

ZIMMER RESIDENCE

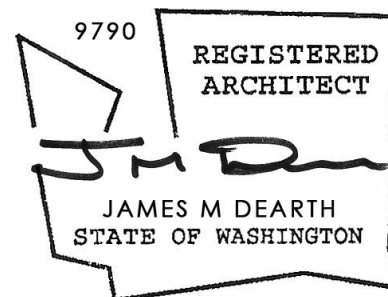
4661 FOREST AVE SE, MERCER ISLAND, WA 98040



RIPPLE
DESIGN STUDIO

206.913.2333

4303 STONE WAY N
SEATTLE, WA 98103



ZIMMER RESIDENCE
4661 FOREST AVE SE, MERCER ISLAND, WA 98040

PROJECT
INFORMATION

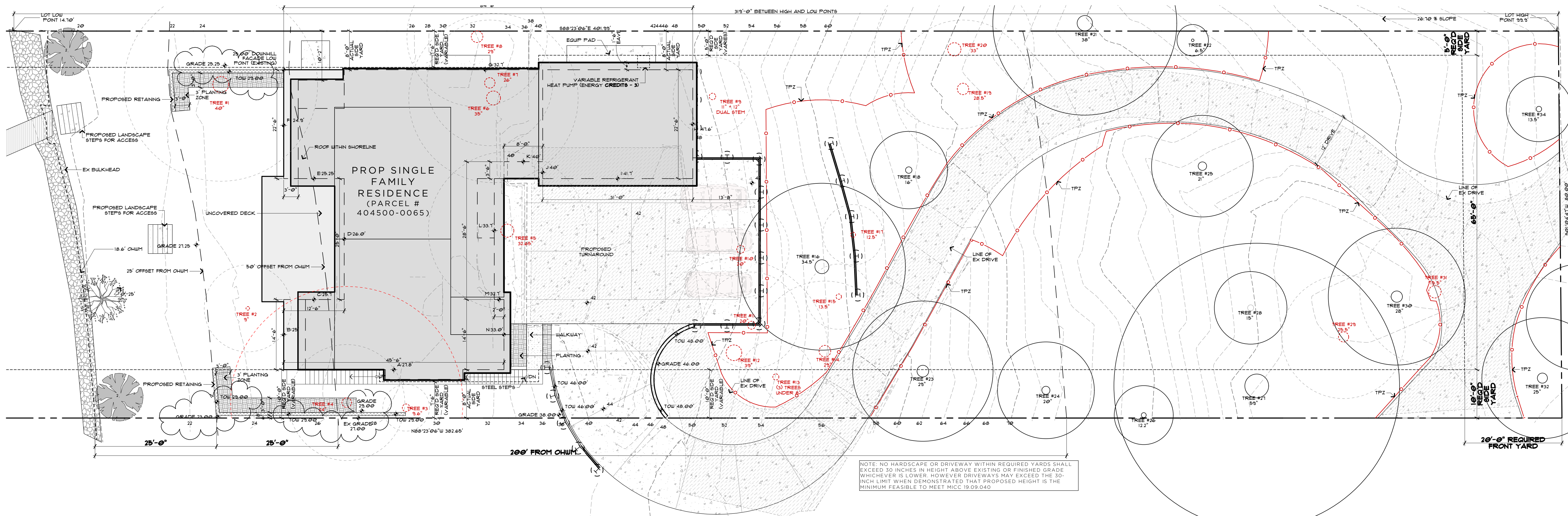
RELEASE

7 APRIL 2025

PERMIT CORRECTIONS
9 MAY 2025

A1.0

ZIMMER
ARCHITECT



SITE PLAN

SCALE: 1" = 10'

ABBREVIATIONS:

ABV	ABOVE
AFF	ABOVE FINISHED FLOOR
BLW	BELOW
BOT	BOTTOM
BOW	BOTTOM OF WALL
CAB	CABINET
CL	CENTERLINE
CONC	CONCRETE
CONT	CONTINUOUS
CP	CENTERPOINT
DET	DETAIL
DIA	DIAMETER
DIM	DIMENSION
DR	DOOR
DS	DOWNSPOUT
D/W	DISHWASHER
EA	EACH
EX	EXISTING
EXT	EXTERIOR
FOC	FACE OF CONCRETE
FOW	FACE OF WALL
FN GRDE	FINISHED GRADE
FNDN	FOUNDATION
FLR	FLOOR
FP	FIREPLACE
GA	GAUGE
GWB	GYPSUM WALL BOARD
HB	HOSE BIBB
HGT	HEIGHT
INFO	INFORMATION
INSUL	INSULATION
INT	INTERIOR
LV	LOW VOLTAGE
MTL	METAL
MFR	MANUFACTURER
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NFC	NOT FOR CONSTRUCTION
OC	ON CENTER
PL	PROPERTY LINE
RAD	RADIUS
RE	REFER TO
SIM	SIMILAR
TBD	TO BE DETERMINED
TG	TEMPERED GLASS
T&G	TONGUE & GROOVE
TOW	TOP OF WALL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VIF	VERIFY IN FIELD
WD	WOOD
WDW	WINDOW

PLAN LEGEND:

	EXISTING WALL TO REMAIN
	NEW FULL-HEIGHT WALL
	NEW FULL-HEIGHT CONCRETE WALL
	PARTIAL-HEIGHT WALL
	PROPERTY LINE
	BUILDING / STRUCTURE ABOVE
	BUILDING / STRUCTURE BELOW
	CENTERLINE
	AREA OF DRAWING REVISION
	ELEVATION MARKER
	SECTION MARKER

DUTY OF COOPERATION:

RELEASE + ACCEPTANCE OF THESE DOCUMENTS INDICATES COOPERATION AMONG THE OWNER, THE CONTRACTOR, + RIPPLE DESIGN STUDIO. ANY ERRORS, OMISSIONS, OR DISCREPANCIES DISCOVERED BY THE USE OF THESE DOCUMENTS SHALL BE REPORTED IMMEDIATELY TO RIPPLE DESIGN STUDIO. FAILURE TO DO SO SHALL RELIEVE RIPPLE DESIGN STUDIO FROM ANY RESPONSIBILITY OF THE CONSEQUENCES.

ANY DEVIATIONS FROM THESE DOCUMENTS WITHOUT THE CONSENT OF RIPPLE DESIGN STUDIO ARE UNAUTHORIZED. FAILURE TO OBSERVE THESE PROCEDURES SHALL RELIEVE RIPPLE DESIGN STUDIO OF RESPONSIBILITY FOR ALL CONSEQUENCES ARISING OUT OF SUCH ACTIONS.

GENERAL NOTES:

- DO NOT SCALE DRAWINGS.
- THIS PROJECT SHALL COMPLY WITH ALL GOVERNING REGULATIONS, ORDINANCES, BUILDING CODES, OR COVENANTS OF THE AREA IN WHICH IT IS BUILT.
- APPROVAL BY AN INSPECTOR DOES NOT CONSTITUTE AUTHORITY TO DEVIATE FROM THE DRAWINGS OR SPECIFICATIONS.
- THE CONTRACTOR SHALL SCHEDULE WALK-THROUGHS AT EACH OF BELOW NOTED INTERVALS:
 - PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
 - PRIOR TO THE COMMENCEMENT OF ALL MECHANICAL + ELECTRICAL WORK.
- PROVIDE ALL NECESSARY BARRICADES, WARNING SIGNS, + DEVICES TO PROTECT PUBLIC + CONSTRUCTION PERSONNEL DURING CONSTRUCTION.
- MAINTAIN ALL REQUIRED ACCESS + EGRESS DURING CONSTRUCTION.

FLOOR AREAS:

LOT AREA:	31,383 FT ²
MAXIMUM ALLOWABLE GFA (R-15):	12,000 FT ²
SUB-BASEMENT GROSS GFA:	[743] FT ²
SUB-BASEMENT "NON-EXCLUDED" GFA: (SEE BELOW)	242.22 FT ²
BASEMENT GROSS GFA:	[2,400] FT ²
BASEMENT "NON-EXCLUDED" GFA: (SEE BELOW)	2,177.76 FT ²
MAIN FLOOR CEILING UNDER 12' GFA:	1,729 FT ²
MAIN FLOOR 12'-16' CEILING HEIGHT GFA (366 FT ² @150%):	549 FT ²
MAIN FLOOR 16'+ CEILING HEIGHT GFA (186 FT ² @200%):	372 FT ²
GARAGE GFA:	698 FT ²

TOTAL GROSS FLOOR AREA: (18.3%) 5,767.98 FT²

BASEMENT FLOOR EXCLUSION CALCS:

SUB SEGMENT	GRADE	WALL	LENGTH	HEIGHT	HEIGHT	COVERAGE %	RESULT
K	33'-0"	5'-4 1/2"	7'-0"	76.7%	25'-7"		
L	22'-6"	3'-4 1/8"	7'-0"	47.7%	10'-9 1/2"		
M	3'-8"	3'-5 5/8"	7'-0"	49.5%	2'-6 3/4"		
N	8'-10"	0"	7'-0"	0%	0		
O	23'-0"	5'-10 1/2"	7'-0"	83.9%	13'-9 3/8"		
P	22'-6"	7'-0"	7'-0"	100%	22'-6"		
TOTALS	111'-0"				74'-9 5/8"		

743 FT² X 67.4% = 500.78 FT² EXCLUDED
743 FT² + 500.78 FT² = 242.22 FT²

BASEMENT	GRADE	WALL	LENGTH	HEIGHT	HEIGHT	COVERAGE %	RESULT
A	9'-0"	1'-9 3/8"	10'-9 1/8"	16.5%	1'-5 3/4"		
B	32'-8"	0"	10'-9 1/8"	0%	0		
C	14'-0"	0"	10'-9 1/8"	0%	0		
D	12'-6"	0"	10'-9 1/8"	0%	0		
E	25'-0"	0"	10'-9 1/8"	0%	0		
F	12'-6"	0"	10'-9 1/8"	0%	0		
G	22'-6"	0"	10'-9 1/8"	0%	0		
H	42'-0"	0"	10'-9 1/8"	0%	0		
I	2'-3"	3'-4 3/4"	10'-9 1/8"	31.4%	0'-10 3/8"		
J	62'-0"	3'-4 3/4"	10'-9 1/8"	31.5%	19'-6 3/8"		
TOTALS	236'-2"				21'-10 1/2" / 236'-2" = 9.26%		

2,400 FT² X 9.26% = 222.24 FT² EXCLUDED
2,400 FT² + 222.24 FT² = 2,177.76 FT²

AVERAGE BUILDING ELEVATION CALCS:

ELEVATION POINT "A" SEGMENT LENGTH "A" ELEV "A" X SEGMENT "A"	27.80
ELEVATION POINT "B" SEGMENT LENGTH "B" ELEV "B" X SEGMENT "B"	45.50
ELEVATION POINT "C" SEGMENT LENGTH "C" ELEV "C" X SEGMENT "C"	1,264.90
ELEVATION POINT "D" SEGMENT LENGTH "D" ELEV "D" X SEGMENT "D"	25.00
ELEVATION POINT "E" SEGMENT LENGTH "E" ELEV "E" X SEGMENT "E"	14.50
ELEVATION POINT "F" SEGMENT LENGTH "F" ELEV "F" X SEGMENT "F"	362.50
ELEVATION POINT "G" SEGMENT LENGTH "G" ELEV "G" X SEGMENT "G"	25.70
ELEVATION POINT "H" SEGMENT LENGTH "H" ELEV "H" X SEGMENT "H"	12.50
ELEVATION POINT "I" SEGMENT LENGTH "I" ELEV "I" X SEGMENT "I"	321.25
ELEVATION POINT "J" SEGMENT LENGTH "J" ELEV "J" X SEGMENT "J"	26.00
ELEVATION POINT "K" SEGMENT LENGTH "K" ELEV "K" X SEGMENT "K"	25.00
ELEVATION POINT "L" SEGMENT LENGTH "L" ELEV "L" X SEGMENT "L"	650.00
ELEVATION POINT "M" SEGMENT LENGTH "M" ELEV "M" X SEGMENT "M"	25.25
ELEVATION POINT "N" SEGMENT LENGTH "N" ELEV "N" X SEGMENT "N"	12.50
ELEVATION POINT "O" SEGMENT LENGTH "O" ELEV "O" X SEGMENT "O"	315.63
ELEVATION POINT "P" SEGMENT LENGTH "P" ELEV "P" X SEGMENT "P"	24.90
ELEVATION POINT "Q" SEGMENT LENGTH "Q" ELEV "Q" X SEGMENT "Q"	23.00
ELEVATION POINT "R" SEGMENT LENGTH "R" ELEV "R" X SEGMENT "R"	572.70
ELEVATION POINT "S" SEGMENT LENGTH "S" ELEV "S" X SEGMENT "S"	26.50
ELEVATION POINT "T" SEGMENT LENGTH "T" ELEV "T" X SEGMENT "T"	32.70
ELEVATION POINT "U" SEGMENT LENGTH "U" ELEV "U" X SEGMENT "U"	6,597.75
ELEVATION POINT "V" SEGMENT LENGTH "V" ELEV "V" X SEGMENT "V"	47.60
ELEVATION POINT "W" SEGMENT LENGTH "W" ELEV "W" X SEGMENT "W"	23.00
ELEVATION POINT "X" SEGMENT LENGTH "X" ELEV "X" X SEGMENT "X"	41.70
ELEVATION POINT "Y" SEGMENT LENGTH "Y" ELEV "Y" X SEGMENT "Y"	30.00
ELEVATION POINT "Z" SEGMENT LENGTH "Z" ELEV "Z" X SEGMENT "Z"	1,292.70
ELEVATION POINT "AA" SEGMENT LENGTH "AA" ELEV "AA" X SEGMENT "AA"	40.00
ELEVATION POINT "AB" SEGMENT LENGTH "AB" ELEV "AB" X SEGMENT "AB"	3.50
ELEVATION POINT "AC" SEGMENT LENGTH "AC" ELEV "AC" X SEGMENT "AC"	140.00
ELEVATION POINT "AD" SEGMENT LENGTH "AD" ELEV "AD" X SEGMENT "AD"	40.00
ELEVATION POINT "AE" SEGMENT LENGTH "AE" ELEV "AE" X SEGMENT "AE"	8.00
ELEVATION POINT "AF" SEGMENT LENGTH "AF" ELEV "AF" X SEGMENT "AF"	32.00
ELEVATION POINT "AG" SEGMENT LENGTH "AG" ELEV "AG" X SEGMENT "AG"	33.70
ELEVATION POINT "AH" SEGMENT LENGTH "AH" ELEV "AH" X SEGMENT "AH"	28.00
ELEVATION POINT "AI" SEGMENT LENGTH "AI" ELEV "AI" X SEGMENT "AI"	960.45
ELEVATION POINT "AJ" SEGMENT LENGTH "AJ" ELEV "AJ" X SEGMENT "AJ"	32.70
ELEVATION POINT "AK" SEGMENT LENGTH "AK" ELEV "AK" X SEGMENT "AK"	2.00
ELEVATION POINT "AL" SEGMENT LENGTH "AL" ELEV "AL" X SEGMENT "AL"	65.40
ELEVATION POINT "AM" SEGMENT LENGTH "AM" ELEV "AM" X SEGMENT "AM"	33.00
ELEVATION POINT "AN" SEGMENT LENGTH "AN" ELEV "AN" X SEGMENT "AN"	14.50
ELEVATION POINT "AO" SEGMENT LENGTH "AO" ELEV "AO" X SEGMENT "AO"	478.50
TOTAL OF ELEVATION POINTS X SEGMENT LENGTHS	10,536.56
TOTAL SEGMENT LENGTHS	326.00
AVERAGE GRADE	32.32

"FIRE CODE ALT ON FILE" - CONDITIONS SHALL APPLY:

- PROVIDED TYPEDX GYPSOM THROUGHOUT THE RESIDENCE ON ALL SURFACES.
- PROVIDE SOLID CORE DOORS
- NFPA 72 MONITORED FIRE ALARM SYSTEM. "A NFPA 72- CHAPTER 29 MONITORED FIRE ALARM SYSTEM IN COMPLIANCE WITH NFPA 72 AND COM STANDARDS SHALL BE INSTALLED THROUGHOUT THE RESIDENCE. A SEPARATE FIRE PERMIT IS REQUIRED."
- NFPA 13R FIRE SPRINKLER SYSTEM "A NFPA 13R FIRE SPRINKLER SYSTEM IN COMPLIANCE WITH NFPA 13R AND COM STANDARDS SHALL BE INSTALLED THROUGHOUT THE RESIDENCE. A SEPARATE FIRE PERMIT IS REQUIRED."

NOTE THAT THIS SPRINKLER SYSTEM REQUIRES A MINIMUM OF 1.5" WATER METER AND 2" WATER SUPPLY LINE.

LOT COVERAGE CALCS:

LOT AREA	31,383 FT ²
MAXIMUM ALLOWABLE BUILDING COVERAGE:	(35%) 10,984 FT ²
EXISTING RESIDENCE TO REMAIN:	0 FT ²
PROPOSED RESIDENCE + COVERED PORCH:	4,006 FT ²
PROPOSED VEHICULAR USE:	5,012 FT ²
TOTAL BUILDING COVERAGE UPON COMPLETION:	(28.7%) 9,018 FT ²

HARDSCAPE CALCS:

LOT AREA	31,383 FT ²
MAXIMUM ALLOWABLE HARDSCAPE COVERAGE:	(16.3%) 5,118 FT ²
(9% OF LOT 2,824 + BORROWED AREA 2,294)	
ALL EXISTING HARDSCAPE TO BE REMOVED	
PROPOSED PAVED AREA (MECH, MID LEVEL NORTH, SUB):	132 FT ²
PROPOSED WALKWAYS (SW AUTOCUTOUT LOWER SOUTH):	49 FT ²
PROPOSED STAIRS (2 SETS):	159 FT ²
PROPOSED RETAINING WALLS:	71 FT ²
TOTAL PROPOSED HARDSCAPE:	(1.3%) 411 FT ²
SHORELINE CALCULATIONS (INCLUDED ABOVE):	3,678 FT ²
0'-25' OF OHWM:	2,031 FT ²
EXISTING BULKHEAD HARDSCAPE:	74 FT ²
PROPOSED LANDSCAPE ACCESS STEPS (2 SETS):	(30+30) 60 FT ²
TOTAL HARDSCAPE 0'-25':	(6.6%) 134 FT ²
25'-50' OF OHWM:	2,021 FT ²
PROPOSED RETAINING WALLS:	44 FT ²
PROPOSED ROOF AREA:	521 FT ²
PROPOSED STAIRS:	30 FT ²
TOTAL HARDSCAPE 25'-50':	(29.4%) 595 FT ²

PROJECT TEAM:

CLIENT / OWNER:
ZIMMER RESIDENCE
4661 FOREST AVE SE
MERCER ISLAND, WA 98040
360.731.0176

ARCHITECT / APPLICANT:
RIPPLE DESIGN STUDIO - JIM DEARTH
4303 STONE WAY N
SEATTLE, WA 98103
206.913.2333

SURVEYOR:
BRH
2009 MINOR AVE EAST
SEATTLE, WA 98102
206.323.4144

GEOTECHNICAL ENGINEER:
PANGE - MICHAEL XUE
3213 EASTLAKE AVE E SUITE B
SEATTLE, WA 98102
206.262.0370

CIVIL ENGINEER:
CIVIL ENGINEERING SOLUTIONS - DUFFY ELLIS
2244 NW MARKET ST SUITE B
SEATTLE, WA 98107
206.930.0342

STRUCTURAL ENGINEER:
BUKER ENGINEERING - DANIEL BUKER
4303 STONE WAY N
SEATTLE, WA 98103
206.258.6333

CONTRACTOR:
TBD

DEVELOPMENT PROPOSALS FOR A NEW SINGLE-FAMILY HOME SHALL REMOVE JAPANESE KNOTUED POLY-GOUMI CHAMPIDINO AND REGULATED CLASS A, REGULATED CLASS B, AND REGULATED CLASS C WEEDS IDENTIFIED ON THE KING COUNTY NOXIOUS WEED LIST, AS AMENDED. FROM REQUIRED LANDSCAPING AREAS ESTABLISHED PURSUANT TO SUBSECTION (P193A) OF THIS SECTION. NEW LANDSCAPING ASSOCIATED WITH NEW SINGLE-FAMILY HOME SHALL NOT INCORPORATE ANY WEEDS IDENTIFIED ON THE KING COUNTY NOXIOUS WEED LIST, AS AMENDED. PROVIDED, THAT REMOVAL SHALL BE REQUIRED IF THE REMOVAL WILL RESULT IN INCREASED SLOPE INSTABILITY OR RISK OF LANDSLIDE OR EROSION.

PROJECT INFO:

PROJECT ADDRESS:
4661 FOREST AVE SE
MERCER ISLAND, WA 98040

SCOPE OF WORK:
DEMOLITION AND RE-BUILD NEW SINGLE FAMILY RESIDENCE

ZONE:
R-15

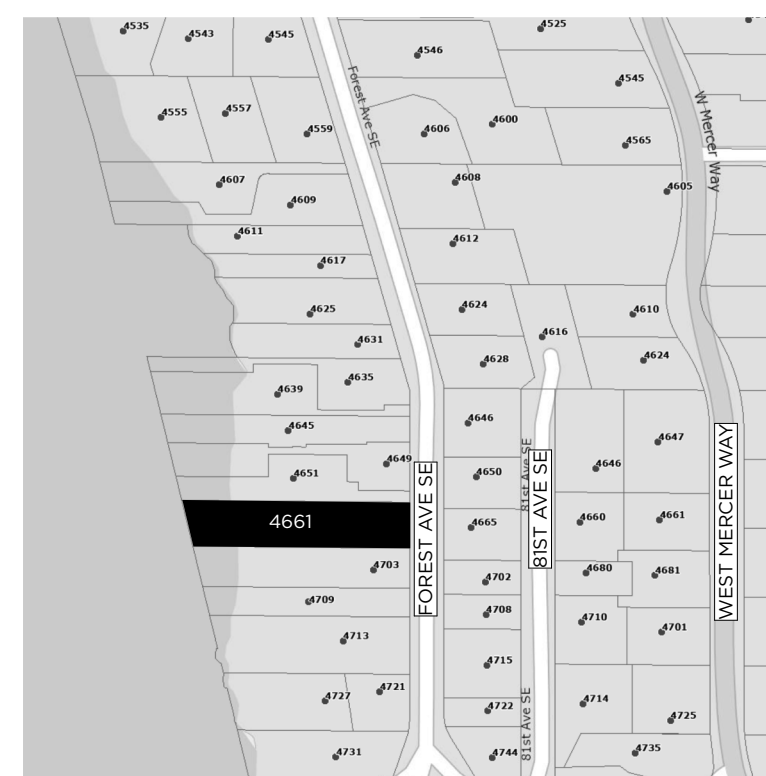
LEGAL DESCRIPTION:
LOT 14 AND THE NORTH 30 FEET OF LOT 13, LAKE ISLE, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 19 OF PLATS, PAGE 35, RECORDS OF KING COUNTY, WASHINGTON; TOGETHER WITH SECOND CLASS SHORELANDS ADJOINING. SITUATE IN THE COUNTY OF KING, STATE WASHINGTON

ACCESSOR'S PARCEL NUMBER:
404500-0065

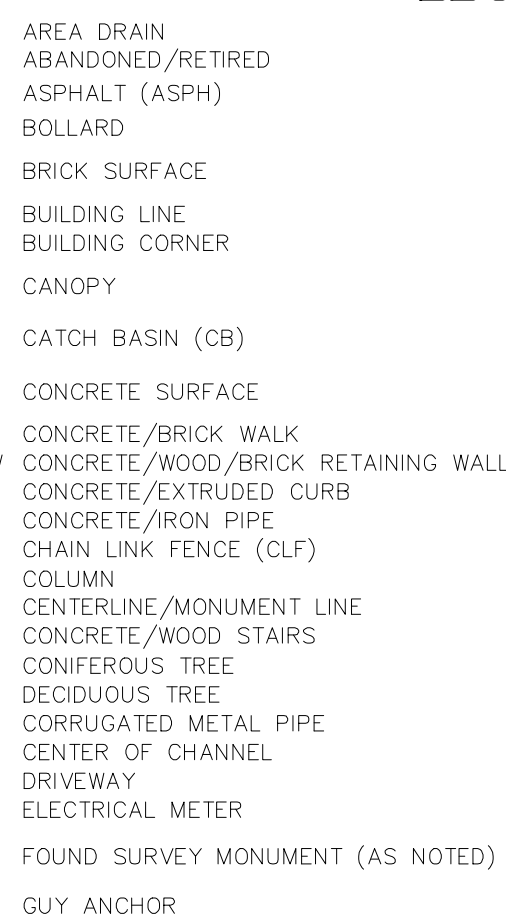
BUILDING CODE + OCCUPANCY:
2021 IRC (ARCHITECTURAL) + IBC (STRUCTURAL)
R-3 SINGLE FAMILY RESIDENTIAL (RESIDENCE)
U STORAGE (GARAGE, STORAGE)

TYPE OF CONSTRUCTION:
TYPE-VB: NFPA13R SPRINKLER SYSTEM + NFPA73 MONITORED ALARM SYSTEM

VICINITY MAP:



ZIMMER
ARCHITECT



	IRON FENCE (WF)
	INVERT ELEVATION
	LANDSCAPE/PLANTER
	MANHOLE
	MAILBOX (FEDERAL/PRIVATE)(MB)
	OVERHEAD POWER/TELEPHONE
	PROPERTY LINE (PL)
	PAINTED UTILITY LOCATION
	PIPE FLOW DIRECTION
	SANITARY SEWER
	STORM DRAIN
	RECORD DATA
	ROCKERY
	ROOF ELEVATION
	SERVICE DRAIN (STORM)
	CLEANOUT
	SANITARY DRAIN SEWER (RECORD)
	SIGN/STREET NAME SIGN
	TEMPORARY BENCHMARK (TBM)
	UTILITY POLE (WOOD)
	WATER WALT
	WATER MAIN
	WATER METER
	WATER VALVE
	VACATION/CONDEMNATION
	ORDINANCE
	WOOD FENCE (WF)
	REBAR AND CAP

2(B) PURPOSE: CIVIL ENGINEERING DESIGN.

2(C) CONTOUR SOURCE: CONTOURS DERIVED FROM DIRECT FIELD OBSERVATIONS

2(F) CONTOUR ACCURACY: COMPLIES WITH UNITED STATES NATIONAL MAP ACCURACY STANDARDS (90% OR GREATER OF ALL SURVEY POINTS CHECKED ARE CORRECT WITHIN HALF OF ONE CONTOUR INTERVAL).

2(G) LIMITATIONS: THIS TOPOGRAPHIC SURVEY IS TO SUPPORT SPECIFIC EFFORTS WITHIN THE AREA OF MAPPING SHOWN.

2(H) BOUNDARY SOURCE: FIELD SURVEY OF CONTROLLING MONUMENTS, AND CONSIDERATION OF EXISTING RECORDS OF SURVEYS FOR DETERMINING ON THE GROUND POSITIONS OF DEEDED PROPERTY AND EASEMENT LINES.

3(A) & 3(B) UTILITIES: UNDERGROUND UTILITIES ARE SHOWN BY ONE OR MORE OF THE FOLLOWING METHODS:

1. SURVEY FIELD OBSERVATION OF MARKINGS PRODUCED BY DIRECT UTILITY DETECTION WORK.
2. DIRECT OBSERVATIONS OF UNDERGROUND, GRAVITY FLOW PIPES PERFORMED AT THE TIME OF CONTROLLING STRUCTURE CONSTRUCTION.
3. SCALING OF AS-BUILTS, DESIGN DRAWINGS OR OTHER RECORDS.

3(C) SCOPE STATEMENT: AGREED UPON SCOPE BETWEEN PROJECT OWNER/AGENT AND SURVEYOR IS TO PROVIDE A COMPLIANT TOPOGRAPHIC SURVEY.

UTILITY PROVIDERS:
SANITARY SEWERS, WATER, STORM DRAINAGE
CITY OF MERCER ISLAND
DEVELOPMENT SERVICES
9811 SE 36TH STREET
MERCER ISLAND, WA 98040
(206) 236-5300

POWER AND NATURAL GAS
PUGET SOUND ENERGY
355 110TH AVENUE NE
BELLEVUE, WA 98004
(206) 225-5773

TELEPHONE
LUMEN TECHNOLOGIES
1600 7TH AVENUE
SEATTLE, WA 98191
(800) 244-1111

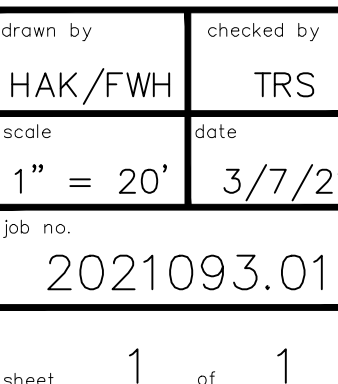
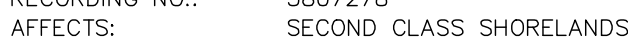
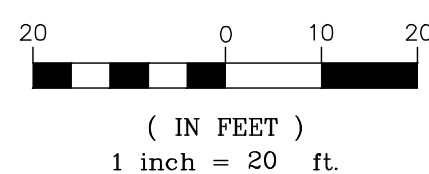


HORIZONTAL BENCHMARKS:
OWNER: CITY OF MERCER ISLAND
ID#
DESCRIPTION: FOUND 2"DISC W/ PUNCH IN CONC,
MONUMENT IN CASE, DOWN 0.4'
LOCATION: FOREST AVE SE & SE 46TH BLOCK
NORTHING: 208378.12
EASTING: 1295666.57

OWNER: CITY OF MERCER ISLAND
ID#
DESCRIPTION: FOUND 1"IP W/ TACK, MONUMENT
IN CASE, DOWN 1.15'
LOCATION: FOREST AVE SE & SE 48TH BLOCK
NORTHING: 207778.15
EASTING: 1295655.26

NAVD 88

SOURCE: BRH
ID# TBM 'A'
DESCRIPTION: RAILROAD SPIKE IN UTILITY POLE
AT WEST FACE
LOCATION: EAST SIDE OF FOREST AVE SE
HOUSE #4702
ELEVATION: 108.64



General Envelope Detail S - Proposed Design									
Conditioned Floor Area, Proposed Design				4,471 sq ft		21.1			
Classification: Medium Density Unit				Notes					
Exterior Doors									
Plan ID	Component Description	Ref.	Door U	Qt	Width Feet	Height Feet	Area	UA	
Exempt	Code Baseline, Unit 39		0.30	1	3	7	21	6.3	
901A	Code Baseline, Unit 39		0.30	1	18	10	182	54.0	
910A	Code Baseline, Unit 39		0.30	1	5	8	40	12.0	
103A	Code Baseline, Unit 39		0.30	1	18	8	144	43.2	
105A	Code Baseline, Unit 39		0.30	1	5	8	40	12.0	
108A	Code Baseline, Unit 39		0.30	1	5	8	40	12.0	
110A	Code Baseline, Unit 39		0.30	1	2	8	21	6.4	
110B	Code Baseline, Unit 39		0.30	1	2	8	21	6.4	
110C	Code Baseline, Unit 39		0.30	1	2	8	21	6.4	
							0	0.0	
							0	0.0	
Sum of Area and UA (excluding exempt door)							518	155.3	
Exterior Doors Area Weighted U								8.398	
Overhead Glazing									
Plan ID	Component Description	Ref.	Glazing U	Qt	Width Feet	Height Feet	Area	UA	
Sum of Area and UA							0.0	0	
Overhead Glazing Area Weighted U									
Vertical Glazing Schedule									
Plan ID	Component Description	Ref.	Glazing U	Qt	Width Feet	Height Feet	Area	UA	Rows to Show 25
Exempt	Code Baseline, Unit 39	Table 406.2	0.30	1	7	2	15.0	4.50	
1	Unit 39 (Code Baseline)	Table 406.2	0.30	1	7	2	15.0	4.50	
2	Unit 39 (Code Baseline)	Table 406.2	0.30	1	2	6	12.0	3.60	
3	Unit 39 (Code Baseline)	Table 406.2	0.30	1	2	6	12.0	3.60	
4	Unit 39 (Code Baseline)	Table 406.2	0.30	1	2	6	12.0	3.60	
5	Unit 39 (Code Baseline)	Table 406.2	0.30	1	4	6	24.0	7.20	
6	Unit 39 (Code Baseline)	Table 406.2	0.30	1	4	6	24.0	7.20	
7	Unit 39 (Code Baseline)	Table 406.2	0.30	1	4	5	22.5	6.75	
8	Unit 39 (Code Baseline)	Table 406.2	0.30	1	5	2	11.0	3.30	
9	Unit 39 (Code Baseline)	Table 406.2	0.30	1	5	2	11.0	3.30	
10	Unit 39 (Code Baseline)	Table 406.2	0.30	1	6	2	13.0	3.90	
11	Unit 39 (Code Baseline)	Table 406.2	0.30	1	6	6	42.0	12.60	
12	Unit 39 (Code Baseline)	Table 406.2	0.30	1	7	6	48.0	14.40	
13	Unit 39 (Code Baseline)	Table 406.2	0.30	2	6	8	104.0	31.20	
14	Unit 39 (Code Baseline)	Table 406.2	0.30	3	6	8	154.0	46.20	
15	Unit 39 (Code Baseline)	Table 406.2	0.30	3	6	2	36.0	10.80	
16	Unit 39 (Code Baseline)	Table 406.2	0.30	4	3	6	78.0	23.40	
17	Unit 39 (Code Baseline)	Table 406.2	0.30	4	3	6	48.0	14.40	
18	Unit 39 (Code Baseline)	Table 406.2	0.30	4	3	5	60.0	18.00	
19	Unit 39 (Code Baseline)	Table 406.2	0.30	4	3	6	72.0	21.60	
20	Unit								

Floor (over or exterior)			Floor U	Area	UA
Plan ID	Component Description	R _{ef}	U		
046	Vented PostBeam (2021.1.4; 2018.1.6)	-	0.020	109	4
				Sum of Area and UA	109 4

Slab on Grade (less than 2 feet below grade)					
Plan ID	Component Description	R _{ef}	F	Slab Perim	FP
RTS	Fully Insulated House (Code Baseline)	10-2	0.250	210	116
				Sum of Perimeter and FP	210 116

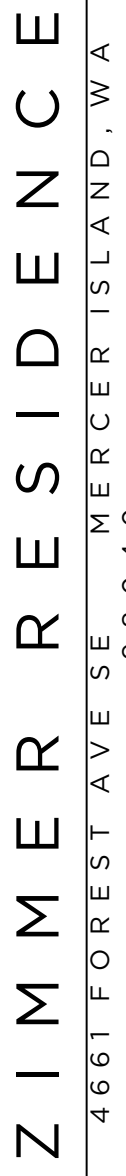
Below Grade Walls and Slabs									
Plan ID	Component Description	Slab Depth	R _{ef}	Wall U	Wall Area	Wall UA	Slab F	Slab Perim	Slab UA
Sum of Area, Length and UA				0	0.0		0	0	

Links to Download Forms, Checklists and Other Resources		Link
Compliance Certificates		Compliance Certificates
Insulation Certificate for Residential New Construction Duct Tighting Affidavit		Insulation Certificate
	Existing Construction	Affidavit - Existing
	New Construction	Affidavit - New
Prescriptive Checklist for 2018 WSEC Alterations (Remodel) Worksheet		Prescriptive Checklist
EER SEER COP HSPFV Converter		Worksheet
		https://www.pdfcrowdmeeting.com/view-one?doc=haq2-hairer-converter

Show Ventilation Calculator?		Show
Ventilation Requirements	Conditioned Floor Area	4,471 sq. ft.
	Number of Bedrooms	3
	Run-Time Percent in Each 4-hour Segment	50%
	Is the system Balanced?	Unbalanced
	Is the system Distributed?	Not Distributed
	Whole House Mechanical Ventilation Airflow Rate	WG, Chapter 16 295 CFM

Show Distribution System Calculator?		Show
HVAC Thermal Distribution System	Download RS-33 (2019)	https://www.hvacsystems.com/resources/hvac-system-calculator/
Is this a hydronic heating system?	No	
Location of Ducts	Conditioned Space	
Location of Air Handler	Conditioned Space	
	Is Duct Testing Required?	Yes
Maximum Duct Leakage:	Maximum total measured duct leakage per square foot	0.00 CFM25 per sq. ft.
	Maximum allowable total measured duct leakage	0.00 CFM25
A maximum of 10 feet of return ducts and 5 feet of supply ducts are allowed to be located outside of the building thermal envelope, if insulated and sealed per IMC3.3.7.		

Show Heating System Sizing?		Show
Heating System Sizing - Proposed Design	Try Out BetterHVAC's HVAC Sizing Tool:	https://betterhvac.com/resources/heating-load-tool/
Nominal Weather Station	Mercer Island	
Indoor Design Temperature	70 F	
Outdoor Design Temperature	25 F	
Design Temperature Difference (ΔT)	45 F	
Conditioned Floor Area, Proposed Design	4,471.92	
Conditioned Volume	[4]	Volume assuming ceiling height of 8.5 ft = 38503.5 B3
Leave blank to use default of 8.5 ft. ceiling height		
HVAC System Type	Heat Pump	
Location of HVAC Distribution System	Conditioned Space	
Sum of UA, including exempt door and window	853	
Envelope Heat Load See UA x ΔT	38,397	Btu / Hour
Air Leakage Heat Load (Volume x ACH x DT x 0.018)	18,470	Btu / Hour
Building Design Heat Load	56,837	Btu / Hour
Building and Duct Heat Loss	56,837	Btu / Hour
For ducts located in unconditioned space: Sum of Building Heat Loss X 1.1 For ducts located in conditioned space or ducts in attics or basements Heat Loss X 1		
Maximum Heat Equipment Output Building and Duct Heat Loss X 1.25 for heat pumps Building and Duct Heat Loss X 1.5 for all other systems	71,046	Btu / Hour
	20.8	kW



SHORELINE MITIGATION:

LOT AREA 31,383 FT²
SITE AREA 20FT FROM OHWM 1,627 FT²
REQUIRED VEGETATION COVERAGE (75% OF AREA) 1,220 FT²

PROPOSED VEGETATION AREA 1,221 FT²

PLANTING TYPE	COMMON NAME	SCIENTIFIC NAME	SIZE	SPACING	QUANTITY	PLANTING NOTES
PLANT TYPE 01	SHORE PINE	PINUS CONTORTA V. VAR. CONTORTA	1 GA. 10 FT BALLED BURLAP OR 5M	9'0" O.C.	6	SUN - PART SHADE DRY - WET
PLANT TYPE 02	WESTERN CRABAPPLE	MALUS FUSCA	3 GA. 10 FT BALLED BURLAP OR 5M	9'0" O.C.	4	SUN - PART SHADE DRY - MOIST
PLANT TYPE 03	SNOWBERRY	SYMPHORICARPOS ALBUS	2 GA. MIN.	4'0" O.C.	1	SUN - SHADE DRY - MOIST
PLANT TYPE 04	RED FLOWERING CURRANT	RIBES SANGUINEUM	2 GA. MIN.	4'0" O.C.	2	SUN - PART SHADE DRY - MOIST
PLANT TYPE 05	SWORD FERN	POLYSTICHUM MUNITUM	1 GA. MIN.	2'0" O.C.	3	PART SHADE - SHADE DRY - MOIST
PLANT TYPE 06	OREGON GRAPE	MAHONIA AQUIFOLIUM	1 GA. MIN.	2'0" O.C.	4	SUN - SHADE DRY - WET
PLANT TYPE 07	BEACH STRAWBERRY	FRASERIA CALYDORIS	8" POT	2'0" O.C.	60 SF	SUN - PART SHADE DRY

MITIGATION LEGEND:

- 

1 - WESTERN CRABAPPLE
- 

2 - SHORE PINE
- 

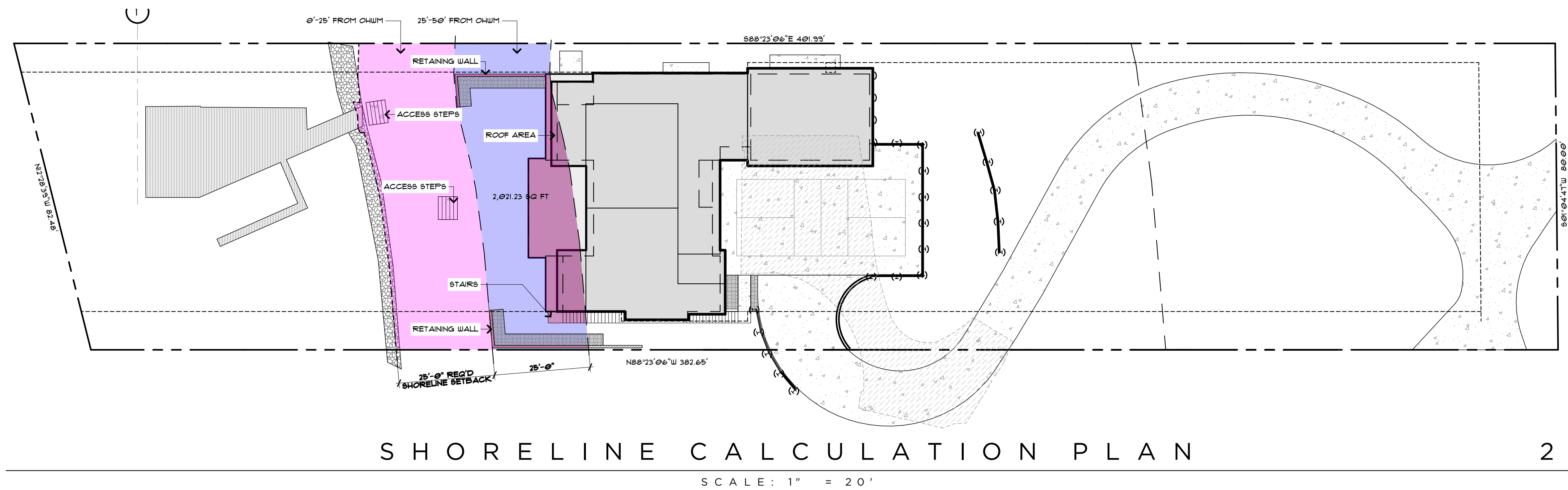
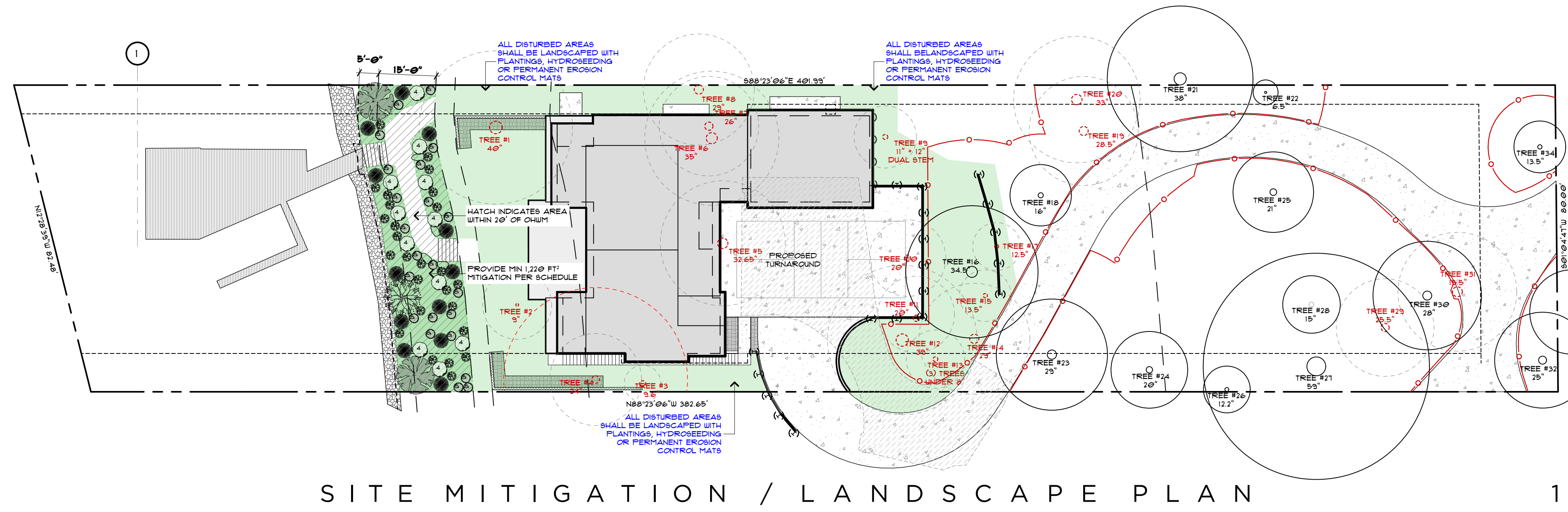
3 - SNOW BERRY
- 

4 - RED FLOWERING CURRANT
- 

5 - SWORD FERN
- 

6 - OREGON GRAPE
- 

7 - BEACH STRAWBERRY



HARDSCAPE CALCS:

LOT AREA	31,383 FT²
MAXIMUM ALLOWABLE HARDSCAPE COVERAGE: (9% OF LOT 2,824 + BORROWED AREA 2,294)	(16.3%) 5,118 FT²
ALL EXISTING HARDSCAPE TO BE REMOVED	
PROPOSED PAVED AREA (MECH. MID LEVEL, NORTH, SUB)	132 FT²
PROPOSED WALKWAYS (SW AUTOCOURT, LOWER SOUTH):	49 FT²
PROPOSED STAIRS (2 SETS)	159 FT²
PROPOSED RETAINING WALLS:	71 FT²
TOTAL PROPOSED HARDSCAPE:	(1.3%) 411 FT²
SHORELINE CALCULATIONS (INCLUDED ABOVE):	
0'-25' OF OHWM:	3,678 FT²
EXISTING BULKHEAD HARDSCAPE:	2,031 FT²
PROPOSED LANDSCAPE ACCESS STEPS (2 SETS):	74 FT²
TOTAL HARDSCAPE 0'-25':	(30+30) 60 FT² (6.6%) 134 FT²
25'-50' OF OHWM:	
PROPOSED RETAINING WALLS:	2,021 FT²
PROPOSED ROOF AREA:	44 FT²
PROPOSED STAIRS:	521 FT²
TOTAL HARDSCAPE 25'-50':	30 FT² (29.4%) 595 FT²



RIPPLE
DESIGN STUDIO

206.913.2333

4303 STONE WAY N
SEATTLE, WA 98103

9790 REGISTERED ARCHITECT

JAMES M DEARTH
STATE OF WASHINGTON

ZIMMER RESIDENCE

4661 FOREST AVE SE
MERCER ISLAND, WA
98040

SHORTLINE + MITIGATION PLANS

THIS DRAWING, AS AN INSTRUMENT OF SERVICE, IS * SHALL REMAIN THE SOLE PROPERTY OF RIPPLE DESIGN STUDIO *
SHALL NOT BE REPRODUCED, PUBLISHED, OR USED IN ANY MANNER WITHOUT PROPER AUTHORIZATION.
COPYRIGHT © 2017 BY RIPPLE DESIGN STUDIO

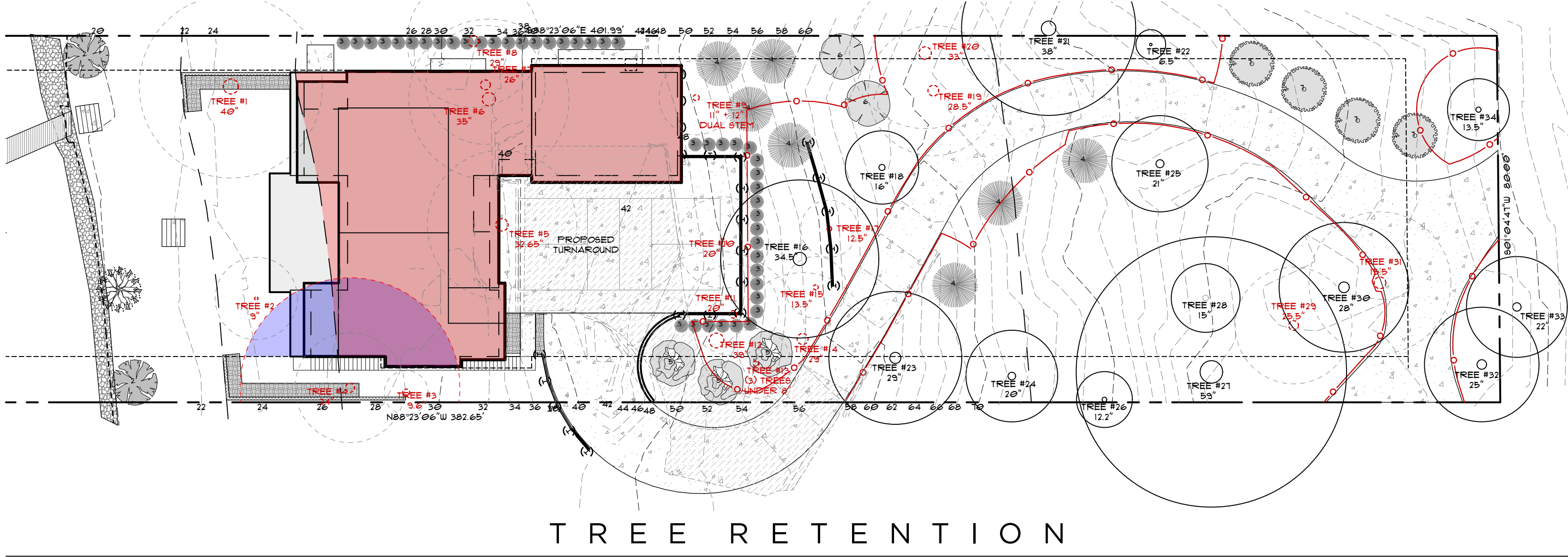
RELEASE

7 APRIL 2025

PERMIT CORRECTIONS
9 MAY 2025

A1.2

ZIMMER
ARCHITECT



TREE RETENTION

SCALE: 1" = 20'

REPLACEMENT TREE SCHEDULE:

PLANTING TYPE	COMMON NAME	SCIENTIFIC NAME	SIZE	SPACING	QUANTITY	PLANTING NOTES
PLANTING TYPE 01	SHORE PINE	PINUS CONTORTA	6' TALL MIN.	9'-0"	1	SUN - PART SHADE, MOIST - WET
PLANTING TYPE 02	WESTERN GRABAPPLE	MALUS FUSCA	15 CAL INCH MIN.	9'-0"	2	SUN - PART SHADE, MOIST - WET
PLANTING TYPE 03	PACIFIC YEW	TAXUS BREVIFOLIA	6' TALL MIN.	3'-0"	44	PARTIAL SHADE - SHADE, DRY - MOIST
PLANTING TYPE 04	VINE MAPLE	ACER CIRCINATUM	6' TALL MIN.	9'-0"	7	PART SHADE - SHADE, DRY - MOIST
PLANTING TYPE 05	CASCARA	RHAMNUS PURSHIANA	15 CAL INCH MIN.	9'-0"	3	FULL SUN - PART SHADE
PLANTING TYPE 06	QUAKING ASPEN	POPULUS TREMULOIDES	15 CAL INCH MIN.	9'-0"	2	FULL SUN - PART SHADE
PLANTING TYPE 07	PACIFIC DOGWOOD	CORNUS NUTTALLI	15 CAL INCH MIN.	9'-0"	4	FULL SUN - PART SHADE
TOTAL REPLACEMENT TREES					63	

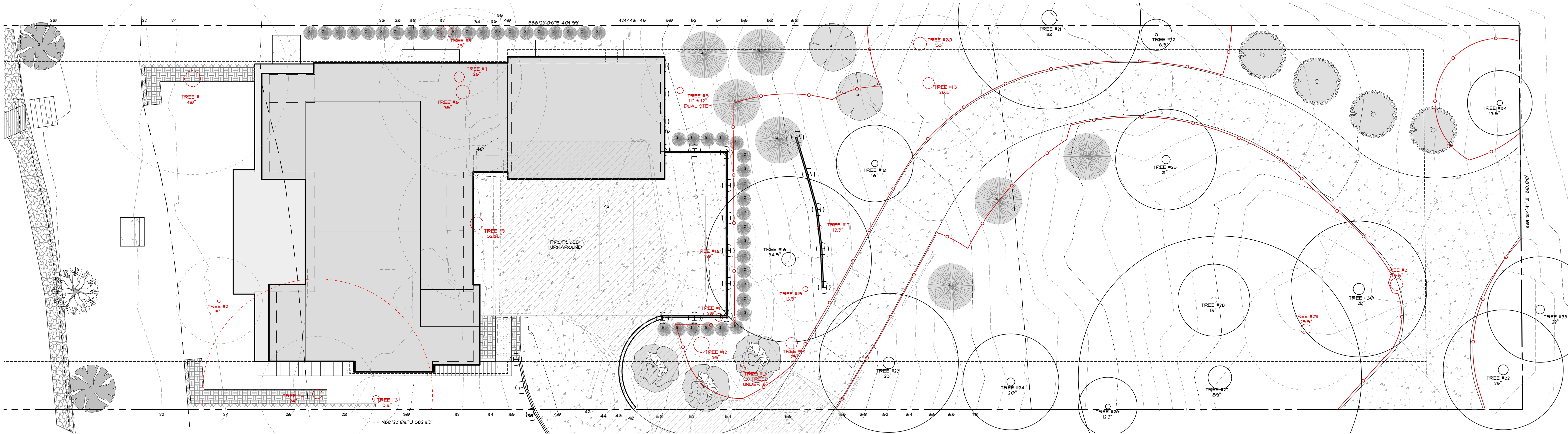
EXCEPTIONAL TREE RETENTION CALCS:

GROSS LOT AREA: 31,383 FT²
EFFECTIVE BUILDABLE AREA: ±4,006 FT²
(BUILDBLE AREA OUTSIDE SHORELINE BUFFERS + STEEP SLOPES, WITHIN REQUIRED SETBACKS + ACCOUNTING FOR REQUIRED DRIVE ACCESS + TURN AROUND FOR FIRE DEPARTMENT)
POTENTIAL TREE PROTECTION AREA FOR #4: 616 FT²
REDUCED BUILDABLE AREA IF RETAINED: (84.6%) 3,390 FT²

TREE CALCULATIONS:

EXISTING TREES	DBH	CONDITION	RETAINED?	MICC B.16 LIST? (REGULATED)	EXCEPTIONAL?	REPLACEMENT TREES
TREE #1: QUERCUS PALUSTRIS	40.0 IN	GOOD	NO	YES	YES	6
TREE #2: STYRAX JAPONICA	9.5 IN	FAIR	NO	NO	NO	0
TREE #3: ACER CIRCINATUM	9.5 IN	FAIR	NO	YES	YES	6
TREE #4: PINUS CONTORTA	24.0 IN	FAIR	NO	YES	YES	6
TREE #5: THUJA PLICATA	32.7 IN	WEAK	NO	YES	NO	3
TREE #6: PSEUDOTSUGA MENZIESII	35.0 IN	WEAK	NO	YES	YES	6
TREE #7: PSEUDOTSUGA MENZIESII	26.0 IN	WEAK	NO	YES	NO	3
TREE #8: THUJA PLICATA	29.0 IN	WEAK	NO	YES	NO	3
TREE #9: ACER MACROPHYLLUM	16.3 IN	POOR	NO	YES	NO	2
TREE #10: PSEUDOTSUGA MENZIESII	20.0 IN	POOR	NO	YES	NO	2
TREE #11: PSEUDOTSUGA MENZIESII	20.0 IN	POOR	NO	YES	NO	2
TREE #12: PSEUDOTSUGA MENZIESII	39.0 IN	FAIR	NO	YES	YES	6
TREE #13: ACER MACROPHYLLUM	8.0 IN	WEAK	NO	NO	NO	0
TREE #14: PSEUDOTSUGA MENZIESII	29.0 IN	WEAK	NO	YES	NO	3
TREE #15: ACER MACROPHYLLUM	13.3 IN	WEAK	NO	YES	NO	2
TREE #16: PSEUDOTSUGA MENZIESII	34.3 IN	FAIR	YES	YES	YES	0
TREE #17: ACER MACROPHYLLUM	12.5 IN	WEAK	NO	YES	NO	2
TREE #18: ACER MACROPHYLLUM	16.0 IN	FAIR	YES	YES	NO	0
TREE #19: POPULUS TRICHOCARPA	28.5 IN	WEAK	NO	YES	NO	3
TREE #20: POPULUS TRICHOCARPA	33.0 IN	WEAK	NO	YES	NO	3
TREE #21: PSEUDOTSUGA MENZIESII	38.0 IN	FAIR	YES	YES	YES	0
TREE #22: THUJA PLICATA	6.5 IN	FAIR	YES	NO	NO	0
TREE #23: PSEUDOTSUGA MENZIESII	29.0 IN	WEAK	YES	YES	NO	0
TREE #24: ACER MACROPHYLLUM	20.0 IN	FAIR	YES	YES	NO	0
TREE #25: PSEUDOTSUGA MENZIESII	21.0 IN	FAIR	YES	YES	NO	0
TREE #26: ACER MACROPHYLLUM	8.0 IN	WEAK	YES	NO	NO	0
TREE #27: PSEUDOTSUGA MENZIESII	59.0 IN	FAIR	YES	YES	YES	0
TREE #28: ARBUTUS MENZIESII	15.0 IN	GOOD	YES	YES	YES	0
TREE #29: ACER MACROPHYLLUM	25.5 IN	WEAK	NO	YES	NO	3
TREE #30: THUJA PLICATA	28.0 IN	WEAK	YES	YES	NO	0
TREE #31: FRAXINUS LAEFOOLIA	15.5 IN	FAIR	NO	YES	NO	2
TREE #32: PSEUDOTSUGA MENZIESII	25.0 IN	WEAK	YES	YES	NO	0
TREE #33: ALNUS RUBRA	22.0 IN	POOR	YES	NO	NO	0
TREE #34: THUJA PLICATA	13.5 IN	GOOD	YES	YES	NO	0
TOTAL REPLACEMENT TREES REQUIRED:						63

TOTAL EXISTING CALIPER: 8015 IN
PROPOSED CALIPER OF TREES TO REMAIN: 335.3 IN
41.83%



TREE PLAN

SCALE: 1" = 10'



RIPPLE
DESIGN STUDIO

206.913.2333

4303 STONE WAY N
SEATTLE, WA 98103

9790

REGISTERED
ARCHITECT

JAMES M DEARTH
STATE OF WASHINGTON

ZIMMER RESIDENCE

4661 FOREST AVENUE, MERCER ISLAND, WA 98040

TREE REMOVAL +
REPLACEMENT
PLANS + CALCS

THIS DRAWING, AS AN INSTRUMENT OF SERVICE, IS TO REMAIN THE SOLE PROPERTY OF RIPPLE DESIGN STUDIO + SHALL NOT BE REPRODUCED, PUBLISHED, OR USED IN ANY MANNER WITHOUT PROPER AUTHORIZATION.
COPYRIGHT © 2017 BY RIPPLE DESIGN STUDIO

RELEASE

7 APRIL 2025

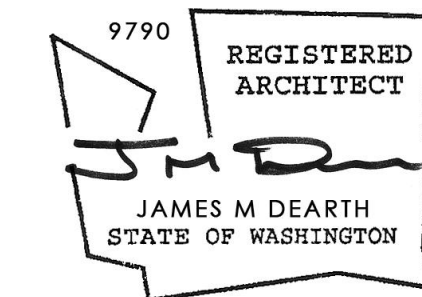
PERMIT CORRECTIONS
9 MAY 2025



RIPPLE
DESIGN STUDIO

206.913.2333

4303 STONE WAY N
SEATTLE, WA 98103



ZIMMER RESIDENCE
4661 FOREST AVE SE, MERCER ISLAND, WA 98040

SHORING PLAN

THIS DRAWING, AS AN INSTRUMENT OF SERVICE, IS TO REMAIN THE SOLE PROPERTY OF RIPPLE DESIGN STUDIO + SHALL NOT BE REPRODUCED, PUBLISHED, OR USED IN ANY MANNER WITHOUT PROPER AUTHORIZATION. COPYRIGHT © 2017 BY RIPPLE DESIGN STUDIO

