

PROJECT INFORMATION

ZONING DISTRICT R-6.6
 PROPERTY OWNER HUANG DONGDONG
 PARCEL NUMBER 531510-0281
 LOT AREA 7,909 S.F.
 OCCUPANCY CLASSIFICATION R-3 / U
 CONSTRUCTION TYPE V-8

LEGAL DESCRIPTION

MC GILVRAS ISLAND ADD E 119.70 FT LESS N 66 FT
 Plat Block: 4
 Plat Lot: 12

STRUCTURAL LOT COVERAGE

NO CHANGE TO LOT COVERAGE

IMPERVIOUS SURFACE COVERAGE

NO CHANGE TO IMPERVIOUS SURFACE

FLOOR AREA SUMMARY

(E) LOWER FLOOR 1,040 SF
 (E) UPPER FLOOR 1,152 SF
 CONVERT (E) SHOP TO ADU 794 SF
 TOTAL FLOOR AREA 2,986 SF

ADU FLOOR AREA

ALLOWED ADU FLOOR AREA 220-900 SF
 PROPOSED ADU 794 SF

PARKING SUMMARY

REQUIRED PARKING < 3000 SF 2 STALLS
 PROVIDED PARKING 2 STALLS

BUILDING HEIGHT

NO CHANGE TO BUILDING HEIGHT

TREE TABLE

NO TREE PROPOSED TO BE REMOVED

SCOPE OF WORK

1. CREATE NEW BEDROOM FROM EXISTING LIVING ROOM (UPPER FLOOR) AND EXISTING FAMILY ROOM (LOWER FLOOR), TWO NEW BEDROOMS ADDED
2. RELOCATE MAIN ENTRY TO MIDDLE OF THE BUILDING
3. CONVERT EXISTING WORKSHOP TO ADU

CODE COMPLIANCE

2018 INTERNATIONAL RESIDENTIAL CODE
 2018 INTERNATIONAL MECHANICAL CODE
 2018 UNIFORM PLUMBING CODE
 2018 INTERNATIONAL FIRE CODE
 2018 NATIONAL ELECTRICAL CODE
 2018 WASHINGTON STATE ENERGY CODE
 (ALL CODES ABOVE INCLUDE WASHINGTON STATEWIDE AMENDMENTS)

ABBREVIATIONS

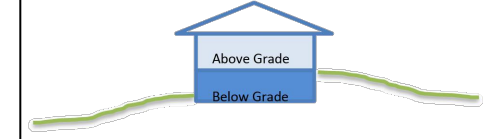
BLKG	BLOCKING	HORIZ	HORIZONTAL
Q	CENTER LINE	MAX	MAXIMUM
CLR	CLEAR	MFR	MANUFACTURER
CONT	CONTINUOUS	MIN	MINIMUM
CS	CASEMENT WINDOW	OV	OVER
DBL	DOUBLE	O.C.	ON CENTER
DS	DOWNSPOUT	SD	SMOKE DETECTOR
EL	ELEVATION	SG	SAFETY GLASS
EO	EQUAL	SF	SQUARE FEET
EXIST / (E)	EXISTING	SIM	SIMILAR
FTG	FOOTING	SLD	SLIDING WINDOW
FX	FIXED WINDOW	TYP	TYPICAL
HDR	HEADER	UNO	UNLESS NOTED OTHERWISE
HDWD	HARDWOOD	w/	WITH
HGR	HANGER		

Simple Heating System Size: Washington State

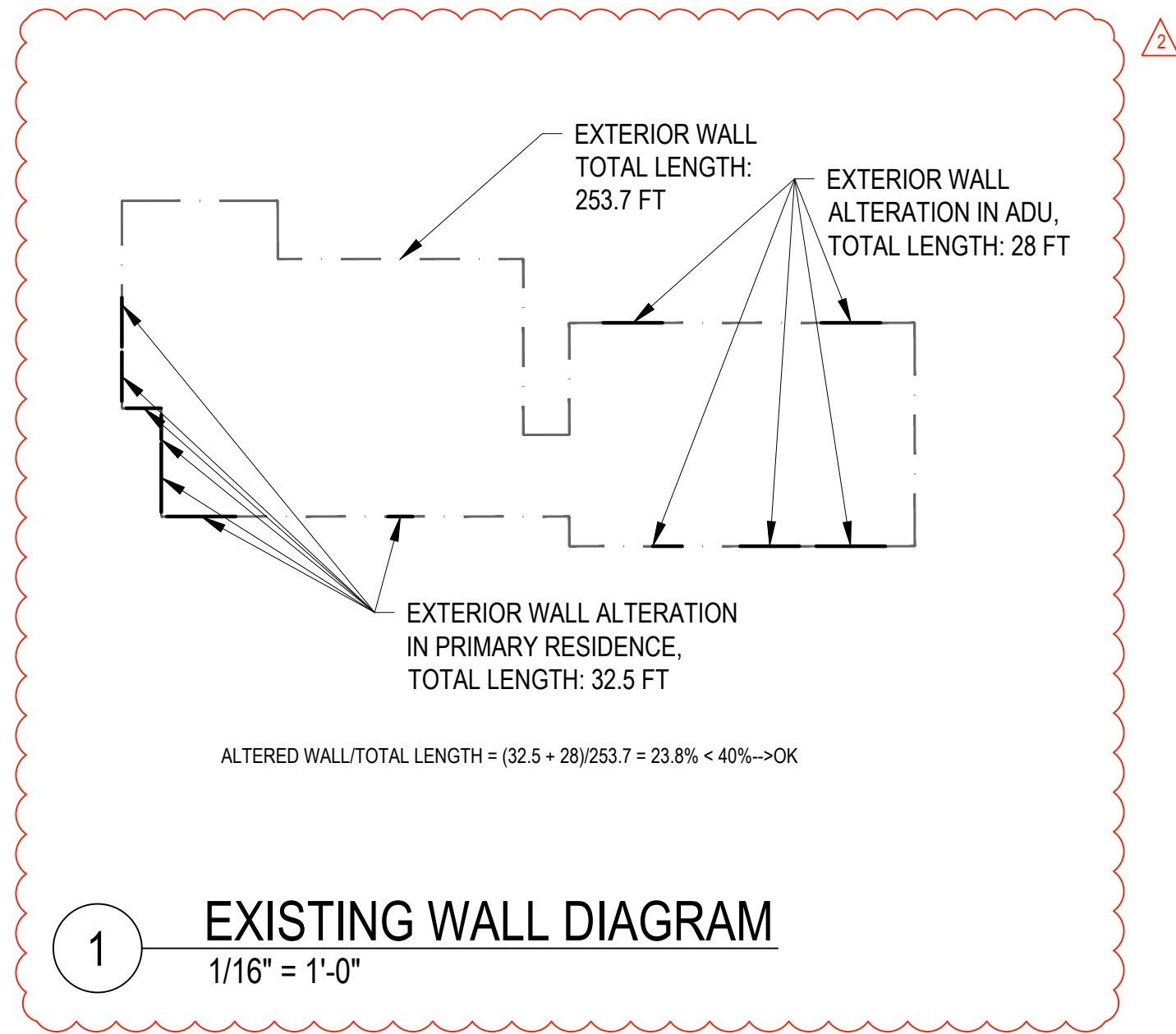
This heating system sizing calculator is based on the Prescriptive Requirements of the 2018 Washington State Energy Code (WSEC) and ACCA Manuals J and S. This tool will calculate heating loads only. ACCA procedures for sizing cooling systems should be used to determine cooling loads. Please complete 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) 956-2042 for assistance.

Project Information 2273 Home Remodel 2273 74th Ave Se Mercer Island 98040	Contact Information Mei Yang meiyang173@gmail.com
Heating System Type: All Other Systems <input type="radio"/> Heat Pump <input checked="" type="radio"/>	
Design Temperature Mercer Island <input type="text"/> Design Temperature Difference (ΔT) ΔT = Indoor (70 degrees) - Outdoor Design Temp	45
Area of Building Conditioned Floor Area (sq ft) 794	Conditioned Volume 6,352
Average Ceiling Height Average Ceiling Height (ft) 8.0	
Glazing and Doors U-Factor X Area = UA U-Factor: 0.25, Area: 142 = 35.50 U-Factor: 0.50, Area: 0 = --	
Skylights U-Factor X Area = UA U-Factor: 0.026, Area: 794 = 20.64	
Attic U-Factor X Area = UA U-Factor: 0.026, Area: 794 = 20.64	
Single Rafter or Joist Vaulted Ceilings U-Factor X Area = UA No selection, Area: 0 = --	
Above Grade Walls (see Figure 1) U-Factor X Area = UA U-Factor: 0.055, Area: 782 = 43.79	
Floors U-Factor X Area = UA U-Factor: 0.025, Area: 0 = --	
Below Grade Walls (see Figure 1) U-Factor X Area = UA No selection, Area: 0 = --	
Slab Below Grade (see Figure 1) F-Factor X Length = UA No selection, Length: 0 = --	
Slab on Grade (see Figure 1) F-Factor X Length = UA F-Factor: 0.360, Length: 782 = 281.52	
Location of Ducts Conditioned Space <input type="radio"/> Unconditioned Space <input type="radio"/>	Duct Leakage Coefficient: 1.00
Sum of UA	381.46
Envelope Heat Load Sum of UA x ΔT	17,166 Btu / Hour
Air Leakage Heat Load Volume x 0.6 x ΔT x 0.018	3,087 Btu / Hour
Building Design Heat Load Air Leakage + envelope heat loss	20,253 Btu / Hour
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	25,318 Btu / Hour
Maximum Heat Equipment Output	25,318 Btu / Hour
Building and duct heat loss x 1.40 for forced air furnace	
Building and duct heat loss x 1.25 for heat pump	

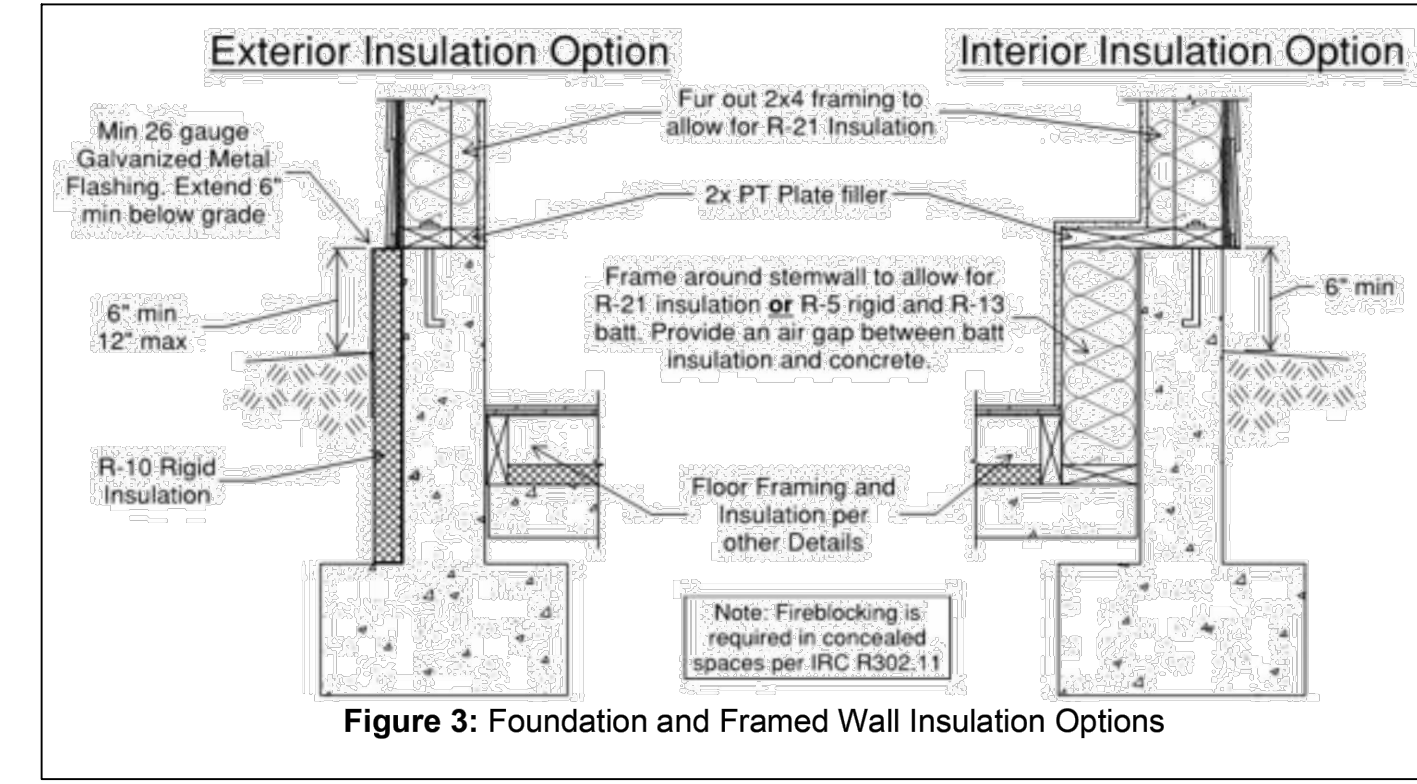
Figure 1.



