

Steinborn Residence

OWNERS:
Ken Rong Chen
10488 Dixon Dr. S.
Seattle, WA 98178

PROJECT ADDRESS:
8435 SE 47th Pl.
Mercer Island, WA 98040
TAX PARCEL NUMBER:
3317500040
LEGAL DESCRIPTION:
LOT 4, HILL HIGH ESTATES AS RECORDED IN VOLUME 68 OF PLATS,
PAGE 28, RECORDS OF KING COUNTY, WASHINGTON.
SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

PERMIT NUMBER:
Pre-App: PRE21-009
Building Permit: 2202-225
CAR2 : CAO22-006
Accessory Dwelling Unit: ADU22-005
PROJECT DESCRIPTION:
Clear and grade existing vacant lot. Provide protection for trees to remain as required.
Phase permanent nail shoring to enable hillside stability.
Build a new single family residence and related site work.

GOVERNING AUTHORITY:
City of Mercer Island, Development Services Group.
ZONING CODE INFORMATION:
Zone: R 9.6
Critical Area Review - 2 : See A1.3 and attached report
Lot Slope: 30% see sheet A1.1

Allowed Lot Coverage: 30% of lot area x 19,360sf = 5,808sf
Proposed Lot Coverage: 5,458.5sf (28.2% of lot area) see Sht. A1.2 for calculation
Side Yard Calculation: see Sht. A1.1
Allowed Height 30' above ABE
Allowed height limit: 305.2' See A1.2 for ABE Calculations & A3.1, A3.2, A3.3 A4.1 for representation
Allowed GFA: 40% x 19,360.24sf = 7744sf
Proposed GFA: 4518.25sf (23.3% of lot area) see Shts. A2.0, A2.1, A2.2 for GFA detail
Allowed Hardscape: 9% of lot area x 26,673sf = 2,400.6 sf
Proposed Hardscape: 720sf (3.7% of lot area). see Sht A1.2

BUILDING CODE INFORMATION:
Building Code: IRC 2018; WSBC Chptr. 51-51 WAC
Occupancy: Group R-3 - Single Family Residence & Group U Garage
Construction Type: V - Wood Frame (VB)
Fire Code Alternate: Approved FCA on file - NFPA 13R PLUS

ENERGY CODE INFORMATION: 2018 WSEC & IRC VENTILATION
Energy Conservation: Component Performance per WSEC Table R402.1.1:
A2.0,A2.1, A2.2, A3.1, A3.2, A3.3, A4.1, A5.1, A9.1, A9.2, A9.3, E2.0, E2.1, E2.2
Energy Credits - 6.0: Outlined below.
Fuel Normalization option 2: Heat pump air to water radiant system. (A1.0, A2.0) 1.0 credit
EC 1.4 - Building Envelope: Vertical Fenestration U=.25 (sht. A9.1/9.2); Wall R-21 plus R-4ci;
Floor R-38; Basement wall R-21 int plus R-5 ci; Slab on grade R-10 perimeter and under entire slab. 1.0 credit (shts. A3.1-3.3, A4.1, A5.1)
C 2.2 - Air leakage control 2.0 ach + HRV system with an efficiency of .65 (shts. A2.0, E2.0, E2.1, E2.2) 1.0 credit
EC4.2 - Efficient heating distribution system (hydronic piping) is 100% in conditioned space. (shts. A2.0, A2.1, A2.2, A3.2, A3.3, A4.1, A5.1) 1.0 credit
EC5.5 - Efficient water heating - Electric heat pump water heater. (sht. A2.0) 2.0 credits
Whole House Ventilation: Prescriptive Intermittent Whole House Ventilation per IRC M1507.3 with a Whole-House Ventilation Rate of 150 cfm each of (3) fans (see sheets E2.0, E2.1 & E2.2).

PROJECT DIRECTORY:	
Architect:	Ectypos Architecture Contact: Lucia Pirzio-Birolu, Architect 4212 W. Mercer Way Mercer Island, WA 98040 Phone: (206) 232-9147 Fax: (206) 275-0312
Surveyor:	Terrane Contact: Dana Hall 10801 Main Street, Ste. 102 Bellevue, WA 98004 Phone: (425) 458-4488
Geotechnical Engineer:	Geotech Consultants, Inc. Contact: Marc McGinnes 2401 10th Ave. E. Seattle, WA 98199 Phone: (425) 747-5618
Civil Engineer	WR Consulting Contact: John W. Rundall 3611 45th Ave. W. Seattle, WA 98199 Phone: (206) 285-1593 Fax: (206) 264-7769
Structural Engineer:	Bykonen Carter Quinn Contact: Nick Carter 2033 6th Ave, Suite 995 Seattle, WA 98121 Phone: (206) 264-7784
Shoring Engineer:	Ground Support PLLC Contact: Chris Wolschlag 16932 Woodinville-Redmond Rd NE, Ste. #210 Woodinville, WA 98072 Phone: (425) 922-1501
Arborist:	Arborist NW LLC. Contact: Neil Baker 1710 SW 318 Pl. 44D Federal Way, WA 98023 Phone: (206) 779-2579
General Contractor:	Mr Q Construction LLC Contact: Kent Shea 9755 SE 40th St. Mercer Island, WA 98040 Phone: (206) 953-9533

DOCUMENT LIST :
City of Mercer Island Coversheet

Drawing schedule:

A0.1 Cover Sheet / Project Information

---- Site Survey

A1.1 Site Plan
A1.2 Site Calculations
A1.3 Critical Area Plan
A1.4 Excavation Grading Plan

SH1.0 Nail Shoring Cover Sheet
SH1.1 Notes
SH2.0 Wall Plan
SH3.0 Wall Elevations
SH4.0 Cross Sections
SH5.0 Details
SH5.1 Details
SH6.0 Nailing Sequence
SH7.0 Specifications
SH7.1 Specificationsm

C1 General Notes
C2 TESC Plan and Details
C3 Drainage Plan
C4 Detention Tank Details
C4.1 Drainage Details

AR1 Tree Removal, Replacement and Protection

A2.0 Lower Level Floor Plan / Crawl Space Diagram
A2.1 Main Level Floor Plan / Crawl Space Diagram
A2.2 Upper Level Floor Plan
A2.3 Roof Plan
A3.1 Elevations
A3.2 Elevations
A3.3 Elevations
A4.1 Building Section
A4.2 Building Sections
A5.1 Wall Section
A9.1 Window Schedule
A9.2 Door Schedule
A9.3 Interior Specialty Glass Schedule

E1.0 Site Electrical Plan
E2.0 Lower Level Floor Electrical Plan
E2.1 Main Level Floor Electrical Plan
E2.2 Upper Level Floor Electrical Plan

S1.0 Structural General Notes
S1.1 Structural General Notes
S2.0 Foundation Plan
S2.1 Main Floor Framing Plan
S2.2 Upper Floor Framing Plan
S2.3 Roof Framing Plan
S3.0 Concrete Details
S3.1 Concrete Details
S3.2 Concrete Details
S3.3 Concrete Details
S4.0 Steel Details
S5.0 Typical Wood Details
S5.1 Typical Wood Lateral Details
S5.2 Wood Details
S5.3 Wood Details
S5.4 Wood Details

Reports, Memos and City Forms:
Permit Application
Site Development Information (revised)
CAR 2 Report (revised)
WSEC Energy Code Compliance form
Fire Area Square Footage Calculation
Fire Code Alternate Request memo
Transportation Concurrence Application
Residential Water Meter Sizing Worksheet
ADU Application form
ADU Affidavit
Critical Area Disclosure - Notice on Title
Large lot - Real Covenant Limiting further Subdivision

Geotechnical Engineering Study and Critical Area Study / Plan Review Letter
Nail Shoring Design Calculations
Arborist Report and tree inventory/replacement form (revised)
Civil Engineer Drainage Report (revised)
Structural Calculations / Supplemental Calculations
Memo: Project 2202-225 Sub2 Ancillary Comments

SYMBOLS:

&	and
@	at
⌒	centerline
x	by
ø	diameter
#	pound/number
##°	degree
±	plus or minus
⚠	revisions / window designation
⌒	door designation
⬆	material designation
EL	finish floor elevation

ABBREVIATIONS:

AB	anchor bolt
ADJ	adjustable
AFF	above finish floor
ARCH	architect/ural
BLDG	building
BM	beam
B.O.	bottom of
B.O.F.	bottom of footing
BTWN	between
CB	catch basin
CIP	cast in place
CJ	control joint
CLG	ceiling
CMU	concrete masonry unit
CO/SD	combined carbon monoxide/smoke detector
COL	column
CONC	concrete
CONT	continuous
DIA	diameter
DIM	dimension
DN	down
DR(S)	door(s)
DS	downspout
DWG	drawing
EA	each
EL	elevation
ELEC	electrical
ELEV	elevations
EQ	equal
EXIST	existing
EXH	exhaust
EXT	exterior
FB	flat bar
FD	floor drain
FDC	Fire Department Connection
FDN	foundation
FE	fire extinguisher
FIN	finish
FOC	face of conc.
FOS	face of stud
FLR	floor
FOIC	furnished by owner installed by contractor
FPHB	frost proof hose bib
FRT	fire retardant treated
FS	full size
FT	foot
FTNG	footing
GA	gauge
GALV	galvanized
GL	glass
GWB	gypsum wallboard
HB	hose bib
HC	hollow core
HM	hollow metal
HOR	horizontal
HP	high point
HR	hour/handrail
HT	height
ID	inside diameter
IN	inch/inches
INSUL	insulation
INT	interior
JNT	joint
KD	kiln dried
LNDSPG	landscaping
LP	low point
LT	light
MAX	maximum
WDF	medium density fiberboard
WDO	medium density overlay
MECH	mechanical
MFGR	manufacturer
MISC	miscellaneous
MIN	minimum
MTL	metal
NIC	not in contract
NO	number
NOM	nominal
NTS	not to scale
OA	overall
OC	on center
OD	outside diameter
OFD	overflow drain
OPNG	opening
OS	overflow
OVR	over
PAV	pavers, paving
PLYWD	plywood
PR	pair
PT	paint/point
RAD	radius
RB	reinforcing bar
ROF	roof drain
REQ'D	required
RES	resilient
RL	rain leader
RO	rough opening
SCHED	schedule(s)
SD	smoke detector
SF	square feet
SHT	sheet
SIM	similar
SPEC	specification
SQ	square
SS	stainless steel
ST	stone
STL	steel
SAF	self adhering flashing
TG	tempered glass
T&G	tongue and groove
THK	top of
T.O.	typical
TYP	typical
V	variable
VERT	vertical
VG	vertical grain
VIN	vinyl
VTR	vent through roof
W/	with
WP	waterproof
W/O	without
WWF	welded wire fabric

GENERAL NOTES:

- Contractor shall verify all dimensions and conditions shown on drawings at the job site and shall notify the Architect of any omissions, discrepancies and/or conflicts before proceeding with the work.
- General Contractor to coordinate pre-construction site meeting w/ Owner, Architect, Structural Engineer, Civil Engineer, Geotechnical Engineer and City of Mercer Island Building Inspector
- Plumbing, mechanical and electrical work shall be under separate permits according to prevailing codes. Contractor shall obtain such permits.
- Special Inspections that are required by the City of Mercer Island Development Services shall be coordinated by Contractor.
- Contractor shall verify existing grade conditions and height limits with Architect and surveyor on site prior to beginning work and shall notify Architect of any discrepancy in the site survey.
- Do not scale drawings, dimensions govern. Large scale dimensions govern over small scale dimensions. Notify Architect of discrepancies in dimensions prior to proceeding with work.
- Construction dimensions shown are to face of stud (F.O.S.) on exterior walls, top of (t.o.) slab or sub-floor at floor levels.
- Per approved Fire Code Alternate an NFPA "Chapter 29" Fire Alarm System shall be installed per City of Mercer Island standards. UL Listings: Devices – UL 268; Control Panel – UL 985; CO Detectors: UL 2075. FIRE DEPARTMENT REQUIREMENTS outlined below in notes 9–11. A separate permit is required and may be deferred and obtained by Contractor.
- DWELLING/GARAGE SEPARATION shall meet the requirements of IRC R302.6. All habitable rooms shall be separated on the garage side by not less than ½" Type "X" gwb or equivalent. DWELLING/GARAGE OPENING/PENETRATION PROTECTION shall meet the requirements of IRC R302.5. Doors shall be minimum 20 minute fire rated doors equipped with a self-closing device.
- FIREBLOCKING shall meet the requirements of IRC R302.11. DRAFTSTOPPING shall meet the requirements of IRC R302.12. UNDER STAIR PROTECTION Enclosed under-stair space accessible by a door or panel shall be protected by a minimum of ½" type "x" gypsum wall board per IRC R302.7 and as indicated in approved Fire Code Alternate. SOLID CORE DOORS Throughout interior spaces except at closets. 1. HOUR TYPE "X" GWB throughout interior spaces as indicated in approved Fire Code Alternate
- SMOKE ALARMS & HEAT DETECTION See note 8 above, shall comply with IRC R314/WBC R314. Smoke alarms shall be listed and labeled in accordance with UL268. Combined smoke and carbon monoxide detectors shall be listed in accordance with UL268 and UL 2075. Smoke alarms shall be located as follows: each sleeping room; outside each separate sleeping area in the immediate vicinity of the bedrooms; on each floor of the dwelling; stairs leading from the basement near the entry to the stair. Combination smoke alarms and carbon monoxide alarms shall be permitted in lieu of smoke alarms where carbon monoxide alarms are also required. CARBON MONOXIDE ALARMS shall meet the requirements of IRC R315. Carbon monoxide alarms shall be installed outside each separate sleeping area in the immediate vicinity of the bedrooms, on each floor level of the dwelling. HEAT ALARM/DETECTION shall be installed in garage per WAC R314.2.1
- EMERGENCY EGRESS WINDOWS shall meet the requirements of IRC R310. Each sleeping room shall have an operable rescue opening. Emergency Escape minimum dimension shall meet IRC R310.2 The sill height shall not be more than 44" from the finished floor to the bottom of the opening. Minimum net clear opening shall be 5.7 square feet; minimum clear width 20"; minimum clear height 24".
- STAIRWAYS shall meet the requirements of IRC R311.7. Stairways shall have a minimum clear width of 36" above handrail, and be not less than 3½" in width below handrail. Minimum headroom shall not be less than 6'–8". Maximum riser 7¼" / minimum tread 10". Handrails shall be not less than 34" or more than 38" above the slope of the plane of the stairs and shall be continuous for the full run of the flight and shall have a minimum space of 1½" between wall and railing.
- See specifications for required shop drawings. Contractor shall prepare and submit shop drawings to governing authority and Architect in a timely manner.
- Provide mounting blocks at exterior walls behind all light fixtures, hose-bibs, structural steel connectors, guardrails and any other exterior mounted accessories. Verify type of mounting block with Architect prior to installation.
- Provide damp-proofing on all below grade foundation walls per IRC R406. Provide all accessories required for a completely watertight installation, including but not necessarily limited to: flashing, counter-flashing, sealant, and caulking at all roof and wall penetrations; interlocking weather-stripping at all doors and windows; water-stops and other concrete inserts at below grade cold joints.
- When a ventilated roof is required: Provide notching/ drilled holes according to Structural Engineer's recommendations or run roof furring strips perpendicular to roof joists to allow cross-ventilation of roof joist spaces. Maintain 1" minimum clear from top of insulation to bottom of decking where occurs.
- Pressure treated lumber typical at all exterior applications and concrete surfaces.
- Pursuant to MICC 19.02.020(F)(3)(d) all Japanese Knotweed and regulated Class A, B & C weeds identified on the King County Noxious Weed List as amended, shall be removed from the property. New landscaping associated with New Single Family Home shall not included any weeds identified on the KC Noxious Weed List.
- Any excavation or foundation work performed between October 1st and April 1st shall be subject to wet season moratorium requirements per MICC 19.07.060(D)(4)
- Per IRC R312 guards shall be installed on all open sided walking surfaces including stairs, ramps, landings, that are located more than 30 inches measured vertically to the floor or grade below. Guards shall have openings small enough that a 4"ø ball cannot pass. All guards shall have a minimum overturn resistance 200 lb. per IRC Table 301.5. See R311.7.8 for stair railing requirements.
- At moist locations provide water resistant gypsum wall board (green board) on walls and ceiling. Rating and thickness shall match gwb throughout rest of structure.

Date:
2/19/2023 Permit Approval
8/24/2023 Permit Rev. Sub
12/6/2024 Permit Rev. Sub

Scale:

Sheet:

Project
Information

A0.1



ECTYPOS
ARCHITECTURE

4212 W. Mercer Way
Mercer Island, WA 98040
t. (206) 232-9147
f. (206) 275-0312



CHEN RESIDENCE

New Residence

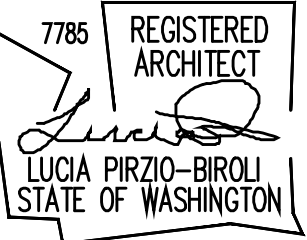
8435 SE 47th PL.

Mercer Island, WA 98040

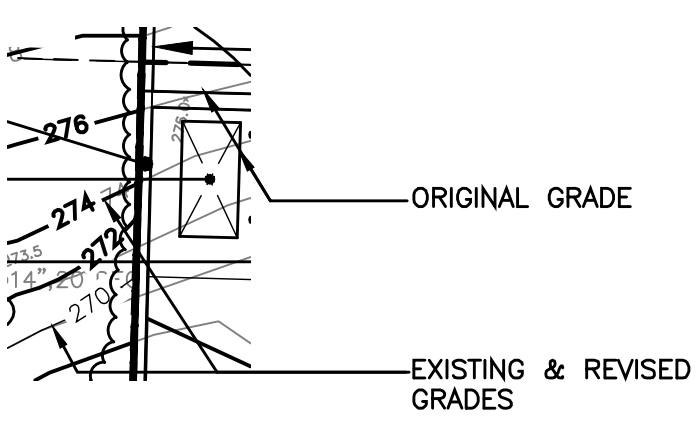


ECTYPOS
ARCHITECTURE

4212 W. Mercer Way
Mercer Island, WA 98040
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f. (206) 275-0312



Grade Legend

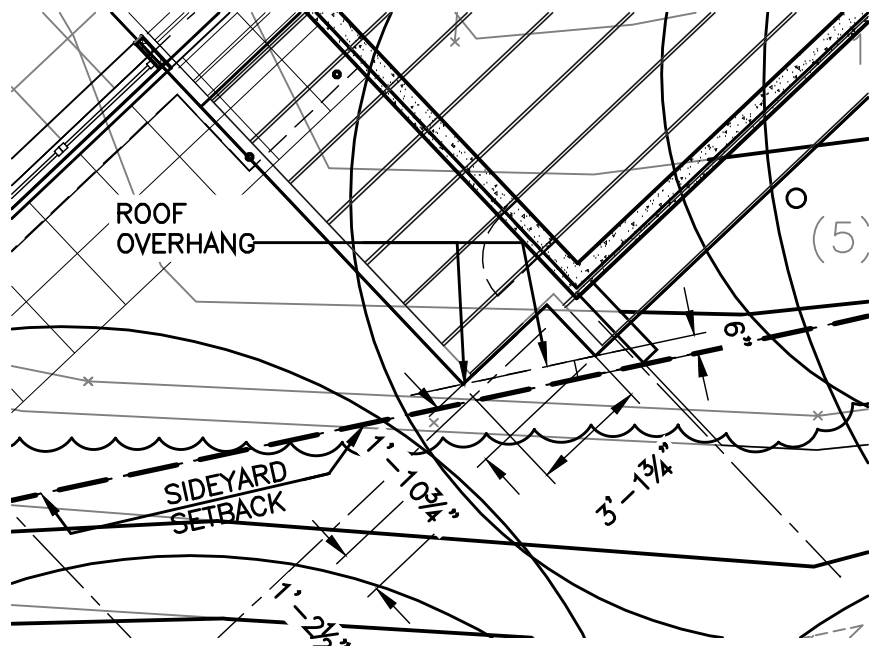


Side Yard Calculation
REQUIRED SIDE YARD WIDTH SUM: 17% OF LOT WIDTH
LOT WIDTH: 187'-10"
SIDE YARD TOTAL WIDTH: $187'-10" \times 17\% = 31'-11"$
(3) SIDE YARDS: $31'-11"/3 = 10.6'$

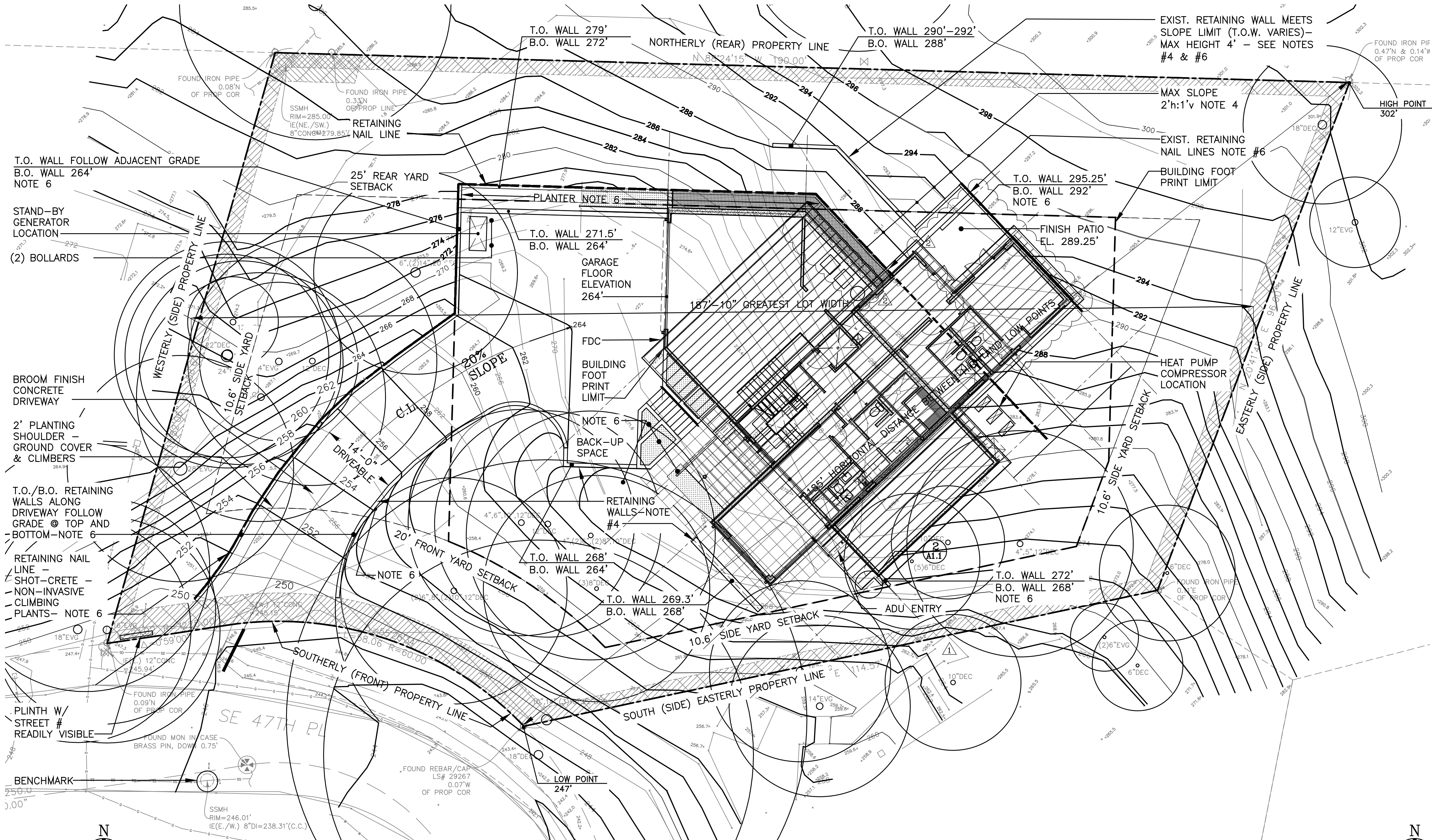
Lot Slope
HIGH POINT: 302'
LOW POINT: 247'
DIFFERENCE: 56'
HORIZONTAL DIFFERENCE: 185'
LOT SLOPE: 30%
ALLOWED LOT COVERAGE: 30%
SEE SHEET A1.2 FOR LOT COVERAGE CALCULATIONS
AND ABE CALCULATION

CHEN RESIDENCE

New Residence
8435 SE 47th PL.
Mercer Island, WA 98040



2 Roof Cut @ Sideyard Setback
scale: 1/8"=1'-0"



1 Site Plan
scale: 1"=10'

Site Plan Notes

- See sheet AR1 (Tree Plan) for all tree information
- See sheet A1.4 (Grading Plan) for pre-foundation grading.
- T.O./B.O. retaining walls noted on this drawing are to address planning requirements. For permanent nail shoring retaining see sheet SH3.0.
- See 12/53.0 for Retaining Wall Schedule
- All graded slopes shall be protected during construction and heavily planted at completion there of.
- All planters/behind retaining walls shall be densely planted with no access as walking surfaces unless explicitly indicated. No guard required.
- See attached memo: Project 2202-225 Sub2 Ancillary Comments
- All shoring and most of foundation work complete as noted

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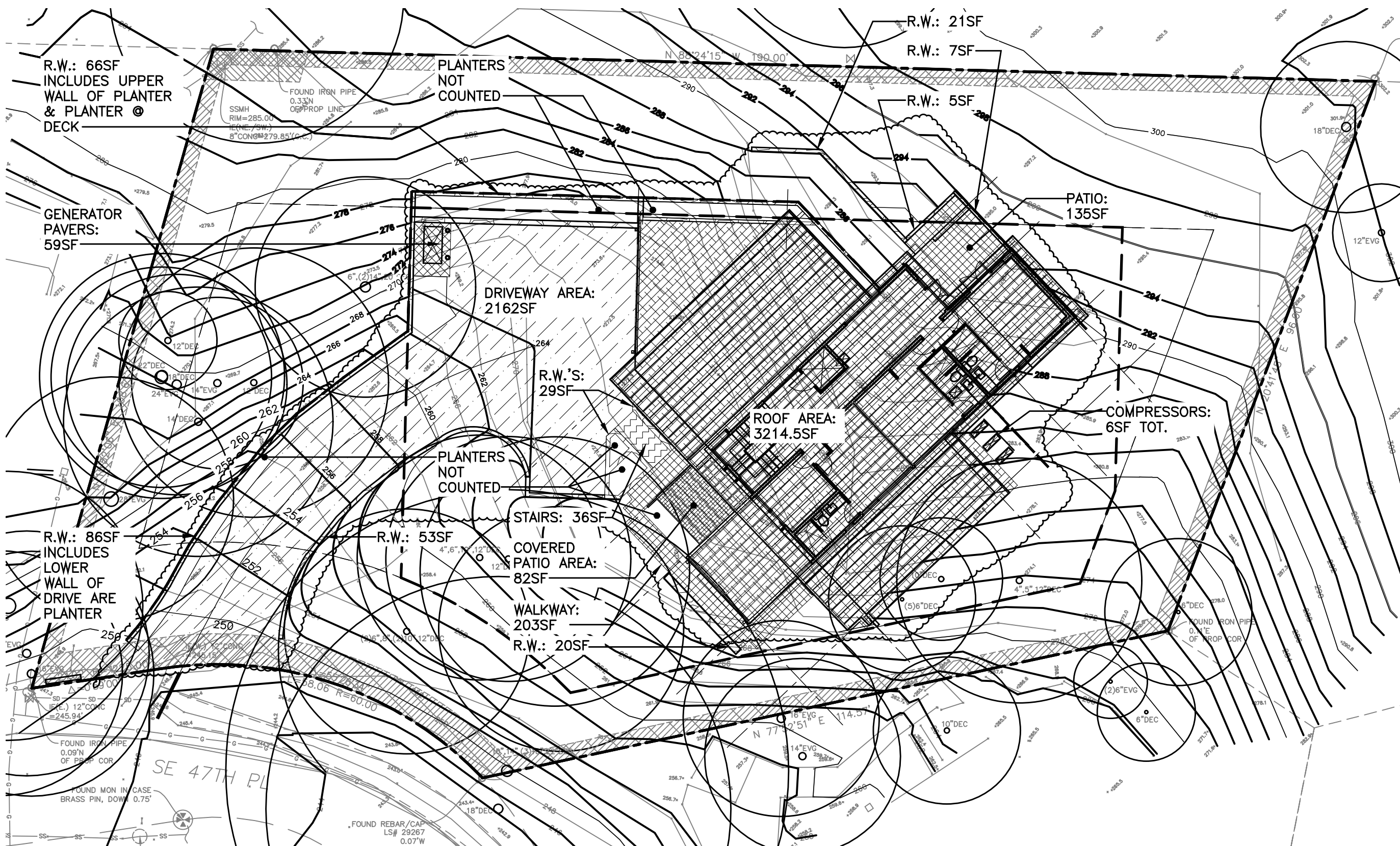
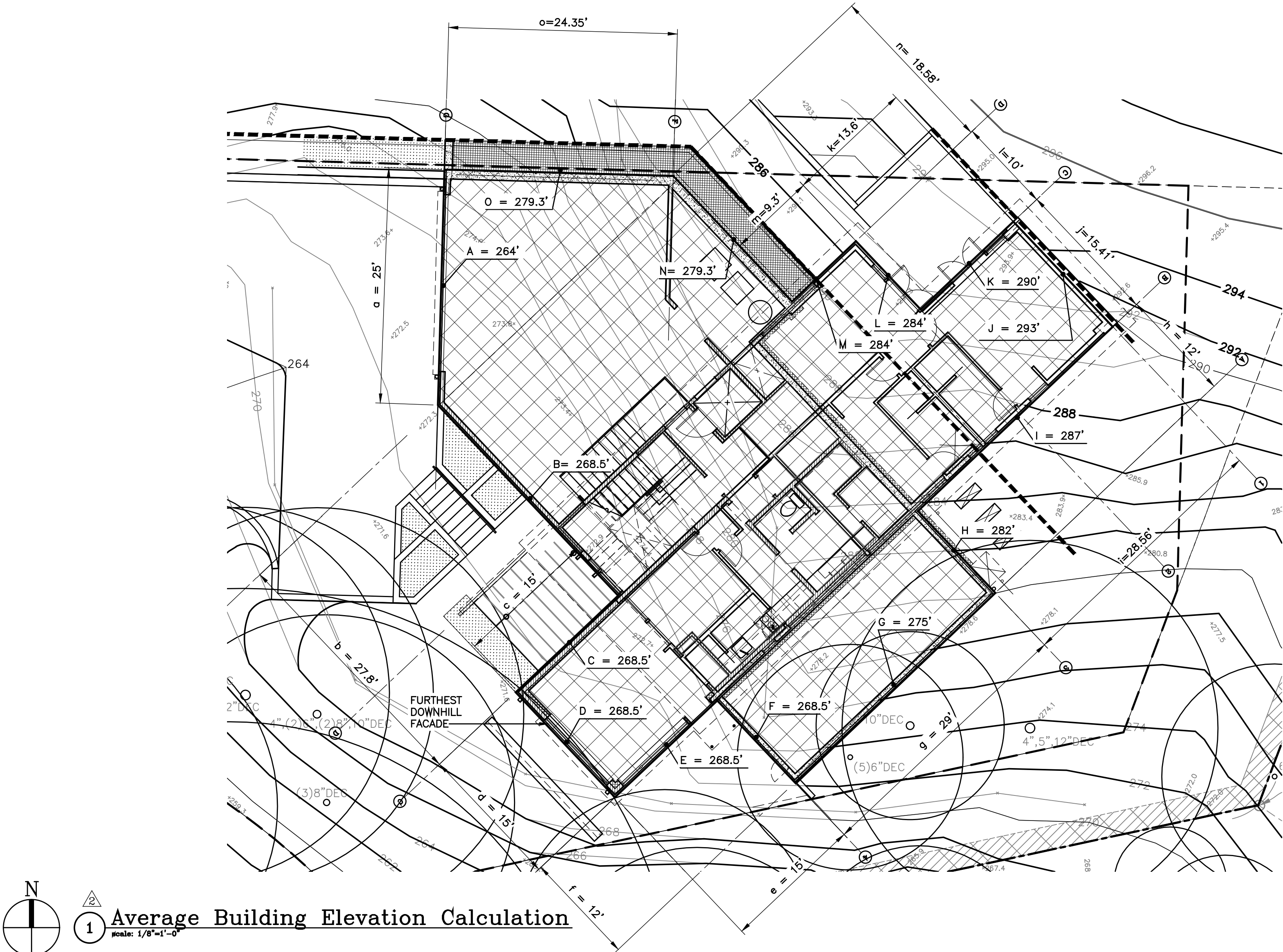
Site
Plan
A1.1



7785 REGISTERED ARCHITECT
Lucia Pirzio-Biroli
LUCIA PIRZIO-BIROLI
STATE OF WASHINGTON

CHEN RESIDENCE

New Residence
8435 SE 47th PL.
Mercer Island, WA 98040



3 AVERAGE BUILDING ELEVATION									
Mid-point Elev.			Wall Segment Length				Elev x Length		
A=	264	ft	*	a=	25.0	ft	=	6600.0	
B=	268.5	ft	*	b=	27.8	ft	=	7464.3	
C=	268.5	ft	*	c=	15.0	ft	=	4027.5	
D=	268.5	ft	*	d=	15.0	ft	=	4027.5	
E=	268.5	ft	*	e=	15.0	ft	=	4027.5	
F=	268.5	ft	*	f=	12.0	ft	=	3222.0	
G=	275	ft	*	g=	29.0	ft	=	7964.0	
H=	282	ft	*	h=	12.0	ft	=	3384.0	
I=	287	ft	*	i=	28.6	ft	=	8196.7	
J=	293	ft	*	j=	15.4	ft	=	4512.2	
K=	290	ft	*	k=	13.6	ft	=	3944.0	
L=	284	ft	*	l=	10.0	ft	=	2840.0	
M=	284	ft	*	m=	9.3	ft	=	2641.2	
N=	279.3	ft	*	n=	18.6	ft	=	5195.0	
O=	279.3	ft	*	o=	24.4	ft	=	6814.9	
					total=			total=	
					227.6	ft.		62850.9	
	Avg. Building Elevation =				276.1	ft.			
	Allowed Building Height =				306.1	ft.			

 INDICATES FOOTPRINT OF FOUNDATION PERIMETER

<u>Lot Coverage Calculation</u>		
	GROSS/NET LOT AREA:	19360.24 SF
	ALLOWED LOT COVERAGE:	5808 SF / 30%
	EXISTING LOT COVERAGE:	0 SF
	PROPOSED DRIVEWAY:	2162 SF
	PROPOSED MAIN STRUCTURE ROOF AREA:	3214.5 SF 
	COVERED PATIOS AND DECKS:	82 SF
	TOTAL LOT COVERAGE:	5458.5 SF
	PROPOSED LOT COVERAGE AREA:	28.2%
<u>Hardscape Calculation</u>		
	GROSS/NET LOT AREA:	19360.24 SF
	ALLOWED HARDSCAPE:	1742 SF / 9%
	EXISTING LOT COVERAGE:	0 SF
	WALKWAYS:	262 SF
	STAIRS:	36 SF
	RETAINING WALLS (R.W.):	287 SF
	UNCOVERED PATIO:	135 SF
	TOTAL HARDSCAPE:	720 SF
	PROPOSED LOT COVERAGE AREA:	3.7%

Date:

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Site Calculations

A1.2



7785 REGISTERED ARCHITECT
Lucia P. Biroli
LUCIA PIRZIO-BIROLI
STATE OF WASHINGTON

CHEN RESIDENCE

New Residence

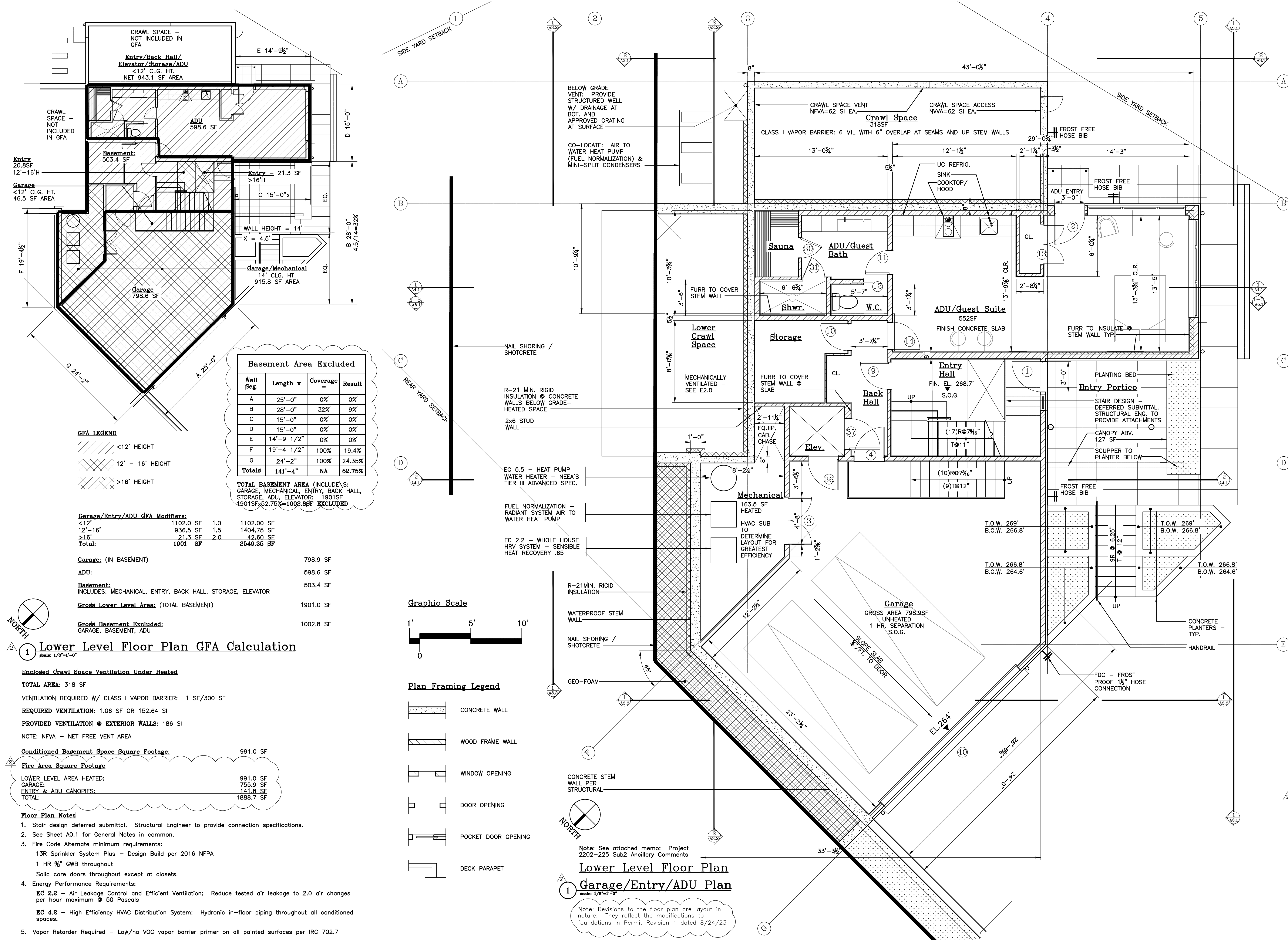
8435 SE 47th PL.

Mercer Island, WA 98040

Scale:

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Lower Level
Floor Plan
A2.0



CHEN RESIDENCE

New Residence
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Mercer Island, WA 98040

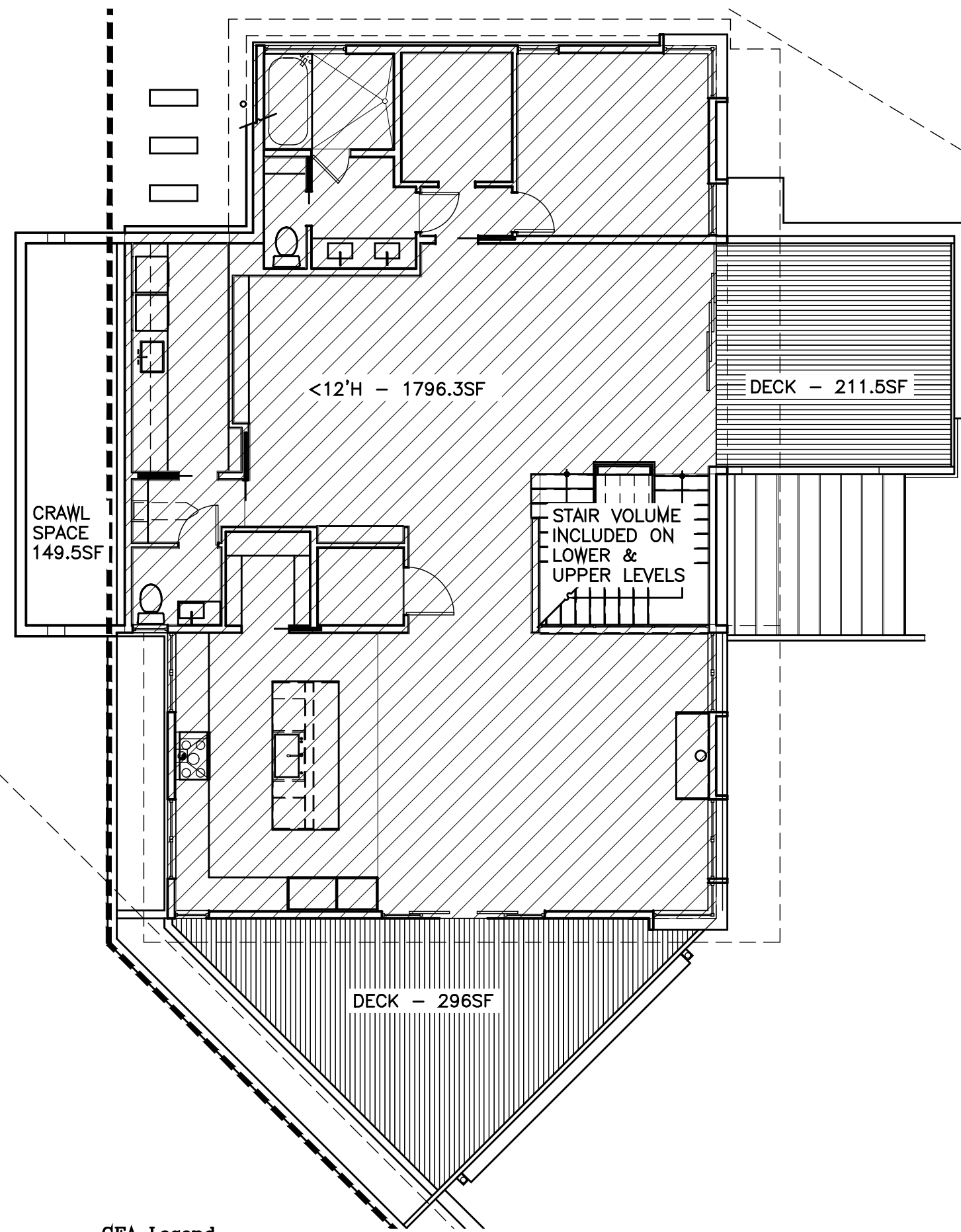
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Scale:

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Main Level
Floor Plan

A2.1



GFA Legend

AREA <12' HEIGHT

Main Floor GFA Calculation

MAIN FLOOR 1796.3 SF
UNCOVERED DECK: 507.5 SF

Enclosed Crawl Space Ventilation Under Heated

TOTAL AREA: 149.5 SF

VENTILATION REQUIRED W/ CLASS I VAPOR BARRIER: 1 SF/300 SF

REQUIRED VENTILATION: .5 SF OR 72 SI

PROVIDED VENTILATION @ EXTERIOR WALLS: 186 SI

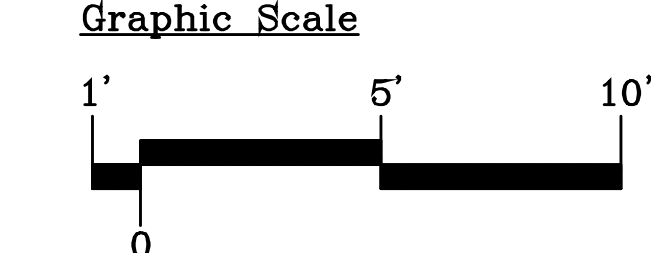
NOTE: NFVA - NET FREE VENT AREA

Conditioned Space Square Footage: 1796.3 SF

Roof Deck Square Footage: 507.5 SF

Main Level Floor Plan

Graphic Scale



Fire Area Square Footage

MAIN FLOOR AREA: 1807.9 SF

Floor Plan Notes

1. Stair design deferred submittal. Structural Engineer to provide connection specifications.
2. See Sheet A0.1 for General Notes in common.
3. Fire Code Alternate minimum requirements:

13R Sprinkler System Plus - Design Build per 2016 NFPA
1 HR ½" GWB throughout

Solid core doors throughout except at closets.

Energy Performance Requirements:

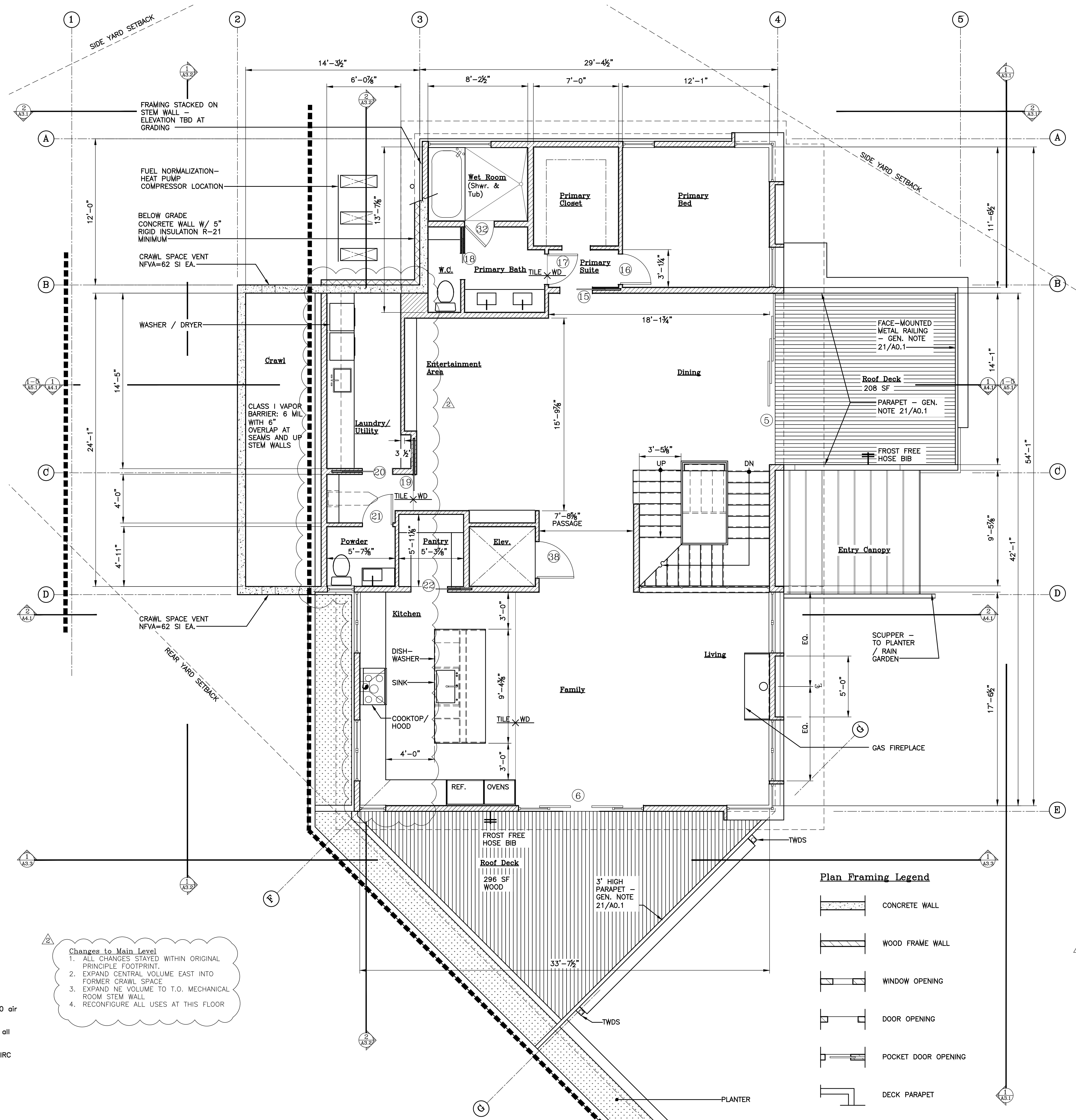
EC 2.2 - Air Leakage Control and Efficient Ventilation: Reduce tested air leakage to 2.0 air changes per hour maximum @ 50 Pascals

EC 4.2 - High Efficiency HVAC Distribution System: Hydronic in-floor piping throughout all conditioned spaces.