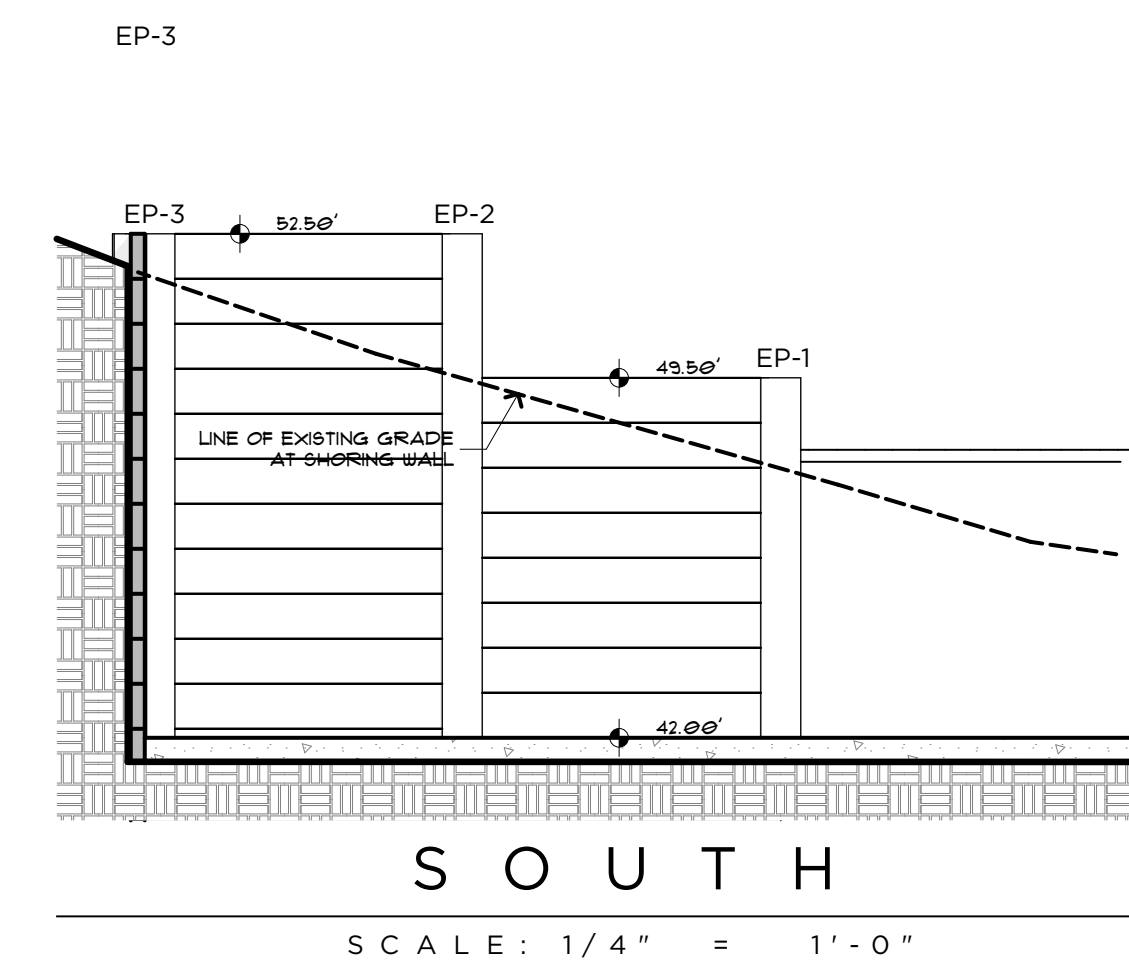
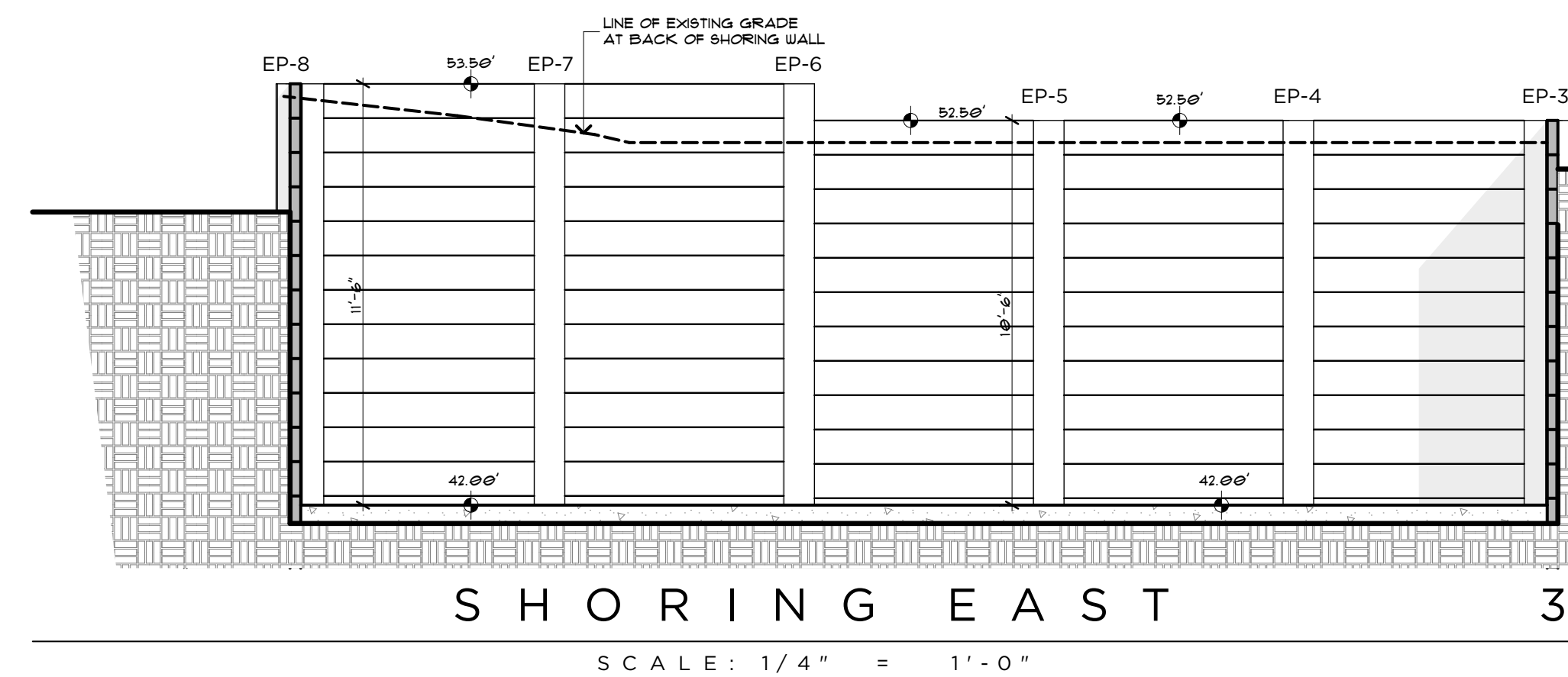
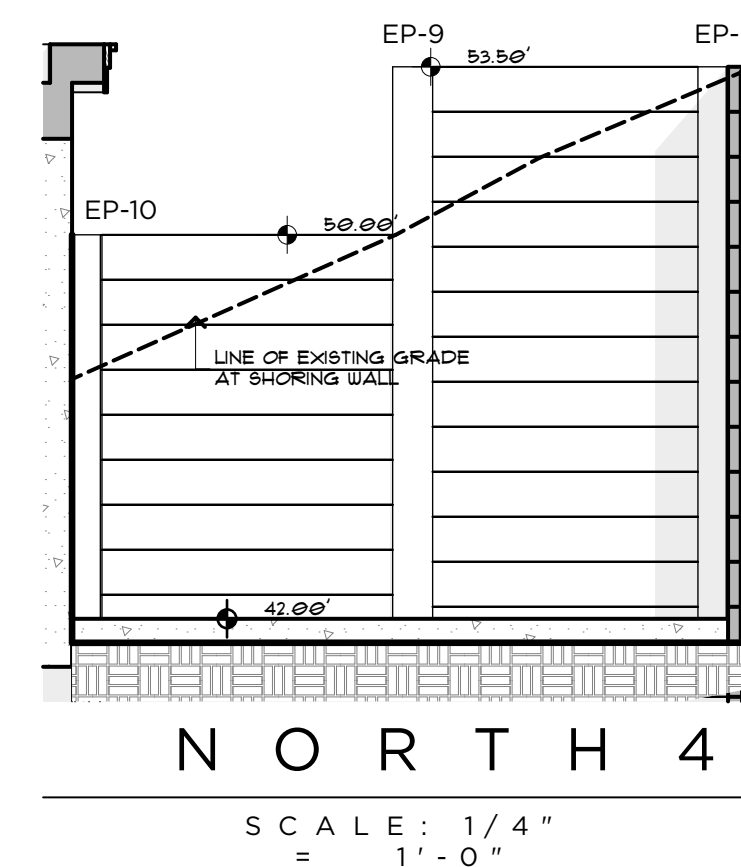
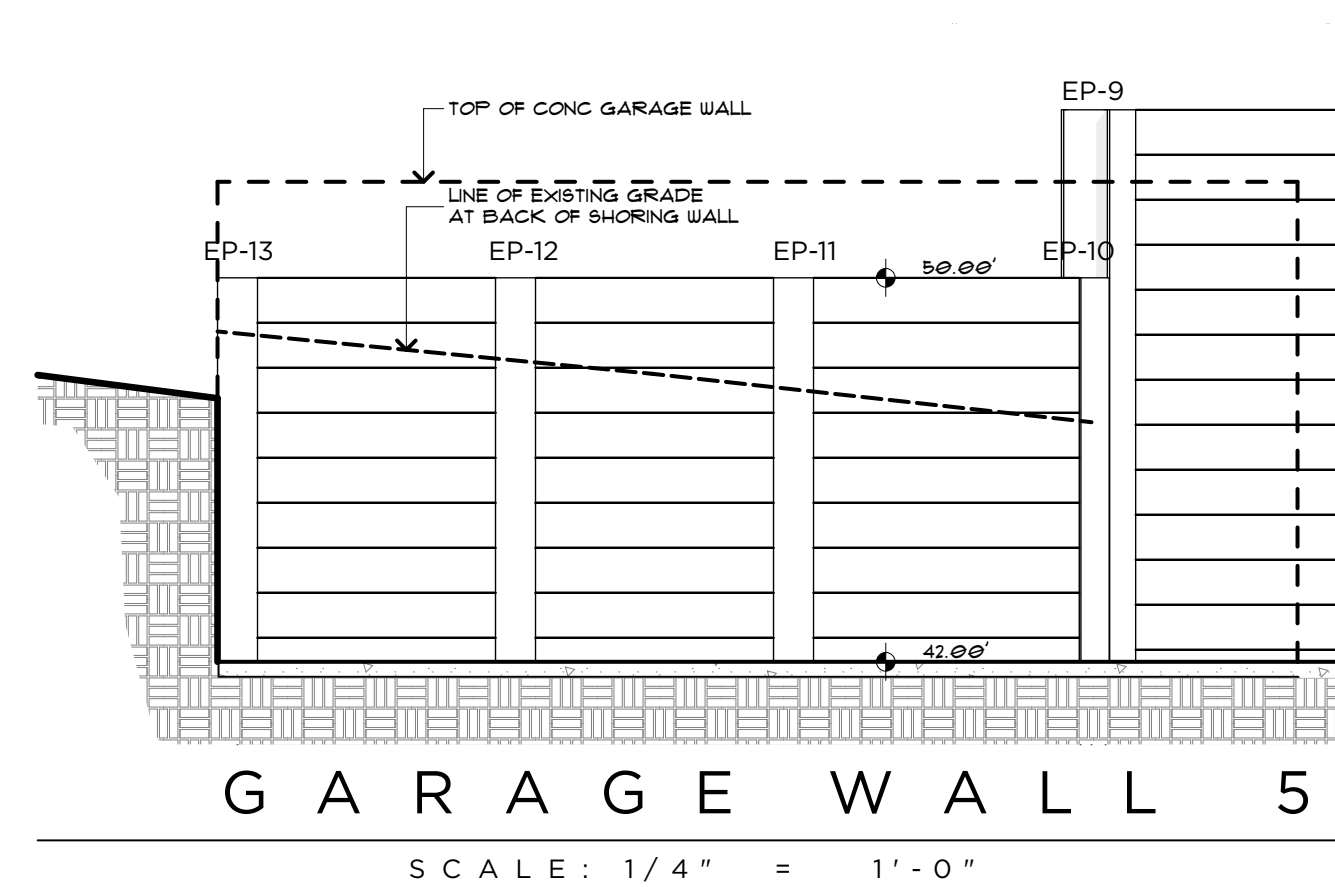
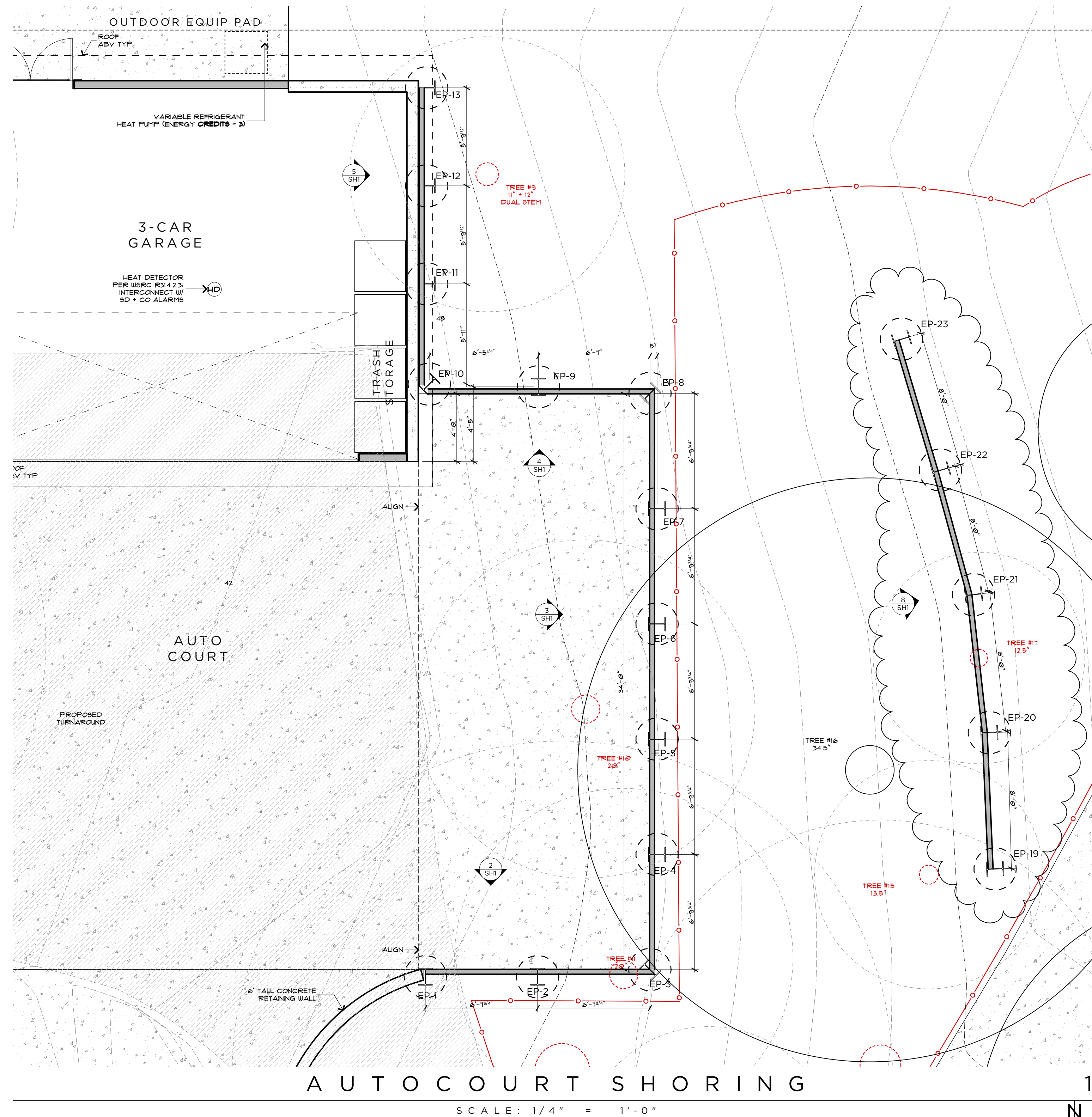
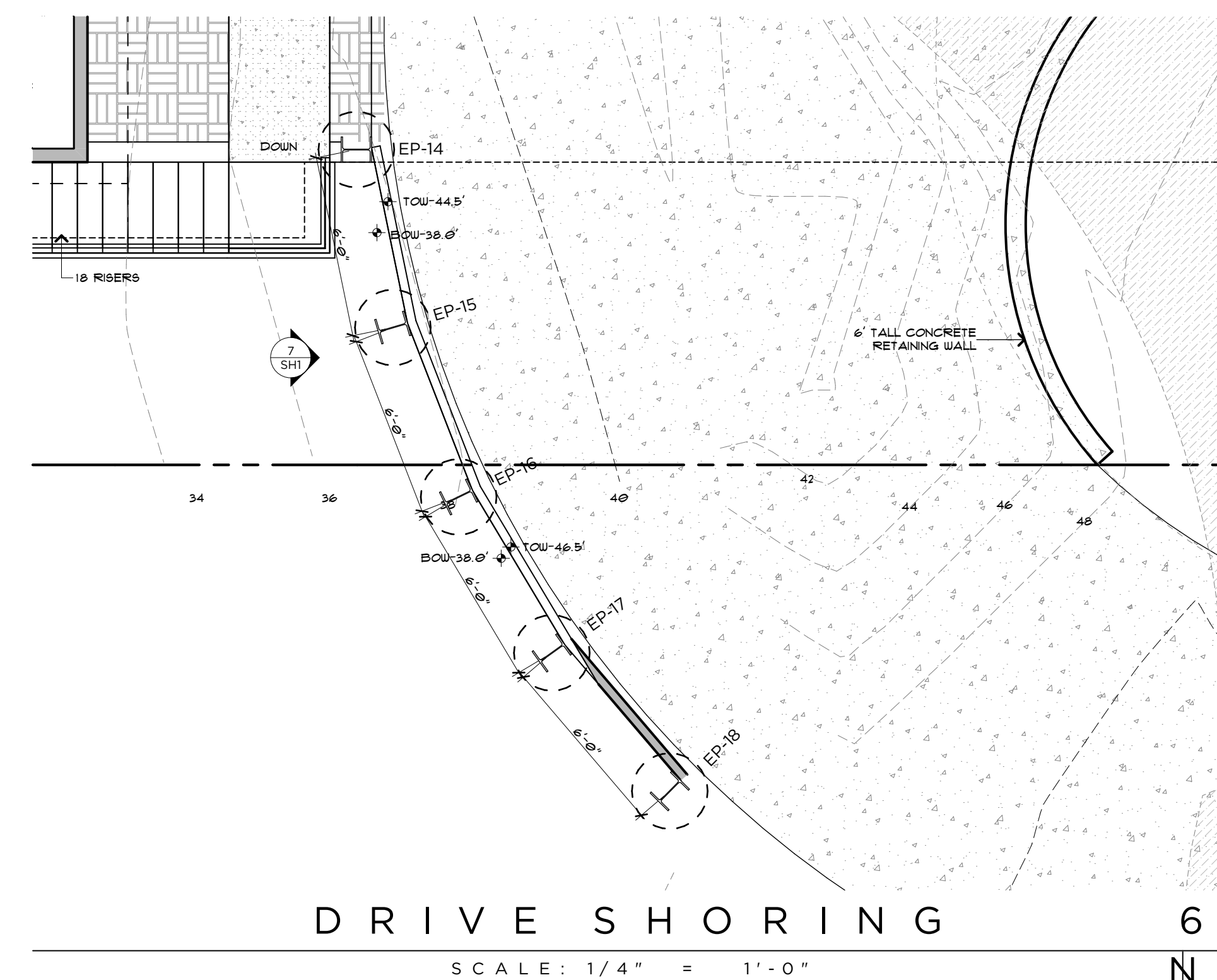
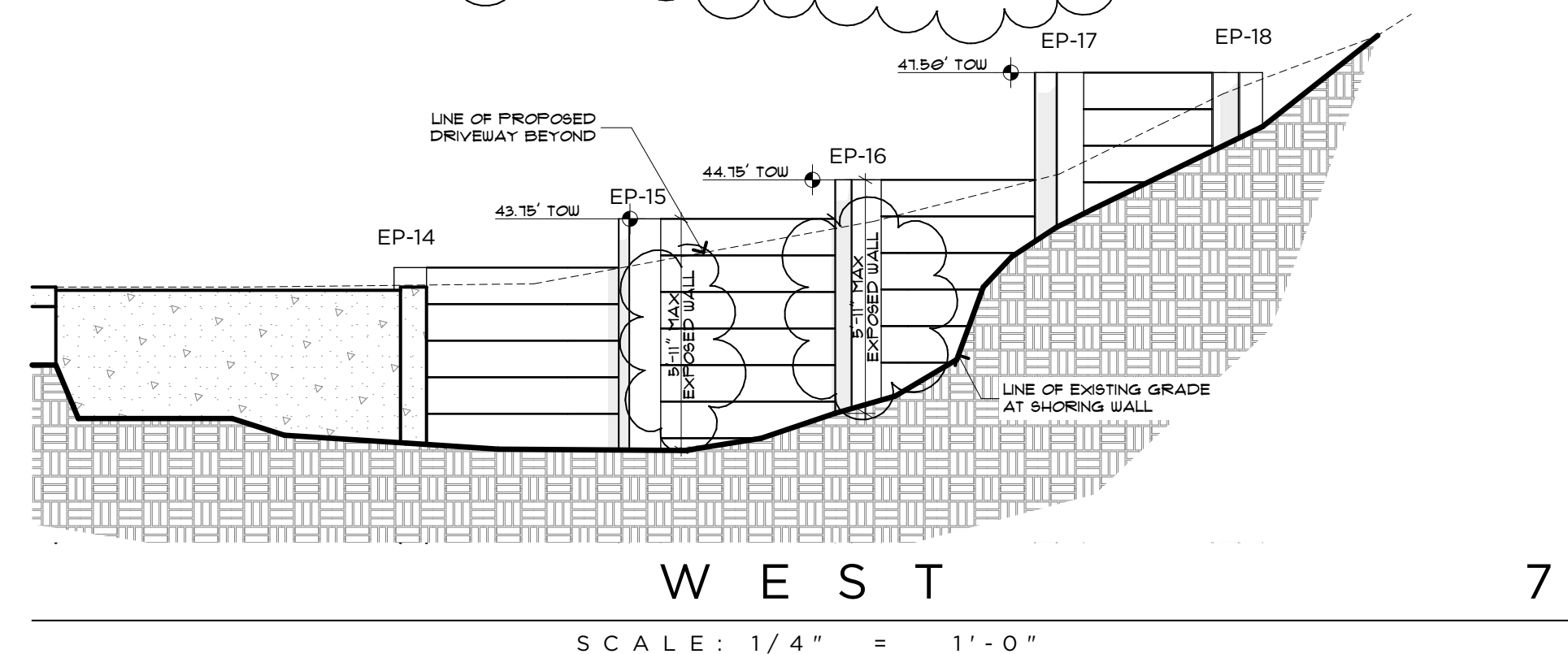
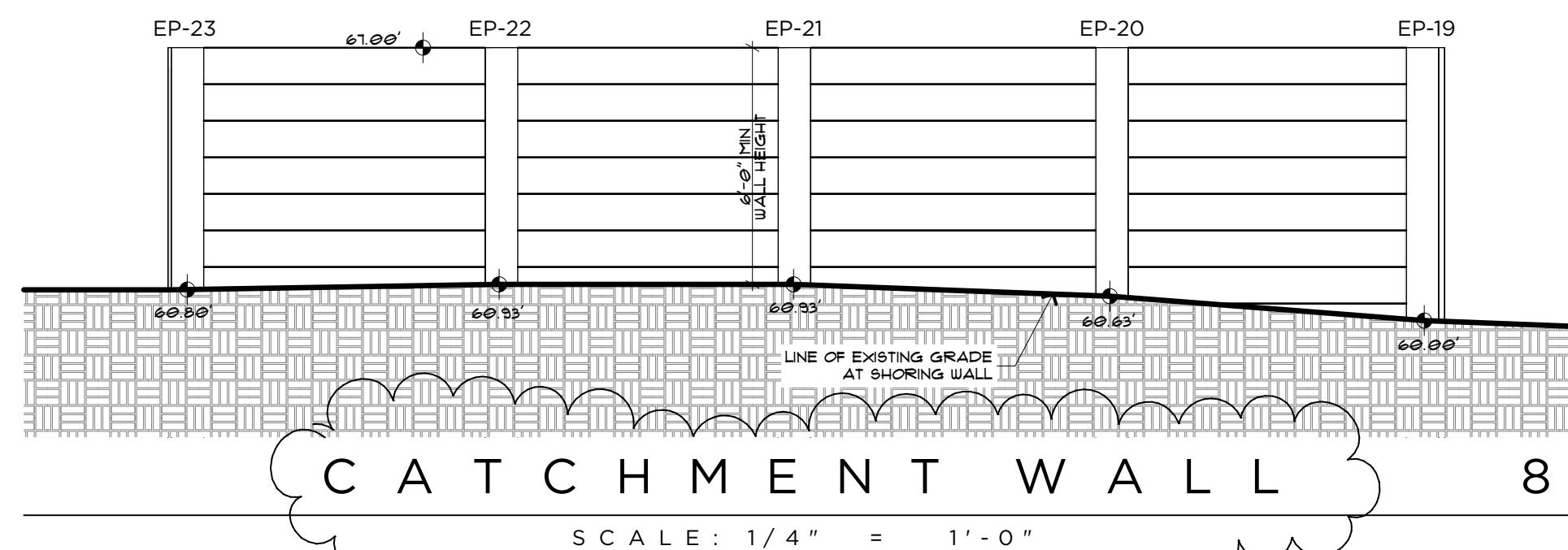
RELEASE

7 APRIL 2025

PERMIT CORRECTIONS
9 MAY 2025

SH 1

ZIMMER
ARCHITECTS



General Structural Notes

The Following Apply Unless Noted Otherwise on the Drawings

Criteria

1. CODE REQUIREMENTS: ALL DESIGN AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE, 2021 EDITION.
2. REFERENCE DOCUMENTS:

a. GEOTECHNICAL REPORT BY PanGEO, INC., DATED October, 2024 (Proj #21-552) & SUBSEQUENT REVISIONS.
3. DESIGN LOADS: THE SOIL PRESSURE INDICATED ON THE SOIL PRESSURE DIAGRAMS WHERE USED FOR DESIGN.
4. SOILS INSPECTION: INSPECTION BY THE SOILS ENGINEER SHALL BE PERFORMED FOR PILE PLACEMENT AND TIEBACK PLACING AND STRESSING. ALL PREPARED SOIL BEARING SURFACES SHALL BE INSPECTED BY THE SOILS ENGINEER PRIOR TO PLACEMENT OF PILE. SOIL COMPACTION SHALL BE SUPERVISED/TESTED BY THE GEOTECHNICAL ENGINEER.
5. SPECIAL INSPECTION: SPECIAL INSPECTION OF THE FOLLOWING TYPES OF CONSTRUCTION SHALL BE PROVIDED IN ACCORDANCE WITH SECTIONS 110 AND 1701 OF THE INTERNATIONAL BUILDING CODE AND THE PROJECT SPECIFICATIONS BY A QUALIFIED TESTING AGENCY DESIGNATED BY THE ARCHITECT, AND RETAINED BY THE BUILDING OWNER. THE ARCHITECT, STRUCTURAL ENGINEER, AND BUILDING DEPARTMENT SHALL BE FURNISHED WITH COPIES OF ALL INSPECTION AND TEST RESULTS.

-STRUCTURAL STEEL FABRICATION AND ERECTION (INCLUDING FIELD WELDING AND HIGH-STRENGTH FIELD BOLTING)
-PERMANENT CONCRETE CONSTRUCTION PER TABLE 1705.3
6. UTILITY LOCATION: THE SHORING CONTRACTOR SHALL DETERMINE THE LOCATION OF ALL ADJACENT UNDERGROUND UTILITIES PRIOR TO DRILLING PILE HOLES, TIEBACK ANCHORS, OR CUTTING OR DIGGING IN STREETS OR ALLEYS. THE UTILITIES INFORMATION SHOWN ON THE PLANS MAY BE NOT COMPLETE.
7. SPECIAL CONDITIONS: CONTRACTOR SHALL VERIFY ALL DIMENSIONS OF EXISTING STRUCTURES IN THE FIELD AND SHALL NOTIFY THE ENGINEER OF ALL FIELD CHANGES PRIOR TO FABRICATION AND INSTALLATION.
8. SOILS: SEE REPORT OF GEOTECHNICAL INVESTIGATION FOR MORE COMPLETE INFORMATION, INCLUDING RECOMMENDATIONS FOR SHORING IN GENERAL, SHORING MONITORING, EXCAVATION, LAGGING, AND DRAINAGE.
9. SAWN LUMBER: SAWN LUMBER SHALL CONFORM TO "GRADING AND DRESSING RULES,"WEST COAST LUMBER INSPECTION BUREAU (WCLIB), LATEST EDITION. LUMBER SHALL BE THE SPECIES AND GRADE NOTED IN THE LAGGING TABLE.

TIMBER LAGGING SHALL BE PRESSURE TREATED WITH WATERBORNE PRESERVATIVES IN ACCORDANCE WITH AWPB STANDARD U1 AND SHALL MEET A USE CATEGORY OF UC4B OR BETTER. LAGGING SHALL BE 4X10 UNLESS OTHERWISE NOTED ON DRAWINGS.
10. STEEL SPECIFICATIONS: DESIGN, FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE FOLLOWING SPECIFICATIONS:

a. STRUCTURAL STEEL: AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS--ALLOWABLE STRESS DESIGN.

b. WELDING: AWS D1.1 (AWS PREQUALIFIED JOINT DETAILS USE 1/4" MINIMUM WELDS UNLESS NOTED OTHERWISE).

c. WELDER CERTIFICATION: WASHINGTON ASSOCIATION OF BUILDING OFFICIALS (WABO).
11. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

TYPE OF MEMBER	ASTM SPECIFICATION	Fy
WIDE FLANGE	A992	50 KSI
PIPE	A53	35 KSI
PLATES, SHAPES, ANGLES, AND RODS	A36	36 KSI
STRUCTURAL BOLTS	A325-N	
WOOD CONNECTION BOLTS	A307	
WELDING ELECTRODES	E70XX	

Concrete

1. CONCRETE: CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF CHAPTER 19 OF THE 2018 IBC. CONCRETE STRENGTHS SHALL BE VERIFIED BY STANDARD CYLINDER TESTS, UNLESS APPROVED OTHERWISE. REQUIRED ULTIMATE COMPRESSIVE STRENGTH OF STRUCTURAL GROUT SHALL BE REACHED BY 7 DAYS FOR TIEBACKS AND 28 DAYS FOR PILES.

f'c (psi)	Minimum Cement Per Cubic Yard	Max. Water Per 94 LB Cement	Use
-----	-----	-----	-----
3,000	1-1/2 Sacks 6 Sacks (PILING)	6 Gallons	Pile & Tieback lean concrete Pile & Tieback struct. grout

CONCRETE WALL SHALL ATTAIN A 28-DAY STRENGTH OF f'c=3,000 PSI

AS AN ALTERNATIVE TO THE ABOVE, THE CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGNS FOR APPROVAL TWO WEEKS PRIOR TO PLACING ANY CONCRETE. THE ALTERNATE MIX DESIGN WILL BE REVIEWED FOR CONFORMANCE TO ACI 318 Ch. 5 WITH SBC REVISIONS.

2. ALL CONCRETE WITH SURFACES EXPOSED TO WEATHER OR STANDING WATER SHALL BE AIR-ENTRAINED WITH AN AIR-ENTRAINING AGENT CONFORMING TO ASTM C260, C494, AND C618. TOTAL AIR CONTENT FOR FROST-RESISTANT CONCRETE SHALL BE IN ACCORDANCE WITH TABLE ACI 318 TABLE 4.2.1 MODERATE EXPOSURE.
3. REINFORCING STEEL SHALL CONFORM TO ASTM A615 (INCLUDING SUPPLEMENT S1), GRADE 60, fy=60,000 PSI. EXCEPTIONS: ANY BARS SPECIFICALLY SO NOTED ON THE DRAWINGS SHALL BE GRADE 40, fy=40,000 PSI. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185. SPIRAL REINFORCEMENT SHALL BE PLAIN WIRE CONFORMING TO ASTM A615, GRADE 60, fy=60,000 PSI.

Pipe and Lagging Construction

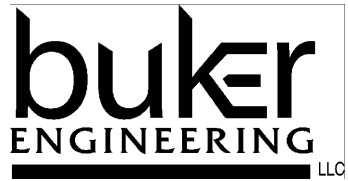
1. DEMOLITION: SHORING AND SOIL EXCAVATION SHALL BE DONE SIMULTANEOUSLY.
2. VERIFICATION: DIMENSIONS AND LOCATION OF EXISTING STRUCTURES SHALL BE VERIFIED PRIOR TO FABRICATION AND INSTALLATION OF ANY STRUCTURAL MEMBER. NOTIFY ENGINEER ABOUT ANY DISCREPANCIES PRIOR TO FABRICATION.
3. STEEL PILE PLACEMENT TOLERANCES:

1" INSIDE PERPENDICULAR TO SHORING WALL.
1" OUTSIDE PERPENDICULAR TO SHORING WALL.
3" LATERALLY.

4. LAGGING: TIMBER LAGGING SHALL BE INSTALLED IN ALL AREAS. VOIDS BETWEEN LAGGING AND SOIL SHALL BE BACKFILLED. DRAINAGE BEHIND THE WALL MUST BE MAINTAINED. IT IS CONTRACTOR'S RESPONSIBILITY TO LIMIT THE AMOUNT OF EXPOSED SOIL WITHOUT LAGGING TO AVOID LOSS OF SOIL. MAXIMUM HEIGHT OF 4 FEET IS RECOMMENDED. SPECIAL CARE SHOULD BE TAKEN TO AVOID GROUND LOSS DURING EXCAVATION.
5. SHORING MONITORING: A SYSTEMATIC PROGRAM OF OBSERVATION SHALL BE CONDUCTED DURING THE PROJECT EXECUTION TO DETERMINE THE EFFECT OF CONSTRUCTION ON ADJACENT FACILITIES AND STRUCTURES IN ORDER TO PROTECT THEM FROM DAMAGE. REFER TO REPORT OF GEOTECHNICAL INVESTIGATION FOR RECOMMENDATIONS. FIELD DATA AND MEASUREMENTS ARE TO BE SUBMITTED TO STRUCTURAL AND GEOTECHNICAL ENGINEER FOR REVIEW.

MONITORING PLAN SHALL INCLUDE THE FOLLOWING:

- THE TOP OF EVERY OTHER SOLDIER PILE SHALL BE MONITORED TWICE A WEEK DURING EXCAVATION FOR LAGGING INSTALLATION. BASED ON THOSE MONITORING RESULTS, THE MONITORING FREQUENCY MAY BE REDUCED TO ONCE A WEEK AFTER THE FOUNDATION IS COMPLETED.
- ADJACENT STRUCTURES OR RETAINING WALLS LOCATED WITHIN 20 FEET OF THE PLANNED SHORING WALL SHALL BE MONITORED AT ESTABLISHED OPTICAL SURVEY POINTS.
- ESTABLISH A BASELINE READING OF MONITORING POINTS ON THE GROUND SURFACE AND SETTLEMENT-SENSITIVE STRUCTURES BEHIND THE SHORING WALL ALIGNMENT PRIOR TO EXCAVATION AND INSTALLATION OF THE SHORING SYSTEMS.
- A LICENSED SURVEYOR MUST DO THE SURVEYING AT LEAST ONCE A WEEK.
- THE GEOTECHNICAL ENGINEER SHALL REVIEW SURVEY DATA AND PROVIDE AN EVALUATION OF WALL PERFORMANCE ALONG WITH SURVEY DATA TO DPD AND SDOT ON AT LEAST A WEEKLY BASIS. IMMEDIATELY AND DIRECTLY, NOTIFY DPD AND SDOT IF ANY UNUSUAL OR SIGNIFICANTLY INCREASED MOVEMENT OCCURS.
- IMMEDIATELY AND DIRECTLY NOTIFY THE GEOTECHNICAL AND STRUCTURAL ENGINEERS, IF 0.5 INCHES OF MOVEMENT OCCURS BETWEEN TWO CONSECUTIVE READINGS AND WHEN TOTAL MOVEMENTS REACH 0.5 INCH. AT THAT AMOUNT OF MOVEMENT, THE ENGINEERS AND DESIGNERS SHALL DETERMINE THE CAUSE OF DISPLACEMENT AND DEVELOP REMEDIAL MEASURES SUFFICIENT TO LIMIT TOTAL WALL MOVEMENTS TO WHAT HAS BEEN DEFINED AS ACCEPTABLE BY THE DESIGN TEAM.



4303 Stone Way N
Seattle, WA 98103
206.258.6333



Zimmer Residence

4661 Forest Ave SE
Mercer Island, WA, 98040

No.	Date	Issue
	11/13/24	Permit
	4/2/25	Corrections
	4/17/25	Revisions
	5/7/25	Corrections

Sheet Contents

General Structural Notes

Sheet No.

SH2

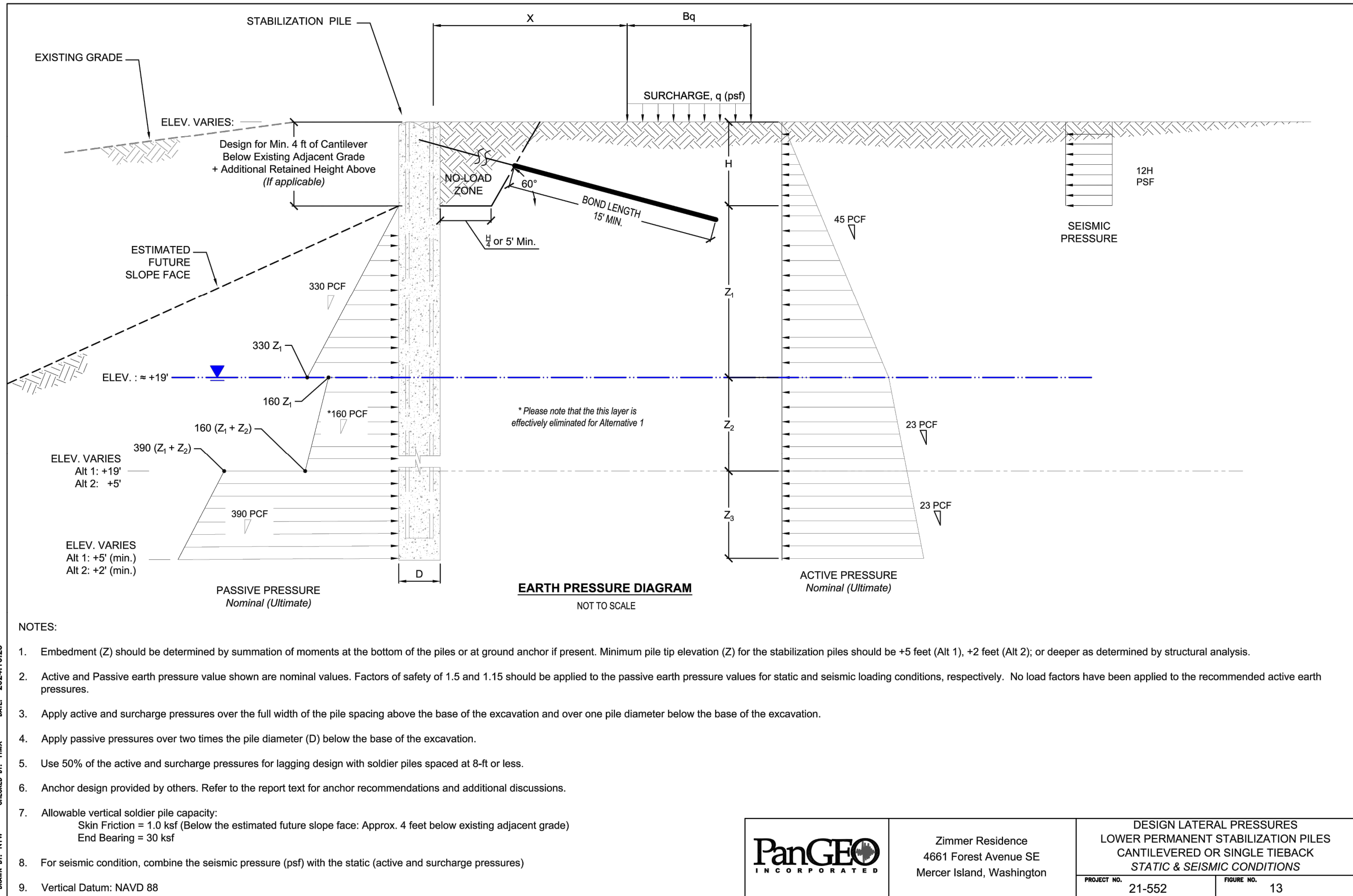
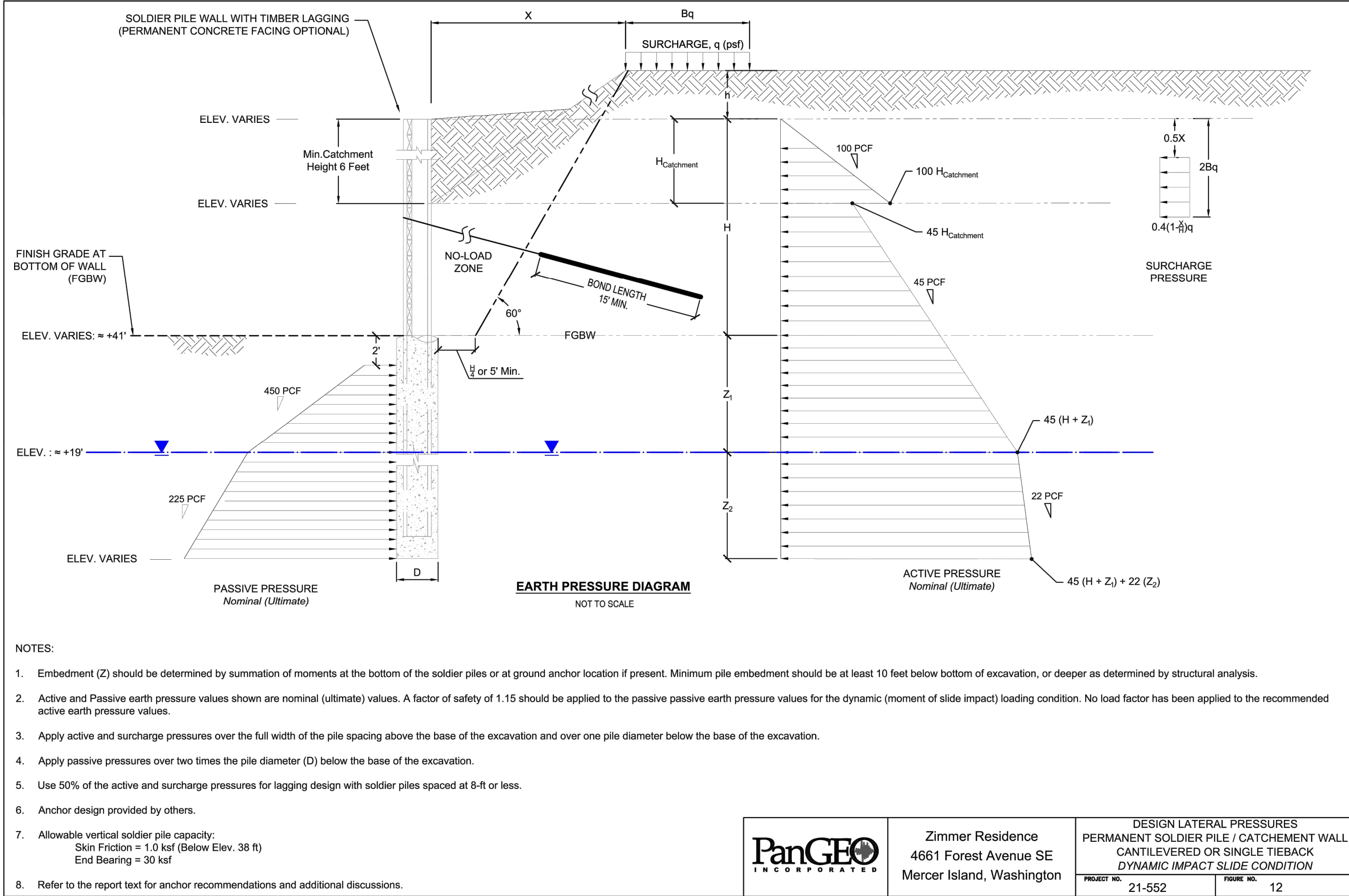
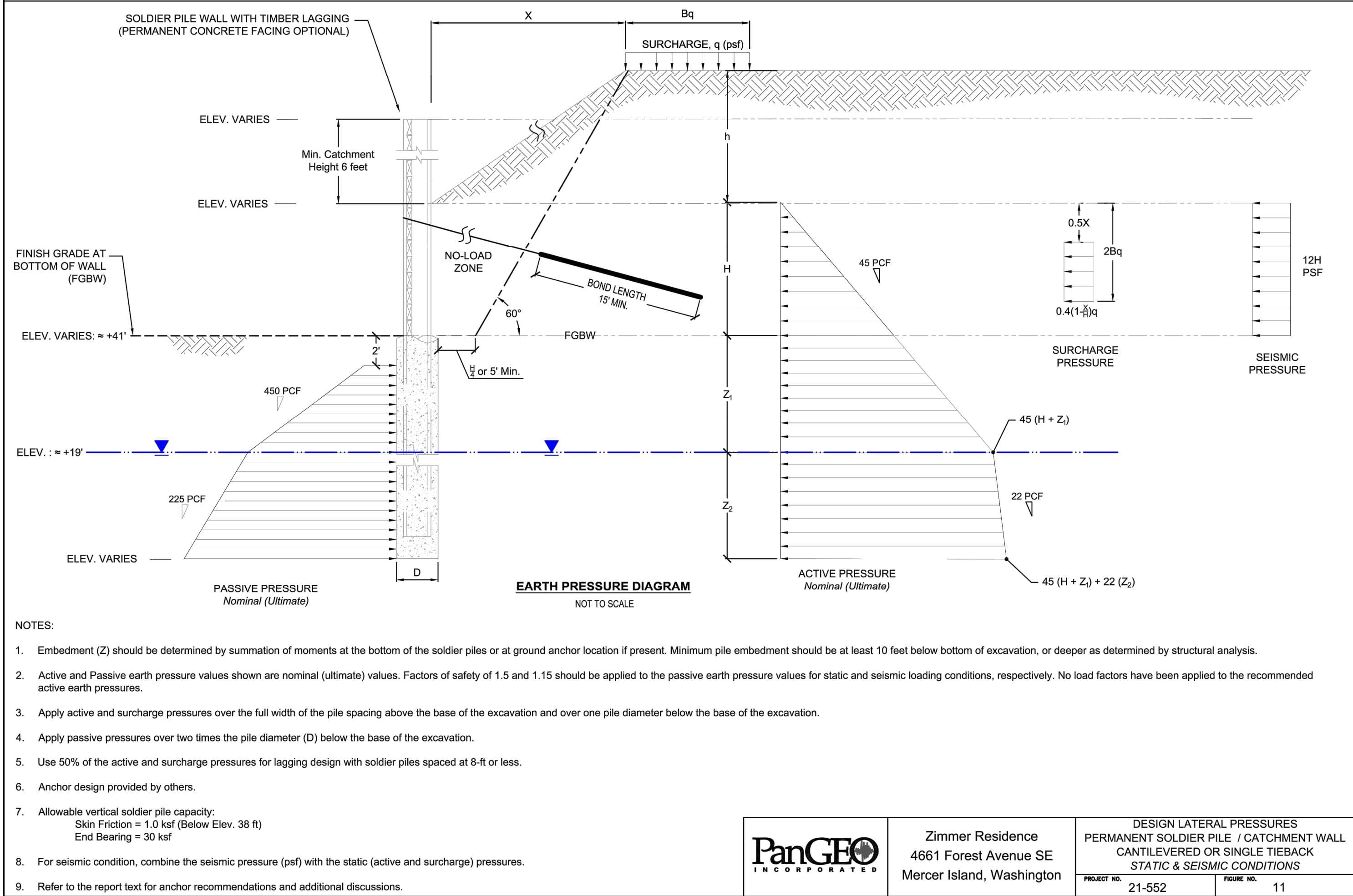
No.	Date	Issue
11/13/24	Permit	
4/2/25	Corrections	
4/17/25	Revisions	
5/7/25	Corrections	

Sheet Contents

SHORING
DETAILS

Sheet No.

SH3



Zimmer Residence

4661 Forest Ave SE
Mercer Island, WA, 98040

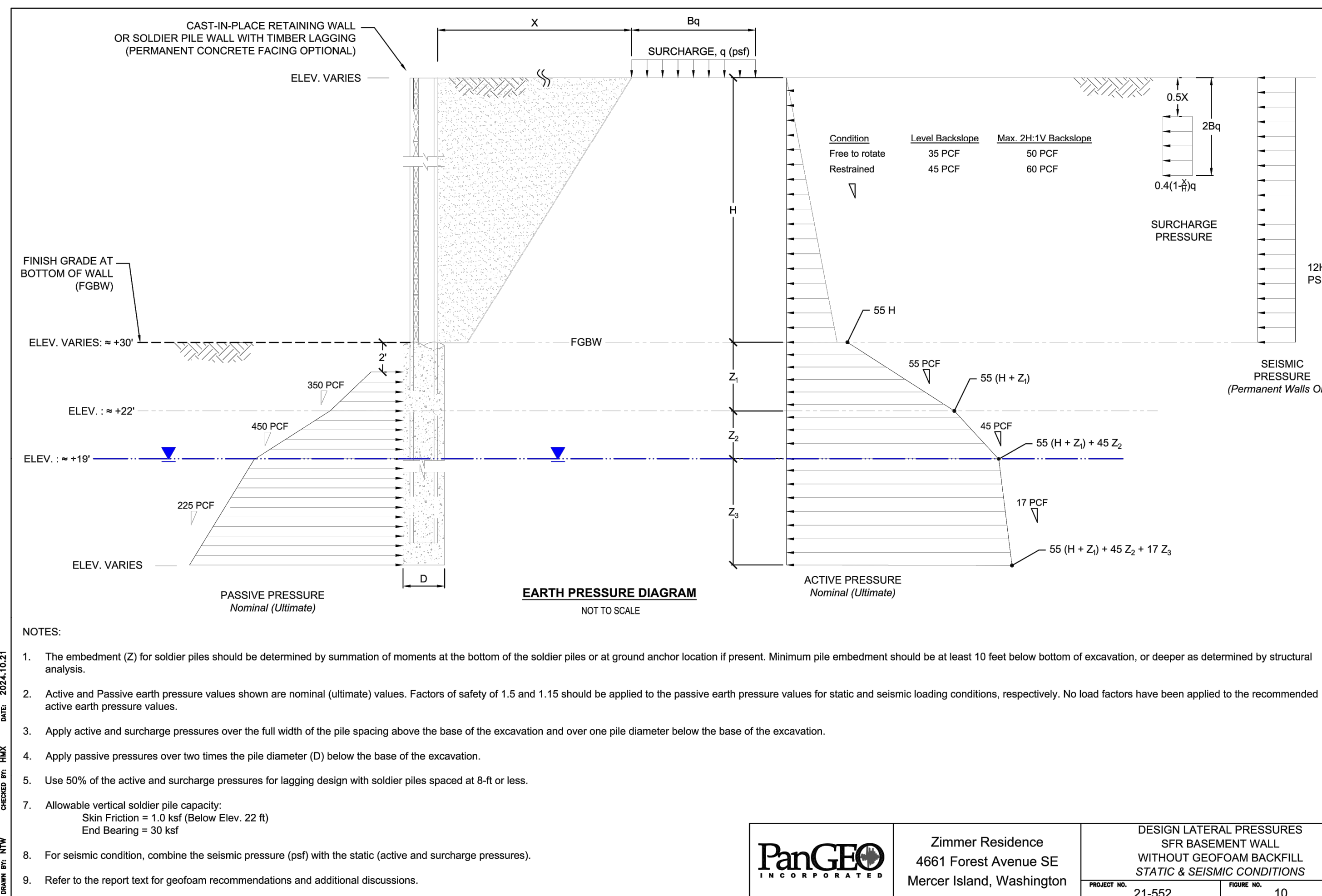
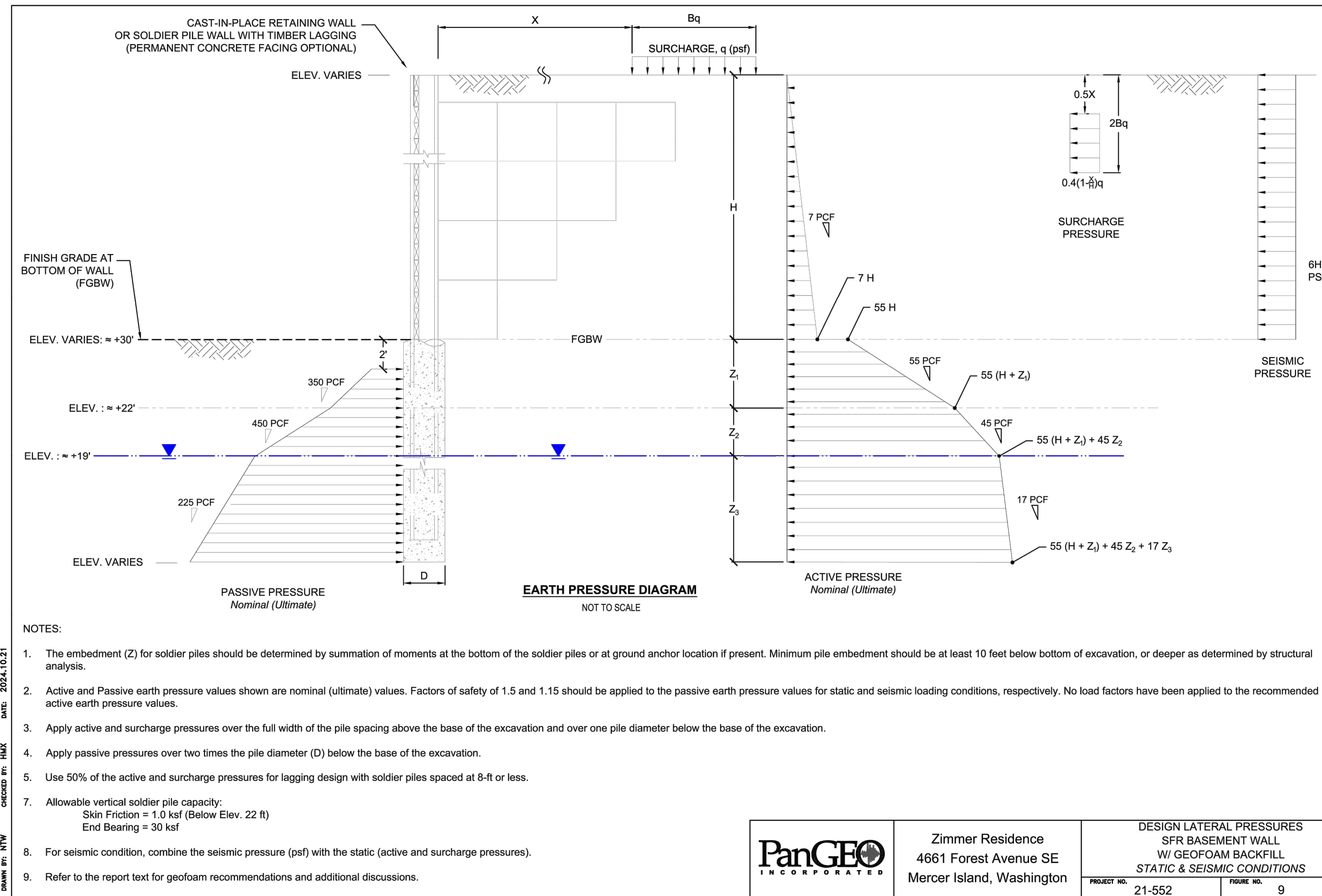
No.	Date	Issue
11/13/24	Permit	
4/2/25	Corrections	
4/17/25	Revisions	
5/7/25	Corrections	

Sheet Contents

SHORING
DETAILS

Sheet No.

SH4



LIMITS OF DISTURBANCE

FILTER FABRIC FENCE (SILT FENCE)

STABILIZED CONSTRUCTION ENTRANCE

CATCH BASIN INLET PROTECTION

TREE PROTECTION FENCING

STRAW WATTLES

USE AS NEEDED

LOT 14 AND THE NORTH 30 FEET OF LOT 13, LAKE ISLE, ACCORDING TO THE PLAT THEREOF
RECORDED IN VOLUME 19 OF PLATS, PAGE 35, RECORDS OF KING COUNTY, WASHINGTON;

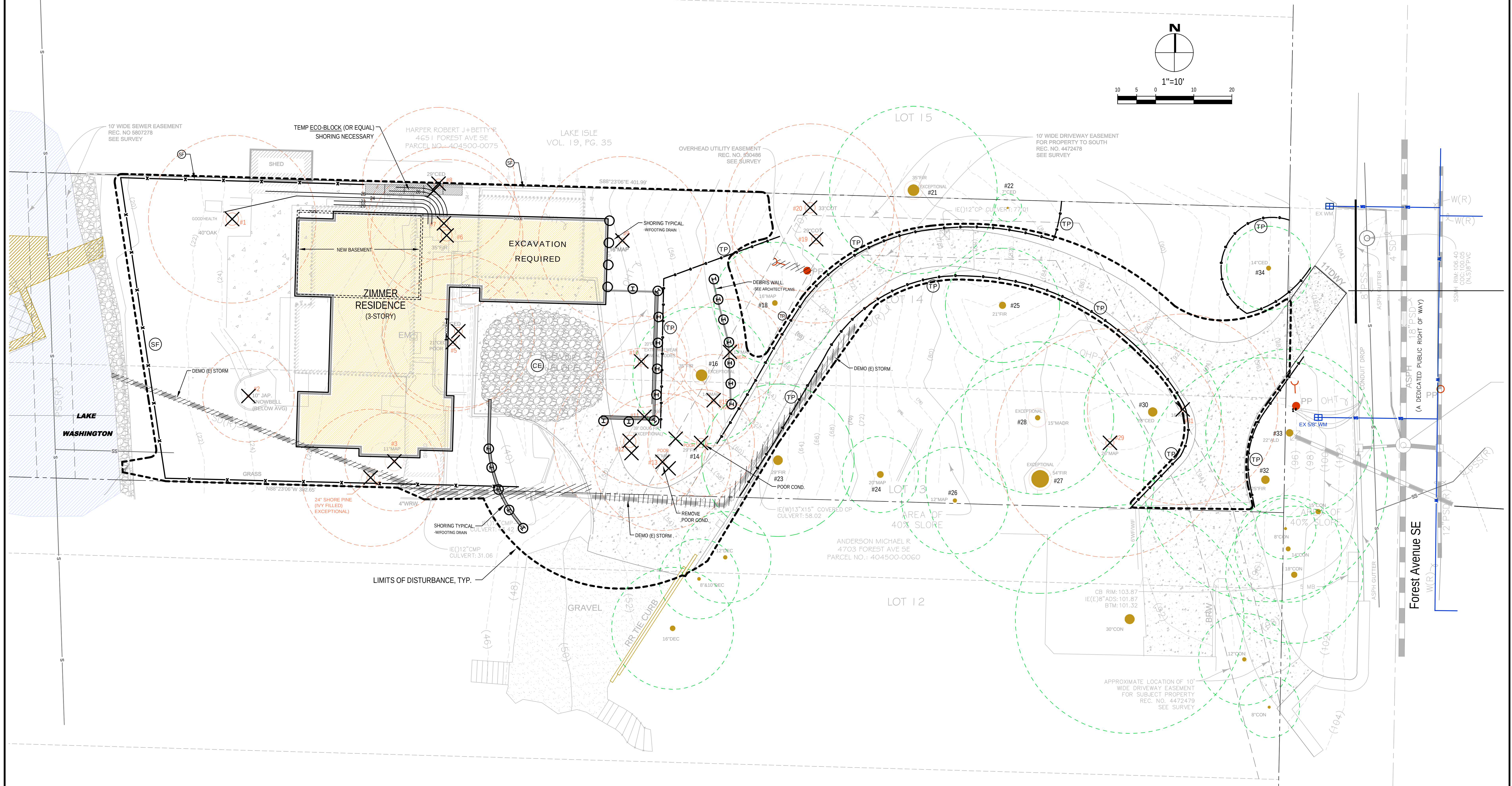
TOGETHER WITH SECOND CLASS SHORELANDS ADJOINING.

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

MINIMUM 10% ORGANIC
MULCH &
COMPOST SOIL REQUIRED

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

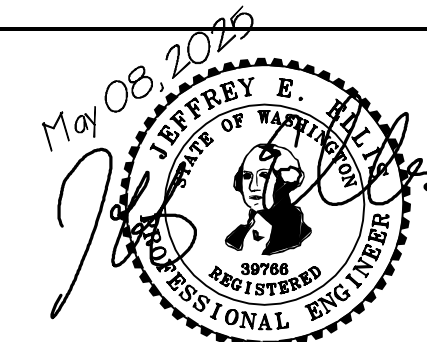
A POST CONSTRUCTION INSPECTION & CERTIFICATION OF AMENDED SOILS IS REQUIRED BY A LICENSED CIVIL ENGINEER. THIS IS REQUIRED BEFORE FINAL SIGN-OFF BY CITY.



NO.	DATE	BY	REVISIONS

APPLICANT
DAVID AND KAREN ZIMMER

DATE:	May 08, 2025
JOB#	2033
DRAFTEDSS	DESIGN: DE
DIGITAL SIGNATURE	



CIVIL ENGINEERING
SOLUTIONS

701 N. 36th STREET, SUITE 450 SEATTLE, WA 98103
PHONE: 206.930.0342 DUFFY@CESOLUTIONS.US

TESC PLAN
TREE RETENTION PLAN

ZIMMER RESIDENCE
4661 FOREST AVENUE SE, MERCER ISLAND, WA 98040

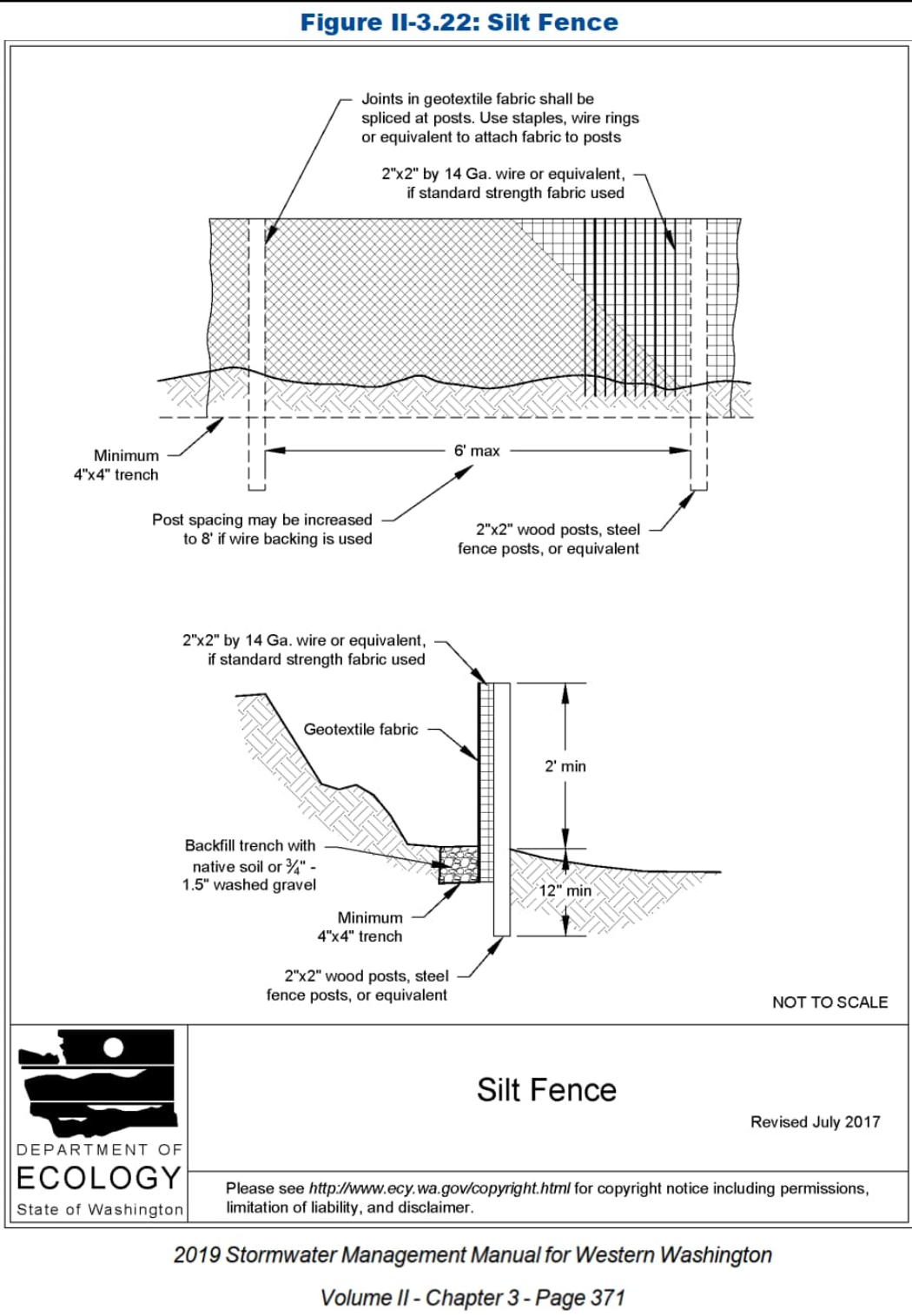
DRAWING NO:

C1.0

PN 404500-0065

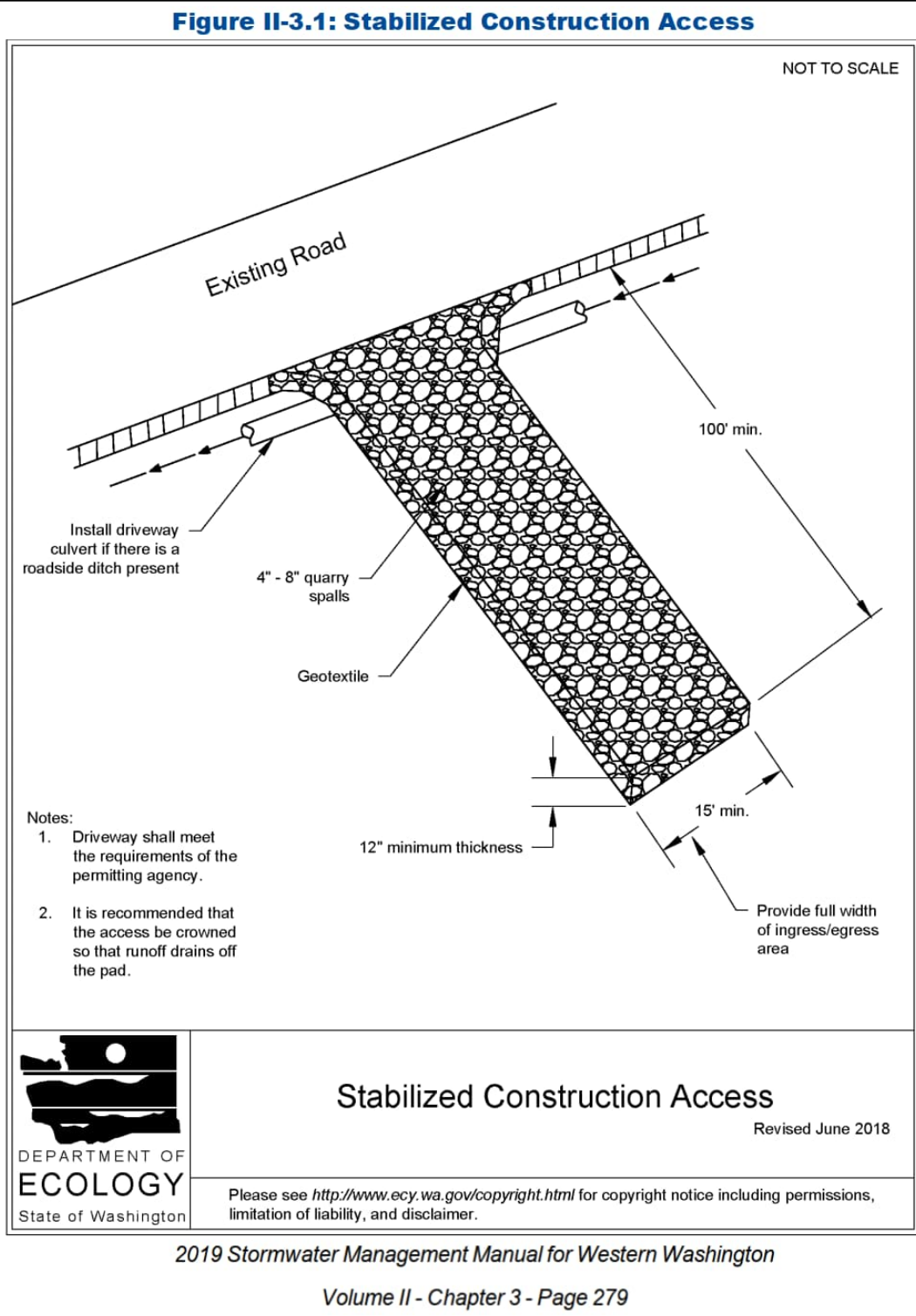
SILT FENCE DETAIL

DOE



CONSTRUCTION ENTRANCE

DOE



RECOMMENDED CONSTRUCTION SEQUENCE

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

DENUDED AREAS REQUIREMENTS

- APRIL 1 TO SEPT 30
ALL DENUDED AREAS MUST BE STABILIZED WITHIN 7 DAYS OF CONSTRUCTION. PLEASE READ ALL CITY TESC NOTES ON SHEET C1.2.
- OCT 1 TO MARCH 31
ALL DENUDED AREAS MUST BE STABILIZED WITHIN 2 DAYS OF GRADING. IF AN EROSION PROBLEM ALREADY EXISTS ON THE SITE, OTHER COVER PROTECTION AND EROSION CONTROL WILL BE REQUIRED.
1. AT NO TIME SHALL MORE THAN ONE (1) FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT-LOADED WATER INTO THE DOWNSTREAM SYSTEM.
2. ANY PERMANENT RETENTION/DETENTION FACILITY USED AS A TEMPORARY SETTLING BASIN SHALL BE MODIFIED WITH THE NECESSARY EROSION CONTROL MEASURES AND SHALL PROVIDE ADEQUATE STORAGE CAPACITY. IF THE FACILITY IS TO FUNCTION ULTIMATELY AS AN INFILTRATION SYSTEM, THE TEMPORARY FACILITY MUST BE ROUGH GRADED SO THAT THE BOTTOM AND SIDES ARE AT LEAST THREE FEET ABOVE THE FINAL GRADE OF THE PERMANENT FACILITY.
3. COVER MEASURES WILL BE APPLIED IN CONFORMANCE WITH APPENDIX D OF THE SURFACE WATER DESIGN MANUAL.
4. PRIOR TO THE BEGINNING OF THE WET SEASON (OCT. 1), ALL DISTURBED AREAS SHALL BE REVIEWED TO IDENTIFY WHICH ONES CAN BE SEEDED IN PREPARATION FOR THE WINTER RAINS. DISTURBED AREAS SHALL BE SEEDED WITHIN ONE WEEK OF THE BEGINNING OF THE WET SEASON.

EROSION CONTROL NOTES

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

CITY NOTES

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

NO.	DATE	BY	REVISIONS	APPLICANT DAVID AND KAREN ZIMMER	DATE: Apr 09, 2025 JOB# 2033 DRAFTED: SS DESIGN: DE DIGITAL SIGNATURE	CIVIL ENGINEERING SOLUTIONS 701 N. 36th STREET, SUITE 450 PHONE: 206.930.0342 SEATTLE, WA 98103 DUFFY@CESOLUTIONS.US	TESC & CITY NOTES TESC DETAILS ZIMMER RESIDENCE 4661 FOREST AVENUE SE, MERCER ISLAND, WA 98040	DRAWING NO: C1.2 APN 404500-0065
-----	------	----	-----------	-------------------------------------	--	---	---	--

SANITARY SEWER IMPROVEMENTS

- 1 -
2 -6" SDR 35 PVC SANITARY SEWER(SS) @ MIN 1.0 %
3 -BACKFLOW VALVE
4 -6" SEWER CLEANOUT PER MERCER ISLAND DETAIL S-19.
7 -LOCATE AND VIDEO CONDITION OF EXISTING SANITARY SIDE SEWER. REPLACE LINE IF FOUND DEFECTIVE AS DETERMINED BY CITY INSPECTOR.

WATER IMPROVEMENTS

- 10 -NEW SF RESIDENTIAL WATER SERVICE & METER PIT. CONFIRM REQUIRED SIZE WITH BUILDING PERMIT REVIEW. INSTALL PER MERCER ISLAND DETAIL W-13, W-14, OR W-14A DEPENDING ON SIZE REQUIREMENT.
11 -PRIVATE HDPE WATER FROM METER TO HOUSE. SEE PLAN FOR SIZE. CONFIRM ADEQUATE TO MEET FIRE FLOW REQUIREMENTS. HDPE WATER (ASTM D2238) RECOMMENDED DEPTH=36". COORDINATE HOUSE ENTRY WITH BUILDER/OWNER.
12 -REDUCED PRESSURE BACKFLOW ASSEMBLY (RPBA) REQUIRED. PROVIDE FROST PROTECTION IN ACCORDANCE WITH UPC (UNIFORM PLUMBING CODE).
14 -ABANDONED EX WATER METER & CAP AT MAIN. NEW WATER SERVICE LINE, NEW WATER METER, AND NEW WATER SUPPLY LINE ARE REQUIRED. THE LOCATION OF THE NEW WATER METER WILL BE DETERMINED BY THE CITY PUBLIC WORKS.

STORM DRAIN

- 20 -4" STORM DRAIN (3034 PVC) @ MIN 2 % GRADE
21 -4" FOUNDATION DRAIN (3034 PVC) @ MIN 1 % GRADE
22 -6" STORM DRAIN (3034 PVC) @ MIN 2 % GRADE
23 -
24 -12" STORM DRAIN (HDPE N12 OR EQUAL)
25 -
26 -
28 -TRENCH EXCAVATION FOR SUBJECT STORM PIPE SHALL REMAIN CONTAINED WITHIN PROPERTY LINE UNLESS A WRITTEN CONSTRUCTION EASEMENT IS PROVIDED BY ADJACENT OWNER
29 -

STORM DRAIN STRUCTURES

- 30 -TYPE 1 CB WITH STANDARD GRATE. MAX 5' RIM TO FL DEPTH. PROVIDE RISOR WITH TURNED-DOWN ELBOW FOR IMPROVED WATER QUALITY FUNCTION.
31 -
32 -TYPE 1 CB WITH SOLID LID
33 -TYPE 1 CB (OR EQUAL). OIL/WATER SPILL CONTROL STYLE. USE DECORATIVE GRATE IF AVAILABLE
34 -
35 -18" YARD DRAIN (OR EQUAL) WITH SOLID LID
36 -8" WIDE NDS DURASLOPE CHANNEL DRAIN KIT OR EQUAL. CLASS B VEHICLE RATED GRATE.
39 -
40 -
41 -
43 -
46 -
47 -
48 -

STORM BMP's

- 50 -COMPOST AMENDED SOIL TO ALL DISTURBED AREAS (SEE DETAIL SHEET C3.5). TILL 2-3" OF COMPOST INTO UPPER 8" OF SOIL. LOOSEN COMPACTED SUBSOIL IF NEEDED BY RIPPING TO 12" DEPTH. MULCH LANDSCAPE BEDS AFTER PLANTING.

NO BMPs PROPOSED

MISC KEY NOTES

- 60 -MIN 4" PRIVATE CONCRETE CURB RECOMMENDED
70 -SOLDIER PILE DEBRIS WALL. REQUIRED BY GEOTECHNICAL. SEE DESIGN BY PANGEO.
100 -SOLDIER PILE WALL WITH FOOTING DRAIN ON LOW SIDE AS SHOWN. WEEP HOLES MIN 6" OC.

SOILS

"INFILTRATION LID FACILITIES ARE NOT PERMITTED"
LAKEFRONT PROPERTY
INFILTRATION NOT PROPOSED

SURVEYOR

TOPOGRAPHIC SURVEY BY:
BUSH, ROED & HITCHINGS, INC.
2009 MINOR AVE. EAST
SEATTLE, WA 98102
PHONE (206) 323-4144
www.brhinc.com

SOIL AMENDMENT REQUIRED

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

SOIL CERTIFICATION REQUIRED

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

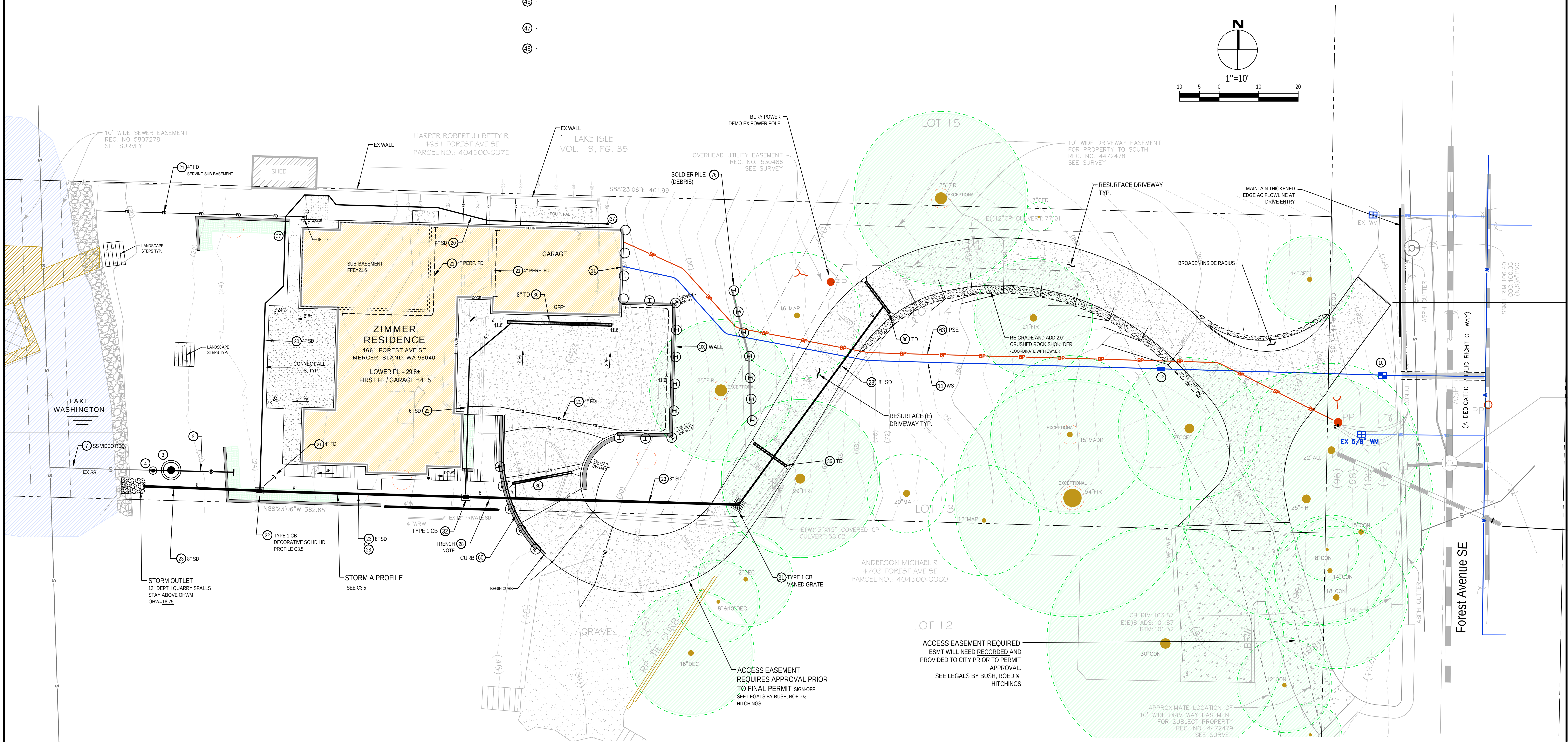
MINIMUM 10% ORGANIC -
COMPOST & MULCH SOIL REQUIRED

VERTICAL DATUM

NAVD 88
SEE SURVEY

LEGAL DESCRIPTION

SEE C1.0



NO.	DATE	BY	REVISIONS	APPLICANT DAVID AND KAREN ZIMMER	DATE: May 08, 2025 JOB#: 2033 DRAFTED: DE DESIGN: DE DIGITAL SIGNATURE	CIVIL ENGINEERING SOLUTIONS 701 N. 36th STREET, SUITE 450 PHONE: 206.930.0342 SEATTLE, WA 98103 DUFFY@CESOLUTIONS.US	DRAINAGE / CIVIL PLAN ZIMMER RESIDENCE 4661 FOREST AVENUE SE, MERCER ISLAND, WA 98040	DRAWING NO: C2.0 APN 404500-0065
-----	------	----	-----------	-------------------------------------	---	---	---	--

Diagram illustrating the Lake Line Cleanout setup. The diagram shows a cross-section of a lake with a gravel bed. A vertical pipe with a cap is shown, with an enclosure (see table below) at the top. The pipe is surrounded by gravel. A horizontal pipe is shown below, with a flow arrow indicating the direction of flow. A lake is shown to the right.