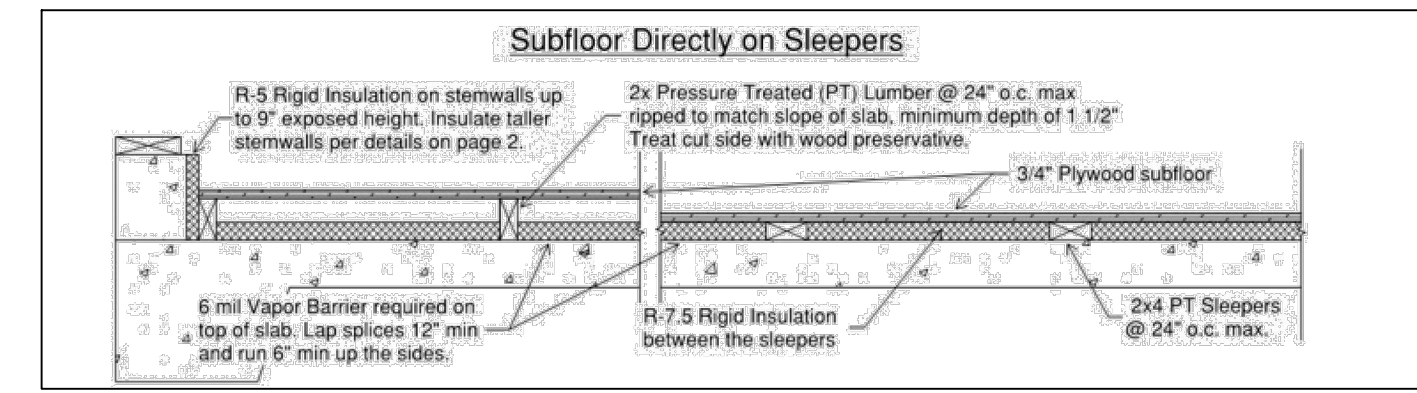
ALTERED WALL TOTAL LENGTH = (32.5 + 28)253.7 = 23.8% < 40% → OK
 1/16" = 1'-0"



CONTRACTOR TO VERIFY ALL OF EXISTING CONDITIONS PRIOR TO CONSTRUCTION. REPORT TO ARCHITECT FOR ANY DISCREPANCIES FOUND.



1 WALL ASSEMBLY NTS



1 FLOOR ASSEMBLY NTS

Alterations Worksheet - 2018 Washington State Energy Code

Project Information 2273 Home Remodel (Primary Residence) 2273 74th Ave Se Mercer Island 98040	Contact Information MEI YANG MEIYANG173@GMAIL.COM
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The WSEC requirements for alterations are located in Chapter 5 of the code text. Alterations (remodels) do not need to obtain energy credits from Table R406.3

Additions must meet the requirements for new construction. This includes nonconditioned space being altered to become conditioned space.

Will the wall cavities be exposed? Yes No
 If yes: Exposed wall cavities must be insulated -
 2 X 4 wall studs require R-15 insulation
 2 X 6 wall studs require R-21 insulation

Will the roof/ceiling framing cavities or attic be exposed? Yes No
 If yes: Exposed roof/ceiling assemblies must be insulated -
 Vaulted ceilings: Insulate to the full depth of the framing member while allowing for the minimum 1" ventilated space
 Flat ceilings: Install R-49 insulation or what the attic space can accommodate based on the roof pitch

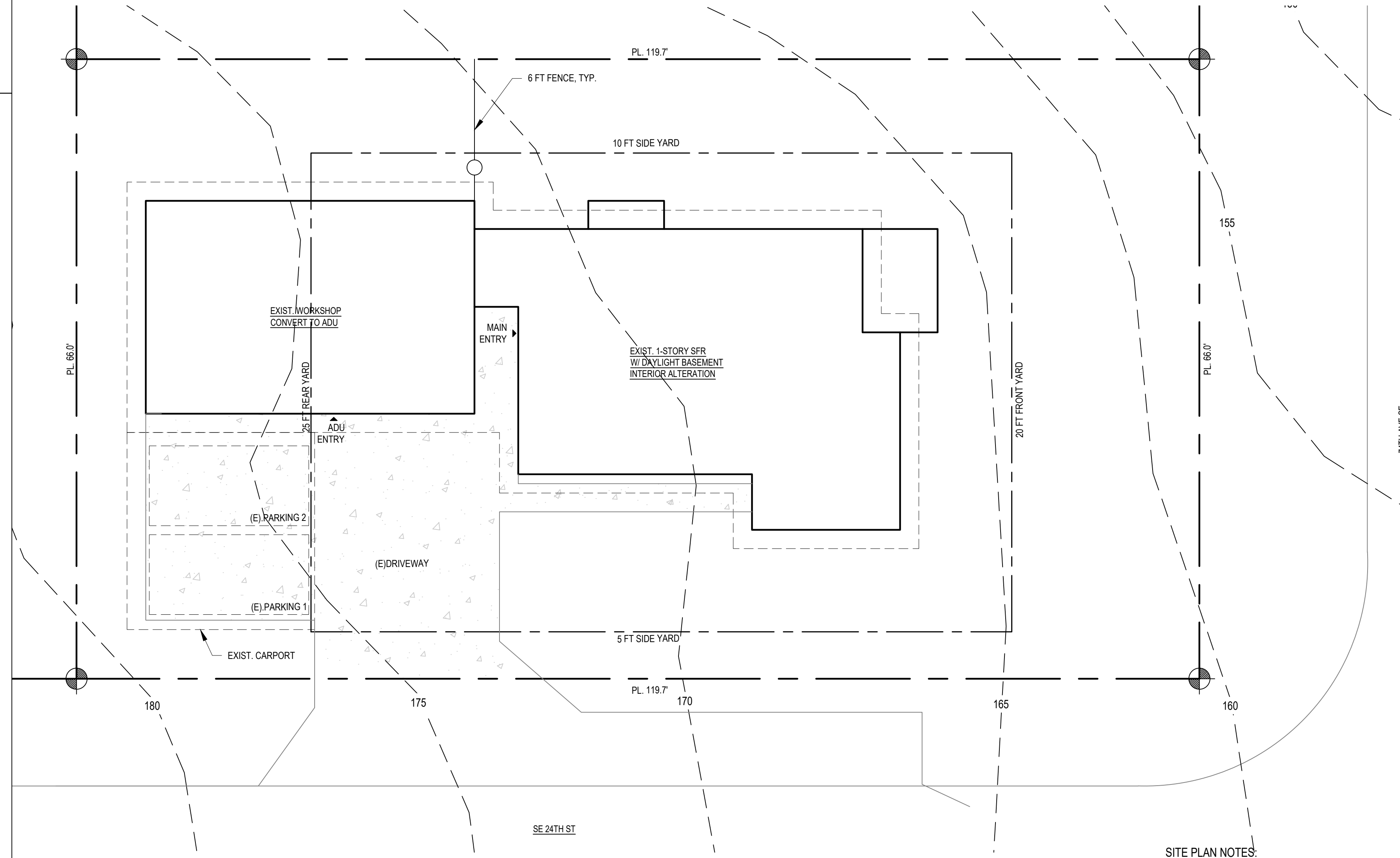
Will the floor framing cavities be exposed? Yes No
 If yes: Exposed floor cavities must be insulated to R-30

Are the windows and/or doors being replaced? Yes No
 (includes both window or door and frames)
 If yes: New windows and doors must have an area weighted average U-factor of ≤0.30

Will the heating or cooling system be replaced? Yes No
 If yes: New equipment must meet current requirements and ducts need to be tested

Will the hot water system be altered? Yes No
 If yes: New water heating equipment must meet current code requirements

Are more than 50% of the light fixtures being changed? Yes No
 If yes: 90% of all lamps must be high efficacy (LED or CFL)



1 SITE PLAN 1/8" = 1'-0"

SITE PLAN NOTES:

1. ALL UTILITIES SERVING THE SITE IS TO BE UNDERGROUND.
2. THE ADDRESS IS TO BE PLACED IN A POSITION THAT IS PLAINLY LEGIBLE AND VISIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY.

NO.	DATE	DESCRIPTION OF REVISIONS
	01/4/2024	PERMIT SET
Δ	03/20/2024	CORRECTION #1
Δ	04/20/2024	CORRECTION #2

SITE PLAN

SHEET NUMBER A1.0

2273 HOME REMODEL
 2273 74TH AVE SE
 MERCER ISLAND WA 98040

MJZ DESIGN

425.922.5926
 mjz.design.wa@gmail.com

PLAN NOTES:

1. USE CONVENTIONAL FRAMING AND SHEATHING U.N.O.
2. ALL INTERIOR WALLS TO BE 2x4 FRAMING U.N.O.
3. ALL DOOR JAMBS TO BE SET OFF WALLS 6" TYP. U.N.O.
4. ALL DIMENSIONS ARE TO FACE OF FRAMING U.N.O.
5. ALL WINDOW HEADS TO BE 8'-0" TO FINISH FLOOR AT THIS FLOOR, U.N.O.
6. ALL EXHAUST FANS ARE TO VENTED TO OUTSIDE.
7. DOOR HT. AT THIS FLOOR IS 6'-8", TYP.
8. ALL SMOKE DETECTORS MUST BE PROVIDED w/ PRIMARY POWER FROM BUILDING WIRING, PROVIDED w/ BATTERY BACKUP, AND BE INTERCONNECTED.
9. CEILING HEIGHT = 88"
10. ESCAPE (EGRESS) WINDOW MUST HAVE A CLEAR OPENABLE AREA OF 5.7 S.F. w/ A MINIMUM NET CLEAR HEIGHT OF 24" AND WIDTH DIMENSION OF 20". THE SILL HEIGHT MUST NOT BE MORE THAN 44" ABOVE THE FLOOR.
11. ALL EXTERIOR COLUMNS, BEAMS, AND JOISTS THAT ARE EXPOSED TO THE WEATHER MUST BE PRESSURE-TREATED.
12. A MINIMUM OF 90% OF PERMANENTLY INSTALLED LIGHTING MUST BE HIGH-EFFICIENCY LAMPS WA ENERGY CODE R404.1

