

HOME OWNER: RENE LUND
 8520 SE 82ND ST
 MERCER ISLAND, WA 98040
 PROJECT ADDRESS: Same as above
 PROJECT: RESTORE BURNED HOUSE WITH INTERIOR REMODEL AND ADDITION. NEW MAIN FLOOR FOYER AND SUN ROOM, AND NEW UPPER FLOOR WITH MASTER SUITE AND AADU.
 PARCEL NUMBER: 3625500210
 LEGAL DESCRIPTION: ISLAND POINT ADD & UND INT IN COMMUNITY TR A

CODE INFORMATION	
EXISTING HOUSE LOWER FLOOR AREA	1,689 sq. ft.
EXISTING HOUSE MAIN FLOOR AREA	1,718 sq. ft.
EXISTING TOTAL LIVING SPACE:	3,407 sq. ft.
ADDED HOUSE MAIN FLOOR AREA	276 sq. ft.
ADDED HOUSE UPPER FLOOR AREA	688 sq. ft.
ADDED HOUSE UPPER FLOOR ADU AREA	553 sq. ft.
ADDED TOTAL LIVING SPACE:	1,517 sq. ft.
NEW TOTAL LIVING SPACE:	4,924 sq. ft.
IMPERVIOUS CALCS	
EXISTING HOUSE ROOF	2,467 sq. ft.
EXISTING GARAGE ROOF	870 sq. ft.
EXISTING UNCOVERED DECK	422 sq. ft.
EXISTING CONCRETE/GRAVEL/PAVERS	4,153 sq. ft.
EXISTING TOTAL	7,912 sq. ft.
ADDED HOUSE ROOF	623 sq. ft.
ADDED TOTAL	623 sq. ft.
REMOVED GARAGE ROOF	73 sq. ft.
REMOVED CONCRETE/GRAVEL/PAVERS	1,180 sq. ft.
REMOVED TOTAL	1,253 sq. ft.
TOTAL LOT IMPERVIOUS SURFACE	61.6% 7,282 sq. ft.
LOT AREA	11,828 sq. ft.

NOTE: ALL CHARRED WOOD TO BE REPLACED REGARDLESS OF APPARENT INTEGRITY.

NOTE: NEW MAXIMUM BUILDING HEIGHT IS WITHIN MERCER ISLAND BUILDING CODE LIMITS.

PRINT AND PROMINENTLY DISPLAY THIS NOTE ON NORTH WALL OF EXISTING GARAGE.

NOTE: ENSURE THAT NO PLANTS ON NEIGHBORING PROPERTIES ARE HARMED IN ANY WAY.

PRINT AND PROMINENTLY DISPLAY THIS NOTE BY DRIVEWAY ENTRANCE FACING SOUTH AND NEAR THE CENTER OF THE EAST PROPERTY LINE FACING EAST.

ADDITIONAL SITE CALCULATIONS ON SHEET C2

NOTE: PRINT AND PROMINENTLY DISPLAY TREE PROTECTION NOTICE ON PROTECTIVE TREE FENCES (SEE TREES 2 AND D). NOTICE CAN BE PRINTED FROM THE FOLLOWING WEB ADDRESS:
https://www.mercerisland.gov/sites/default/files/fileattachments/community_planning_amp_development/page/2091/tree_protection_area_signage_chain_link_update.pdf

TABLE OF CONTENTS	
SHEET	DESCRIPTION
C-1	PROJECT DATA SHEET & SITE PLAN
C-2	ADDITIONAL CALCULATIONS AND NOTES
A-1	EXISTING LOWER FLOOR PLAN
A-2	NEW LOWER FLOOR PLAN
A-3	EXISTING MAIN FLOOR PLAN
A-4	NEW MAIN FLOOR PLAN
A-5	NEW UPPER FLOOR PLAN
A-6	NEW FOUNDATION PLAN
A-7	NEW THRU-WALL SECTION
A-8	NEW ROOF PLAN
A-9	EXISTING NORTH & SOUTH ELEVATION
A-10	EXISTING EAST & WEST ELEVATION
A-11	NEW NORTH & SOUTH ELEVATION
A-12	NEW EAST & WEST ELEVATION
S-1	GENERAL STRUCTURAL NOTES
S-2	FOUNDATION
S-3	FRAMING ABOVE LOWER FLOOR
S-4	FRAMING ABOVE MAIN FLOOR
S-5	UPPER FLOOR ROOF FRAMING
S-6	SECTIONS AND DETAILS
S-7	ADDITIONAL SECTIONS AND DETAILS
S-8	LOWER FLOOR SHEAR WALL
S-9	MAIN AND UPPER FLOOR SHEAR WALL

AVERAGE BUILDING ELEVATION		
LOCATION	SEGMENT LENGTH	HEIGHT AT MIDPOINT
POINT A	10'	322'
POINT B	11'	324'
POINT C	34'	325'
POINT D	23'	325'
POINT E	23'	327'
POINT F	23'	328'
POINT G	23'	327'
POINT H	29'	322'
POINT I	16'	319'
POINT J	12'	319'
POINT K	54'	321'
AVERAGE BUILDING ELEVATION = 324'-10 3/4"		
MAIN FLOOR HEIGHT = 329'-5 3/4"		

Tree #	Common Name	Scientific Name	Dripline					*DSH (Inches)	**RLOD (feet)	Condition	Comments	Proposal	Exceptional
			N	E	S	W							
1	Pacific dogwood	<i>Cornus nuttallii</i>	24	18	18	16	12	10	poor	trunk damage	retain	yes	
2	Flowering cherry	<i>Prunus serrulata</i> spp.	15	6	8	8	8	6	fair		retain	no	
3	Strawberry tree	<i>Arbutus unedo</i>	13.5	10	10	10	3	8	good	multi-stem:8,8,5,5,5	retain	no	
4	Korean dogwood	<i>Cornus kousa</i>	11.3	10	5	10	13	8	good	multi-stem:5,5,6,7	retain	no	
A	Sweet osmanthus	<i>Osmanthus fragrans</i>	9.8					8	6	fair	multi-stem: 6 x 4"	n/a	no
B	Douglas-fir	<i>Pseudotsuga menziesii</i>	20		12				10	good	n/a	no	
C	Scots pine	<i>Pinus sylvestris</i>	10		10				8	good	n/a	no	
D	Hollywood juniper	<i>Juniperus chinensis 'Torulosa'</i>	10				7	5	fair		n/a	no	
E	Douglas-fir	<i>Pseudotsuga menziesii</i>	32		22				12	good	n/a	yes	
F	Flowering cherry	<i>Prunus serrulata</i> spp.	12			4		4	poor	topped	n/a	no	
G	Douglas-fir	<i>Pseudotsuga menziesii</i>	24			18		12	good	n/a	no		
H	Douglas-fir	<i>Pseudotsuga menziesii</i>	18			14		10	good	n/a	no		

Tree ID is numerical if on-site and alphabetical if off-site.

Rich Design Group, LLC
 DESIGNED BY: RICH MELCHIOR
 253-951-8049
 RICHDESIGN@COMCAST.NET

A Home Project for
 RENE LUND
 8520 SE 82ND ST
 MERCER ISLAND, WA 98040
 10-11-24
 RICH DESIGN 1
 PROJECT NO.: 21-6

LOT COVERAGE CALCULATIONS

A. Gross Lot Area	11828	Square Feet
B. Net Lot Area	11828	Square Feet
C. Allowed Lot Coverage Area	4731	Square Feet
D. Allowed Lot Coverage	45	% of Lot
E. Existing Lot Coverage:		
1. Main Structure Roof Area	2467	Square Feet
2. Accessory Building Roof Area	870	Square Feet
3. Vehicular Use (driveway, paved access easements [portion used by the lot for access], parking)	4153	Square Feet
4. Covered Patios and Covered Decks	0	Square Feet
5. Total Existing Lot Coverage Area (E1+E2+E3+E4)	7490	Square Feet
F. (Total Lot Coverage Area Removed)	1253	Square Feet
G. Proposed Adjustment for Single Story (Area)	0	Square Feet
H. Proposed Adjustment for Flag Lot	0	Square Feet
I. Total New Lot Coverage Area:		
1. Main Structure Roof Area	623	Square Feet
2. Accessory Structure Roof Area	0	Square Feet
3. Vehicular Use (driveway, paved access easement [portion used by the lot for access], parking)	0	Square Feet
4. Covered Patios and Covered Decks	0	Square Feet
5. Total New Lot Coverage Area (I1 + I2 + I3 + I4)	623	Square Feet
J. Total Project Lot Coverage Area = (E5 - F) + I5	6860	Square Feet
K. Proposed Lot Coverage Area = (I/J) x 100	58.0	% of Lot

HARDSCAPE CALCULATIONS

A. Gross Lot Area	11828	Square Feet
B. Net Lot Area	11828	Square Feet
C. Area Borrowed from Lot Coverage	0	Square Feet
D. Allowed Hardscape Area = 9% of lot area + C	1065	% of Lot
E. Allowed Hardscape Area	1065	Square Feet
F. Total Existing Hardscape Area:		
1. Uncovered Decks	422	Square Feet
2. Uncovered Patios	0	Square Feet
3. Walkways	0	Square Feet
4. Stairs	0	Square Feet
5. Rockeries and Retaining Walls	417	Square Feet
6. Other	0	Square Feet
7. Total Existing Hardscape Area (F1+F2+F3+F4+F5+F6)	839	Square Feet
G. (Total Hardscape Area Removed)	0	Square Feet
H. Total New Hardscape Area:		
1. Uncovered Decks	0	Square Feet
2. Uncovered Patios	0	Square Feet
3. Walkways	0	Square Feet
4. Stairs	90	Square Feet
5. Rockeries and Retaining Walls	0	Square Feet
6. Other	0	Square Feet
7. Total New Hardscape Area (H1+H2+H3+H4+H5+H6)	90	Square Feet
I. Total Project Hardscape Area = (F7 - G) + H7	929	Square Feet
J. Total Project Hardscape Area = (I/B)x100	7.9	% of Lot

GROSS FLOOR AREA CALCULATIONS

Building Area	Existing Area	Removed Area	New/Addition Area	Total
Upper Floor	0	Sq. Ft.	688	Sq. Ft.
Main Floor	1718	Sq. Ft.	276	Sq. Ft.
Gross Basement Area	1689	Sq. Ft.	0	Sq. Ft.
Garage/ Carport	462	Sq. Ft.	0	Sq. Ft.
Total Floor Area	3869	Sq. Ft.	1517	Sq. Ft.
Accessory Buildings	0	Sq. Ft.	0	Sq. Ft.
Accessory Dwelling Unit	0	Sq. Ft.	553	Sq. Ft.
2 nd & 3 rd Story Roofed				
Decks	0	Sq. Ft.	0	Sq. Ft.
Basement Area		Sq. Ft.		Sq. Ft.
Excluded	413	0	0	413
150% GFA Modifier* (main and upper floor x2)	292	0	0	292
200% GFA Modifier* (main and upper floor x2)	0	0	0	0
Staircase GFA Modifier* (x2 for a three story staircase, x3 for a four story staircase)	0	0	90	90
TOTAL Building Area	3689	Sq. Ft.	2160	Sq. Ft.