PIPE SIZE	MATERIAL	CAP	ENCLOSURE	COMMENTS
6"	PVC	SIDU MECHANICAL JOINT CAP	CONC. METER BOX, FOOTITE 1-D	INSTALLATION BELOW HYDRAULIC GRADIENT
6"	PVC	PVC CAP W/O GASKET	CONC. METER BOX, FOOTITE 1-D	INSTALLATION ABOVE HYDRAULIC GRADIENT
6"	DIP	M/ECHANICAL JOINT CAP	CONC. METER BOX, FOOTITE 1-D	INSTALLATION ABOVE HYDRAULIC GRADIENT
6"	PVC	PVC CAP W/O GASKET	CONC. METER BOX, FOOTITE 1-D	INSTALLATION ABOVE HYDRAULIC GRADIENT
8"	DIP	MECHANICAL JOINT CAP	CONC. METER BOX, FOOTITE 1-D	INSTALLATION ABOVE HYDRAULIC GRADIENT

NOTES

- IF POSSIBLE, CLEANOUT TO BE LOCATED JUST ABOVE HYDRAULIC GRADIENT OF LAKE LINE. CLEANOUT SHOULD ALSO BE LOCATED TO PROVIDE EASY ACCESS FOR INSPECTION AND MAINTENANCE BY THE HOME OWNER.
- SEE S-23 & S-24 FOR BACK WATER VALVE LOCATION.

CITY OF MERCER ISLAND

STANDARD DETAILS

SEWER

SIDE SEWER CLEANOUT FOR LAKE LINE CONNECTIONS

6-S-2009

REV DATE				NO SCALE	S-25
					APPROVED

24" FRAME AND COVER
MARKED "SEWER"
(SEE DETAIL S-13)

24" DIA.

48" DIAMETER
VALVE CHAMBER

SEAL PIPE ENTRY (TYP.)

TO SEWER

5" MAX.

FROM HOUSE

4" TO 8" DIAMETER
SIDE SEWER

FLOW

48" DIA.

CALDER COUPLING

3" D.I. NIPPLE P.E.
CLASS 53 CEMENT
LINED

FLANGED COUPLING ADAPTER,
ROCKWELL 919 OR EQUAL.

GRAVITY FLOW BACKWATER VALVE
(NDS PART NO. 575 OR 575P OR EQUAL
WITH PRIOR APPROVAL BY CITY ENGINEER)

CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER
BACK WATER VALVE ASSEMBLY
FOR JOINT USE SIDE SEWER
(4" OR 6" DIAMETER)

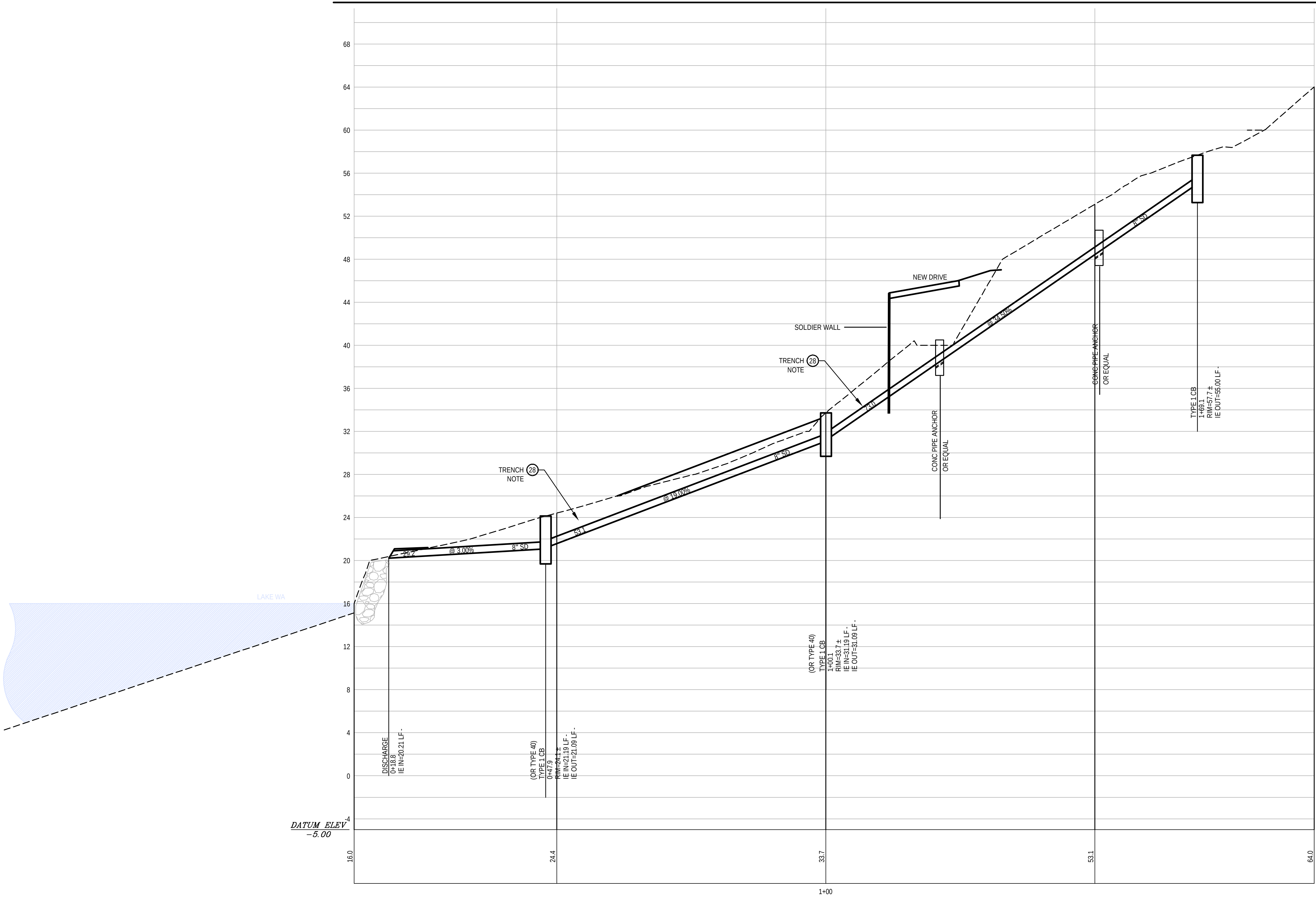
6-5-2009 NO SCALE **S-26**

REV DATE

APPROVED

NO.	DATE	BY	REVISIONS	APPLICANT DAVID AND KAREN ZIMMER	DATE: Apr 09, 2025 JOB#: 2033 DRAFTED: DE DESIGN: DE DIGITAL SIGNATURE	 Apr 09, 2025	CIVIL ENGINEERING SOLUTIONS 701 N. 30th STREET, SUITE 450 SEATTLE, WA 98103 PHONE: 206.930.0342 DUFFY@CESOLUTIONS.US	SEWER NOTES & DETAILS ZIMMER RESIDENCE 4661 FOREST AVENUE SE, MERCER ISLAND, WA 98040	DRAWING NO: C3.2 APN 404500-0065
-----	------	----	-----------	-------------------------------------	---	---	--	---	---

PRIVATE STORM "A" PROFILE



MINIMUM 10% ORGANIC -
COMPOST SOIL REQUIRED

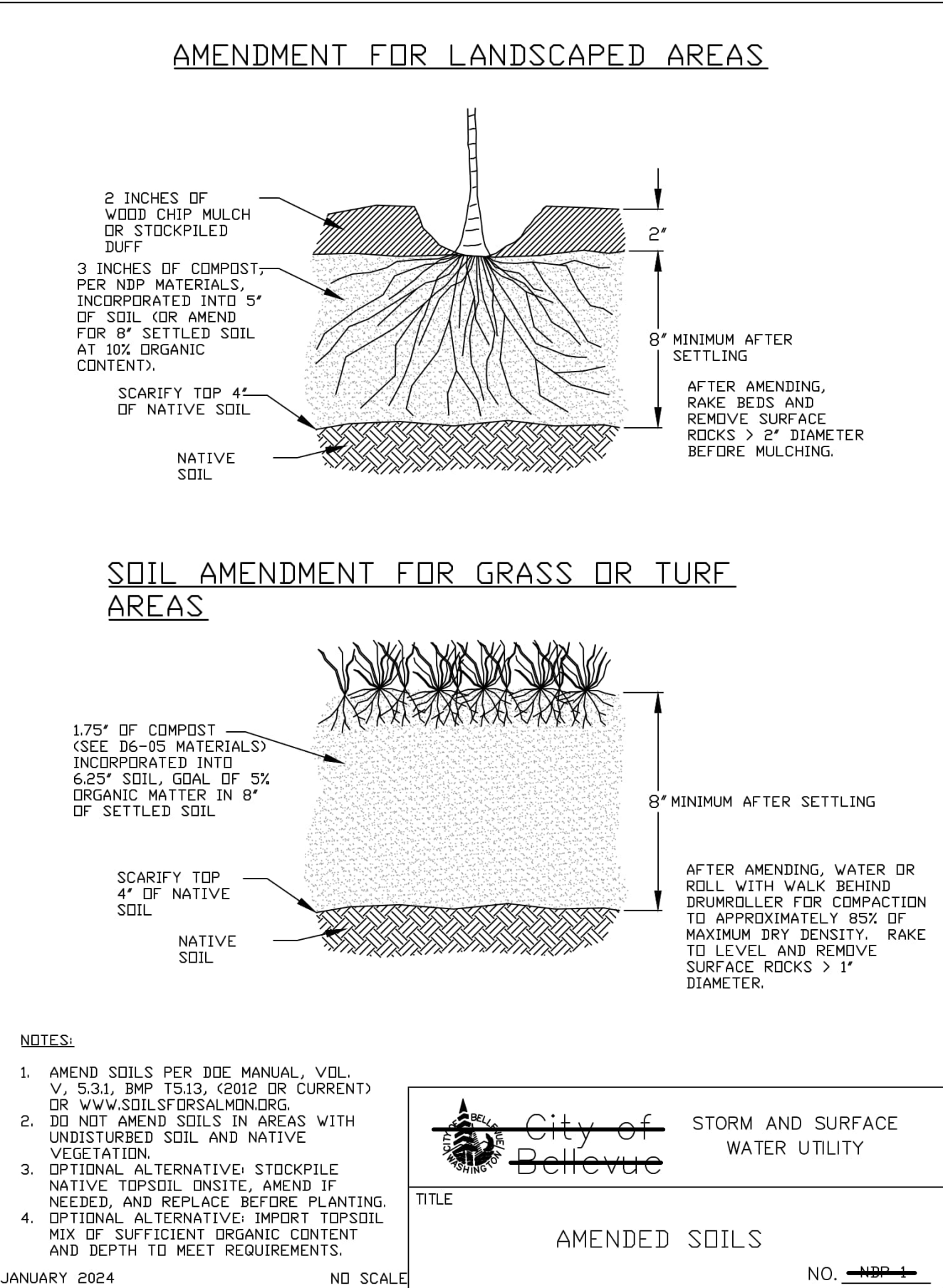
SOIL AMENDMENT REQUIRED

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

SOIL INSPECTION REQUIRED BY ENGINEER

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

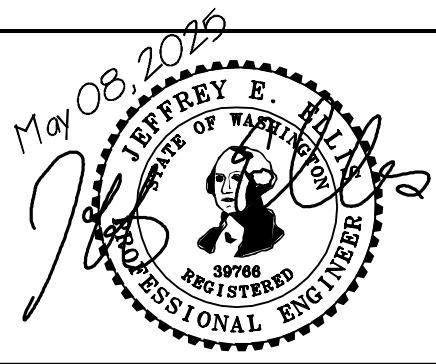
COMPOST AMENDED SOIL SPEC



NO.	DATE	BY	REVISIONS

APPLICANT
DAVID AND KAREN ZIMMER

DATE: May 08, 2025
JOB#: 2033
DRAFTED: SS DESIGN: SS
DIGITAL SIGNATURE



CIVIL ENGINEERING
SOLUTIONS
701 N. 36th STREET, SUITE 450 SEATTLE, WA 98103
PHONE: 206.930.0342 DUFFY@CESOLUTIONS.US

STORMWATER BMP DETAILS
ZIMMER RESIDENCE
4661 FOREST AVENUE SE, MERCER ISLAND, WA 98040

DRAWING NO:
C3.5
APN 404500-0065

TOTAL GROSS FLOOR AREA: (18.3%) 5,767.98 FT²

BASEMENT FLOOR EXCLUSION CALCS:

SUB BASEMENT	WALL SEGMENT	LENGTH	HEIGHT	GRADE	WALL HEIGHT	COVERAGE %	RESULT
K	33'-0"	3'-4 1/2"	7'-0"	76.7%	25'-1"		
L	22'-6"	3'-4 1/8"	7'-0"	49.7%	10'-9 1/2"		
M	3'-8"	3'-5 5/8"	7'-0"	49.5%	2'-6 3/4"		
N	5'-10"	0"	7'-0"	0%	0		
O	23'-6"	5'-10 1/2"	7'-0"	83.0%	13'-10 3/8"		
P	22'-6"	7'-0"	7'-0"	100%	22'-6"		
TOTALS	111'-0"				74'-9 5/8" / 111'-0" = 67.4%		

743 FT² X 67.4% = 500.78 FT² EXCLUDED
743 FT² - 500.78 FT² = **242.22 FT²**

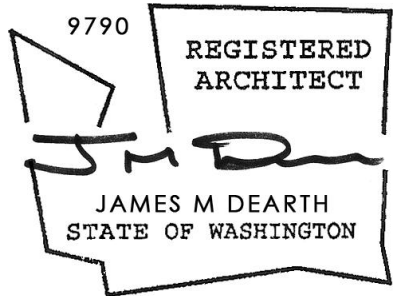
BASEMENT	WALL SEGMENT	LENGTH	HEIGHT	GRADE	WALL HEIGHT	COVERAGE %	RESULT
A	8'-0"	1'-9 3/8"	10'-9 1/8"	16.5%	1'-5 3/4"		
B	32'-9"	0"	10'-9 1/8"	0%	0		
C	14'-6"	0"	10'-9 1/8"	0%	0		
D	12'-6"	0"	10'-9 1/8"	0%	0		
E	23'-0"	0"	10'-9 1/8"	0%	0		
F	12'-6"	0"	10'-9 1/8"	0%	0		
G	22'-6"	0"	10'-9 1/8"	0%	0		
H	42'-9"	0"	10'-9 1/8"	0%	0		
I	2'-9"	3'-4 5/8"	10'-9 1/8"	31.4%	0'-10 3/8"		
J	62'-0"	3'-4 3/4"	10'-9 1/8"	31.5%	19'-6 3/8"		
TOTALS	238'-2"				21'-10 1/2"		



RIPPLE
DESIGN STUDIO

206.913.2333

4303 STONE WAY N
SEATTLE, WA 98103



ZIMMER RESIDENCE
4661 FOREST AVE SE, MERCER ISLAND, WA 98040

SUB-BASEMENT
FLOOR PLAN

THIS DRAWING, AS AN INSTRUMENT OF SERVICE, IS * SHALL REMAIN THE SOLE PROPERTY OF RIPPLE DESIGN STUDIO *
SHALL NOT BE REPRODUCED, PUBLISHED, OR USED IN ANY MANNER WITHOUT PROPER AUTHORIZATION.
COPYRIGHT © 2017 BY RIPPLE DESIGN STUDIO

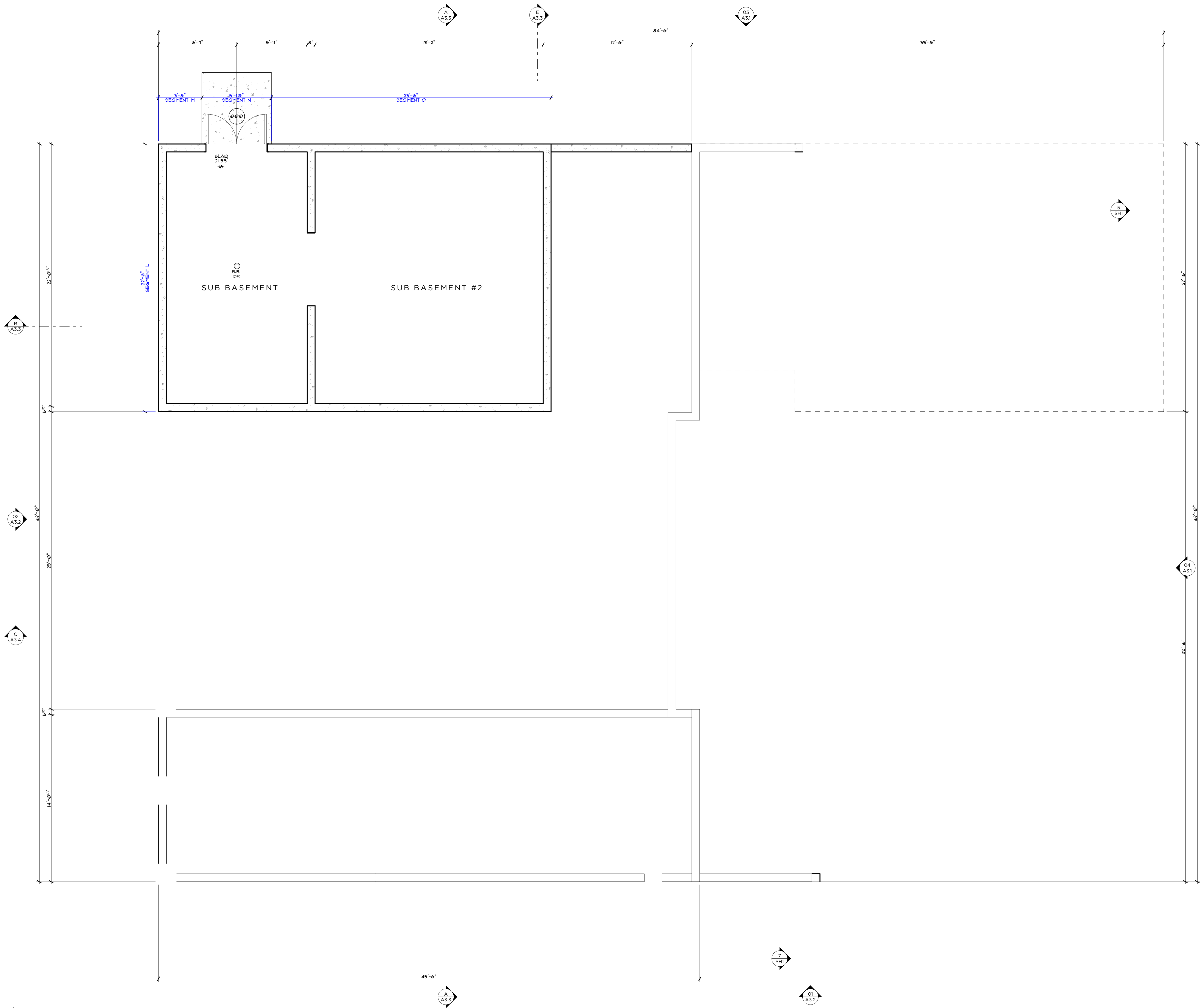
RELEASE

7 APRIL 2025

PERMIT CORRECTIONS
9 MAY 2025

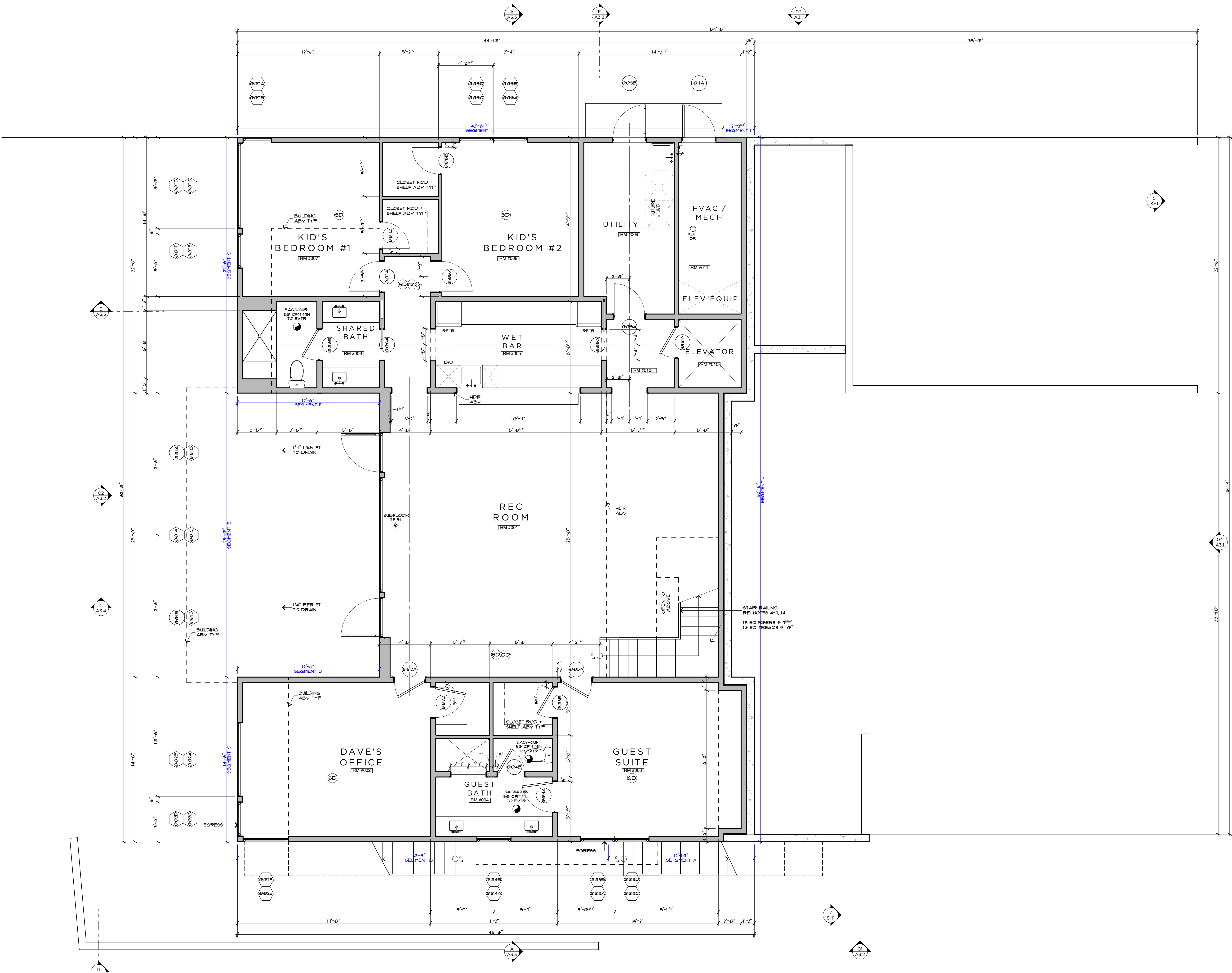
A 2.00

ZIMMER
AUTHOR: 5/14/25



SUB-BASEMENT FLOOR PLAN

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



LOWER LEVEL PLAN

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

TOTAL GROSS FLOOR AREA:

(18.3%) 5,767.98 FT²

BASEMENT FLOOR
EXCLUSION CALCS:

SUB BASEMENT			GRADE	WALL		
WALL SEGMENT	LENGTH	HEIGHT	HEIGHT	COVERAGE %	RESULT	
K	33'-0"	5'-4 1/2"	7'-0"	76.7%	25'-1"	
L	22'-6"	3'-4 1/8"	7'-0"	47.7%	10'-9 1/2"	
M	3'-8"	3'-5 5/8"	7'-0"	49.5%	2'-6 3/4"	
N	5'-10"	0'	7'-0"	0%	0	
O	23'-6"	5'-10 1/2"	7'-0"	83.9%	13'-10 3/8"	
P	22'-6"	7'-0"	7'-0"	100%	22'-6"	
TOTALS	111'-0"				74'-9 5/8"	

743 FT² X 67.4% = 500.78 FT² EXCLUDED
743 FT² - 500.78 FT² = **242.22 FT²**

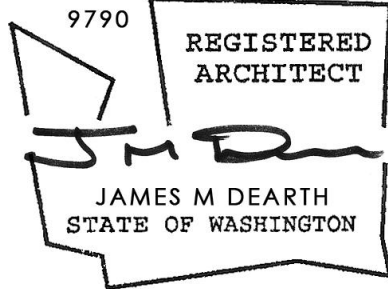
BASEMENT		GRADE		WALL	
WALL SEGMENT	LENGTH	HEIGHT	HEIGHT	COVERAGE %	RESULT
A	9'-0"	1'-9 3/8"	10'-9 1/8"	16.5%	1'-5 3/4"
B	32'-8"	0'	10'-9 1/8"	0%	0
C	14'-6"	0'	10'-9 1/8"	0%	0
D	12'-6"	0'	10'-9 1/8"	0%	0
E	25'-0"	0'	10'-9 1/8"	0%	0
F	12'-6"	0'	10'-9 1/8"	0%	0
G	22'-6"	0'	10'-9 1/8"	0%	0
H	42'-9"	0'	10'-9 1/8"	0%	0
I	2'-9"	3'-4 5/8"	10'-9 1/8"	31.4%	0'-10 3/8"
J	62'-0"	3'-4 3/4"	10'-9 1/8"	31.5%	19'-6 3/8"
TOTALS	236'-2"				21'-10 1/2"



RIPPLE
DESIGN STUDIO

206.913.2333

4303 STONE WAY N
SEATTLE, WA 98103



ZIMMER RESIDENCE
4661 FOREST AVE SE, MERCER ISLAND, WA 98040

BASEMENT FLOOR
PLAN

RELEASE

7 APRIL 2025

PERMIT CORRECTIONS
9 MAY 2025

A 2.0

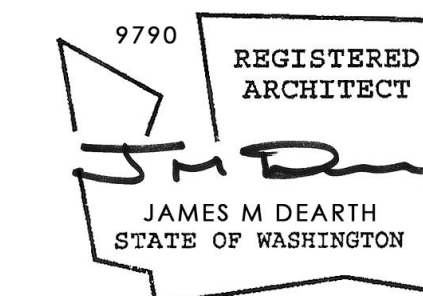
ZIMMER
ARCHITECTS



RIPPLE
DESIGN STUDIO

206.913.2333

4303 STONE WAY N
SEATTLE, WA 98103



ZIMMER RESIDENCE
4661 FOREST AVE SE, MERCER ISLAND, WA 98040

MAIN FLOOR PLAN

THIS DRAWING, AS AN INSTRUMENT OF SERVICE, IS TO REMAIN THE SOLE PROPERTY OF RIPPLE DESIGN STUDIO + SHALL NOT BE REPRODUCED, PUBLISHED, OR USED IN ANY MANNER WITHOUT PROPER AUTHORIZATION. COPYRIGHT © 2017 BY RIPPLE DESIGN STUDIO

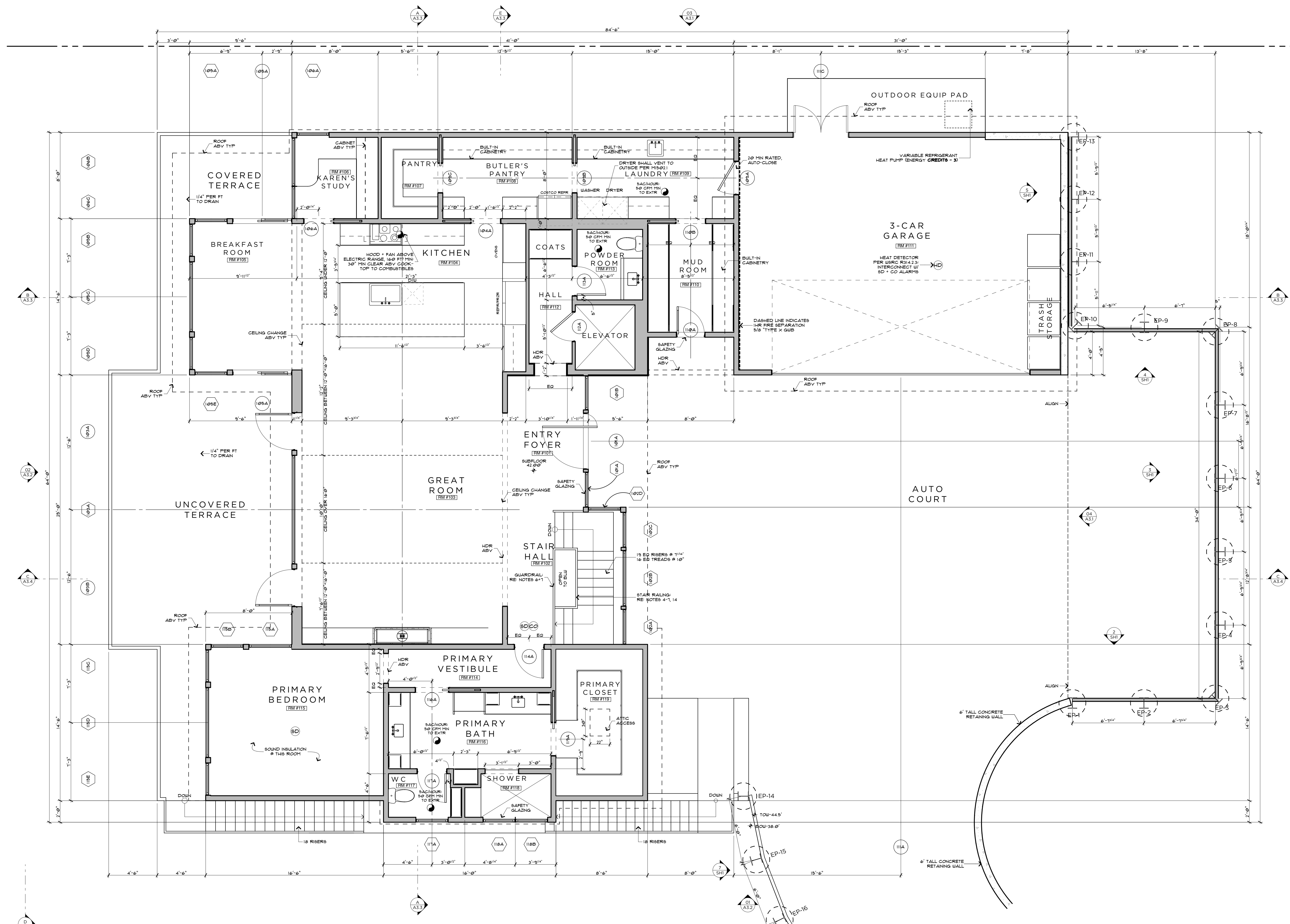
RELEASE

7 APRIL 2025

PERMIT CORRECTIONS
9 MAY 2025

A 2.1

ZIMMER
ARCHITECTS

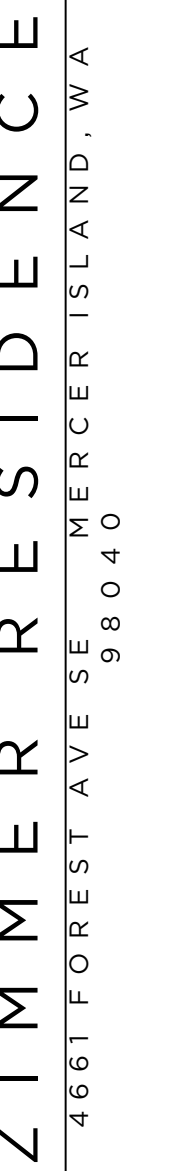


MAIN FLOOR PLAN

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



4303 STONE WAY N
SEATTLE, WA 98103



ROOF PLAN

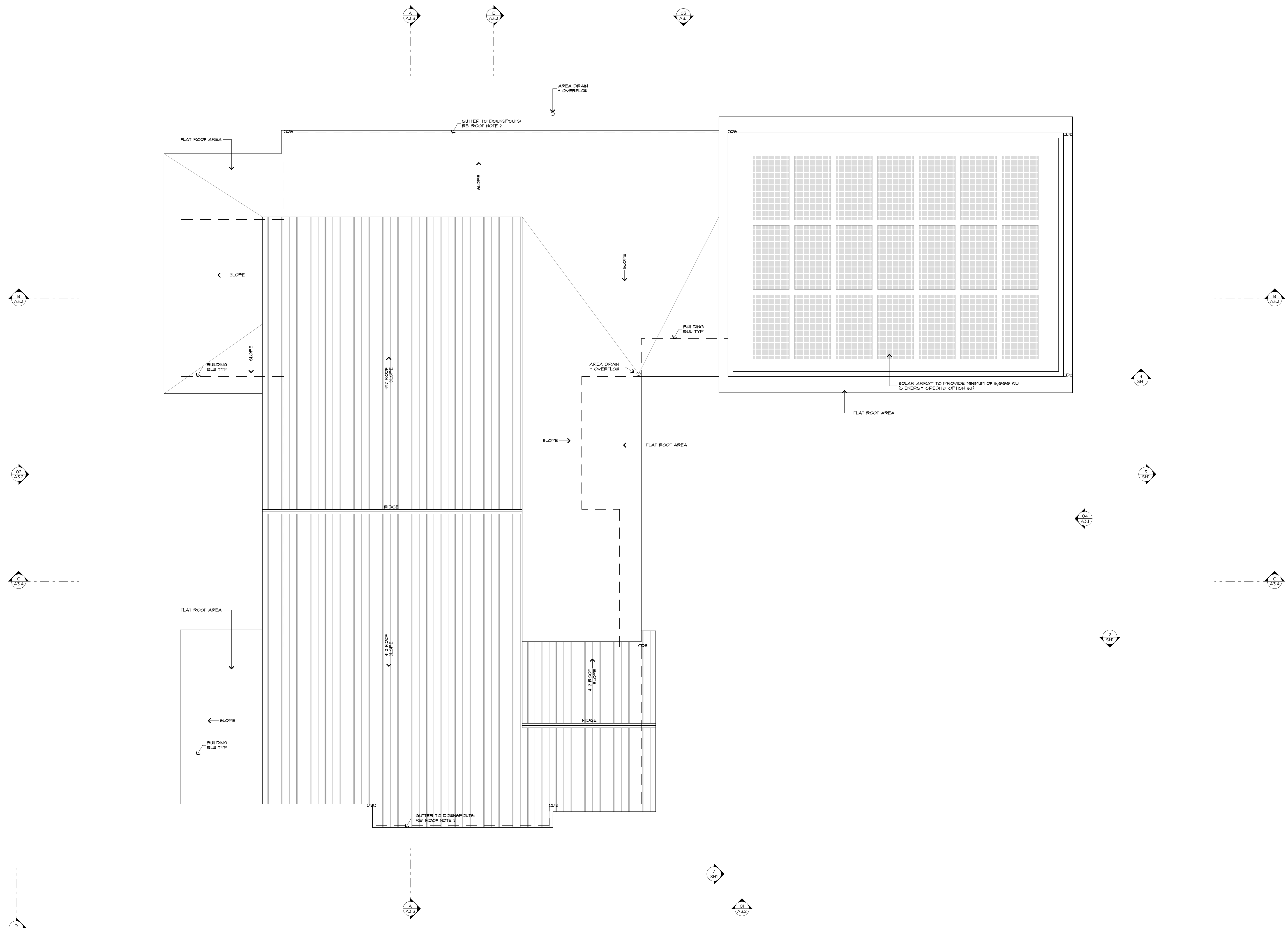
THIS DRAWING, AS AN INSTRUMENT OF SERVICE, IS+SHALL REMAIN THE SOLE PROPERTY OF RIPPLE DESIGN STUDIO+ SHALL NOT BE REPRODUCED, PUBLISHED, OR USED IN ANY MANNER WITHOUT PROPER AUTHORIZATION. COPYRIGHT © 2017 BY RIPPLE DESIGN STUDIO

APRIL 2025

PERMIT CORRECTIONS
9 MAY 2025

A 2 . 2

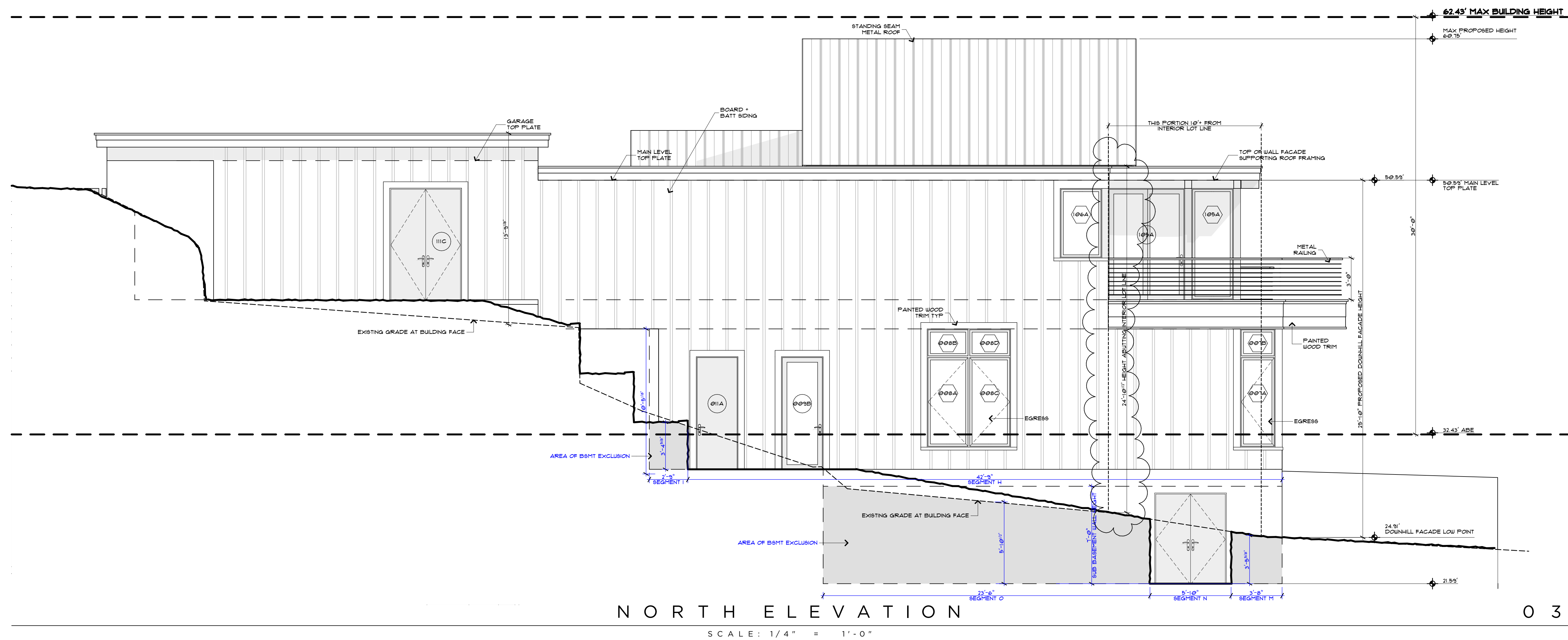
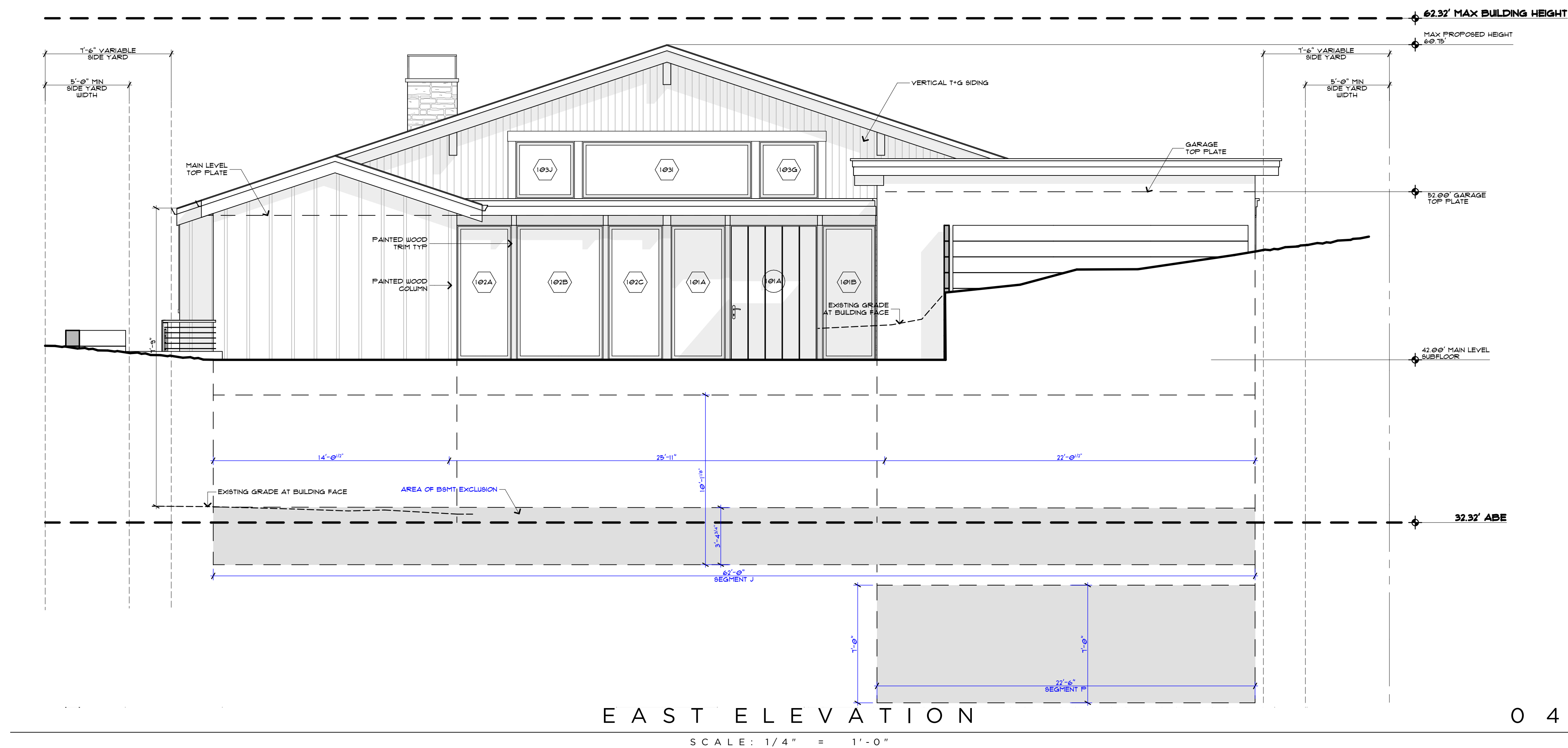
ZIMMER
AUTHORED: 5/14/25



R O O F P L A N

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

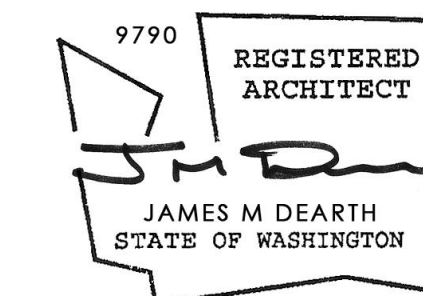
N



RIPPLE
DESIGN STUDIO

206.913.2333

4303 STONE WAY N
SEATTLE, WA 98103



ZIMMER RESIDENCE
4661 FOREST AVE SE, MERCER ISLAND, WA
98040

NORTH + EAST
BUILDING
ELEVATIONS

THIS DRAWING, AS AN INSTRUMENT OF SERVICE, IS * SHALL REMAIN THE SOLE PROPERTY OF RIPPLE DESIGN STUDIO *
SHALL NOT BE REPRODUCED, PUBLISHED, OR USED IN ANY MANNER WITHOUT PROPER AUTHORIZATION.
COPYRIGHT © 2017 BY RIPPLE DESIGN STUDIO

RELEASE

7 APRIL 2025

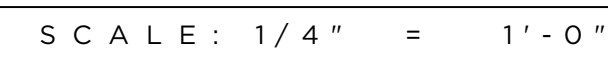
PERMIT CORRECTIONS
9 MAY 2025

A3.1

ZIMMER
ARCHITECT

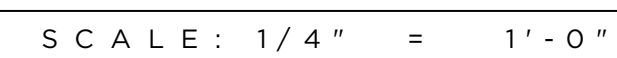


IMMER
HORED: 5/14/25



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

0 1



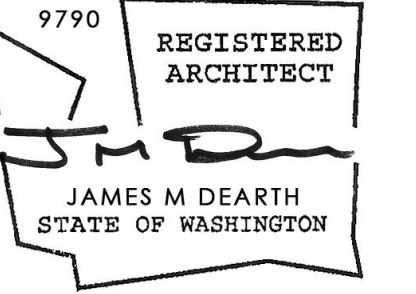
0 1



RIPPLE
DESIGN STUDIO

206.913.2333

4303 STONE WAY N
SEATTLE, WA 98103



ZIMMER RESIDENCE
4661 FOREST AVE SE, MERCER ISLAND, WA 98040

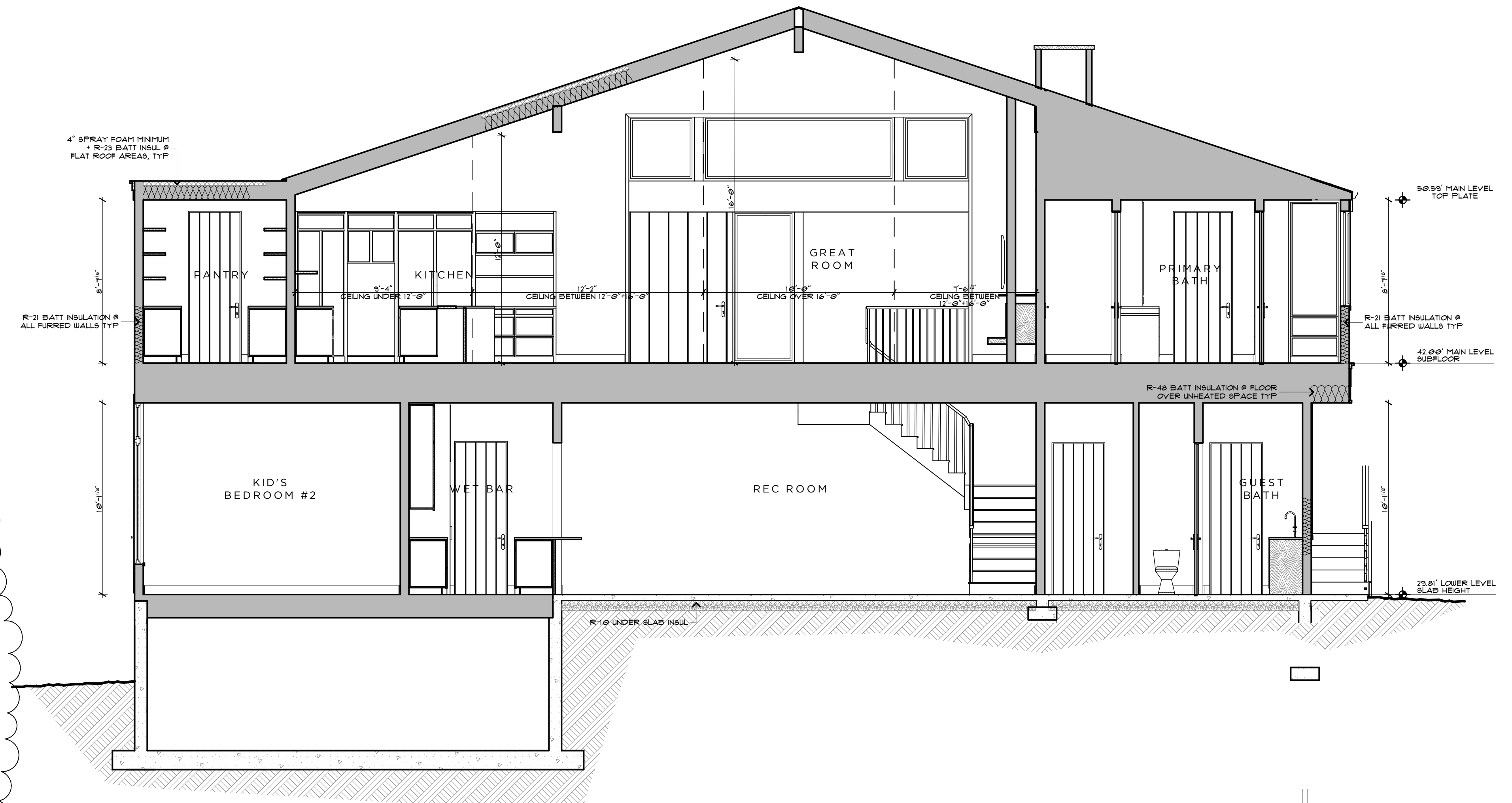
BUILDING A - A + B -
SECTIONS

RELEASE
7 APRIL 2025
PERMIT CORRECTIONS
9 MAY 2025

A 3.3

ZIMMER

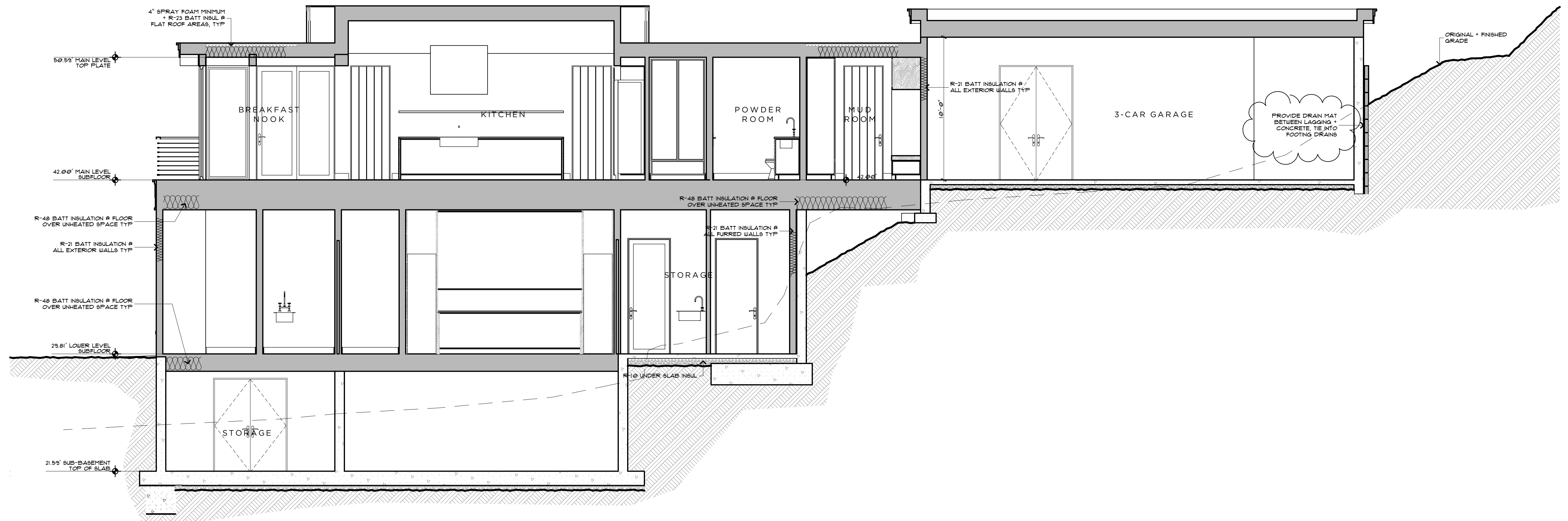
ARCHITECT



SECTION A - A

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

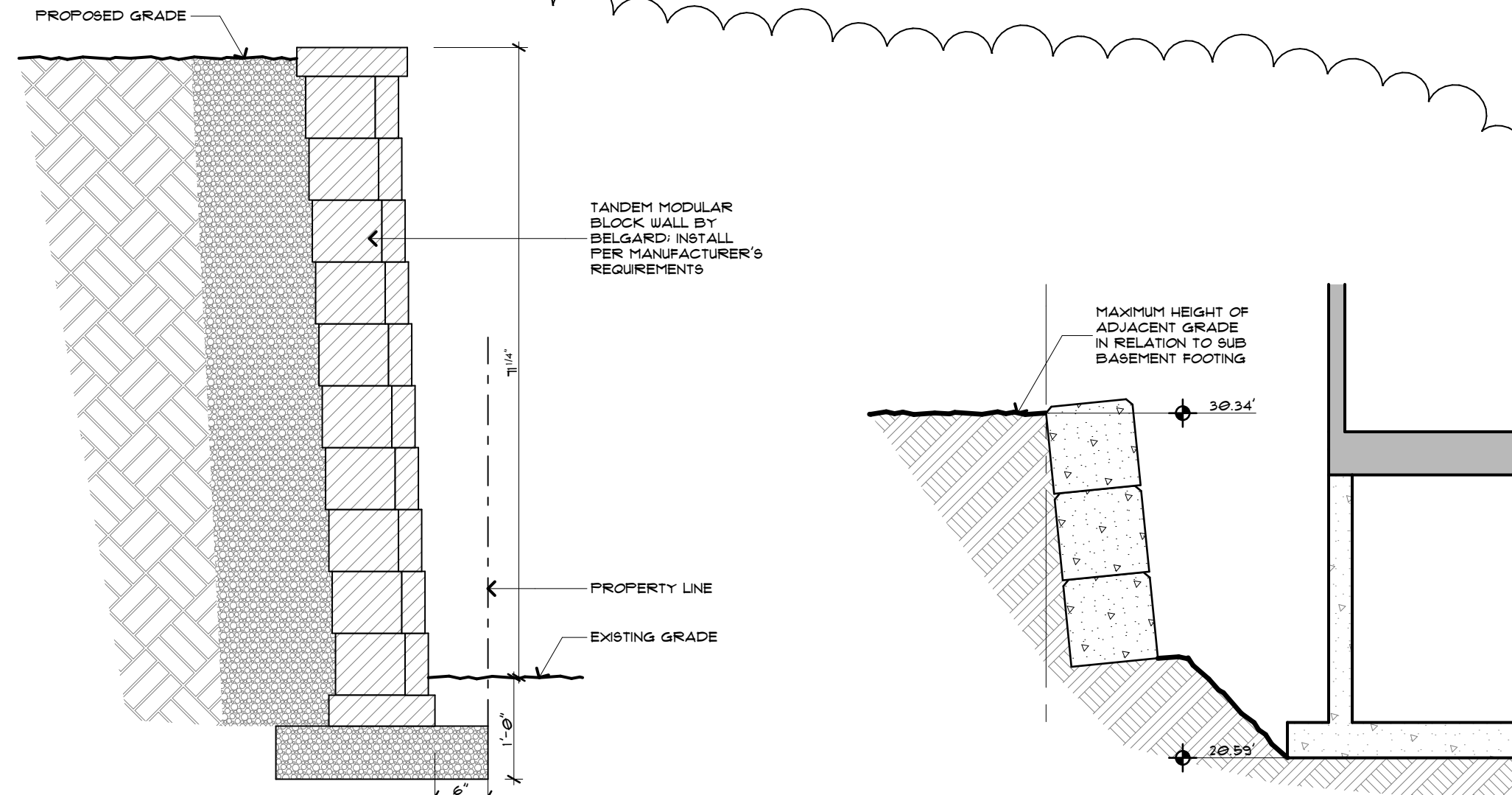
A



SECTION B - B

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

B



RETAINING WALL 4

SCALE: 3/4" = 1'-0"

TEMP CUT DIAGRAM 3

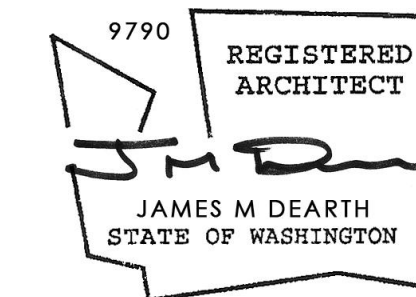
SCALE: 1/4" = 1'-0"



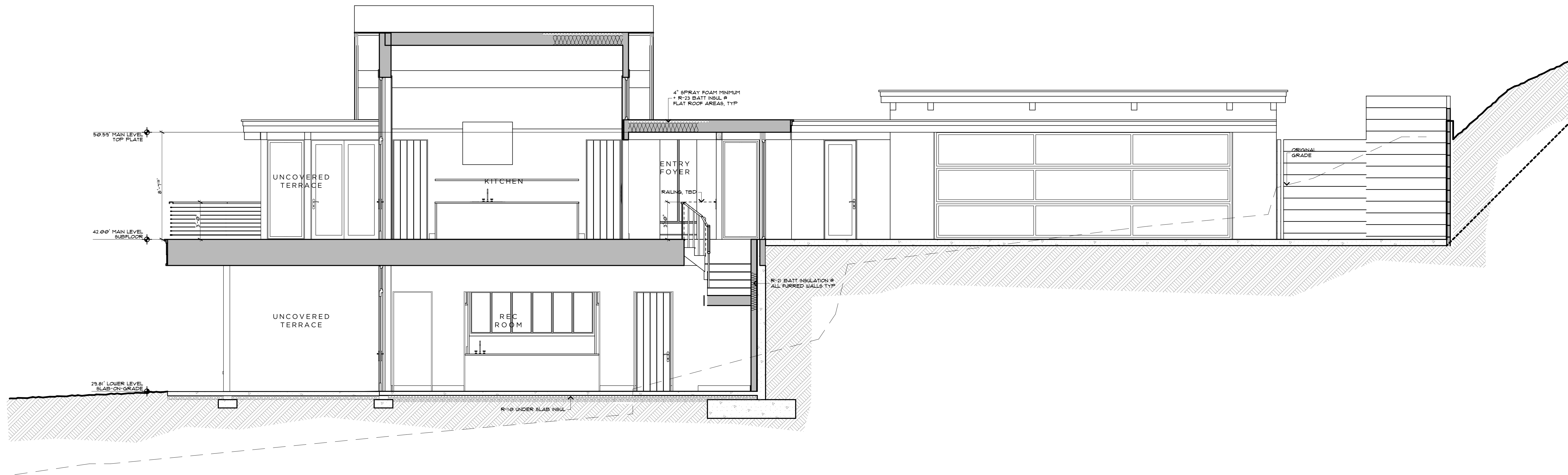
RIPPLE
DESIGN STUDIO

206.913.2333

4303 STONE WAY N
SEATTLE, WA 98103



ZIMMER RESIDENCE
4661 FOREST AVE SE, MERCER ISLAND, WA 98040



SECTION C - C

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

C

A 3 . 4

RELEASE

7 APRIL 2025

PERMIT CORRECTIONS
9 MAY 2025

THIS DRAWING, AS AN INSTRUMENT OF SERVICE, IS * SHALL REMAIN THE SOLE PROPERTY OF RIPPLE DESIGN STUDIO *
SHALL NOT BE REPRODUCED, PUBLISHED, OR USED IN ANY MANNER WITHOUT PROPER AUTHORIZATION.
COPYRIGHT © 2017 BY RIPPLE DESIGN STUDIO

ZIMMER
AUTHOR: 5/16/25

WSEC 2021 NOTES:

1. THIS PROJECT IS ELIGIBLE AND COMPLIANT W/ WSEC 2021 PRESCRIPTIVE METHOD.
2. INSULATION VALUES SHALL BE AS FOLLOWS:

A. ALL VERTICAL GLAZING SHALL BE 0.30 U-FACTOR MAX.

B. ALL OVERHEAD GLAZING SHALL BE 0.50 U-FACTOR MAX.

C. ALL EXTERIOR DOORS (INCLUDING DOORS FROM CONDITIONED SPACE TO UNCONDITIONED SPACE) SHALL BE 0.20 U-FACTOR MIN.

D. ALL CEILINGS OVER CONDITIONED SPACE SHALL RECEIVE R-49 BLOWN-IN INSULATION MIN.

E. ALL VAULTED CEILINGS SHALL RECEIVE R-38 BATT INSULATION MIN.

F. ALL ABOVE-GRADE EXTERIOR WALLS SHALL RECEIVE R-21 BATT INSULATION MIN.

G. ALL BELOW-GRADE EXTERIOR WALLS SHALL RECEIVE R-21 BATT INSULATION MIN @ INTERIOR FRAMED WALL.

H. ALL FLOORS OVER UNCONDITIONED SPACE SHALL RECEIVE R-38 BATT INSULATION MIN.

I. ALL SLAB-ON-GRADE WITHIN CONDITIONED SPACE SHALL RECEIVE R-10 RIGID INSULATION WITHIN 24" OF SLAB PERIMETER.

J. ALL HEADERS @ EXTERIOR WALLS SHALL RECEIVE R-10 RIGID INSULATION @ INTERIOR SIDE OF WALL.
3. RE: STRUCTURAL DRAWINGS FOR ALL FRAMING COMPLIANCE REQUIREMENTS.
4. PROVIDE 100 CFM INTERMITTENTLY OPERATING POINT-OF-USE VENTILATION @ KITCHEN.
5. PROVIDE 50 CFM INTERMITTENTLY OPERATING POINT-OF-USE VENTILATION @ ALL BATHS + LAUNDRY.
6. NATURAL GAS, PROPANE OR OIL WATER HEATER SHALL HAVE A MINIMUM EF OF 0.91 (WSEC 406.2, CREDIT 5c).
7. AT CRAWLSPACES THE MIN NET AREA OF VENTILATION OPENINGS SHALL NOT BE LESS THAN 1 FT² FOR EACH 300 FT² OF UNDER-FLOOR AREA. ONE VENTILATION OPENING SHALL BE WITHIN 3'-0" OF EACH CORNER OF THE BUILDING AT CRAWLSPACE. EXCEPT ONE SIDE OF THE BUILDING SHALL BE PERMITTED TO HAVE NO VENTILATION OPENINGS, OR CRAWLSPACE SHALL BE MECHANICALLY VENTED.
8. THE BUILDING THERMAL ENVELOPE SHALL BE CONSTRUCTED TO LIMIT AIR LEAKAGE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTIONS R402.4.1 THROUGH R402.4.4. WHERE REQUIRED BY THE CODE OFFICIAL, TESTING SHALL BE CONDUCTED BY AN APPROVED THIRD PARTY AND A WRITTEN REPORT OF THE TESTING RESULTS SHALL BE SIGNED BY THE TESTING PARTY AND PROVIDED TO THE CODE OFFICIAL.
9. AT LEAST ONE THERMOSTAT PER DWELLING UNIT SHALL BE CAPABLE OF CONTROLLING THE HEATING AND COOLING SYSTEM ON A DAILY SCHEDULE.

INTERIOR DOOR SCHEDULE:

DOOR #	WIDTH	HEIGHT	TYPE	DOOR LEAF	MATERIAL	FINISH	HARDWARE	LATCHING	NOTES
002A	2'-8"	8'-0"	SWING	PANEL	WOOD	PAINTED	TBD	PRIVACY	
002B	2'-8"	8'-0"	SWING	PANEL	WOOD	PAINTED	TBD	PASSAGE	
003A	2'-8"	8'-0"	SWING	PANEL	WOOD	PAINTED	TBD	PRIVACY	
003B	2'-8"	8'-0"	SWING	PANEL	WOOD	PAINTED	TBD	PASSAGE	
004A	2'-8"	8'-0"	SWING	PANEL	WOOD	PAINTED	TBD	PRIVACY	
004B	2'-4"	8'-0"	SWING	PANEL	WOOD	PAINTED	TBD	PRIVACY	
005A	2'-8"	8'-0 ^{14"}	POCKET	PANEL	WOOD	PAINTED	TBD	PASSAGE	
006A	2'-8"	8'-0"	SWING	PANEL	WOOD	PAINTED	TBD	PRIVACY	
006B	2'-8"	8'-0"	SWING	PANEL	WOOD	PAINTED	TBD	PASSAGE	
007A	2'-8"	8'-0"	SWING	PANEL	WOOD	PAINTED	TBD	PRIVACY	
007B	2'-4"	8'-0"	SWING	PANEL	WOOD	PAINTED	TBD	PASSAGE	
008A	2'-8"	8'-0 ^{14"}	SWING	PANEL	WOOD	PAINTED	TBD	PRIVACY	
008B	2'-4"	8'-0 ^{14"}	SWING	PANEL	WOOD	PAINTED	TBD	PASSAGE	
009A	2'-8"	8'-0"	SWING	PANEL	WOOD	PAINTED	TBD	PASSAGE	
010A	2'-8"	8'-0"	SWING	PANEL	WOOD	PAINTED	TBD	PASSAGE	ELEVATOR, LOCKING
104A	2'-8"	8'-0"	POCKET	PANEL	WOOD	PAINTED	TBD	PASSAGE	
106A	2'-8"	8'-0"	POCKET	PANEL	WOOD	PAINTED	TBD	PASSAGE	
109A	3'-0"	8'-0"	SWING	PANEL	WOOD	PAINTED	TBD	PASSAGE	20 MIN RATED, AUTO-CLOSE
109B	2'-8"	8'-0"	POCKET	PANEL	WOOD	PAINTED	TBD	PASSAGE	
109C	2'-8"	8'-0"	POCKET	PANEL	WOOD	PAINTED	TBD	PASSAGE	
110B	2'-8"	8'-0"	POCKET	PANEL	WOOD	PAINTED	TBD	PASSAGE	
112A	2'-8"	8'-0"	SWING	PANEL	WOOD	STAINED	TBD	PASSAGE	ELEVATOR, LOCKING
113A	2'-8"	8'-0"	SWING	PANEL	WOOD	STAINED	TBD	PRIVACY	
114A	2'-8"	8'-0"	SWING	PANEL	WOOD	STAINED	TBD	PRIVACY	
116A	3'-0"	8'-0"	POCKET	PANEL	WOOD	PAINTED	TBD	PASSAGE	
117A	2'-8"	8'-0"	SWING	PANEL	WOOD	STAINED	TBD	PRIVACY	
119A	3'-0"	8'-0"	POCKET	PANEL	WOOD	PAINTED	TBD	PASSAGE	

EXTERIOR DOOR SCHEDULE: (ALL GLAZING TO BE NFRC CERTIFIED)

DOOR #	WIDTH	HEIGHT	TYPE	DOOR LEAF	MATERIAL	FINISH	GLAZING	HARDWARE	NOTES
000	5'-0"	6'-6"	SWING	PANEL	FIBERGLASS	TBD	NONE	TBD	
001A	3'-6"	8'-0"	SWING	FULL LIGHT	CLAD WOOD	PAINTED	LoE3 366	TBD	
001B	3'-6"	8'-0"	SWING	FULL LIGHT	CLAD WOOD	PAINTED	LoE3 366	TBD	
009B	3'-0"	8'-1 ^{10"}	SWING	FULL LIGHT	CLAD WOOD	PAINTED	LoE3 366	TBD	
011A	3'-0"	8'-1 ^{10"}	SWING	PANEL	FIBERGLASS	TBD	NONE	TBD	
101A	5'-2' ^{25"}	8'-0"	PIVOT	PANEL	WOOD	STAINED	NONE	TBD	
103A	3'-6"	8'-0"	SWING	FULL LIGHT	CLAD WOOD	PAINTED	LoE3 366	TBD	
103B	3'-6"	8'-0"	SWING	FULL LIGHT	CLAD WOOD	PAINTED	LoE3 366	TBD	
105A	5'-6"	8'-0"	SLIDER	FULL LIGHT	CLAD WOOD	PAINTED	LoE3 366	TBD	SLIDING SCREEN DOOR
105A	5'-6"	8'-0"	SLIDER	FULL LIGHT	CLAD WOOD	PAINTED	LoE3 366	TBD	SLIDING SCREEN DOOR
110A	2'-8"	8'-0"	SWING	FULL LIGHT	CLAD WOOD	STAINED	LoE3 366	TBD	
111A	24'-0"	8'-9' ^{25"}	OVERHEAD	PANEL	WOOD/GLASS	PAINTED	NONE	TBD	
111C	5'-0"	8'-0"	SWING	PANEL	FIBERGLASS	TBD	NONE	TBD	PAIR

WINDOW SCHEDULE: (ALL GLAZING TO BE NFRC CERTIFIED)

WDW #	WIDTH	HEIGHT	HEADER	TYPE	FINISH	GLAZING	WDW COVERING	OPERATION	HARDWARE	NOTES
001A	10'-1"	8'-0"	8'-0"	FIXED	PAINTED	LoE3 366	---	---	TBD	SAFETY GLAZING
001B	3'-6"	2'-1 ^{10"}	10'-1 ^{10"}	TRANSOM	PAINTED	LoE3 366	---	---	TBD	
001C	10'-1"	2'-1 ^{10"}	10'-1 ^{10"}	TRANSOM	PAINTED	LoE3 366	---	---	TBD	
001D	3'-6"	2'-1 ^{10"}	10'-1 ^{10"}	TRANSOM	PAINTED	LoE3 366	---	---	TBD	
002A	6'-6"	6'-6"	8'-1 ^{10"}	FIXED	PAINTED	LoE3 366	---	---	TBD	
002B	6'-6"	2'-0"	10'-1 ^{10"}	TRANSOM	PAINTED	LoE3 366	---	---	TBD	
002C	3'-0"	6'-6"	8'-1 ^{10"}	CASEMENT	PAINTED	LoE3 366	---	---	TBD	
002D	3'-0"	2'-0"	10'-1 ^{10"}	CASEMENT	PAINTED	LoE3 366	---	---	TBD	EGRESS
002E	4'-0"	6'-6"	8'-1 ^{10"}	CASEMENT	PAINTED	LoE3 366	---	---	TBD	
002F	4'-0"	2'-0"	10'-1 ^{10"}	TRANSOM	PAINTED	LoE3 366	---	---	TBD	
003A	3'-0"	5'-0"	8'-1 ^{10"}	CASEMENT	PAINTED	LoE3 366	---	---	TBD	EGRESS, SAFETY GLAZING
003B	3'-0"	2'-0"	10'-1 ^{10"}	TRANSOM	PAINTED	LoE3 366	---	---	TBD	
003C	3'-0"	5'-0"	8'-1 ^{10"}	CASEMENT	PAINTED	LoE3 366	---	---	TBD	EGRESS, SAFETY GLAZING
003D	3'-0"	2'-0"	10'-1 ^{10"}	TRANSOM	PAINTED	LoE3 366	---	---	TBD	
004A	3'-0"	5'-0"	8'-1 ^{10"}	CASEMENT	PAINTED	LoE3 366	---	---	TBD	SAFETY GLAZING
004B	3'-0"	2'-0"	10'-1 ^{10"}	TRANSOM	PAINTED	LoE3 366	---	---	TBD	
007A	2'-6"	6'-6"	8'-1 ^{10"}	CASEMENT	PAINTED	LoE3 366	---	---	TBD	EGRESS
007B	2'-6"	2'-0"	10'-1 ^{10"}	TRANSOM	PAINTED	LoE3 366	---	---	TBD	
007C	7'-6"	6'-6"	8'-1 ^{10"}	FIXED	PAINTED	LoE3 366	---	---	TBD	
007D	7'-6"	2'-0"	10'-1 ^{10"}	TRANSOM	PAINTED	LoE3 366	---	---	TBD	
007E	3'-0"	6'-6"	8'-1 ^{10"}	CASEMENT	PAINTED	LoE3 366	---	---	TBD	
007F	3'-0"	2'-0"	10'-1 ^{10"}	TRANSOM	PAINTED	LoE3 366	---	---	TBD	
008A	3'-0"	6'-6"	8'-1 ^{10"}	CASEMENT	PAINTED	LoE3 366	---	---	TBD	EGRESS
008B	3'-0"	2'-0"	10'-1 ^{10"}	TRANSOM	PAINTED	LoE3 366	---	---	TBD	
008C	3'-0"	6'-6"	8'-1 ^{10"}	CASEMENT	PAINTED	LoE3 366	---	---	TBD	EGRESS
008D	3'-0"	2'-0"	10'-1 ^{10"}	TRANSOM	PAINTED	LoE3 366	---	---	TBD	
101A	3'-3"	8'-0"	8'-0"	FIXED	PAINTED	LoE3 366	---	---	TBD	SAFETY GLAZING
101B	3'-2"	8'-0"	8'-0"	FIXED	PAINTED	LoE3 366	---	---	TBD	SAFETY GLAZING
102A	3'-3"	8'-0"	8'-0"	FIXED	PAINTED	LoE3 366	---	---	TBD	SAFETY GLAZING
102B	5'-2"	8'-0"	8'-0"	FIXED	PAINTED	LoE3 366	---	---	TBD	SAFETY GLAZING
102C	3'-3"	8'-0"	8'-0"	FIXED	PAINTED	LoE3 366	---	---	TBD	SAFETY GLAZING
102D	3'-0"	8'-0"	8'-0"	CASEMENT	PAINTED	LoE3 366	---	---	TBD	SAFETY GLAZING
103A	10'-1"	8'-0"	8'-0"	FIXED	PAINTED	LoE3 366	---	---	TBD	SAFETY GLAZING
103B	3'-6"	5'-0"	1'-7 ^{24"}	FIXED	PAINTED	LoE3 366	---	---	TBD	
103C	10'-1"	5'-0"	1'-7 ^{24"}	FIXED	PAINTED	LoE3 366	---	---	TBD	
103D	3'-6"	5'-0"	1'-7 ^{24"}	FIXED	PAINTED	LoE3 366	---	---	TBD	
103G	3'-6"	3'-5"	4'-5"	CASEMENT	PAINTED	NONE	---	---	TBD	
103I	10'-1"	3'-5"	4'-5"	CASEMENT	PAINTED	NONE	---	---	TBD	
103J	3'-6"	3'-5"	4'-5"	CASEMENT	PAINTED	NONE	---	---	TBD	
105A	3'-0"	8'-0"	8'-0"	FIXED	PAINTED	LoE3 366	---	---	TBD	
105B	3'-0"	8'-0"	8'-0"	FIXED	PAINTED	LoE3 366	---	---	TBD	
105C	6'-6"	8'-0"	8'-0"	FIXED	PAINTED	LoE3 366	---	---	TBD	
105D	3'-0"	8'-0"	8'-0"	FIXED	PAINTED	LoE3 366	---	---	TBD	
105E	3'-0"	8'-0"	8'-0"	FIXED	PAINTED	LoE3 366	---	---	TBD	
106A	3'-0"	5'-0"	8'-0"	FIXED	PAINTED	LoE3 366	---	---	TBD	
106B	4'-6"	5'-0"	8'-0"	FIXED	PAINTED	LoE3 366	---	---	TBD	
106C	3'-0"	5'-0"	8'-0"	CASEMENT	PAINTED	LoE3 366	---	---	TBD	
115A	4'-0"	8'-0"	8'-0"	FIXED	PAINTED	LoE3 366	---	---	TBD	
115B	3'-0"	8'-0"	8'-0"	CASEMENT	PAINTED	LoE3 366	---	---	TBD	EGRESS
115C	3'-0"	8'-0"	8'-0"	FIXED	PAINTED	LoE3 366	---	---	TBD	
115D	6'-6"	8'-0"	8'-0"	FIXED	PAINTED	LoE3 366	---	---	TBD	
115E	3'-0"	8'-0"	8'-0"	FIXED	PAINTED	LoE3 366	---	---	TBD	
117A	3'-0"	5'-0"	8'-0"	FIXED	PAINTED	LoE3 366	---	---	TBD	SAFETY GLAZING
118A	3'-0"	5'-0"	8'-0"	FIXED	TBD	LoE3 366	---	---	TBD	FROSTED / TRANSLUCENT GLAZING, SAFETY GLAZING
118B	3'-0"	5'-0"	8'-0"	FIXED	TBD	LoE3 366	---	---	TBD	FROSTED / TRANSLUCENT GLAZING, SAFETY GLAZING



RIPPLE
DESIGN STUDIO

206.913.2333

4303 STONE WAY N
SEATTLE, WA 98103

9790

REGISTERED
ARCHITECT

JAMES M DEARTH
STATE OF WASHINGTON

ZIMMER RESIDENCE

4681 FOREST AVE SE, MERCER ISLAND, WA 98040

DOOR + WINDOW
SCHEDULES

THIS DRAWING, AS AN INSTRUMENT OF SERVICE, IS * SHALL REMAIN THE SOLE PROPERTY OF RIPPLE DESIGN STUDIO + *
SHALL NOT BE REPRODUCED, PUBLISHED, OR USED IN ANY MANNER WITHOUT PROPER AUTHORIZATION.
COPYRIGHT © 2017 BY RIPPLE DESIGN STUDIO

RELEASE

7 APRIL 2025

PERMIT CORRECTIONS
9 MAY 2025

A 4 . 1

ZIMMER
ARCHITECT

General Structural Notes

The Following Apply Unless Noted Otherwise on the Drawings

Criteria

1. ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE 2021 INTERNATIONAL BUILDING CODE.