ENERGY REQUIREMENTS (PERSPECTIVE):

ADDITIONS LESS THAN 1500 SQUARE FEET 3.0 CREDIT REQUIRED

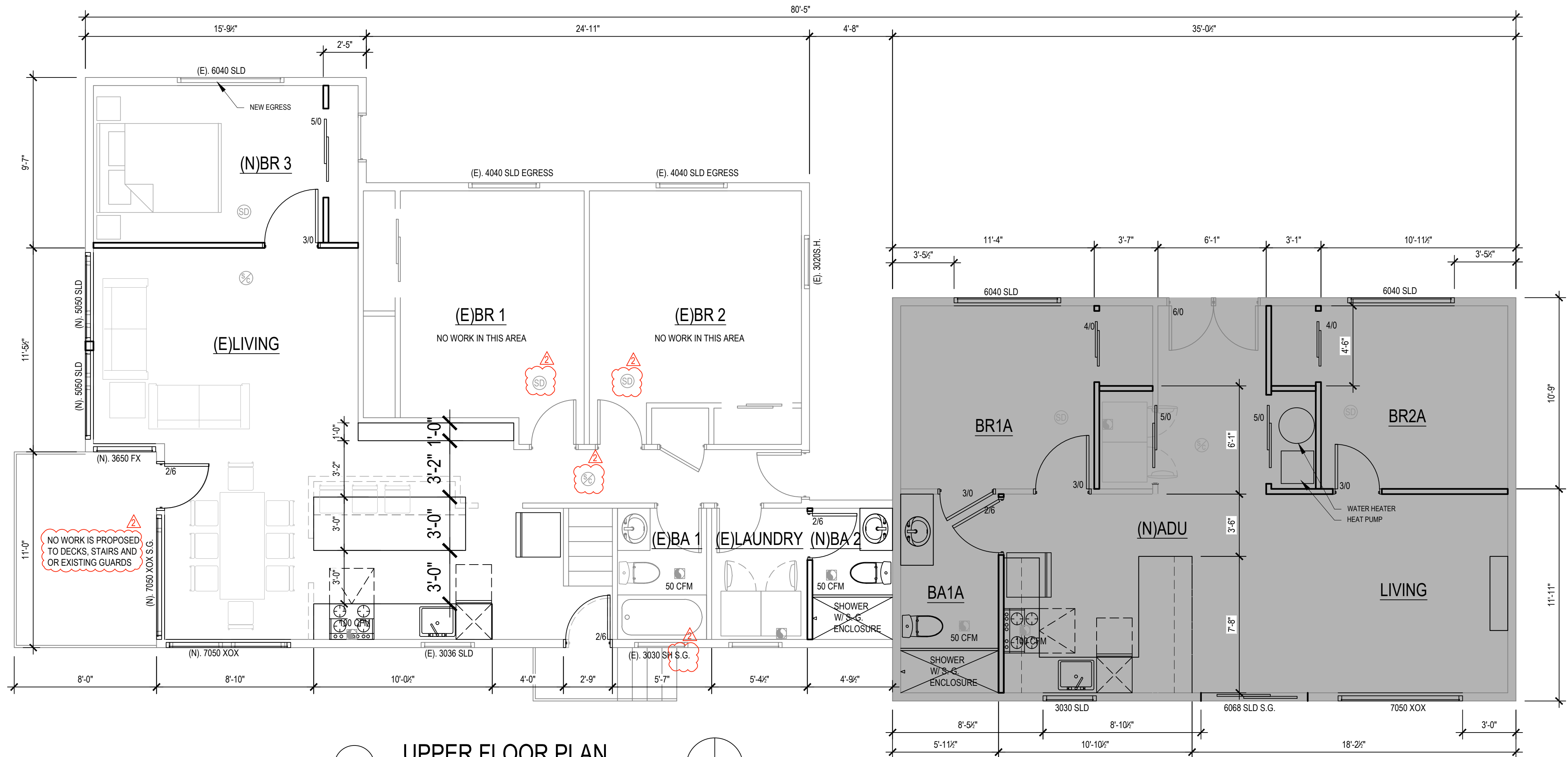
3.0 ENERGY CREDITS AS SELECTED AND LISTED BELOW:

4. FUEL NORMALIZATION CREDITS : 0.5 CREDIT FOR HEATING SYSTEM BASED ON ELECTRIC RESISTANCE WITH A DUCTLESS MINI-SPLIT HEAT PUMP SYSTEM IN ACCORDANCE WITH SECTION R403.7.1 INCLUDING THE EXCEPTION

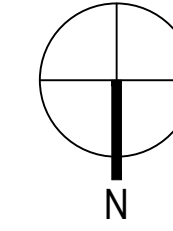
1.4 EFFICIENT BUILDING ENVELOPE: 1 CREDIT PRESCRIPTIVE COMPLIANCE IS BASED ON TABLE R402.1.1 WITH THE FOLLOWING MODIFICATIONS:
VERTICAL FENESTRATION U = 0.25
WALL R-21 PLUS R-4 CI
FLOOR R-9

BASEMENT WALL R-21 INT PLUS R-5 CI
SLAB ON GRADE R-10 PERIMETER AND UNDER ENTIRE SLAB
BELOW GRADE SLAB R-10 PERIMETER AND UNDER ENTIRE SLAB

3.4 HIGH EFFICIENCY HVAC EQUIPMENT OPTIONS: 1.5 CREDIT
DUCTLESS MINI-SPLIT HEAT PUMP SYSTEM ZONAL CONTROL: IN HOMES WHERE THE PRIMARY SPACE HEATING SYSTEM IS ZONAL ELECTRIC HEATING, A DUCTLESS MINI-SPLIT HEAT PUMP SYSTEM WITH A MINIMUM HSPF OF 10.0 SHALL BE INSTALLED AND PROVIDE HEATING TO THE LARGEST ZONE OF THE HOUSING UNIT.



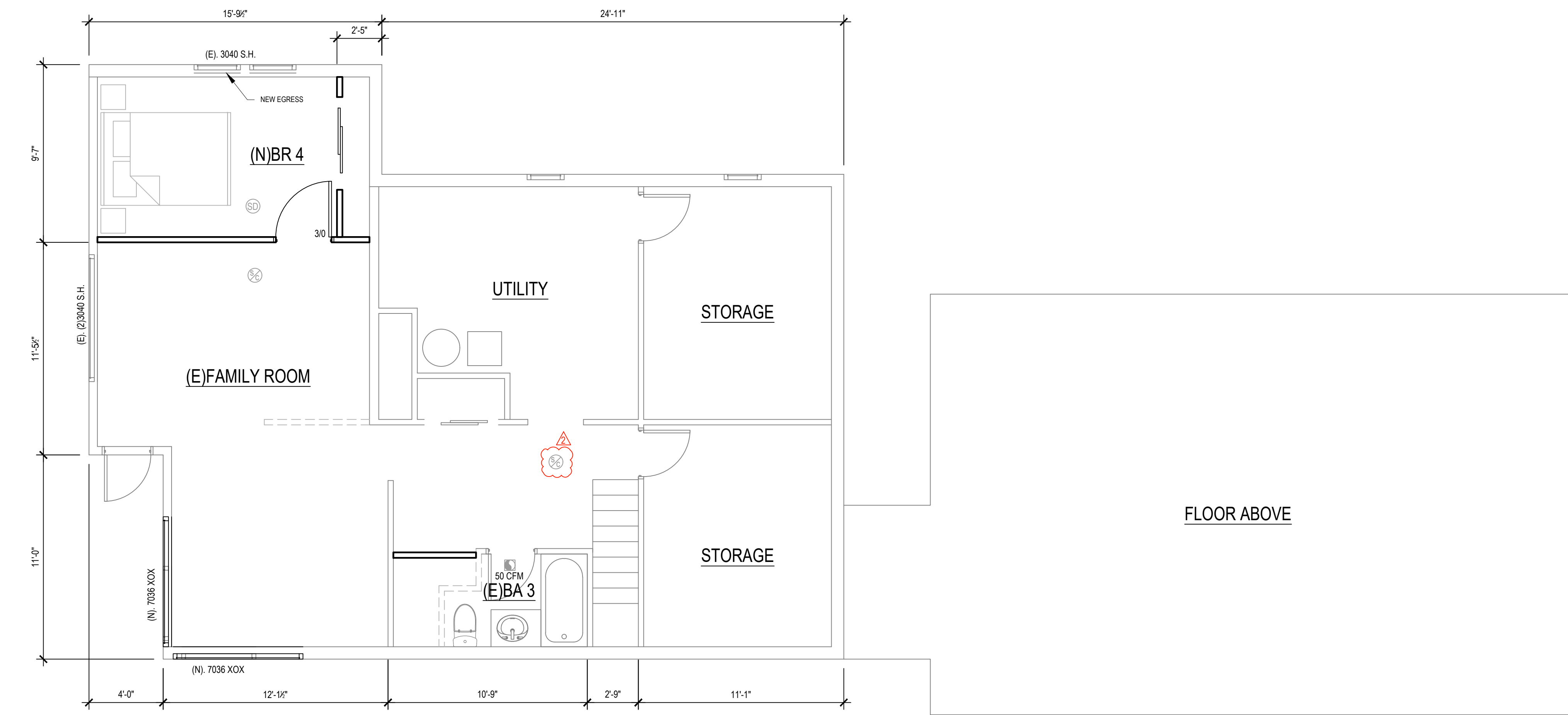
1 UPPER FLOOR PLAN
1/4" = 1'-0"



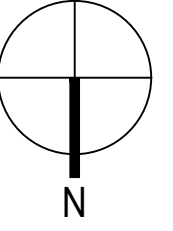
WHOLE HOUSE VENTILATION SYSTEM CONTROLS:
ALL VENTILATION SYSTEM CONTROLS SHALL BE READILY ACCESSIBLE. INTERMITTENTLY OPERATED SYSTEMS SHALL HAVE A MANUAL CONTROL, AS WELL AS AN AUTOMATIC CONTROL, SUCH AS A CLOCK TIMER. THE AUTOMATIC CONTROL TIMER SHALL BE SET TO OPERATE THE WHOLE HOUSE FAN SYSTEM FOR AT LEAST 8 HOURS A DAY. IRC M1507.3.2

FIREBLOCKING SHALL BE PROVIDED IN WOOD-FRAME CONSTRUCTION IN THE FOLLOWING LOCATIONS:

1. IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES AND PARALLEL ROWS OF STUDS OR STAGGERED STUDS, AS FOLLOWS:
 - 1.1. VERTICALLY AT THE CEILING AND FLOOR LEVELS.
 - 1.2. HORIZONTALLY AT INTERVALS NOT EXCEEDING 10 FEET (3048 MM).
2. AT ALL INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS OCCUR AT SOFFITS, DROP CEILINGS AND COVE CEILINGS.
3. IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM OF THE RUN. ENCLOSED SPACES UNDER STAIRS SHALL COMPLY WITH SECTION R302.7.
4. AT OPENINGS AROUND VENTS, PIPES, DUCTS, CABLES AND WIRES AT CEILING AND FLOOR LEVEL, WITH AN APPROVED MATERIAL TO RESIST THE FREE PASSAGE OF FLAME AND PRODUCTS OF COMBUSTION. THE MATERIAL FILLING THIS ANNULAR SPACE SHALL NOT BE REQUIRED TO MEET THE ASTM E 136 REQUIREMENTS.



