

73RD AVE RESIDENCE

2755 73RD AVE SE,
MERCER ISLAND, WA 98040

PROJECT INFORMATION

PROJECT # :

MUP # N/A

BP # 2502-155

PROJECT DESCRIPTION:

CONSTRUCT (1) NEW SINGLE FAMILY RESIDENCE (SFR) AND (1) DETACHED ACCESSORY DWELLING UNIT (DADU) PER PLAN, W/ 2-CAR GARAGE AND ONE SURFACE PARKING. EXISTING SFR TO BE DEMOLISHED.

LEGAL DESCRIPTION:

LOT 9, LEMASTER'S ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 49 OF PLATS, PAGES 33, IN KING COUNTY, WASHINGTON;

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

TAX # :

426070-0045

PROJECT TEAM

OWNER/ APPLICANT :

2755 LLC-PRASERT NGAMSIRIPOL
13620 NE 20TH ST, STE L,
BELLEVUE, WA 98005

STRUCTURAL ENGINEER :

CARISSA FARKAS STRUCTURAL ENGINEERING PLLC
2322 NE 103RD ST,
SEATTLE, WA 98125
P. 206.683.3197

ARCHITECT/PROJECT CONTACT:

SHI DARU ARCHITECTURE LLC
13755 40TH AVE NE,
SEATTLE, WA 98125
P. 504.756.6250

CIVIL ENGINEER:

PBG, LLC
5130 S 166TH LANE,
SEATAC, WA 98188
P 206.446.1292

PROJECT DATA

ZONE: R-8.4

LOT AREA: 9,037 SF (0.207 ACRES), AS SURVEYED

FLOOR AREA RATIO: 45% OR 4,500SF, WHICHEVER IS LESS

(PER 19.02.020.D.3.b, PROPOSED ADU W/ NEW SFR APPLICATION)

(CALCULATED TO INSIDE FACE OF WALL STRUCTURE)
SEE SHEET A2.0 FOR DIAGRAM

GROSS FLOOR AREA(GFA) TABLE	
BUILDING	GROSS FLOOR AREA
DADU	566.99 SF
SFR	3,494.21 SF
	4,061.21 SF
TOTAL	4,061.21 SF

LOT AREA : 9,037 SF
ALLOWED: 9,037 x 0.45 = 4,066.65 SF
PROPOSED: 4061.21 SF ≤ 4,066.65 SF, **COMPLIES**
DADU SIZE: 2205SF < 566,99SF < 9005SF, **COMPLIES**

PARKING: (3) REQUIRED, (3) PROVIDED (COMBINED GFA > 3,000SF)

DENSITY LIMIT:

(1) SFR ALLOWED W/ (1) ACCESSORY DWELLING UNIT
(1) SFR, (1) DADU PROPOSED, **COMPLIES**

SETBACKS:

	REQUIRED	ACTUAL
FRONT	20'-0"	20'-2 5/8"
SIDE, NORTH	10'-0"	14'-0"
SIDE, SOUTH	5'-0"	6'-0"
REAR	25'-0"	27'-7 1/8"

STRUCTURE HEIGHT LIMIT:

30' TOP OF EXTERIOR WALL, ALSO APPLY TO DETACHED ADU
(SEE SHEET A1.2 FOR HEIGHT CALCULATION)

FIRE SPRINKLER:
NFPA 13R FOR BOTH BUILDINGS

FIRE NOTE:

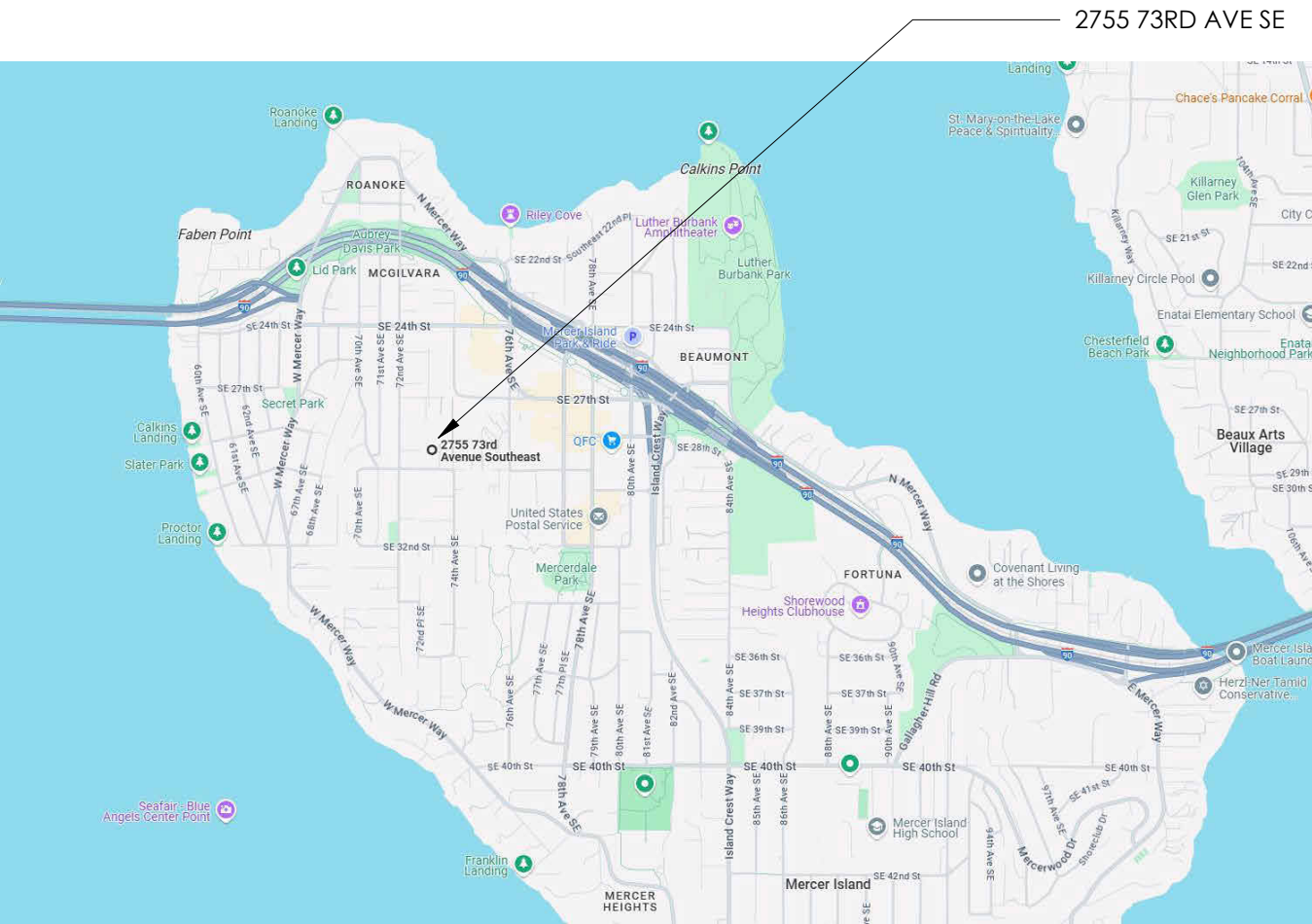
1. NFPA 72 (Chapter 29) - Monitored Household Fire Alarm Fire Alarm System in compliance with NFPA 72 had CoMI standards shall be installed throughout the residence. A separate FIRE permit is required.
2. NFPA 13R Fire Sprinkler System in compliance with NFPA 13R and CoMI standards shall be installed throughout the residence. A Separate FIRE permit is required.



RENDERING FOR ILLUSTRATIVE PURPOSES ONLY

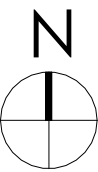
DRAWING INDEX

GENERAL	
A0.0	COVERSHEET
A0.1	GENERAL NOTES
A0.2	RENDERING VIEWS
A1.0	SITE PLAN
A1.1	TREE INFO & REPLACEMENT
A1.2	ABE CALC. & LOT COVERAGE
A1.3	WSEC COMPLIANCE
A1.4	GLAZING SUMMARY
A1.5	BUILDING ASSEMBLIES
A2.0	FAR DIAGRAMS & MHA
SURVEY	
V1	TOPOGRAPHIC SURVEY
CIVIL	
C1	TREE PROTECTION PLAN/ TESC PLAN
C2	TESC DETAILS
C3	STORMWATER / UTILITY PLAN AND DETAILS
ARCHITECTURAL	
A2.1	FLOOR PLANS
A2.2	FLOOR PLANS
A2.3	FLOOR PLANS
A2.4	FLOOR PLANS
A3.0	ELEVATIONS
A3.1	ELEVATIONS
A3.2	ELEVATIONS
A4.1	BUILDING SECTION
A6.1	DETAILS
A6.2	DETAILS
A6.3	DETAILS
STRUCTURAL	
S1.0	GENERAL STRUCTURAL NOTES
S2.0	SFR FOUNDATION PLAN
S2.1	SFR LEVEL 2 FRAMING PLAN AND LOW ROOF FRAMING PLAN
S2.2	SFR HIGH ROOF FRAMING PLAN
S2.3	DADU FOUNDATION PLAN AND FRAMING PLANS
S3.0	CONCRETE DETAILS
S4.0	WOOD FRAMING DETAILS
S4.1	WOOD FRAMING DETAILS
S4.2	WOOD FRAMING DETAILS
S4.3	WOOD FRAMING DETAILS



VICINITY MAP

SCALE: N.T.S.



ARCHITECTURAL & GENERAL NOTES

(THE FOLLOWING APPLY UNLESS SHOWN OTHERWISE ON THE PLANS)

A. These notes are provided in concise form to further elaborate on aspects of the work not explicitly detailed in the drawings. The expectation is that the quality of workmanship will consistently meet high standards, and all materials must either meet or surpass the standard industry norms applicable in each case.

B. All tasks are to be executed in strict accordance with the 2021 International Building Code (IBC) for architectural aspects, the 2021 International Building Code (IBC) for structural aspects, the 2021 Washington Energy Code, and all relevant provisions of current local, state, and federal codes and ordinances. This includes adherence to licensing laws and any pertinent local amendments.

C. The Contractor should promptly notify and engage with the Architect if disparities emerge between the drawings and on-site conditions or building/zoning requirements before commencing work. The Contractor bears sole responsibility and costs for consequences arising from these disparities if the Architect is not consulted before construction in the affected area.

D. Before commencing work, the Contractor must verify field conditions. In case of variations in measurements or conditions compared to the drawings, the Owner should be notified before starting work. Any conflicts should be brought to the Architect's attention, who will make the final decision.

E. Dimensional strings, generated by a computer drafting program, typically round dimensions to the nearest 1/8 of an inch. Consequently, a string of multiple dimensions and the overall dimension of the same string may differ by 1/8 of an inch. The Architect should be notified if a dimension verification is required or if dimensions to 1/16" are needed.

F. Drawing scaling is discouraged. Proportions might have changed during the reprographic process. Written dimensions should be used, and conflicts must be promptly communicated to the Architect.

G. The Contractor is obligated to maintain insurance continuously, as per Article II of the General Conditions of the Contract for Construction, AIA Document A201. Certificates demonstrating this insurance must be provided to the Owner before commencing any work.

H. The Contractor is exclusively responsible for construction means and methods, ensuring the structural integrity of any construction until all final lateral and vertical load-carrying systems are completed. Approvals from the architect do not extend to approving construction means and methods.

I. Drawings depict a comprehensive installation with fully functional assemblies. The Contractor is required to field verify all dimensions and conditions before commencing any work and is responsible for all work and materials, including those completed by subcontractors.

GENERAL REQUIREMENTS

A. Provide all necessary temporary facilities and utilities essential to maintaining facility operations during construction. The Contractor is accountable for all costs associated with temporary facilities and utilities.

B. Construction barricades must be provided as necessary to ensure public and employee safety, following applicable federal, state, and city codes and regulations.

C. Any wood plates directly in contact with concrete or masonry must be pressure-treated with an approved preservative. Two layers of asphalt-impregnated building paper should be supplied between untreated ledgers, blocking, etc., and concrete or masonry.

D. All fasteners and connectors in contact with pressure-treated lumber must be hot-dipped galvanized, with a minimum coating of G90 (.90 oz/sf) per galvanized products. Stainless steel products should not come in contact with galvanized products.

E. All materials and construction must adhere to the Washington State Energy Code (2021 Edition) .

DRAWINGS / PERMITS BY OTHERS

It is the contractor's responsibility to provide additional drawings and permits as required to complete this project. The following list is by no means meant to be comprehensive, rather suggestive of the possible types of additional permits, drawings, and submittals that may be required during the course of the project. Depending on the project, some of the following permits, drawing, and submittals could come up including others not listed below:

- ☐ Provide information to City regarding disposal of excess soil. (if any)
- ☐ Provide Design / obtain Permit for any required Shoring Work. (if any)
- ☐ Provide Drawings / obtain Permit for Plumbing Work
- ☐ Provide Drawings / obtain Permit for Electrical Work
- ☐ Obtain Permit for Storm Sewer Design & Hook-Up
- ☐ Obtain Street Use Permits for any Street Work. (if any)
- ☐ Apply & pay for required Water Meters.

Any deferred submittal shall be submitted to the Building Department for review and approval. (if any)

sdAr
Shi Daru Architecture, LLC

24004682
REGISTERED
ARCHITECT
Shi Daru Shi
DARU SHI
STATE OF WASHINGTON

2755 LLC-PRASERT NGAMSIRIPOL

13620 NE 20TH ST, STE L,
BELLEVUE, WA 98005

A	Date	Description	BP Submittal Cycle#	1	2	3	4	5	6	7	8	9	10	11	12
1	02.11.2025	BP Submittal Cycle# 1 Corr.	05.14.2025												

COVERSHEET

73RD AVE RESIDENCE

2755 73RD AVE SE,
MERCER ISLAND, WA 98040

REF. #	N/A
BP #	2502-155
Project Number	D5025
Scale	As indicated
Date	02.11.2025

A0.0

STAMP HERE

RENDERING FOR REFERENCE



sdAr

Shi Daru Architecture, LLC

24004682

REGISTERED ARCHITECT

Shi Daru

DARU SHI

STATE OF WASHINGTON

2755 LLC-PRASERT NGAMSIRIPOL

13620 NE 20TH ST, STE L,
BELLEVUE, WA 98005

Description		Date	BP Submittal	
A		02.11.2025		

RENDERING VIEWS

73RD AVE RESIDENCE

2755 73RD AVE SE,
MERCER ISLAND, WA 98040

REF. #	N/A
BP #	2502-155
Project Number	DS025
Scale	
Date	02.11.2025

A0.2

STAMP HERE

7/28/2025 2:28:36 PM

ADDRESS: 2755 73RD AVE SE, MERCER ISLAND, WA 98040

PARCEL#: 426070-0045

LEGAL DESCRIPTION: LOT 9, LEMASTER'S ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 49 OF PLATS, PAGES 33, IN KING COUNTY, WASHINGTON;
SITUATE IN THE CITY OF MERCER ISLAND, COUNTY OF KING, STATE OF WASHINGTON.

PROJECT DESCRIPTION: CONSTRUCT (1) NEW SINGLE FAMILY RESIDENCE (SFR) AND (1) DETACHED ACCESSORY DWELLING UNIT (DADU) PER PLAN, W/ 2-CAR GARAGE AND ONE SURFACE PARKING. EXISTING SFR TO BE DEMOLISHED.

SITE AREA: 9,037 SF

ZONING: R-8.4



755 LLC-PRASERT NGAMSIRIPOL

3620 NE 20TH ST, STE L,
BELLEVUE, WA 98005

[illegible]

SITE PLAN

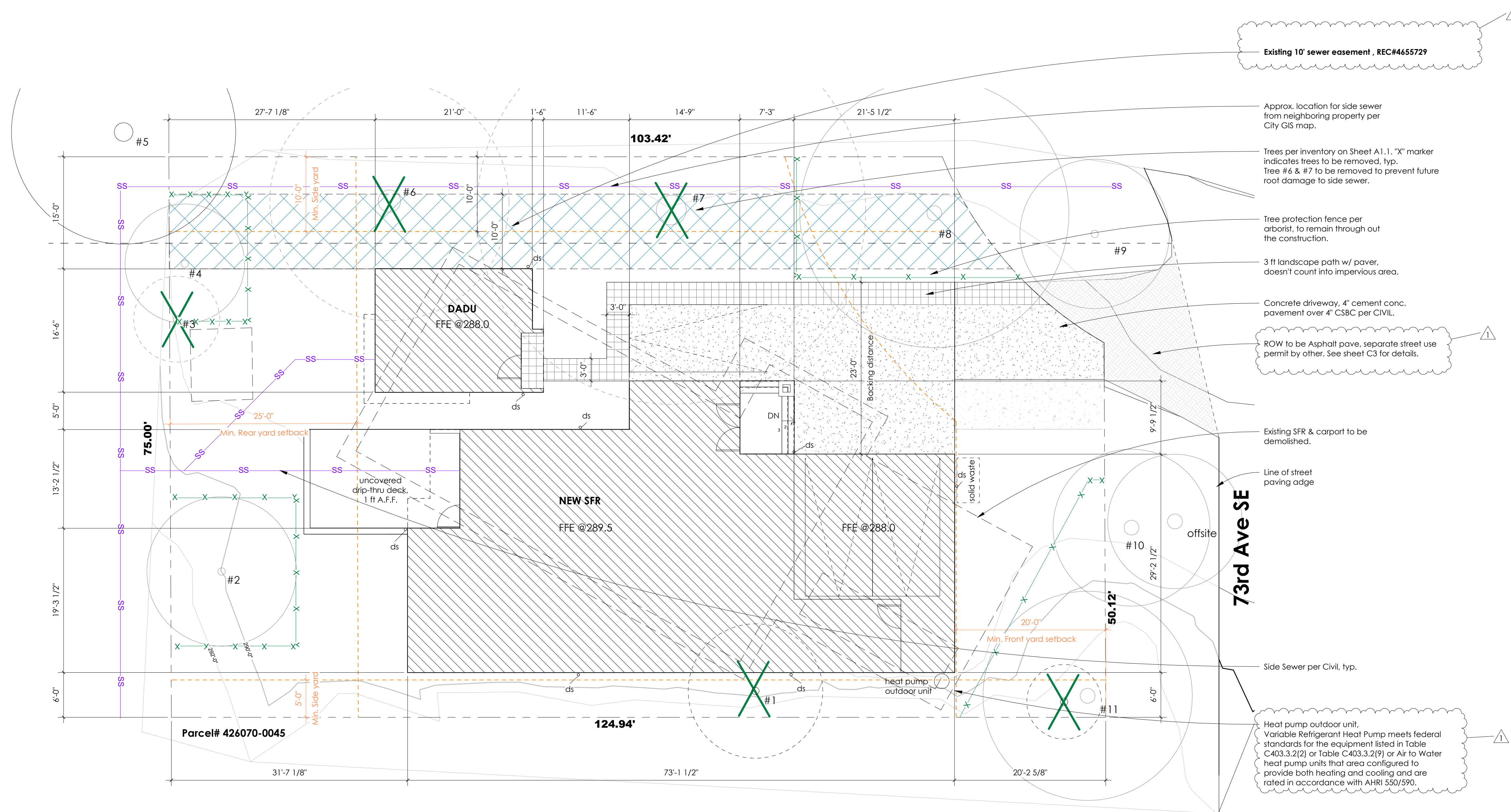
/3RD AVE RESIDENCE

Z/3373KD AVE SE,
MERCER ISLAND, WA 98040

REF. #	N/A
IP #	2502-155
Project Number	DS025
Scale	1/8" = 1'-0"
Date	02.11.2025

A1.0

7/28/2025 2:28:36 PM



1 SITE PLAN

SCALE: 1/8" = 1'-0"

SCALE: 1/8" = 1'-0"

STAMP HERE

TREE INVENTORY AND PROTECTION PER ARBORIST REPORT DATED 12/24/2024

Cascadeclifconsulting.com

7



Site Map

2755 73rd Ave SE
Mercer Island, WA 98040
Parcel # 4260700045

#

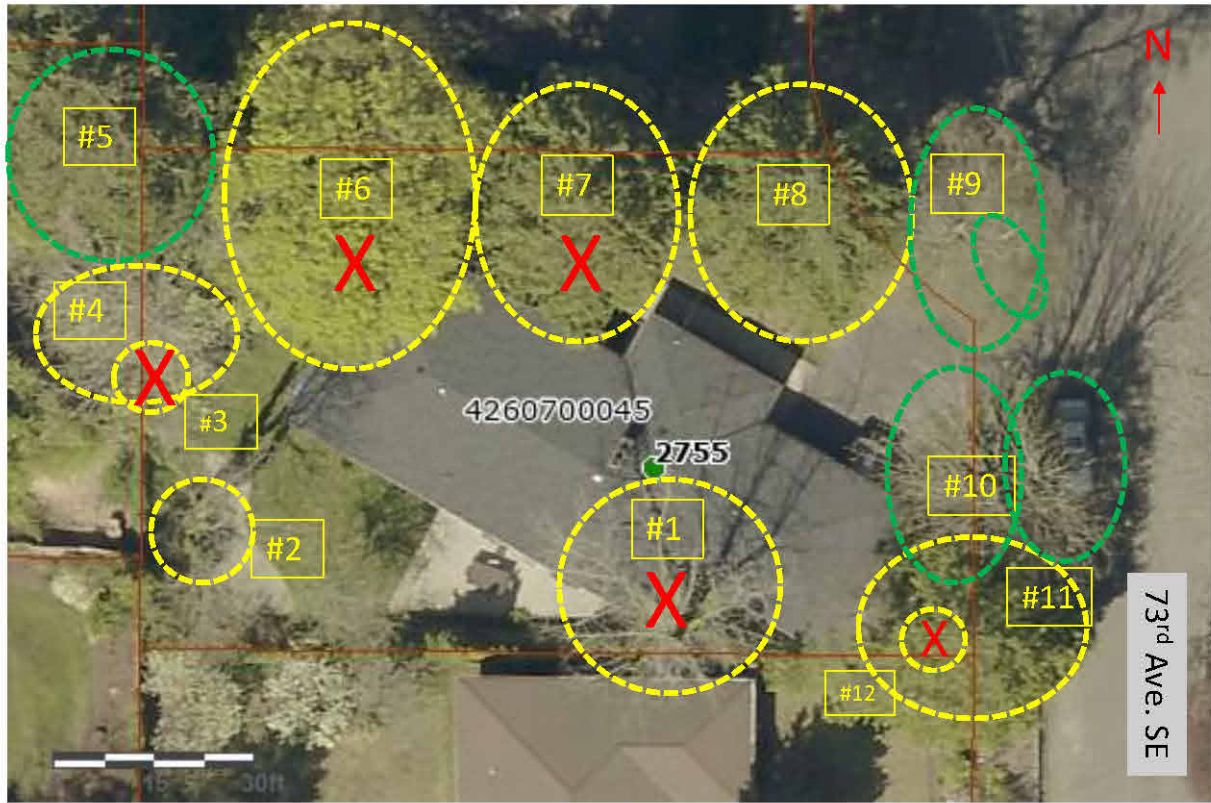
-On site trees and approximate canopy area.

#

-Off site trees and approximate canopy area.

X

-Trees proposed for removal.



Client: Prasert Ngamsiripol

Document: 2755AR.pdf

Cascadeclifconsulting.com

6

Tree Inventory

Tree ID #	Common name	Genus species	DSH"	Inner CRZ	Outer CRZ	Canopy Diameter	Health/Condition	Status	Location
1	Black Walnut	Juallans niara	17.6"	9'	18'	50'	good vigor, poor location and structure	Remove	On site
2	Black Locust	Robinia psuedoacacia	19.5"	10'	20'	30'	good vigor, remove ivy for inspection	Retain	On site
3	English Laurel	Prunus laurocerasus	11.4"	5.75'	11.5'	22'	good vigor, suppressed by nearby tree	Remove	On site
4	Black Walnut	Juglans nigra	16.0"	8'	16'	50'	good vigor and structure	Retain	On site
5	Western Red Cedar	Thuja plicata	30"	15'	30'	50'	good vigor and structure	Retain	Off site
6	Japanese Maple	Acer palmatum	32.2"	16'	32'	55'	good vigor, remove ivy for inspection	Remove	On site
7	Western Red Cedar	Thuia plicata	51.9"	26'	52'	40'	good vigor, poor structure	Remove	On site
8	Western Red Cedar	Thuja plicata	36.2"	18'	36'	44'	good vigor, remove ivy for inspection	Retain	On site
9	Silver Birch	Betula pendula	19.9"	10'	20'	40'	good vigor, good response to BBB	Retain	Off site
10	Big Leaf Maple	Acer macrophyllum	20.9"	10.5'	21'	25'	good vigor	Retain	Off site
11	Western Red Cedar	Thuja plicata	27.6"	14'	28'	44'	good vigor and structure	Retain	On site
12	Silver Birch	Betula pendula	10.3"	5'	10'	8'	poor condition/ suppressed	Remove	On site

Trees proposed for removal
Trees proposed for retention
Off site trees

Client: Prasert Ngamsiripol

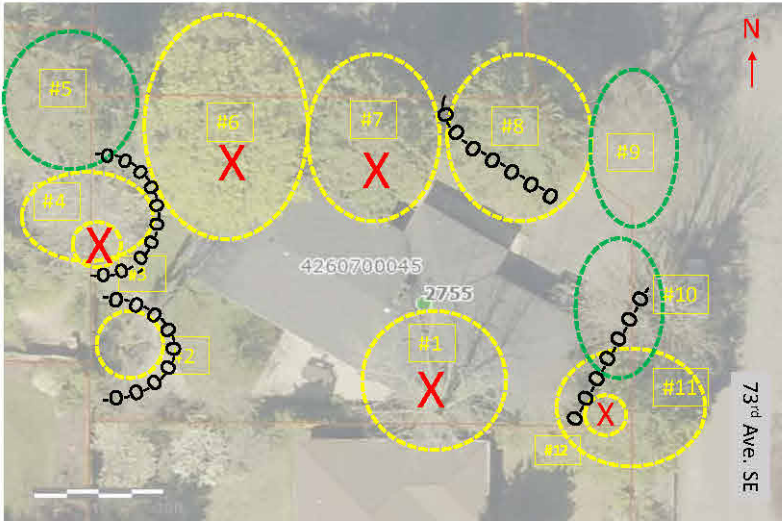
Document: 2755AR.pdf

Cascadeclifconsulting.com

4

Tree Protection Detail

-Tree protection fencing



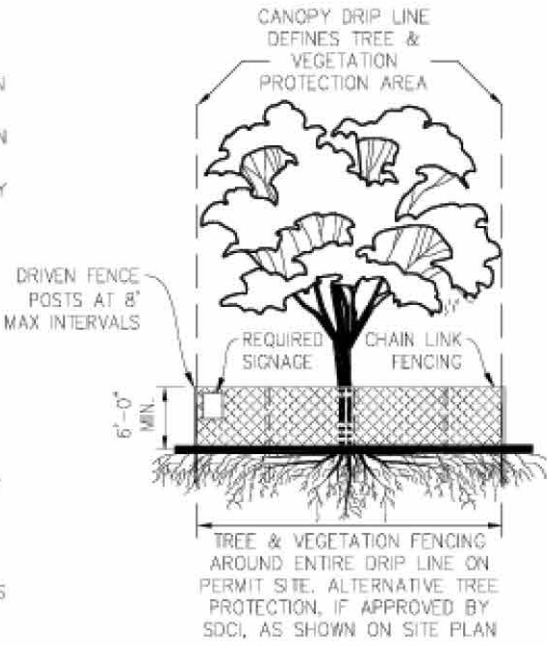
TREE & VEGETATION PROTECTION

TREE PROTECTION FENCING AND SIGN

- CHAIN LINK FENCE REQUIRED (NO ORANGE CONSTRUCTION FENCE OR PLYWOOD)
- MINIMUM 6' HIGH
- FENCE SHALL BE SUPPORTED BY RIGID POSTS DRIVEN INTO THE GROUND AT 8' MAXIMUM INTERVALS
- MUST BE INSTALLED PRIOR TO DEMOLITION OR GROUND DISTURBANCE
- KEPT IN PLACE FOR THE DURATION OF CONSTRUCTION
- NO DUMPING OF ANY MATERIALS IN THE PROTECTION AREA
- NO SOIL DISTURBANCE OR ACTIVITY ALLOWED WITHIN FENCED AREA: MATERIAL STORAGE/STOCKPILING, PARKING, EXCAVATION, DUMPING, OR WASHING
- MODIFICATIONS OF THESE REQUIREMENTS BY APPROVAL OF SDCI PLANNER ONLY
- IF ROOTS GREATER THAN 2 INCH FOUND OUTSIDE OF FENCING, PROTECT BY HAND EXCAVATION AND, IF NECESSARY, CUT CLEANLY AND KEEP MOIST
- USE 3 INCHES OR DEEPER WOOD CHIP MULCH OUTSIDE FENCED AREAS TO PROTECT FEEDER ROOTS

VEGETATION PROTECTION (DOES NOT APPLY TO TREES)

- ORANGE MESH OR SIMILAR OPEN MATERIAL
- PROTECT VEGETATION OUTSIDE CONSTRUCTION ZONE WITH FENCING AS SHOWN



Client: Prasert Ngamsiripol

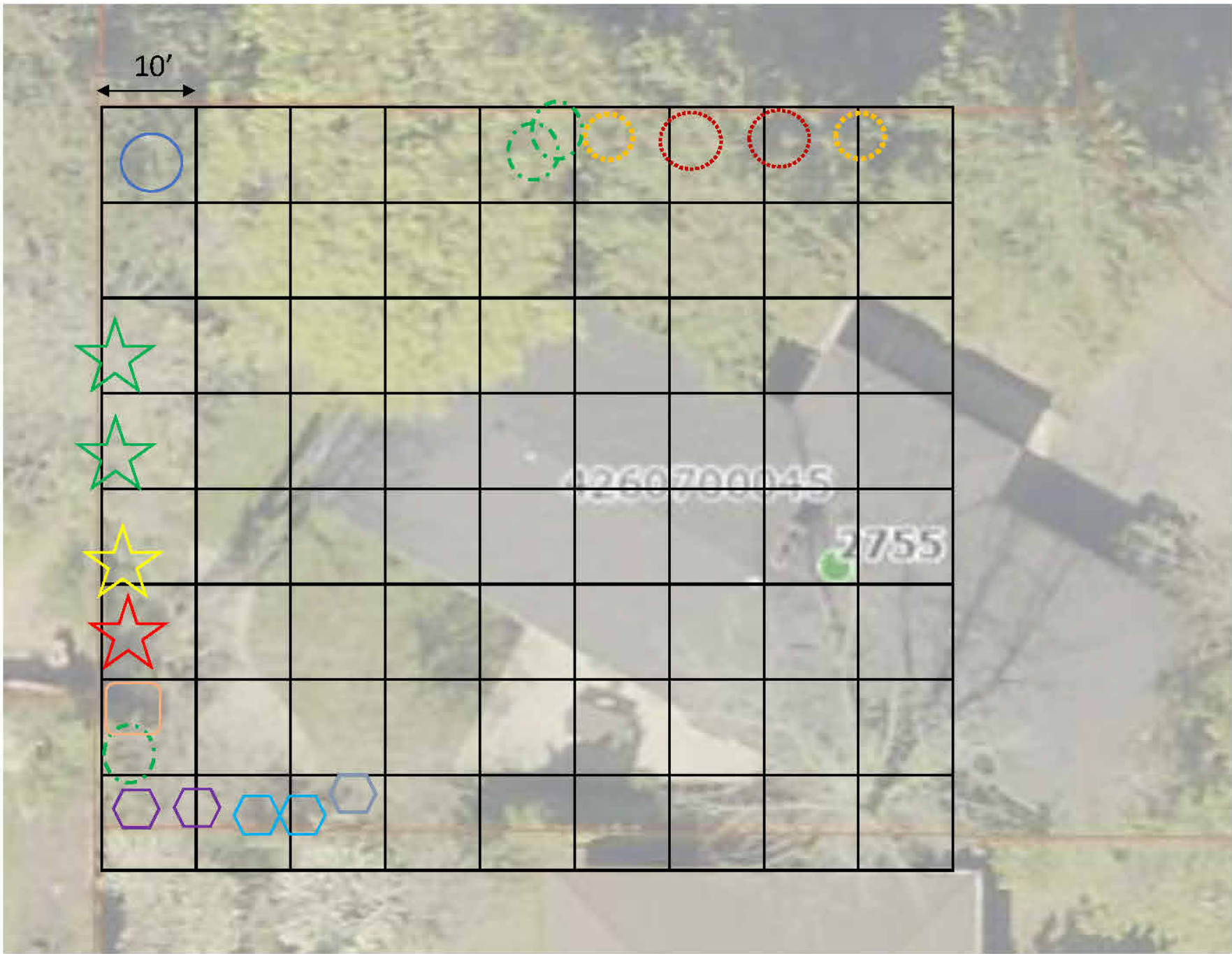
Document: 2755AR.pdf

Cascadeclifconsulting.com

8

Replanting Map

- 2 Pacific Dogwood trees
- 2 Hinoki Cypress trees
- 3 Vine Maple trees
- 1 Hazelnut trees
- 2 Western Red Cedar trees
- 1 Douglas Fir tree
- 1 Shore Pine tree
- 1 Strawberry tree
- 2 American Smoke trees
- 2 Stewartia trees
- 1 Japanese Maple tree



Client: Prasert Ngamsiripol

Document: 2755AR.pdf



Shi Daru Architecture, LLC

24004682

REGISTERED ARCHITECT

DARU SHI

STATE OF WASHINGTON

2755 LLC-PRASERT NGAMSIRIPOL

13620 NE 20TH ST, STE L,
BELLEVUE, WA 98005

Date	Description
02.11.2025	BP Submittal

TREE INFO & REPLACEMENT

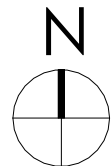
73RD AVE RESIDENCE

2755 73RD AVE SE,
MERCER ISLAND, WA 98040

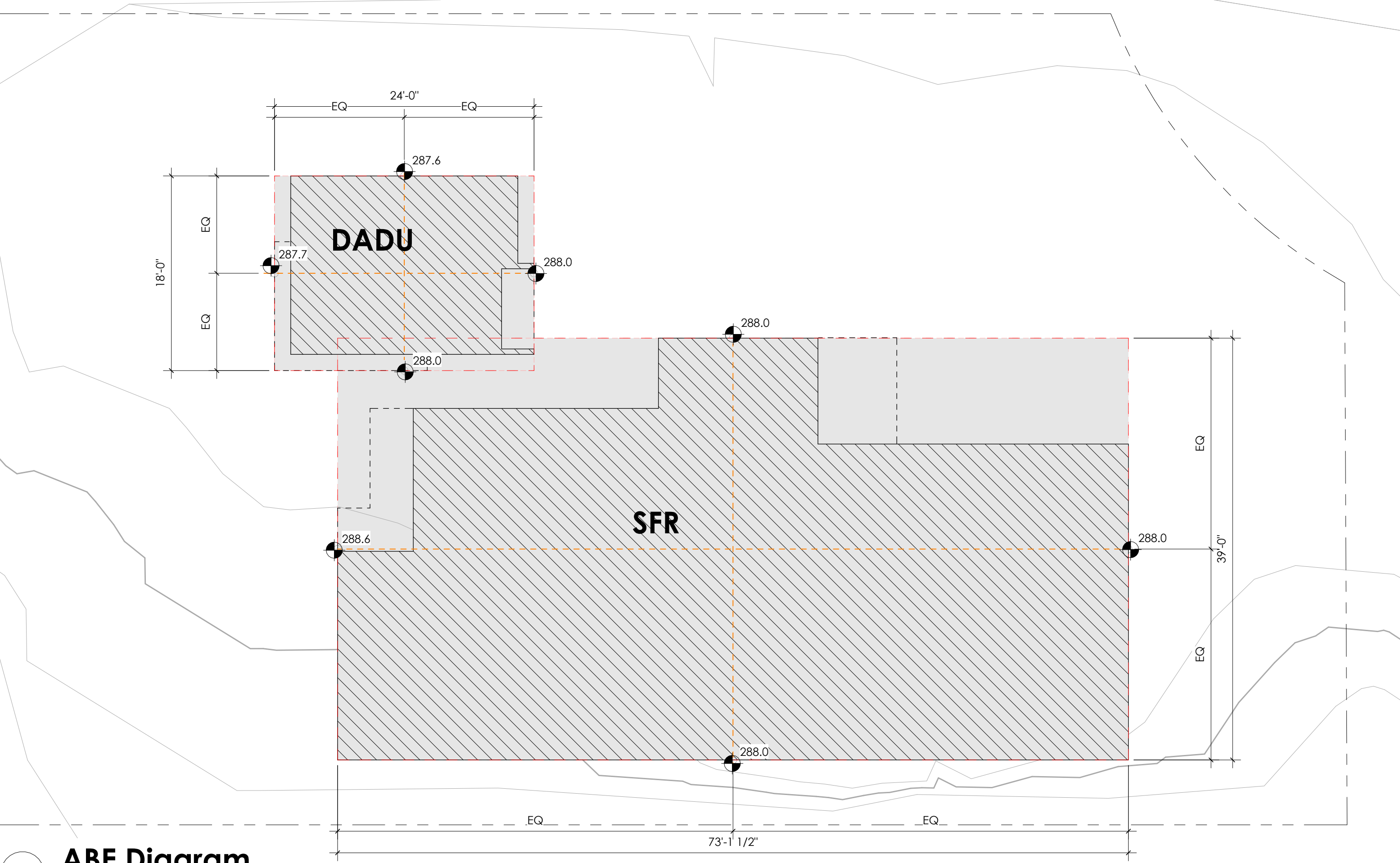
REF. #	N/A
BP #	2502-155
Project Number	D5025
Scale	
Date	02.11.2025

A1.1

STAMP HERE

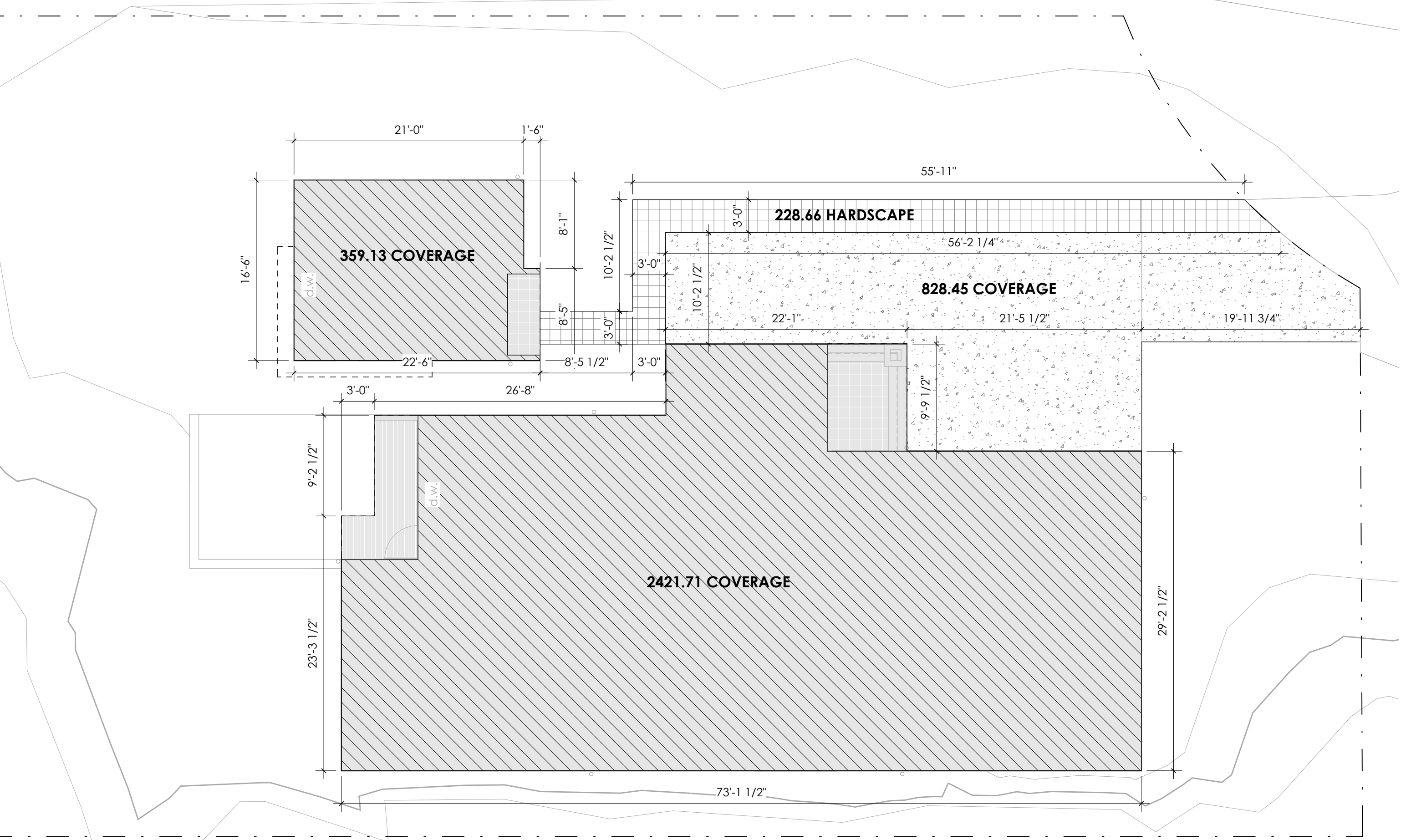


ABE(AVERAGE BUILDING ELEVATION) CALCULATION



1 ABE Diagram
SCALE: 1/8" = 1'-0"

LOT COVERAGE & SETBACKS



2 Lot Coverage Diagram
SCALE: 1/8" = 1'-0"

AVERAGE BUILDING ELEVATION				
Comments	AGP (FEET)	AGP BUILDING LENGTH	LENGTH (FEET)	PRODUCT (SF)
DADU1				
north	287.6	24'-0"	24	6902.4
south	288	24'-0"	24	6912
west	287.7	18'-0"	18	5178.6
east	288	18'-0"	18	5184
			84	24177
SFR1				
north	288	73'-1 1/2"	73.13	21061.44
south	288	73'-1 1/2"	73.13	21061.44
west	288.6	39'-0"	39	11255.4
east	288	39'-0"	39	11232
			224.26	64610.28

AVERAGE GRADE CALC.

$24177 / 84 = 287.82'$
DADU AGP = 287.82'

$64610.28 / 224.26 = 288.10'$
SFR AGP = 288.10'

LOT COVERAGE CALC.

Lot Area: 9,037 sf

Allowed lot coverage: $9,037 \times 40\% = 3,614.8$ sf (Buildings & driving surfaces)

Proposed Lot coverage: $2421.71 \text{ sf} + 359.13 \text{ sf} + 828.45 \text{ sf} = 3,609.29 \text{ sf} < 3,614.8 \text{ sf}$, **COMPLIES.**

Allowed Hardscape: $9,037 \times 9\% = 813.33$ sf
 $228.66 \text{ sf} < 813.33 \text{ sf}$, **COMPLIES**



Shi Daru Architecture, LLC



24004682 REGISTERED ARCHITECT
DARU SHI
STATE OF WASHINGTON

2755 LLC-PRASERT NGAMSIRIPOP

13620 NE 20TH ST, STE L,
BELLEVUE, WA 98005

Date	Description
02.11.2025	BP Submittal

ABE CALC. & LOT COVERAGE

73RD AVE RESIDENCE

2755 73RD AVE SE,
MERCER ISLAND, WA 98040

REF. #	N/A
BP #	2502-155
Project Number	DS025
Scale	1/8" = 1'-0"
Date	02.11.2025

A1.2

STAMP HERE



HEATING EQUIPMENT SIZING FORM

SFR

DADU

UA PATH COMPLIANCE
SEE SEPARATE UPLOADED UA WORKSHEET

2021 WASHINGTON STATE ENERGY
CODE (WSEC) NOTES

ENERGY CODE COMPLIANCE

2021 WASHINGTON STATE RESIDENTIAL ENERGY CODE (WSEC-R)

TOTAL UA TRADE OFF IS USED TO DEMONSTRATE COMPLIANCE. PROPOSED UA IS LESS THAN OR EQUAL

TO THE TARGET UA. SEE WSEC CODE COMPLIANCE CALCULATOR SHEETS ADJACENT. TABLE R402.1.2

- FENESTRATION (WINDOWS AND DOORS) U-FACTOR: .30
- SKYLIGHT U-FACTOR: .50
- CEILING U-FACTOR: .024
- ABOVE GRADE WALL U-FACTOR: .056
- FLOOR U-FACTOR: .029
- BELOW GRADE WALLS: 2' DEPTH = .042, 3.5' DEPTH = .040, 7' DEPTH = .035

ENERGY CONSERVATION

INSULATION AND VAPOR BARRIERS .

APPLICATION AND INSTALLATION OF INSULATION AND VAPOR BARRIERS SHALL COMPLY WITH WASHINGTON STATE THERMAL INSULATION STANDARDS. ALL INSULATING MATERIALS SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 450 PER SECTION R302.10.1 EXTERIOR WINDOW AND DOOR HEADERS SHALL BE INSULATED WITH MIN R-10 INSULATION.

AIR LEAKAGE

ALL EXTERIOR JOINTS SHALL BE SEALED, CAULKED, GASKETED, OR WEATHER-STRIPPED TO LIMIT AIR LEAKAGE IN THE FOLLOWING LOCATIONS. PARTIAL LIST BELOW, REFER TO WSEC R402.4.2.2 FOR COMPLETE LIST ON AIR BARRIER, AIR SEALING, AND INSULATION INSTALLATION REQUIREMENTS. WINDOW AND DOOR FRAMES OPENINGS BETWEEN WALLS AND FOUNDATIONS BETWEEN WALLS AND ROOF OPENINGS AT PENETRATION OF UTILITY SERVICES ALL OTHER OPENINGS IN THE BUILDING AIR LEAKAGE RATE LIMITED TO 4 AIR CHANGES PER HOUR

2X6 WALL W/ BLOWN IN FIBERGLASS U FACTOR CALCULATION

2x6 wall with R24 blown in fiberglass			
Parallel Components:		Studs/Plates	Headers Insulation
Percent Area of Component		19.0%	4.0% 77.0%
Framing/Insulation - Thickness (inches)		5.5	3 5.5
R-value per inch, framing/insulation		1.25	1.25 4.36
Header insulation R-value			10
Continuous Insulation, R-value			
Other continuous layers, R-value		2.03	2.03 2.03
Total R-value of component		8.905	15.78 26.03
U-value of component		0.1123	0.0634 0.0384
Component U-value x Percent Area		0.0213	0.0025 0.0296
Assembly U-value		0.053	
Assembly R-value		18.71	
Note: R-10 Rigid Insulation at Headers			
Selected Continuous Layers		R-values	Reference
Exterior air film, all surfaces		0.17	WSEC 2021 Appendix A, Table A101.5
0.5" gypsum		0.45	WSEC 2021 Appendix A, Table A101.5
0.5" plywood		0.62	https://www.appliedbuildingtech.com/fsc/woodcalculator
Lap Siding		0.79	https://www.appliedbuildingtech.com/fsc/woodcalculator
Total R		2.03	
U-value		0.492610837	

Simple Heating System Size: Washington State

This heating system sizing calculator is based on the Prescriptive Requirements of the 2018 and 2021 Washington State Energy Code (WSEC). This tool will calculate heating loads only. ACCA procedures for sizing cooling systems should be used to determine cooling loads.

Please complete the green drop-downs and boxes that are applicable to your project. As you make selections in the drop-downs for each section, some values will be calculated for you. If you do not see the selection you need in the drop-down options, please contact the WSU Energy Program at energycode@energy.wsu.edu or (360) 865-2342 for assistance.

This tool is for the permitting purposes only. A Manual J calculation is required to meet the requirement of the Washington State Energy Code.

Project Information

2755 73RD AVE SE
MERCER ISLAND, WA 98040
WA

Heating System Type:
To see detailed instructions for each section, place your cursor on the word "Instructions"

Design Temperature
Instructions

24
Design Temperature Difference (ΔT)
ΔT = Indoor (75 degrees) - Outdoor Design Temp

46

Area of Building
Conditioned Floor Area (sq ft)
Instructions

3,090

Conditioned Volume
28,973

Average Ceiling Height
Instructions

9.7

Glazing and Doors
Instructions

U-0.35

Skylights
Instructions

U-0.50

Insulation
Instructions

R-38

Single Rafter or Joist Vaulted Ceilings
Instructions

None

Above Grade Walls (see Figure 1)
Instructions

R-21 Intermediate

Floors
Instructions

R-38

Below Grade Walls and Slabs (see Figure 1)
Instructions

Wall & Slab
None

Depth
Select nearest slab depth

Slab on Grade (see Figure 1)
Instructions

R-10 Fully Insulated

Location of Ducts
Instructions

No Ducts

Duct Leakage Coefficient
1.000

Sum of UA
Envelope Heat Load
Sum of Q_h x 1.7
Air Leakage Heat Load
Volume x 0.6 x 1.7 x 0.018
Building Design Heat Load
Air leakage + envelope heat loss
Building and Duct Heat Load
Ducts in unconditioned space: sum of building heat loss x 1.10
Ducts in conditioned space: sum of building heat loss x 1
Maximum Heat Equipment Output
Building and duct heat loss x 1.45 for forced air furnace
Building and duct heat loss x 1.25 for heat pump

517.41
23,801 Btu / Hour
14,891 Btu / Hour
38,691 Btu / Hour
7,812 Btu / Hour
48,364 Btu / Hour
9,765 Btu / Hour

2755 73RD AVE SE
MERCER ISLAND, WA 98040
WA

Heating System Type:
To see detailed instructions for each section, place your cursor on the word "Instructions"

Design Temperature
Instructions

24
Design Temperature Difference (ΔT)
ΔT = Indoor (75 degrees) - Outdoor Design Temp

46

Area of Building
Conditioned Floor Area (sq ft)
Instructions

3,090

Conditioned Volume
28,973

Average Ceiling Height
Instructions

9.7

Glazing and Doors
Instructions

U-0.35

Skylights
Instructions

U-0.50

Insulation
Instructions

R-38

Single Rafter or Joist Vaulted Ceilings
Instructions

None

Above Grade Walls (see Figure 1)
Instructions

R-21 Intermediate

Floors
Instructions

R-38

Below Grade Walls and Slabs (see Figure 1)
Instructions

Wall & Slab
None

Depth
Select nearest slab depth

Slab on Grade (see Figure 1)
Instructions

R-10 Fully Insulated

Location of Ducts
Instructions

No Ducts

Duct Leakage Coefficient
1.000

Sum of UA
Envelope Heat Load
Sum of Q_h x 1.7
Air Leakage Heat Load
Volume x 0.6 x 1.7 x 0.018
Building Design Heat Load
Air leakage + envelope heat loss
Building and Duct Heat Load
Ducts in unconditioned space: sum of building heat loss x 1.10
Ducts in conditioned space: sum of building heat loss x 1
Maximum Heat Equipment Output
Building and duct heat loss x 1.45 for forced air furnace
Building and duct heat loss x 1.25 for heat pump

517.41
23,801 Btu / Hour
14,891 Btu / Hour
38,691 Btu / Hour
7,812 Btu / Hour
48,364 Btu / Hour
9,765 Btu / Hour

Figure 1

Area of Building

Conditioned Floor Area (sq ft)

Simple Heating System Size: Washington State

This heating system sizing calculator is based on the Prescriptive Requirements of the 2018 and 2021 Washington State Energy Code (WSEC). This tool will calculate heating loads only. ACCA procedures for sizing cooling systems should be used to determine cooling loads.

Please complete the green drop-downs and boxes that are applicable to your project. As you make selections in the drop-downs for each section, some values will be calculated for you. If you do not see the selection you need in the drop-down options, please contact the WSU Energy Program at energycode@energy.wsu.edu or (360) 865-2342 for assistance.

This tool is for the permitting purposes only. A Manual J calculation is required to meet the requirement of the Washington State Energy Code.

Project Information

2755 73RD AVE SE
MERCER ISLAND, WA 98040
WA

Heating System Type:
To see detailed instructions for each section, place your cursor on the word "Instructions"

Design Temperature
Instructions

24
Design Temperature Difference (ΔT)
ΔT = Indoor (75 degrees) - Outdoor Design Temp

46

Area of Building
Conditioned Floor Area (sq ft)
Instructions

3,090

Conditioned Volume
28,973

Average Ceiling Height
Instructions

9.7

Glazing and Doors
Instructions

U-0.35

Skylights
Instructions

U-0.50

Insulation
Instructions

R-38

Single Rafter or Joist Vaulted Ceilings
Instructions

None

Above Grade Walls (see Figure 1)
Instructions

R-21 Intermediate

Floors
Instructions

R-38

Below Grade Walls and Slabs (see Figure 1)
Instructions

Wall & Slab
None

Depth
Select nearest slab depth

Slab on Grade (see Figure 1)
Instructions

R-10 Fully Insulated

Location of Ducts
Instructions

No Ducts

Duct Leakage Coefficient
1.000

Sum of UA
Envelope Heat Load
Sum of Q_h x 1.7
Air Leakage Heat Load
Volume x 0.6 x 1.7 x 0.018
Building Design Heat Load
Air leakage + envelope heat loss
Building and Duct Heat Load
Ducts in unconditioned space: sum of building heat loss x 1.10
Ducts in conditioned space: sum of building heat loss x 1
Maximum Heat Equipment Output
Building and duct heat loss x 1.45 for forced air furnace
Building and duct heat loss x 1.25 for heat pump

517.41
23,801 Btu / Hour
14,891 Btu / Hour
38,691 Btu / Hour
7,812 Btu / Hour
48,364 Btu / Hour
9,765 Btu / Hour

2755 73RD AVE SE
MERCER ISLAND, WA 98040
WA

Heating System Type:
To see detailed instructions for each section, place your cursor on the word "Instructions"

Design Temperature
Instructions

24
Design Temperature Difference (ΔT)
ΔT = Indoor (75 degrees) - Outdoor Design Temp

46

Area of Building
Conditioned Floor Area (sq ft)
Instructions

3,090

Conditioned Volume
28,973

Average Ceiling Height
Instructions

9.7

Glazing and Doors
Instructions

U-0.35

Skylights
Instructions

U-0.50

Insulation
Instructions

R-38

Single Rafter or Joist Vaulted Ceilings
Instructions

None

Above Grade Walls (see Figure 1)
Instructions

R-21 Intermediate

Floors
Instructions

R-38

Below Grade Walls and Slabs (see Figure 1)
Instructions

Wall & Slab
None

Depth
Select nearest slab depth

Slab on Grade (see Figure 1)
Instructions

R-10 Fully Insulated

Location of Ducts
Instructions

No Ducts

Duct Leakage Coefficient
1.000

Sum of UA
Envelope Heat Load
Sum of Q_h x 1.7
Air Leakage Heat Load
Volume x 0.6 x 1.7 x 0.018
Building Design Heat Load
Air leakage + envelope heat loss
Building and Duct Heat Load
Ducts in unconditioned space: sum of building heat loss x 1.10
Ducts in conditioned space: sum of building heat loss x 1
Maximum Heat Equipment Output
Building and duct heat loss x 1.45 for forced air furnace
Building and duct heat loss x 1.25 for heat pump

517.41
23,801 Btu / Hour
14,891 Btu / Hour
38,691 Btu / Hour
7,812 Btu / Hour
48,364 Btu / Hour
9,765 Btu / Hour

Figure 1

Area of Building

Conditioned Floor Area (sq ft)

FOR SFR

USE SYSTEM TYPE 4 FROM TABLE 406.2, AND USE(3.7, 5.5, 6.1) OPTIONS FROM TABLE 406.3 FOR A TOTAL OF 8.0 CREDITS

SYSTEM TYPE 4: (3.0 CREDIT)
For using a heat pump as the primary heating system.

SELECTED OPTION 3.7: (2.0 CREDIT)
Ductless split system heat pumps with no electric resistance heating in the primary living area.

SELECTED OPTION 5.5: (1.5 CREDIT)
Water heating system shall include one of the following: Electric heat pump water heater meeting the standards for Tier II of NEEA's advanced water heating specification

SELECTED OPTION 6.1: (1.5 CREDIT)
Provide minimum 1,800kwh of electrical generation per housing unit annually by on-site solar equipment.

FOR DADU

USE SYSTEM TYPE 4 FROM TABLE 406.2, AND USE(3.7) OPTIONS FROM TABLE 406.3 FOR A TOTAL OF 5.0 CREDITS

SYSTEM TYPE 4: (3.0 CREDIT)
For using a heat pump as the primary heating system.

SELECTED OPTION 3.7: (2.0 CREDIT)
Ductless split system heat pumps with no electric resistance heating in the primary living area.

A PERMANENT CERTIFICATE SHALL BE COMPLETED BY THE BUILDER OR OTHER APPROVED PARTY AND POSTED ON A WALL IN THE SPACE WHERE THE FURNANCE IS LOCATED, A UTILITY ROOM, OR AN APPROVED LOCATION INSIDE THE BUILDING. A SAMPLE CERTIFICATE IS AVAILABLE AT:
<http://www.energy.wsu.edu/Documents/Compliance%20Certificate%202018%20WSEC.pdf>

EACH SEPARATE HEATING AND COOLING SYSTEM IS REQUIRED TO BE PROVIDED WITH AT LEAST ONE PROGRAMMABLE THERMOSTAT FOR THE REGULATION OF TEMPERATURE PER WSEC 403.1.1

DUCTS, AIR HANDLERS, AND FILTER BOXES SHALL BE SEALED. DUCT LEAKAGE SHALL BE LEAK TESTED IN ACCORDANCE WITH WSU RS-33 PER WSEC 403.3.3.

MECHANICAL SYSTEM PIPING CABLE OF CARRYING FLUIDS ABOVE 100 DEGREES FAHRENHEIT OR BELOW 55 DEGREES FAHRENHEIT SHALL BE INSULATED TO A MINIMUM OF R-6 PER WSEC R403.4.

ALL PERMANENTLY INSTALLED IGHTING FIXTURES, EXCLUDING KITCHEN APPLIANCE LIGHTING FIXTURES, SHALL CONTAIN ONLY HIGH-EFFICACY LIGHTING SOURCES.

GLAZING NOTES:
*OPERABLE WINDOWS TO HAVE SCREENS AND TO BE CONTROLLABLE AND SECURABLE.

*ALL NEW FENESTRATION TO BE NFRC CERTIFIED.