Vapor Retarder Required - Low/no VOC vapor barrier primer on all painted surfaces per IRC 702.7

Changes to Main Level

1. ALL CHANGES STAYED WITHIN ORIGINAL PRINCIPLE FOOTPRINT.
2. EXPAND CENTRAL VOLUME EAST INTO FORMER CRAWL SPACE.
3. EXPAND NE VOLUME TO T.O. MECHANICAL ROOM STEM WALL.
4. RECONFIGURE ALL USES AT THIS FLOOR



Plan Framing Legend

	CONCRETE WALL
	WOOD FRAME WALL
	WINDOW OPENING
	DOOR OPENING
	POCKET DOOR OPENING
	DECK PARAPET



7785 REGISTERED ARCHITECT
Lucia Pirzio-Biroli
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STATE OF WASHINGTON

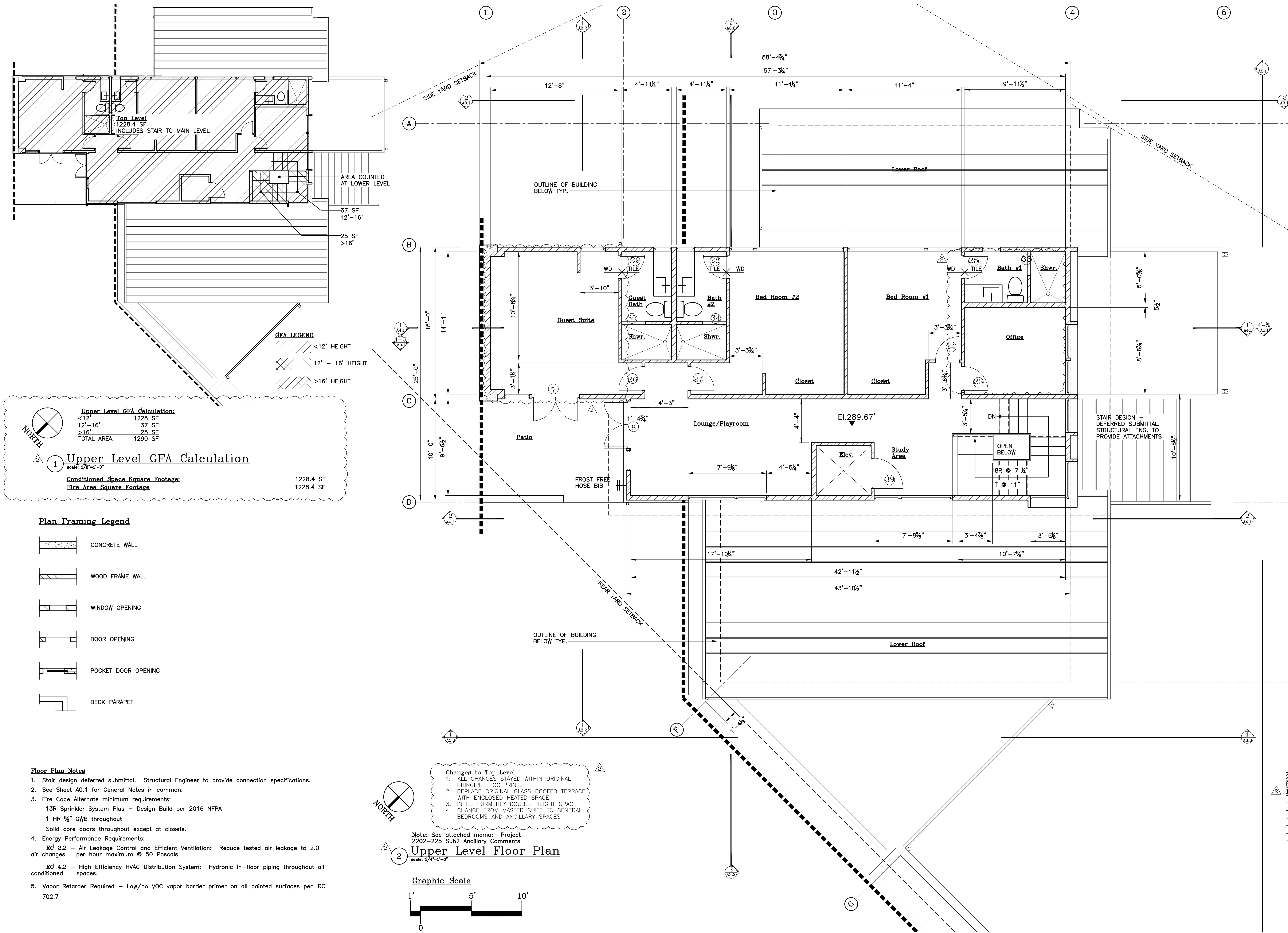
CHEN RESIDENCE

New Residence
8435 SE 47th PL.
Mercer Island, WA 98040

Scale:

Sheet:

Upper Level
Floor Plan
A2.2



Floor Plan Notes

1. Stair design deferred submittal. Structural Engineer to provide connection specifications.
2. See Sheet A0.1 for General Notes in common.
3. Fire Code Alternate minimum requirements:
 - 13R Sprinkler System Plus – Design Build per 2016 NFPA
 - 1 HR ½" GWB throughout
 - Solid core doors throughout except at closets.
4. Energy Performance Requirements:
 - EC 2.2 – Air Leakage Control and Efficient Ventilation: Reduce tested air leakage to 2.0 air changes per hour maximum @ 50 Pascals
 - EC 4.2 – High Efficiency HVAC Distribution System: Hydronic in-floor piping throughout all conditioned spaces.
5. Vapor Retarder Required – Low/no VOC vapor barrier primer on all painted surfaces per IRC 702.7

Changes to Top Level

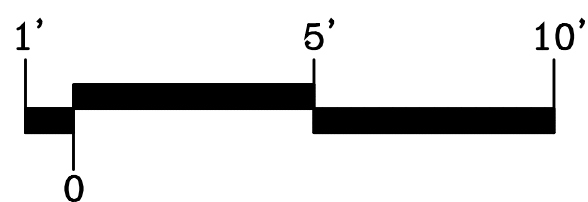
1. ALL CHANGES STAYED WITHIN ORIGINAL PRINCIPLE FOOTPRINT.
2. REPLACE ORIGINAL GLASS ROOFED TERRACE WITH ENCLOSED HEATED SPACE
3. INFILL FORMERLY DOUBLE HEIGHT SPACE
4. CHANGE FROM MASTER SUITE TO GENERAL BEDROOMS AND ANCILLARY SPACES

Note: See attached memo: Project 2202-225 Sub2 Ancillary Comments

Upper Level Floor Plan

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

Graphic Scale





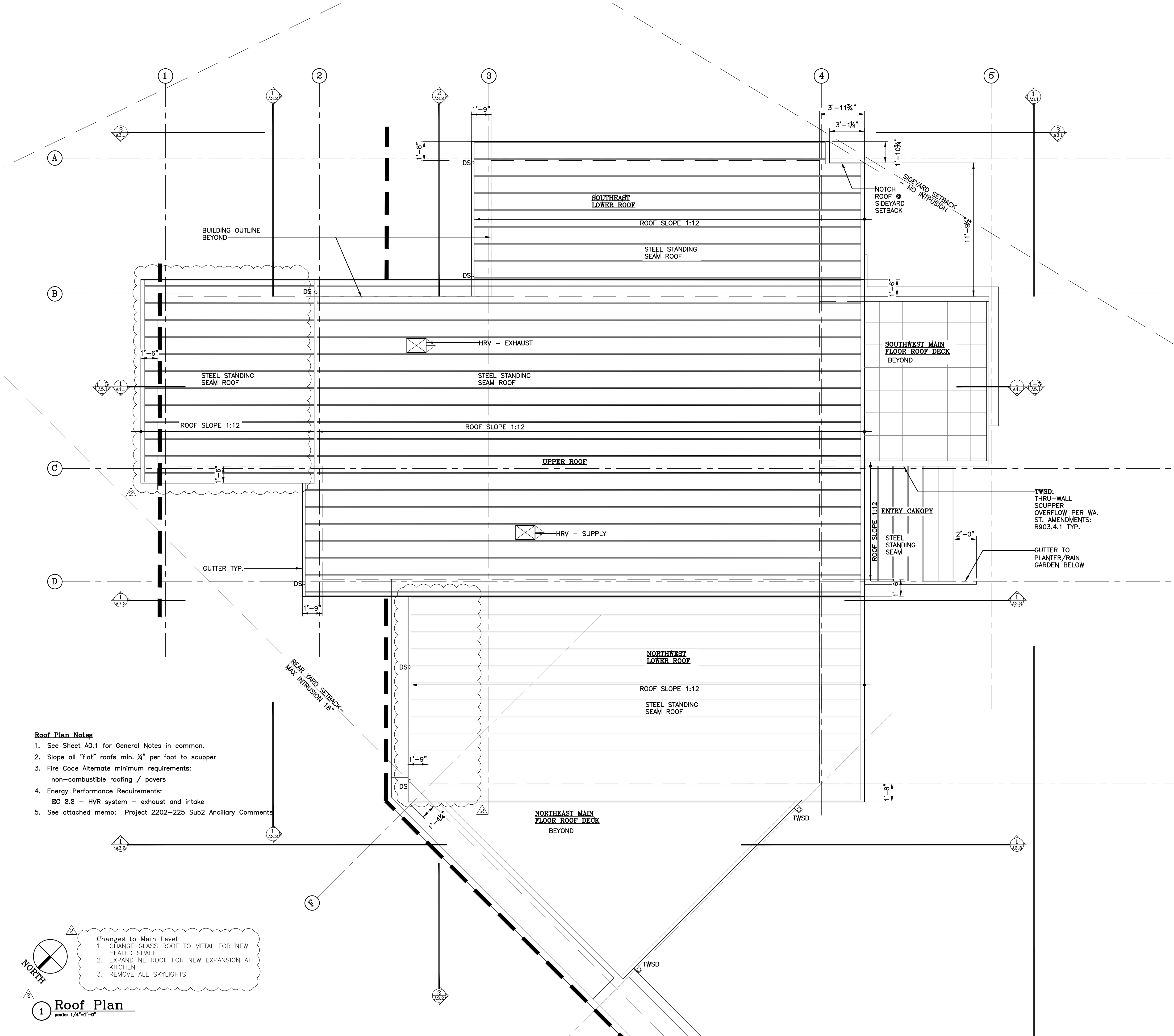
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- Roof Plan Notes**
- See Sheet A0.1 for General Notes in common.
 - Slope all "flat" roofs min. $\frac{1}{4}$ " per foot to scupper
 - Fire Code Alternate minimum requirements:
non-combustible roofing / pavers
 - Energy Performance Requirements:
EC 2.2 - HVR system - exhaust and intake
 - See attached memo: Project 2202-225 Sub2 Ancillary Comments

Changes to Main Level

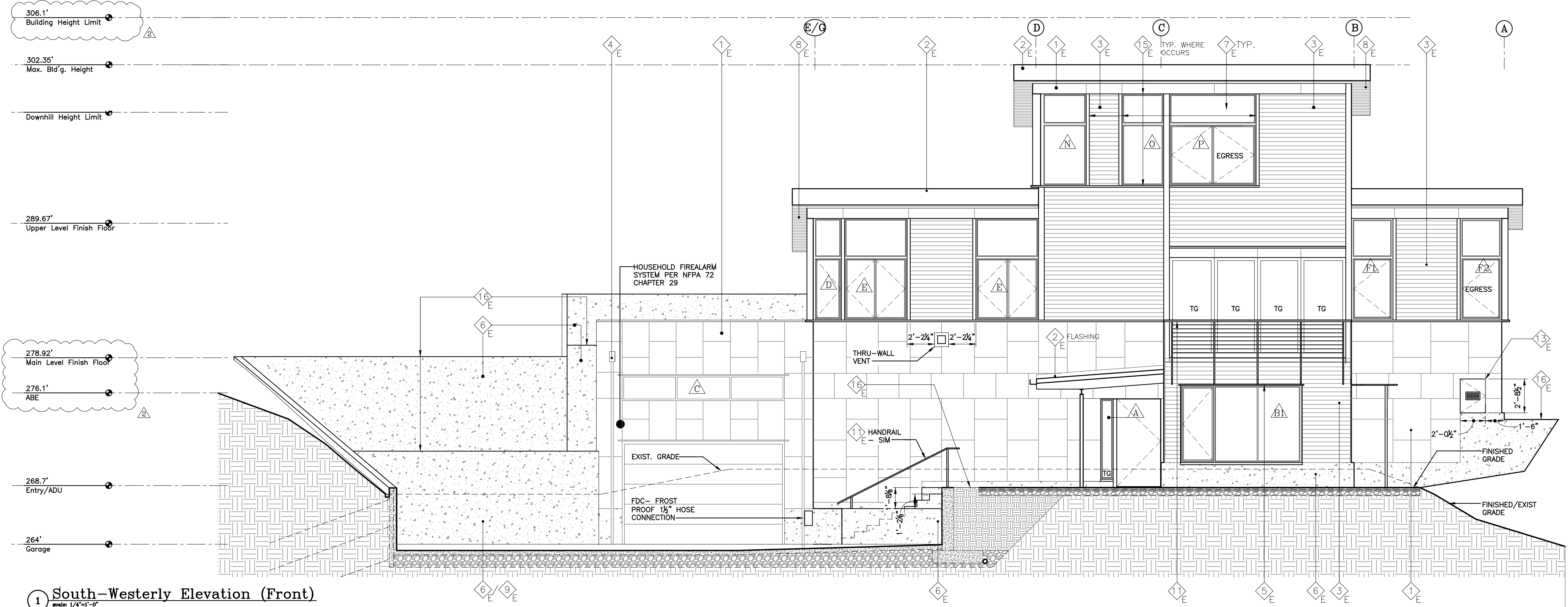
- CHANGE GLASS ROOF TO METAL FOR NEW HEATED SPACE
- EXPAND NE ROOF FOR NEW EXPANSION AT KITCHEN
- REMOVE ALL SKYLIGHTS

1 Roof Plan
scale: 1/4"=1'-0"

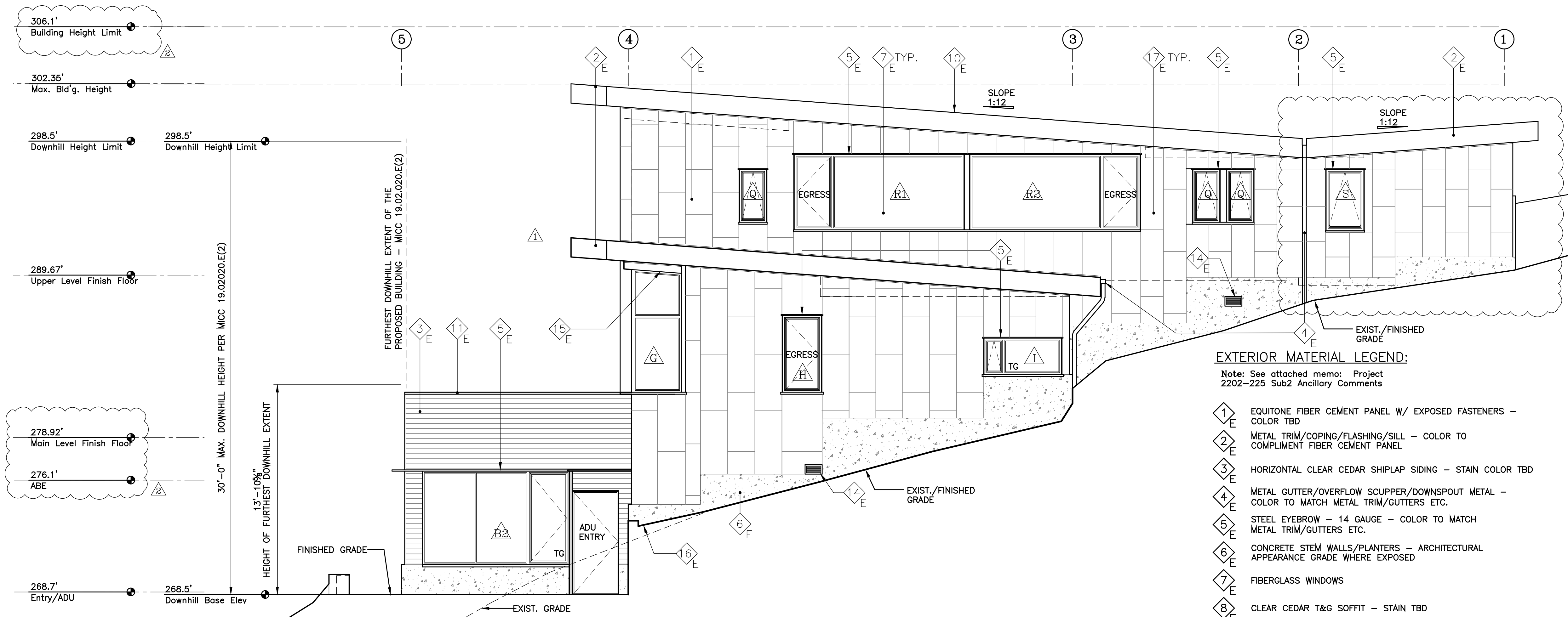
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Scale:
Sheet:

Roof
Plan
A2.3



1 South-Westerly Elevation (Front)
Scale: 1/4"=1'-0"



2 South-Easterly Elevation (Side)
Scale: 1/4"=1'-0"

CHANGES TO ELEVATIONS
1. ABE/MAX BUILDING ELEVATION/HEIGHT
2. WINDOW/DOOR CONFIGURATION ON MAIN/UPPER FLOORS
3. MAIN FLOOR ELEVATION LOWERED
4. INFILL OF COVERED PATIO @ UPPER FLOOR WITH HEATED SPACE
5. INFILL OF DBL. HEIGHT SPACE @ DINING AREA

EXTERIOR MATERIAL LEGEND:

Note: See attached memo: Project 2202-225 Sub2 Ancillary Comments

- 1 E EQUITONE FIBER CEMENT PANEL W/ EXPOSED FASTENERS - COLOR TBD
- 2 E METAL TRIM/COPING/FLASHING/SILL - COLOR TO COMPLEMENT FIBER CEMENT PANEL
- 3 E HORIZONTAL CLEAR CEDAR SHIPLAP SIDING - STAIN COLOR TBD
- 4 E METAL GUTTER/OVERFLOW SCUPPER/DOWNSPOUT METAL - COLOR TO MATCH METAL TRIM/GUTTERS ETC.
- 5 E STEEL EYEBROW - 14 GAUGE - COLOR TO MATCH METAL TRIM/GUTTERS ETC.
- 6 E CONCRETE STEM WALLS/PLANTERS - ARCHITECTURAL APPEARANCE GRADE WHERE EXPOSED
- 7 E FIBERGLASS WINDOWS
- 8 E CLEAR CEDAR T&G SOFFIT - STAIN TBD

- 9 E ESPALIER GREEN WALL - STEEL WIRE ROPE & HARDWARE
- 10 E STANDING SEAM METAL ROOF AND RELATED METAL TRIM - COLOR TBD.
- 11 E STAINLESS STEEL GUARDRAIL WITH WOOD TOP RAIL- FACE MOUNTED. SEE GENERAL NOTE #21 ON A0.1
- 12 E STEEL/WOOD PORCH FRAME
- 13 E 18"x24" ACCESS OPENING W/ CRAWL SPACE VENT NFVA: 62SI - PER IRC R408.4/WAC 51-51 R408
- 14 E CRAWL SPACE VENT NFVA: 62SI - PER WAC 51-51 R408 AT BELOW GRADE VENTS PROVIDE STRUCTURED WELL WITH GRAVEL 6" BELOW VENT & DRAIN TO CONNECTED DRAINAGE SYSTEM.
- 15 E ELECTRIC ROLLER SHADES W/ LATERAL TRACK "FINS"
- 16 E DENSELY PLANTED VEGETATION - NO FALL RISK
- 17 E MEET OR EXCEED EC 1.4 - EFFICIENT BUILDING ENVELOPE

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Scale:
Sheet:

Elevations

A3.1

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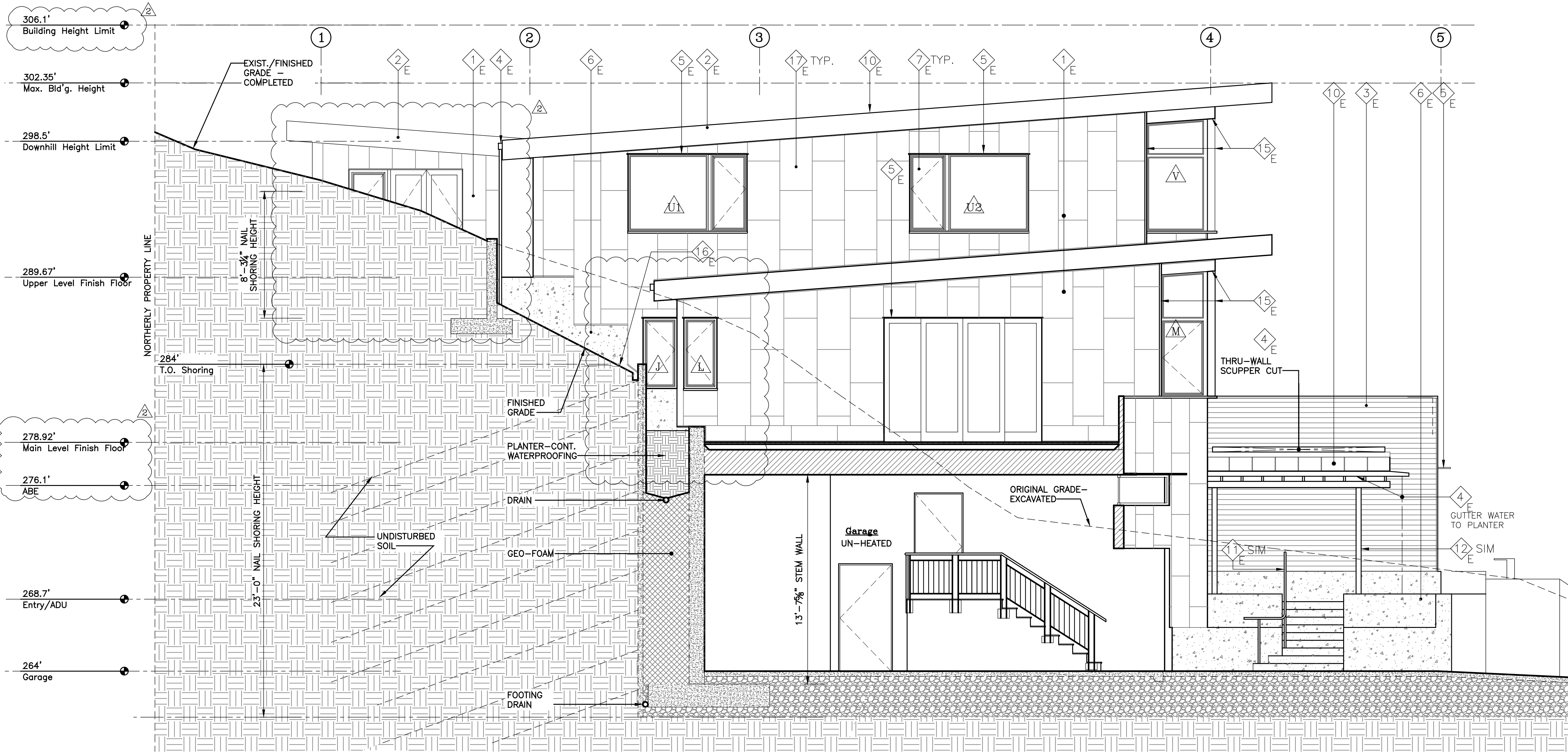
New Residence
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EXTERIOR MATERIAL LEGEND:

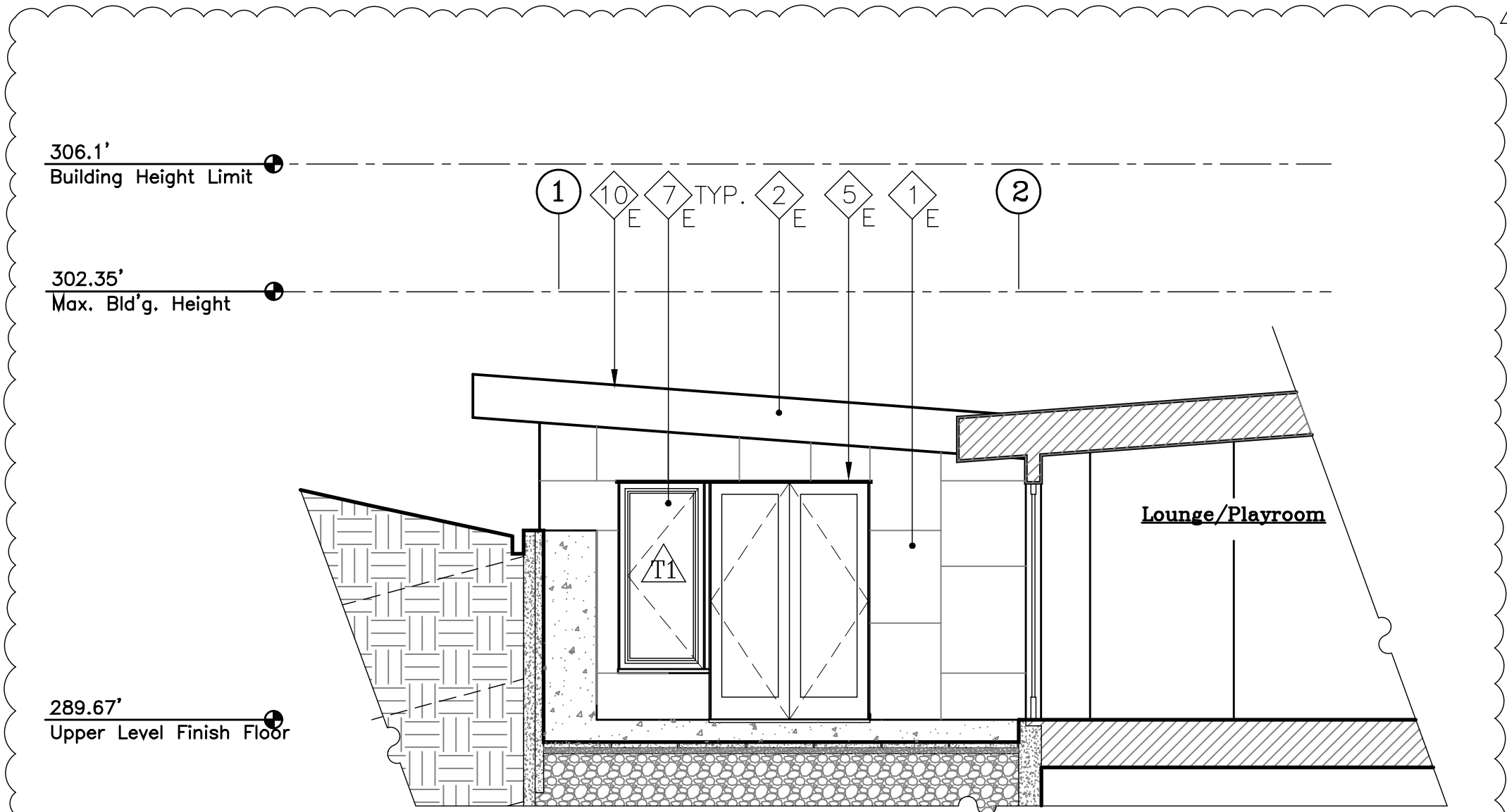
Note: See attached memo: Project
2202-225 Sub2 Ancillary Comments

- 1 E EQUITONE FIBER CEMENT PANEL W/ EXPOSED FASTENERS - COLOR TBD
- 2 E METAL TRIM/COPING/FLASHING/SILL - COLOR TO COMPLEMENT FIBER CEMENT PANEL
- 3 E HORIZONTAL CLEAR CEDAR SHIPLAP SIDING - STAIN COLOR TBD
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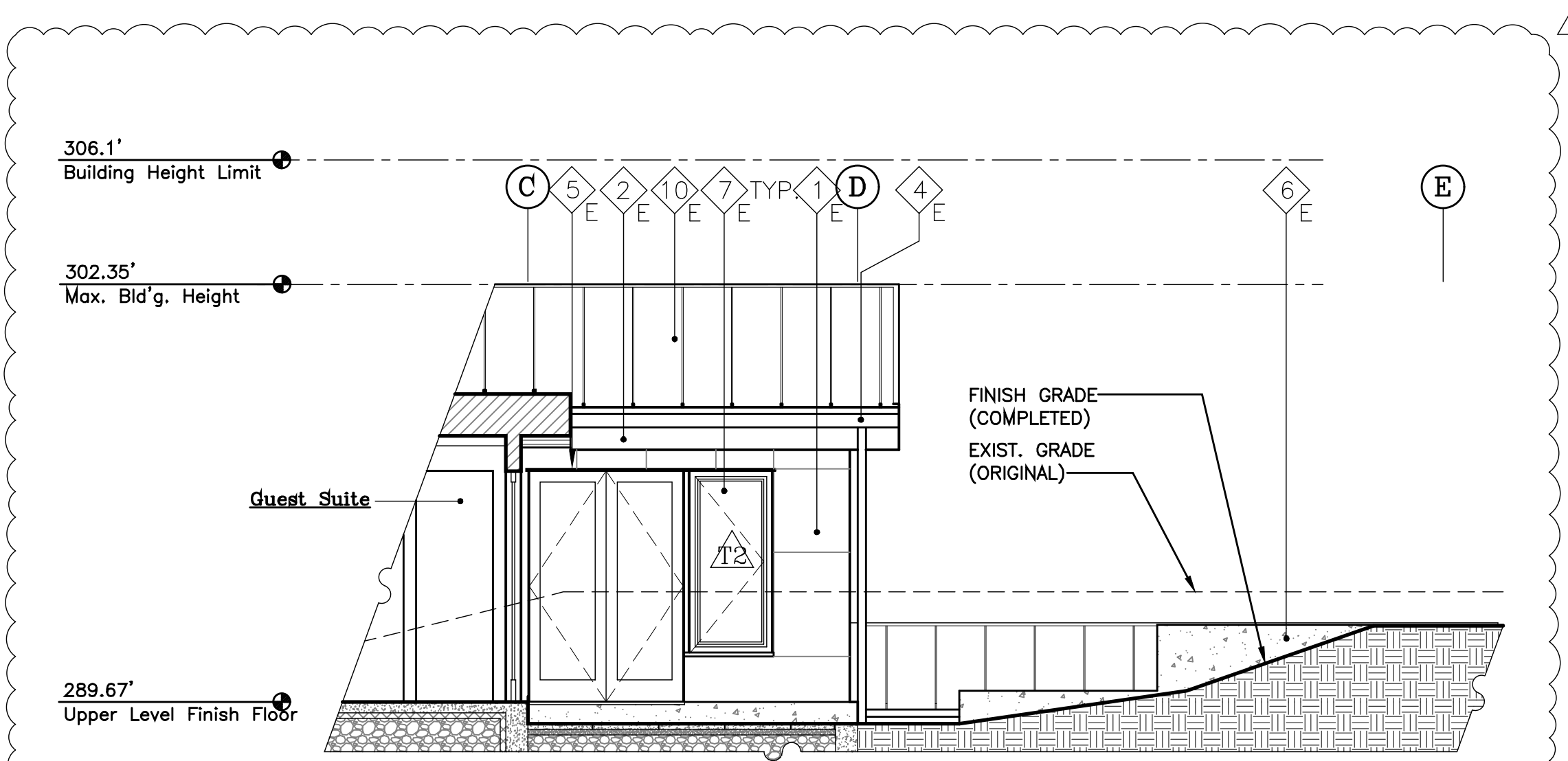
- CHANGES TO ELEVATIONS
- 1. ABE/MAX BUILDING ELEVATION/HEIGHT
 - 2. WINDOW/DOOR CONFIGURATION ON MAIN/UPPER FLOORS
 - 3. MAIN FLOOR ELEVATION LOWERED
 - 4. INFILL OF COVERED PATIO @ UPPER FLOOR WITH HEATED SPACE
 - 5. INFILL OF DBL. HEIGHT SPACE @ DINING AREA



1 North-Westerly
Section/Elevation
Scale: 1/4"=1'-0"



2 North-Westerly
Partial Section/Elevation @ Top Floor Patio
Scale: 1/4"=1'-0"



3 North-Easterly
Partial Section/Elevation @ Top Floor Patio
Scale: 1/4"=1'-0"

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Scale:

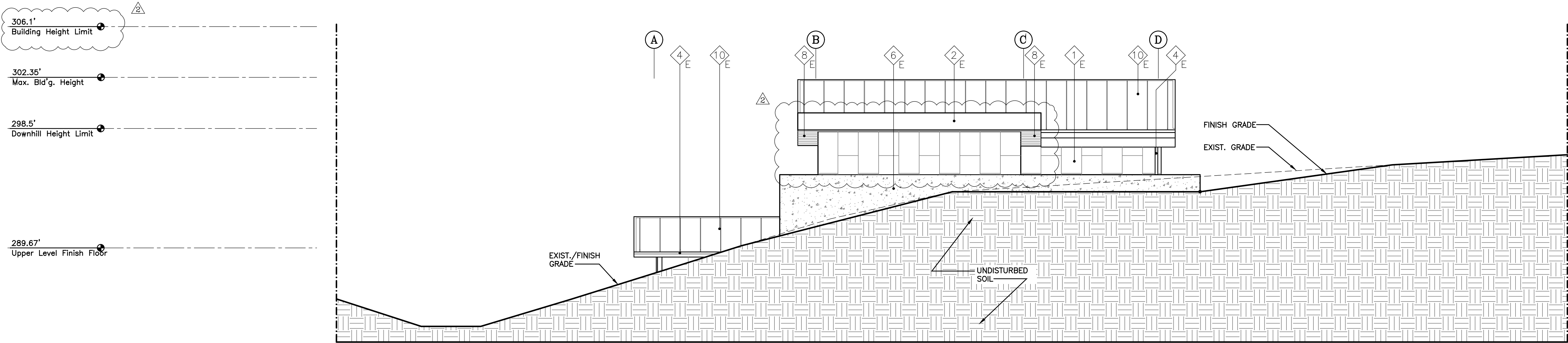
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Elevations/
Sections
A3.3



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ARCHITECTURE

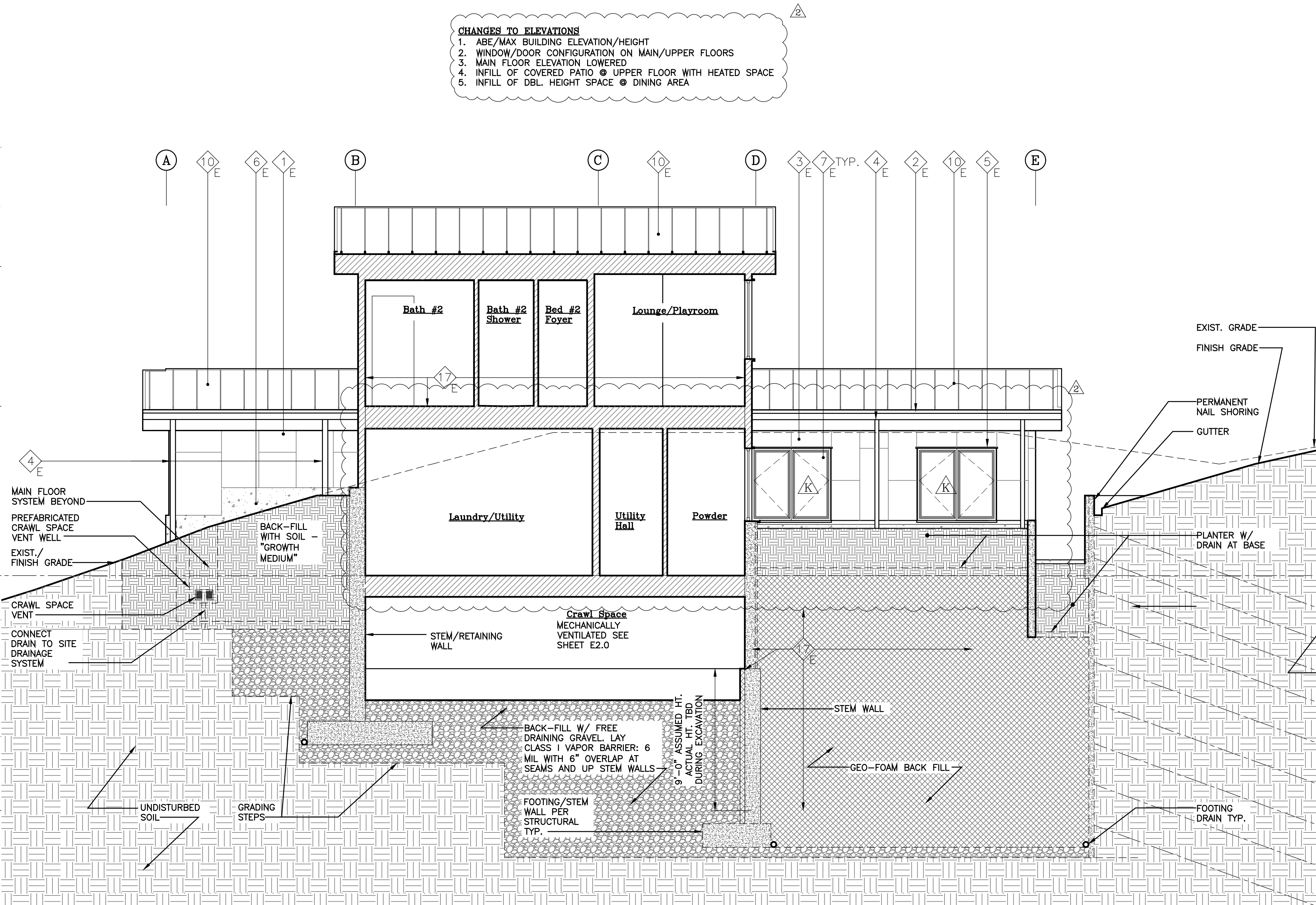
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1 North-Easterly Elevation (Rear)
scale: 1/4"=1'-0"



2 Building Section / Partial Elevation
scale: 1/4"=1'-0"



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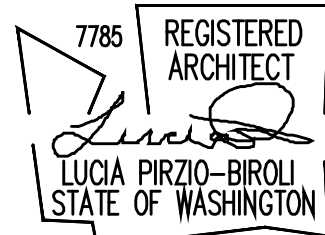
Scale:
Sheet:

Elevations/
Sections
A3.2



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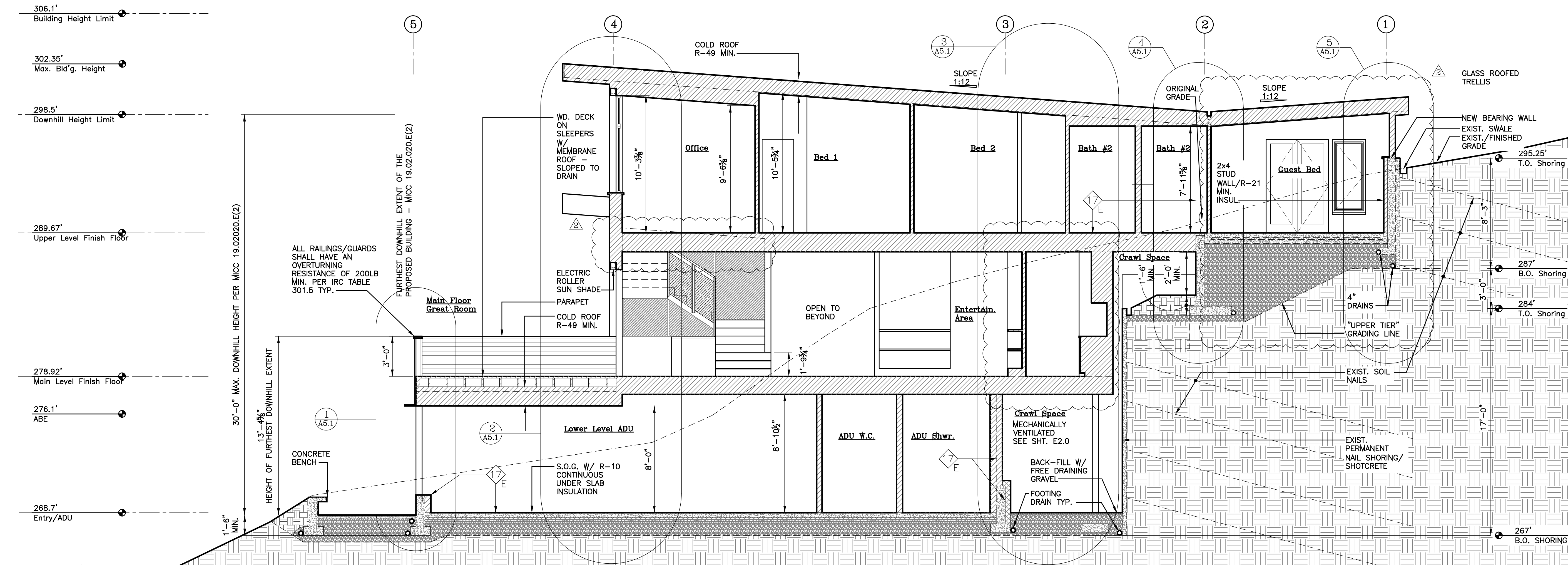
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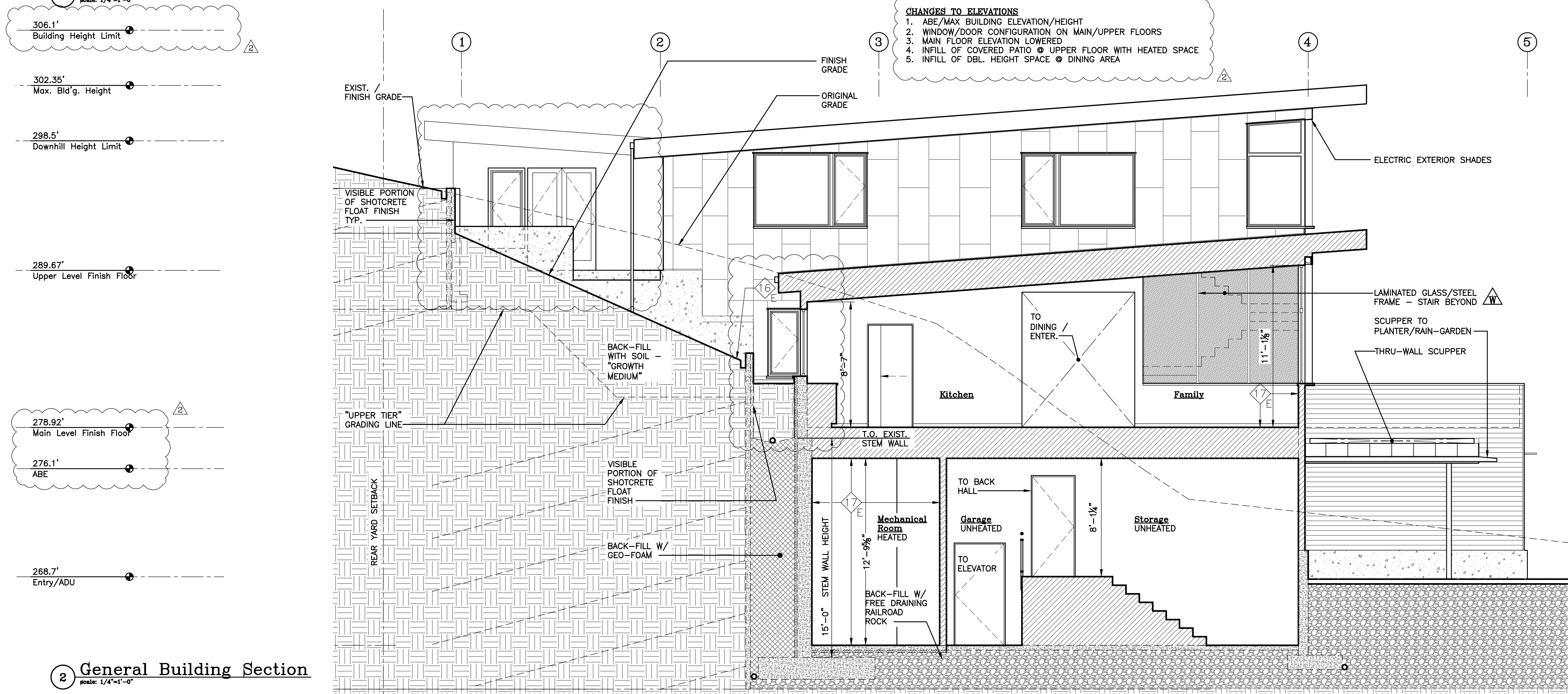
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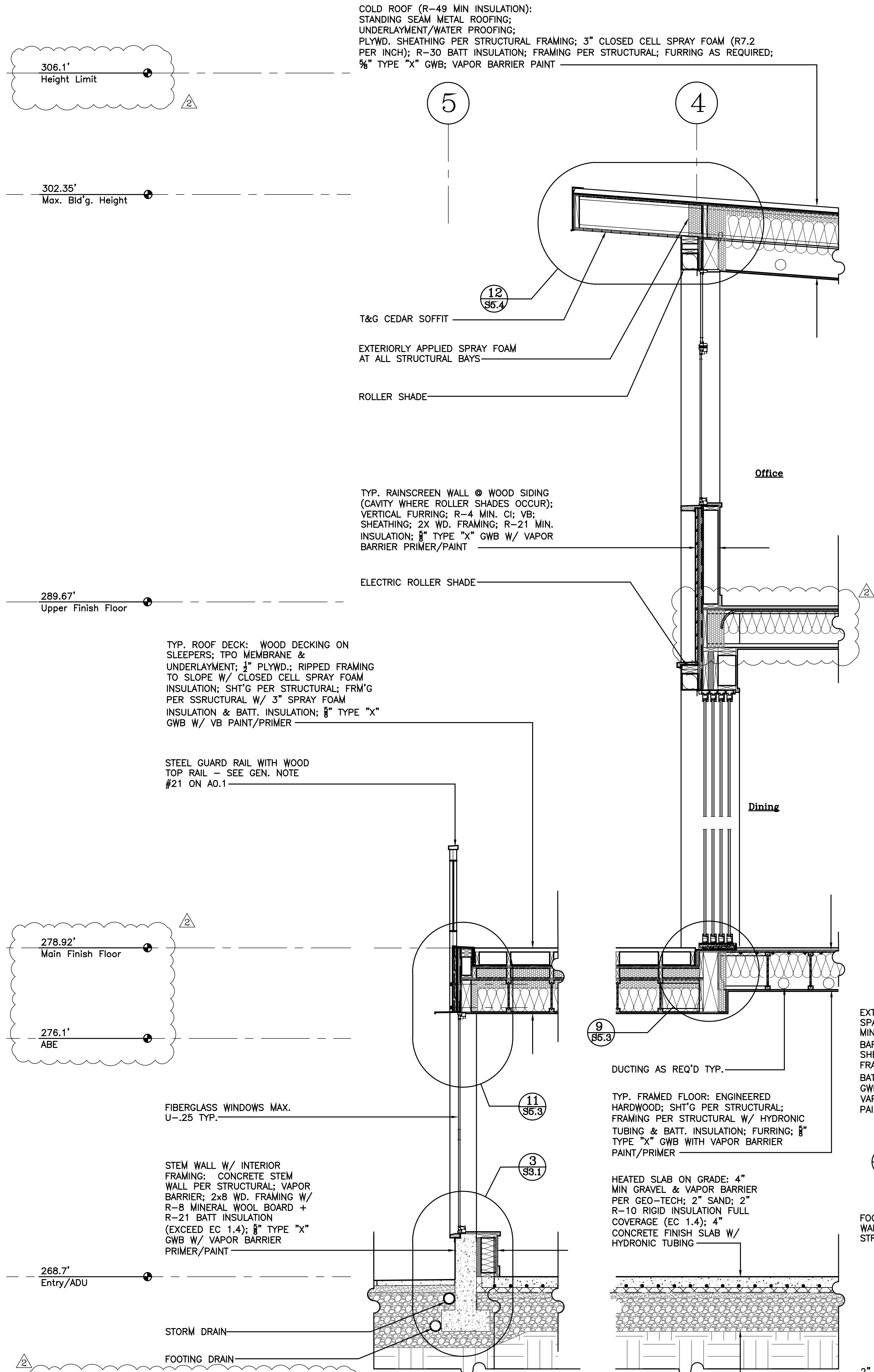
Building
Sections
A4.1



1 General Building Section



2 General Building Section



General Wall Section Notes:
1. FOUNDATIONS AND NAIL SHORING EXISTING EXCEPT AS NOTED.
2. COORDINATE ALL STRUCTURAL DETAILS.
3. 1/2" 1 HOUR TYPE "X" GWB THROUGHOUT PER GEN. NOTE 10 SHT. A0.1
4. MEET ALL REQUIREMENTS PER WSEC 2018 AND SELECTED EC SHT. A0.1

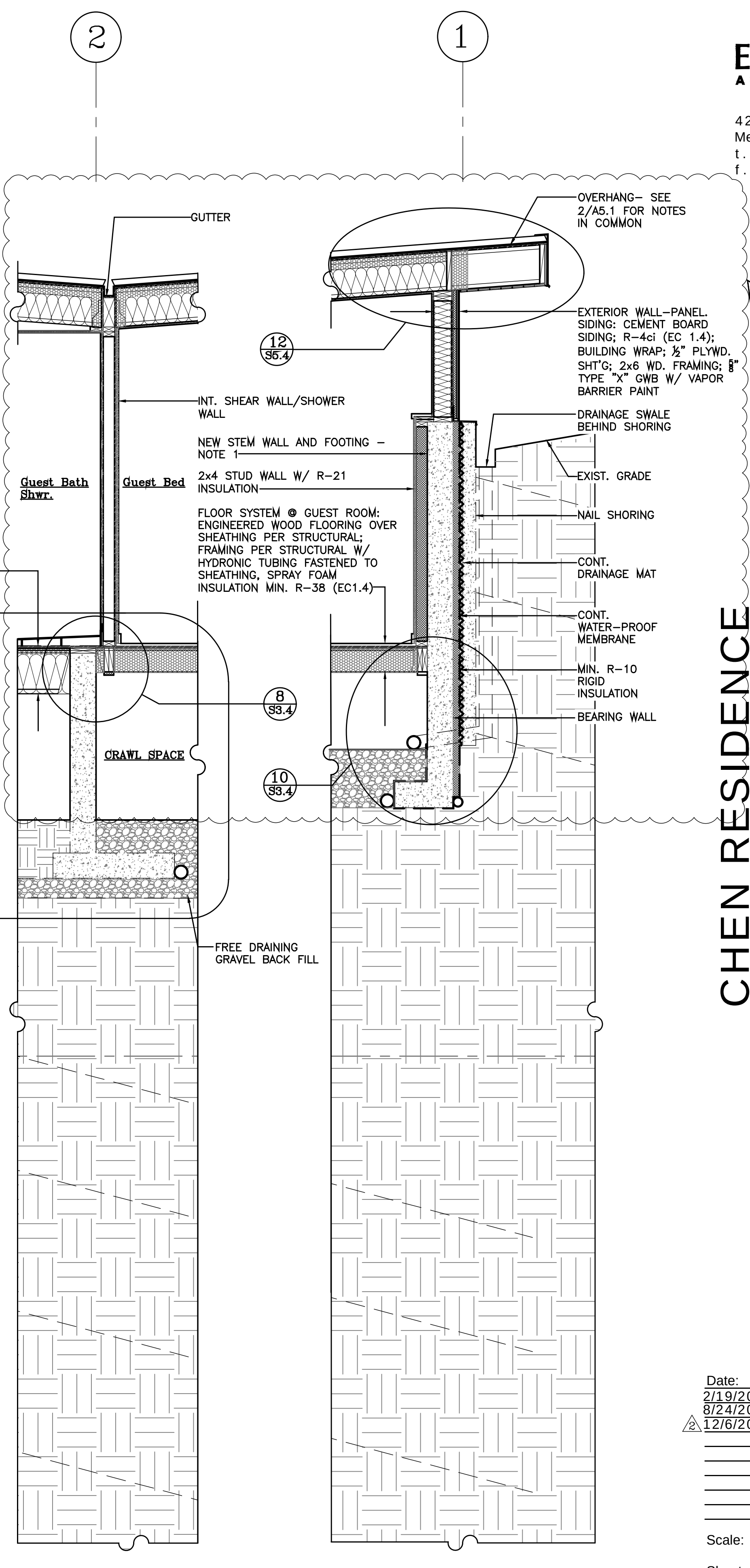
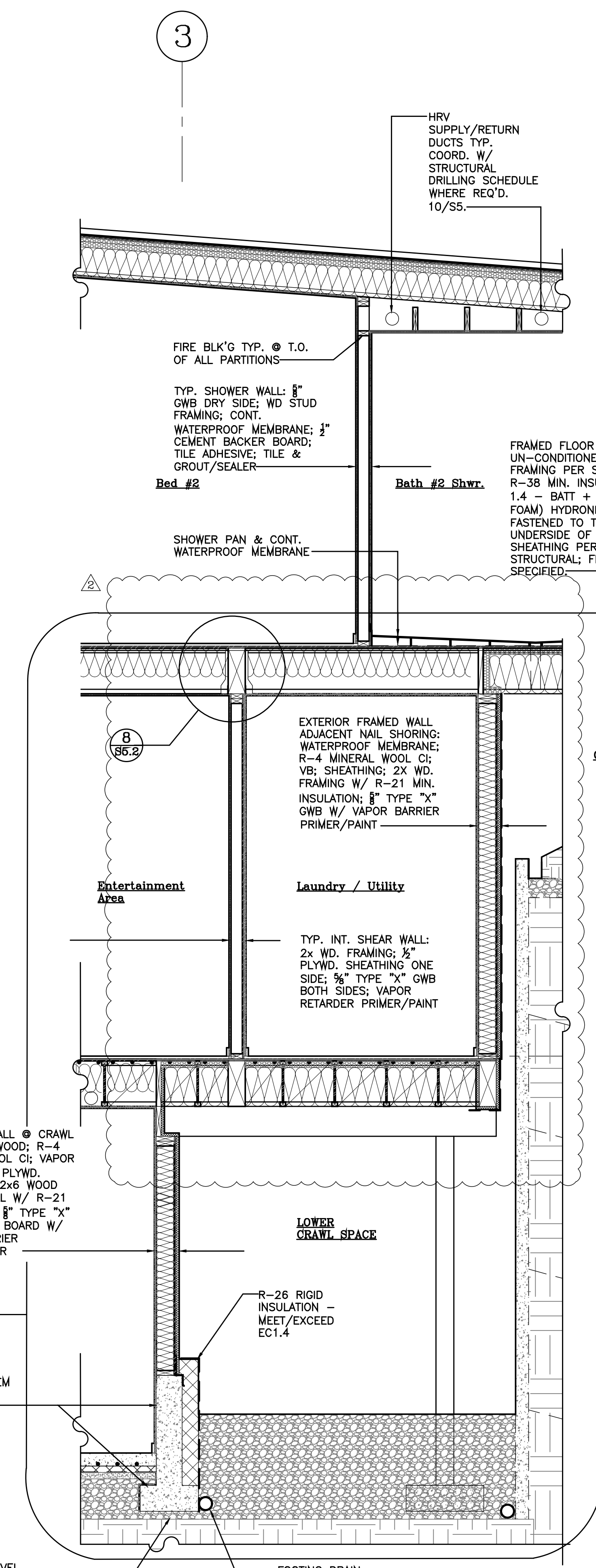
1 Wall Section
scale: 1/8"=1'-0"