1 LOWER FLOOR PLAN
1/4" = 1'-0"



SYMBOL

- EXHAUST VENT
- SMOKE DETECTOR
- SMOKE/CO ALARM
- NEW WALL
- EXIST WALL
- DEMO WALL
- ADU

2273 HOME REMODEL
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mjz.design.wa@gmail.com

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△	04/20/2024	CORRECTION #2

MAIN FLOOR PLAN

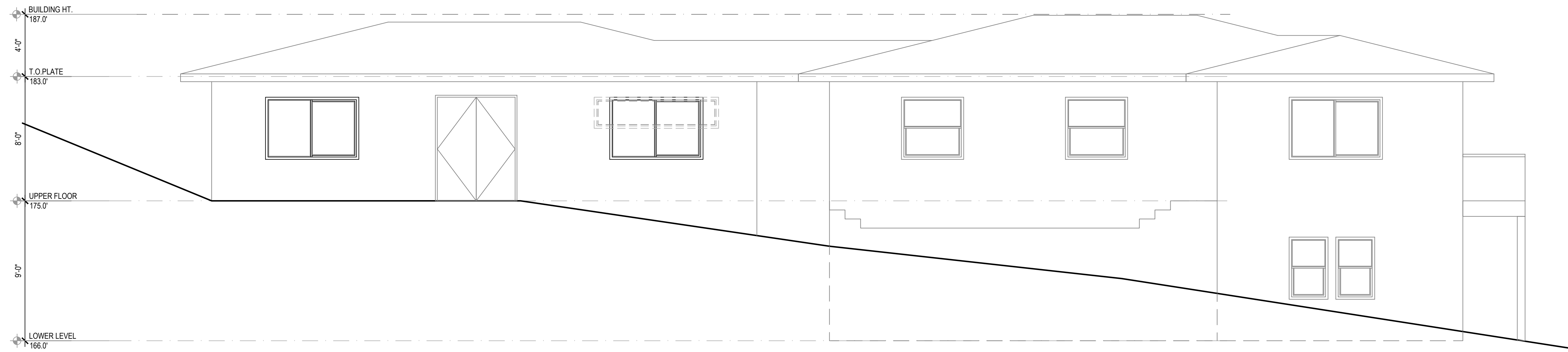
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2273 HOME REMODEL

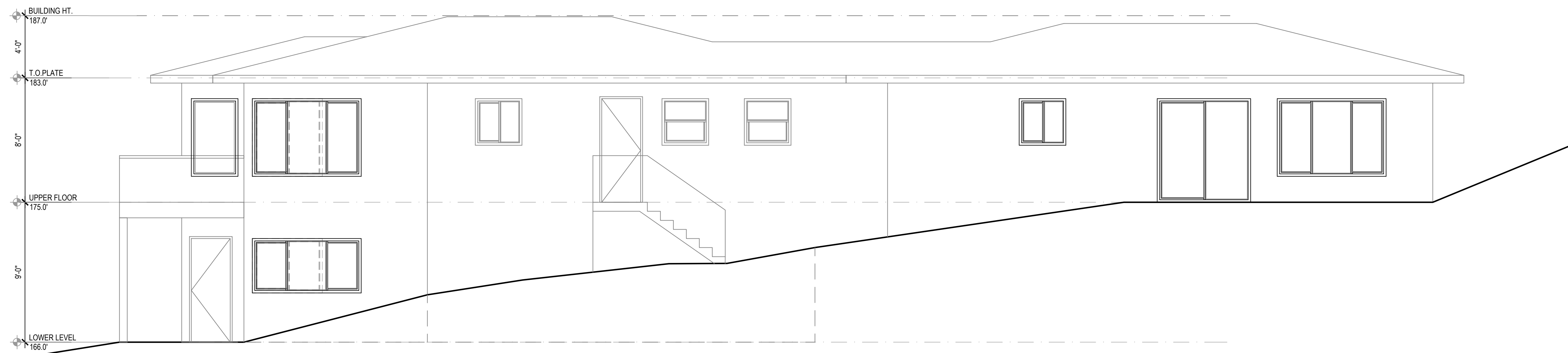
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MERCER ISLAND WA 98040

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DESIGN

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1 SOUTH ELEVATION
1/4" = 1'-0"



2 NORTH ELEVATION
1/4" = 1'-0"

NO.	DATE	DESCRIPTION OF REVISIONS
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△	03/20/2024	CORRECTION #1
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ELEVATIONS

SHEET NUMBER

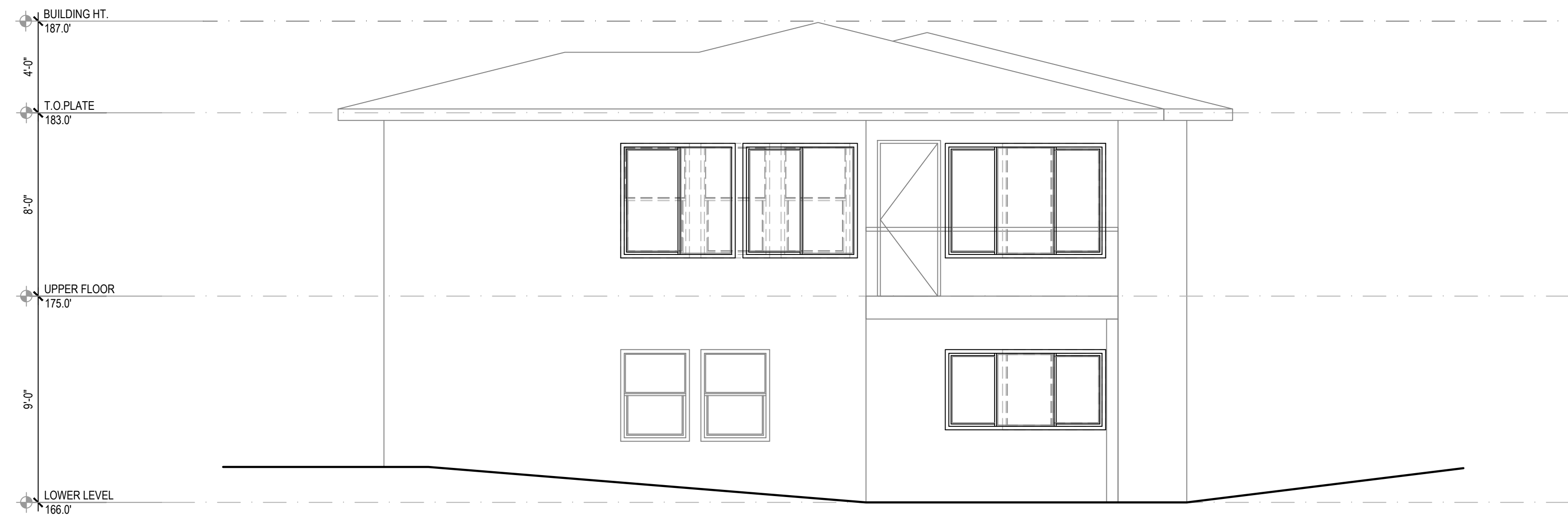
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2273 HOME REMODEL

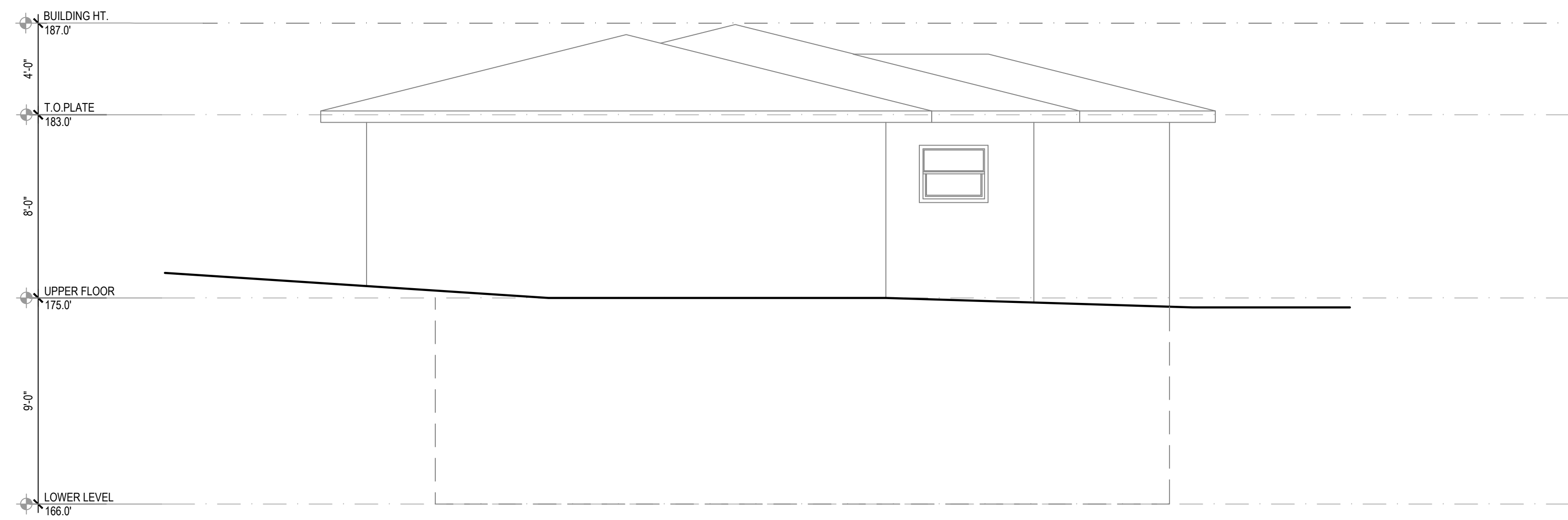
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DESIGN**

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1 EAST ELEVATION
1/4" = 1'-0"