A. Lot Area	11828	Square Feet
B. Zone R-8.4 <input type="checkbox"/> R-9.6 <input checked="" type="checkbox"/>	R-12 <input type="checkbox"/> R-15 <input type="checkbox"/>	
C. Allowed Gross Floor Area (refer to "allowed GFA")	5323	Square Feet
D. Allowed Gross Floor Area	45.0	% of Lot
E. Proposed Gross Floor Area	5209	Square Feet
F. Proposed Gross Floor Area	44.0	% of Lot

* 413 SQ. FT. OF THE LOWER FLOOR IS A SUBLEVEL WHICH IS ENTIRELY BELOW GRADE, WHICH PER CITY CODE IS NOT INCLUDED IN GFA.
 ** 292 SQ. FT. OF THE MAIN FLOOR HAS A 12 FOOT CEILING, WHICH PER CITY CODE COUNTS x1.5 FOR GFA.

FIELD VERIFY ALL CONDITIONS AND MEASUREMENTS
 READ AND UNDERSTAND ALL NOTES BEFORE WORKING

NOTE: THE ENGINEER MUST PROVIDE A WRITTEN REPORT AFTER THEIR INITIAL INVESTIGATION WITH A SUMMARY OF THEIR FINDINGS; A FIELD REPORT PRIOR TO THE FRAMING INSPECTION THAT CLARIFIES ALL THE REMAINING MATERIALS CAN SAFELY REMAIN; AND A SUMMARY REPORT AT THE TIME OF THE FINAL INSPECTION. REPORTS FROM THE ENGINEER MUST BE SUBMITTED TO THE BUILDING OFFICIAL AND MUST INCLUDE A STATEMENT THAT THEY WERE PROVIDED THE ACCESS NECESSARY TO INSPECT AND DETERMINE THAT THE REMAINING MATERIALS ARE SAFE.

NOTE: A QUALIFIED WASHINGTON STATE LICENSED INDUSTRIAL HYGIENIST MUST INSPECT ANY REMAINING BUILDING MATERIALS TO DETERMINE WHETHER THE MATERIALS CAN SAFELY REMAIN WITH RESPECT TO HEALTH HAZARDS TO BUILDING OCCUPANTS. THEIR INSPECTION SHALL INCLUDE HEALTH SAFETY ITEMS WHICH MAY BE PRESENT BEHIND WALLS, UNDER FLOORS, ETC., INCLUDING BUT NOT LIMITED TO IRRITANTS, POLLUTANTS, CONTAMINANTS, ALLERGENS, TOXIC MATERIALS, OR QUALITY OF AIR IN OR AROUND THE BUILDING (I.E.- SPORES, FUNGUS, MOLD, MILDEW, INFESTATION, ETC.). THE HYGIENIST MUST PROVIDE A WRITTEN REPORT AFTER THEIR INITIAL INVESTIGATION WITH A SUMMARY OF THEIR FINDINGS; A FIELD REPORT PRIOR TO THE FRAMING INSPECTION THAT CLARIFIES ALL THE REMAINING MATERIALS CAN SAFELY REMAIN; AND A SUMMARY REPORT AT THE TIME OF THE FINAL INSPECTION. REPORTS FROM THE HYGIENIST MUST BE SUBMITTED TO THE BUILDING OFFICIAL AND MUST INCLUDE A STATEMENT THAT THEY WERE PROVIDED THE ACCESS NECESSARY TO INSPECT AND DETERMINE THAT THE REMAINING MATERIALS ARE SAFE.

NOTE: THE ELECTRICIAN MUST PROVIDE A WRITTEN REPORT AFTER THEIR INITIAL INVESTIGATION WITH A SUMMARY OF THEIR FINDINGS; A FIELD REPORT PRIOR TO THE FRAMING INSPECTION THAT CLARIFIES ALL THE REMAINING MATERIALS CAN SAFELY REMAIN; AND A SUMMARY REPORT AT THE TIME OF THE FINAL INSPECTION. REPORTS FROM THE ELECTRICIAN MUST BE SUBMITTED TO THE BUILDING OFFICIAL AND MUST INCLUDE A STATEMENT THAT THEY WERE PROVIDED THE ACCESS NECESSARY TO INSPECT AND DETERMINE THAT THE REMAINING MATERIALS ARE SAFE. PRIOR TO COVERING ANY WORK, THE GENERAL CONTRACTOR SHALL OBTAIN AN INSPECTION BY THE CITY OF MERCER ISLAND BUILDING OFFICIAL TO REVIEW THE ELECTRICIAN'S REPORT AGAINST REMAINING MATERIALS. A PEER REVIEW (PAID BY THE BUILDING OWNER) MAY BE REQUIRED IF THE ELECTRICIAN'S APPROVAL OF REMAINING MATERIALS IS FOUND QUESTIONABLE.

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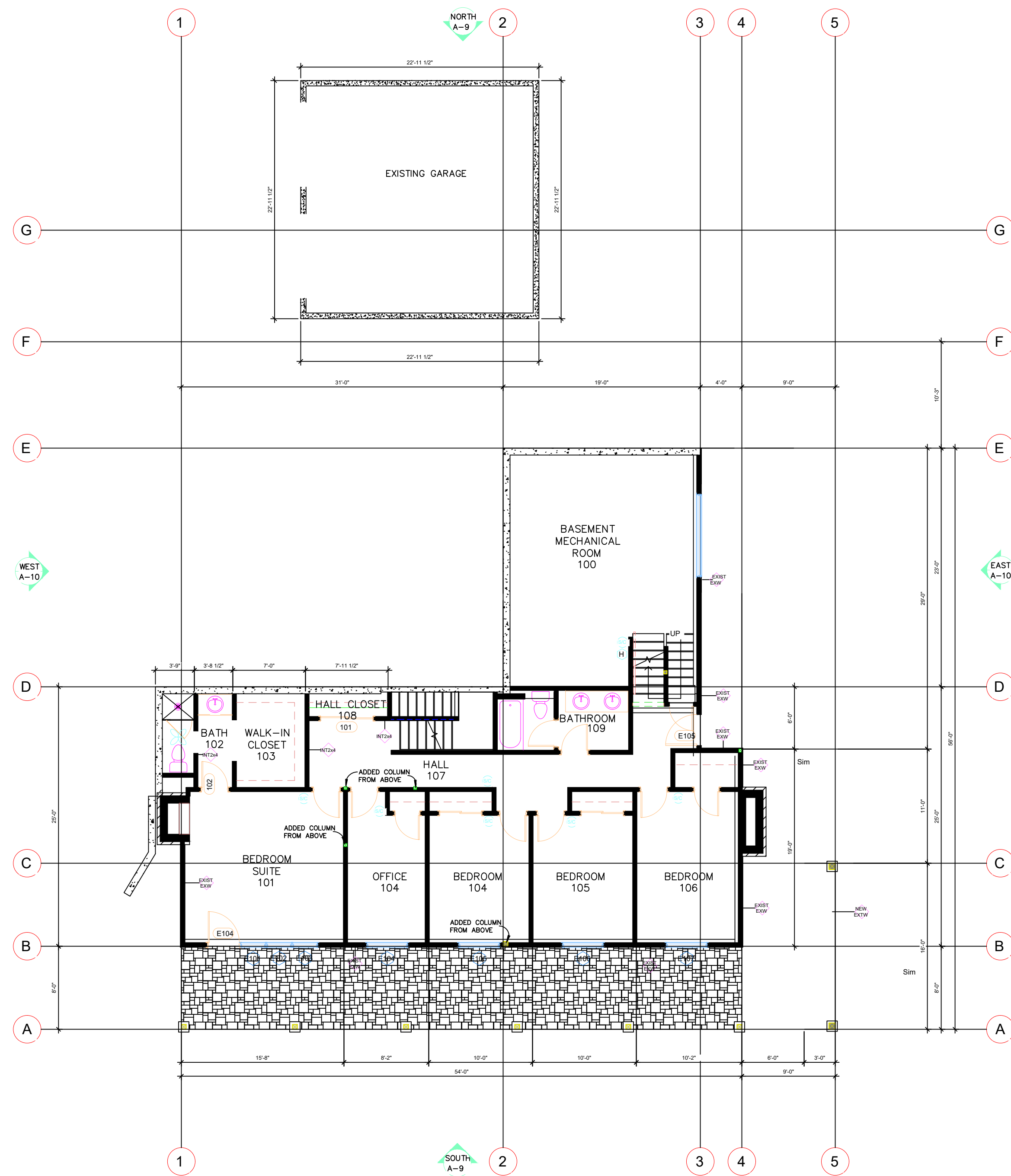
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A Home Project for
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10-11-24

C 2
 RICH DESIGN 1
 PROJECT NO.: 21-6

NOTE: FIELD VERIFY ALL MEASUREMENTS

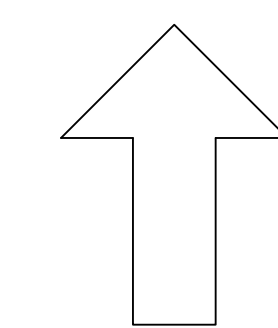


GENERAL NOTES

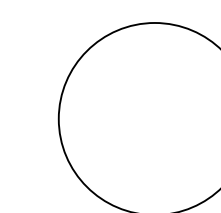
1. CONTRACTOR RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS BEFORE COMMENCEMENT OF WORK, NOTIFY THE OWNER ABOUT ANY DISCREPANCY
2. MECHANICAL, ELECTRICAL AND PLUMBING TO BE DESIGNED BY THE CONTRACTORS PER PRESCRIPTIVE REQUIREMENTS.
3. CONTRACTOR RESPONSIBLE FOR VERIFYING UTILITY LINE LOCATIONS PRIOR TO ANY SITE OR DEMO WORK, COORDINATE WITH UTILITY COMPANIES TO DISCONNECT OR RELOCATE ANY UTILITY LINES AS PART OF THE WORK
4. DO NOT SCALE DRAWINGS TO OBTAIN DIMENSIONS, WRITTEN DIMENSIONS TO BE VERIFIED ON SITE
5. ALL WORK SHALL CONFIRM TO THE 2021 IRC/IBC, AND/OR THE LATEST EDITION OF ALL OTHER APPLICABLE CODES
6. ALL INTERIOR WALLS TO BE 2X4" U.N.O.

PROVIDE **ATTIC ACCESS**, MIN. 22 X 30" W/ MIN. 30" HEADROOM @ UNOBSTRUCTED, READILY ACCESSIBLE OPENING (REF. IRC R807.1)

LEGEND	
	EXISTING WINDOW
	EXISTING DOOR
	100 cfm min EXHAUST FAN
	SMOKE DETECTOR/CARBON MONOXIDE



NORTH



EXISTING BASEMENT

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

NOTE: FIELD VERIFY ALL MEASUREMENTS

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NO.	DATE	REVISION

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10-11-24

A 1

RICH DESIGN 1
PROJECT NO.: 21-6

WINDOW SCHEDULE (LOWER FLOOR)

Component Description	Ref	U-factor	Qt	Width Feet	Height Feet	Area	UA
Existing Tempered Fixed Glass	E101	0.25	1	2' 6"	6' 0"	15.0	3.75
Existing Tempered Fixed Glass	E102	0.25	1	2' 6"	6' 0"	15.0	3.75
Existing Tempered Fixed Glass	E103	0.25	1	2' 6"	6' 0"	15.0	3.75
Existing Tempered Single Hung	E104	0.25	1	4' 0"	4' 0"	16.0	4.00
Existing Tempered Single Hung	E105	0.25	1	4' 0"	4' 0"	16.0	4.00
Existing Tempered Single Hung	E106	0.25	1	4' 0"	4' 0"	16.0	4.00
Existing Tempered Single Hung	E107	0.25	1	4' 0"	4' 0"	16.0	4.00
New Fixed Glass	108	0.25	1	2' 0"	2' 0"	5.0	1.25
New Fixed Glass	109	0.25	1	2' 0"	2' 0"	5.0	1.25
New Fixed Glass	110	0.25	1	2' 0"	2' 0"	5.0	1.25
New Fixed Glass	111	0.25	1	2' 0"	2' 0"	5.0	1.25
TOTAL						129.0	32.25

DOOR SCHEDULE (LOWER FLOOR)

Component Description	Ref	U-factor	Qt	Width Feet	Height Feet	Area	UA
Existing Exterior Door	E104	0.25	1	3' 0"	6' 8"	20.0	5.00
Existing Exterior Door	E105	0.25	1	3' 0"	6' 8"	20.0	5.00
TOTAL						40.0	10.00

NEW FIXTURE	QTY
VENT	2
TOILET	2
SINK	3
SHOWER	1
BATH	0
BATH/SHOWER	1

NOTE: FIELD VERIFY ALL MEASUREMENTS

DESIGN PER IRC/IBC 2021

SAFETY GLAZING (REF IRC R308)

- * SAFETY GLAZING MUST BE PERMANENTLY MARKED AS SUCH.
- * WINDOWS ADJACENT TO TUB/SHOWER MUST HAVE BOTTOM SILL AT LEAST 60" ABOVE FLOOR LEVEL.