2 Wall Section
scale: 1/8"=1'-0"

3 Wall Section
scale: 1/8"=1'-0"

4 Wall Section
scale: 1/8"=1'-0"

5 Wall Section
scale: 1/8"=1'-0"



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Scale:
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Wall
Section
A5.1



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CHEN RESIDENCE

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Window Schedule															
TAG	WINDOW R.O.		UNIT AREA	QTY.	TOTAL	MAX U-VALUE NOTE 6	UA VALUE	HEAD HEIGHT (AFF)	TYPE OPERATION	SCREEN	TYPE	FRAME / FINISH	GLASS	MANUF.	NOTES
	Notes 1, 2 & 9				window area				NOTES 3&5	NOTE 8			NOTES 4&7		
	width	height													
A	1'-0"	x 6'-4"	6.3 SQ. FT.	1	6.3 SQ. FT.	0.25	1.6 SQ. FT.	7'-0"	FIX			FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON/LAM	MARVIN	COORDINATE W/ ADJ. DOOR & CONCRETE
B1	9'-8"	x 6'-2"	59.6 SQ. FT.	1	59.6 SQ. FT.	0.25	14.9 SQ. FT.	8'-0"	FIX/CASE	X		FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	SEE ELEVATIONS/COORD. RAILING STANCHIONS/CASE. LEFT HINGE
B2	9'-8"	x 6'-2"	59.6 SQ. FT.	1	59.6 SQ. FT.	0.25	14.9 SQ. FT.	8'-0"	FIX/CASE	X		FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	CASEMENT RIGHT HINGE
C	2'-0"	x 18'-0"	36.0 SQ. FT.	1	36.0 SQ. FT.	0.25	9.0 SQ. FT.	13'-5 ¾"	FIX			FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	(3) EQUAL PAN.
D	2'-3"	x 8'-1 ½"	18.3 SQ. FT.	1	18.3 SQ. FT.	0.25	4.6 SQ. FT.	10'-7 1/2"	FIX/CASE	X		FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	CASE RIGHT HINGE
E	5'-0"	x 8'-1 ½"	40.6 SQ. FT.	2	81.3 SQ. FT.	0.25	20.3 SQ. FT.	10'-7 1/2"	FIX/DBL. CASE	X		FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	COORDINATE W/ "D" /CASE RIGHT & LEFT HINGES
F	3'-3 ¾"	x 8'-1 ½"	26.9 SQ. FT.	2	53.8 SQ. FT.	0.25	13.5 SQ. FT.	10'-7 1/2"	FIX/CASE	X	CORNER	FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	CASEMENTS LEFT HINGE/COORDINATE W/ "G" / EGRESS
G	3'- 3 ¾"	x VARIES	26.9 SQ. FT.	1	26.9 SQ. FT.	0.25	6.7 SQ. FT.	FOLLOW ROOF	FIX	X	CORNER	FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	COORDINATE W/ "F"
H	2'-7"	x 5'-0"	12.9 SQ. FT.	1	12.9 SQ. FT.	0.25	3.2 SQ. FT.	8'-1"	CASE			FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	RIGHT HINGE
I	5'-11"	x 2'-5"	14.2 SQ. FT.	1	14.2 SQ. FT.	0.25	3.6 SQ. FT.	6'-7"	FIX/AWN			FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	AWNING OBSCURED GLASS/ALIGN LEFT JAMB TO EDGE OF CONCRETE
J	2'-2"	x 4'-7"	9.9 SQ. FT.	1	9.9 SQ. FT.	0.25	2.5 SQ. FT.	7'-7"	CASE			FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	RIGHT HINGE / EGRESS
K	5'-0"	x 4'-7"	22.9 SQ. FT.	2	45.8 SQ. FT.	0.25	11.5 SQ. FT.	8'-1"	DBL. CASE			FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	
L	2'-2"	x 4'-7"	9.9 SQ. FT.	1	9.9 SQ. FT.	0.25	2.5 SQ. FT.	7'-7"	CASE			FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	LEFT HINGE
M	3'-0"	x VARIES	24.4000 SQ. FT.	1	24.4 SQ. FT.	0.25	6.1 SQ. FT.	FOLLOW ROOF	FIX/CASE	X	CORNER	FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	CASE LEFT HINGE/COORDINATE W/ "D"
N	3'-7 3/4"	x 7'-4"	26.7 SQ. FT.	1	26.7 SQ. FT.	0.25	6.7 SQ. FT.	10'-4"	FIX	X		FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	COORDINATE W/ "V"
O	3'-4"	x 7'-4"	24.4 SQ. FT.	1	24.4 SQ. FT.	0.25	6.1 SQ. FT.	10'-4"	FIX	X		FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	
P	6'-11"	x 7'-4"	50.7 SQ. FT.	1	50.7 SQ. FT.	0.25	12.7 SQ. FT.	10'-4"	FIX/DBL. CASE	X		FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	CASE RIGHT & LEFT HINGES / EGRESS
Q	1'-9 1/2"	x 3'-6"	6.3 SQ. FT.	3	18.8 SQ. FT.	0.25	4.7 SQ. FT.	7'-0"	AWN			FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	OBSCURED GLASS
R1	11'-2 ¾"	x 5'-0"	56.1 SQ. FT.	1	56.1 SQ. FT.	0.25	14.0 SQ. FT.	8'-0"	FIX/CASE			FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	CASE LEFT HINGE
R2	11'-2 3/4"	x 5'-0"	56.1 SQ. FT.	1	56.1 SQ. FT.	0.25	14.0 SQ. FT.	8'-0"	FIX/CASE	X		FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	CASE RIGHT HINGE
S	2'-6"	x 3'-6"	8.8 SQ. FT.	1	8.8 SQ. FT.	0.25	2.2 SQ. FT.	7'-0"	AWN			FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	
T1	2'-6"	x 5'-6"	13.8 SQ. FT.	1	13.8 SQ. FT.	0.25	3.4 SQ. FT.	7'-0"	CASE			FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	LEFT HINGE / EGRESS
T2	2'-6"	x 5'-6"	13.8 SQ. FT.	1	13.8 SQ. FT.	0.25	3.4 SQ. FT.	7'-0"	CASE			FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	RIGHT HINGE / EGRESS
U1	7'-8"	x 5'-0"	38.5 SQ. FT.	1	38.5 SQ. FT.	0.25	9.6 SQ. FT.	8'-0"	FIX/CASE			FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	CASE RIGHT HINGE
U2	7'-8"	x 5'-0"	38.5 SQ. FT.	1	38.5 SQ. FT.	0.25	9.6 SQ. FT.	8'-0"	FIX/CASE			FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	CASE LEFT HINGE
V	3'-11 1/2"	x VARIES	29.0000 SQ. FT.	1	29.0 SQ. FT.	0.25	7.3 SQ. FT.	FOLLOW ROOF	FIX	X	CORNER	FIBERGLASS/BLACK	LO-E/LOW ERS/ARGON	MARVIN	COORDINATE W/ "N"
WINDOW UA:			WINDOW AREA		826.6 SF	TOTAL UA	206.5 SF								

WINDOW NOTES:

- CONTRACTOR SHALL MEASURE ACTUAL FRAMED OPENINGS PRIOR TO ORDERING UNITS. ROUGH OPENING PER MANUFACTURER'S REQUIREMENTS.
- WINDOW MANUFACTURER: MARVIN EXCEPT AS NOTED OTHERWISE
- WINDOW MANUFACTURER TO VERIFY OPERATION AND WIDTH OPENING – COORDINATE WITH ARCHITECT WHERE DIFFERS FROM DRAWINGS
- TEMPERED GLASS: WITHIN TWO FEET OF ALL EXTERIOR DOORS, WITHIN 18" OF FLOOR, IN SHOWERS AND OTHER HAZARDOUS LOCATIONS AS IDENTIFIED IN IRC R308.4. SEE ELEVATIONS FOR TEMPERED LIGHTS.
- EGRESS WINDOWS AT SLEEPING ROOMS SHALL MEET IRC R310
- EO 1.4: EFFICIENT BUILDING ENVELOPE: ALL NEW EXTERIOR WINDOWS SHALL MEET MINIMUM U-25 MINIMUM COMPLIANCE.
- OBSCURED GLASS AS NOTED.
- SCREENS ON ALL OPERABLE WINDOWS. CONNECT SCREENS TO SECURITY SYSTEM.
- ALL OPERABLE WINDOWS CONNECTED TO WHOLE-HOUSE SECURITY SYSTEM

ABBREVIATIONS

- | | |
|-------|------------------|
| AWN | AWNING |
| CASE | CASEMENT |
| CLR | CLEAR |
| DBL | DOUBLE GLAZING |
| FIX | FIXED |
| HC | HOLLOW CORE |
| LAM | LAMINATED |
| LO-E | LOW-EMISSIVITY |
| MIN | MINUTE |
| OBS | OBSCURE |
| R.O. | ROUGH OPENING |
| SC | SOLID CORE |
| SLD | SLIDING |
| SL | SKYLIGHT |
| STORE | STOREFRONT |
| TBD | TO BE DETERMINED |
| TG | TEMPERED GLASS |
| UA | U-VALUE AREA |
| WD | WOOD |

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Scale:

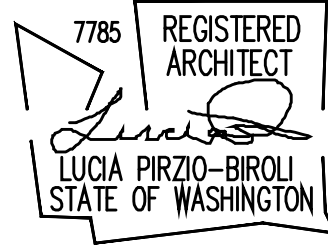
Sheet:

Window
Schedule
A9.1



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Scale:
Sheet:

Door
Schedule
A9.2

Exterior Door to Conditioned Space

TAG	PANEL SIZE			UNIT AREA	PANEL QTY.	TOTAL door area	MAX U-VALUE	UA VALUE	Thickness	Location	TYPE	HARDWARE NOTE 3	MATERIAL/FINISH	FRAME/FINISH	GLASS	MANUF.	COLOR	NOTES
	width		height															
1	3'-0"	x	7'-0"	21.0 SQ. FT.	1	21.0 SQ. FT.	.46	9.7 SQ. FT.	0'-1 3/4"	ENTRY	SC/INSULATED/SLAB	DEADBOLT/TBD	WD/TBD	WD./TBD	NA	CUSTOM	TBD	COORD W/ SIDELIGHT WINDOW "A"
2	3'-0"	x	7'-0"	21.0 SQ. FT.	1	21.0 SQ. FT.	.46	9.7 SQ. FT.	0'-1 3/4"	ADU ENTRY	SC/FLUSH/INSULATED	DEADBOLT/LEVER	WD/STAIN	WD./STAIN	NA	TBD	TBD	
3	2'-4"	x	7'-0"	16.3 SQ. FT.	2	32.7 SQ. FT.	.46	15.0 SQ. FT.	0'-1 3/4"	GARAGE/MECH.	SC/FLUSH/INSULATED	SELF-CLOSING/LEVER	WD/STAIN	WD./STAIN	NA	TBD	MATCH INT. DOORS	20 MINUTE
4	3'-0"	x	7'-0"	21.0 SQ. FT.	1	21.0 SQ. FT.	.46	9.7 SQ. FT.	0'-1 3/4"	GARAGE/ENTRY	SC/FLUSH/INSULATED	SELF-CLOSING/LEVER	WD./STAIN	WD./STAIN	NA	TBD	MATCH INT. DOORS	20 MINUTE
5	3'-6"	x	8'-0"	28.0 SQ. FT.	3	84.0 SQ. FT.	.25	21.0 SQ. FT.	0'-1 3/4"	MAIN DINING/DECK 1	STORE/MULTI-SLIDE	TRACK/3 PT. LOCK	FIBERGLASS/MATCH WINDOWS	FIBERGLASS/FACTORY	LO-E3/LO-ERS/ARGON/TG	MARVIN	BLACK	NOTE 4
6	2'-6"	x	7'-0"	17.5 SQ. FT.	4	70.0 SQ. FT.	.25	17.5 SQ. FT.	0'-1 3/4"	MAIN LOUNGE/DECK 2	STORE/INSULATED	DEADBOLT/LEVER	FIBERGLASS/MATCH WINDOWS	FIBERGLASS/FACTORY	LO-E3/LO-ERS/ARGON/TG	MARVIN	BLACK	
7	2'-4"	x	7'-0"	16.3 SQ. FT.	2	32.7 SQ. FT.	.25	8.2 SQ. FT.	0'-1 3/4"	GUEST SUITE/PATIO	STORE/INSULATED	DEADBOLT/LEVER	FIBERGLASS/MATCH WINDOWS	FIBERGLASS/FACTORY	LO-E3/LO-ERS/ARGON/TG	MARVIN	BLACK	
8	2'-4"	x	7'-0"	16.3 SQ. FT.	2	32.7 SQ. FT.	.25	8.2 SQ. FT.	0'-1 3/4"	LOUNGE/PATIO	STORE/INSULATED	DEADBOLT/LEVER	FIBERGLASS/MATCH WINDOWS	FIBERGLASS/FACTORY	LO-E3/LO-ERS/ARGON/TG	MARVIN	BLACK	
36	3'-0"	x	7'-0"	21.0 SQ. FT.	1	21.0 SQ. FT.	.46	9.7 SQ. FT.	0'-1 3/4"	ELEVATOR/ LOWER LEVEL	SC/FLUSH/INSULATED	SELF-CLOSING/LEVER	WD./STAIN	WD./STAIN	NA	TBD	MATCH INT. DOORS	20 MINUTE
37	3'-0"	x	7'-0"	21.0 SQ. FT.	1	21.0 SQ. FT.	.46	9.7 SQ. FT.	0'-1 3/4"	ELEVATOR/ BACK HALL	SC/FLUSH/INSULATED	SELF-CLOSING/LEVER	WD./STAIN	WD./STAIN	NA	TBD	MATCH INT. DOORS	20 MINUTE
38	3'-0"	x	7'-0"	21.0 SQ. FT.	1	21.0 SQ. FT.	.46	9.7 SQ. FT.	0'-1 3/4"	ELEVATOR/MAIN LEVEL	SC/FLUSH/INSULATED	SELF-CLOSING/LEVER	WD./STAIN	WD./STAIN	NA	TBD	MATCH INT. DOORS	20 MINUTE
39	3'-0"	x	7'-0"	21.0 SQ. FT.	1	21.0 SQ. FT.	.46	9.7 SQ. FT.	0'-1 3/4"	ELEVATOR/TOP LEVEL	SC/FLUSH/INSULATED	SELF-CLOSING/LEVER	WD./STAIN	WD./STAIN	NA	TBD	MATCH INT. DOORS	20 MINUTE
AREA DOORS IMPACTING UA:				EXT. DOOR AREA		249.7 SQ. FT.	TOTAL UA	82.5 SQ. FT.										

EXTERIOR DOOR NOTES:

1. CONTRACTOR SHALL MEASURE ACTUAL FRAMED OPENINGS PRIOR TO ORDERING UNITS. ROUGH OPENING PER MANUFACTURER'S REQUIREMENTS.
2. UNIT BREAK DOWN W/ IN ROUGH OPENING
3. (3) MINIMUM HEAVY DUTY CONCEALED HINGES MIN. AT ALL EXTERIOR SWING DOORS
4. 3 POINT LOCKING SYSTEM MINIMUM
5. MANUFACTURER: MARVIN EXCEPT AS NOTED OTHERWISE
6. MANUFACTURER TO VERIFY OPERATION AND WIDTH OPENING - COORDINATE WITH ARCHITECT WHERE DIFFERS FROM DRAWINGS
7. TEMPERED GLASS: WITHIN TWO FEET OF ALL EXTERIOR DOORS, WITHIN 18" OF FLOOR, IN SHOWERS AND OTHER HAZARDOUS LOCATIONS AS IDENTIFIED IN IRC R308.4
8. GLASS - LO-E3/LOW ERS/ARGON FILLED AT ALL WINDOWS AND STOREFRONT DOORS
9. EGRESS WINDOWS AT SLEEPING ROOMS SHALL MEET IRC R310. NOTED ON ELEVATIONS
10. EC 1.4: EFFICIENT BUILDING ENVELOPE ALL NEW EXTERIOR WINDOWS AND GLAZED DOORS SHALL MEET MINIMUM U-25 MINIMUM COMPLIANCE.
11. OBSCURED GLASS AS NOTED.
12. SCREENS ON ALL OPERABLE WINDOWS, SLIDING GLASS DOORS AND SWING DOORS AS NOTED.
13. ALL EXTERIOR DOORS AND SCREENS CONNECTED TO WHOLEHOUSE SECURITY SYSTEM.
14. ELEVATOR DOORS: 20 MINUTE WITH SELF-CLOSING HARDWARE

ABBREVIATIONS

AWN AWNING
CASE CASEMENT
CLR CLEAR
DBL DOUBLE GLAZING
FIX FIXED
HC HOLLOW CORE
LAM LAMINATED
LO-E LOW-EMISSIVITY
MIN MINUTE
OBS OBSCURE
R.C. ROLLER CATCH
R.O. ROUGH OPENING
SC SOLID CORE
SLD SLIDING
SL SKYLIGHT
STORE STOREFRONT
TBD TO BE DETERMINED
TG TEMPERED GLASS
TRPL TRIPLE
UA U-VALUE AREA
WD WOOD

Interior Door Schedule & Doors From Un-conditioned Space to Exterior

TAG	PANEL SIZE (NOTE #4)			PANEL QTY.	UNIT AREA	Thickness	TYPE	LOCATION	MATERIAL/ FINISH	GLASS	HARDWARE NOTES 2&3	MANUF.	NOTES
	width		height										
9	2'-8"	x	7'-0"	1	18.7 SQ. FT.	0'-1 3/8"	SC/SLAB	ENTRY HALL/BACK HALL	WOOD/TBD	NA	LEVER/PRIVACY	TBD.	NOTE 4
10	2'-8"	x	7'-0"	1	18.7 SQ. FT.	0'-1 3/8"	SC/SLAB	BACK HALL/STORAGE	WOOD/TBD	NA	LEVER	TBD	NOTE 4
11	2'-4"	x	7'-0"	1	16.3 SQ. FT.	0'-1 3/8"	SC/SLAB	ADU/ADU BATH	WOOD/TBD	NA	LEVER/PRIVACY	TBD	NOTE 4
12	2'-4"	x	7'-0"	1	16.3 SQ. FT.	0'-1 3/8"	SC/SLAB/PKT	ADU BATH/TOILET	WOOD/TBD	NA	FLUSH PULL/PRIVACY	TBD	
13	2'-0"	x	7'-0"	2	14.0 SQ. FT.	0'-1 3/8"	HC/SLAB	ENTRY COATS	WOOD/TBD	N/A	PULLS/RC	TBD	NOTE 4
14	2'-8"	x	7'-0"	1	18.7 SQ. FT.	0'-1 3/8"	SC/SLAB	ADU/BACK HALL	WOOD/TBD	N/A	LEVER/PRIVACY	TBD	20 MIN. DOOR/PROVIDE SEPARATE LOCKS BOTH SIDES - NOTE 4
15	2'-8"	x	7'-0"	1	18.7 SQ. FT.	0'-1 3/8"	SC/SLAB/PKT	LIVING/PRIMARY SUITE	WOOD/TBD	N/A	FLUSH PULL	TBD	
16	2'-6"	x	7'-0"	1	17.5 SQ. FT.	0'-1 3/8"	SC/SLAB	PRIMARY BED	WOOD/TBD	N/A	LEVER/PRIVACY	TBD	NOTE 4
17	3'-0"	x	7'-0"	1	21.0 SQ. FT.	0'-1 3/8"	SC/SLAB	PRIMARY BATH	WOOD/TBD	N/A	LEVER/PRIVACY	TBD	NOTE 4
18	2'-2"	x	7'-0"	1	15.2 SQ. FT.	0'-1 3/8"	SC/SLAB	WC	WOOD/TBD	N/A	FLUSH PULL/PRIVACY	TBD	
19	2'-10"	x	7'-0"	1	19.8 SQ. FT.	0'-1 3/8"	SC/SLAB	ENTER. AREA/LAUNDRY	WOOD/TBD	N/A	LEVER/PASS	TBD	
20	2'-6"	x	7'-0"	1	17.5 SQ. FT.	0'-1 3/8"	SC/PKT	LAUNDRY	WOOD/TBD	N/A	FLUSH PULL	TBD	
21	2'-6"	x	7'-0"	1	17.5 SQ. FT.	0'-1 3/8"	SC/SLAB	POWDER ROOM	WOOD/TBD	N/A	LEVER/PRIVACY	TBD	NOTE 4
22	3'-0"	x	7'-0"	1	21.0 SQ. FT.	0'-1 3/4"	SC/SLAB	PANTRY	WOOD/TBD	N/A	FLUSH PULL	TBD	
23	2'-8"	x	7'-0"	1	18.7 SQ. FT.	0'-1 3/8"	SC/SLAB	OFFICE	WOOD/TBD	N/A	LEVER/PRIVACY	TBD	NOTE 4
24	2'-8"	x	7'-0"	1	18.7 SQ. FT.	0'-1 3/8"	SC/PKT	BEDROOM #1	WOOD/TBD	N/A	LEVER/PRIVACY	TBD	NOTE 4
25	2'-8"	x	7'-0"	1	18.7 SQ. FT.	0'-1 3/8"	SC/SLAB	BATHROOM #1	WOOD/TBD	N/A	LEVER/PRIVACY	TBD	NOTE 4
26	2'-8"	x	7'-0"	1	18.7 SQ. FT.	0'-1 3/8"	SC/SLAB	GUEST SUITE	WOOD/TBD	N/A	LEVER/PRIVACY	TBD	NOTE 4
27	2'-8"	x	7'-0"	1	18.7 SQ. FT.	0'-1 3/8"	STORE	BEDROOM #2	WOOD/TBD	OBS/TG	LEVER/PRIVACY	TBD	NOTE 4
28	2'-8"	x	7'-0"	1	18.7 SQ. FT.	0'-1 3/8"	SC/PKT	BATHROOM #2	WOOD/TBD	N/A	LEVER/PRIVACY	TBD	NOTE 4
29	2'-8"	x	7'-0"	1	18.7 SQ. FT.	0'-1 3/8"	SC/SLAB	GUEST BATHP	WOOD/TBD	N/A	LEVER/PRIVACY	TBD	NOTE 4
40	18'-0"	x	8'-0"	1	144.0 SQ. FT.	0'-1 3/4"	SECTIONAL	GARAGE	WOOD FACED/STAIN	N/A	MOTORIZED TRACK	TBD	

INTERIOR DOOR NOTES:

1. ALL NON-CLOSET FLUSH DOORS - SOLID CORE
2. (3) HINGES MINIMUM
3. HANDLE LEVER UNO
4. UNDERCUT DOORS 1/2" TO HABITABLE SPACES AS NECESSARY TO MEET WHOLE HOUSE VENTILATION REQUIREMENTS
5. MEASURE PRIOR TO ORDERING DOORS.



ECTYPOS
ARCHITECTURE

4212 W. Mercer Way
Mercer Island, WA 98040
t. (206) 232-9147
f. (206) 275-0312



CHEN RESIDENCE
New Residence
8435 SE 47th PL.
Mercer Island, WA 98040

ABBREVIATIONS
AWN AWNING
CASE CASEMENT
CLR CLEAR
DBL DOUBLE GLAZING
FIX FIXED
HC HOLLOW CORE
LAM LAMINATED
LO-E LOW-EMISSIVITY
MIN MINUTE
OBS OBSCURE
R.C. ROLLER CATCH
R.O. ROUGH OPENING
SC SOLID CORE
SLD SLIDING
SL SKYLIGHT
STORE STOREFRONT
TBD TO BE DETERMINED
TG TEMPERED GLASS
TRPL TRIPLE
UA U-VALUE AREA
WD WOOD

Interior Specialty Glass Schedule													
TAG	PANEL SIZE (NOTE #4)			PANEL QTY.	UNIT AREA	Thickness	TYPE	LOCATION	MATERIAL/ FINISH	GLASS	HARDWARE NOTES 2&3	MANUF.	NOTES
	width		height		square ft.								
30	2'-0"	x	6'-8"	1	13.3 SQ. FT.	0'-1 3/8"	SC/SLAB	ADU SAUNA	WOOD/TBD	LAMINATED/TG	LEVER	TBD.	
31	2'-0"	x	7'-0"	1	14.0 SQ. FT.	0'-0 3/8"	SHOWER	ADU	FRAMELESS SHOWER	LAMINATED/TG	PULL	TBD	
32	2'-2"	x	7'-0"	1	15.2 SQ. FT.	0'-0 3/8"	SHOWER	PRIMARY BATH WET RM.	FRAMELESS SHOWER	LAMINATED/TG	PULL	TBD	
33	2'-4"	x	7'-0"	1	16.3 SQ. FT.	0'-0 3/8"	SHOWER	BATHROOM #1	FRAMELESS SHOWER	LAMINATED/TG	PULL	TBD	BARN DOOR TRACK HARDWARE
34	2'-4"	x	7'-0"	1	16.3 SQ. FT.	0'-0 3/8"	SHOWER	BATHROOM #2	FRAMELESS SHOWER	LAMINATED/TG	PULL	TBD	BARN DOOR TRACK HARDWARE
35	2'-4"	x	7'-0"	1	16.3 SQ. FT.	0'-0 3/8"	SHOWER	GUEST SUITE BATH	FRAMELESS SHOWER	LAMINATED/TG	PULL	TBD	BARN DOOR TRACK HARDWARE
W	10'-8"	x	7'-8"	1	81.8 SQ. FT.	TBD	SCREEN	INTERIOR STAIRS	TBD	LAMINATED/TG	-	TBD	TRIPLE MULLIONS

INTERIOR DOOR NOTES:
1. ALL NON-CLOSET FLUSH DOORS - SOLID CORE
2. (3) HINGES MINIMUM
3. HANDLE LEVER UNO
4. UNDERCUT DOORS 1/2" TO HABITABLE SPACES AS NECESSARY TO MEET WHOLE HOUSE VENTILATION REQUIREMENTS
5. MEASURE PRIOR TO ORDERING DOORS.

Date:
2/19/2023 Permit Approval
8/24/2023 Permit Rev. Sub
12/6/2024 Permit Rev. Sub

Scale:

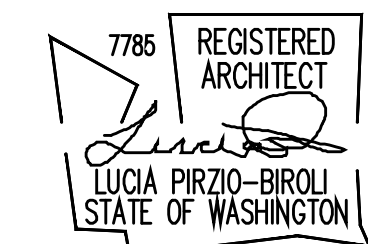
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Specialty Glass
Schedule
A9.3



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ARCHITECTURE

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f. (206) 275-0312



CHEN RESIDENCE

New Residence
8435 SE 47th PL.
Mercer Island, WA 98040

Power and Lighting Legend

	Recessed Ceiling Mounted Exhaust Fan
	Recessed Ceiling Mounted Smoke Detector/Carbon Monoxide
	Heat Detector / Heat Alarm
	Cable Connection
	Floor Mounted Cable Connection
	Dedicated Data Outlet (CatVI)
	Switch
	Switch, Multi-way
	Switch, Dimmer
	Switch, Dimmer/Multi-way
	Switch, Door Activated
	Duplex Outlet
	Ground Fault Circuit Interrupter
	Exterior Duplex Outlet
	Four-plex Outlet
	Floor Mounted Duplex Outlet
	Strip Outlets
	220 V Outlet
	Breaker Panel
	Meter
	Security Panel
	Recessed Ceiling Mounted LED Downlight
	Recessed Ceiling Mounted LED Wallwasher
	Surface Ceiling Mounted LED Downlight
	Surface Mounted Wall LED Sconce
	Surface Mounted Track LED Lighting
	Surface Mounted Undercabinet Strip LED Lighting
	Ribbon LED linear light
	Pendant Fixture
	Cluster Pendant Fixture
	Surface Mounted Downlight
	Surface Mounted LED Batten Fixture
	Recessed Step LED Light
	Exterior Recessed Ceiling Mounted LED Downlight
	Exterior Ground LED Light
	Exterior Surface Mounted Wall LED Sconce
	Exterior Recessed Wall LED Step Light
	Exterior Direct Burial Uplight
	Pool Light
	Waste Disposal
	Level 2 240V EV Charger
	Security Camera w/ Night Vision Capability
	DOOR BELL

- Notes:
1. Install household fire alarm system as outlined in General Notes on A0.1
 2. Install comprehensive security system as specified.
 3. Provide all necessary power for elevator.
 4. Install electric under-floor heating system w/ timer & thermostat @ all bath rooms.

PROVIDE REQUIRED POWER:
MINI-SPLIT & AIR TO WATER
CONDENSER

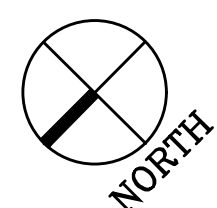
PROVIDE MAKEUP
AIR-IRC M1503.6

CONTINUOUSLY OPERATED
MECHANICAL EXHAUST VENT
50 CFM PER WAC 51-51-0408
- COORD. W/ UTILITY ROOM
EXHAUST SYSTEM.

CRAWL SPACE ACCESS FROM
MECHANICAL ROOM - 16"x24"
PER 2021 WARC R 408.4

TIMER/MOTION
DETECTOR

NOTE 3



1 Lower Floor Electrical Plan
scale: 1/4"=1'-0"

Date:
2/19/2023 Permit Approval
8/24/2023 Permit Rev. Sub
12/6/2024 Permit Rev. Sub

Scale:

Sheet:
Lower Floor
Electrical Plan
E2.0



ECTYPOS
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CHEN RESIDENCE

New Residence
8435 SE 47th PL.
Mercer Island, WA 98040

HARD WIRED TOWEL
WARMER W/TIMER

DRYER DEDICATED
OUTLET

IRON. BOARD
DEDICATED OUTLET

DW DEDICATED
OUTLET

PROVIDE MAKEUP
AIR - IRC M1503.6

LINEAR PENDANT
OVEN DEDICATED
OUTLET



1

Main Floor Electrical Plan

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

Power and Lighting Legend

	Recessed Ceiling Mounted Exhaust Fan
	Recessed Ceiling Mounted Smoke Detector/Carbon Monoxide
	Heat Detector / Heat Alarm
	Cable Connection
	Floor Mounted Cable Connection
	Dedicated Data Outlet (CatV)
	Switch
	Switch, Multi-way
	Switch, Dimmer
	Switch, Dimmer/Multi-way
	Switch, Door Activated
	Duplex Outlet
	Ground Fault Circuit Interrupter
	Exterior Duplex Outlet
	Four-plex Outlet
	Floor Mounted Duplex Outlet
	Strip Outlets
	220 V Outlet
	Breaker Panel
	Meter
	Security Panel
	Recessed Ceiling Mounted LED Downlight
	Recessed Ceiling Mounted LED Wallwasher
	Surface Ceiling Mounted LED Downlight
	Surface Mounted Wall LED Sconce
	Surface Mounted Track LED Lighting
	Surface Mounted Undercabinet Strip LED Lighting
	Ribbon LED linear light
	Pendant Fixture
	Cluster Pendant Fixture
	Surface Mounted Downlight
	Surface Mounted LED Batten Fixture
	Recessed Wall LED Light
	Exterior Recessed Ceiling Mounted LED Downlight
	Exterior Ground LED Light
	Exterior Surface Mounted Wall LED Sconce
	Exterior Recessed Wall LED Step Light
	Exterior Direct Burial Upflight
	Pool Light
	Waste Disposal
	Level 2 240V EV Charger
	Security Camera w/ Night Vision Capability
	Door Bell

- Notes:
1. Install household fire alarm system as outlined in General Notes on A0.1
 2. Install comprehensive security system as specified.
 3. Provide all necessary power for elevator.
 4. Install electric under-floor heating system w/ timer & thermostat @ all bath rooms.

Date:
2/19/2023 Permit Approval
8/24/2023 Permit Rev. Sub
12/6/2024 Permit Rev. Sub

Scale:

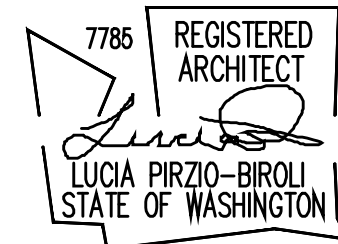
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Main Floor
Electrical Plan
E2.1



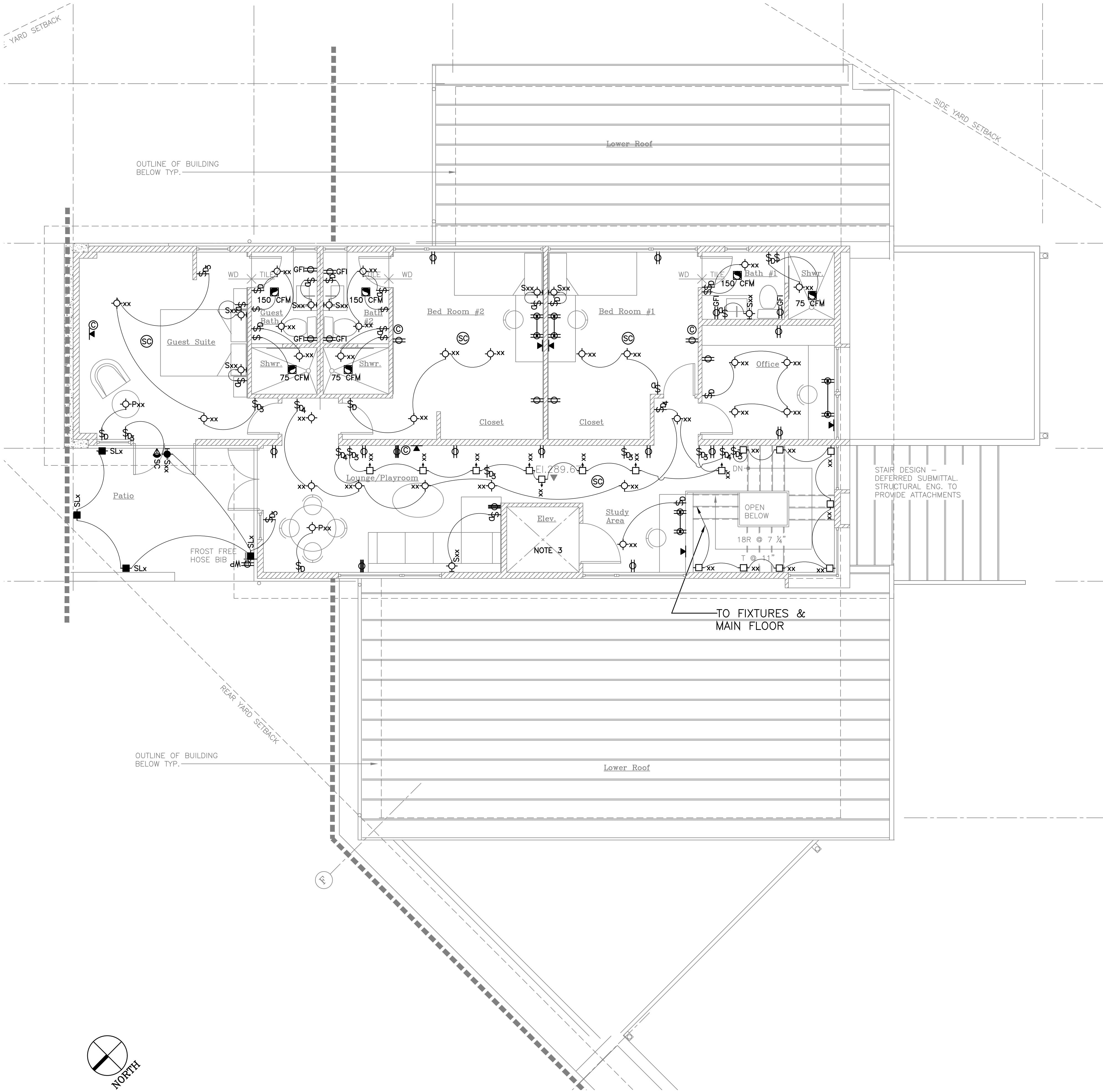
ECTYPOS
ARCHITECTURE

4212 W. Mercer Way
Mercer Island, WA 98040
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CHEN RESIDENCE

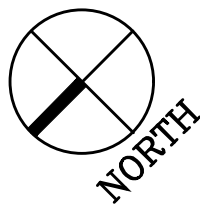
New Residence
8435 SE 47th PL.
Mercer Island, WA 98040



Power and Lighting Legend

	Recessed Ceiling Mounted Exhaust Fan
	Recessed Ceiling Mounted Smoke Detector/Carbon Monoxide
	Heat Detector / Heat Alarm
	Cable Connection
	Floor Mounted Cable Connection
	Dedicated Data Outlet (CatVI)
	Switch
	Switch, Multi-way
	Switch, Dimmer
	Switch, Dimmer/Multi-way
	Switch, Door Activated
	Duplex Outlet
	Ground Fault Circuit Interrupter
	Exterior Duplex Outlet
	Four-plex Outlet
	Floor Mounted Duplex Outlet
	Strip Outlets
	220 V Outlet
	Breaker Panel
	Meter
	Security Panel
	Recessed Ceiling Mounted LED Downlight
	Recessed Ceiling Mounted LED Wallwasher
	Surface Ceiling Mounted LED Downlight
	Surface Mounted Wall LED Sconce
	Surface Mounted Track LED Lighting
	Surface Mounted Undercabinet Strip LED Lighting
	Ribbon LED linear light
	Pendant Fixture
	Cluster Pendant Fixture
	Surface Mounted Downlight
	Surface Mounted LED Batten Fixture
	Recessed Mounted Wall LED Washer
	Recessed Wall LED Light
	Exterior Recessed Ceiling Mounted LED Downlight
	Exterior Ground LED Light
	Exterior Surface Mounted Wall LED Sconce
	Exterior Recessed Wall LED Step Light
	Exterior Direct Burial Uplight
	Pool Light
	Waste Disposal
	Level 2 240V EV Charger
	Ceiling Fan with Light
	Security Camera w/ Night Vision Capability

- Notes:
1. Install household fire alarm system as outlined in General Notes on A0.1
 2. Install comprehensive security system as specified.
 3. Provide all necessary power for elevator.
 4. Install electric under-floor heating system w/ timer & thermostat @ all bath rooms.



1 Upper Level Electrical Plan
scale: 1/4"=1'-0"

Date:
2/19/2023 Permit Approval
8/24/2023 Permit Rev. Sub
12/6/2024 Permit Rev. Sub

Scale:

Sheet:

Top Floor
Electrical Plan
E2.2

-GENERAL STRUCTURAL NOTES									
(The following apply unless shown otherwise on the plans)									
CRITERIA									
1.	ALL MATERIALS WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE 2018 INTERNATIONAL BUILDING CODE (IBC) INCLUDING WASHINGTON STATE MODIFICATIONS.								
2.	DESIGN LOADING CRITERIA								
<table><tr><td>SNOW LOAD</td><td>GROUND SNOW LOAD, P_s = 25 PSF RAIN ON SNOW SURCHARGE = 5 PSF 40 PSF 60 PSF 200 LBS.</td></tr><tr><td>FLOOR LIVE LOAD (RESIDENTIAL) FLOOR LIVE LOAD (RESIDENTIAL BALCONIES AND DECKS) GUARDRAILS/BALCONY RAILS (RESIDENTIAL)</td><td>BASIC WIND SPEED = 97 MPH ALLOWABLE STRESS DESIGN WIND SPEED = 75 MPH IMPORTANCE FACTOR, I_w= 1.0 RISK CATEGORY = II TOPOGRAPHIC FACTOR, K_{zt} = 1.60 EXPOSURE CATEGORY = C INTERNAL PRESSURE COEFFICIENT, (GC_p)= 0.18/-0.18</td></tr><tr><td>WIND (MAIN WIND FORCE RESISTING SYSTEM)</td><td></td></tr><tr><td>GROSS WIND PRESSURES FOR COMPONENTS AND CLADDING</td><td>ZONE 1 = -61.2 PSF ZONE 2 = -80.5 PSF ZONE 3 = -109.8 PSF ZONE 4 = -61.6 PSF ZONE 5 = -51.3 PSF</td></tr></table>		SNOW LOAD	GROUND SNOW LOAD, P _s = 25 PSF RAIN ON SNOW SURCHARGE = 5 PSF 40 PSF 60 PSF 200 LBS.	FLOOR LIVE LOAD (RESIDENTIAL) FLOOR LIVE LOAD (RESIDENTIAL BALCONIES AND DECKS) GUARDRAILS/BALCONY RAILS (RESIDENTIAL)	BASIC WIND SPEED = 97 MPH ALLOWABLE STRESS DESIGN WIND SPEED = 75 MPH IMPORTANCE FACTOR, I _w = 1.0 RISK CATEGORY = II TOPOGRAPHIC FACTOR, K _{zt} = 1.60 EXPOSURE CATEGORY = C INTERNAL PRESSURE COEFFICIENT, (GC _p)= 0.18/-0.18	WIND (MAIN WIND FORCE RESISTING SYSTEM)		GROSS WIND PRESSURES FOR COMPONENTS AND CLADDING	ZONE 1 = -61.2 PSF ZONE 2 = -80.5 PSF ZONE 3 = -109.8 PSF ZONE 4 = -61.6 PSF ZONE 5 = -51.3 PSF
SNOW LOAD	GROUND SNOW LOAD, P _s = 25 PSF RAIN ON SNOW SURCHARGE = 5 PSF 40 PSF 60 PSF 200 LBS.								
FLOOR LIVE LOAD (RESIDENTIAL) FLOOR LIVE LOAD (RESIDENTIAL BALCONIES AND DECKS) GUARDRAILS/BALCONY RAILS (RESIDENTIAL)	BASIC WIND SPEED = 97 MPH ALLOWABLE STRESS DESIGN WIND SPEED = 75 MPH IMPORTANCE FACTOR, I _w = 1.0 RISK CATEGORY = II TOPOGRAPHIC FACTOR, K _{zt} = 1.60 EXPOSURE CATEGORY = C INTERNAL PRESSURE COEFFICIENT, (GC _p)= 0.18/-0.18								
WIND (MAIN WIND FORCE RESISTING SYSTEM)									
GROSS WIND PRESSURES FOR COMPONENTS AND CLADDING	ZONE 1 = -61.2 PSF ZONE 2 = -80.5 PSF ZONE 3 = -109.8 PSF ZONE 4 = -61.6 PSF ZONE 5 = -51.3 PSF								
NOTE: WIND PRESSURES ARE BASED ON TRIBUTARY AREAS LESS THAN 10 SQ-FT									
EARTHQUAKE (EQUIVALENT LATERAL FORCE PROCEDURE)	S _{ps} = 1.439 S _{ps} = 0.959 S ₁ = 0.5 S ₀₁ = 0.6 IMPORTANCE FACTOR, I _{pe} = 1.0 SITE CLASS D SEISMIC DESIGN CATEGORY= D RISK CATEGORY = II R = 6.5 FOR WOOD STRUCTURAL PANEL SHEAR WALLS OVER STRENGTH FACTOR, Ω _s = 3.0 DEFLECTION AMPLIFICATION FACTOR, C _d = 4.0 REDUNDANCY FACTOR = 1.0 SEISMIC RESPONSE COEFFICIENT, C _s = 0.148 SEISMIC BASE SHEAR = 24.3 KIPS 1.0 INCHES/HOUR								
RAIN INTENSITY									
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. ALL DIMENSIONS SHOWN ON THE STRUCTURAL DRAWINGS ARE INTENDED FOR REFERENCE ONLY. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.								
4.	CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS, MEMBER SIZES, AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE STRUCTURAL 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 WORK. THE STRUCTURAL ENGINEER HAS NO OVERALL SUPERVISORY AUTHORITY OR ACTUAL AND/OR DIRECT RESPONSIBILITY FOR THE SPECIFIC WORKING CONDITIONS AT THE SITE AND/OR FOR ANY HAZARDS RESULTING FROM THE ACTIONS OF ANY TRADE CONTRACTOR. THE STRUCTURAL ENGINEER HAS NO DUTY TO INSPECT, SUPERVISE, NOTE, CORRECT, OR REPORT ANY HEALTH OR SAFETY DEFICIENCIES OF THE OWNER, CONTRACTORS, OR OTHER ENTITIES OR PERSONS AT THE PROJECT SITE.								
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.	ALL STRUCTURAL SYSTEMS WHICH ARE TO BE COMPOSED OF COMPONENTS TO BE FIELD ERECTED SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE, AND ERECTION IN ACCORDANCE WITH INSTRUCTIONS PREPARED BY THE SUPPLIER.								
10.	MECHANICAL / ELECTRICAL / PLUMBING: CONTRACTOR SHALL SUBMIT DRAWINGS SHOWING THE LOCATION, LOADS, AND ANCHORAGE OF ALL MECHANICAL, ELECTRICAL, PLUMBING, AND SPRINKLER ATTACHMENTS IN EXCESS OF 50 POUNDS TO STRUCTURAL ENGINEER FOR REVIEW PRIOR TO INSTALLATION. ALL DETAILS NECESSARY FOR ATTACHING THESE SYSTEMS TO THE BASE BUILDING STRUCTURE, INCLUDING THE DESIGN AND DETAILING OF THE DESIGNATED SEISMIC LOAD RESISTING SYSTEM AS REQUIRED BY SECTION 1705.12.4 OF THE INTERNATIONAL BUILDING CODE, ARE THE RESPONSIBILITY OF THE SUPPLIER OF THAT EQUIPMENT AND MUST BE STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF WASHINGTON.								
11.	SUBMITTAL REVIEW PERIOD: SUBMITTALS SHALL BE MADE IN TIME TO ALLOW MINIMUM OF TWO WEEKS FOR REVIEW BY THE ARCHITECT/ENGINEER PRIOR TO FABRICATION.								
12.	GENERAL CONTRACTOR'S PRIOR REVIEW OF SUBMITTALS: PRIOR TO SUBMISSION TO THE ARCHITECT/ENGINEER THE CONTRACTOR SHALL REVIEW THE SUBMITTAL FOR COMPLETENESS. DIMENSIONS AND QUANTITIES ARE NOT REVIEWED BY THE ENGINEER AND THEREFORE MUST BE VERIFIED BY THE GENERAL CONTRACTOR. GENERAL CONTRACTOR SHALL PROVIDE ALL NECESSARY DIMENSIONAL INFORMATION REQUESTED BY THE DETAILER AND SHALL PROVIDE THE GENERAL CONTRACTOR'S REVIEW STAMP AND SIGNATURE PRIOR TO FORWARDING THE SUBMITTAL TO THE ARCHITECT/ENGINEER.								
13.	SHOP DRAWINGS FOR: A. REINFORCING STEEL (FOR BOTH CONCRETE AND MASONRY CONSTRUCTION) B. STRUCTURAL STEEL C. GLUED LAMINATED MEMBERS D. OPEN WEB WOOD (OR COMBINATION WOOD/STEEL) TRUSSES E. CONNECTOR PLATE WOOD ROOF TRUSSES F. PLYWOOD WEB JOISTS								

SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION OF THESE ITEMS. CONTRACTOR SHALL ALSO SUBMIT SHOP DRAWINGS TO THE BUILDING DEPARTMENT AS REQUIRED. SHOP DRAWINGS FOR CONNECTOR PLATE WOOD ROOF TRUSSES SHALL ALSO BE SUBMITTED TO THE MECHANICAL ENGINEER FOR COORDINATION.

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

14. 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.

SHOP DRAWINGS 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.

DEFERRED SUBMITTALS FOR BUILDING COMPONENTS INCLUDING, BUT NOT LIMITED TOO, STAIRS, PREFABRICATED CONNECTOR PLATE WOOD ROOF TRUSSES, AND EXTERIOR CLADDING SHALL INCLUDE THE ENGINEER'S STAMP FOR THE STATE OF WASHINGTON AND SHALL BE APPROVED BY THE COMPONENT DESIGNER PRIOR TO CURSORY REVIEW BY THE ENGINEER OF RECORD FOR LOADS IMPOSED ON THE BASIC STRUCTURE. THE COMPONENT DESIGNER IS RESPONSIBLE FOR CODE CONFORMANCE AND ALL NECESSARY CONNECTIONS NOT SPECIFICALLY CALLED OUT ON ARCHITECTURAL OR STRUCTURAL DRAWINGS. DEFERRED SUBMITTALS SHALL INDICATE MAGNITUDE AND DIRECTION OF ALL LOADS IMPOSED ON BASIC STRUCTURE. DESIGN CALCULATIONS SHALL BE INCLUDED IN THE SUBMITTAL.

15. STATEMENT SPECIAL INSPECTIONS:

THE FOLLOWING CONSTRUCTION TYPES ARE TO BE REVIEWED BY A SPECIAL INSPECTOR DESIGNATED BY THE OWNER OR ARCHITECT. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION. SPECIAL INSPECTION SHALL CONFORM TO SECTION 1704 OF THE 2018 INTERNATIONAL BUILDING CODE. SPECIAL INSPECTION AGENCY SHALL BE RESPONSIBLE FOR KEEPING RECORDS OF SPECIAL INSPECTIONS AND TESTS. THE ARCHITECT, STRUCTURAL ENGINEER, AND BUILDING DEPARTMENT SHALL BE FURNISHED WITH COPIES OF ALL INSPECTION REPORTS AND TEST RESULTS.

SOILS: SHALL BE SPECIAL INSPECTED AS REQUIRED IN THE INTERNATIONAL BUILDING CODE SECTION 1705.6 AND AS DIRECTED IN THE GEOTECHNICAL REPORT.

STEEL CONSTRUCTION AND WELDING: SHALL BE SPECIAL INSPECTED AS REQUIRED IN THE INTERNATIONAL BUILDING CODE SECTION 1705.2, AISC 360-16, AISC 341-16, AWS D1.1, AND AWS D1.8.

POST-INSTALLED ANCHORS: PERIODIC SPECIAL INSPECTION IN ACCORDANCE WITH THE PRODUCTS APPROVED ICC-ES REPORT.

16. THE CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A MAIN WIND OR SEISMIC FORCE RESISTING SYSTEM, DESIGNATED WIND OR SEISMIC SYSTEM, OR SEISMIC FORCE RESISTING COMPONENT SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND OWNER PRIOR TO COMMENCEMENT OF WORK AS REQUIRED BY SECTION 1704.4 OF THE INTERNATIONAL BUILDING CODE.