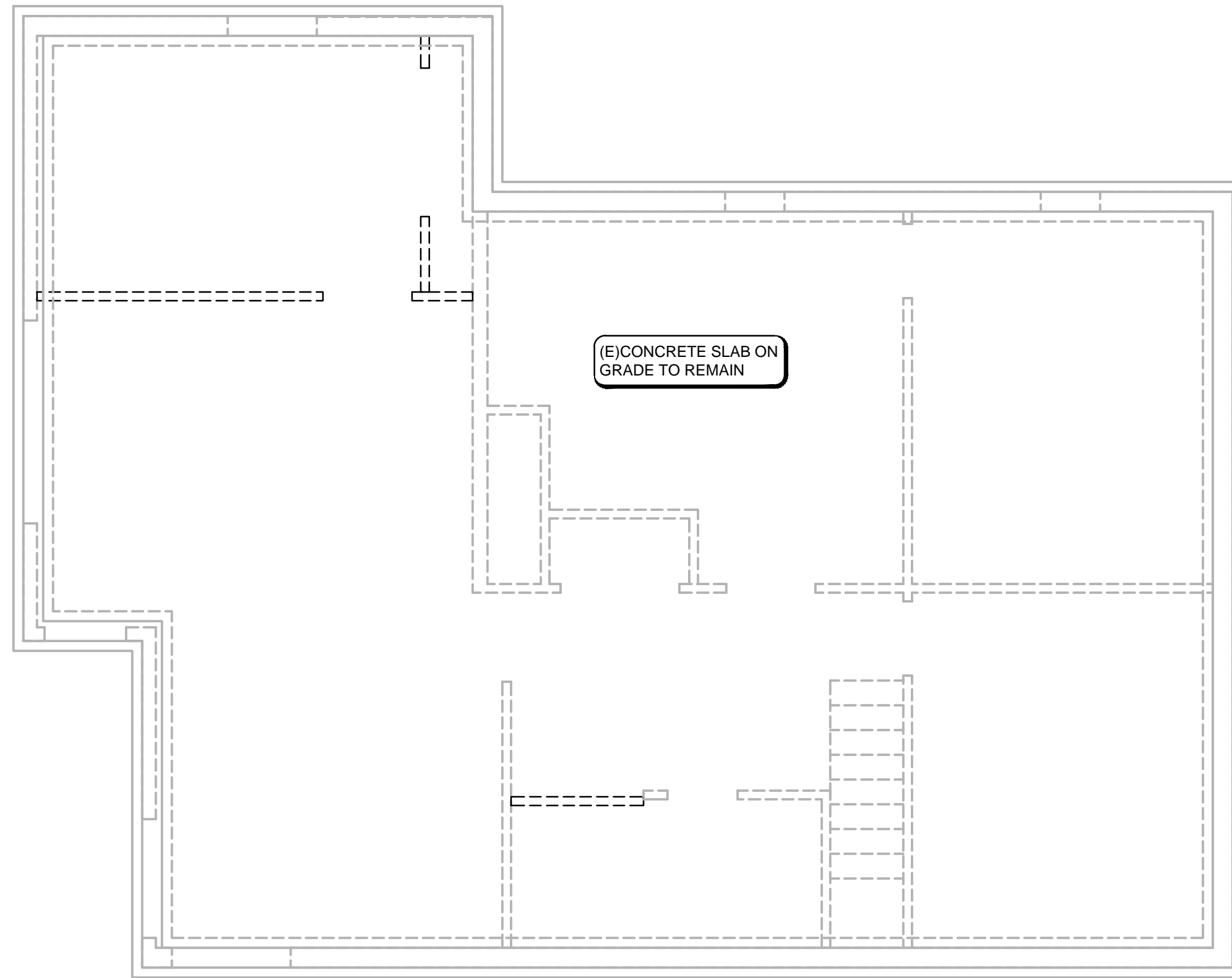
2 WEST ELEVATION
1/4" = 1'-0"

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ELEVATIONS

SHEET NUMBER

A3.1

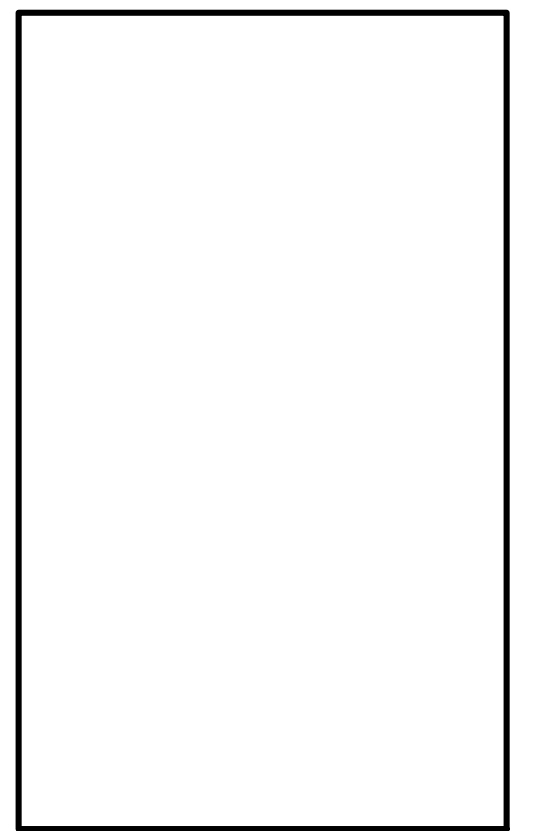
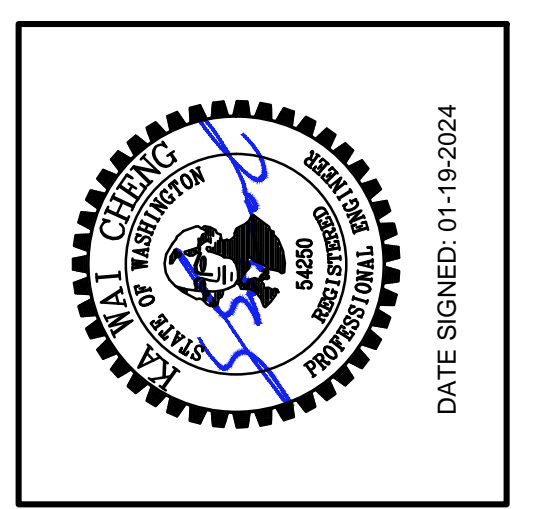


FOUNDATION AND LOWER FLOOR PLAN 

1/4" = 1'-0"

1. DO NOT SCALE DRAWINGS.
2. VERIFY ALL DIMENSIONS IN FIELD. REFER TO ARCHITECTURAL PLAN FOR WALL LAYOUT.
3. FOOTINGS SHALL BE PLACED ON UNDISTURBED NATIVE SOIL OR STRUCTURAL FILL COMPACTED TO 95% MAXIMUM WET DENSITY PLACED IN MAX. 12" LIFTS.
4. BOTTOM OF ALL FOOTINGS SHALL BE 18" MINIMUM BELOW LOWEST ADJACENT GRADE, U.N.O.
5. TYPICAL EXTERIOR WALL TO BE DETAILED AS SHEAR WALL TYPE W6 PER SHEAR WALL SCHEDULE, U.N.O.

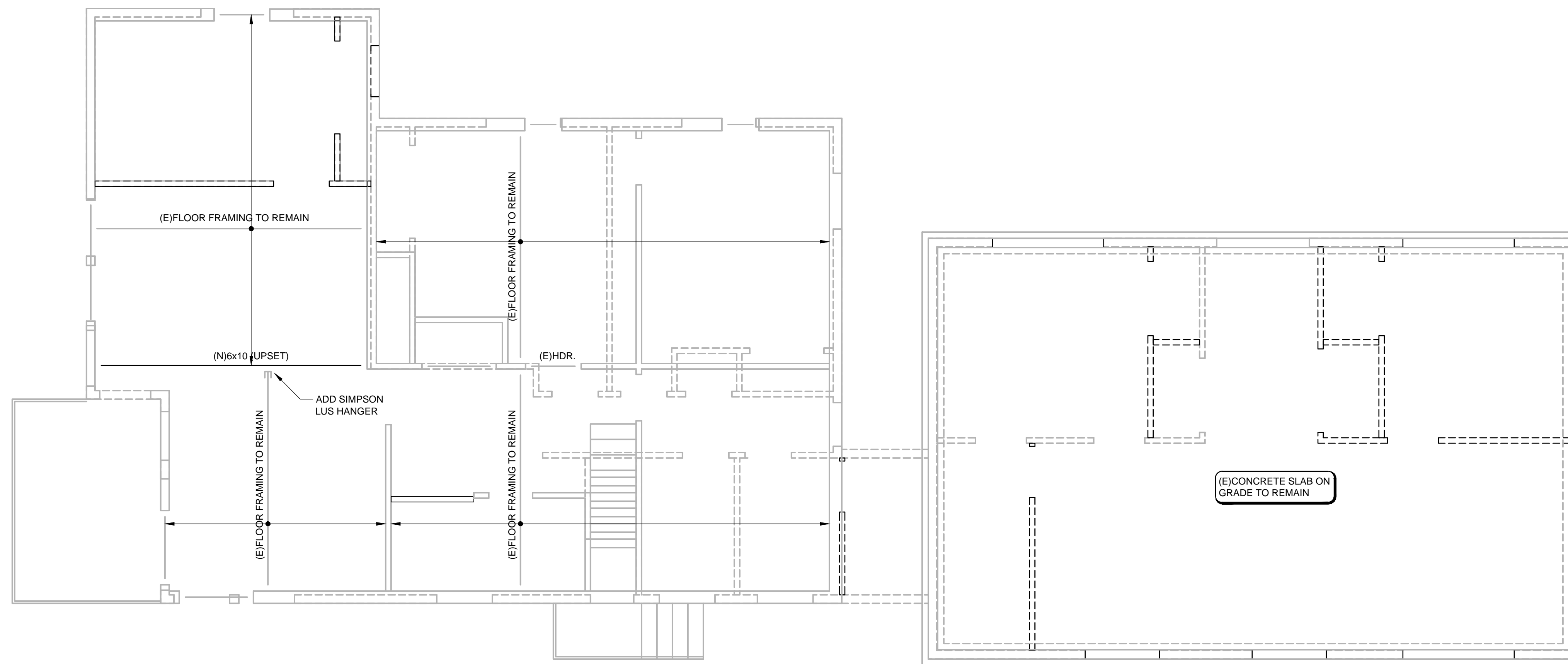
NO.	DRAWING SUBMITTALS / REVISIONS	DATE
	SUBMIT FOR PERMIT	01-19-2024
	SUBMIT FOR BID	
	SUBMIT FOR CONSTRUCTION	



FOUNDATION AND LOWER FLOOR PLAN

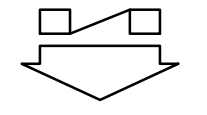
HUANG RESIDENCE REMODEL
 2273 74TH AVE. SE,
 MERCER ISLAND, WA 98040

CHECKED: KWC
 DATE: 01-08-2024
 SHEET NO:
S1.1



CONTRACTOR TO FIELD VERIFY ALL EXISTING FRAMING SHOWN ON THIS PLAN DRAWING, INCLUDING INFORMATION FOR ALL FRAMING MEMBER SIZE, SPAN LENGTH, SPAN ORIENTATION AND ON-CENTER SPACING. NOTIFY E.O.R. IMMEDIATELY FOR ANY DISCREPANCY.