BATHROOM FIXTURE CLEARANCE (REF IRC R307)

- * 21" IN FRONT OF SINK/TOILET/TUB.
- * 24" IN FRONT OF SHOWER OPENING.
- * 15" BETWEEN WALL/TUB AND TOILET O.C.

BATHROOM HEIGHTS (REF IRC R307)

- * NONABSORBENT SURFACE ON WALL ABOVE TUB/SHOWER MINIMUM 6 FEET HIGH

STAIRWAYS (REF IRC 311.7)

- * MIN WIDTH: 36"
- * MIN HEAD ROOM: 6'-8"
- * MAX RISER HEIGHT: 7-3/4"
- * MAX VARIANCE: 3/8"
- * MIN TREAD DEPTH 10"
- * NOSING BETWEEN 3/4" AND 1-1/4"
- * MAX HANDRAIL PROJECTION: 4-1/2"
- * HANDRAIL REQUIRED FOR ALL FLIGHTS OF AT LEAST 4 STAIRS
- * HANDRAILS SHALL BE CONTINUOUS ALONG FLIGHT OF STAIRS EXCEPT AT CORNER POSTS.
- * LOCATION AT 34-38 INCHES ABOVE THE STAIR NOSING.
- * GRASP DIMENSION BETWEEN 1-1/4 TO 2 INCHES.
- * PROVIDE CONTINUOUS HANDRAIL OR TERMINATE AT NEWEL POSTS OR SAFETY TERMINAL.
- * WHERE USED AS A GUARDRAIL, A MAXIMUM OPENING OF 4 INCHES.
- * USABLE SPACE UNDER STAIRS, WALLS AND CEILINGS TO HAVE 5/8" type x g.w.b. sec. 10003.33.4

LIGHTING (REF IRC R303)

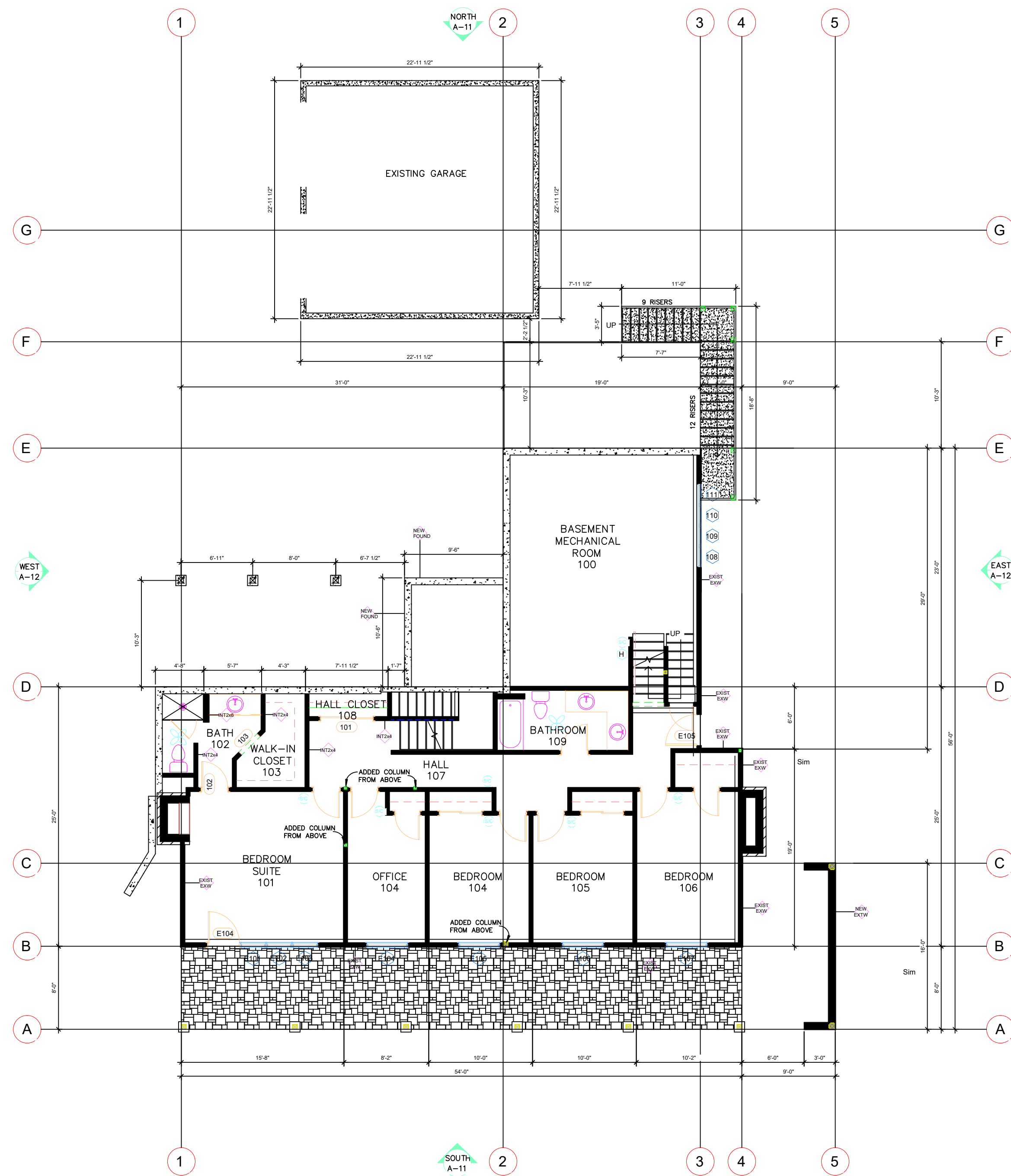
- * INTERIOR AND EXTERIOR STAIRWAYS TO BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE

FIRE ALARMS (REF IFC AND MERCER ISLAND RESIDENTIAL CODE)

- * SMOKE ALARMS COMPLYING WITH NFPA 72 AND KING COUNTY CODE TO BE INSTALLED IN EACH BEDROOM AND NEAR EACH SEPARATE SLEEPING AREA.
- * CARBON MONOXIDE ALARMS TO BE INSTALLED NEAR EACH SEPARATE SLEEPING AREA, MINIMUM 1 ALARM PER FLOOR.
- * ALL NEW ALARMS TO BE HARDWIRED AND INTERCONNECTED.

EGRESS WINDOWS

- * MINIMUM CLEARANCE 20" X 24"
- * MINIMUM OPENING AREA 5.7 SQ FT
- * WINDOW SILL HEIGHT MAX 44" ABOVE FLOOR

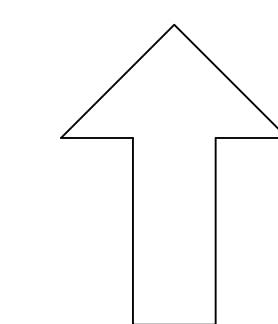


GENERAL NOTES

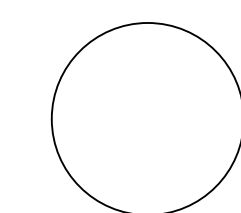
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LEGEND	
	NEW WALL TAG
	EXISTING WINDOW
	EXISTING DOOR
	100 cfm min EXHAUST FAN
	SMOKE DETECTOR/CARBON MONOXIDE



NORTH



NEW BASEMENT

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

NOTE: FIELD VERIFY ALL MEASUREMENTS

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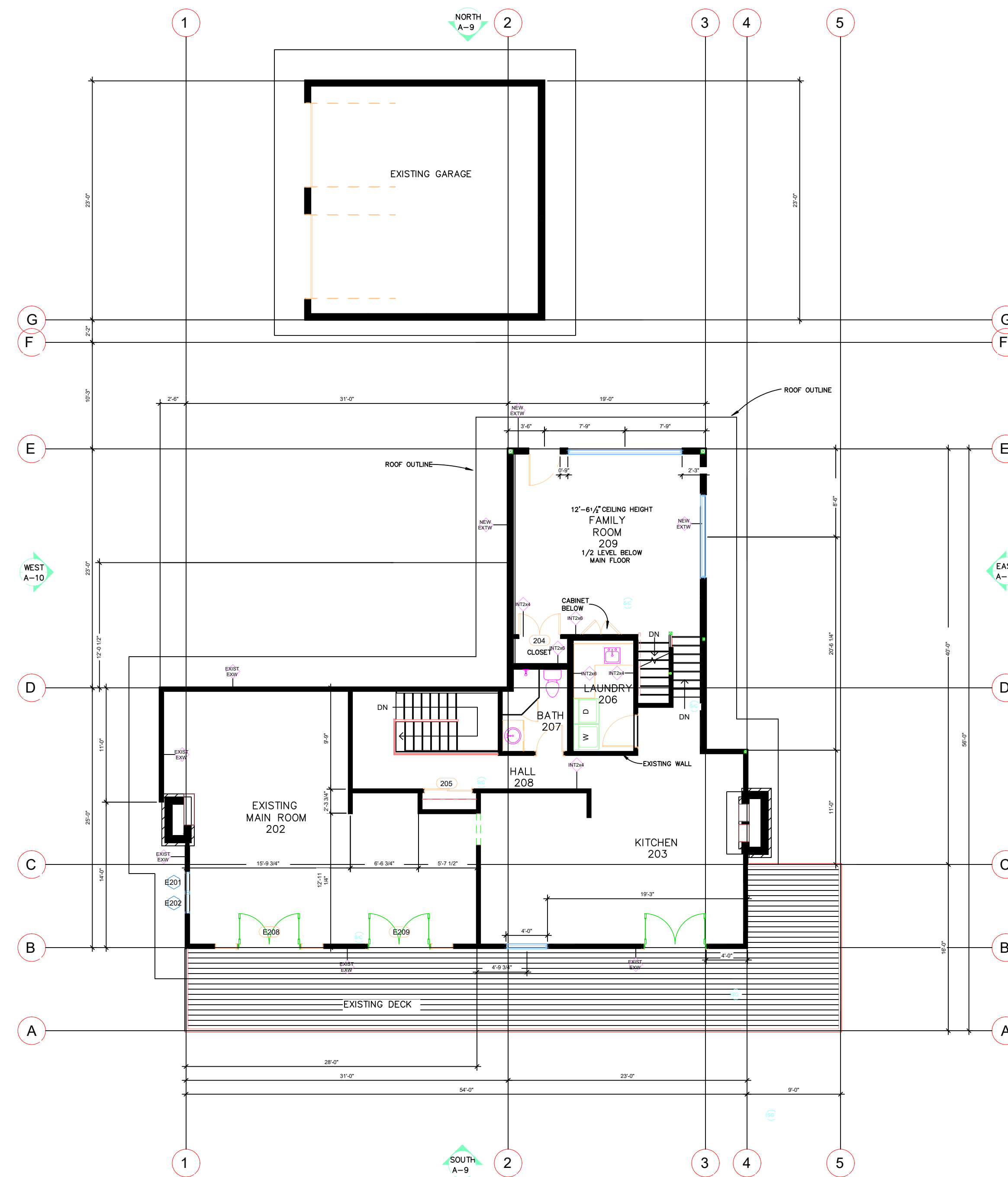
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A 2