GEOTECHNICAL

17. 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 (CONTROLLED, COMPACTED STRUCTURAL FILL OR BOTH) AT LEAST 18" BELOW LOWEST ADJACENT FINISHED GRADE. FOOTING DEPTHS/ELEVATIONS SHOWN ON PLANS (OR IN DETAILS) ARE MINIMUM AND FOR GUIDANCE ONLY; THE ACTUAL ELEVATIONS OF FOOTINGS MUST BE ESTABLISHED BY THE CONTRACTOR IN THE FIELD WORKING WITH THE TESTING LAB AND SOILS ENGINEER. BACKFILL BEHIND ALL RETAINING WALLS WITH FREE DRAINING GRANULAR FILL AND PROVIDE FOR SUBSURFACE DRAINAGE AS NOTED IN THE SOILS REPORT.

ALLOWABLE SOIL PRESSURE	4,000 PSF
LATERAL EARTH PRESSURE (RESTRAINED/UNRESTRAINED)	60 PCF/40 PCF
LATERAL EARTH PRESSURE (SEISMIC)	9H (ULTIMATE LOAD)
PASSIVE EARTH PRESSURE (ULTIMATE)	300 PCF
COEFFICIENT OF FRICTION (ULTIMATE)	0.45

SOILS REPORT REFERENCE: REPORT JN 21061 ISSUED BY GEOTECH CONSULTANTS INC., MARCH 23, 2021

ALL PILE SIZES, EXCEPT 2-INCH DIAMETER PILES, SHALL BE SUBJECT TO ASTM LOAD TESTING ON A MINIMUM OF 3% OF PILES, UP TO 5 PILES MAXIMUM (1 MINIMUM). TESTING SHALL BE IN ACCORDANCE WITH ASTM STANDARD D1143-81 FOR PILES UNDER STATIC AXIAL COMPRESSIVE LOAD.

AS INDICATED IN THE GEOTECHNICAL REPORT PIPE PILES DRIVEN USING HAMMERS AND DRIVING RATES SHOWN BELOW MAY BE ASSIGNED THE FOLLOWING COMPRESSIVE CAPACITIES.

PILE DIAMETER	FINAL DRIVING RATE	JACKHAMMER WEIGHT	CAPACITY
2-INCH DIAMETER PILE (COMPRESSION)	60 SEC/INCH	90 POUND HAMMER	3 TONS

IF 140 POUND HAMMER IS USED TO INSTALL 2-INCH DIAMETER PIPE PILES THE CONTRACTOR SHALL VERIFY THE REQUIRED REFUSAL CRITERIA USING A 90 POUND HAMMER IF REQUIRED BY THE GEOTECHNICAL ENGINEER. THE DRIVING CRITERIA, FOR 3-INCH DIAMETER PILES, IS VALID ONLY FOR HYDRAULIC HAMMERS MOUNTED ON SLIDING LEADS THAT ALLOW THE HAMMER TO SIT ON TOP OF THE PILE DURING INSTALLATION.

MINIMUM PILE EMBEDMENT SHALL NOT BE LESS THAN 6'-0" AND FINAL LENGTH OF 2-INCH DIAMETER PIPE PILES SHALL NOT EXCEED 30'-0". INDIVIDUAL PILE SECTIONS SHALL BE CONNECTED USING SLEEVE COUPLERS INSTALLED BY WABO CERTIFIED WELDERS. ALTERNATE COUPLING METHODS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION.

STEEL PIPE SHALL CONFORM TO ASTM A 53, TYPE E OR S, GRADE B, Fy = 35 KSI. MINIMUM PILE WEIGHT FOR 2-INCH DIAMETER PIPE SHALL BE EXTRA-STRONG (SCHEDULE 80) AS NOTED IN THE AISC STEEL CONSTRUCTION MANUAL. MINIMUM PIPE WEIGHT FOR ALL OTHER PILES SHALL BE AS RECOMMENDED IN THE GEOTECHNICAL REPORT. PIPE PILES SHALL BE GALVANIZED.

PILE INSTALLATION AND TESTING SHALL BE OBSERVED BY THE GEOTECHNICAL ENGINEER.

CONCRETE

18. CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED, AND PLACED IN ACCORDANCE WITH ACI 318-14 AND ACI 301-16. CONCRETE SHALL ATTAIN A 28-DAY STRENGTH (fc) OF 3500 PSI BASED ON EXPOSURE CLASS F1, SHALL CONTAIN NO LESS THAN 5-1/2 SACKS OF CEMENT, HAVE A MAXIMUM WATER/CEMENT RATIO OF 0.45, MAXIMUM AGGREGATE OF 3/4-INCH, AND A SLUMP OF 5 INCHES OR LESS. CONCRETE HAS BEEN DESIGNED BASED ON A CONCRETE STRENGTH (fc) OF 2500 PSI PER INTERNATIONAL BUILDING CODE SECTION 1705.3 EXCEPTION 2.3 TO AVOID SPECIAL INSPECTIONS AND MATERIAL TESTING.

ALL CONCRETE WITH SURFACES EXPOSED TO STANDING WATER SHALL BE AIR-ENTRAINED WITH AN AIR-ENTRAINING AGENT CONFORMING TO ASTM C260, C494M, AND C618. UNLESS OTHERWISE NOTED THE TOTAL AIR CONTENT SHALL BE 5%. AIR CONTENT SHALL BE SAMPLED IN ACCORDANCE WITH ASTM C172 AND AIR CONTENT MEASURED IN ACCORDANCE WITH ASTM C231 OR C173.

CONCRETE MAY BE PLACED BY THE "SHOTCRETE" METHOD, PROVIDED THE APPROVALS, TESTS, AND INSPECTIONS REQUIRED BY BUILDING DEPARTMENT ARE OBTAINED. SHOTCRETE MATERIALS, EQUIPMENT, PROCEDURES, PROPORTIONS, BATCHING AND MIXING, AND PLACEMENT SHALL BE IN ACCORDANCE WITH ACI 506R-05, ACI 506.2-13, ACI 506.4R-94 AND INTERNATIONAL BUILDING CODE SECTION 1908.

19. REINFORCING STEEL SHALL CONFORM TO ASTM A615 (INCLUDING SUPPLEMENTS 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

20. DETAILING OF REINFORCING STEEL (INCLUDING HOOKS AND BENDS) SHALL BE IN ACCORDANCE WITH ACI SP-66-04 AND ACI 318-14 CHAPTER 25. LAP ALL REINFORCEMENTS AS FOLLOWS:

BAR SIZE	MINIMUM LAP LENGTH	MINIMUM HOOK EMBEDMENT
#3	24-INCHES	6-INCHES
#4	31-INCHES	8-INCHES
#5	39-INCHES	11-INCHES
#6	43-INCHES	12-INCHES
#7	62-INCHES	13-INCHES

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. FIELD BENDING OF GRADE 60 REINFORCEMENT SHALL NOT BE ALLOWED.

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

FOOTINGS AND OTHER UNFORMED SURFACES CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
ALL OTHER CASES	1-1/2"

22. SLABS-ON-GRADE: UNLESS NOTED OTHERWISE SHALL BE 4" CONCRETE, REINFORCED WITH 6X6 W1.4XW1.4 WELDED WIRE FABRIC CENTERED IN SLAB. UNLESS OTHERWISE DIRECTED BY SOILS REPORT PROVIDE MINIMUM 10 MIL VAPOR BARRIER OVER 4" OF COMPACTED SAND OR GRAVEL.

23. 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. TOLERANCES FOR ALL STRUCTURAL CONCRETE AND REINFORCEMENT SHALL BE IN ACCORDANCE WITH ACI 117-10 AND ACI 117.1R-14.

24. 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 (3,000 PSI MINIMUM).

POST INSTALLED ANCHORS

25. POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER--OF-RECORD PRIOR TO INSTALLING POST-INSTALLED ANCHORS IN PLACE OF MISSING OR MISPLACED CAST-IN-PLACE ANCHORS. CARE SHALL BE TAKEN IN PLACING POST-INSTALLED ANCHORS TO AVOID CONFLICTS WITH EXISTING REINFORCEMENT. HOLES SHALL BE DRILLED AND CLEANED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND ICC-ES REPORT. SUBSTITUTION REQUESTS, FOR PRODUCTS OTHER THAN THOSE SPECIFIED BELOW, SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER-OF-RECORD ALONG WITH CALCULATIONS THAT ARE PREPARED & SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF WASHINGTON. THE CALCULATIONS SHALL DEMONSTRATE THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING EQUIVALENT PERFORMANCE VALUES (MINIMUM) OF THE SPECIFIED PRODUCT USING THE APPROPRIATE DESIGN PROCEDURE AND/OR STANDARD(S) AS REQUIRED BY THE INTERNATIONAL BUILDING CODE. SUBSTITUTIONS SHALL HAVE CURRENT ICC-ES APPROVAL.

A. CONCRETE ANCHORS

- MECHANICAL ANCHORS FOR USE IN CRACKED AND UNCRACKED CONCRETE SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 308.2 AND ICC-ES AC108. PRE-APPROVED MECHANICAL ANCHORS INCLUDE:
 - SIMPSON STRONG-TIE "STRONG-BOLT Z" (ICC-ES ESR-3037)
 - SIMPSON STRONG-TIE "TITEN-HD" (ICC-ES ESR-2713)
 - HILTI "KWIK BOLT TZ" (ICC-ES ESR-1917)
- ADHESIVE ANCHORS FOR USE IN CRACKED AND UNCRACKED CONCRETE SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ICC-ES AC308. PRE-APPROVED ADHESIVE ANCHORS INCLUDE:
 - SIMPSON STRONG-TIE "SET-XP" (ICC-ES ESR-2508)
 - SIMPSON STRONG-TIE "AT-XP" (IAPMO UES ER-263)
 - HILTI "HIT-RE 500-V3" (ICC-ES ESR-3814)
 - HILTI "HIT-HY 200" (ICC-ES ESR-3187)

STEEL

26. STRUCTURAL STEEL DESIGN, FABRICATION, AND ERECTION SHALL BE BASED ON THE LATEST EDITIONS OF THE A.I.S.C. SPECIFICATIONS AND CODES AS FOLLOWS:

- AISC 360-16 SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS.
- AISC 303-16 CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES, AMENDED BY THE DELETION OF THE FOLLOWING SENTENCE IN PARAGRAPH 4.2.1: "THIS APPROVAL CONSTITUTES THE OWNER'S ACCEPTANCE OF ALL RESPONSIBILITY FOR THE DESIGN ADEQUACY OF ANY DEVELOPED DETAIL CONFIGURATION OF CONNECTIONS DEVELOPED BY THE FABRICATOR AS PART OF HIS PREPARATION OF THESE SHOP DRAWINGS."
- AISC 341-16 SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS
- SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS.
- AMERICAN WELDING SOCIETY (AWS) STRUCTURAL WELDING CODE D1.1 AND D1.4

27. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

TYPE OF MEMBER	ASTM SPECIFICATION	Fy
PLATES, ANGLES, AND RODS	A36	36 KSI
WIDE FLANGE SHAPES AND CHANNELS	A992	50 KSI
PIPE COLUMNS	A53 (TYPE E OR S, GRADE B)	35 KSI
STRUCTURAL TUBING (SQUARE OR RECTANGULAR)	A500 (GRADE B)	46 KSI
ANCHOR BOLTS (EMBEDDED IN MASONRY OR CONCRETE)	A307	
CONNECTION BOLTS (3/4" ROUND, UNLESS SHOWN OTHERWISE)	A325-N	
THREADED RODS FOR EPOXY GROUTED CONNECTIONS	A36 OR A307 GRADE C	36 KSI

28. ALL BEAM PENETRATIONS NOT SPECIFICALLY INDICATED ON THE STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION.

29. ARCHITECTURALLY EXPOSED STRUCTURAL STEEL SHALL CONFORM TO SECTION 10 OF THE AISC 303-10. ANY STRUCTURAL STEEL THAT IS EXPOSED TO VIEW UPON COMPLETION OF THE PROJECT SHALL BE CONSIDERED ARCHITECTURALLY EXPOSED. SEE PROJECT SPECIFICATIONS FOR SPECIFIC FABRICATION AND ERECTION REQUIREMENTS.

30. ALL A-325 CONNECTION BOLTS SHALL BE INSTALLED TO THE SNUG-TIGHT CONDITION PER AISC SPECIFICATIONS. INSTALL IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED RECOMMENDATIONS.

34. ALL WELDING SHALL BE IN CONFORMANCE WITH AISC AND AWS STANDARDS AND SHALL BE PERFORMED BY WABO CERTIFIED WELDERS USING E70 XX ELECTRODES UNLESS OTHERWISE NOTED. ONLY PREQUALIFIED WELDS (AS DEFINED BY AWS) SHALL BE USED.

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Mercer Island, WA 98040

Date:	
2/14/2022	Permit Submittal
8/25/2022	Sub2-2205-225
5/09/2023	Garage Wall - Re

11/27/2024	Up-Date
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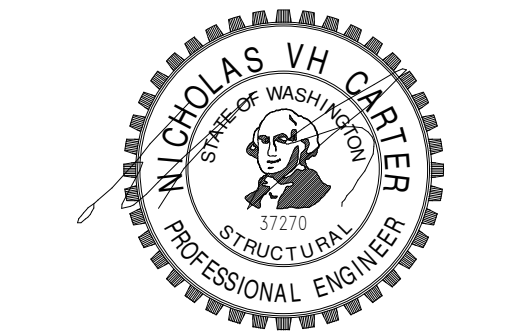
IF SHEET IS NOT 24"x36" IT
HAS BEEN RESCALED

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IF SHEET IS NOT 24"x36" IT HAS BEEN RESCALED

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General Structural Notes

S1.0

- WOOD

35.

FRAMING LUMBER SHALL BE KILN DRIED OR MC-19, AND GRADED AND MARKED IN CONFORMANCE WITH WCLIB STANDARD GRADING RULES FOR WEST COAST LUMBER NO. 17, LATEST EDITION. FURNISH TO THE FOLLOWING MINIMUM STANDARDS.

JOISTS:
(2X, 3X, AND 4X MEMBERS)
BEAM AND STRINGERS:
(6 X AND LARGER MEMBERS)
POSTS AND TIMBERS:
(6 X AND LARGER MEMBERS)
STUDS PLATES & MISCELLANEOUS LIGHT FRAMING

2X AND 3X TONGUE AND GROOVE DECKING

HEM-FIR NO. 2 (UNLESS NOTED OTHERWISE ON PLANS)
MINIMUM BASE VALUE, F_b = 850 PSI
DOUGLAS FIR LARCH NO. 1
MINIMUM BASIC DESIGN STRESS, F_b = 1,350 PSI
DOUGLAS FIR LARCH NO. 1
MINIMUM BASIC DESIGN STRESS, F_b = 1,200 PSI, F_c = 1,000 PSI
DOUGLAS FIR LARCH OR HEM-FIR NO. 2,
MINIMUM BASIC DESIGN STRESS F_b = 850 PSI, F_c = 1,300 PSI
HEM-FIR COMMERCIAL DEX, F_b = 1,350 PSI

36.

PARALLEL STRAND LUMBER (PSL): EACH PIECE SHALL BEAR A STAMP OR STAMPS NOTING THE NAME AND PLANT NUMBER OF THE MANUFACTURER, THE GRADE, PRODUCT DESIGNATION OR TYPE, THE PRODUCTION DATE, SPECIES OR SPECIES GROUP DESIGNATION, AND THE QUALITY CONTROL AGENCY. MEMBERS SHALL BE GLUED WITH A WATERPROOF ADHESIVE MEETING THE REQUIREMENTS OF ASTM D2559 WITH ALL GRAIN PARALLEL WITH THE LENGTH OF THE MEMBER. STRUCTURAL CAPACITIES SHALL BE ESTABLISHED IN ACCORDANCE WITH ASTM D5456 AND PRODUCT SHALL HAVE AN APPROVED ICC-ES EVALUATION REPORT. MEMBERS SHALL BE TRANSPORTED AND STORED PER MANUFACTURERS RECOMMENDATIONS AND SHALL NOT BE EXPOSED TO PROLONGED MOISTURE. MINIMUM REQUIRED DESIGN PROPERTIES: F_b = 2800 PSI, E = 2000,000 PSI, F_v = 290 PSI.

DESIGN SHOWN ON PLANS IS BASED ON LUMBER MANUFACTURED BY THE WEYERHAEUSER. 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-ES APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. ALL JOIST HANGERS AND OTHER HARDWARE SHALL BE COMPATIBLE IN SIZE WITH MEMBERS PROVIDED.

37.

LAMINATED VENEER LUMBER (LVL): EACH PIECE SHALL BEAR A STAMP OR STAMPS NOTING THE NAME AND PLANT NUMBER OF THE MANUFACTURER, THE GRADE, PRODUCT DESIGNATION OR TYPE, THE PRODUCTION DATE, SPECIES OR SPECIES GROUP DESIGNATION, AND THE QUALITY CONTROL AGENCY. MEMBERS SHALL BE GLUED WITH A WATERPROOF ADHESIVE MEETING THE REQUIREMENTS OF ASTM D2559 WITH ALL GRAIN PARALLEL WITH THE LENGTH OF THE MEMBER. STRUCTURAL CAPACITIES SHALL BE ESTABLISHED IN ACCORDANCE WITH ASTM D5456 AND PRODUCT SHALL HAVE AN APPROVED ICC-ES EVALUATION REPORT. MEMBERS SHALL BE TRANSPORTED AND STORED PER MANUFACTURERS RECOMMENDATIONS AND SHALL NOT BE EXPOSED TO PROLONGED MOISTURE. MINIMUM REQUIRED DESIGN PROPERTIES: F_b = 2600 PSI, F_v = 285 PSI, E = 2,000,000 PSI.

DESIGN SHOWN ON PLANS IS BASED ON LUMBER MANUFACTURED BY WEYERHAEUSER. 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-ES APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. ALL JOIST HANGERS AND OTHER HARDWARE SHALL BE COMPATIBLE IN SIZE WITH MEMBERS PROVIDED.

38.

LAMINATED STRAND LUMBER (LSL): EACH PIECE SHALL BEAR A STAMP OR STAMPS NOTING THE NAME AND PLANT NUMBER OF THE MANUFACTURER, THE GRADE, PRODUCT DESIGNATION OR TYPE, THE PRODUCTION DATE, SPECIES OR SPECIES GROUP DESIGNATION, AND THE QUALITY CONTROL AGENCY. MEMBERS SHALL BE GLUED WITH A WATERPROOF ADHESIVE MEETING THE REQUIREMENTS OF ASTM D2559 WITH ALL GRAIN PARALLEL WITH THE LENGTH OF THE MEMBER. STRUCTURAL CAPACITIES SHALL BE ESTABLISHED IN ACCORDANCE WITH ASTM D5456 AND PRODUCT SHALL HAVE AN APPROVED ICC-ES EVALUATION REPORT. MEMBERS SHALL BE TRANSPORTED AND STORED PER MANUFACTURERS RECOMMENDATIONS AND SHALL NOT BE EXPOSED TO PROLONGED MOISTURE. MINIMUM REQUIRED DESIGN PROPERTIES: F_b = 2325 PSI, F_v = 310 PSI, E = 1,550,000 PSI,

LSL RIM JOISTS SHALL CONFORM TO ANSI/APA PRR 410 AND SHALL BE MARKED IN ACCORDANCE WITH THE STANDARD.

DESIGN SHOWN ON PLANS IS BASED ON LUMBER MANUFACTURED BY WEYERHAEUSER. 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-ES APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. ALL JOIST HANGERS AND OTHER HARDWARE SHALL BE COMPATIBLE IN SIZE WITH MEMBERS PROVIDED.

39.

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

40.

PLYWOOD SHEATHING SHALL BE GRADE C-D, EXTERIOR GLUE OR STRUCTURAL II, EXTERIOR GLUE IN CONFORMANCE WITH DOC PS 1-09 OR PS 2-18 AND AMERICAN PLYWOOD ASSOCIATION PERFORMANCE STANDARD PRP-108. ORIENTED STRAND BOARD OF EQUIVALENT THICKNESS, EXPOSURE RATING AND PANEL INDEX MAY BE USED IN LIEU OF PLYWOOD. SEE PLANS FOR THICKNESS, PANEL IDENTIFICATION INDEX AND NAILING REQUIREMENTS. EACH PANEL SHALL BE IDENTIFIED FOR GRADE AND GLUE TYPE BY THE TRADEMARKS OF AN APPROVED TESTING AND GRADING AGENCY.

41.

ALL WOOD PLATES IN DIRECT CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE-TREATED WITH AN APPROVED PRESERVATIVE, PROVIDE 2 LAYERS OF ASPHALT IMPREGNATED BUILDING PAPER BETWEEN UNTREATED LEDGERS, BLOCKING, ETC. AND CONCRETE OR MASONRY.

PRESSURE TREATED LUMBER SHALL COMPLY WITH THE AMERICAN WOOD PROTECTION ASSOCIATION (AWPA) STANDARD U1, COMMODITY SPECIFICATION A AS INDICATED BELOW OR HAVE EQUIVALENT ICC-ES APPROVAL.

PROPOSED USE

RESIDENTIAL DECKS

DECKING

JOISTS ABOVE GROUND

POSTS

RAILING

LEDGERS

SAWN LUMBER

PLYWOOD

ABOVE GROUND

DAMP ABOVE GROUND

EXTERIOR ABOVE GROUND

SILL PLATES

IN CONTACT WITH CONCRETE OR MASONRY

INTERIOR LEDGERS

IN CONTACT WITH CONCRETE OR MASONRY

AWPA USE CATEGORY

3B

3B

4A

3B

3B

3B

2

3B

2

2

ALL TREATED LUMBER SHALL BEAR THE QUALITY MARK OF AN ACCREDITED INSPECTION AGENCY. THE QUALITY MARK SHALL INCLUDE:

A. IDENTIFICATION OF TREATING MANUFACTURER

B. TYPE OF PRESERVATIVE USED

C. MINIMUM PRESERVATIVE RETENTION (PCF)

D. END USE FOR WHICH THE PRODUCT IS TREATED

E. IDENTITY OF THE ACCREDITED INSPECTION AGENCY

F. STANDARD TO WHICH THE PRODUCT IS TREATED

42.

TIMBER CONNECTORS CALLED OUT BY LETTERS AND NUMBERS SHALL BE "STRONG-TIE" BY SIMPSON COMPANY, AS SPECIFIED IN THEIR CATALOG NUMBER C-C-2019. 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 TO ACHIEVE THE MAXIMUM PUBLISHED ALLOWABLE LOAD. ALL CONNECTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. WHERE CONNECTOR STRAPS CONNECT TWO MEMBERS, PLACE ONE-HALF OF THE NAILS OR BOLTS IN EACH MEMBER. SHIMS, WHERE REQUIRED, SHALL BE SEASONED AND DRIED AND THE SAME GRADE (MINIMUM) AS MEMBERS CONNECTED.

ALL BOLTS IN WOOD MEMBERS SHALL CONFORM TO ASTM A307. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD. ALL LAG SCREWS SHALL BE INSTALLED IN PRE-DRILLED HOLES.

UNLESS NOTED OTHERWISE ALL SAWN LUMBER JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "LUS" SERIES JOIST HANGERS AND ALL PREFABRICATED PLYWOOD WEB JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "IUS" SERIES JOIST HANGERS.

ALL CONNECTIONS/FASTENERS IN CONTACT WITH PRESERVATIVE-TREATED OR FIRE-RETARDANT-TREATED WOOD, SHALL BE OF HOT DIPPED ZINC-COATED GALVANIZED STEEL OR STAINLESS STEEL. HOT DIPPED GALVANIZED FASTENERS SHOULD CONFORM TO ASTM STANDARD 153, AND HOT DIPPED GALVANIZED CONNECTORS SHOULD CONFORM TO ASTM STANDARD A653 (CLASS G-185). STAINLESS STEEL FASTENERS AND CONNECTORS SHOULD BE TYPE 304 OR 316. NOTE: ELECTROPLATED GALVANIZED FASTENERS AND CONNECTORS ARE NOT TO BE USED WITH PRESSURE TREATED WOOD. SIMPSON PRODUCT FINISHES CORRESPONDING TO THE ABOVE REQUIREMENTS ARE ZMAX (HOT DIPPED GALVANIZED) AND SST300 (STAINLESS STEEL). STAINLESS STEEL HARDWARE AND FASTENERS SHALL NOT BE COMBINED WITH UNTREATED OR GALVANIZED MATERIAL.

43. WOOD FASTENERS:

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

SIZE	LENGTH	DIAMETER
6d	2"	0.113"
8d	2-1/2"	0.131"
10d	3"	0.148"
12d	3-1/4"	0.148"
16d	3-1/2"	0.162"

DESIGN IS BASED ON COMMON STEEL WIRE NAILS MEETING THE REQUIREMENTS OF ASTM F1667. USE OF ALTERNATE FASTENERS MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY THE STRUCTURAL ENGINEER PRIOR TO THE START OF CONSTRUCTION.

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

44. 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 OF THE INTERNATIONAL BUILDING CODE. UNLESS NOTED OTHERWISE, ALL NAILS SHALL BE AS SPECIFIED ABOVE. COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH MECHANICAL AND ARCHITECTURAL DRAWINGS. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD. INSTALLATION OF BOLTS AND LAG SCREWS SHALL CONFORM TO SECTIONS 12.1.3 AND 12.1.4 OF THE 2018 NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION. NATURALLY DURABLE OR PRESSURE TREATED WOOD SHALL BE PROVIDED WHERE REQUIRED BY SECTION 2304.12 OF THE INTERNATIONAL BUILDING CODE.

B. WALL FRAMING: ALL STUD WALLS SHOWN AND NOT OTHERWISE NOTED SHALL BE 2X6 AT 16" O.C. TWO STUDS MINIMUM SHALL BE PROVIDED AT THE END OF ALL WALLS AND AT EACH SIDE OF ALL OPENINGS. TWO 2 x 8 HEADERS SHALL BE PROVIDED OVER ALL OPENINGS NOT OTHERWISE NOTED AND SHALL BEAR FULLY ON A MINIMUM OF TWO STUDS. SOLID BLOCKING FOR WOOD COLUMNS SHALL BE PROVIDED THROUGH FLOORS TO SUPPORTS BELOW. PROVIDE SOLID BLOCKING BETWEEN STUDS AT MID_HEIGHT OF ALL STUD WALLS OVER 10' IN HEIGHT.

STUDS MAY BE NOTCHED, CUT, OR PENETRATED WITH ROUND BORED HOLES AS FOLLOWS:

STUD SIZE	MAXIMUM NOTCH / CUT	MAXIMUM BORED HOLE
2X4	7/8"	1-3/8"
2X6	1-3/8"	2-1/8"

BORED HOLES SHALL NOT BE LOCATED WITH 5/8" FROM THE EDGE OF THE STUD OR AT THE SAME LOCATION AS A NOTCH OR CUT.

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 AT 12" O.C. AND LAP MINIMUM 4'-0" AT JOINTS AND PROVIDE EIGHT 16d NAILS AT 4" O.C. EACH SIDE OF JOINT.

ALL STUD WALLS SHALL HAVE THEIR LOWER WOOD PLATES ATTACHED TO WOOD FRAMING BELOW WITH 16d NAILS AT 12" O.C. STAGGERED OR BOLTED TO CONCRETE WITH 5/8" DIAMETER ANCHOR BOLTS (WITH 7" MINIMUM EMBEDMENT) @ 4'-0" O.C. UNLESS INDICATED OTHERWISE. PROVIDE 3"x3" x1/4" HOT-DIPPED GALVANIZED PLATE WASHERS AT ALL ANCHOR BOLTS. INDIVIDUAL MEMBERS OF BUILT UP POSTS SHALL BE NAILED TO EACH OTHER WITH 16d NAILS @ 12" O.C. STAGGERED. REFER TO THE PLANS AND SHEAR WALL SCHEDULE FOR REQUIRED SHEATHING AND NAILING. WHEN NOT OTHERWISE NOTED, PROVIDE GYPSUM WALLBOARD ON INTERIOR SURFACES NAILED TO ALL STUDS, TOP AND BOTTOM PLATES AND BLOCKING WITH NAILS AT 7" O.C. USE 5d COOLER NAILS FOR 12" GWB AND 6d COOLER NAILS FOR 5/8" GWB. PROVIDE 15/32" APA RATED SHEATHING (SPAN RATING 24(0) ON EXTERIOR SURFACES NAILED AT ALL PANEL EDGES (BLOCK UNSUPPORTED EDGES), TOP AND BOTTOM PLATES WITH 8d NAILS @ 6" O.C. AND TO ALL INTERMEDIATE STUDS AND BLOCKING WITH NAILS @ 12" O.C. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND 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.

NOTCHES AT THE END OF JOISTS AND RAFTERS SHALL NOT EXCEED 1/4 THE DEPTH OF THE MEMBER. NOTCHES IN THE TOP OR BOTTOM SHALL NOT EXCEED 1/6 THE DEPTH OF THE MEMBER AND SHALL NOT BE LOCATED WITHIN THE MIDDLE 1/3 OF THE SPAN. THE DIAMETER OF ROUND HOLES BORED IN JOISTS AND RAFTERS SHALL NOT EXCEED 1/3 OF THE DEPTH OF THE MEMBER AND SHALL NOT BE LOCATED WITHIN 2' FROM THE TOP OR BOTTOM EDGE.

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 OF 16d @ 12" O.C. ATTACH RAFTERS AND ROOF TRUSSES AT BEARING LINES WITH H2.5 @ 24" O.C. UNLESS OTHER METAL CONNECTIONS ARE INDICATED.

UNLESS OTHERWISE NOTED ON THE PLANS, APA RATED ROOF AND FLOOR SHEATHING SHALL BE LAID UP WITH STRENGTH AXIS PERPENDICULAR TO SUPPORTS AND ATTACHED WITH 10d NAILS @ 6" O.C. TO FRAMED PANEL EDGES AND OVER STUD WALLS AS SHOWN ON PLANS AND @ 12" O.C. TO INTERMEDIATE SUPPORTS. PROVIDE APPROVED PLYWOOD EDGE CLIPS CENTERED BETWEEN JOISTS/TRUSSES AT UNBLOCKED ROOF SHEATHING EDGES. ALL FLOOR SHEATHING EDGES SHALL HAVE APPROVED TONGUE AND GROOVE JOINTS OR SHALL BE SUPPORTED WITH SOLID BLOCKING. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS OF ALL ROOF AND FLOOR SHEATHING. TOENAIL BLOCKING TO SUPPORTS WITH 16d NAILS @ 12" O.C. UNLESS OTHERWISE NOTED. AT BLOCKED FLOOR AND ROOF DIAPHRAGMS PROVIDE FLAT 2X BLOCKING AT ALL UNFRAMED PANEL EDGES AND FASTEN SHEATHING TO FRAMING/BLOCKING AS SPECIFIED.

TONGUE AND GROOVE STRUCTURAL ROOF AND FLOOR DECKING SHALL BE INSTALLED AS FOLLOWS:

A. 2X DECKING SHALL BE TOENAILED THROUGH THE TONGUE AND FACE NAILED WITH ONE 16d NAIL PER PIECE PER SUPPORT.

B. 3X AND 4X DECKING SHALL BE TOENAILED WITH ONE 40d NAIL AND FACE NAILED WITH ONE 60d NAIL PER SUPPORT. COURSES SHALL BE SPIKED TOGETHER WITH 8" SPIKES AT 30" O.C. (MAXIMUM) AND AT 10" (MAXIMUM) FROM EACH END OF EACH PIECE. SPIKES SHALL BE INSTALLED IN PREDRILLED EDGE HOLES

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CHEN RESIDENCE

New Residence
8435 SE 47th PL.
Mercer Island, WA 98040

Date:	
2/14/2022	Permit Submittal
8/25/2022	Sub2-2205-225
5/09/2023	Garage Wall - Rev

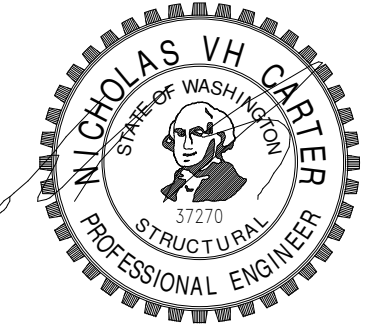
11/27/2024	Up-Date
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IF SHEET IS NOT 24"x36" IT HAS BEEN RESCALED

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General Structural Notes

S1.1



CHEN RESIDENCE
New Residence
8435 SE 47th PL.
Mercer Island, WA 98040

Date:
2/14/2022 Permit Submittal
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Foundation Plan

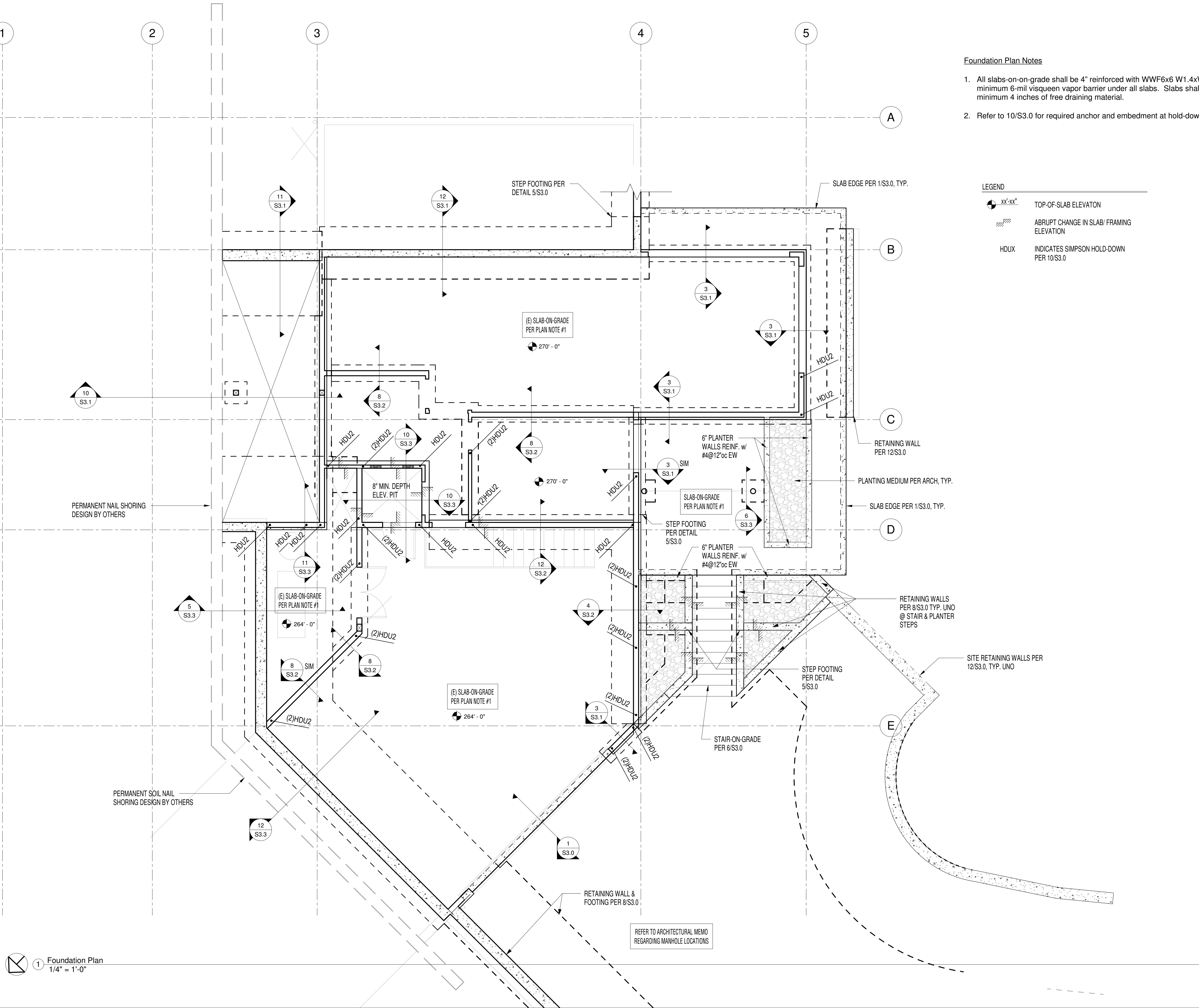
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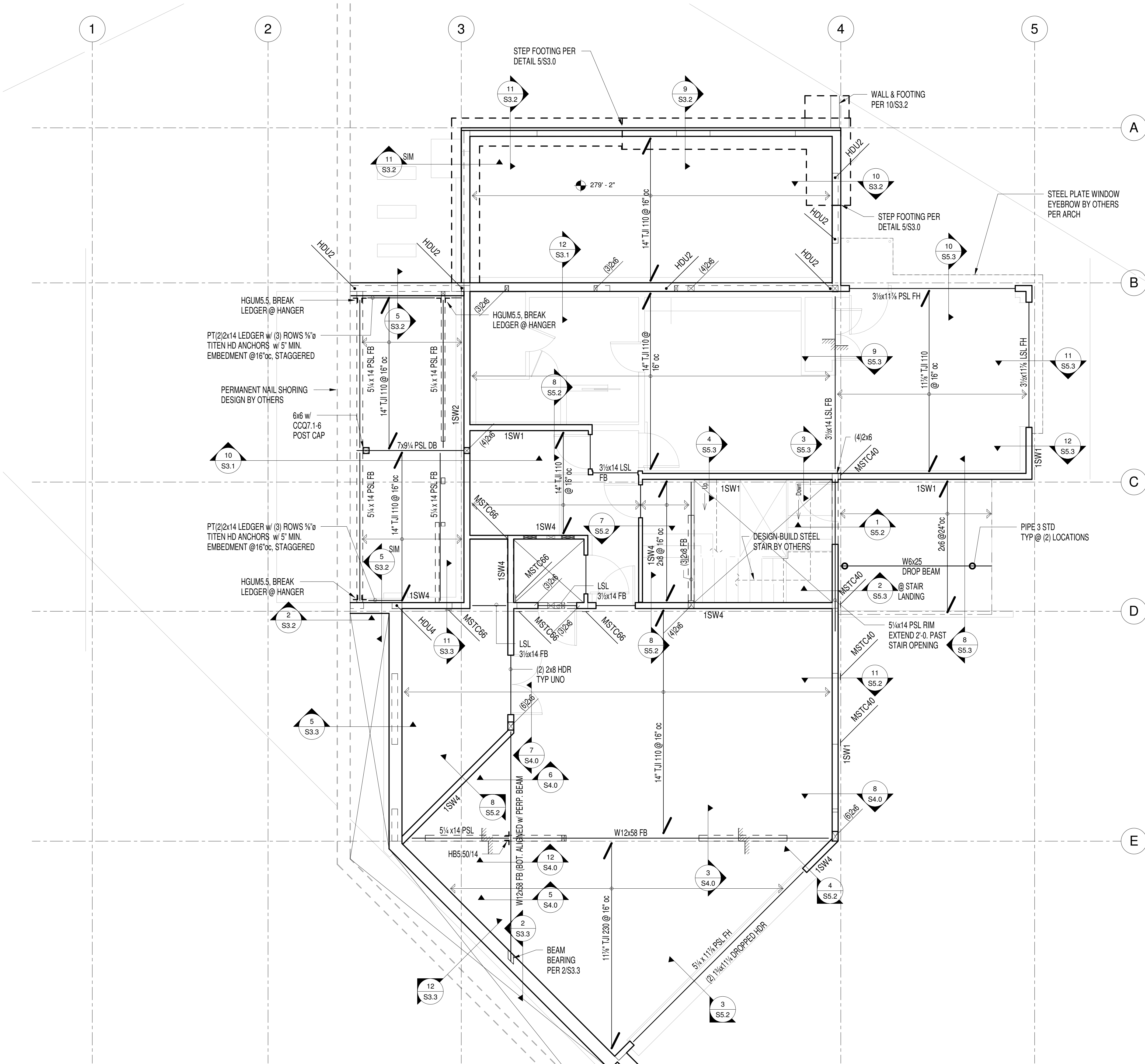
Foundation Plan Notes

- All slabs-on-on-grade shall be 4" reinforced with WWF6x6 W1.4xW1.4 u.n.o. Provide minimum 6-mil visqueen vapor barrier under all slabs. Slabs shall be supported on a minimum 4 inches of free draining material.
- Refer to 10/S3.0 for required anchor and embedment at hold-downs.

LEGEND

- xx'-xx" TOP-OF-SLAB ELEVATION
- ABRUPT CHANGE IN SLAB/ FRAMING ELEVATION
- HDUX INDICATES SIMPSON HOLD-DOWN PER 10/S3.0



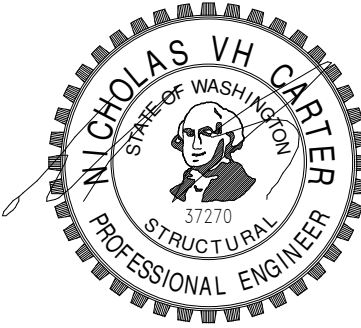


- TYPICAL WOOD FRAMING PLAN NOTES
1. ROOF SHEATHING SHALL BE 19/32" TONGUE AND GROOVE APA RATED STRUCTURAL SHEATHING WITH PANEL INDEX 24/0. ATTACH TO FRAMING WITH 8d NAILS AT 6" OC AT FRAMED PANEL EDGES AND WALLS AND 12" OC AT INTERMEDIATE FRAMING. ROOF HAS BEEN DESIGNED TO SUPPORT PHOTOVOLTAIC PANELS (5psf SUPERIMPOSED DEAD LOAD).
 2. FLOOR SHEATHING SHALL BE 23/32" TONGUE AND GROOVE APA RATED STRUCTURAL SHEATHING WITH PANEL INDEX 40/20. ATTACH TO FRAMING WITH 10d NAILS AT 6" OC AT FRAMED PANEL EDGES AND WALLS AND 12" OC AT INTERMEDIATE FRAMING. FLOOR HAS NOT BEEN DESIGNED TO SUPPORT GYPCRETE OR OTHER CONCRETE TOPPING.
 3. DECK SHEATHING SHALL BE 23/32" TONGUE AND GROOVE APA RATED STRUCTURAL SHEATHING WITH PANEL INDEX 40/20. ATTACH TO FRAMING WITH 10d NAILS AT 6" OC AT FRAMED PANEL EDGES AND WALLS AND 12" OC AT INTERMEDIATE FRAMING. DECKS HAVE BEEN DESIGNED TO SUPPORT 1 1/2" THICK CONCRETE PAVERS (18psf SUPERIMPOSED DEAD LOAD).
 4. SW-X INDICATES SHEAR WALL PER 12/S5.1. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL WALL REQUIREMENTS.
 5. ALL HEADERS AT INTERIOR WALLS SHALL BE (2) 2x8 UNO. REFER TO NOTE 6 FOR TYPICAL SUPPORT REQUIREMENTS.
 6. COLUMNS, STUD STACKS, AND TRIMMERS SHALL BE DOUBLE STUD MINIMUM, U.N.O. BEAMS/HEADERS SHALL BEAR FULLY ON STUDS.

LEGEND	
	HANGER
	WALL/ COLUMN BELOW
	WALL/ COLUMN ABOVE
	ABRUPT CHANGE IN SLAB/ FRAMING ELEVATION
	FB INDICATES FLUSH BEAM
	FH INDICATED FLUSH HEADER
	UNO UNLESS NOTED OTHERWISE
	SPAN AND EXTENTS
	SPAN AND EXTENTS THRU-OUT



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IF SHEET IS NOT 24"x36" IT HAS BEEN RESCALED

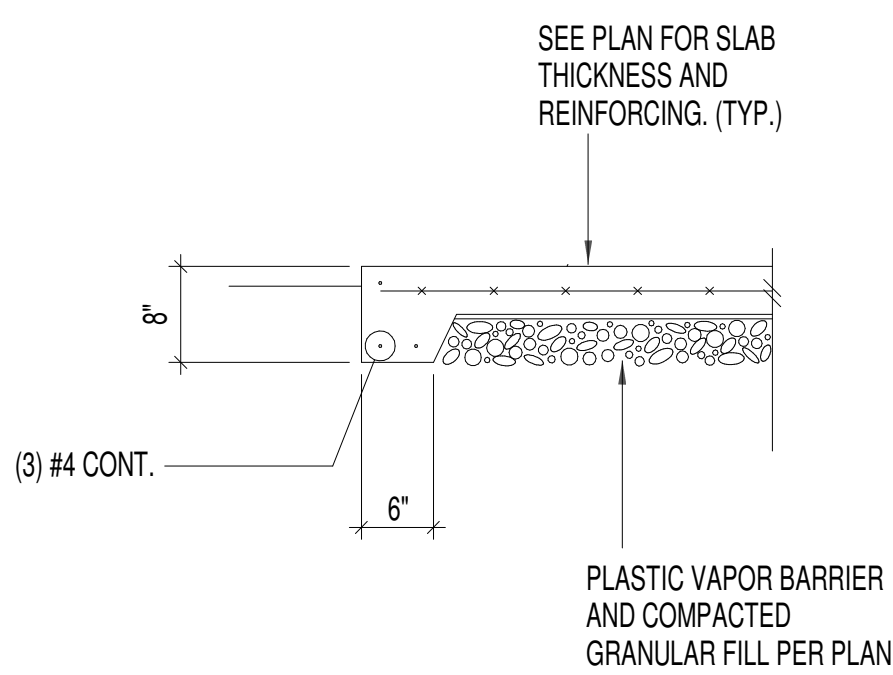
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Main Floor Framing Plan

S2.1

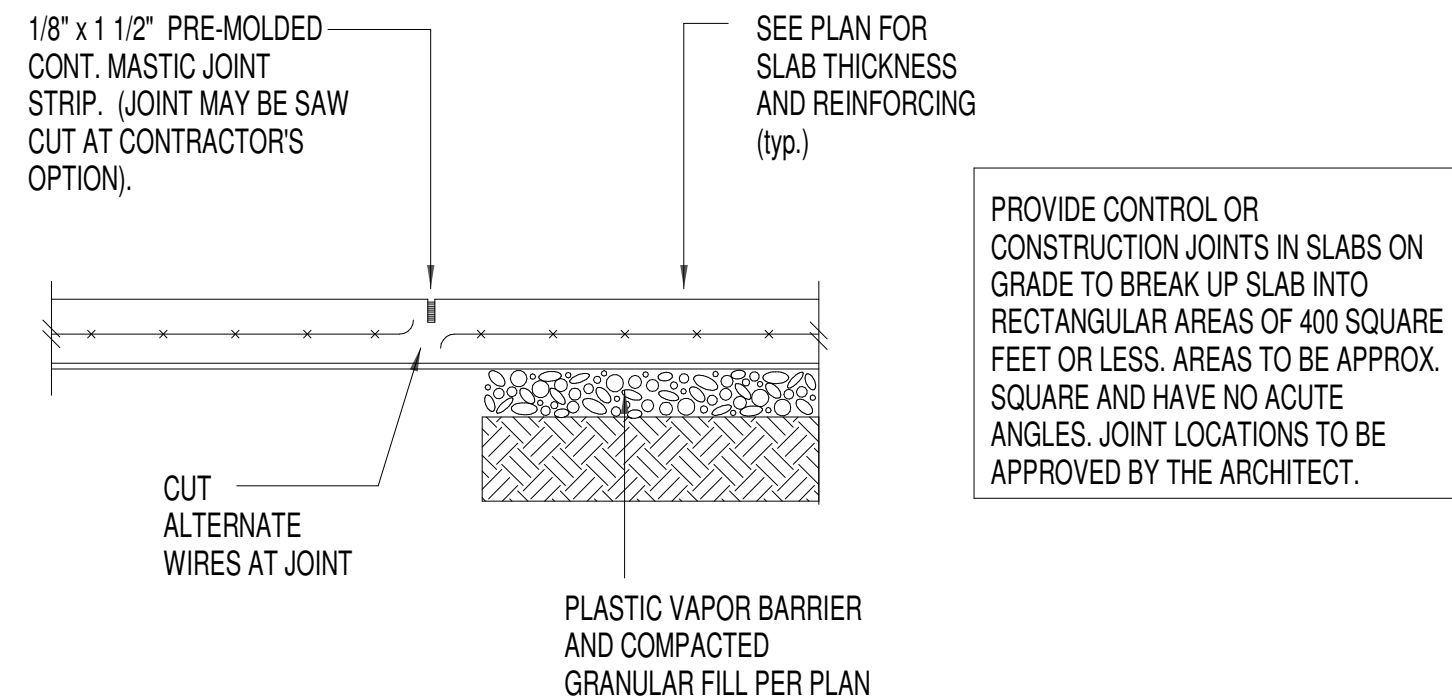


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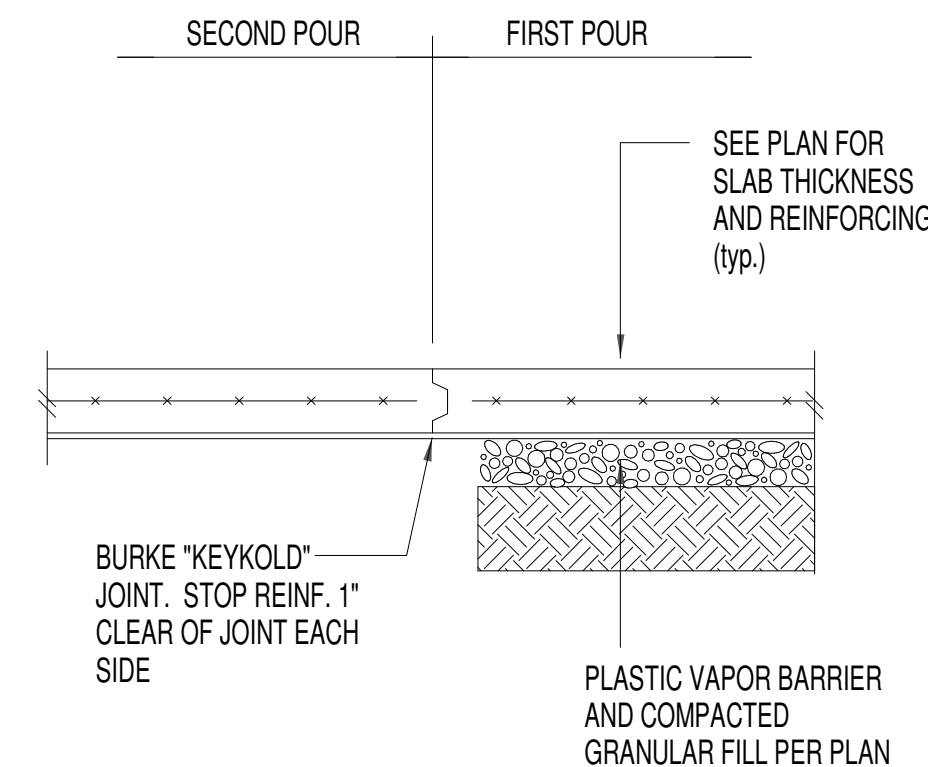