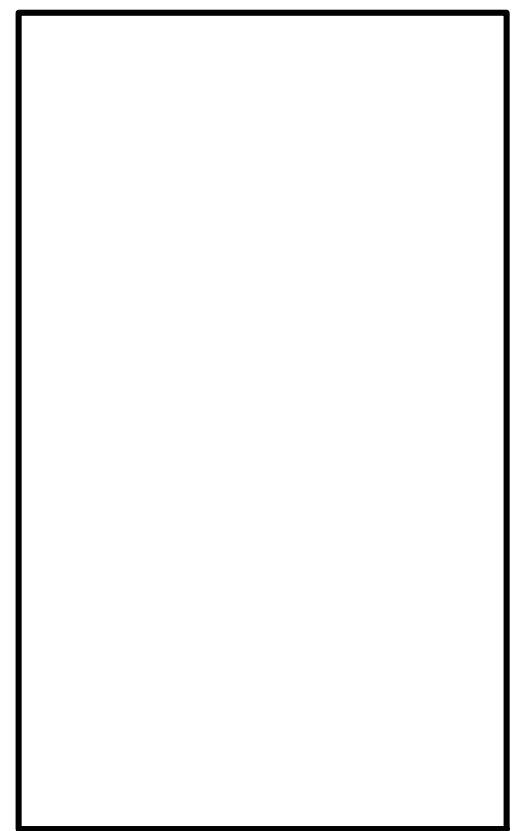
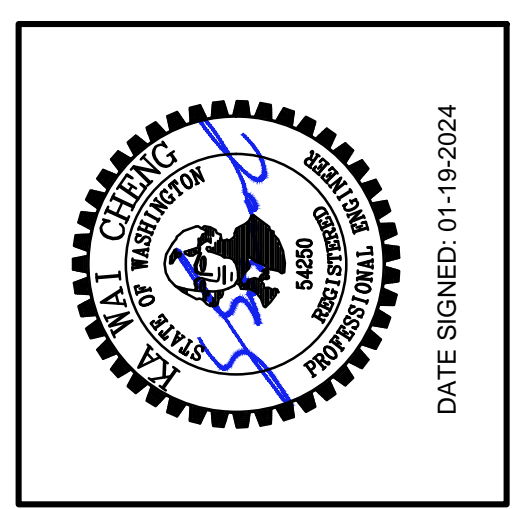
MAIN FLOOR FRAMING PLAN



1/4" = 1'-0"

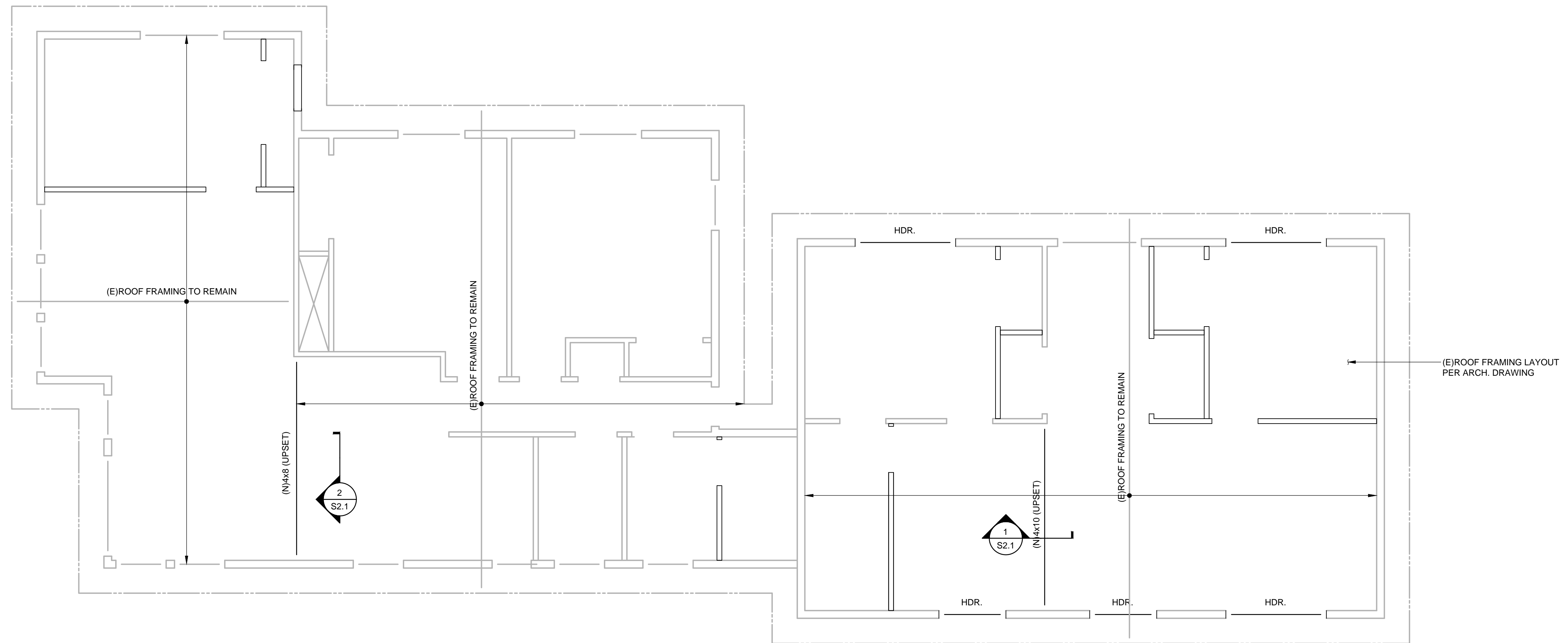
1. DO NOT SCALE DRAWINGS
2. VERIFY ALL DIMENSIONS IN FIELD. REFER TO ARCHITECTURAL PLAN FOR WALL LAYOUT.
3. TYPICAL FLOOR FRAMING CONSISTS OF 3/4" T&G PLYWOOD SHEATHING ON FLOOR JOISTS. NAIL ALL SUPPORTED PANEL EDGES WITH 10d NAILS @ 6"oc & ALL INTERMEDIATE SUPPORTS WITH 10d NAILS @ 12"oc. PROVIDE BLOCKING FOR ALL EDGES.
4. TYPICAL EXTERIOR WALL SHALL BE FRAMED WITH 2x6 DF STUDS @ 16"oc, U.N.O. TYPICAL INTERIOR WALL SHALL BE FRAMED WITH 2x4 DF STUDS @ 16"oc U.N.O. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION PERTAINING TO WALL THICKNESS.
5. TYPICAL EXTERIOR WALL HEADERS SHALL BE FRAMED WITH (2) PILES OF 2x10 DF#2. TYPICAL INTERIOR WALL HEADERS SHALL BE FRAMED WITH (2) PILES OF 2x8 DF#2, U.N.O.
6. TYPICAL EXTERIOR WALL TO BE DETAILED AS SHEAR WALL TYPE W6 PER SHEAR WALL SCHEDULE, U.N.O.
7. ALL WOOD FRAMING USED IN EXTERIOR APPLICATIONS AND EXPOSE TO THE WEATHER SHALL BE PRESSURE TREATED.

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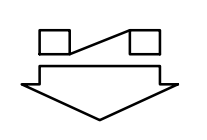
SHEET CONTENTS: MAIN FLOOR FRAMING PLAN
HUANG RESIDENCE REMODEL
 2273 74TH AVE. SE,
 MERCER ISLAND, WA 98040

CHECKED: KWC
DATE: 01-08-2024
SHEET NO:
S1.2



CONTRACTOR TO FIELD VERIFY ALL EXISTING FRAMING SHOWN ON THIS PLAN DRAWING, INCLUDING INFORMATION FOR ALL FRAMING MEMBER SIZE, SPAN LENGTH, SPAN ORIENTATION AND ON-CENTER SPACING. NOTIFY E.O.R. IMMEDIATELY FOR ANY DISCREPANCY.

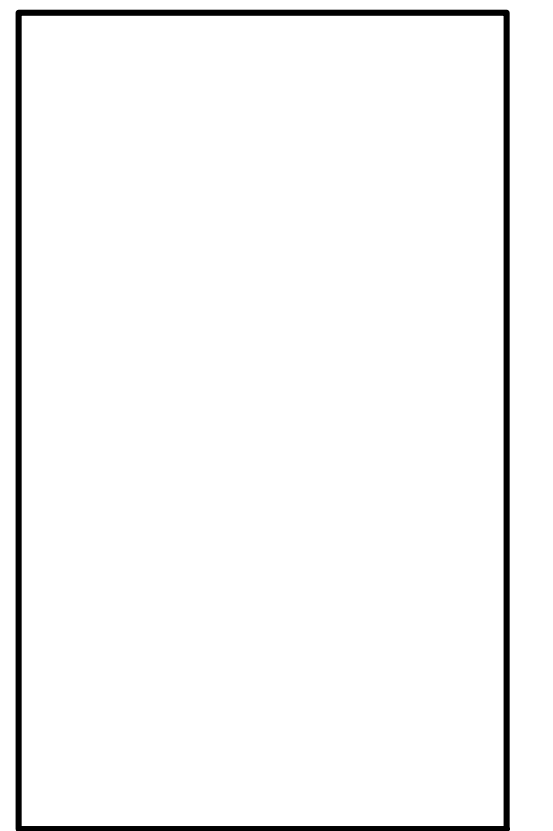
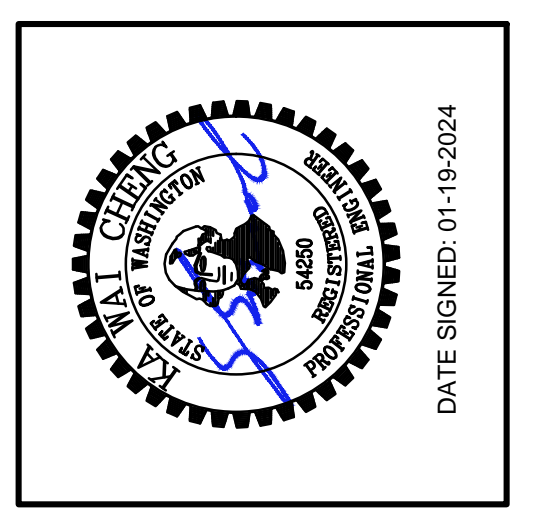
ROOF FRAMING PLAN



1/4" = 1'-0"

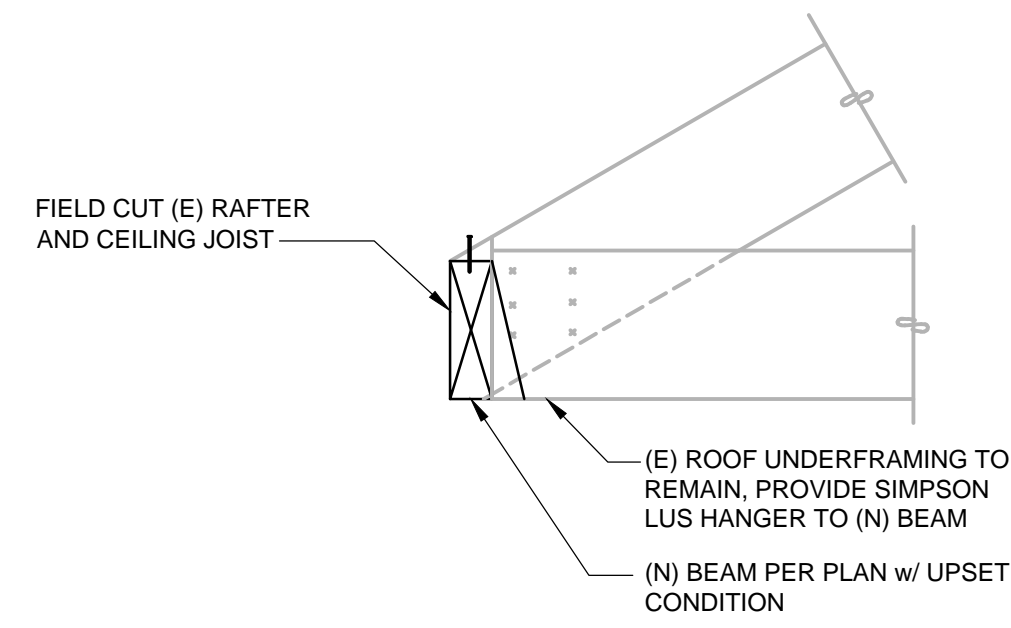
1. DO NOT SCALE DRAWINGS
2. VERIFY ALL DIMENSIONS IN FIELD. REFER TO ARCHITECTURAL PLAN FOR WALL LAYOUT.
3. TYPICAL ROOF FRAMING CONSISTS OF 5/8" PLYWOOD ON ENGINEERED WOOD TRUSSES OR RAFTERS. NAIL ALL SUPPORTED PANEL EDGES WITH 10d NAILS @ 6"oc & ALL INTERMEDIATE SUPPORTS WITH 10d NAILS @ 12"oc
4. TYPICAL EXTERIOR WALL SHALL BE FRAMED WITH 2x6 DF STUDS @ 16"oc, U.N.O. TYPICAL INTERIOR WALL SHALL BE FRAMED WITH 2x4 DF STUDS @ 16"oc U.N.O. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION PERTAINING TO WALL THICKNESS.
5. TYPICAL EXTERIOR WALL HEADERS SHALL BE FRAMED WITH (2) PILES OF 2x10 DF#2. TYPICAL INTERIOR WALL HEADERS SHALL BE FRAMED WITH (2) PILES OF 2x8 DF#2, U.N.O.
6. TYPICAL EXTERIOR WALL TO BE DETAILED AS SHEAR WALL TYPE W6 PER SHEAR WALL SCHEDULE, U.N.O.