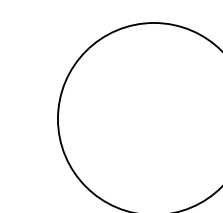
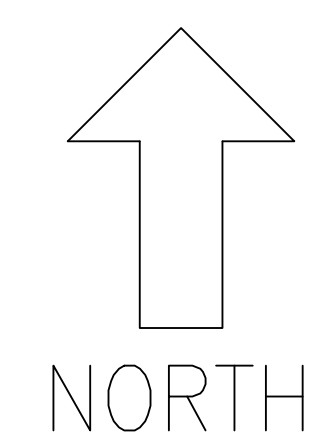
RICH DESIGN 1
PROJECT NO.: 21-6

NOTE: FIELD VERIFY ALL MEASUREMENTS



NOTE: ALL ROOMS ON THIS FLOOR AFFECTED BY FIRE DAMAGE. REPLACE DAMAGED FRAMING IN ACCORDANCE WITH NEW MAIN FLOOR PLAN. ENSURE TEMPORARY SUPPORTS REMAIN IN PLACE UNTIL STRUCTURAL INTEGRITY HAS BEEN RESTORED.

LEGEND	
	EXISTING WINDOW
	EXISTING DOOR
	100 cfm min EXHAUST FAN
	SMOKE DETECTOR/CARBON MONOXIDE



EXISTING MAIN FLOOR
SCALE: 1/8"=1'-0"

NOTE: FIELD VERIFY ALL MEASUREMENTS

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10-11-24

A 3

RICH DESIGN 1
PROJECT NO.: 21-6

WINDOW SCHEDULE (MAIN FLOOR)

Component Description	Ref.	U-factor	Qt.	Width Feet	Height Feet	Area	UA
Existing Fixed Glass	E201	0.25	1	2' 0"	9' 2"	18.3	4.58
Existing Fixed Glass	E202	0.25	1	2' 0"	8' 6"	17.0	4.25
New Tempered Triple Slider	203	0.25	1	6' 0"	3' 2"	19.0	4.75
New Fixed Glass	204	0.25	1	8' 0"	5' 0"	40.0	10.00
New Fixed Glass	205	0.25	1	4' 0"	5' 0"	20.0	5.00
New Fixed Glass	206	0.25	1	3' 0"	5' 0"	15.0	3.75
New Fixed Glass	207	0.25	1	6' 0"	5' 0"	30.0	7.50
New Fixed Glass	208	0.25	1	3' 0"	5' 0"	15.0	3.75
New Fixed Glass	209	0.25	1	4' 0"	5' 0"	20.0	5.00
New Fixed Glass	210	0.25	1	3' 0"	5' 0"	15.0	3.75
New Tempered Fixed Glass	211	0.25	1	3' 0"	6' 0"	18.0	4.50
New Tempered Fixed Glass	212	0.25	1	6' 0"	6' 0"	36.0	9.00
New Fixed Glass	213	0.25	1	3' 0"	6' 0"	18.0	4.50
New Tempered Fixed Glass	214	0.25	1	5' 0"	6' 0"	30.0	7.50
TOTAL						311.3	77.83

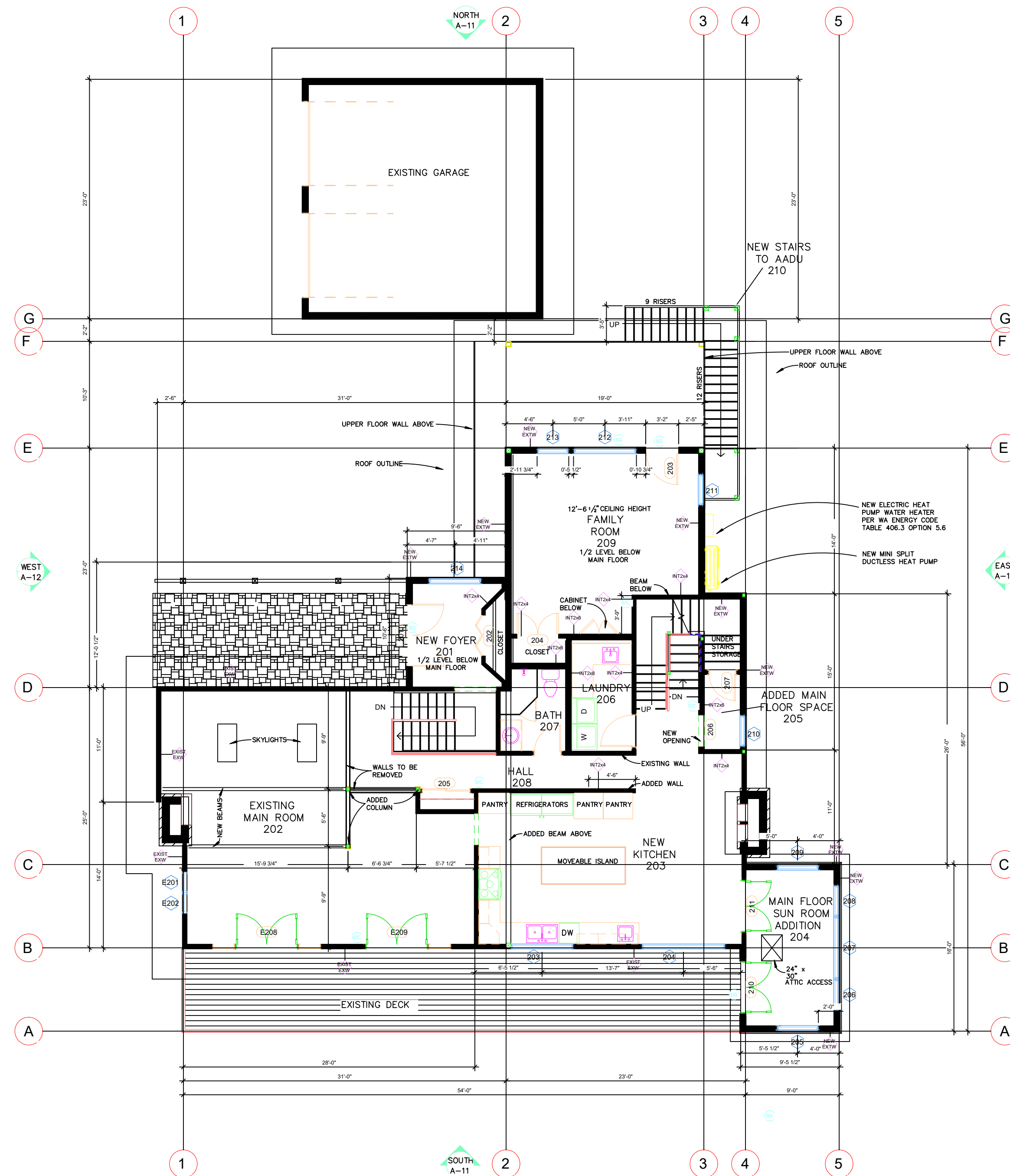
DOOR SCHEDULE (MAIN FLOOR)

Component Description	Ref.	U-factor	Qt.	Width Feet	Height Feet	Area	UA
New Exterior French Doors	201	0.25	1	6' 0"	8' 0"	48.0	12.00
New Exterior Door	203	0.25	1	3' 0"	8' 0"	24.0	6.00
Existing Exterior French Doors	E208	0.25	1	6' 0"	6' 6"	40.0	10.00
Existing Exterior French Doors	E209	0.25	1	6' 0"	6' 6"	40.0	10.00
New Exterior French Doors	210	0.25	1	5' 0"	6' 6"	33.3	8.33
New Exterior French Doors	211	0.25	1	5' 0"	6' 6"	33.3	8.33
TOTAL						218.6	54.65

NEW FIXTURE	QTY
VENT	0
TOILET	0
SINK	2
SHOWER	0
BATH	0
BATH/SHOWER	0

NOTE: FIELD VERIFY ALL MEASUREMENTS

NEW IN-WALL TANKLESS WATER HEATER
NEW IN-WALL DUCTLESS HEAT PUMP



DESIGN PER IRC/IBC 2021

SAFETY GLAZING (REF IRC R308)
 * SAFETY GLAZING MUST BE PERMANENTLY MARKED AS SUCH.
 * WINDOWS ADJACENT TO TUB/SHOWER MUST HAVE BOTTOM SILL AT LEAST 60" ABOVE FLOOR LEVEL.

BATHROOM FIXTURE CLEARANCE (REF IRC R307)
 * 21" IN FRONT OF SINK/TOILET/TUB.
 * 24" IN FRONT OF SHOWER OPENING.
 * 15" BETWEEN WALL/TUB AND TOILET O.C.

BATHROOM HEIGHTS (REF IRC R307)
 * NONABSORBENT SURFACE ON WALL ABOVE TUB/SHOWER MINIMUM 6 FEET HIGH

STAIRWAYS (REF IRC 311.7)
 * MIN WIDTH: 36"
 * MIN HEAD ROOM: 6'-8"
 * MAX RISER HEIGHT: 7-3/4"
 * MAX VARIANCE: 3/8"
 * MIN TREAD DEPTH 10"
 * NOSING BETWEEN 3/4" AND 1-1/4"
 * MAX HANDRAIL PROJECTION: 4-1/2"
 * HANDRAIL REQUIRED FOR ALL FLIGHTS OF AT LEAST 4 STAIRS
 * HANDRAILS SHALL BE CONTINUOUS ALONG FLIGHT OF STAIRS EXCEPT AT CORNER POSTS.
 * LOCATION AT 34-38 INCHES ABOVE THE STAIR NOSING.
 * GRASP DIMENSION BETWEEN 1-1/4 TO 2 INCHES.
 * PROVIDE CONTINUOUS HANDRAIL OR TERMINATE AT NEWEL POSTS OR SAFETY TERMINAL.
 * WHERE USED AS A GUARDRAIL, A MAXIMUM OPENING OF 4 INCHES.
 * USABLE SPACE UNDER STAIRS, WALLS AND CEILINGS TO HAVE 5/8" type x g.w.b. sec. 10003.33.4