Typical Slab Edge

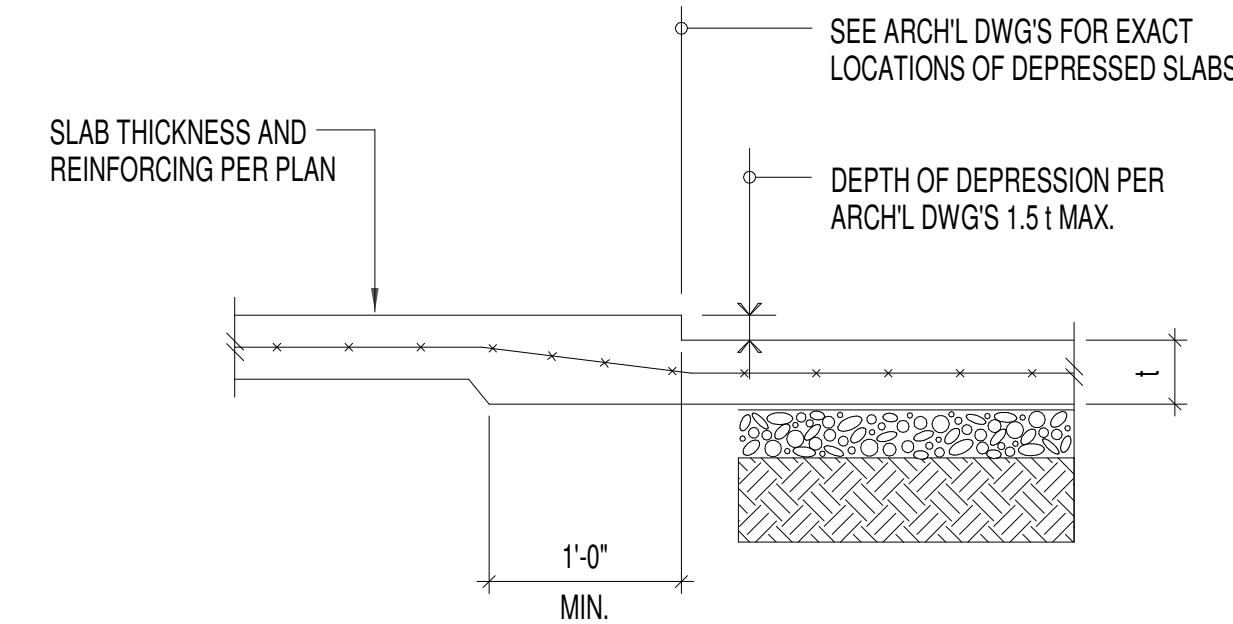
1



Control Joint

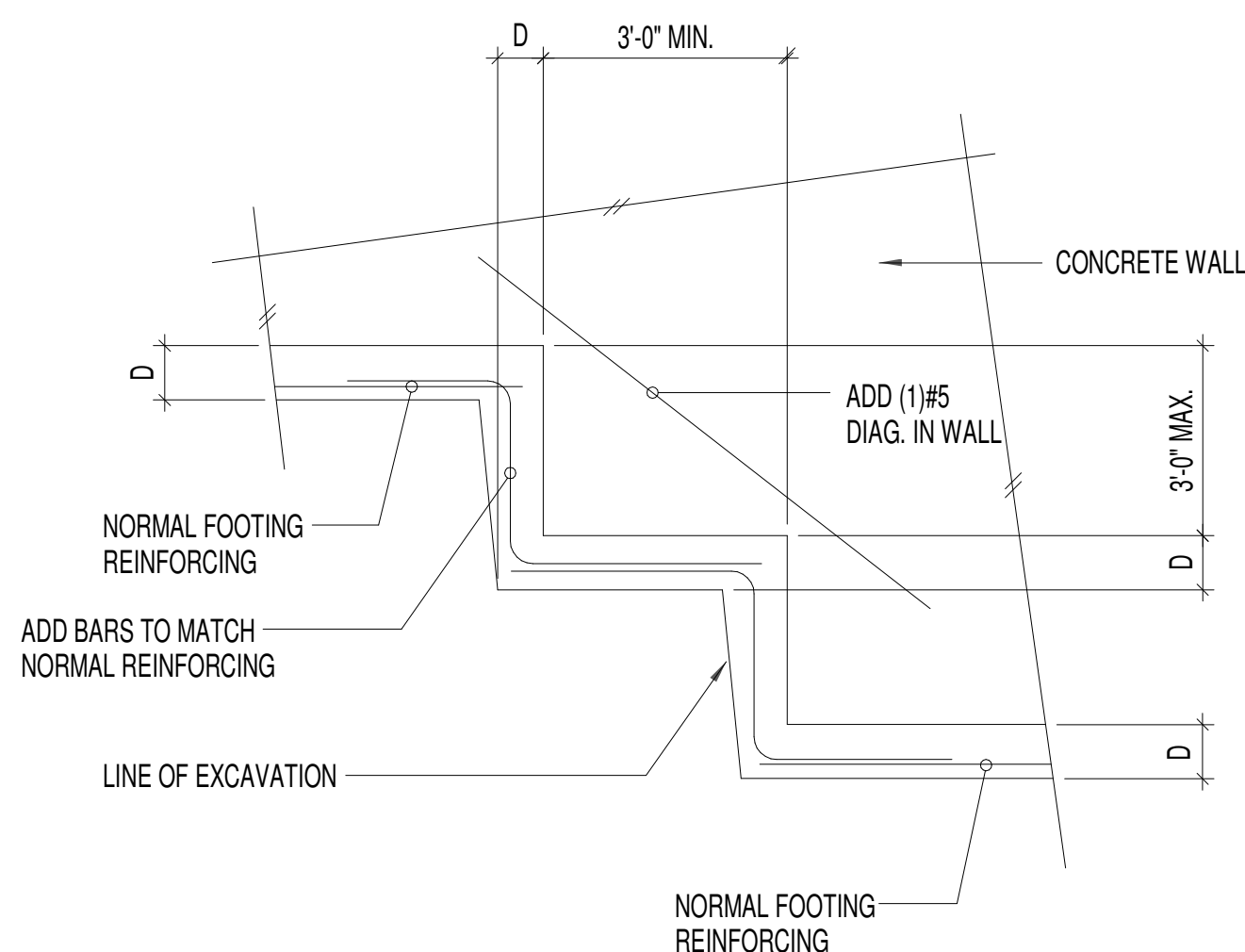


Construction Joint



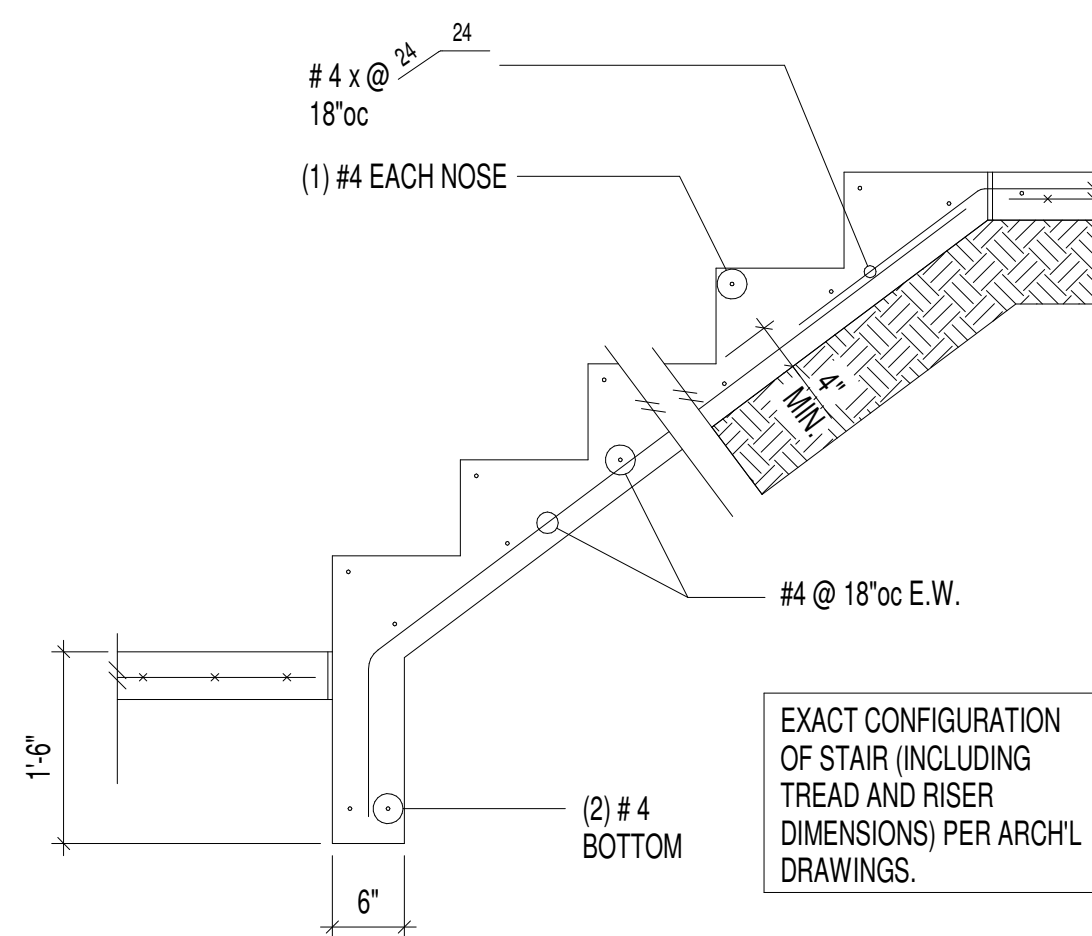
Typical Depressed Slab

4



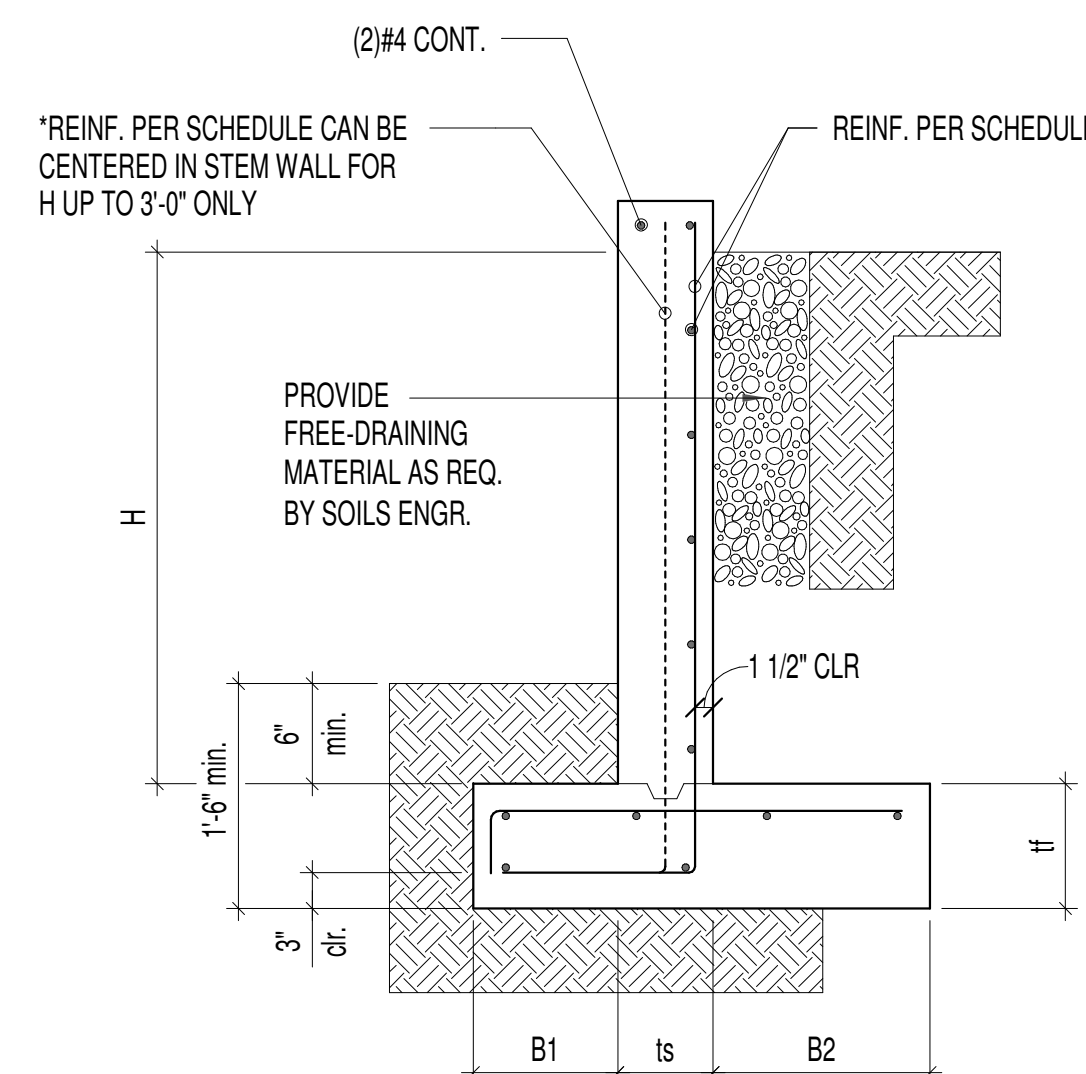
Typical Stepped Footing

5



Stair On Grade

6

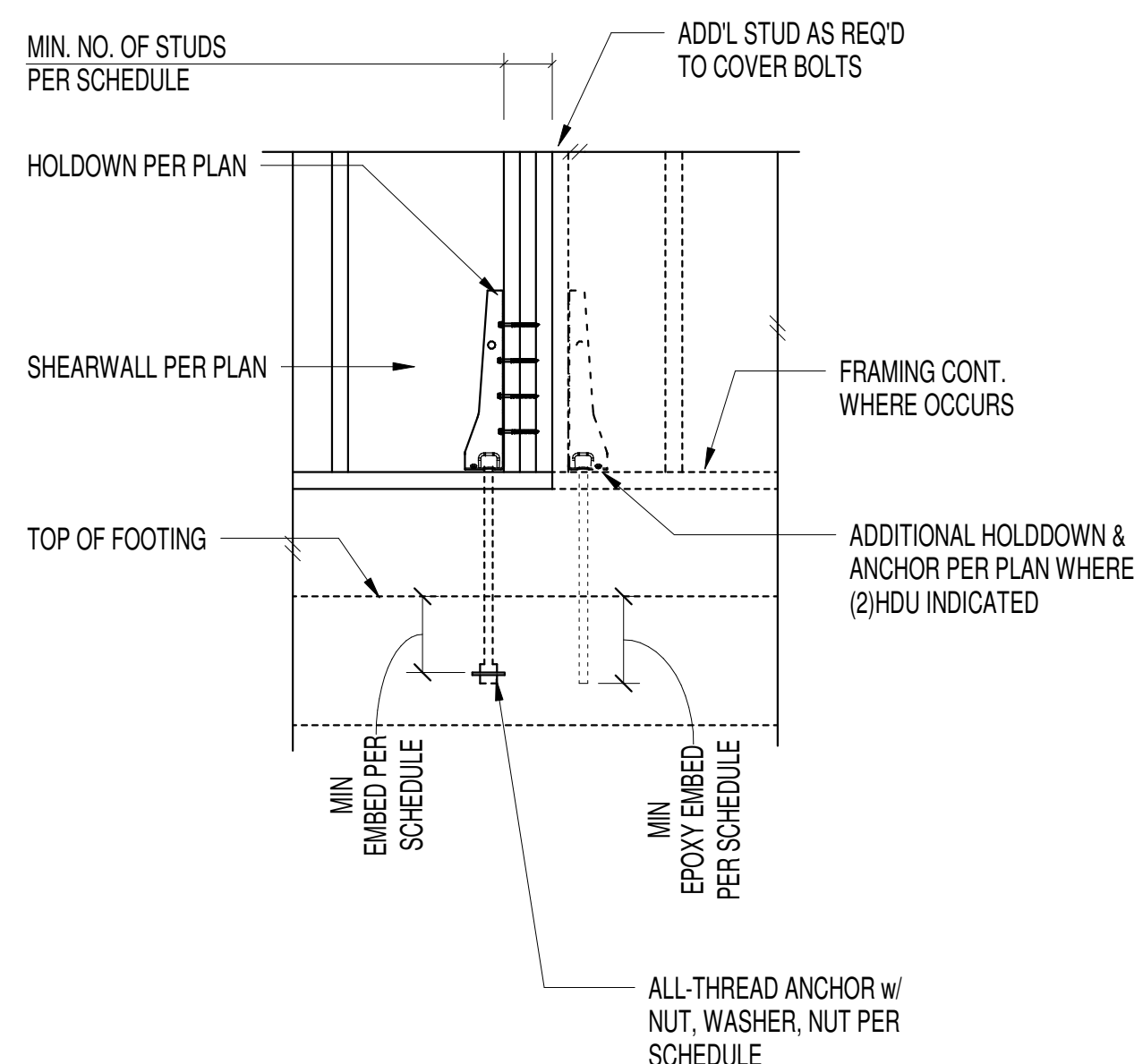


RETAINING WALL SCHEDULE DATA								
H	tf	B1	ts	B2	Stem Reinforcement		Footing Reinforcement	
					VERT.	HORIZ.	TOP	LONGIT.
*UP TO 3'-0"	10"	5"	8"	5"	#4 @12"oc	#4 @12"oc	#4 @10"oc	(2)#4
4'-0"	10"	5"	8"	16"	#4 @12"oc	#4 @12"oc	#4 @10"oc	(3)#4
5'-0"	10"	5"	8"	22"	#4 @12"oc	#4 @12"oc	#4 @10"oc	(4)#4
6'-0"	12"	9"	8"	28"	#4 @12"oc	#4 @12"oc	#5 @12"oc	(5)#4
7'-0"	12"	12"	10"	32"	#5 @12"oc	#5 @12"oc	#5 @10"oc	(6)#4
8'-0"	12"	12	10"	35"	#5 @12"oc	#5 @12"oc	#5 @10"oc	(7)#4

EQUIVALENT FLUID PRESSURE = 40 PCF
 MINIMUM ALLOWABLE BEARING = 4000 PSF
 COEFFICIENT OF FRICTION = 0.45 (ULTIMATE)
 PASSIVE RESISTANCE = 300 PCF (ULTIMATE)
 LATERAL SEISMIC SURCHARGE = 9H (ULTIMATE)

Retaining Wall Schedule

8

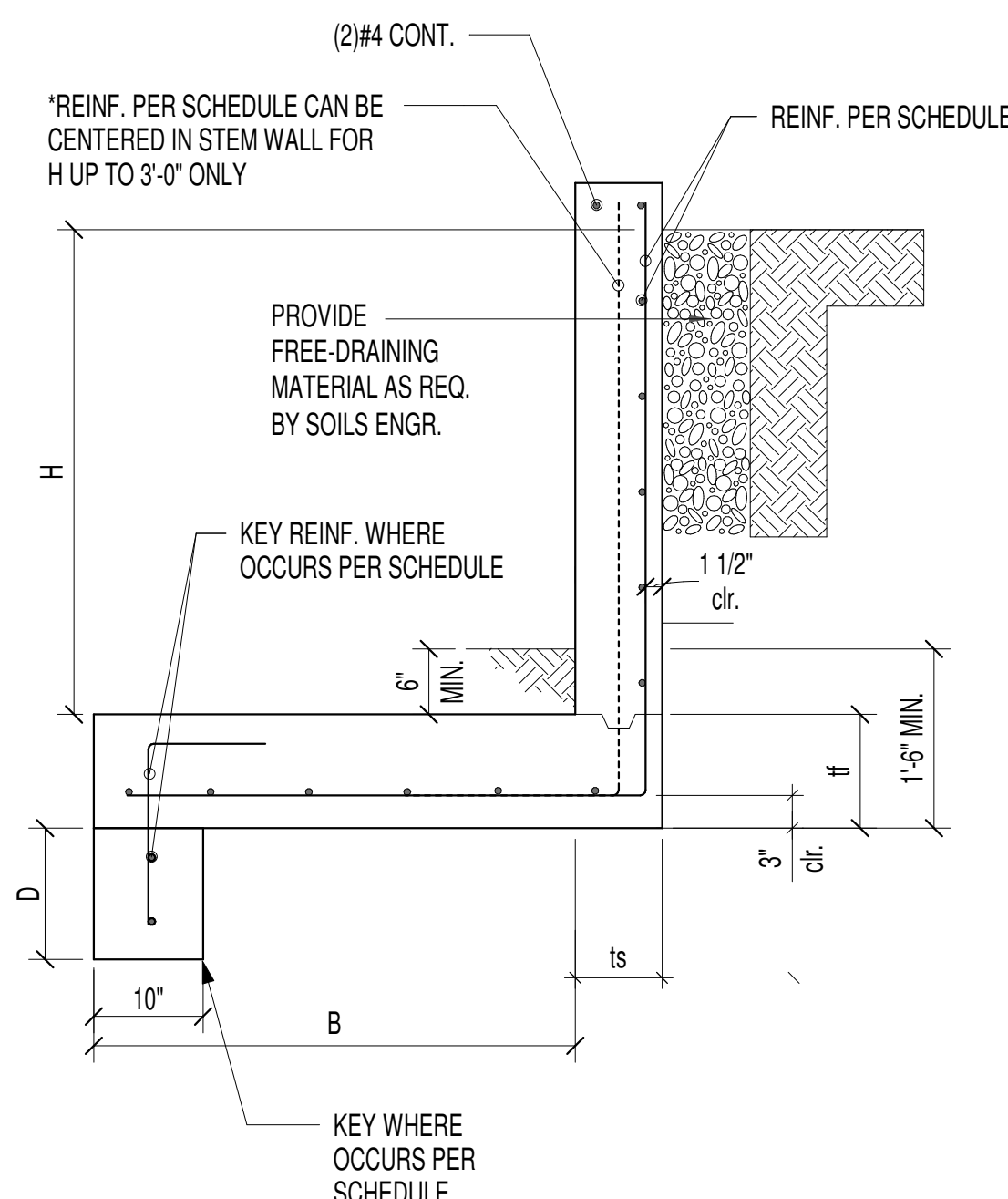


HOLDOWN SCHEDULE					
PLAN MARK	ANCHOR BOLT	EPOXY EMBED	CAST-IN-PLACE	②	MIN. NO. OF END STUDS ①
HDU2	3/8"	10"	7"	③	2
HDU4	3/8"	-	7"	④	2
(2)HDU2	3/8"	5"	-	⑤	4

- MINIMUM NO. OF STUDS AT END OF WALL UNLESS OTHERWISE NOTED ON FRAMING PLANS.
- CAST IN PLACE ALL THREAD w/ NUT/ WASHER/ NUT EMBEDDED IN CONCRETE. PLATE WASHER 1 3/4"x1 3/4"x1/2" MIN.
- HDU2 ANCHOR CAN BE SSTB20, EMBED 16%" MIN. INTO STEM WALL @ CONTRACTOR OPTION.
- HDU4 ANCHOR CAN BE SSTB24, EMBED 16%" MIN. INTO STEM WALL @ CONTRACTOR OPTION.
- EPOXY EMBED SHOWN IS THE REQUIRED MINIMUM EMBED INTO EXISTING FOOTING. THREADED ROD SHALL EXTEND AS REQUIRED THROUGH EXISTING STEM WALL TO ACHIEVE MINIMUM EMBED INTO CONCRETE FOOTING BELOW. EPOXY SHALL BE SET-XP.

Typical Hold-down Anchor

10

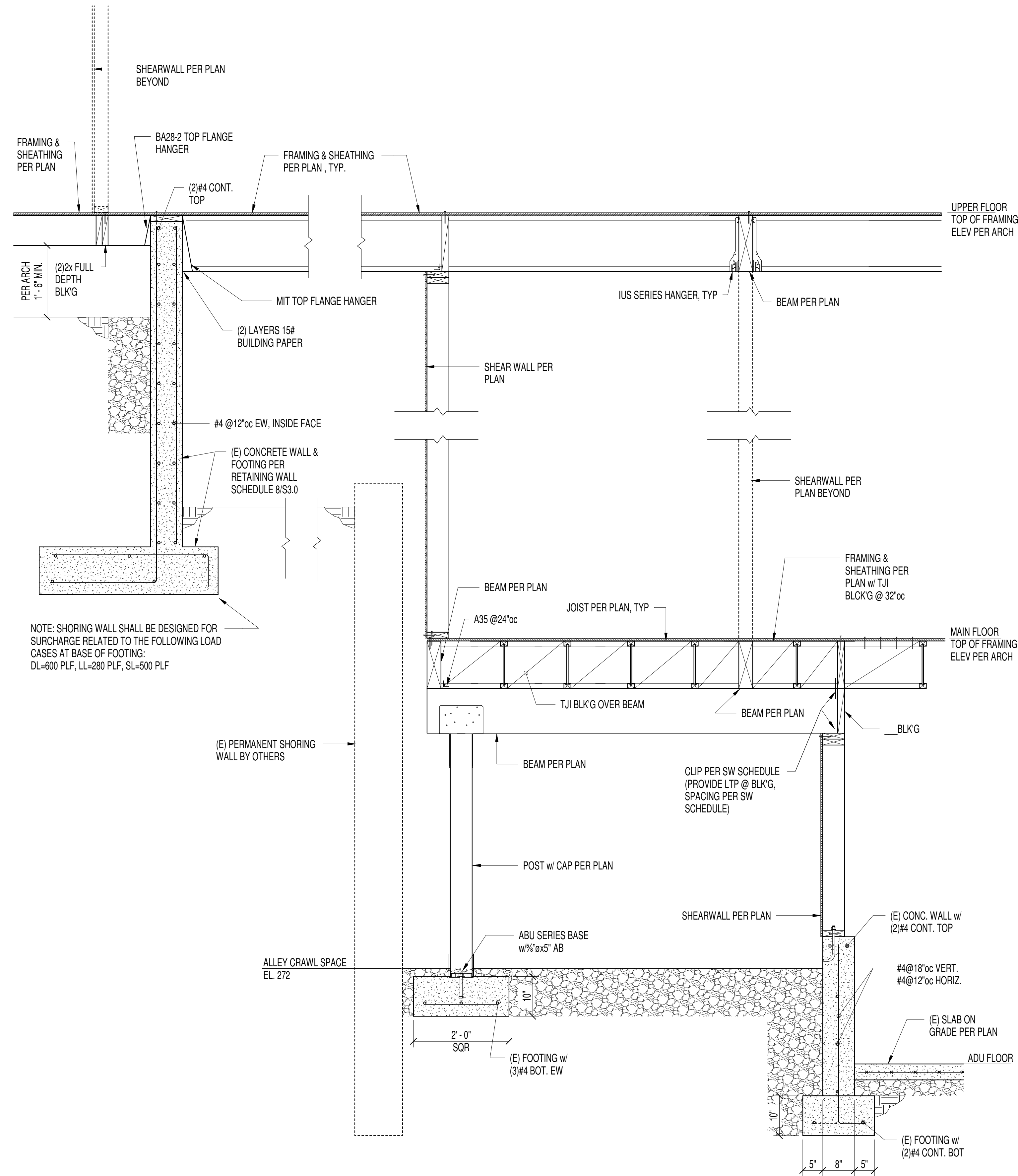


RETAINING WALL SCHEDULE DATA - SITE WALLS									
H	tf	ts	B	D	Stem Reinforcement		Footing Reinforcement		Key Reinf.
					VERT.	HORIZ.	TOP	LONGIT.	VERT. LONGIT.
*UP TO 3'-0"	10"	8"	15"	-	#4 @10"oc	#4 @12"oc	#4 @10"oc	(2)#4	- -
4'-0"	10"	8"	21"	-	#4 @10"oc	#4 @12"oc	#4 @10"oc	(2)#4	- -
5'-0"	12"	8"	44"	-	#4 @9"oc	#4 @12"oc	#4 @9"oc	(5)#4	- -
6'-0"	14"	8"	44"	8"	#5 @12"oc	#4 @12"oc	#5 @12"oc	(6)#5	#4 @12"oc (1)#4
7'-0"	14"	12"	60"	8"	#5 @12"oc	#5 @12"oc	#5 @10"oc	(6)#5	#4 @12"oc (1)#4
8'-0"	14"	12"	84"	12"	#5 @10"oc	#5 @12"oc	#5 @10"oc	(8)#5	#4 @12"oc (1)#4
9'-0"	14"	12"	99"	16"	#5 @8"oc	#5 @12"oc	#5 @8"oc	(9)#5	#4 @10"oc (2)#4
10'-0"	16"	12"	123"	18"	#6 @10"oc	#5 @12"oc	#6 @10"oc	(12)#6	#4 @10"oc (2)#4

EQUIVALENT FLUID PRESSURE = 40 PCF
 MINIMUM ALLOWABLE BEARING = 4000 PSF
 COEFFICIENT OF FRICTION = 0.45 (ULTIMATE)
 PASSIVE RESISTANCE = 300 PCF (ULTIMATE)
 LATERAL SEISMIC SURCHARGE = 9H (ULTIMATE)

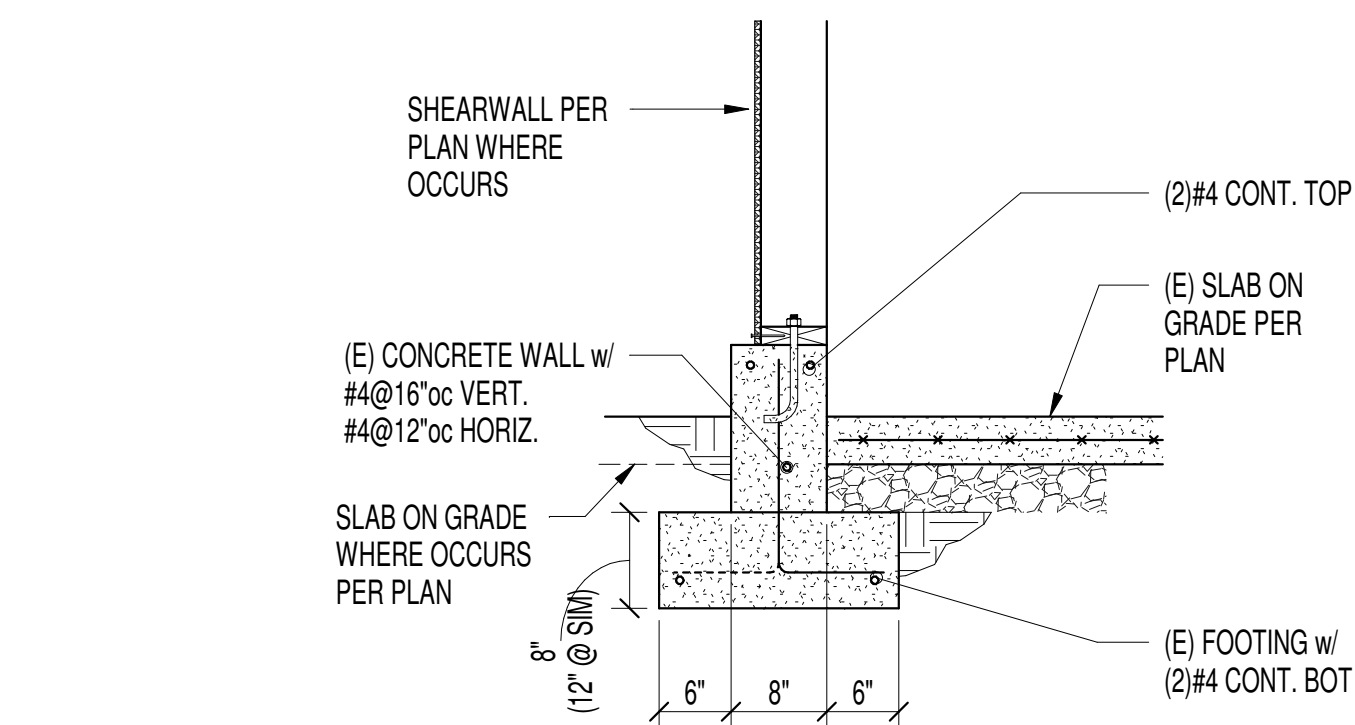
Retaining Wall Schedule - Site Walls

12



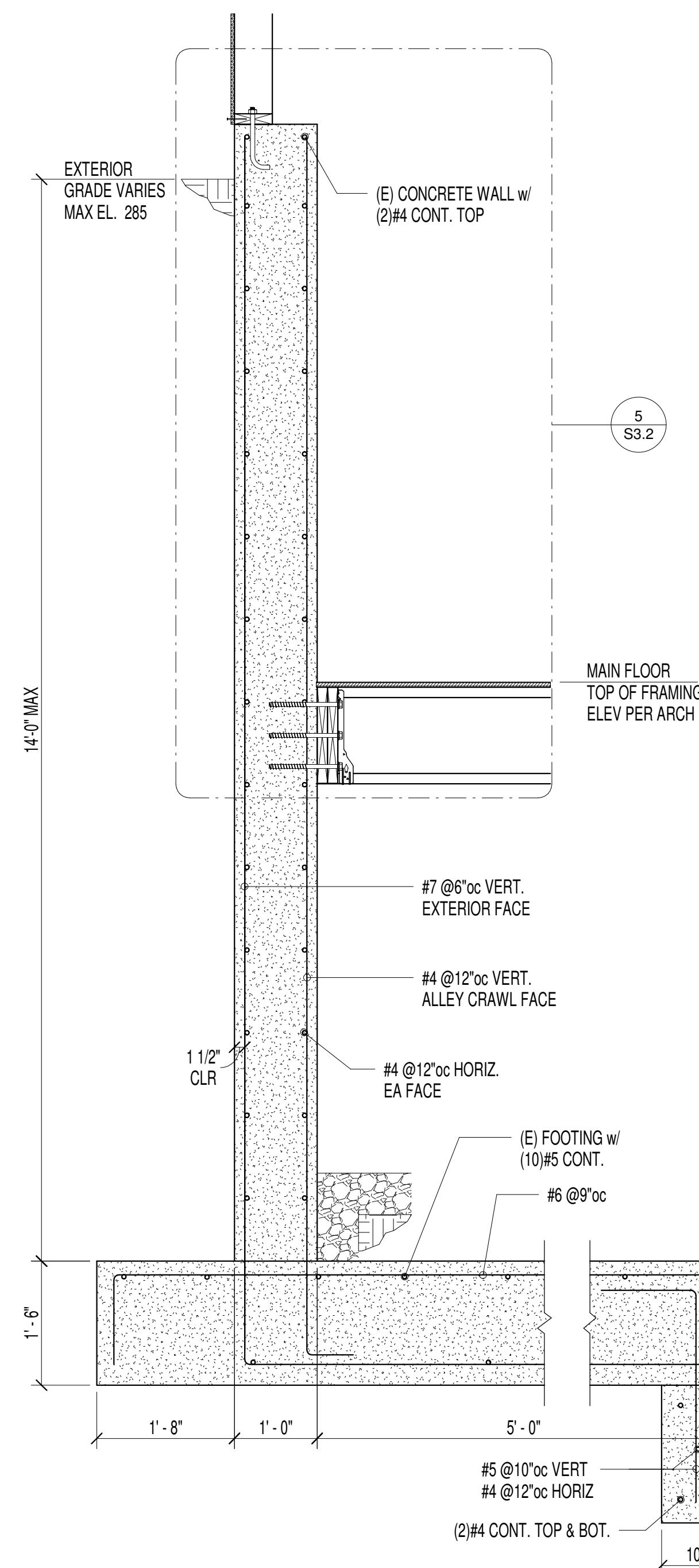
Section thru NE wall @ Lower Crawlspace

10



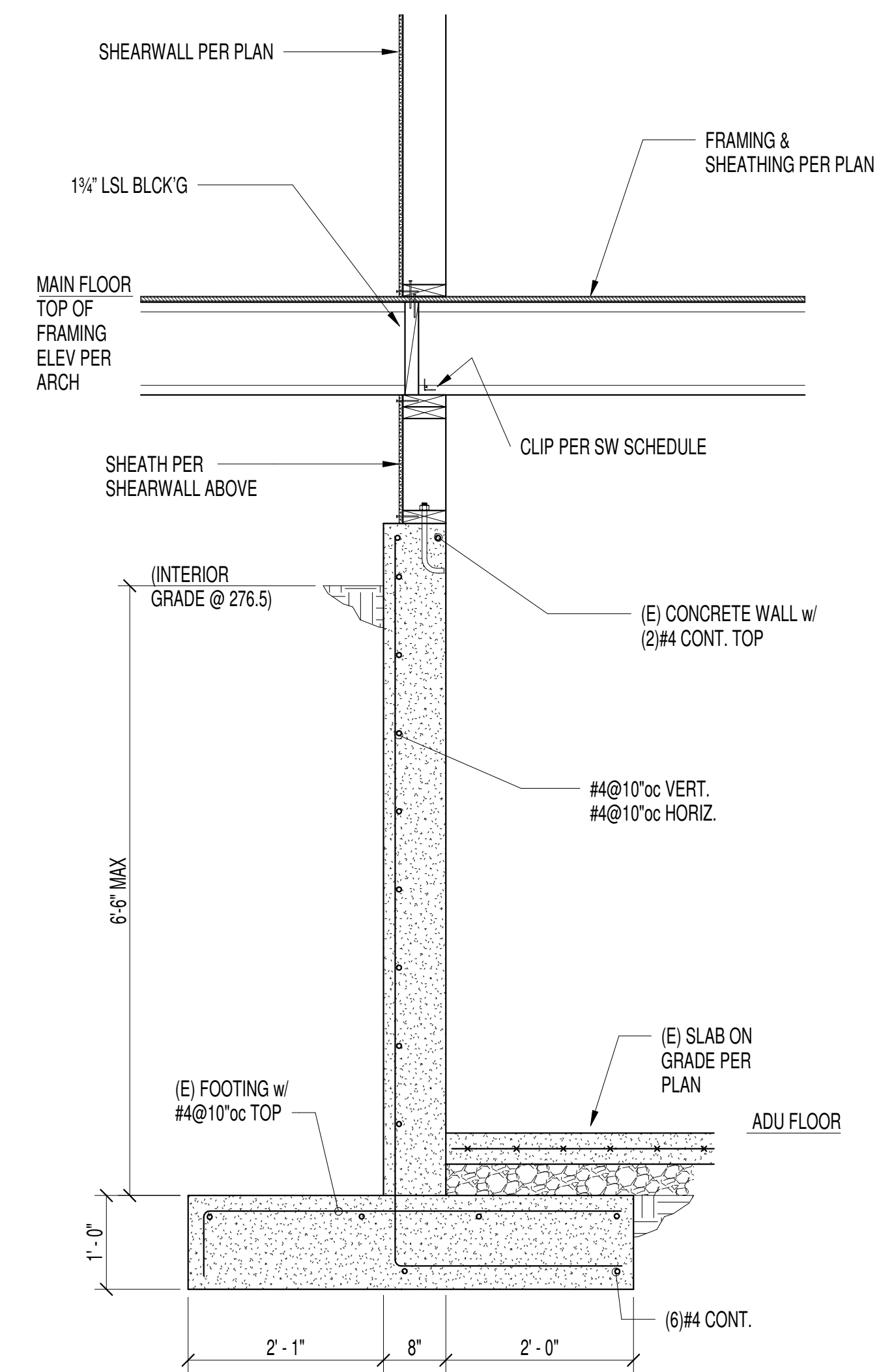
Section SW ADU/Entry

3



Section thru SE elevation @ ADU/Laundry

11



Section thru SE elevation @ ADU/Laundry

12

CHEN RESIDENCE

New Residence
8435 SE 47th PL.
Mercer Island, WA 98040

Date:
2/14/2022 Permit Submittal
8/25/2022 Sub2-2205-225
5/09/2023 Garage Wall - Rev

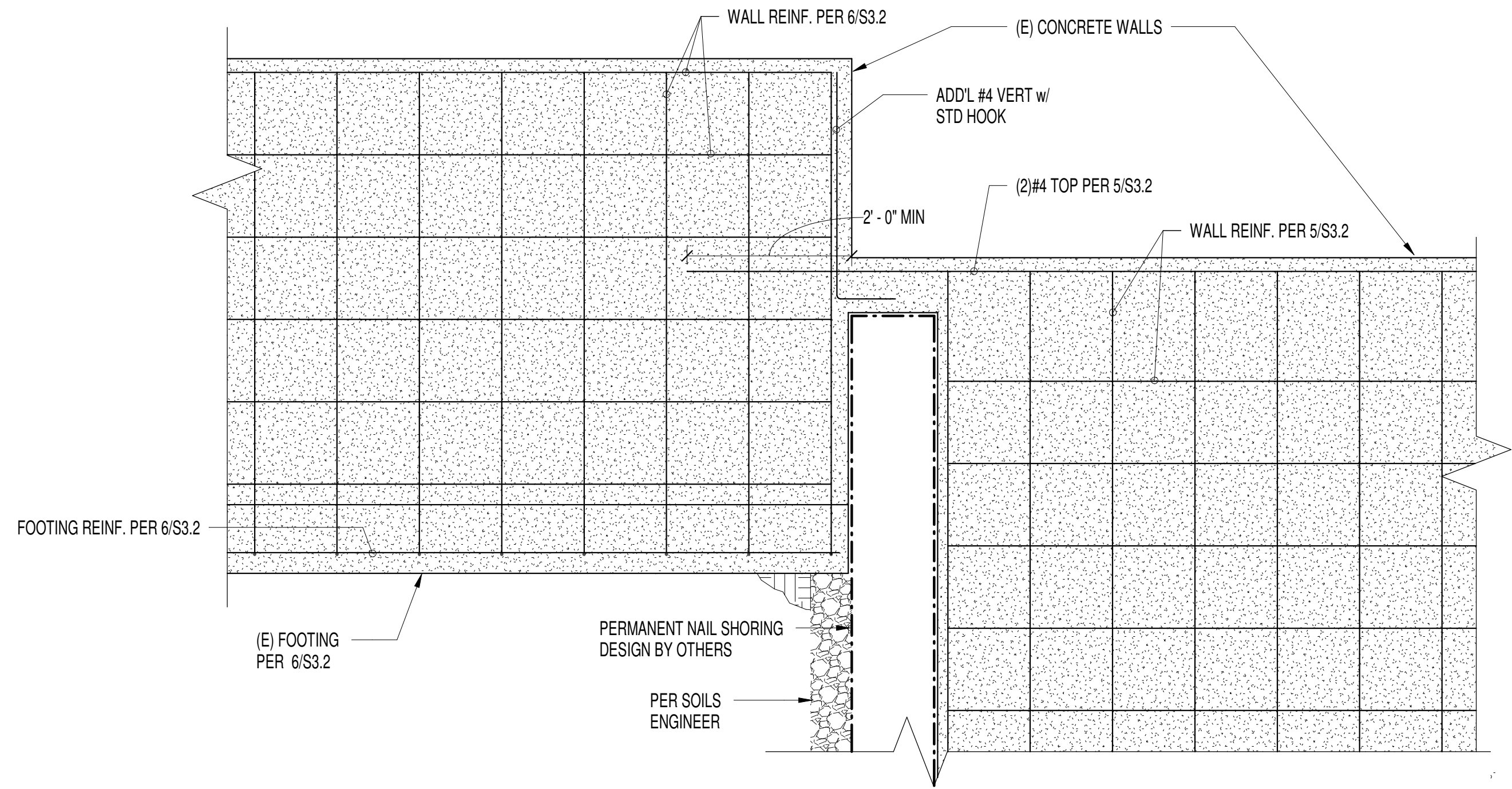
11/27/2024 Up-Date

IF SHEET IS NOT 24"x36" IT
HAS BEEN RESCALED

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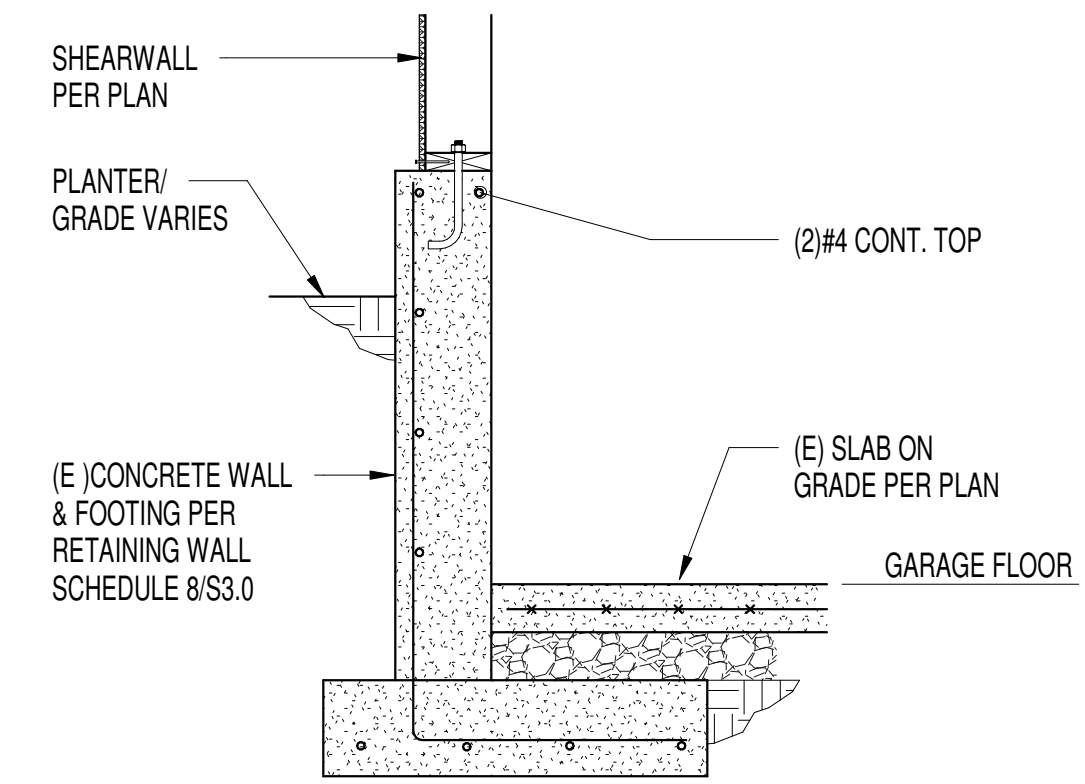
Concrete Details

S3.1



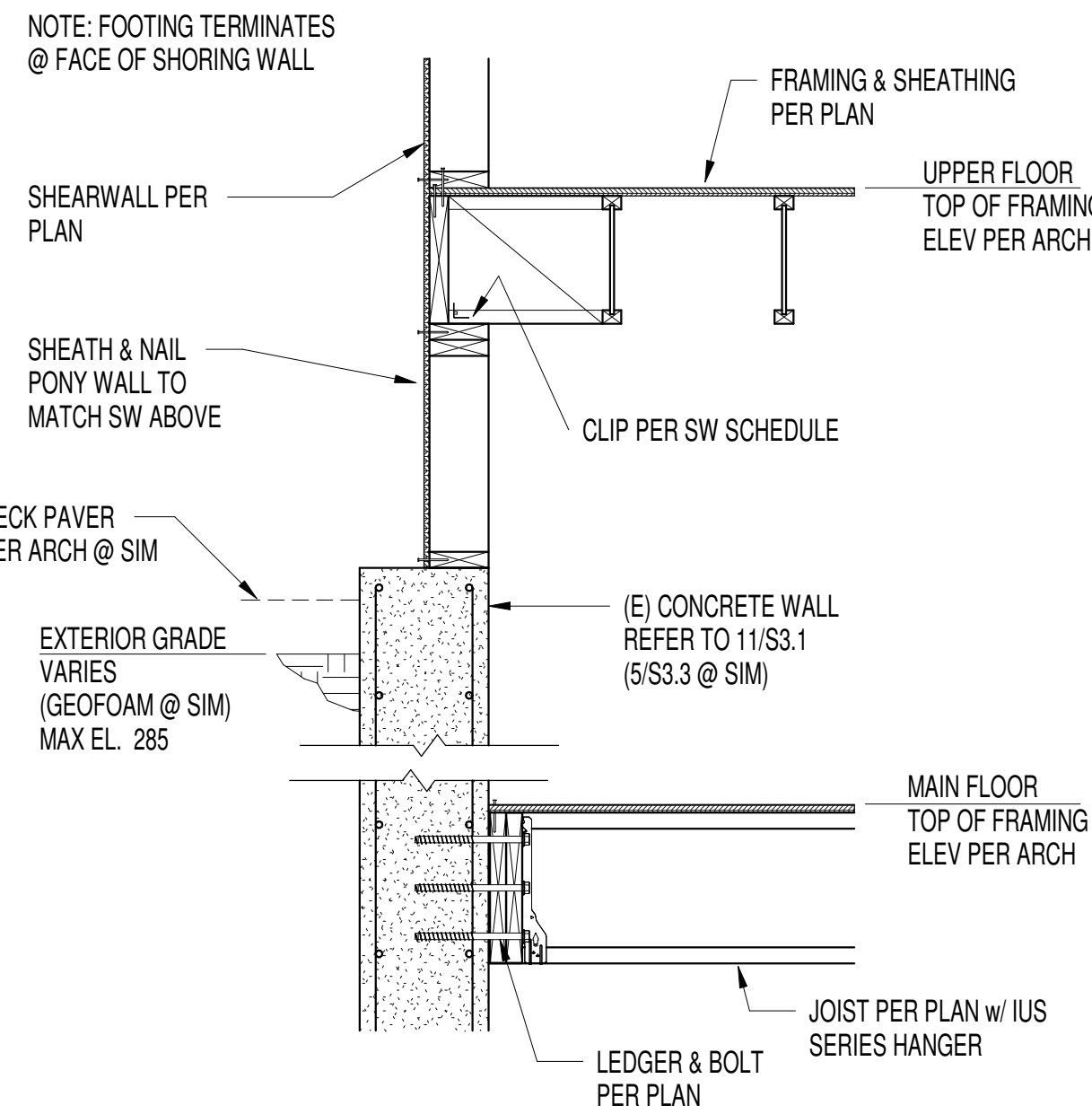
Wall Elevation

2



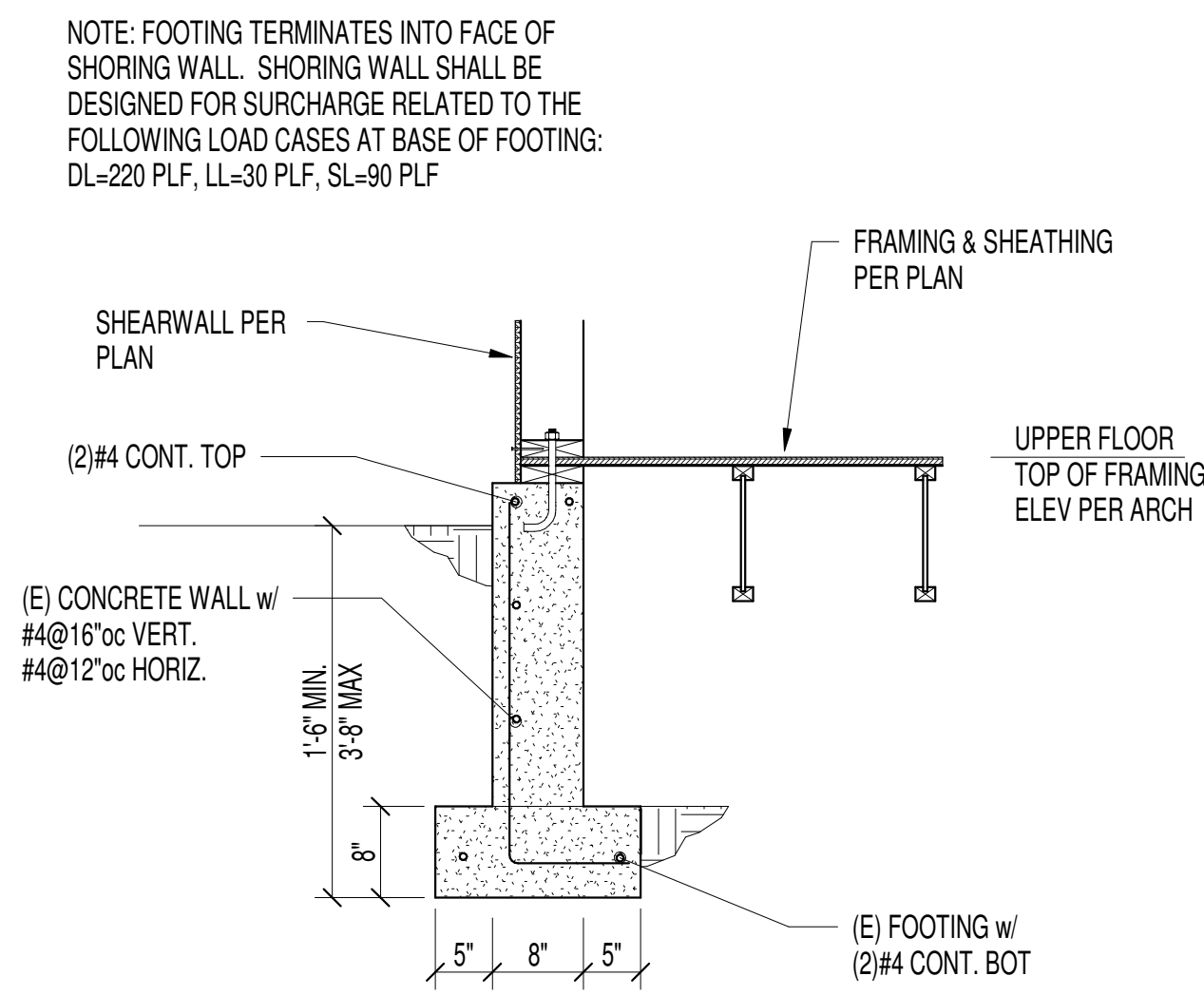
Garage SW @ Entry Planters

4



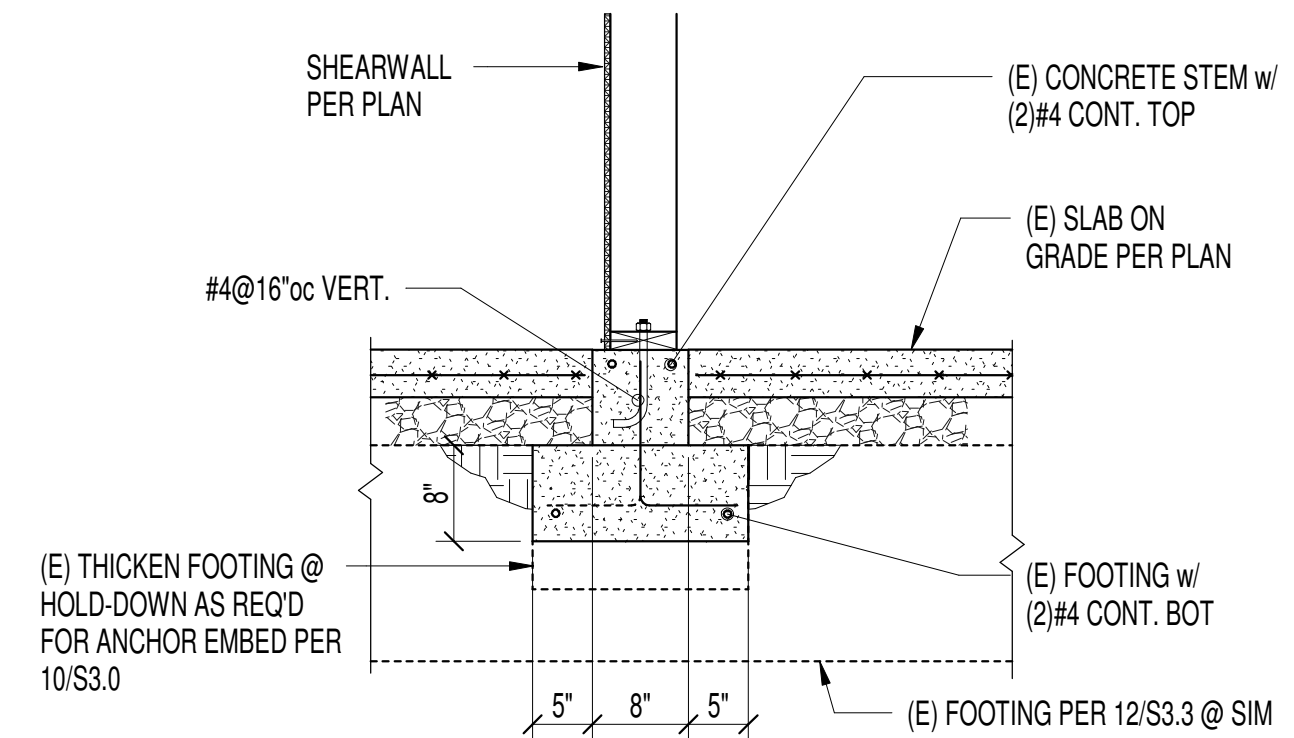
Section thru SW & NE elevations @ Secret Room/Bath