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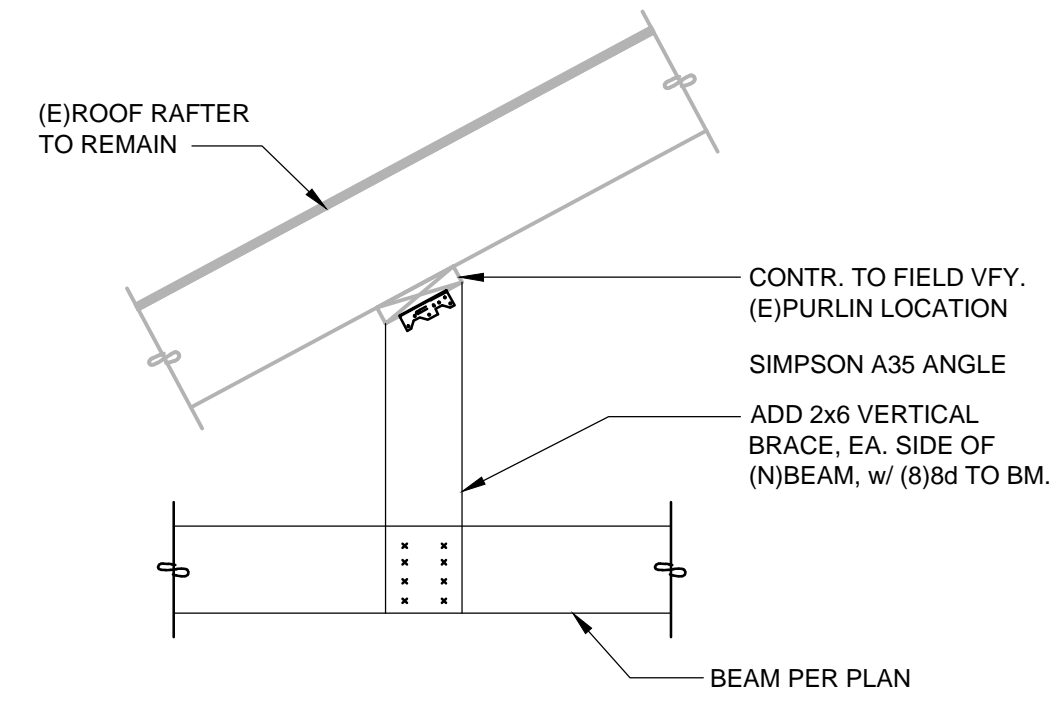


ROOF FRAMING PLAN
HUANG RESIDENCE REMODEL
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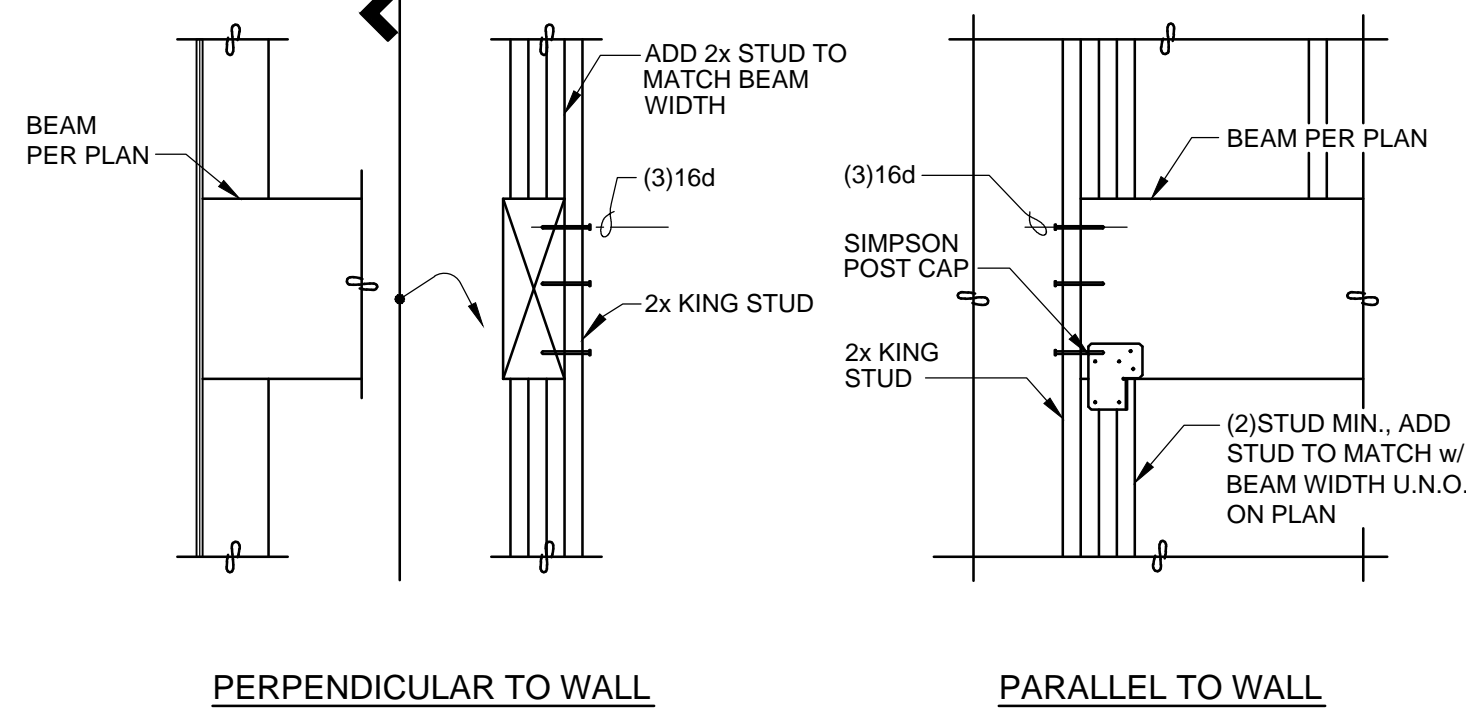
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SHEET NO:
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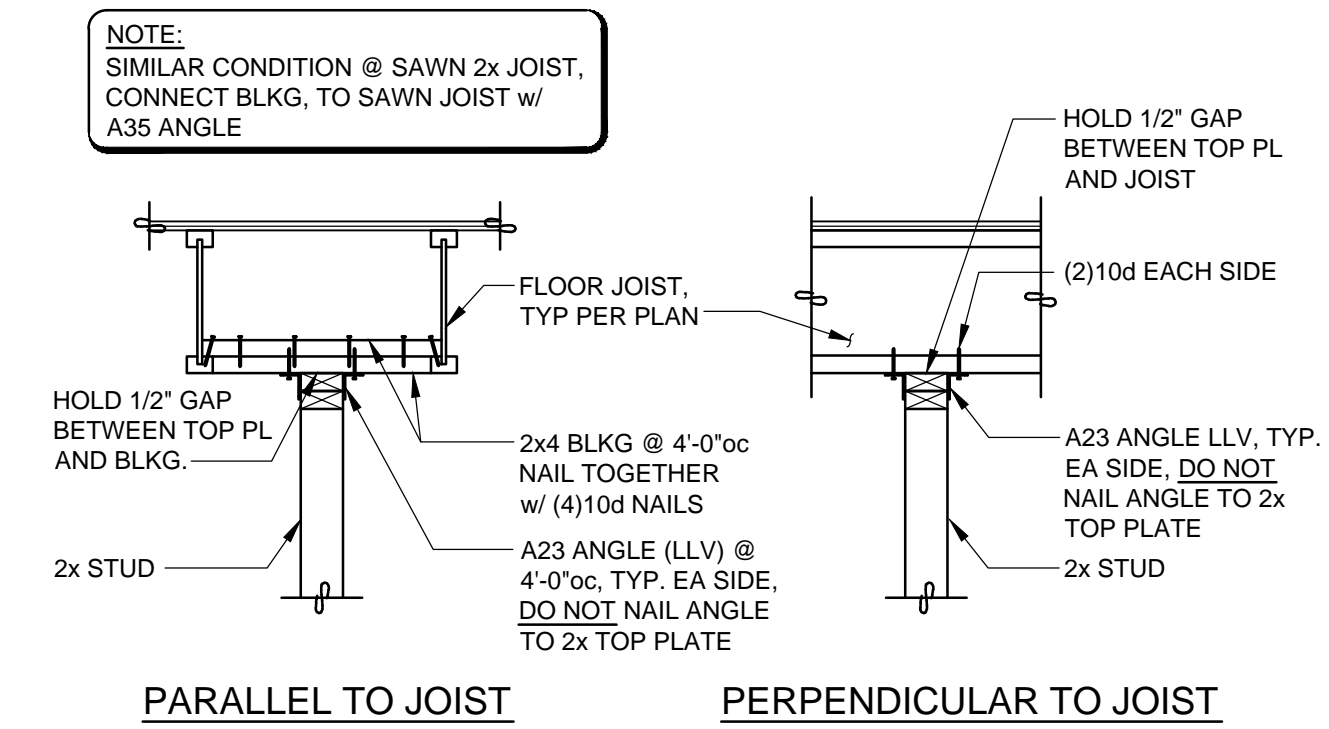
1 SECTION
3/4" = 1'-0"