A WRITTEN REPORT OF THE TEST RESULTS, INCLUDING VERIFIED LOCATION AND TIME STAMP OF THE DATE, SHALL BE SIGNED BY THE TESTING AGENCY AND PROVIDED TO THE BUILDING OWNER AND CODE OFFICIAL, PRIOR TO CALL FOR FINAL INSPECTION.

sdAr

Shi Daru Architecture, LLC

24004682

REGISTERED ARCHITECT

Shi Daru Shi

DARU SHI

STATE OF WASHINGTON

2755 LLC-PRASERT NGAMSIRIPOL

13620 NE 20TH ST, STE L,
BELLEVUE, WA 98005

Description

BP Submittal

Date

02.11.2025

A

WSEC COMPLIANCE

73RD AVE RESIDENCE

2755 73RD AVE SE,
MERCER ISLAND, WA 98040

REF. #

N/A

BP #

2502-155

Project Number

D5025

Scale

1/4" = 1'-0"

Date

02.11.2025

A1.3

STAMP HERE

7/28/2025 2:28:39 PM

EXTERIOR DOOR SCHEDULE

EXTERIOR DOOR SCHEDULE									
Family and Type		Count	Location	Width	Height	U (BTU/h·ft²·°F)	Area	UA	Comments
DADU									
Door-Exterior-FullLite: DR 3070		1	I.d.k.	3'-0"	7'-0"	0.28	21.00 SF	5.88 SF	TMP
		1					21.00 SF	5.88 SF	
SFR									
Door-Exterior-FullLite: DR 3090-EX		1	great room	3'-0"	9'-0"	0.28	27.00 SF	7.56 SF	TMP
Door-Exterior-Garage: GARAGE DR 16080		1	garage	16'-0"	8'-0"	0.37	128.00 SF	47.36 SF	TMP
Door-Interior-Swing-Double: 6090 DBL DR		1	great room	6'-0"	9'-0"	0.28	54.00 SF	15.12 SF	SOLID FRONT DOOR
Door-Interior-Swing: 3070-GA		1	garage	3'-0"	7'-0"	0.28	21.00 SF	5.88 SF	GARAGE
		4					230.00 SF	75.92 SF	
Sum of Swinging Door Area and UA		5					251.00 SF	81.80 SF	

EXTERIOR WINDOW SCHEDULE

GLAZING SCHEDULE									
Type Mark	Family and Type	Count	Location	Width	Height	U (BTU/h·ft²·°F)	Area	UA	Comments
DADU									
A	Awning: 2626 WN	1	pwdr	2'-6"	2'-6"	0.28	6.25 SF	1.75 SF	TMP
C	Casement: 2650 WN	1	stair hallway	2'-6"	5'-0"	0.28	12.50 SF	3.50 SF	TMP
C	Casement: 2650 WN	1	bed1	2'-6"	5'-0"	0.28	12.50 SF	3.50 SF	
C	Casement: 2650 WN	1	bath1	2'-6"	5'-0"	0.28	12.50 SF	3.50 SF	
E	Fixed: 5026 WN	1	stair hallway	5'-0"	2'-6"	0.28	12.50 SF	3.50 SF	
F	Split Horizontal: 5020 Awning	1	I.d.k.	5'-0"	2'-0"	0.28	10.00 SF	2.80 SF	
K	Split Horizontal: 7650 CS Left	1	bed1	7'-6"	5'-0"	0.28	37.50 SF	10.50 SF	EGRESS
L	Split Vertical: 3060 Awn Lower	1	I.d.k.	3'-0"	6'-0"	0.28	18.00 SF	5.04 SF	
N	Split Vertical: 8026 Casement L	1	I.d.k.	2'-6"	8'-0"	0.28	20.00 SF	5.60 SF	
N	Split Vertical: 8026 Casement L	1	I.d.k.	2'-6"	8'-0"	0.28	20.00 SF	5.60 SF	
		10					161.75 SF	45.29 SF	
SFR									
A	Awning: 2626 WN	1	pwdr	2'-6"	2'-6"	0.28	6.25 SF	1.75 SF	
B	Awning: 3030 WN	1	primary bed	3'-0"	3'-0"	0.28	9.00 SF	2.52 SF	
B	Awning: 3030 WN	1	bath2	3'-0"	3'-0"	0.28	9.00 SF	2.52 SF	
B	Awning: 3030 WN	1	bath3	3'-0"	3'-0"	0.28	9.00 SF	2.52 SF	
B	Awning: 3030 WN	1	bath4	3'-0"	3'-0"	0.28	9.00 SF	2.52 SF	
C	Casement: 2650 WN	1	office	2'-6"	5'-0"	0.28	12.50 SF	3.50 SF	
D	Fixed: 1650 WN	1	bed3	1'-6"	5'-0"	0.28	7.50 SF	2.10 SF	
D	Fixed: 1650 WN	1	bed5	1'-6"	5'-0"	0.28	7.50 SF	2.10 SF	
D	Fixed: 1650 WN	1	bed4	1'-6"	5'-0"	0.28	7.50 SF	2.10 SF	
E	Fixed: 5026 WN	1	pwdr	5'-0"	2'-6"	0.28	12.50 SF	3.50 SF	
G	Split Horizontal: 5026 Fixed	1	family room	5'-0"	2'-6"	0.28	12.50 SF	3.50 SF	TMP
H	Split Horizontal: 5050 casement	1	primary bath	5'-0"	5'-0"	0.28	25.00 SF	7.00 SF	
H	Split Horizontal: 5050 casement	1	office	5'-0"	5'-0"	0.28	25.00 SF	7.00 SF	
H	Split Horizontal: 5050 casement	1	bed3	5'-0"	5'-0"	0.28	25.00 SF	7.00 SF	EGRESS
H	Split Horizontal: 5050 casement	1	bed4	5'-0"	5'-0"	0.28	25.00 SF	7.00 SF	EGRESS
H	Split Horizontal: 5050 casement	1	laundry	5'-0"	5'-0"	0.28	25.00 SF	7.00 SF	
J	Split Horizontal: 6030 CS Left	1	family room	6'-0"	3'-0"	0.28	18.00 SF	5.04 SF	
J	Split Horizontal: 6030 CS Left	1	roof deck	6'-0"	3'-0"	0.28	18.00 SF	5.04 SF	
J	Split Horizontal: 6030 CS Left	1	office	6'-0"	3'-0"	0.28	18.00 SF	5.04 SF	
J	Split Horizontal: 6030 CS Left	1	garage	6'-0"	3'-0"	0.28	18.00 SF	5.04 SF	
J	Split Horizontal: 6030 CS Left	1	garage	6'-0"	3'-0"	0.28	18.00 SF	5.04 SF	
K	Split Horizontal: 7650 CS Left	1	great room	7'-6"	5'-0"	0.28	37.50 SF	10.50 SF	TMP
K	Split Horizontal: 7650 CS Left	1	primary bed	7'-6"	5'-0"	0.28	37.50 SF	10.50 SF	EGRESS
K	Split Horizontal: 7650 CS Left	1	bed5	7'-6"	5'-0"	0.28	37.50 SF	10.50 SF	EGRESS
K	Split Horizontal: 7650 CS Left	1	guest suite	7'-6"	5'-0"	0.28	37.50 SF	10.50 SF	EGRESS
M	Split Vertical: 4060 Awn Lower	1	family room	4'-0"	6'-0"	0.28	24.00 SF	6.72 SF	
M	Split Vertical: 4060 Awn Lower	1	family room	4'-0"	6'-0"	0.28	24.00 SF	6.72 SF	
M	Split Vertical: 4060 Awn Lower	1	family room	4'-0"	6'-0"	0.28	24.00 SF	6.72 SF	
P	Split Vertical - Three: 4080	1	great room	4'-0"	8'-0"	0.28	32.00 SF	8.96 SF	TMP
P	Split Vertical - Three: 4080	1	great room	4'-0"	8'-0"	0.28	32.00 SF	8.96 SF	TMP
P	Split Vertical - Three: 4080	1	family room	4'-0"	8'-0"	0.28	32.00 SF	8.96 SF	TMP
SL	Skylight: 22' x 40"	1	family room	1'-10"	3'-4"	0.28	6.11 SF	1.71 SF	
SL	Skylight: 22' x 40"	1	family room	1'-10"	3'-4"	0.28	6.11 SF	1.71 SF	
SL	Skylight: 22' x 40"	1	family room	1'-10"	3'-4"	0.28	6.11 SF	1.71 SF	
SL	Skylight: 22' x 40"	1	family room	1'-10"	3'-4"	0.28	6.11 SF	1.71 SF	
		35					659.69 SF	184.71 SF	
Sum of Vertical Fenestration Area and UA		45					821.44 SF	230.00 SF	

TOTAL WINDOW COUNT		
Type Mark	Family and Type	Count
A	Awning: 2626 WN	2
B	Awning: 3030 WN	4
C	Casement: 2650 WN	4
D	Fixed: 1650 WN	3
E	Fixed: 5026 WN	2
F	Split Horizontal: 5020 Awning	1
G	Split Horizontal: 5026 Fixed	1
H	Split Horizontal: 5050 casement	5
J	Split Horizontal: 6030 CS Left	5
K	Split Horizontal: 7650 CS Left	5
L	Split Vertical: 3060 Awn Lower	1
M	Split Vertical: 4060 Awn Lower	3
N	Split Vertical: 8026 Casement L	2
P	Split Vertical - Three: 4080	3
SL	Skylight: 22' x 40"	4
TOTAL		45



Shi Daru Architecture, LLC



2755 LLC-PRASERT NGAMSIRIPOL

13620 NE 20TH ST, STE L,
BELLEVUE, WA 98005

Description

BP Submittal

Date

02.11.2025

A

GLAZING SUMMARY

73RD AVE RESIDENCE

2755 73RD AVE SE,
MERCER ISLAND, WA 98040

REF. #

N/A

BP #

2502-155

Project Number

D5025

Scale

Date

02.11.2025

A1.4

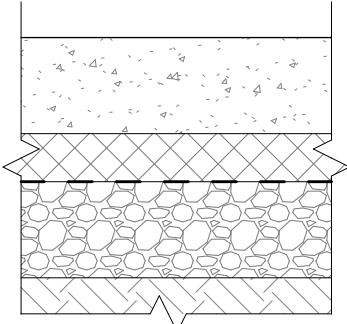
STAMP HERE



FLOOR ASSEMBLIES

F1

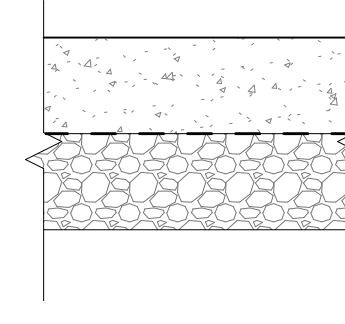
SLAB ON GRADE - INSULATED



- STAIN & SEAL
- 4" CONCRETE W/ REINFORCING PER STRUCTURAL
- 10-MIL VAPOR BARRIER W/ FULLY-TAPED JOINTS
- RIGID INSULATION (R-10 MIN., ENTIRE SLAB)
- 4" MIN. COMPACTED GRAVEL

F3

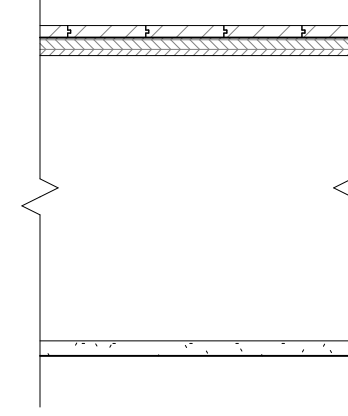
SLAB ON GRADE @ GARAGE



- STAIN & SEAL
- 4" CONCRETE W/ REINFORCING PER STRUCTURAL
- 10-MIL VAPOR BARRIER W/ FULLY-TAPED JOINTS
- 4" MIN. COMPACTED GRAVEL

F3

UPPER FLOOR

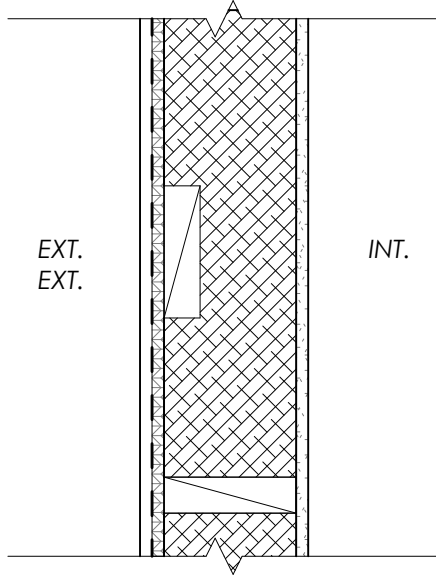


- FLOOR FINISH
- SHEATHING, NAILING & FRAMING PER STRUCTURAL
- (OPTIONAL) ACOUSTICAL BATT INSULATION (R-11)
- 5/8" GWB
- PVA PRIMER, PAINT

WALL ASSEMBLIES

W1

EXTERIOR WALL

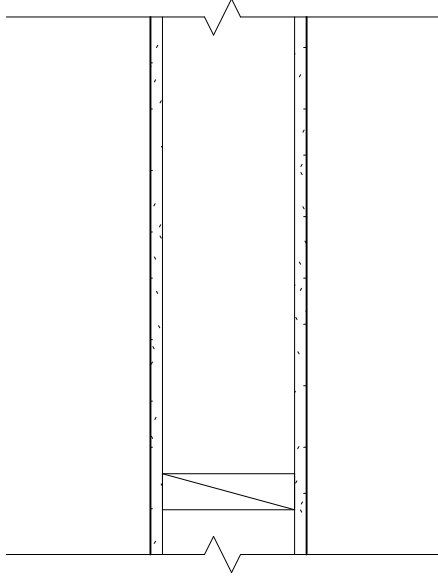


- SIDING PER ELEVATION
- WEATHER / AIR BARRIER
- SHTG & NAILING PER STRUCTURAL
- 2X6 STUDS PER STRUCTURAL
- BLOCKING AS REQ'D FOR SIDING
- **BLOWN IN INSULATION (R-24 MIN.)**
- CLASS 1 VAPOR RETARDER
- 1/2" GWB
- PVA PRIMER, PAINT

THERMAL: R-24

W3

INTERIOR WALL

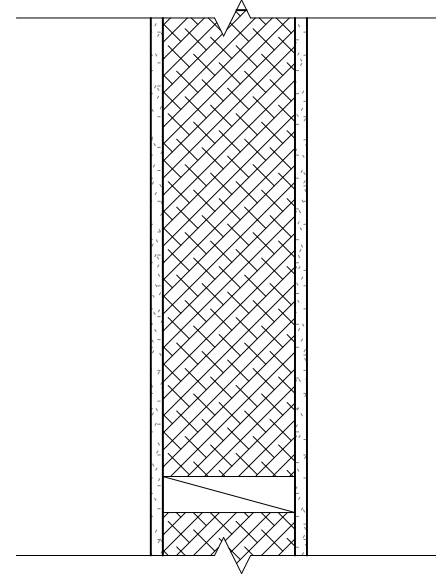


- PVA PRIMER, PAINT
- 1/2" GWB
- 2X STUDS PER STRUCTURAL
- (OPTIONAL) SOUND ATTENUATION BATT INSULATION, R-11 FOR 2X4 CAVITY; R-19 FOR 2X6 CAVITY;
- PLUMBING WHERE OCCURS PER PLANS
- 1/2" GWB
- PVA PRIMER, PAINT

WRAP PLUMBING PIPE WITH SOUND ATTENUATION BATT

W5

WALL @ GARAGE/LIVING



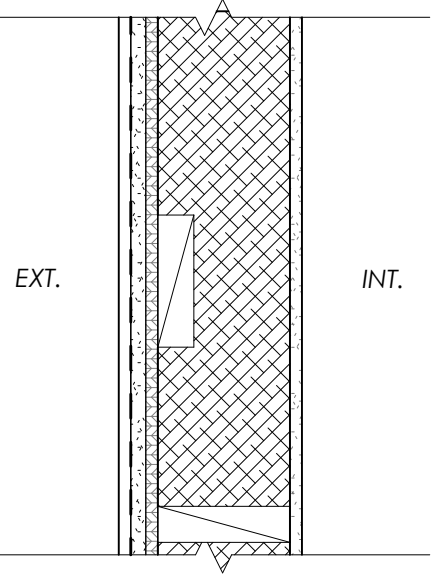
- PVA PRIMER, PAINT
- 1/2" GWB
- 2X6 STUDS PER STRUCTURAL
- **BLOWN IN INSULATION (R-24 MIN.)**
- 1/2" GWB
- PVA PRIMER, PAINT

THERMAL: R-24

W6

EXTERIOR WALL 1-HR

GA FILE NO. WP 8105



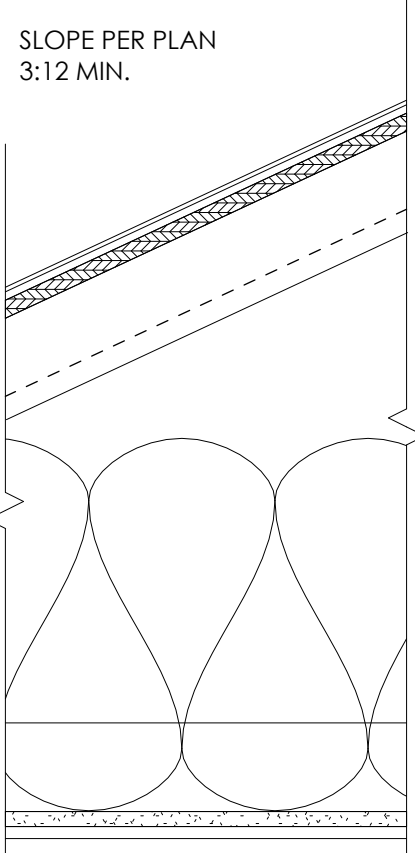
- SIDING PER ELEVATION
- WEATHER / AIR BARRIER
- 5/8" TYPE "X" GWB
- SHTG & NAILING PER STRUCTURAL
- 2X6 STUDS PER STRUCTURAL
- BLOCKING AS REQ'D FOR SIDING
- **BLOWN IN INSULATION (R-24 MIN.)**
- CLASS 1 VAPOR RETARDER
- 5/8" TYPE "X" GWB
- PVA PRIMER, PAINT

RATED BOTH SIDES

ROOF ASSEMBLIES

R1

CHORD TRUSS - UNVENTED

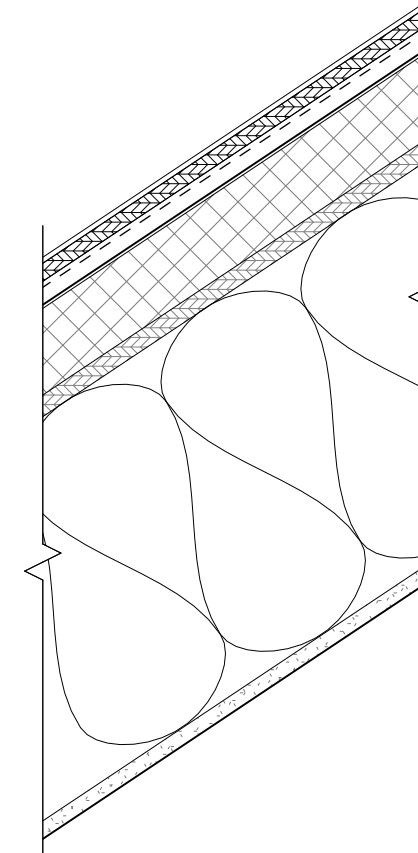


- COMPOSITE ROOF INSTALL PER MFR'S
- ROOFING UNDERLAYMENT, INSTALL PER MFR'S RECOMMENDATIONS
- SHEATHING, NAILING & FRAMING PER STRUCTURAL
- MIN 1" AIRSPACE ABOVE INSULATION INCLUDE BAFFLE
- **BATT INSULATION TO FILL CAVITY, R-49 MINIMUM**
- 5/8" GWB
- PVA PRIMER, PAINT

THERMAL R-49

R2

TJI - UNVENTED



- COMPOSITE ROOF INSTALL PER MFR'S
- ROOFING UNDERLAYMENT, INSTALL PER MFR'S RECOMMENDATIONS
- SLEEPER & ADDITIONAL PLYWOOD FOR ROOF ATTACHMENT ON TOP OF RIGID FOAM
- 3" THICK RIGID INSULATION, R-15 MIN., AIR IMPERMEABLE, ATTACHED IN DIRECT CONTACT W/ SHEATHING
- SHEATHING, NAILING & FRAMING PER STRUCTURAL
- **BATT INSULATION TO FILL CAVITY, R-49 MINIMUM, INSTALLED IN DIRECT CONTACT W/ ROOF SHEATHING**
- 5/8" GWB
- PVA PRIMER, PAINT

THERMAL R-64
UNVENTED ASSEMBLY TO COMPLY W/ SRC R806.5.5.1.2

sdAr
Shi Daru Architecture, LLC

24004682
REGISTERED
ARCHITECT
Shi Daru Shi
STATE OF WASHINGTON

2755 LLC-PRASERT NGAMSIRIPOL
13620 NE 20TH ST, STE L,
BELLEVUE, WA 98005

Description

BP Submittal

Date

02.11.2025

A

BUILDING ASSEMBLIES
73RD AVE RESIDENCE
2755 73RD AVE SE,
MERCER ISLAND, WA 98040

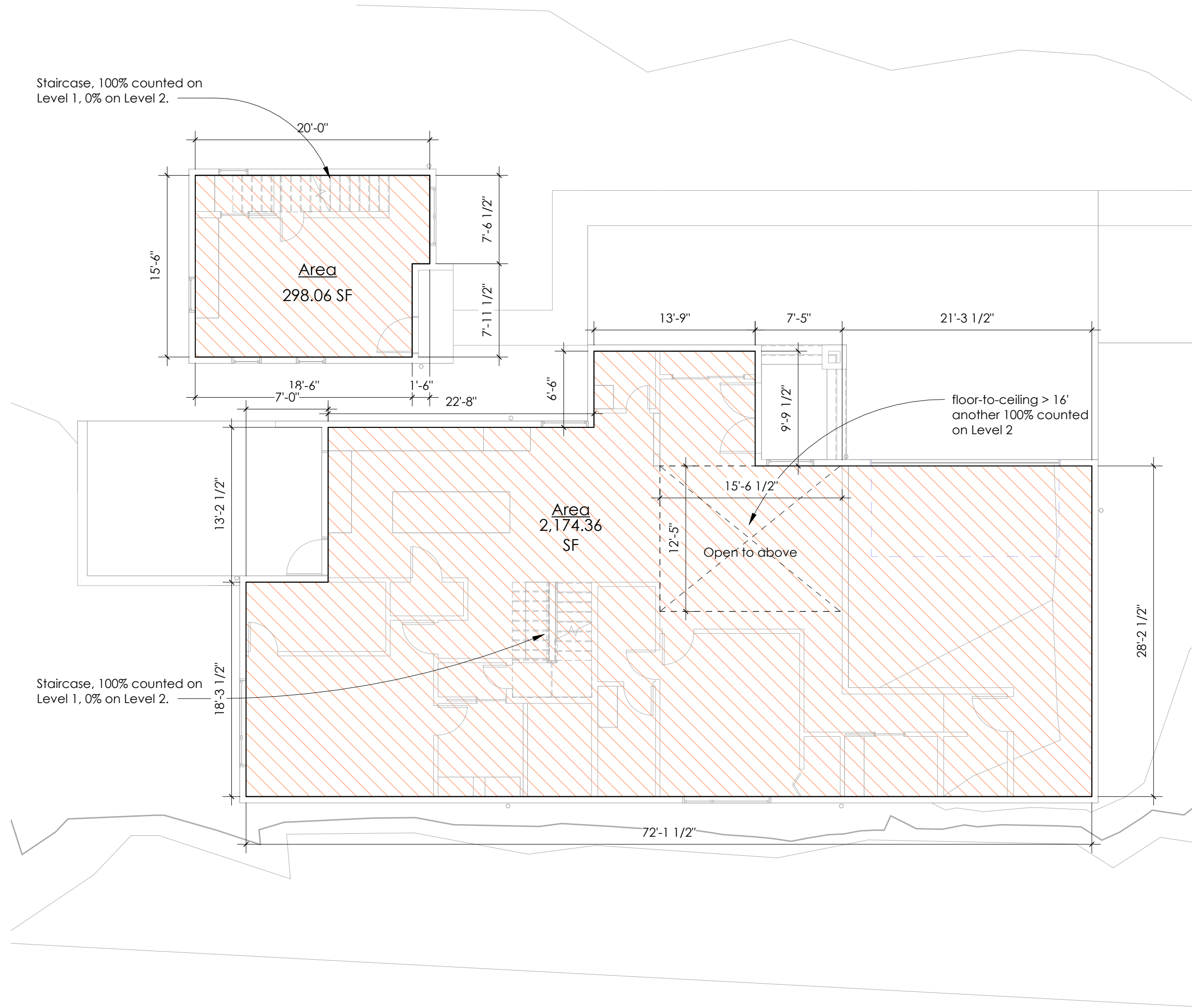
REF. # N/A
BP # 2502-155
Project Number D5025
Scale 1 1/2" = 1'-0"
Date 02.11.2025

A1.5

STAMP HERE



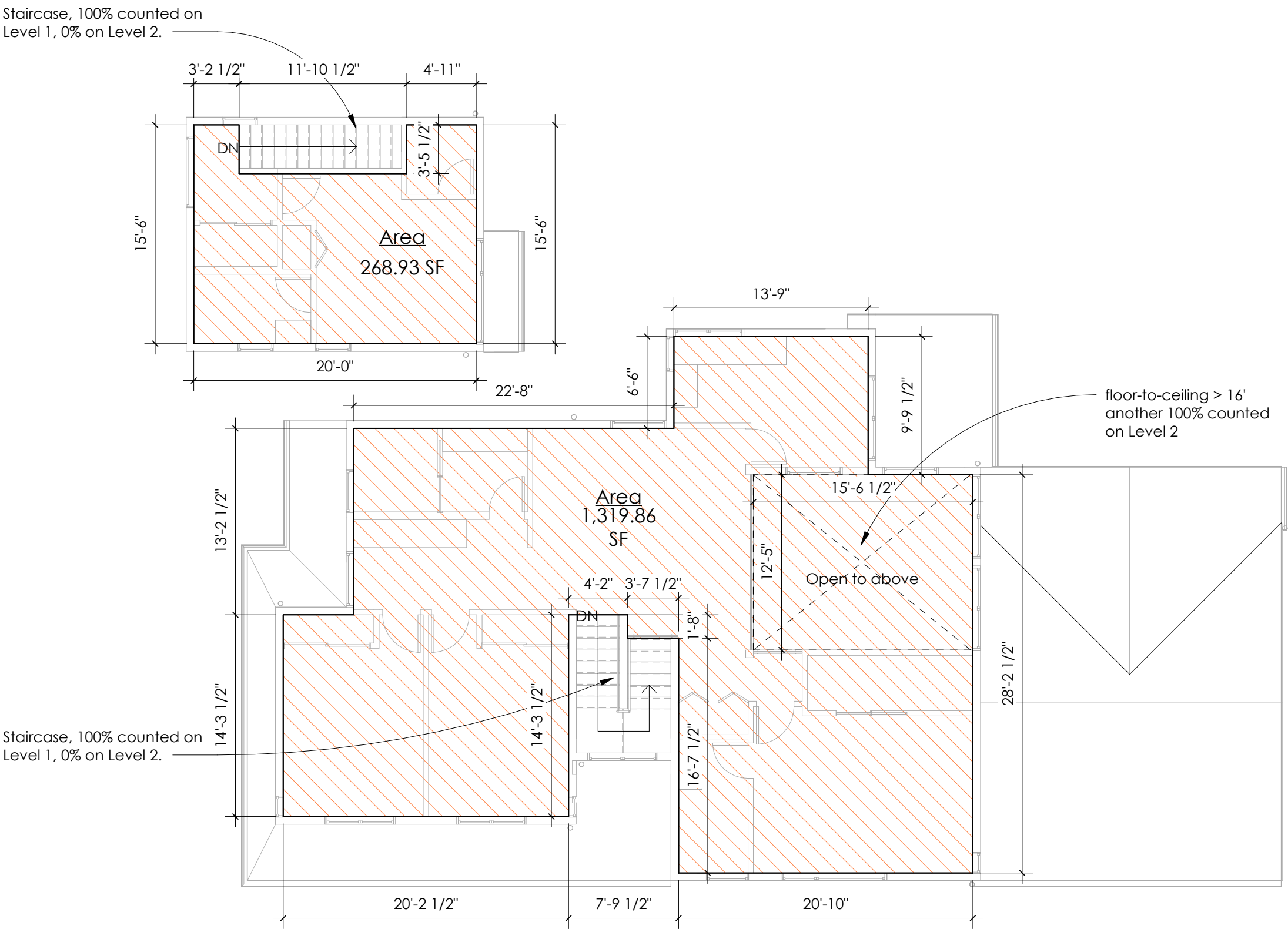
FAR DIAGRAMS & GFA CALCULATION



1 FAR DIAGRAM - Level 1
SCALE: 1/8" = 1'-0"

FAR SUMMARY	
DADU	
Level 1	298.06 SF
Level 2	268.93 SF
	566.99 SF
SFR	
Level 1	2,174.36 SF
Level 2	1,319.86 SF
	3,494.21 SF
TOTAL	4,061.21 SF

LOT AREA : 9,037 SF
ALLOWED: 9,037 x 0.45 = 4,066.45 SF
PROPOSED: 4,061.21 SF ≤ 4,066.45 SF. **COMPLIES**



2 FAR DIAGRAM - Level 2
SCALE: 1/8" = 1'-0"



STAMP HERE



Shi Daru Architecture, LLC



24004682
REGISTERED ARCHITECT
DARU SHI
STATE OF WASHINGTON

2755 LLC-PRASERT NGAMSIRIPOL

13620 NE 20TH ST, STE L,
BELLEVUE, WA 98005

Description	
BP Submittal	
Date	02.11.2025
A	

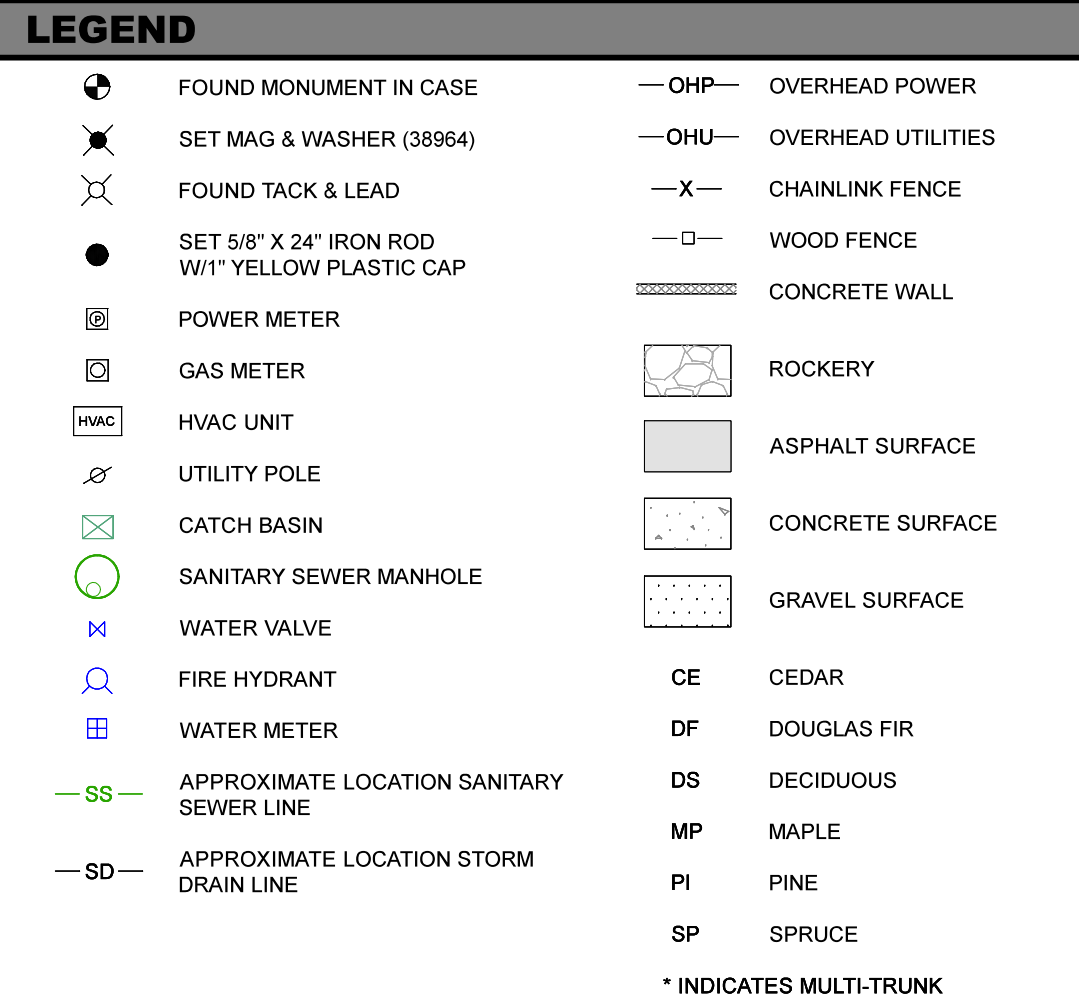
FAR DIAGRAMS & MHA

73RD AVE RESIDENCE

2755 73RD AVE SE,
MERCER ISLAND, WA 98040

REF. #	N/A
BP #	2502-155
Project Number	DS025
Scale	1/8" = 1'-0"
Date	02.11.2025

A2.0



LOT 9, LEMASTER'S ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 49 OF PLATS, PAGES 33, IN KING COUNTY, WASHINGTON;

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

THE PLAT OF LEMASTER'S ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 49 OF PLATS, PAGES 33, IN KING COUNTY, WASHINGTON; ACCEPTED A BEARING OF N 01°17'30" W FOR THE CENTERLINE 72ND AVENUE SE BASED ON FOUND MONUMENTS IN CASE.

PROPERTY OWNER:	CHERRIE LEE 2755 73RD AVENUE SE MERCER ISLAND, WA 98040
TAX PARCEL NUMBER:	426070-0045
PROJECT ADDRESS:	2755 73RD AVENUE SE MERCER ISLAND, WA 98040
ZONING:	R-8.4
JURISDICTION:	CITY OF MERCER ISLAND
PARCEL ACREAGE:	0.037 S.F. (± 0.207 ACRES) AS SURVEYED

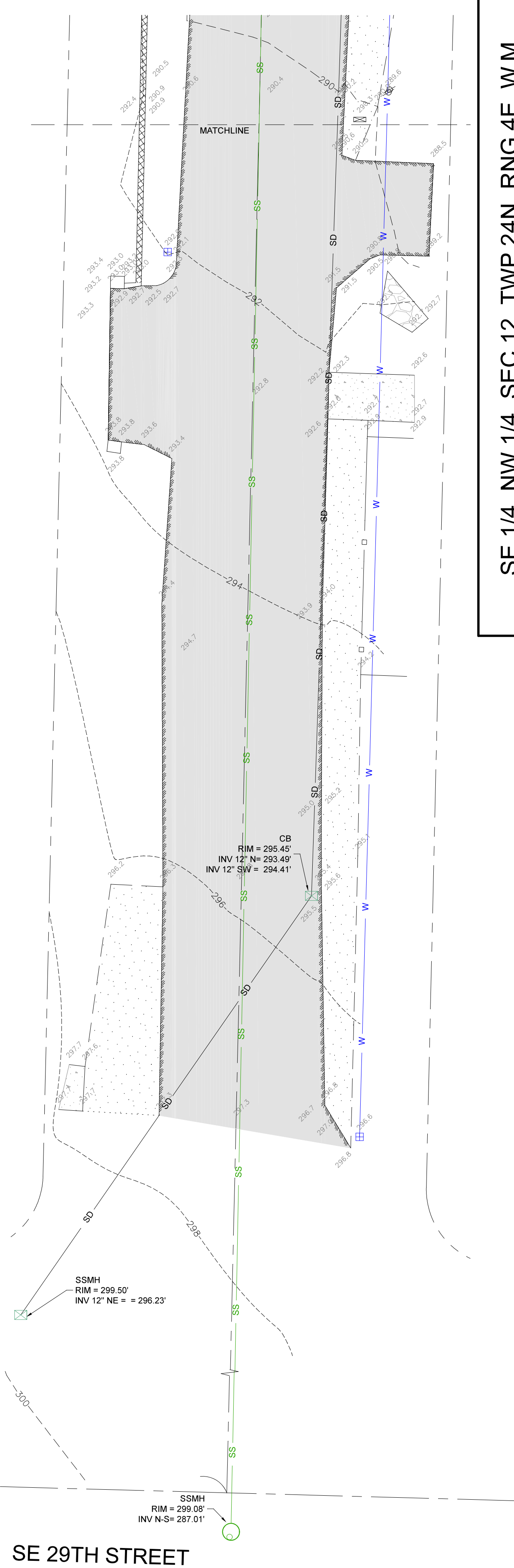
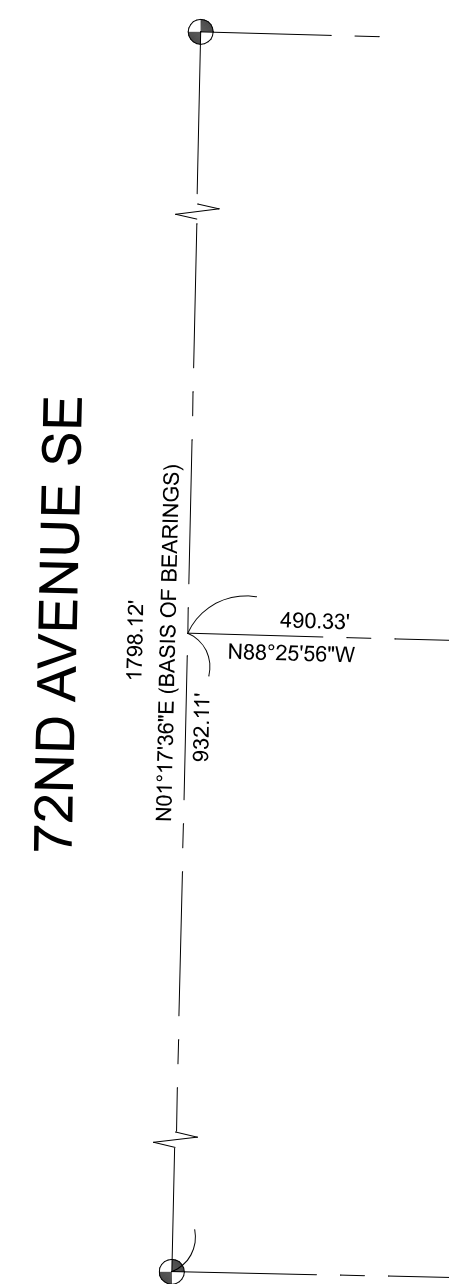
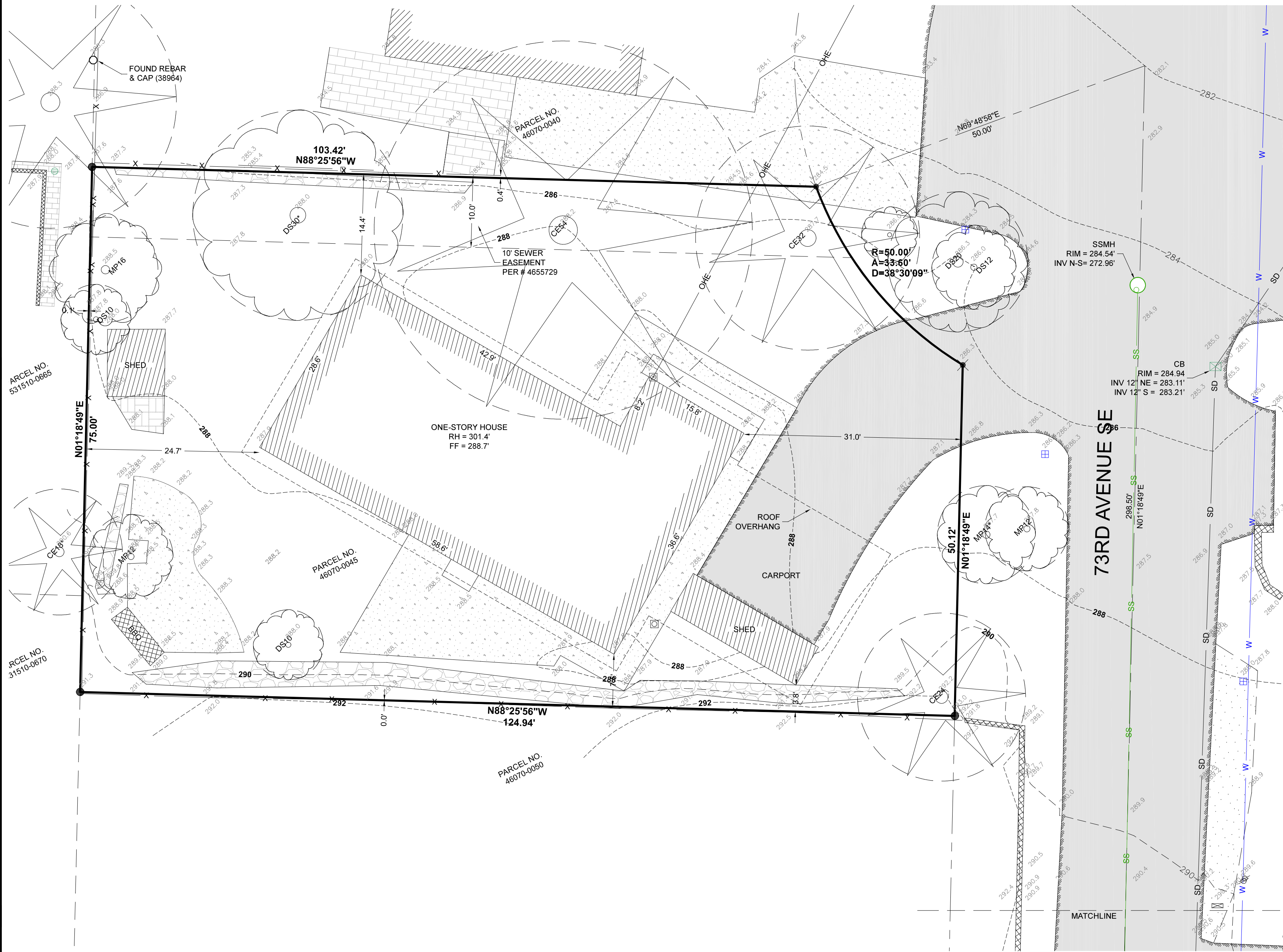
1. THIS SURVEY WAS COMPLETED WITHOUT BENEFIT OF A CURRENT TITLE REPORT. EASEMENTS AND OTHER ENCUMBRANCES MAY EXIST ON THIS PROPERTY THAT ARE NOT SHOWN HEREON.
2. INSTRUMENTATION FOR THIS SURVEY WAS A 3-SECOND SPECTRAPRECISION FOCUS 35 TOTAL STATION AND AN EMILIO REACH RS2 GPS RECEIVER. PROCEDURES USED IN THIS SURVEY MEET OR EXCEED STANDARDS SET BY WAC 332-130-090.
3. THE INFORMATION ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE IN OCTOBER 2024 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.
4. UTILITIES SHOWN ON THIS SURVEY ARE BASED UPON ABOVE GROUND OBSERVATIONS AND AS-BUILT PLANS WHERE AVAILABLE. ACTUAL LOCATIONS OF UNDERGROUND UTILITIES MAY VARY AND UTILITIES NOT SHOWN ON THIS SURVEY MAY EXIST ON THIS SITE.
5. ALL MONUMENTS WERE LOCATED DURING THIS SURVEY UNLESS OTHERWISE NOTED.

ELEVATIONS SHOWN ON THIS DRAWING WERE DERIVED FROM INFORMATION PROVIDED BY THE WGS SURVEY DATA WAREHOUSE.

POINT ID NO. CASC13
CONCRETE MONUMENT IN CASE AT THE INTERSECTION OF SE 32ND AVENUE AND 72ND AVENUE SE.

ELEVATION: 306.50 FEET NAVD 88

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



SE 1/4, NW 1/4, SEC 12, TWP 24N, RNG 4E, W.M.



www.sitesurveymapping.com
21923 NE 11th Street Sammamish, WA 98074
Phone: 425.298.4412

TOPOGRAPHIC SURVEY

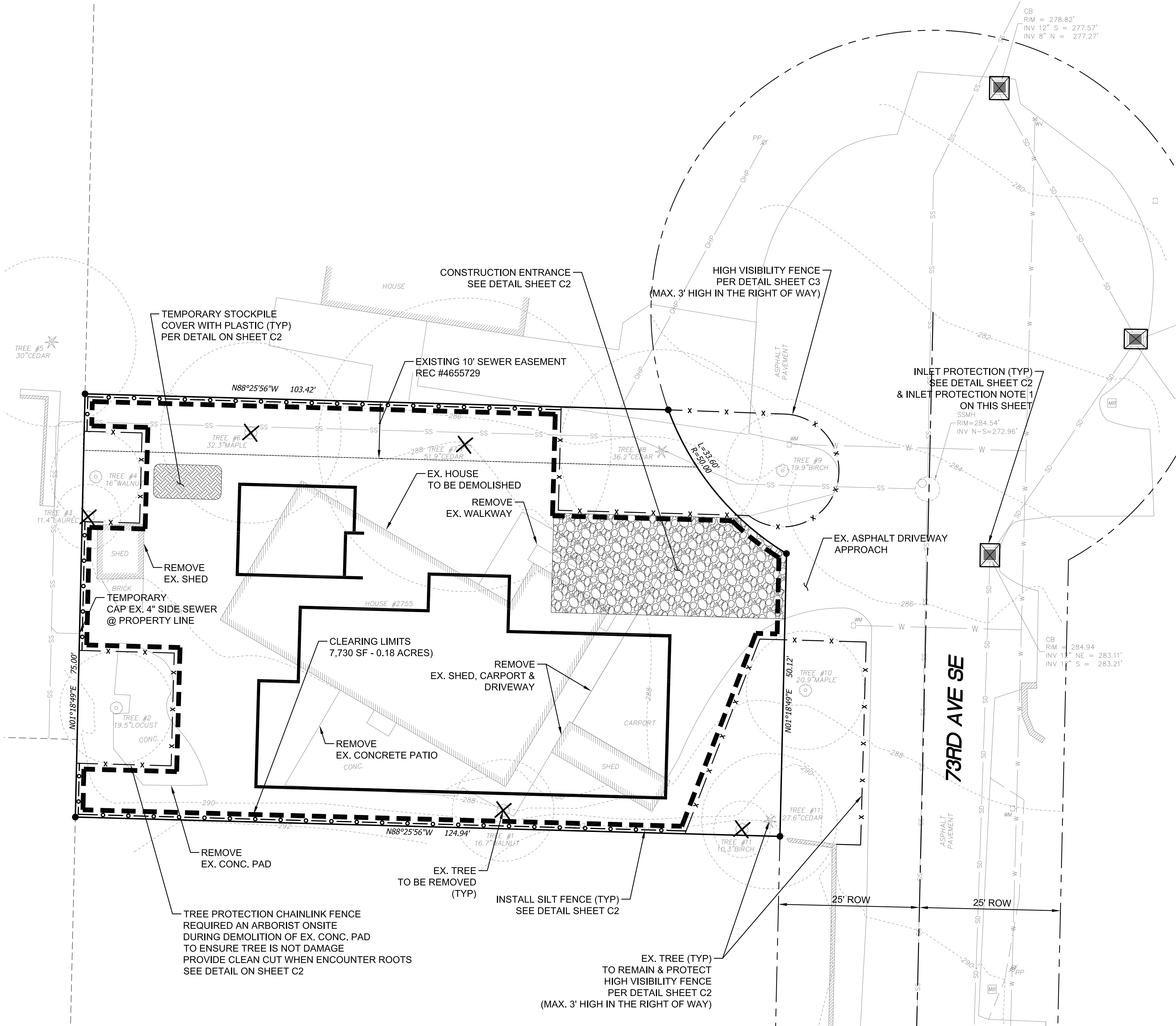
CHERRIE LEE
2755 73RD AVENUE SE
MERCER ISLAND, WA 98040

© 2024 SITE SURVEYING INC. ALL RIGHTS RESERVED

PROJECT NO. 24-489

DRAWN BY: MTS
CHECKED BY: TNW
DATE: 10/17/24

SHEET 1 OF 1



STABILIZE SOILS:

TEMPORARY COVER MEASURES SHALL BE PROVIDED WHEN NECESSARY TO PROTECT DISTURBED AREAS. THE INTENT OF THESE MEASURES IS TO PREVENT EROSION BY HAVING AS MUCH AREA AS POSSIBLE COVERED DURING ANY PERIOD OF PRECIPITATION. TOPSOIL LAYERS SHALL BE RETAINED AND PROTECTED TO THE MAXIMUM EXTENT FEASIBLE. ANY TOPSOIL THAT IS STOCKPILED ONSITE SHALL BE COVERED TO PREVENT EROSION AND SATURATION, AND SHALL BE REUSED IN LANDSCAPED AREAS UPON COMPLETION OF THE GROUND DISTURBING ACTIVITIES. TEMPORARY COVER SHALL BE INSTALLED IF AN AREA IS TO REMAIN UNWORKED FOR MORE THAN 7 DAYS DURING THE DRY SEASON (MAY 1 TO SEPTEMBER 30) OR FOR MORE THAN TWO CONSECUTIVE WORKING DAYS DURING THE WET SEASON (OCTOBER 1 TO APRIL 30). COVER METHODS INCLUDE THE USE OF SURFACE ROUGHENING, MULCH, EROSION CONTROL NETS AND BLANKETS, PLASTIC COVERING, SEEDING, AND SODDING. MULCH AND PLASTIC SHEETING ARE PRIMARILY INTENDED TO PROTECT DISTURBED AREAS FOR A SHORT PERIOD OF TIME, TYPICALLY DAYS TO A FEW MONTHS. SEEDING AND SODDING ARE MEASURES FOR AREAS THAT ARE TO REMAIN UNWORKED FOR MONTHS. EROSION NETS AND BLANKETS ARE TO BE USED IN CONJUNCTION WITH SEEDING STEEP SLOPES

GENERAL NOTE:

1. LAND CLEARING, GRADING, FILLING, AND FOUNDATION WORK ARE NOT PERMITTED BETWEEN OCTOBER 1ST AND APRIL 1ST. ANY WORK THAT IS PROPOSED DURING THE WET SEASON MUST SUBMIT A SEASONAL DEVELOPMENT LIMITATION WAIVER FOR APPROVAL BY THE BUILDING OFFICIAL.

PROJECT ENGINEER'S CERTIFICATION:

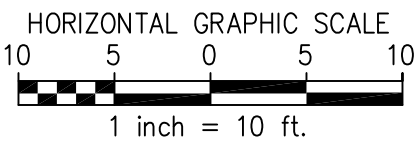
I HEREBY STATE THAT THIS CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN FOR JABOODA HOMES RESIDENCE HAS BEEN PREPARED BY ME OR UNDER MY SUPERVISION AND MEETS THE STANDARD OF CARE AND EXPERTISE WHICH IS USUAL AND CUSTOMARY IN THIS COMMUNITY OF PROFESSIONAL ENGINEERS. I UNDERSTAND THAT THE CITY OF MERCER ISLAND DOES NOT AND WILL NOT ASSUME LIABILITY FOR THE SUFFICIENCY, SUITABILITY, OR PERFORMANCE OF CONSTRUCTION SWPPP BMPS PREPARED BY ME.

INLET PROTECTION NOTE:

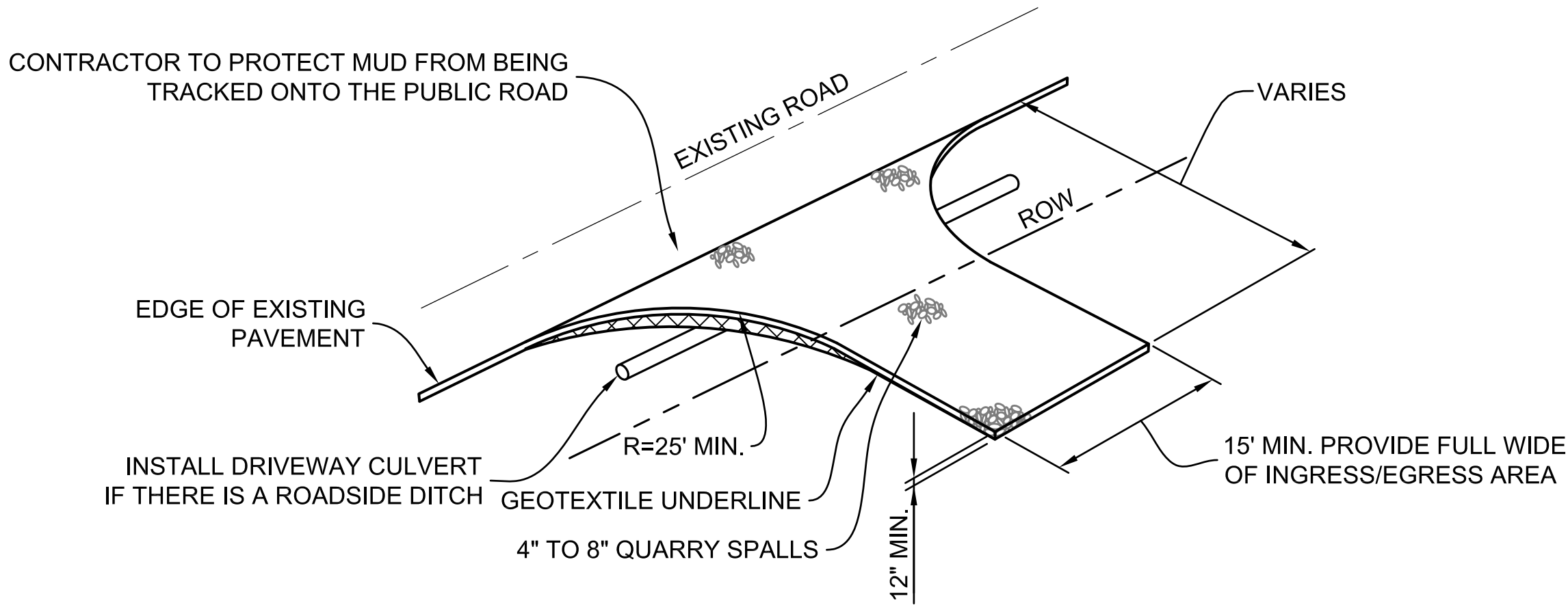
1. CONTRACTOR TO INSTALL INLET PROTECTION ON ALL CATCH BASINS DOWNSTREAM WITHIN 50'

LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- RIGHT OF WAY LINE
- RIGHT OF WAY CENTERLINE
- PROPOSED STRUCTURE



REFERENCE SHEET NO.		SHEET 1 OF 3 SHEETS	
C1		2755 LLC 2755 73RD AVE SE MERCER ISLAND, WA 98040 TREE PROTECTION PLAN TESC PLAN	
			
 Land Development and Civil Engineering Consultants 5130 South 166th Lane SeaTac, WA 98188 T (206) 229-6422			
JOB NO. R24610		ISSUE DATE 7-20-2025	
DESIGNED BY:		L. PHAN	
DRAWN BY:		L. PHAN	
CHECKED BY:		H. H. PHAN	
PROJ. MNGR:		H. H. PHAN	



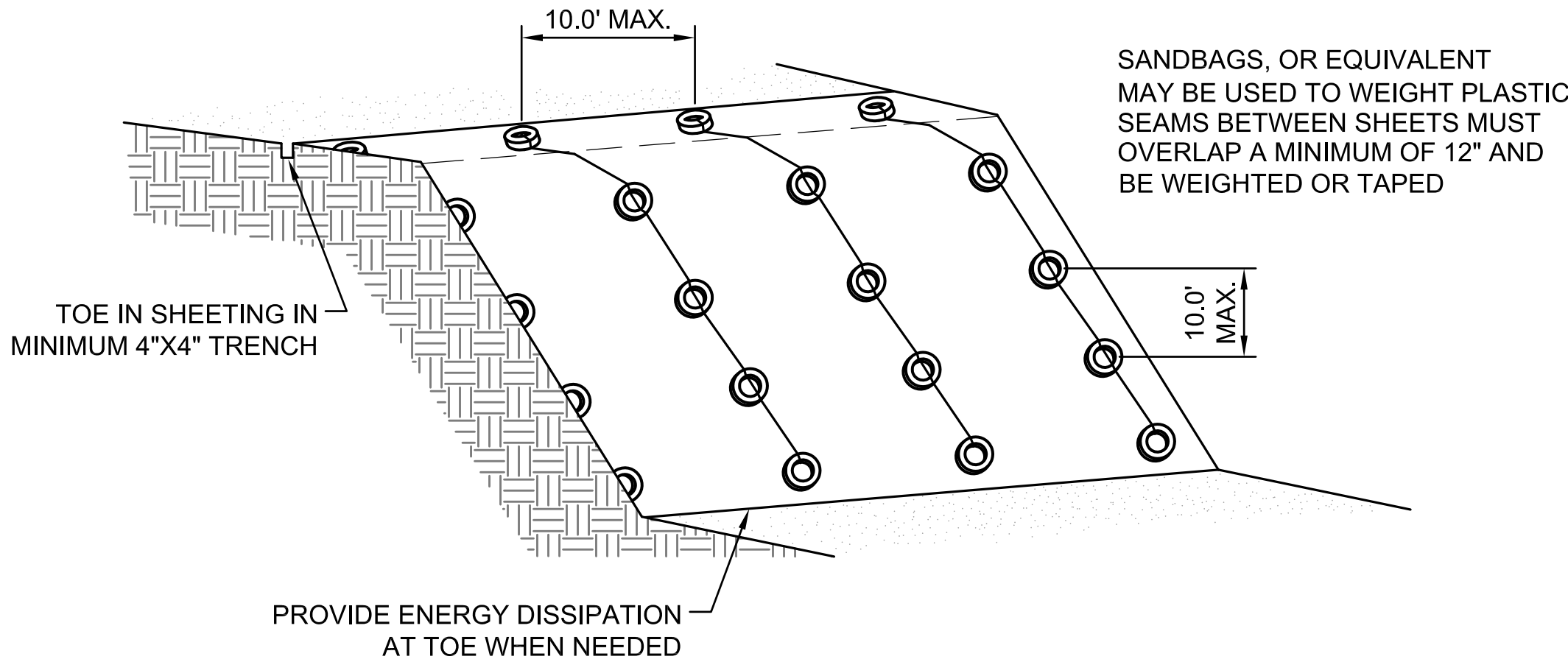
NOTES:

DRIVEWAYS SHALL BE PAVED TO THE EDGE OF RIGHT-OF-WAY PRIOR TO INSTALLATION OF THE CONSTRUCTION ENTRANCE TO AVOID DAMAGING OF THE ROADWAY.

IT IS RECOMMENDED THAT THE ENTRANCE BE CROWNED SO THAT RUNOFF DRAINS OFF THE ROAD.

CONSTRUCTION ENTRANCE DETAIL

SCALE: NONE



PLASTIC COVERING DETAIL

SCALE: NONE

TREE PROTECTION AREA (TPZ)

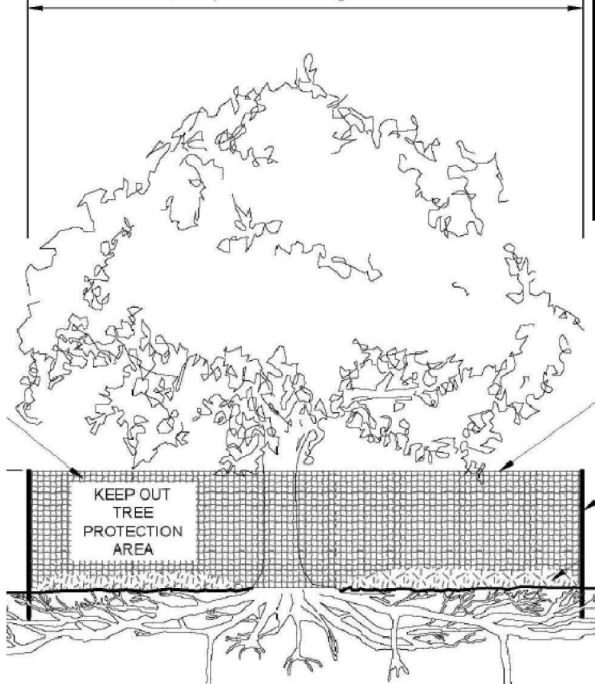
KEEP OUT!

DO NOT REMOVE OR ADJUST THE APPROVED LOCATION OF THIS TREE PROTECTION AREA

Trees enclosed by this fence are protected and are subject to the conditions of the tree permit. Violation of tree conditions may lead to:

1. Correction Notices or Stop Work Orders until compliance is achieved
2. RE Inspection Fees
3. Arborist reports recommending mitigation

Crown drip line or other limit of Tree Protection area. See Site/Utility Plan for fence alignment.



Notes

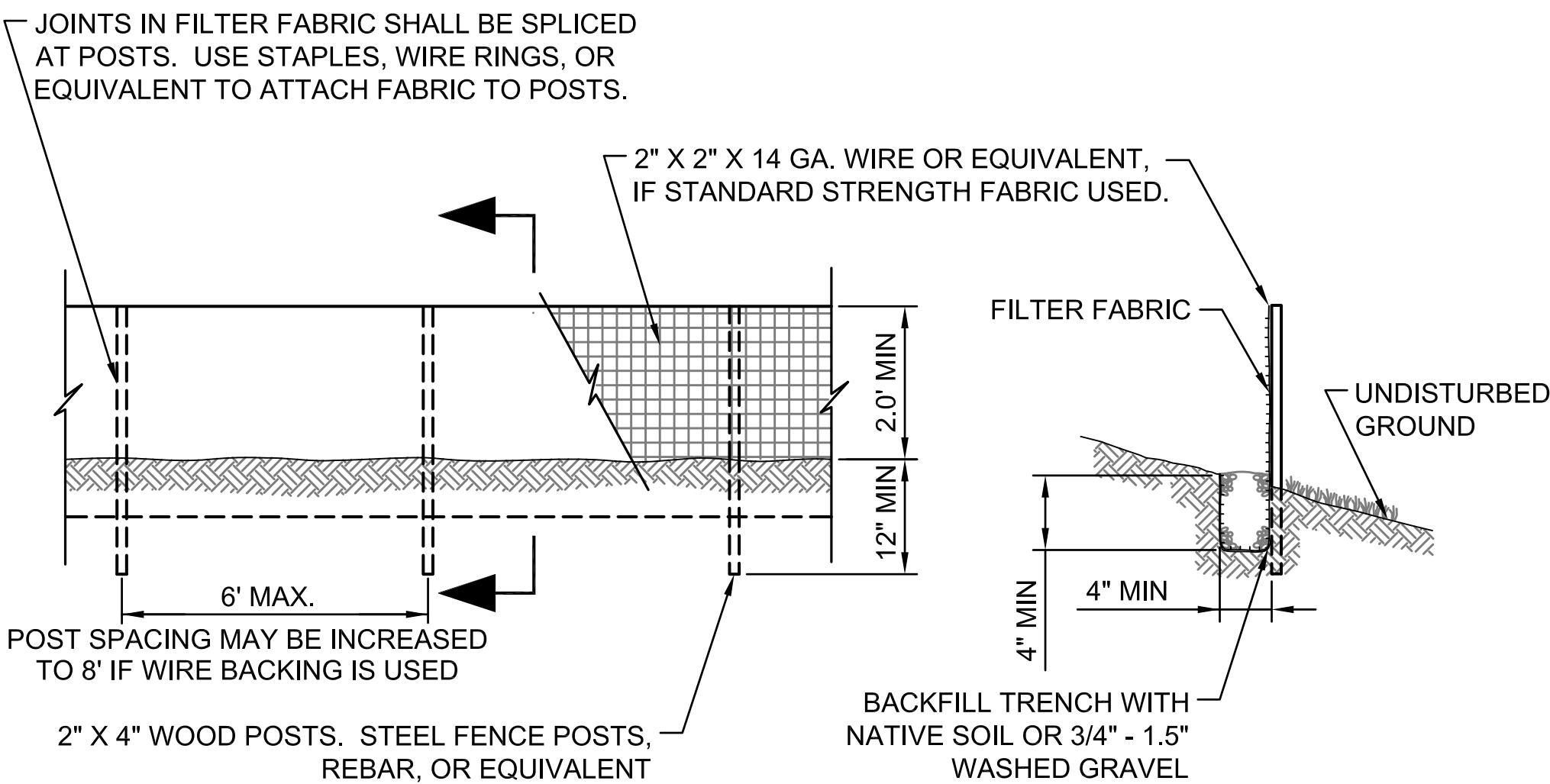
1. No pruning shall be performed unless under the direction of an arborist
2. No equipment shall be stored or operated inside the protective fencing including during fence installation and removal
3. No storage of materials shall occur inside the protective fencing
4. Refer to Site/Utility Plan for allowable modifications to the tree protection area.
5. Unauthorized activities in tree protection area may require evaluation by private arborist to identify impacts and mitigation required
6. Exposed roots: For roots > 1" damaged during construction, make a clean straight cut to remove damaged portion and inform City Arborist

Tree protection fence: 4-6" chain link fence, solidly anchored into the ground, or if authorized High-density polyethylene fencing with 3.5" x 1.5" openings; color orange. Steel posts installed at 8' o.c.