5



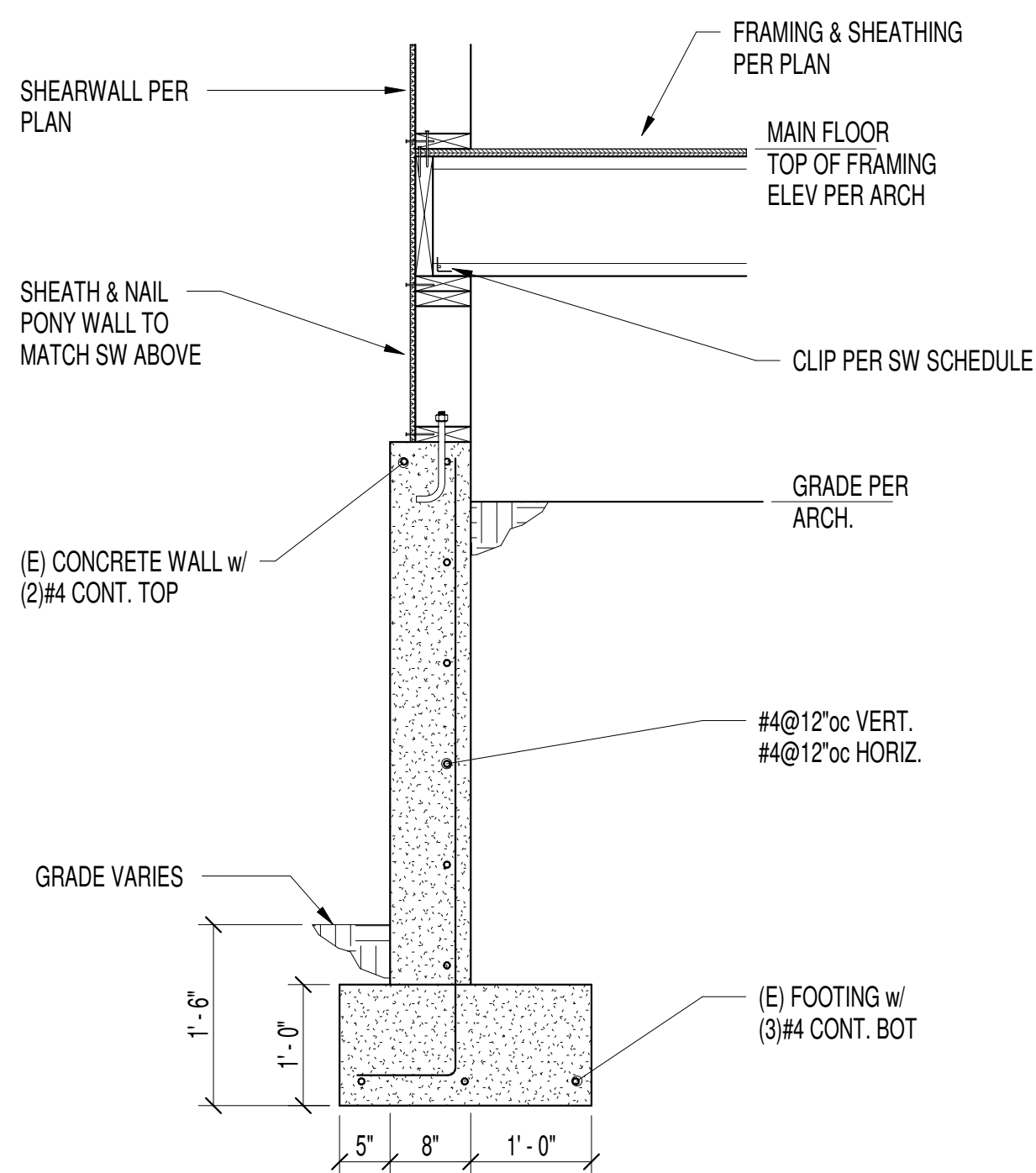
SE/NW @ Secret Room/Bath (NE of Shoring Wall)

6



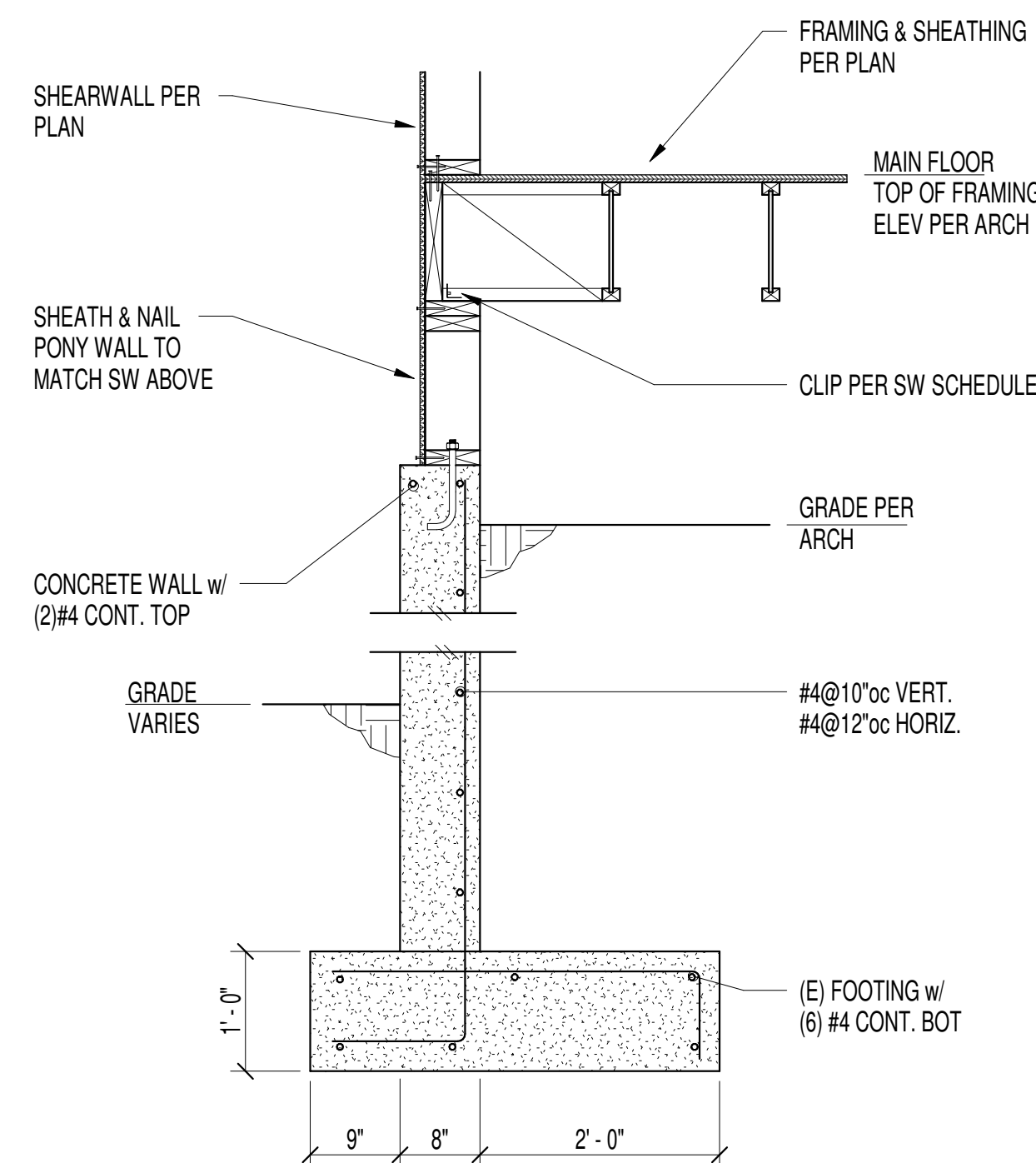
Interior Bearing Stem Wall

8



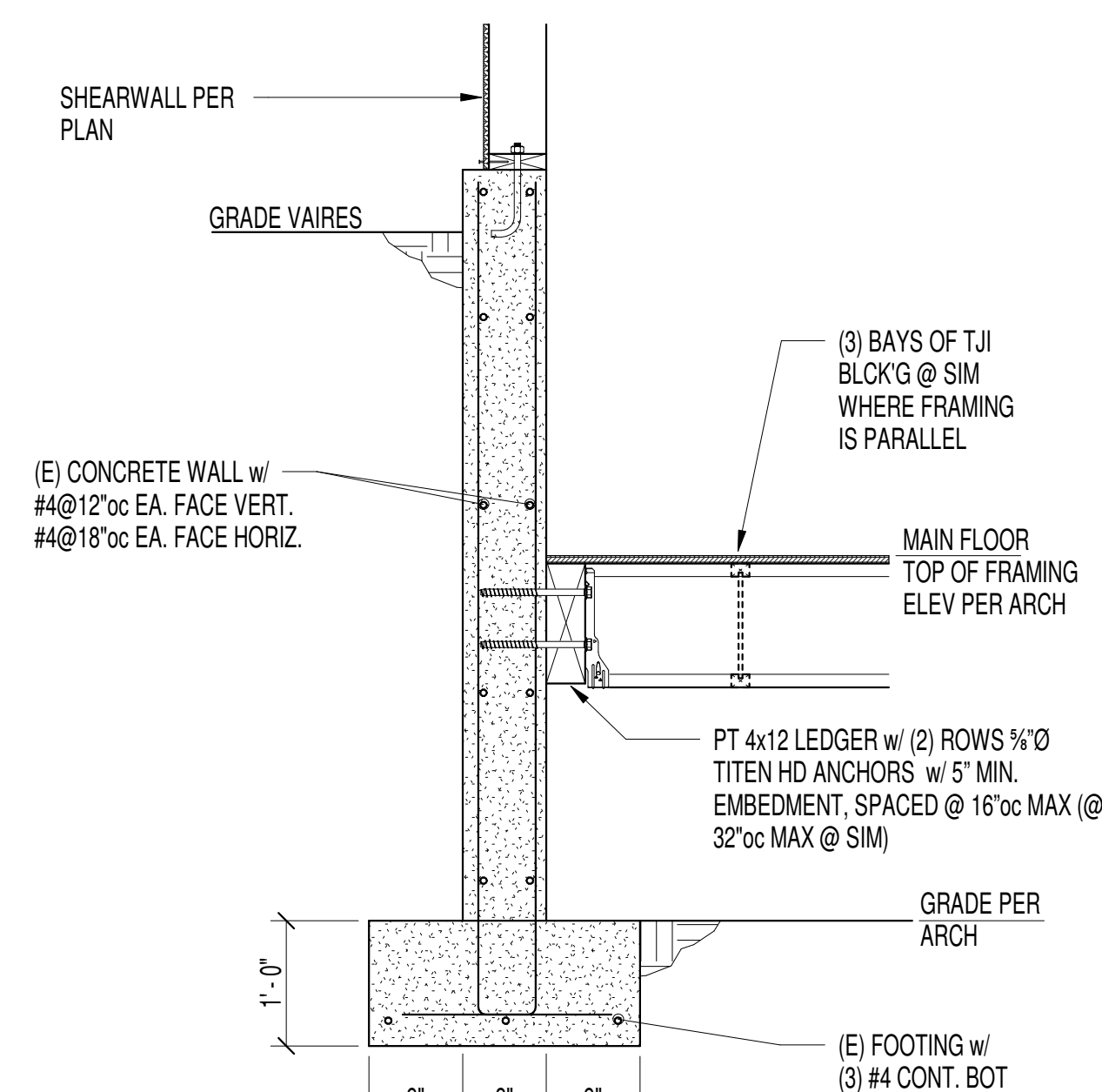
Section thru SE elevation @ Den/Laundry

9



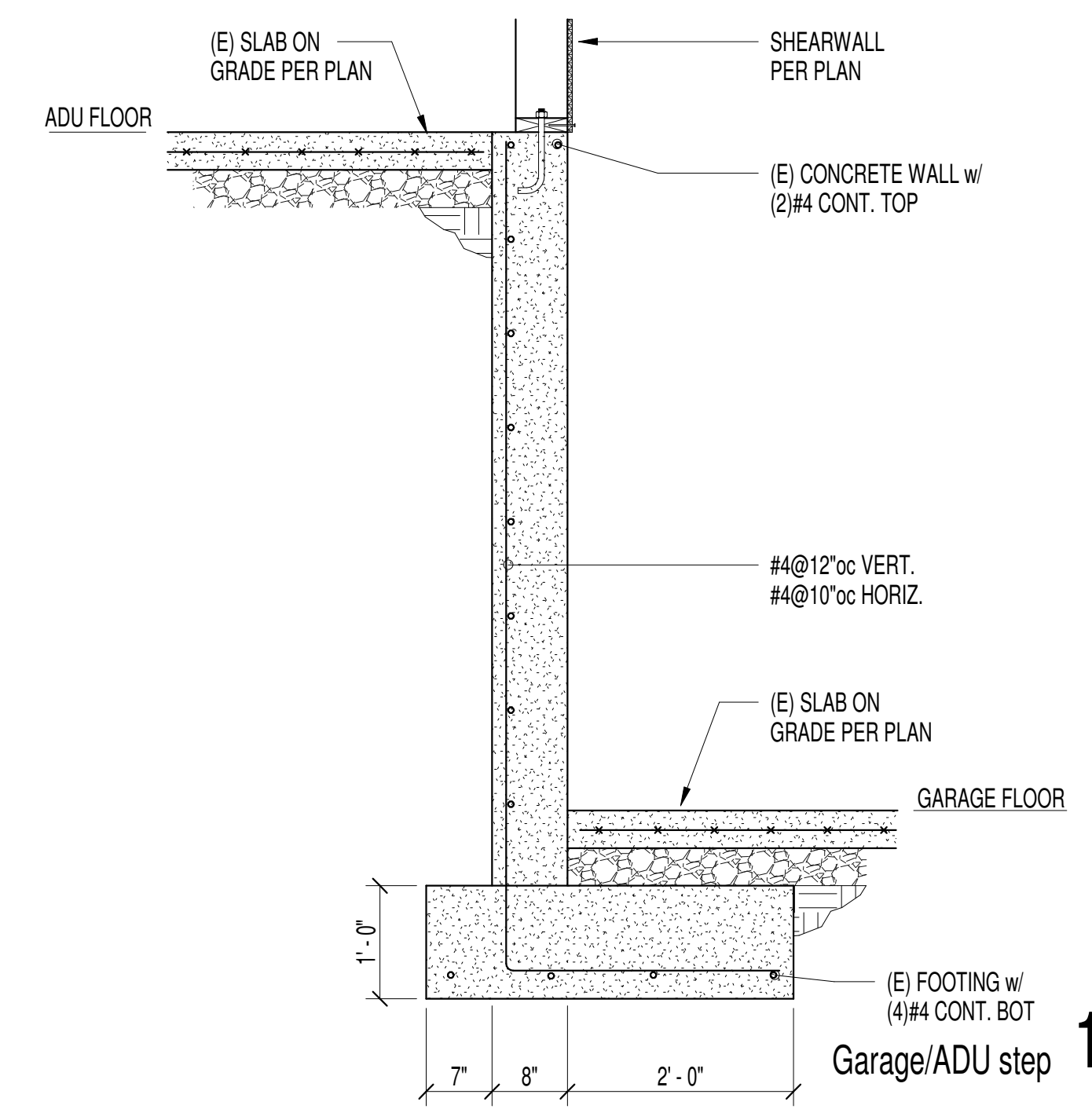
Section thru SW elevation @ Den/Laundry

10



Section thru NE/SE elevation @ Laundry

11



Garage/ADU step

12

CHEN RESIDENCE

New Residence
8435 SE 47th PL.
Mercer Island, WA 98040

Date:	
2/14/2022	Permit Submittal
8/25/2022	Sub2-2205-225
5/09/2023	Garage Wall - Rev

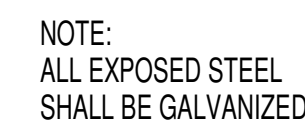
11/27/2024 Up-Date

IF SHEET IS NOT 24"x36" IT HAS BEEN RESCALED

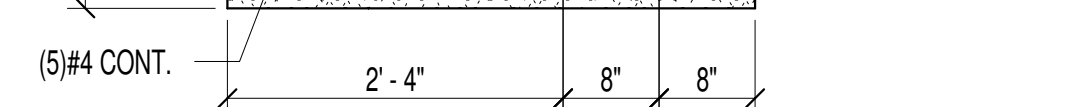
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Concrete Details

S3.2



Exterior HSS Post Base



CHEN RESIDENCE

New Residence

8435 SE 47th PL.

Mercer Island, WA 98040

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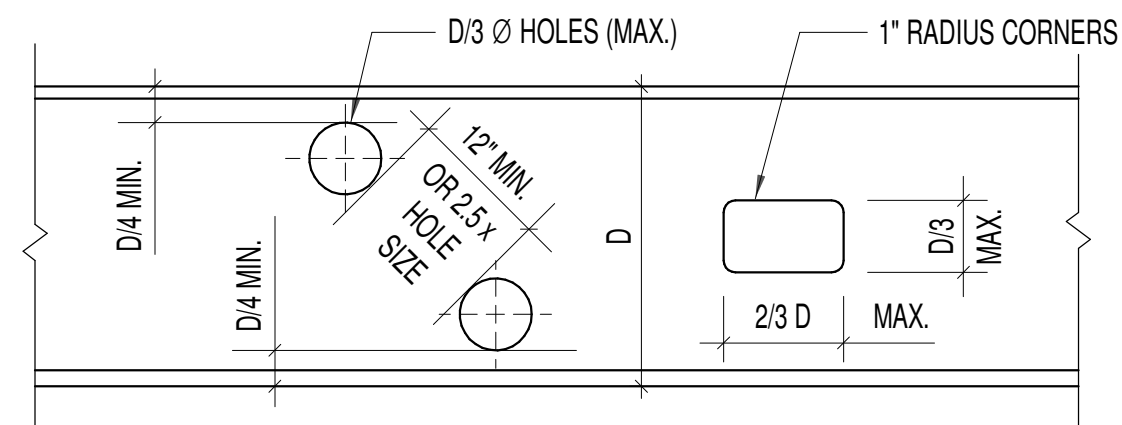
Concrete Details

S3.3

New Residence
8435 SE 47th PL.
Mercer Island, WA 98040

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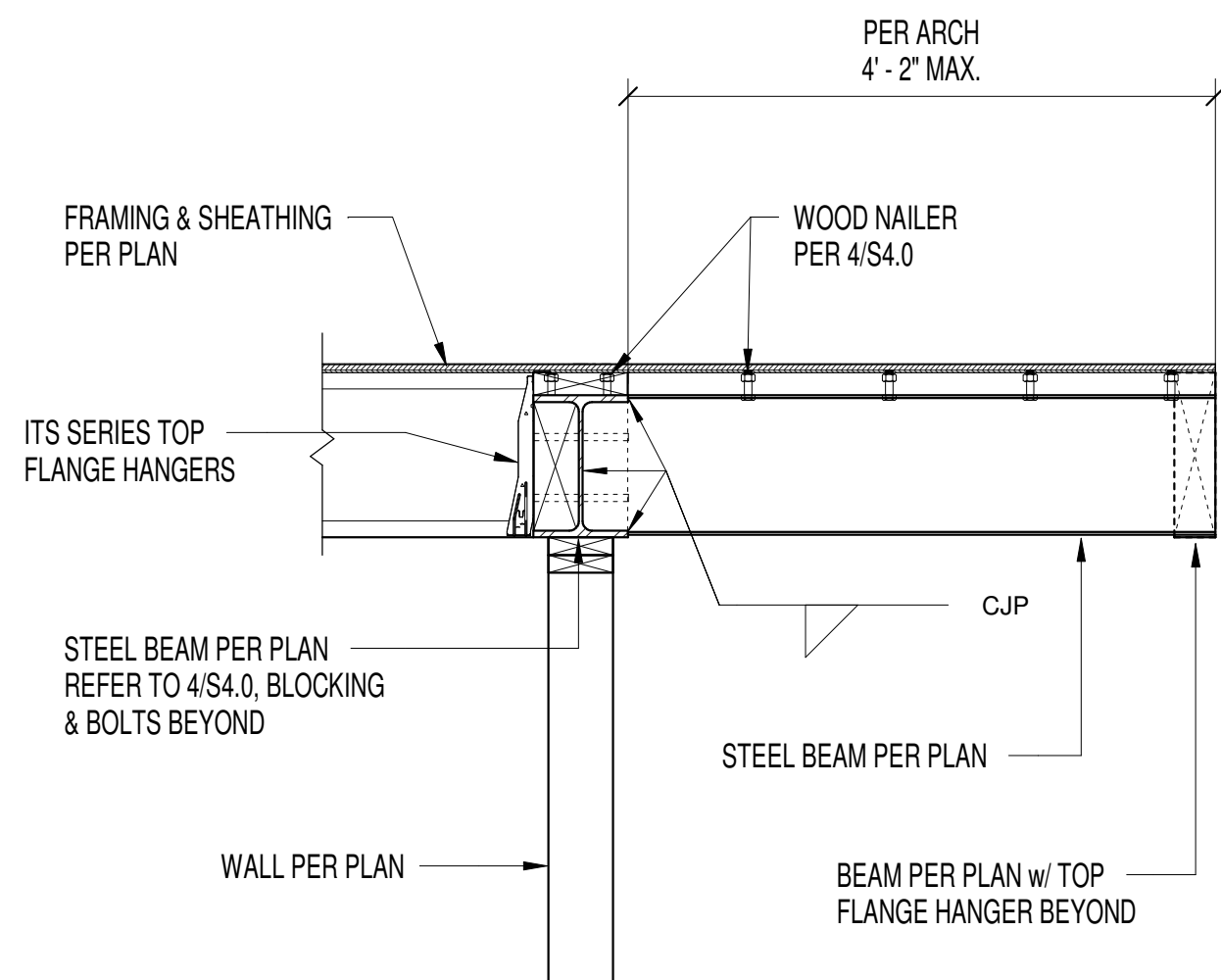
S3.4



1. CONTRACTOR SHALL COORDINATE SIZES AND LOCATIONS OF ALL BEAM PENETRATIONS, ALL PENETRATIONS LARGER THAN 2"Ø SHALL BE SHOWN ON SHOP DRAWINGS OR SKETCHES AND SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. FIELD CUTTING NOT PERMITTED WITHOUT APPROVAL.
2. OPENINGS MAY OCCUR IN MIDDLE HALF OF BEAM LENGTH ONLY.
3. NO CUTTING MAY OCCUR IN TOP OR BOTTOM QUARTER OF BEAM DEPTH.
4. ADJACENT OPENINGS MUST BE SPACED AT THE LESSER OF, 12" OR 2.5 x LARGER OPENING SIZE, EDGE TO EDGE.
5. MAXIMUM SIZES OF OPENINGS SHALL BE D/3 Ø OR D/3 x 2D/3 AS SHOWN.
6. NO OPENINGS SHALL OCCUR WITHIN 12" OF AN ADJACENT BEAM CONNECTION.
7. REQUIRED OPENINGS NOT MEETING ABOVE CRITERIA SHALL BE SUBMITTED TO ENGINEER FOR REINFORCING DESIGN.

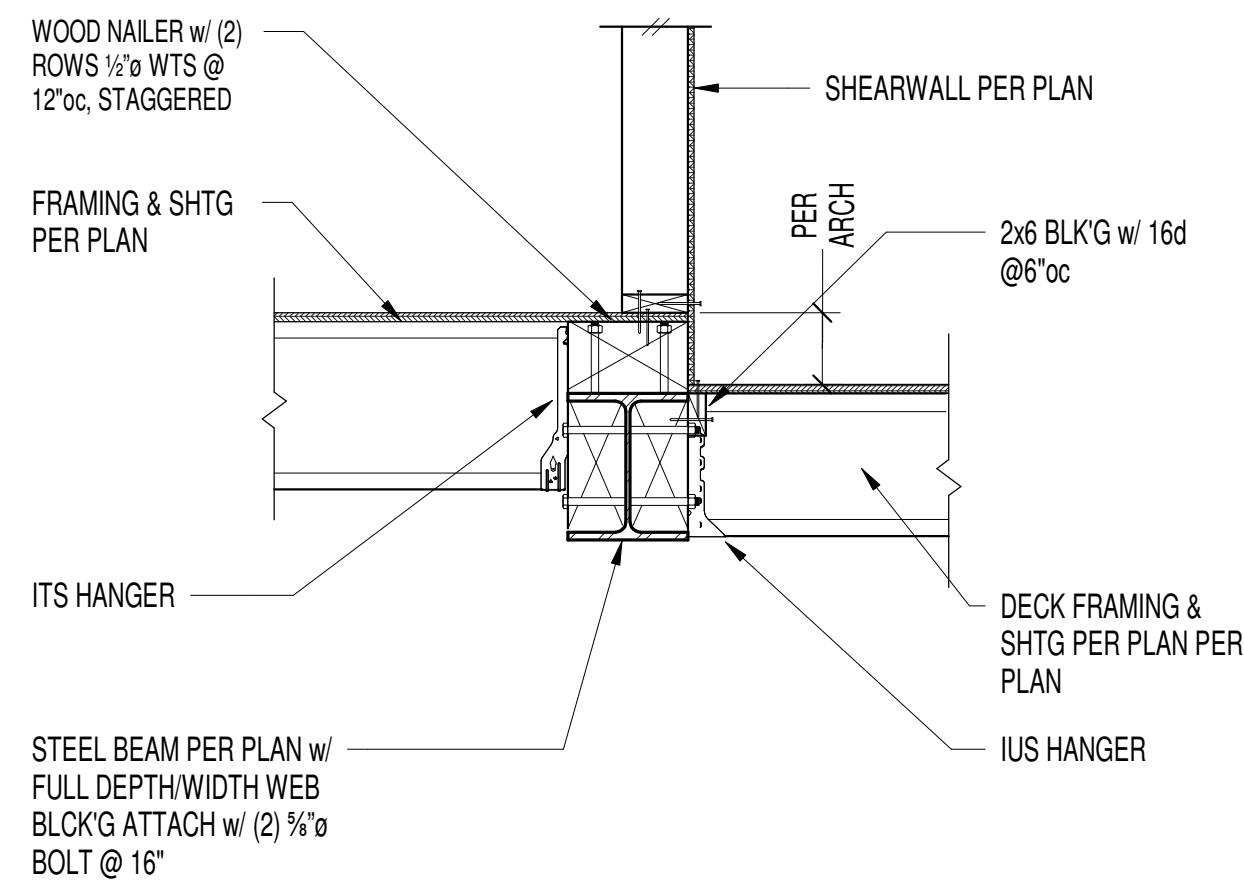
Steel Beam Openings

1



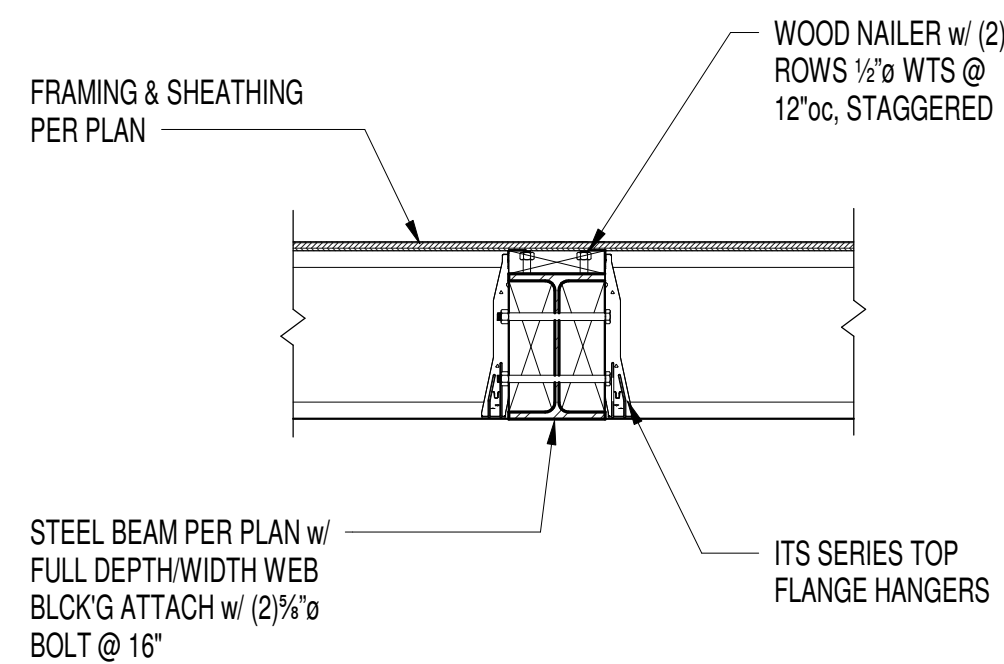
Flush Steel Beam - Stair Landing

2



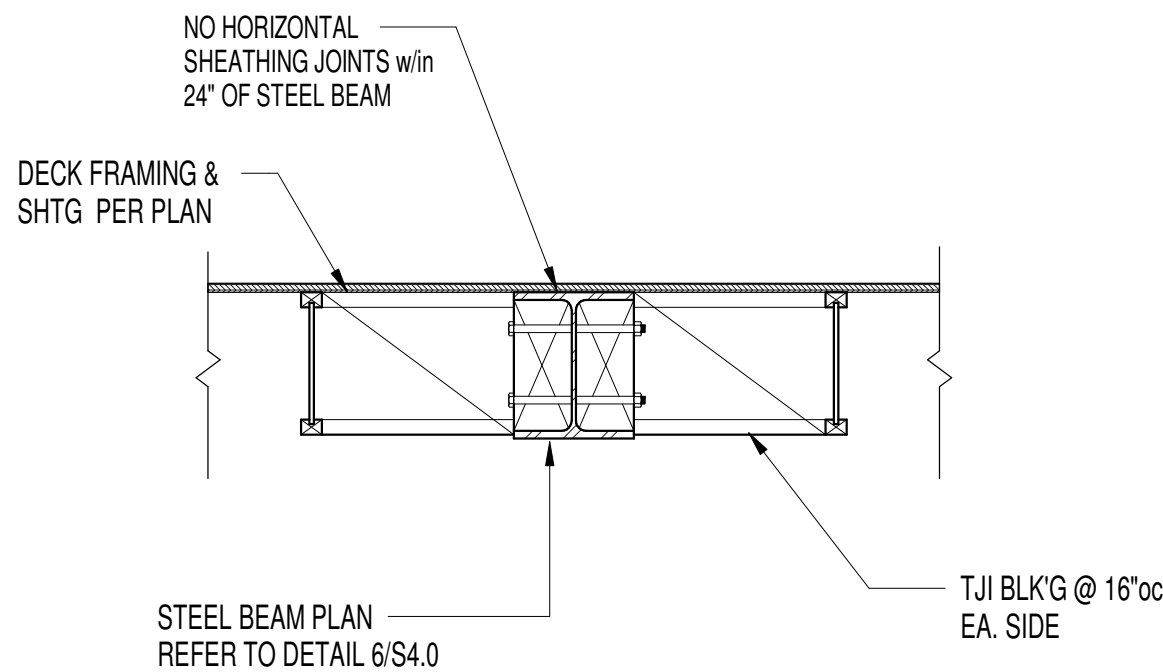
Deck Beam

3



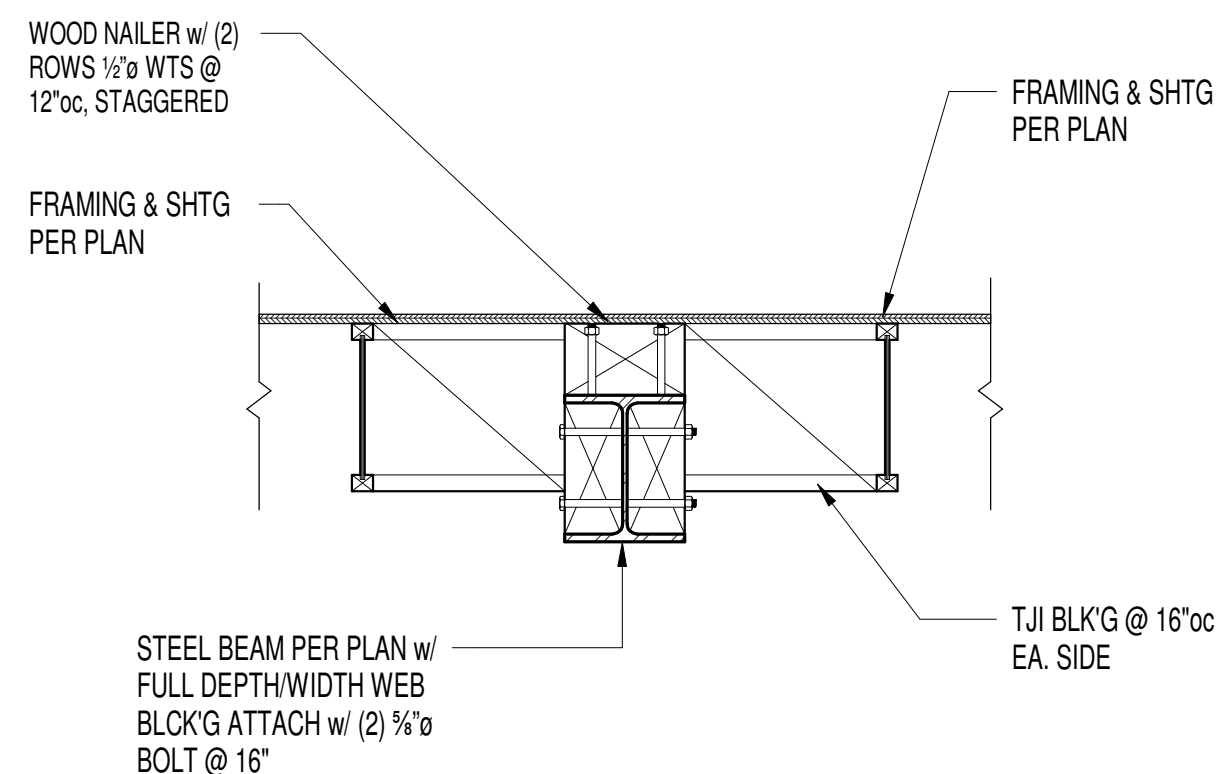
Flush Steel Beam

4



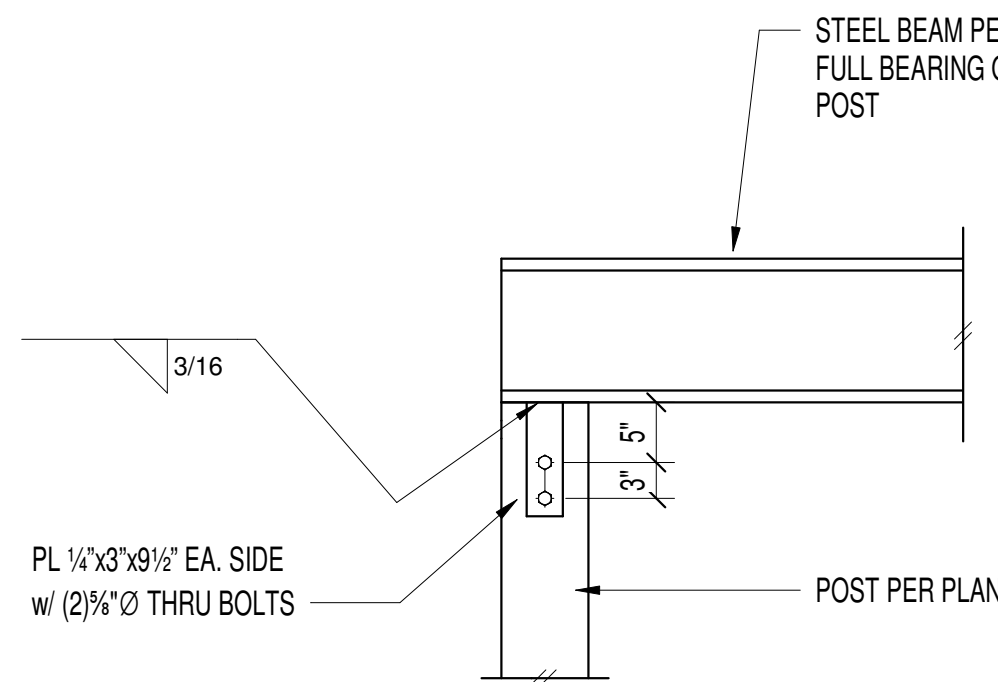
Stell Beam Over Garage @ Deck

5



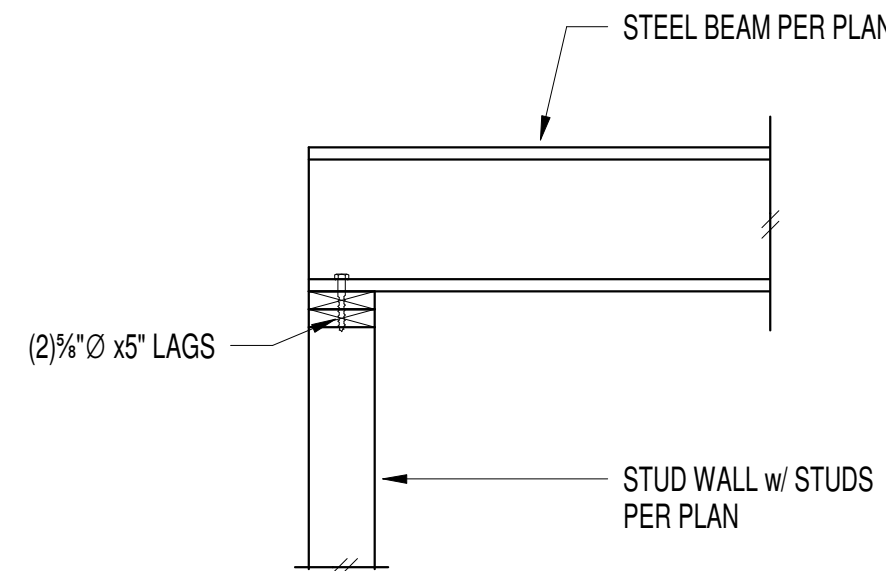
Stell Beam Over Garage @ Floor

6



Steel Beam to Isolated Post

7



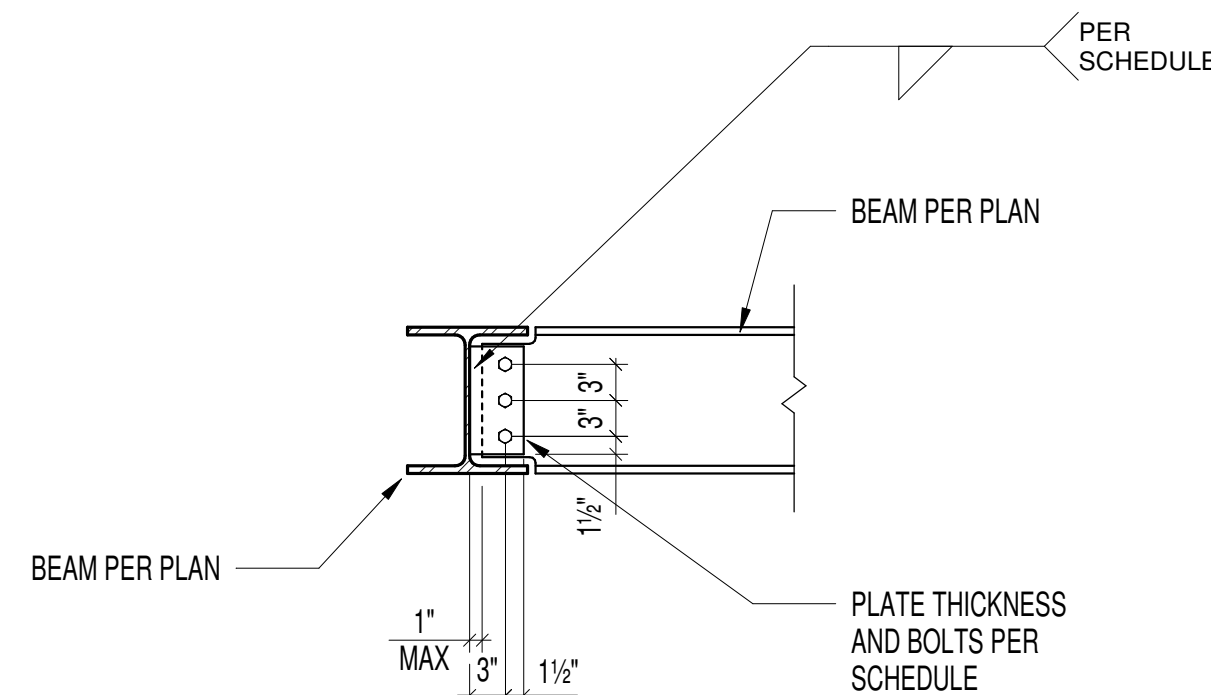
Steel Beam to Bearing Wall

8

SHEAR PLATE SCHEDULE

BEAM SIZE	NO. OF BOLTS	BOLT SIZE *	PLATE THICKNESS	WELD SIZE
W10	2	¾"Ø	¼"	¼"
W12, W14	3	¾"Ø	¼"	¼"

* BOLT TYPE = A325X
PL MATERIAL = A36



Typical Beam To Beam Connection

12

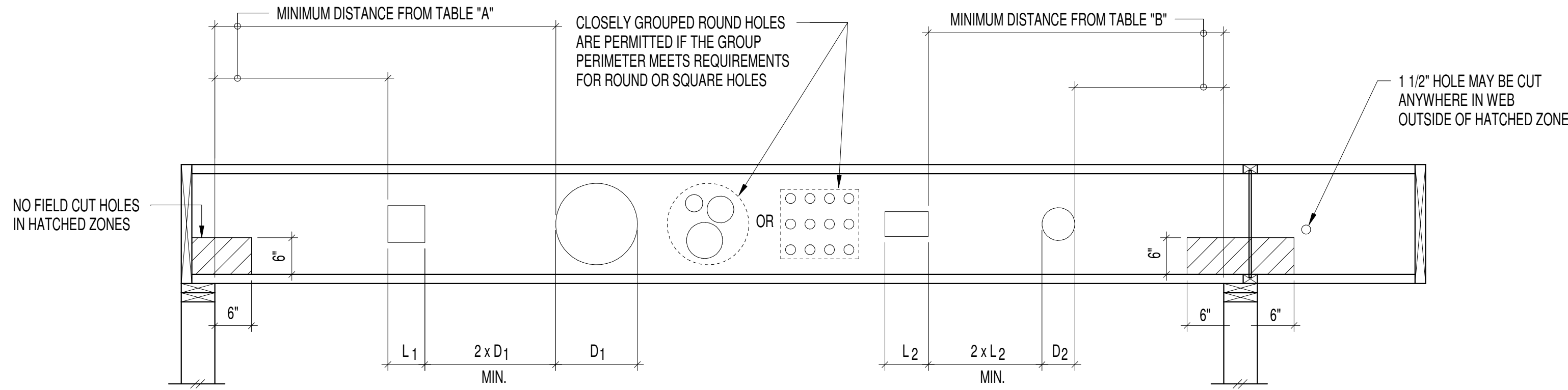


TABLE A - END SUPPORT

MINIMUM DISTANCE FROM EDGE OF HOLE TO INSIDE FACE OF NEAREST END SUPPORT

DEPTH	TJI	○ ROUND HOLE SIZE										□ SQUARE OR RECTANGULAR HOLE SIZE							
		2"	3"	4"	5"	6 1/2"	7"	8 7/8"	11"	13"	2"	3"	4"	5"	6 1/2"	7"	8 7/8"	11"	13"
9 1/2"	110	1'-0"	1'-6"	2'-0"	3'-0"	5'-0"	-	-	-	-	1'-0"	1'-6"	2'-6"	3'-6"	4'-6"	-	-	-	-
	210	1'-0"	1'-6"	2'-6"	3'-0"	5'-6"	-	-	-	-	1'-0"	2'-0"	2'-6"	4'-0"	5'-0"	-	-	-	-
	230	1'-6"	2'-0"	2'-6"	3'-6"	5'-6"	-	-	-	-	1'-0"	2'-0"	3'-0"	4'-6"	5'-0"	-	-	-	-
11 7/8"	110	1'-0"	1'-0"	1'-6"	2'-0"	2'-6"	3'-0"	5'-6"	-	-	1'-0"	1'-6"	2'-0"	2'-6"	4'-6"	5'-0"	6'-0"	-	-
	210	1'-0"	1'-6"	2'-0"	2'-0"	3'-0"	3'-6"	6'-0"	-	-	1'-0"	1'-6"	2'-6"	3'-0"	5'-0"	5'-6"	6'-6"	-	-
	230	1'-0"	1'-6"	2'-0"	2'-6"	3'-0"	3'-6"	6'-6"	-	-	1'-0"	2'-0"	2'-6"	3'-6"	5'-6"	5'-6"	7'-0"	-	-
	360	1'-6"	2'-0"	3'-0"	3'-6"	4'-6"	5'-0"	7'-0"	-	-	1'-6"	2'-6"	3'-6"	4'-6"	6'-6"	6'-6"	7'-6"	-	-
	560	1'-6"	2'-6"	3'-0"	4'-0"	5'-6"	6'-0"	8'-0"	-	-	2'-6"	3'-6"	4'-6"	5'-6"	7'-0"	7'-6"	8'-0"	-	-
14"	110	1'-0"	1'-0"	1'-0"	1'-6"	2'-0"	3'-0"	5'-6"	-	-	1'-0"	1'-0"	1'-6"	2'-0"	3'-6"	4'-0"	6'-0"	8'-0"	-
	210	1'-0"	1'-0"	1'-0"	1'-6"	2'-0"	2'-6"	3'-6"	6'-0"	-	1'-0"	1'-0"	2'-0"	2'-6"	4'-0"	4'-6"	6'-6"	8'-6"	-
	230	1'-0"	1'-0"	1'-0"	1'-6"	2'-6"	4'-0"	7'-0"	-	-	1'-0"	1'-0"	2'-0"	3'-0"	4'-0"	5'-0"	7'-0"	9'-0"	-
	360	1'-0"	1'-0"	1'-6"	2'-6"	3'-6"	4'-0"	5'-6"	8'-0"	-	1'-0"	1'-6"	2'-6"	4'-0"	6'-0"	6'-6"	8'-0"	9'-6"	-
	560	1'-0"	1'-0"	2'-0"	3'-0"	4'-6"	5'-0"	6'-6"	9'-0"	-	1'-6"	3'-0"	4'-0"	5'-0"	7'-0"	7'-6"	9'-0"	10'-0"	-