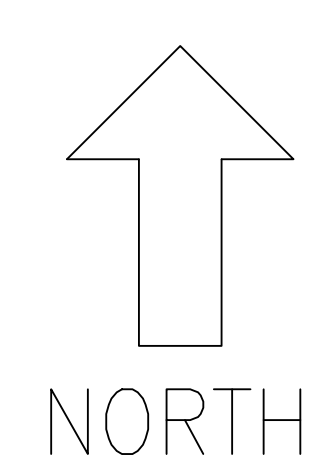
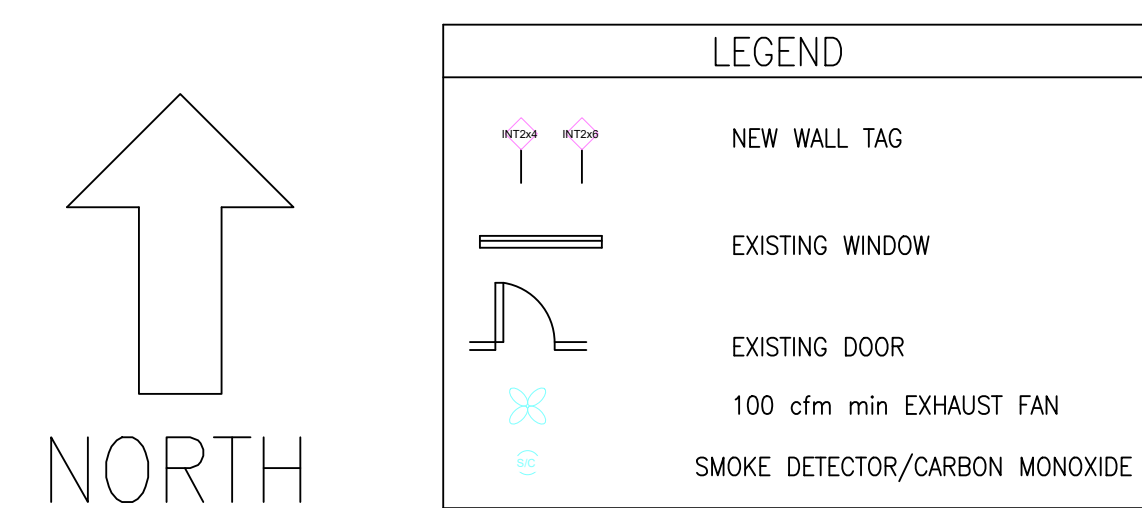
LIGHTING (REF IRC R303)
 * INTERIOR AND EXTERIOR STAIRWAYS TO BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE

FIRE ALARMS (REF IFC AND MERCER ISLAND RESIDENTIAL CODE)
 * SMOKE ALARMS COMPLYING WITH NFPA 72 AND KING COUNTY CODE TO BE INSTALLED IN EACH BEDROOM AND NEAR EACH SEPARATE SLEEPING AREA.
 * CARBON MONOXIDE ALARMS TO BE INSTALLED NEAR EACH SEPARATE SLEEPING AREA, MINIMUM 1 ALARM PER FLOOR.
 * ALL NEW ALARMS TO BE HARDWIRED AND INTERCONNECTED.

EGRESS WINDOWS
 * MINIMUM CLEARANCE 20" X 24"
 * MINIMUM OPENING AREA 5.7 SQ FT
 * WINDOW SILL HEIGHT MAX 44" ABOVE FLOOR

- GENERAL NOTES**
- CONTRACTOR RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS BEFORE COMMENCEMENT OF WORK, NOTIFY THE OWNER ABOUT ANY DISCREPANCY
 - MECHANICAL, ELECTRICAL AND PLUMBING TO BE DESIGNED BY THE CONTRACTORS PER PRESCRIPTIVE REQUIREMENTS.
 - CONTRACTOR RESPONSIBLE FOR VERIFYING UTILITY LINE LOCATIONS PRIOR TO ANY SITE OR DEMO WORK. COORDINATE WITH UTILITY COMPANIES TO DISCONNECT OR RELOCATE ANY UTILITY LINES AS PART OF THE WORK.
 - DO NOT SCALE DRAWINGS TO OBTAIN DIMENSIONS, WRITTEN DIMENSIONS TO BE VERIFIED ON SITE
 - ALL WORK SHALL CONFIRM TO THE 2021 IRC/IBC, AND/OR THE LATEST EDITION OF ALL OTHER APPLICABLE CODES
 - ALL INTERIOR WALLS TO BE 2X4" U.N.O.

PROVIDE A **TTC ACCESS**, MIN. 22 X 30" W/ MIN. 30" HEADROOM @ UNOBSTRUCTED, READILY ACCESSIBLE OPENING (REF. IRC R807.1)



NEW MAIN FLOOR
SCALE: 1/8"=1'-0"

NOTE: FIELD VERIFY ALL MEASUREMENTS

Rich Design Group, LLC
 DESIGNED BY:
 RICH MELCHIOR
 253-951-8049
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A Home Project for
 RENEE LUND
 8520 SE 82ND ST
 MERCER ISLAND, WA 98040
 10-11-24

A 4
 RICH DESIGN 1
 PROJECT NO.: 21-6

WINDOW SCHEDULE (UPPER FLOOR)

Component Description	Ref.	U-factor	Qt	Width Feet	Height Feet	Area	UA
New Fixed Glass	301	0.25	1	4	6	24.0	6.00
New Fixed Glass	302	0.25	1	8	6	48.0	12.00
New Fixed Glass	303	0.25	1	4	6	24.0	6.00
New Tempered Slider	304	0.25	1	5	6	30.0	7.50
New Fixed Glass	305	0.25	1	3	6	18.0	4.50
New Tempered Casement	306	0.25	1	2	4	8.0	2.00
New Fixed Glass	307	0.25	1	3	6	18.0	4.50
New Fixed Glass	308	0.25	1	8	6	48.0	12.00
New Fixed Glass	309	0.25	1	3	6	18.0	4.50
New Tempered Slider	310	0.25	1	4	4	16.0	4.00
New Tempered Slider	311	0.25	1	5	5	25.0	6.25
TOTAL						279.0	69.75

HEAT PUMP
 MODEL: BLUERIDGE BMY48U18FCC
 HEATING POWER: 50,000 BTU
 COOLING POWER: 48,000 BTU
 SEER RATING: 18
 HSPF: 11
 NUMBER OF UNITS: 2

ELECTRIC TANKLESS WATER HEATER
 MODEL: RHEEM RTE-13
 POWER: 13 kW
 CONNECTION VOLTAGE: 240 V
 GPM: 4.8
 UEF: 0.92
 NUMBER OF UNITS: 2

DOOR SCHEDULE (UPPER FLOOR)

Component Description	Ref.	U-factor	Qt	Width Feet	Height Feet	Area	UA
New Exterior Door	304	0.25	1	3	6	20.0	5.00
TOTAL						20.0	5.00

Component	QTY
NEW FIXTURE	5
VENT	5
TOILET	2
SINK	5
SHOWER	2
BATH	1
BATH/SHOWER	0

MECHANICAL FLOW RATE CALCULATIONS
 NEW TOTAL LIVING SPACE: 4,924 SQ. FT.
 NUMBER OF BEDROOMS: 6
 REQUIRED AIR FLOW PER WSRC 2021 M1505.4.3: 95 CFM

NOTE: FIELD VERIFY ALL MEASUREMENTS

4'	For heating system using a heat pump that meets federal standards for the equipment listed in Table C403.3.2(2) or C403.3.2(9) or Air to water heat pump units that are configured to provide both heating and cooling and are rated in accordance with AHRI 550/590	3.0	⊕
2.1	Compliance based on Section R402.4.1.2: Reduce the tested air leakage to 2.0 air changes per hour maximum at 50 Pascals, or For R-2 Occupancies, optional compliance based on Section R402.4.1.2: Reduce the tested air leakage to 0.25 cfm/ft2 maximum at 50 Pascals and All whole house ventilation requirements as determined by Section M1505.3 of the International Residential Code or Section 403.8 of the International Mechanical Code shall be met with a heat recovery ventilation system with minimum sensible heat recovery efficiency of 0.65. To qualify to claim this credit, the building permit drawings shall specify the option being selected, the maximum tested building air leakage, and shall show the qualifying ventilation system and its control sequence of operation.	1.0	
3.7.2.6	Ductless split system heat pumps with no electric resistance heating in the primary living areas. A ductless heat pump system with a minimum HSPF of 10 shall be sized and installed to provide heat to entire dwelling unit at the design outdoor air temperature. Exception: In homes with total heating loads of 24,000 BTUs or less using multi-zone mini-split systems with nominal ratings of 24,000 or less, the minimum HSPF to claim this credit shall be 9 HSPF. To qualify to claim this credit, the building permit drawings shall specify the option being selected, the heated floor area calculation, the heating equipment type(s), the minimum equipment efficiency, and total installed heat capacity (by equipment type).	2.0	
5.6	Water heating system shall include the following: Electric heat pump water heater meeting the standards for Tier III of NEEA's advanced water heating specification Electric heat pump water heater with a minimum UEF of 2.9 and utilizing a split system configuration with the air-to-refrigerant heat exchanger located outdoors. Equipment shall meet Section 4, requirements for all units, of the NEEA standard Advanced Water Heating Specification with the UEF noted above To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the water heater equipment type and the minimum equipment efficiency.	2.0	
7.1	All of the following appliances shall be new and installed in the dwelling unit and shall meet the following standards: 1. Dishwasher, standard – Energy Star rated, Most Efficient 2021 or Dishwasher, compact – Energy Star rated (Version 6.0) 2. Refrigerator (if provided) – Energy Star rated (Version 5.1) 3. Washing machine (Residential) – Energy Star rated (Version 8.1) 4. Dryer – Energy Star rated, Most Efficient 2022 To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall show the appliance type and provide documentation of Energy Star compliance. At the time of inspection, all appliances shall be installed and connected to utilities. Dryer ducts and exterior dryer vent caps are not permitted to be installed in the dwelling unit.	0.5	

TOTAL ENERGY CREDITS: 8.5

SUM OF UA (VERTICAL FENESTRATION)	249.50
SUM OF UA (WALLS, FLOORS, CEILING)	477.50
Sum of UA	727.00
Envelope Heat Load	32,715 Btu / Hour
Sum of UA x ΔT	
Air Leakage Heat Load	19,145 Btu / Hour
Volume x 0.6 x ΔT x 0.018	
Building Design Heat Load	51,859 Btu / Hour
Air leakage + envelope heat loss	
Building and Duct Heat Load	51,859 Btu / Hour
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	64,824 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	