2. DESIGN LOAD CRITERIA

FLOOR LIVE LOAD (RESIDENTIAL)

FLOOR LIVE LOAD (RESIDENTIAL DECKS)

ROOF DEAD LOAD (SOLAR)

ROOF DEAD LOAD (BALLAST)

SNOW

WIND

40 PSF

60 PSF

5 PSF

17 PSF

Pf=25 PSF

lw=1.0, GCpi=0.18, 100 MPH (ULTIMATE), EXPOSURE "C", KZT=1.00
- EARTHQUAKE

ANALYSIS PROCEDURE:

LATERAL SYSTEM:

BASE SHEAR (ULTIMATE)

BASE SHEAR (ULTIMATE)

TOTAL BASE SHEAR

SITE CRITERIA
- EQUIVALENT LATERAL FORCE PROCEDURE

LIGHT FRAMED SHEAR WALLS

V=21.47 KIPS

V=2.16 KIPS

V=23.63 KIPS

SITE CLASS=D, Ss=1.441, Sds=0.961, S1=0.5, SD1=0.6, Cs=0.148

SDC D, Ie=1.0, R=6.5

- SEE PLANS FOR ADDITIONAL LOADING CRITERIA
3. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS FOR BIDDING AND CONSTRUCTION. CONTRACTOR SHALL VERIFY DIMENSIONS AND CONDITIONS FOR COMPATIBILITY AND SHALL NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
4. CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS, MEMBER SIZES, AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS ARE INTENDED AS GUIDELINES ONLY AND MUST BE VERIFIED.
5. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, REQUIRED TO PERFORM THE CONTRACTORS WORK. THE STRUCTURAL ENGINEER HAS NO OVERALL SUPERVISORY AUTHORITY OR ACTUAL AND/OR DIRECT RESPONSIBILITY FOR THE SPECIFIC WORKING CONDITIONS AT THE SITE AND/OR FOR ANY HAZARDS RESULTING FROM THE ACTIONS OF ANY TRADE CONTRACTOR. THE STRUCTURAL ENGINEER HAS NO DUTY TO INSPECT, SUPERVISE, NOTE, CORRECT, OR REPORT ANY HEALTH OR SAFETY DEFICIENCIES TO THE OWNER, CONTRACTORS, OR OTHER ENTITIES OR PERSONS AT THE PROJECT SITE.
7. CONTRACTOR-INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS ONLY WILL NOT SATISFY THIS REQUIREMENT.
8. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND THE STRUCTURAL ENGINEER.
9. SHOP DRAWINGS FOR THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION OF THESE ITEMS.

OPEN WEB WOOD (OR COMBINATION WOOD/STEEL) TRUSSES

STRUCTURAL STEEL

CONTRACTOR SHALL SUBMIT WALL ELEVATION DRAWINGS OF AT LEAST 1/8"=1'-0" SCALE INDICATING LOCATIONS OF CONNECTION EMBEDMENTS AND WALL OPENINGS FOR REVIEW PRIOR TO CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH REINFORCEMENT SHOP DRAWINGS.

APPROVED SETS OF ALL SHOP DRAWINGS SHALL ALSO BE SUBMITTED TO THE BUILDING DEPARTMENT.
10. SHOP DRAWING REVIEW: DIMENSIONS AND QUANTITIES ARE NOT REVIEWED BY THE ENGINEER OF RECORD, THEREFORE MUST BE VERIFIED BY THE CONTRACTOR. CONTRACTOR SHALL REVIEW AND STAMP DRAWINGS PRIOR TO REVIEW BY ENGINEER OF RECORD. CONTRACTOR SHALL REVIEW DRAWINGS FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND OPERATIONS OF CONSTRUCTION, AND ALL SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO. SUBMITTALS SHALL INCLUDE A REPRODUCIBLE AND ONE COPY; REPRODUCIBLE WILL BE MARKED AND RETURNED WITHIN TWO WEEKS OF RECEIPT WITH A NOTATION INDICATING THAT THE SUBMITTAL HAS BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THE SUBMITTED ITEMS SHALL NOT BE INSTALLED UNTIL THEY HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.
- SHOP DRAWING SUBMITTALS PROCESSED BY THE ENGINEER ARE NOT CHANGE ORDERS. THE PURPOSE OF SHOP DRAWING SUBMITTALS BY THE CONTRACTOR IS TO DEMONSTRATE TO THE ENGINEER THAT THE CONTRACTOR UNDERSTANDS THE DESIGN CONCEPT, BY INDICATING WHICH MATERIAL IS INTENDED TO BE FURNISHED AND INSTALLED AND BY DETAILING THE INTENDED FABRICATION AND INSTALLATION METHODS. IF DEVIATIONS, DISCREPANCIES, OR CONFLICTS BETWEEN SHOP DRAWING SUBMITTALS AND THE CONTRACT DOCUMENTS ARE DISCOVERED EITHER PRIOR TO OR AFTER SHOP DRAWING SUBMITTALS ARE PROCESSED BY THE ENGINEER, THE DESIGN DRAWINGS AND SPECIFICATIONS SHALL CONTROL AND SHALL BE FOLLOWED.

Quality Assurance

1. SPECIAL INSPECTION SHALL BE PROVIDED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND SECTIONS 110 AND 1704 OF THE INTERNATIONAL BUILDING CODE BY A QUALIFIED TESTING AGENCY DESIGNATED BY THE ARCHITECT, AND RETAINED BY THE BUILDING OWNER, THE ARCHITECT, STRUCTURAL ENGINEER, AND BUILDING DEPARTMENT SHALL BE FURNISHED WITH COPIES OF ALL INSPECTION AND TEST RESULTS. SPECIAL INSPECTION IS REQUIRED OF THE FOLLOWING TYPES OF CONSTRUCTION:

STRUCTURAL STEEL FABRICATION AND ERECTION

CONCRETE CONSTRUCTION

(GRADE BEAMS, AUGER-CAST PILES)

SOIL CONDITIONS, FILL PLACEMENT, AND DENSITY

PILE OR PIER FOUNDATIONS

EXPANSION BOLTS AND THREADED EXPANSION INSERTS

EPOXY GROUTED INSTALLATIONS
- PER IBC 1705.2
- PER TABLE 1705.3
- PER SOILS REPORT
- PER SOILS REPORT
- PER MANUFACTURER
- PER MANUFACTURER

2. UNLESS OTHERWISE NOTED, THE FOLLOWING ELEMENTS COMPRISE THE SEISMIC-FORCE-RESISTING SYSTEM AND ARE SUBJECT TO SPECIAL INSPECTION FOR SEISMIC RESISTANCE IN ACCORDANCE WITH SECTION 1705.12 OF THE INTERNATIONAL BUILDING CODE.

A. STRUCTURAL STEEL MOMENT FRAMES AND BRACED FRAMES REQUIRE CONTINUOUS INSPECTION FOR WELDING PER AISC 341 EXCEPT SINGLE PASS FILLET WELDS NOT EXCEEDING 5/16-INCH.

Geotechnical

1. FOUNDATION NOTES: SUBGRADE PREPARATION INCLUDING DRAINAGE, EXCAVATION, COMPACTION, AND FILLING REQUIREMENTS, SHALL CONFORM STRICTLY WITH RECOMMENDATIONS GIVEN IN THE SOILS REPORT OR AS DIRECTED BY THE SOILS ENGINEER. FOOTINGS SHALL BEAR ON SOLID UNDISTURBED EARTH AT LEAST 18" BELOW LOWEST ADJACENT FINISHED GRADE. FOOTING DEPTHS/ELEVATIONS SHOWN ON PLANS (OR IN DETAILS) ARE MINIMUM AND FOR GUIDANCE ONLY; THE ACTUAL ELEVATIONS OF FOOTINGS MUST BE ESTABLISHED BY THE CONTRACTOR IN THE FIELD WORKING WITH THE TESTING LAB AND SOILS ENGINEER. BACKFILL BEHIND ALL RETAINING WALLS WITH FREE DRAINING GRANULAR FILL AND PROVIDE FOR SUBSURFACE DRAINAGE AS NOTED IN THE SOILS REPORT.
- LATERAL EARTH PRESSURE (RESTRAINED/UNRESTRAINED)
- VARIES 7 PCF-55 PCF
- SEE SOILS REPORT
- COEFFICIENT OF FRICTION
- (FACTOR OF SAFETY OF 1.5 INCLUDED)
- 0.35
- 3"Ø PILE CAPACITY (COMPRESSION) (STANDARD STEEL PIPE)
- 12 KIPS
- 4"Ø PILE CAPACITY (COMPRESSION) (STANDARD STEEL PIPE)
- 20 KIPS
- REFUSAL CRITERIA: 2000-POUND HYDRAULIC HAMMER, 1" OR LESS FOR 10 SECONDS OF CONTINUOUS DRIVING AT 600 BLOWS PER MINUTE.
- ANTICIPATED PILE LENGTH TO REACH BEARING SOILS: APPROXIMATELY 20'-30'+/-
- 30"Ø AUGER-CAST PILE
- SKIN FRICTION = 1.0 KSF
- END BEARING = 30 KSF
- GEOTECHNICAL SPECIAL INSPECTOR SHALL BE CONTINUOUSLY PRESENT DURING PIN PILE INSTALLATION.
- SOILS REPORT REFERENCE: PanGEO Inc., Project No. 21-552, Dated October 2024
2. PIN PILES SHALL BE DRIVEN TO REFUSAL PER THE REFUSAL CRITERIA ABOVE. THE MAXIMUM PILE ECCENTRICITY SHALL BE 3 INCHES. THE CONTRACTOR SHALL DETERMINE THE LOCATION OF ALL ADJACENT UNDERGROUND UTILITIES PRIOR TO DRIVING PILES.
3. QUICK TESTING SHALL BE PERFORMED ON A MINIMUM OF 3% OF PILES UP TO (5) PILES MAXIMUM (1 MINIMUM) PER ASTM STANDARD D 1143-81.

Concrete

1. CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH IBC SECTION 1905, 1906, AND ACI 301. STRENGTHS AT 28 DAYS AND MIX CRITERIA SHALL BE AS FOLLOWS:

TYPE OF CONSTRUCTION

28 DAY STRENGTH (f'c)

SLABS ON GRADE

STAIR LANDINGS AND TREADS

3,000 PSI*

ALL STRUCTURAL CONCRETE EXCEPT WALLS

4,000 PSI

CONCRETE WALLS

2,500 PSI

AUGERCAST PILING

(STRUCTURAL CONCRETE)

4,000 PSI

(10) SACK MIX (940 LBS CEMENT)

*STRUCTURAL DESIGN OF FOUNDATION IS BASED ON A f'c=2,500 PSI, PER IBC 1705.3.2.3, SPECIAL INSPECTION IS NOT REQUIRED
2. THE MINIMUM AMOUNTS OF CEMENT MAY BE CHANGED IF A CONCRETE PERFORMANCE MIX IS SUBMITTED TO THE STRUCTURAL ENGINEER AND THE BUILDING DEPARTMENT FOR APPROVAL TWO WEEKS PRIOR TO PLACING ANY CONCRETE. THE PERFORMANCE MIX SHALL INCLUDE THE AMOUNTS OF CEMENT, FINE AND COARSE AGGREGATE, WATER AND ADMIXTURES AS WELL AS THE WATER CEMENT RATIO, SLUMP, CONCRETE YIELD AND SUBSTANTIATING STRENGTH DATA IN ACCORDANCE WITH IBC 1905.6. THE USE OF A PERFORMANCE MIX REQUIRES BATCH PLANT INSPECTION, THE COST OF WHICH SHALL BE PAID BY THE GENERAL CONTRACTOR. REVIEW OF MIX SUBMITTALS BY THE ENGINEER OF RECORD INDICATES ONLY THAT INFORMATION PRESENTED CONFORMS GENERALLY TO THE CONTRACT DOCUMENTS. CONTRACTOR OR SUPPLIER MAINTAINS FULL RESPONSIBILITY FOR SPECIFIED PERFORMANCE.
3. ALL CONCRETE WITH SURFACES EXPOSED TO WEATHER OR STANDING WATER SHALL BE AIR-ENTRAINED WITH AN AIR-ENTRAINING AGENT CONFORMING TO ASTM C260, C494, AND C618. TOTAL AIR CONTENT FOR FROST-RESISTANT CONCRETE SHALL BE IN ACCORDANCE WITH TABLE ACI 318 TABLE 4.2.1 MODERATE EXPOSURE.
4. REINFORCING STEEL SHALL CONFORM TO ASTM A615 (INCLUDING SUPPLEMENT S1), GRADE 60, fy=60,000 PSI. EXCEPTIONS: ANY BARS SPECIFICALLY SO NOTED ON THE DRAWINGS SHALL BE GRADE 40, fy=40,000 PSI. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185. SPIRAL REINFORCEMENT SHALL BE PLAIN WIRE CONFORMING TO ASTM A615, GRADE 60, fy=60,000 PSI.
5. DETAILING OF REINFORCING STEEL (INCLUDING HOOKS AND BENDS) SHALL BE IN ACCORDANCE WITH ACI 315-99 AND 318-14. LAP ALL REINFORCEMENTS IN ACCORDANCE WITH "THE REINFORCING SPLICE AND DEVELOPMENT LENGTH SCHEDULE." PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 8" AT SIDES AND ENDS.
- NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY SO DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER.
6. CONCRETE PROTECTION (COVER) FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

FOOTINGS AND OTHER UNFORMED SURFACES CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH FORMED SURFACES EXPOSED TO EARTH OR WEATHER (#6 BARS OR LARGER)

3"

FORMED SURFACES EXPOSED TO EARTH OR WEATHER (#5 BARS OR SMALLER)

2"

1-1/2"

1-1/2"

GREATER OF BAR DIAMETER PLUS 1/8" OR 3/4"
7. CONCRETE WALL REINFORCING - PROVIDE THE FOLLOWING UNLESS DETAILED OTHERWISE:

6" WALLS

#4 @ 16 HORIZ.

#4 @ 18 VERTICAL

1 CURTAIN

8" WALLS

#4 @ 12 HORIZ.

#4 @ 18 VERTICAL

1 CURTAIN
8. CAST-IN-PLACE CONCRETE: SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND DIMENSIONS OF DOOR AND WINDOW OPENINGS IN ALL CONCRETE WALLS. SEE MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF MISCELLANEOUS MECHANICAL OPENINGS THROUGH CONCRETE WALLS. SEE ARCHITECTURAL DRAWINGS FOR ALL GROOVES, NOTCHES, CHAMFERS, FEATURE STRIPS, COLOR, TEXTURE, AND OTHER FINISH DETAILS AT ALL EXPOSED CONCRETE SURFACES, BOTH CAST-IN-PLACE AND PRECAST.
9. NON-SHRINK GROUT SHALL BE FURNISHED BY AN APPROVED MANUFACTURER AND SHALL BE MIXED AND PLACED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED RECOMMENDATIONS. GROUT STRENGTH SHALL BE AT LEAST EQUAL TO THE MATERIAL ON WHICH IT IS PLACED (3000 PSI MINIMUM).

Anchorage

1. EXPANSION BOLTS INTO CONCRETE AND CONCRETE MASONRY UNITS SHALL BE "KIKI BOLT TZ" AS MANUFACTURED BY THE HILTI CORP., INSTALLED IN STRICT ACCORDANCE WITH ICC-ES REPORT NO. ESR-1917, 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.
- 1.1. ALTERNATIVELY, EXPANSION BOLTS INTO CONCRETE AND CONCRETE MASONRY UNITS MAY BE STRONG-BOLT 2 ANCHORS AS MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY AND INSTALLED IN STRICT CONFORMANCE TO ICC-ES REPORT NUMBER ESR-3037, INCLUDING MINIMUM EMBEDMENT REQUIREMENTS. BOLTS INTO CONCRETE MASONRY OR BRICK MASONRY UNITS SHALL BE INTO FULLY GROUTED CELLS. SPECIAL INSPECTION IS REQUIRED FOR ALL EXPANSION BOLT INSTALLATION.
2. EPOXY-GROUTED ITEMS (THREADED RODS OR REINFORCING BAR) SPECIFIED ON THE DRAWINGS SHALL BE INSTALLED USING "HIT BE 500-V2" AS MANUFACTURED BY HILTI CORP. INSTALL IN STRICT ACCORDANCE WITH ICC-ES REPORT NO. ESR-2322. SPECIAL INSPECTION OF INSTALLATION IS REQUIRED. RODS SHALL BE ASTM A-36 UNLESS OTHERWISE NOTED.
- 2.1. ALTERNATIVELY, EPOXY-GROUTED ITEMS (THREADED RODS OR REINFORCING BAR) SPECIFIED ON THE DRAWINGS MAY BE INSTALLED USING "SET-3G" HIGH STRENGTH EPOXY AS MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY. INSTALL IN STRICT ACCORDANCE WITH ICC-ES REPORT NO. ESR-4057. SPECIAL INSPECTION OF INSTALLATION IS REQUIRED. RODS SHALL BE ASTM A-36 UNLESS OTHERWISE NOTED.

Steel

1. STRUCTURAL STEEL DESIGN, FABRICATION, AND ERECTION SHALL BE BASED ON:

A. EITHER AISC 360 AND SECTION 2205.2 OF THE INTERNATIONAL BUILDING CODE.

B. MARCH 18, 2005 AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES, AMENDED AS FOLLOWS.

i) AS NOTED IN THE CONTRACT DOCUMENTS.

ii) BY THE DELETION OF PARAGRAPH 4.4.1.

iii) REVISE REFERENCE FROM "STRUCTURAL DESIGN DRAWINGS" TO "CONTRACT DOCUMENTS" IN PARAGRAPH 3.1.
2. SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

TYPE OF MEMBER

ASTM SPECIFICATION

Fy

WIDE FLANGE SHAPES

A992

50 KSI

OTHER SHAPES, PLATES, AND RODS

A36

36 KSI

PIPE COLUMNS

A53 (E OR S, GR.B)

35 KSI

STRUCTURAL TUBING

A500 (GRADE B)

SQUARE OR RECTANGULAR CONNECTION BOLTS

A325-N

46 KSI

(3/4" ROUND, UNLESS SHOWN OTHERWISE)
3. ARCHITECTURALLY EXPOSED STRUCTURAL STEEL SHALL CONFORM TO SECTION 10 OF THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES.
4. ALL A-325N CONNECTION BOLTS NEED ONLY TO BE TIGHTENED TO A SNUG TIGHT CONDITION, DEFINED AS THE TIGHTNESS THAT EXISTS WHEN ALL PILES IN A JOINT ARE IN FIRM CONTACT. THIS MAY BE ATTAINED BY A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF AN IRONWORKER USING AN ORDINARY SPUD WRENCH.
5. ALL ANCHORS EMBEDDED IN MASONRY OR CONCRETE SHALL BE A307 HEADED BOLTS OR A36 THREADED ROD WITH AN ASTM 563 HEAVY HEX NUT TACK WELDED ON THE EMBEDDED END.
6. ALL WELDING SHALL BE IN CONFORMANCE WITH A.I.S.C. AND A.W.S. STANDARDS AND SHALL BE PERFORMED BY W.A.B.O. CERTIFIED WELDERS USING E70 XX ELECTRODES. ONLY PREQUALIFIED WELDS (AS DEFINED BY A.W.S.) SHALL BE USED. ALL COMPLETE JOINT PENETRATION GROOVE WELDS SHALL BE MADE WITH A FILLER MATERIAL THAT HAS A MINIMUM CVN TOUGHNESS OF 20 FT-LBS AT -20 DEGREES F AND 40 FT-LBS AT 70 DEGREES F, AS DETERMINED BY AWS CLASSIFICATION OR MANUFACTURER CERTIFICATION.

Wood

1. FRAMING LUMBER SHALL BE KILN DRIED OR MC-19, AND GRADED AND MARKED IN CONFORMANCE WITH W.C.L.B. STANDARD GRADING RULES FOR WEST COAST LUMBER NO.17. FURNISH TO THE FOLLOWING MINIMUM STANDARDS:

JOISTS

(2X & 3X MEMBERS)

DOUGLAS FIR-LARCH NO. 2

MINIMUM BASE VALUE, Fb=900 PSI

AND BEAMS:

(4X MEMBERS)

DOUGLAS FIR-LARCH NO. 2

MINIMUM BASE VALUE, Fb=900 PSI

BEAMS:

(INCL. 6X AND LARGER)

DOUGLAS FIR-LARCH NO. 1

MINIMUM BASE VALUE, Fb=1350 PSI

POSTS:

(4X MEMBERS)

DOUGLAS FIR-LARCH NO. 2

MINIMUM BASE VALUE, Fc=1350 PSI

(6X AND LARGER)

DOUGLAS FIR-LARCH NO. 1

MINIMUM BASE VALUE, Fc=1000 PSI

- STUDS, PLATES & MISC. FRAMING: DOUGLAS-FIR-LARCH NO. 2
2. GLUED LAMINATED MEMBERS SHALL BE FABRICATED IN CONFORMANCE WITH ASTM AND AITC STANDARDS. EACH MEMBER SHALL BEAR AN A.I.T.C. IDENTIFICATION MARK AND SHALL BE ACCOMPANIED BY AN A.I.T.C. CERTIFICATE OF CONFORMANCE. ALL SIMPLE SPAN BEAMS SHALL BE DOUGLAS FIR COMBINATION 24F-V4, Fb=2,400 PSI, Fv=265 PSI. ALL CANTILEVERED BEAMS SHALL BE DOUGLAS FIR COMBINATION 24F-V8, Fb=2,400 PSI, Fv=265 PSI. CAMBER ALL SIMPLE SPAN GLULAM BEAMS TO 3,000' RADIUS, UNLESS SHOWN OTHERWISE ON THE PLANS.
3. MANUFACTURED LUMBER, PS1, 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 PS1, LVL, AND LSL LUMBER SHALL BE MANUFACTURED IN ACCORDANCE WITH ICC-ES REPORT ESR-1387 USING DOUGLAS FIR VENEER GLUED WITH A WATERPROOF ADHESIVE MEETING THE REQUIREMENTS OF ASTM D2559 WITH ALL GRAIN PARALLEL WITH THE LENGTH OF THE MEMBER. THE MEMBERS SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:

PS1 (2.0E)

Fb=2900 PSI, E=2000 KSI, Fv=290 PSI

LVL (1.9E)

Fb=2600 PSI, E=1900 KSI, Fv=285 PSI

LSL (1.55E)

Fb=2325 PSI, E=1550 KSI, Fv=310 PSI
- DESIGN SHOWN ON PLANS IS BASED ON LUMBER MANUFACTURED BY THE WEYERHAEUSER CORPORATION. ALTERNATE MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER, ALTERNATE JOIST HANGERS AND OTHER HARDWARE MAY BE SUBSTITUTED FOR ITEMS SHOWN PROVIDED THEY HAVE ICC APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. ALL JOIST HANGERS AND OTHER HARDWARE SHALL BE COMPATIBLE IN SIZE WITH MEMBERS PROVIDED.
- MANUFACTURED LUMBER PRODUCTS SHALL BE INSTALLED WITH A MOISTURE CONTENT OF 12% OR LESS. THE CONTRACTOR SHALL MAKE PROVISIONS DURING CONSTRUCTION TO PREVENT THE MOISTURE CONTENT OF INSTALLED BEAMS FROM EXCEEDING 12%. EXCESSIVE DEFLECTIONS MAY OCCUR IF MOISTURE CONTENT EXCEEDS THIS VALUE.

Wood (Cont)

4. PREFABRICATED OPEN WEB WOOD TRUSSES (OR COMBINATION WOOD AND METAL) SHALL BE DESIGNED BY THE MANUFACTURER FOR THE SPANS AND CONDITIONS SHOWN ON THE PLANS AND SHALL BE FURNISHED AND INSTALLED IN CONFORMANCE WITH THE MANUFACTURER'S PUBLISHED SPECIFICATIONS. ALL NECESSARY BRIDGING, BLOCKING, PRE-NOTCHED PLATES, ETC., SHALL BE DETAILED AND FURNISHED BY THE MANUFACTURER. SUBMIT SHOP DRAWINGS AND DESIGN CALCULATIONS (COMPLETE WITH STRESS DIAGRAMS) TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION. DESIGN SUBMITTALS SHALL BEAR THE STAMP AND SIGNATURE OF A REGISTERED PROFESSIONAL ENGINEER, STATE OF WASHINGTON. PERMANENT AND TEMPORARY BRIDGING SHALL BE INSTALLED IN CONFORMANCE WITH MANUFACTURER'S SPECIFICATIONS.
5. PLYWOOD SHEATHING SHALL BE GRADE C-D, EXTERIOR GLUE OR STRUCTURAL II, EXTERIOR GLUE IN CONFORMANCE WITH DOC PS 1. ORIENTED STRAND BOARD OF EQUIVALENT THICKNESS, EXPOSURE RATING AND PANEL INDEX MAY BE USED IN LIEU OF PLYWOOD.

A. ROOF SHEATHING SHALL BE 1/2" (NOMINAL) WITH SPAN RATING 32/16.

B. FLOOR SHEATHING SHALL BE 3/4" (NOMINAL) WITH SPAN RATING 48/24.

C. WALL SHEATHING SHALL BE 1/2" (NOMINAL) WITH SPAN RATING 24/0.

D. REFER TO WOOD FRAMING NOTES BELOW FOR TYPICAL NAILING REQUIREMENTS.
6. ALL WOOD IN DIRECT CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE-TREATED WITH AN APPROVED PRESERVATIVE OR (2) LAYERS OF ASPHALT IMPREGNATED BUILDING PAPER SHALL BE PROVIDED BETWEEN UNTREATED WOOD AND CONCRETE OR MASONRY.
7. PRESSURE TREATED WOOD SHALL BE TREATED PER AWPA STANDARD. PRESSURE TREATED WOOD FOR ABOVE GROUND USE SHALL BE TREATED TO A RETENTION OF 0.25 PCF. WOOD IN CONTINUOUS CONTACT WITH FRESH WATER OR SOIL SHALL BE TREATED TO A RETENTION OF 0.40 PCF. WOOD FOR USE IN PERMANENT FOUNDATIONS SHALL BE TREATED TO A RETENTION OF 0.60 PCF. SODIUM BORATE (SBX) TREATED WOOD SHALL NOT BE USED WHERE EXPOSED TO WEATHER. FASTENERS AND TIMBER CONNECTORS IN DIRECT CONTACT WITH ACQ-A, CBA-A, CA-B, OR SBX TREATED WOOD SHALL BE G185 OR A185 HOT DIPPED OR CONTINUOUS HOT-GALVANIZED PER ASTM A653. FASTENERS AND TIMBER CONNECTORS IN DIRECT CONTACT WITH ACZA TREATED WOOD SHALL BE TYPE 304 OR 316 STAINLESS STEEL.
8. TIMBER CONNECTORS CALLED OUT BY LETTERS AND NUMBERS SHALL BE "STRONG-TIE" BY SIMPSON COMPANY, AS SPECIFIED IN THEIR CATALOG NUMBER C-C-2015. EQUIVALENT DEVICES BY OTHER MANUFACTURERS MAY BE SUBSTITUTED, PROVIDED THEY HAVE ICC-ES 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.
- ALL 2X JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "LUS" SERIES JOIST HANGERS. ALL TJ1 JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "IUS" SERIES JOIST HANGERS. ALL DOUBLE-JOIST BEAMS SHALL BE CONNECTED TO FLUSH BEAMS WITH "MITT" SERIES JOIST HANGERS.
- WHERE CONNECTOR STRAPS CONNECT TWO MEMBERS, PLACE ONE-HALF OF THE NAILS OR BOLTS IN EACH MEMBER.
- ALL SHIMS SHALL BE SEASONED AND DRIED AND THE SAME GRADE (MINIMUM) AS MEMBERS CONNECTED.
9. WOOD FASTENERS

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

SIZE

LENGTH

DIAMETER

8d

2-1/2"

0.131"

10d

3"

0.148"

16d BOX

3-1/2"

0.135"

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

NAILS - PLYWOOD (APA RATED SHEATHING) FASTENERS TO FRAMING SHALL BE DRIVEN FLUSH TO FACE OF SHEATHING WITH NO COUNTERSINKING PERMITTED.

B. ALL BOLTS IN WOOD MEMBERS SHALL CONFORM TO ASTM A307. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG BOLTS BEARING ON WOOD. INSTALLATION OF LAG BOLTS SHALL CONFORM TO THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (2005 EDITION) WITH A LEAD BORE HOLE OF 60 TO 70 PERCENT OF THE SHANK DIAMETER. LEAD HOLES ARE NOT REQUIRED FOR 3/8" AND SMALLER LAG SCREWS.

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

A. ALL WOOD FRAMING DETAILS NOT SHOWN OTHERWISE SHALL BE CONSTRUCTED TO THE MINIMUM STANDARDS OF THE INTERNATIONAL BUILDING CODE. MINIMUM NAILING, UNLESS OTHERWISE NOTED, SHALL CONFORM TO TABLE 2304.10.1. COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH MECHANICAL AND ARCHITECTURAL DRAWINGS.

B. WALL FRAMING: REFER ARCHITECTURAL DRAWINGS FOR THE SIZE OF ALL WALLS. ALL STUDS SHALL BE SPACED AT 16" O.C. UNO. TWO STUDS MINIMUM SHALL BE PROVIDED AT THE END OF ALL WALLS AND AT EACH SIDE OF ALL OPENINGS, AND AT BEAM OR HEADER BEARING LOCATIONS. TWO 2x8 HEADERS SHALL BE PROVIDED OVER ALL OPENINGS NOT OTHERWISE NOTED. SOLID BLOCKING FOR WOOD COLUMNS SHALL BE PROVIDED THROUGH FLOORS TO SUPPORTS BELOW. PROVIDE CONTINUOUS SOLID BLOCKING AT MID-HEIGHT OF ALL STUD WALLS OVER 10'-0" IN HEIGHT.

ALL WALLS SHALL HAVE A SINGLE BOTTOM PLATE AND A DOUBLE TOP PLATE. END NAIL TOP PLATE TO EACH STUD WITH TWO 16d NAILS, AND TOENAIL OR END NAIL EACH STUD TO BOTTOM PLATE WITH TWO 16d NAILS. FACE NAIL DOUBLE TOP PLATE WITH 16d @ 12" O.C. AND LAP MINIMUM 4'-0" AT JOINTS AND PROVIDE EIGHT 16d NAILS @ 4" O.C. EACH SIDE JOINT.

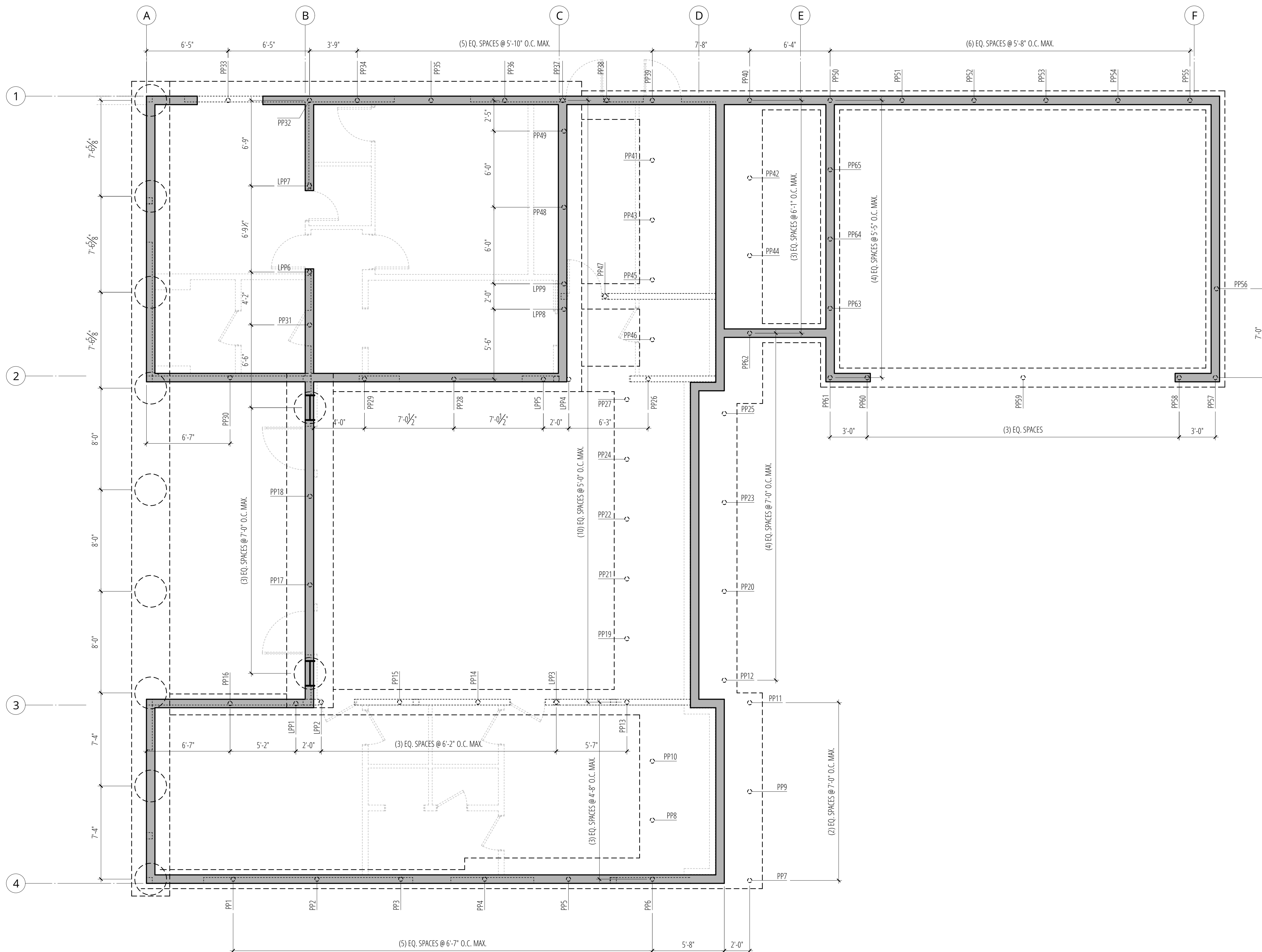
ALL STUD WALLS SHALL HAVE THEIR LOWER WOOD PLATES ATTACHED TO WOOD FRAMING BELOW WITH TWO ROWS OF 16d NAILS @ 12" ON-CENTER, OR ATTACHED TO CONCRETE BELOW WITH 5/8" DIAMETER ANCHOR BOLTS @ 4'-0" ON-CENTER EMBEDDED 7" MINIMUM, UNLESS INDICATED OTHERWISE. INDIVIDUAL MEMBERS OF BUILT-UP POSTS SHALL BE NAILED TO EACH OTHER WITH TWO ROWS OF 16d @ 12" ON-CENTER, UNLESS OTHERWISE NOTED. GYPSUM WALLBOARD SHALL BE FASTENED TO THE INTERIOR SURFACE OF ALL STUDS AND PLATES WITH NO. 6 X 1-1/4" TYPE S OR W SCREWS @ 8" ON-CENTER, UNLESS INDICATED OTHERWISE, 1/2" (NOMINAL) APA RATED SHEATHING (SPAN RATING 24/0) SHALL BE NAILED TO ALL EXTERIOR SURFACES WITH 8d NAILS @ 6" ON-CENTER AT PANEL EDGES AND TOP AND BOTTOM PLATES (BLOCK UN-SUPPORTED EDGES) AND TO ALL INTERMEDIATE STUDS AND BLOCKING WITH 8d NAILS @ 12" ON-CENTER ALLOW 1/8" SPACING AT ALL PANEL EDGES AND PANEL ENDS.

C. FLOOR AND ROOF FRAMING: PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS THAT EXTEND OVER MORE THAN HALF THE JOIST LENGTH AND AROUND ALL OPENINGS IN FLOORS OR ROOFS UNLESS OTHERWISE NOTED. PROVIDE SOLID BLOCKING AT ALL BEARING POINTS. TOENAIL JOISTS TO SUPPORTS WITH TWO 16d NAILS. ATTACH TIMBER JOISTS TO FLUSH HEADERS OR BEAMS WITH SIMPSON METAL JOIST HANGERS IN ACCORDANCE WITH NOTES ABOVE. NAIL ALL MULTI-JOIST BEAMS TOGETHER WITH TWO ROWS 16d @ 12" ON-CENTER.

UNLESS OTHERWISE NOTED ON THE PLANS, PLYWOOD ROOF AND FLOOR SHEATHING SHALL BE LAID UP WITH GRAIN PERPENDICULAR TO SUPPORTS AND NAILED AT 6" ON-CENTER WITH 8d NAILS TO FRAMED PANEL EDGES, STRUTS AND OVER STUD WALLS AS SHOWN ON PLANS AND @ 12" ON-CENTER TO INTERMEDIATE SUPPORTS. PROVIDE APPROVED PLYWOOD EDGE CLIPS CENTERED BETWEEN JOISTS/TRUSSES AT UNBLOCKED ROOF SHEATHING EDGES. ALL FLOOR SHEATHING EDGES SHALL HAVE APPROVED T&G JOINTS OR SHALL BE SUPPORTED WITH SOLID BLOCKING. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS OF FLOOR AND ROOF SHEATHING. TOENAIL BLOCKING TO SUPPORTS WITH 16d @ 12" ON-CENTER UNLESS OTHERWISE NOTED.

Zimmer Residence

4661 Forest Ave SE
Mercer Island, WA, 98040



LEGEND

- (N) CONCRETE WALL ABOVE THIS LEVEL
- (N) CONCRETE FOOTING
- PIPE PILE PER SCHEDULE

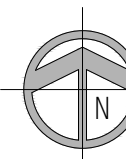
PLAN NOTES

PIPE PILE SCHEDULE	
PP1 - PP65	3" # STD PIPE
LPP1 - LPP9	4" # STD PIPE

- PIPE PILES SHALL BE DRIVEN TO REFUSAL & INSPECTED PER GENERAL NOTES
- PILES SHALL BE CAPPED w/ MIN. X STL. PL & EMBED 3" MIN - 6" MAX IN CONCRETE FOUNDATIONS (18" MIN. OF CONCRETE COVER OVER PILE CAP)
- EXTENT OF PIPE PILE SUPPORT IS APPROXIMATE & SHALL BE VERIFIED BY GEOTECHNICAL ENGINEER IN FIELD. IF ADDITIONAL/LESS PILES ARE REQ'D, COORDINATE REVISIONS w/ ENGINEER OF RECORD.

Pin Pile Plan

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

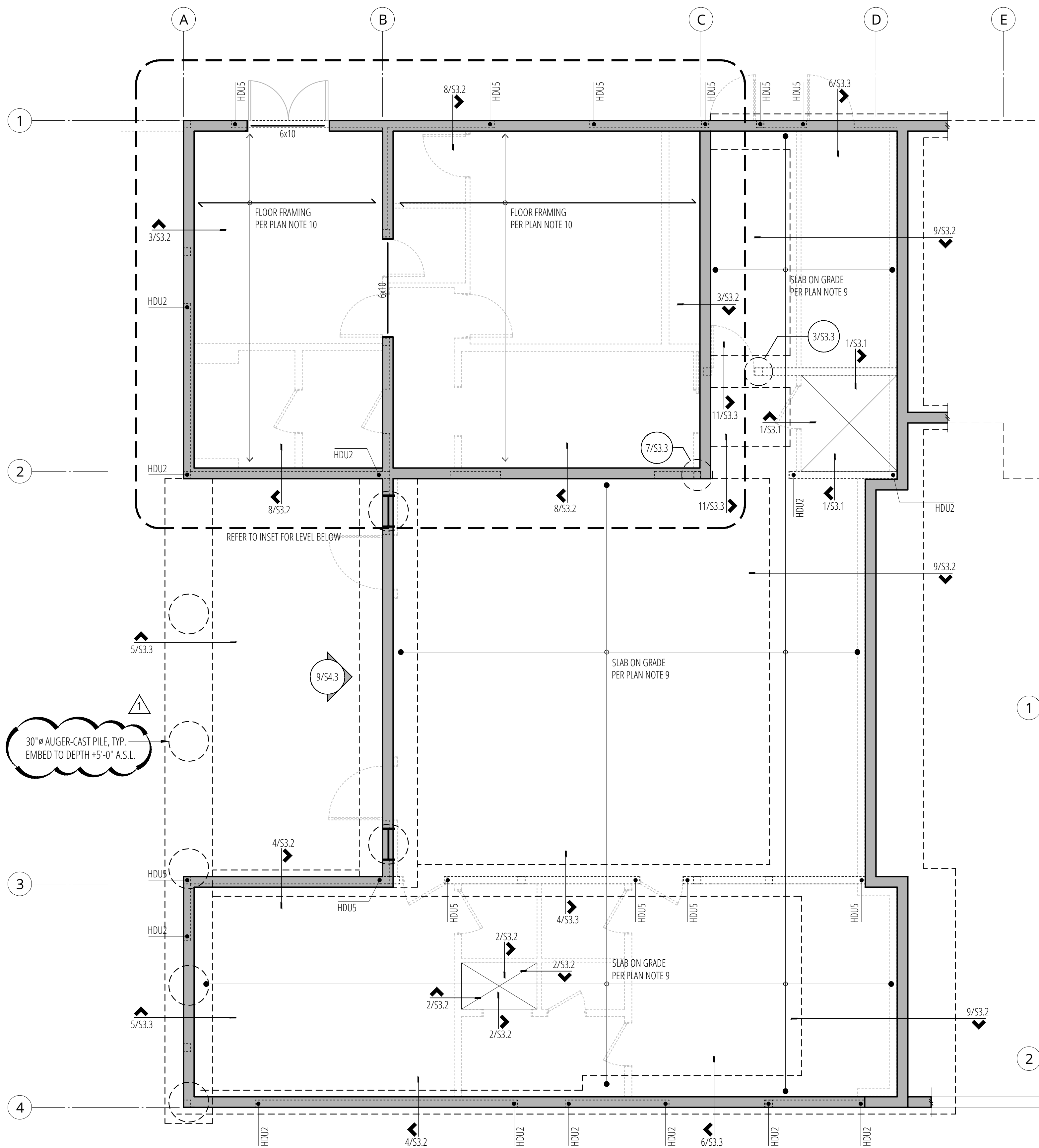


No.	Date	Issue
11/13/24	Permit	
4/2/25	Corrections	
4/17/25	Revisions	
5/7/25	Corrections	

Sheet Contents

Sheet No.

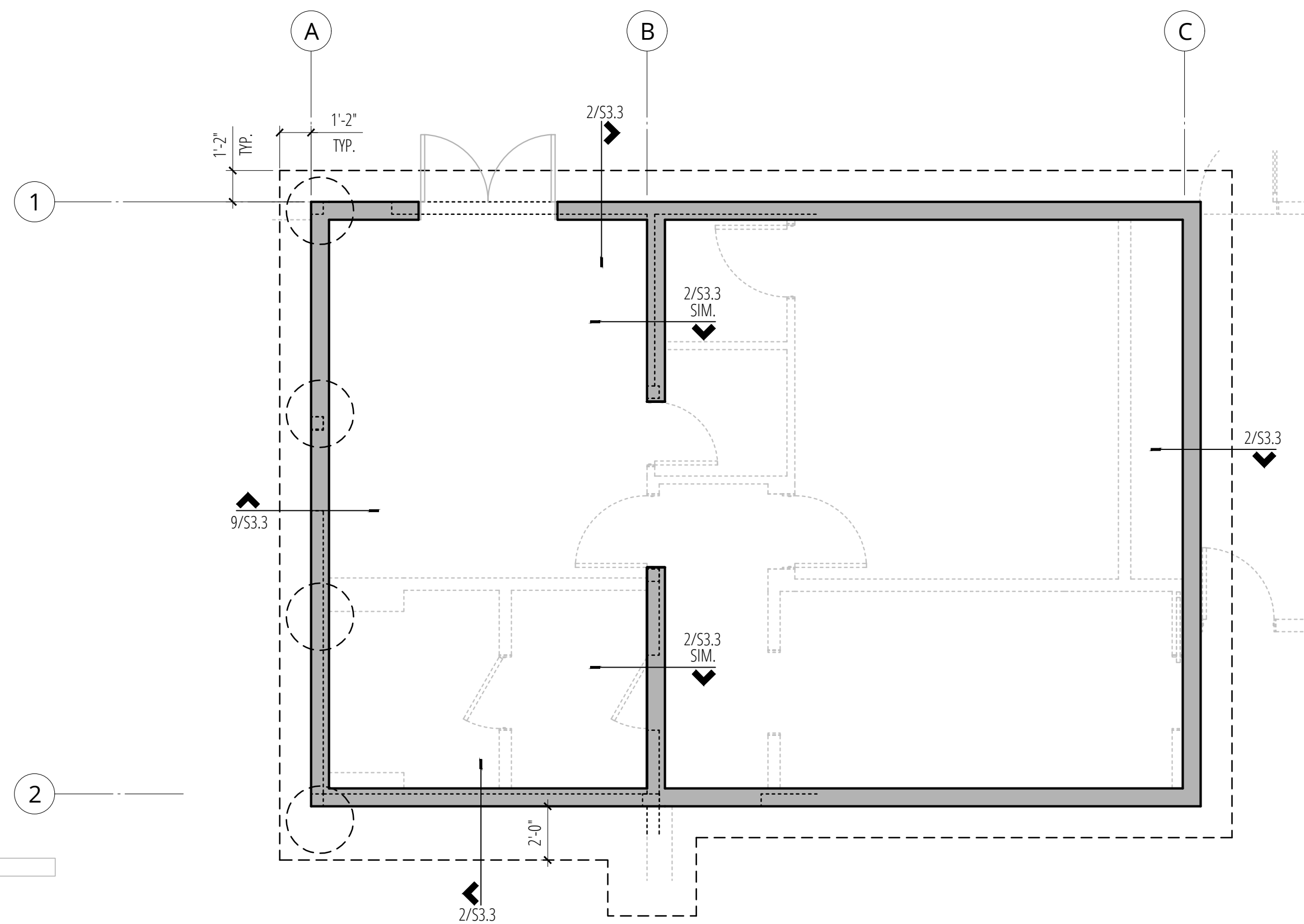
S2.0



- PLAN NOTES**
- REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS (S1.1).
 - REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS UNLESS SPECIFICALLY NOTED ON STRUCTURAL PLANS.
 - ALL FOOTINGS SHALL BEAR ON FIRM, NATIVE SOIL.
 - PROVIDE DRAINAGE BEHIND ALL FOUNDATION WALLS.
 - REINFORCE FOOTING AND WALL CORNERS AND INTERSECTIONS PER 11/S3.1.
 - "HDUx" REFERS TO HOLDDOWNS PER 9/S3.1.
 - REFER 4/S3.1 WHERE PIPES PENETRATE FOUNDATION.
 - CONTRACTOR TO VERIFY TOP OF FOOTING ELEVATION w/ ARCHITECTURAL PLANS.

- 4" CONCRETE SLAB ON GRADE REINFORCED WITH #3 @ 12" O.C. EACH WAY, CENTERED IN SLAB. PROVIDE A BASE OF 12" COMPACTED, CLEAN ¾" MINUS GRAVEL COVERED WITH 6 MIL. VAPOR BARRIER. PROVIDE JOINTS PER 7/S3.1.
- FLOOR FRAMING AT SUB-BASEMENT TO BE 14" FLOOR TRUSSES @ 16" O.C. TRUSS DESIGN BY OTHERS
- FLOOR SHEATHING SHALL BE 1 ½" T&G PLYWOOD SHEATHING WITH 48/24 SPAN RATING. NAIL FRAMED PANEL EDGES w/ 8d COMMON (0.131" DIA. x 2 ½") @ 6" O.C., FIELD @ 12" O.C. (REFER TO 9/S4.1)
- CONTRACTOR TO COORDINATE WHERE SITE CONDITIONS REQUIRE FOOTING TO STEP. (REFER TO DETAIL 2/S3.1)

- LEGEND**
- (N) CONCRETE WALL ABOVE THIS LEVEL
 - (N) CONCRETE FOOTING
 - STRUCTURAL WOOD WALL or POST ABOVE THIS LEVEL
 - SPAN DIRECTION
 - EXTENT OF SPAN
 - HOLDOWN



Sub-Basement Foundation Plan
SCALE: ¼"=1'-0"

Foundation Plan
SCALE: ¼"=1'-0"

No.	Date	Issue
11/13/24	Permit	
4/2/25	Corrections	
4/17/25	Revisions	
5/7/25	Corrections	

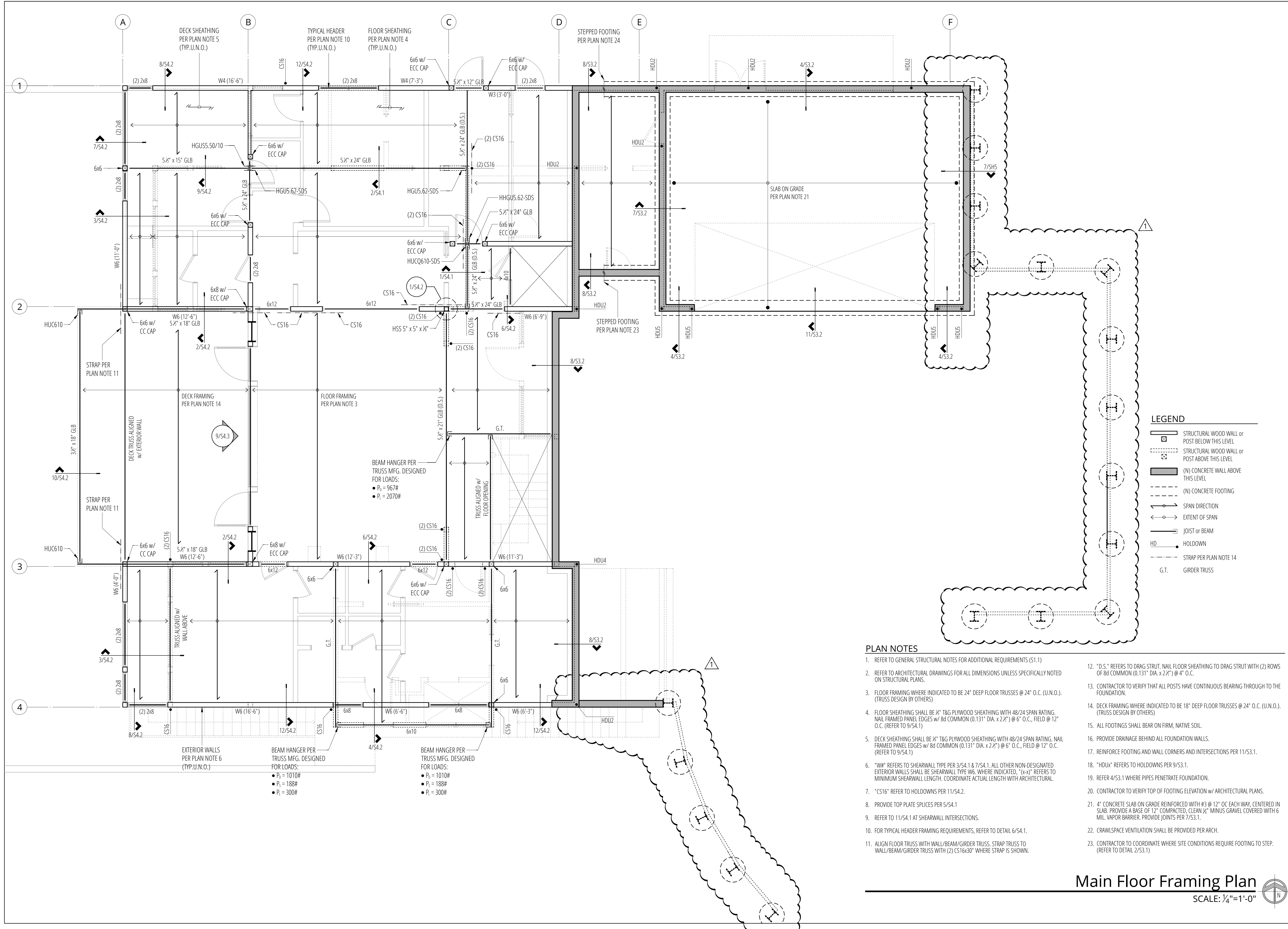
Sheet Contents
#####

Sheet No.

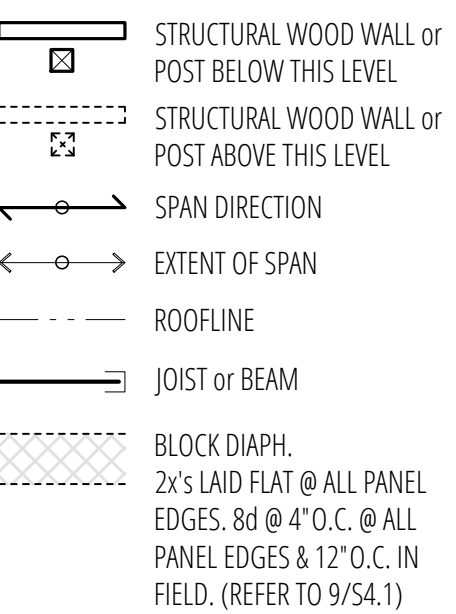
4661 Forest Ave SE
Mercer Island, WA, 98040

Sheet No.

52.2

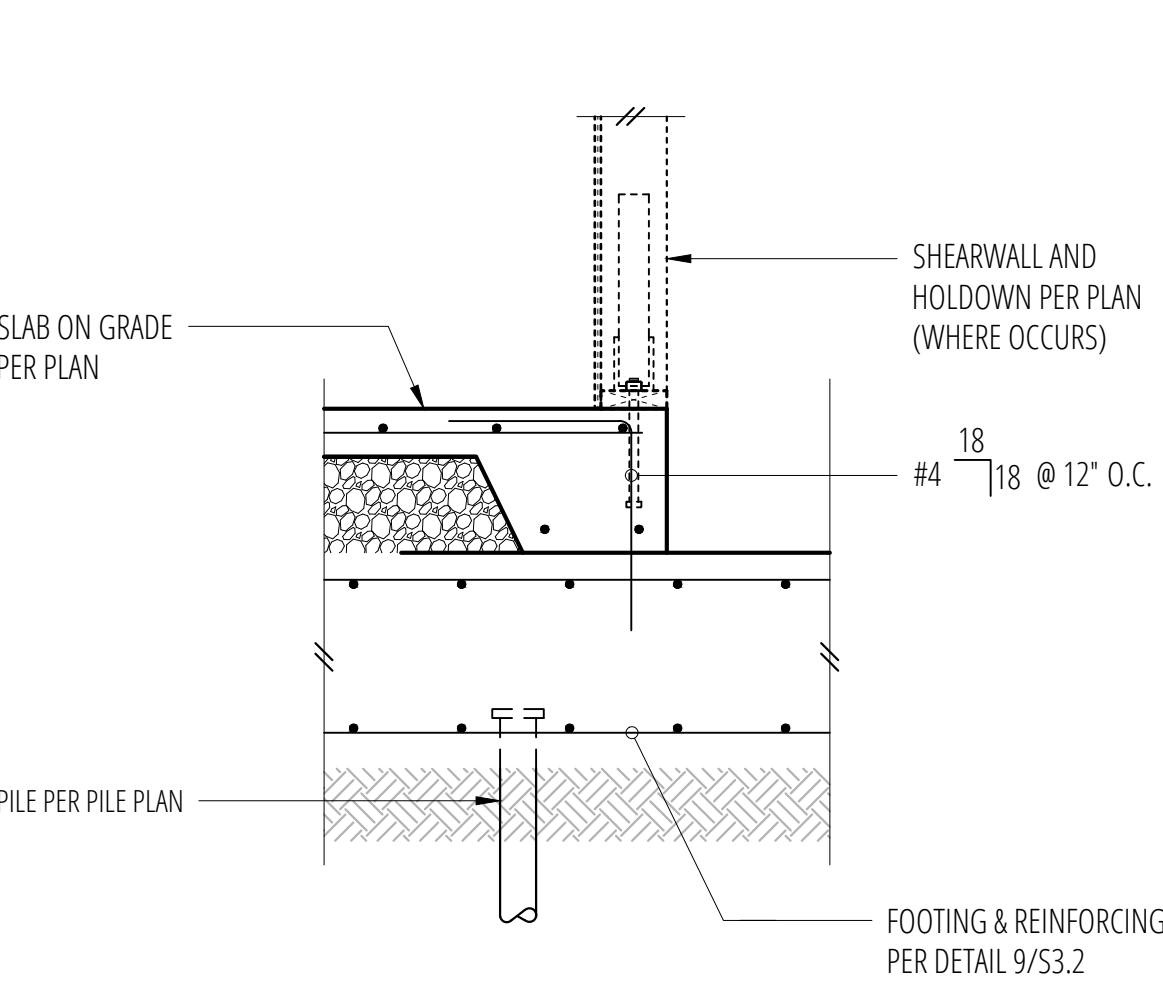


4661 Forest Ave SE
Mercer Island, WA, 98040



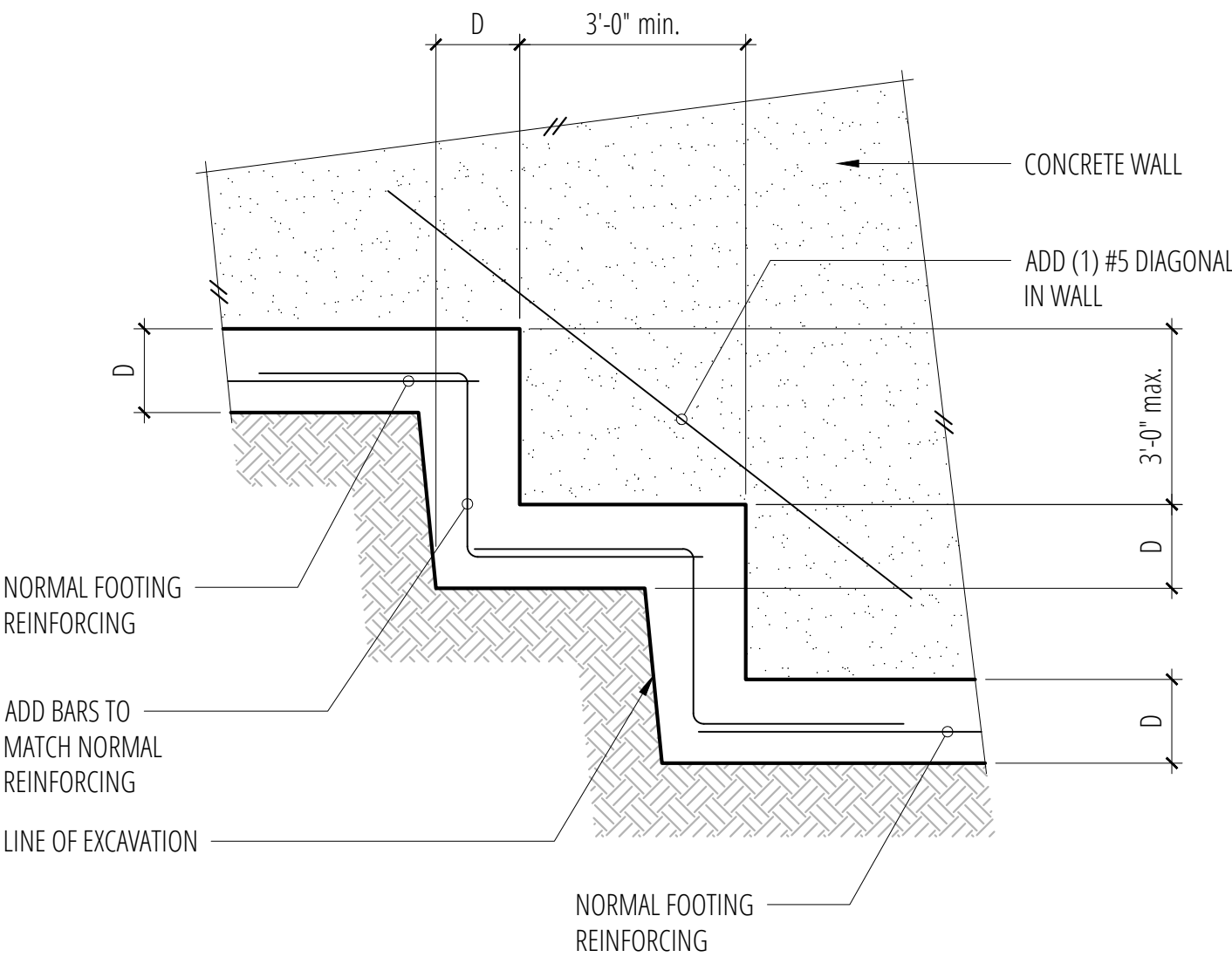
1

Slab Edge at Elevator Pit
SCALE: 3/4"=1'-0"



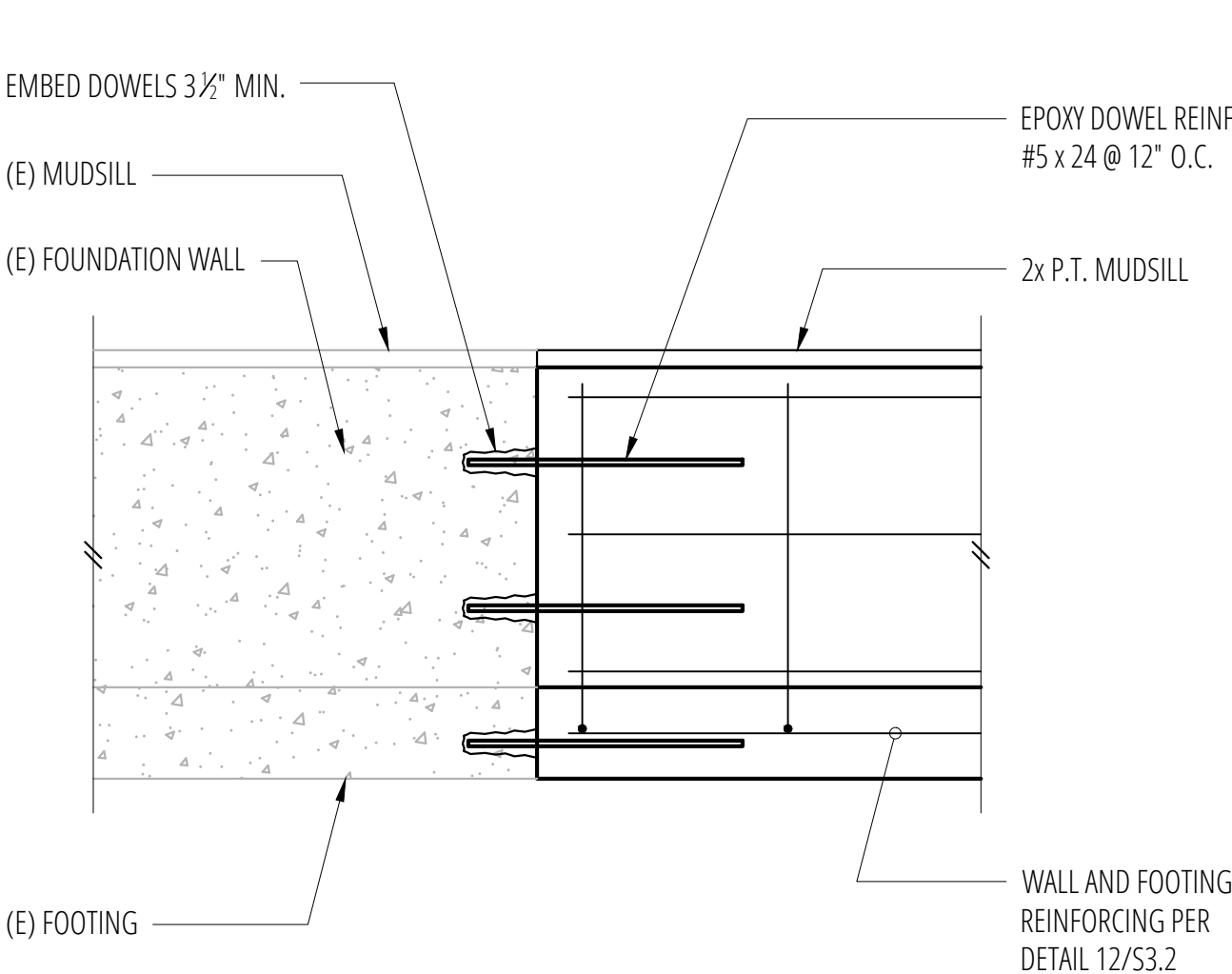
2

Stepped Footing
SCALE: 3/4"=1'-0"



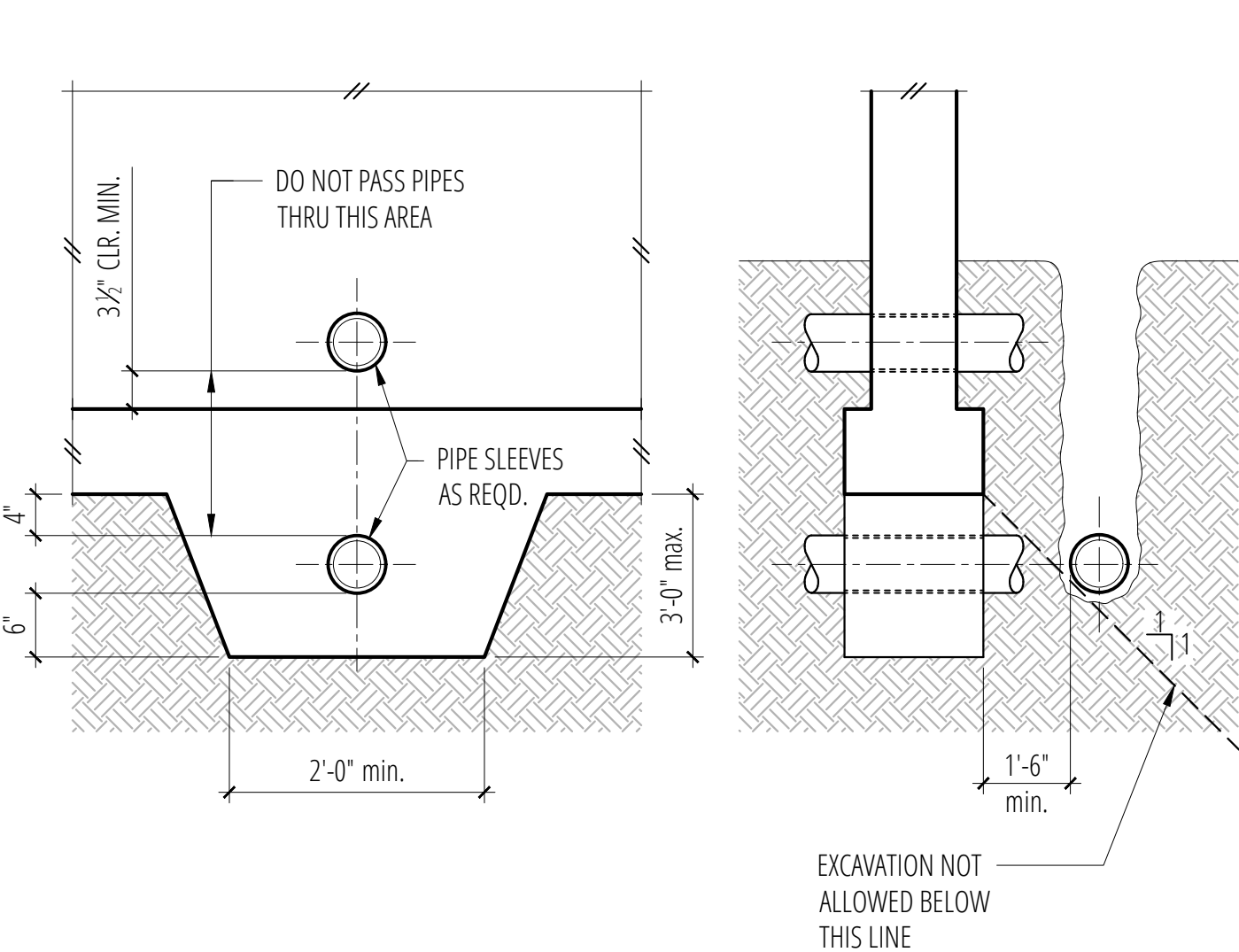
3

Epoxy Dowel Connection at (E) Foundation
SCALE: 3/4"=1'-0"



4

Pipe and Trench Locations
SCALE: 3/4"=1'-0"



Holdown Schedule

Plan Mark	Screws	Anchor Bolt	A.B. Embed	Holdown Post		Capacity #
				IF 2x4	IF 2x6	
HDU2-SDS2.5	(6) SDS 1/4" x 2 1/2"	SSTB16	12 3/8"	(2) 2x4	4x6	2215/3075
HDU4-SDS2.5	(10) SDS 1/4" x 2 1/2"	SB 3/8 x 24	18"	4x4	4x6	4565
HDU5-SDS2.5	(14) SDS 1/4" x 2 1/2"	SB 3/8 x 24	18"	4x4	4x6	5645
HDU8-SDS2.5	(20) SDS 1/4" x 2 1/2"	SB 3/8 x 24	18"	4x4	4x6	6970
HDU11-SDS2.5	(30) SDS 1/4" x 2 1/2"	SB 1 x 30	24"	4x8	6x6	9535 (8315 AT CORNER)
HDU14-SDS2.5	(36) SDS 1/4" x 2 1/2"	SB 1 x 30	24"	N/A	6x6	11470 (8315 AT CORNER)

- ① MINIMUM SIZE OF POST AT END OF WALL UNLESS NOTED OTHERWISE ON FRAMING PLANS.
② "SSTB" & "SB" REFER TO ANCHOR BOLTS BY SIMPSON STRONG-TIE. INSTALL PER MANUFACTURER.