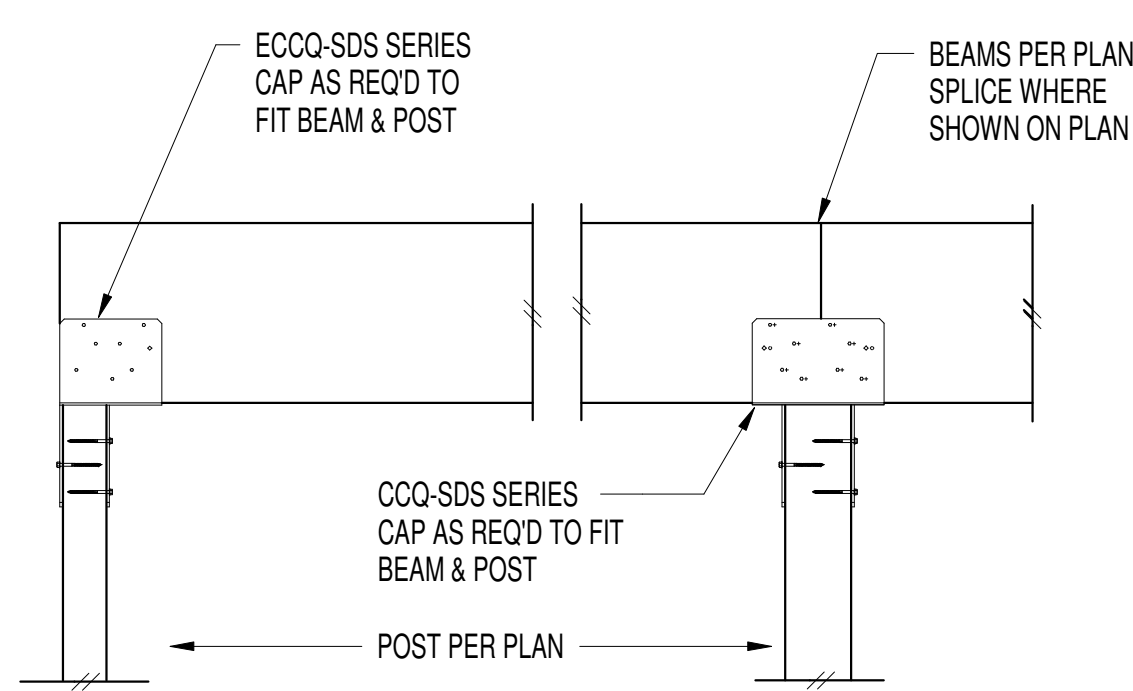
TABLE B - INTERMEDIATE OR CANTILEVER SUPPORT

MINIMUM DISTANCE FROM EDGE OF HOLE TO INSIDE FACE OF NEAREST INTERMEDIATE OR CANTILEVER SUPPORT

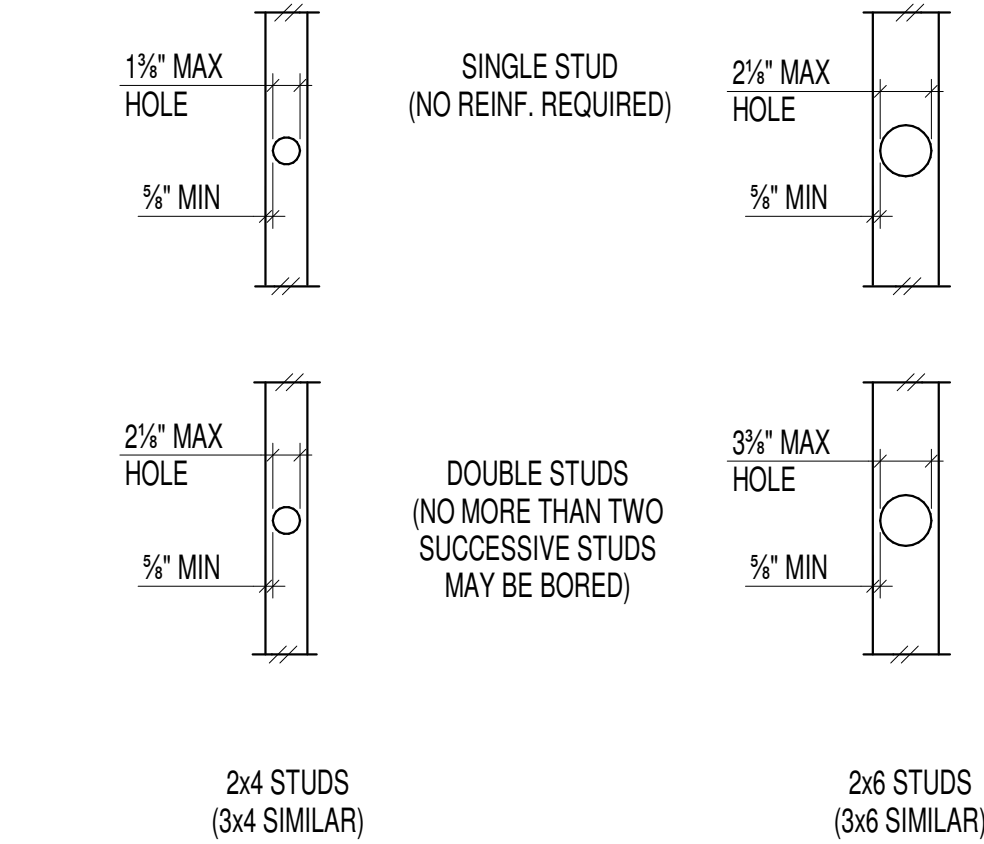
DEPTH	TJI	○ ROUND HOLE SIZE										□ SQUARE OR RECTANGULAR HOLE SIZE							
		2"	3"	4"	5"	6 1/2"	7"	8 7/8"	11"	13"	2"	3"	4"	5"	6 1/2"	7"	8 7/8"	11"	13"
9 1/2"	110	2'-0"	2'-6"	3'-6"	4'-6"	7'-6"	-	-	-	-	1'-6"	2'-6"	3'-6"	5'-6"	6'-6"	-	-	-	-
	210	2'-0"	2'-6"	3'-6"	5'-0"	8'-0"	-	-	-	-	2'-0"	3'-0"	4'-0"	6'-6"	7'-6"	-	-	-	-
	230	2'-6"	3'-0"	4'-0"	5'-6"	8'-6"	-	-	-	-	2'-0"	3'-6"	4'-6"	6'-6"	7'-6"	-	-	-	-
11 7/8"	110	1'-0"	1'-0"	1'-6"	2'-6"	4'-0"	4'-6"	8'-6"	-	-	1'-0"	1'-6"	2'-6"	4'-0"	7'-0"	7'-0"	9'-6"	-	-
	210	1'-0"	1'-0"	2'-0"	3'-0"	4'-6"	5'-0"	9'-0"	-	-	1'-0"	2'-0"	3'-0"	4'-6"	8'-0"	8'-0"	10'-0"	-	-
	230	1'-0"	2'-0"	2'-6"	3'-6"	5'-0"	5'-6"	10'-0"	-	-	1'-0"	2'-6"	3'-6"	5'-0"	8'-6"	9'-0"	10'-6"	-	-
	360	2'-0"	3'-0"	4'-0"	5'-6"	7'-0"	7'-6"	11'-0"	-	-	2'-0"	3'-6"	5'-0"	7'-0"	9'-6"	9'-6"	11'-0"	-	-
	560	1'-6"	3'-0"	4'-6"	5'-6"	8'-0"	8'-6"	12'-0"	-	-	3'-0"	4'-6"	6'-0"	8'-0"	10'-6"	11'-0"	12'-0"	-	-
14"	110	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	2'-6"	4'-6"	8'-6"	-	1'-0"	1'-0"	1'-0"	2'-6"	5'-0"	6'-0"	9'-0"	12'-0"	-
	210	1'-0"	1'-0"	1'-0"	1'-0"	2'-6"	3'-0"	5'-6"	9'-6"	-	1'-0"	1'-0"	2'-0"	3'-6"	6'-0"	7'-0"	10'-0"	13'-0"	-
	230	1'-0"	1'-0"	1'-0"	2'-0"	3'-6"	4'-0"	6'-0"	10'-6"	-	1'-0"	1'-0"	2'-6"	4'-0"	6'-6"	7'-6"	11'-0"	13'-6"	-
	360	1'-0"	1'-0"	2'-0"	3'-6"	5'-6"	6'-0"	8'-6"	12'-6"	-	1'-0"	2'-0"	4'-0"	5'-6"	9'-0"	10'-0"	12'-0"	14'-0"	-
	560	1'-0"	1'-0"	1'-6"	3'-6"	5'-6"	6'-6"	9'-6"	13'-6"	-	1'-0"	3'-0"	5'-0"	7'-0"	10'-0"	11'-0"	13'-6"	15'-0"	-

- GENERAL NOTES:
- HOLES MAY BE LOCATED VERTICALLY ANYWHERE WITHIN THE WEB. LEAVE 1/8" OF WEB (MINIMUM) AT TOP AND BOTTOM OF HOLE.
 - KNOCKOUTS ARE LOCATED IN WEB AT APPROXIMATELY 12" ON-CENTER; THEY DO NOT AFFECT HOLE PLACEMENT AND MAY BE LOCATED IN THE HATCHED ZONE.
 - FOR SIMPLE SPAN (5' MINIMUM) UNIFORMLY LOADED JOISTS MEETING THE REQUIREMENTS OF THIS GUIDE, ONE MAXIMUM SIZE ROUND HOLE MAY BE OCATED AT THE CENTER OF THE JOIST SPAN PROVIDED THAT NO OTHER HOLES OCCUR IN THE JOIST.
 - DISTANCES ARE BASED ON THE MAXIMUM UNIFORM LOADS SHOWN IN THIS GUIDE. FOR OTHER LOAD CONDITONS OR HOLE CONFIGURATIONS, USE FORTE SOFTWARE OR CONTACT YOUR WEYERHAEUSER REPRESENTATIVE.
 - DO NOT CUT OR NOTCH FLANGE.

Allowable TJI Joist Penetrations

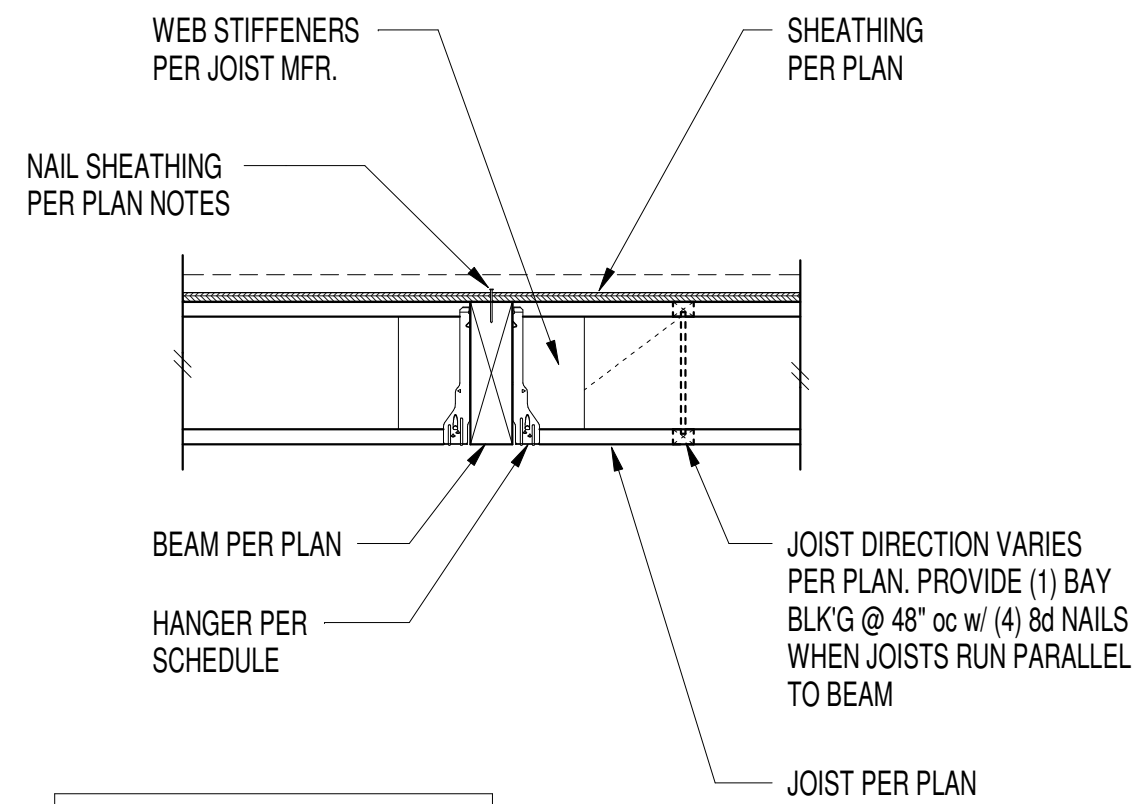


Typical Beam To Isolated Post Connection



NOTE: BORED HOLES SHALL NOT BE LOCATED @ THE SAME SECTION OF STUD AS A NOTCH.

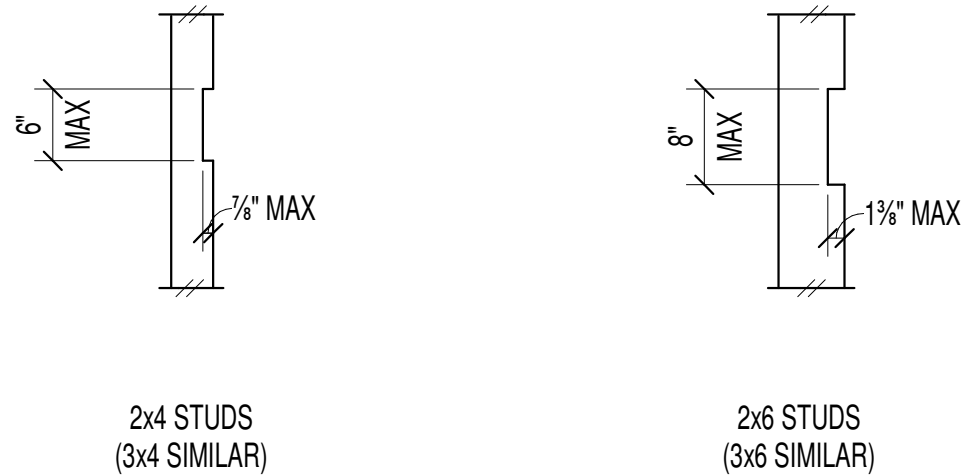
Holes Allowed Through Studs



JOIST HANGER SCHEDULE	
JOIST	HANGER
11 1/2" TJI 110	HUS1.81/11
11 1/2" TJI 360	HU3511
14" TJI 110	IUS1.81/14

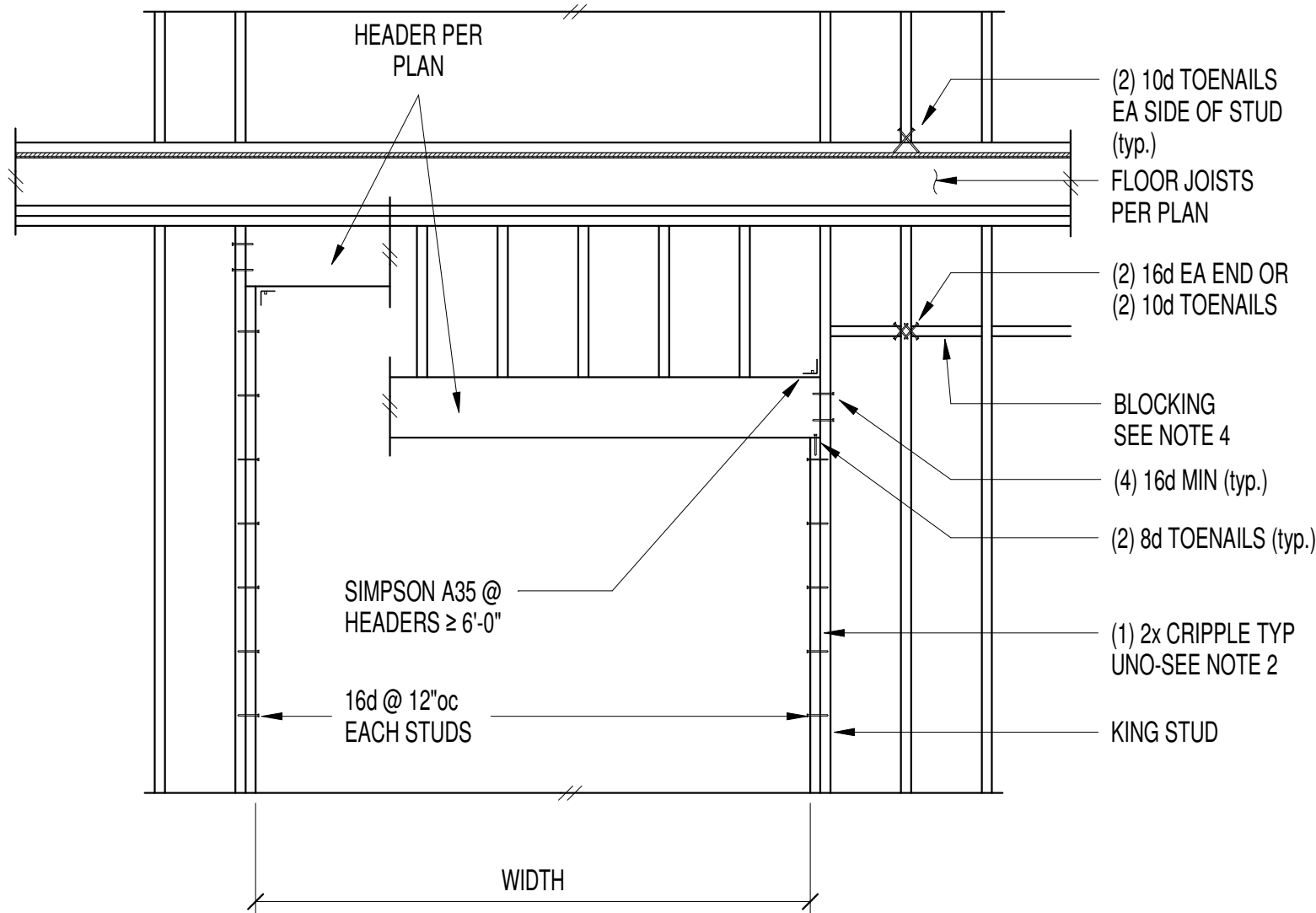
Typical Beam

NOTE: NOTCHES SHALL NOT OCCUR IN MORE THAN (2) SUCCESSIVE STUDS



ANY NOTCH OR HOLE THRU STUDS EXCEEDING ABOVE DETAIL SHALL GET E.O.R. APPROVAL FOR POSSIBLE REINFORCING REQUIREMENTS PRIOR TO DRILLING/NOTCHING

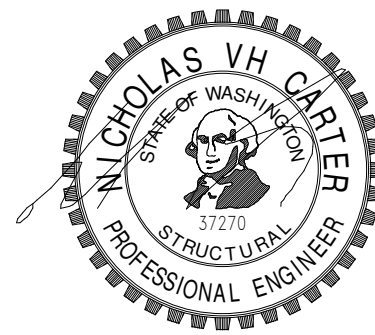
Allowable Notches In Studs



NOTES:

1. HEADERS PER PLAN
2. PROVIDE (1) 2x CRIPPLE STUDS MINIMUM TYPICAL, U.O.N.
3. SEE ARCHITECTURAL DRAWINGS FOR OPENING SIZES AND LOCATIONS
4. 2x SOLID BLOCKING REQUIRED AT CEILING LINE, ALL PANEL EDGES, AND @ 8'-0"oc MAX.

2033 Sixth Ave #995
Seattle, WA 98121
206-264-7784
www.CQN-SE.com



CHEN RESIDENCE

New Residence
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Mercer Island, WA 98040

Date:
2/14/2022 Permit Submittal
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5/09/2023 Garage Wall - Rev

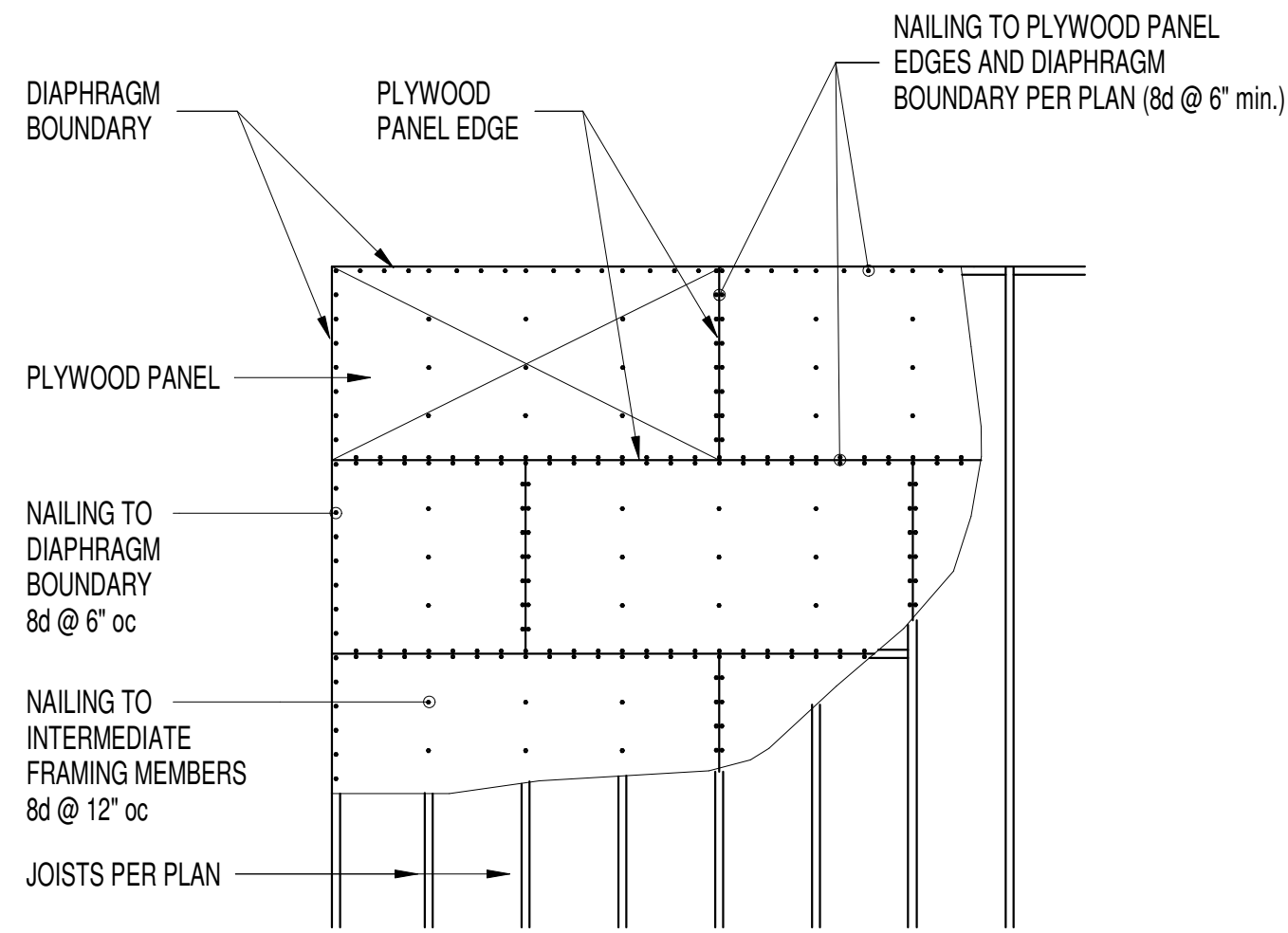
11/27/2024 Up-Date

IF SHEET IS NOT 24"x36" IT HAS BEEN RESCALED

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Typical Wood Details

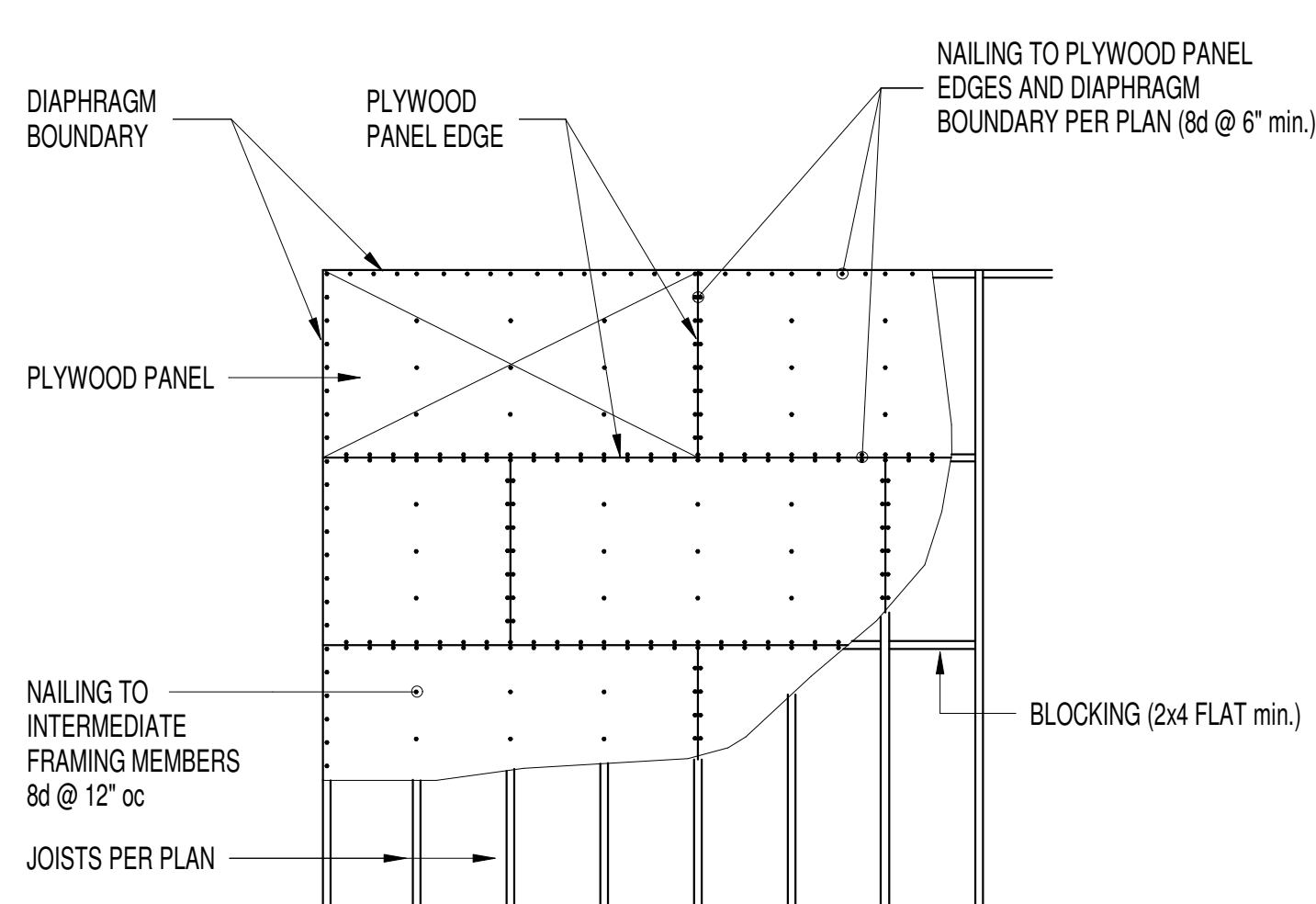
Typical Wall Opening Framing Elevation



NOTE:
BEARING AND SHEAR WALL INTERSECTIONS SHALL
BE CONSIDERED DIAPHRAGM BOUNDARIES, TYP

Typical Un-Blocked Plywood Roof/Floor Sheathing Layout

1



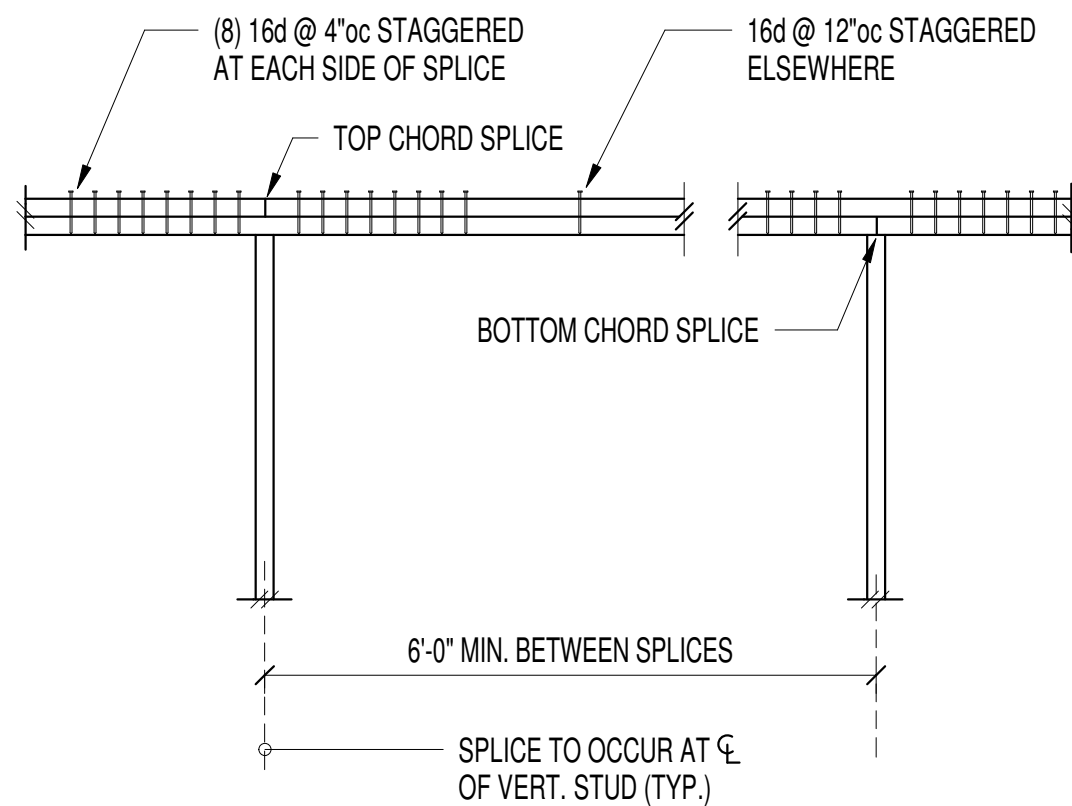
NOTE:
BEARING AND SHEAR WALL INTERSECTIONS SHALL
BE CONSIDERED DIAPHRAGM BOUNDARIES, TYP

Typical Blocked Sheathing Layout

2

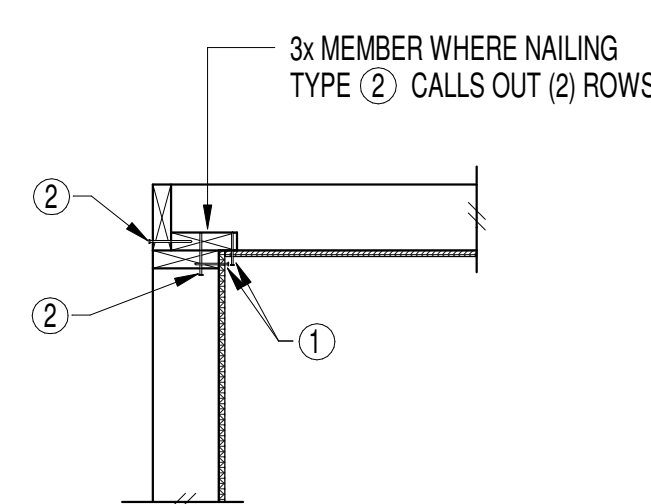
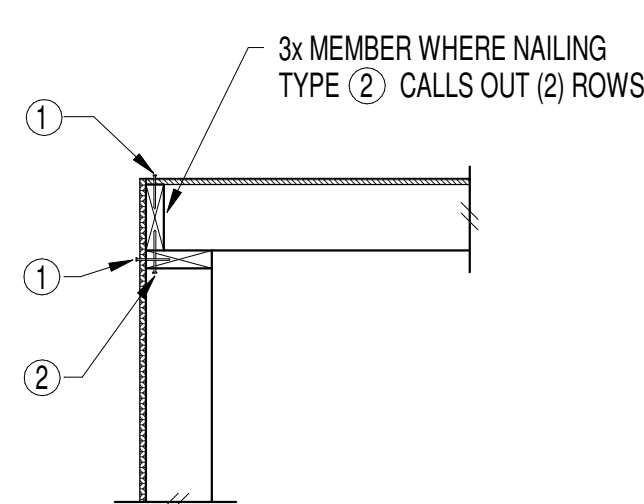
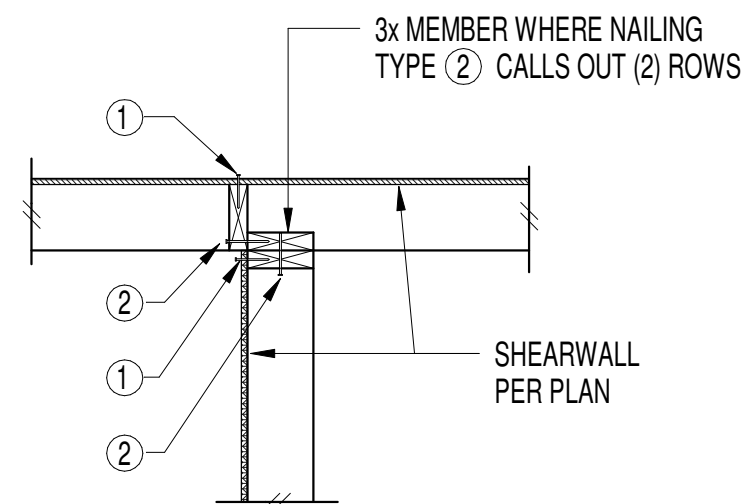
3

4

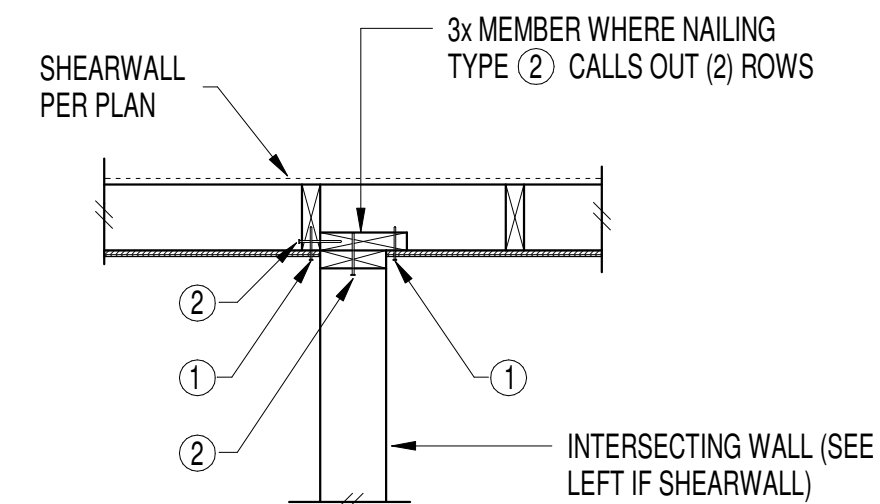
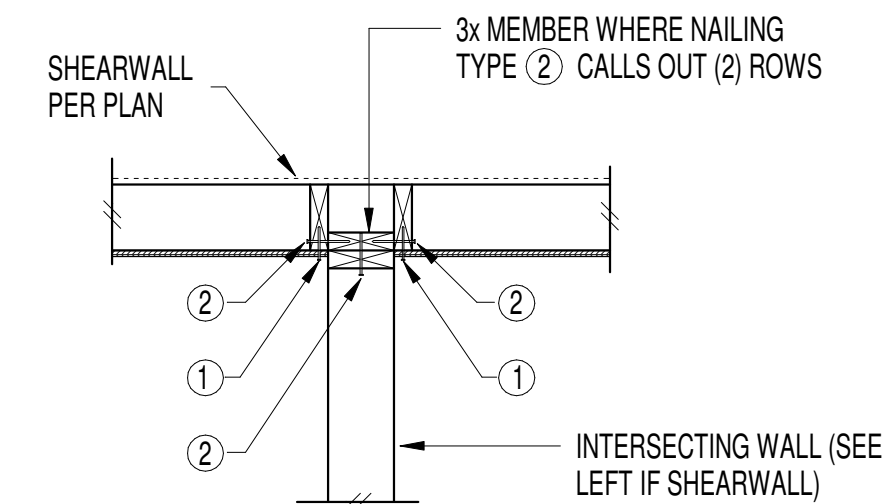


Typical Top Plate Splice - Side View

5

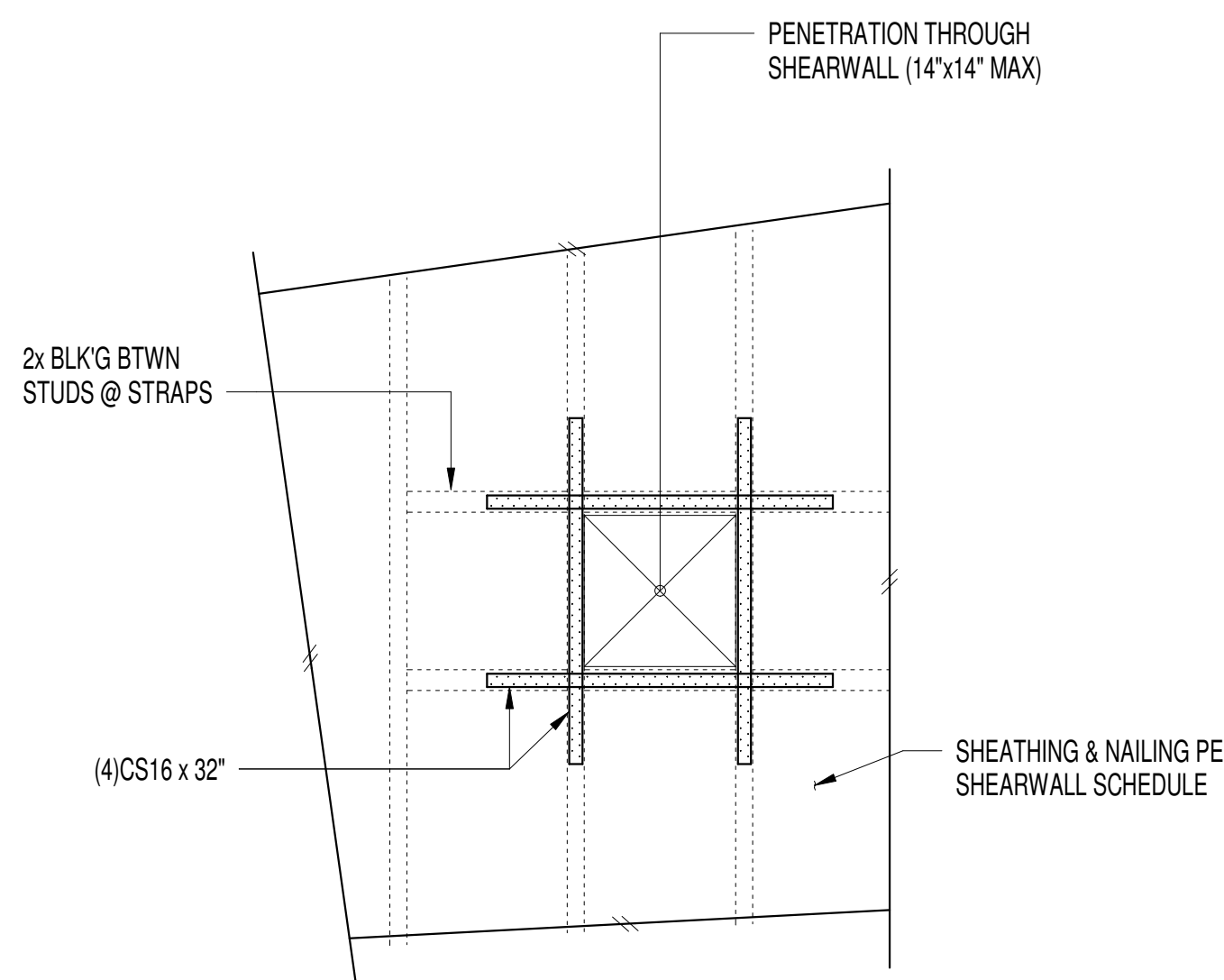


- ① PLYWOOD PANEL EDGE NAILING
PER SHEARWALL SCHEDULE TO
MATCH BOTTOM PLATE
- ② NAILING PER SHEARWALL
SCHEDULE



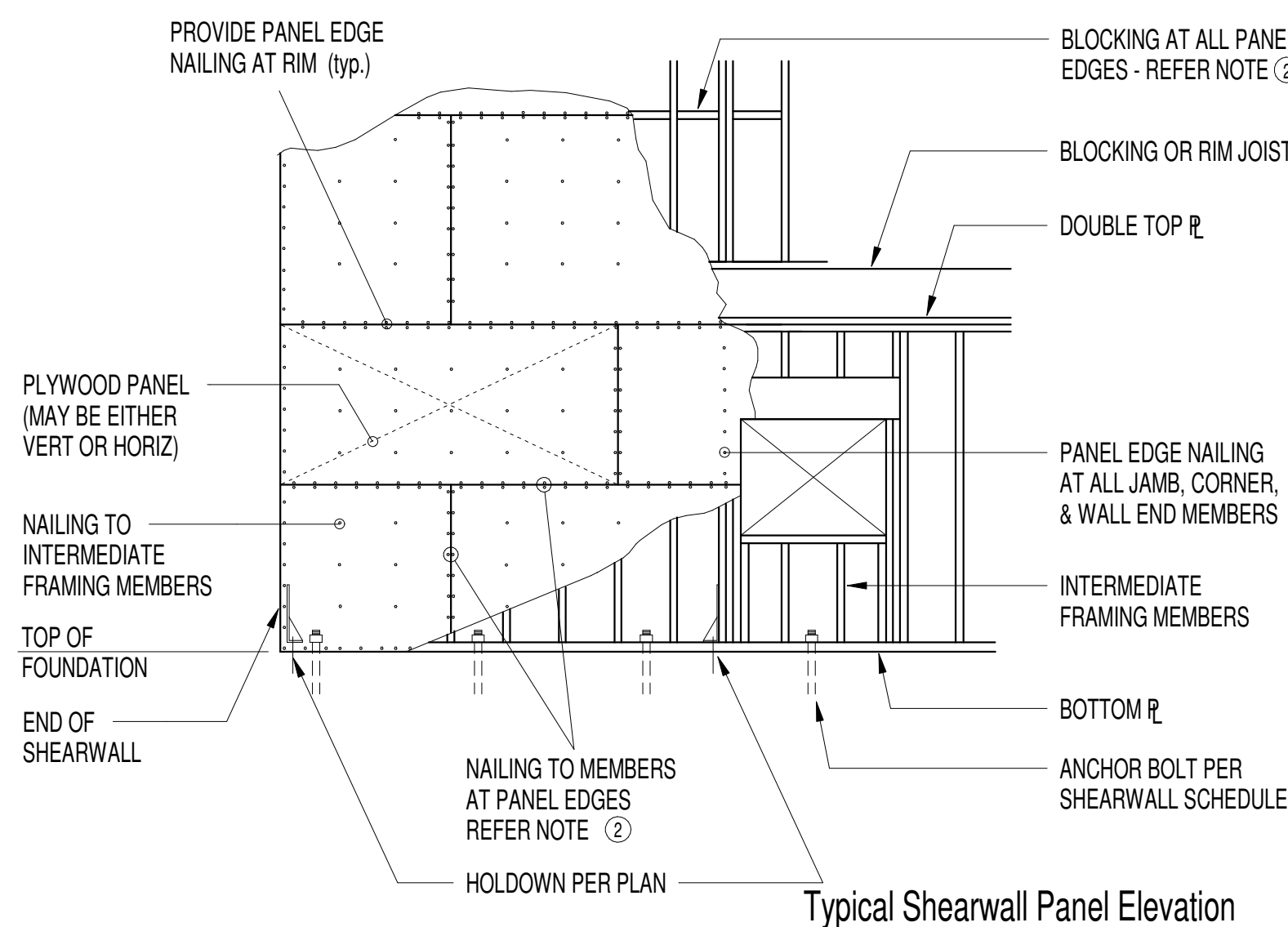
Shearwall Intersection

8



Penetration Through Shearwall

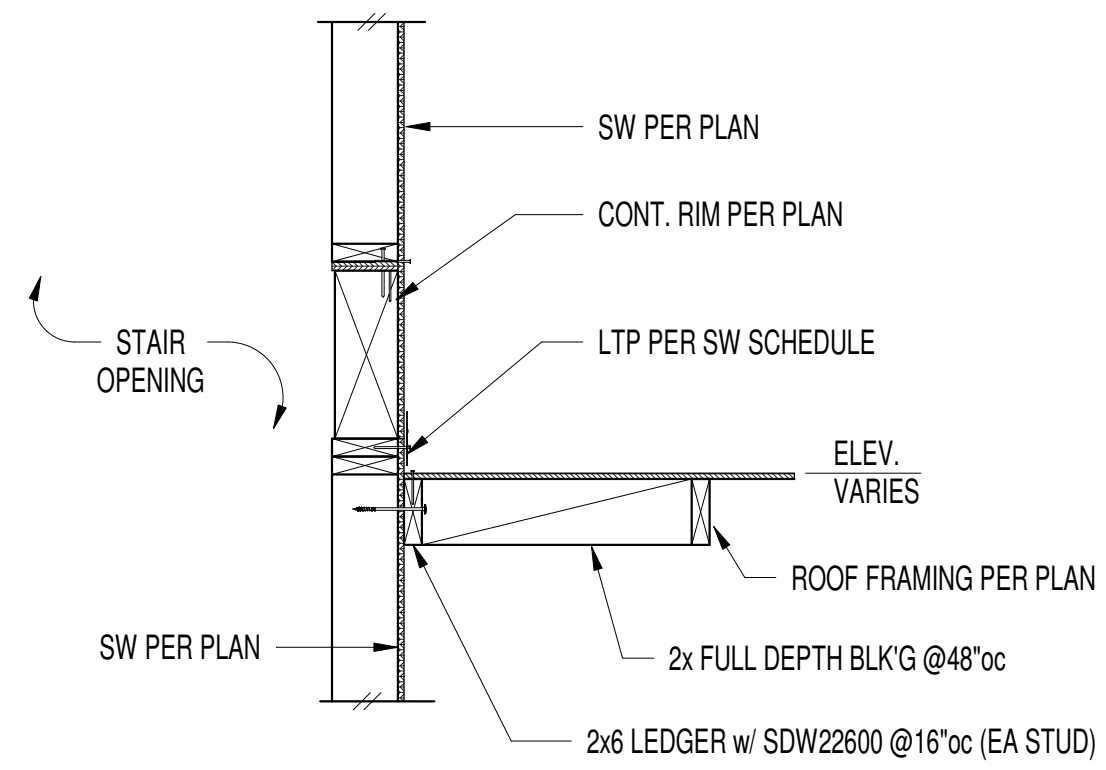
9



Typical Shearwall Panel Elevation

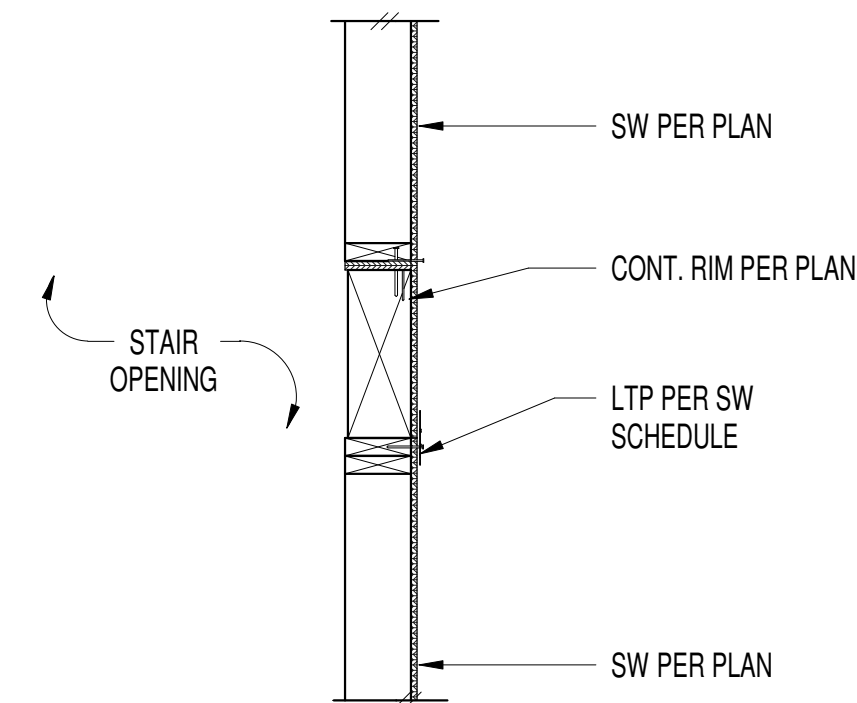
SHEAR WALL SCHEDULE								
#SW#	SHEATHING	BLOCKING	PANEL EDGE NAILING ①	ATTACHMENT TO TOP PLATE ③	BOTTOM PLATE ATTACHMENT			CAPACITY (plf) SEISMIC
					LSL RIM JOIST REQ'D.	FACENAILING TO WOOD BELOW ⑤	ANCHOR BOLTING TO CONC. BELOW ⑥	
1SW1	15/32" APA RATED SHEATHING	YES	8d @ 6" oc	CLIP @ 16" oc	1 3/4" LSL	NAILS @ 6" oc	5/8" Ø @ 48" oc	260 PLF
1SW2	15/32" APA RATED SHEATHING	YES	8d @ 4" oc	CLIP @ 16" oc	1 3/4" LSL	NAILS @ 4 3/4" oc	5/8" Ø @ 48" oc	380 PLF
1SW3	15/32" APA RATED SHEATHING	YES	8d @ 3" oc	CLIP @ 16" oc	1 3/4" LSL	NAILS @ 3 3/4" oc	5/8" Ø @ 36" oc	490 PLF
1SW4	15/32" APA RATED SHEATHING	YES	8d @ 2" oc ②	CLIP @ 12" oc	3 1/2" LSL ④	(2) ROWS NAILS @ 5 3/4" oc	5/8" Ø @ 24" oc	640 PLF

- ① NAILS SHALL BE 8d COMMON. NAILING APPLIES TO ALL PANEL EDGES (BLOCK ALL UNSUPPORTED PANEL EDGES), TOP & BOTTOM PLATES AND BLOCKING. NAIL TO INTERMEDIATE FRAMING MEMBERS w/ 8d @ 12" oc. (NOTE: WHERE STUD SPACING IS 24" oc, NAIL TO INTERMEDIATE FRAMING MEMBERS w/ 8d @ 6" oc)
- ② FRAMING AT ADJOINING PANEL EDGES SHALL BE 3 INCH NOMINAL OR WIDER AND NAILS SHALL BE STAGGERED.
- ③ CLIP SHALL BE EITHER A35 OR LTP4. CLIP MAY BE OMITTED WHEN ADJOINING PANEL EDGES OCCUR @ RIM JOIST AS SHOWN IN ELEVATION.
- ④ ROWS MUST BE OFFSET AT LEAST 1/2" AND STAGGERED.
- ⑤ NAILS SHALL BE 10d COMMON (0.1480 x 3 1/2") SCREWS SHALL BE SIMPSON SDS25500 (1/2" Ø x 5" MIN.)
- ⑥ PROVIDE 3"x3"x0.229" PLATE WASHER AT ALL ANCHOR BOLTS. ANCHOR BOLTS SHALL BE POSITIONED SUCH THAT PLATE EDGE OF PLATE WASHER IS WITHIN 1/2" OF THE EDGE OF THE BOTTOM PLATE (PLATE WASHER MAY BE DIAGONALLY SLOTTED WITH A WIDTH OF UP TO 13/16" AND A LENGTH NOT TO EXCEED 1 3/4")