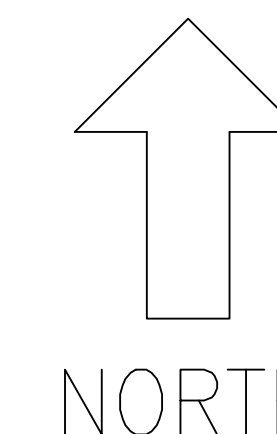
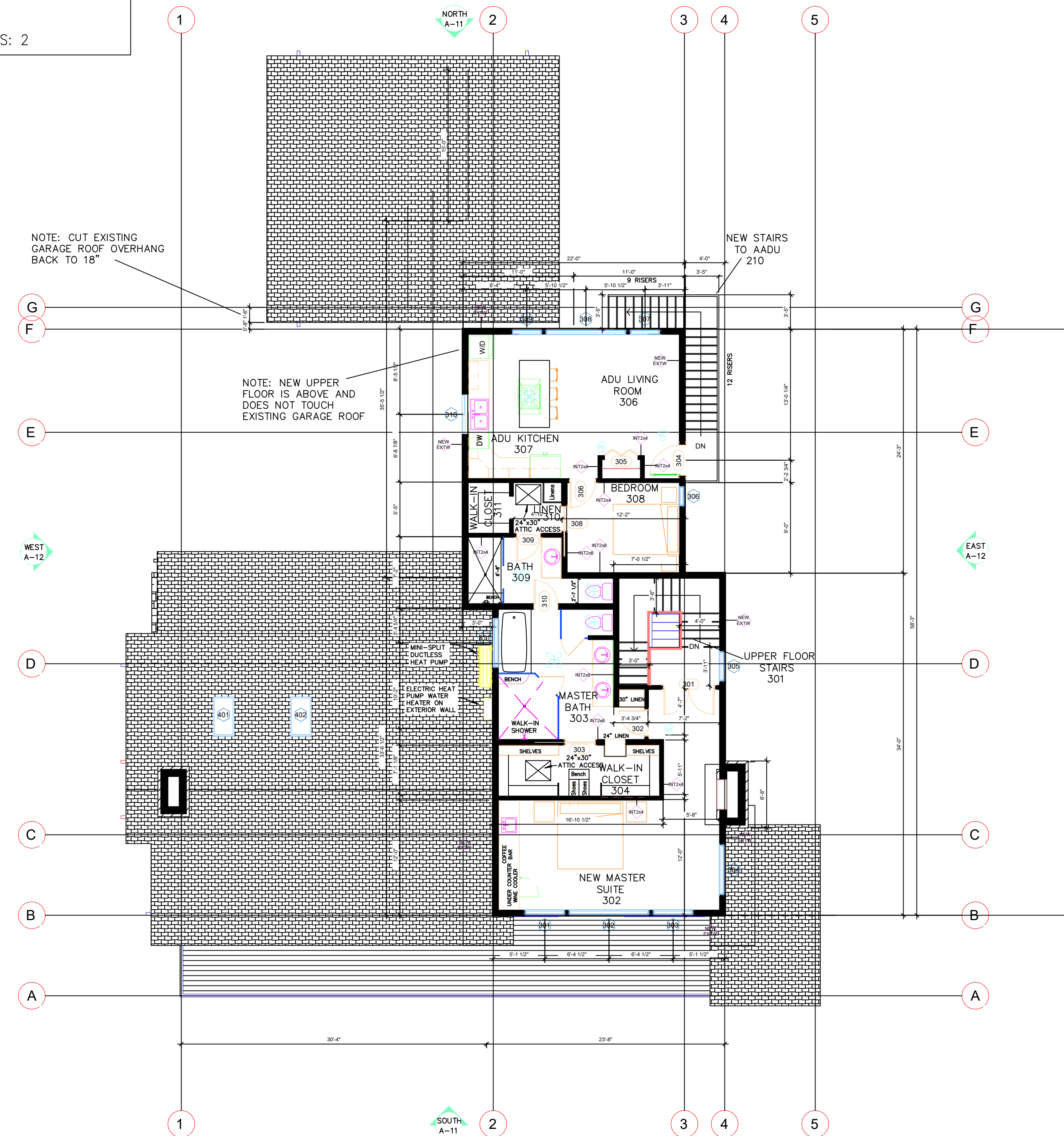
NOTE: SEE HEATING SYSTEM SIZING WORKSHEET FOR HEATING REQUIREMENT CALCULATIONS.

GENERAL NOTES

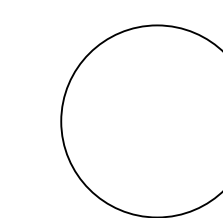
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- ALL INTERIOR WALLS TO BE 2X4" U.N.O.

PROVIDE ATTIC ACCESS, MIN. 22 X 30" W/ MIN. 30" HEADROOM @ UNOBSTRUCTED, READILY ACCESSIBLE OPENING (REF. IRC R807.1)

- DESIGN PER IRC/IBC 2021
- SAFETY GLAZING (REF IRC R308)
 * SAFETY GLAZING MUST BE PERMANENTLY MARKED AS SUCH.
 * WINDOWS ADJACENT TO TUB/SHOWER MUST HAVE BOTTOM SILL AT LEAST 60" ABOVE FLOOR LEVEL.
- BATHROOM FIXTURE CLEARANCE (REF IRC R307)
 * 21" IN FRONT OF SINK/TOILET/TUB.
 * 24" IN FRONT OF SHOWER OPENING.
 * 15" BETWEEN WALL/TUB AND TOILET O.C.
- BATHROOM HEIGHTS (REF IRC R307)
 * NONABSORBENT SURFACE ON WALL ABOVE TUB/SHOWER MINIMUM 6 FEET HIGH
- STAIRWAYS (REF IRC 311.7)
 * MIN WIDTH: 36"
 * MIN HEAD ROOM: 6'-8"
 * MAX RISER HEIGHT: 7-3/4"
 * MAX VARIANCE: 3/8"
 * MIN TREAD DEPTH 10"
 * NOSING BETWEEN 3/4" AND 1-1/4"
 * MAX HANDRAIL PROJECTION: 4-1/2"
 * HANDRAIL REQUIRED FOR ALL FLIGHTS OF AT LEAST 4 STAIRS
 * HANDRAILS SHALL BE CONTINUOUS ALONG FLIGHT OF STAIRS EXCEPT AT CORNER POSTS.
 * LOCATION AT 34-38 INCHES ABOVE THE STAIR NOSING.
 * GRASP DIMENSION BETWEEN 1-1/4 TO 2 INCHES.
 * PROVIDE CONTINUOUS HANDRAIL OR TERMINATE AT NEWEL POSTS OR SAFETY TERMINAL.
 * WHERE USED AS A GUARDRAIL, A MAXIMUM OPENING OF 4 INCHES.
 * USABLE SPACE UNDER STAIRS, WALLS AND CEILINGS TO HAVE 5/8" type x g.w.b. sec. 10003.33.4
- LIGHTING (REF IRC R303)
 * INTERIOR AND EXTERIOR STAIRWAYS TO BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE
- FIRE ALARMS (REF IFC AND MERCER ISLAND RESIDENTIAL CODE)
 * SMOKE ALARMS COMPLYING WITH NFPA 72 AND KING COUNTY CODE TO BE INSTALLED IN EACH BEDROOM AND NEAR EACH SEPARATE SLEEPING AREA.
 * CARBON MONOXIDE ALARMS TO BE INSTALLED NEAR EACH SEPARATE SLEEPING AREA, MINIMUM 1 ALARM PER FLOOR.
 * ALL NEW ALARMS TO BE HARDWIRED AND INTERCONNECTED.
- EGRESS WINDOWS
 * MINIMUM CLEARANCE 20" X 24"
 * MINIMUM OPENING AREA 5.7 SQ FT
 * WINDOW SILL HEIGHT MAX 44" ABOVE FLOOR



NORTH



NEW UPPER FLOOR

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

NOTE: FIELD VERIFY ALL MEASUREMENTS

Rich Design Group, LLC
 DESIGNED BY:
 RICH MELCHIOR
 253-951-8049
 RICHDESIGN@COMCAST.NET

NO.	DATE	REVISION

A Home Project for
RENEE LUND
 8520 SE 82ND ST
 MERCER ISLAND, WA 98040
 10-11-24

A 5
 RICH DESIGN 1
 PROJECT NO.: 21-6

NOTE: REFER TO ENGINEERING SHEETS FOR WALL SECTION & DETAILS

USE CAUTION TO AVOID DAMAGING EXISTING PLANTS IN PLANTERS (SEE ARBORIST REPORT AND SITE PLAN FOR DETAILS)

NOTE: FIELD VERIFY ALL MEASUREMENTS

VENTILATION CALCULATIONS

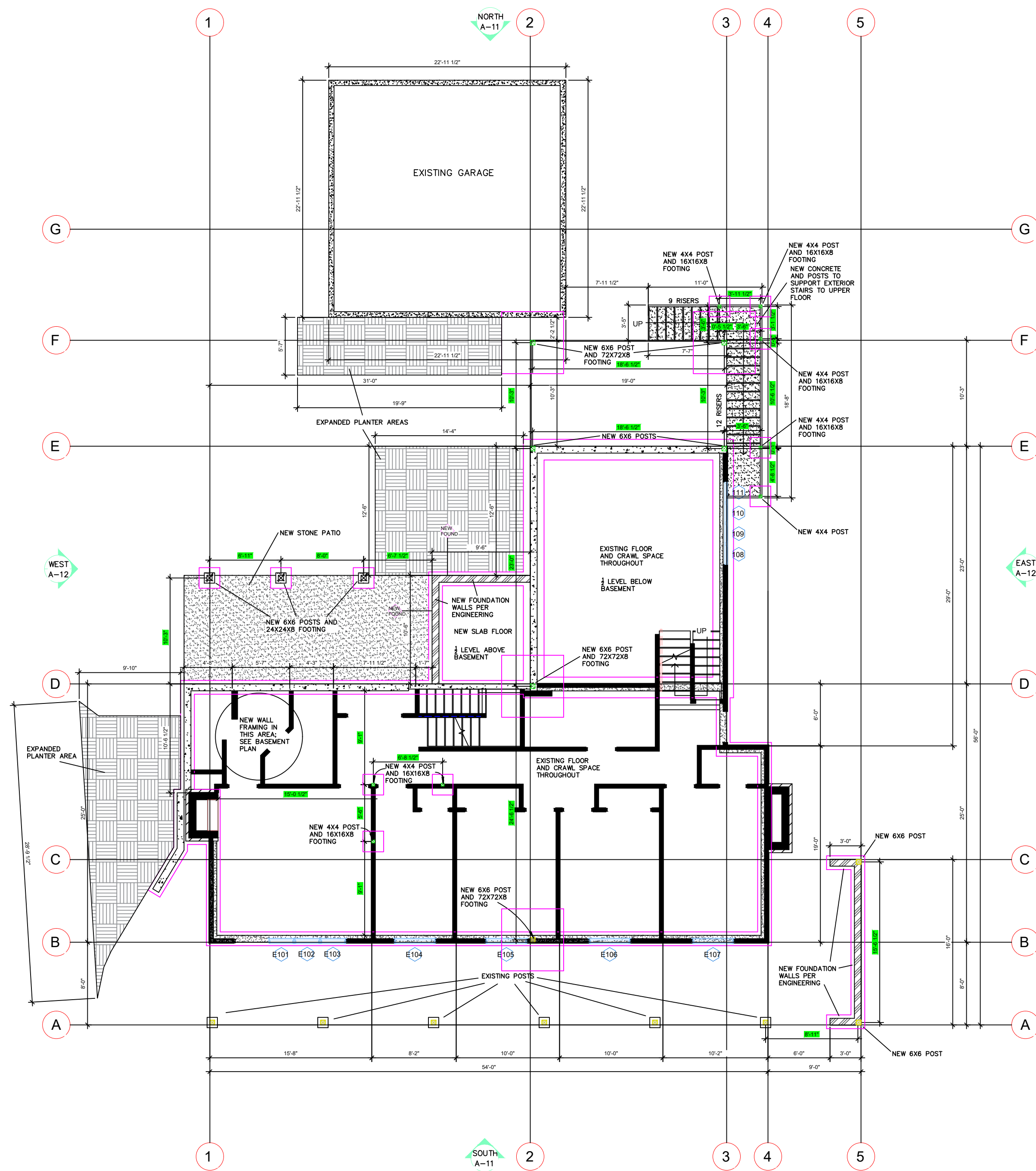
NOT REQUIRED; ONLY NEW AREA IS SLAB FLOOR