9

HDU Holdown Schedule
SCALE: 3/4"=1'-0"

10

Lap Splice and Development Schedule
SCALE: 3/4"=1'-0"

REINFORCING SPLICE AND DEVELOPMENT LENGTH SCHEDULE

FOR F'c = 2500 psi, GRADE 60 REINFORCING

I

MINIMUM STRAIGHT DEVELOPMENT LENGTH (ℓd)		
BAR SIZE	TOP BARS	OTHER BARS
#3	23"	18"
#4	31"	24"
#5	40"	30"
#6	47"	36"
#7	68"	53"
#8	78"	60"
#9	88"	68"
#10	99"	77"
#11	110"	85"

II

MINIMUM LAP SPLICE LENGTHS (ℓs)		
BAR SIZE	TOP BARS	OTHER BARS
#3	31"	23"
#4	41"	31"
#5	51"	40"
#6	62"	47"
#7	89"	68"
#8	102"	78"
#9	114"	88"
#10	130"	99"
#11	143"	110"

TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" DEPTH OF CONCRETE CAST BELOW THEM.

IF CLEAR CONCRETE COVER IS NOT GREATER THAN THE DIAMETER OF THE BAR, OR THE CENTER TO CENTER SPACING IS NOT GREATER THAN 3 BAR DIAMETER THEN LENGTHS SHALL BE INCREASED BY 50%

III

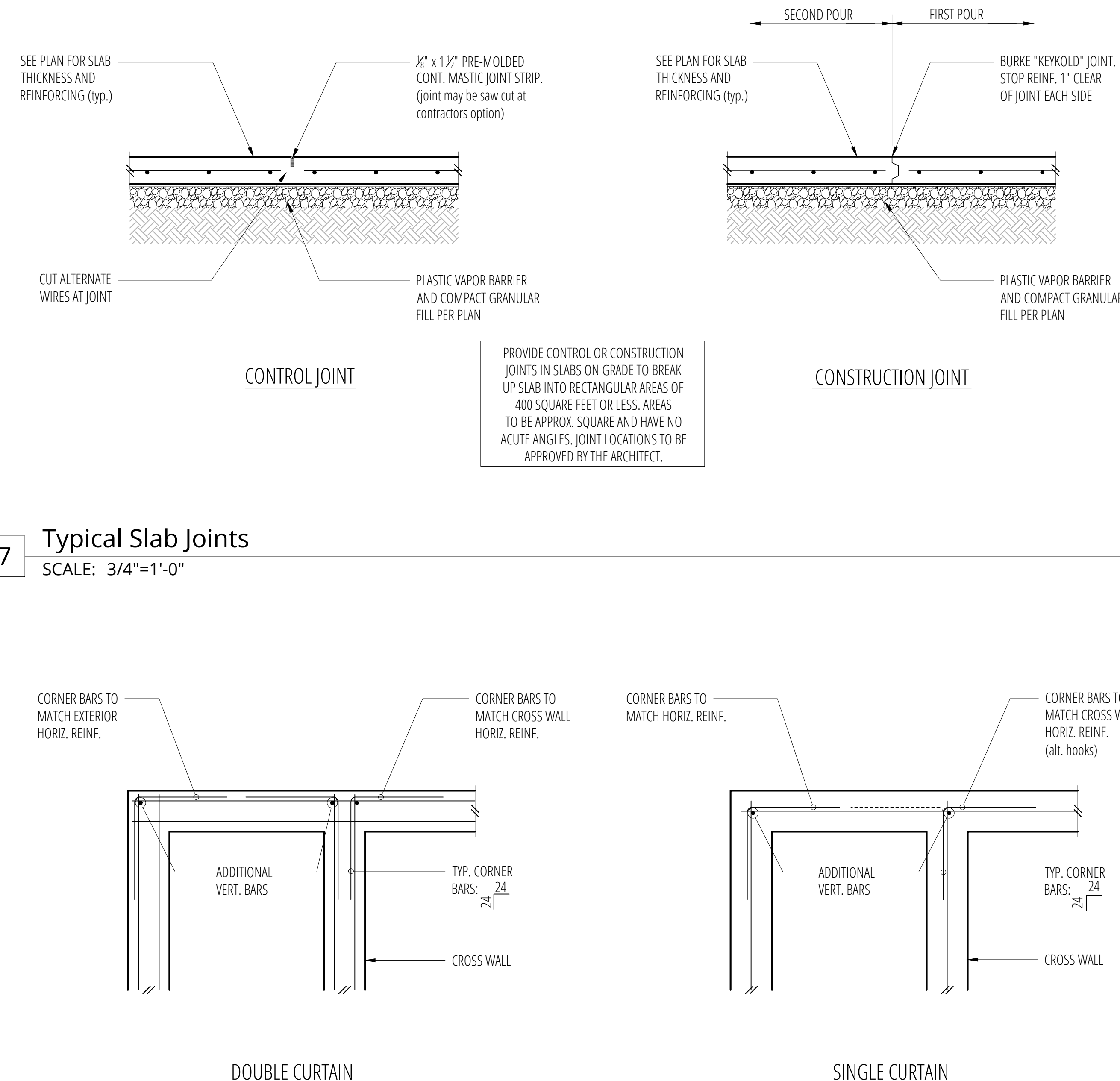
MINIMUM EMBEDMENT LENGTHS (ℓdh) FOR STANDARD END HOOKS	
BAR SIZE	LENGTH
#3	7"
#4	9"
#5	11"
#6	13"
#7	14"
#8	17"
#9	19"
#10	21"
#11	24"

1. SIDE COVER MUST BE EQUAL TO OR GREATER THAN 2½"

2. END COVER FOR 90° HOOKS MUST BE EQUAL TO OR GREATER THAN 2"

7

Typical Slab Joints
SCALE: 3/4"=1'-0"



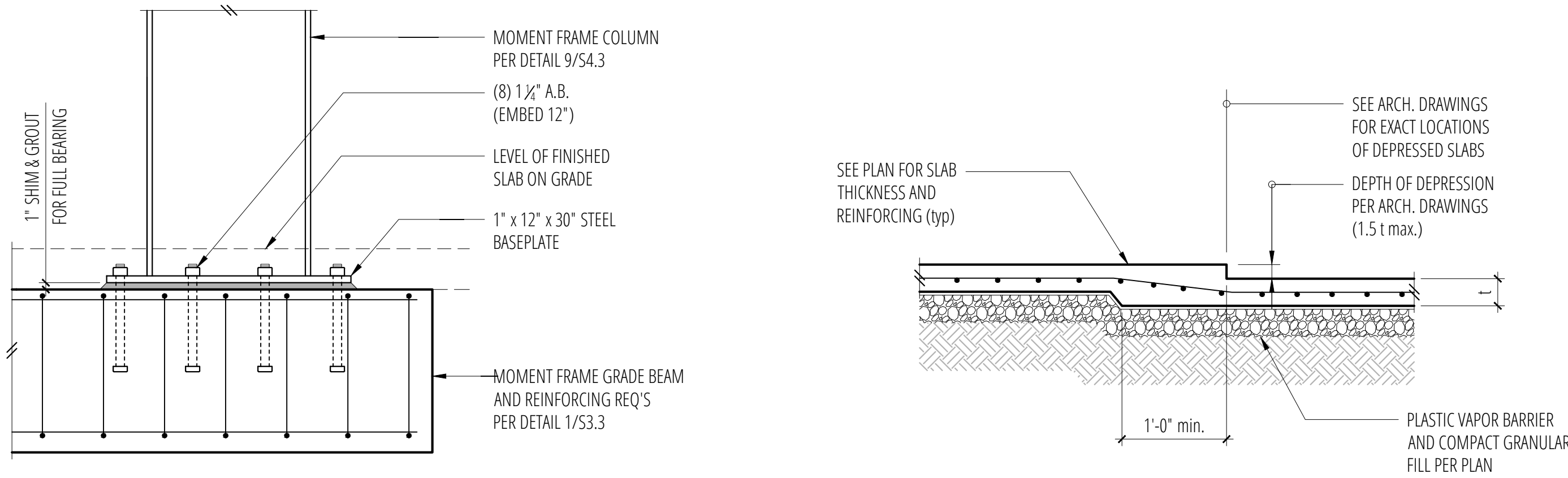
11

Typical Corner Bars at Concrete Walls and Footings
SCALE: 3/4"=1'-0"

No.	Date	Issue
11/13/24	Permit	
4/2/25	Corrections	
4/17/25	Revisions	
5/7/25	Corrections	

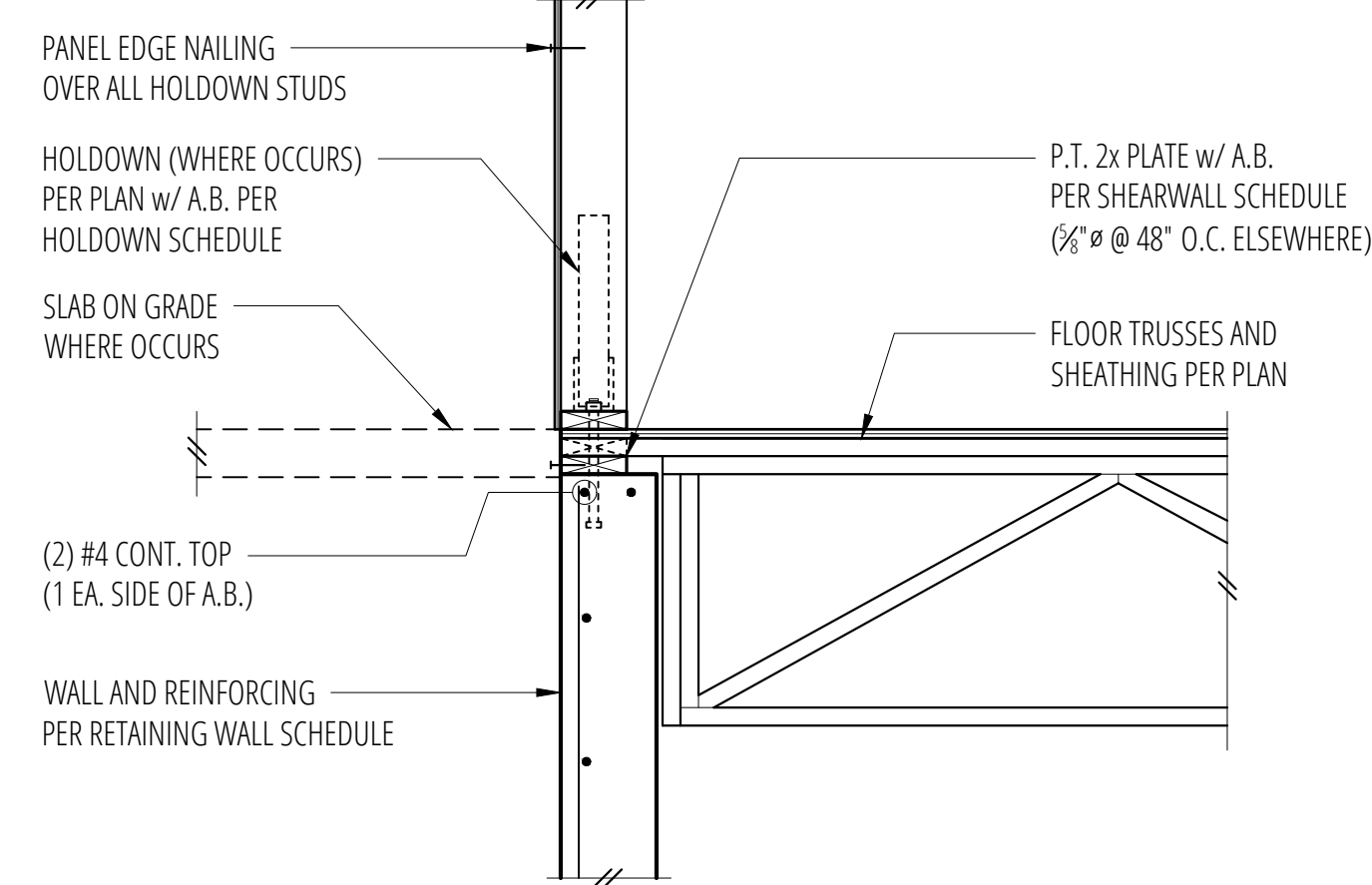
Sheet Contents
CONCRETE DETAILS

Sheet No.

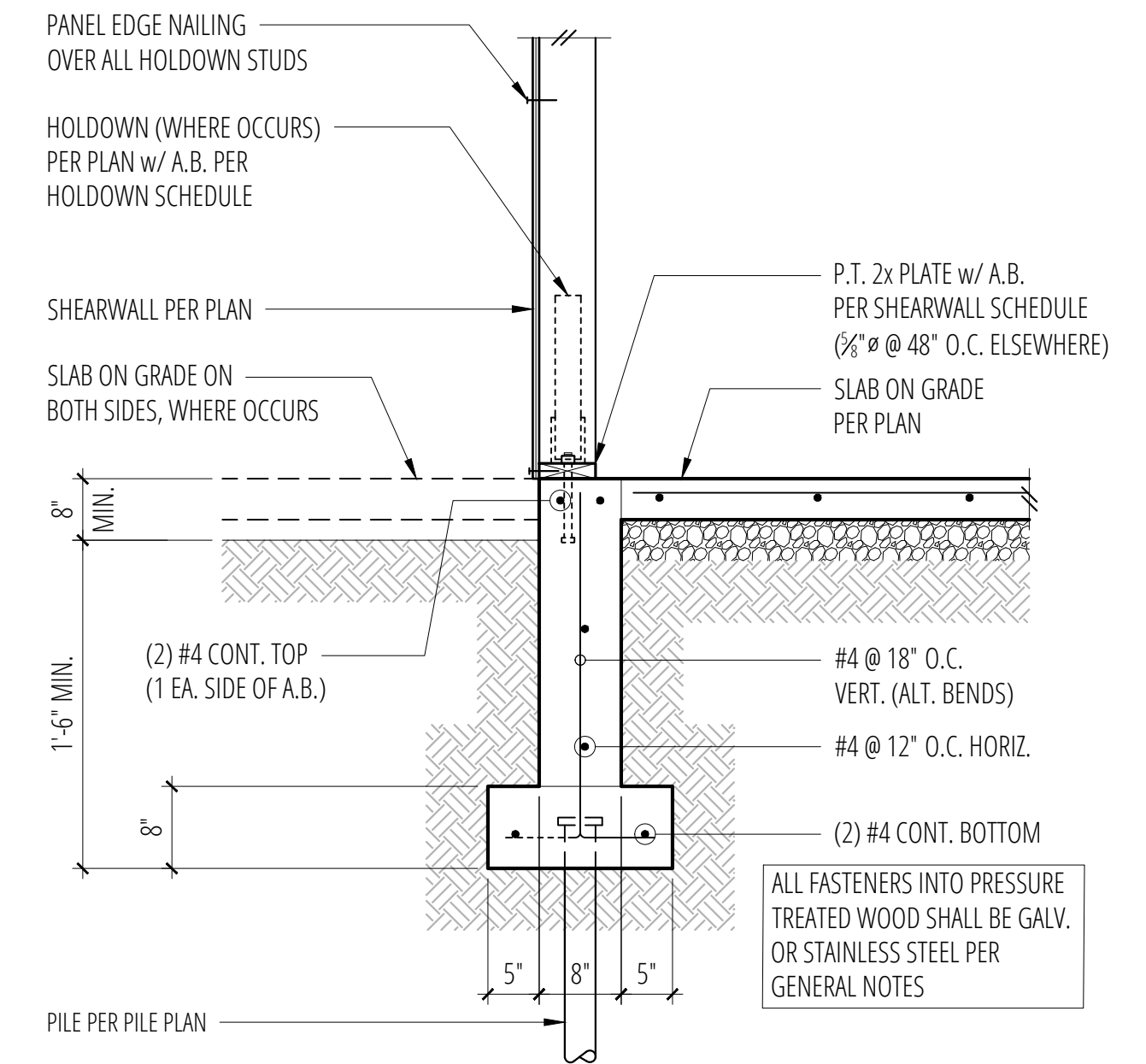


1 Grade Beam at Moment Frame
SCALE: 3/4"=1'-0"

2 Typical Depressed Slab on Grade
SCALE: 3/4"=1'-0"



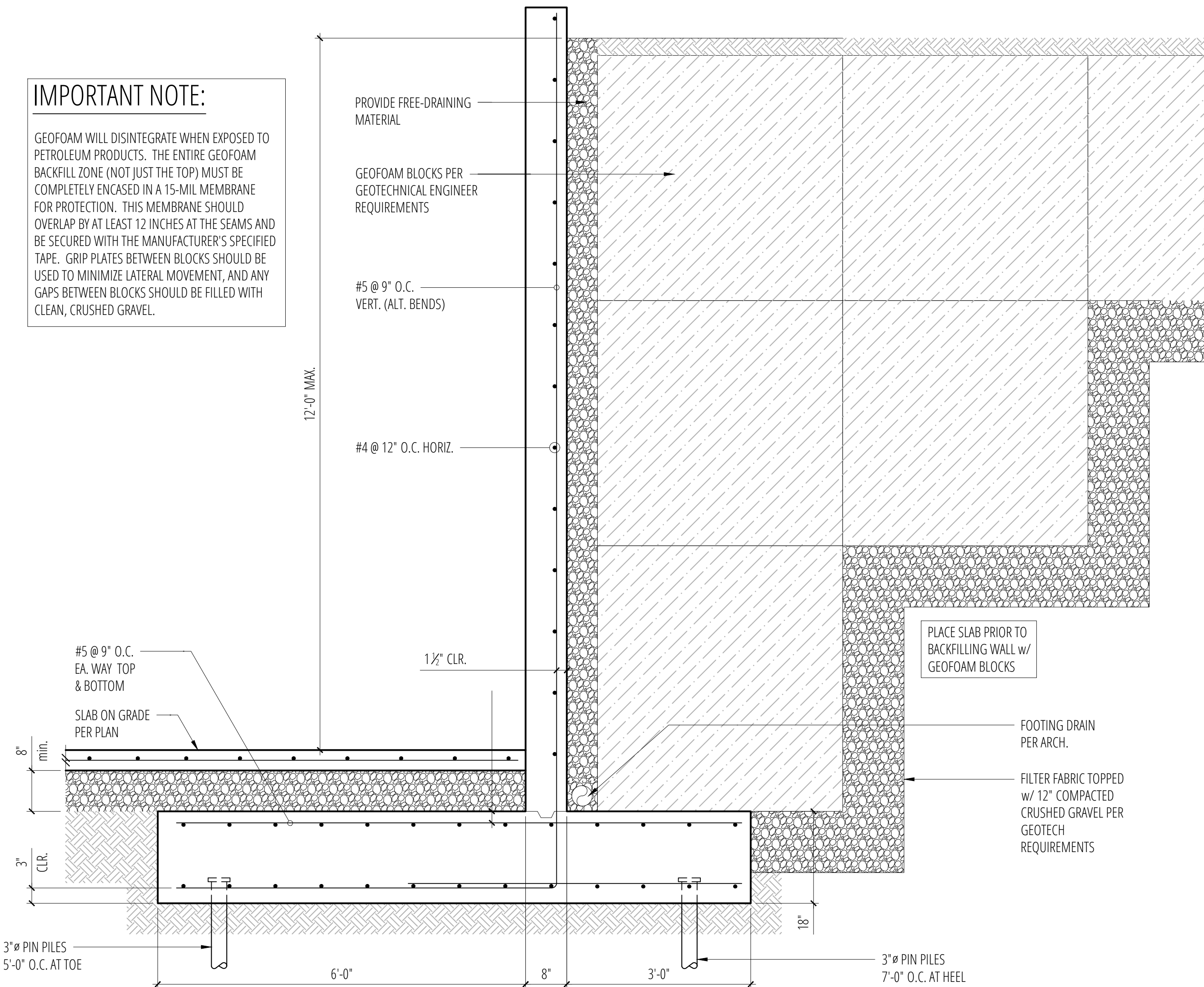
3 Exterior Floor Framing at Full Height Concrete
SCALE: 3/4"=1'-0"



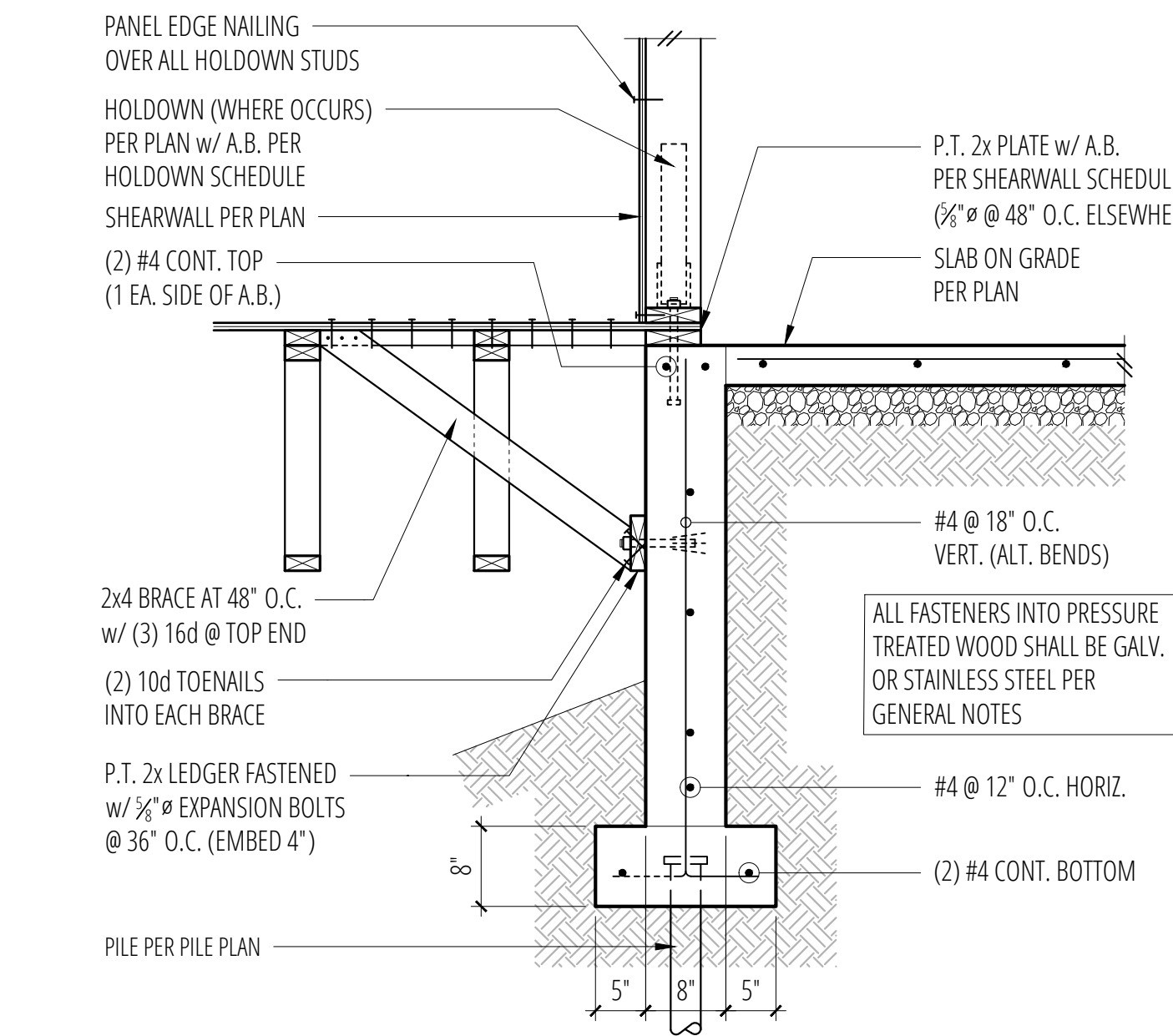
4 Exterior Wall w/ Slab on Grade
SCALE: 3/4"=1'-0"

IMPORTANT NOTE:

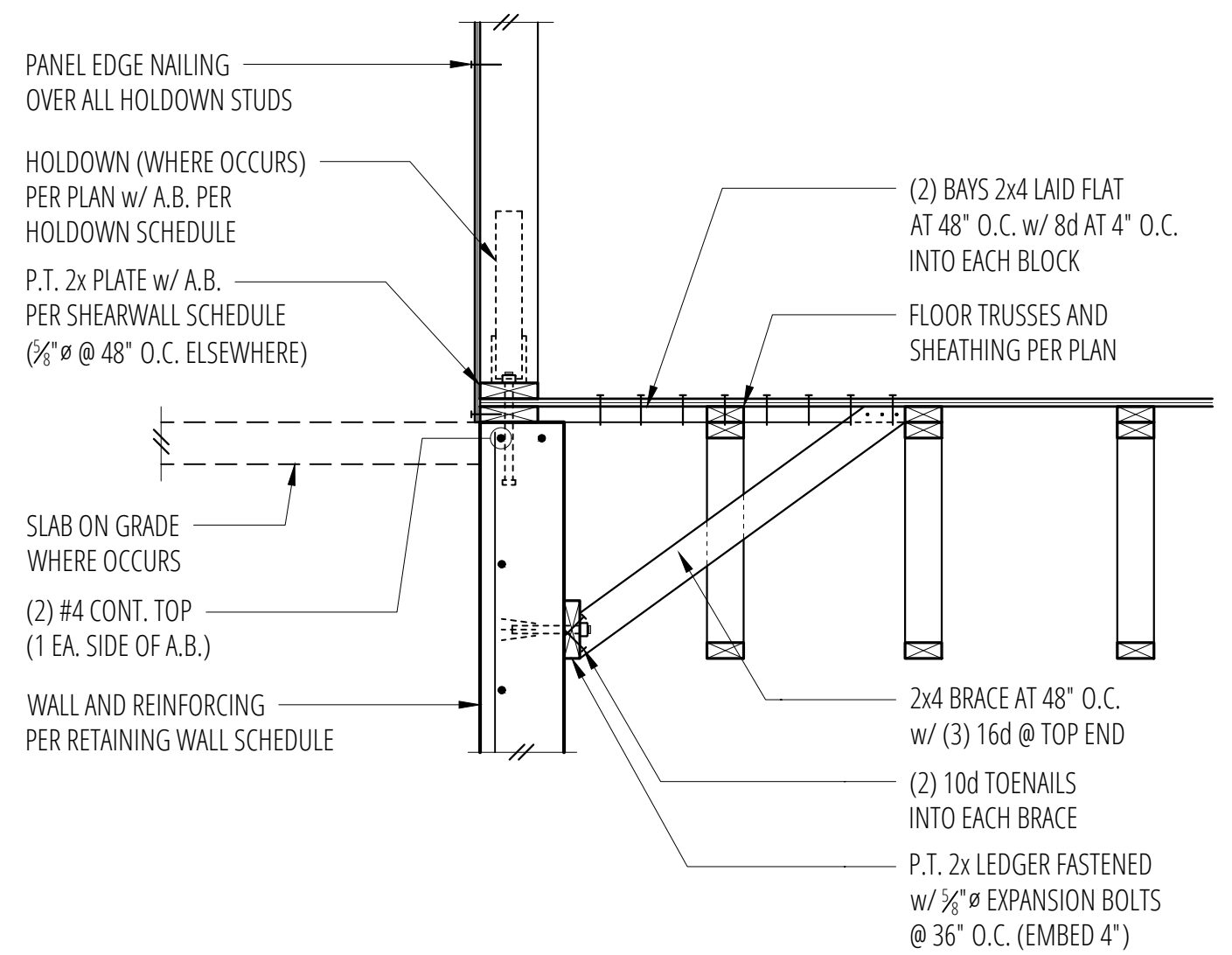
GEOFOAM WILL DISINTEGRATE WHEN EXPOSED TO PETROLEUM PRODUCTS. THE ENTIRE GEOFOAM BACKFILL ZONE (NOT JUST THE TOP) MUST BE COMPLETELY ENCASED IN A 15-MIL MEMBRANE FOR PROTECTION. THIS MEMBRANE SHOULD OVERLAP BY AT LEAST 12 INCHES AT THE SEAMS AND BE SECURED WITH THE MANUFACTURER'S SPECIFIED TAPE. GRIP PLATES BETWEEN BLOCKS SHOULD BE USED TO MINIMIZE LATERAL MOVEMENT, AND ANY GAPS BETWEEN BLOCKS SHOULD BE FILLED WITH CLEAN, CRUSHED GRAVEL.



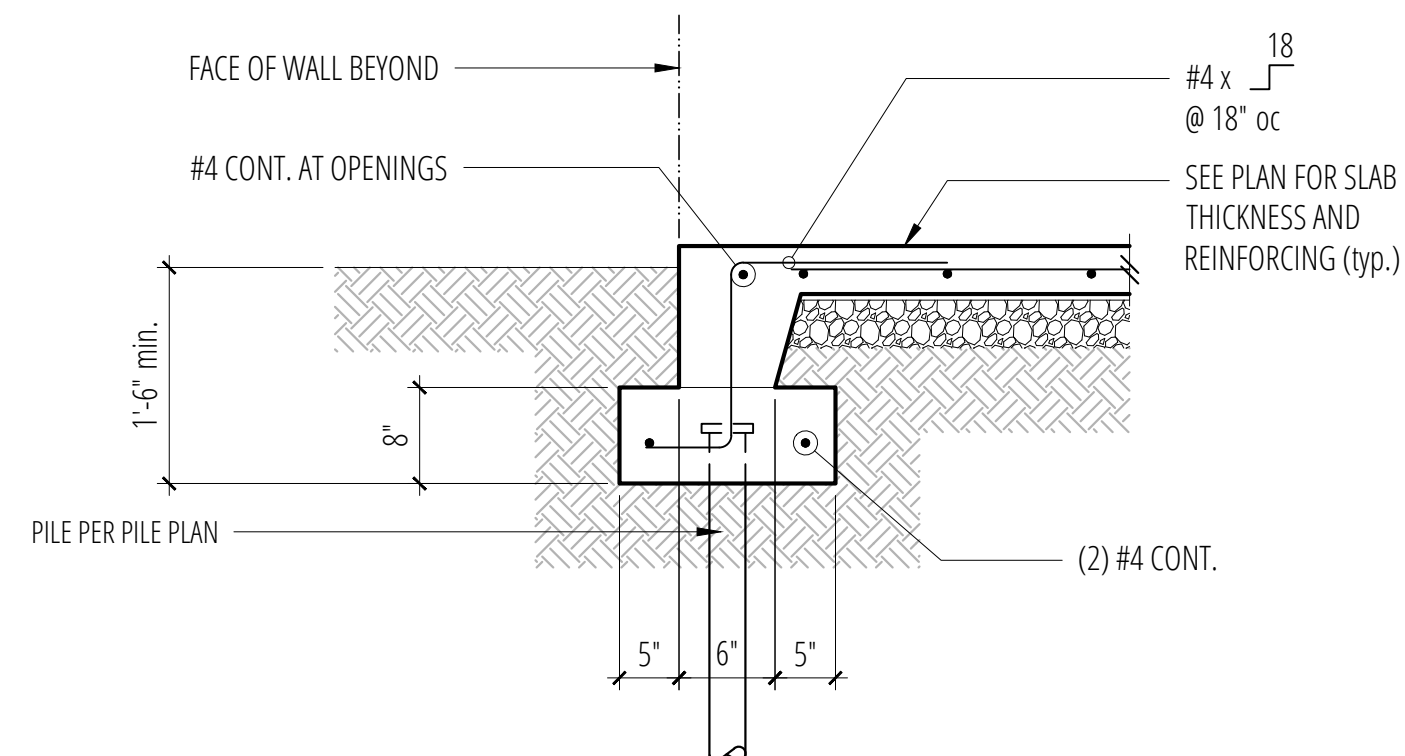
9 Retaining Wall Schedule with Slab on Grade
SCALE: 3/4"=1'-0"



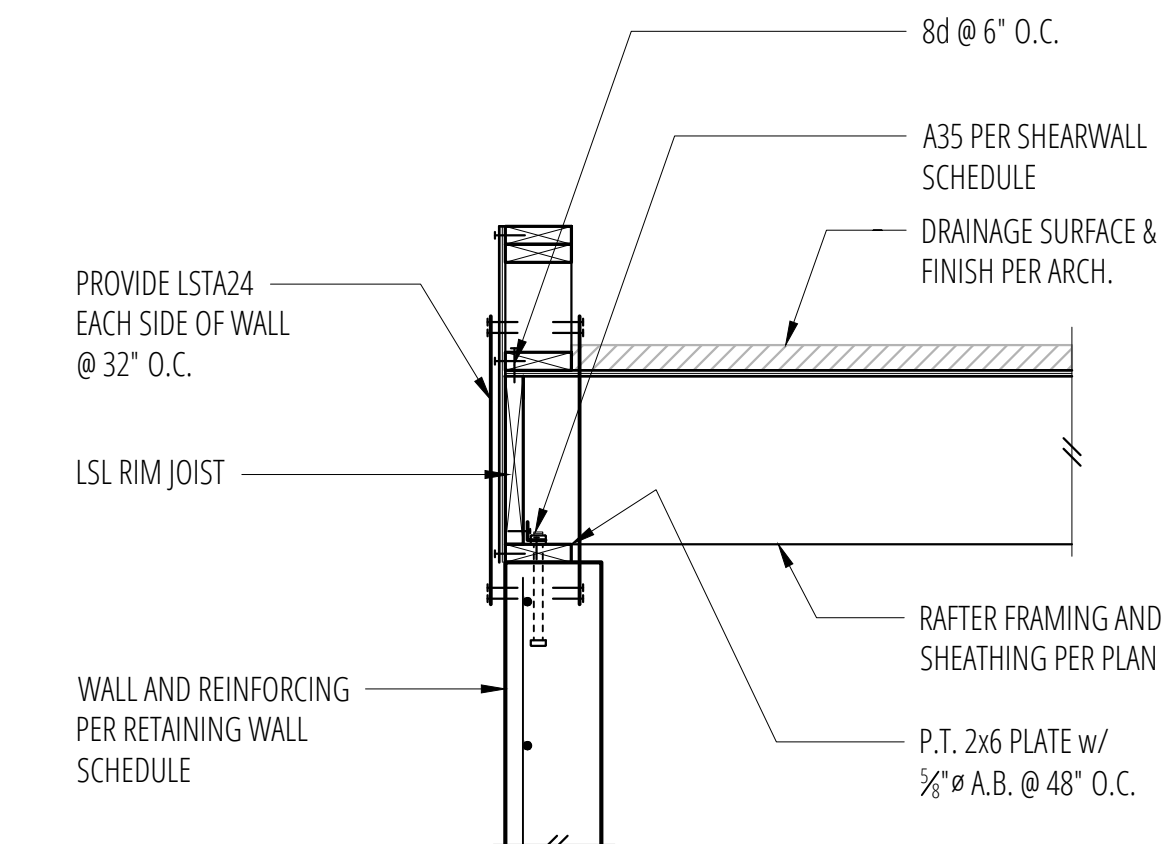
7 Foundation Wall at Garage Slab/Crawlspace
SCALE: 3/4"=1'-0"



8 Exterior Floor Framing at Full Height Concrete
SCALE: 3/4"=1'-0"



11 Turned-Down Slab Edge
SCALE: 3/4"=1'-0"



12 Rafter Framing at Garage Concrete Wall
SCALE: 3/4"=1'-0"

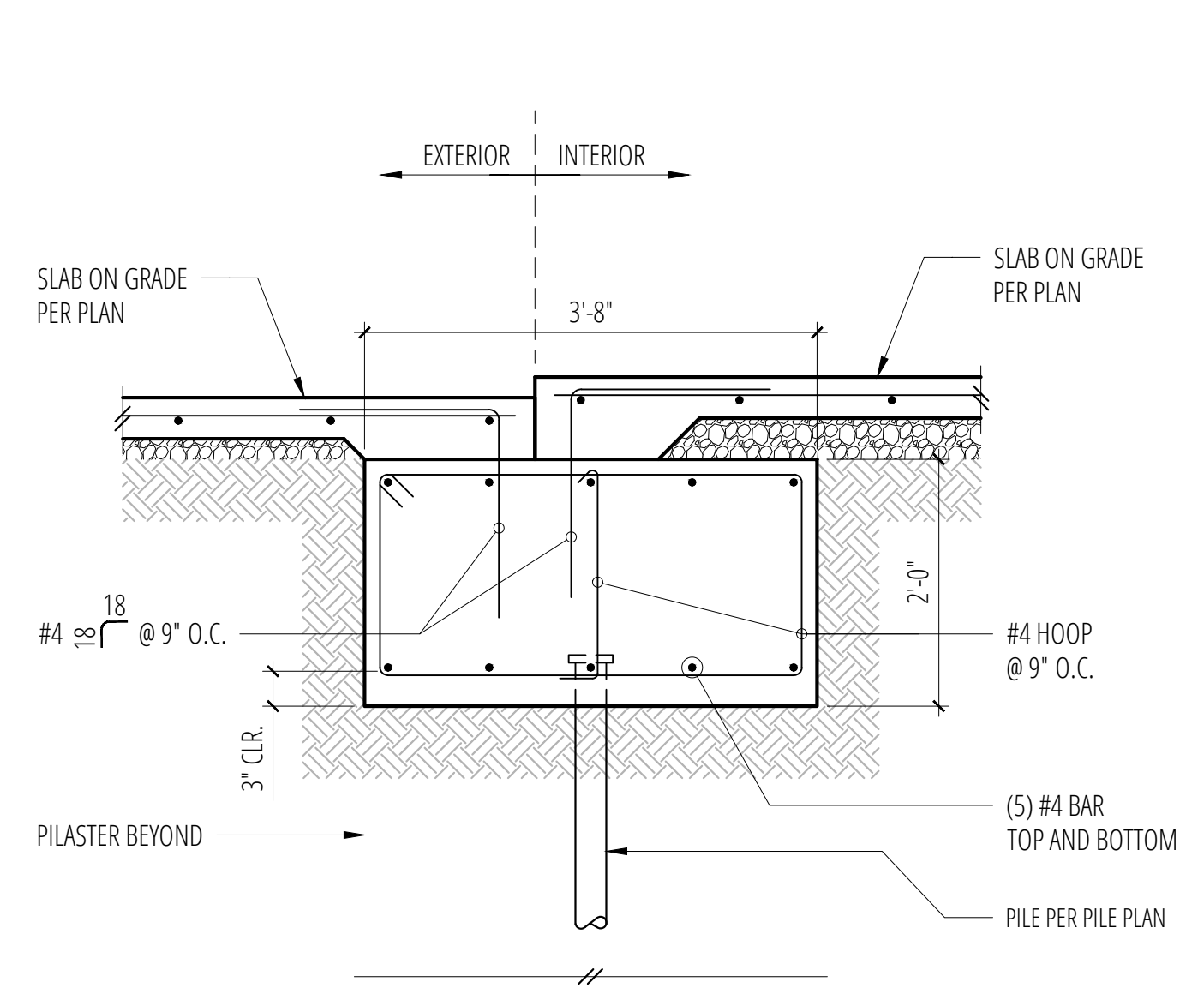
No.	Date	Issue
11/13/24	Permit	
4/2/25	Corrections	
4/17/25	Revisions	
5/7/25	Corrections	

Sheet Contents

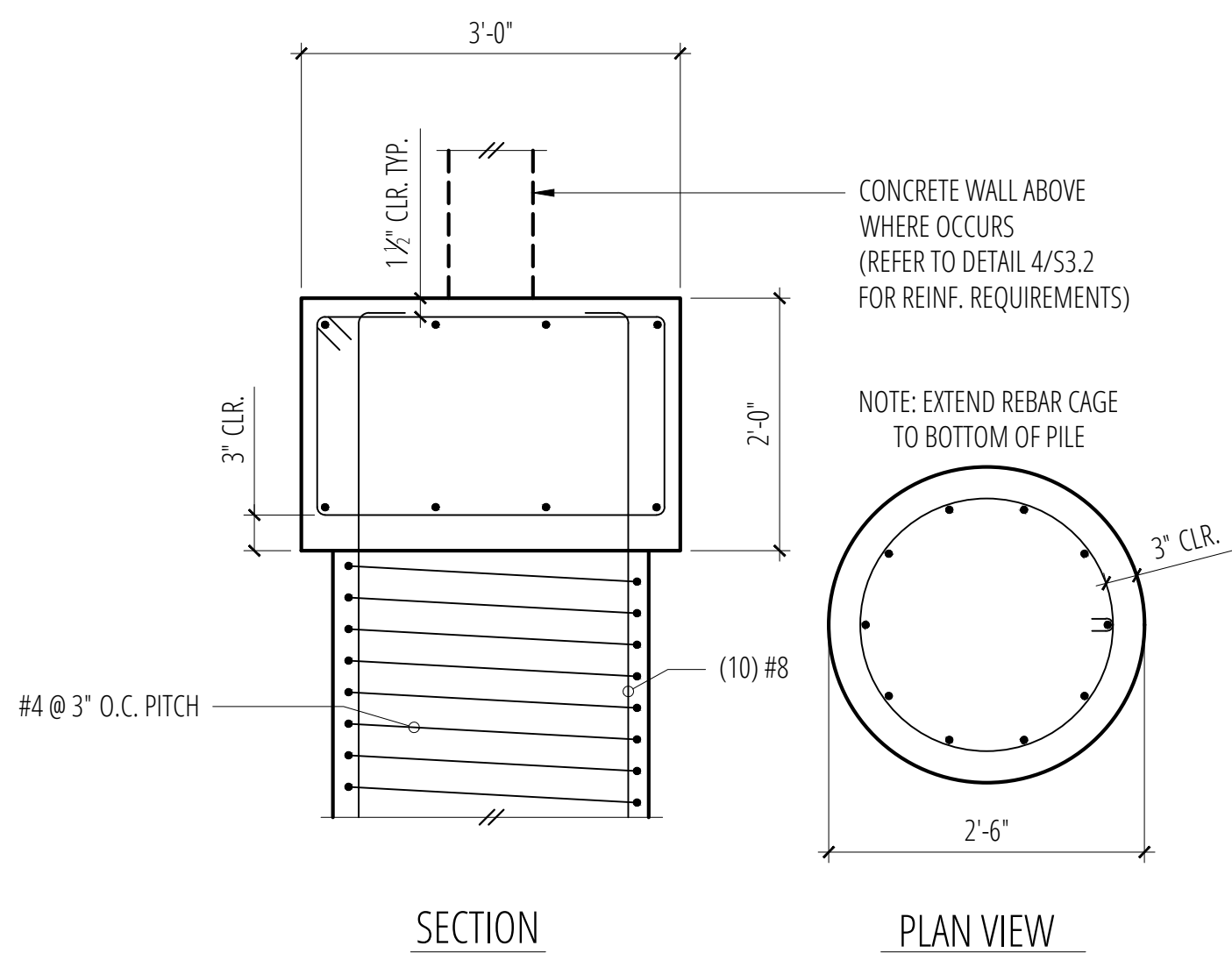
CONCRETE DETAILS

Sheet No.

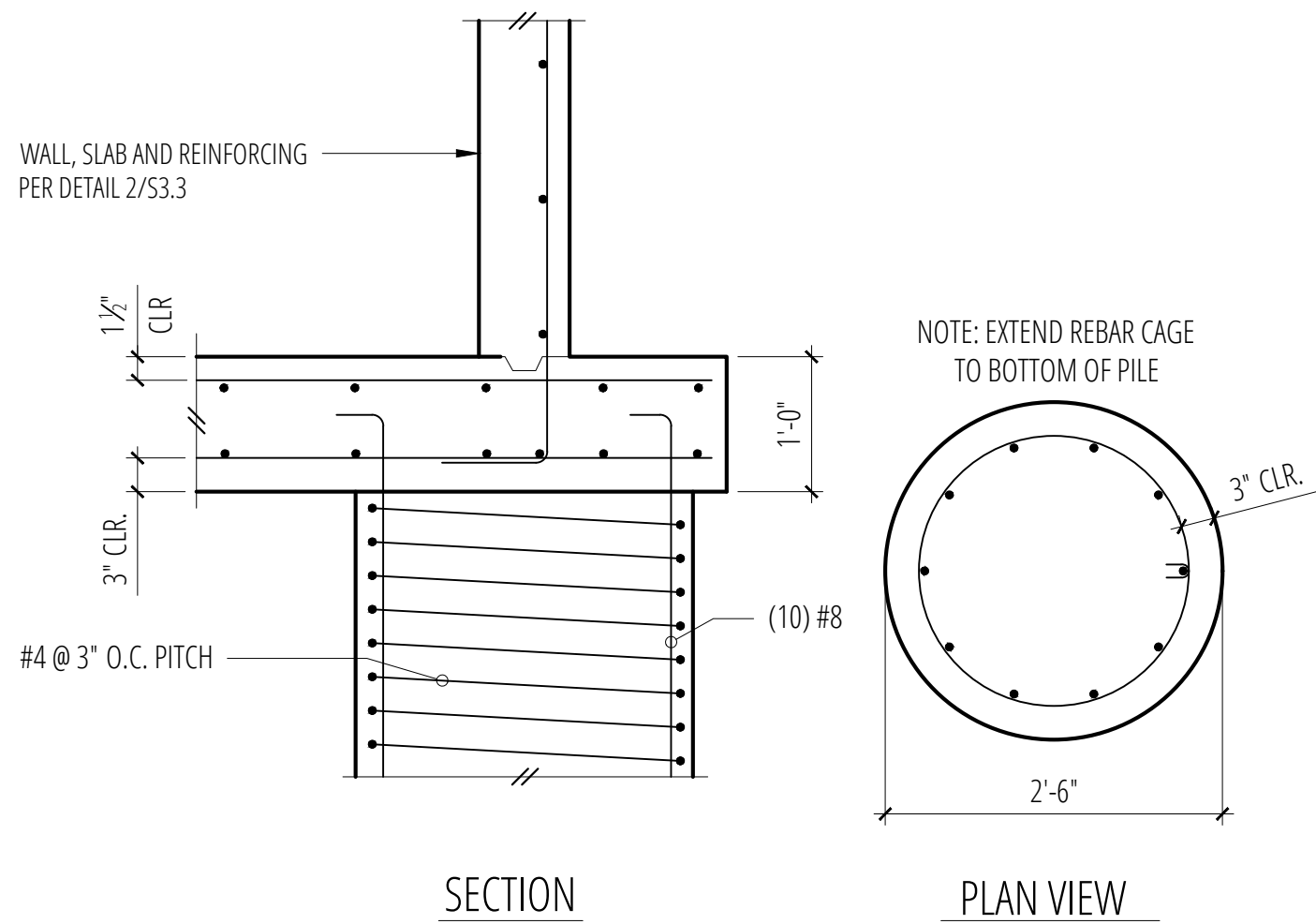
S3.2



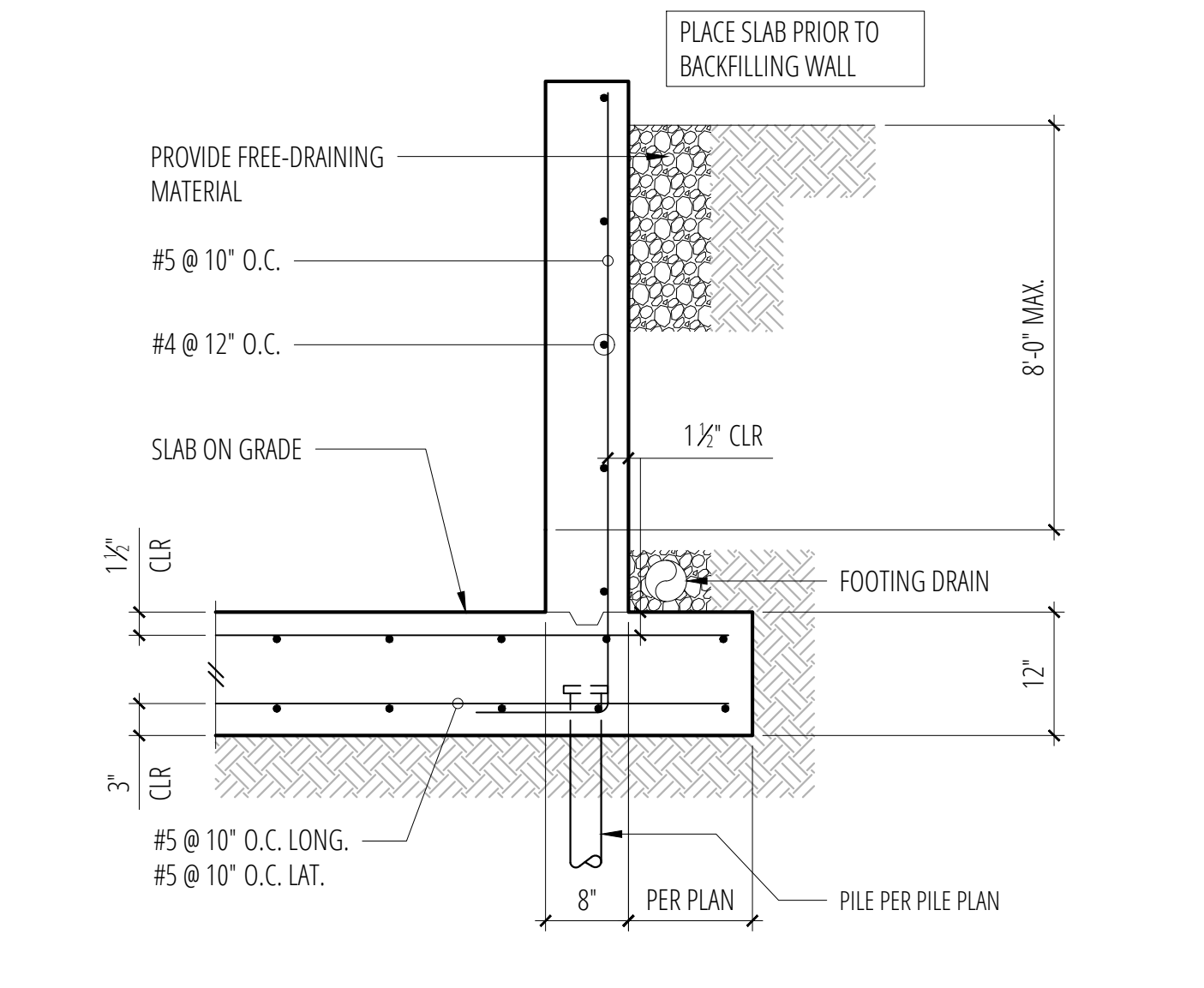
1 Grade Beam at Moment Frame
SCALE: 3/4"=1'-0"



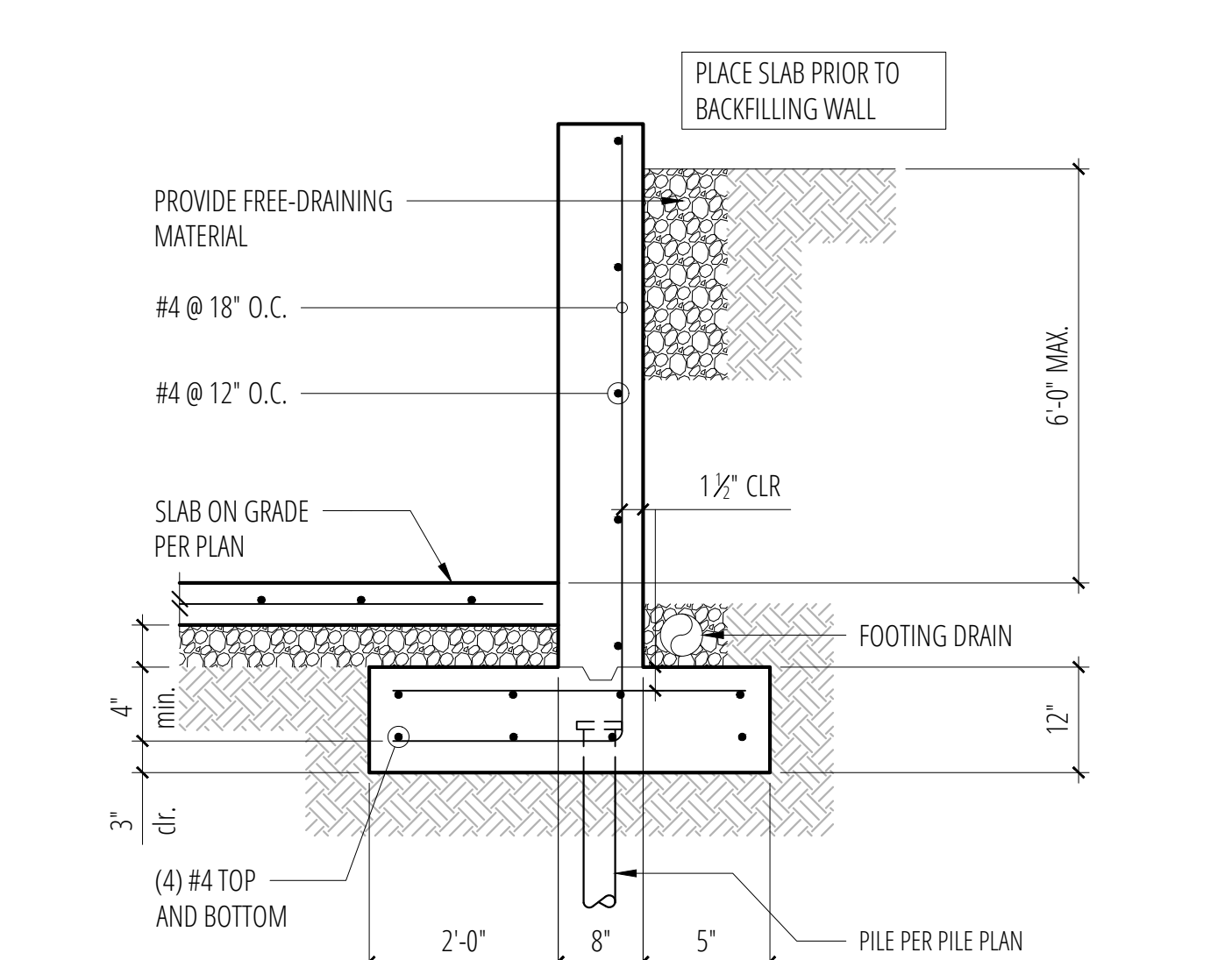
5 Auger-Cast Piles at Grade Beam
SCALE: 3/4"=1'-0"



9 Auger-Cast Piles at Sub-Basement Wall
SCALE: 3/4"=1'-0"



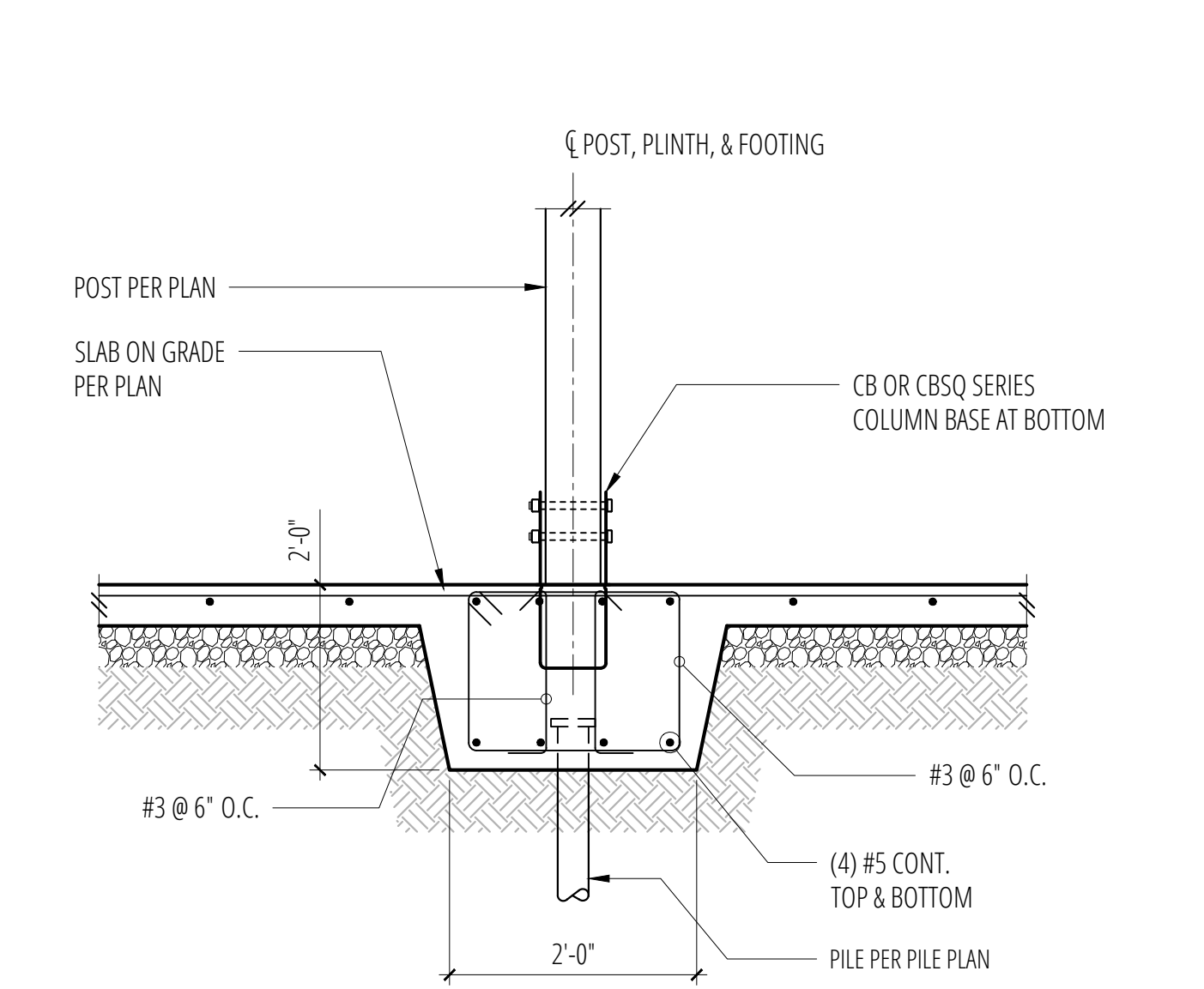
2 Sub-Basement Retaining Wall
SCALE: 3/4"=1'-0"



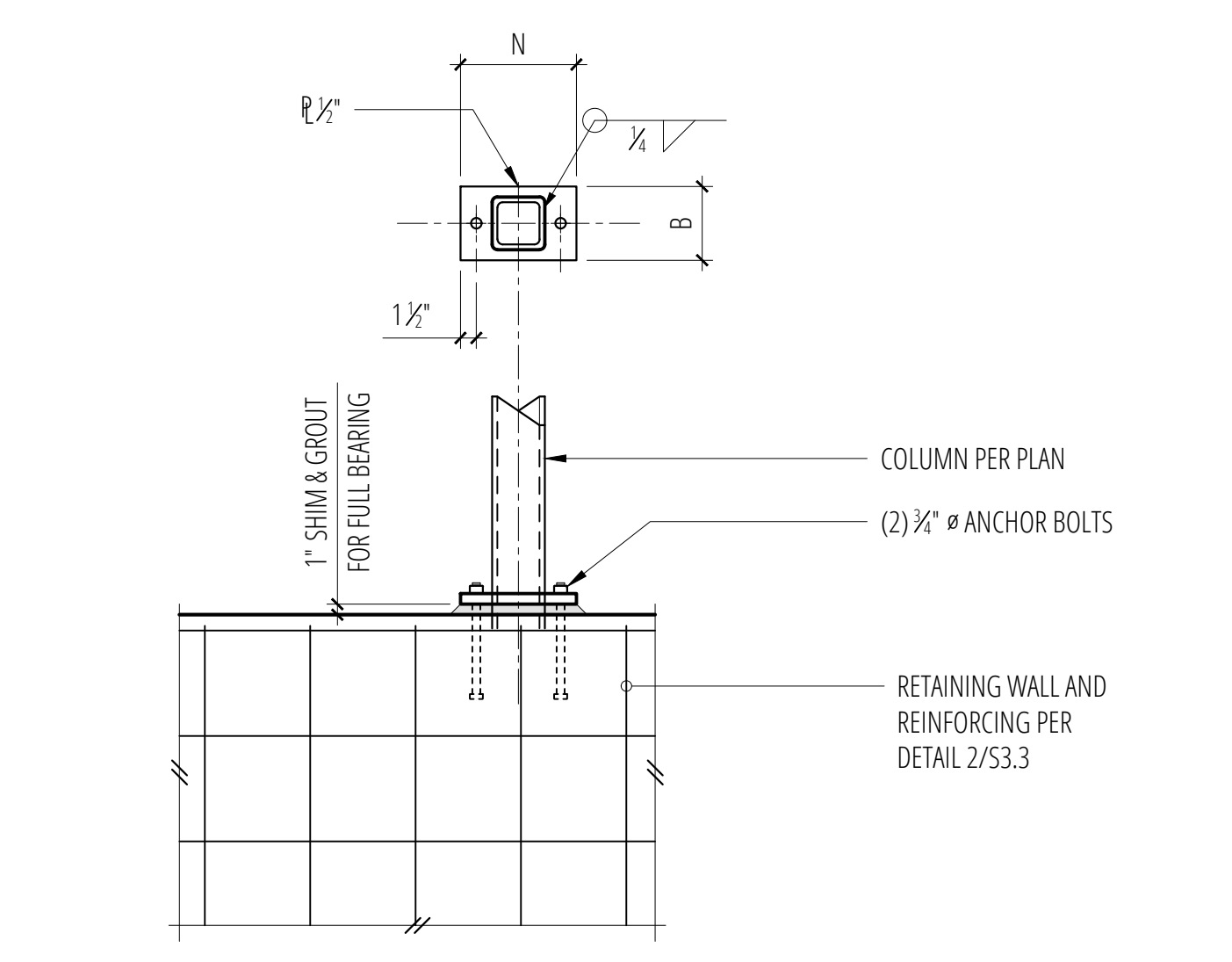
6 Standard Retaining Wall
SCALE: 3/4"=1'-0"



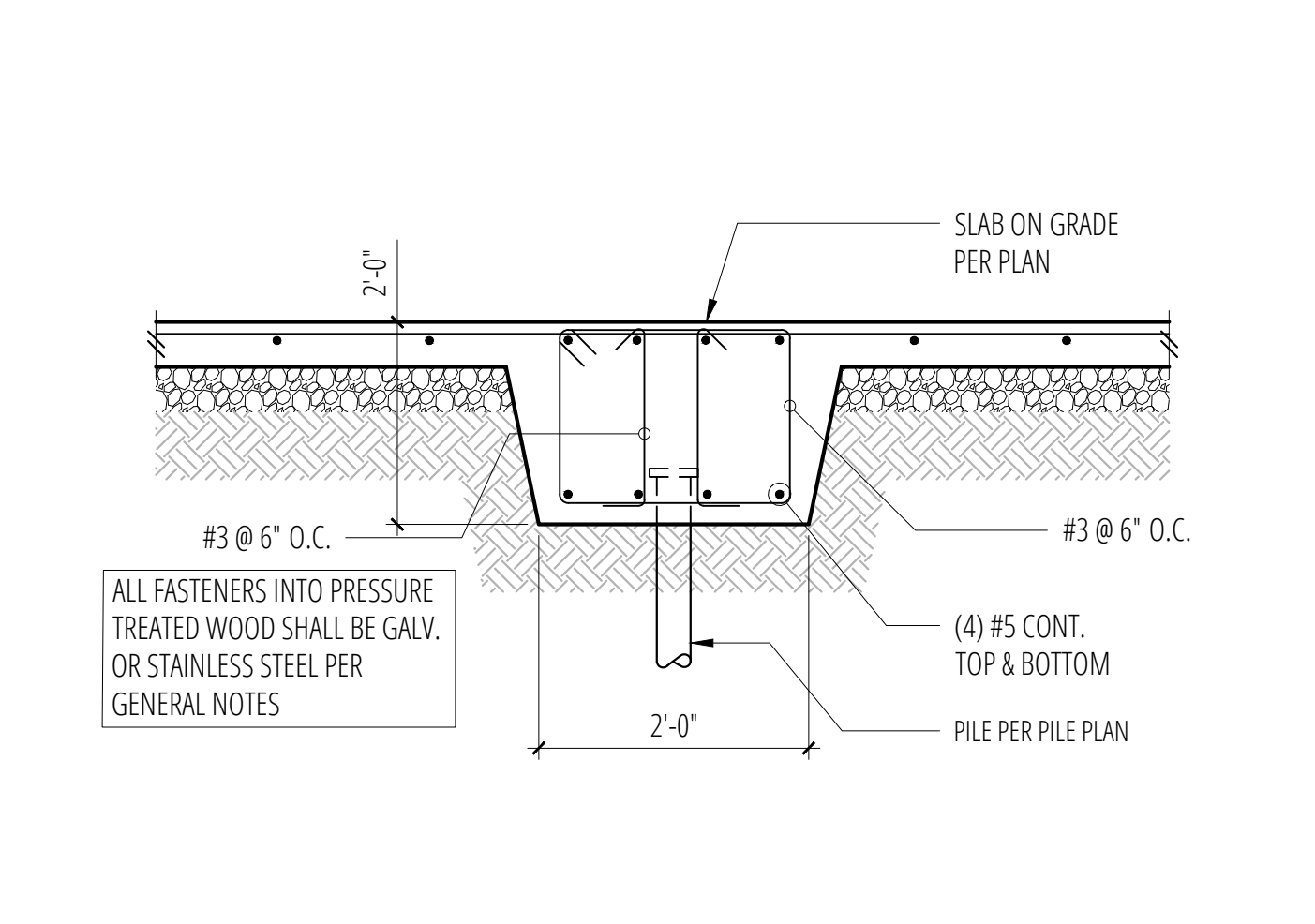
10 Not Used
SCALE: 3/4"=1'-0"