2" x 6" steel posts or approved equal

Maintain existing grade with the tree protection fence unless otherwise indication on the plans

Any Work in the protected area must be with the permission of the City Arborist john.kenney@mercergov.org

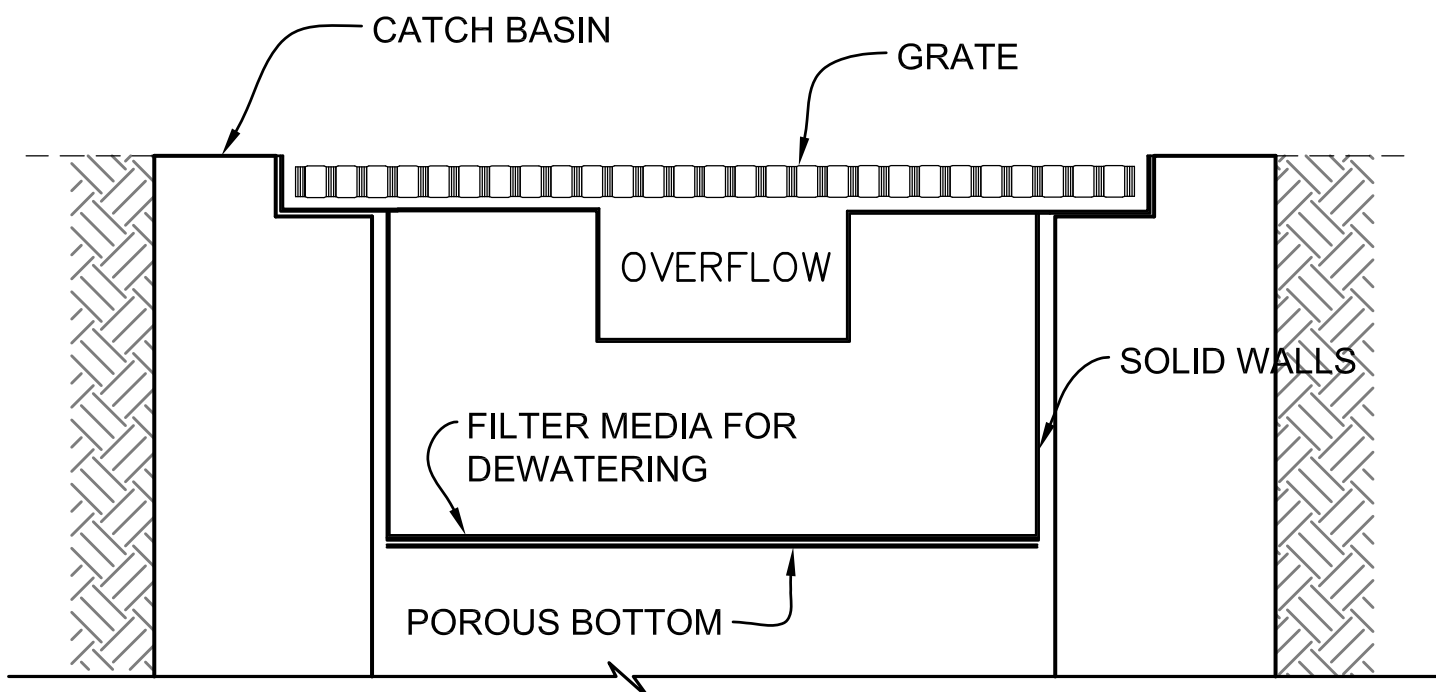


NOTES:

FILTER FABRIC FENCES SHALL BE INSTALLED ALONG CONTOUR WHENEVER POSSIBLE.

SILT FENCE DETAIL

SCALE: NONE

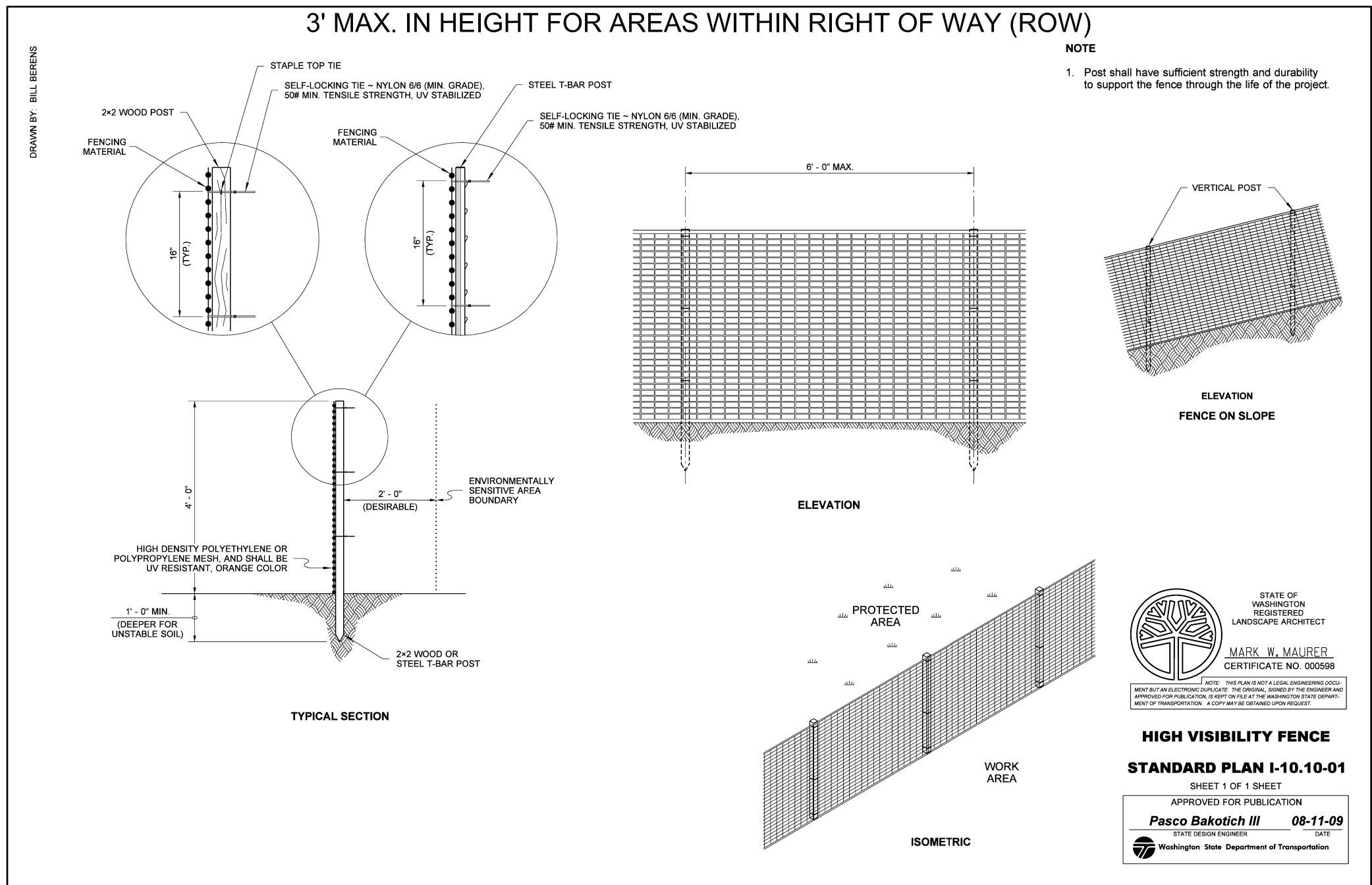


NOTES:

THIS DETAIL IS ONLY SCHEMATIC. ANY INSERT IS ALLOWED THAT HAS A MIN. 0.5 CUBIC FEET OF STORAGE WITH THE MEANS TO DEWATER THE STORED SEDIMENT, PROVIDE AN OVERFLOW, AND CAN BE EASILY MAINTAINED.

INLET PROTECTION DETAIL

SCALE: NONE



REFERENCE SHEET NO.		SHEET 2 OF 3 SHEETS	
C2			
2755 LLC 2755 73RD AVE SE MERCER ISLAND, WA 98040		TESC DETAILS	
			
 Land Development and Civil Engineering Consultants 5130 South 166th Lane SeaTac, WA 98188 T (206) 229-6422			
JOB NO. R24610		ISSUE DATE 7-20-2025	
DESIGNED BY: L. PHAN			
DRAWN BY: L. PHAN			
CHECKED BY: H. H. PHAN			
PROJ. MNGR: H. H. PHAN			
REVISION DESCRIPTION			
NO.	DATE	BY	

FLOOR PLAN NOTES:

- ENSURE ALL INTERIOR WALLS ARE CONSTRUCTED WITH 2X4 FRAMING AT 24" O.C. (U.N.O.), EXCEPT NOTED ON PLAN FOR PLUMBING.
- UTILIZE 2X6 FRAMING FOR ALL EXTERIOR WALLS, IN ACCORDANCE WITH STRUCTURAL REQUIREMENTS.
- INSTALL HEADERS BASED ON STRUCTURAL SPECIFICATIONS.
- SPECIFY WINDOW SIZES USING NOMINAL ROUGH OPENING DIMENSIONS FOR WIDTH AND HEIGHT.
- IMPLEMENT FIREBLOCKING AT EVERY PLUMBING OPENING TO ENHANCE SAFETY.
- PROVIDE SOLID BLOCKING ABOVE SUPPORTS TO ENSURE STABILITY.
- IN SEISMIC ZONES D0, D1 & D2, ANCHOR WATER HEATERS TO RESIST HORIZONTAL DISPLACEMENT DURING EARTHQUAKE MOTION. APPLY STRAPPING WITHIN THE UPPER ONE-THIRD AND LOWER ONE-THIRD OF ITS VERTICAL DIMENSIONS PER IRC R802.1.1.
- ENSURE OUTDOOR COMBUSTION AIR FOR FURNACE AND WATER HEATER PER IRC G2407.6.
- SHIELD AND DIRECT EXTERIOR LIGHTING AWAY FROM ADJACENT PROPERTIES.
- POSITION ELECTRICAL PANELS FOR CIRCUITS WITHIN THE DWELLING UNITS WITHIN THE UNITS THEY SERVE OR IN A COMMONLY ACCESSIBLE AREA.
- ALL WINDOW AND DOOR HEADER TO BE MINIMUM R-10.

COMBINATION SMOKE ALARM AND CARBON MONOXIDE ALARM

FOR NEW CONSTRUCTION, AN APPROVED CARBON MONOXIDE ALARM SHALL BE INSTALLED OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATELY VICINITY OF THE BEDROOMS IN DWELLING UNITS AND ON EACH LEVEL OF THE DWELLING AND IN ACCORDANCE WITH THE MANUFACTURERS DIRECTIONS.

EQUIPMENT TO BE LISTED WITH UL 217 AND UL 2034

SMOKE DETECTORS

110v INTERCONNECTED WITH BATTERY BACKUP. INSTALLED IN EACH FLOOR, IN EACH SLEEPING AREA, AND OUTSIDE EACH SEPARATE SLEEPING AREA. INSTALLED NOT LESS THAN 3 FEET FROM THE DOOR OF A BATH WHICH CONTAINS A TUB OR SHOWER UNLESS THIS PREVENTS PLACEMENT IN A REQUIRED LOCATION.

EQUIPMENT TO BE LISTED WITH UL 217 AND TO COMPLY WITH NFPA 72

HEAT ALARM

A HEAT DETECTOR OR HEAT ALARM TO BE INSTALLED IN A CENTRAL LOCATION IN THE GARAGE AND PER MANUF INSTRUCTIONS. EQUIPMENT TO BE LISTED AND TESTED FOR USE.

HEAT DETECTORS AND ALARMS SHALL BE CONNECTED TO AN ALARM OR SMOKE ALARM INSTALLED IN THE DWELLING

VENTILATION SCHEDULE

WHOLE HOUSE VENTILATION TO CONFORM TO SRC SECTION M1507.3

- KITCHEN**
MINIMUM 250 CFM INTERMITTENT, AND 80% CAPTURE EFFICIENCY PER ASTM E3087. RANGE HOOD OR DOWN DRAFT EXHAUST FAN RATED AT 250 CFM AT 1.0" WG MAY BE USED FOR EXHAUST FAN REQUIREMENT. FANS IN EXCESS OF 400 CFM SHALL PROVIDE MAKE UP AIR. 10" DUCT.
KITCHEN EXHAUST FANS SHALL BE RATED FOR SOUND AT A MAXIMUM OF 3 SONES AT ONE OR MORE AIRFLOW SETTINGS NOT LESS THAN 100 CFM AT A STATIC PRESSURE NOT LESS THAN THAT DETERMINED AT WORKING SPEED AS SPECIFIED IN HVI 916 SECTION 7.2.
- BATHROOMS, POWDER**
MINIMUM 80 CFM AT .25" WG, 6" DUCT
- LAUNDRY ROOM - WHOLE HOUSE MECHANICAL VENTILATION**
WHOLE HOUSE FAN MUST OPERATE AT 90 CFM MIN CONT. WHOLE HOUSE VENTILATION USING EXHAUST FANS

WSEC AMENDMENTS TO IRC M1505, ALL FANS VENT TO OUTSIDE. MEET ALL REQUIREMENTS OF M1505 AND AMENDMENTS. REFER TO A0.2 ENERGY CODE COMPLIANCE FOR ADDITIONAL NOTES AND DOCUMENTATION FOR VENTILATION AND HEATING SYSTEM SIZING.

GARAGE NOTES:

* THE GARAGE SHALL BE SEPARATED FROM THE RESIDENCE AND ITS ATTIC AREA BY NOT LESS THAN 1/2" GWB APPLIED TO THE GARAGE SIDE. GARAGES BENEATH HABITABLE ROOMS SHALL BE SEPARATED FROM ALL HABITABLE ROOMS ABOVE BY NOT LESS THAN 5/8" TYPE X GYPSUM BOARD OR EQUIVALENT. WHERE THE SEPARATION IS A FLOOR-CEILING ASSEMBLY, THE STRUCTURE SUPPORTING THE SEPARATION SHALL ALSO BE PROTECTED BY NOT LESS THAN 1/2-INCH GYPSUM BOARD OR EQUIVALENT.

* ...OPENINGS BETWEEN THE GARAGE AND RESIDENCE SHALL BE EQUIPPED WITH SOLID WOOD DOORS NOT LESS THAN 1 3/8" IN THICKNESS. SOLID OR HONEYCOMB CORE STEEL DOORS NOT LESS THAN 1 3/8" THICK. OR 20-MINUTE FIRE-RATED DOORS.

GARAGE/DWELLING DOOR EQUIPPED WITH A SELF-CLOSING DEVICE.

* DUCTS IN THE GARAGE AND DUCTS PENETRATING THE WALLS OR CEILINGS SEPARATING THE DWELLING FROM THE GARAGE SHALL BE CONSTRUCTED OF A MINIMUM NO. 26 GAGE SHEET STEEL OR OTHER APPROVED MATERIALS AND SHALL HAVE NO OPENINGS INTO THE GARAGE. IRC R302.5.2

* IN SEISMIC ZONES D0, D1 & D2, WATER HEATERS SHALL BE ANCHORED TO RESIST HORIZONTAL DISPLACEMENT DUE TO EARTHQUAKE MOTION. STRAPPING SHALL BE AT POINTS WITHIN THE UPPER ONE-THIRD AND LOWER ONE-THIRD OF ITS VERTICAL DIMENSIONS.

Marketable Area Summary (for reference only)

DADU	
LEVEL 1	338 SF
LEVEL 2	350 SF
	687 SF
SFR	
LEVEL 2	1,284 SF
LEVEL 1	1,806 SF
	3,090 SF
GARAGE	488 SF
	488 SF

sdAr

Shi Daru Architecture, LLC

24004682
REGISTERED
ARCHITECT
DARU SHI
STATE OF WASHINGTON

2755 LLC-PRASERT NGAMSIRIPOL

13620 NE 20TH ST, STE L,
BELLEVUE, WA 98005

Description

BP Submittal
Cycle#1 Corr.

Date

02.11.2025
05.14.2025

A

1

FLOOR PLANS

73RD AVE RESIDENCE

2755 73RD AVE SE,
MERCER ISLAND, WA 98040

REF. #

N/A

BP #

2502-155

Project Number

D5025

Scale

1/4" = 1'-0"

Date

02.11.2025

A2.1

STAMP HERE

1 SFR LEVEL 1

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



FLOOR PLAN NOTES:

- ENSURE ALL INTERIOR WALLS ARE CONSTRUCTED WITH 2X4 FRAMING AT 24" O.C. (U.N.O.), EXCEPT NOTED ON PLAN FOR PLUMBING.
- UTILIZE 2X6 FRAMING FOR ALL EXTERIOR WALLS, IN ACCORDANCE WITH STRUCTURAL REQUIREMENTS.
- INSTALL HEADERS BASED ON STRUCTURAL SPECIFICATIONS.
- SPECIFY WINDOW SIZES USING NOMINAL ROUGH OPENING DIMENSIONS FOR WIDTH AND HEIGHT.
- IMPLEMENT FIREBLOCKING AT EVERY PLUMBING OPENING TO ENHANCE SAFETY.
- PROVIDE SOLID BLOCKING ABOVE SUPPORTS TO ENSURE STABILITY.
- IN SEISMIC ZONES D0, D1 & D2, ANCHOR WATER HEATERS TO RESIST HORIZONTAL DISPLACEMENT DURING EARTHQUAKE MOTION. APPLY STRAPPING WITHIN THE UPPER ONE-THIRD AND LOWER ONE-THIRD OF ITS VERTICAL DIMENSIONS PER IRC R802.1.1.
- ENSURE OUTDOOR COMBUSTION AIR FOR FURNACE AND WATER HEATER PER IRC G2407.6.
- SHIELD AND DIRECT EXTERIOR LIGHTING AWAY FROM ADJACENT PROPERTIES.
- POSITION ELECTRICAL PANELS FOR CIRCUITS WITHIN THE DWELLING UNITS WITHIN THE UNITS THEY SERVE OR IN A COMMONLY ACCESSIBLE AREA.
- ALL WINDOW AND DOOR HEADER TO BE MINIMUM R-10.

COMBINATION SMOKE ALARM AND CARBON MONOXIDE ALARM

FOR NEW CONSTRUCTION, AN APPROVED CARBON MONOXIDE ALARM SHALL BE INSTALLED OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS IN DWELLING UNITS AND ON EACH LEVEL OF THE DWELLING AND IN ACCORDANCE WITH THE MANUFACTURERS DIRECTIONS.

EQUIPMENT TO BE LISTED WITH UL 217 AND UL 2034

SMOKE DETECTORS

110v INTERCONNECTED WITH BATTERY BACKUP. INSTALLED IN EACH FLOOR, IN EACH SLEEPING AREA, AND OUTSIDE EACH SEPARATE SLEEPING AREA. INSTALLED NOT LESS THAN 3 FEET FROM THE DOOR OF A BATH WHICH CONTAINS A TUB OR SHOWER UNLESS THIS PREVENTS PLACEMENT IN A REQUIRED LOCATION. EQUIPMENT TO BE LISTED WITH UL 217 AND TO COMPLY WITH NFPA 72

VENTILATION SCHEDULE

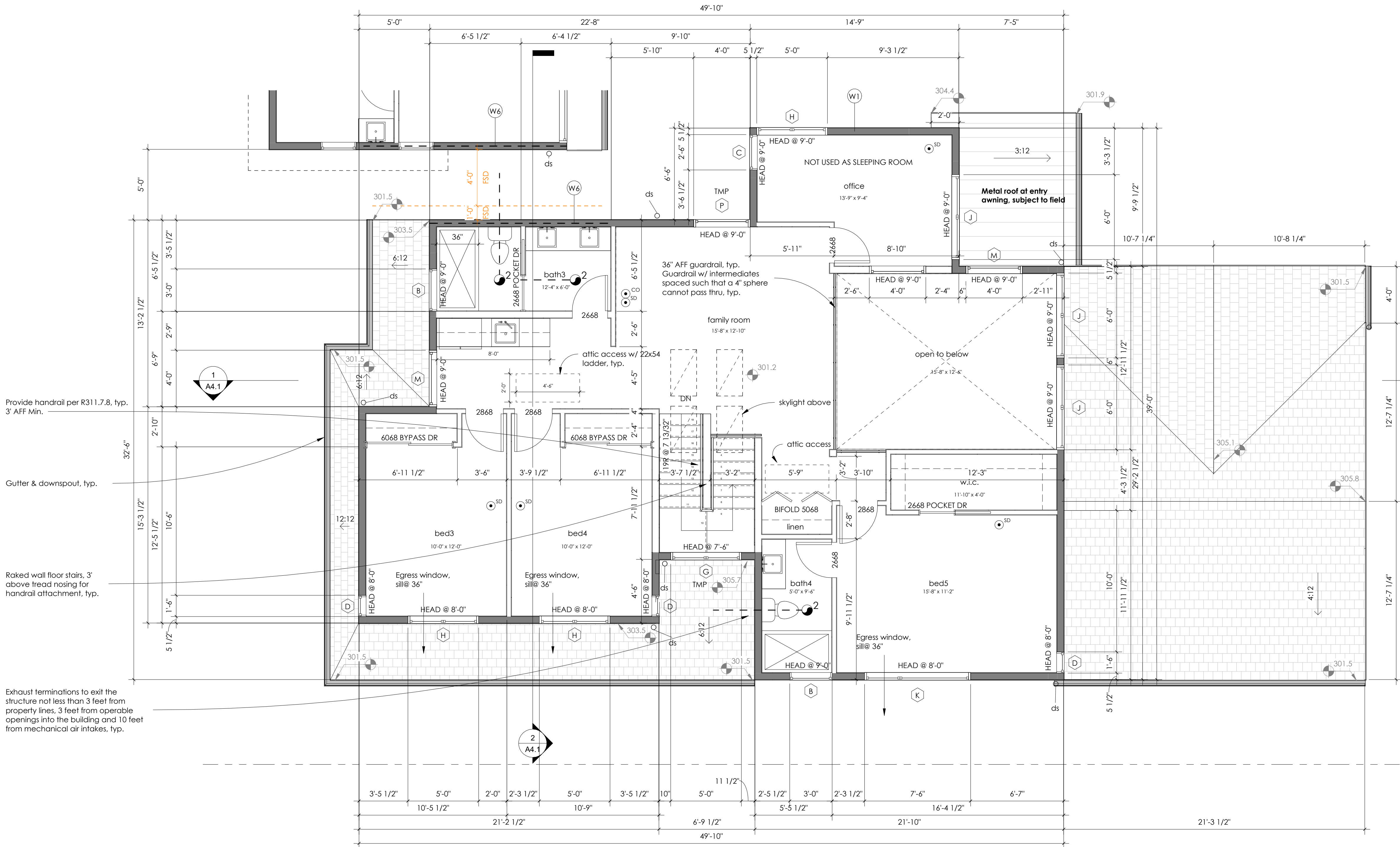
WHOLE HOUSE VENTILATION TO CONFORM TO SRC SECTION M1507.3

1 KITCHEN
MINIMUM 250 CFM INTERMITTENT, AND 80% CAPTURE EFFICIENCY PER ASTM E3087. RANGE HOOD OR DOWN DRAFT EXHAUST FAN RATED AT 250 CFM AT 1.0" WG MAY BE USED FOR EXHAUST FAN REQUIREMENT. FANS IN EXCESS OF 400 CFM SHALL PROVIDE MAKE UP AIR. 10" DUCT.
KITCHEN EXHAUST FANS SHALL BE RATED FOR SOUND AT A MAXIMUM OF 3 SONES AT ONE OR MORE AIRFLOW SETTINGS NOT LETT THAN 100 CFM AT A STATIC PRESSURE NOT LESS THAN THAT DETERMINED AT WORKING SPEED AS SPECIFIED IN HVI 916 SECTION 7.2.

2 BATHROOMS, POWDER
MINIMUM 80 CFM AT .25" WG. 6" DUCT

3 LAUNDRY ROOM - WHOLE HOUSE MECHANICAL VENTILATION
WHOLE HOUSE FAN MUST OPERATE AT 90 CFM MIN CONT. WHOLE HOUSE VENTILATION USING EXHAUST FANS

WSEC AMENDMENTS TO IRC M1505. ALL FANS VENT TO OUTSIDE. MEET ALL REQUIREMENTS OF M1505 AND AMENDMENTS. REFER TO A0.2 ENERGY CODE COMPLIANCE FOR ADDITIONAL NOTES AND DOCUMENTATION FOR VENTILATION AND HEATING SYSTEM SIZING.



1 SFR LEVEL 2
SCALE: 1/4" = 1'-0"

Marketable Area Summary (for reference only)

DADU	
LEVEL 1	338 SF
LEVEL 2	350 SF
	687 SF
SFR	
LEVEL 2	1,284 SF
LEVEL 1	1,806 SF
	3,090 SF
GARAGE	488 SF
	488 SF

sdAr
Shi Daru Architecture, LLC

24004682
REGISTERED
ARCHITECT
DARU SHI
STATE OF WASHINGTON

2755 LLC-PRASERT NGAMSIRIPOL

13620 NE 20TH ST, STE L,
BELLEVUE, WA 98005

Description

BP Submittal

Date
02.11.2025

A

FLOOR PLANS
73RD AVE RESIDENCE
2755 73RD AVE SE,
MERCER ISLAND, WA 98040

REF. #	N/A
BP #	2502-155
Project Number	D5025
Scale	1/4" = 1'-0"
Date	02.11.2025

A2.2

STAMP HERE

FLOOR PLAN NOTES:

- ENSURE ALL INTERIOR WALLS ARE CONSTRUCTED WITH 2X4 FRAMING AT 24" O.C. (U.N.O.), EXCEPT NOTED ON PLAN FOR PLUMBING.
- UTILIZE 2X6 FRAMING FOR ALL EXTERIOR WALLS, IN ACCORDANCE WITH STRUCTURAL REQUIREMENTS.
- INSTALL HEADERS BASED ON STRUCTURAL SPECIFICATIONS.
- SPECIFY WINDOW SIZES USING NOMINAL ROUGH OPENING DIMENSIONS FOR WIDTH AND HEIGHT.
- IMPLEMENT FIREBLOCKING AT EVERY PLUMBING OPENING TO ENHANCE SAFETY.
- PROVIDE SOLID BLOCKING ABOVE SUPPORTS TO ENSURE STABILITY.
- IN SEISMIC ZONES D0, D1 & D2, ANCHOR WATER HEATERS TO RESIST HORIZONTAL DISPLACEMENT DURING EARTHQUAKE MOTION. APPLY STRAPPING WITHIN THE UPPER ONE-THIRD AND LOWER ONE-THIRD OF ITS VERTICAL DIMENSIONS PER IRC R802.1.1.
- ENSURE OUTDOOR COMBUSTION AIR FOR FURNACE AND WATER HEATER PER IRC G2407.6.
- SHIELD AND DIRECT EXTERIOR LIGHTING AWAY FROM ADJACENT PROPERTIES.
- POSITION ELECTRICAL PANELS FOR CIRCUITS WITHIN THE DWELLING UNITS WITHIN THE UNITS THEY SERVE OR IN A COMMONLY ACCESSIBLE AREA.
- ALL WINDOW AND DOOR HEADER TO BE MINIMUM R-10.

COMBINATION SMOKE ALARM AND CARBON MONOXIDE ALARM

FOR NEW CONSTRUCTION, AN APPROVED CARBON MONOXIDE ALARM SHALL BE INSTALLED OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATELY VICINITY OF THE BEDROOMS IN DWELLING UNITS AND ON EACH LEVEL OF THE DWELLING AND IN ACCORDANCE WITH THE MANUFACTURERS DIRECTIONS.
EQUIPMENT TO BE LISTED WITH UL 217 AND UL 2034

SMOKE DETECTORS

110v INTERCONNECTED WITH BATTERY BACKUP, INSTALLED IN EACH FLOOR, IN EACH SLEEPING AREA, AND OUTSIDE EACH SEPARATE SLEEPING AREA. INSTALLED NOT LESS THAN 3 FEET FROM THE DOOR OF A BATH WHICH CONTAINS A TUB OR SHOWER UNLESS THIS PREVENTS PLACEMENT IN A REQUIRED LOCATION. EQUIPMENT TO BE LISTED WITH UL 217 AND TO COMPLY WITH NFPA 72

VENTILATION SCHEDULE

WHOLE HOUSE VENTILATION TO CONFORM TO SRC SECTION M1507.3

1 KITCHEN
MINIMUM 250 CFM INTERMITTENT, AND 80% CAPTURE EFFICIENCY PER ASTM E3087. RANGE HOOD OR DOWN DRAFT EXHAUST FAN RATED AT 250 CFM AT .10" WG MAY BE USED FOR EXHAUST FAN REQUIREMENT. FANS IN EXCESS OF 400 CFM SHALL PROVIDE MAKE UP AIR. 10" DUCT.
KITCHEN EXHAUST FANS SHALL BE RATED FOR SOUND AT A MAXIMUM OF 3 SONES AT ONE OR MORE AIRFLOW SETTINGS NOT LETT THAN 100 CFM AT A STATIC PRESSURE NOT LESS THAN THAT DETERMINED AT WORKING SPEED AS SPECIFIED IN HV1 916 SECTION 7.2.

2 BATHROOMS, POWDER
MINIMUM 80 CFM AT .25" WG, 6" DUCT

3 LAUNDRY ROOM - WHOLE HOUSE MECHANICAL VENTILATION
WHOLE HOUSE FAN MUST OPERATE AT 90 CFM MIN CONT. WHOLE HOUSE VENTILATION USING EXHAUST FANS

WSEC AMENDMENTS TO IRC M1505. ALL FANS VENT TO OUTSIDE. MEET ALL REQUIREMENTS OF M1505 AND AMENDMENTS. REFER TO A0.2 ENERGY CODE COMPLIANCE FOR ADDITIONAL NOTES AND DOCUMENTATION FOR VENTILATION AND HEATING SYSTEM SIZING.

SOLAR PANEL NOTES:

1. PROPOSED CREDITS = 1.5 CREDITS.
2. **PROVIDE MINIMUM 1,800KWH OF ELECTRICAL GENERATION PER HOUSING UNIT ANNUALLY BY ON-SITE SOLAR EQUIPMENT**
3. MAINTAIN 36" CLEAR TO VENTS AND OTHER APPURTENANCES.
4. SOLAR THERMAL SYSTEMS SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH CHAPTER 23 AND THE INTERNATIONAL FIRE CODE. IFC 1207.1
5. R324.4 ELECTRCIAL PERMIT AND INSPECTION REQUIRED FOR SOLAR PANELS.

Marketable Area Summary (for reference only)

DADU	
LEVEL 1	338 SF
LEVEL 2	350 SF
687 SF	
SFR	
LEVEL 2	1,284 SF
LEVEL 1	1,806 SF
3,090 SF	
GARAGE	
488 SF	

sdAr
Shi Daru Architecture, LLC

24004682
REGISTERED
ARCHITECT
Shi Daru Shi
DARU SHI
STATE OF WASHINGTON

2755 LLC-PRASERT NGAMSIRIPOL

13620 NE 20TH ST, STE L,
BELLEVUE, WA 98005

Description

BP Submittal

Date

02.11.2025

A

FLOOR PLANS

73RD AVE RESIDENCE

2755 73RD AVE SE,
MERCER ISLAND, WA 98040

REF. #

N/A

BP #

2502-155

Project Number

DS025

Scale

1/4" = 1'-0"

Date

02.11.2025

A2.3

STAMP HERE

7/28/2025 2:28:46 PM

FLOOR PLAN NOTES:

- ENSURE ALL INTERIOR WALLS ARE CONSTRUCTED WITH 2X4 FRAMING AT 24" O.C. (U.N.O.), EXCEPT NOTED ON PLAN FOR PLUMBING.
- UTILIZE 2X6 FRAMING FOR ALL EXTERIOR WALLS, IN ACCORDANCE WITH STRUCTURAL REQUIREMENTS.
- INSTALL HEADERS BASED ON STRUCTURAL SPECIFICATIONS.
- SPECIFY WINDOW SIZES USING NOMINAL ROUGH OPENING DIMENSIONS FOR WIDTH AND HEIGHT.
- IMPLEMENT FIREBLOCKING AT EVERY PLUMBING OPENING TO ENHANCE SAFETY.
- PROVIDE SOLID BLOCKING ABOVE SUPPORTS TO ENSURE STABILITY.
- IN SEISMIC ZONES D0, D1 & D2, ANCHOR WATER HEATERS TO RESIST HORIZONTAL DISPLACEMENT DURING EARTHQUAKE MOTION. APPLY STRAPPING WITHIN THE UPPER ONE-THIRD AND LOWER ONE-THIRD OF ITS VERTICAL DIMENSIONS PER IRC R802.1.1.
- ENSURE OUTDOOR COMBUSTION AIR FOR FURNACE AND WATER HEATER PER IRC G2407.6.
- SHIELD AND DIRECT EXTERIOR LIGHTING AWAY FROM ADJACENT PROPERTIES.
- POSITION ELECTRICAL PANELS FOR CIRCUITS WITHIN THE DWELLING UNITS WITHIN THE UNITS THEY SERVE OR IN A COMMONLY ACCESSIBLE AREA.
- ALL WINDOW AND DOOR HEADER TO BE MINIMUM R-10.

COMBINATION SMOKE ALARM AND CARBON MONOXIDE ALARM

FOR NEW CONSTRUCTION, AN APPROVED CARBON MONOXIDE ALARM SHALL BE INSTALLED OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATELY VICINITY OF THE BEDROOMS IN DWELLING UNITS AND ON EACH LEVEL OF THE DWELLING AND IN ACCORDANCE WITH THE MANUFACTURERS DIRECTIONS.

EQUIPMENT TO BE LISTED WITH UL 217 AND UL 2034

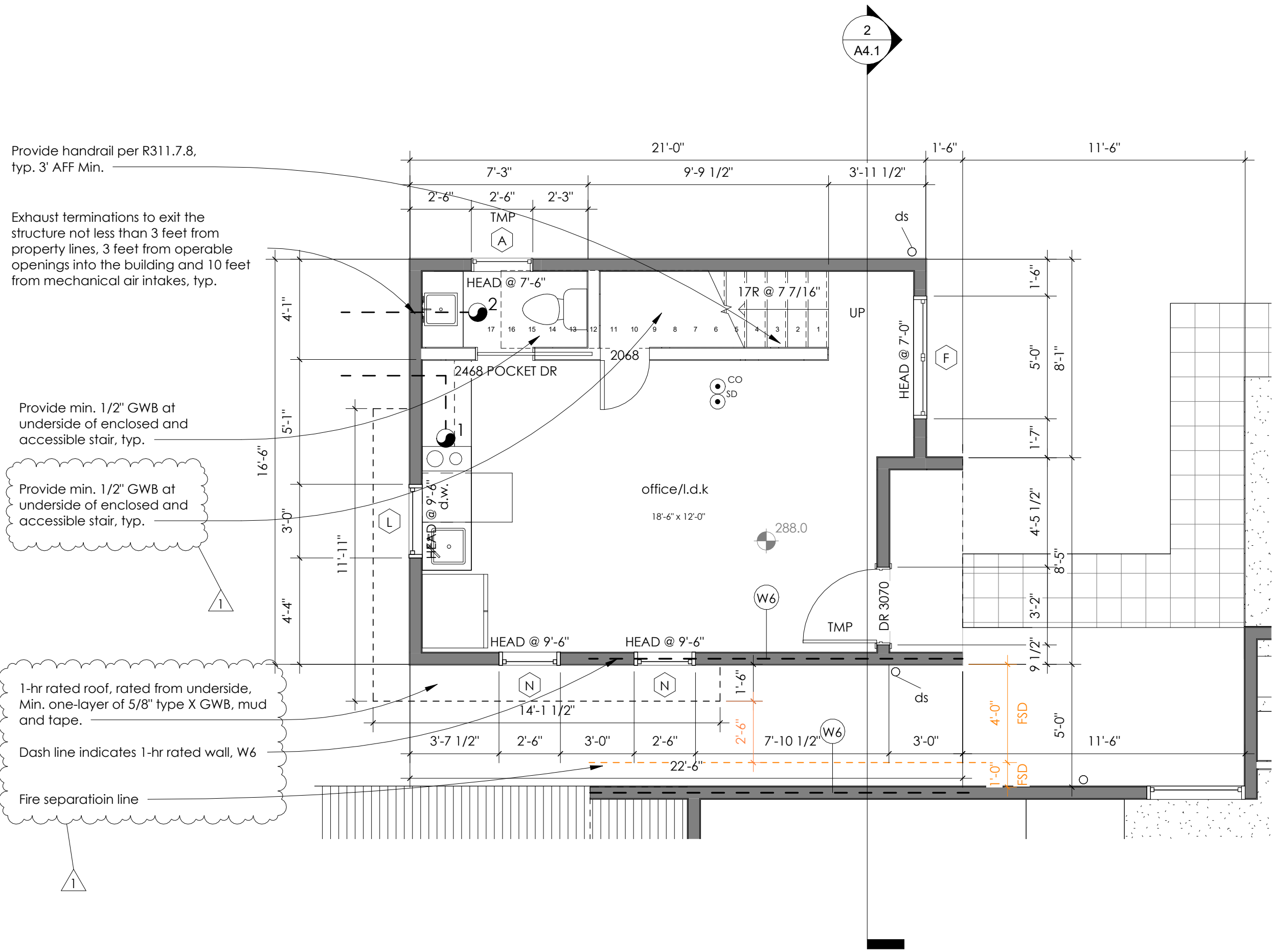
SMOKE DETECTORS

110v INTERCONNECTED WITH BATTERY BACKUP, INSTALLED IN EACH FLOOR, IN EACH SLEEPING AREA, AND OUTSIDE EACH SEPARATE SLEEPING AREA. INSTALLED NOT LESS THAN 3 FEET FROM THE DOOR OF A BATH WHICH CONTAINS A TUB OR SHOWER UNLESS THIS PREVENTS PLACEMENT IN A REQUIRED LOCATION, EQUIPMENT TO BE LISTED WITH UL 217 AND TO COMPLY WITH NFPA 72

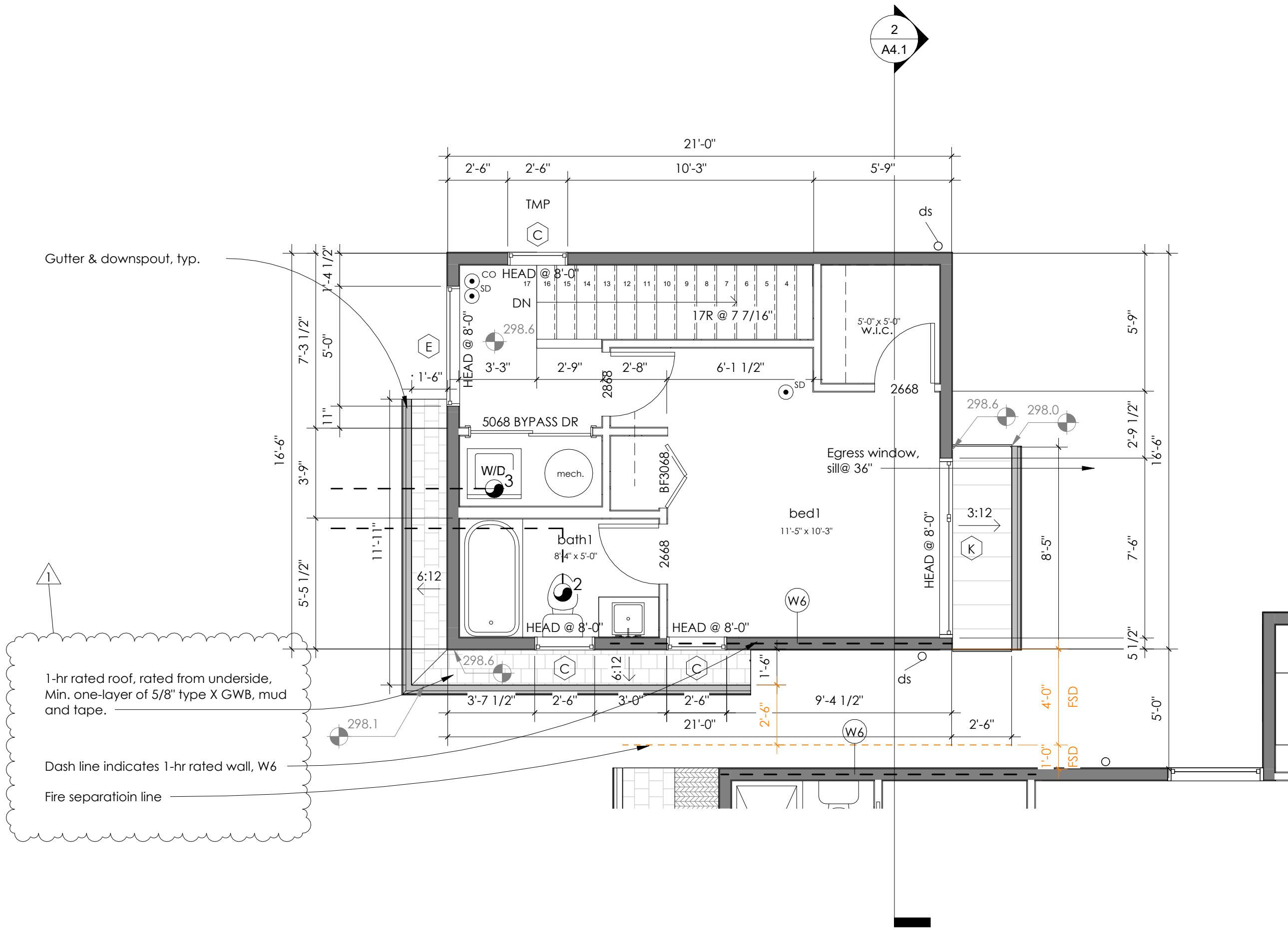
VENTILATION SCHEDULE

- WHOLE HOUSE VENTILATION TO CONFORM TO SRC SECTION M1507.3
- 1 KITCHEN**
MINIMUM 250 CFM INTERMITTENT, AND 80% CAPTURE EFFICIENCY PER ASTM E3087, RANGE HOOD OR DOWN DRAFT EXHAUST FAN RATED AT 250 CFM AT 10" WG MAY BE USED FOR EXHAUST FAN REQUIREMENT. FANS IN EXCESS OF 400 CFM SHALL PROVIDE MAKE UP AIR, 10" DUCT.
KITCHEN EXHAUST FANS SHALL BE RATED FOR SOUND AT A MAXIMUM OF 3 SONES AT ONE OR MORE AIRFLOW SETTINGS NOT LETT THAN 100 CFM AT A STATIC PRESSURE NOT LESS THAN THAT DETERMINED AT WORKING SPEED AS SPECIFIED IN HVI 916 SECTION 7.2.
- 2 BATHROOMS, POWDER**
MINIMUM 80 CFM AT .25" WG, 6" DUCT
- 3 LAUNDRY ROOM - WHOLE HOUSE MECHANICAL VENTILATION**
WHOLE HOUSE FAN MUST OPERATE AT 90 CFM MIN CONT. WHOLE HOUSE VENTILATION USING EXHAUST FANS

WSEC AMENDMENTS TO IRC M1505. ALL FANS VENT TO OUTSIDE. MEET ALL REQUIREMENTS OF M1505 AND AMENDMENTS. REFER TO A0.2 ENERGY CODE COMPLIANCE FOR ADDITIONAL NOTES AND DOCUMENTATION FOR VENTILATION AND HEATING SYSTEM SIZING.



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



2 DADU LEVEL 2
SCALE: 1/4" = 1'-0"

Marketable Area Summary (for reference only)

DADU	
LEVEL 1	338 SF
LEVEL 2	350 SF
	687 SF
SFR	
LEVEL 2	1,284 SF
LEVEL 1	1,806 SF
	3,090 SF
GARAGE	488 SF
	488 SF

sdAr
Shi Daru Architecture, LLC

24004682
REGISTERED
ARCHITECT
DARU SHI
STATE OF WASHINGTON

2755 LLC-PRASERT NGAMSIRIPOL

13620 NE 20TH ST, STE L,
BELLEVUE, WA 98005

Description

Date

BP Submittal

Cycle#1 Corr.

1

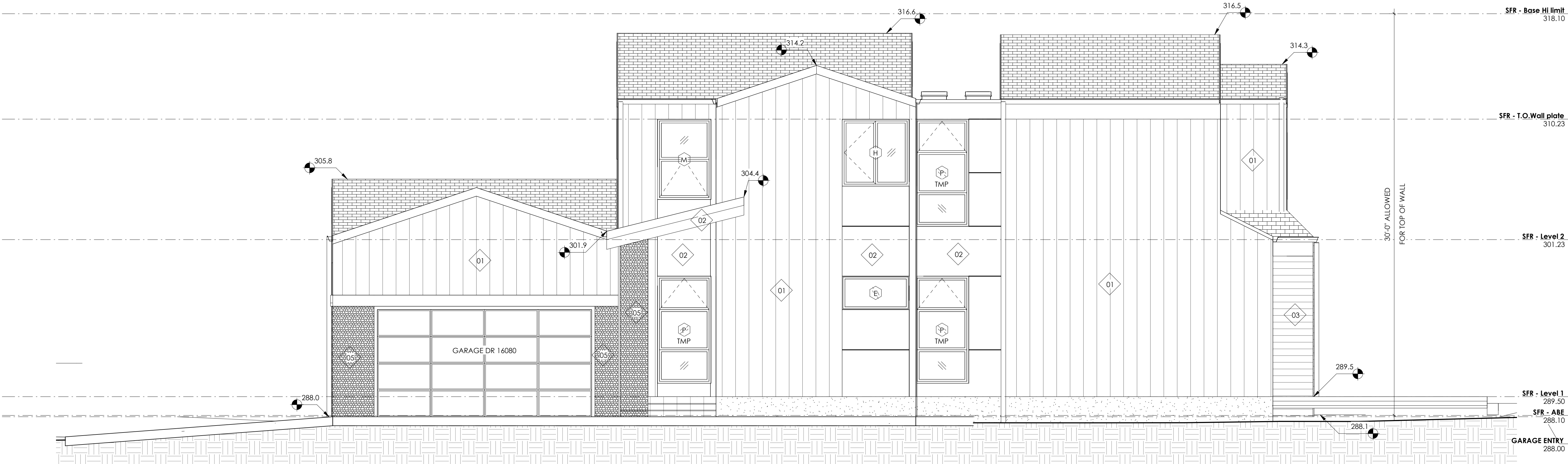
FLOOR PLANS
73RD AVE RESIDENCE
2755 73RD AVE SE,
MERCER ISLAND, WA 98040

REF. #	N/A
BP #	2502-155
Project Number	DS025
Scale	1/4" = 1'-0"
Date	02.11.2025

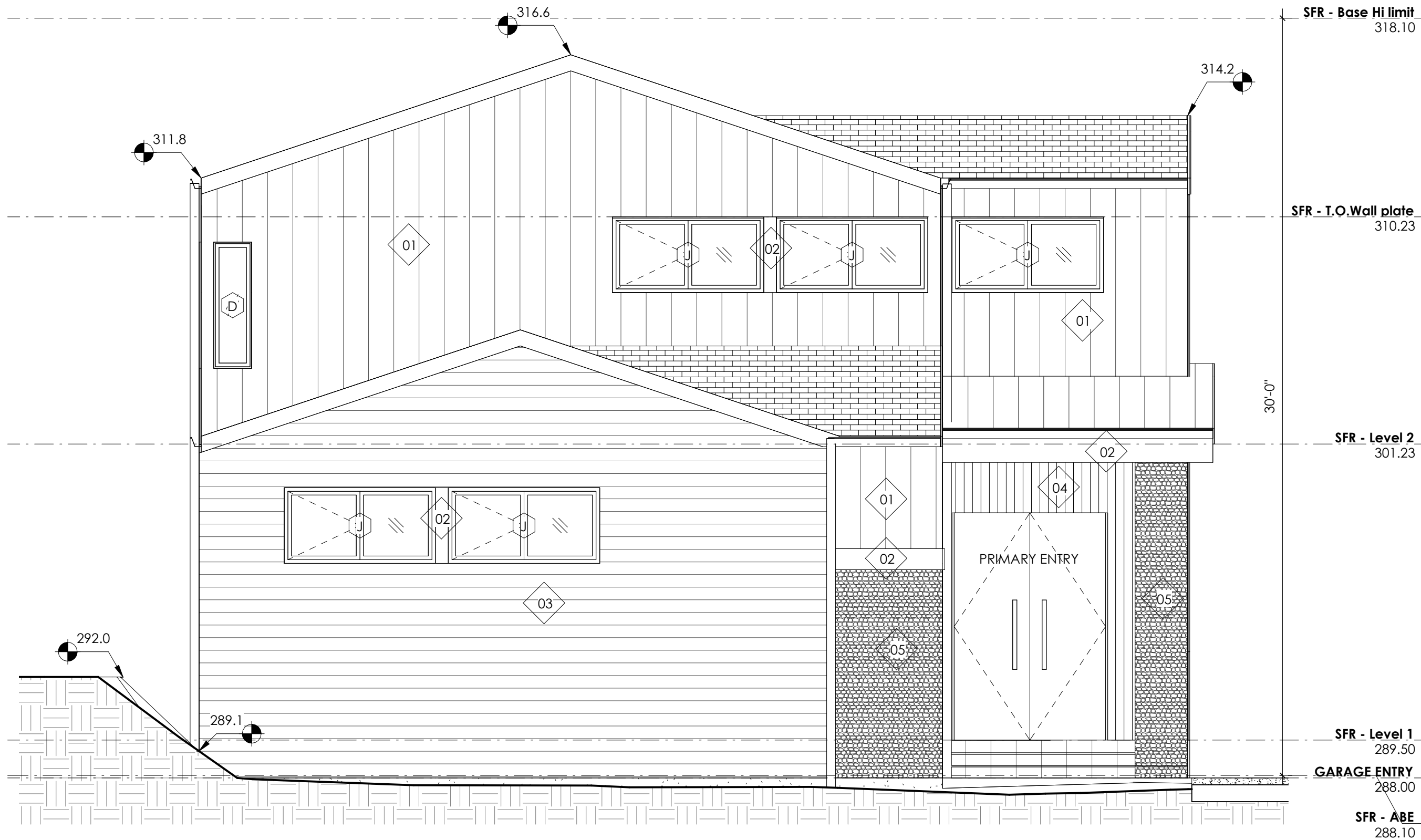
A2.4

STAMP HERE

MATERIAL LEGEND	
01	4' x 8' CEMENTITIOUS PANEL W/ 1X2 BATTS AT 12" O.C., PAINTED WHITE COLOR
02	4' x 8' CEMENTITIOUS PANEL, PAINTED BLACK COLOR
03	8" CEMENTITIOUS LAP SIDING, PAINTED BEIGE/LIGHT GRAY COLOR
04	4" VERTICAL WOOD T&G SIDING, STAINED AND SEALED 6 SIDES PRIOR TO INSTALLATION.
05	STONE VENEER SIDING



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



2 SFR ELEVATION - EAST
SCALE: 1/4" = 1'-0"

STAMP HERE



Shi Daru Architecture, LLC

24004682
REGISTERED ARCHITECT
Daru Shi
DARU SHI
STATE OF WASHINGTON

2755 LLC-PRASERT NGAMSIRIPOL

13620 NE 20TH ST, STE L,
BELLEVUE, WA 98005

Description	
BP Submittal	
Date	02.11.2025
A	

ELEVATIONS

73RD AVE RESIDENCE

2755 73RD AVE SE,
MERCER ISLAND, WA 98040

REF. #	N/A
BP #	2502-155
Project Number	D5025
Scale	1/4" = 1'-0"
Date	02.11.2025

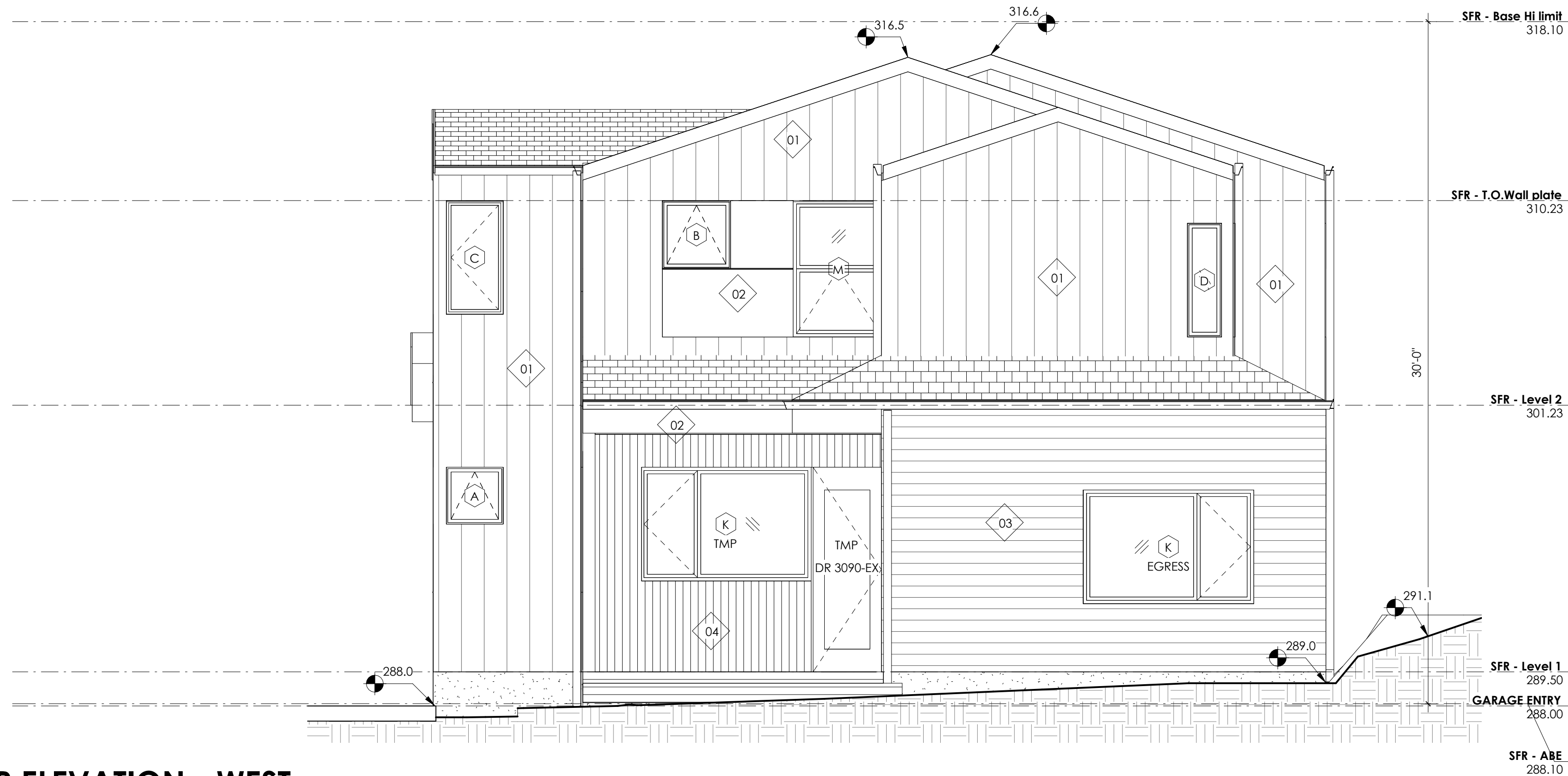
A3.0

7/28/2025 2:28:48 PM

MATERIAL LEGEND	
01	4' x 8' CEMENTITIOUS PANEL W/ 1X2 BATTS AT 12" O.C., PAINTED WHITE COLOR
02	4' x 8' CEMENTITIOUS PANEL, PAINTED BLACK COLOR
03	8" CEMENTITIOUS LAP SIDING, PAINTED BEIGE/LIGHT GRAY COLOR
04	4" VERTICAL WOOD T&G SIDING, STAINED AND SEALED 6 SIDES PRIOR TO INSTALLATION.
05	STONE VENEER SIDING



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



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

sdAr
Shi Daru Architecture, LLC

24004682
REGISTERED
ARCHITECT
Shi Daru
DARU SHI
STATE OF WASHINGTON

2755 LLC-PRASERT NGAMSIRIPOL
13620 NE 20TH ST, STE L,
BELLEVUE, WA 98005

Description	
BP Submittal	
Date	02.11.2025
A	

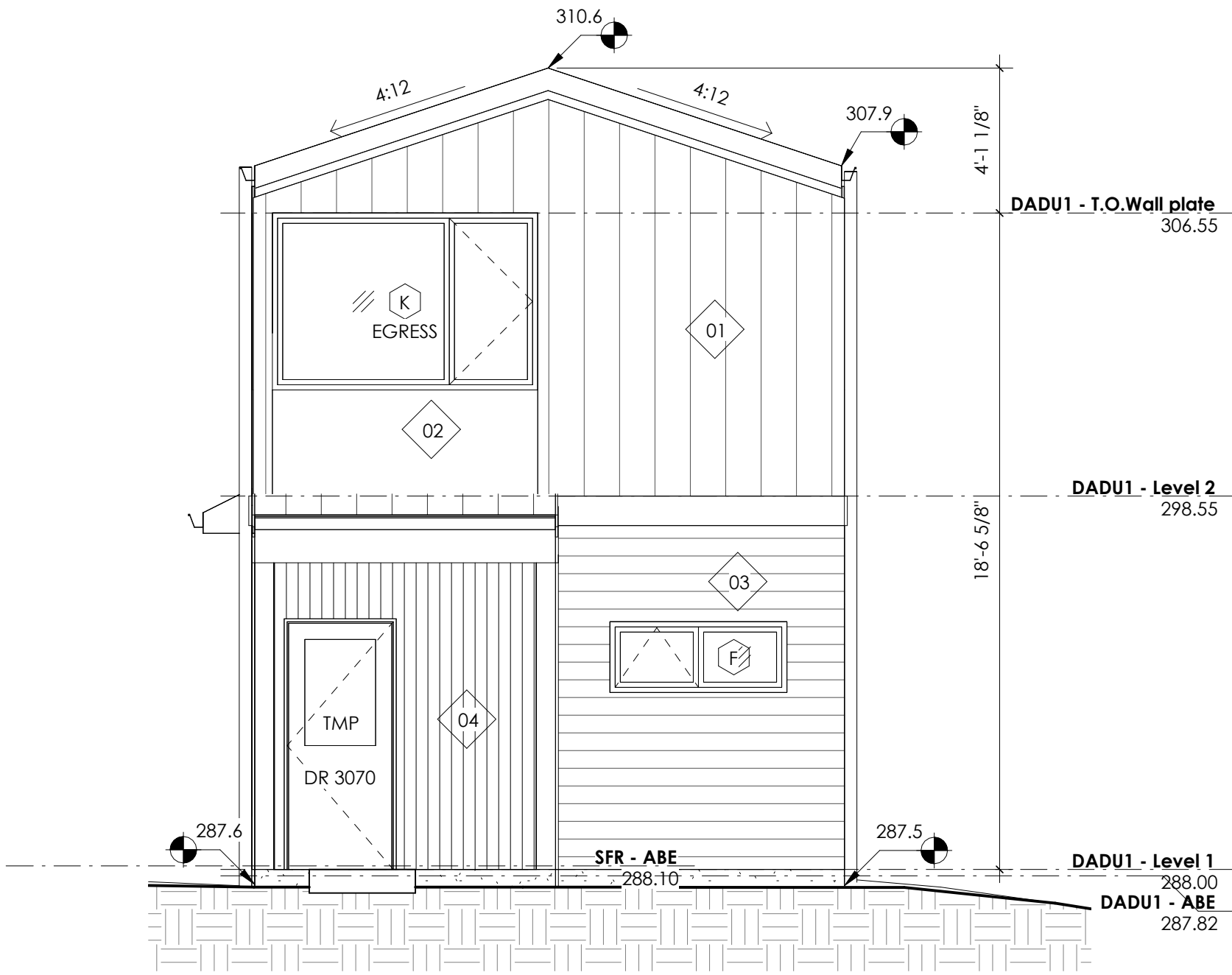
ELEVATIONS
73RD AVE RESIDENCE
2755 73RD AVE SE,
MERCER ISLAND, WA 98040

REF. #	N/A
BP #	2502-155
Project Number	DS025
Scale	1/4" = 1'-0"
Date	02.11.2025

A3.1

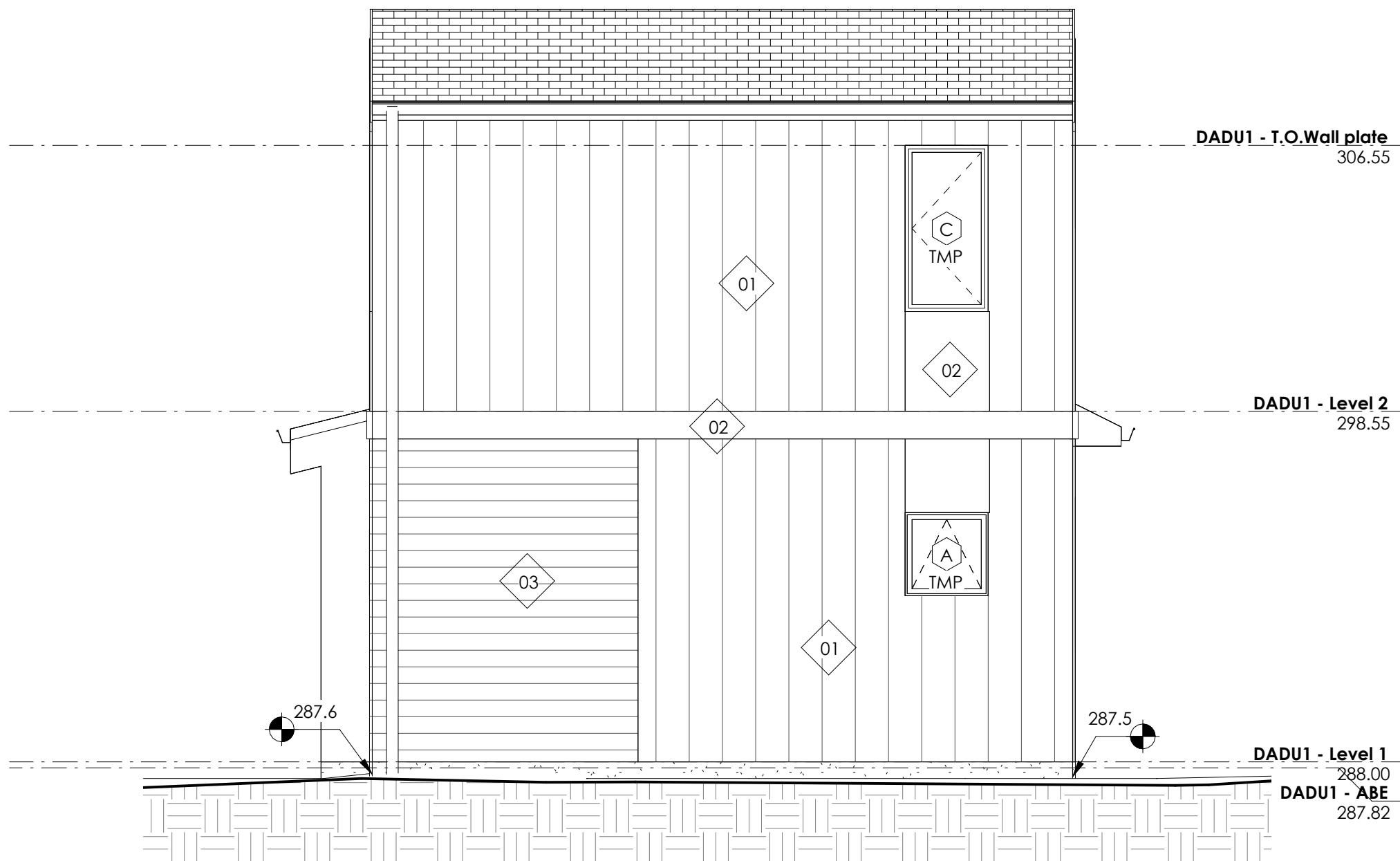
STAMP HERE

MATERIAL LEGEND	
01	4' x 8' CEMENTITIOUS PANEL W/ 1X2 BATTS AT 12" O.C., PAINTED WHITE COLOR
02	4' x 8' CEMENTITIOUS PANEL, PAINTED BLACK COLOR
03	8" CEMENTITIOUS LAP SIDING, PAINTED BEIGE/LIGHT GRAY COLOR
04	4" VERTICAL WOOD T&G SIDING, STAINED AND SEALED 6 SIDES PRIOR TO INSTALLATION.
05	STONE VENEER SIDING