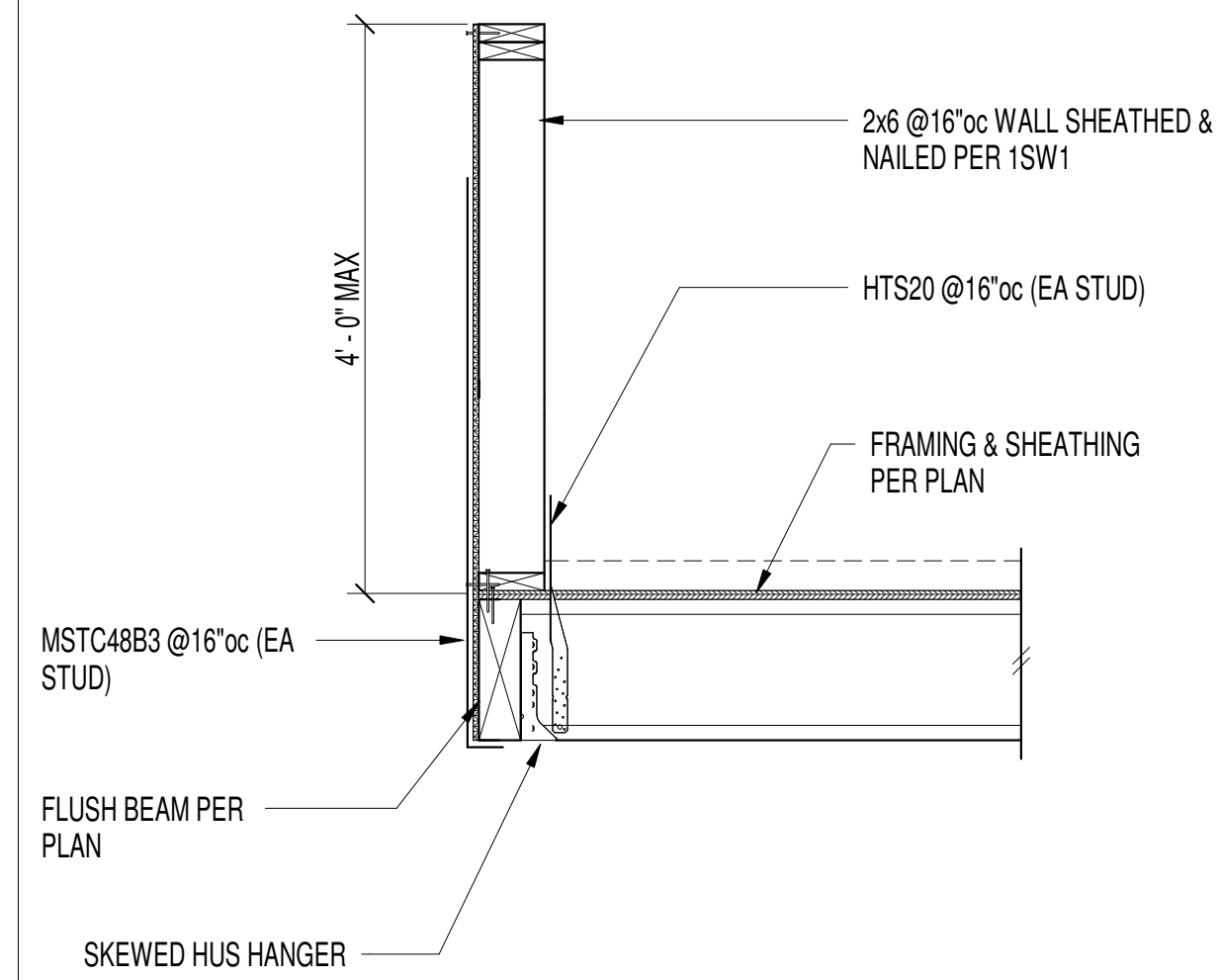
Wall Framing @ Stair, Entry Canopy

1



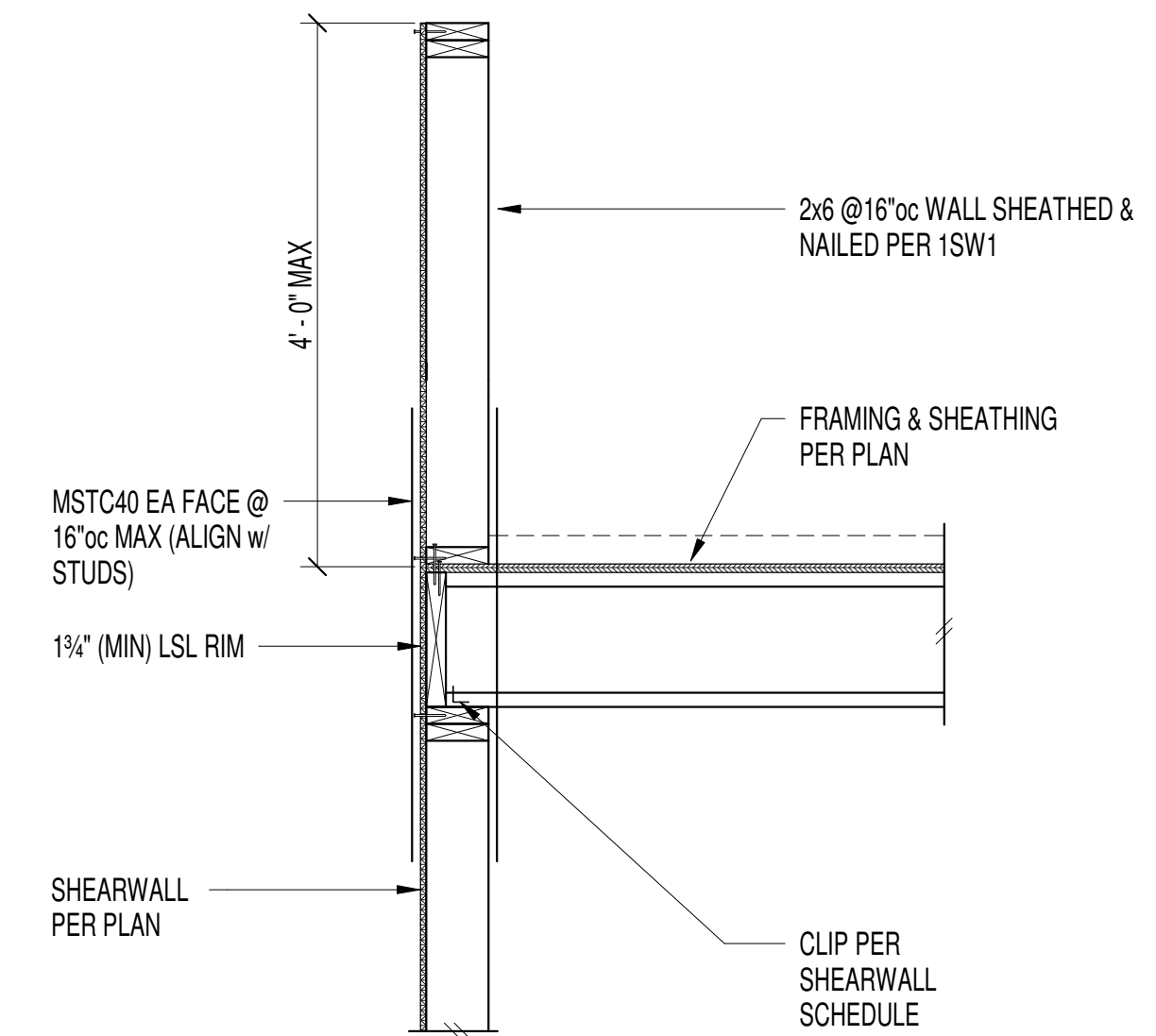
Wall Framing @ Stair

2



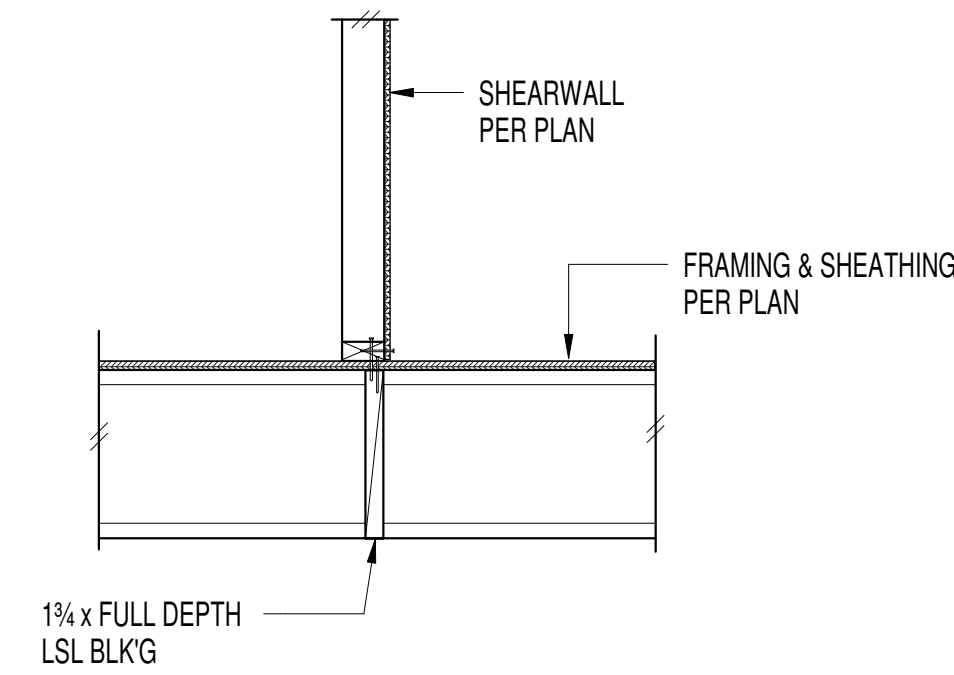
Deck Parapet - Flush Rim Header

3



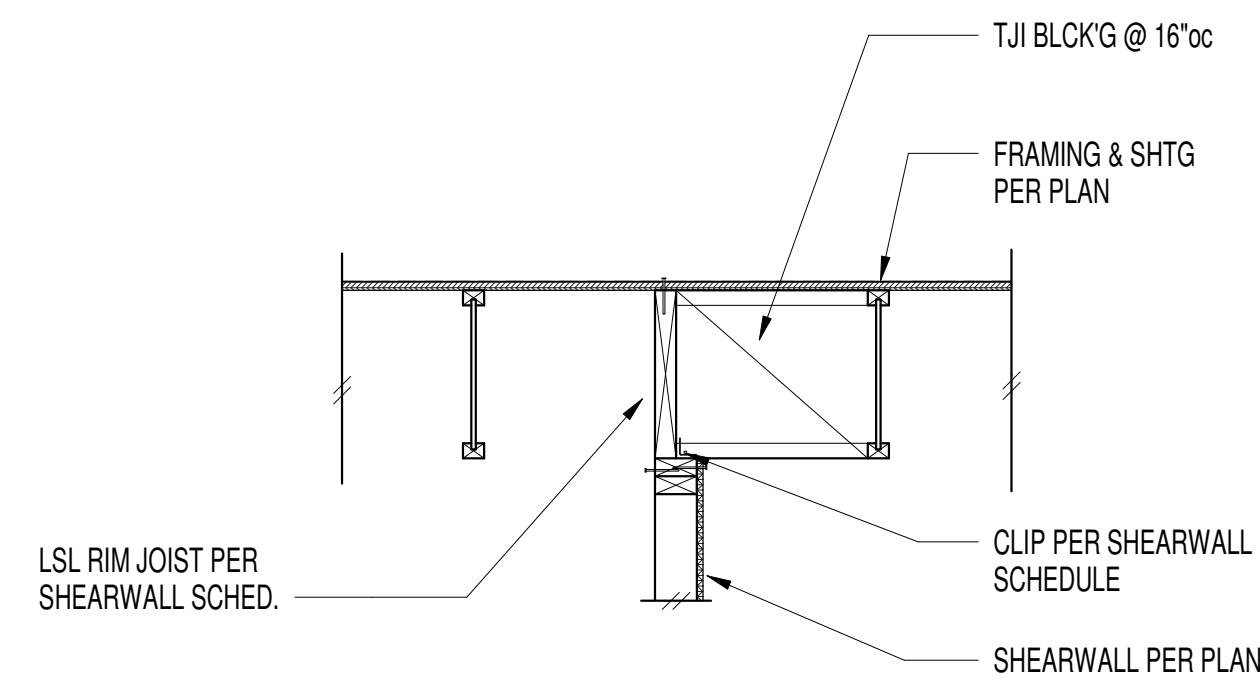
Deck Parapet - Perpendicular Framing

4



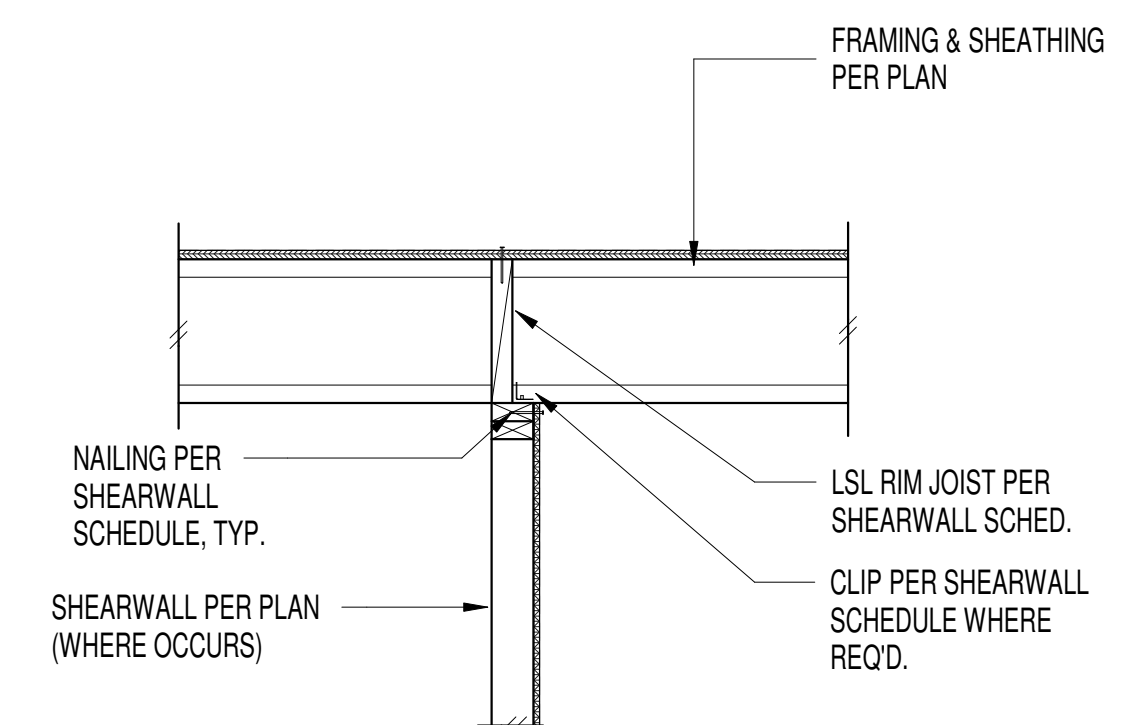
Floor Framing Supporting Shearwall Above

6



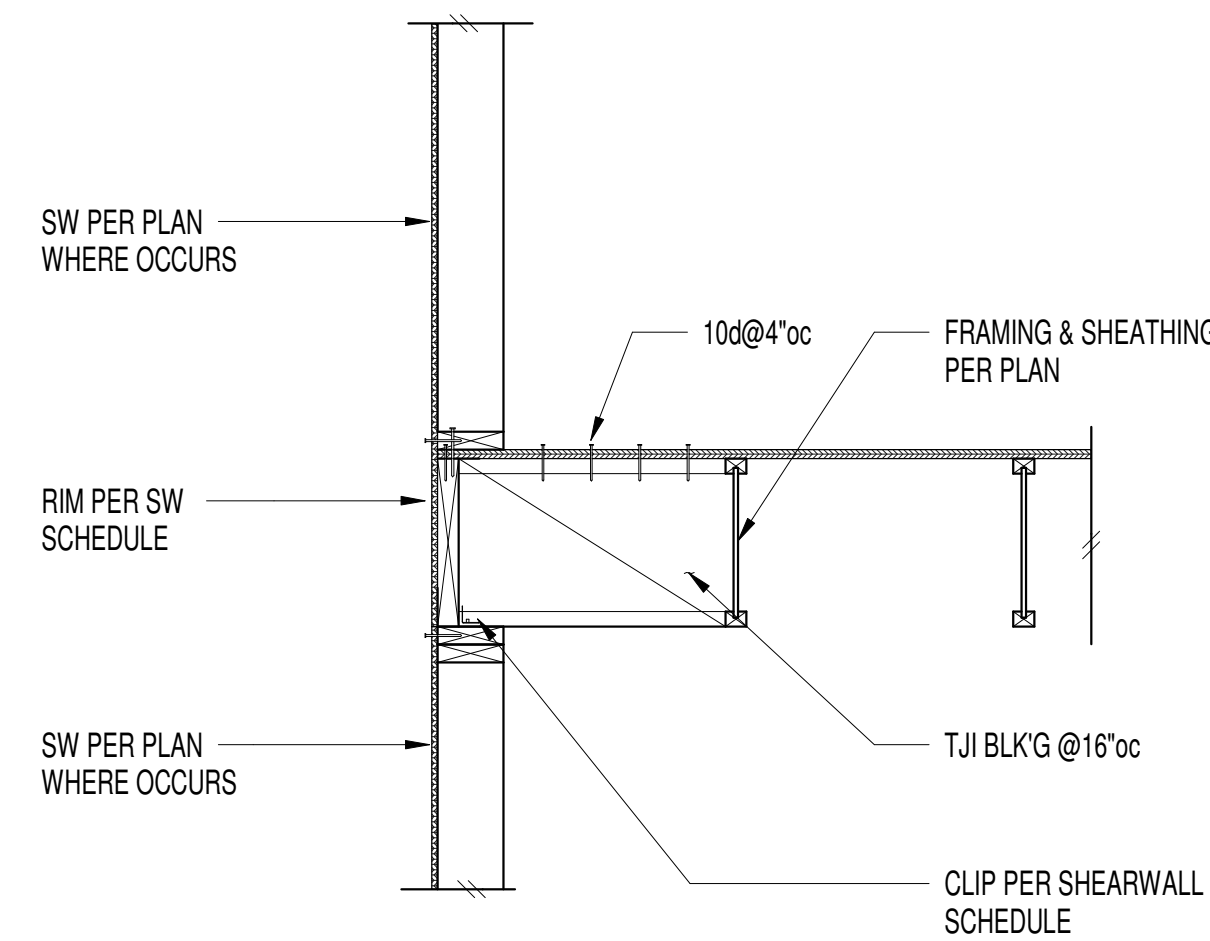
Shearwall w/ Framing Parallel

7



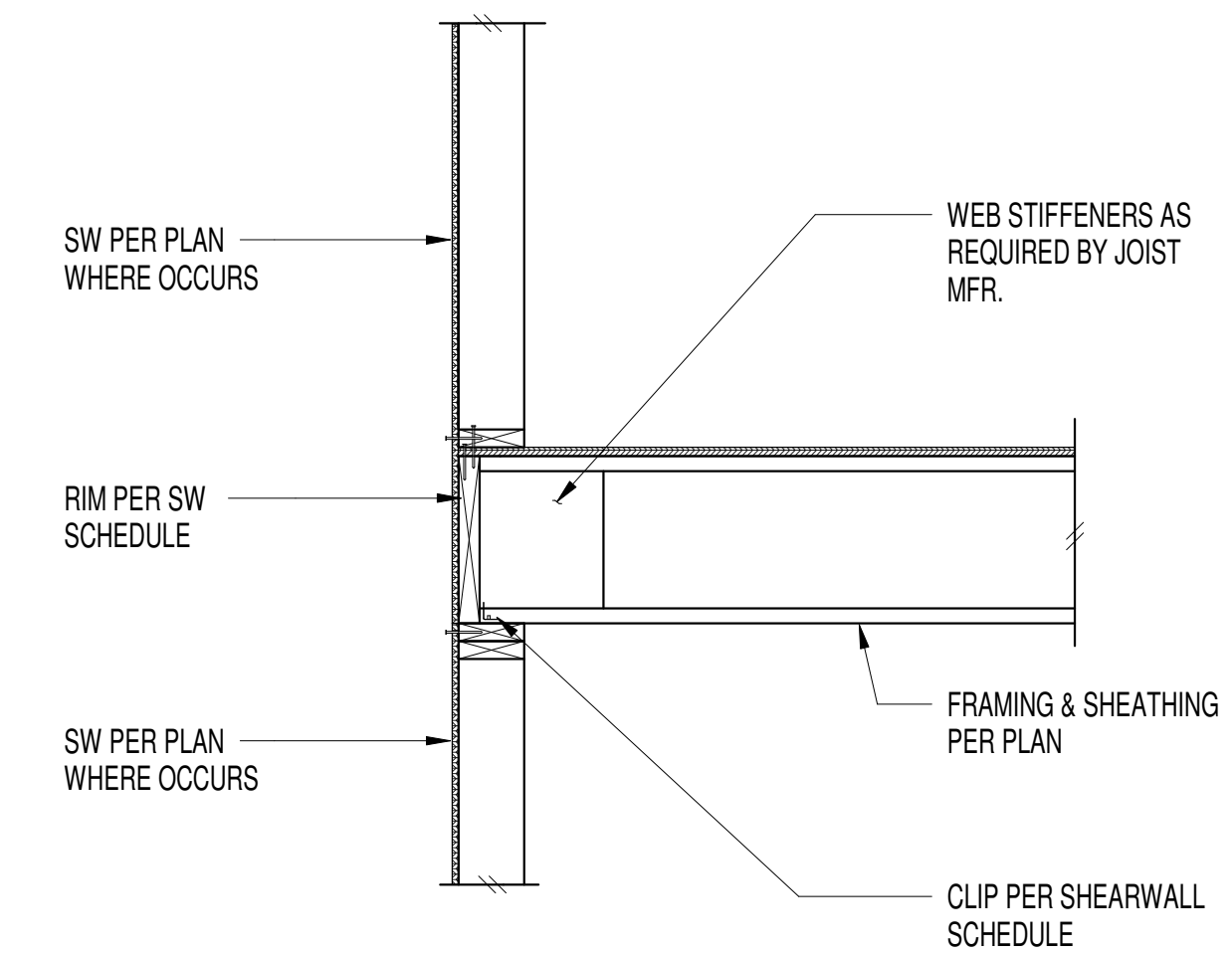
Framing w/ Shearwall Below

8



Framing - Parallel to Wall

11



Framing - Perpendicular to Wall

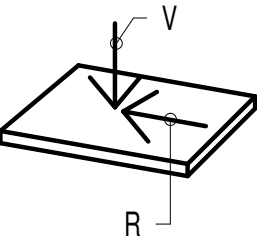
12

5

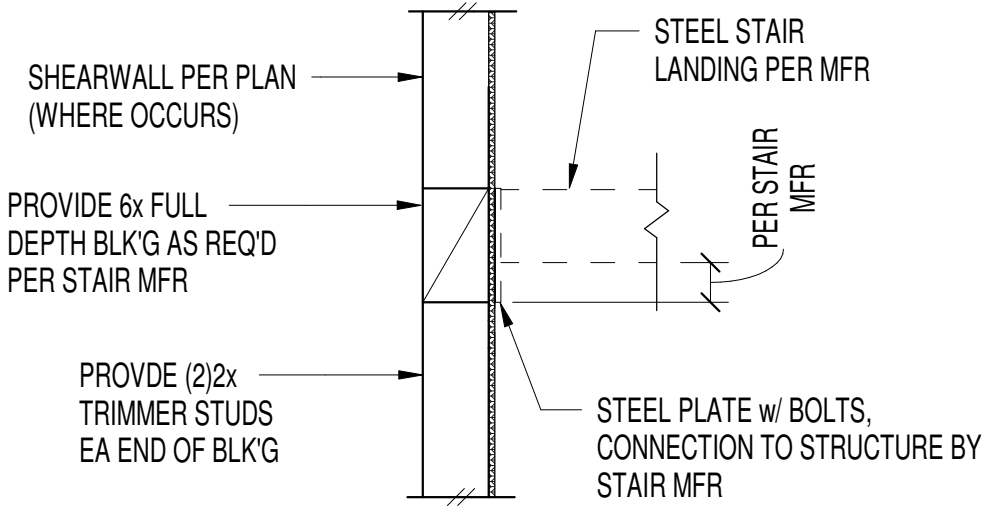
9

10

- NOTES:
1. STRUCTURE IS DESIGNED FOR FORCES IMPOSED BY PREFABRICATED STEEL STAIR. LOADING ASSUMES SINGLE STRINGER. NOTIFY ENGINEER OF RECORD IF FORCES EXCEED THOSE SHOWN.
 2. STEEL PLATE CONNECTION IS BY MANUFACTURER AND SHALL BE PER MANUFACTURER SHOP DRAWINGS AND CALCULATIONS.

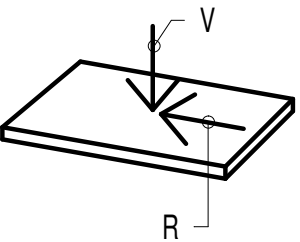


MAXIMUM TOTAL LOAD FORCES AS FOLLOWS (REFER TO NOTE 1):
V=2250 #
R=1508 #
(NOTIFY ENGINEER OF RECORD IF FORCES EXCEED THOSE SHOWN).

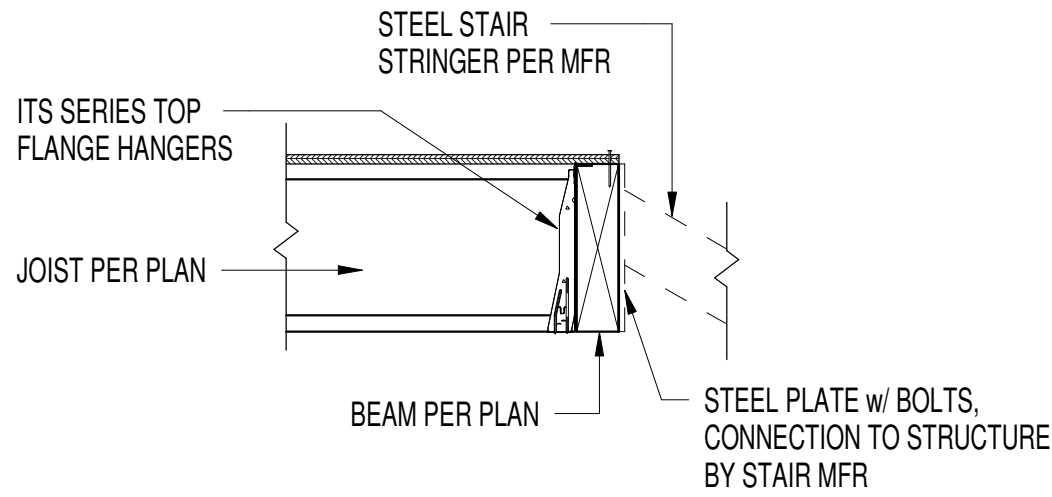


1

- NOTES:
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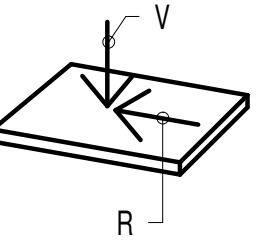


MAXIMUM TOTAL LOAD FORCES AS FOLLOWS (REFER TO NOTE 1):
V=2250 #
R=1508 #
(NOTIFY ENGINEER OF RECORD IF FORCES EXCEED THOSE SHOWN).

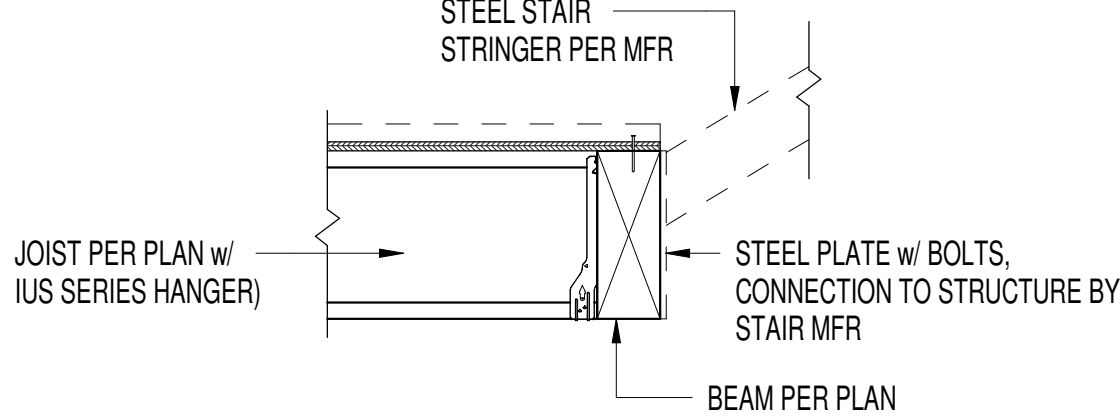


2

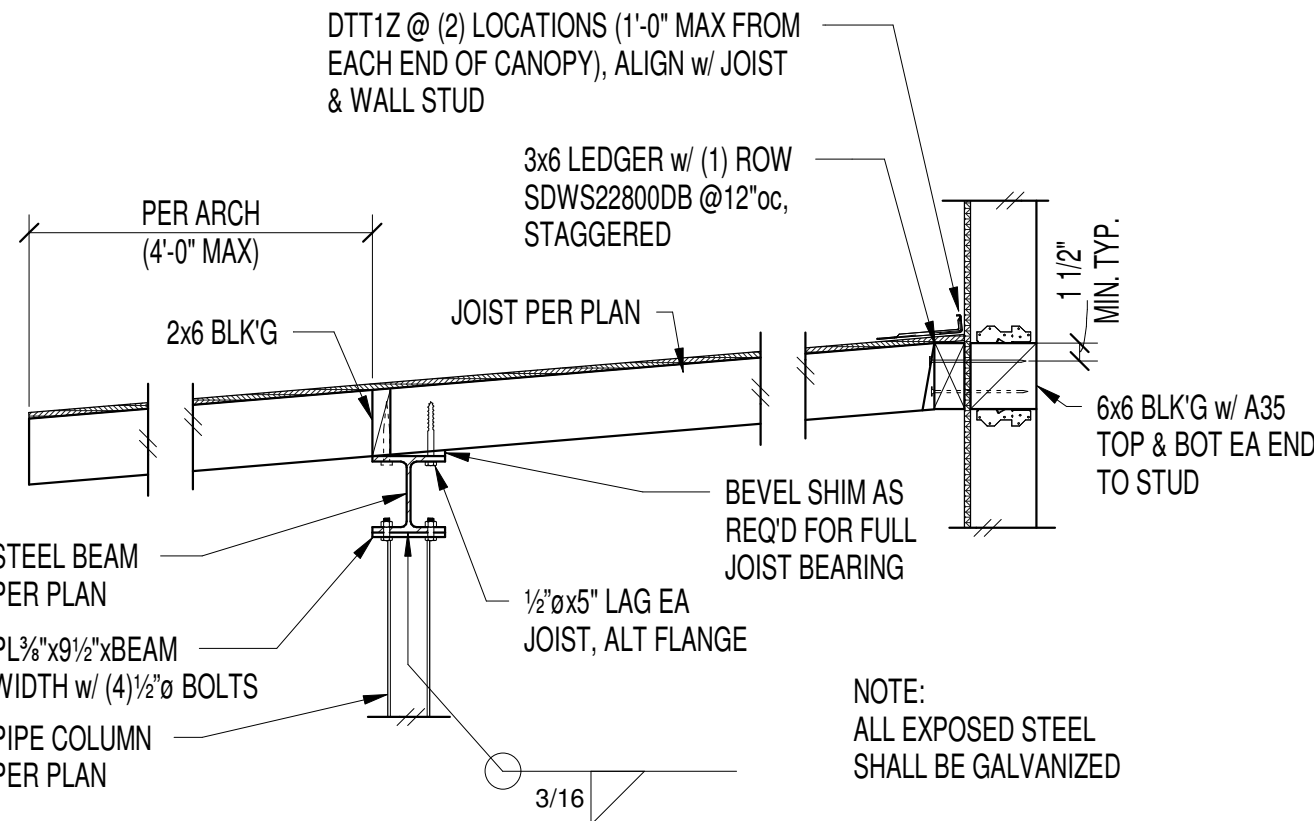
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MAXIMUM TOTAL LOAD FORCES AS FOLLOWS (REFER TO NOTE 1):
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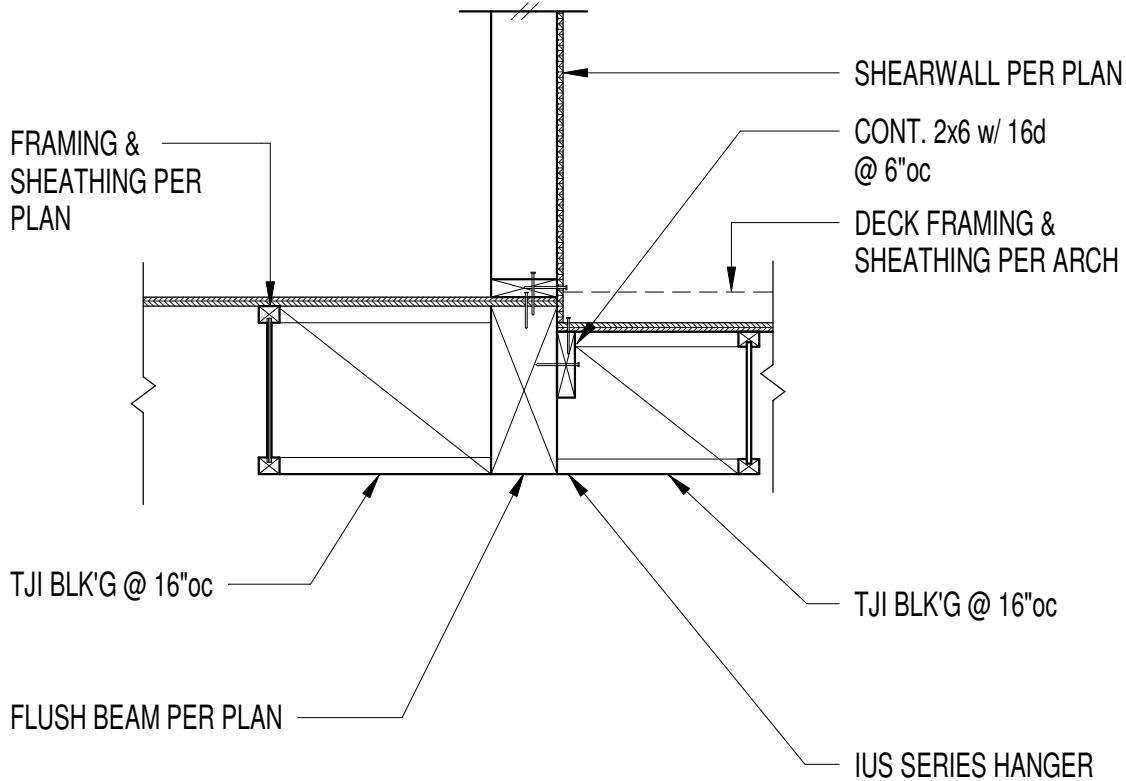


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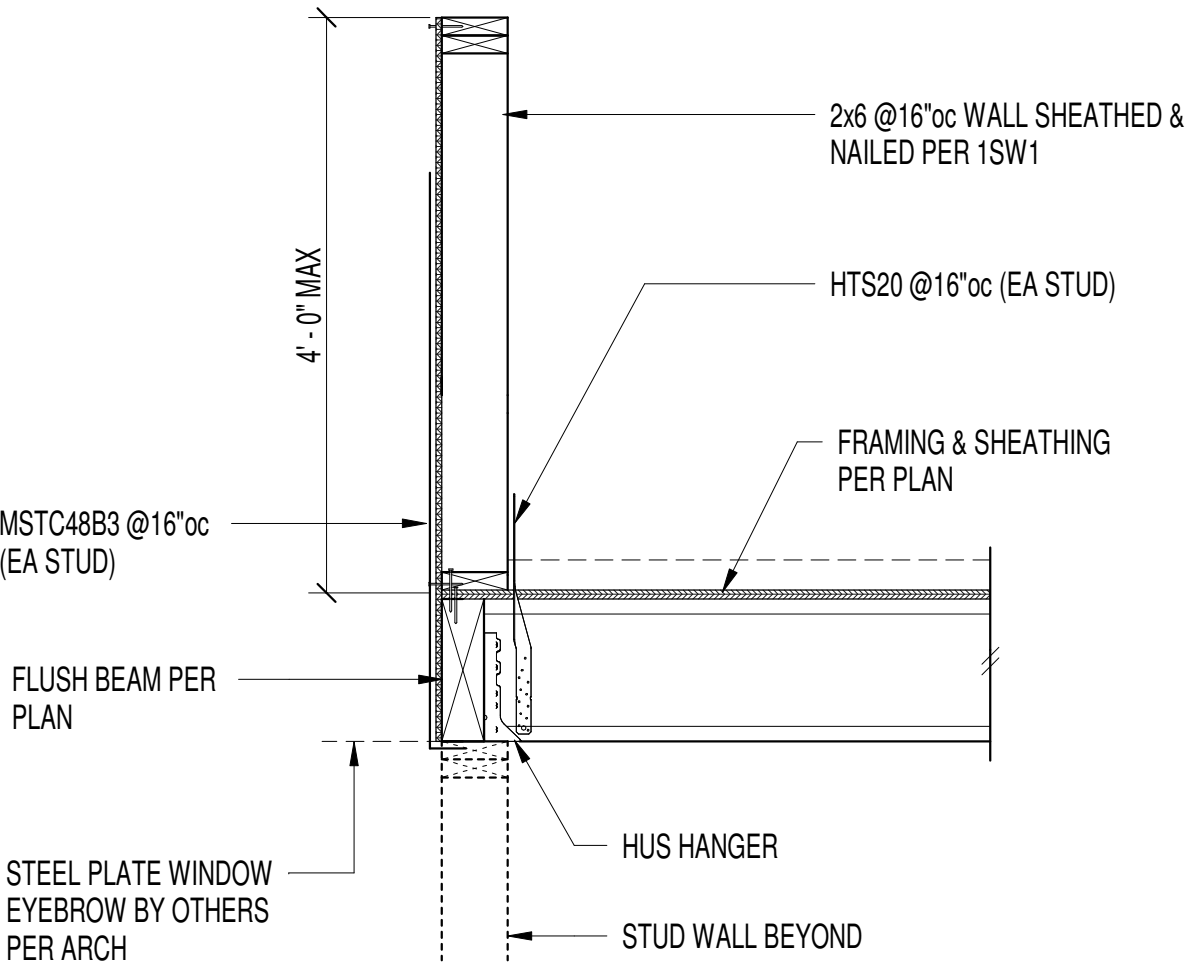


NOTE:
ALL EXPOSED STEEL
SHALL BE GALVANIZED

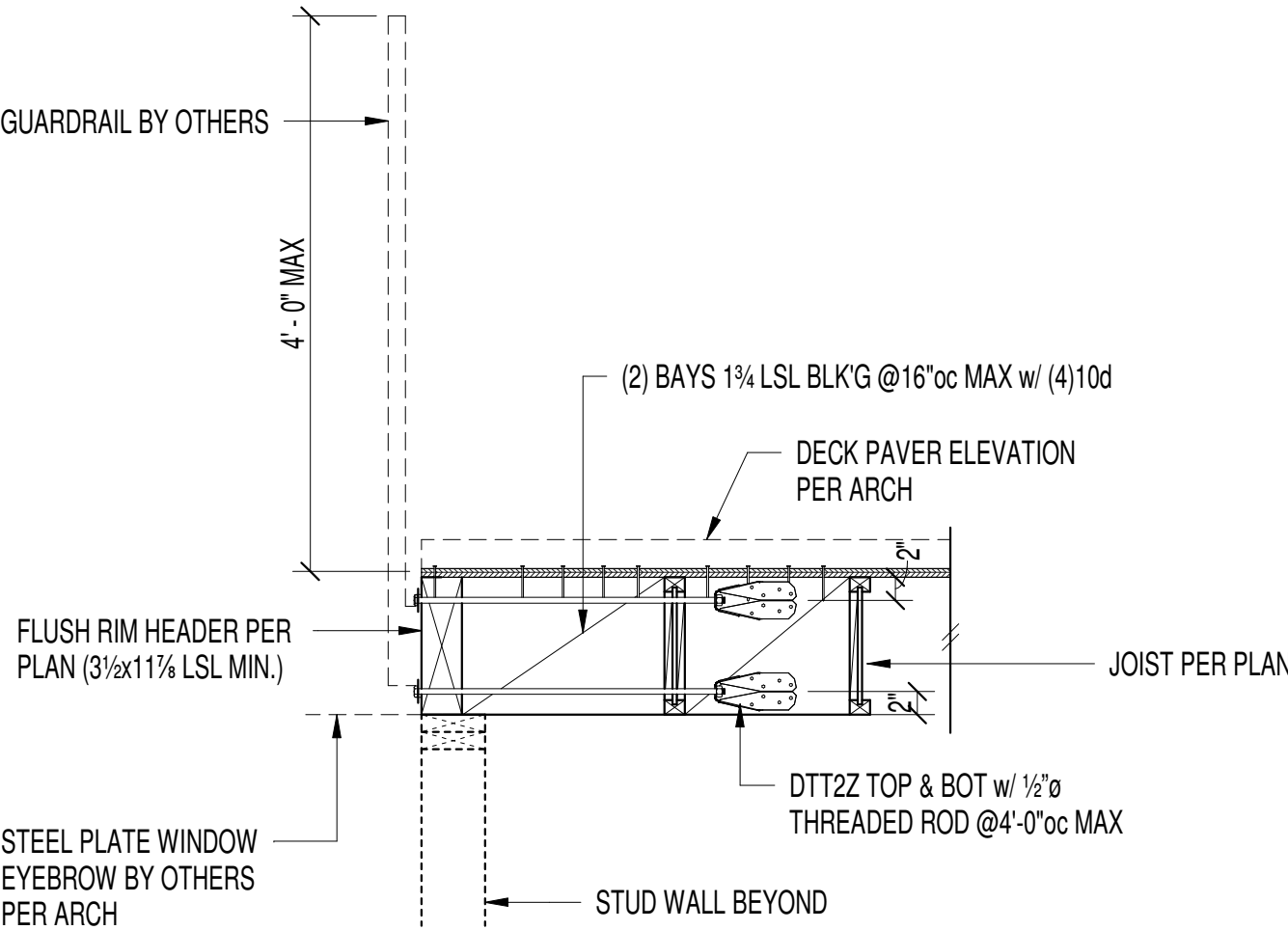
Entry Canopy 8



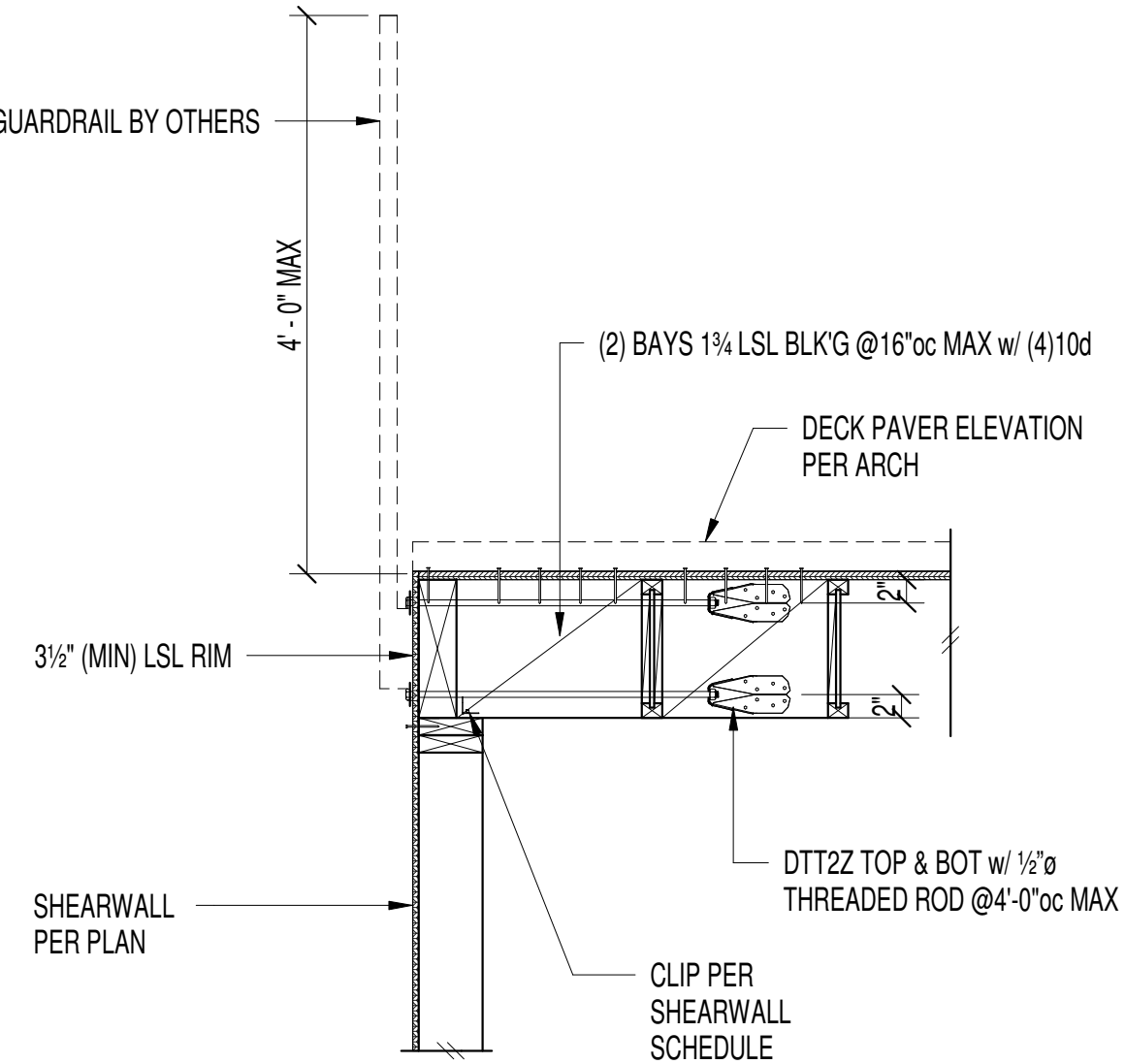
Step @ Deck Over ADU 9



Deck Parapet - Flush Rim Header 10



Deck Rail - Flush Rim Header 11



Deck Rail - Parallel framing 12

CHEN RESIDENCE

New Residence
8435 SE 47th PL.
Mercer Island, WA 98040

Date:
2/14/2022 Permit Submittal
8/25/2022 Sub2-2205-225
5/09/2023 Garage Wall - Rev

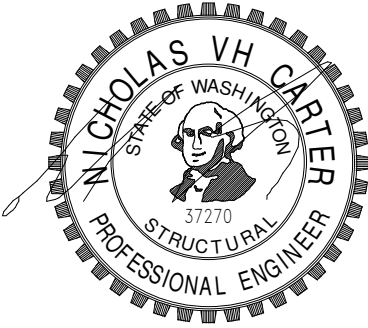
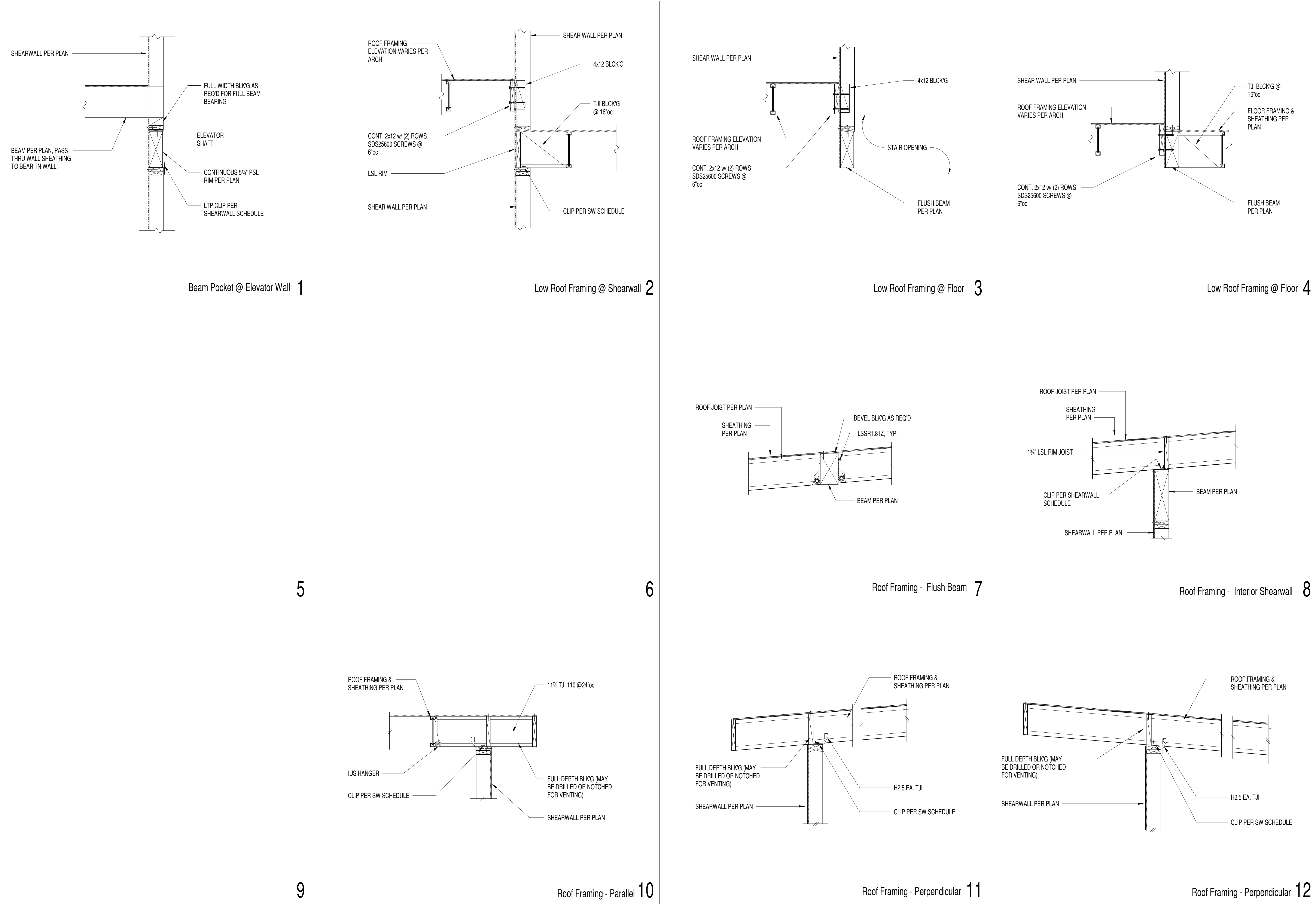
11/27/2024 Up-Date

IF SHEET IS NOT 24"x36" IT
HAS BEEN RESCALED

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Wood Details

S5.3



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