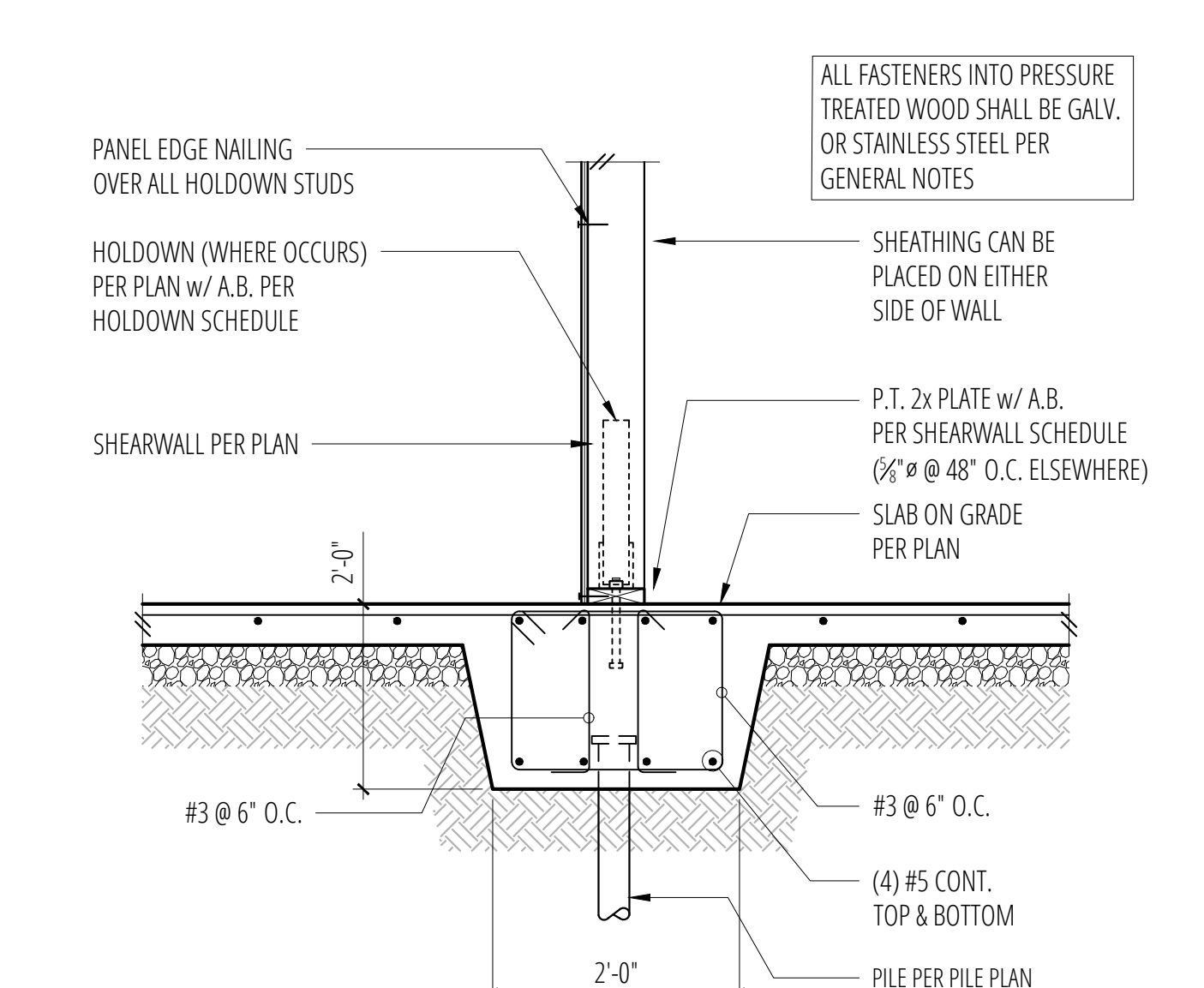
3 Monolithic Grade Beam at Interior Post
SCALE: 3/4"=1'-0"



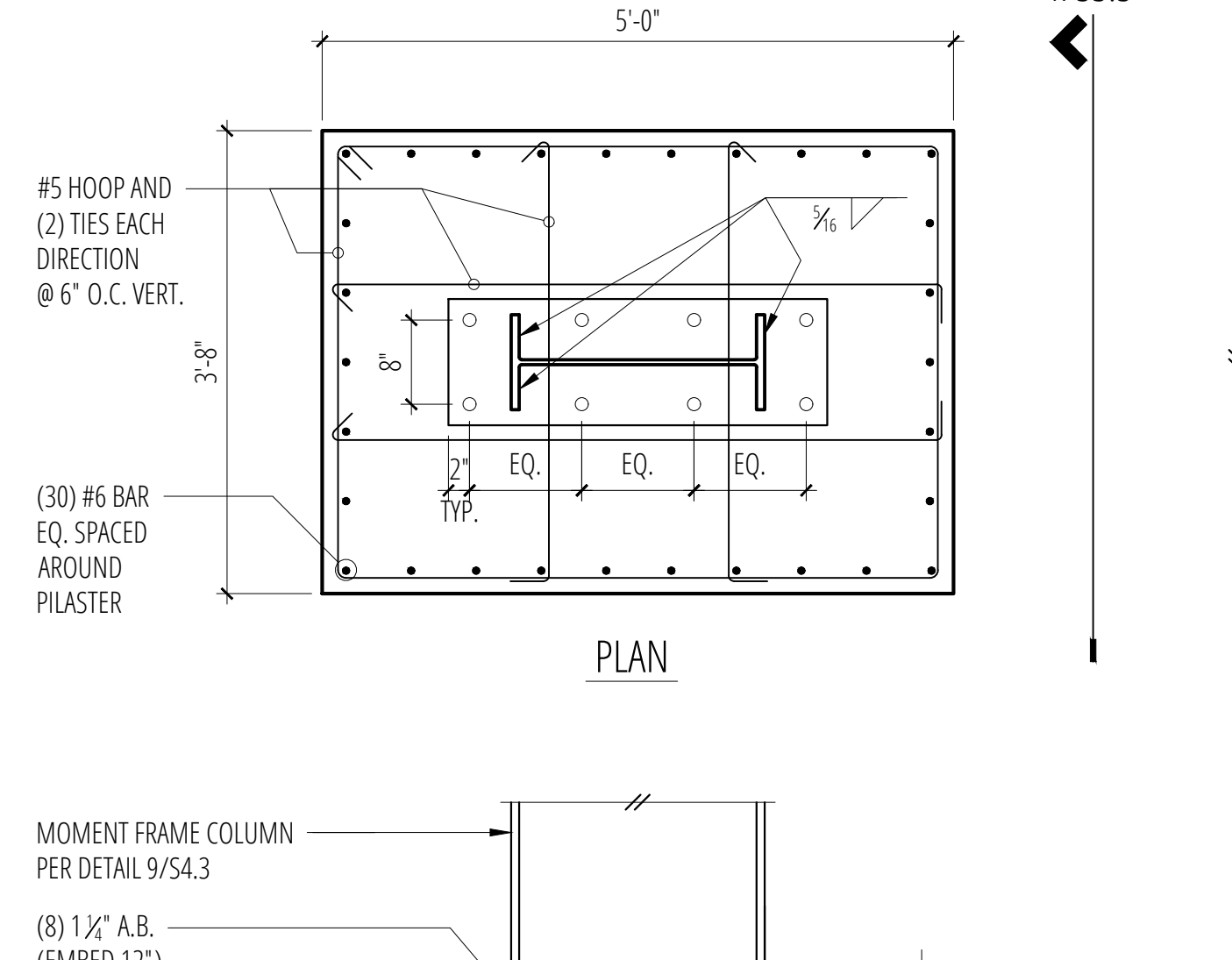
7 Baseplate at HSS Column
SCALE: 3/4"=1'-0"



11 Monolithic Grade Beam
SCALE: 3/4"=1'-0"



4 Monolithic Grade Beam at Interior Wall
SCALE: 3/4"=1'-0"



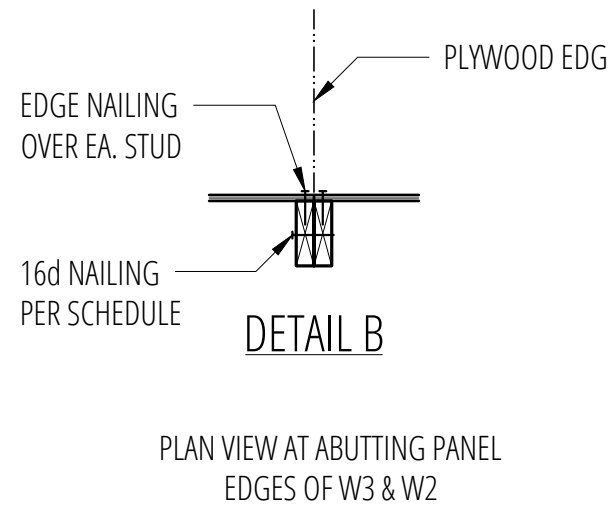
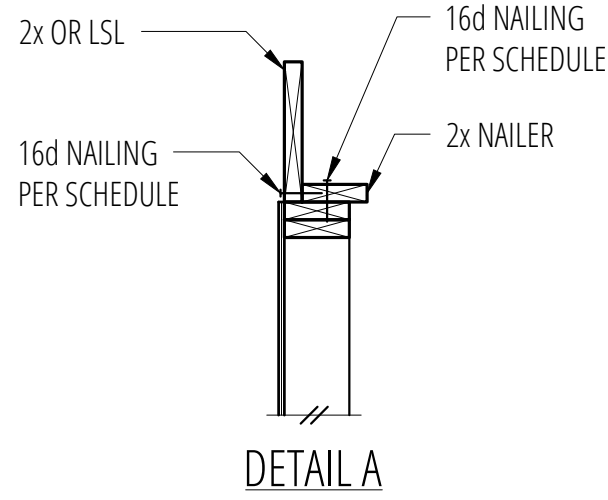
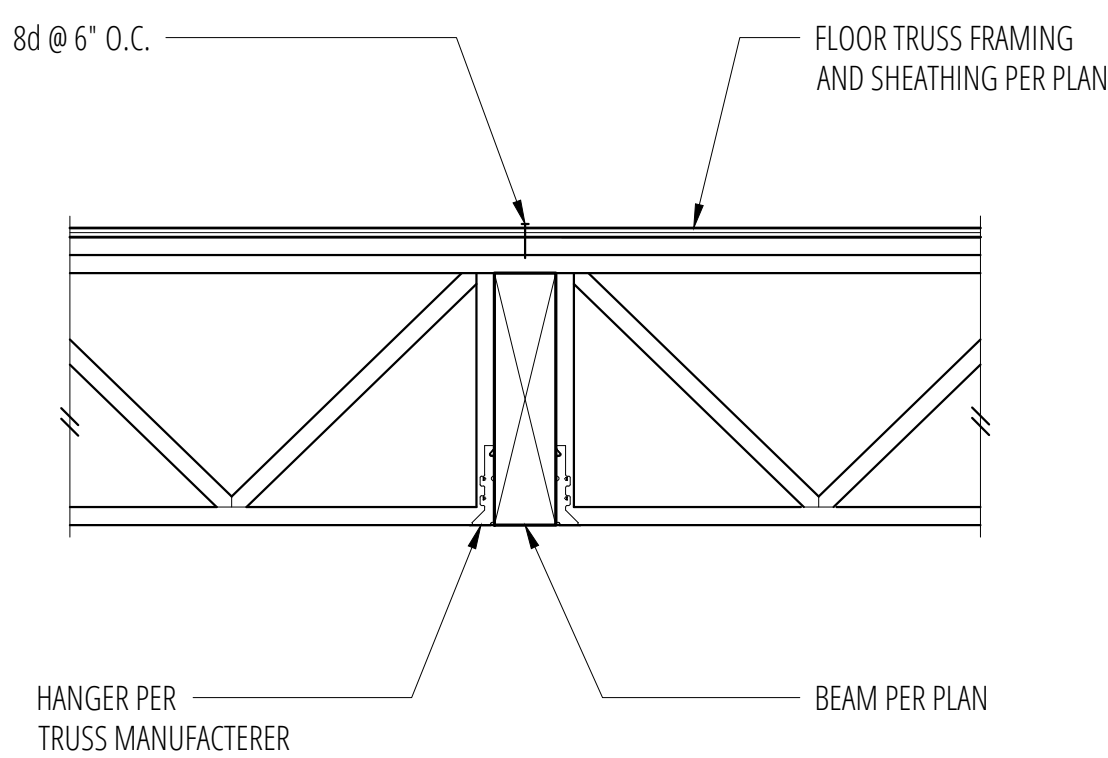
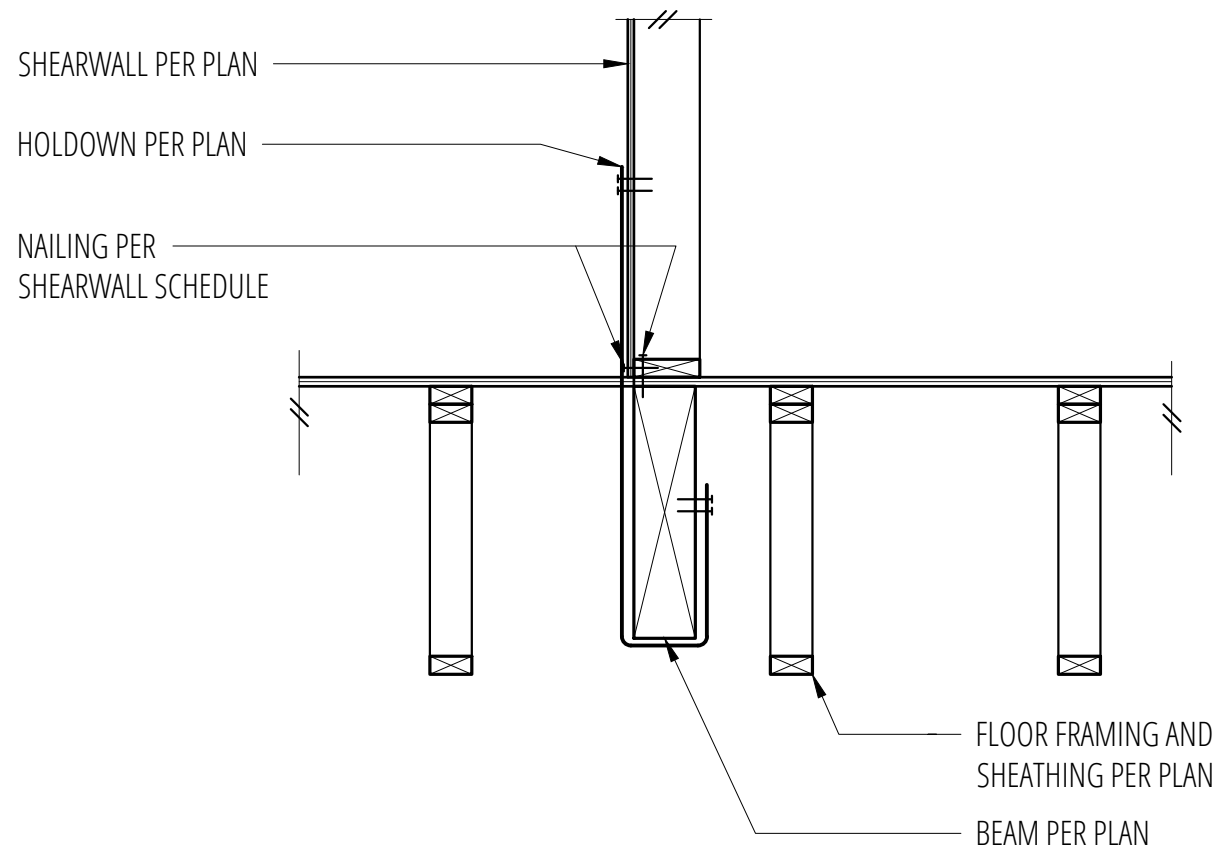
12 Grade Beam and Pilaster at Moment Frame
SCALE: 3/4"=1'-0"

No.	Date	Issue
11/13/24	Permit	
4/2/25	Corrections	
4/17/25	Revisions	
5/7/25	Corrections	

Sheet Contents

CONCRETE DETAILS

Sheet No.



PLAN VIEW AT ABUTTING PANEL EDGES OF W3 & W2

SHEARWALL SCHEDULE ①②③⑤⑥⑦

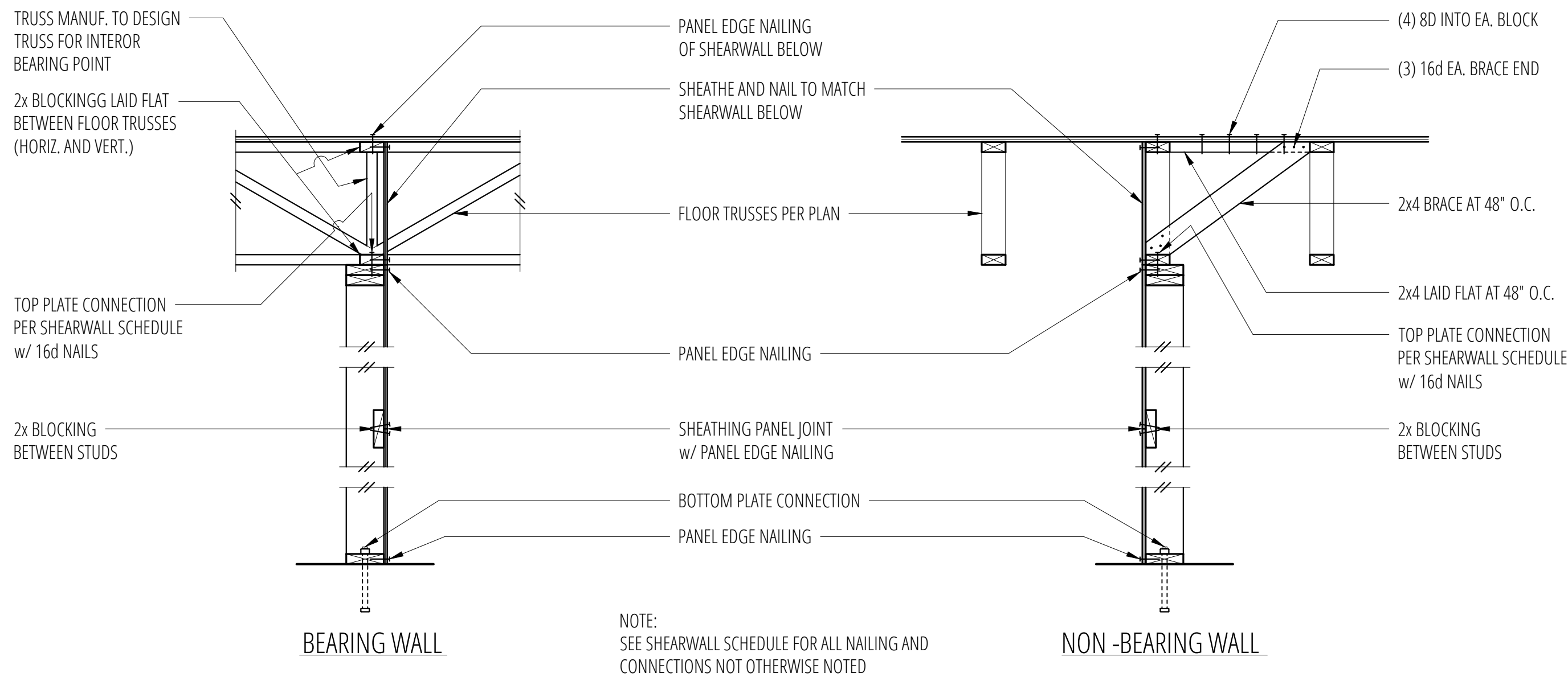
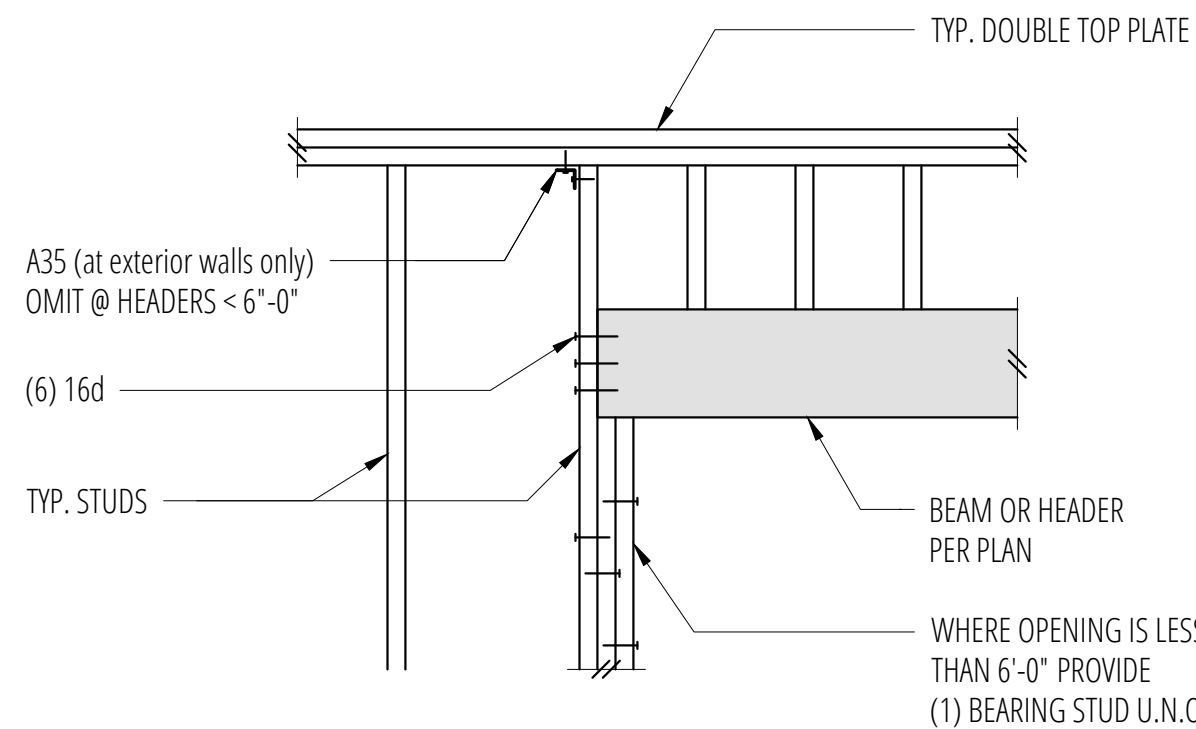
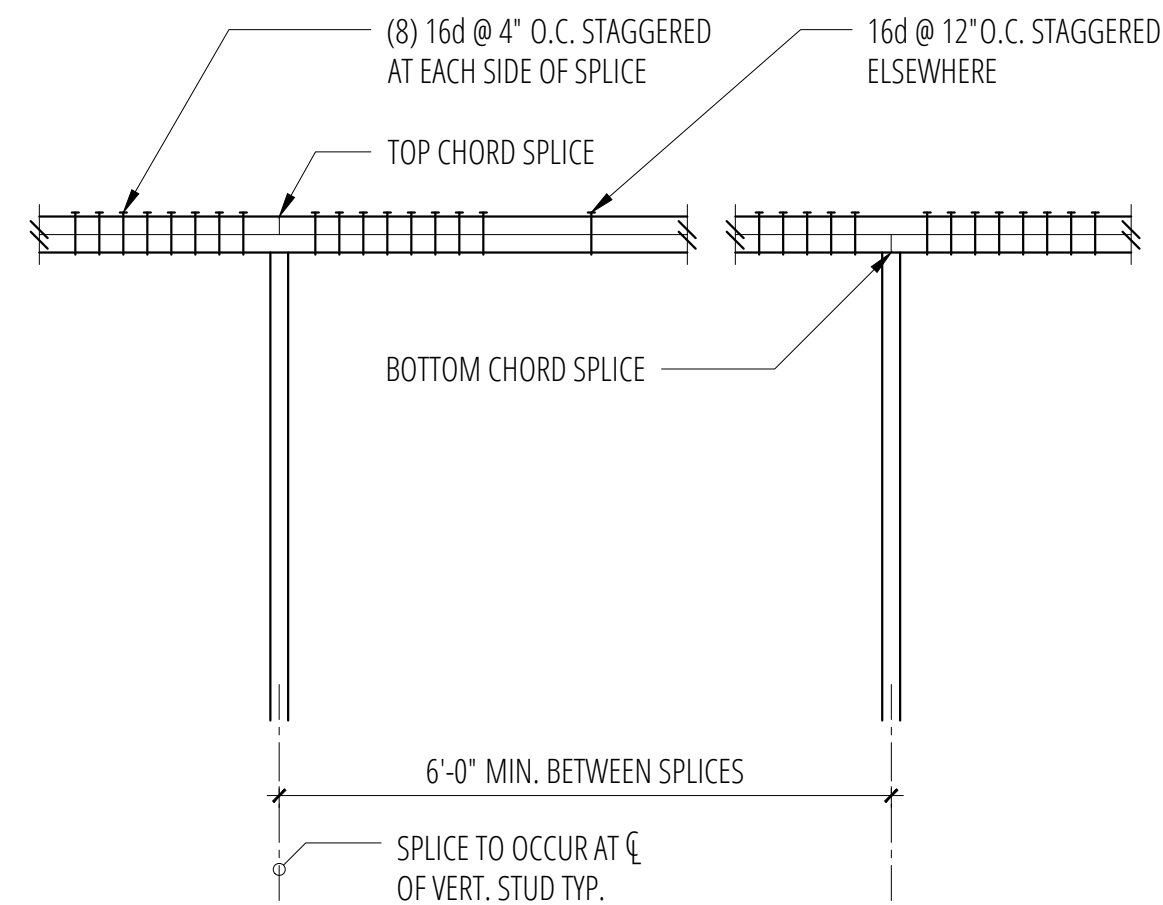
MARK	SHEATHING	PANEL EDGE NAILING	TOP PLATE CONNECTION		BASE PLATE CONNECTION	
			IF TJI	IF 2x OR LSL	AT WOOD	AT CONCRETE
W6	1 1/2" CDX PLYWOOD	8d @ 6" OC	16d @ 6" OC	A35 @ 24" OC	16d @ 6" OC	3/8" A.B. @ 48" OC
W4	1 1/2" CDX PLYWOOD	8d @ 4" OC	16d @ 4" OC	A35 @ 16" OC	16d @ 4" OC	3/8" A.B. @ 32" OC
W3 ④	1 1/2" CDX PLYWOOD	8d @ 3" OC	(2) ROWS 16d @ 6" OC	A35 @ 12" OC	16d @ 3" OC ⑩	3/8" A.B. @ 16" OC
W2 ④	1 1/2" CDX PLYWOOD	8d @ 2" OC	(2) ROWS 16d @ 4 1/2" OC	A35 @ 9" OC	(2) ROWS 16d @ 4 1/2" OC ⑪	3/8" A.B. @ 12" OC

- BLOCK PANEL EDGES WITH 2x MIN. LAID FLAT AND NAIL PANELS TO INTERMEDIATE SUPPORTS WITH 8d @ 12" o.c.
- 8d NAILS SHALL BE 0.131" x 2 1/2" (common) - 16d NAILS SHALL BE 0.135" x 3 1/2" (box)
- EMBED ANCHOR BOLTS AT LEAST 7" EXPANSION BOLTS MAY BE SUBSTITUTED FOR ANCHOR BOLTS WITH 4" EMBEDMENT. ALL BOLTS SHALL HAVE 3" x 3" x 1/2" PLATE WASHERS. EXTEND TO WITHIN 1/2" OF THE PLYWOOD SHEATHING.
- 3x STUDS OR DOUBLE STUDS NAILED TOGETHER W/ BASE PLATE NAILING ARE REQUIRED AT ABUTTING PANEL EDGES OF W3 AND W2. SEE DETAIL B. WHERE 3x STUDS ARE USED FOR W2, STAGGER NAILS AT ADJOINING PANEL EDGES.
- TWO STUDS MINIMUM ARE REQUIRED AT EACH END OF ALL SHEARWALLS AND ALL END STUDS SHALL RECEIVE PANEL EDGE NAILING.
- ALL EXTERIOR WALLS SHALL BE W6, UNLESS NOTED OTHERWISE.
- 7/16" O.S.B. MAY BE SUBSTITUTED FOR 1 1/2" CDX.
- LTP4's MAY BE SUBSTITUTED FOR A35's AT CONTRACTORS OPTION.
- A 2x NAILER ATTACHED W/ BASE PLATE NAILING PER DETAIL A MAY BE SUBSTITUTED FOR A35's AT CONTRACTORS OPTION.
- STAGGER NAILS IN ROW W/ 1/2" MIN. OFFSET.
- MINIMUM OFFSET BETWEEN ROWS 1/2" AND MINIMUM RIM OR JOIST 3 1/2" WIDE.

1 Flush Beam in Floor (Parallel) SCALE: 3/4"=1'-0"

2 Flush Beam in Floor SCALE: 3/4"=1'-0"

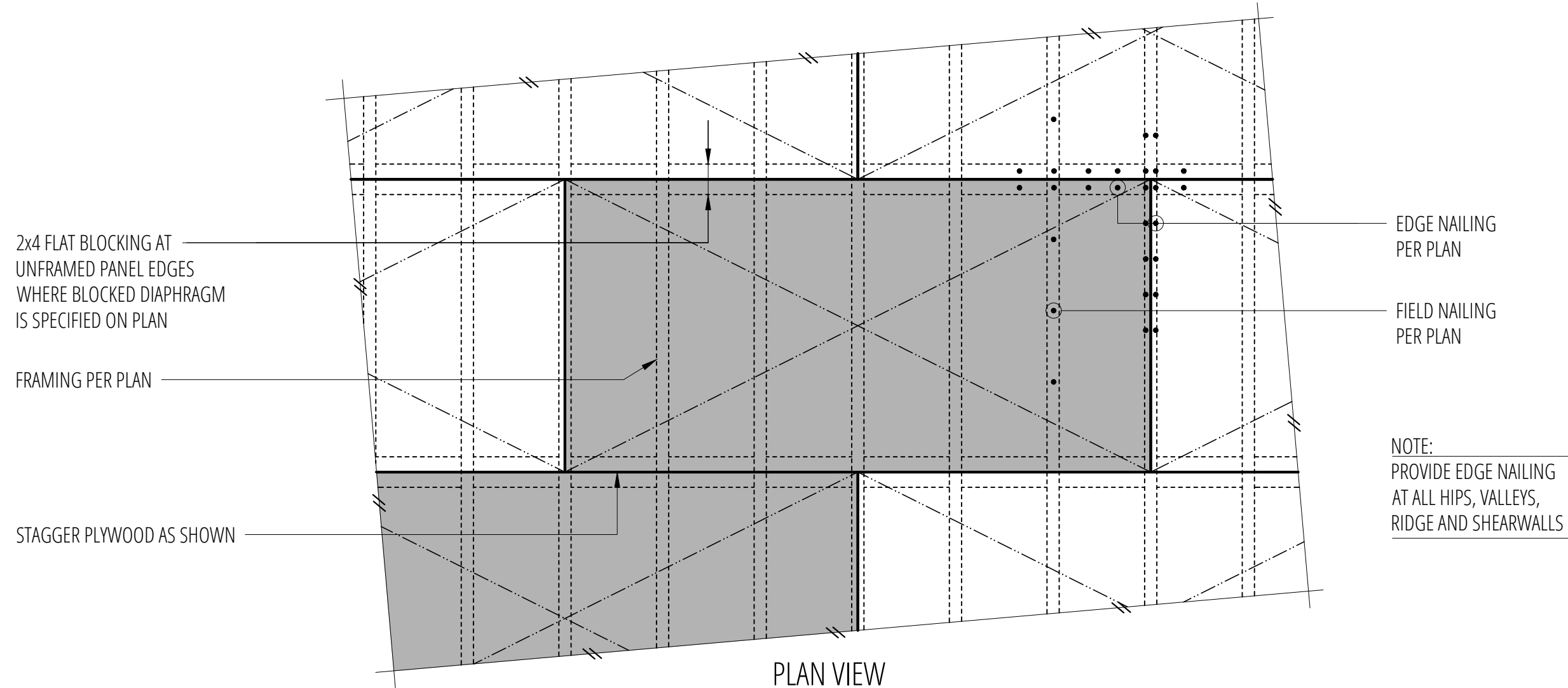
3 Shearwall Schedule SCALE: 3/4"=1'-0"



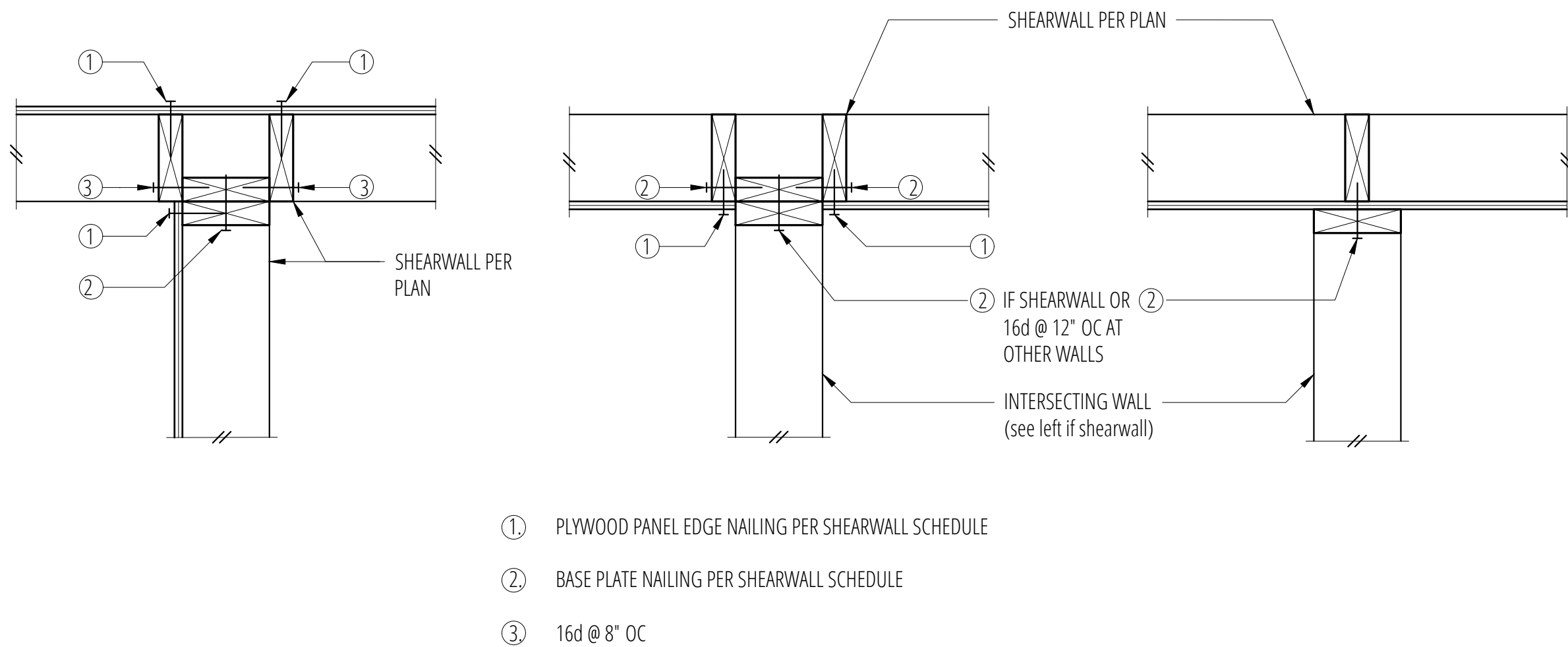
5 Typical Top Plate Splice SCALE: 3/4"=1'-0"

6 Typical Header Support SCALE: 3/4"=1'-0"

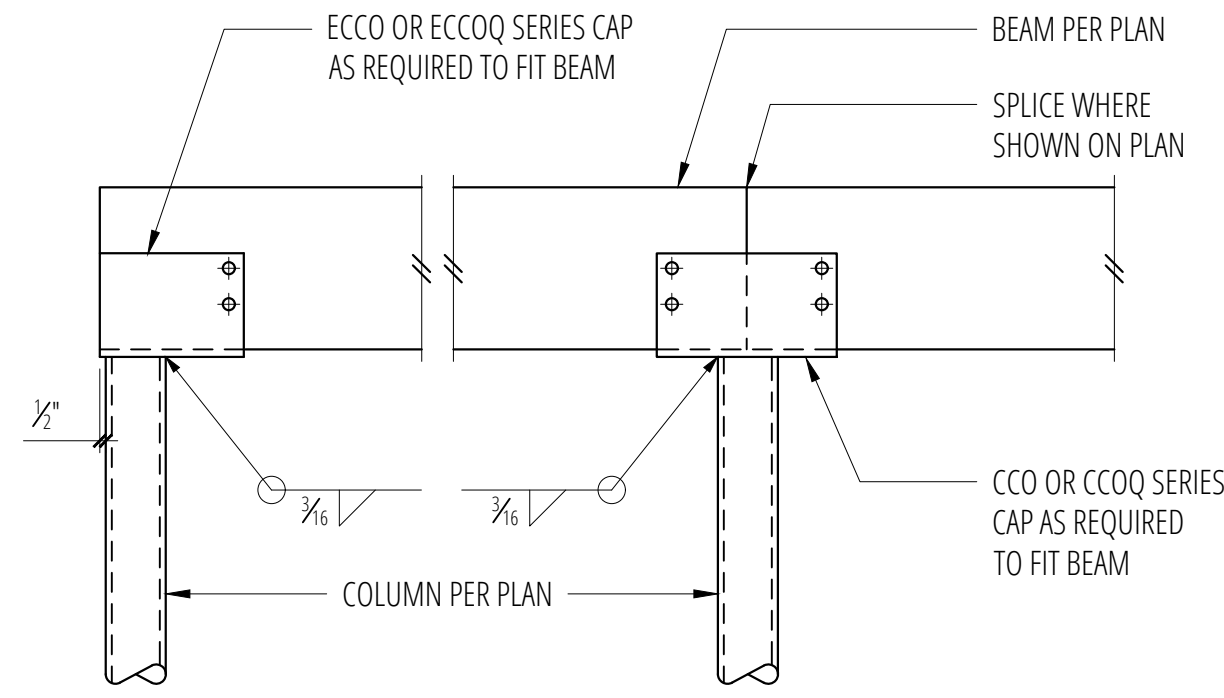
7 Typical Shearwall Construction SCALE: 3/4"=1'-0"



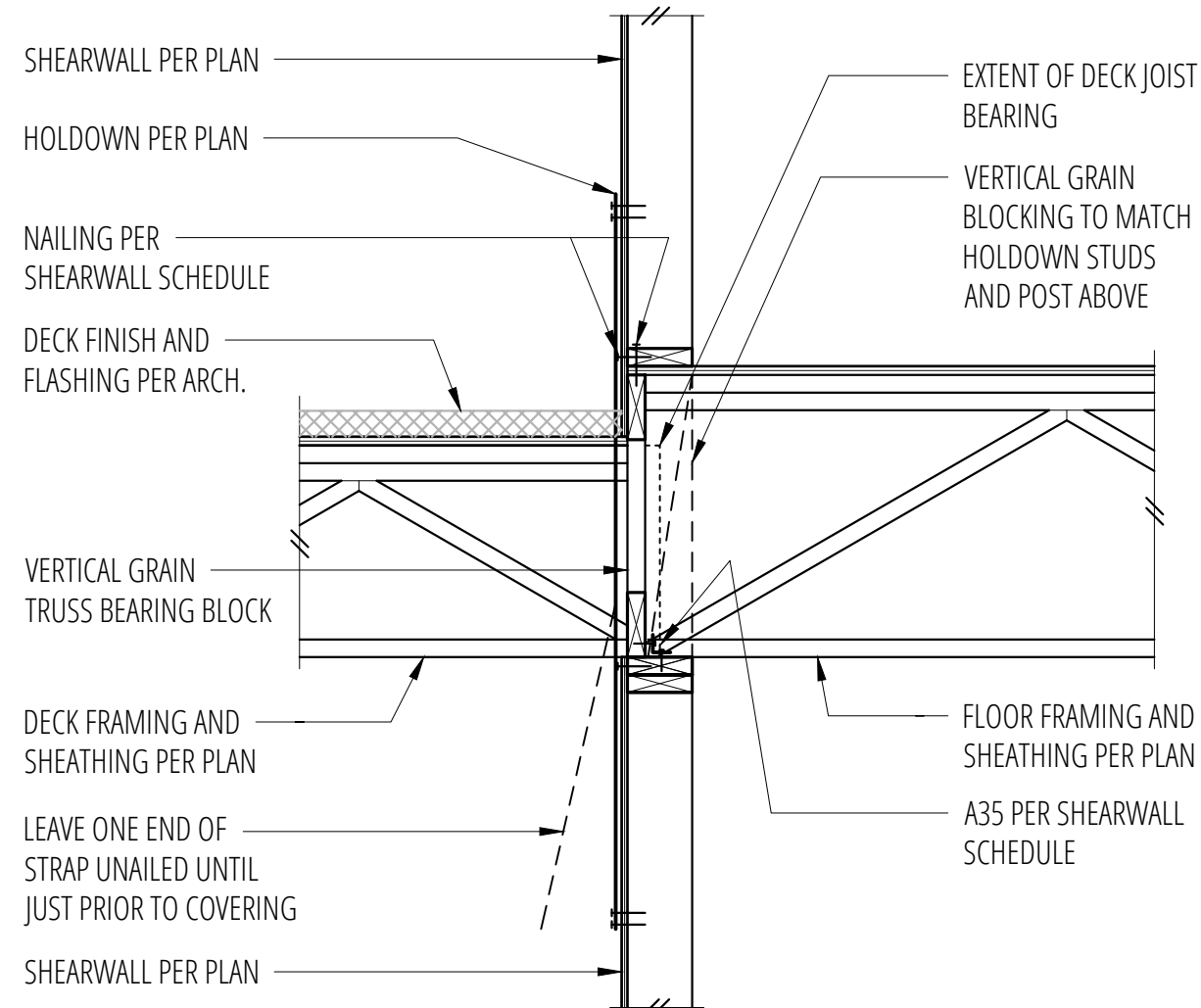
9 Typical Diaphragm Sheathing and Nailing SCALE: 3/4"=1'-0"



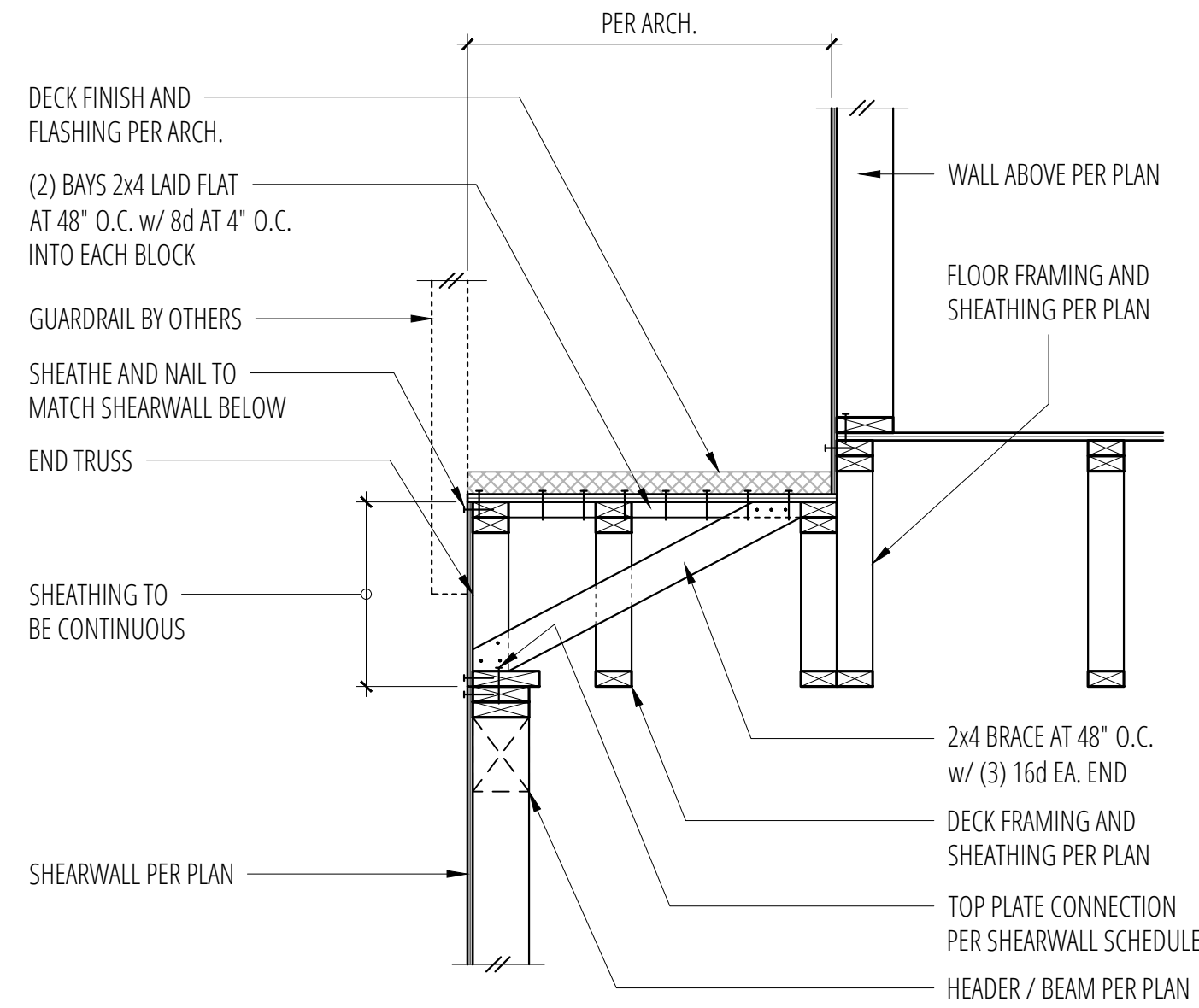
11 Typical Shearwall Intersection SCALE: 3/4"=1'-0"



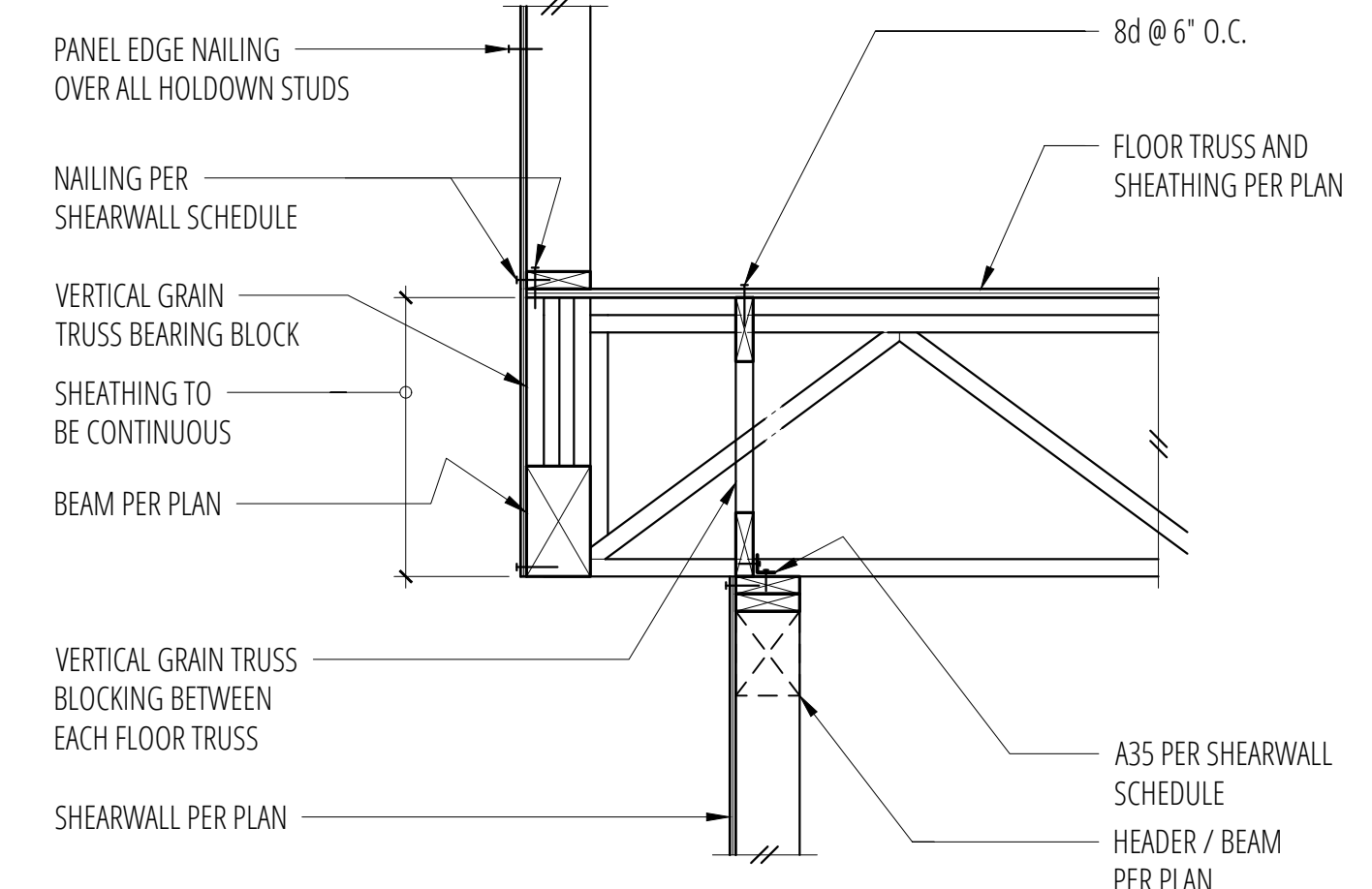
1 CC/CCQ Series Connection at Steel Column
SCALE: 3/4"=1'-0"



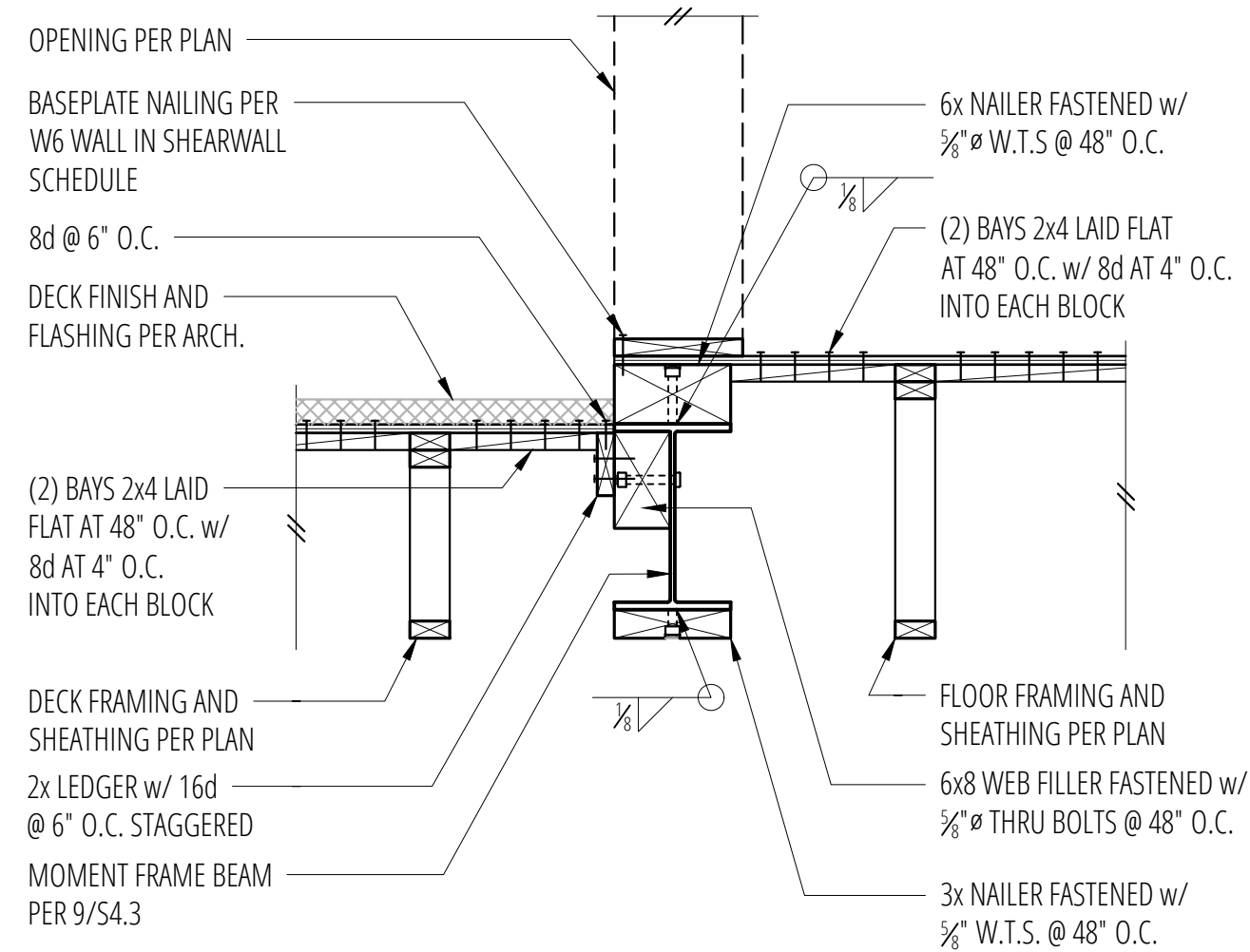
2 Floor to Deck Framing Transition (Perp.)
SCALE: 3/4"=1'-0"



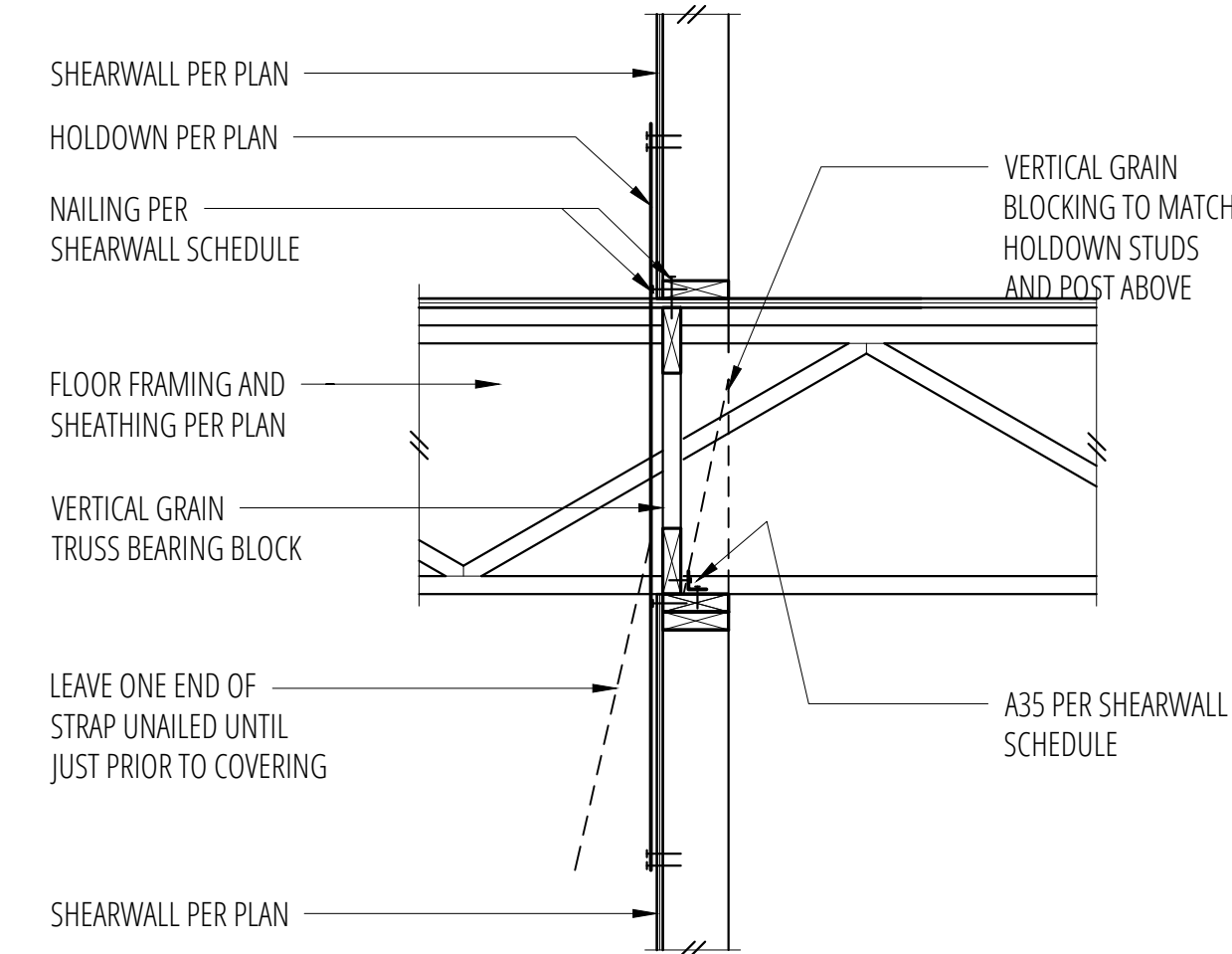
3 Floor to Deck Framing Transition (Parallel)
SCALE: 3/4"=1'-0"



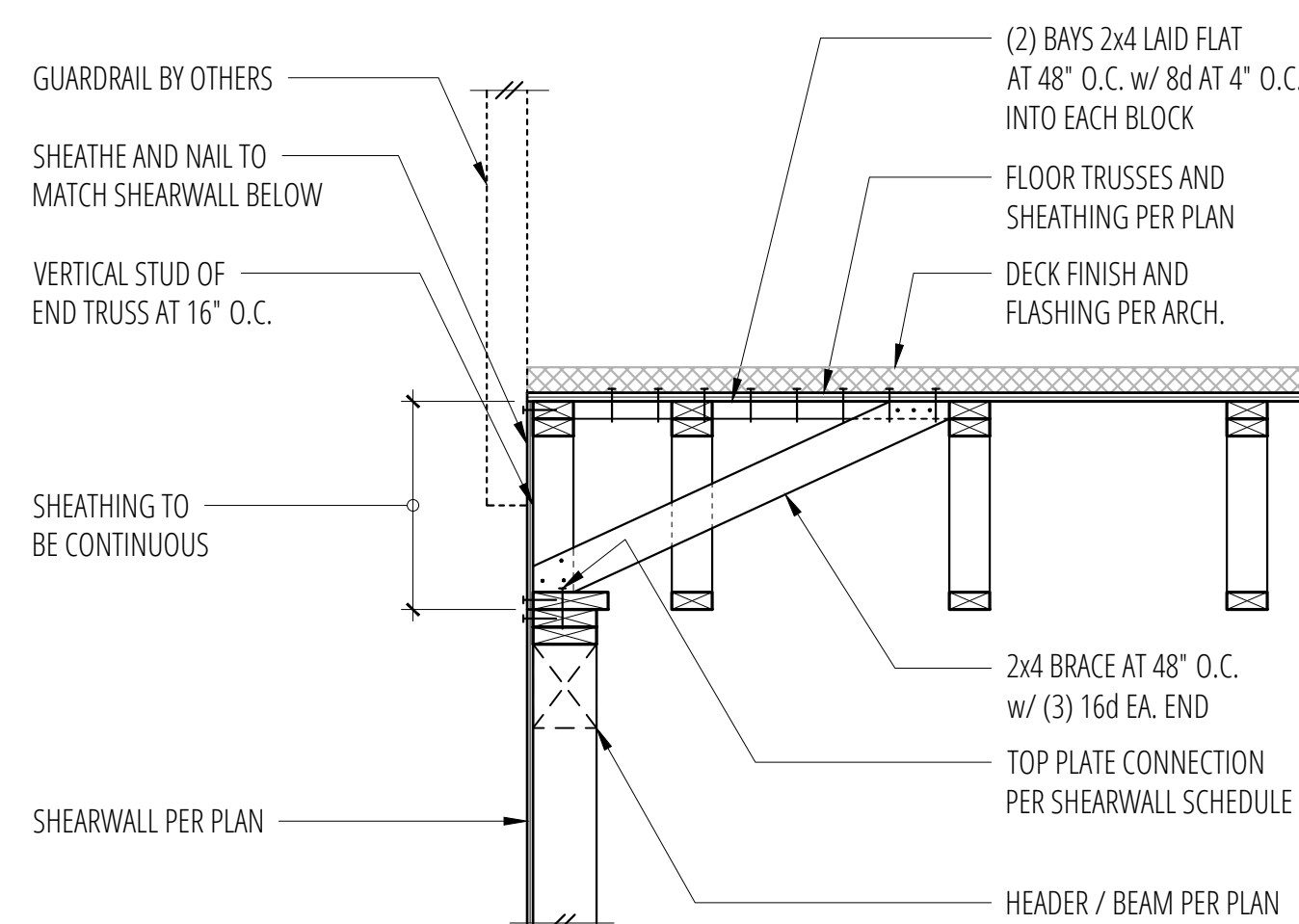
4 Cantilevered Floor Framing
SCALE: 3/4"=1'-0"



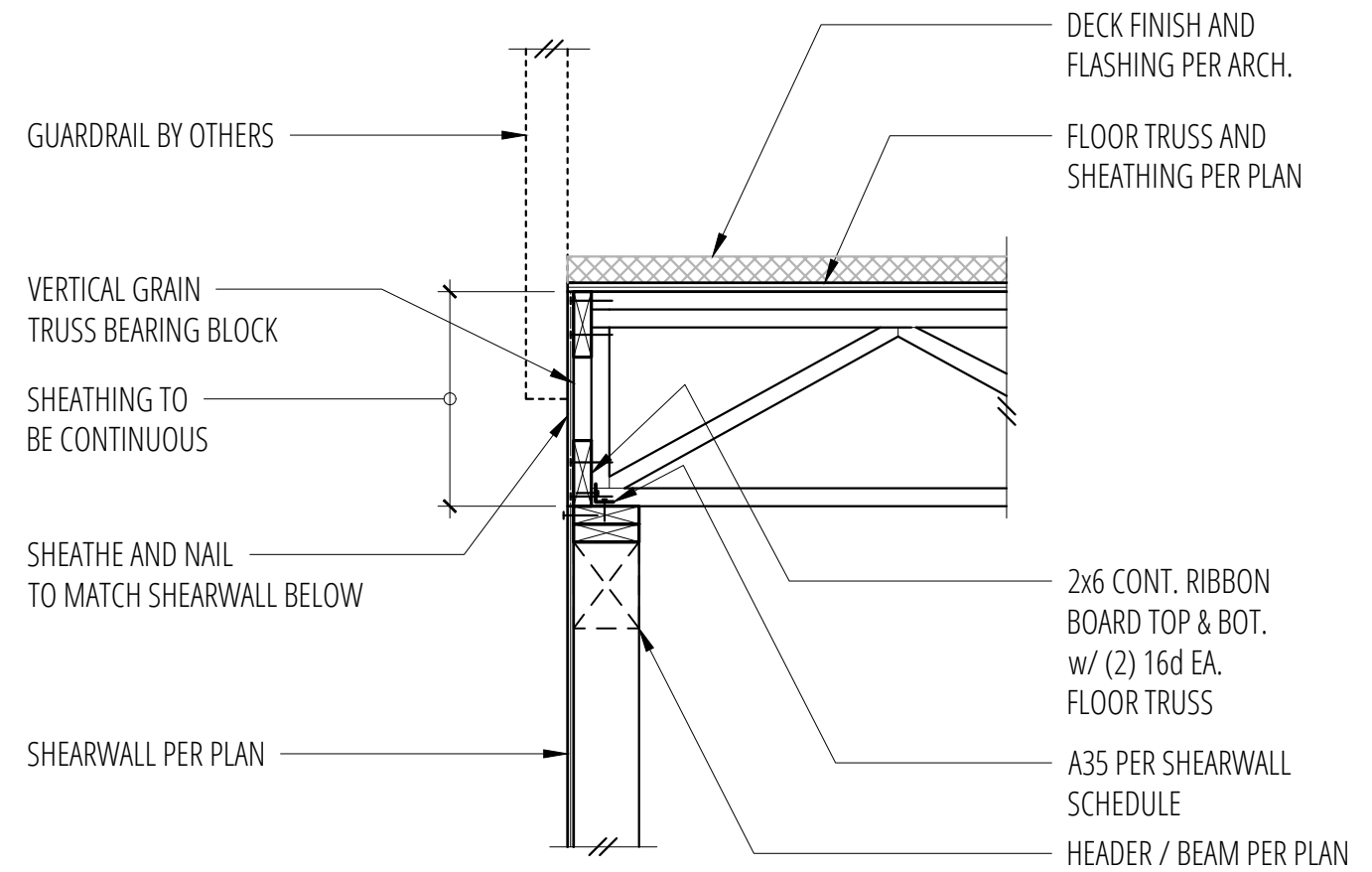
5 Floor to Deck Framing at Moment Frame
SCALE: 3/4"=1'-0"



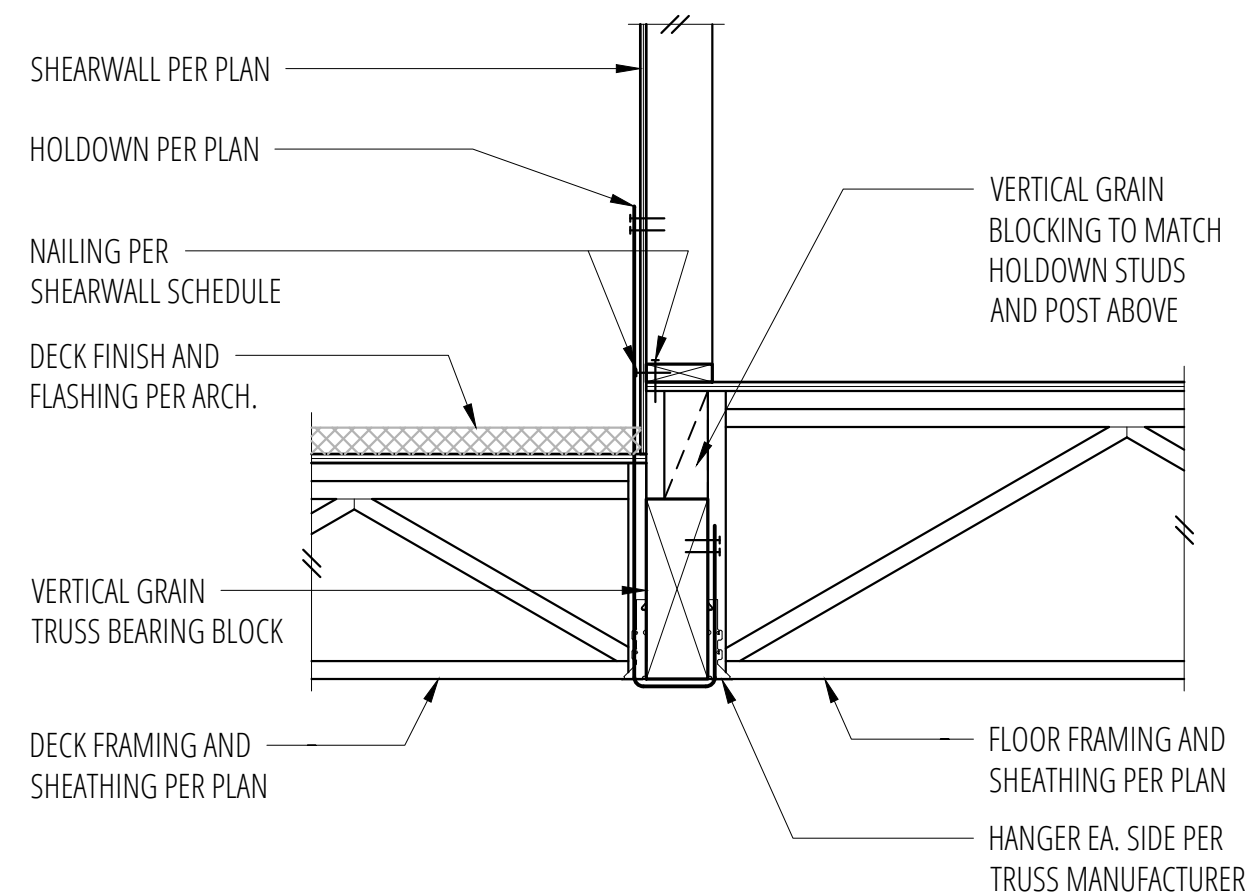
6 Interior Shearwall
SCALE: 3/4"=1'-0"