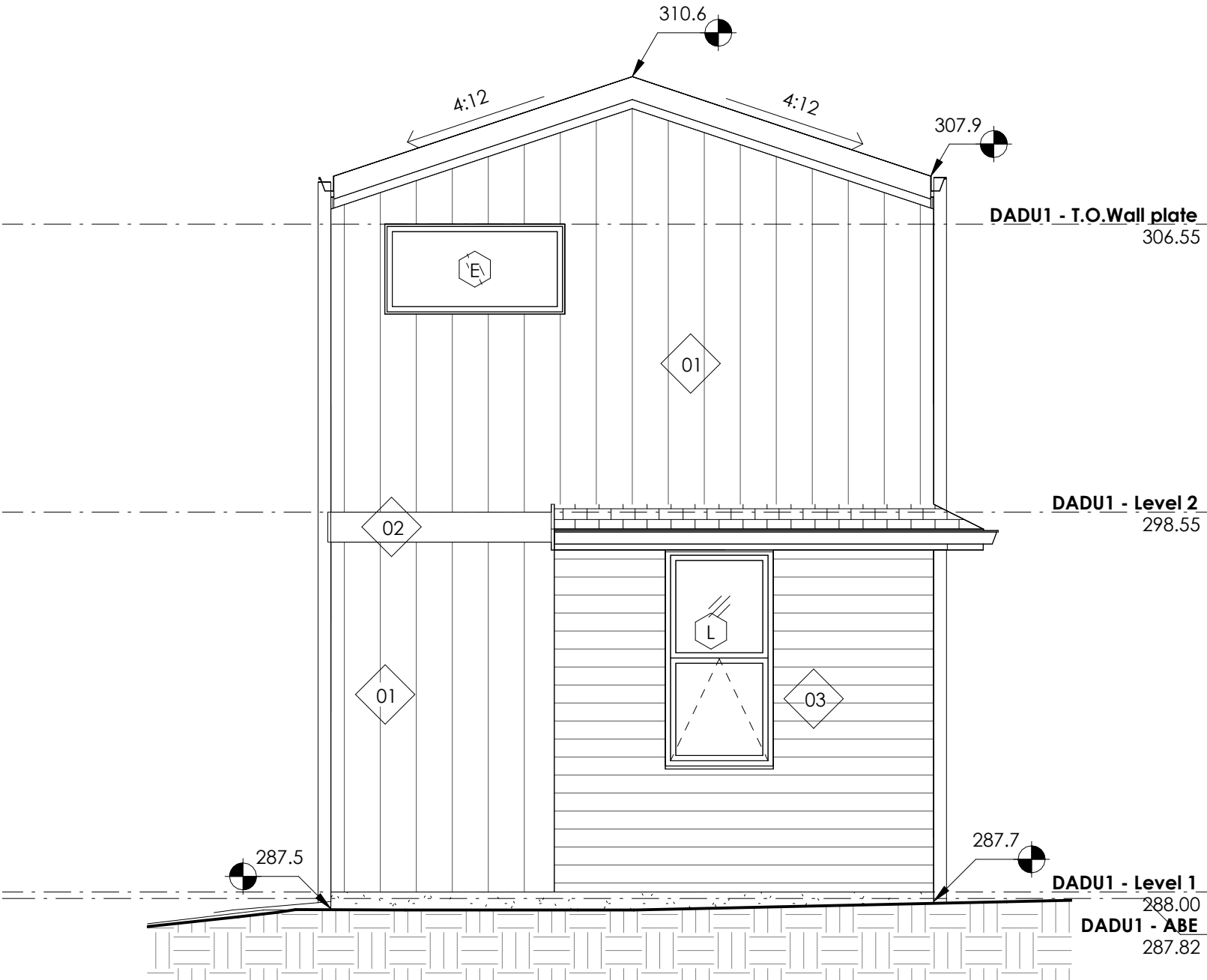
1 DADU ELEVATION - EAST

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



2 DADU ELEVATION - NORTH

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



3 DADU ELEVATION - WEST

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



4 DADU ELEVATION - SOUTH

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

sdAr

Shi Daru Architecture, LLC

24004682
REGISTERED
ARCHITECT
DARU SHI
STATE OF WASHINGTON

2755 LLC-PRASERT NGAMSIRIPOL

13620 NE 20TH ST, STE L,
BELLEVUE, WA 98005

A	Date	Description
	02.11.2025	BP Submittal

ELEVATIONS

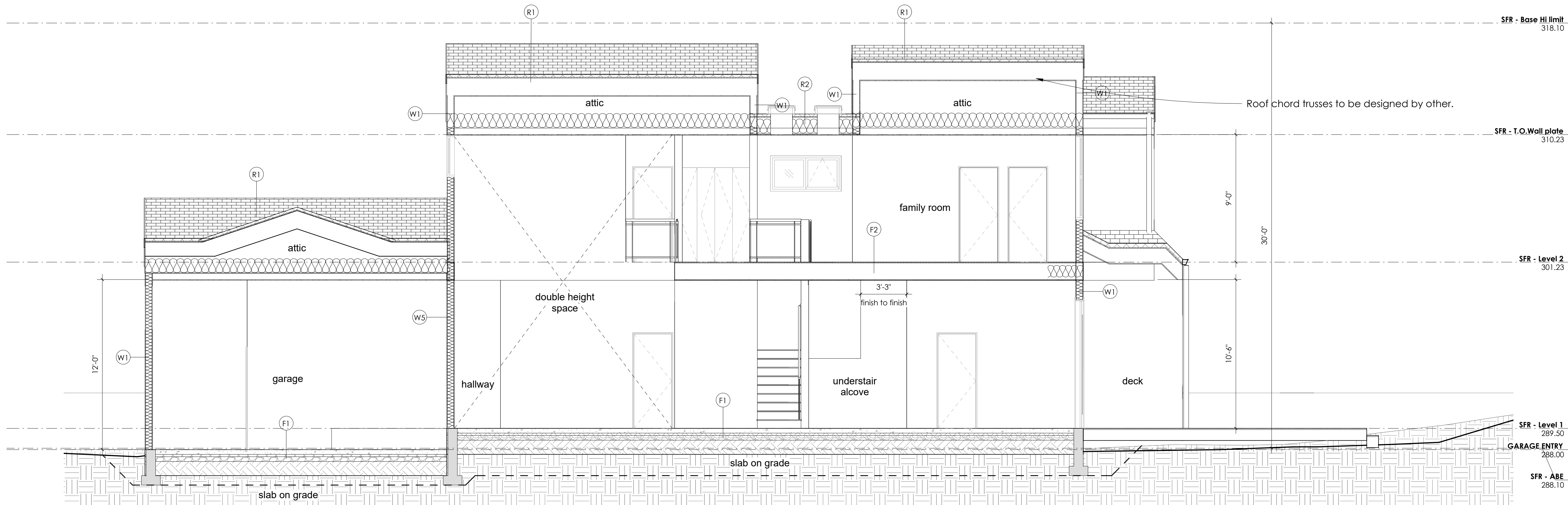
73RD AVE RESIDENCE

2755 73RD AVE SE,
MERCER ISLAND, WA 98040

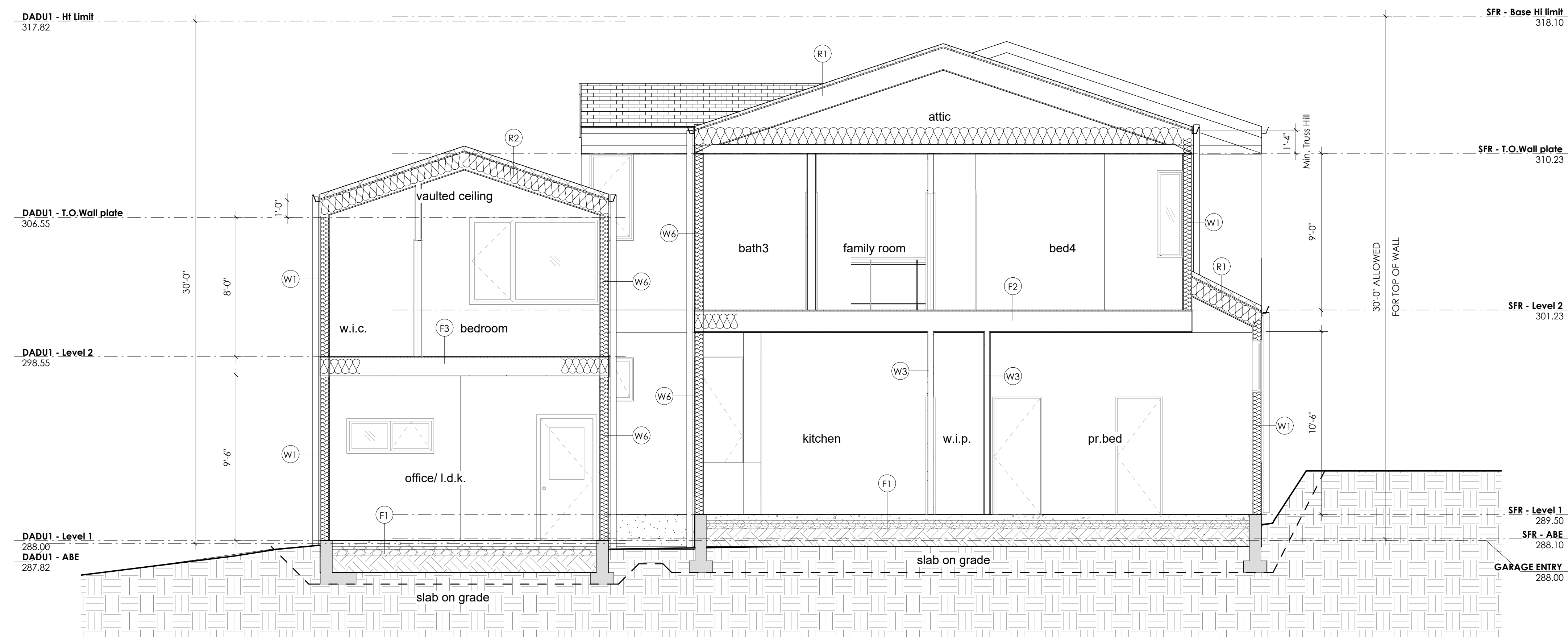
REF. #	N/A
BP #	2502-155
Project Number	D5025
Scale	1/4" = 1'-0"
Date	02.11.2025

A3.2

STAMP HERE



1 E-W SECTION - SFR
SCALE: 1/4" = 1'-0"



2 N-S SECTION - SFR&DADU
SCALE: 1/4" = 1'-0"

sdAr
Shi Daru Architecture, LLC

24004682 REGISTERED ARCHITECT
Shi Daru
DARU SHI
STATE OF WASHINGTON

2755 LLC-PRASERT NGAMSIRIPOL
13620 NE 20TH ST, STE L,
BELLEVUE, WA 98005

Description

BP Submittal

Date
02.11.2025

A

BUILDING SECTION

73RD AVE RESIDENCE

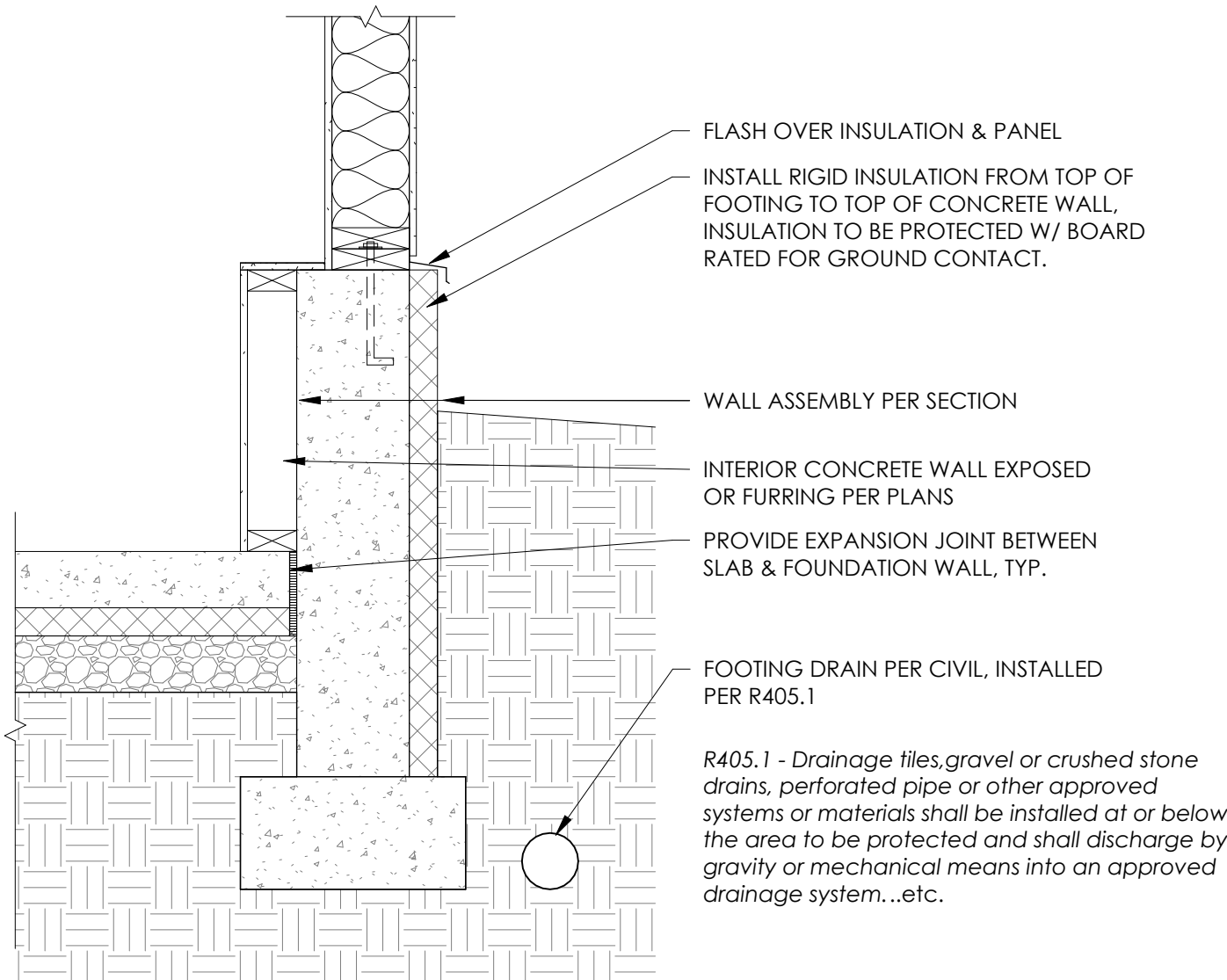
2755 73RD AVE SE,
MERCER ISLAND, WA 98040

REF. # N/A
BP # 2502-155
Project Number D5025
Scale 1/4" = 1'-0"
Date 02.11.2025

A4.1

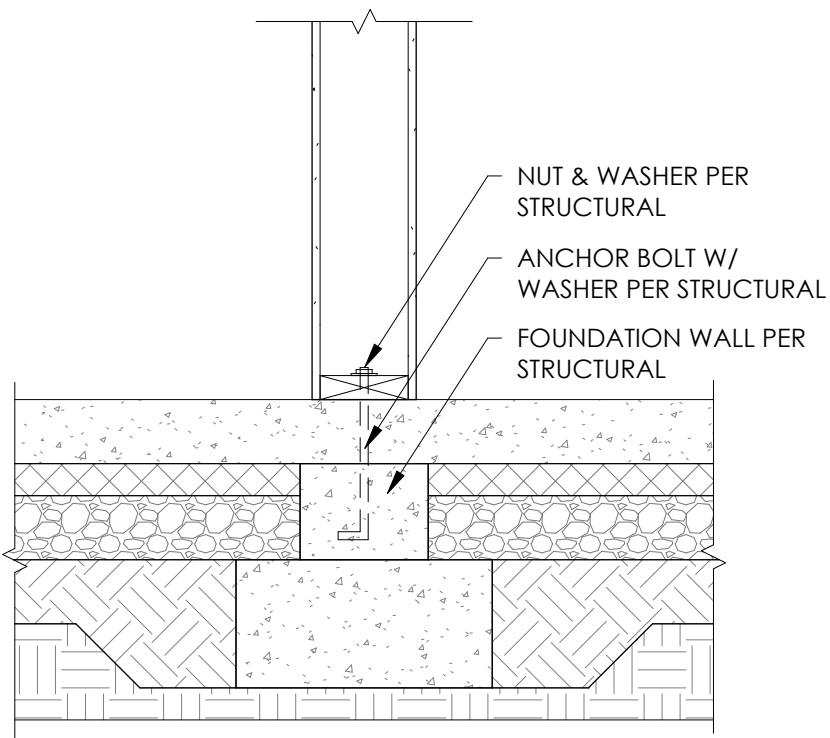
STAMP HERE

7/28/2025 2:28:51 PM



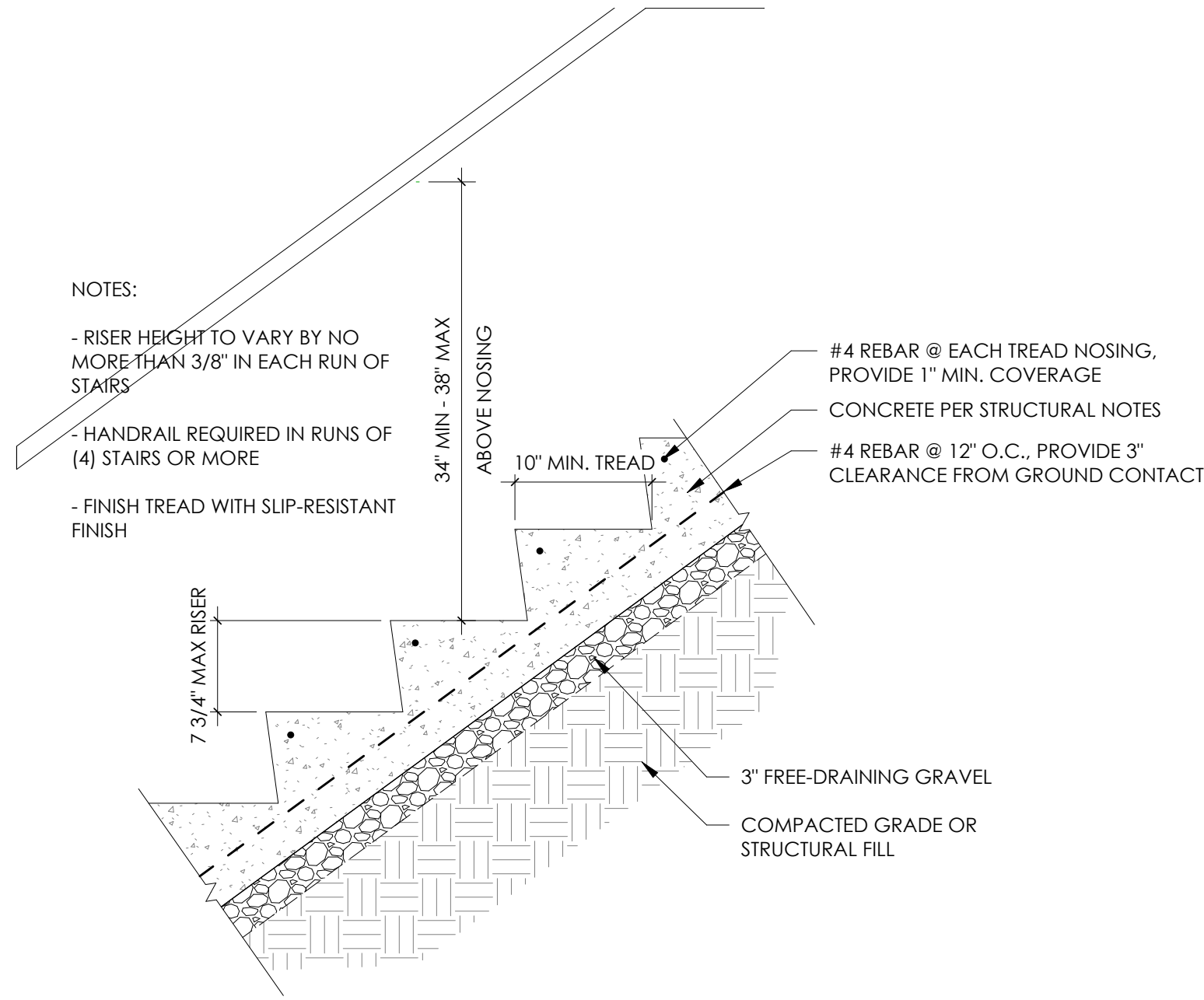
1 FOUNDATION WALL W/ RIGID

SCALE: 1" = 1'-0"



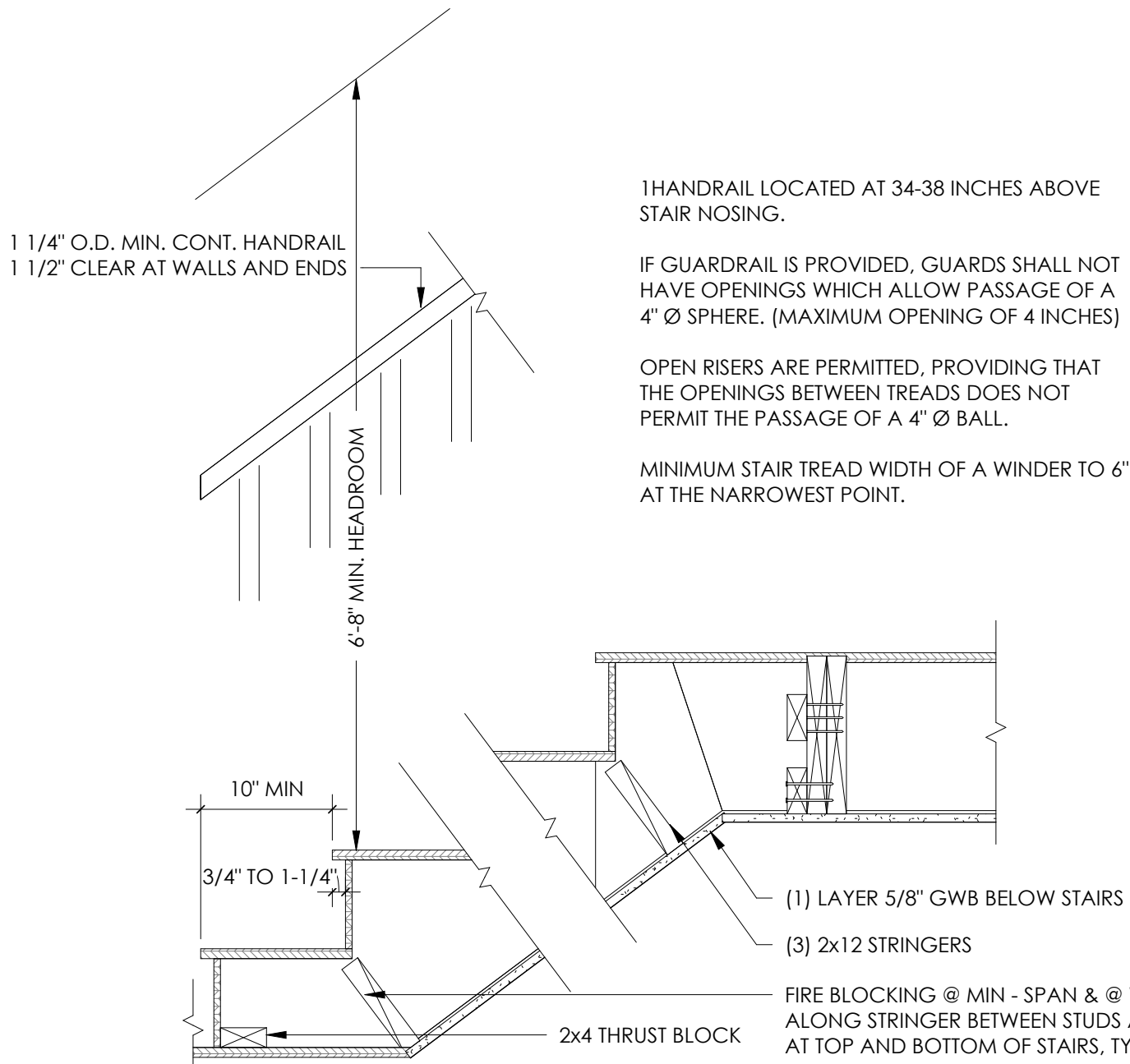
2 SLAB @ INTERIOR FOOTING

SCALE: 1" = 1'-0"



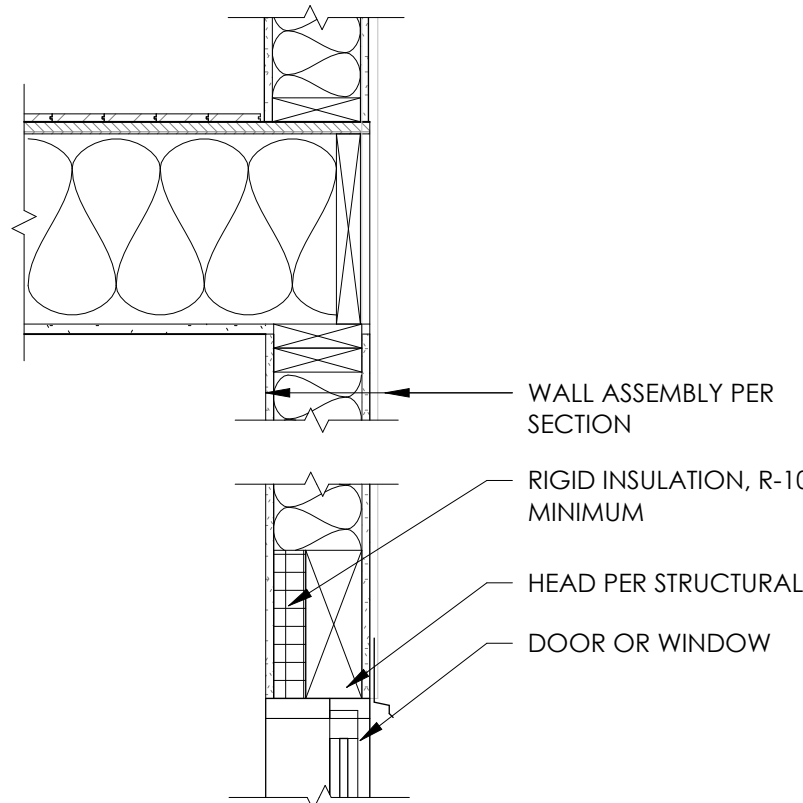
3 CONCRETE STEPS ON GRADE

SCALE: 1" = 1'-0"



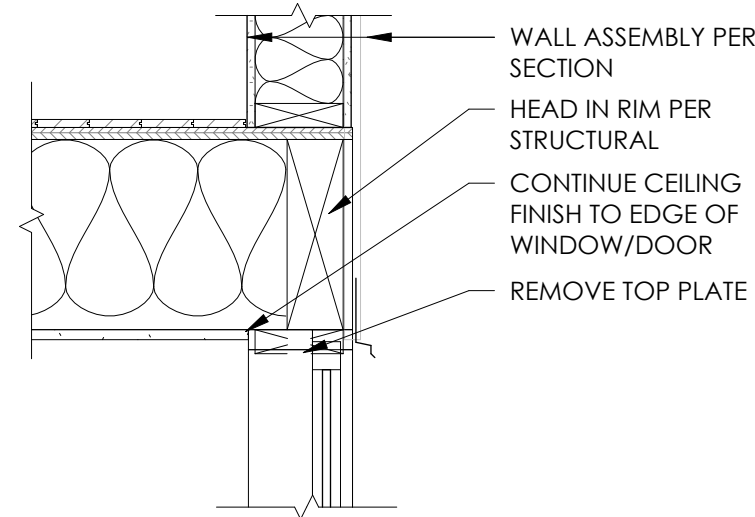
4 STAIR, MIN. 10" TREAD

SCALE: 1" = 1'-0"



5 HEADER

SCALE: 1" = 1'-0"



6 HEAD IN RIM

SCALE: 1" = 1'-0"

FOR REFERENCE ONLY

sdAr

Shi Daru Architecture, LLC

24004682 REGISTERED ARCHITECT
DARU SHI
STATE OF WASHINGTON

2755 LLC-PRASERT NGAMSIRIPOL

13620 NE 20TH ST, STE L,
BELLEVUE, WA 98005

A	Date	Description
	02.11.2025	BP Submittal

DETAILS

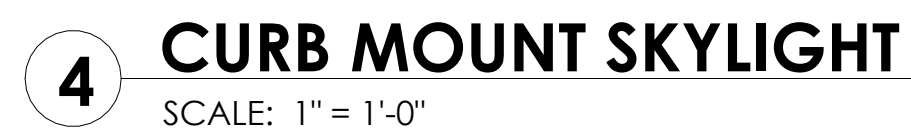
73RD AVE RESIDENCE

2755 73RD AVE SE,
MERCER ISLAND, WA 98040

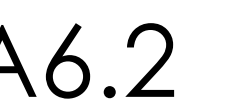
REF. #	N/A
BP #	2502-155
Project Number	DS025
Scale	1" = 1'-0"
Date	02.11.2025

A6.1

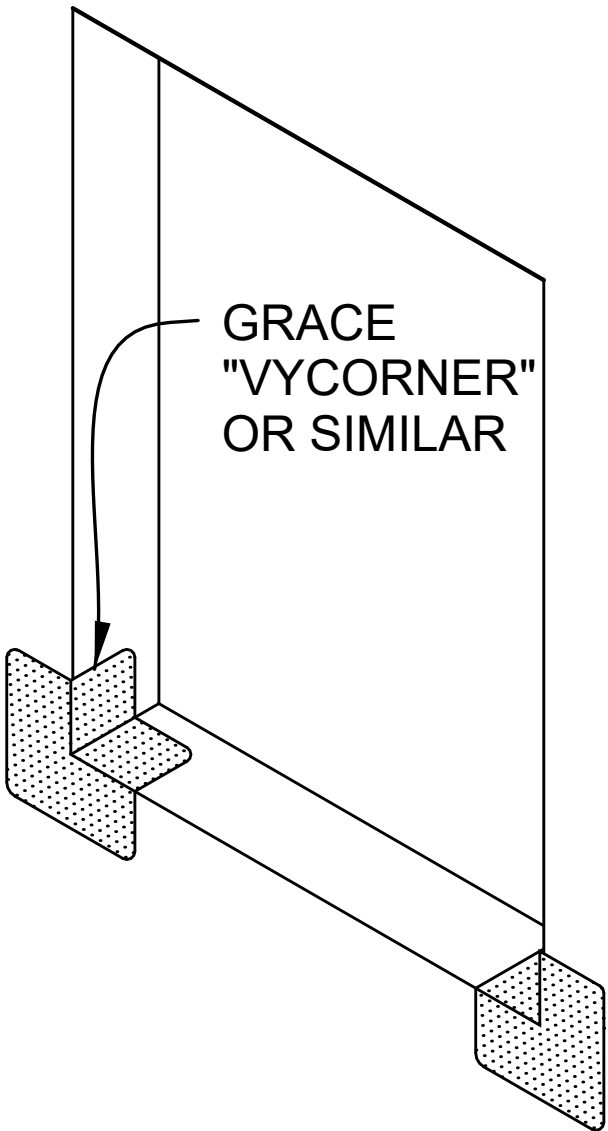
STAMP HERE



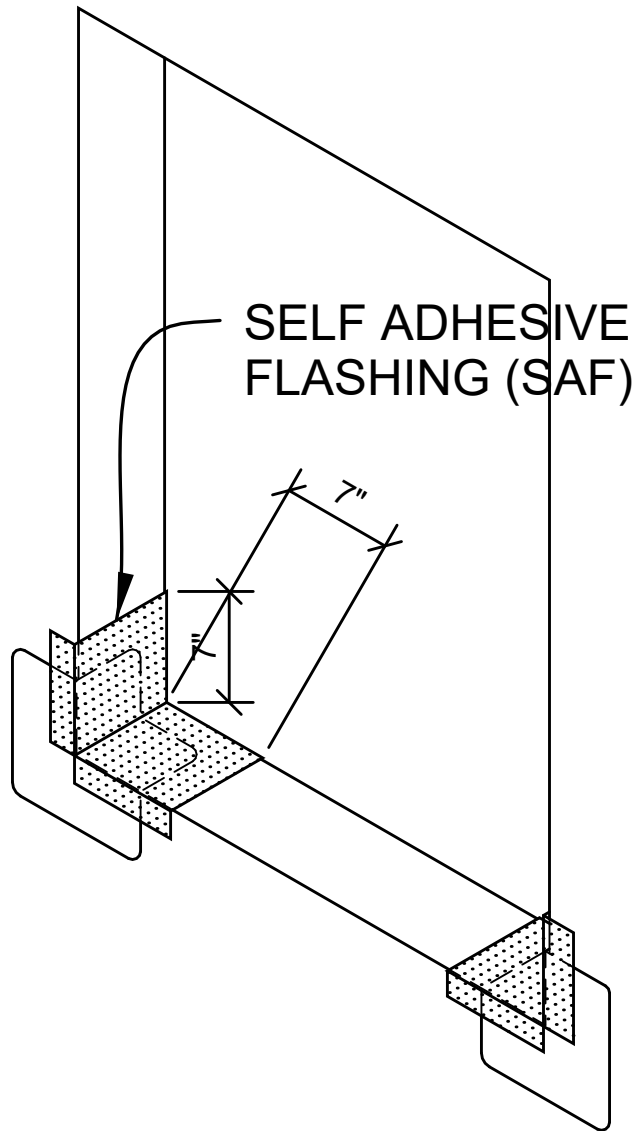
STAMP HERE



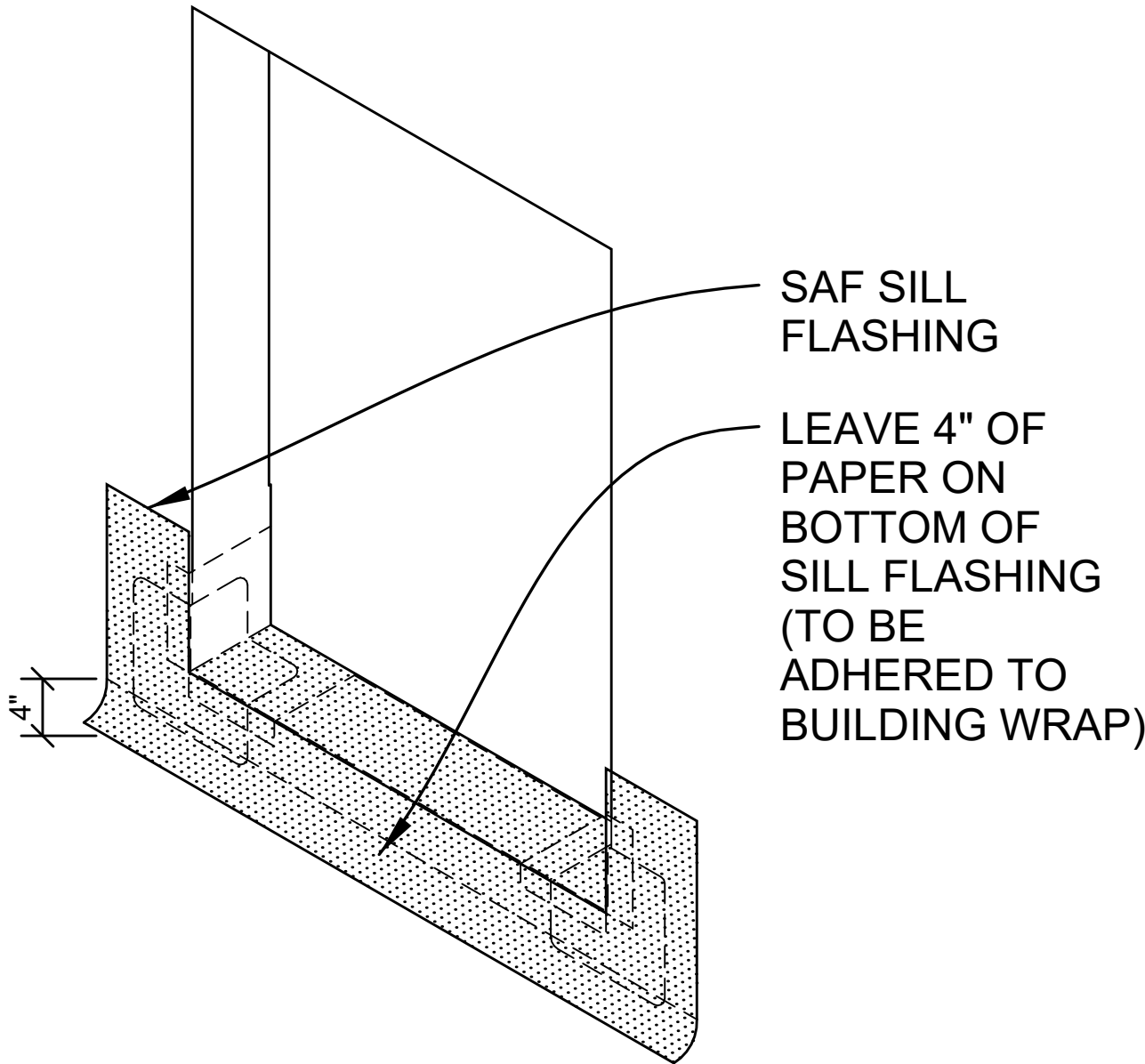
STEP 1 - VYCORNER



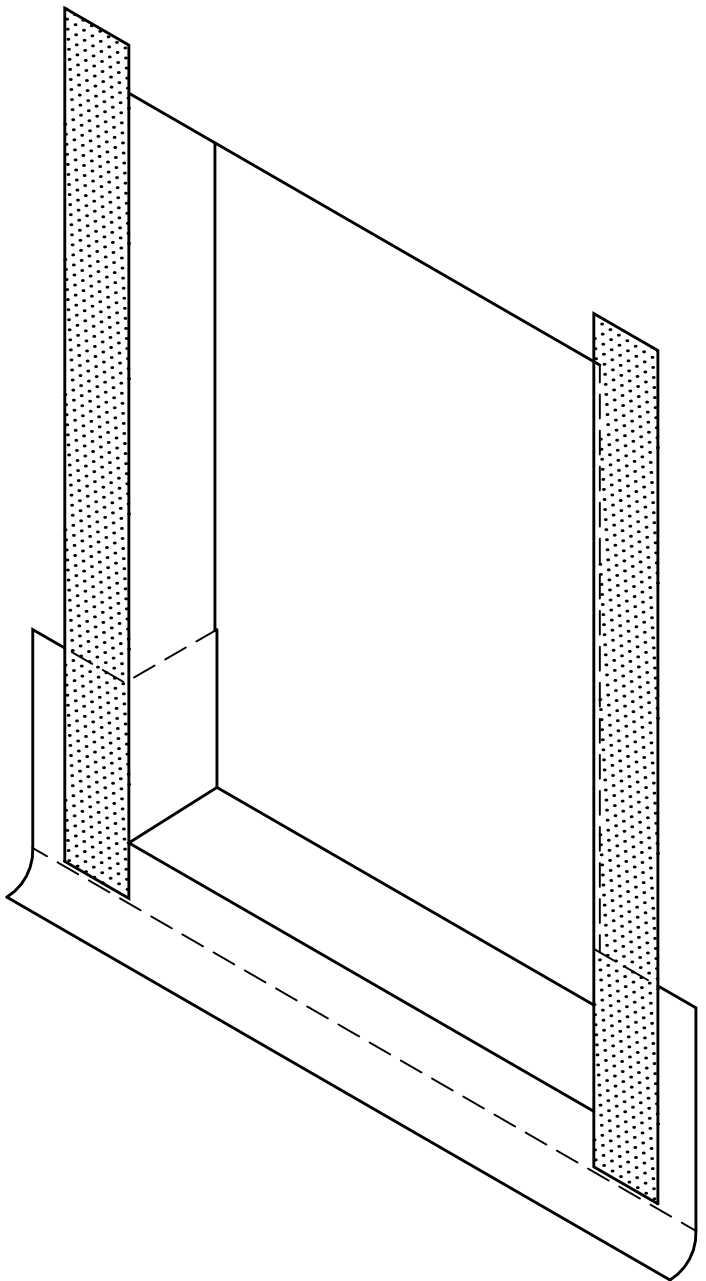
STEP 2 - SAF TABS



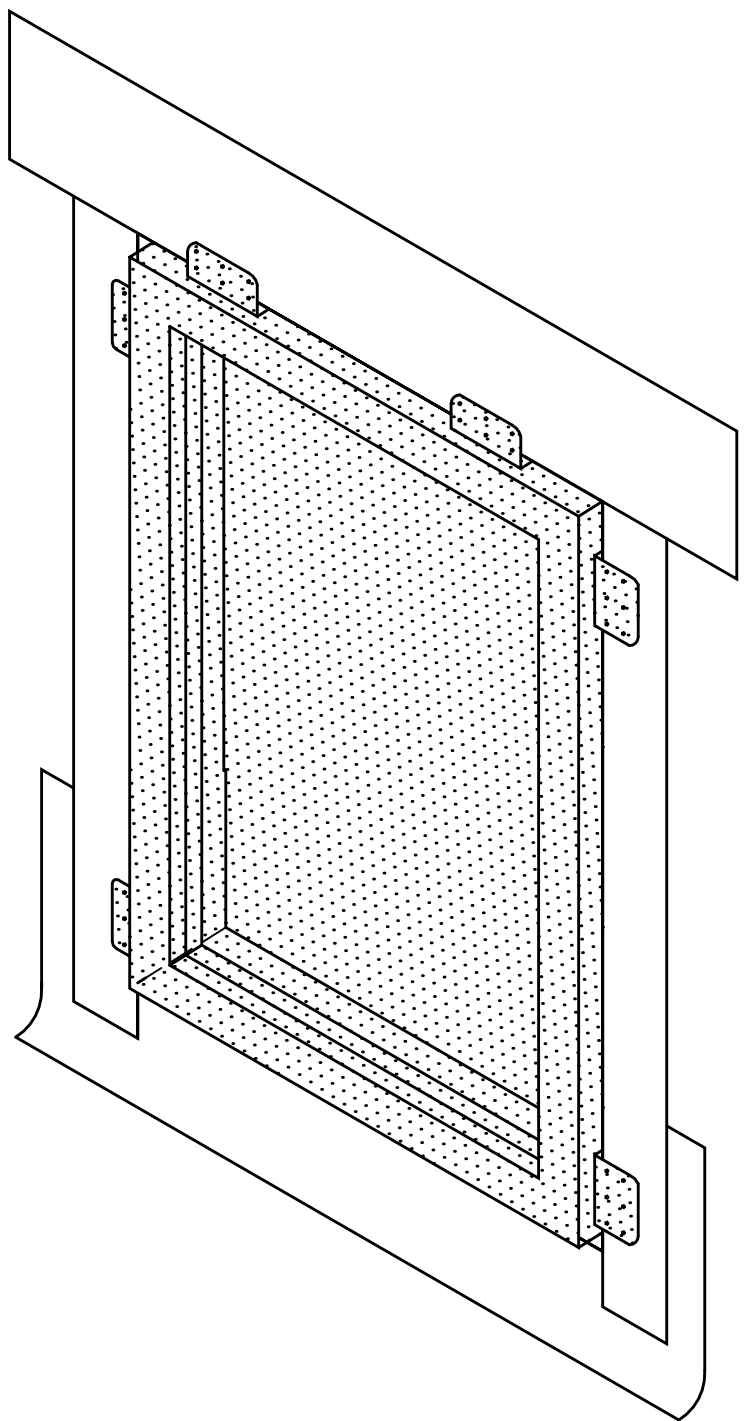
STEP 3 - SAF SILL



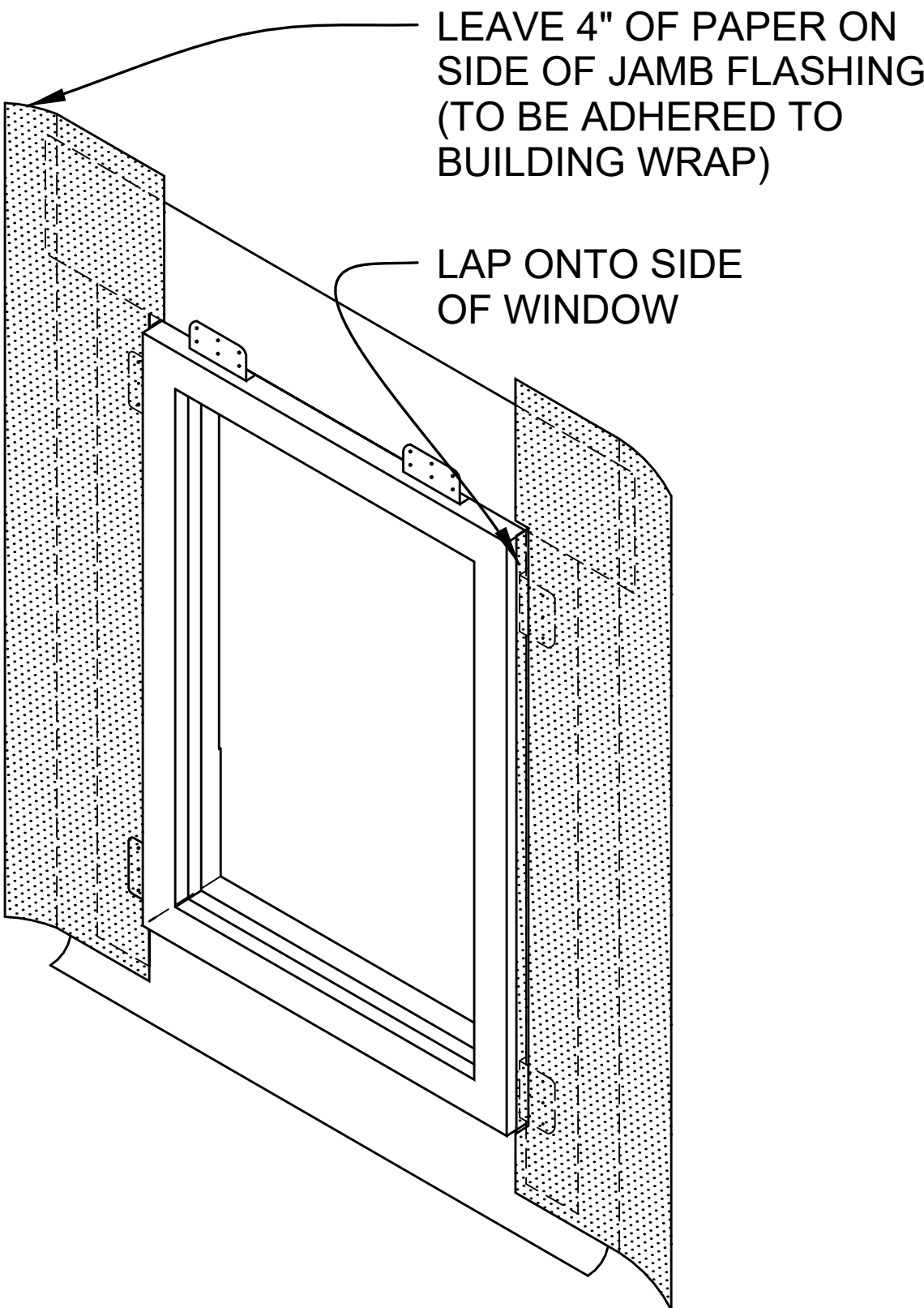
STEP 4 - SAF JAMB



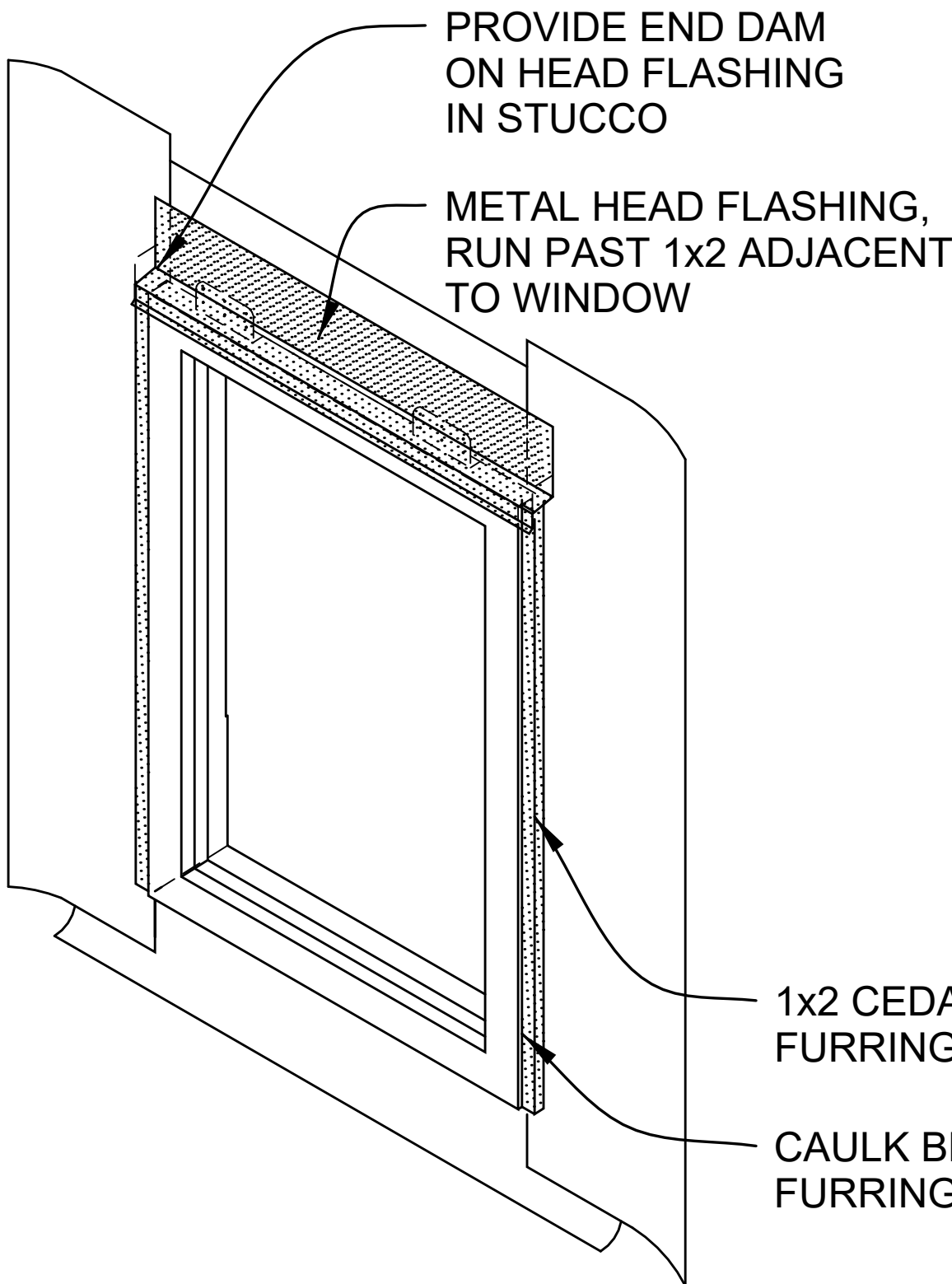
STEP 5 - WINDOW



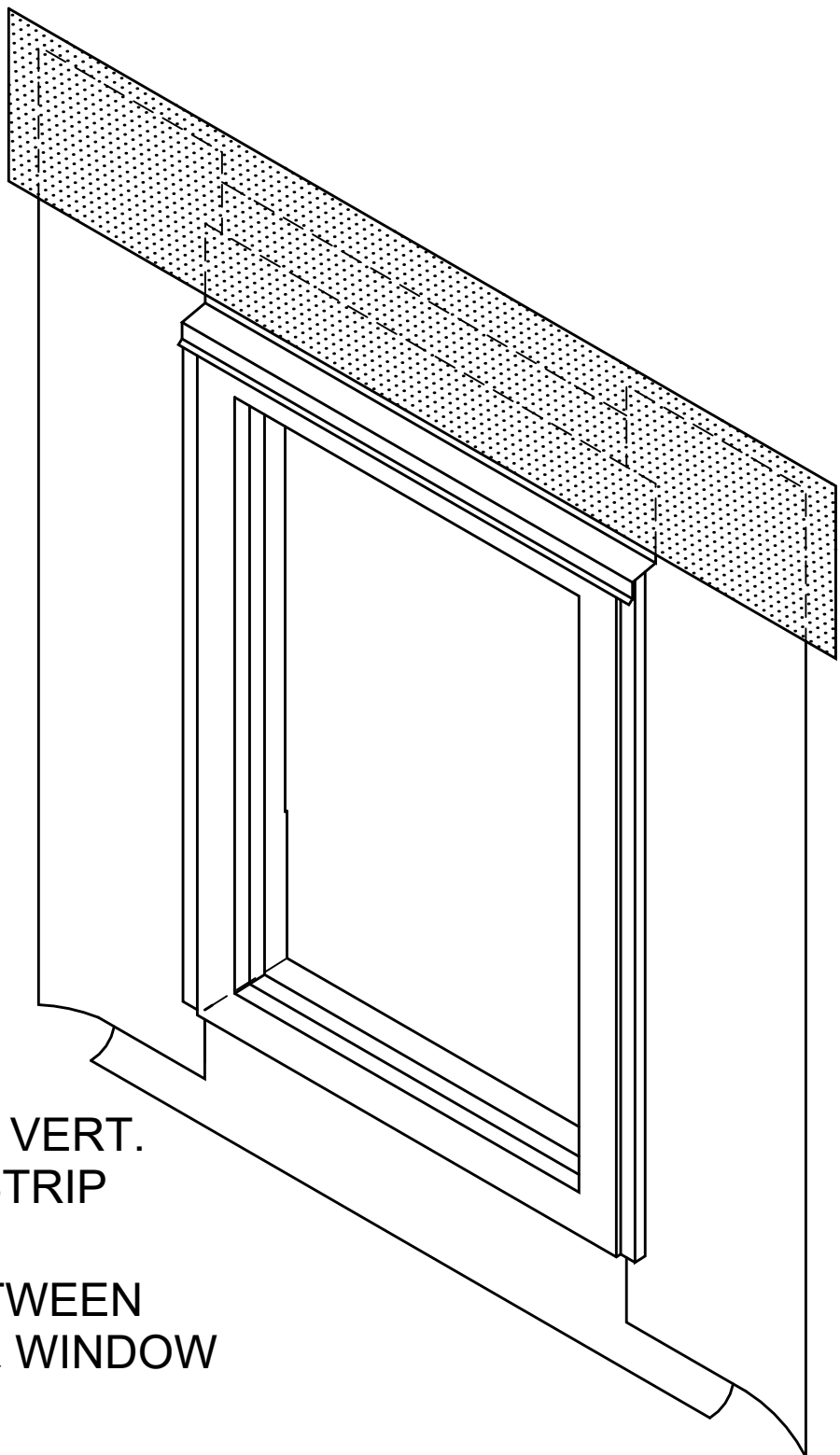
STEP 6 - SECOND SAF JAMB



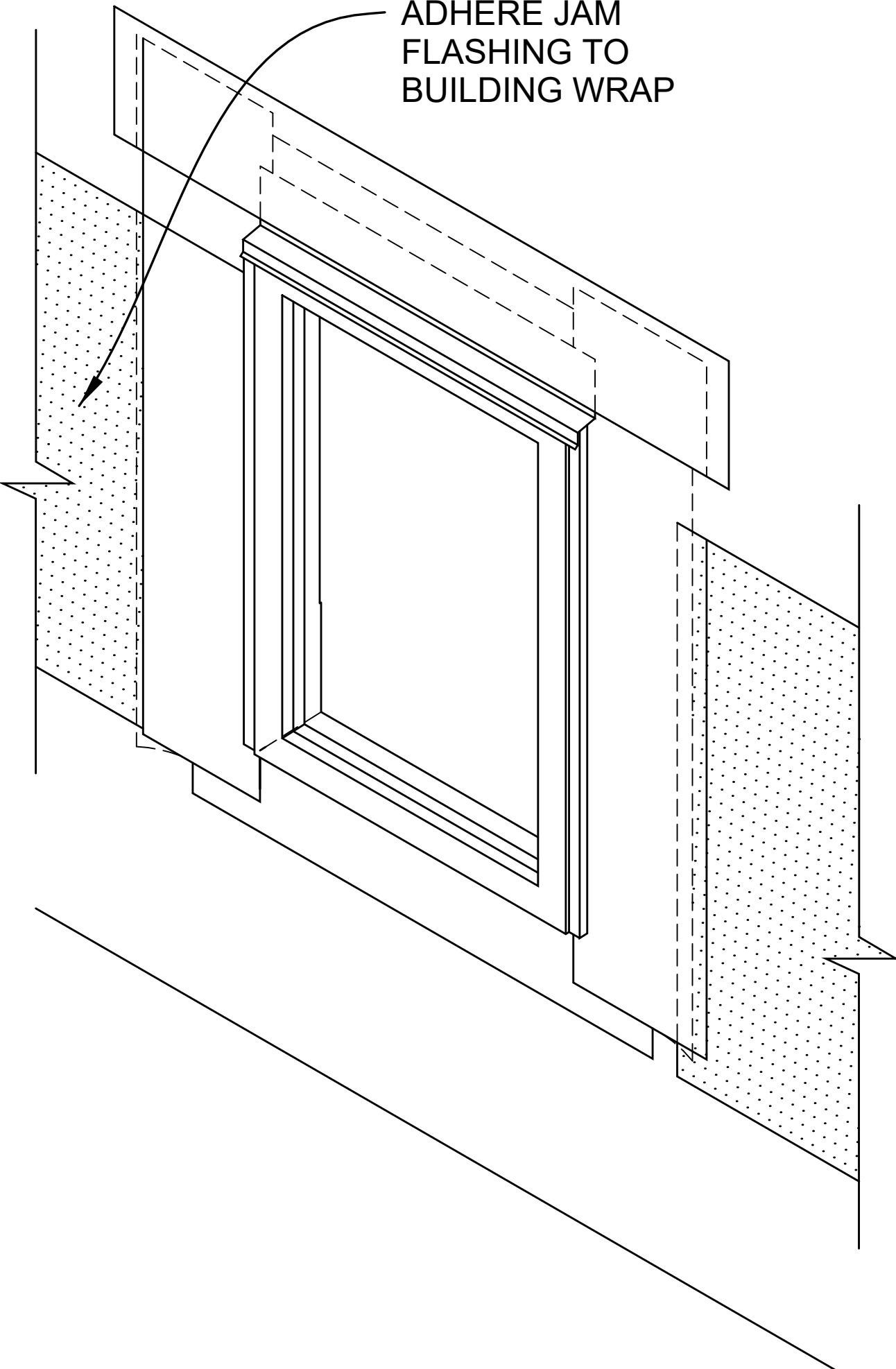
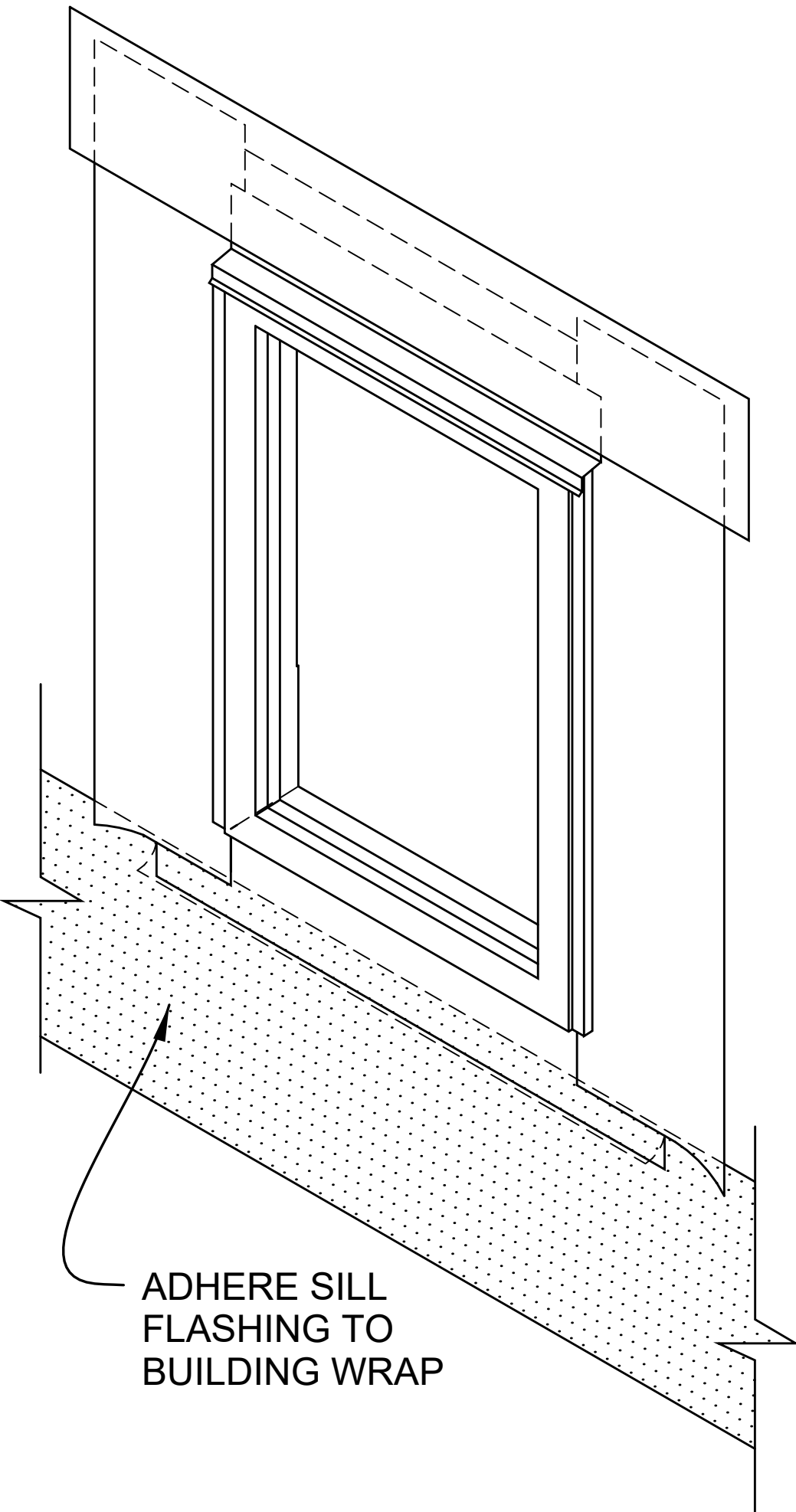
STEP 7 - METAL HEAD FLASHING



STEP 8 - SAF HEAD FLASHING



STEP 9 - BUILDING WRAP



FOR REFERENCE ONLY

1 WINDOW FLASHING INSTALLATION

SCALE: 1" = 1'-0"

NOTE: HOSE TEST FIRST WINDOW INSTALLED TO TEST FOR WATER INFILTRATION

STAMP HERE

sdAr
Shi Daru Architecture, LLC

24004682
REGISTERED
ARCHITECT
Shi Daru
SHI DARU SHI
STATE OF WASHINGTON

2755 LLC-PRASERT NGAMSIRIPOL
13620 NE 20TH ST, STE L,
BELLEVUE, WA 98005

Description

BP Submittal

Date
02.11.2025

A

DETAILS

73RD AVE RESIDENCE
2755 73RD AVE SE,
MERCER ISLAND, WA 98040

REF. # N/A
BP # 2502-155
Project Number D5025
Scale 1" = 1'-0"
Date 02.11.2025

A6.3

7/28/2025 2:28:33 PM

CRITERIA

1. ALL MATERIALS, WORKMANSHIP, DESIGN, & CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, AND SPECIFICATIONS OF THE INTERNATIONAL BUILDING CODE 2021 EDITION.
2. DESIGN LOADING CRITERIA

FLOOR LIVE LOAD (RESIDENTIAL),..... 40 PSF, 60 PSF FOR DECK

FLOOR DEAD LOAD 15 PSF MAX, 20 PSF FOR DECK

ROOF DEAD LOAD 15 PSF MAX

+ 5 PSF SOLAR PANELS (WHERE OCCURS)

Pf = 25 PSF

WIND LOAD,..... Kzt=1.6, Iw=1.0, GcP=0.18, V=97 MPH, EXPOSURE "B"

EARTHQUAKE ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE

LATERAL SYSTEM: LIGHT FRAMED SHEARWALLS, R=6.5

SDC D, Ie=1.0, Ss=1.40, S1=0.487, SDS=1.12, SD1=0.487, Cs=0.172

Vs = 10.442 KIPS (SFR) Vs = 2.017 KIPS (DADU)
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 AND STRUCTURAL ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
4. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE & STRUCT COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE W/ THE PLANS.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS & THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE CONTRACTORS WORK. THE STRUCTURAL ENGINEER HAS NO OVERALL SUPERVISORY AUTHORITY OR ACTUAL AND/OR DIRECT RESPONSIBILITY FOR THE SPECIFIC WORKING CONDITIONS AT THE SITE AND/OR FOR ANY HAZARDS RESULTING FROM THE ACTIONS OF ANY TRADE CONTRACTOR. THE STRUCTURAL ENGINEER HAS NO DUTY TO INSPECT, SUPERVISE, NOTE, CORRECT, OR REPORT ANY HEALTH OR SAFETY DEFICIENCIES OF THE OWNER, CONTRACTORS, OR OTHER ENTITIES OR PERSONS AT THE PROJECT SITE.
6. CONTRACTOR-INITIATED CHANGES AFFECTING THESE STRUCTURAL DRAWINGS SHALL BE SUBMITTED IN WRITING TO THE STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS ONLY WILL NOT SATISFY THIS REQUIREMENT.
7. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION, WHERE CONDITIONS ARE NOT SPECIFICALLY IDENTIFIED BUT SIMILAR CHARACTER TO DETAILS SHOWN. SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW & APPROVAL BY THE STRUCT ENGINEER.
8. SHOP DRAWINGS FOR THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION OF THESE ITEMS:

PRE-MANUFACTURED TRUSSES

MANUFACTURED LUMBER, PSL, LVL, LSL AND TJI JOISTS

GLUE-LAMINATED BEAMS (GLULAM)
- WHERE APPLICABLE, CONTRACTOR SHALL SUBMIT ELEVATION DRAWINGS OF AT LEAST 1/8" = 1'-0" SCALE INDICATING LOCATIONS OF CONNECTION EMBEDMENT AND WALL OPENINGS FOR REVIEW PRIOR TO CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH REINFORCEMENT SHOP DRAWINGS.
- APPROVED SETS OF ALL SHOP DRAWINGS SHALL ALSO BE SUBMITTED TO THE BUILDING DEPARTMENT.
9. SHOP DRAWING REVIEW: DIMENSIONS AND QUANTITIES ARE NOT REVIEWED BY THE ENGINEER OF RECORD, AND THEREFORE MUST BE VERIFIED BY THE CONTRACTOR. CONTRACTOR SHALL REVIEW & STAMP DRAWINGS PRIOR TO REVIEW BY ENGINEER OF RECORD. CONTRACTOR SHALL REVIEW DWGS FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND OPERATIONS OF CONSTRUCTION, AND ALL SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO. SUBMITTALS SHALL INCLUDE A REPRODUCIBLE AND ONE COPY; REPRODUCIBLE WILL BE MARKED AND RETURNED WITHIN TWO WEEKS OF RECEIPT WITH A NOTATION INDICATING THAT THE SUBMITTAL HAS BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THE SUBMITTED ITEMS SHALL NOT BE INSTALLED UNTIL THEY HAVE BEEN APPROVED BY THE BUILDING OFFICIAL
- SHOP DRAWING SUBMITTALS PROCESSED BY THE ENGINEER ARE NOT CHANGE ORDERS. THE PURPOSE OF SHOP DRAWING SUBMITTALS BY THE CONTRACTOR IS TO DEMONSTRATE TO THE ENGINEER THAT THE CONTRACTOR UNDERSTANDS THE DESIGN CONCEPT, BY INDICATING WHICH MATERIAL IS INTENDED TO BE FURNISHED AND INSTALLED AND BY DETAILING THE INTENDED FABRICATION AND INSTALLATION METHODS. IF DEVIATIONS, DISCREPANCIES, OR CONFLICTS BETWEEN SHOP DRAWING SUBMITTALS AND THE CONTRACT DOCUMENTS ARE DISCOVERED EITHER PRIOR TO OR AFTER SHOP DRAWING SUBMITTALS ARE PROCESSED BY THE ENGINEER, THE DESIGN DRAWINGS AND SPECIFICATIONS SHALL CONTROL AND SHALL BE FOLLOWED.
10. SHOP DRAWINGS OF DESIGN BUILD COMPONENTS INCLUDING PREFABRICATED STAIR SYSTEMS SHALL INCLUDE THE DESIGNING PROFESSIONAL ENGINEER'S STAMP, STATE OF WASHINGTON, AND SHALL BE APPROVED BY THE COMPONENT DESIGNER PRIOR TO REVIEW OF THE ARCHITECT OR ENGINEER OF RECORD FOR GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THE COMPONENT DESIGNER IS RESPONSIBLE FOR CODE CONFORMANCE AND ALL NECESSARY CONNECTIONS NOT SPECIFICALLY CALLED OUT ON ARCHITECTURAL OR STRUCTURAL DRAWINGS.
- SHOP DRAWINGS SHALL INDICATE MAGNITUDE AND DIRECTION OF ALL LOADS IMPOSED ON BASIC STRUCTURE. DESIGN CALCULATIONS SHALL BE MADE AVAILABLE UPON REQUEST.