FIELD VERIFY ALL MEASUREMENTS

ALL TRUSSES:
SHALL CARRY MANUFACTURER STAMP
SHALL BE INSTALLED AND BRACED TO
MANUFACTURER SPECIFICATIONS
SHALL NOT BE ALTERED WITHOUT
PRIOR BUILDING DEPT. APPROVAL
OF ENGINEERING CALCULATIONS
SHALL HAVE DRAWINGS ON SITE
FOR FRAMING INSPECTION
VENT BLOCKS (APPROX. EVERY OTHER BAY).
PROVIDE FIRE BLOCKING BETWEEN STUDS
ALL NEW INSULATION INSTALLED UP TO CODE

NOTES:

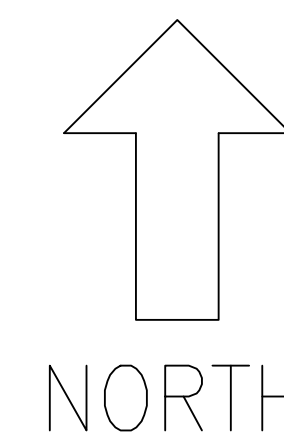
1. DISHWASHER TO HAVE AIR GAP
2. SHOWER HEADS SHALL BE EQUIPPED WITH FLOW CONTROL DEVICES TO LIMIT FLOW TO A MAX OF 3 GPM PER SHOWER HEAD.
3. SAFETY GLASS IS REQUIRED ON SHOWER DOORS.
4. HOT WATER TANK PROVIDE PRESSURE RELIEF VALVE PIPE DRAIN TO OUTSIDE DRAIN PIPE TO EXTEND WITHIN 2' ABOVE GROUND POINTING DOWN TO TRAPPING UPC 6083.
5. STOVE TO BE SEPARATELY VENTED TO OUTSIDE
6. ATTIC ACCESS (SEE SHEETS A2 AND A6) TO BE READILY ACCESSIBLE MINIMUM SIZE 22"x30" WITH 30" UNOBSTRUCTED HEADROOM R8071.
7. HANDRAILS SHALL BE PROVIDED OF TWO SIDE OPEN AND CONTINUOUS ON ONE SIDE ONLY. HANDRAIL SHALL BE 34"-38" ABOVE NOSING OF TREAD AND SHALL BE CONTINUOUS THE FULL LENGTH OF THE STAIRS AND THE ENDS SHALL RETURN TO THE WALL OF SHALL TERMINATE IN A NEWELL POST. THERE SHALL BE NOT LESS THAN 1-1/4" NOR MORE THAN 2" IN CROSS SECTIONAL DIMENSION AND SHALL HAVE A SMOOTH SURFACE WITH NO SHARP CORNERS.
8. APPLIANCES INSTALLED IN GARAGE SHALL BE LOCATED OUT OF THE NORMAL PATH OF VEHICLES OR A MEANS OF PROTECTION SHALL BE PROVIDED. UNITS GENERATING A SPARK OR FLAME SHALL HAVE PILOTS AND BURNERS 18" ABOVE THE FLOOR.
9. ALL ELECTRIC WATER HEATERS IN UNHEATED SPACES SHALL BE PLACED ON AN INCOMPRESSIBLE INSULATED SURFACE OF R-10. WSEC 2021.
10. HOSE BIBS REQUIRED TO HAVE AN APPROVED BACKFLOW PREVENTION.
11. USABLE SPACE UNDER STAIRS, WALLS AND CEILINGS TO HAVE 5/8" type x g.w.b. . sec. 10003.33.4
12. FIREBLOCK STAIRWAYS BETWEEN STRINGERS AND RUN BETWEEN STUDS.
13. MAXIMUM RISE 7-3/4" MINIMUM RUN 10" MINIMUM WIDTH 36" MINIMUM HEADROOM 6'-8".
14. HANDRAIL TO BE MINIMUM 34"-38" WITH BALUSTERS NOT TO ALLOW A 4" SPHERE TO PASS THROUGH.
15. ALL SMOKE ALARMS MUST BE INTERCONNECTED
16. FACTORY BUILT FIREPLACE(S) SHALL BE LABELED, LISTED, TESTED IN ACCORDANCE WITH UL 127, AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS DIRECTIONS



LEGEND	
	EXISTING 8" STEM WALL
	16X8 CONCRETE FOOTING
	NEW FOUNDATION WALL
	4X4 POST (EXISTING EXCEPT WHERE NOTED)
	24X24X8 CONCRETE FOOTING (EXISTING EXCEPT WHERE NOTED)

NOTE: DIMENSIONS RELATED TO NEW POSTS ARE HIGHLIGHTED IN GREEN

NOTE: REFER TO ENGINEERING SHEETS FOR WALL SECTION & DETAILS



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

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NO.	DATE

A Home Project for
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8520 SE 82ND ST
MERCER ISLAND, WA 98040

10-11-24

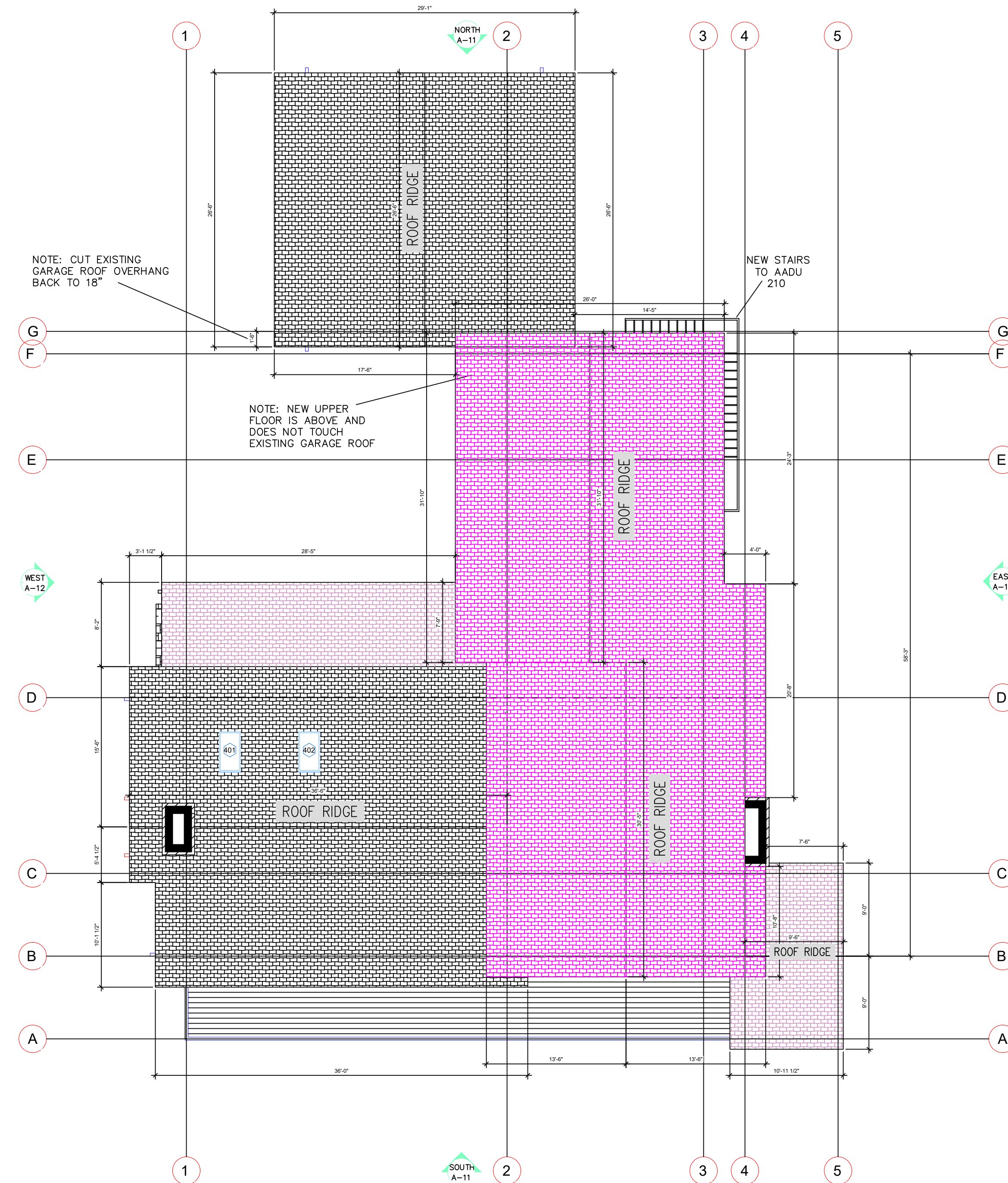
A 6
RICH DESIGN 1
PROJECT NO.: 21-6

WINDOW SCHEDULE (ROOF)

Component Description	Ref.	U-factor	Width		Height		Area	UA
			Qt	Feet	Inch	Feet		
New Skylight	401	0.50	1	2	0	4	8.0	4.00
New Skylight	402	0.50	1	2	0	4	8.0	4.00
TOTAL							16.0	8.00

NOTE: FIELD VERIFY ALL MEASUREMENTS

VENTILATION CALCULATIONS
ATTIC FLOOR AREA: 1,498 SQ. FT. VENT RATIO: 1/300
REQUIRED VENT AREA: $1,498/300 = 4.99$ SQ. FT.



SEE ENGINEERING SHEETS FOR DETAILS

NEW ROOF PLAN

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

NOTE: FIELD VERIFY ALL MEASUREMENTS

LEGEND	
	NEW WALL
	NEW UPPER FLOOR ROOF
	EXISTING UPPER FLOOR ROOF
	EXISTING MAIN FLOOR ROOF
	NEW GUTTER DOWN SPOUT

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 10-11-24

A 8
 RICH DESIGN 1
 PROJECT NO.: 21-6

NOTE: FIELD VERIFY ALL MEASUREMENTS

NOTES:

1. CAULK OR WEATHERSTRIP ALL JOINTS AND PENETRATION TO HEATING SPACES.
2. ALL GLAZING TO COMPLY WITH WSEC 2021.
3. PROVIDE ATTIC VENTILATION OF 1/150 OF ATTIC AREA OR 1/300 PROVIDED 40-50 PERCENT IS LOCATED WITHIN 3 FEET OF ROOF RIDGE. THE OPENING SHALL BE COVERED WITH 1/4" MESH CORROSION RESISTANT WIRE.
4. PROVIDE ADDRESS ON EVERY DWELLING. ADDRESS SHALL BE LEGIBLE AND VISIBLE FROM THE STREET. NUMBERS SHALL CONTRAST FROM THEIR BACKGROUND.