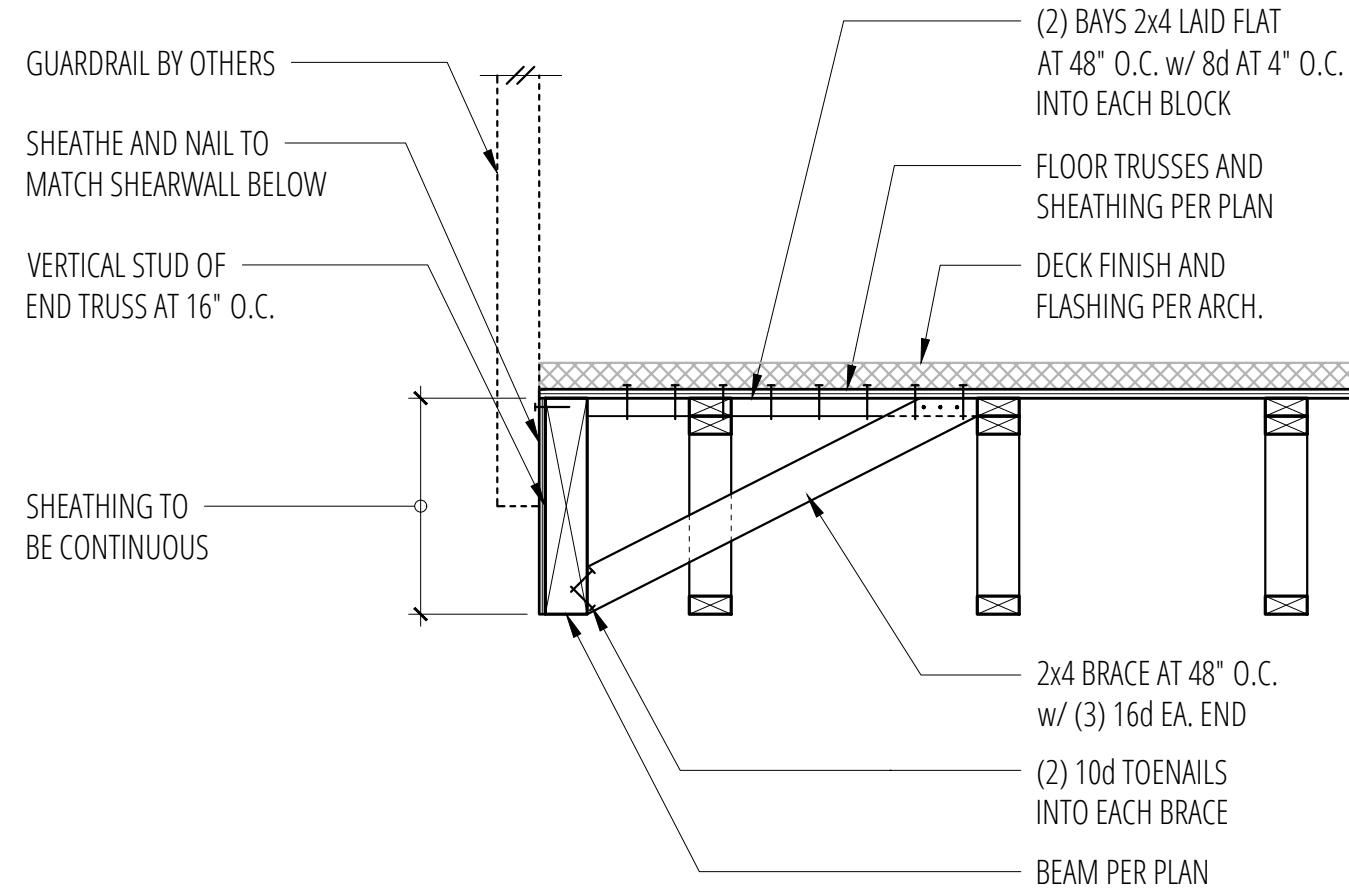
7 Deck Floor Framing (Parallel)
SCALE: 3/4"=1'-0"



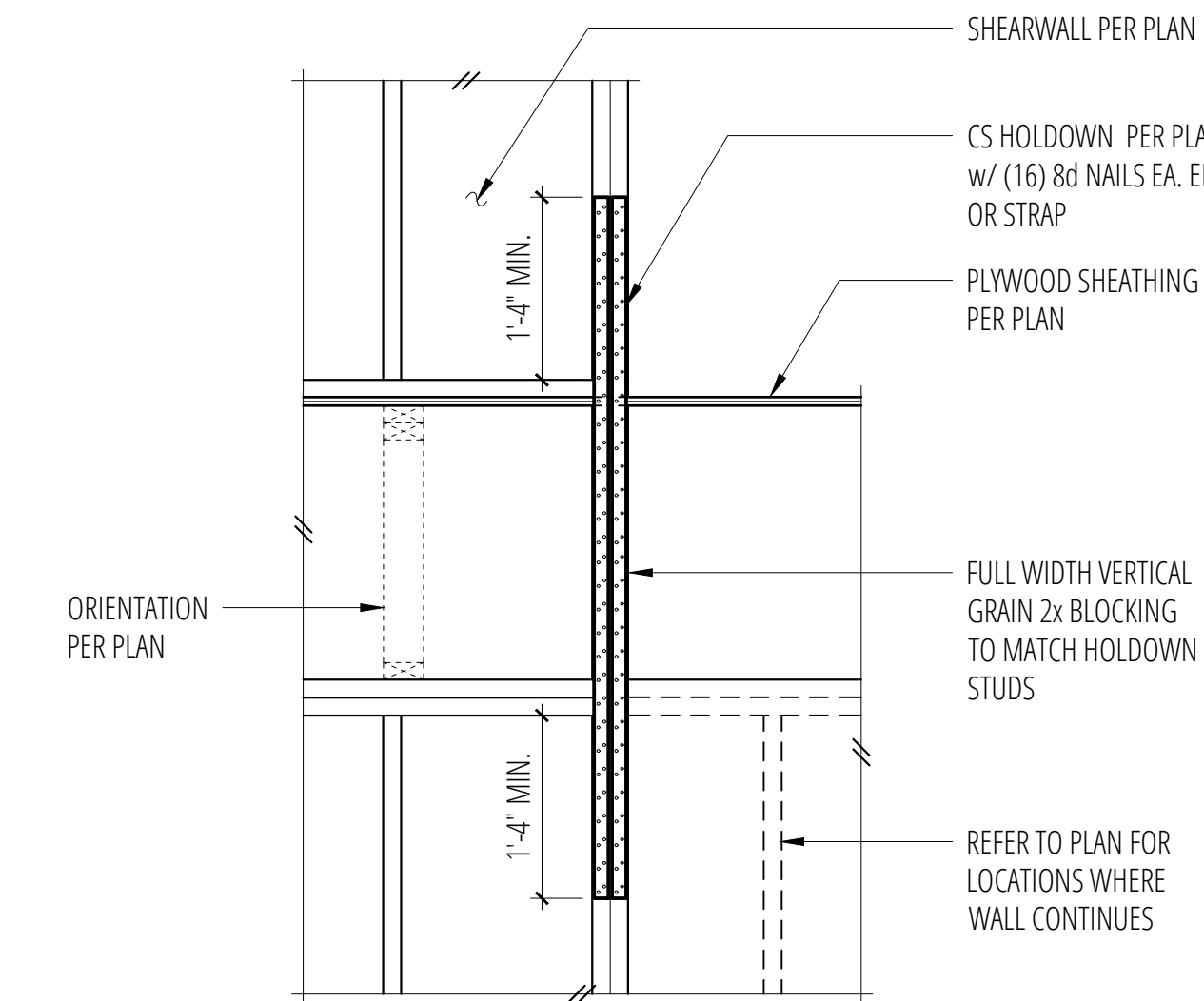
8 Deck Floor Framing (Perpendicular)
SCALE: 3/4"=1'-0"



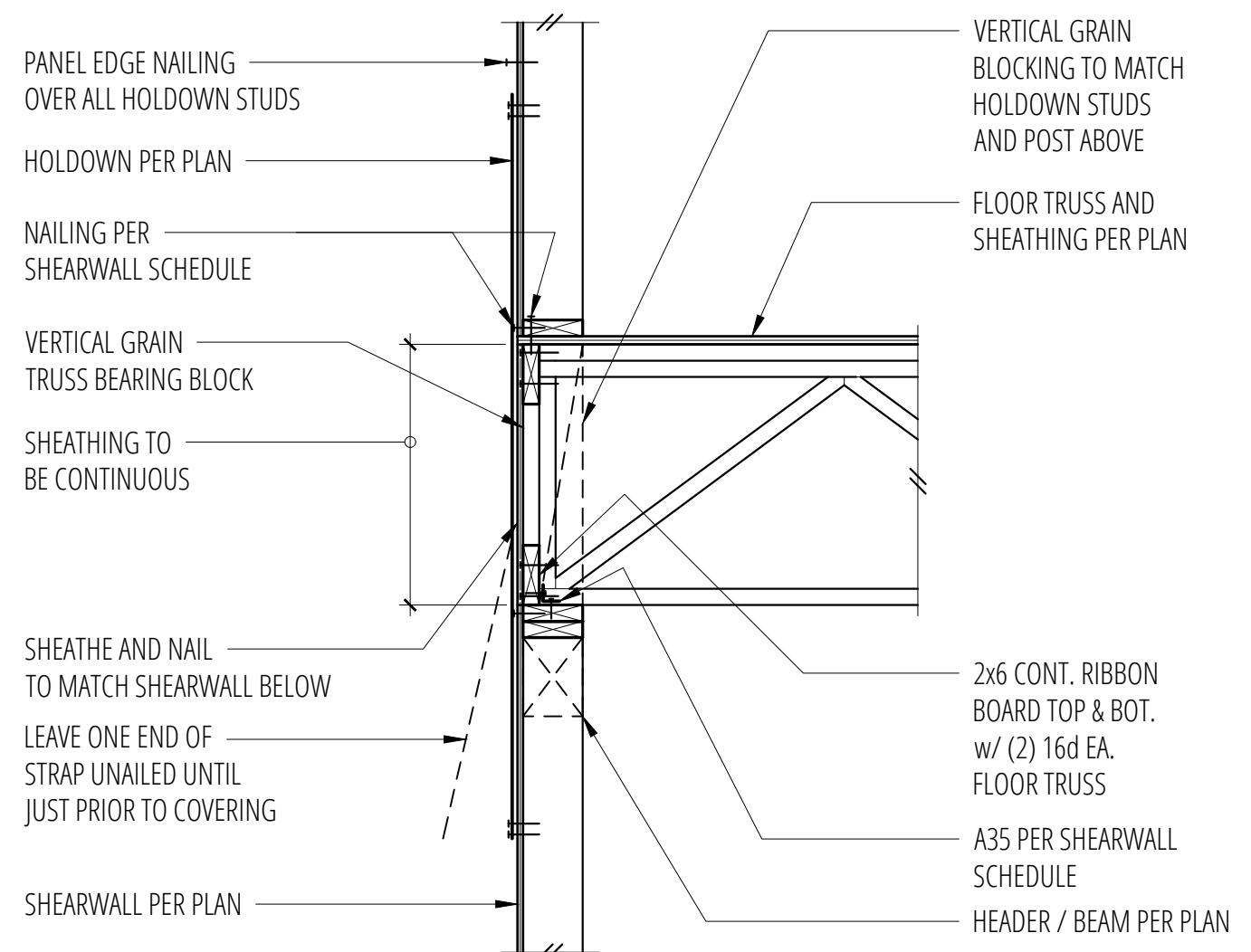
9 Flush Beam at Deck to Floor Transition
SCALE: 3/4"=1'-0"



10 Exterior Deck Framing
SCALE: 3/4"=1'-0"



11 Typical CS Holdown at Floor
SCALE: 3/4"=1'-0"



12 Exterior Floor Framing (Perpendicular)
SCALE: 3/4"=1'-0"

No.	Date	Issue
11/13/24	Permit	
4/2/25	Corrections	
4/17/25	Revisions	
5/7/25	Corrections	

Sheet Contents
FLOOR FRAMING DETAILS

Sheet No.

1. SEE 19/YLMC1 FOR ADDITIONAL WELDING INFORMATION.
2. SEE 20/YLMC1 FOR ADDITIONAL SHEAR TAB INFORMATION.
3. DIMENSIONS SHOWN ARE FOR DESIGN PURPOSES ONLY AND SHALL FIELD-VERIFIED AGAINST ARCHITECTURAL DRAWINGS.
4. SEE YLMC1 FOR GENERAL NOTES AND CONNECTION DETAILING.
5. SEE YLMC2 FOR CONNECTION BOLTING AND PLATE DETAILING REQUIREMENTS FOR FABRICATION.
6. SEE YLMC3 FOR CRUCIFORM COLUMN AND SLOPED BEAM DETAILING.
7. MOMENT FRAME LINE-WORK REPRESENTS CENTERLINE OF ALL BEAMS AND COLUMNS.

No.	Link Size	Qty (kits)
1	YLMC6-3.5	4

Elev. ID	Grid ID	Story	Column Size	Left no. ST	Left ST Thk (in)	Right no. ST	Right ST Thk (in)	Cont_PL Thk (in)	Dblr_PL Thk (in)	W1A (in)	N_side of W1A
1	A	Story2	W24X84	-	-	1	3/8	3/8	-	-	-
1	B	Story2	W24X84	1	3/8	-	-	3/8	-	1/4	2
1	A	Story1	W24X84	-	-	1	3/8	3/8	-	-	-
1	B	Story1	W24X84	1	3/8	-	-	3/8	-	1/4	2

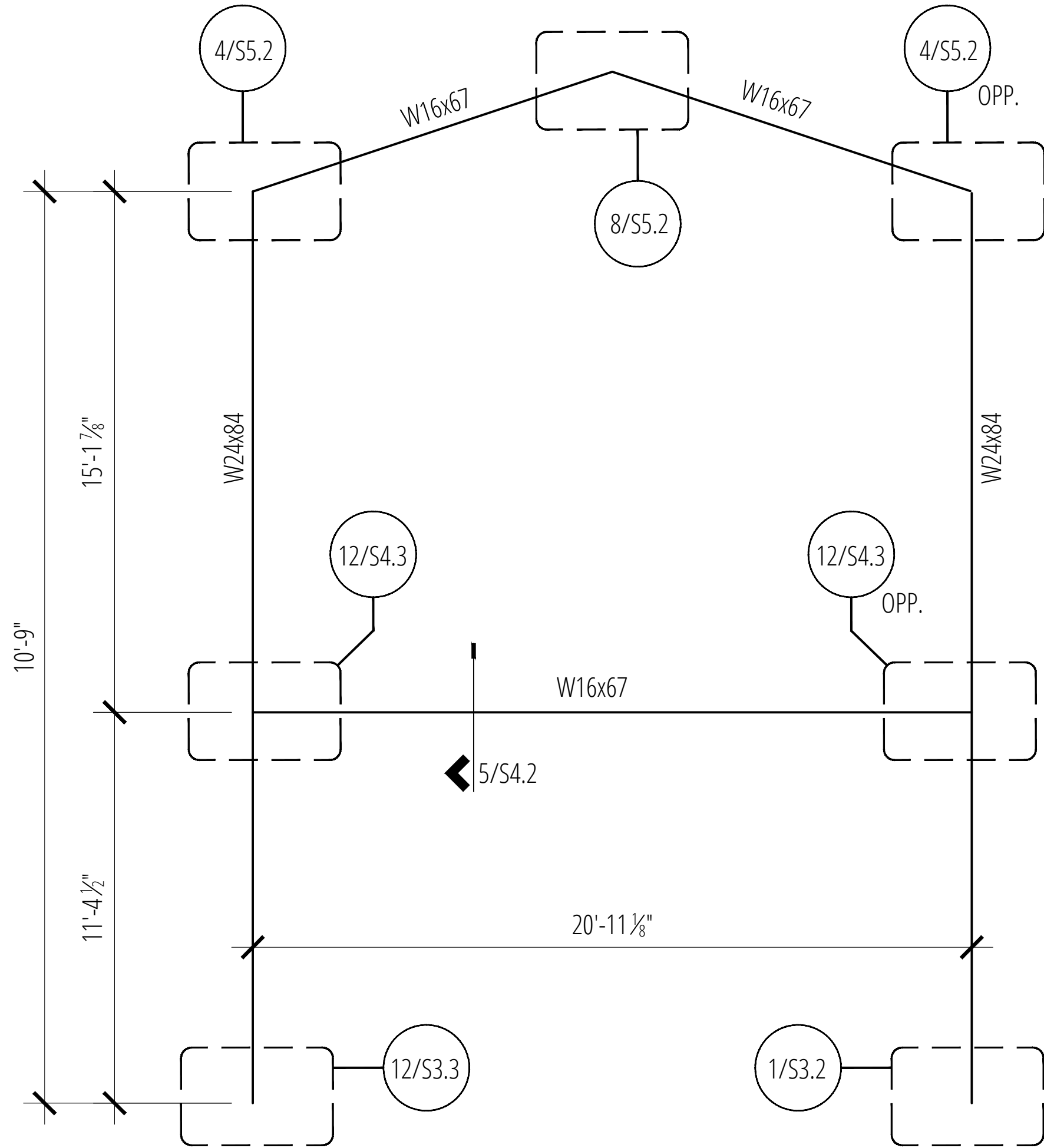
N_side of W1A	W1A_PJP (in)	N_side of W1A_PJP	W1B (in)	N_side of W1B	W1B_PJP (in)	N_side of W1B_PJP	W2 (in)	N_side of W2	W3 (in)	N_side of W3	W4 (in)
-	-	-	1/4	2	-	-	3/16	2	3/16	2	-
2	-	-	-	-	-	-	3/16	2	3/16	2	-
-	-	-	1/4	2	-	-	3/16	2	3/16	2	-
2	-	-	-	-	-	-	3/16	2	3/16	2	-

N_side of W4	W4A Dia. (in)	W4A Depth (in)	W5 (in)	N_Side of W5
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-

9

Steel Moment Frame

SCALE: N.T.S.

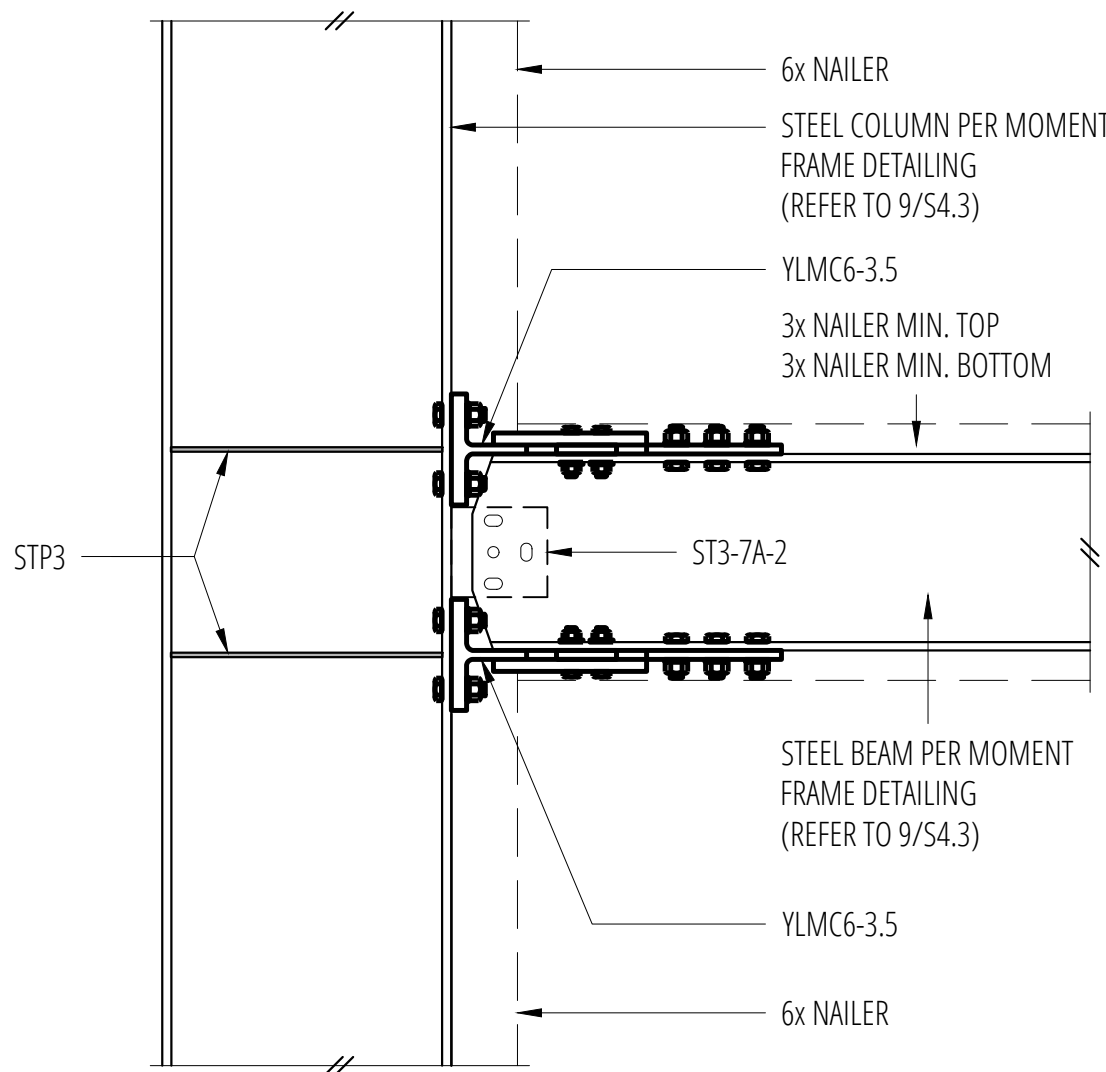


4

SCALE: 3/4"=1'-0"

8

SCALE: 3/4"=1'-0"



12

Moment Frame - Beam to Column

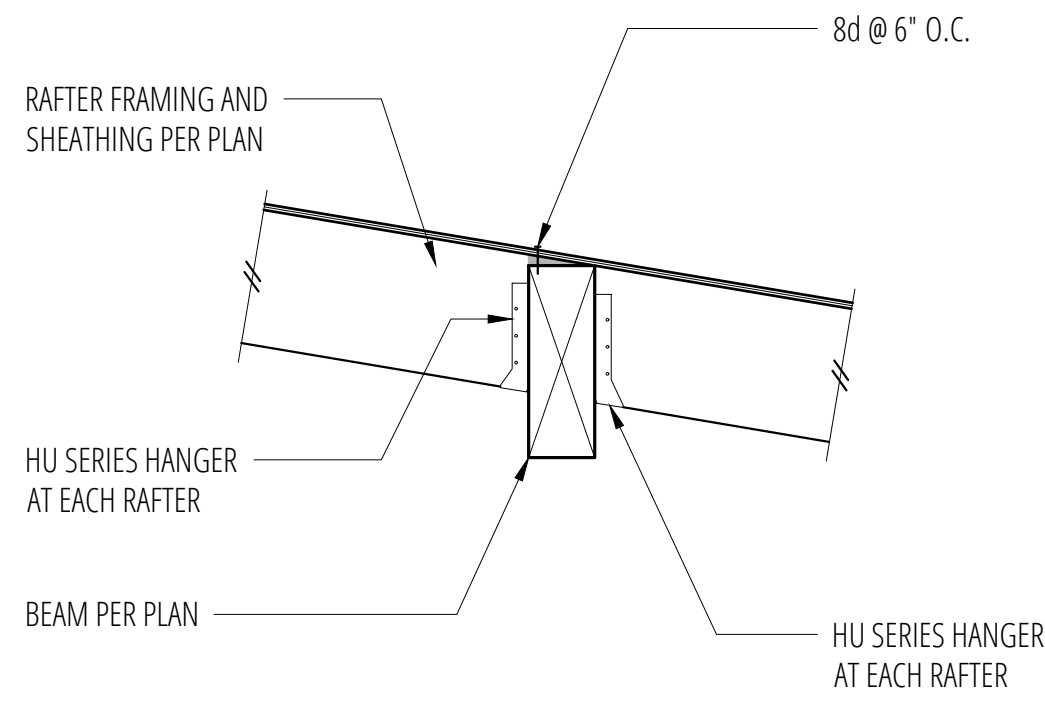
SCALE: 3/4"=1'-0"

No.	Date	Issue
11/13/24	Permit	
4/2/25	Corrections	
4/17/25	Revisions	
5/7/25	Corrections	

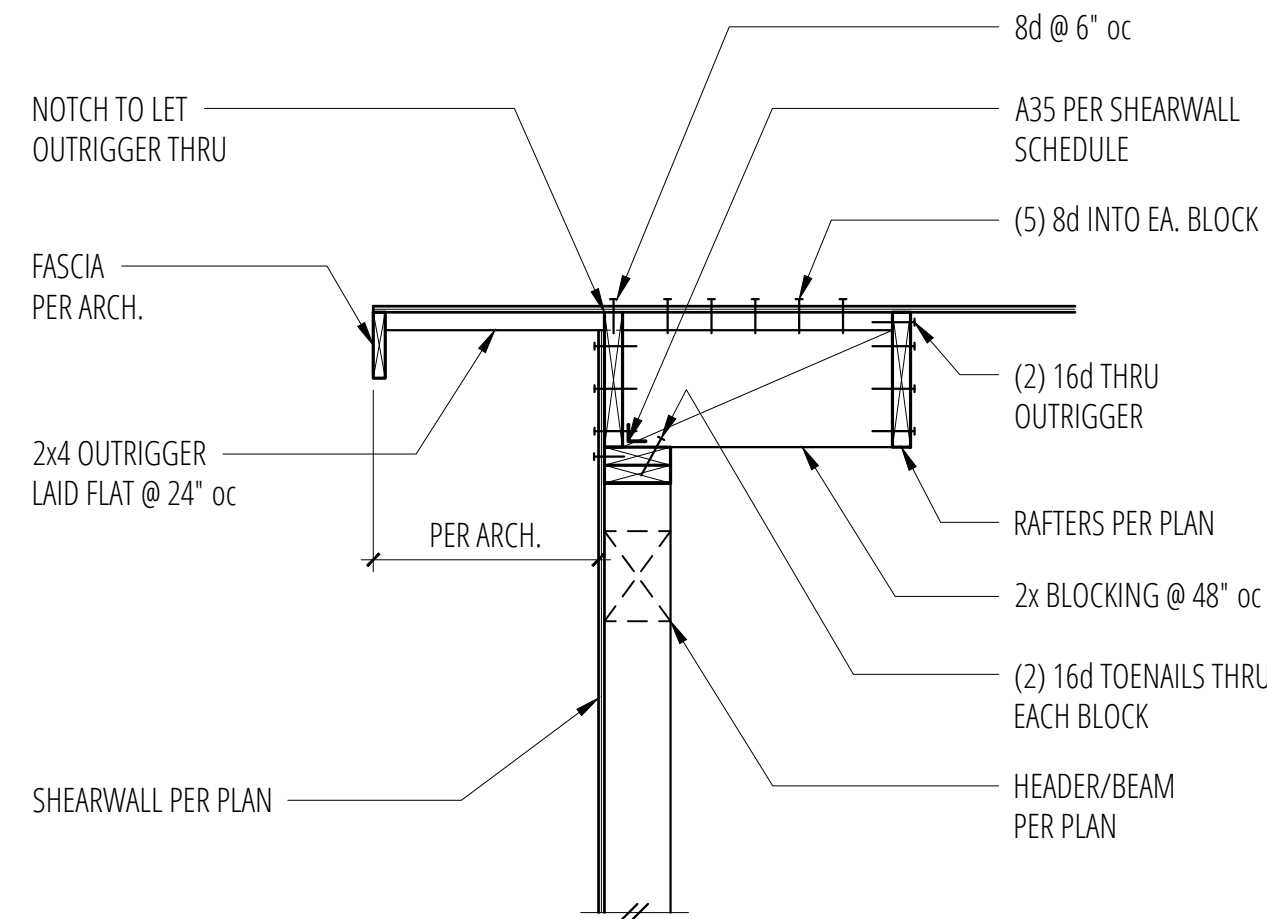
Sheet Contents

FLOOR FRAMING
DETAILS

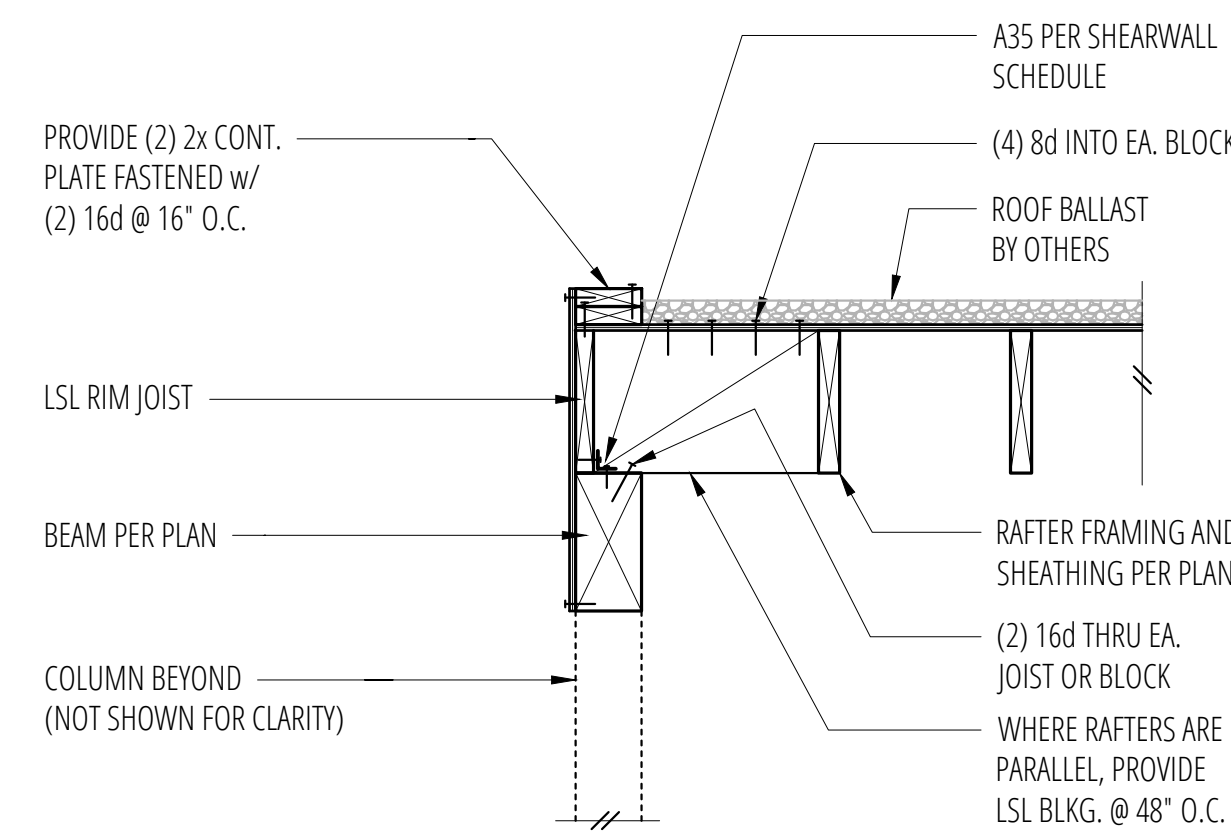
Sheet No.



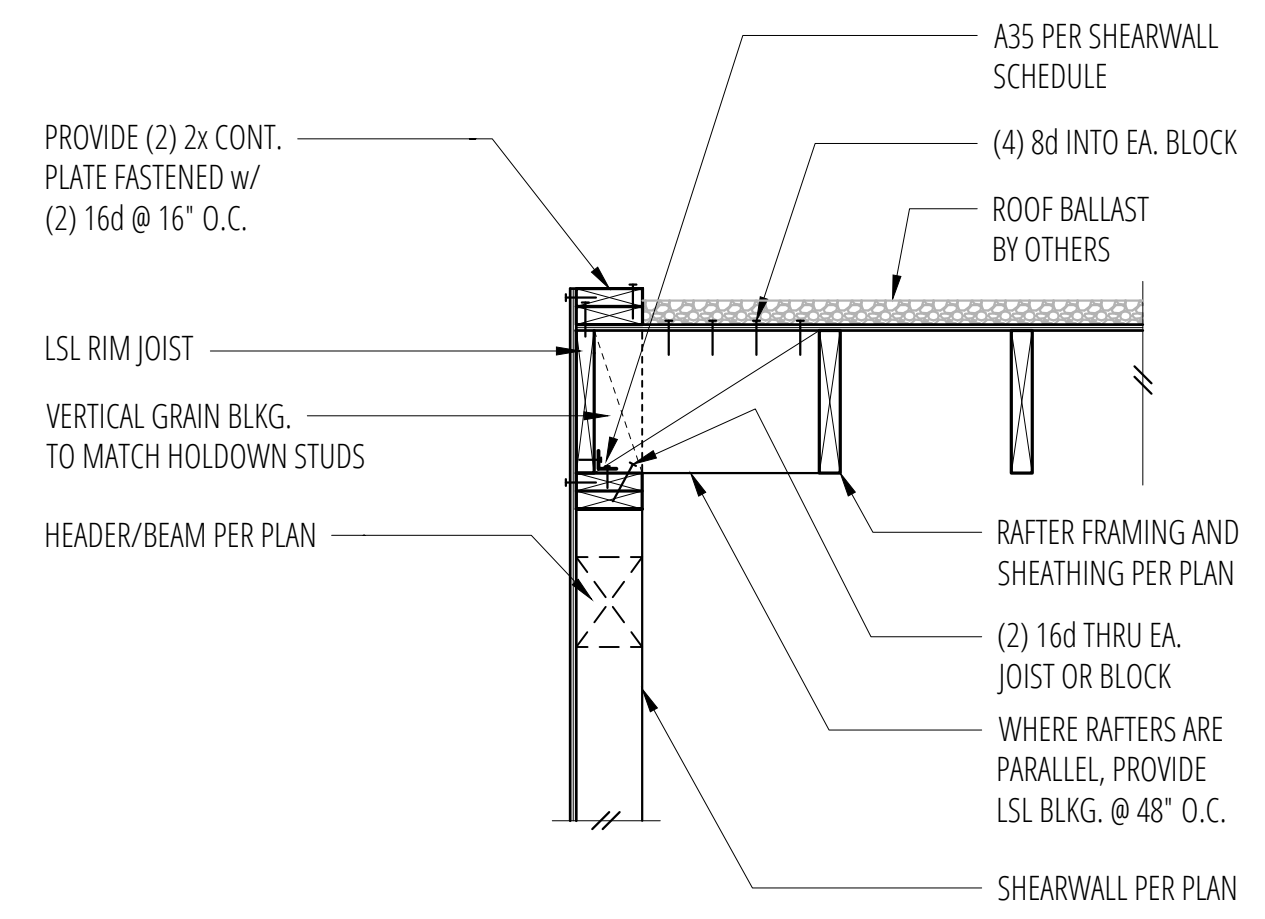
1 Rafter Framing at Flush Beam
SCALE: 3/4"=1'-0"



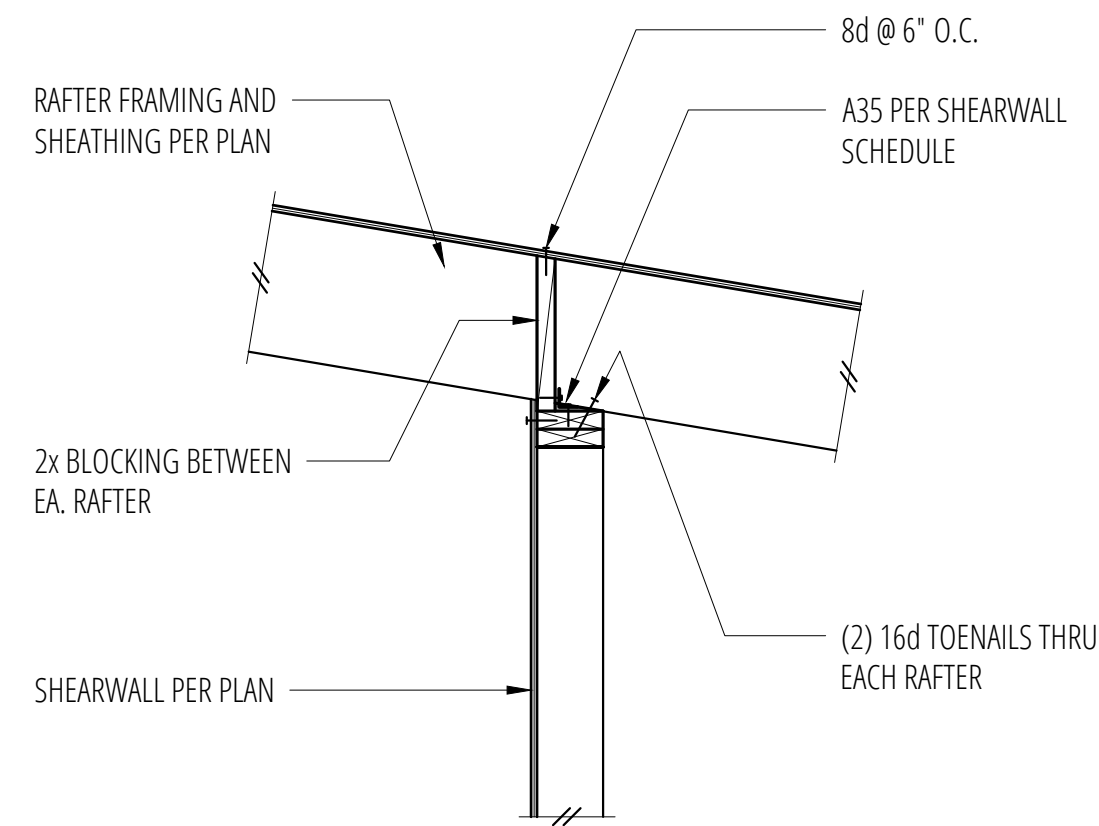
2 Pitched Roof Framing (Parallel)
SCALE: 3/4"=1'-0"



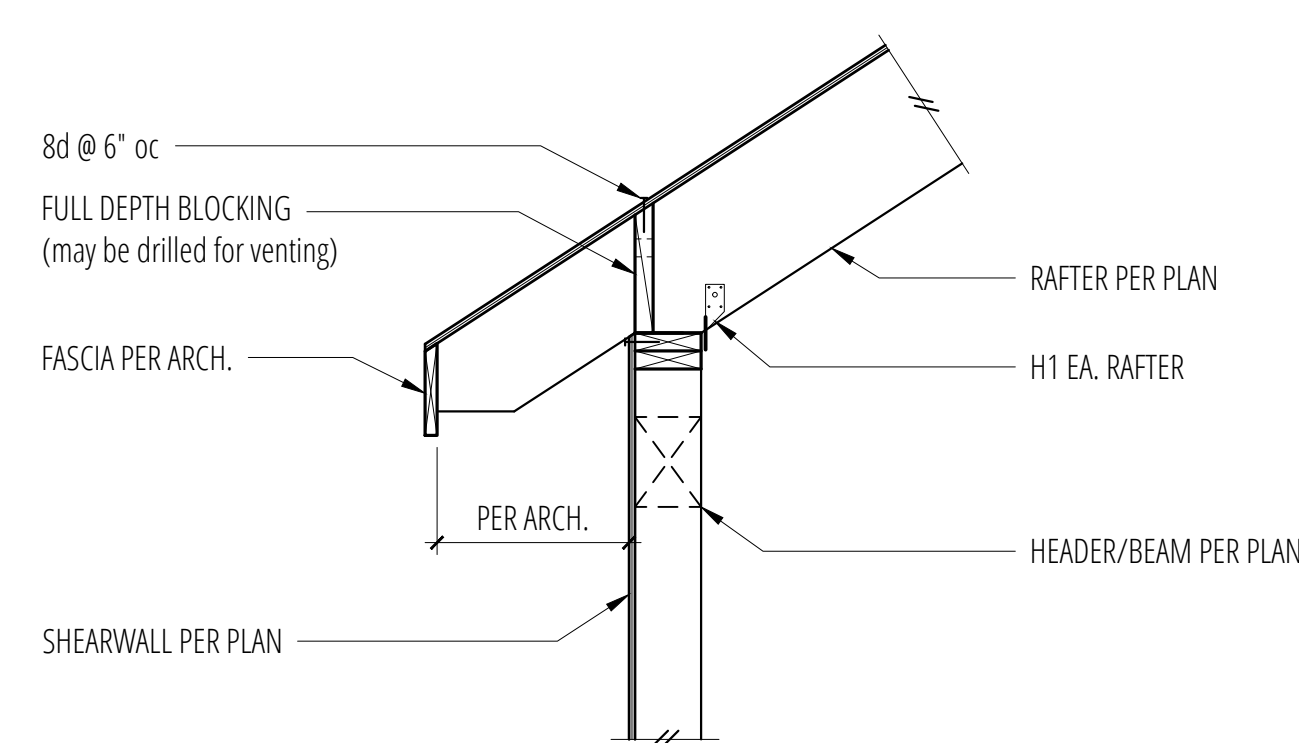
3 Post and Beam at Flat Roof (Parallel)
SCALE: 3/4"=1'-0"



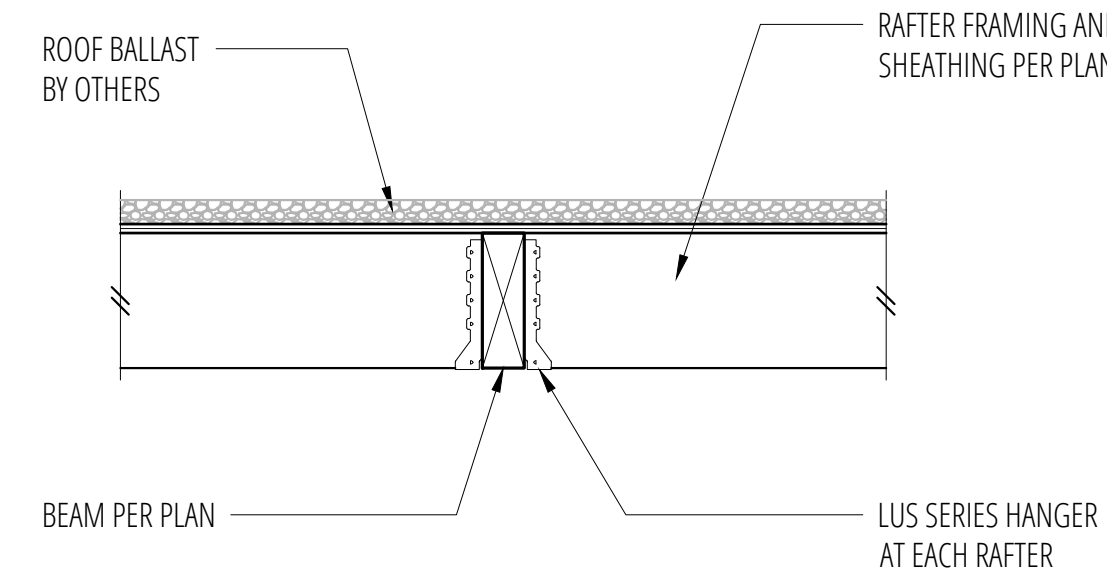
4 Flat Roof Framing (Parallel)
SCALE: 3/4"=1'-0"



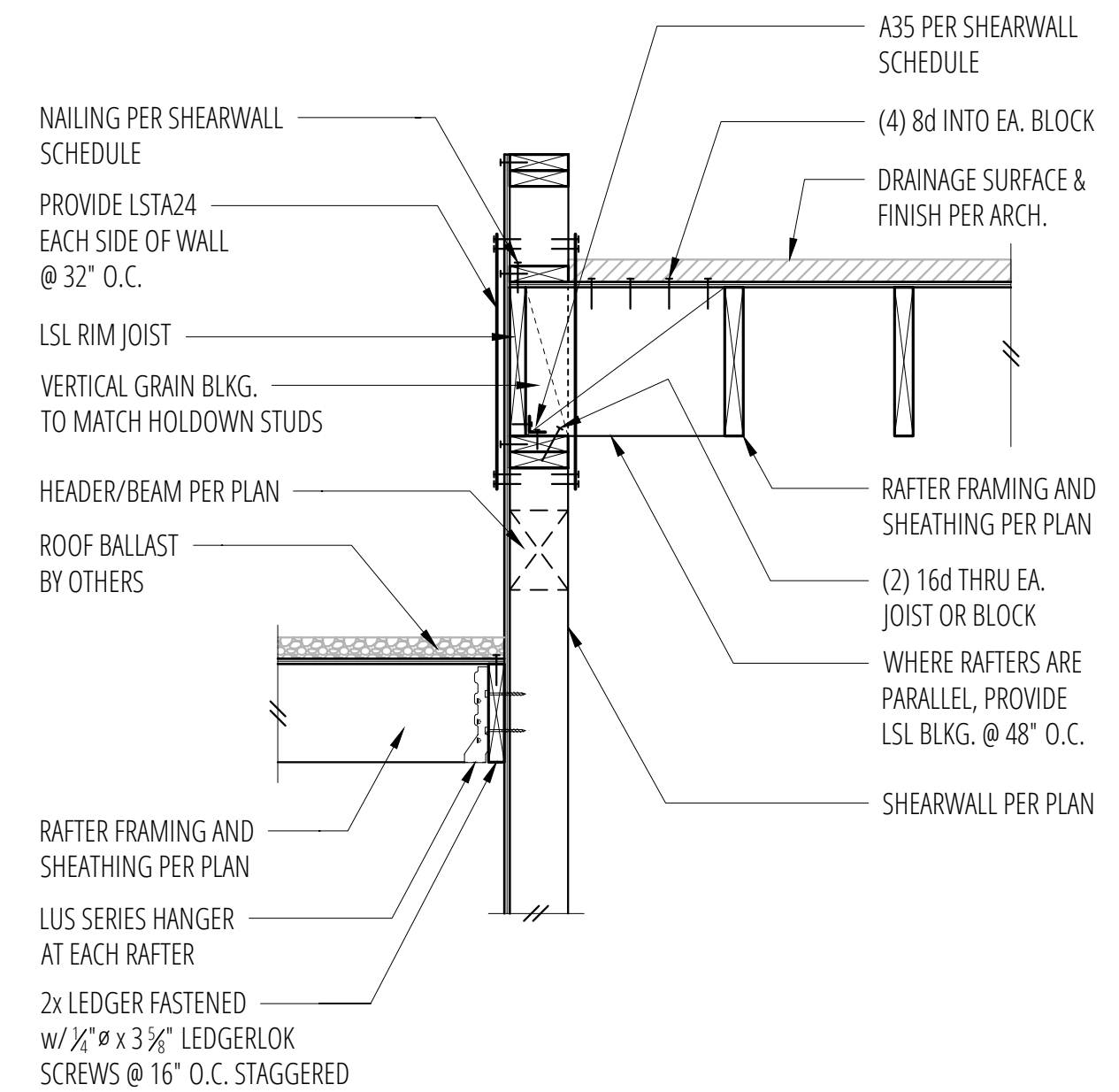
5 Rafter Framing Over Interior Shearwall
SCALE: 3/4"=1'-0"



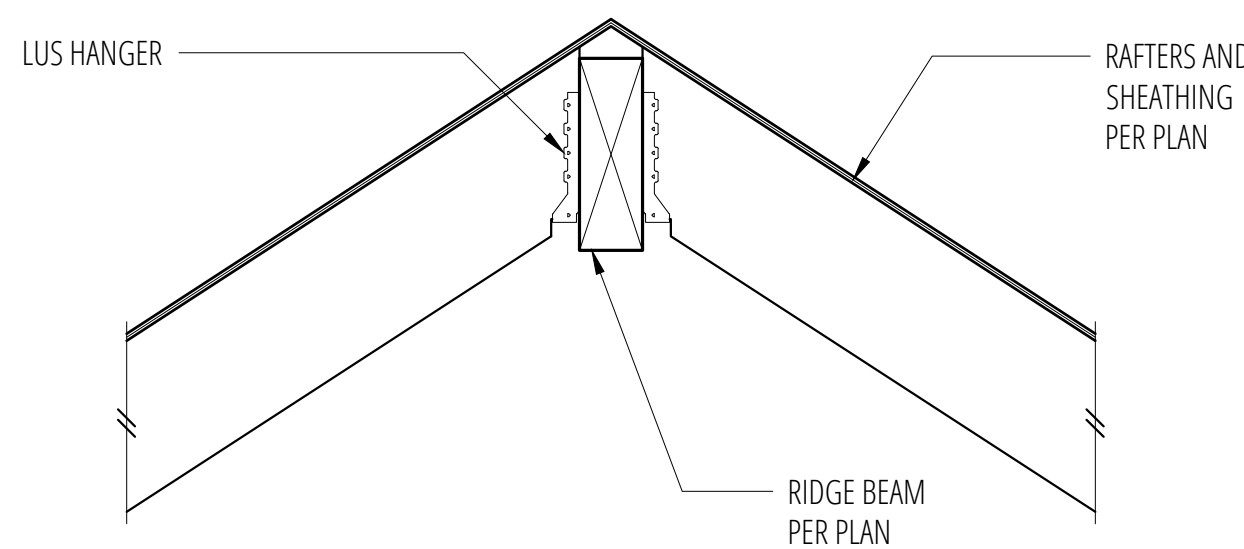
6 Pitched Roof Framing (Perpendicular)
SCALE: 3/4"=1'-0"



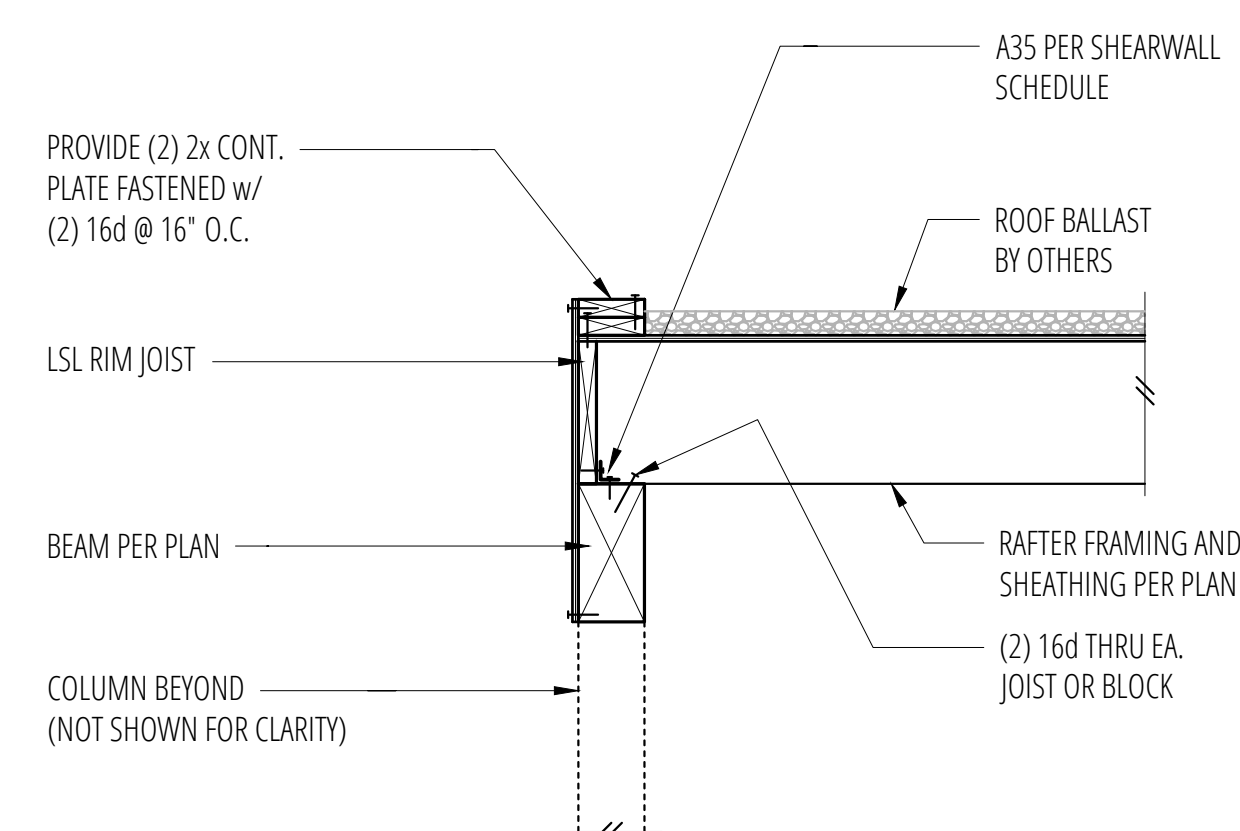
7 Flush Beam at Flat Roof
SCALE: 3/4"=1'-0"



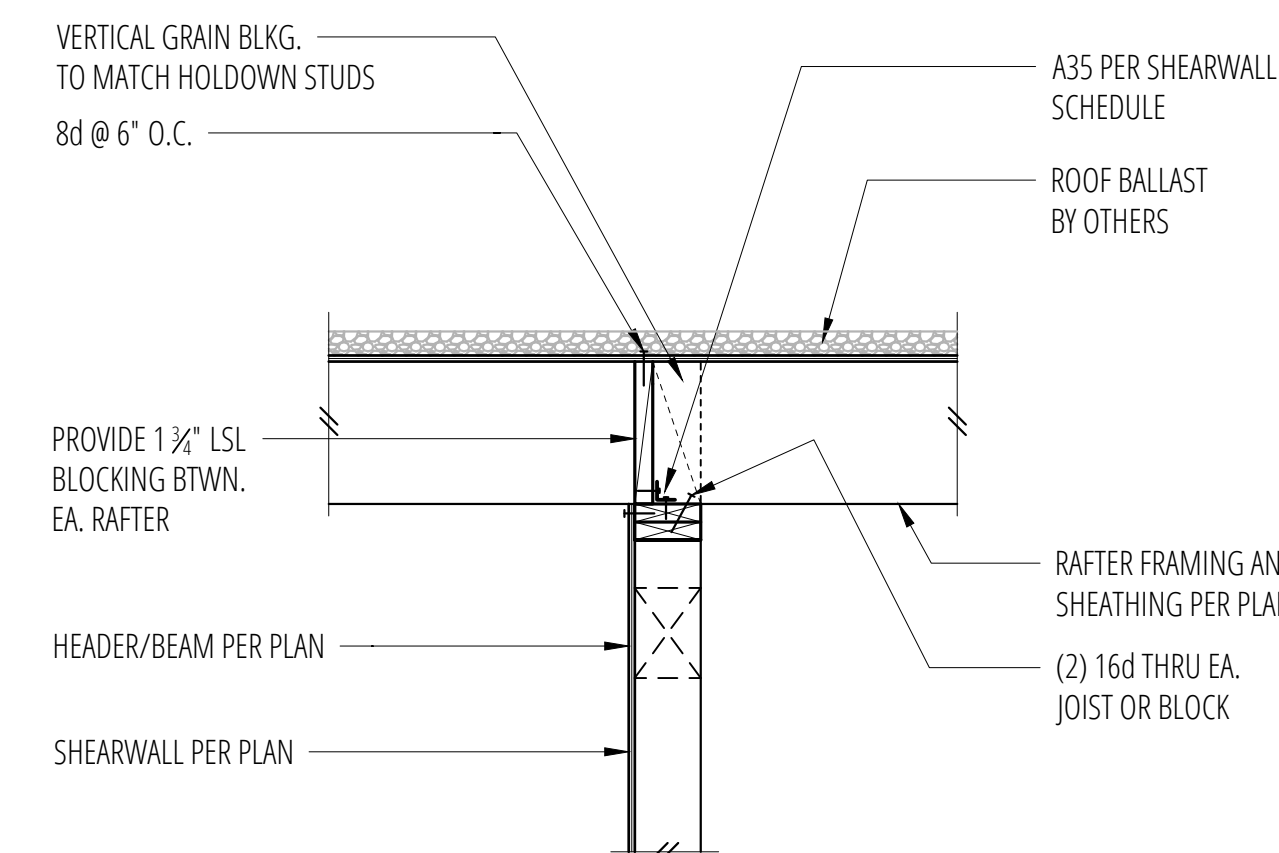
8 Rafter Framing at Garage (Parallel)
SCALE: 3/4"=1'-0"



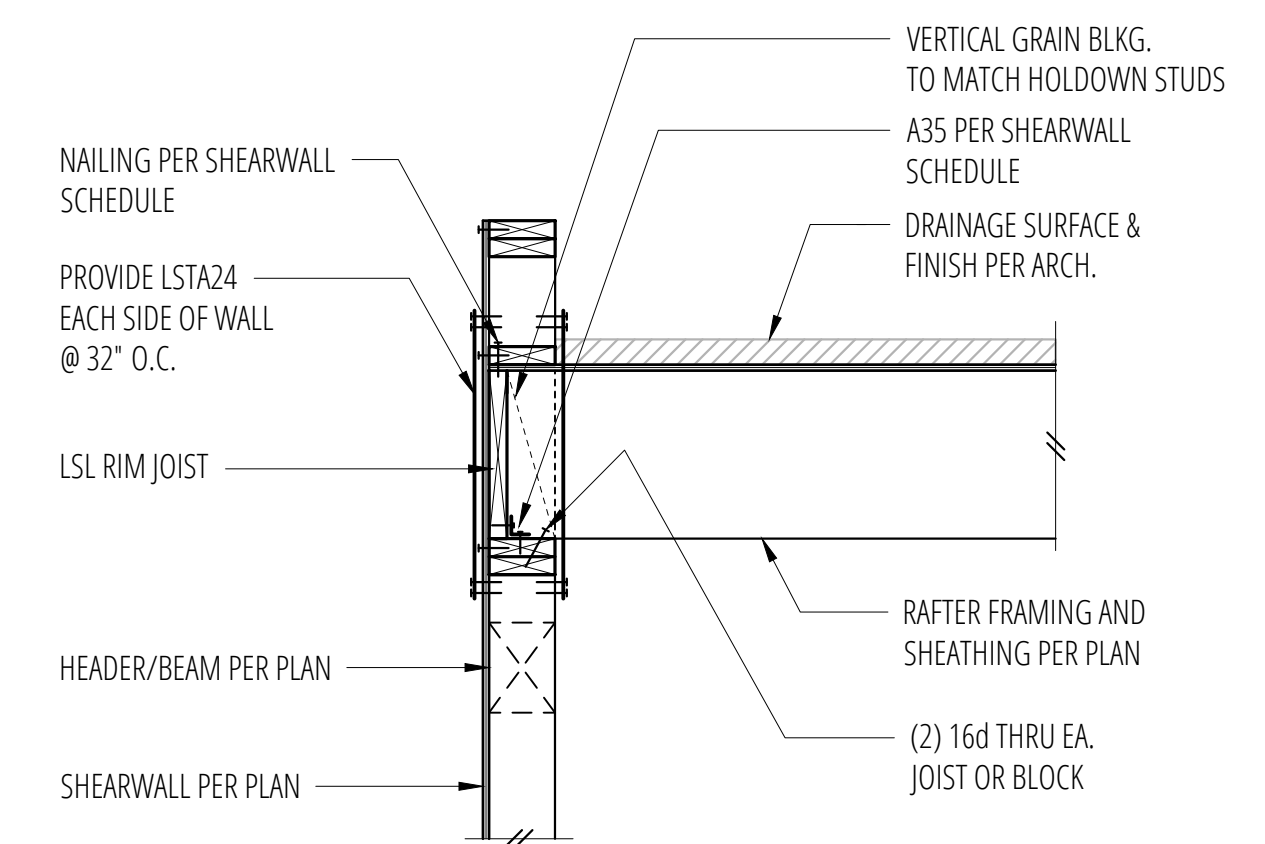
9 Ridge Beam
SCALE: 3/4"=1'-0"



10 Post and Beam at Flat Roof (Perpendicular)
SCALE: 3/4"=1'-0"



11 Interior Shearwall Below Flat Roof
SCALE: 3/4"=1'-0"



12 Rafter Framing at Garage (Perpendicular)
SCALE: 3/4"=1'-0"

No.	Date	Issue
11/13/24	Permit	
4/2/25	Corrections	
4/17/25	Revisions	
5/7/25	Corrections	

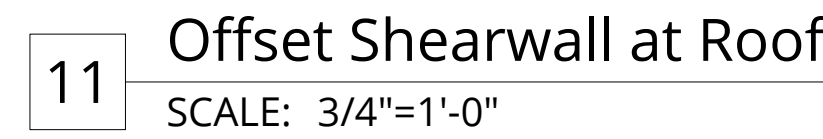
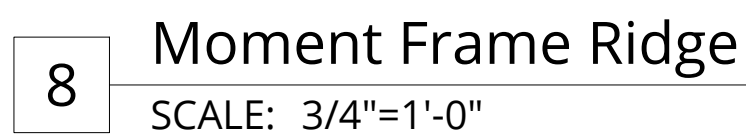
Sheet Contents
ROOF FRAMING DETAILS