GEOTECHNICAL

11. FOUNDATION NOTES : ALLOWABLE SOIL PRESSURE AND LATERAL EARTH PRESSURE ARE ASSUMED & THEREFORE MUST BE VERIFIED BY A QUALIFIED SOILS ENGINEER OR APPROVED BY THE BUILDING OFFICIAL. IF SOILS ARE FOUND TO BE OTHER THAN ASSUMED, NOTIFY THE STRUCTURAL ENGINEER FOR POSSIBLE FOUNDATION REDESIGN. IF GEOTECHNICAL ENGINEER IS HIRED FOR THE PROJECT PROVIDE ALL REPORTS TO THE STRUCTURAL ENGINEER FOR REVIEW OF COMPATIBILITY WITH THE STRUCTURAL PLAN SET.
12. FOOTINGS SHALL BEAR ON FIRM, UNDISTURBED EARTH AT LEAST 18" BELOW ADJACENT FINISHED GRADE UNLESS NOTED OTHERWISE. FOOTINGS SHALL BE CENTERED BELOW POSTS OR WALLS ABOVE UNO.

ALLOWABLE SOIL PRESSURE.....2000 PSF

LATERAL EARTH PRESSURE (RESTRAINED / UNRESTRAINED),.....55 PCF / 35 PCF

COEFFICIENT OF FRICTION (FACTOR OF SAFETY OF 1.5 INCLUDED),...0.3
13. BACK FILL BEHIND ALL RETAINING WALLS WITH FREE DRAINING, GRANULAR FILL AND PROVIDE FOR SUBSURFACE DRAINAGE.

CONCRETE

14. CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE W/ THE SECTION 1905.10 AND ACI 301, INCLUDING TESTING PROCEDURES. CONCRETE SHALL ATTAIN A 28-DAY STRENGTH OF $f_c = 2,500$ PSI AND MIX SHALL CONTAIN NOT LESS THAN 5 1/2 SACKS OF CEMENT AND SHALL BE PROPORTIONED TO PRODUCE A SLUMP OF 5" OR LESS. ALL CONCRETE SURFACES EXPOSED TO EXTERIOR WEATHER, NOT INCLUDING FOUNDATION WALLS, SHALL HAVE A STRENGTH OF 3,000 PSI.
15. ALL CONCRETE WITH SURFACES EXPOSED TO STANDING WATER SHALL BE AIR-ENTRAINED WITH AN AIR-ENTRAINING AGENT CONFORMING TO ASTM C260, C494, AND C618. TOTAL AIR CONTENT FOR FROST-RESISTANT CONCRETE SHALL BE IN ACCORDANCE WITH TABLE 19.3.3.1 OF ACI 318. EXPOSED CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 3000 PSI. NO SPECIAL INSPECTION IS REQUIRED FOR 3000 PSI INSTALLED SOLELY TO SATISFY EXPOSED CONCRETE REQUIREMENTS.
16. REINFORCING STEEL SHALL CONFORM TO ASTM A615 (INCLUDING SUPPLEMENT S1), GRADE 60, $f_y = 60,000$ PSI. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185. SPIRAL REINFORCEMENT SHALL BE PLAIN WIRE CONFORMING TO ASTM 615, GRADE 60, $f_y = 60,000$ PSI. IF GRADE 40 REINFORCING IS PREFERRED, NOTIFY STRUCTURAL ENGINEER IN ADVANCE OF PLACING RE-BAR. THE STRUCTURAL PLAN SET WILL REQUIRE A REVIEW DUE TO THE STRENGTH REDUCTION IN OR 40 REINFORCING IN COMPARISON TO GR 60 REINFORCING.
17. REINFORCING STEEL SHALL BE DETAILED (INCLUDING HOOKS AND BENDS) IN ACCORDANCE WITH ACI 315 AND ACI 318. LAP ALL CONTINUOUS REINFORCEMENT #6 AND SMALLER 64 BAR DIAMETERS. PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP CORNER BARS #6 AND SMALLER 64 BAR DIAMETERS. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 6" 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.
18. CONCRETE PROTECTION (COVER) FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

FTGS & OTHER UNFORMED SURFACES CAST AGAINST & PERMANENTLY EXPOSED TO EARTH....3"

FORMED SURFACES EXPOSED TO EARTH OR WEATHER (#6 BARS OR SMALLER),.....1-1/2"

COLUMN TIES OR SPIRALS AND BEAM STIRRUPS 1-1/2"

SLABS AND WALLS (INTERIOR FACE) GREATER OF BAR Ø PLUS 1/8" OR 3/4"
19. CAST-IN-PLACE CONCRETE : SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS & DIMENSIONS OF DOOR AND WINDOW OPENINGS IN ALL CONCRETE WALLS. SEE ARCHITECTURAL DRAWINGS FOR ALL GROOVES, NOTCHES, CHAMFER, CUTOUTS, TEXTURE, AND OTHER FINISH DETAILS AT ALL EXPOSED CONCRETE SURFACES. BOTH CAST-IN-PLACE AND PRE-CAST. IF ARCHITECTURAL PLANS DIFFER FROM STRUCTURAL PLANS, NOTIFY BOTH THE ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO FORMING CONCRETE.

ANCHORAGE

20. EXPANSION BOLTS INTO CONCRETE SHALL BE STRONG-BOLT 2 ANCHORS AS MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY & INSTALLED IN STRICT CONFORMANCE TO ICC-ES ESR-3037 INCLUDING MINIMUM EMBEDMENT REQUIREMENTS. EXPANSION BOLTS ARE NOT ALLOWED AT SW'S IN LIEU OF CAST IN PLACE AB, THREADED ROD W/ SIMPSON SET-3G EPOXY OR SIMPSON TITEN HD ARE REQUIRED.
21. EPOXY-GROUTED ITEMS (THREADED RODS OR REINFORCING BAR) SPECIFIED ON THE DRAWINGS SHALL BE INSTALLED USING "SET-3G" HIGH STRENGTH EPOXY AS MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY. INSTALL IN STRICT ACCORDANCE TO ICC REPORT NO. 10, ICC ESR-4507. SPECIAL INSPECTION OF INSTALLATION IS REQUIRED. THREADED RODS SHALL BE ASTM A-36 U.N.O. ALTERNATE EPOXY REQUIRES REVIEW BY THE STRUCTURAL ENGINEER. SIMILAR SEISMIC & WIND TEST CRITERIA (TO THE SET-3G HIGH STRENGTH PRODUCT) SHALL BE APPROVED BY THE ICC FOR ALTERNATIVE EPOXY CONSIDERATION.
22. TITEN HD ANCHORS PER PLAN ARE MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY. TITEN EMBEDMENT REQUIREMENTS. CONTINUOUS SPECIAL INSPECTION IS REQUIRED.

WOOD

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

JOISTS AND BEAMS:	(2x MEMBERS)	HEM-FIR NO. 2
	(3x AND 4x MEMBERS)	MINIMUM BASE VALUE, Fb = 850 PSI
		DOUGLAS FIR-LARCH NO. 1
		MINIMUM BASE VALUE, Fb = 1000 PSI
LARGE BEAMS:	(INCL. 6x AND LARGER)	DOUGLAS FIR-LARCH NO. 1
		MINIMUM BASE VALUE, Fb = 1350 PSI
POSTS:	(4x MEMBERS)	DOUGLAS FIR-LARCH NO. 2
	(6x AND LARGER)	MINIMUM BASE VALUE, Fc = 1350 PSI
		DOUGLAS FIR-LARCH NO. 1
		MINIMUM BASE VALUE, Fc = 1000 PSI
STUDS, PLATES & MISC. FRAMING		DOUGLAS-FIR-LARCH OR HEM-FIR NO. 2
24. MANUFACTURED LUMBER, PSL, LVL, AND LSL SHALL BE MANUFACTURED BY WEYERHAEUSER. ALL PSL, LVL AND LSL LUMBER SHALL BE MANUFACTURED IN ACCORDANCE WITH ICC-ES SAVE REPORT NO. VAR-1008. THE MEMBERS SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:

PSL BEAM (2.2E)	Fb = 2900 PSI, E = 2200 KSI, Fv = 290 PSI
LVL BEAM (1.9E)	Fb = 2600 PSI, E = 1900 KSI, Fv = 285 PSI
LSL BEAM (1.5E)	Fb = 2250 PSI, E = 1550 KSI, Fv = 285 PSI
25. DESIGN SHOWN ON PLANS IS BASED ON LUMBER MANUFACTURED BY WEYERHAEUSER. ALTERNATE MANUFACTURERS MAY BE USED SUBJECT TO REVIEW & APPROVAL BY THE STRUCTURAL ENGINEER. JOIST HANGERS & HARDWARE REFERENCED ON THE PLAN ARE ASSUMED BY THE SIMPSON STRONG TIE COMPANY. ALTERNATIVE HARDWARE MFRS MAY BE SUBSTITUTED FOR ITEMS SHOWN PROVIDED THEY HAVE ICC APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES AND APPROVAL BY THE STRUCTURAL ENGINEER. ALL JOIST HANGERS AND OTHER HARDWARE SHALL BE COMPATIBLE IN SIZE WITH MEMBERS PROVIDED.
26. MANUFACTURED LUMBER PRODUCTS SHALL BE INSTALLED WITH A MOISTURE CONTENT OF 19% OR LESS AS DIRECTED BY THE ICC-ES SAVE REPORT NO. VAR-1008. MOISTURE CONTENTS EXCEEDING 19%, WHETHER UPON DELIVERY OR ACHIEVED ON SITE, MAY NOT PERFORM AS INTENDED IN THIS STRUCTURAL DESIGN. THE CONTRACTOR SHALL MAKE PROVISIONS UPON RECEIPT OF MATERIAL & DURING CONSTRUCTION TO PREVENT THE MOISTURE CONTENT OF INSTALLED BEAMS FROM EXCEEDING 19%. EXCESSIVE DEFLECTIONS AND/OR BEAM FAILURES CAN OCCUR IF MOISTURE CONTENT EXCEEDS THIS VALUE AS SUPPORTED BY MFR'S FINDINGS.
27. PREFABRICATED PL YWOOD WEB JOISTS SHALL BE MANUFACTURED BY WEYERHAEUSER. ALL PL YWOOD WEB JOIST MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE STRUCTURAL ENGINEER.
- REFER TO WEYERHAUSER TRUS JOIST GUIDE (TJ-4000) FOR TJI JOIST INSTALLATION REQUIREMENTS, INCLUDING SAFETY BRACING, ALLOWABLE HOLES, ACCESSORIES SUCH AS WEB STIFFENERS, SQUASH BLOCK, FILLER BLOCKS AMONG OTHERS.
28. GLUED LAMINATED MEMBERS SHALL BE FABRICATED IN CONFORMANCE WITH ASTM & AITC STANDARDS IN A CITY OF SEATTLE CERTIFIED PLANT. EACH MEMBER SHALL BEAR AN AITC IDENTIFICATION MARK & SHALL BE ACCOMPANIED BY AN AITC CERTIFICATE OF CONFORMANCE. CERTIFICATES OF CONFORMANCE MUST BE MADE AVAILABLE TO BUILDING INSPECTORS. CITY INSPECTION IS REQUIRED PRIOR TO COVERING GLUED LAMINATED MEMBERS. ALL SIMPLE SPAN BEAMS SHALL BE OF 186 GRADE 1.1E OR 1.2E TYPE S OR WY SCREWS @ 8" OC, UNLESS NOTED OTHERWISE. 12" (NOMINAL) ALL CANTILEVERED BEAMS SHALL BE DOUGLAS FIR COMBINATION 24F-V8 (1.8E), Fb = 2,400 PSI, Fv = 240 PSI. CAMBER ALL SIMPLE SPAN GLULAM BEAMS TO 3,500" RADIUS, UNLESS SHOWN OTHERWISE ON PLANS.

WOOD (continued)

29. PREFABRICATED CONNECTOR PLATE WOOD ROOF DECK TRUSSES SHALL BE DESIGNED BY THE MANUFACTURER IN ACCORDANCE WITH THE NATIONAL DESIGN STANDARD FOR METAL PLATE-CONNECTED WOOD TRUSS CONSTRUCTION, ANSI/TPI 1" BY THE TRUSS PLATE INSTITUTE FOR THE SPANS AND CONDITIONS SHOWN ON THE PLANS. LOADING SHALL BE AS FOLLOWS:

TOP CHORD LIVE LOAD	25 PSF
TOP CHORD DEAD LOAD	15 PSF
TOP CHORD DEAD LOAD	5 PSF SOLAR PANELS (WHERE OCCURS)
BOTTOM CHORD DEAD LOAD	5 PSF
BOTTOM CHORD LIVE LOAD	50 PSF (FOR ATTIC TRUSSES ONLY)
TOTAL LOAD	45 PSF 50 PSF IF WITH SOLAR PANELS
TOTAL LOAD	85 PSF FOR ATTIC TRUSSES
WIND UPLIFT (TOP CHORD)	PER ASCE 7-16
BOTTOM CHORD LIVE LOAD	10 PSF (BOTTOM CHORD LIVE LOAD DOES NOT ACT CONCURRENTLY WITH THE ROOF LIVE LOAD WHERE APPLICABLE. IF PLAT TRUSSES OR SCISSOR ARE UTILIZED FOR ROOF STRUCTURES THE 10 PSF LIVE LOAD DOES NOT NEED CONSIDERATION DUE TO THE LIMITED SPACE WITHIN THE CEILING CAVITY))
30. WOOD TRUSSES SHALL UTILIZE APPROVED CONNECTOR PLATES (GANG NAIL OR EQUAL). TRUSSES MUST MEET TPI STANDARDS (2303.4.6) AND BCSI TEMPORARY AND PERMANENT BRACING STANDARDS (104.1 AND 2303.4.1.2 # 1). SUBMIT SHOP DRAWINGS AND DESIGN CALCULATIONS TO THE ARCHITECT. STRUCTURAL ENGINEER AND BUILDING OFFICIAL FOR REVIEW AND APPROVAL PRIOR TO FABRICATION. SUBMITTED CALCULATIONS SHALL BE SIGNED AND STAMPED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF WASHINGTON PROVIDE FOR SHAPES, BEARING POINTS, INTERSECTIONS, HIPPS, VALLEYS, ETC. SHOWN ON THE DRAWINGS. EXACT COMPOSITION OF SPECIAL HIP VALLEY & INTERSECTION AREAS (USE OF GIRDER TRUSSES, JACK-TRUSSES, STEP-DOWN TRUSSES, ETC.) SHALL BE DETERMINED BY THE MANUFACTURER, UNLESS SPECIFICALLY INDICATED ON THE PLANS. PROVIDE ALL TRUSS-TO-TRUSS AND TRUSS-TO-GIRDER TRUSS CONNECTION DETAILS AND REQUIRED CONNECTION MATERIALS. PROVIDE FOR ALL TRUSS BRACING AND BRIDGING.
- PREFABRICATED ROOF TRUSSES MUST BE FABRICATED BY A REGISTERED AND APPROVED FABRICATORS IN ACCORDANCE WITH IBC SECTION 1704.2.5.1.
31. PL YWOOD SHEATHING SHALL BE GRADE C-D, EXTERIOR GLUE OR STRUCTURAL II, EXTERIOR GLUE IN CONFORM WITH DOC PL 1. ORIENTED STRAND BOARD OF EQUIVALENT THICKNESS, EXPOSURE RATING AND PANEL INDEX MAY BE USED IN LIEU OF PLYWOOD.

ROOF SHEATHING SHALL BE 1/2" (NOMINAL) WITH SPAN RATING 32/16.
FLOOR AND DECK SHEATHING SHALL BE 3/4" (NOMINAL) WITH SPAN RATING 48/24.
WALL SHEATHING SHALL BE 1/2" (NOMINAL) WITH SPAN RATING 24/0.

REFER TO WOOD FRAMING NOTES BELOW FOR TYPICAL NAILING REQUIREMENTS.
32. ALL WOOD IN DIRECT CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE-TREATED WITH AN APPROVED PRESERVATIVE OR (2) LAYERS OF ASPHALT IMPREGNATED BUILDING PAPER SHALL BE PROVIDED BETWEEN UNTREATED WOOD AND CONCRETE OR MASONRY.
33. PRESSURE TREATED WOOD SHALL BE TREATED PER AWP A STANDARD U1 & M4 AND IBC 2303.1.9. SODIUM BORATE (SBX) TREATED WOOD SHALL NOT BE USED WHERE EXPOSED TO WEATHER. FASTENERS & TIMBER CONNECTORS IN DIRECT CONTACT WITH ACZA TREATED WOOD SHALL BE Fb = G185 OR A185 HOT DIPPED OR CONTINUOUS HOT GALVANIZED PER ASTM A663. FASTENERS & TIMBER CONNECTORS IN DIRECT CONTACT WITH ACZA TREATED WOOD SHALL BE Fb = 304 OR 316 STAINLESS STEEL. FASTENERS INCLUDING WASHERS AND NUTS INSTALLED FOR PRESERVATIVE, TREATED AND FIRE - RETARDANT TREATED WOOD SHALL BE HOT-DIP ZINC COATED GALVANIZED WITH A MINIMUM COATING WEIGHT COMPLYING WITH ASTM A 153. FASTENER OTHER THAN NAILS, WOOD SCREWS AND LAG SCREWS ARE PERMITTED TO BE MECHANICALLY DEPOSITED ZINC-COATED WITH COATING WEIGHTS COMPLYING WITH ASTM A 153 TO SURFSS 55 MINIMUM. PLAIN CARBON STEEL FASTENERS IN WOOD PRESERVATIVE TREATED WITHSBX / DOT OR ZINC BORATE ARE NOT REQUIRED TO BE GALVANIZED.
34. TIMBER CONNECTORS CALLED OUT BY LETTERS & NUMBERS SHALL BE "STRONG-TIE" BY SIMPSON COMPANY, AS SPECIFIED IN THEIR CATALOG NUMBER C-C-2024. EQUIVALENT DEVICES BY OTHER MFRS MAY BE SUBSTITUTED, PROVIDED THEY HAVE ICCB OR ICC-ES APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. THE DESIGNER'S SPECIFICATIONS SHALL BE SPECIFIED BY MFR. CONNECTORS SHALL BE INSTALLED IN ACCORDANCE W/ THE MFR'S RECOMMENDATIONS.
- ALL 2X JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "LUS" SERIES JOIST HANGERS. ALL TJI JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "ITT" SERIES JOIST HANGERS. ALL DOUBLE JOIST BEAMS SHALL BE CONNECTED TO FLUSH BEAMS W/ "MIT" SERIES JOIST HANGERS.
- WHERE CONNECTOR STRAPS CONNECT TWO MEMBERS, PLACE 1/2 OF THE NAILS OR BOLTS IN EA MEMBER. ALL STUDS SHALL BE SEASONED & DRIED & THE SAME GRADE (MIN) AS MEMBERS CONNECTED.
35. WOOD FASTENERS
- A. NAIL SIZE SPECIFIED ON DRAWINGS ARE BASED ON THE FOLLOWING SPECIFICATIONS:

SIZE	LENGTH	DIAMETER
8d	2-1/2"	0.131"
10d	3"	0.148"
12d	3-1/4"	0.148"
16d	3-1/2"	0.135"
- IF CONTRACTOR PROPOSES THE USE OF ALTERNATE NAILS, THEY SHALL SUBMIT NAIL SPECIFICATIONS TO THE STRUCTURAL ENGINEER (PRIOR TO CONSTRUCTION) FOR REVIEW AND APPROVAL. PLYWOOD (APA RATED SHEATHING) FASTENERS TO FRAMING SHALL BE DRIVEN FLUSH TO FACE OF SHEATHING WITH NO COUNTERSINKING PERMITTED.
- B. ALL BOLTS IN WOOD MEMBERS SHALL CONFORM TO ASTM A307. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG BOLTS BEARING ON WOOD. INSTALLATION OF LAG BOLTS SHALL CONFORM TO THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (2021 EDITION) WITH A LEAD BORE HOLE OF 60-70% OF THE SHANK DIAMETER. LEAD HOLES ARE NOT REQUIRED FOR 3/8"Ø AND SMALLER LAG SCREWS.
36. 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, MIN NAILING, UNLESS NOTED OTHERWISE. SHALL CONFORM TO TABLE 2304.10.2 OF THE INTERNATIONAL BUILDING CODE. COORDINATE THE SIZE & LOCATION OF ALL OPENINGS W/ MECHANICAL & ARCH'L DRAWINGS.
- B. WALL FRAMING - REFER TO ARCHITECTURAL DRAWINGS FOR THE SIZE OF ALL WALLS. ALL STUDS SHALL BE SPACED AT 16" OC, UNLESS NOTED OTHERWISE. TWO STUDS MINIMUM SHALL BE PROVIDED AT THE END OF ALL WALLS & AT EACH SIDE OF ALL OPENINGS, & AT BEAM OR HEADER BEARING LOCATIONS. TWO 2x8 HEADERS SHALL BE PROVIDED OVER ALL OPENINGS NOT OTHERWISE NOTED ON PLAN. SOLID BLOCKING FOR WOOD POSTS SHALL BE PROVIDED THROUGH FLOORS TO SUPPORTS BELOW. PROVIDE CONTINUOUS SOLID BLOCKING AT MID-HEIGHT OF ALL STUD WALLS OVER 10'-0" IN HEIGHT.
- ALL WALLS SHALL HAVE A SINGLE BOTTOM PLATE & A DOUBLE TOP PLATE. END NAIL TOP PLATE TO EACH STUD WITH TWO 16d NAILS, & TOENAIL OR END NAIL EACH STUD TO BOTTOM PLATE WITH TWO 16d NAILS. DOUBLE TOP PLATE WITH 16d NAIL @ 12" & LAP MINIMUM 4'-0" AT JOINTS AND PROVIDE TWELVE 16d NAILS @ 4" EACH SIDE JOINT.
- FLOOR AND ROOF FRAMING: PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS THAT EXTEND OVER MORE THAN HALF THE JOIST LENGTH & AROUND ALL OPENINGS IN FLOORS OR ROOFS UNLESS NOTED OTHERWISE. PROVIDE SOLID BLOCKING AT ALL BEARING POINTS. TOENAIL JOISTS TO SUPPORTS WITH TWO 16d NAILS. ATTACH JOISTS TO FLUSH HEADERS OR BEAMS WITH SIMPSON METAL JOIST HANGERS IN ACCORDANCE WITH NOTES ABOVE. NAIL ALL MULTI-JOIST BEAMS TOGETHER WITH TWO ROWS 16d @ 12" UNLESS NOTED OTHERWISE. ON THE PLANS, PLYWOOD ROOF AND FLOOR SHEATHING SHALL BE LAID UP WITH TWO ROWS 16d @ 12" UNLESS NOTED OTHERWISE. NAIL AT 6" WITH 8d NAILS TO FRAMED PANEL EDGES. STRUTS & OVER STUD WALLS AS SHOWN ON PLANS AND @ 12" TO INTERMEDIATE SUPPORTS. PROVIDE APPROVED PLYWOOD EDGE CLIPS CENTERED BETWEEN JOIST/STRUTS. PROVIDE APPROVED PLYWOOD SHEATHING EDGES. ALL FLOOR SHEATHING EDGES SHALL HAVE APPROVED T&G JOINTS OR SHALL BE SUPPORTED WITH SOLID BLOCKING. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS OF FLOOR & ROOF SHEATHING. TOENAIL BLKG TO SUPPORTS W/ 16d @ 12", UNLESS NOTED OTHERWISE.
- ALL STUD WALLS SHALL HAVE THEIR LOWER WOOD PLATES ATTACHED TO WOOD FRAMING BELOW WITH 16d NAILS @ 4" OR ATTACHED TO CONCRETE BELOW WITH 5/8"Ø ANCHOR BOLTS @ 4'-0" OC, EMBEDDED 7" MINIMUM, UNLESS NOTED OTHERWISE. INDIVIDUAL MEMBERS OF BUILT-UP POSTS SHALL BE NAILED TO EACH OTHER WITH TWO ROWS OF 16d @ 12". UNLESS NOTED OTHERWISE, GYPSUM WALLBOARD SHALL BE FASTENED TO THE INTERIOR SURFACE OF ALL STUDS & PLATES WITH NO. 6 x 1-1/4" TYPE S OR WY SCREWS @ 8" OC, UNLESS NOTED OTHERWISE. 12" (NOMINAL) RATED SHEATHING (SPAN RATING 24/0) SHALL BE NAILED TO ALL EXTERIOR VERTICAL SURFACES WITH 8d NAILS @ 6" AT PANEL EDGES & TOP & BOTTOM PLATES (BLOCK UNSUPPORTED EDGES) & TO ALL INTERMEDIATE STUDS & BLOCKING WITH 8d NAILS @ 12". ALLOW 1/8" SPACING AT ALL PANEL EDGES & PANEL ENDS.

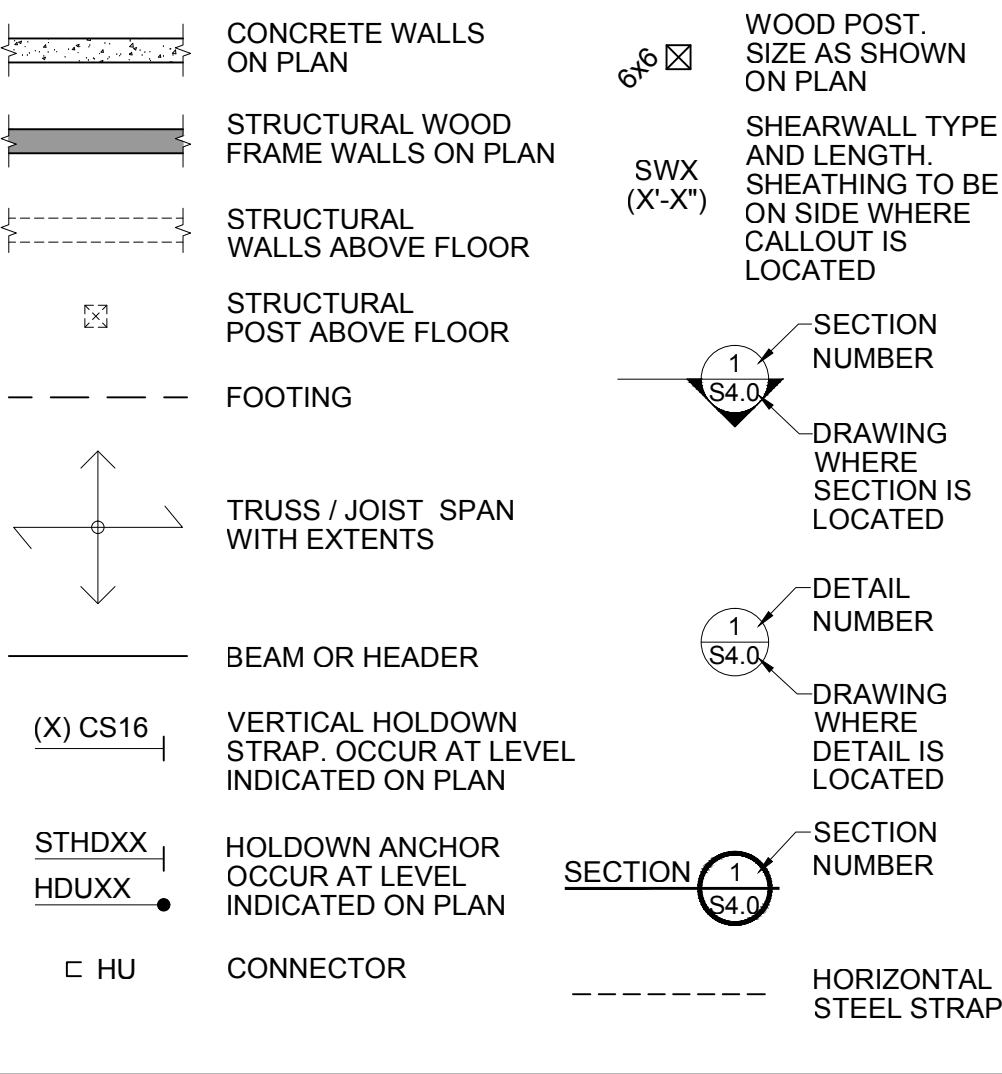
DRAWING INDEX

- S1.0 GENERAL STRUCTURAL NOTES, ABBREVIATIONS AND LEGENDS
- S2.0 SFR - FOUNDATION PLAN
- S2.1 SFR - LEVEL 2 FRAMING PLAN AND LOW ROOF FRAMING PLAN
- S2.2 SFR - HIGH ROOF FRAMING PLAN
- S2.3 DADU - FOUNDATION PLAN & FRAMING PLANS
- S3.0 CONCRETE DETAILS
- S4.0 FRAMING DETAILS
- S4.1 FRAMING DETAILS
- S4.2 FRAMING DETAILS
- S4.3 FRAMING DETAILS

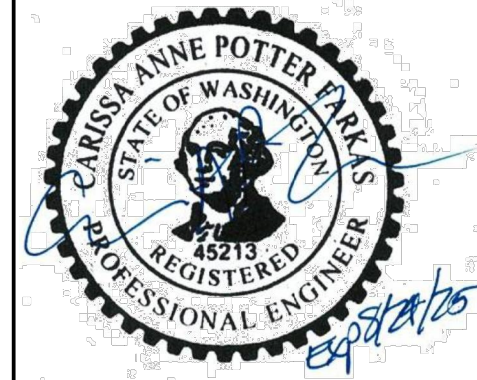
ABBREVIATIONS

& @	AND AT	H, HT	HEIGHT
AB	ANCHOR BOLT	HGR(S)	HANGER(S)
ALT	ALTERNATING	HDR	HEADER
ARCH	ARCHITECT	HORIZ	HORIZONTAL
BLDG	BUILDING	INT	INTERSECTION
BLKG	BLOCKING	INV	INVERTED
BOT	BOTTOM	KP	KING POST
BS	BACKSPAN	LG	LONG
CANT	CANTILEVER	LL	LIVE LOAD
CL	CENTER LINE	MAX	MAXIMUM
CONC	CONCRETE	MFR	MANUFACTURER
CONST	CONSTRUCTION	MIN	MINIMUM
CONT	CONTINUOUS	(N)	NEW
CTR	CENTER	NTS	NOT TO SCALE
DET	DETAIL	OC	ON CENTER
DIM	DIMENSION	OPNG	OPENING
DN	DOWN	OPP	OPPOSITE
DP	DEEP	PERP	PERPENDICULAR
(D)	DROPPED	PL	PLATE
DS	DRAG STRUT	PT	PRESSURE TREATED
DT	DRAG TRUSS	REIN	REINFORCEMENT
DTS	DEPTH TO SUIT	REQD	REQUIRED
DWGS	DRAWINGS	REV	REVISION
EA	EACH	SECT	SECTION
EL	ELEVATION	SIM	SIMILAR
EQ SP	EQUAL SPACES	SOG	SLAB ON GRADE
(E), EXIST	EXISTING	SPEC(S)	SPECIFICATION(S)
EXT	EXTERIOR	STAG	STAGGERED
(FB)	FLUSH BEAM	STRUC	STRUCTURAL
FDN	FOUNDATION	SW	SHEAR WALL
FIN GR	FINAL GRADE	T&G	TOP AND BOTTOM
FL	FLOOR	THK	TOUNGE & GROOVE
FRMG	FRAMING	TYP	TYPICAL
FTG	FOOTING	U/S	UNDERSIDE
GA	GAUGE	UNO	UNLESS NOTED
GALV	GALVANIZED	VERT	VERTICAL
GT	GIRDER TRUSS	W/	WITH

SYMBOLS AND LEGENDS



ENGINEER'S SEAL



© CF Structural Engineering, LLC 2024.
These drawings were prepared for the
2755 73rd Ave. SE, New SFR + DADU
project in Mercer Island, WA.
They are not intended for use on any
other project.

PROJECT TITLE

73RD AVENUE RESIDENCES
(SFR + DADU)

ADDRESS

2755 73rd Ave. SE,
Mercer Island, WA
98040

No. Date Issue

12.31.24 Coordination

01.10.25 Building Permit

SHEET CONTENTS

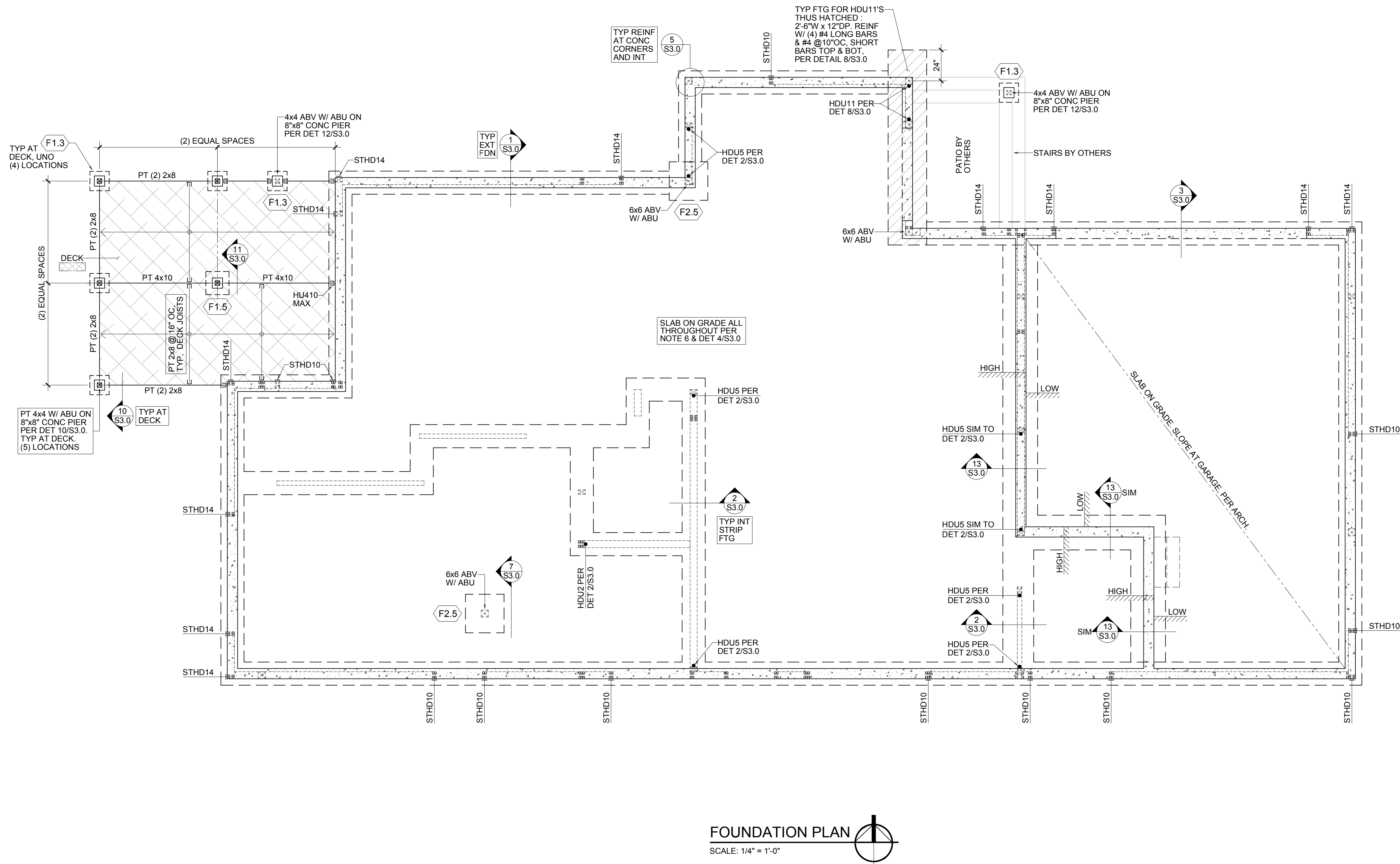
GENERAL NOTES

JOB NO. 2449

SHEET NO.

S1.0

DPD APPROVAL



PLAN NOTES

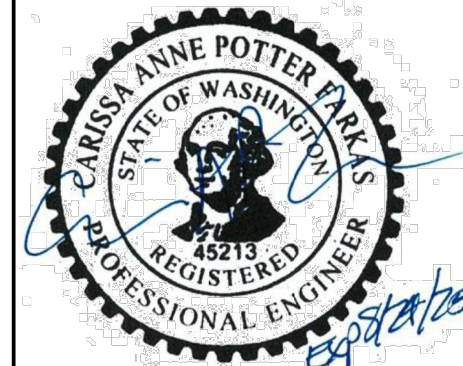
- DO NOT SCALE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.
- FLOOR SHEATHING SHALL BE 3/4" THK TONGUE AND GROOVE A.P.A. RATED PANELS (EXPOSURE 1, SPAN RATING 48/24), FACE GRAIN PERPENDICULAR TO SUPPORTS OVER FLOOR FRAMING. NAIL SHEATHING AT ALL FRAMED PANEL EDGES. GLUE AND NAIL AT ALL FRAMED PANEL EDGES WITH 8d @ 6" AND TO ALL INTERMEDIATE FRAMING @ 12". PROVIDE 1/8" CLEARANCE BETWEEN SHEATHING PANELS.
- DECK JOISTS SHALL BE PT 2x8 @ 16" OC. TYPICAL JOIST HANGERS TO BE SIMPSON LUS OR JB.
- THE BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE 18" MINIMUM BELOW GRADE. THE BOTTOM OF ALL INTERIOR FOOTINGS SHALL BE 12" MINIMUM BELOW GRADE.
- STRIP FOOTINGS TO BE CENTERED UNDER BEARING WALLS AND CONCRETE WALLS. UNO ON PLAN. PAD FOOTINGS TO BE CENTERED UNDER POST.
- SLAB ON GRADE: 4" THK CONC SLAB OVER 10 MIL VAPOR BARRIER OVER INSULATION PER ARCH. ON 6" OF GRAVEL OR CRUSHED ROCK OVER FIRM UNDISTURBED SOIL OR ENGINEERED COMPACTED BACK-FILL. REINFORCE WITH 6 x 6 W1.4 x W1.4 WWF.
- FOR STEPPED FOUNDATIONS, SEE TYP DETAIL 8/S3.0. STEPPED DOWN FOOTINGS IF SHOWN ON PLAN ARE INDICATIVE ONLY. CONTRACTOR TO DETERMINE WHERE THEY ARE REQUIRED.
- F# INDICATES FOOTING TYPE. SEE FOOTING SCHEDULE FOR SIZE AND REINFORCING.
- STHDXX INDICATES VERTICAL HOLD-DOWN AT ENDS OF SHEAR WALL ABOVE. PROVIDE (2) 2x6 (MIN) FOR STRAP NAILING, TYP. FOR STHD10, FASTEN W/ (28) 0.148 x 3 1/4 NAILS INTO STUDS. FOR STHD14, FASTEN W/ (30) 0.148 x 3 1/4 NAILS INTO STUDS. SEE MFR SPECS FOR OTHER INSTALLATION REQUIREMENTS.

- HDU INDICATES VERTICAL HOLD-DOWN AT ENDS OF SHEAR WALL ABOVE. REFER TO DETAIL 2/S3.0 AND MFR SPECS FOR OTHER INSTALLATION REQUIREMENTS.
- FOR POSTS WITH ABU BASE, USE 5/8" BOLT EPOXY EMBED 4" MIN INTO CONCRETE AND W/ (12) 16d INTO POST. DO NOT BEAR POST ON SILL PLATES. PACK ABU BASE SOLID WITH NON-SHRINK GROUT. REFER TO MFR FOR OTHER INSTALLATION REQUIREMENTS.
- ALL CONNECTORS AND FASTENERS INTO PRESSURE TREATED WOOD SHALL BE GALVANIZED OR STAINLESS STEEL PER STRUCTURAL NOTES. ALL WOOD MUST BE PROTECTED FROM MOISTURE, PER ARCH.
- PORCH, PATIO, WOOD STAIRS AND RAILINGS BY OTHERS.
- REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

ISOLATED POST FOOTING SCHEDULE

TYPE	SIZE	REINFORCEMENT
F1.3	1'-3"x1'-3"x8" DP	(2) #4 EA WAY, BOT
F1.5	1'-6"x1'-6"x8" DP	(2) #4 EA WAY, BOT
F2.5	2'-6"x2'-6"x10" DP	(4) #4 EA WAY, BOT

ENGINEER'S SEAL



© CF Structural Engineering, LLC 2024.
These drawings were prepared for the
2755 73rd Ave. SE, New SFR + DADU
project in Mercer Island, WA.
They are not intended for use on any
other project.

PROJECT TITLE

73RD AVENUE RESIDENCES
(SFR + DADU)

ADDRESS

2755 73rd Ave. SE,
Mercer Island, WA
98040

No.	Date	Issue
12.31.24		Coordination
01.10.25		Building Permit

SHEET CONTENTS

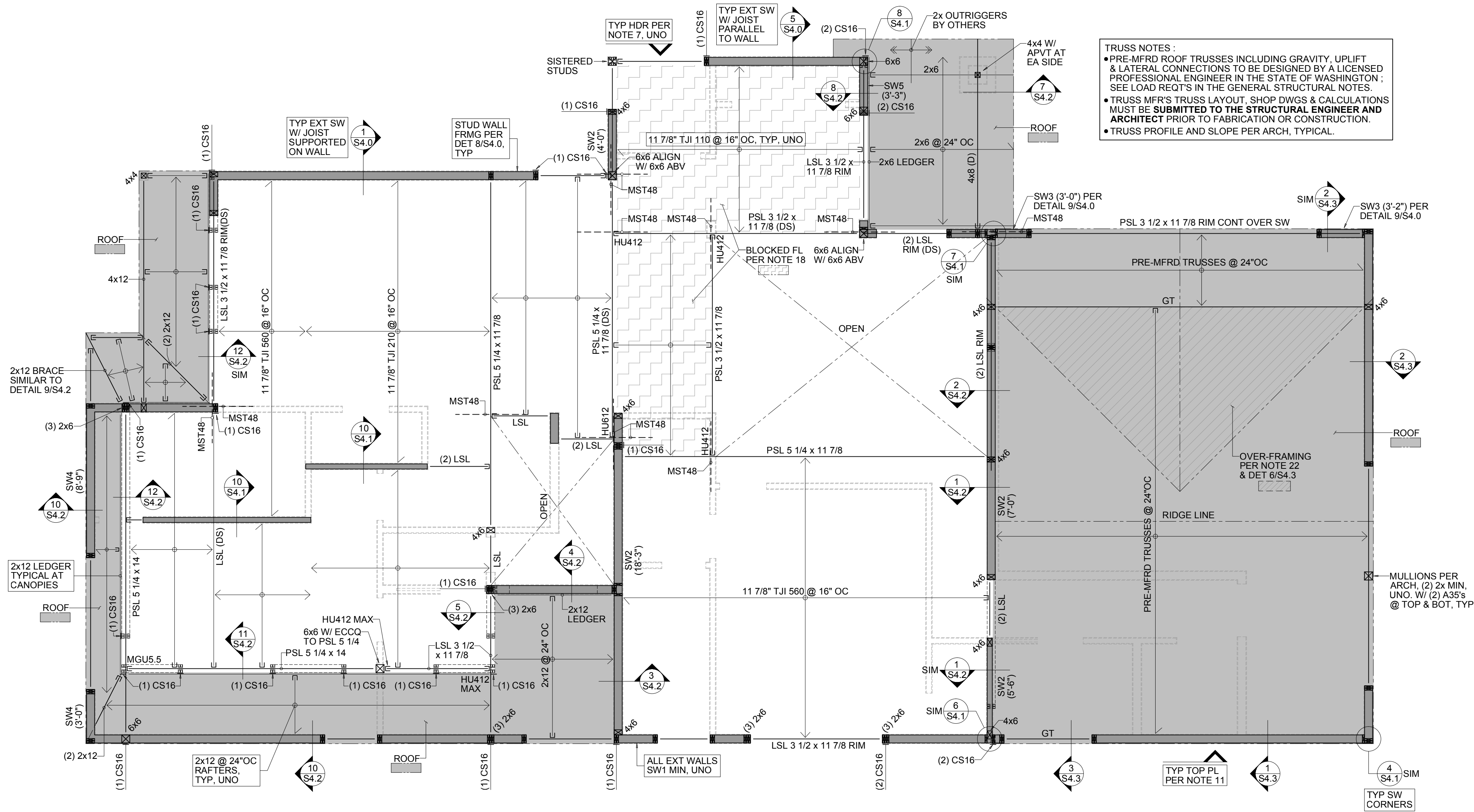
SFR
FOUNDATION PLAN

JOB NO. 2449

SHEET NO.

S2.0

DPD APPROVAL



LEVEL 2 FRAMING PLAN
AND LOW ROOF FRAMING PLAN
SCALE: 1/4" = 1'-0"

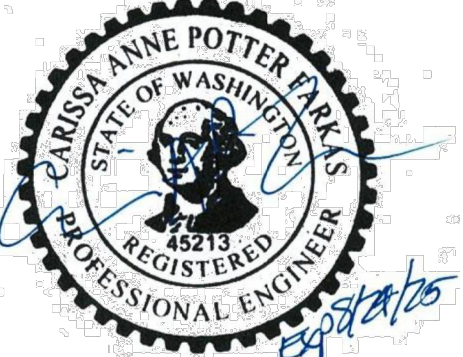
PLAN NOTES

- DO NOT SCALE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.
- ROOF SHEATHING SHALL BE 1/2" THK A.P.A. RATED PANELS (EXPOSURE 1, SPAN RATING 32/16), FACE GRAIN PERPENDICULAR TO SUPPORTS OVER ROOF FRAMING. NAIL SHEATHING AT ALL FRAMED PANEL EDGES WITH 8d @ 6" AND TO ALL INTERMEDIATE FRAMING @ 12". PROVIDE 1/8" CLEARANCE BETWEEN SHEATHING PANELS.
- FLOOR SHEATHING SHALL BE 3/4" THK TONGUE AND GROOVE A.P.A. RATED PANELS (EXPOSURE 1, SPAN RATING 48/24), FACE GRAIN PERPENDICULAR TO SUPPORTS OVER FLOOR FRAMING. NAIL SHEATHING AT ALL FRAMED PANEL EDGES. GLUE AND NAIL AT ALL FRAMED PANEL EDGES WITH 8d @ 6" AND TO ALL INTERMEDIATE FRAMING @ 12". PROVIDE 1/8" CLEARANCE BETWEEN SHEATHING PANELS.
- ROOF FRAMING SHALL BE PREFABRICATED ROOF TRUSSES @ 24" OC. UNO ON PLAN. TRUSS DESIGN AND CONNECTIONS TO BE PROVIDED BY MFR. SEE STRUCT NOTES FOR DESIGN REQ'TS.
- ROOF RAFTERS SHALL BE PT 2x @ 24" OC. SEE PLAN FOR DEPTH. TYPICAL RAFTER HANGERS TO BE SIMPSON LUS, LRUZ OR LUC.
- FLOOR JOISTS SHALL BE 11 7/8" DEEP TJ'S. TYPE AND SPACING PER PLAN. TYP. JOIST HANGERS TO BE SIMPSON IUS, ITS OR BA.
- IF HEADERS OVER OPENINGS ARE WITHIN THE RIM SPACE, RIM JOISTS SHALL ACT AS THE HEADER AND CONTINUOUS OVER OPENINGS AND MUST EXTEND BEYOND OPENINGS A MINIMUM OF 6" EACH SIDE. JOISTS HANG TO RIM AT OPENINGS. PROVIDE (2) TRIMMER STUDS MIN. AT EACH END OF OPENINGS WIDER THAN 4'-0" UNO ON PLAN. FOR OPENINGS LESS THAN 4'-0", PROVIDE (1) TRIMMER STUD MINIMUM. PROVIDE HTS20 STRAPS WHERE TOP PLATES ARE REMOVED. REFER TO DETAIL 4/S4.0 AND DETAIL 8/S4.0 FOR TYPICAL CONSTRUCTION REQUIREMENTS. FOR DROPPED HEADERS, SEE NOTE 8.
- FOR DROPPED HEADERS OVER DOOR AND WINDOW OPENINGS, PROVIDE (2) 2x8 MINIMUM. UNO ON PLAN. PROVIDE (2) TRIMMER STUDS MIN. AT EACH END OF ALL OPENINGS WIDER THAN 4'-0", UNO ON PLAN. FOR OPENINGS LESS THAN 4'-0", PROVIDE (1) TRIMMER STUD. UNO ON PLAN. SEE DETAIL 2/S4.0 FOR TYPICAL CONSTRUCTION. FOR HEADERS WITHIN THE RIM SPACE, SEE NOTE 7.
- PROVIDE (2) STUDS MINIMUM AT EACH END OF ALL BEAMS, UNO ON PLAN. BEAR BEAM FULLY ON POSTS AND PROVIDE POSITIVE CONNECTION BY EITHER ASS OR LTP4 CLIPS ON EACH SIDE OF BEAM OR WITH A PCZ, OR LPCZ CAP. UNO ON PLAN. SOLID VERTICAL GRAIN BLOCKING FOR WOOD POSTS SHALL BE PROVIDED THROUGH FLOORS TO CONTINUOUS SUPPORT BELOW.
- SW# (X'-X") INDICATES SHEAR WALL TYPE AND APPROXIMATE LENGTH. ALL EXTERIOR WALLS SHALL BE SW1 MINIMUM. UNO ON PLAN. SEE DETAIL 1/S4.1 FOR CONSTRUCTION REQ'TS.
- TOP PLATE CONSTRUCTION PER TYPICAL DETAIL 3/S4.0.
- LENGTH OF BEAMS WHERE INDICATED ARE APPROXIMATE. CONTRACTOR TO VERIFY EXACT LENGTH.
- STRUCTURAL MEMBERS SHOULD NOT BE SPLICED. PENETRATIONS AND NOTCHES THRU STRUCTURAL MEMBERS MUST BE APPROVED BY THE ENGINEER PRIOR TO DRILLING.
- INDIVIDUAL MEMBERS OF BUILT-UP POSTS SHALL BE NAILED TO EACH OTHER WITH TWO ROWS OF 16d @ 12". NAIL ALL MULTI-JOIST / BEAMS TOGETHER WITH TWO ROWS OF 16d @ 12".
- LSL PER PLAN IS LSL 1 3/4" x 11 7/8" (1.5E), TYPICAL HANGERS ARE SIMPSON HUS UNO ON PLAN.
- (X) CS16 INDICATES VERTICAL HOLD-DOWN STRAP AT END OF SHEAR WALL ABOVE. (X) INDICATES STRAP QTY. SEE DETAIL 6/S4.0 FOR INSTALLATION REQUIREMENTS. FOR CS16 STRAPS AT OPENINGS REFER TO DETAIL 7/S4.0.
- HORIZONTAL STRAPS :
 - FASTEN STRAPS TO EACH MEMBER EQUALLY. PROVIDE BEAM OR BLKG (EA BAY) AS REQUIRED FOR NAILING. FASTEN BLKG TO JOISTS W/ (3) 16d AT EA END.
 - FOR CS16 HORIZONTAL STRAPS, FASTEN W/ 8d AT EVERY OTHER HOLE INTO EACH MEMBER.
 - FOR HTS20 HORIZONTAL STRAPS, FASTEN W/ (12) 10d INTO EACH MEMBER. (24) 10d TOTAL.
 - FOR MST HORIZONTAL STRAPS, FASTEN W/ 16d AT EVERY OTHER HOLE INTO EACH MEMBER.
 - REFER TO PLAN FOR STRAP QUANTITY, TYPE & LENGTH.
- BLOCKED FLOOR DIAPHRAGM : PROVIDE 2x4 FLAT BLOCKING AT ALL UNFRAMED PANEL EDGES. NAIL SHEATHING TO BLKG AND PANEL EDGES W/ 8d @ 4".
- DRAG STRUT (DS) : PROVIDE PANEL EDGE NAILING OF 8d @ 4" ALONG FULL LENGTH OF MEMBER.
- DRAG TRUSS (DT) : PROVIDE PANEL EDGE NAILING OF 8d @ 4" ALONG FULL LENGTH OF TOP CHORD. TRUSS MFR : DESIGN TRUSS FOR IN PLANE SHEAR OF 200 PLF FOR WIND AND 150 PLF FOR SEISMIC (MAX).
- STAIR LANDING FRAMING, IF REQUIRED, SHALL BE 2x10 @ 16" OC. TYPICAL JOIST HANGERS TO BE SIMPSON LUS OR JB. PROVIDE (2) 2x12 MIN FOR STAIR STRINGERS SUPPORT. STAIR TREAD, STRINGERS AND BEAM AT LANDING INCLUDING CONNECTIONS, BY OTHERS.
- IN HATCHED ROOF AREA, OVERFRAMING TO BE 2x6'S @ 24" OC W/ VERT SUPPORTS TO TRUSSES BELOW AT NO MORE THAN 48" OC. TYPICAL. REFER TO DETAIL 6/S4.3 FOR CONSTRUCTION REQUIREMENTS.
- REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

WOOD FRAME WALL SCHEDULE:		PLAN VIEW
ALL EXTERIOR WALLS	• 2x6 STUDS @ 16" OC	
INTERIOR BEARING WALLS	• 2x4 STUDS @ 16" OC UNO ON ARCH DWGS	
NON LOAD WALLS	• PER ARCH	

TRUSS NOTES:
• PRE-MFRD ROOF TRUSSES INCLUDING GRAVITY, UPLIFT & LATERAL CONNECTIONS TO BE DESIGNED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF WASHINGTON; SEE LOAD REQ'TS IN THE GENERAL STRUCTURAL NOTES.
• TRUSS MFR'S TRUSS LAYOUT, SHOP DWGS & CALCULATIONS MUST BE SUBMITTED TO THE STRUCTURAL ENGINEER AND ARCHITECT PRIOR TO FABRICATION OR CONSTRUCTION.
• TRUSS PROFILE AND SLOPE PER ARCH, TYPICAL.

ENGINEER'S SEAL



© CF Structural Engineering, LLC 2024.
These drawings were prepared for the
2755 73rd Ave. SE, New SFR + DADU
project in Mercer Island, WA.
They are not intended for use on any
other project.