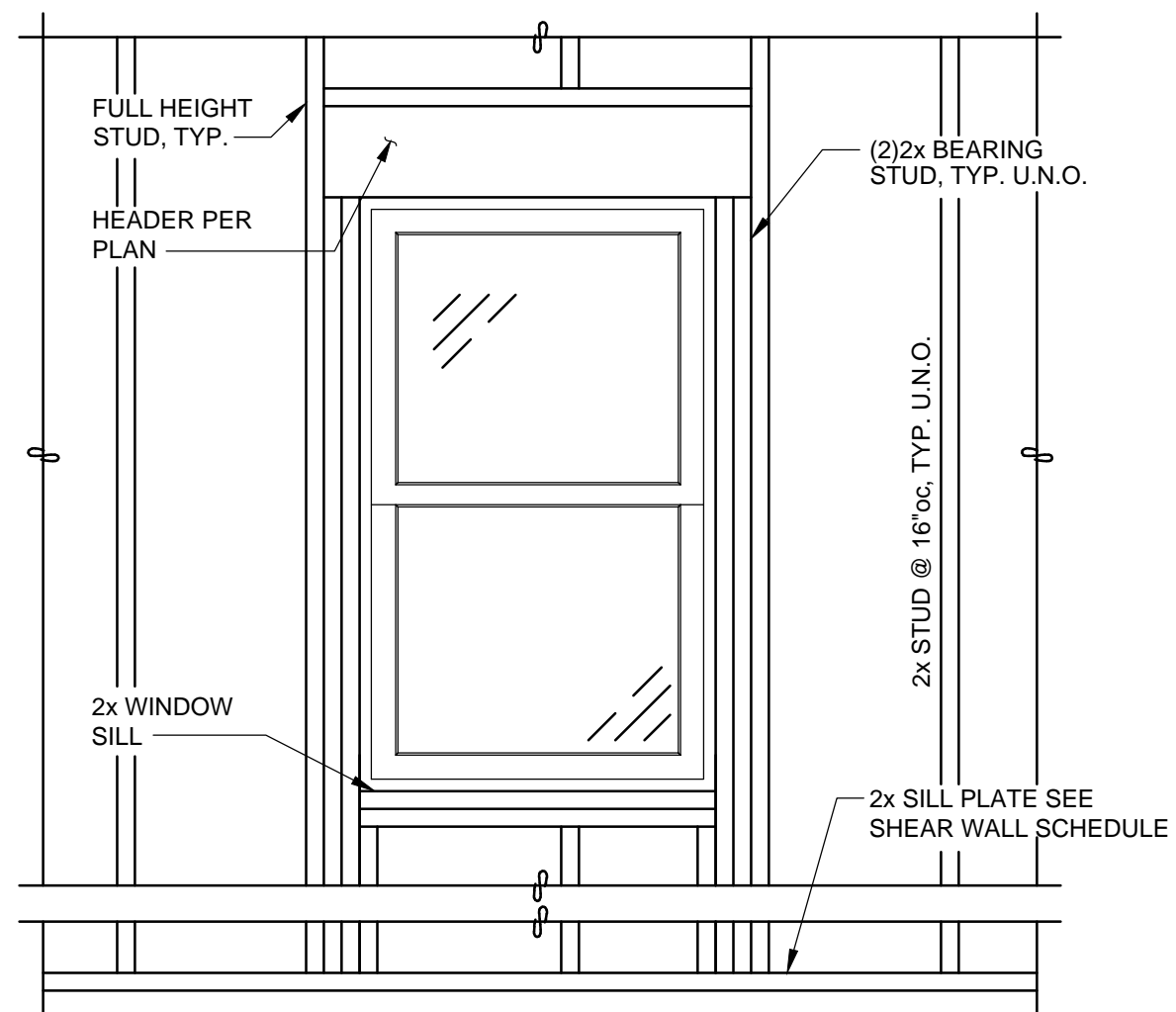
2 SECTION
3/4" = 1'-0"



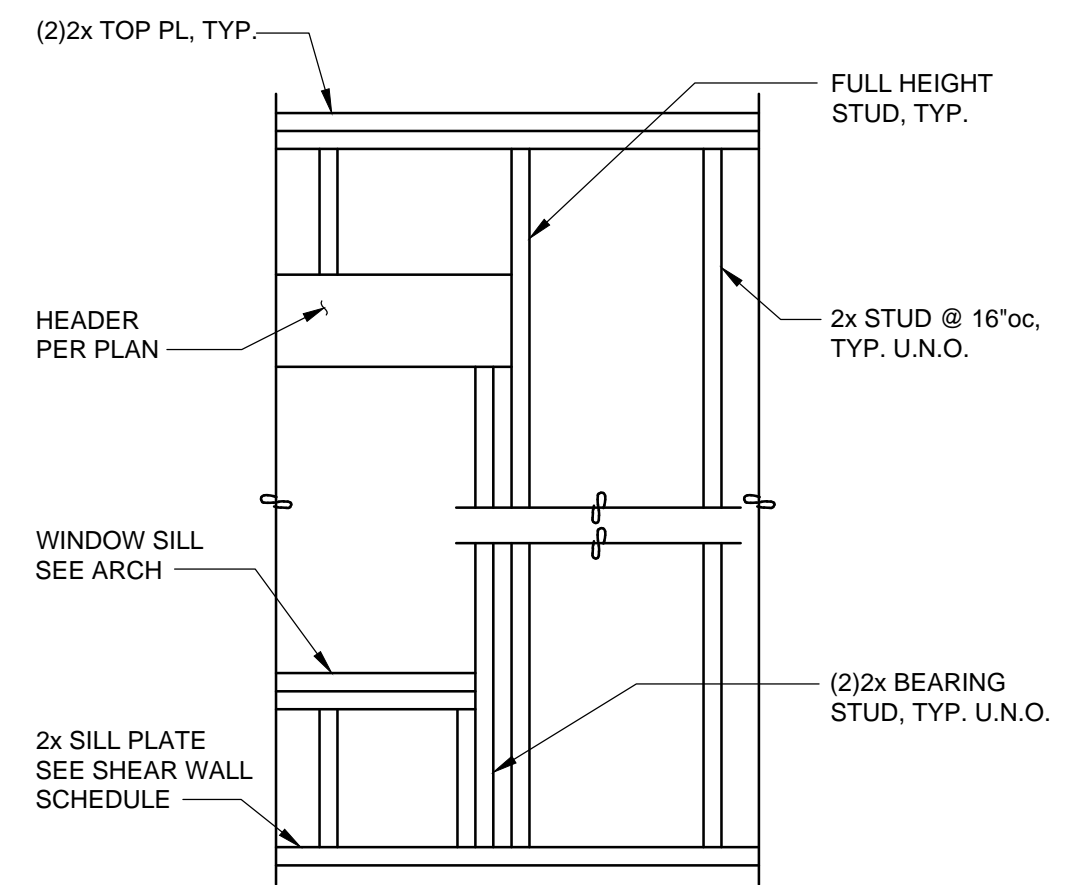
3 SECTION
3/4" = 1'-0"



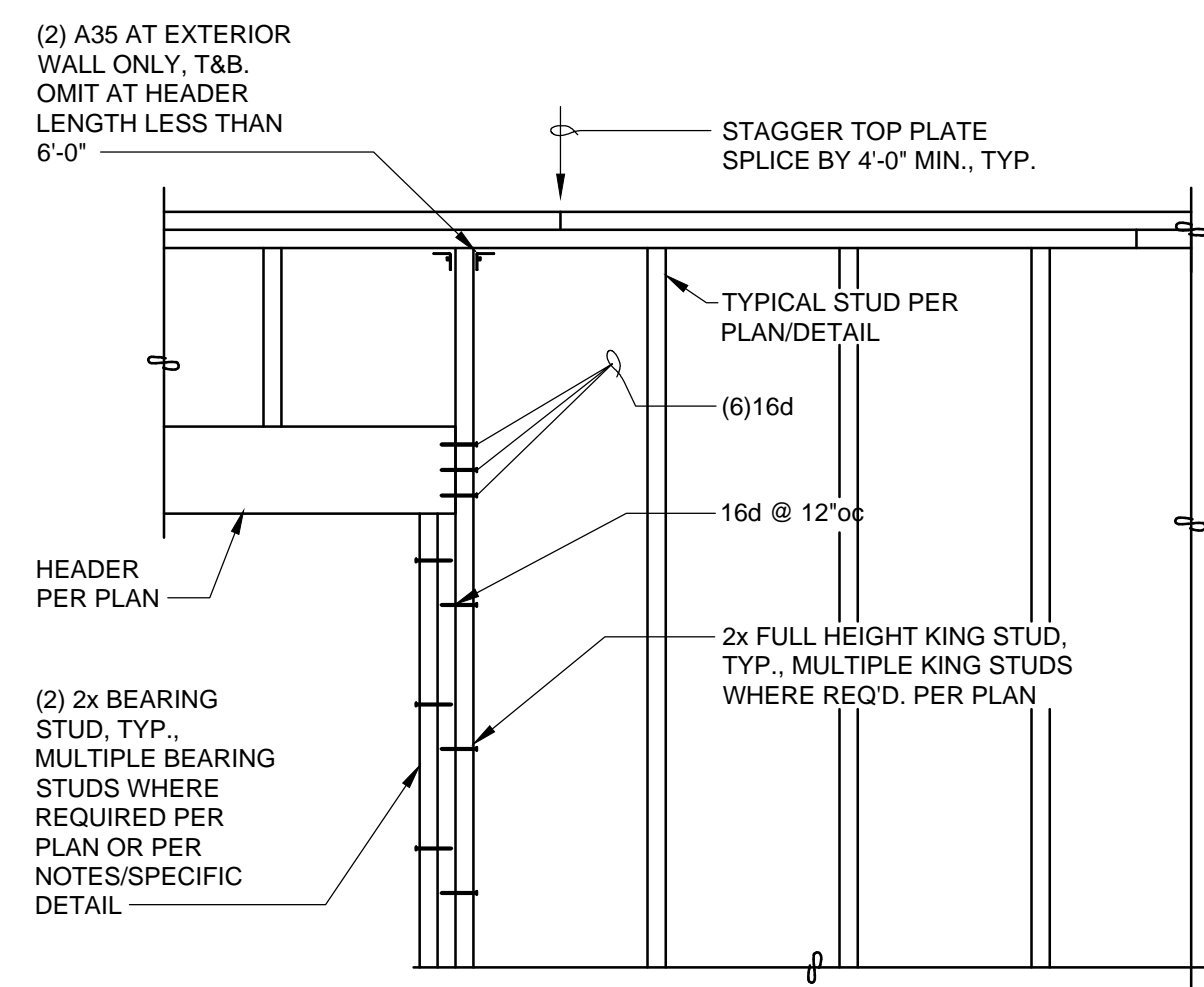
4 SECTION
3/4" = 1'-0"



5 SECTION
3/4" = 1'-0"

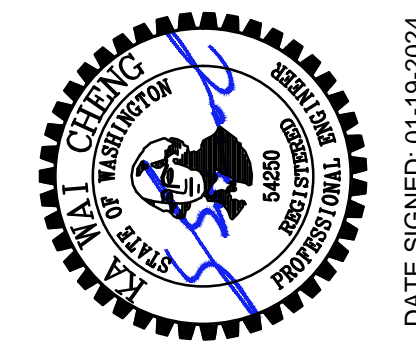


6 SECTION
3/4" = 1'-0"

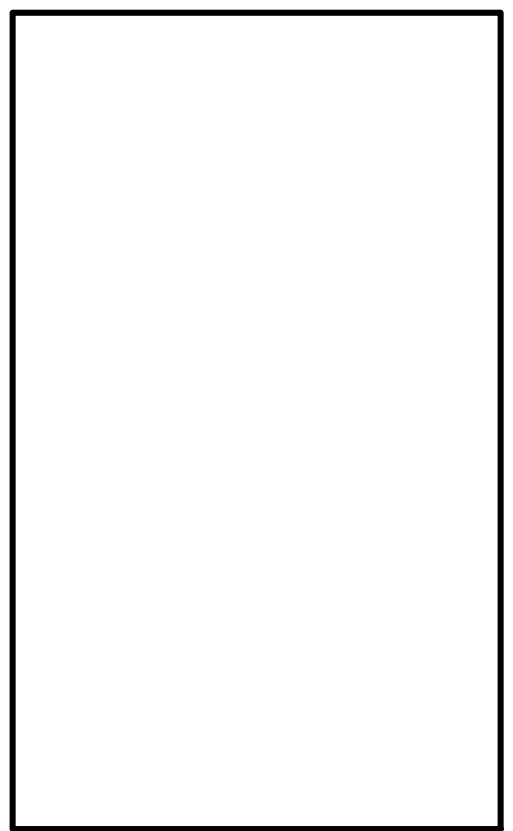


7 SECTION
3/4" = 1'-0"

NO.	DRAWING SUBMITTALS / REVISIONS	DATE
	SUBMIT FOR PERMIT	01-19-2024
	SUBMIT FOR BID	
	SUBMIT FOR CONSTRUCTION	



DATE SIGNED: 01-19-2024



STRUCTURAL SECTIONS

HUANG RESIDENCE REMODEL
2273 74TH AVE. SE.
MERCER ISLAND, WA 98040

CHECKED: KWC
DATE: 01-08-2024
SHEET NO:
S2.1