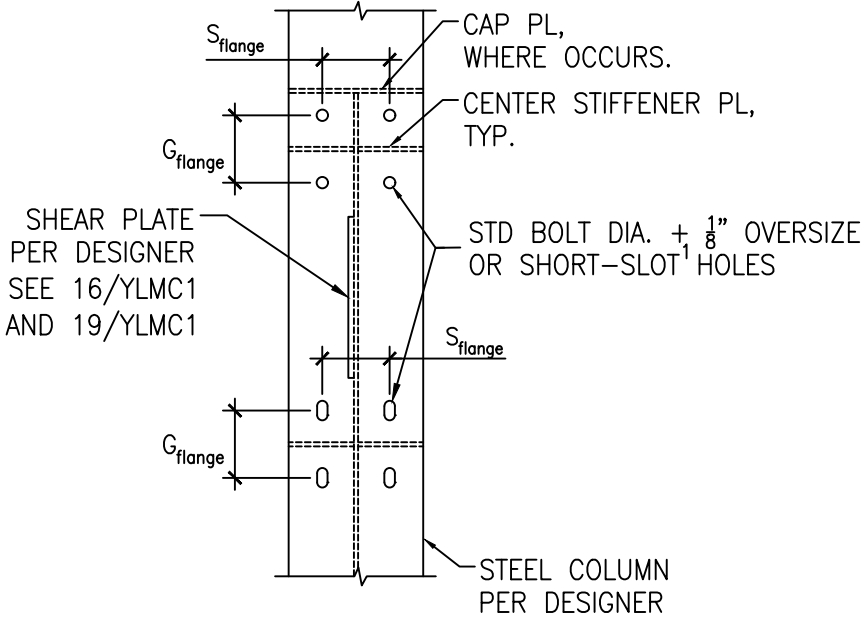
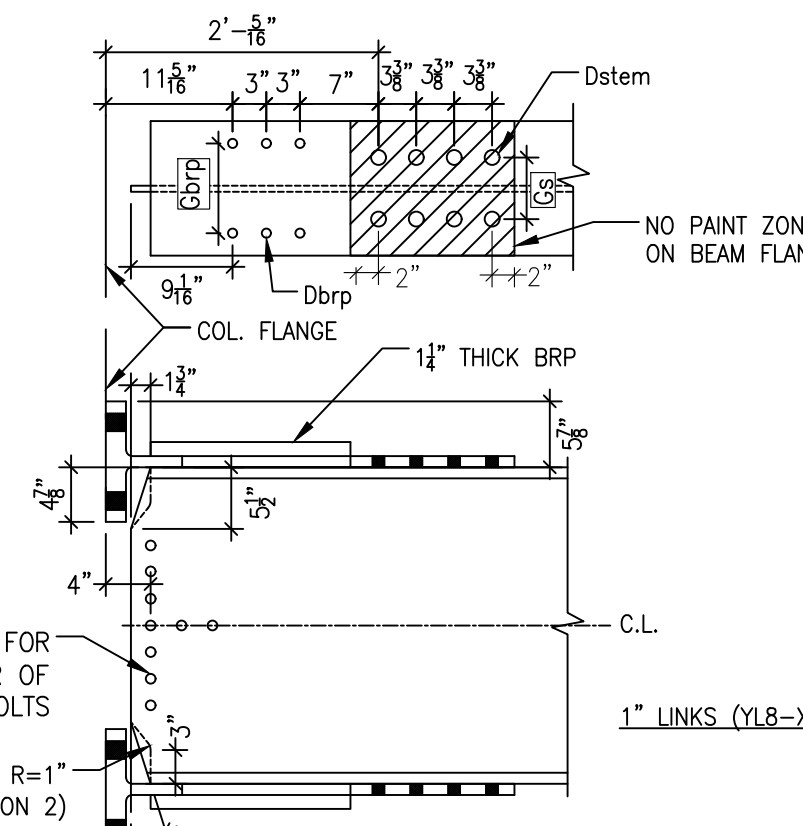
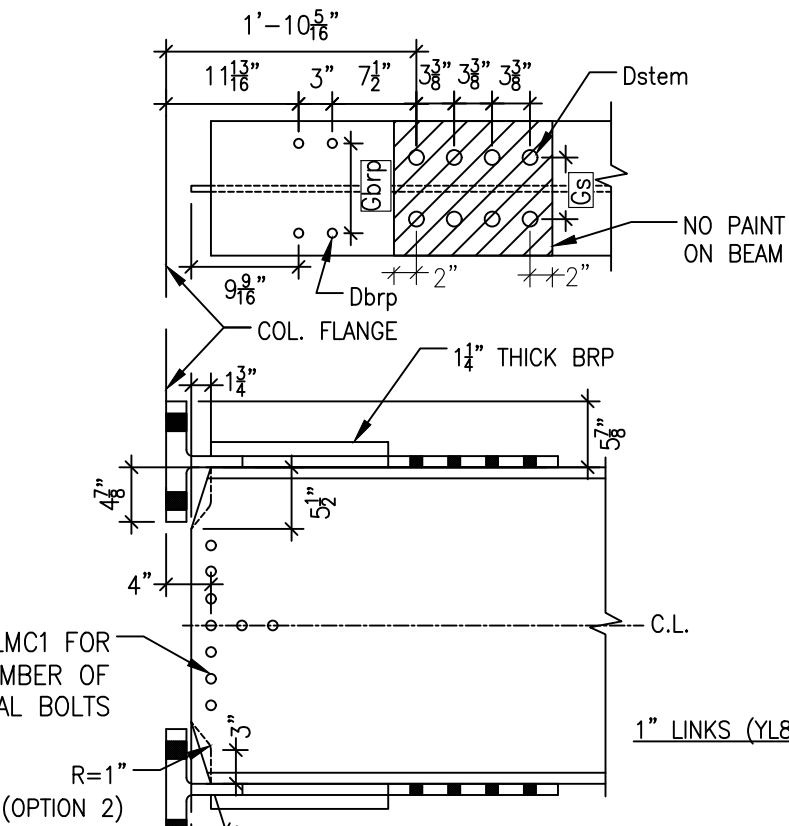
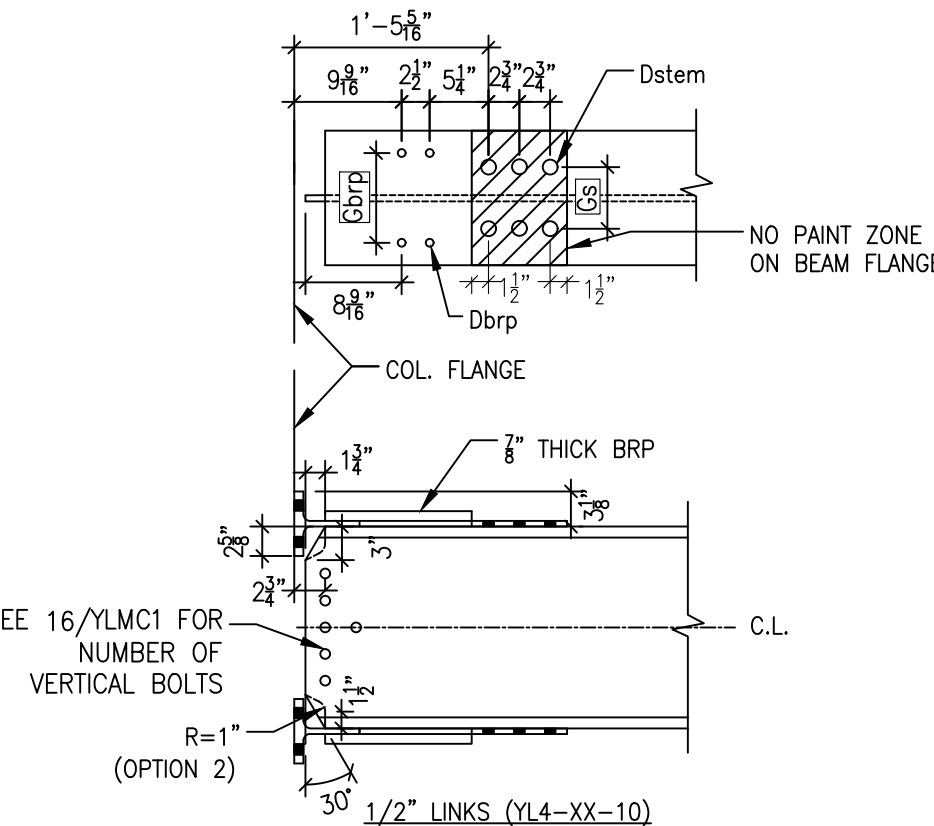
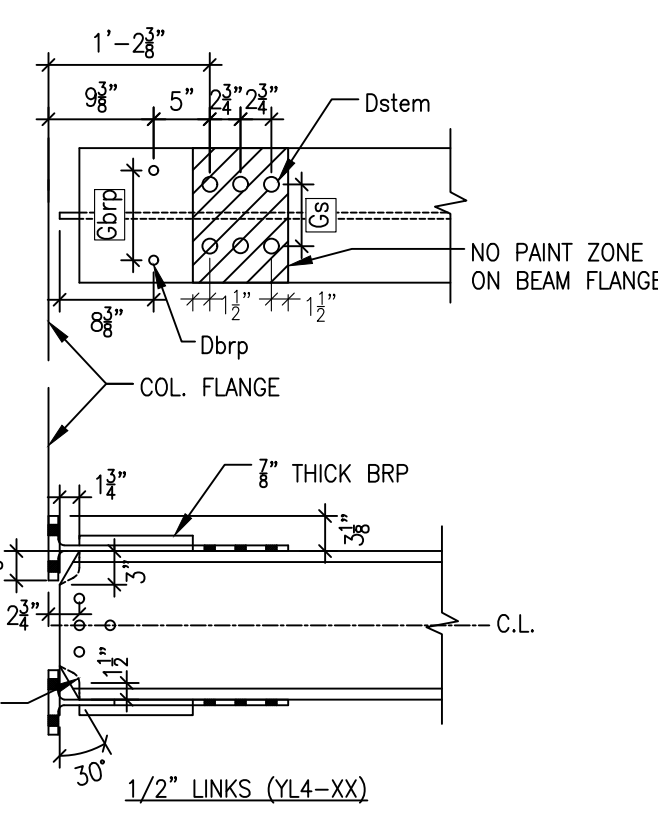
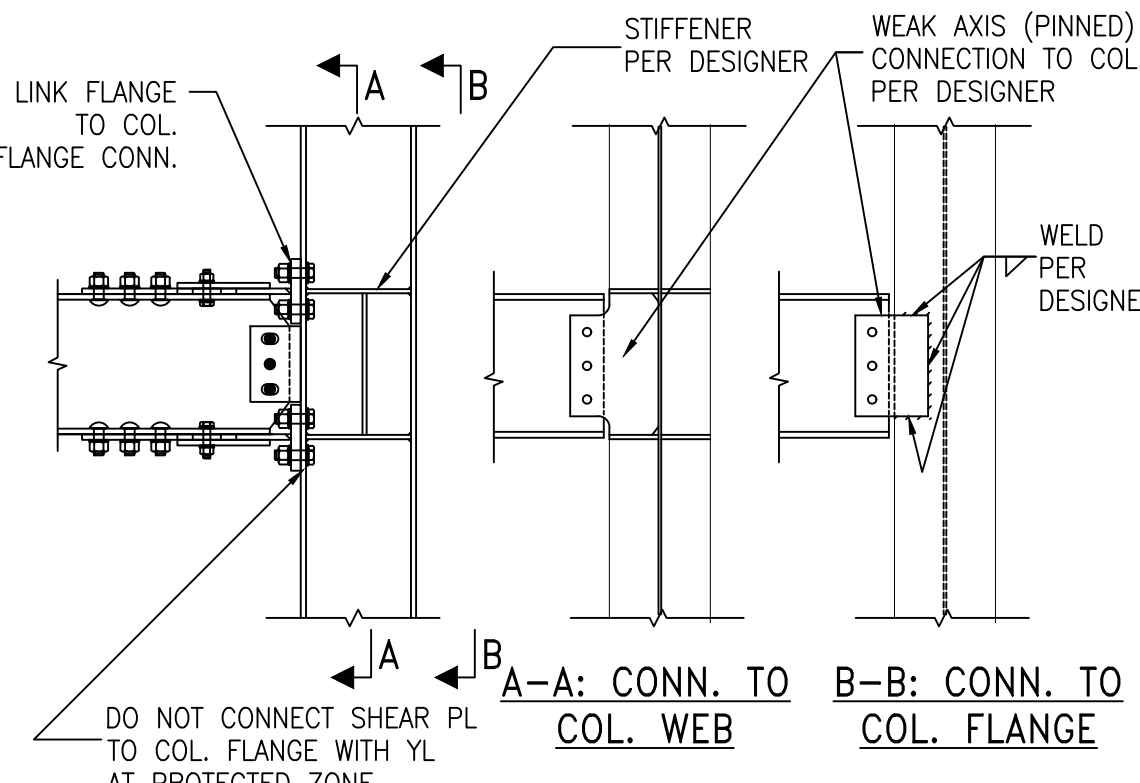
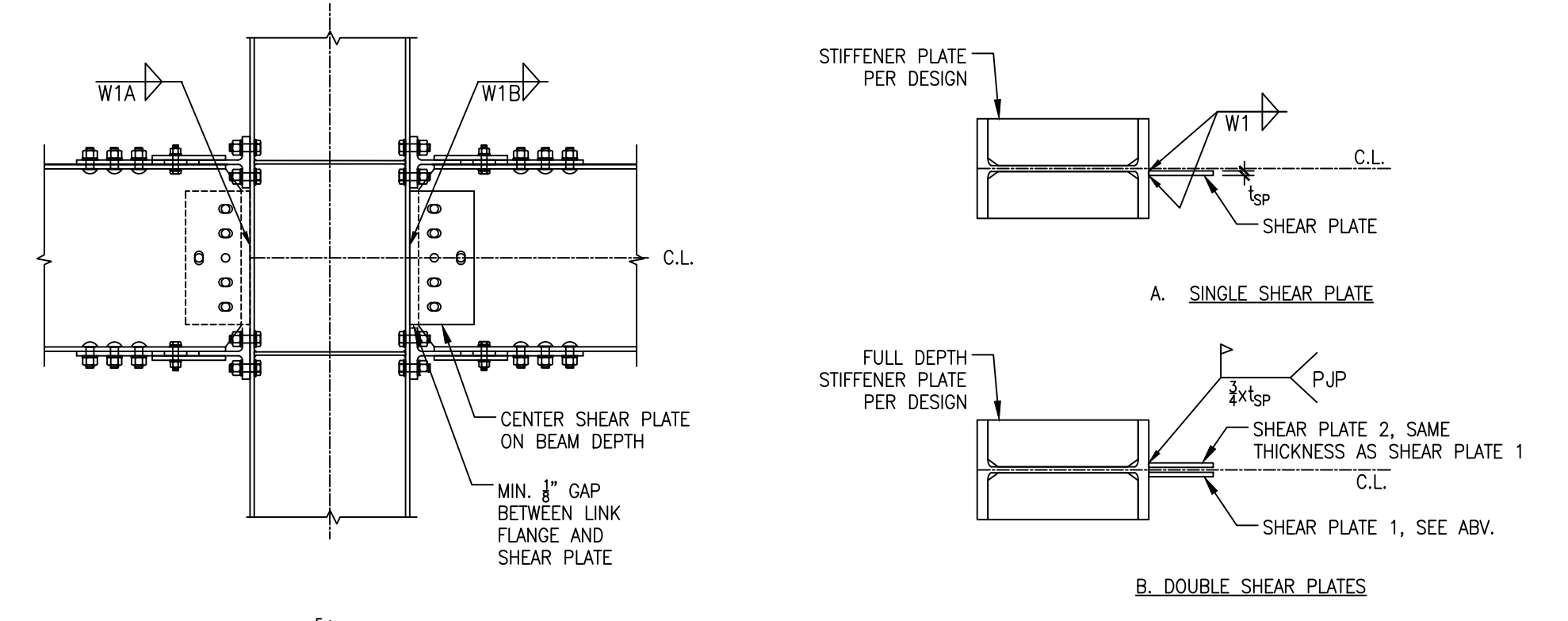
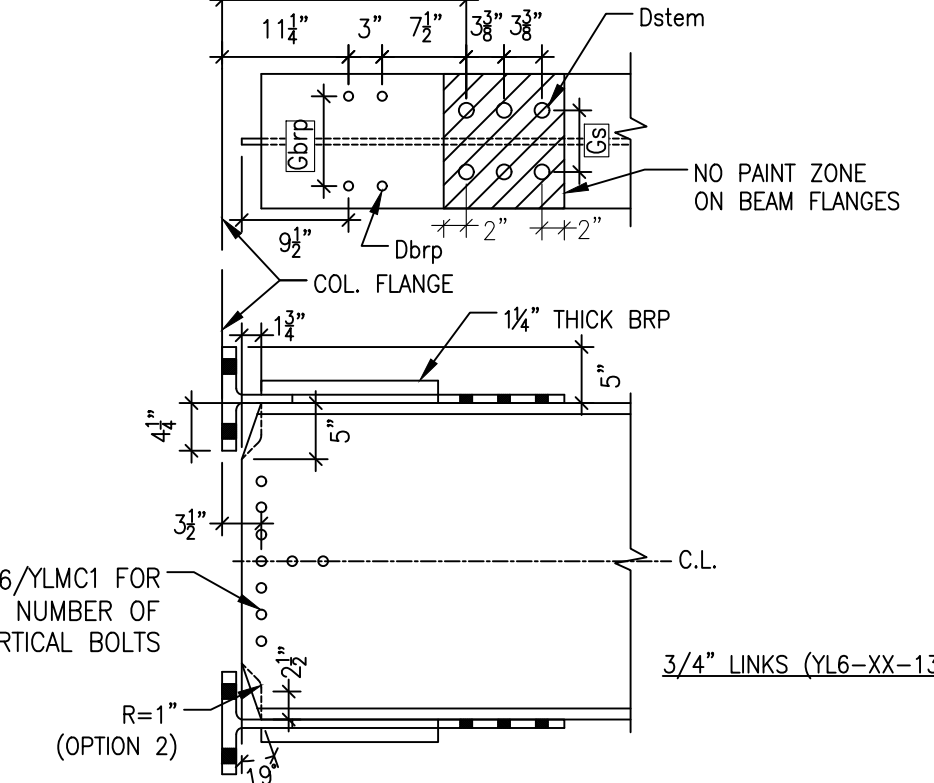
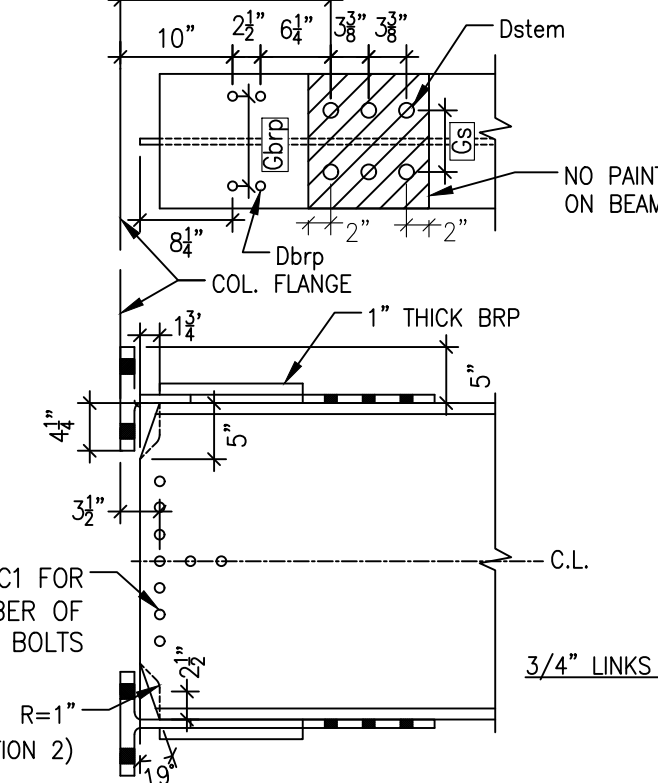
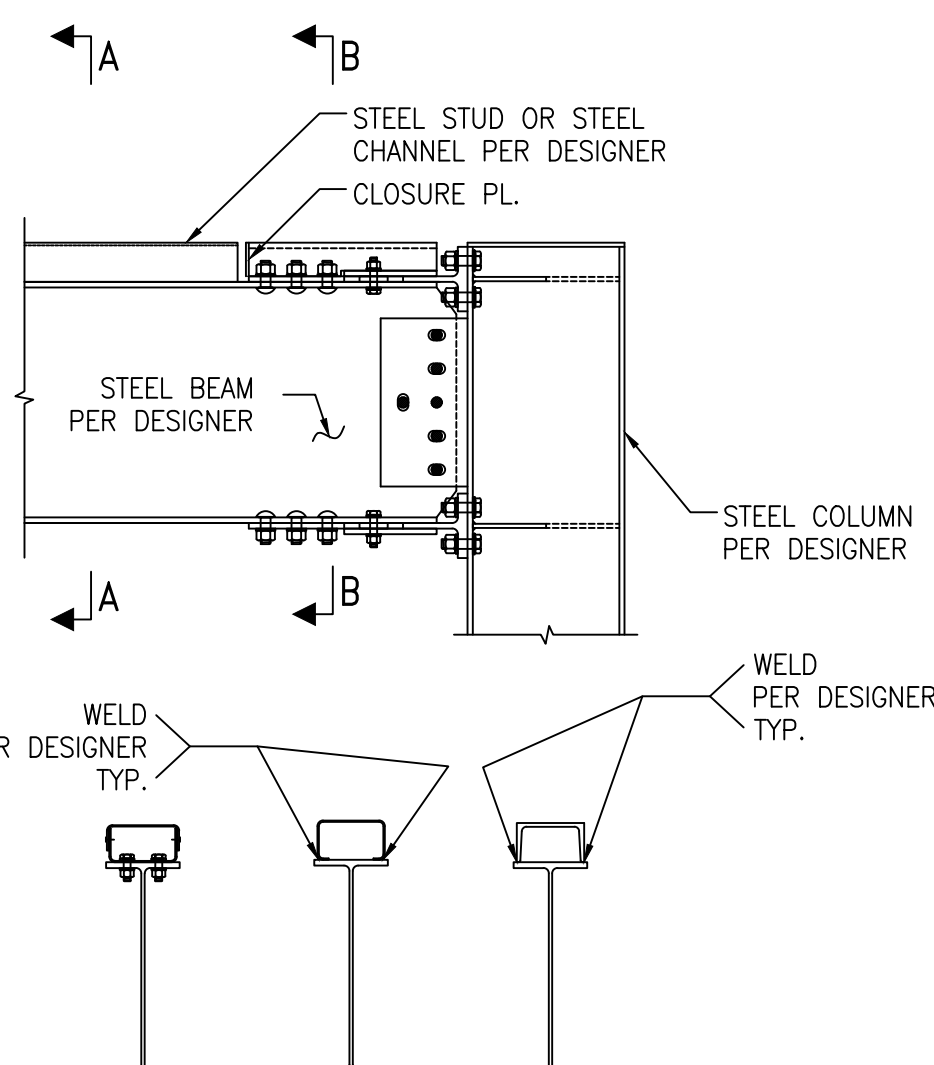
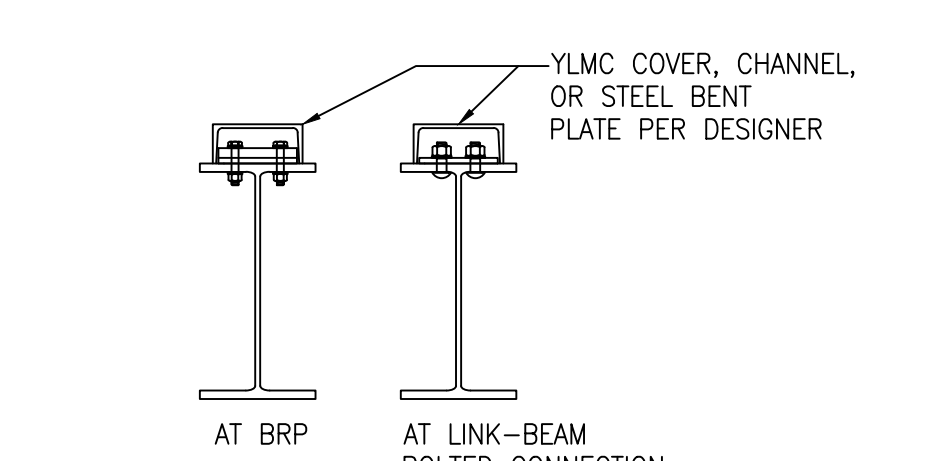
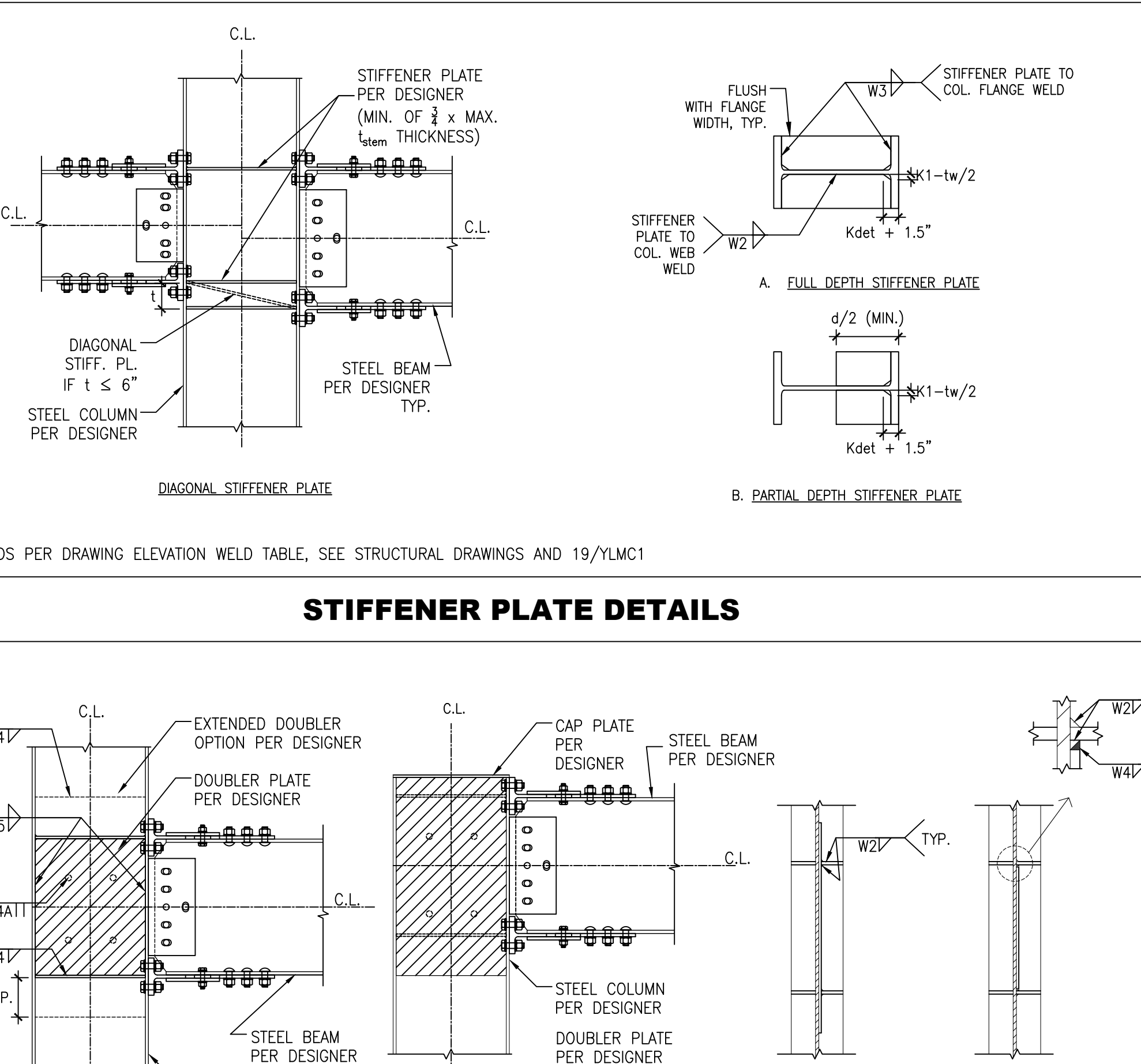
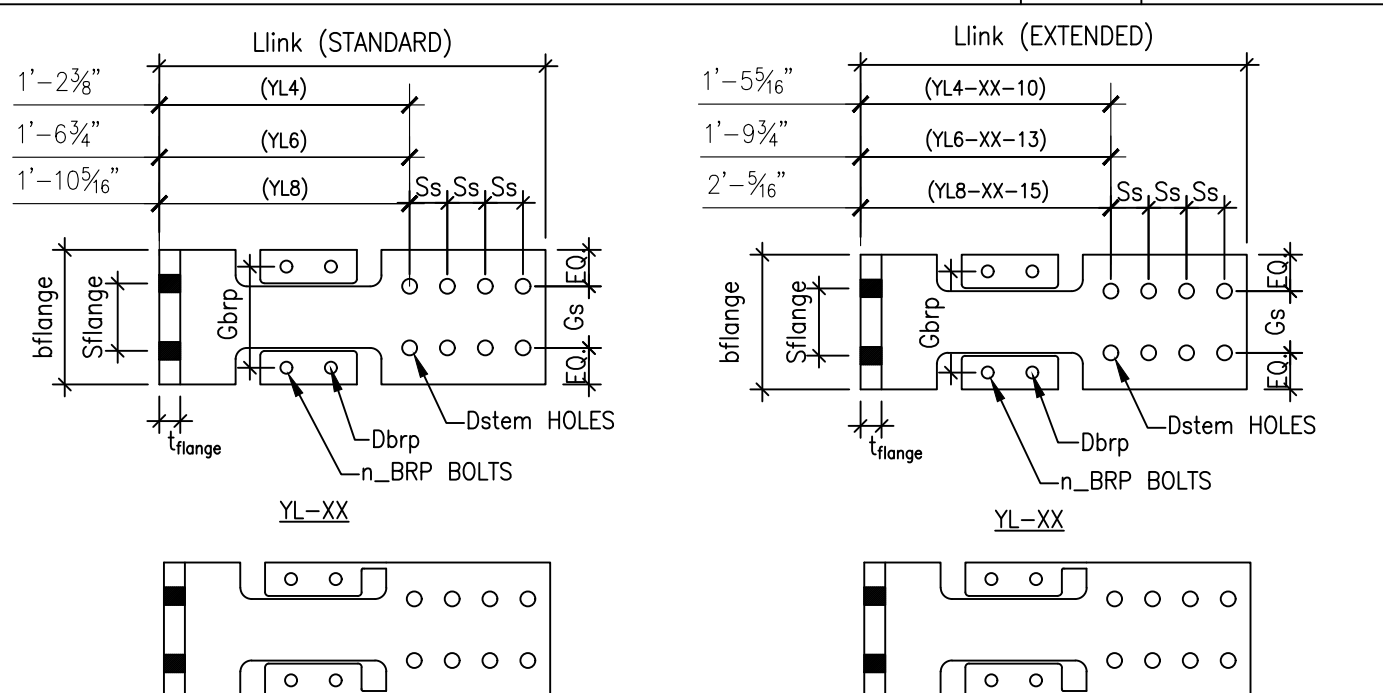
Sheet No.

4661 Forest Ave SE
Mercer Island, WA, 98040

ROOF FRAMING
DETAILS

55.2



 NOTE: 1. REFER TO RCSC FOR WASHER REQUIREMENTS ON SLOTTED HOLES 2. SEE DETAIL 17/YLMC1 FOR WASHER OPTIONS WHEN WASHERS ENCR OACH INTO COLUMN K REGION. 3. SEE 4/YLMC2 FOR Sflange AND Gflange DIMENSIONS	17	 NOTE: 1. YL8-XX-15 TO BE USED FOR W30 TO W36 BEAMS 2. SEE 4/YLMC2 FOR Gs, Dbrp AND Dstern, TYP.	13	 NOTE: 1. YL8-XX TO BE USED FOR W24 TO W36 BEAMS 2. SEE 4/YLMC2 FOR Gs, Dbrp AND Dstern, TYP.	9	 NOTE: 1. YL4-XX-10 TO BE USED FOR W21 TO W27 BEAMS 2. SEE 4/YLMC2 FOR Gs, Dbrp AND Dstern, TYP.	5	 NOTE: 1. YL4-XX TO BE USED FOR W12 TO W18 BEAMS 2. SEE 4/YLMC2 FOR Gs, Dbrp AND Dstern, TYP.	1																																																																																																																																																																																																																																																																																																																																																																																																										
 DO NOT CONNECT SHEAR PL TO COL. FLANGE WITH YL AT PROTECTED ZONE	18	 NOTE: 1. W1A & W1B FILLET WELDS SHALL BE MIN. 5/8 X SHEAR PLATE THICKNESS ON E.S. 2. SHEAR PLATE GEOMETRY SEE 16/YLMC1 AND FRAME ELEVATION SHEETS	10	 NOTE: 1. YL6-XX-13 TO BE USED FOR W30 TO W36 BEAMS 2. SEE 4/YLMC2 FOR Gs, Dbrp AND Dstern, TYP.	6	 NOTE: 1. YL6-XX TO BE USED FOR W16 TO W27 BEAMS 2. SEE 4/YLMC2 FOR Gs, Dbrp AND Dstern, TYP.	2																																																																																																																																																																																																																																																																																																																																																																																																												
 SECTION A-A: BEAM TOP CONNECTION  SECTION B-B: BEARING CONNECTION AT LINK REGION	20	 NOTE: 1. W2, W3 WELDS PER DRAWING ELEVATION WELD TABLE, SEE STRUCTURAL DRAWINGS AND 19/YLMC1 NOTE: 1. W4, W5 WELDS PER DRAWING ELEVATION WELD TABLE, SEE STRUCTURAL DRAWINGS 2. WHEN W5 IS A CJP WELD, IT SHALL MEET D1.8 DC WELD REQUIREMENTS (SEE 19/YLMC1)	11	 <table><thead><tr><th colspan="2">STANDARD YIELD-LINKS</th><th colspan="2">EXTENDED YIELD-LINKS</th><th colspan="16">SHARED PARAMETERS</th></tr><tr><th>LINK ID</th><th>Link</th><th>n_BRP BOLTS</th><th>Link</th><th>n_BRP BOLTS</th><th>bflange</th><th>hflange</th><th>Sflange</th><th>Gflange</th><th>Dflange</th><th>Dstern</th><th>Dbrp</th><th>Gbrp</th><th>Gs</th><th>Ss</th><th>n STEM BOLTS</th><th>n FLG BOLTS</th></tr></thead><tbody><tr><td>YL4-2</td><td>1'-2 3/8"</td><td></td><td>1'-5 5/8"</td><td></td><td>6"</td><td>53"</td><td>3 1/2"</td><td>3 3/4"</td><td>1 5/8"</td><td>1 5/8"</td><td>1 1/2"</td><td>3 3/4"</td><td>3 1/2"</td><td>2 3/4"</td><td>4</td><td></td></tr><tr><td>YL4-2.5</td><td>1'-6 3/4"</td><td></td><td>1'-9 3/4"</td><td></td><td>6"</td><td>53"</td><td>3 3/4"</td><td>3 3/4"</td><td>1 5/8"</td><td>1 5/8"</td><td>1 1/2"</td><td>4 1/4"</td><td>3 3/2"</td><td>2 3/4"</td><td>4</td><td></td></tr><tr><td>YL4-3</td><td>1'-10 3/4"</td><td></td><td>2'-5 1/8"</td><td></td><td>6"</td><td>53"</td><td>3 3/4"</td><td>3 3/4"</td><td>1 5/8"</td><td>1 5/8"</td><td>1 1/2"</td><td>4 3/4"</td><td>3 3/2"</td><td>2 3/4"</td><td>4</td><td></td></tr><tr><td>YL4-2.25</td><td></td><td>2 (TOTAL)</td><td>1'-9 3/8"</td><td>4 (TOTAL)</td><td>7"</td><td>53"</td><td>4 1/2"</td><td>3 3/4"</td><td>1 5/8"</td><td>1 5/8"</td><td>1 1/2"</td><td>4 3/4"</td><td>3 3/2"</td><td>2 3/4"</td><td>4</td><td></td></tr><tr><td>YL4-2.875</td><td></td><td>2 (TOTAL)</td><td>1'-9 3/8"</td><td>4 (TOTAL)</td><td>7"</td><td>53"</td><td>4 1/2"</td><td>3 3/4"</td><td>1 5/8"</td><td>1 5/8"</td><td>1 1/2"</td><td>5"</td><td>3 3/2"</td><td>2 3/4"</td><td>4</td><td></td></tr><tr><td>YL4-3.5</td><td></td><td>2 (TOTAL)</td><td>1'-9 3/8"</td><td>4 (TOTAL)</td><td>7"</td><td>53"</td><td>5 1/4"</td><td>3 3/4"</td><td>1 5/8"</td><td>1 5/8"</td><td>1 1/2"</td><td>5 1/4"</td><td>3 3/2"</td><td>2 3/4"</td><td>4</td><td></td></tr><tr><td>YL4-3.75</td><td></td><td>2 (TOTAL)</td><td>1'-9 3/8"</td><td>4 (TOTAL)</td><td>7"</td><td>53"</td><td>5 1/4"</td><td>3 3/4"</td><td>1 5/8"</td><td>1 5/8"</td><td>1 1/2"</td><td>5 1/4"</td><td>3 3/2"</td><td>2 3/4"</td><td>4</td><td></td></tr><tr><td>YL4-4</td><td></td><td>2 (TOTAL)</td><td>1'-9 3/8"</td><td>4 (TOTAL)</td><td>7"</td><td>53"</td><td>5 1/4"</td><td>3 3/4"</td><td>1 5/8"</td><td>1 5/8"</td><td>1 1/2"</td><td>6 1/4"</td><td>3 3/2"</td><td>2 3/4"</td><td>4</td><td></td></tr><tr><td>YL6-2.5</td><td></td><td>2 (TOTAL)</td><td>1'-9 3/8"</td><td>4 (TOTAL)</td><td>6 1/2"</td><td>53"</td><td>4"</td><td>5 1/4"</td><td>1 5/8"</td><td>1 5/8"</td><td>1 1/2"</td><td>4 1/4"</td><td>4"</td><td>3 3/8"</td><td>4</td><td></td></tr><tr><td>YL6-3</td><td></td><td>2 (TOTAL)</td><td>1'-9 3/8"</td><td>4 (TOTAL)</td><td>6 1/2"</td><td>53"</td><td>5"</td><td>5 1/4"</td><td>1 5/8"</td><td>1 5/8"</td><td>1 1/2"</td><td>5 1/4"</td><td>5"</td><td>3 3/8"</td><td>4</td><td></td></tr><tr><td>YL6-3.5</td><td></td><td>2 (TOTAL)</td><td>1'-9 3/8"</td><td>4 (TOTAL)</td><td>6 1/2"</td><td>53"</td><td>5"</td><td>5 1/4"</td><td>1 5/8"</td><td>1 5/8"</td><td>1 1/2"</td><td>5 1/4"</td><td>5"</td><td>3 3/8"</td><td>4</td><td></td></tr><tr><td>YL6-4</td><td></td><td>2 (TOTAL)</td><td>1'-9 3/8"</td><td>4 (TOTAL)</td><td>6 1/2"</td><td>53"</td><td>5"</td><td>5 1/4"</td><td>1 5/8"</td><td>1 5/8"</td><td>1 1/2"</td><td>5 1/4"</td><td>5"</td><td>3 3/8"</td><td>4</td><td></td></tr><tr><td>YL6-4.5</td><td></td><td>2 (TOTAL)</td><td>1'-9 3/8"</td><td>4 (TOTAL)</td><td>6 1/2"</td><td>53"</td><td>6"</td><td>5 1/4"</td><td>1 5/8"</td><td>1 5/8"</td><td>1 1/2"</td><td>6 1/4"</td><td>6"</td><td>3 3/8"</td><td>4</td><td></td></tr><tr><td>YL6-5</td><td></td><td>2 (TOTAL)</td><td>1'-9 3/8"</td><td>4 (TOTAL)</td><td>6 1/2"</td><td>53"</td><td>6"</td><td>5 1/4"</td><td>1 5/8"</td><td>1 5/8"</td><td>1 1/2"</td><td>7 1/4"</td><td>6"</td><td>3 3/8"</td><td>4</td><td></td></tr><tr><td>YL6-5.5</td><td></td><td>2 (TOTAL)</td><td>1'-9 3/8"</td><td>4 (TOTAL)</td><td>6 1/2"</td><td>53"</td><td>6"</td><td>5 1/4"</td><td>1 5/8"</td><td>1 5/8"</td><td>1 1/2"</td><td>7 1/4"</td><td>6"</td><td>3 3/8"</td><td>4</td><td></td></tr><tr><td>YL6-6</td><td></td><td>2 (TOTAL)</td><td>1'-9 3/8"</td><td>4 (TOTAL)</td><td>6 1/2"</td><td>53"</td><td>6"</td><td>5 1/4"</td><td>1 5/8"</td><td>1 5/8"</td><td>1 1/2"</td><td>8 1/4"</td><td>6"</td><td>3 3/8"</td><td>4</td><td></td></tr><tr><td>YL8-4</td><td></td><td>2 (TOTAL)</td><td>1'-9 3/8"</td><td>4 (TOTAL)</td><td>9"</td><td>10 1/2"</td><td>5 1/4"</td><td>7"</td><td>1 5/8"</td><td>1 5/8"</td><td>1 1/2"</td><td>6 1/2"</td><td>5 1/4"</td><td>3 3/8"</td><td>6</td><td></td></tr><tr><td>YL8-4.5</td><td></td><td>2 (TOTAL)</td><td>1'-9 3/8"</td><td>4 (TOTAL)</td><td>9"</td><td>10 1/2"</td><td>5 1/4"</td><td>7"</td><td>1 5/8"</td><td>1 5/8"</td><td>1 1/2"</td><td>7"</td><td>5 1/4"</td><td>3 3/8"</td><td>6</td><td></td></tr><tr><td>YL8-5</td><td></td><td>2 (TOTAL)</td><td>1'-9 3/8"</td><td>4 (TOTAL)</td><td>9"</td><td>10 1/2"</td><td>6"</td><td>7"</td><td>1 5/8"</td><td>1 5/8"</td><td>1 1/2"</td><td>7 1/2"</td><td>6"</td><td>3 3/8"</td><td>8</td><td></td></tr><tr><td>YL8-5.5</td><td></td><td>2 (TOTAL)</td><td>1'-9 3/8"</td><td>4 (TOTAL)</td><td>9"</td><td>10 1/2"</td><td>6"</td><td>7"</td><td>1 5/8"</td><td>1 5/8"</td><td>1 1/2"</td><td>8"</td><td>6"</td><td>3 3/8"</td><td>8</td><td></td></tr><tr><td>YL8-6</td><td></td><td>2 (TOTAL)</td><td>1'-9 3/8"</td><td>4 (TOTAL)</td><td>9"</td><td>10 1/2"</td><td>6"</td><td>7"</td><td>1 5/8"</td><td>1 5/8"</td><td>1 1/2"</td><td>8 1/2"</td><td>6"</td><td>3 3/8"</td><td>8</td><td></td></tr></tbody></table> NOTES: 1. FOR CUSTOM LINKS NOT NOTED CONTACT SIMPSON STRONG-TIE FOR CUSTOM DETAILING GEOMETRIES 2. BEAM, COLUMN AND HOLE DIMENSIONAL TOLERANCE SHALL BE PER AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES (AISC 303-16) 3. Dstern HOLES ON BEAM FLANGES ARE PERMITTED TO BE STANDARD SIZES HOLES PER AISC 360-16 TABLE J3.3, ALL LINK HOLE SIZES SHOWN ARE 1/16" LARGER THAN BOLT DIAMETER. 4. SEE DETAILS 1/-, 2/-, 5/-, 6/-, 9/- AND 13/- FOR BEAM COPE AND BOLT HOLE DETAILS 5. SEE DETAIL 17/- FOR COLUMN FLANGE BOLT HOLE DETAILS 6. YIELD-LINK CONFIGURATION VARIES PER SEPARATE (YL-XX) OR INTEGRATED SPACER PLATES (YLMC-XX) REFER ENGINEERING LETTER TITLED L-L-YLYLMC ON STRONGTIE.COM					STANDARD YIELD-LINKS		EXTENDED YIELD-LINKS		SHARED PARAMETERS																LINK ID	Link	n_BRP BOLTS	Link	n_BRP BOLTS	bflange	hflange	Sflange	Gflange	Dflange	Dstern	Dbrp	Gbrp	Gs	Ss	n STEM BOLTS	n FLG BOLTS	YL4-2	1'-2 3/8"		1'-5 5/8"		6"	53"	3 1/2"	3 3/4"	1 5/8"	1 5/8"	1 1/2"	3 3/4"	3 1/2"	2 3/4"	4		YL4-2.5	1'-6 3/4"		1'-9 3/4"		6"	53"	3 3/4"	3 3/4"	1 5/8"	1 5/8"	1 1/2"	4 1/4"	3 3/2"	2 3/4"	4		YL4-3	1'-10 3/4"		2'-5 1/8"		6"	53"	3 3/4"	3 3/4"	1 5/8"	1 5/8"	1 1/2"	4 3/4"	3 3/2"	2 3/4"	4		YL4-2.25		2 (TOTAL)	1'-9 3/8"	4 (TOTAL)	7"	53"	4 1/2"	3 3/4"	1 5/8"	1 5/8"	1 1/2"	4 3/4"	3 3/2"	2 3/4"	4		YL4-2.875		2 (TOTAL)	1'-9 3/8"	4 (TOTAL)	7"	53"	4 1/2"	3 3/4"	1 5/8"	1 5/8"	1 1/2"	5"	3 3/2"	2 3/4"	4		YL4-3.5		2 (TOTAL)	1'-9 3/8"	4 (TOTAL)	7"	53"	5 1/4"	3 3/4"	1 5/8"	1 5/8"	1 1/2"	5 1/4"	3 3/2"	2 3/4"	4		YL4-3.75		2 (TOTAL)	1'-9 3/8"	4 (TOTAL)	7"	53"	5 1/4"	3 3/4"	1 5/8"	1 5/8"	1 1/2"	5 1/4"	3 3/2"	2 3/4"	4		YL4-4		2 (TOTAL)	1'-9 3/8"	4 (TOTAL)	7"	53"	5 1/4"	3 3/4"	1 5/8"	1 5/8"	1 1/2"	6 1/4"	3 3/2"	2 3/4"	4		YL6-2.5		2 (TOTAL)	1'-9 3/8"	4 (TOTAL)	6 1/2"	53"	4"	5 1/4"	1 5/8"	1 5/8"	1 1/2"	4 1/4"	4"	3 3/8"	4		YL6-3		2 (TOTAL)	1'-9 3/8"	4 (TOTAL)	6 1/2"	53"	5"	5 1/4"	1 5/8"	1 5/8"	1 1/2"	5 1/4"	5"	3 3/8"	4		YL6-3.5		2 (TOTAL)	1'-9 3/8"	4 (TOTAL)	6 1/2"	53"	5"	5 1/4"	1 5/8"	1 5/8"	1 1/2"	5 1/4"	5"	3 3/8"	4		YL6-4		2 (TOTAL)	1'-9 3/8"	4 (TOTAL)	6 1/2"	53"	5"	5 1/4"	1 5/8"	1 5/8"	1 1/2"	5 1/4"	5"	3 3/8"	4		YL6-4.5		2 (TOTAL)	1'-9 3/8"	4 (TOTAL)	6 1/2"	53"	6"	5 1/4"	1 5/8"	1 5/8"	1 1/2"	6 1/4"	6"	3 3/8"	4		YL6-5		2 (TOTAL)	1'-9 3/8"	4 (TOTAL)	6 1/2"	53"	6"	5 1/4"	1 5/8"	1 5/8"	1 1/2"	7 1/4"	6"	3 3/8"	4		YL6-5.5		2 (TOTAL)	1'-9 3/8"	4 (TOTAL)	6 1/2"	53"	6"	5 1/4"	1 5/8"	1 5/8"	1 1/2"	7 1/4"	6"	3 3/8"	4		YL6-6		2 (TOTAL)	1'-9 3/8"	4 (TOTAL)	6 1/2"	53"	6"	5 1/4"	1 5/8"	1 5/8"	1 1/2"	8 1/4"	6"	3 3/8"	4		YL8-4		2 (TOTAL)	1'-9 3/8"	4 (TOTAL)	9"	10 1/2"	5 1/4"	7"	1 5/8"	1 5/8"	1 1/2"	6 1/2"	5 1/4"	3 3/8"	6		YL8-4.5		2 (TOTAL)	1'-9 3/8"	4 (TOTAL)	9"	10 1/2"	5 1/4"	7"	1 5/8"	1 5/8"	1 1/2"	7"	5 1/4"	3 3/8"	6		YL8-5		2 (TOTAL)	1'-9 3/8"	4 (TOTAL)	9"	10 1/2"	6"	7"	1 5/8"	1 5/8"	1 1/2"	7 1/2"	6"	3 3/8"	8		YL8-5.5		2 (TOTAL)	1'-9 3/8"	4 (TOTAL)	9"	10 1/2"	6"	7"	1 5/8"	1 5/8"	1 1/2"	8"	6"	3 3/8"	8		YL8-6		2 (TOTAL)	1'-9 3/8"	4 (TOTAL)	9"	10 1/2"	6"	7"	1 5/8"	1 5/8"	1 1/2"	8 1/2"	6"	3 3/8"	8		4
STANDARD YIELD-LINKS		EXTENDED YIELD-LINKS		SHARED PARAMETERS																																																																																																																																																																																																																																																																																																																																																																																																															
LINK ID	Link	n_BRP BOLTS	Link	n_BRP BOLTS	bflange	hflange	Sflange	Gflange	Dflange	Dstern	Dbrp	Gbrp	Gs	Ss	n STEM BOLTS	n FLG BOLTS																																																																																																																																																																																																																																																																																																																																																																																																			
YL4-2	1'-2 3/8"		1'-5 5/8"		6"	53"	3 1/2"	3 3/4"	1 5/8"	1 5/8"	1 1/2"	3 3/4"	3 1/2"	2 3/4"	4																																																																																																																																																																																																																																																																																																																																																																																																				
YL4-2.5	1'-6 3/4"		1'-9 3/4"		6"	53"	3 3/4"	3 3/4"	1 5/8"	1 5/8"	1 1/2"	4 1/4"	3 3/2"	2 3/4"	4																																																																																																																																																																																																																																																																																																																																																																																																				
YL4-3	1'-10 3/4"		2'-5 1/8"		6"	53"	3 3/4"	3 3/4"	1 5/8"	1 5/8"	1 1/2"	4 3/4"	3 3/2"	2 3/4"	4																																																																																																																																																																																																																																																																																																																																																																																																				
YL4-2.25		2 (TOTAL)	1'-9 3/8"	4 (TOTAL)	7"	53"	4 1/2"	3 3/4"	1 5/8"	1 5/8"	1 1/2"	4 3/4"	3 3/2"	2 3/4"	4																																																																																																																																																																																																																																																																																																																																																																																																				
YL4-2.875		2 (TOTAL)	1'-9 3/8"	4 (TOTAL)	7"	53"	4 1/2"	3 3/4"	1 5/8"	1 5/8"	1 1/2"	5"	3 3/2"	2 3/4"	4																																																																																																																																																																																																																																																																																																																																																																																																				
YL4-3.5		2 (TOTAL)	1'-9 3/8"	4 (TOTAL)	7"	53"	5 1/4"	3 3/4"	1 5/8"	1 5/8"	1 1/2"	5 1/4"	3 3/2"	2 3/4"	4																																																																																																																																																																																																																																																																																																																																																																																																				
YL4-3.75		2 (TOTAL)	1'-9 3/8"	4 (TOTAL)	7"	53"	5 1/4"	3 3/4"	1 5/8"	1 5/8"	1 1/2"	5 1/4"	3 3/2"	2 3/4"	4																																																																																																																																																																																																																																																																																																																																																																																																				
YL4-4		2 (TOTAL)	1'-9 3/8"	4 (TOTAL)	7"	53"	5 1/4"	3 3/4"	1 5/8"	1 5/8"	1 1/2"	6 1/4"	3 3/2"	2 3/4"	4																																																																																																																																																																																																																																																																																																																																																																																																				
YL6-2.5		2 (TOTAL)	1'-9 3/8"	4 (TOTAL)	6 1/2"	53"	4"	5 1/4"	1 5/8"	1 5/8"	1 1/2"	4 1/4"	4"	3 3/8"	4																																																																																																																																																																																																																																																																																																																																																																																																				
YL6-3		2 (TOTAL)	1'-9 3/8"	4 (TOTAL)	6 1/2"	53"	5"	5 1/4"	1 5/8"	1 5/8"	1 1/2"	5 1/4"	5"	3 3/8"	4																																																																																																																																																																																																																																																																																																																																																																																																				
YL6-3.5		2 (TOTAL)	1'-9 3/8"	4 (TOTAL)	6 1/2"	53"	5"	5 1/4"	1 5/8"	1 5/8"	1 1/2"	5 1/4"	5"	3 3/8"	4																																																																																																																																																																																																																																																																																																																																																																																																				
YL6-4		2 (TOTAL)	1'-9 3/8"	4 (TOTAL)	6 1/2"	53"	5"	5 1/4"	1 5/8"	1 5/8"	1 1/2"	5 1/4"	5"	3 3/8"	4																																																																																																																																																																																																																																																																																																																																																																																																				
YL6-4.5		2 (TOTAL)	1'-9 3/8"	4 (TOTAL)	6 1/2"	53"	6"	5 1/4"	1 5/8"	1 5/8"	1 1/2"	6 1/4"	6"	3 3/8"	4																																																																																																																																																																																																																																																																																																																																																																																																				
YL6-5		2 (TOTAL)	1'-9 3/8"	4 (TOTAL)	6 1/2"	53"	6"	5 1/4"	1 5/8"	1 5/8"	1 1/2"	7 1/4"	6"	3 3/8"	4																																																																																																																																																																																																																																																																																																																																																																																																				
YL6-5.5		2 (TOTAL)	1'-9 3/8"	4 (TOTAL)	6 1/2"	53"	6"	5 1/4"	1 5/8"	1 5/8"	1 1/2"	7 1/4"	6"	3 3/8"	4																																																																																																																																																																																																																																																																																																																																																																																																				
YL6-6		2 (TOTAL)	1'-9 3/8"	4 (TOTAL)	6 1/2"	53"	6"	5 1/4"	1 5/8"	1 5/8"	1 1/2"	8 1/4"	6"	3 3/8"	4																																																																																																																																																																																																																																																																																																																																																																																																				
YL8-4		2 (TOTAL)	1'-9 3/8"	4 (TOTAL)	9"	10 1/2"	5 1/4"	7"	1 5/8"	1 5/8"	1 1/2"	6 1/2"	5 1/4"	3 3/8"	6																																																																																																																																																																																																																																																																																																																																																																																																				
YL8-4.5		2 (TOTAL)	1'-9 3/8"	4 (TOTAL)	9"	10 1/2"	5 1/4"	7"	1 5/8"	1 5/8"	1 1/2"	7"	5 1/4"	3 3/8"	6																																																																																																																																																																																																																																																																																																																																																																																																				
YL8-5		2 (TOTAL)	1'-9 3/8"	4 (TOTAL)	9"	10 1/2"	6"	7"	1 5/8"	1 5/8"	1 1/2"	7 1/2"	6"	3 3/8"	8																																																																																																																																																																																																																																																																																																																																																																																																				
YL8-5.5		2 (TOTAL)	1'-9 3/8"	4 (TOTAL)	9"	10 1/2"	6"	7"	1 5/8"	1 5/8"	1 1/2"	8"	6"	3 3/8"	8																																																																																																																																																																																																																																																																																																																																																																																																				
YL8-6		2 (TOTAL)	1'-9 3/8"	4 (TOTAL)	9"	10 1/2"	6"	7"	1 5/8"	1 5/8"	1 1/2"	8 1/2"	6"	3 3/8"	8																																																																																																																																																																																																																																																																																																																																																																																																				
ALT. ATTACHMENTS AT SMF BM FLG	20	DOUBLER PLATE DETAILS	12	YIELD-LINK DETAILED GEOMETRIES					4																																																																																																																																																																																																																																																																																																																																																																																																										

REVISIONS

NO.

DATE

1

2

3

SIMPSON

Strong-Tie

5956 W. Las Positas Blvd.

Pleasanton, CA 94566

Tel: (800) 999-5099

Fax: (925) 847-15977

Web site: www.strongtie.com

THIS IS NO EQUAL

STRONG-TIE

STRONG-TIE

NAME: B.C.

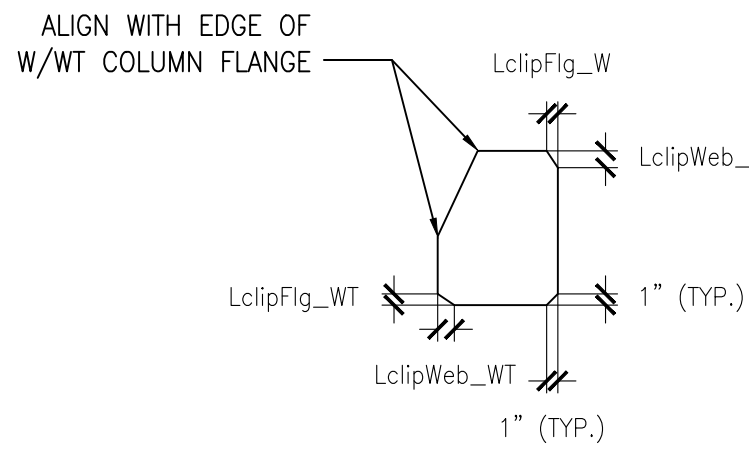
DATE: 04/07/2023

SCALE: N.T.S.

SHEET:

YLMC2

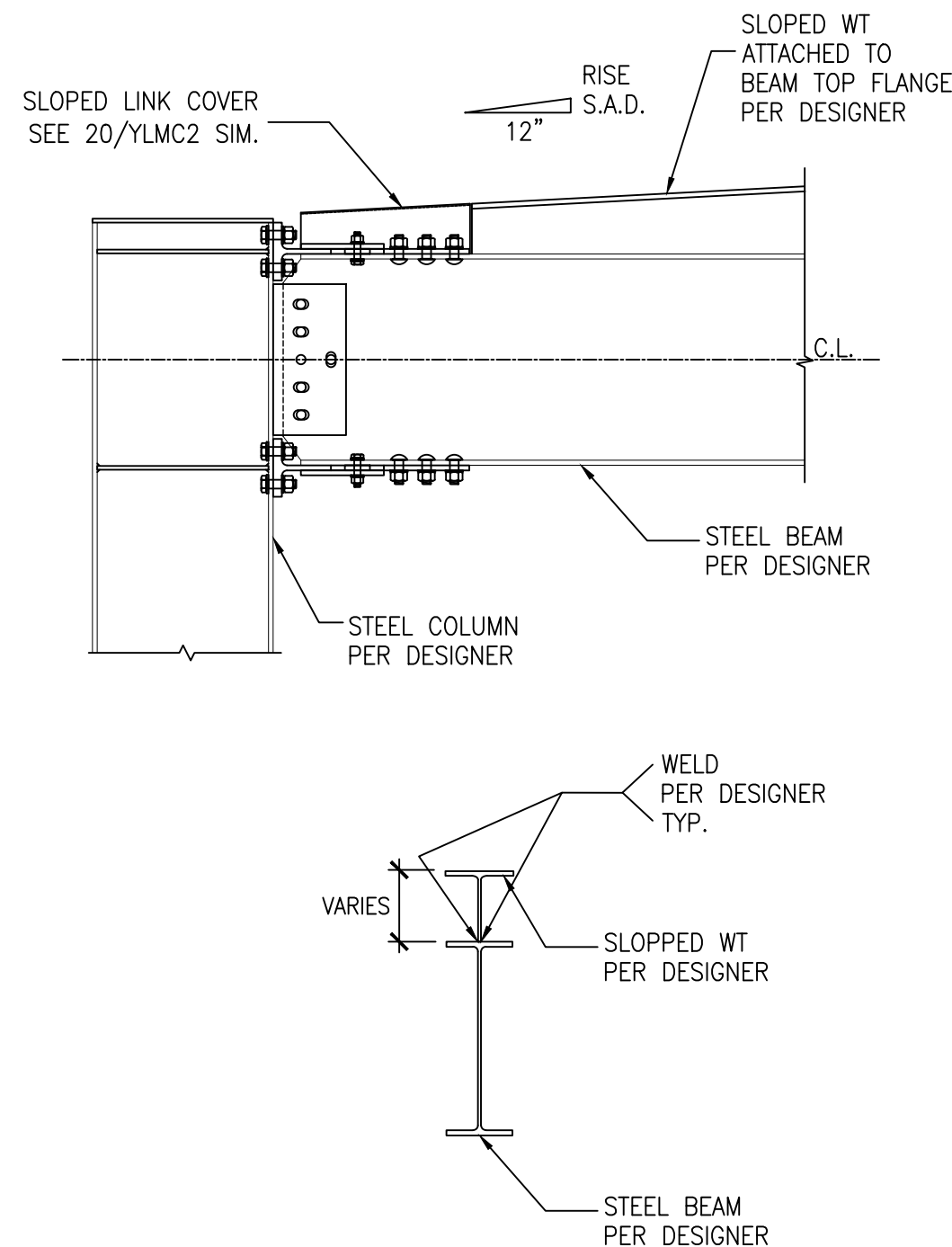
JOB NO.



- NOTES:
1. WEB COPE AT WT AND W SECTIONS ($L_{clipWeb_WT}$, $L_{clipWeb_W}$) = $k+1.5''-t_f$
 2. FLANGE COPE AT WT AND W SECTIONS ($L_{clipFlg_WT}$, $L_{clipFlg_W}$) = $k_f+0.5''-t_w/2$
 3. SEE AWS D1.8 CHAPTER C-4 FOR MORE INFORMATION
 4. SEE AISC STEEL MANUAL FOR k , k_f , t_f AND t_w VALUES FOR THE COLUMNS

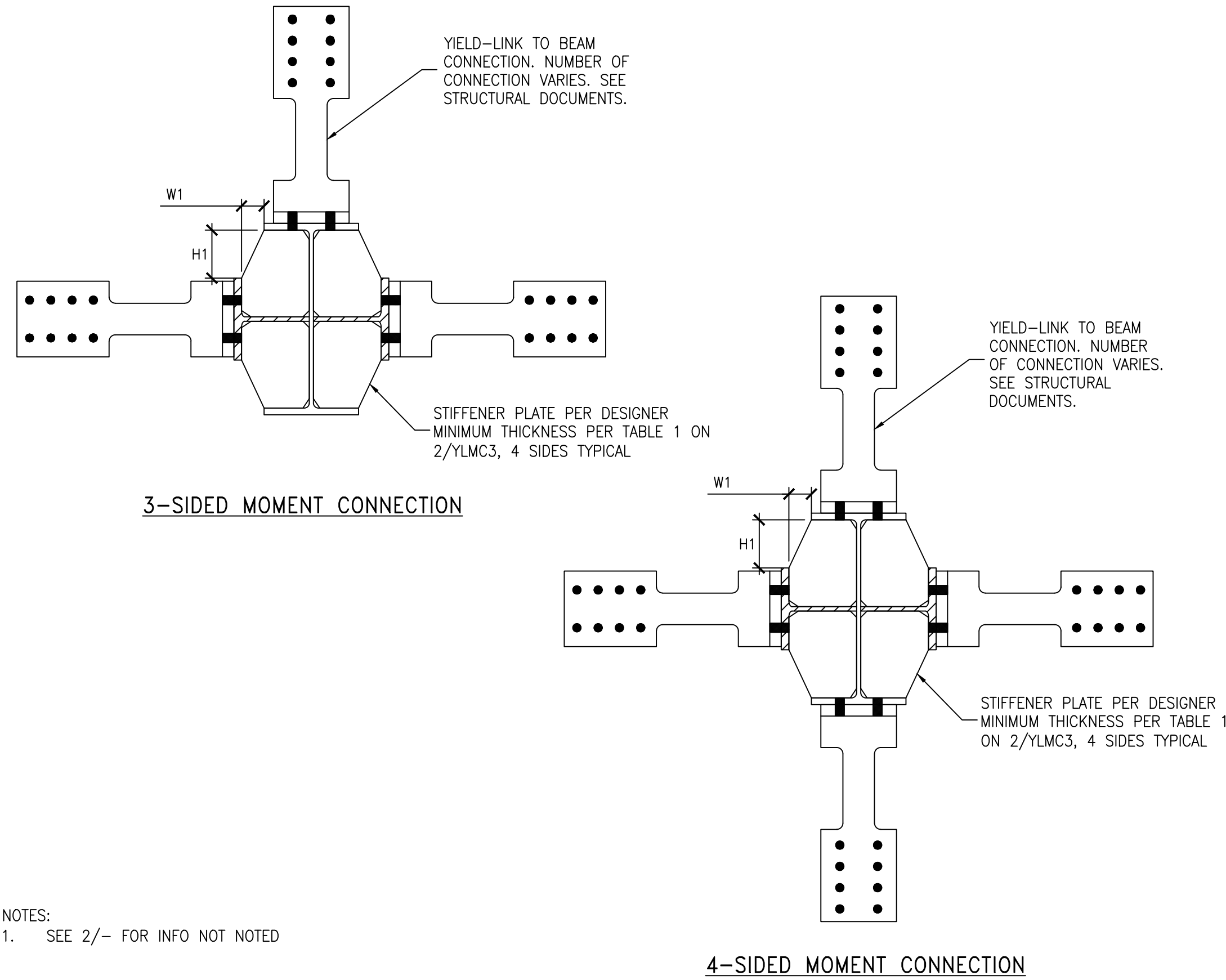
CRUCIFORM COL. STP CLIP DETAILS

18



SLOPED BEAM CONN (OPTION 3)

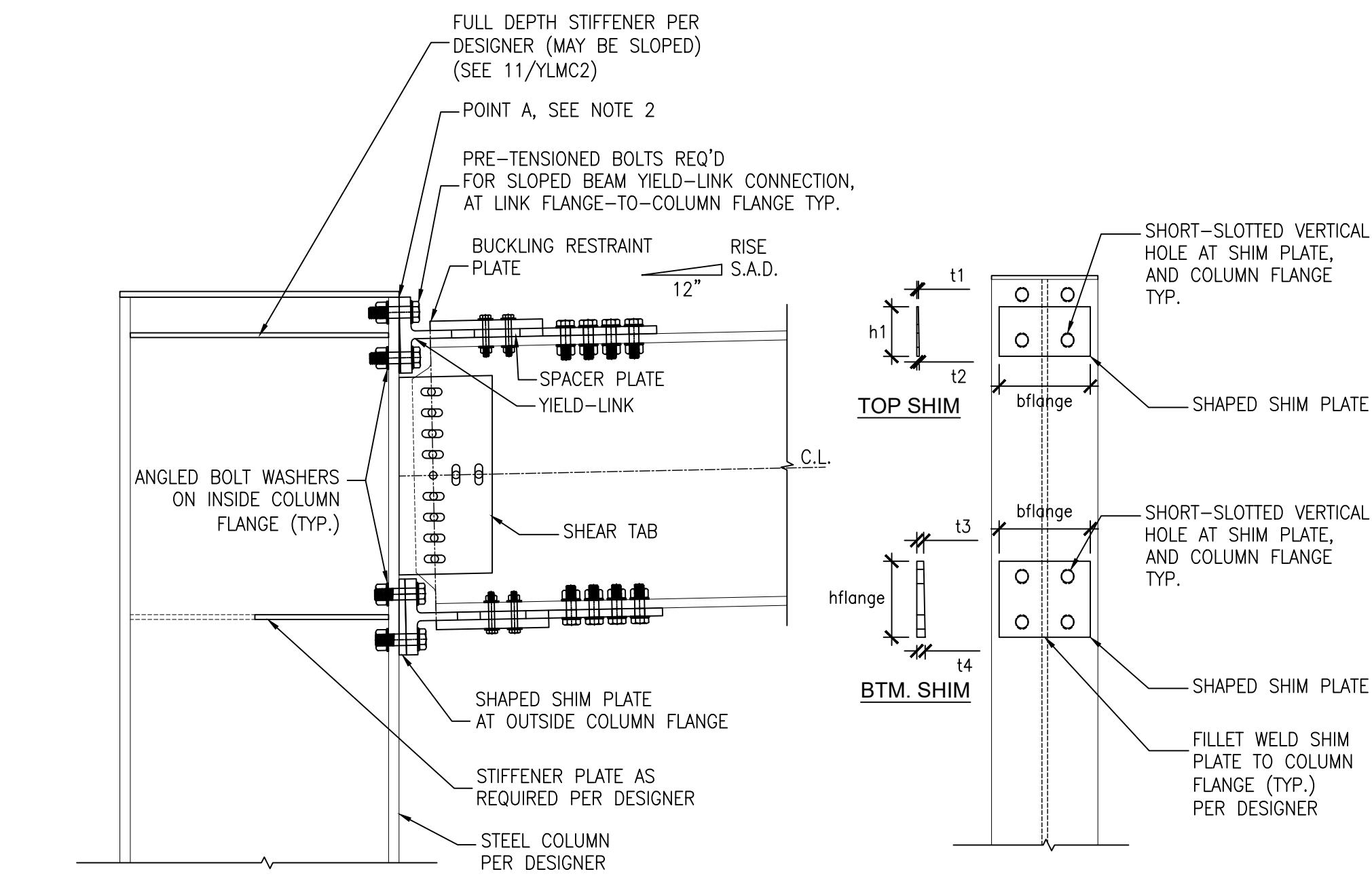
20



- NOTES:
1. SEE 2/- FOR INFO NOT NOTED

MULTI-DIRECTION MOMENT CONNECTION DETAIL

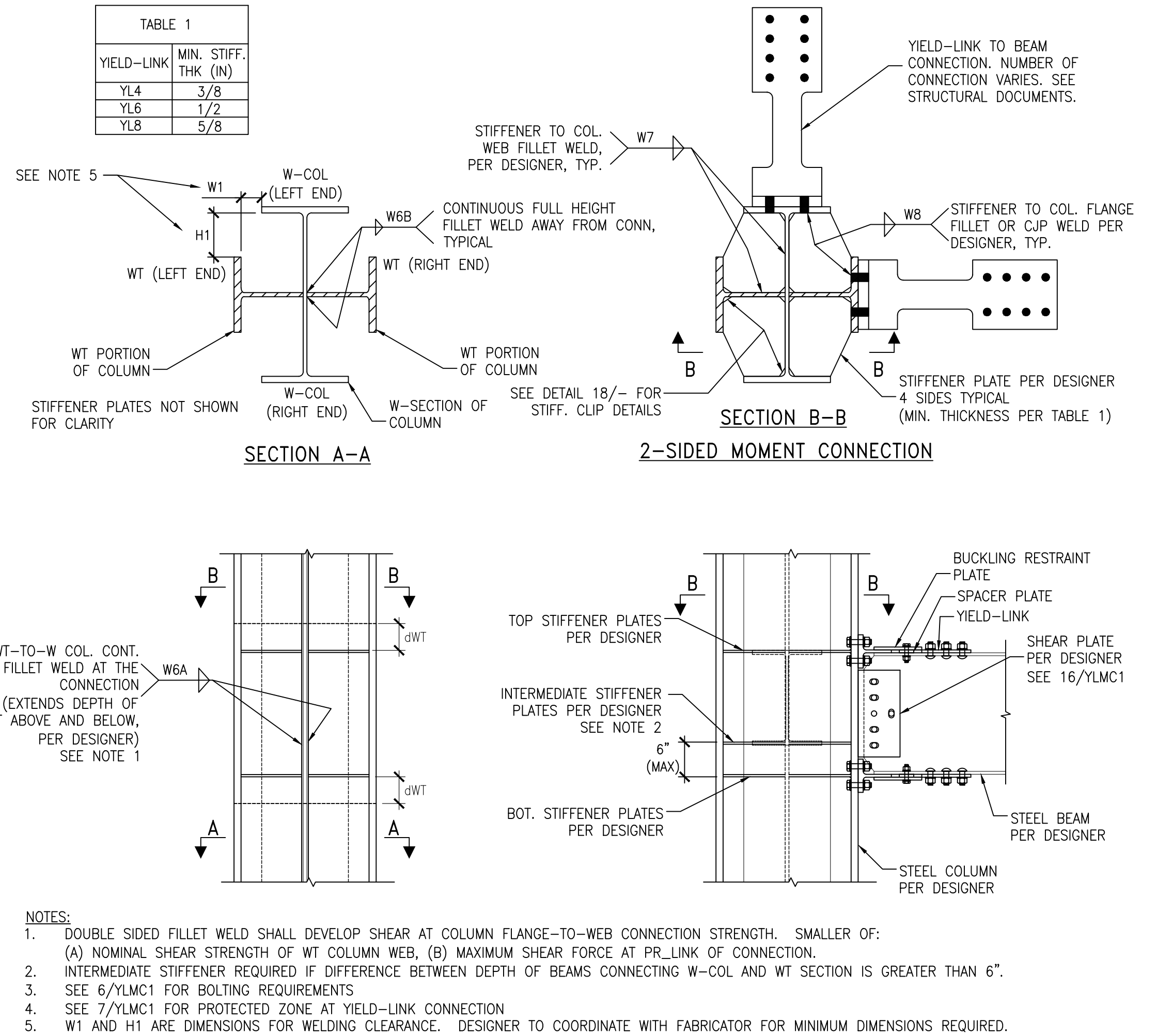
10



- NOTES:
1. SEE 4/- FOR INFO NOT NOTED
 2. THICKNESS OF SHIMS (t_1 , t_2 , t_3 AND t_4) TO BE DETERMINED BY DESIGNER/DETAILER ASSUMING TOP OF LINK FLANGE IN CONTACT WITH COLUMN FLANGE (POINT A), WITH MINIMUM SHIM THICKNESS OF $1/16''$ AT (t_1 AND t_3 LOCATIONS)
 3. t_1 SHALL BE A MAXIMUM OF $1/8''$

SLOPED BEAM YIELD-LINK CONNECTION (OPTION 2)

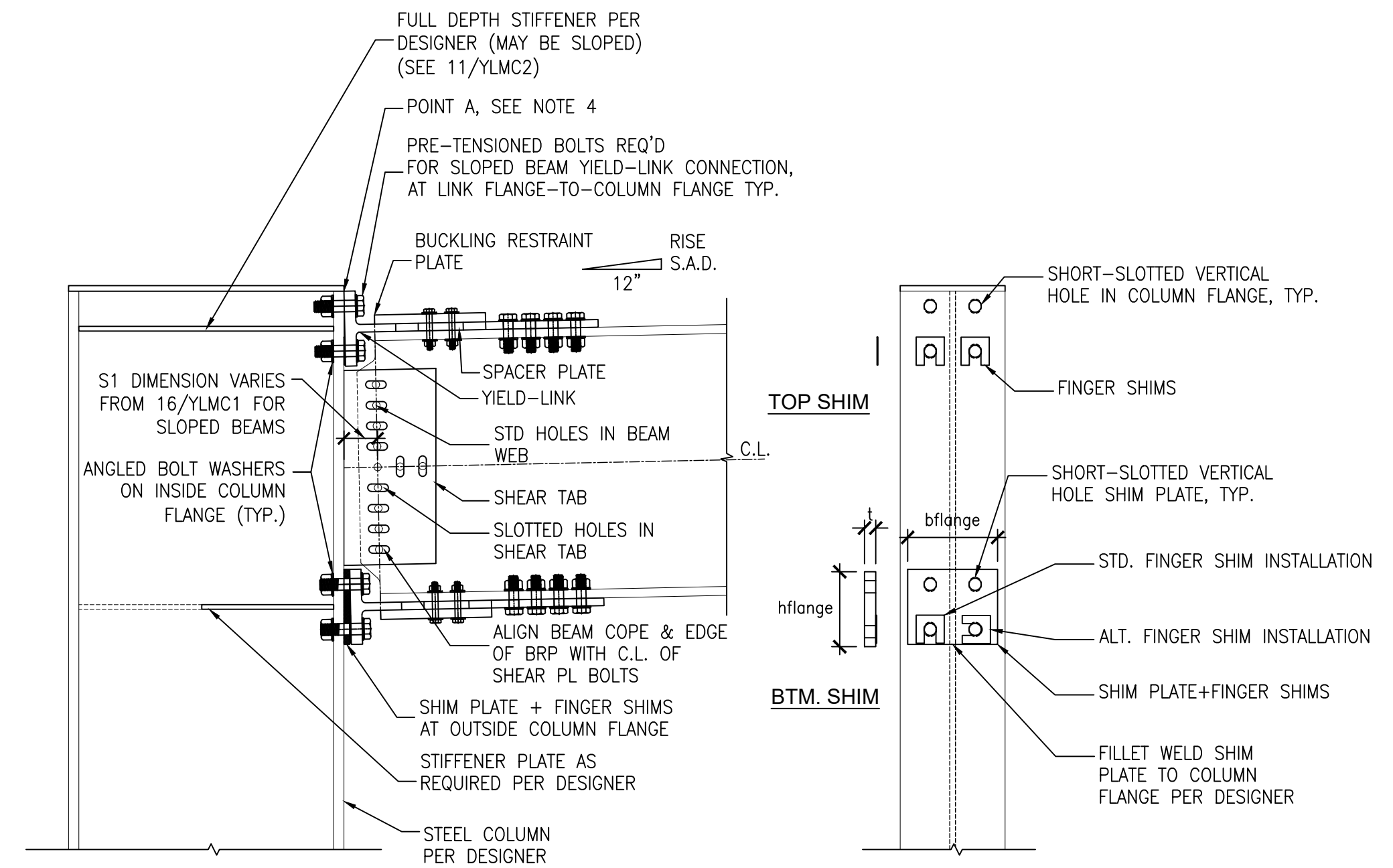
12



- NOTES:
1. DOUBLE SIDED FILLET WELD SHALL DEVELOP SHEAR AT COLUMN FLANGE-TO-WEB CONNECTION STRENGTH. SMALLER OF:
(A) NOMINAL SHEAR STRENGTH OF WT COLUMN WEB, (B) MAXIMUM SHEAR FORCE AT PR_LINK OF CONNECTION.
 2. INTERMEDIATE STIFFENER REQUIRED IF DIFFERENCE BETWEEN DEPTH OF BEAMS CONNECTING W-COL AND WT SECTION IS GREATER THAN 6".
 3. SEE 6/YLMC1 FOR BOLTING REQUIREMENTS
 4. SEE 7/YLMC1 FOR PROTECTED ZONE AT YIELD-LINK CONNECTION
 5. W1 AND H1 ARE DIMENSIONS FOR WELDING CLEARANCE. DESIGNER TO COORDINATE WITH FABRICATOR FOR MINIMUM DIMENSIONS REQUIRED.

CORNER CONDITION WITH FLANGE CRUCIFORM COLUMN

2



- NOTES:
1. MAXIMUM RISE = $1''$ PER FOOT. CONTACT SIMPSON STRONG-TIE FOR STEEPER SLOPES.
 2. LINK FLANGE-TO-COLUMN FLANGE BOLTS SHALL BE PRE-TENSIONED FOR SLOPED BEAM-TO-COLUMN YIELD-LINK CONNECTIONS
 3. SHIM PLATE SIZE TO MATCH LINK FLANGE LENGTH AND WIDTH DIMENSIONS.
 4. THICKNESS OF SHIM TO BE DETERMINED BY DESIGNER/DETAILER ASSUMING TOP OF LINK FLANGE IN CONTACT WITH COLUMN FLANGE (POINT A)
 5. SHIM PLATE MATERIAL: A36 OR A572 GR. 50
 6. FINGER SHIM MATERIAL: STRUCTURAL-GRADE STEEL MATERIAL, BUT NEED NOT BE HARDENED
 7. ANGLED BOLT WASHER MATERIAL: F436
 8. BEAM SLOPED DOWN CONDITION SIMILAR
 9. SEE YLMC1 SHEET FOR FURTHER INFORMATION

SLOPED BEAM YIELD-LINK CONNECTION (OPTION 1)

4

NO.	DATE	REVISIONS

SIMPSON STRONG-TIE, CO. INC.

• 5956 W. Las Positas Blvd.
Pleasanton, CA 94566
• Tel: (800) 999-5099
• Fax: (925) 847-1597
• Web site: www.strongtie.com

SIMPSON Strong-Tie

• THERE IS NO EQUAL

SIMPSON YIELD-LINK® MOMENT CONNECTION

STEEL SPECIAL MOMENT FRAME

CONNECTION DETAILING INFORMATION

SIMPSON Strong-Tie

• THERE IS NO EQUAL

NAME: B.C.

DATE: 04/07/2023

SCALE: N.T.S.

SHEET:

YLMC3

JOB NO.