PROJECT TITLE

73RD AVENUE RESIDENCES
(SFR + DADU)

ADDRESS

2755 73rd Ave. SE,
Mercer Island, WA
98040

No.	Date	Issue
12.31.24		Coordination
01.10.25		Building Permit

SHEET CONTENTS

SFR
LEVEL 2 FRAMING PLAN &
LOW ROOF FRAMING PLAN

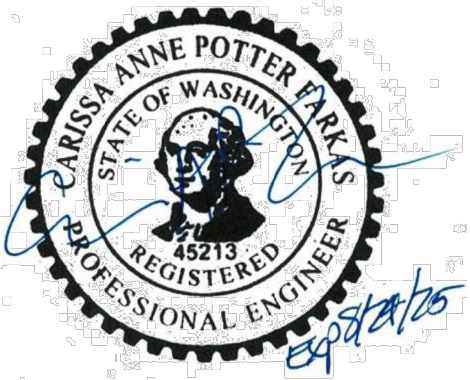
JOB NO. 2449

SHEET NO.

S2.1

DPD APPROVAL

ENGINEER'S SEAL



© CF Structural Engineering, LLC 2024.
These drawings were prepared for the
2755 73rd Ave. SE, New SFR + DADU
project in Mercer Island, WA.
They are not intended for use on any
other project.

PROJECT TITLE

73RD AVENUE RESIDENCES
(SFR + DADU)

ADDRESS

2755 73rd Ave. SE,
Mercer Island, WA
98040

No.	Date	Issue
12.31.24		Coordination
01.10.25		Building Permit

SHEET CONTENTS

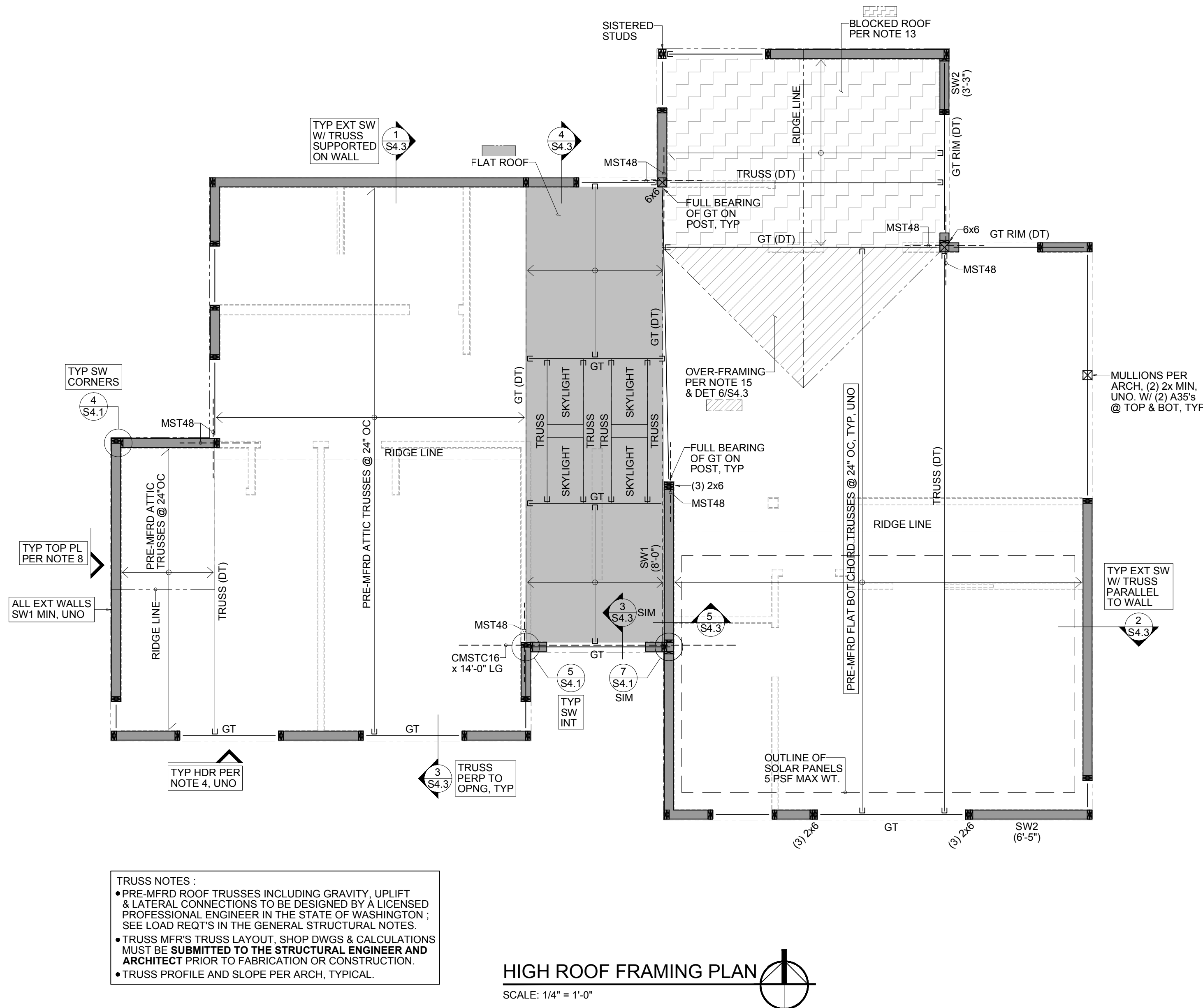
SFR
HIGH ROOF FRAMING PLAN

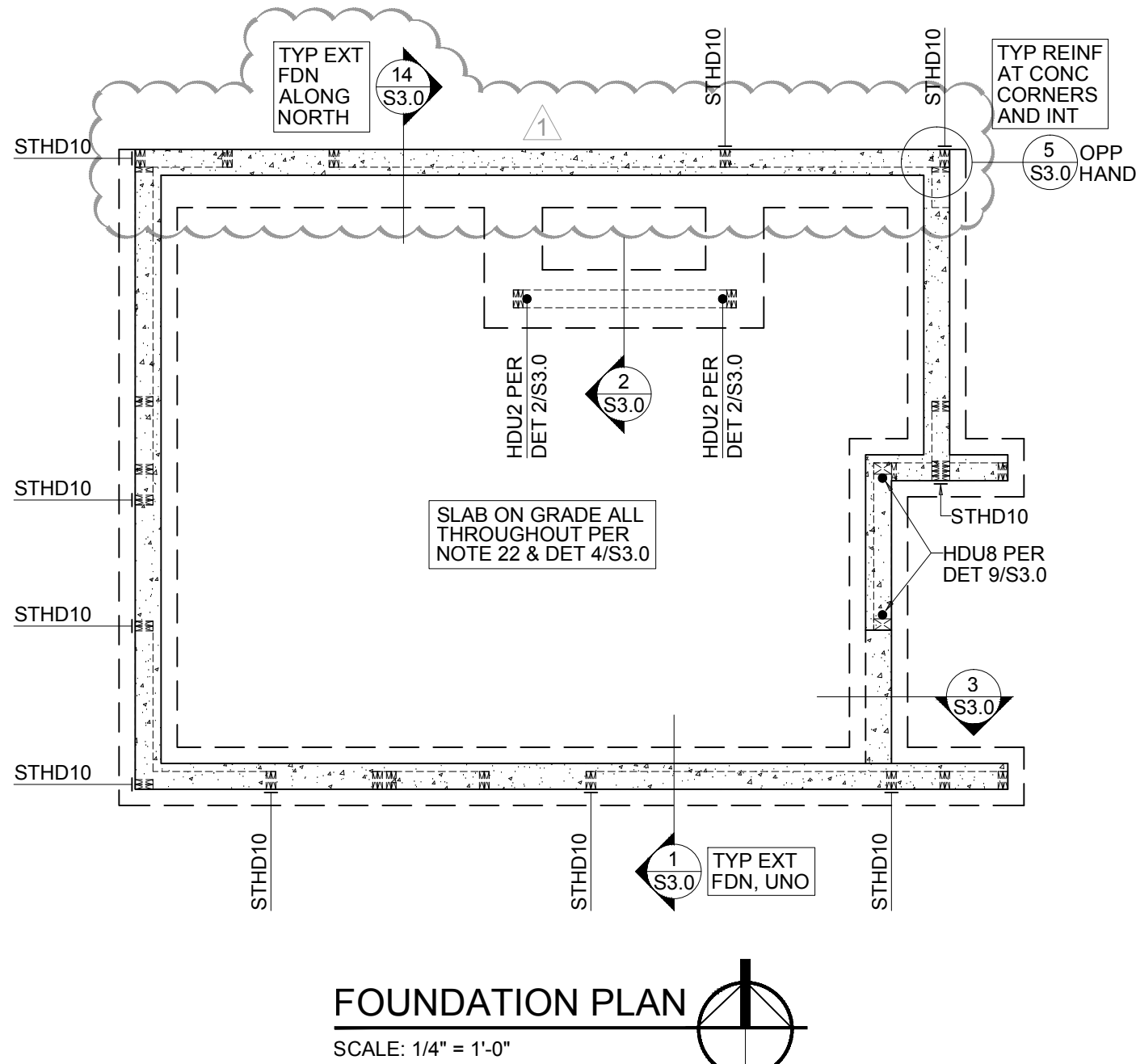
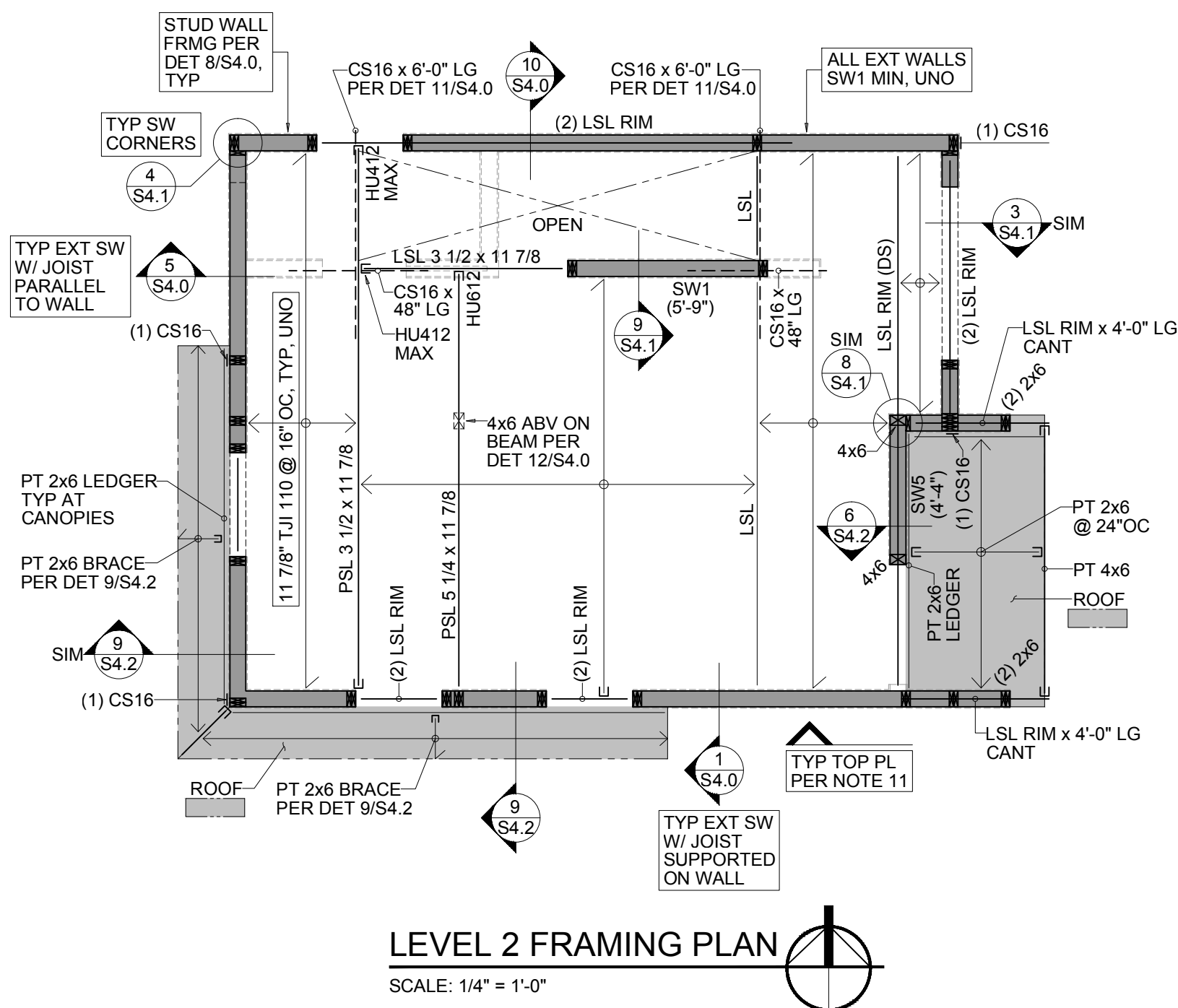
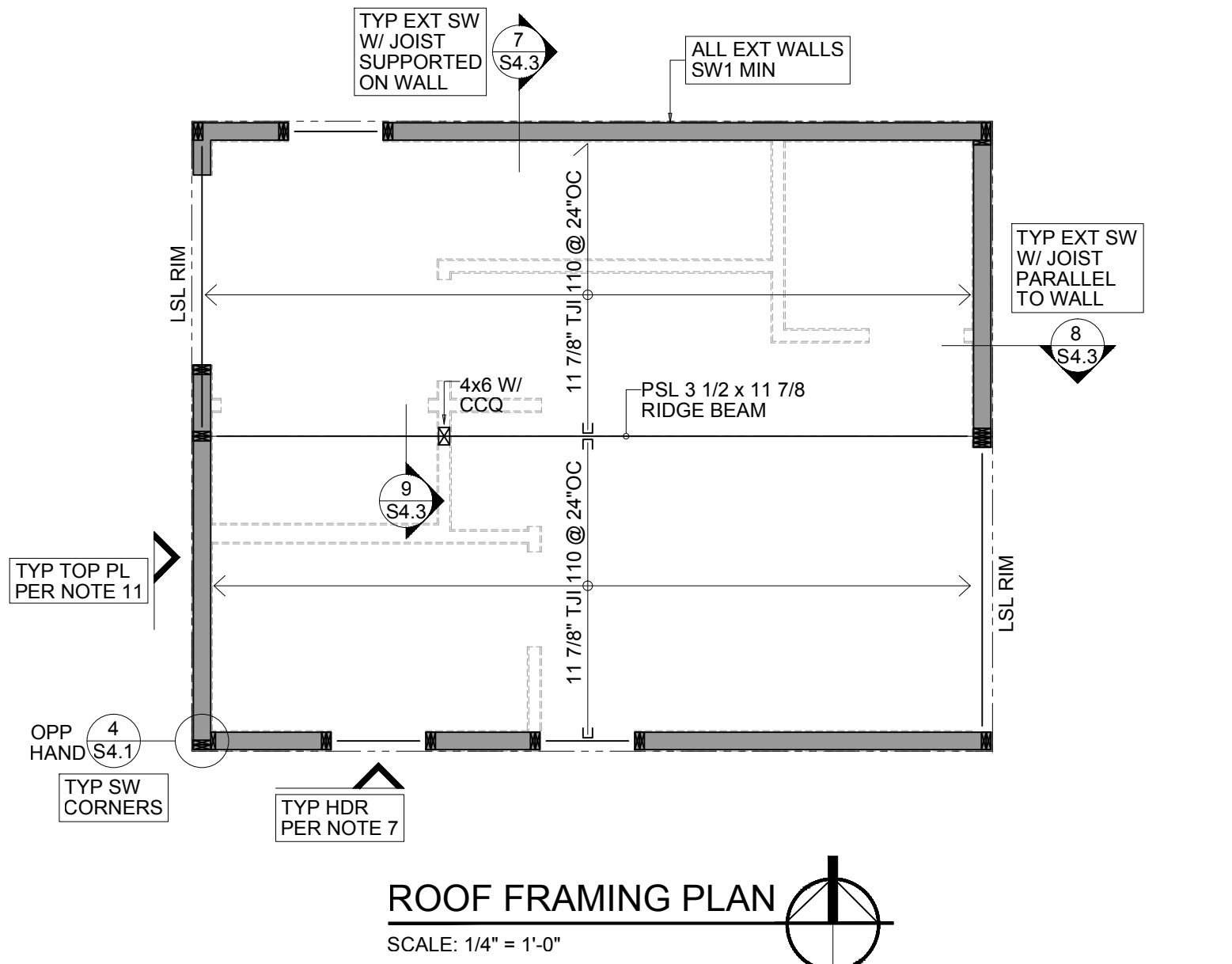
JOB NO. 2449

SHEET NO.

S2.2

DPD APPROVAL



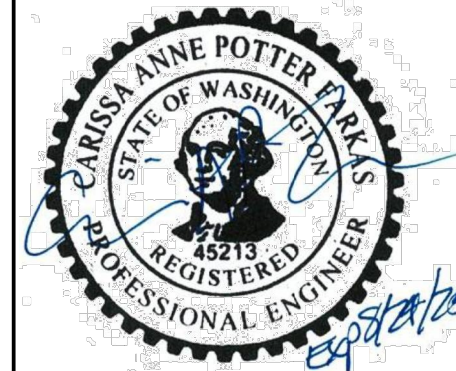


PLAN NOTES

- DO NOT SCALE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.
- ROOF RAFTERS SHALL BE PT 2x6 @ 24" OC. TYPICAL RAFTER HANGERS TO BE SIMPSON LUS, LRUZ OR LUC.
- ROOF SHEATHING SHALL BE 1/2" THK A.P.A. RATED PANELS (EXPOSURE 1, SPAN RATING 32/16), FACE GRAIN PERPENDICULAR TO SUPPORTS OVER ROOF FRAMING. NAIL SHEATHING AT ALL FRAMED PANEL EDGES WITH 8d @ 6" AND TO ALL INTERMEDIATE FRAMING @ 12". PROVIDE 1/8" CLEARANCE BETWEEN SHEATHING PANELS.
- FLOOR SHEATHING SHALL BE 3/4" THK TONGUE AND GROOVE A.P.A. RATED PANELS (EXPOSURE 1, SPAN RATING 48/24), FACE GRAIN PERPENDICULAR TO SUPPORTS OVER FLOOR FRAMING. NAIL SHEATHING AT ALL FRAMED PANEL EDGES. GLUE AND NAIL AT ALL FRAMED PANEL EDGES WITH 8d @ 6" AND TO ALL INTERMEDIATE FRAMING @ 12". PROVIDE 1/8" CLEARANCE BETWEEN SHEATHING PANELS.
- ROOF JOISTS SHALL BE 11 7/8" DEEP TJI 110 @ 24" OC. TYPICAL JOIST HANGERS TO BE SIMPSON IUS, ITS OR BA.
- FLOOR JOISTS SHALL BE 11 7/8" DEEP TJI 110 @ 16" OC. TYPICAL JOIST HANGERS TO BE SIMPSON IUS, ITS OR BA.
- IF HEADERS OVER OPENINGS ARE WITHIN THE RIM SPACE, RIM JOISTS SHALL ACT AS THE HEADER AND CONTINUOUS OVER OPENINGS AND MUST EXTEND BEYOND OPENINGS A MINIMUM OF 6" EACH SIDE. JOISTS HANG TO RIM AT OPENINGS. PROVIDE (2) TRIMMER STUDS MIN. AT EACH END OF OPENINGS WIDER THAN 4'-0" UNO ON PLAN. FOR OPENINGS LESS THAN 4'-0", PROVIDE (1) TRIMMER STUD MINIMUM. PROVIDE HTS20 STRAPS WHERE TOP PLATES ARE REMOVED. REFER TO DETAIL 4/S4.0 AND DETAIL 8/S4.0 FOR TYPICAL CONSTRUCTION REQUIREMENTS. FOR DROPPED HEADERS, SEE NOTE 8.
- FOR DROPPED HEADERS OVER DOOR AND WINDOW OPENINGS, PROVIDE (2) 2x6 MINIMUM, UNO ON PLAN. PROVIDE (2) TRIMMER STUDS MIN. AT EACH END OF ALL OPENINGS WIDER THAN 4'-0", UNO ON PLAN. FOR OPENINGS LESS THAN 4'-0", PROVIDE (1) TRIMMER STUD, UNO ON PLAN. SEE DETAIL 2/S4.0 FOR TYPICAL CONSTRUCTION. FOR HEADERS WITHIN THE RIM SPACE, SEE NOTE 7.
- PROVIDE (2) STUDS MINIMUM AT EACH END OF ALL BEAMS, UNO ON PLAN. BEAR BEAM FULLY ON POSTS AND PROVIDE POSITIVE CONNECTION BY EITHER A35 OR LTP4 CLIPS ON EACH SIDE OF BEAM OR WITH A PCZ, OR LPCZ CAP, UNO ON PLAN. SOLID VERTICAL GRAIN BLOCKING FOR WOOD POSTS SHALL BE PROVIDED THROUGH FLOORS TO CONTINUOUS SUPPORT BELOW.
- SW# (X'-X") INDICATES SHEAR WALL TYPE AND APPROXIMATE LENGTH. ALL EXTERIOR WALLS SHALL BE SW1 MINIMUM. UNO ON PLAN. SEE DETAIL 1/S4.1 FOR CONSTRUCTION REQTS.
- TOP PLATE CONSTRUCTION PER TYPICAL DETAIL 3/S4.0.
- LENGTH OF BEAMS WHERE INDICATED ARE APPROXIMATE. CONTRACTOR TO VERIFY EXACT LENGTH.
- STRUCTURAL MEMBERS SHOULD NOT BE SPICED. PENETRATIONS AND NOTCHES THRU STRUCTURAL MEMBERS MUST BE APPROVED BY THE ENGINEER PRIOR TO DRILLING.
- INDIVIDUAL MEMBERS OF BUILT-UP POSTS SHALL BE NAILED TO EACH OTHER WITH TWO ROWS OF 16d @ 12". NAIL ALL MULTI-JOIST/BEAMS TOGETHER WITH TWO ROWS OF 16d @ 12".
- LSL PER PLAN IS LSL 1 3/4" x 11 7/8" (1.5E), TYPICAL HANGERS ARE SIMPSON HU'S UNO ON PLAN.
- (X) CS16 INDICATES VERTICAL HOLD-DOWN STRAP AT END OF SHEAR WALL ABOVE. (X) INDICATES STRAP QTY. SEE DETAIL 6/S4.0 FOR INSTALLATION REQUIREMENTS. FOR CS16 STRAPS AT OPENINGS REFER TO DETAIL 7/S4.0.
- HORIZONTAL STRAPS:
 - FASTEN STRAPS TO EACH MEMBER EQUALLY. PROVIDE BEAM OR BLKG (EA BAY) AS REQUIRED FOR NAILING. FASTEN BLKG TO JOISTS W/ (3) 16d AT EA END.
 - FOR CS16 HORIZONTAL STRAPS, FASTEN W/ 8d AT EVERY OTHER HOLE INTO EACH MEMBER.
 - FOR HTS20 HORIZONTAL STRAPS, FASTEN W/ (12) 10d INTO EACH MEMBER, (24) 10d TOTAL.
 - FOR MST HORIZONTAL STRAPS, FASTEN W/ 16d AT EVERY OTHER HOLE INTO EACH MEMBER.
 - REFER TO PLAN FOR STRAP QUANTITY, TYPE & LENGTH.
- BLOCKED FL DIAPHRAGM: PROVIDE 2x4 FLAT BLOCKING AT ALL UNFRAMED PANEL EDGES. NAIL SHEATHING TO BLKG AND PANEL EDGES W/ 8d @ 4".
- DRAG STRUT (DS): PROVIDE PANEL EDGE NAILING OF 8d @ 4" ALONG FULL LENGTH OF MEMBER.
- THE BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE 18" MINIMUM BELOW GRADE. THE BOTTOM OF ALL INTERIOR FOOTINGS SHALL BE 12" MINIMUM BELOW GRADE.
- STRIP FOOTINGS TO BE CENTERED UNDER BEARING WALLS AND CONCRETE WALLS.
- SLAB ON GRADE: 4" THK CONC SLAB OVER 10 MIL VAPOR BARRIER OVER INSULATION PER ARCH, ON 6" OF GRAVEL OR CRUSHED ROCK OVER FIRM UNDISTURBED SOIL OR ENGINEERED COMPACTED BACK-FILL. REINFORCE WITH 6 x 6 W1.4 x W1.4 WWF.
- STHDXX INDICATES VERTICAL HOLD-DOWN AT ENDS OF SHEAR WALL ABOVE. PROVIDE (2) 2x6 (MIN) FOR STRAP NAILING, TYP. FOR STHD10, FASTEN W/ (28) 0.148 x 3 1/4 NAILS INTO STUDS. FOR STHD14, FASTEN W/ (30) 0.148 x 3 1/4 NAILS INTO STUDS. SEE ALSO MFR SPECS FOR OTHER INSTALLATION REQUIREMENTS.
- HDUX INDICATES VERTICAL HOLD-DOWN AT ENDS OF SHEAR WALL ABOVE. REFER TO DET 2/S3.0 FOR HDU2 & DET 9/S3.0 FOR HDU8. REFER MFR SPECS FOR OTHER INSTALLATION REQTS.
- FOR STEPPED FOUNDATIONS, SEE TYP DETAIL 6/S3.0. STEPPED DOWN FOOTINGS IF SHOWN ON PLAN ARE INDICATIVE ONLY. CONTRACTOR TO DETERMINE WHERE THEY ARE REQUIRED.
- ALL CONNECTORS AND FASTENERS INTO PRESSURE TREATED WOOD SHALL BE GALVANIZED OR STAINLESS STEEL PER STRUCTURAL NOTES. ALL WOOD MUST BE PROTECTED FROM MOISTURE, PER ARCH.
- PORCH, PATIO, WOOD STAIRS AND RAILINGS BY OTHERS.
- REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

WOOD FRAME WALL SCHEDULE:	PLAN VIEW
ALL EXTERIOR WALLS	• 2x6 STUDS @ 16" OC
INTERIOR BEARING WALLS	• 2x4 STUDS @ 16" OC UNO ON ARCH DWGS
NON LOAD WALLS	• PER ARCH

ENGINEER'S SEAL



© CF Structural Engineering, LLC 2024.
These drawings were prepared for the
2755 73rd Ave. SE, New SFR + DADU
project in Mercer Island, WA.
They are not intended for use on any
other project.

PROJECT TITLE

73RD AVENUE RESIDENCES
(SFR + DADU)

ADDRESS

2755 73rd Ave. SE,
Mercer Island, WA
98040

No.	Date	Issue
	12.31.24	Coordination
	01.10.25	Building Permit
	06.12.25	Correction

SHEET CONTENTS

DADU
FOUNDATION PLAN
AND FRAMING PLANS

JOB NO. 2449

SHEET NO.

S2.3

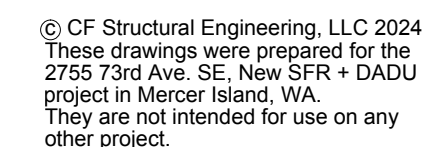
DPD APPROVAL



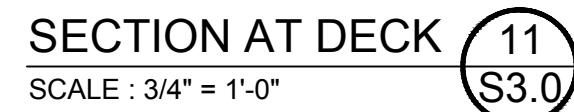
TYPICAL SLAB JOINTS

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

4
S3.0

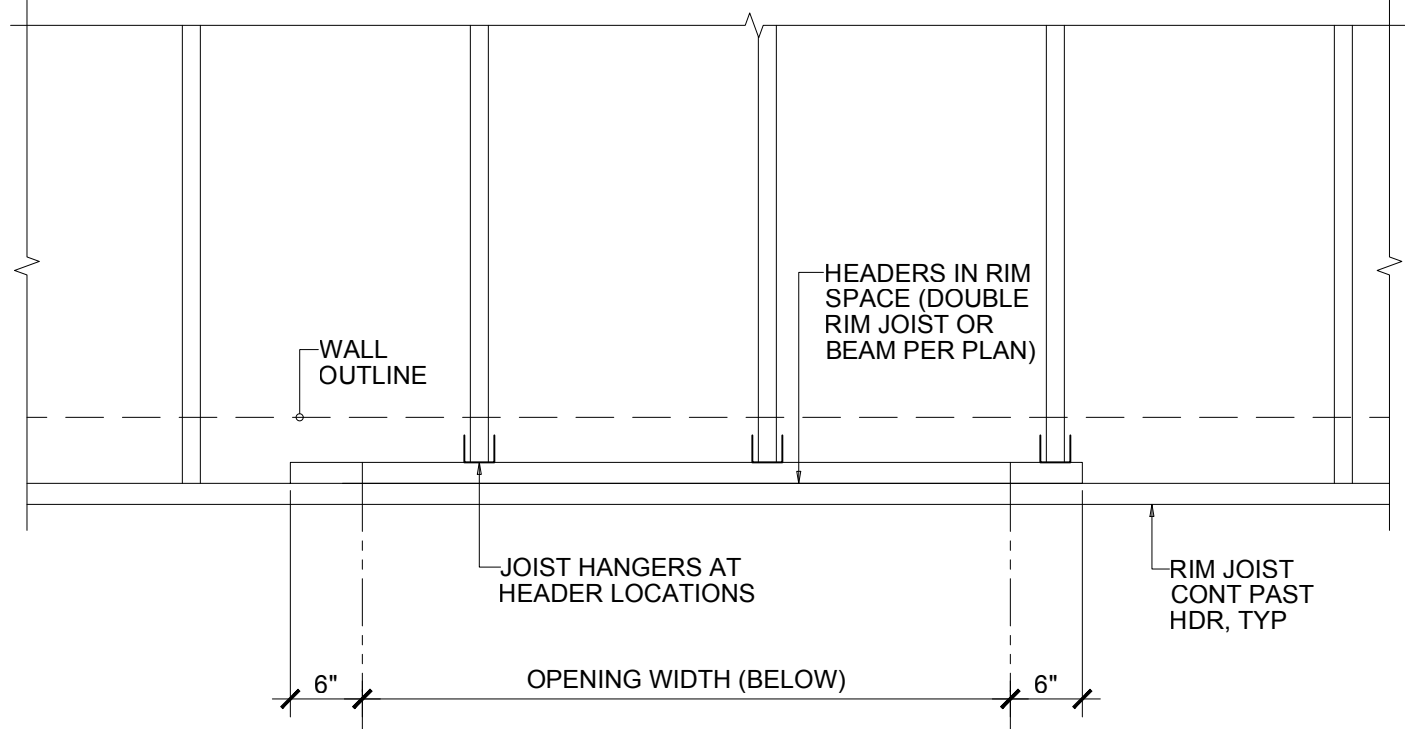


No.	Date	Issue
	12.31.24	Coordination
	01.10.25	Building Permits
1	06.12.25	Correction



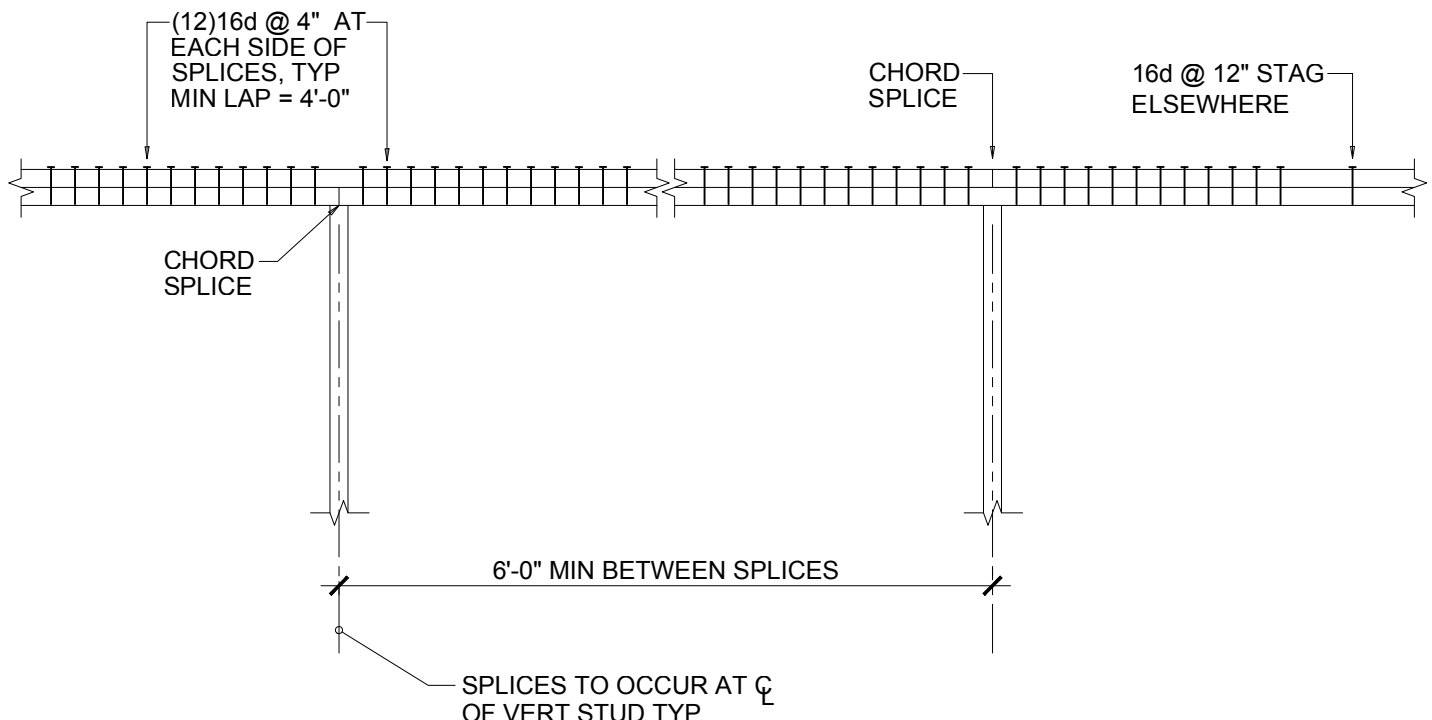
DPD APPROVAL

24" x 36" Sheet

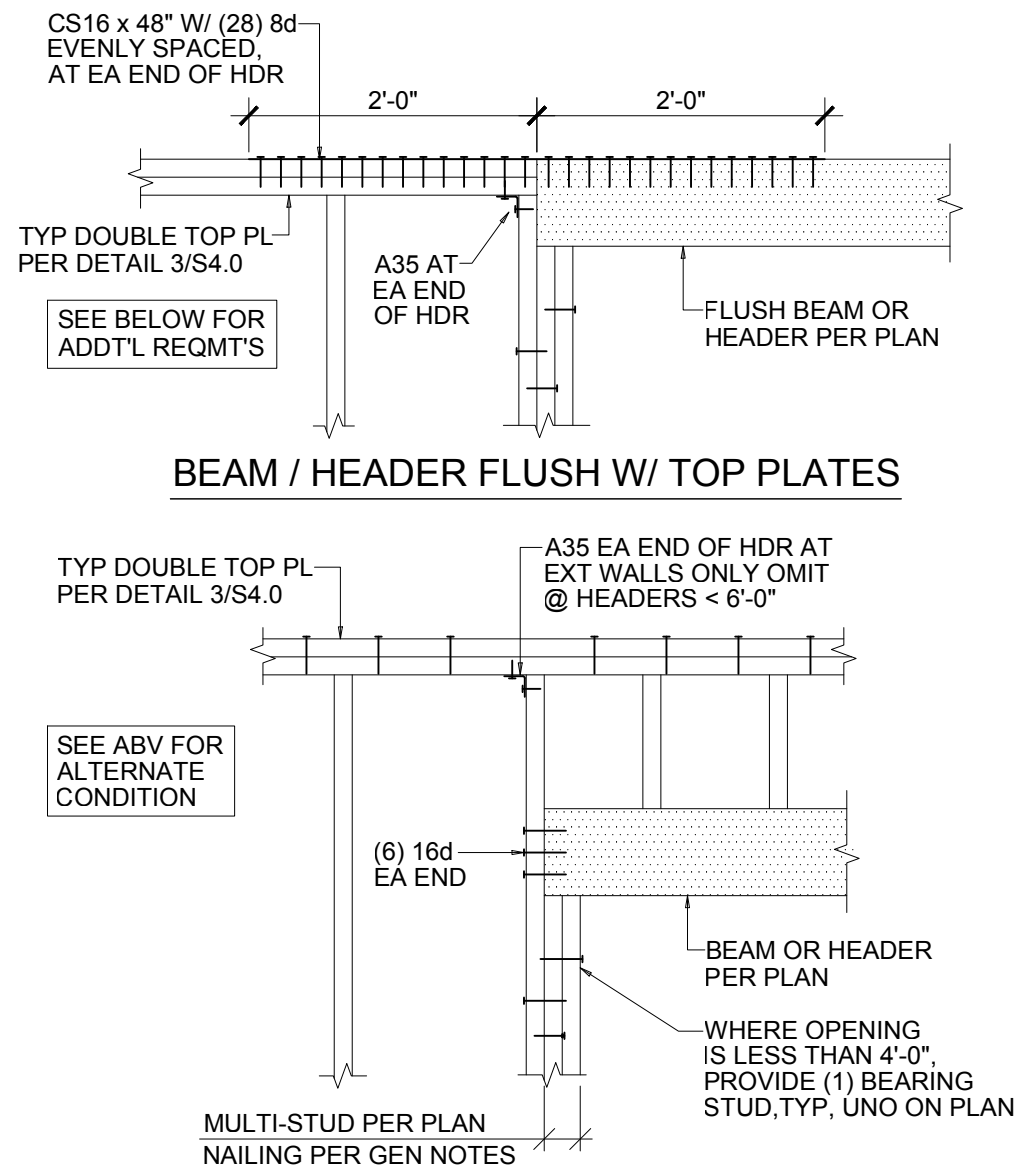


PLAN VIEW

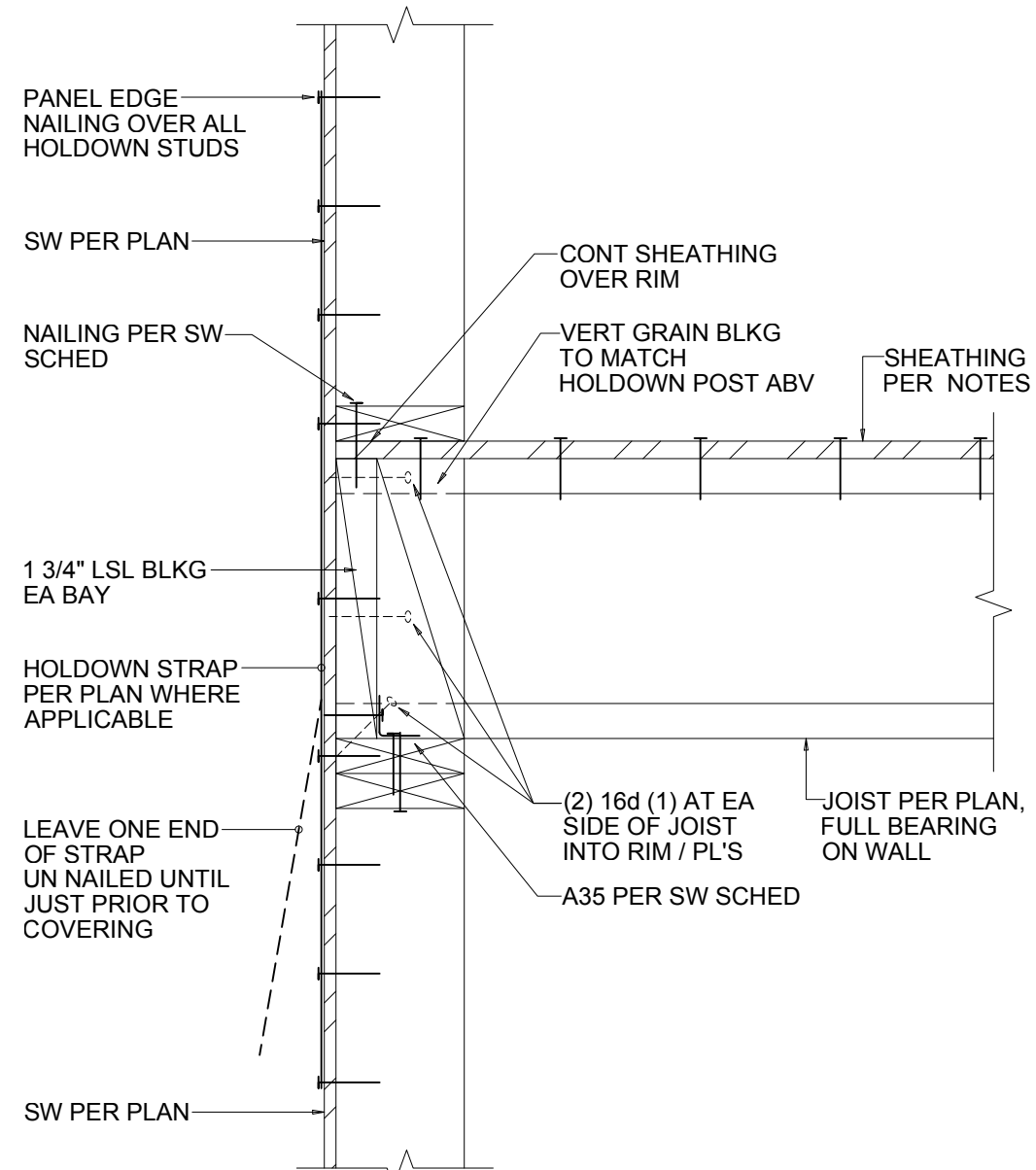
HEADER AT RIM JOIST **4**
SCALE : 3/4" = 1'-0"



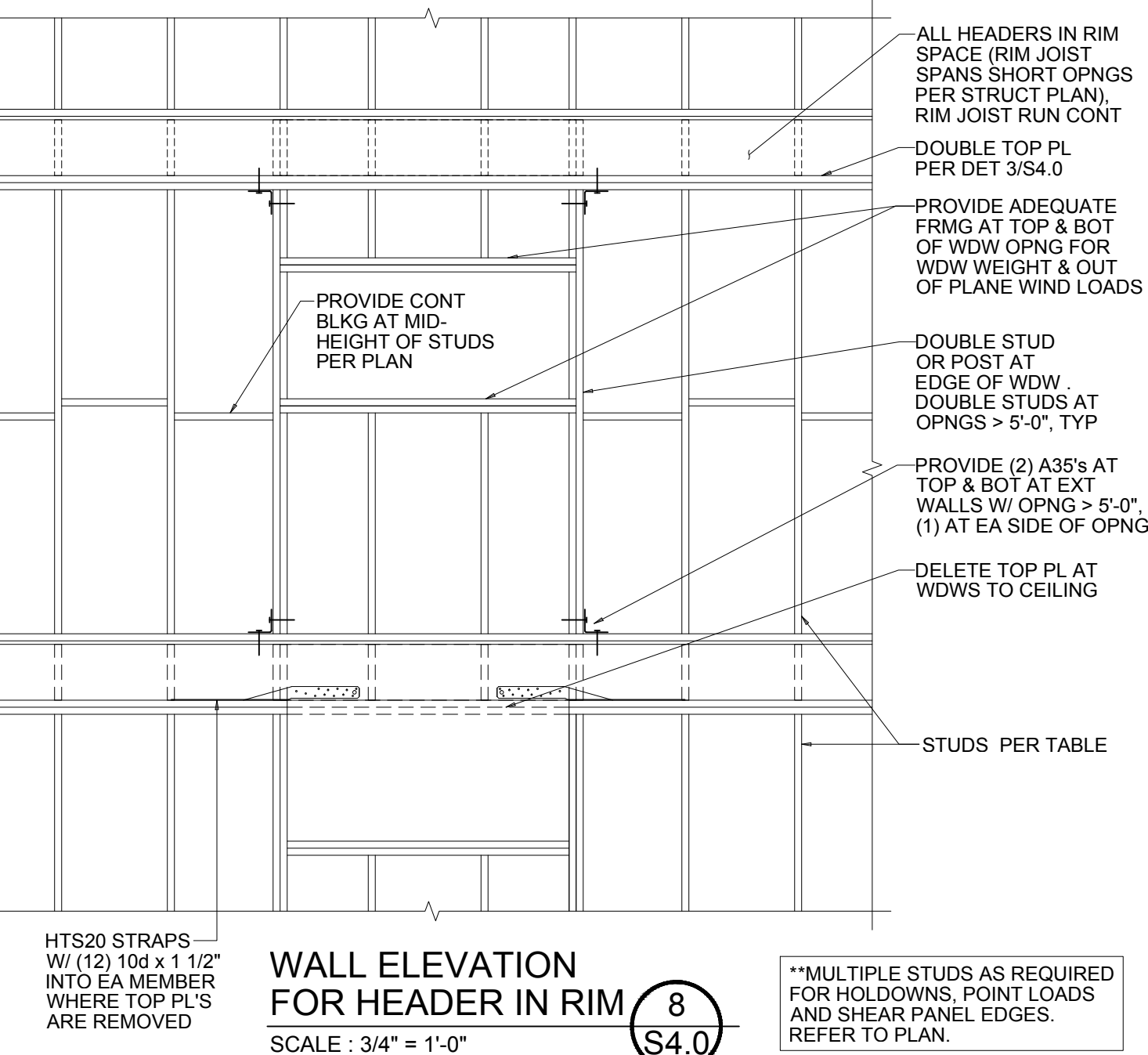
TYPICAL TOP PLATE SPLICE **3**
SCALE : 3/4" = 1'-0"



TYPICAL HEADER **2**
SCALE : 3/4" = 1'-0"

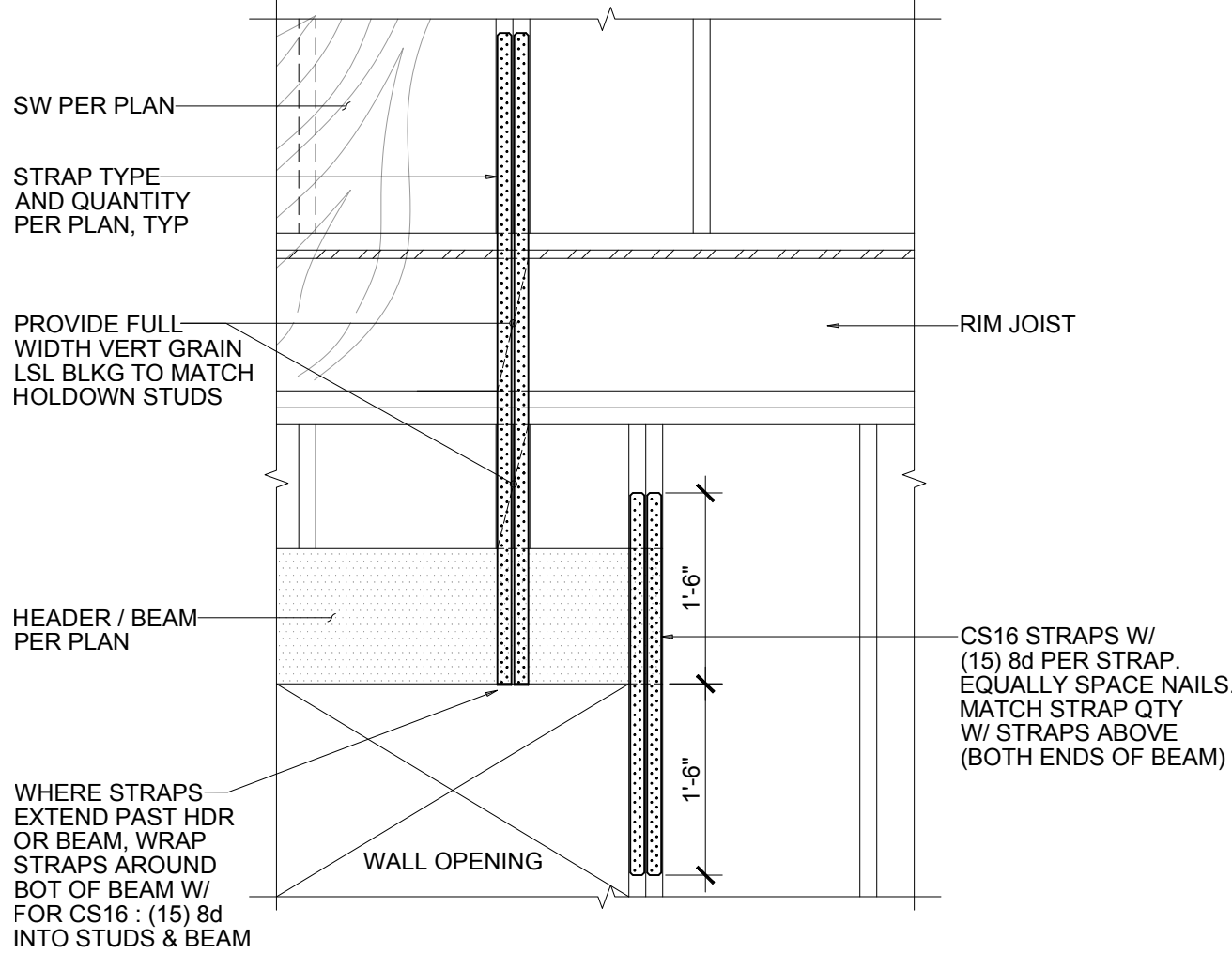


EXTERIOR WALL WITH PERPENDICULAR JOIST **1**
SCALE : 1 1/2" = 1'-0"

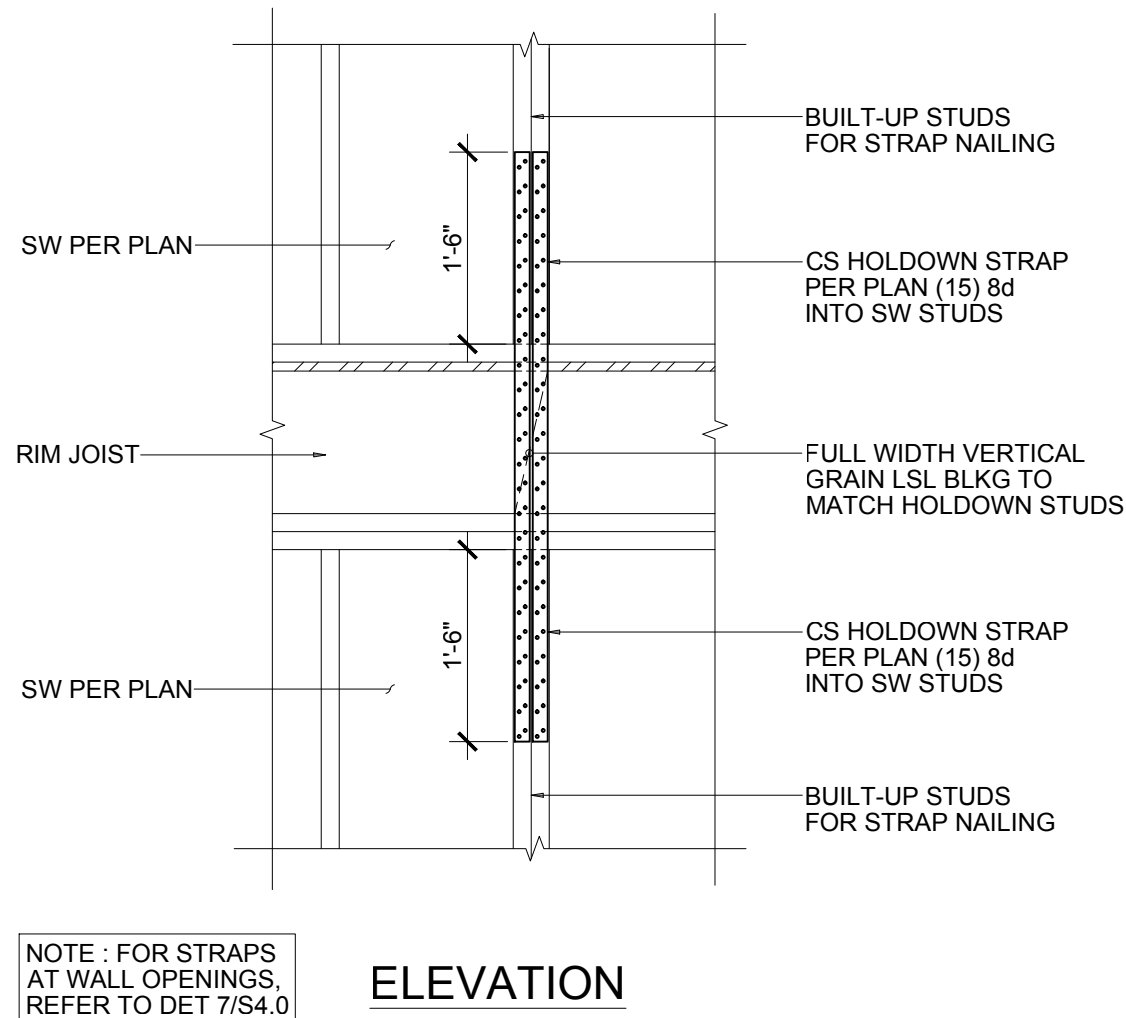


WALL ELEVATION FOR HEADER IN RIM **8**
SCALE : 3/4" = 1'-0"

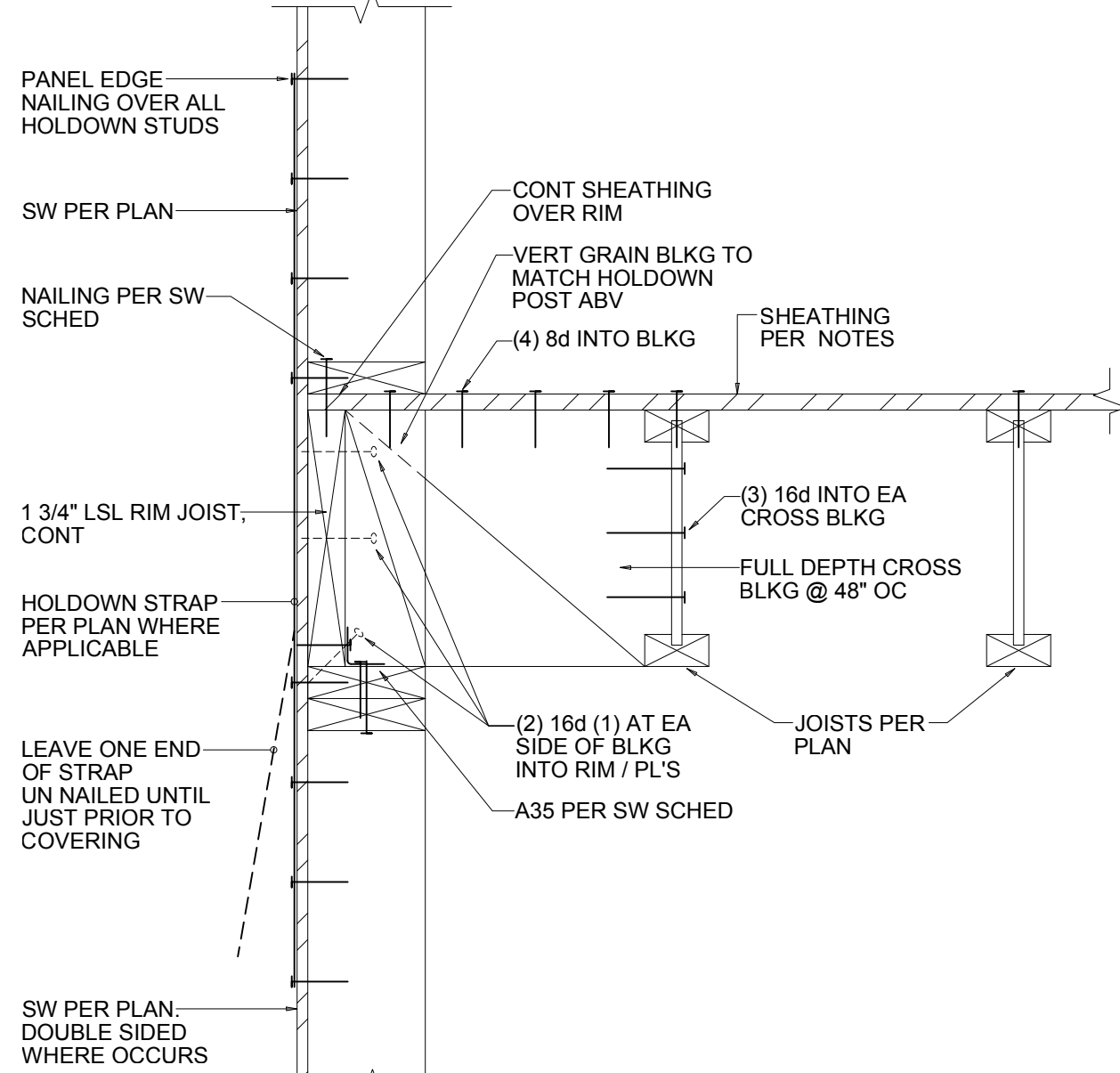
**MULTIPLE STUDS AS REQUIRED FOR HOLDOWNS, POINT LOADS AND SHEAR PANEL EDGES. REFER TO PLAN.



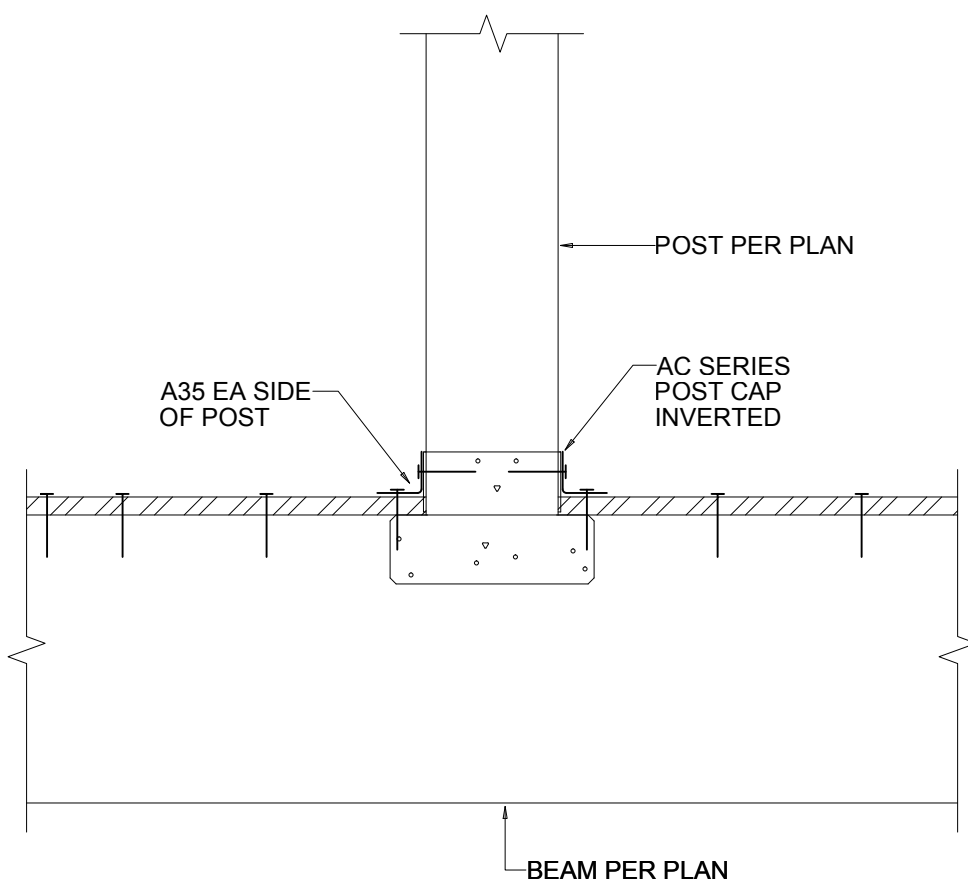
TYPICAL HOLDOWN STRAP AT WALL OPENING **7**
SCALE : 3/4" = 1'-0"



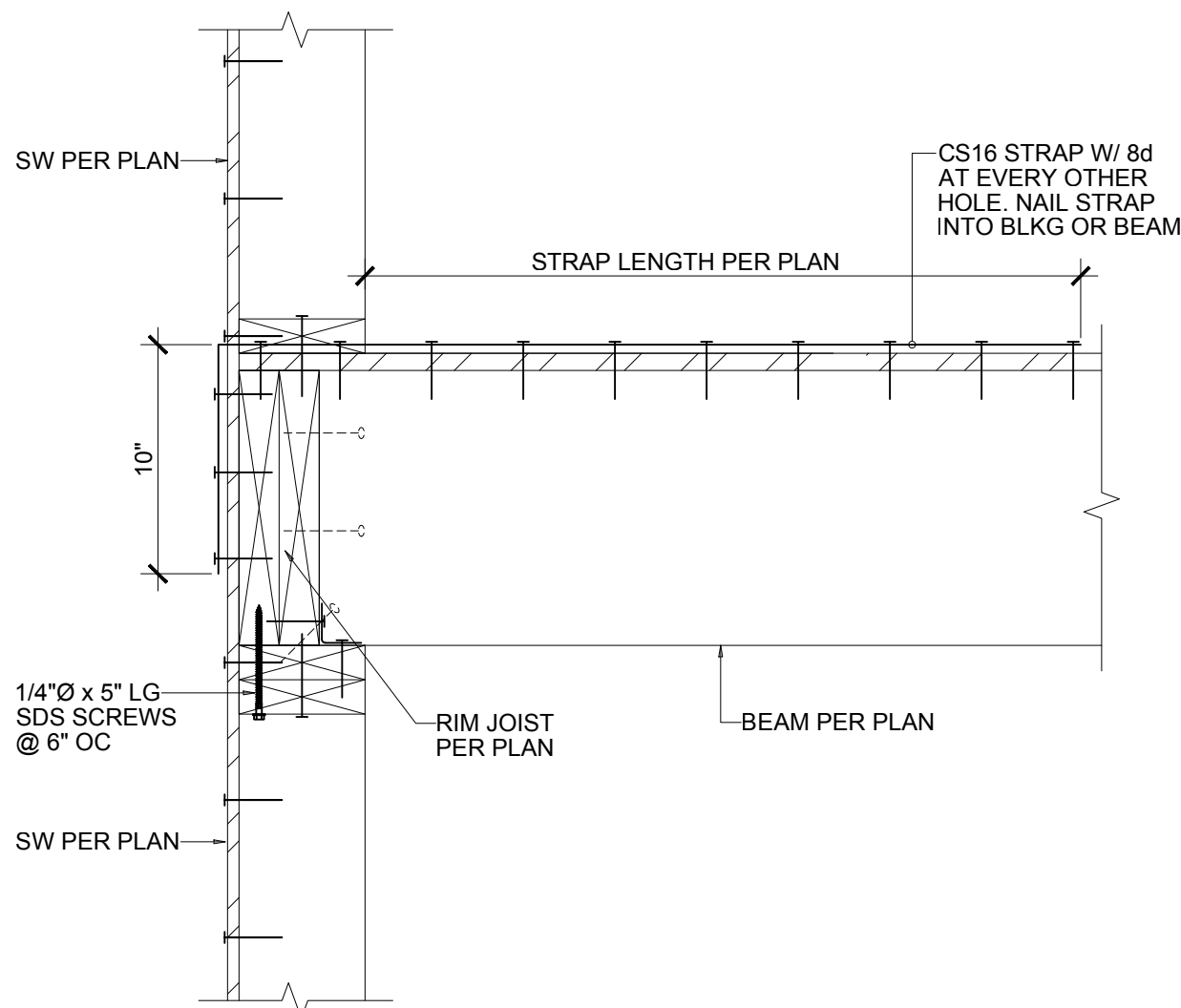
TYPICAL CS HOLDOWN STRAP **6**
SCALE : 3/4" = 1'-0"



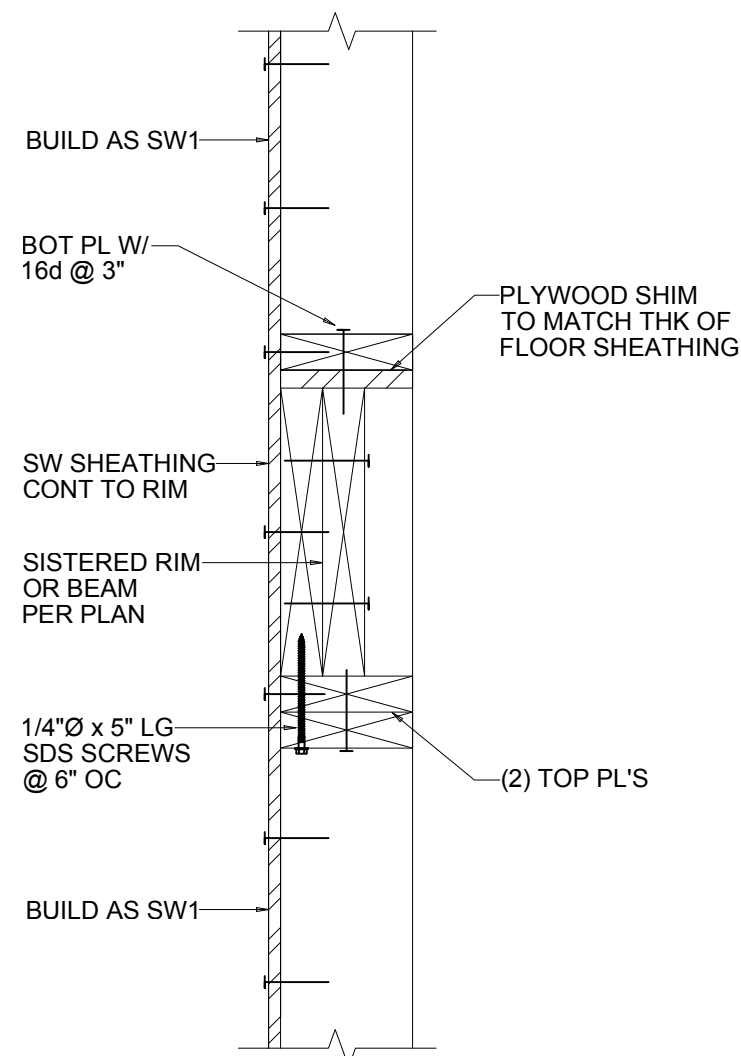
EXTERIOR WALL WITH PARALLEL JOIST **5**
SCALE : 1 1/2" = 1'-0"



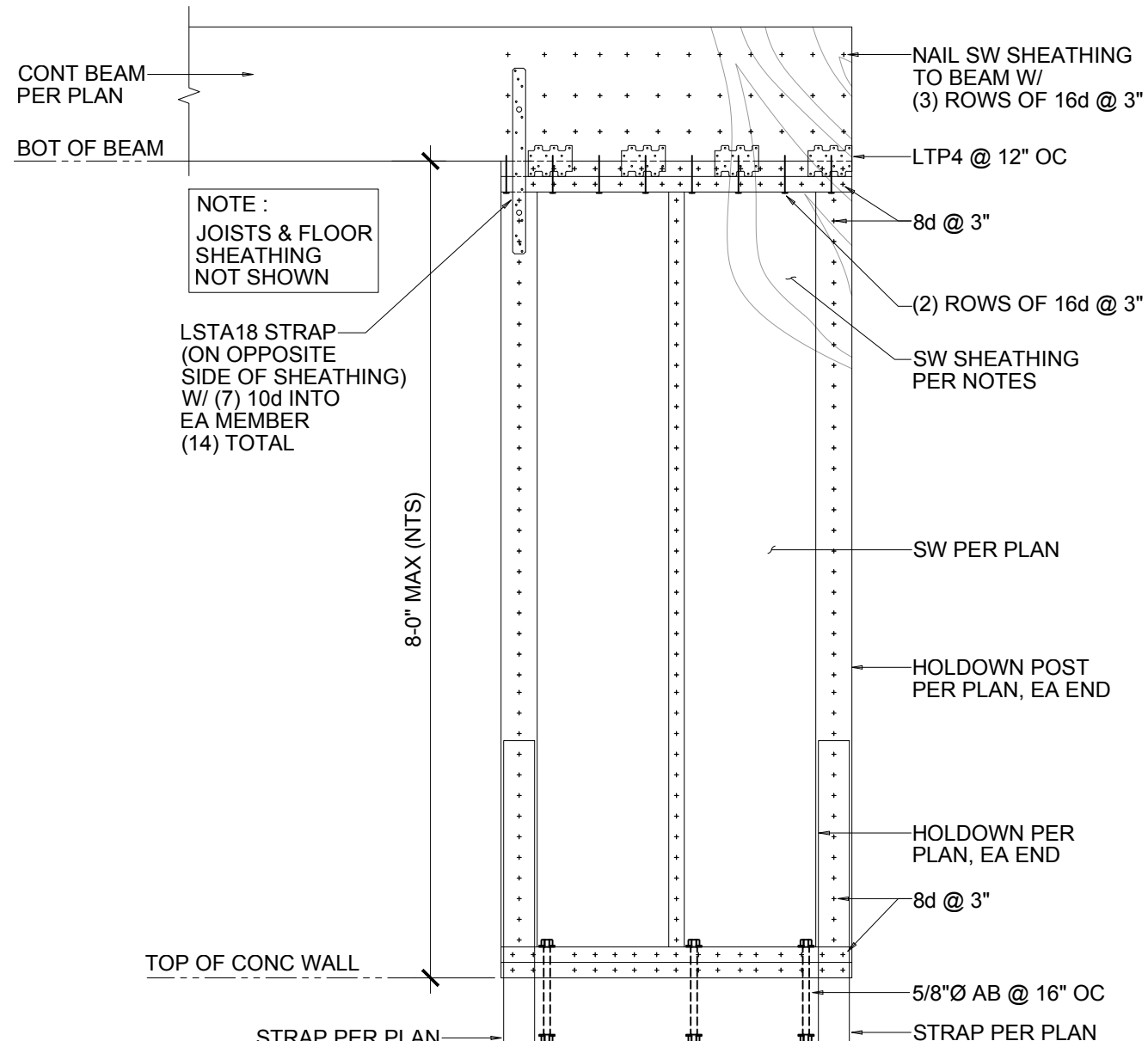
ISOLATED WOOD POST ON WOOD BEAM **12**
NOT TO SCALE



STRAP AT STAIRWELL RIM JOIST **11**
SCALE : 1 1/2" = 1'-0"



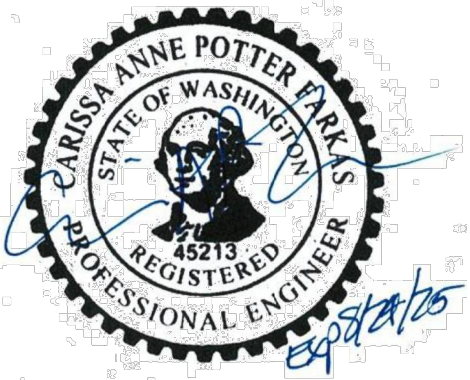
SECTION AT STAIR WELL **10**
SCALE : 1 1/2" = 1'-0"



SHEARWALL PORTAL ELEVATION **9**
NOT TO SCALE

cfse
CARISSA FARKAS
STRUCTURAL
ENGINEERING, PLLC
206.6833197

ENGINEER'S SEAL



© CF Structural Engineering, LLC 2024.
These drawings were prepared for the
2755 73rd Ave. SE, New SFR + DADU
project in Mercer Island, WA.
They are not intended for use on any
other project.

PROJECT TITLE

73RD AVENUE RESIDENCES
(SFR + DADU)

ADDRESS

2755 73rd Ave. SE,
Mercer Island, WA
98040

No.	Date	Issue
12.31.24		Coordination
01.10.25		Building Permit

SHEET CONTENTS

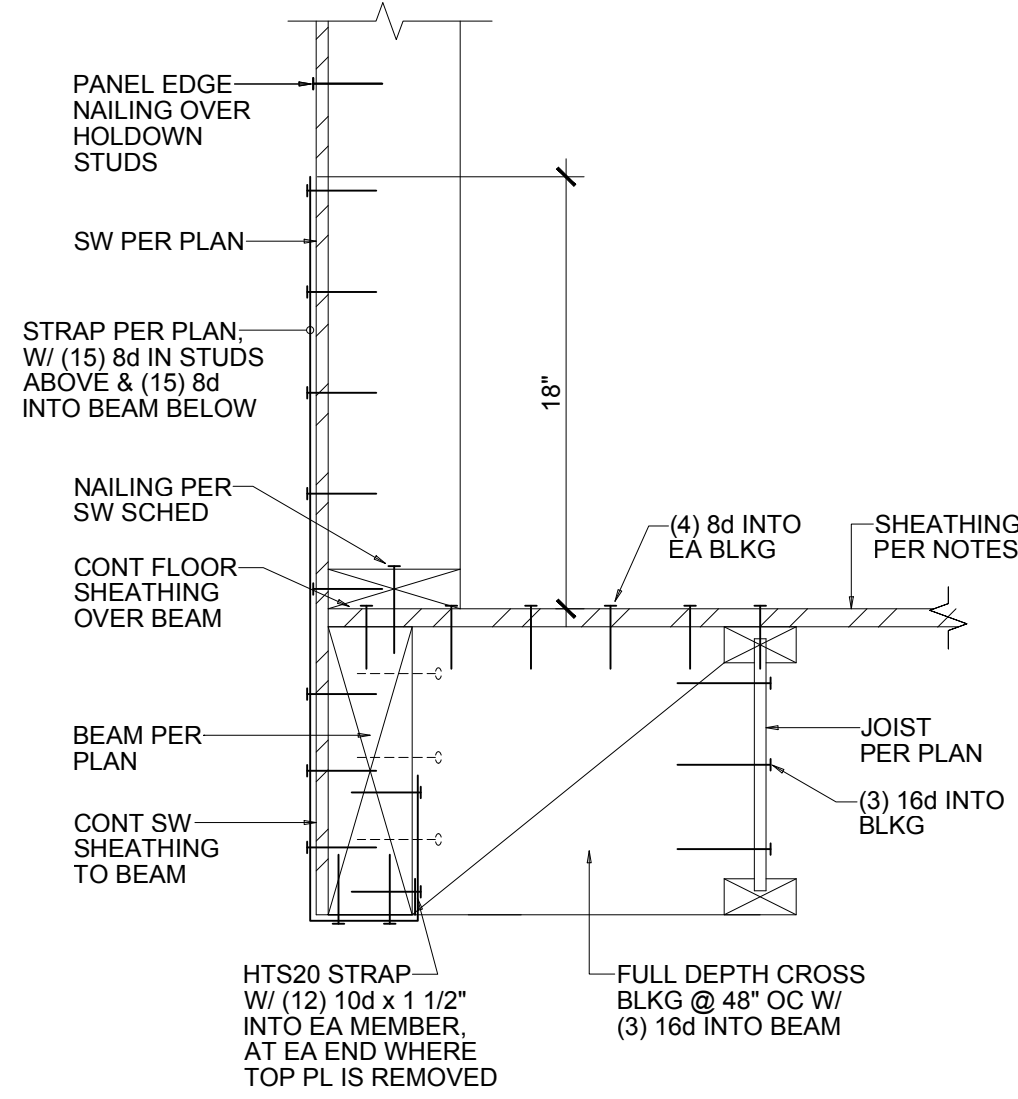
FRAMING DETAILS

JOB NO. 2449

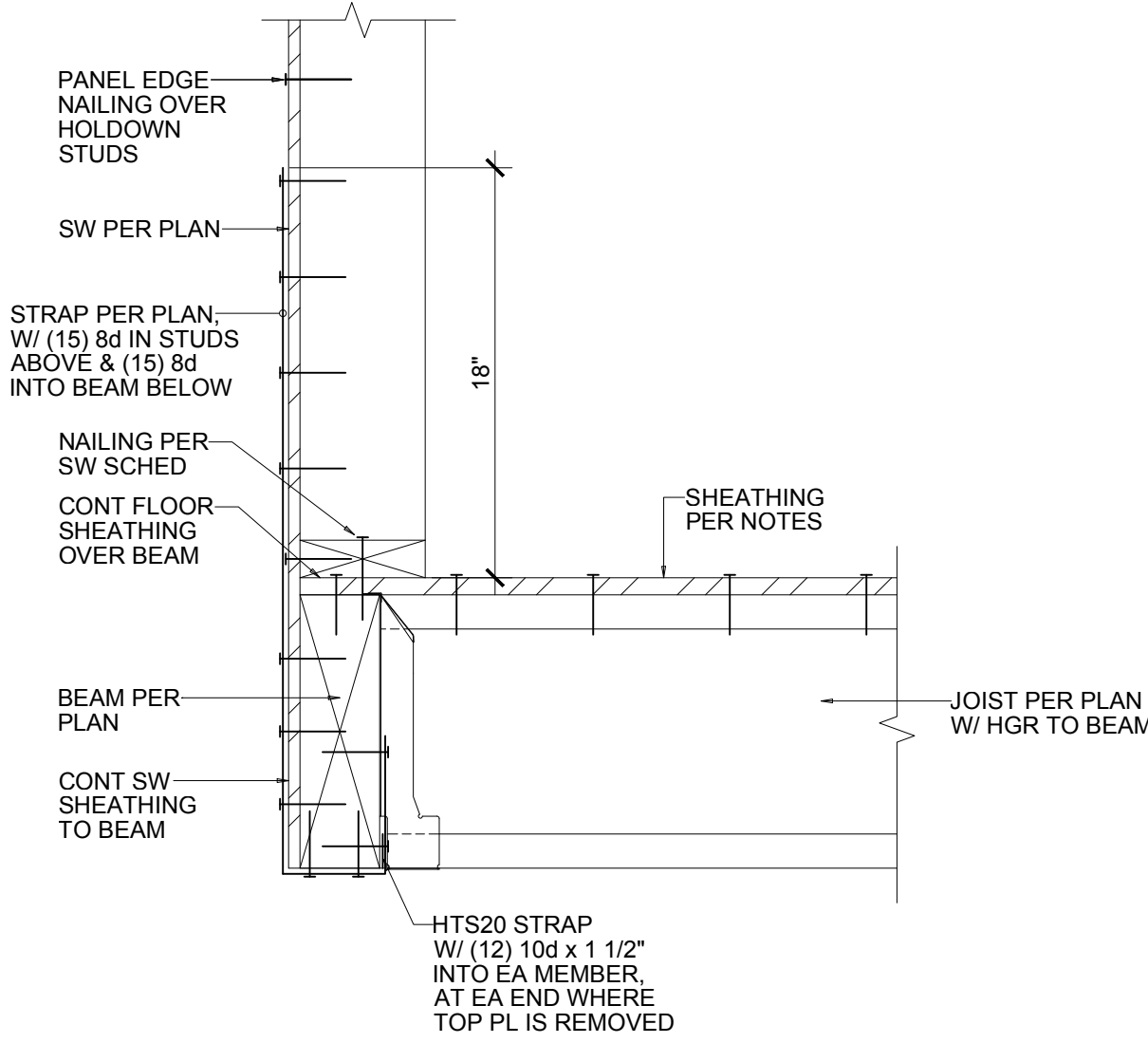
SHEET NO.

S4.0

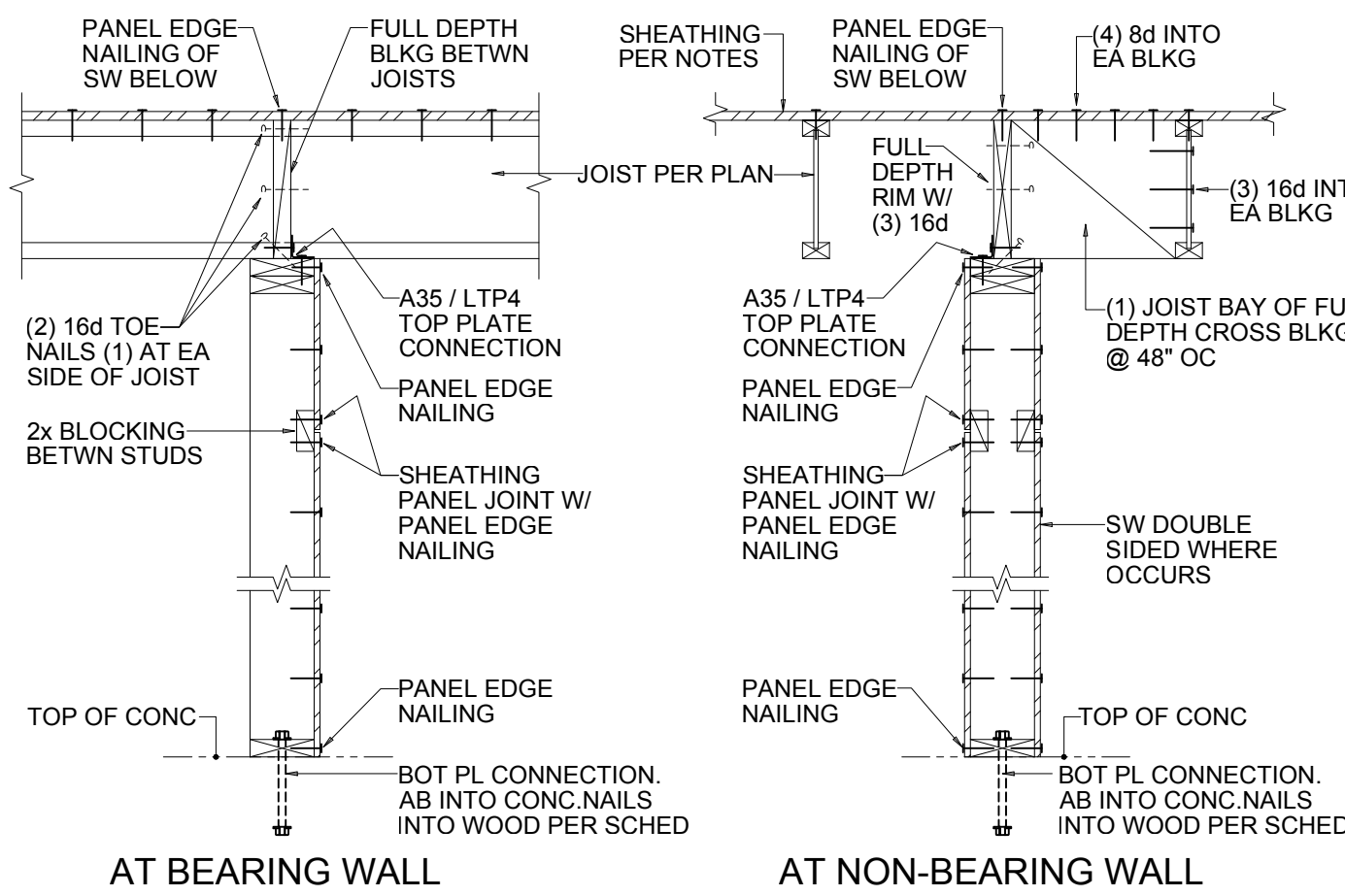
DPD APPROVAL



DISCONTINUOUS SHEARWALL 3
SCALE : 1 1/2" = 1'-0"



DISCONTINUOUS SHEARWALL 2
SCALE : 1 1/2" = 1'-0"



NOTE:
• DETAIL SHOWN IS A GENERAL ILLUSTRATION FOR THE SHEARWALL SCHEDULE. PROJECT SPECIFIC DETAILS GOVERNS OVER DETAILS SHOWN HERE.
• SEE SHEARWALL SCHEDULE FOR ALL NAILING AND CONNECTIONS, NOT OTHERWISE NOTED

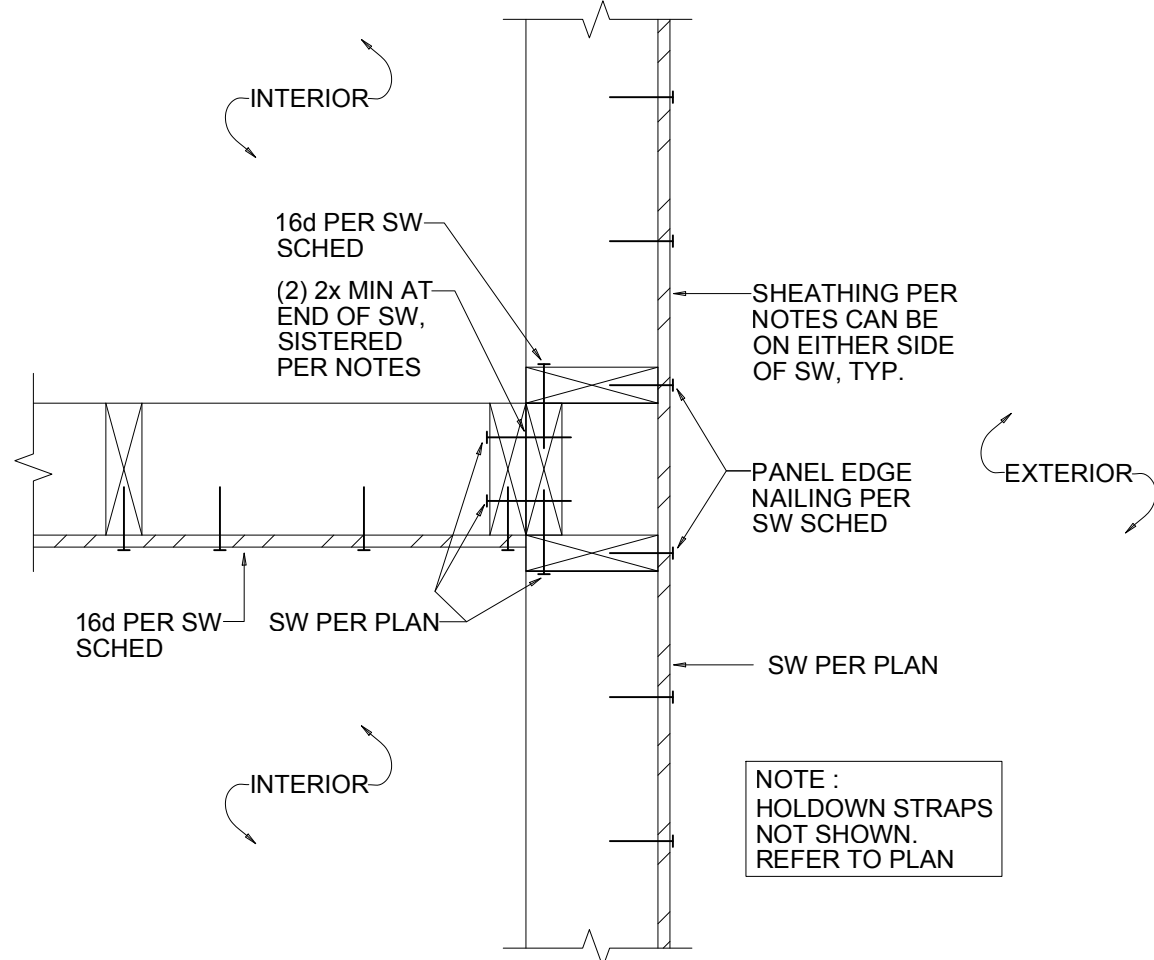
PLAN DETAIL AT JOINT

STANDARD SHEARWALL CONSTRUCTION 1
NOT TO SCALE

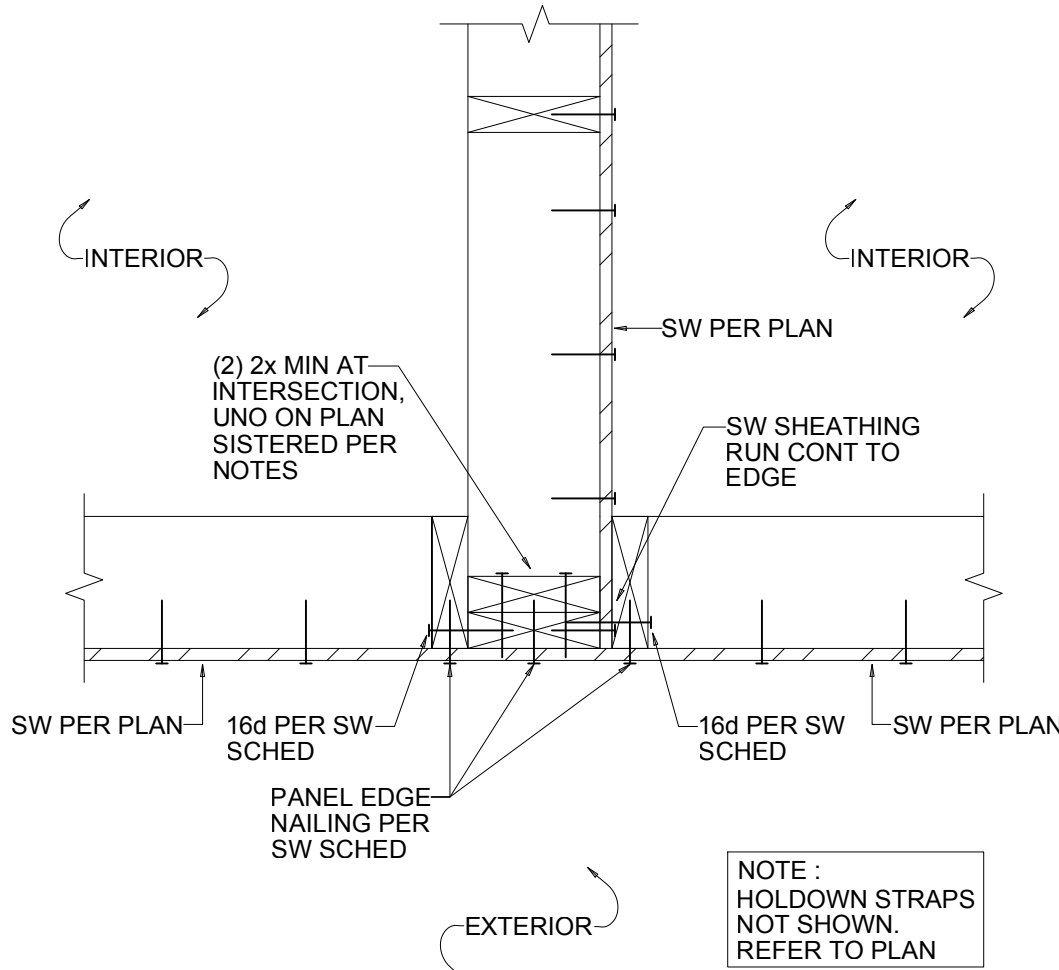
SHEARWALL SCHEDULE

TYPE	SHEATHING	PANEL EDGE NAILING	TOP PLATE CONNECTION	BASE PLATE CONNECTION	
				AT WOOD	AT CONCRETE
SW1	1/2" PLYWOOD	8d @ 6"	A35 @ 24" OC	16d @ 6"	5/8"Ø AB @ 48" OC
SW2	1/2" PLYWOOD	8d @ 4"	A35 @ 16" OC	16d @ 4"	5/8"Ø AB @ 32" OC
SW3	1/2" PLYWOOD	8d @ 3"	A35 @ 12" OC	16d @ 3"	5/8"Ø AB @ 16" OC
SW4	1/2" PLYWOOD	8d @ 2"	A35 @ 9" OC	(2) ROWS OF 16d @ 4 1/2"	5/8"Ø AB @ 16" OC
SW5	1/2" PLYWOOD EA SIDE	8d @ 2" EA SIDE	A35 @ 6" OC	1/4"Ø x 5" LG SDS SCREWS @ 3" OC	5/8"Ø AB @ 12" OC

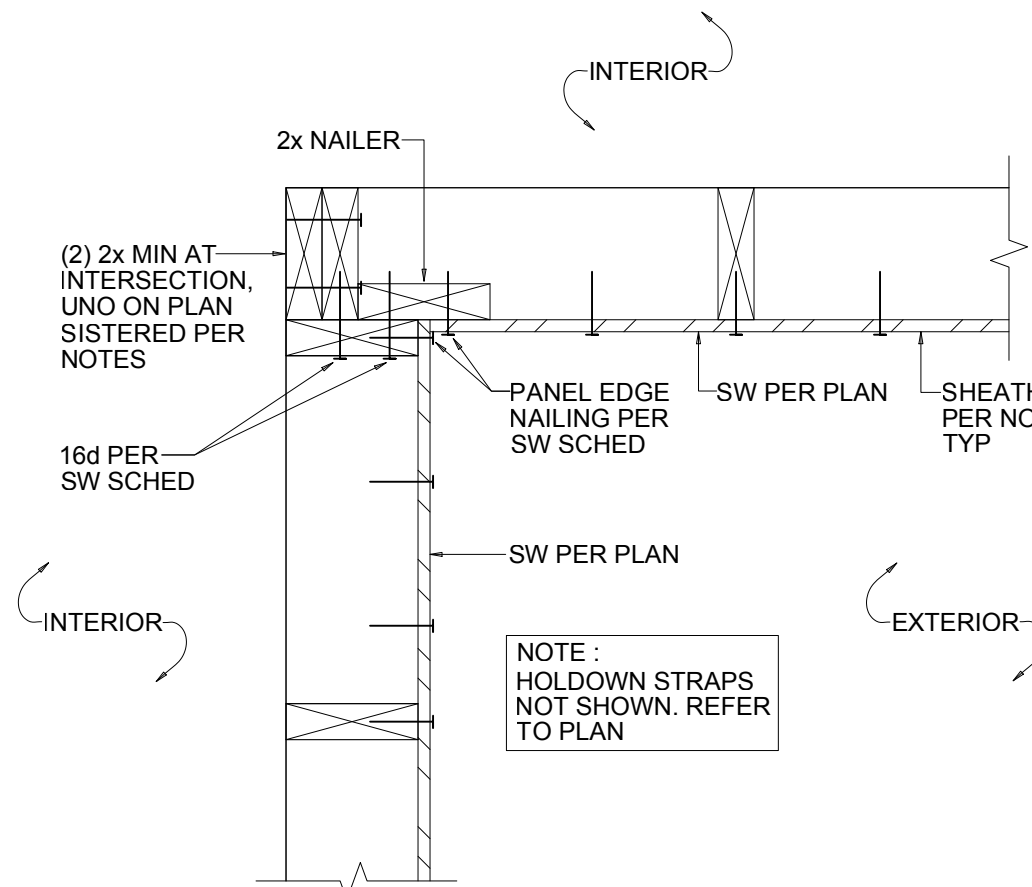
- NOTES :
- BLOCK PANEL EDGES WITH 2x LAID FLAT AND NAIL PANELS TO INTERMEDIATE SUPPORTS WITH 8d @ 12".
 - 8d NAILS SHALL BE 0 131"Ø x 2 1/2" (COMMON) - 16d NAILS SHALL BE 0 135"Ø x 3 1/2" (BOX).
 - EMBED ANCHOR BOLTS AT LEAST 7". TITEN HD ANCHORS MAY BE SUBSTITUTED FOR ANCHOR BOLTS WITH 4" EMBEDMENT. ALL BOLTS SHALL HAVE 3" x 3" x 1/4"THK PLATE WASHER FOR 2x4 WALLS. FOR 2x6 WALLS, USE 'SIMPSON' BPS 5/8-6 WASHER. EDGE OF PLATE WASHER TO BE LOCATED 1/2" MAX FROM EDGE OF WALL SHEATHING.
 - AT ABUTTING PANEL EDGES OF SW3, SW4 AND SW5, USE 3x STUDS OR DOUBLE STUDS. MINIMUM. NAIL DOUBLE STUDS TOGETHER WITH SHEARWALL'S "BASE PLATE CONNECTION AT WOOD" IN THE SHEARWALL SCHEDULE ABOVE.
 - TWO STUDS MINIMUM ARE REQUIRED AT EACH END OF ALL SHEAR WALLS AND ALL END STUDS SHALL RECEIVE PANEL EDGE NAILING.
 - ALL EXTERIOR WALLS SHALL BE SW1, UNLESS NOTED OTHERWISE.
 - LTP4's MAY BE SUBSTITUTED FOR A35's AT CONTRACTOR'S OPTION.



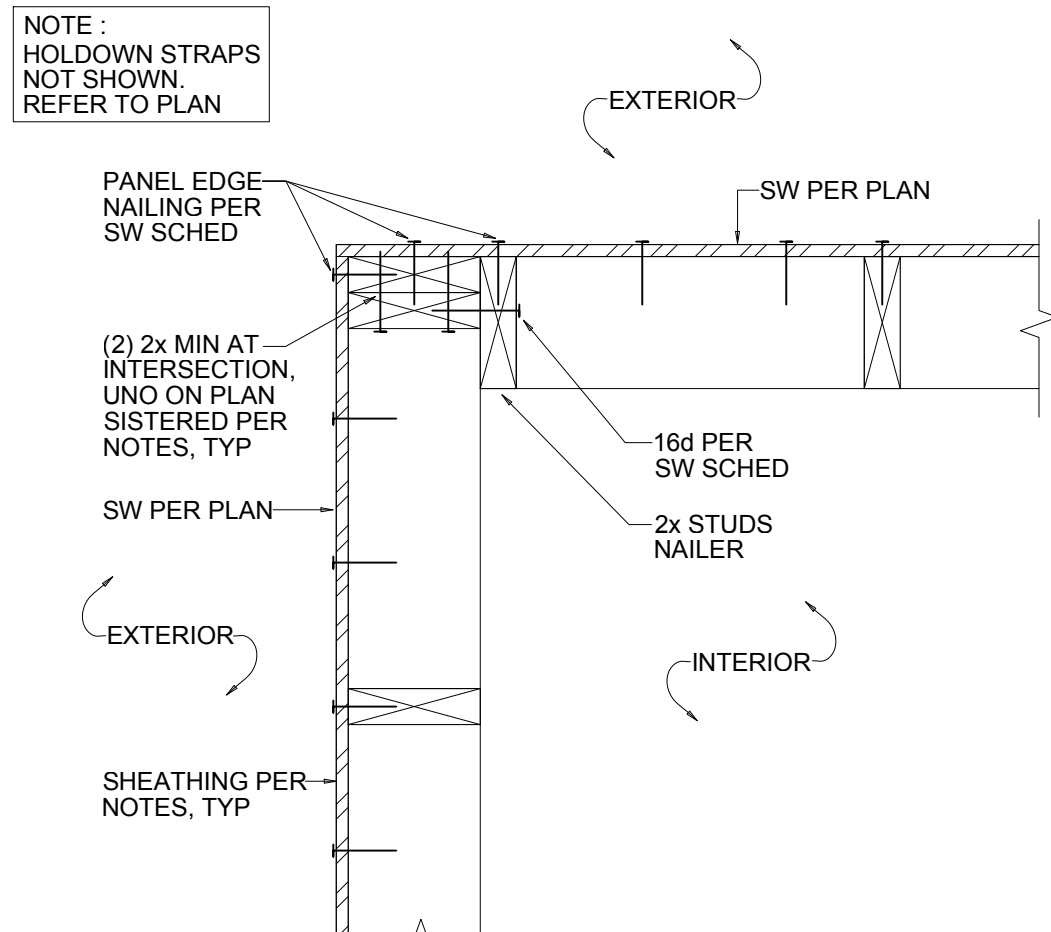
SHEARWALL INTERSECTION 7
SCALE : 1 1/2" = 1'-0"



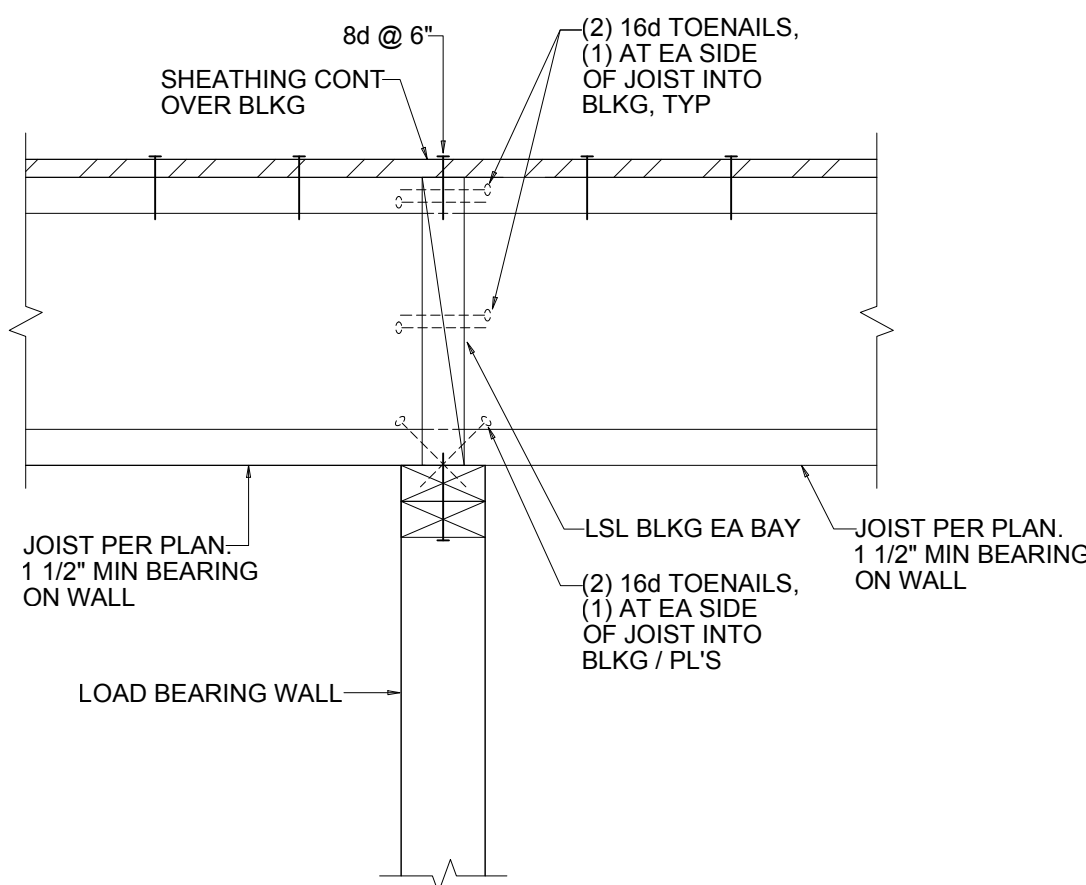
SHEARWALL INTERSECTION 6
SCALE : 1 1/2" = 1'-0"



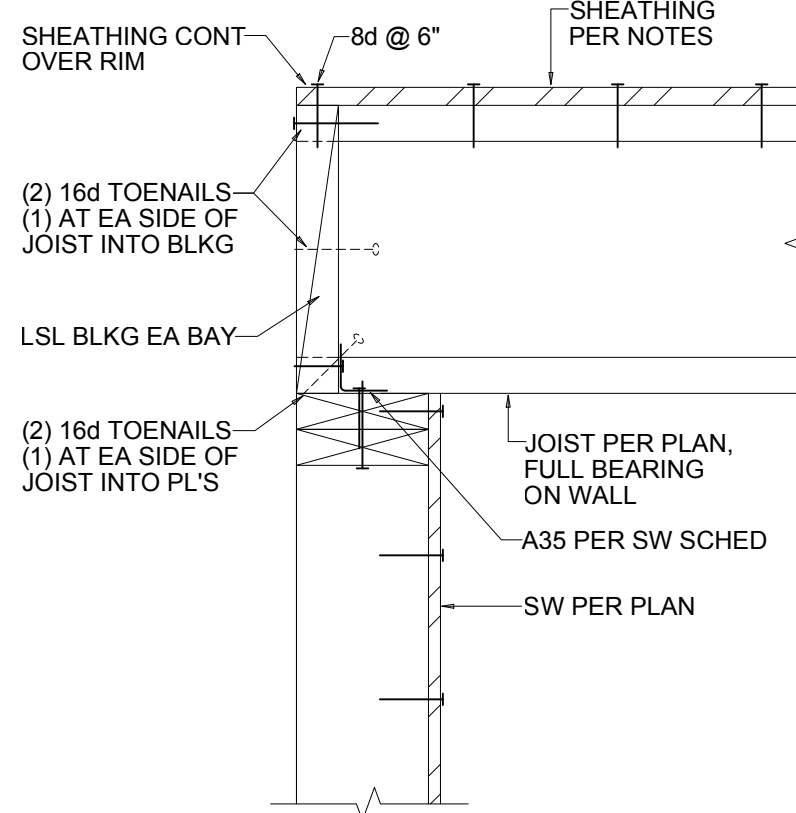
SHEARWALL INTERSECTION 5
SCALE : 1 1/2" = 1'-0"



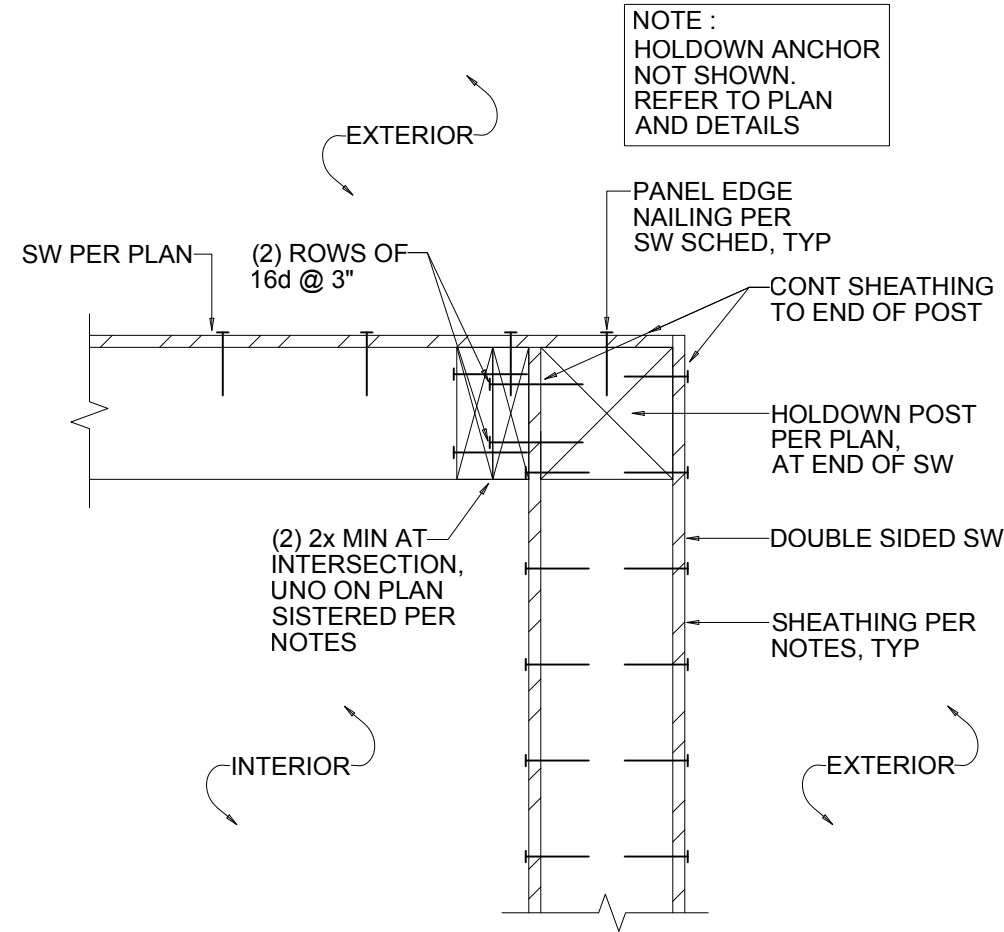
SHEARWALL CORNERS 4
SCALE : 1 1/2" = 1'-0"



JOISTS ON INTERIOR BEARING WALL 10
SCALE : 1 1/2" = 1'-0"



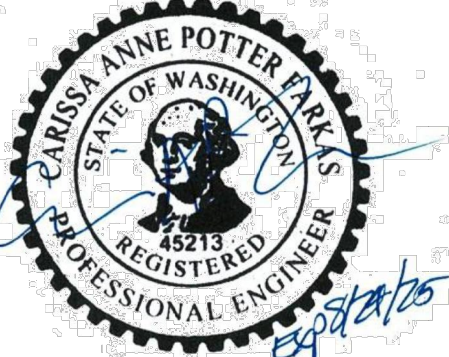
INTERIOR SW W/ PERPENDICULAR JOIST 9
SCALE : 1 1/2" = 1'-0"



DOUBLE SIDED SW CORNERS 8
SCALE : 1 1/2" = 1'-0"



ENGINEER'S SEAL



© CF Structural Engineering, LLC 2024.
These drawings were prepared for the
2755 73rd Ave. SE, New SFR + DADU
project in Mercer Island, WA.
They are not intended for use on any
other project.

PROJECT TITLE

73RD AVENUE RESIDENCES
(SFR + DADU)

ADDRESS

2755 73rd Ave. SE,
Mercer Island, WA
98040

No.	Date	Issue
12.31.24		Coordination
01.10.25		Building Permit

SHEET CONTENTS

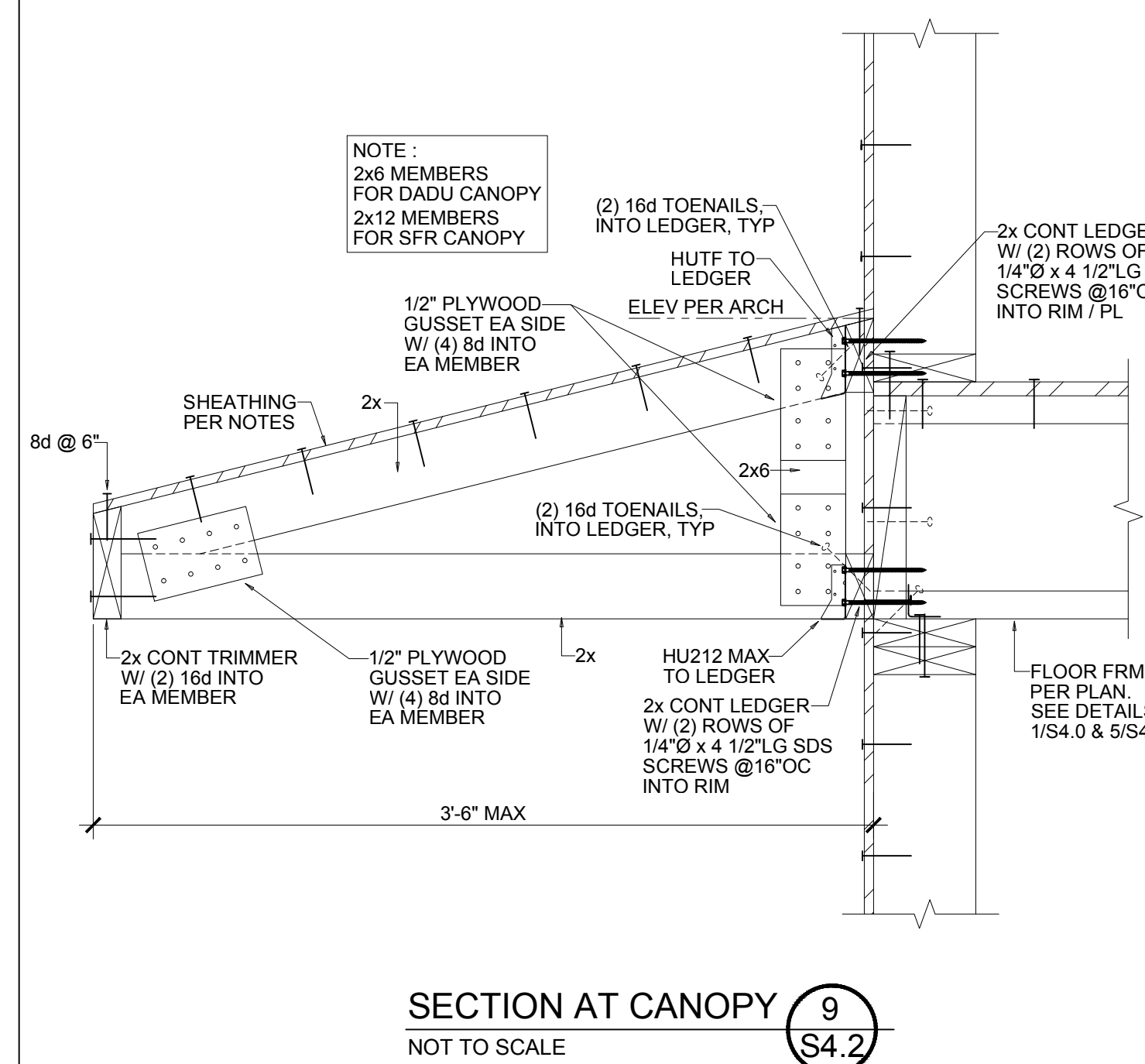
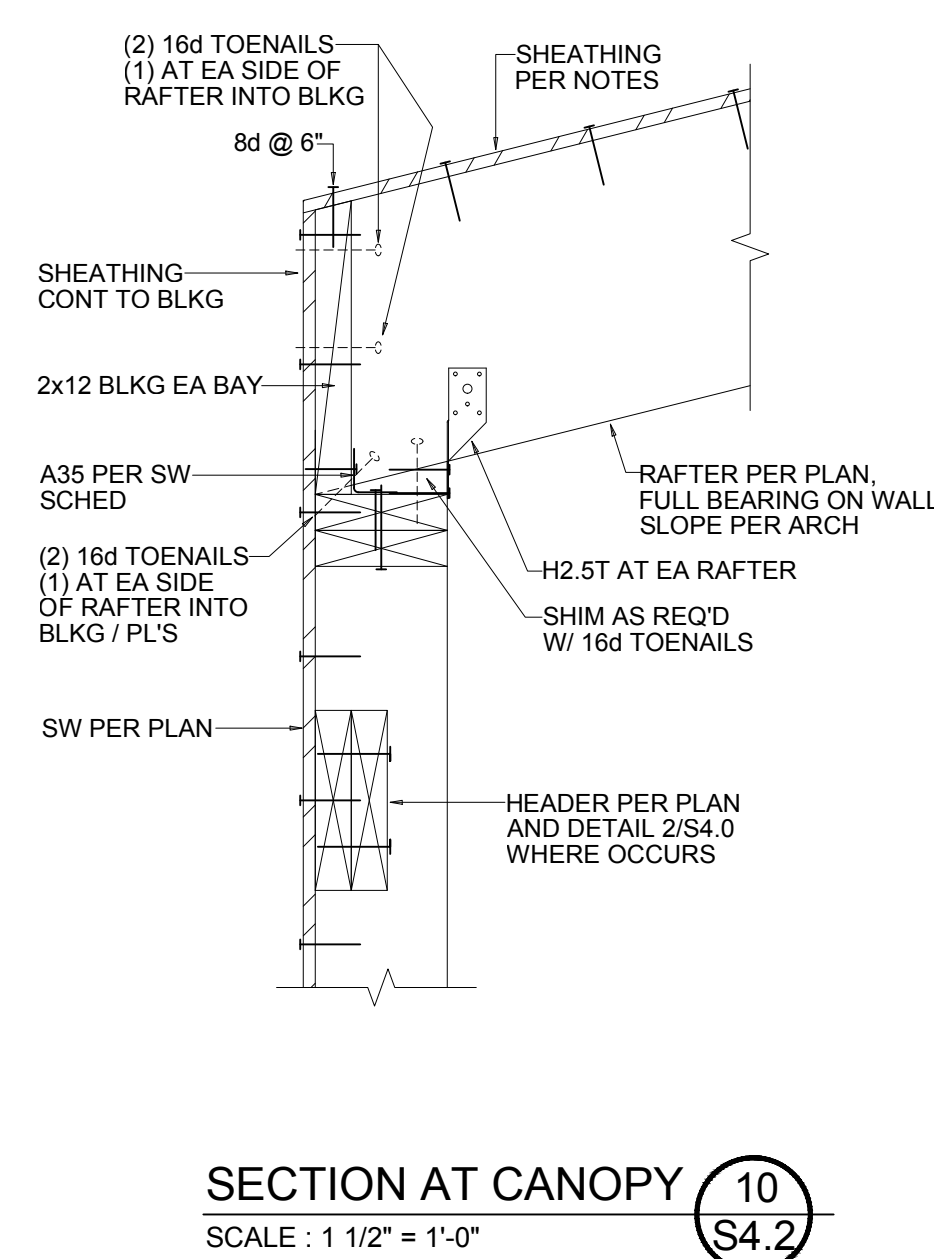
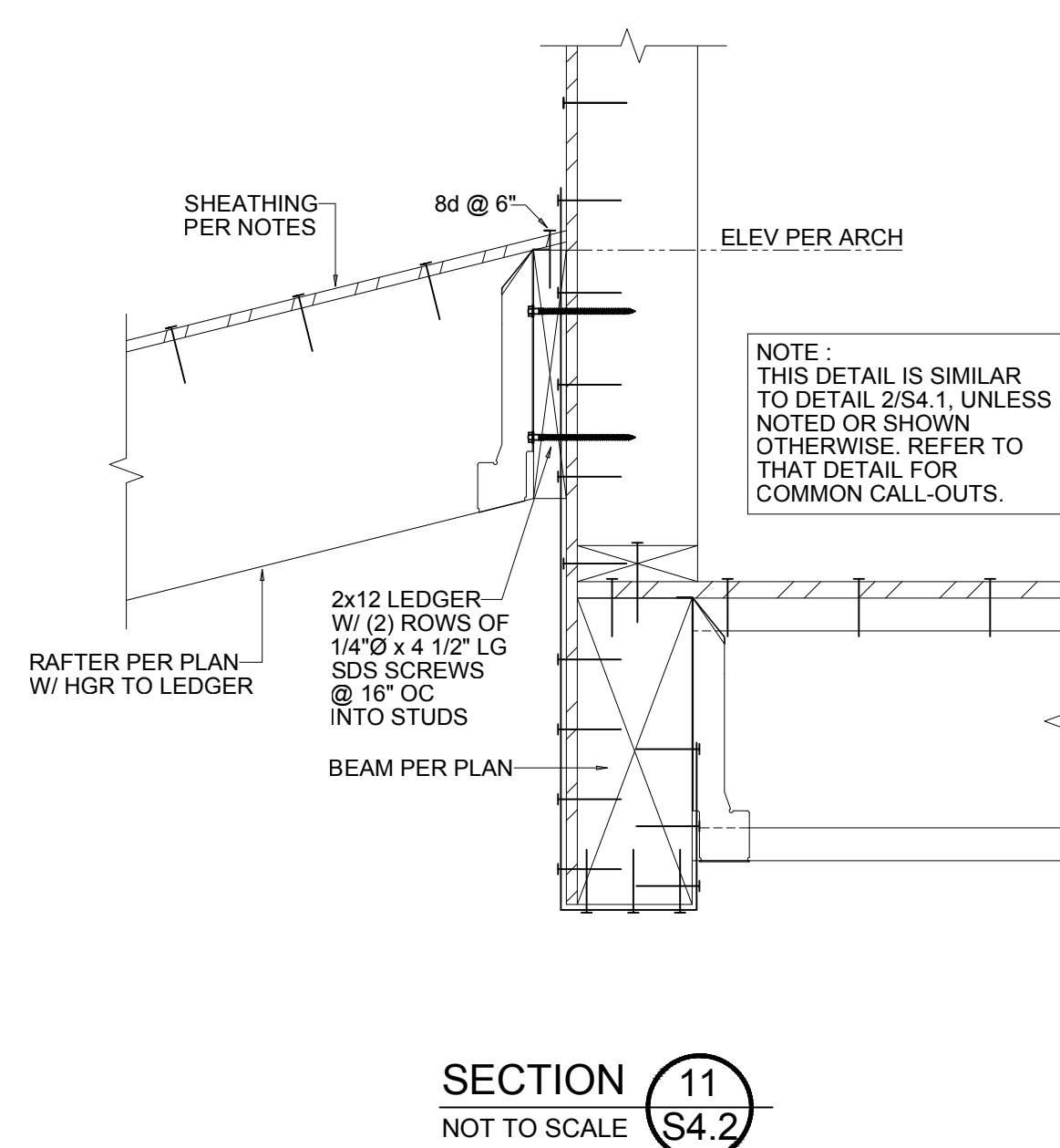
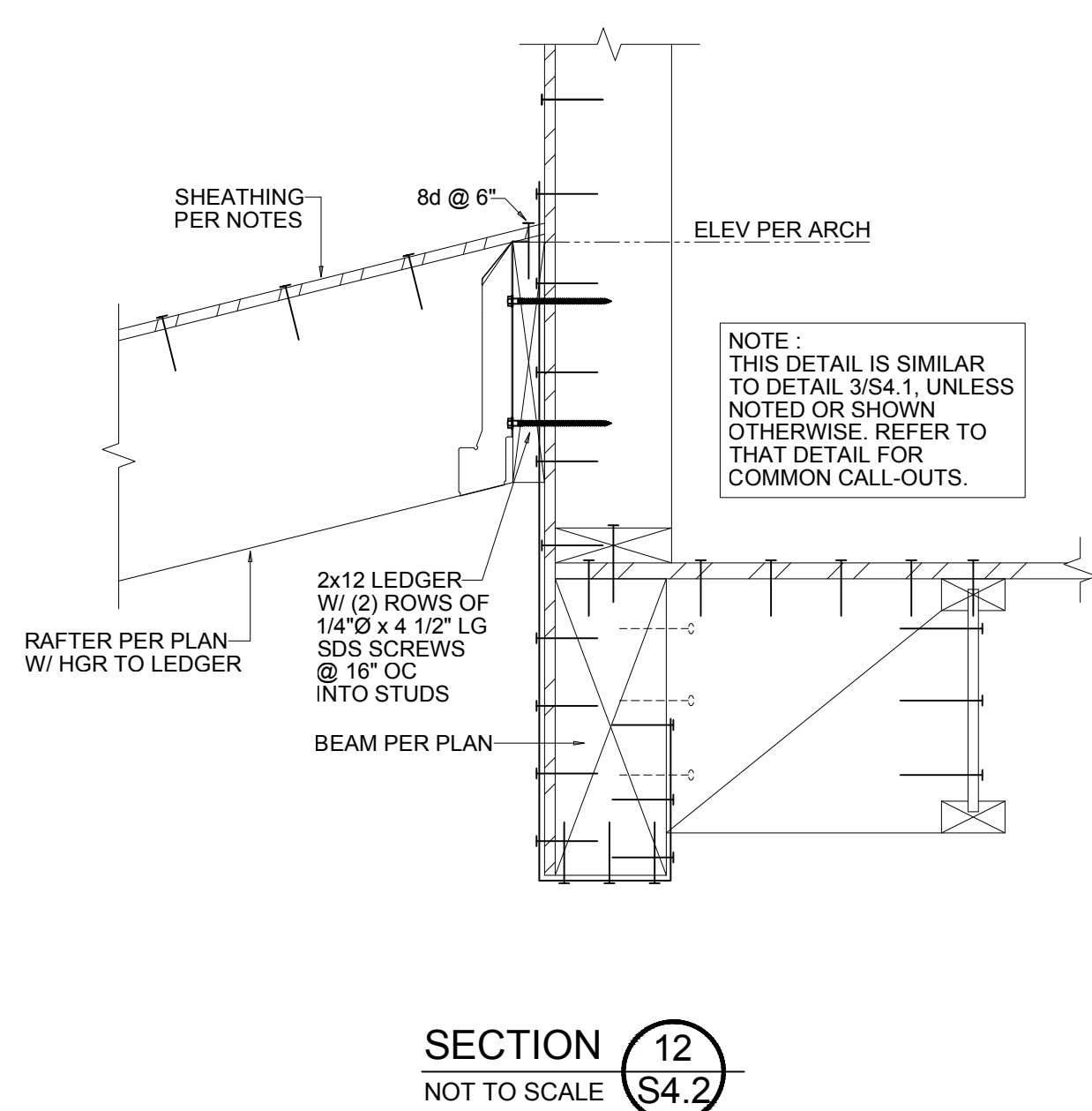
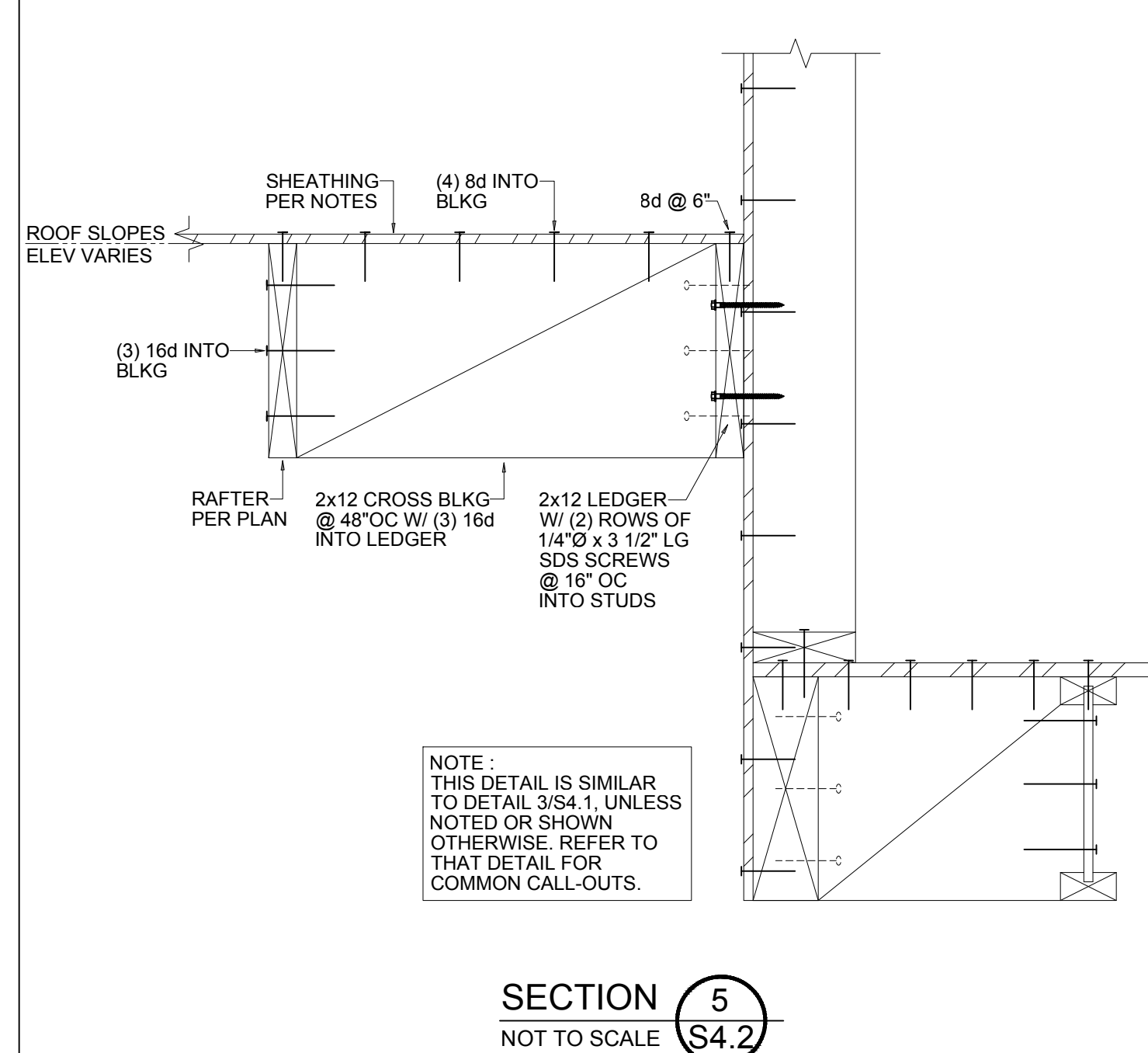
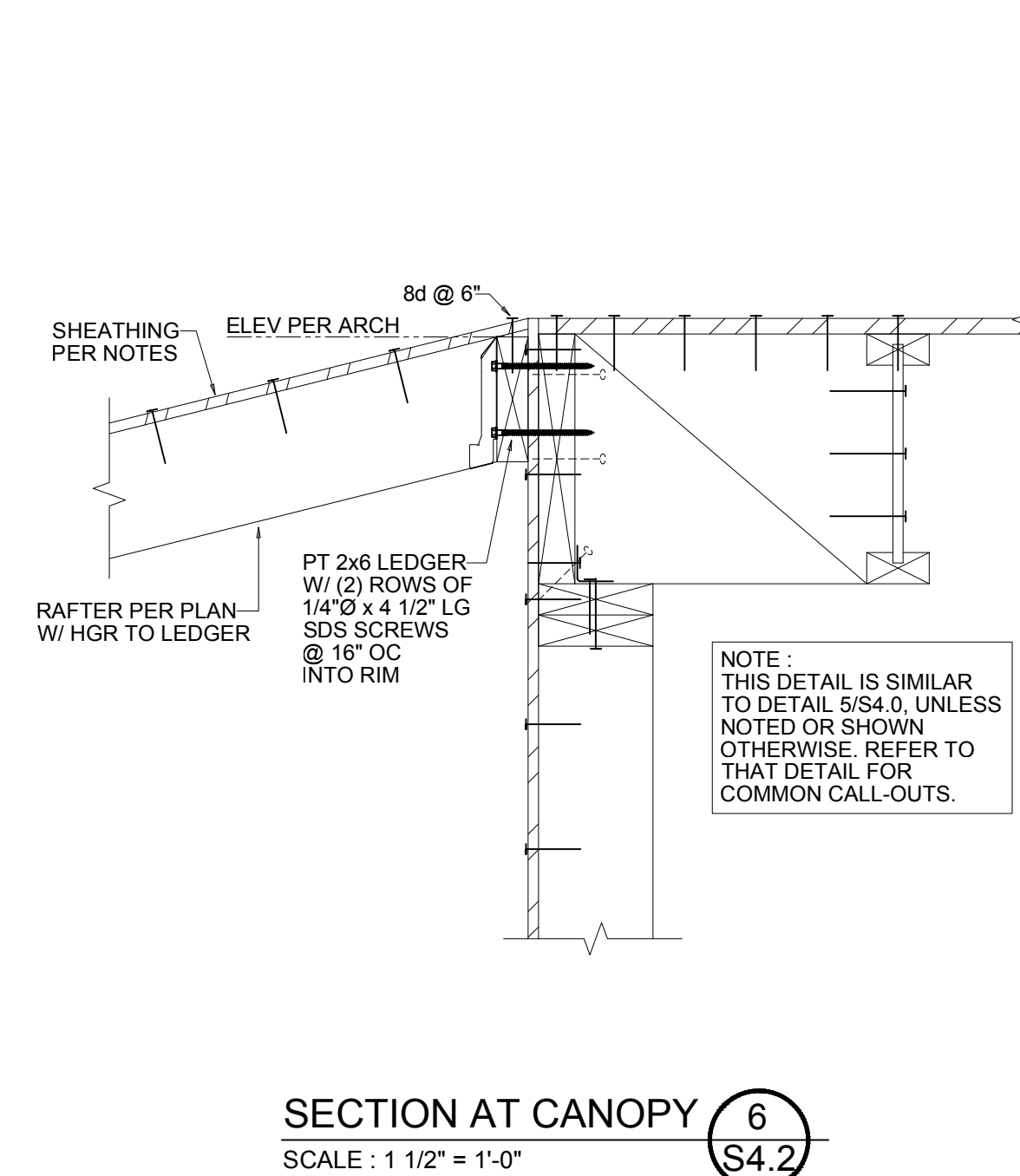
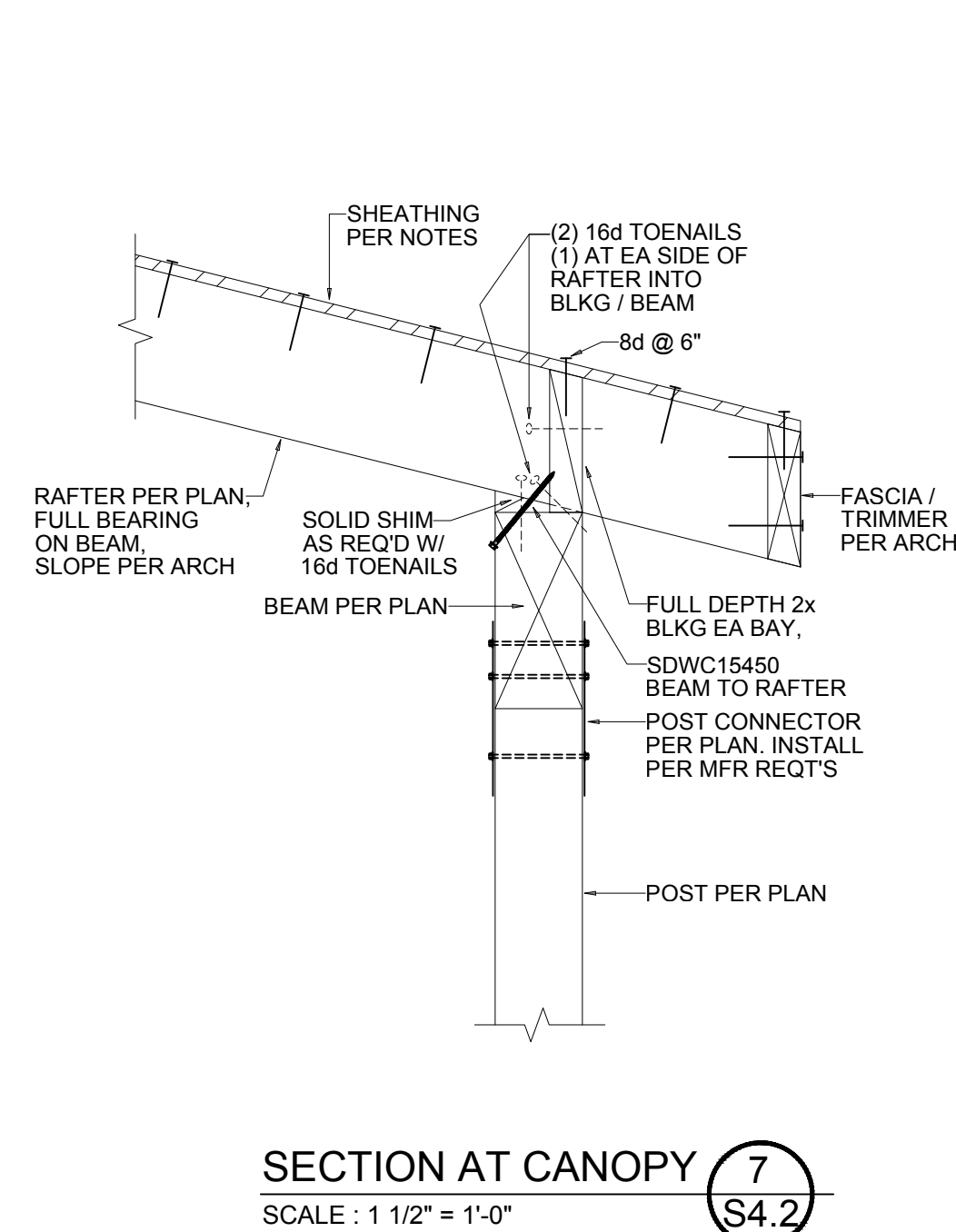
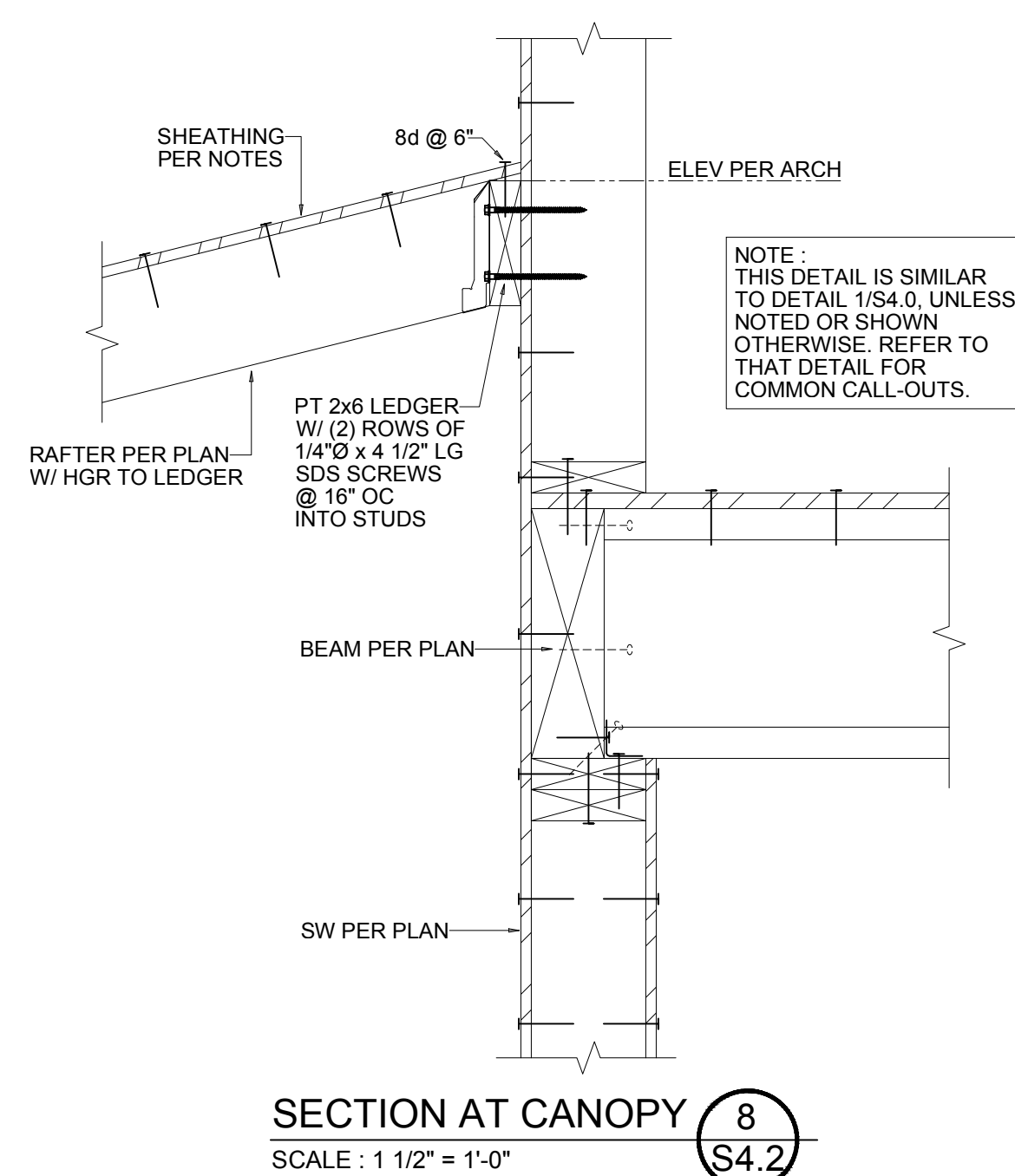
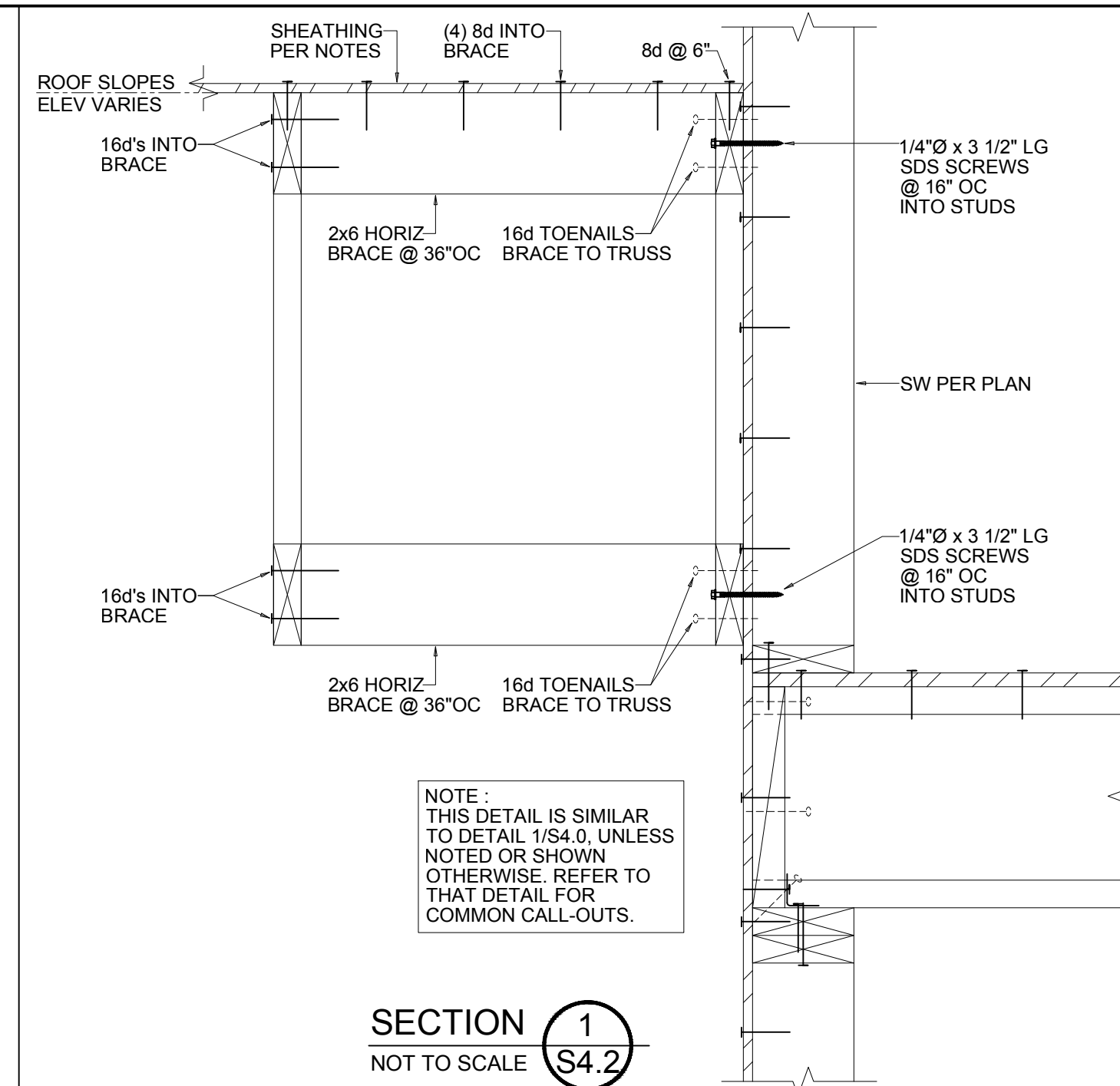
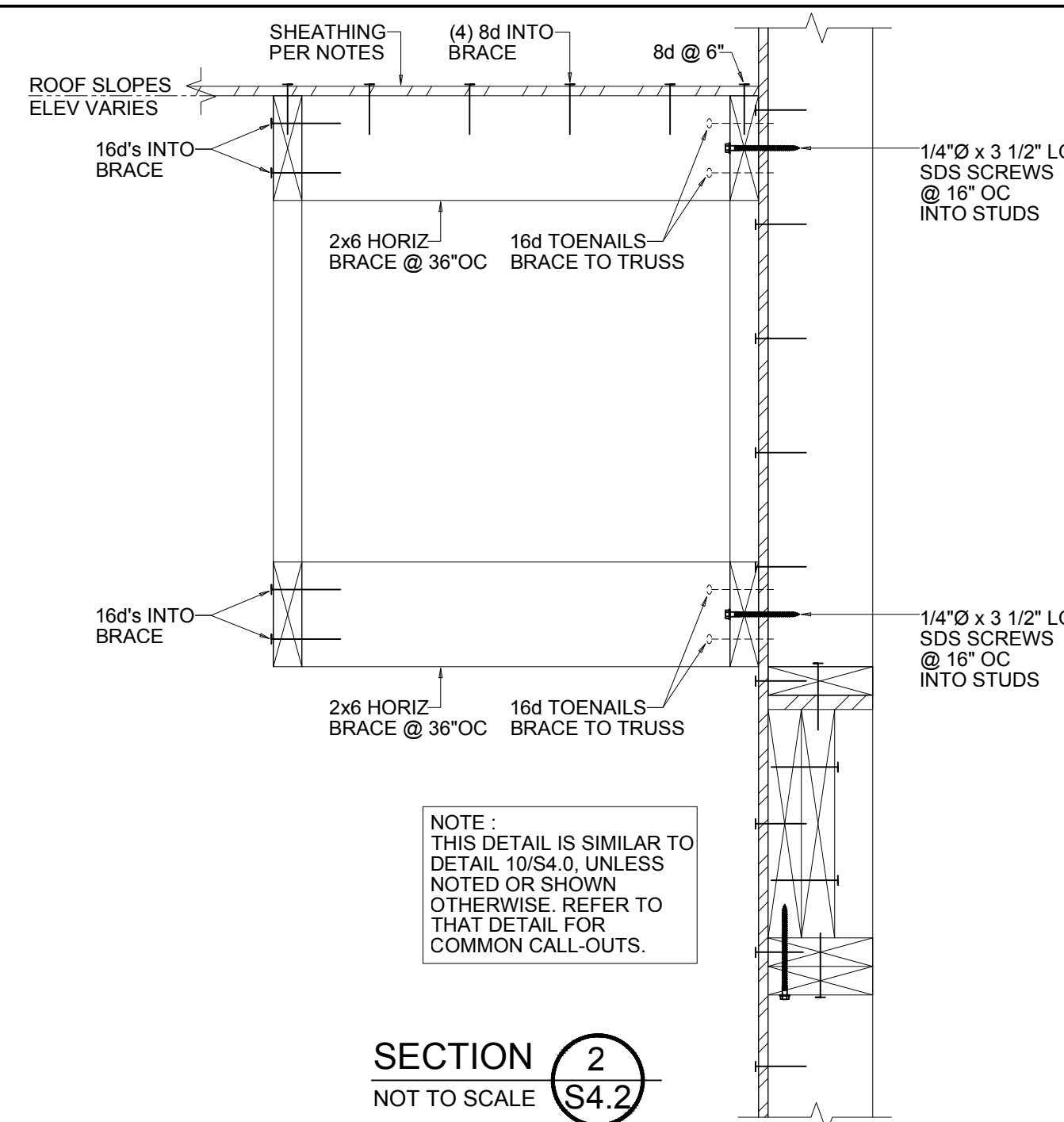
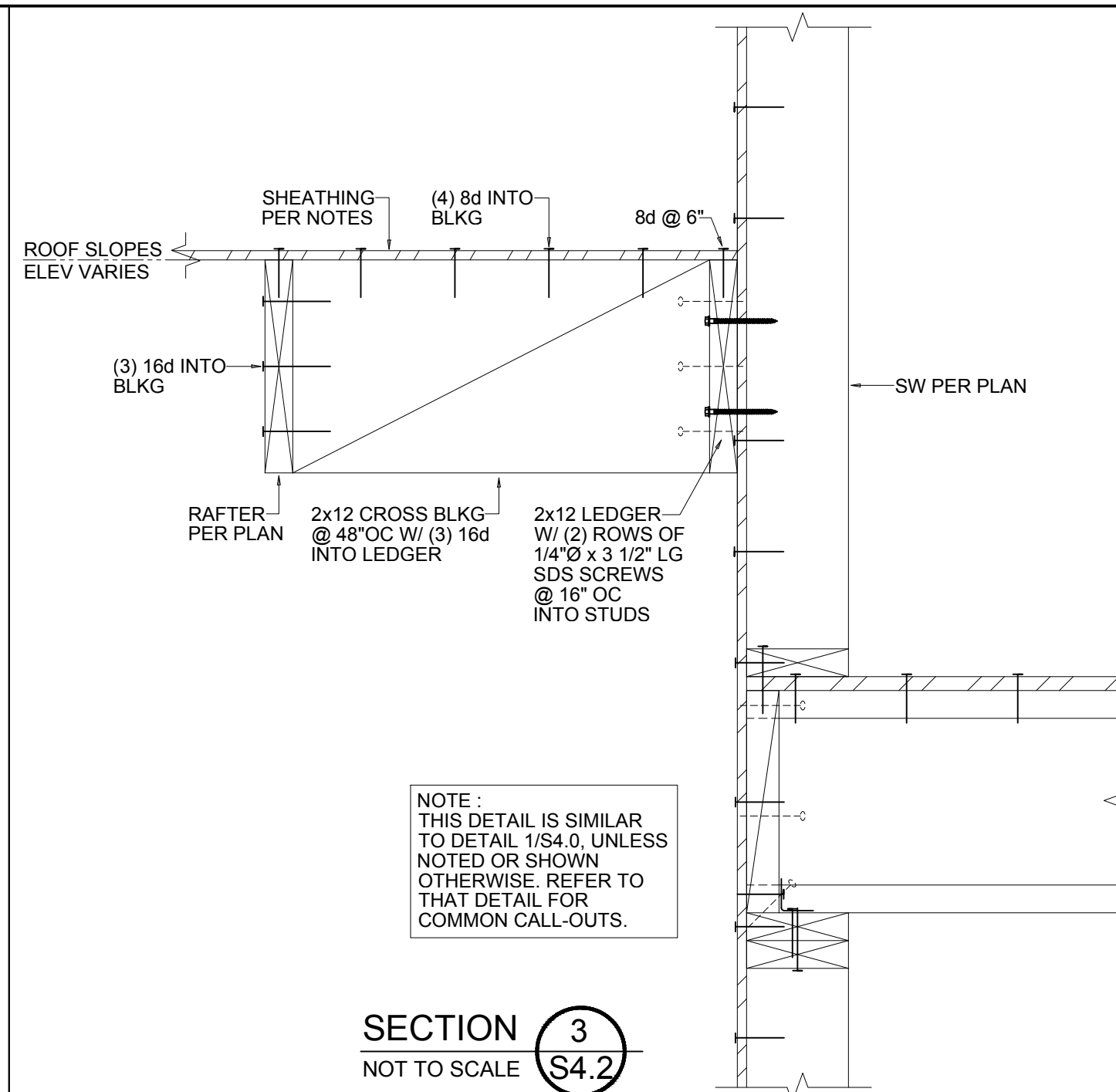
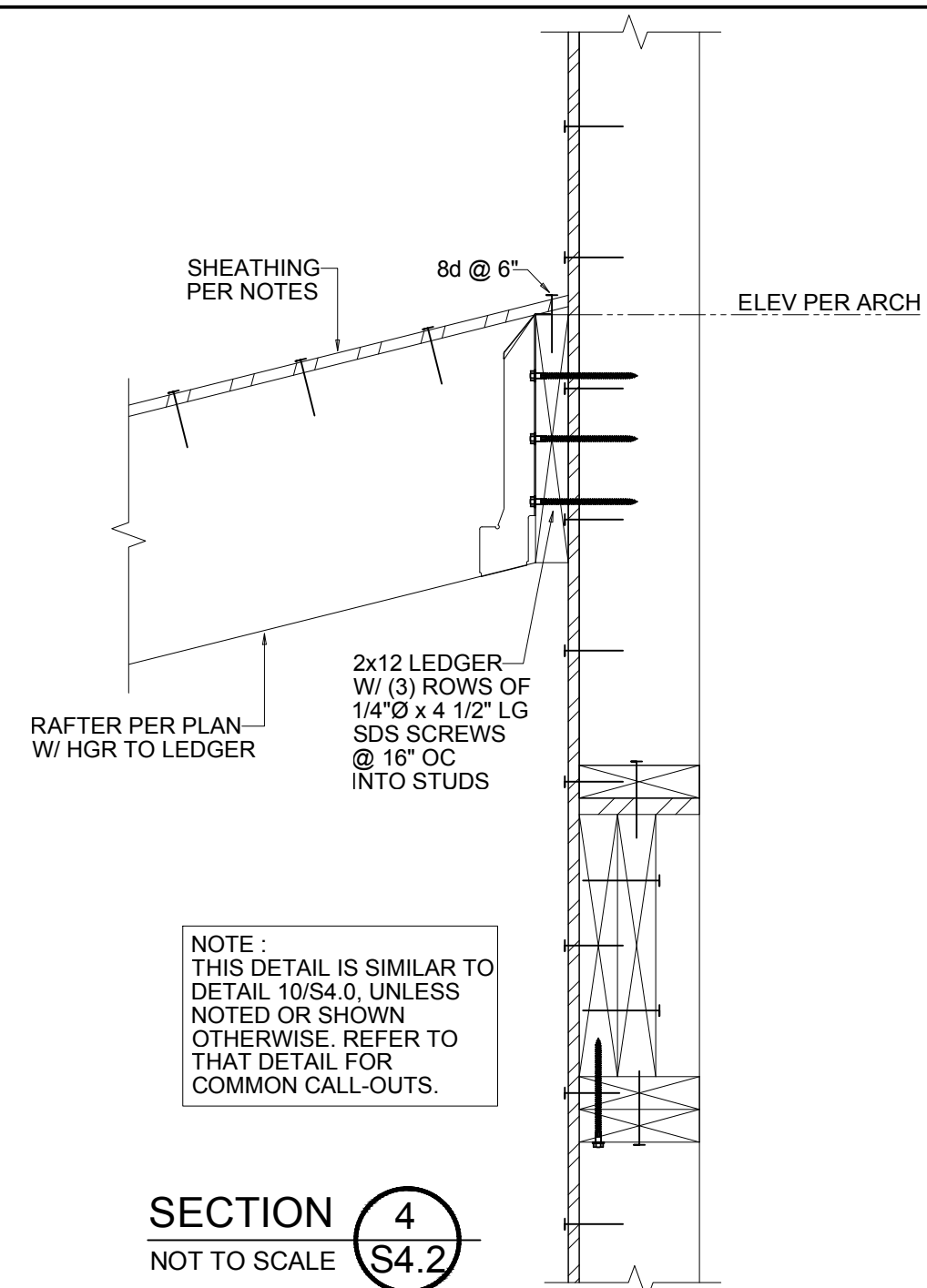
FRAMING DETAILS

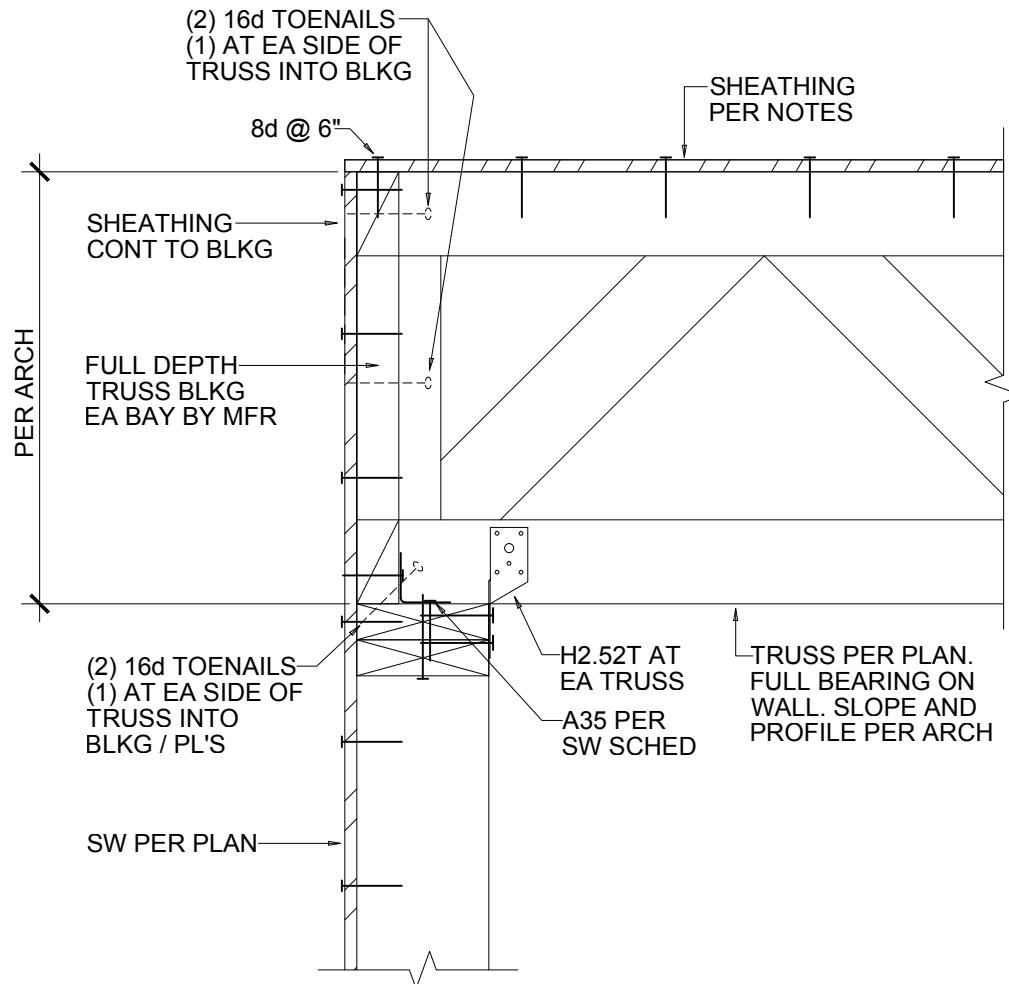
JOB NO. 2449

SHEET NO.

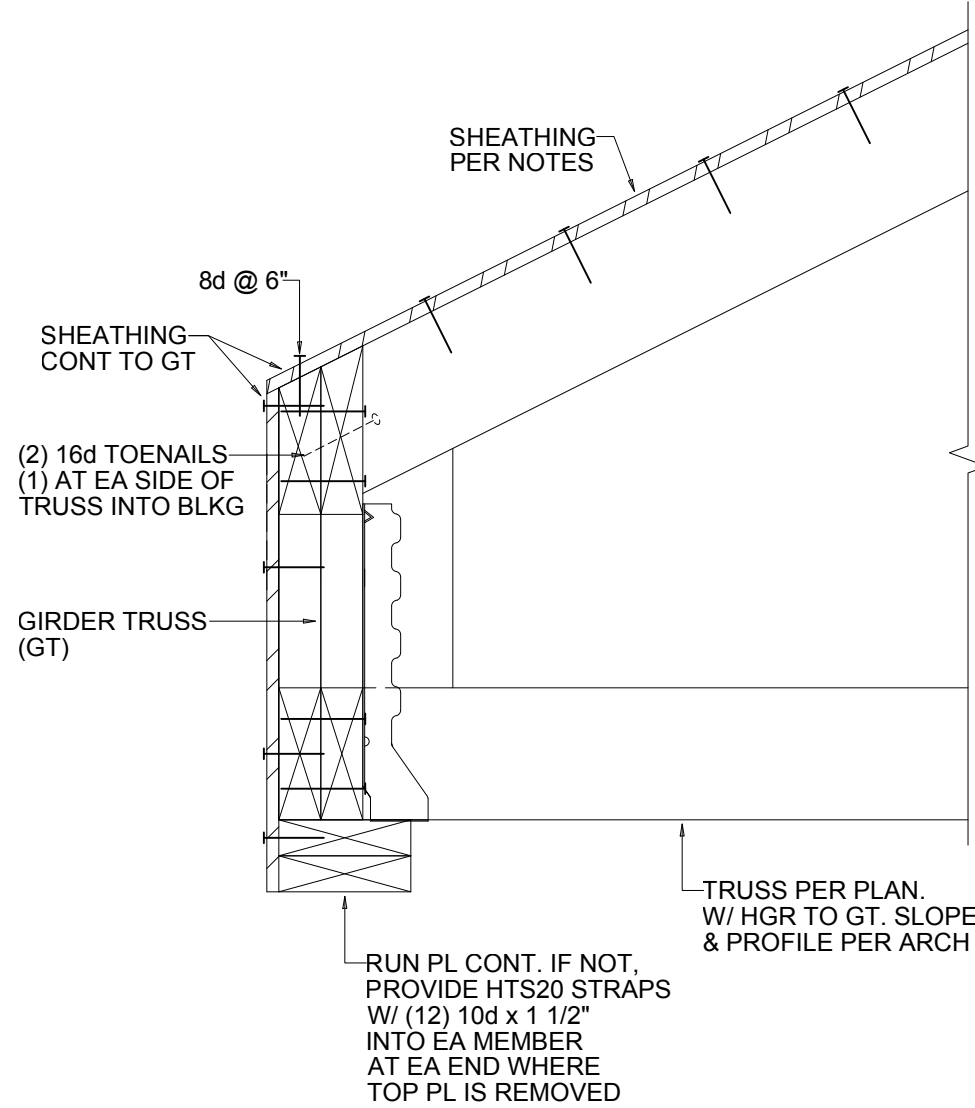
S4.1

DPD APPROVAL

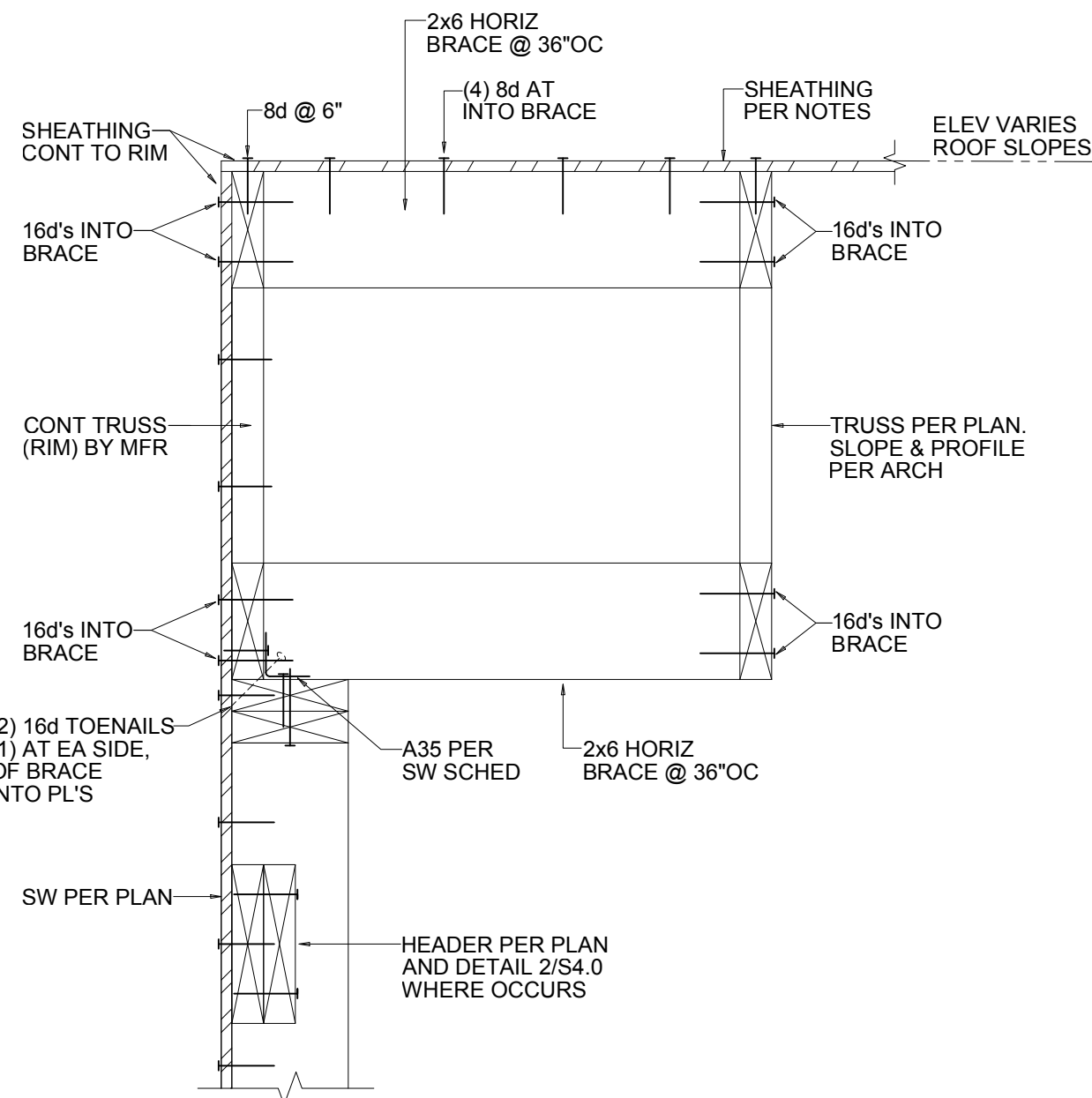




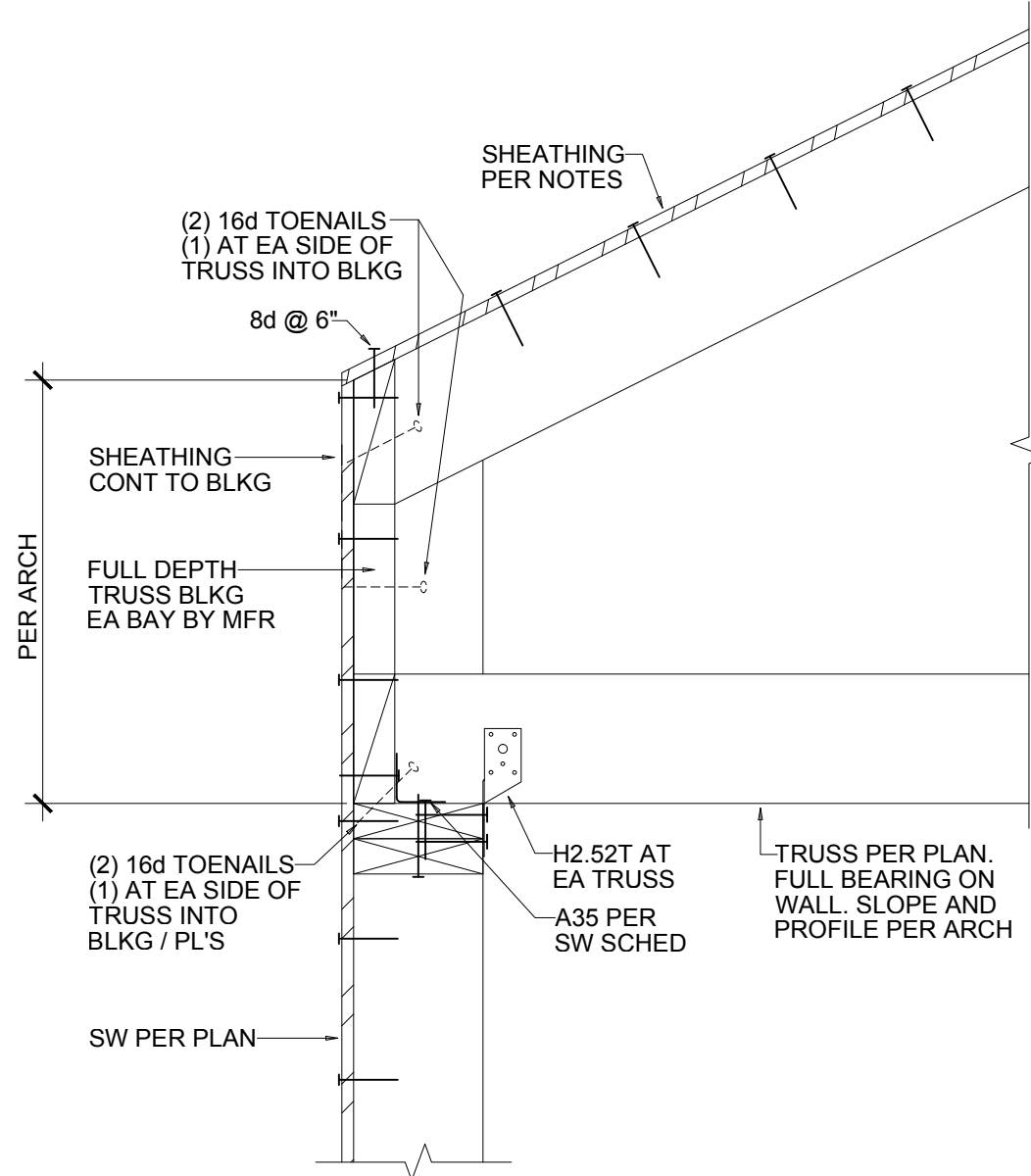
TRUSS PERPENDICULAR TO EXTERIOR SW 4
SCALE : 1 1/2" = 1'-0"



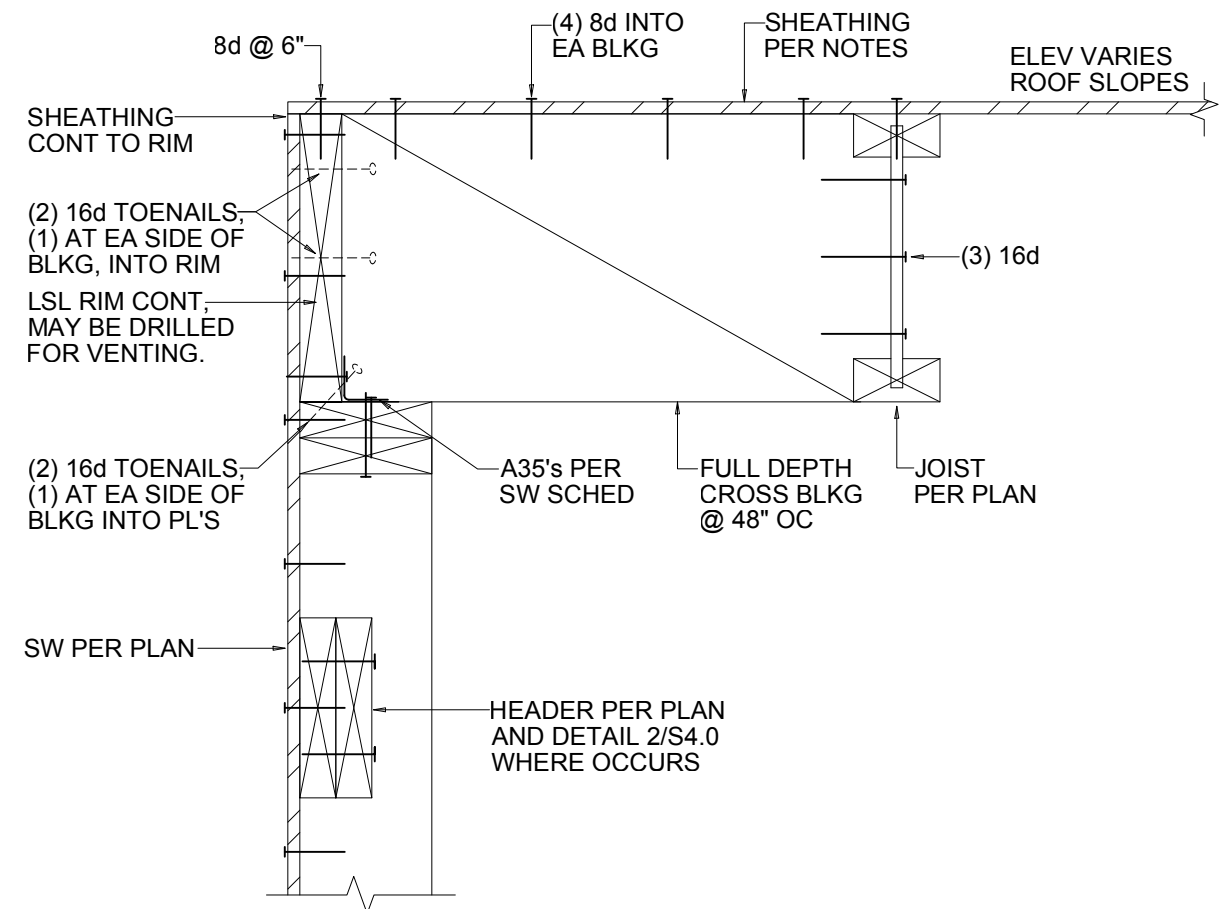
TRUSS AT OPENING 3
SCALE : 1 1/2" = 1'-0"



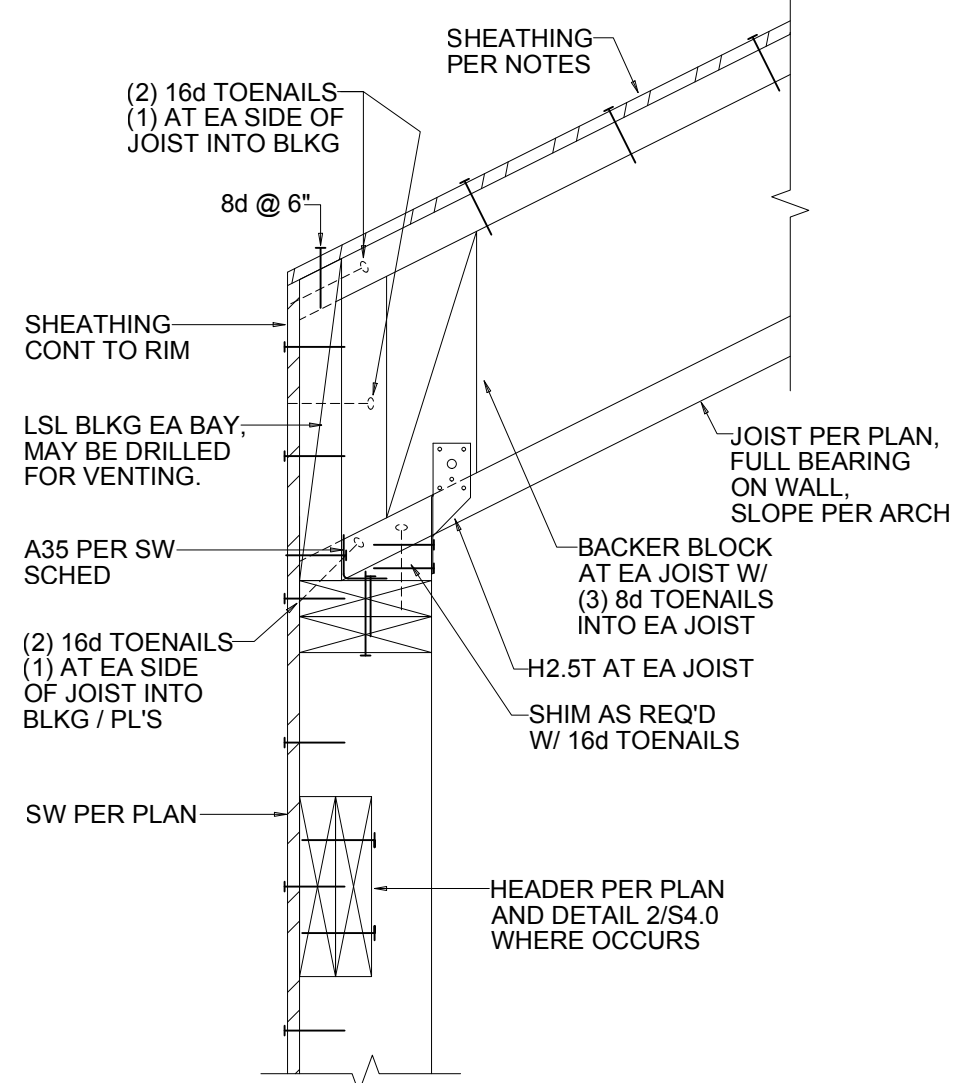
TRUSS PARALLEL TO EXTERIOR SW 2
SCALE : 1 1/2" = 1'-0"



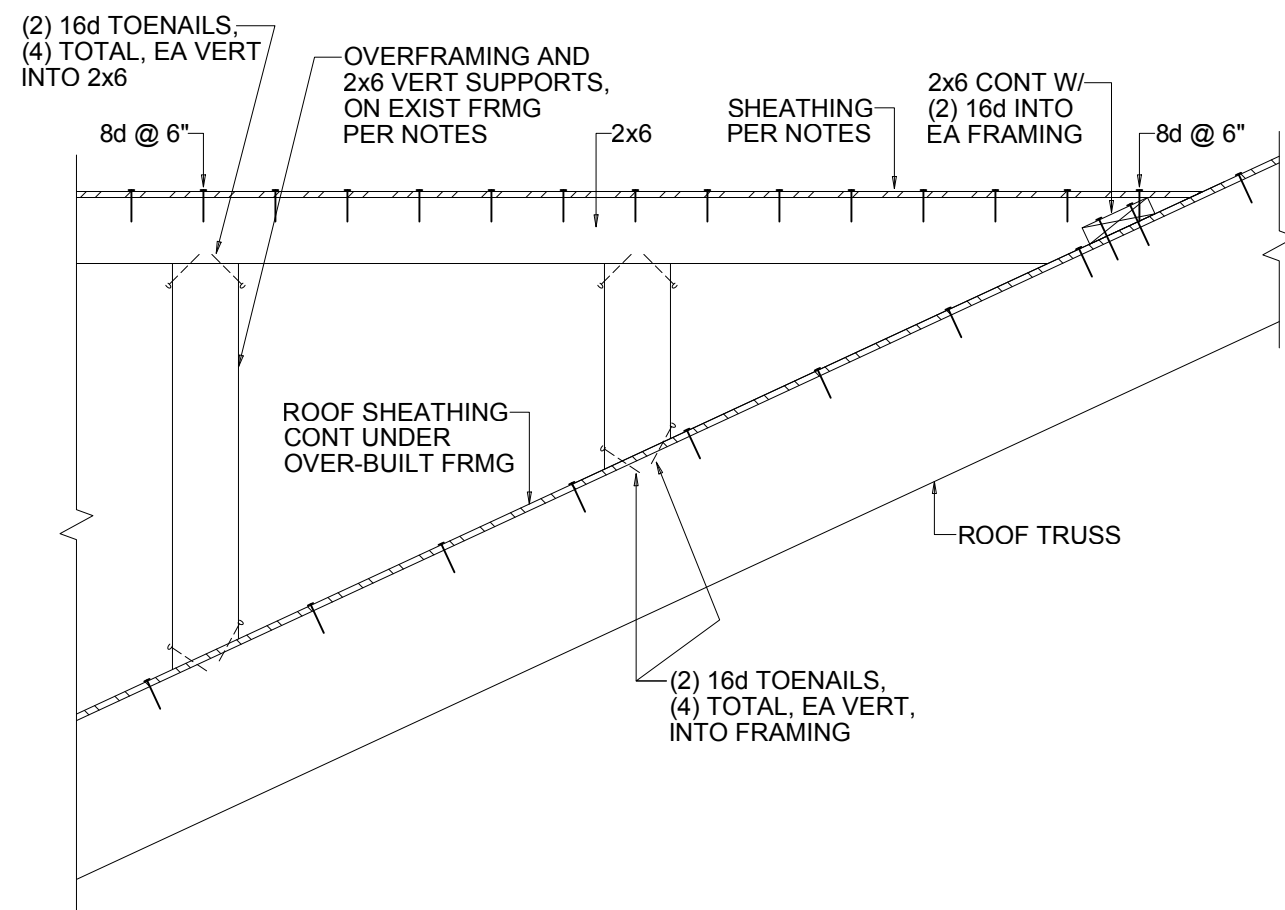
TRUSS PERPENDICULAR TO EXTERIOR SW 1
SCALE : 1 1/2" = 1'-0"



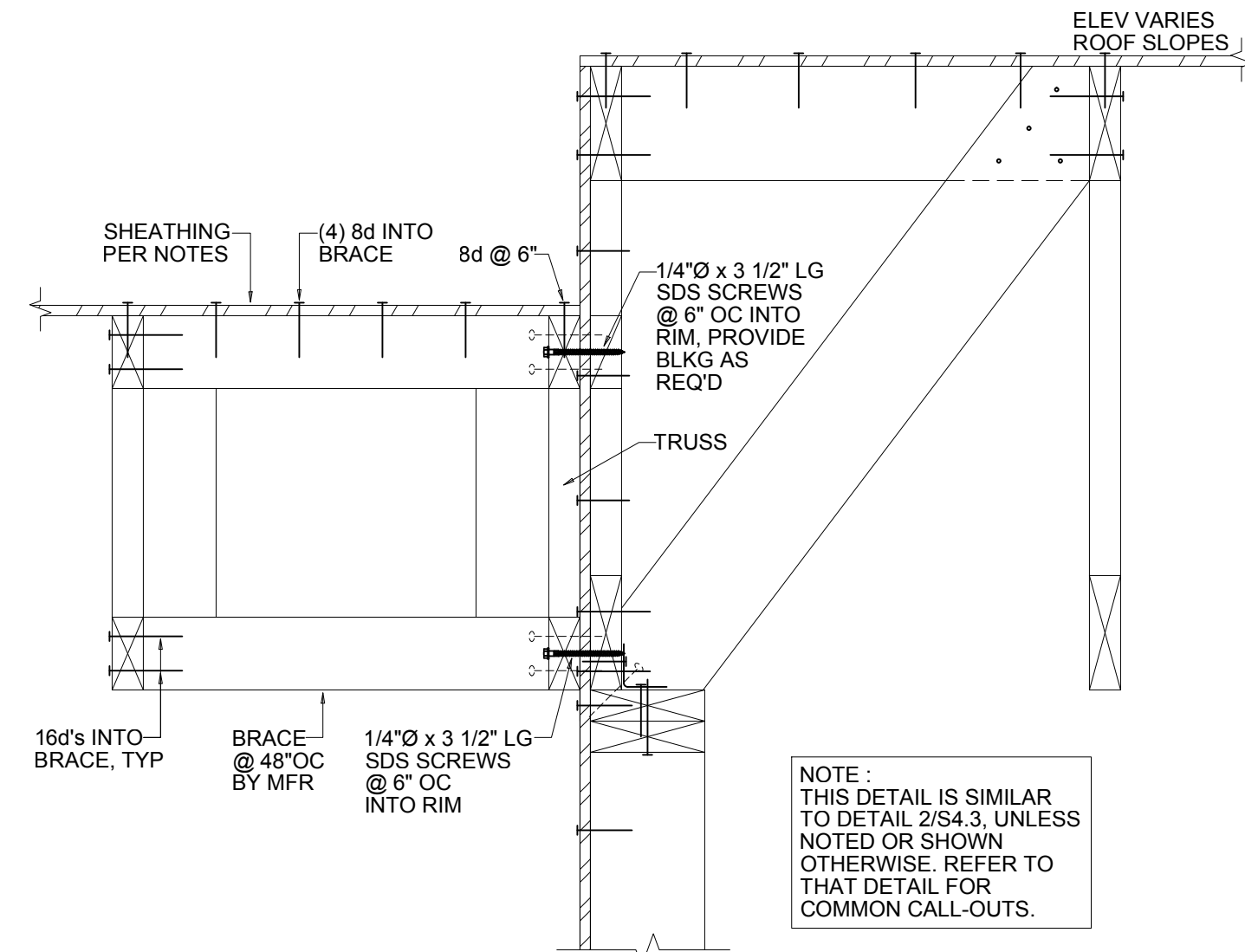
ROOF JOIST PARALLEL TO EXTERIOR SW 8
SCALE : 1 1/2" = 1'-0"



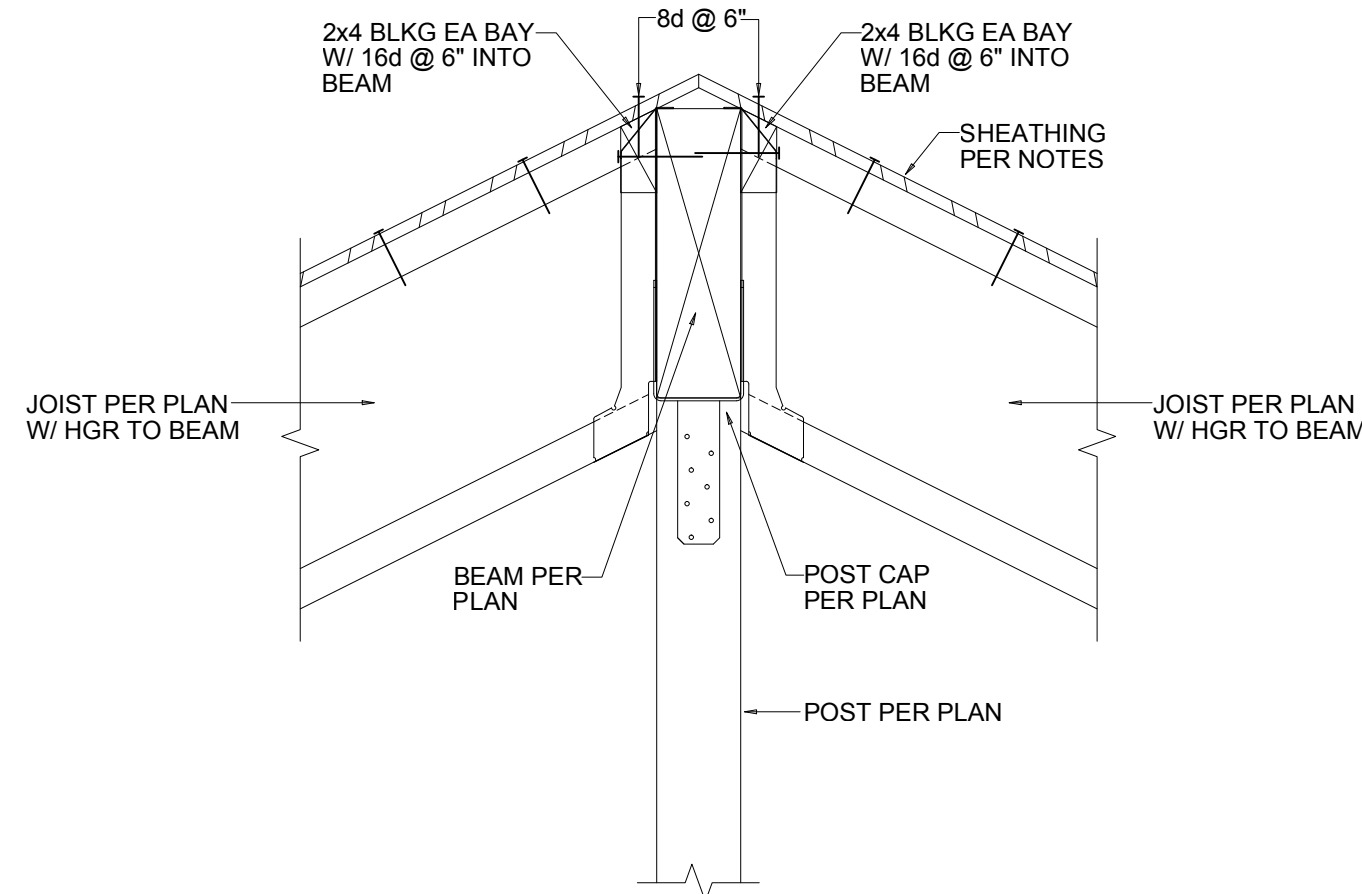
ROOF JOIST PERPENDICULAR TO EXTERIOR SW 7
SCALE : 1 1/2" = 1'-0"



OVER FRAMING CONNECTION 6
NOT TO SCALE

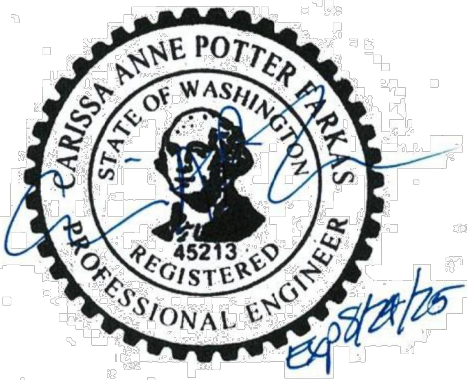


SECTION 5
NOT TO SCALE



SECTION AT RIDGE BEAM 9
SCALE : 1 1/2" = 1'-0"

ENGINEER'S SEAL



© CF Structural Engineering, LLC 2024.
These drawings were prepared for the
2755 73rd Ave. SE, New SFR + DADU
project in Mercer Island, WA.
They are not intended for use on any
other project.

PROJECT TITLE

73RD AVENUE RESIDENCES
(SFR + DADU)

ADDRESS

2755 73rd Ave. SE,
Mercer Island, WA
98040

No.	Date	Issue
12.31.24		Coordination
01.10.25		Building Permit

SHEET CONTENTS

FRAMING DETAILS

JOB NO. 2449

SHEET NO.

S4.3

DPD APPROVAL