2.0" Trim around all windows & doors

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REVISION

DATE

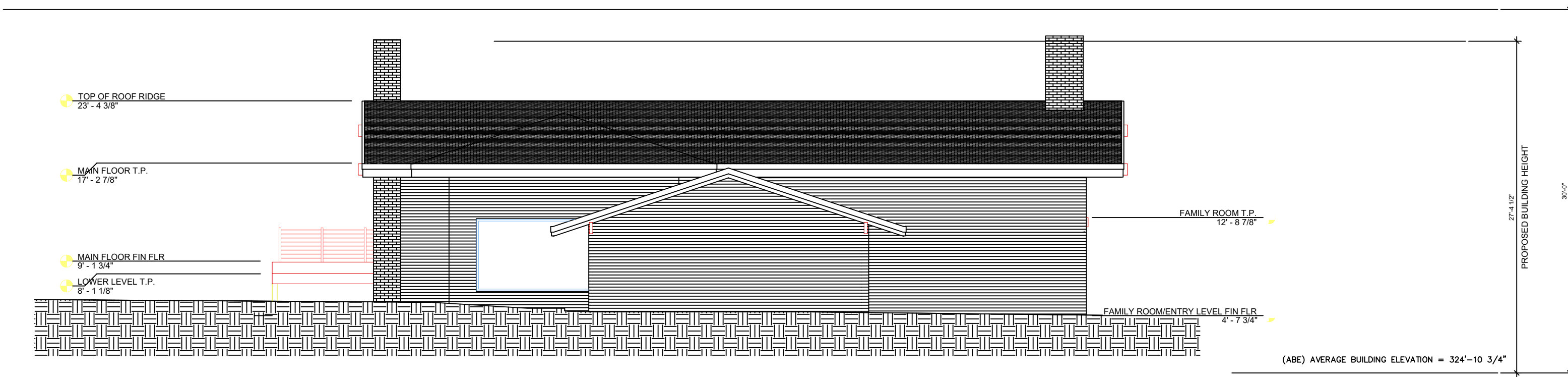
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A Home Project for

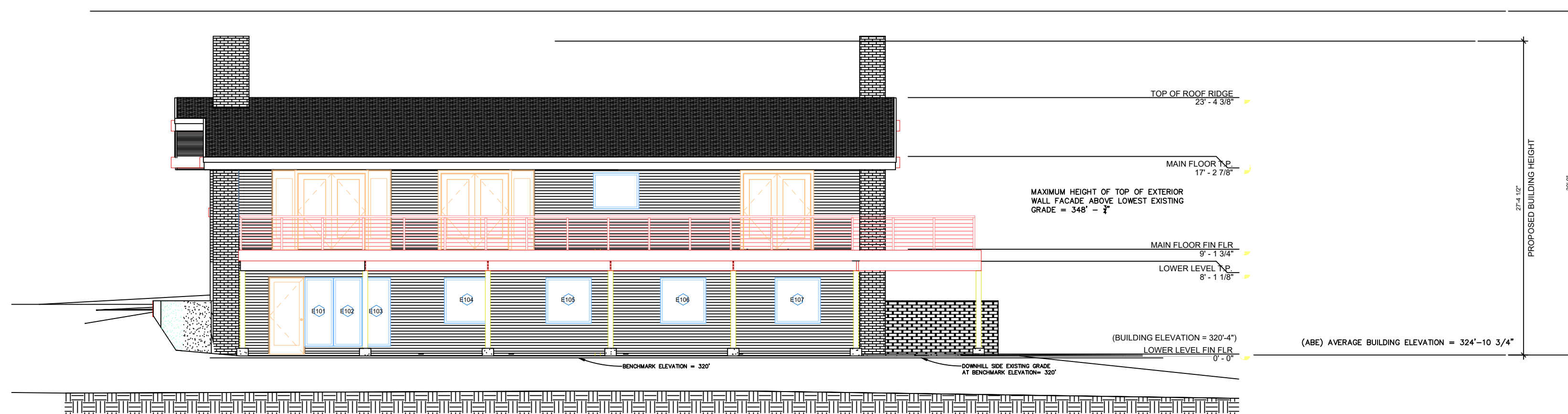
RENEE LUND
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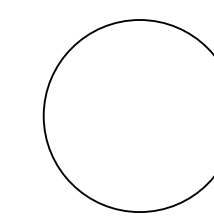
A 9
RICH DESIGN 1
PROJECT NO.: 21-6



NORTH



SOUTH



EXISTING NORTH & SOUTH ELEVATION

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

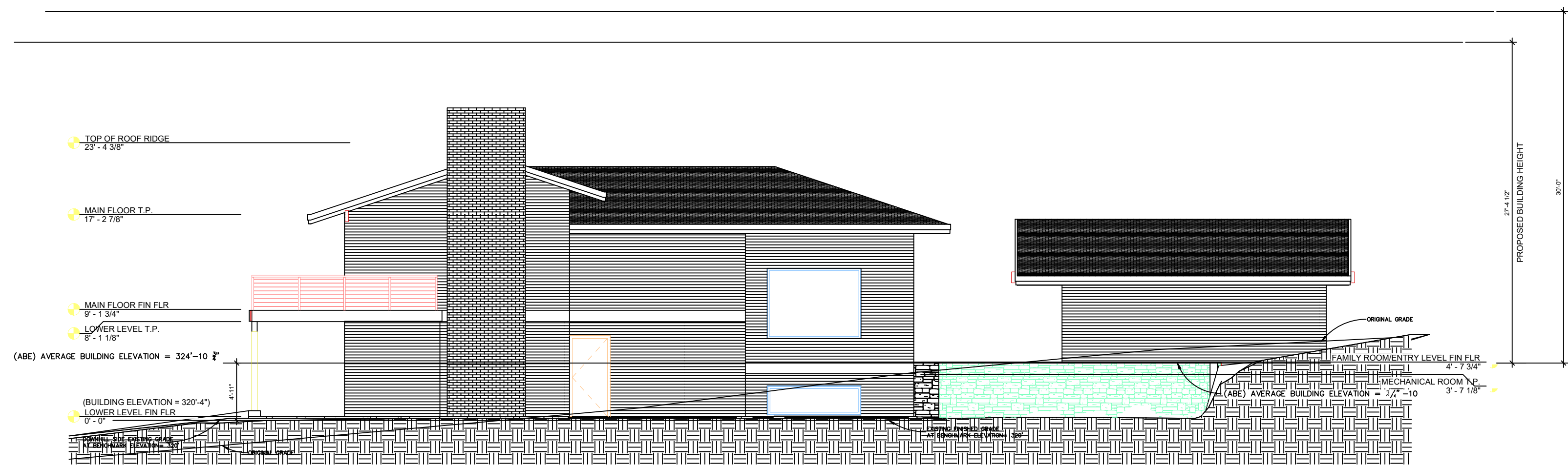
NOTE: FIELD VERIFY ALL MEASUREMENTS

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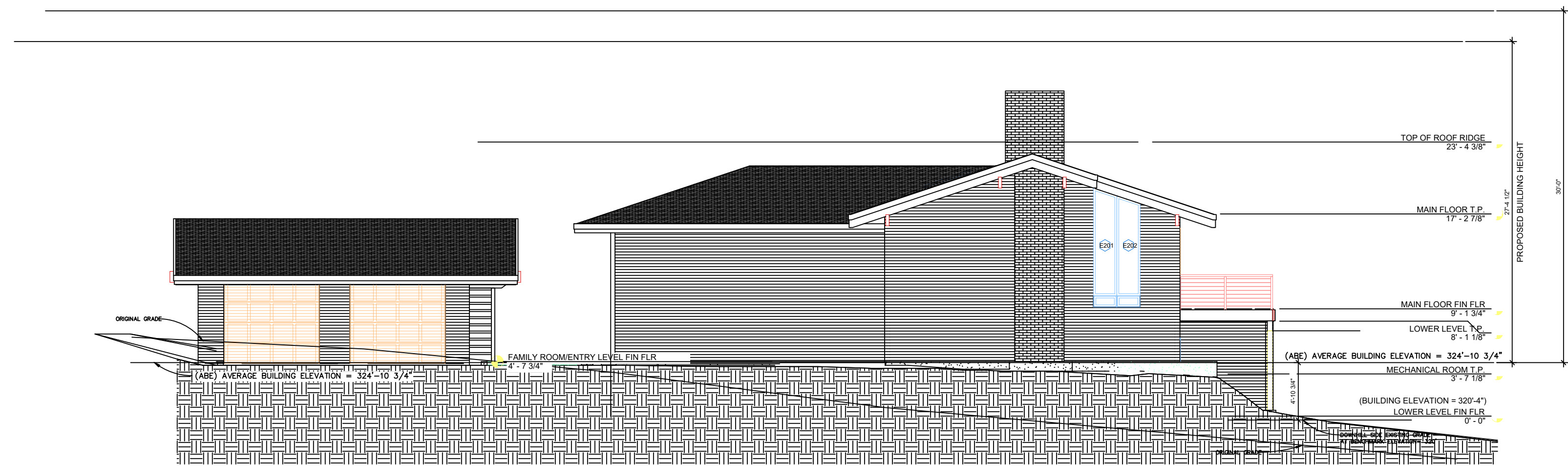
NOTES:

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2. ALL GLAZING TO COMPLY WITH WSEC 2021.
3. PROVIDE ATTIC VENTILATION OF 1/150 OF ATTIC AREA OR 1/300 PROVIDED 40-50 PERCENT IS LOCATED WITHIN 3 FEET OF ROOF RIDGE. THE OPENING SHALL BE COVERED WITH 1/4" MESH CORROSION RESISTANT WIRE.
4. PROVIDE ADDRESS ON EVERY DWELLING. ADDRESS SHALL BE LEGIBLE AND VISIBLE FROM THE STREET. NUMBERS SHALL CONTRAST FROM THEIR BACKGROUND.

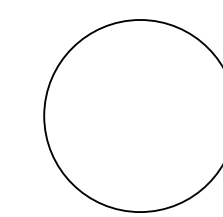
2.0" Trim around all windows & doors



EAST



WEST



EXISTING EAST & WEST ELEVATION

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

NOTE: FIELD VERIFY ALL MEASUREMENTS

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NO.	DATE	REVISION

A Home Project for
RENEE LUND
8520 SE 82ND ST
MERCER ISLAND, WA 98040

10-11-24

A 10
RICH DESIGN 1
PROJECT NO.: 21-6

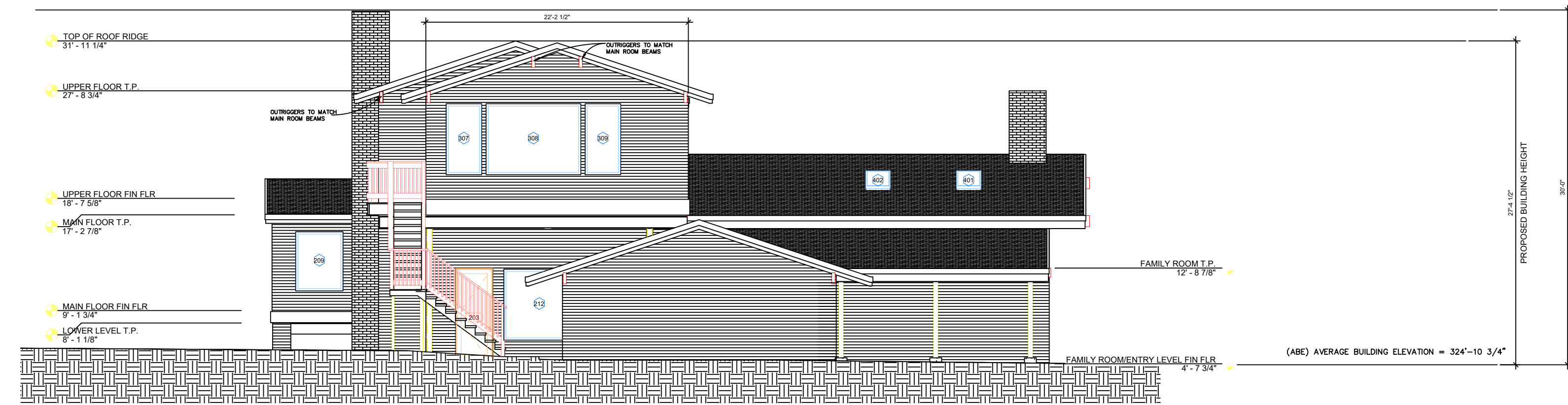
NOTE: FIELD VERIFY ALL MEASUREMENTS

NOTES:

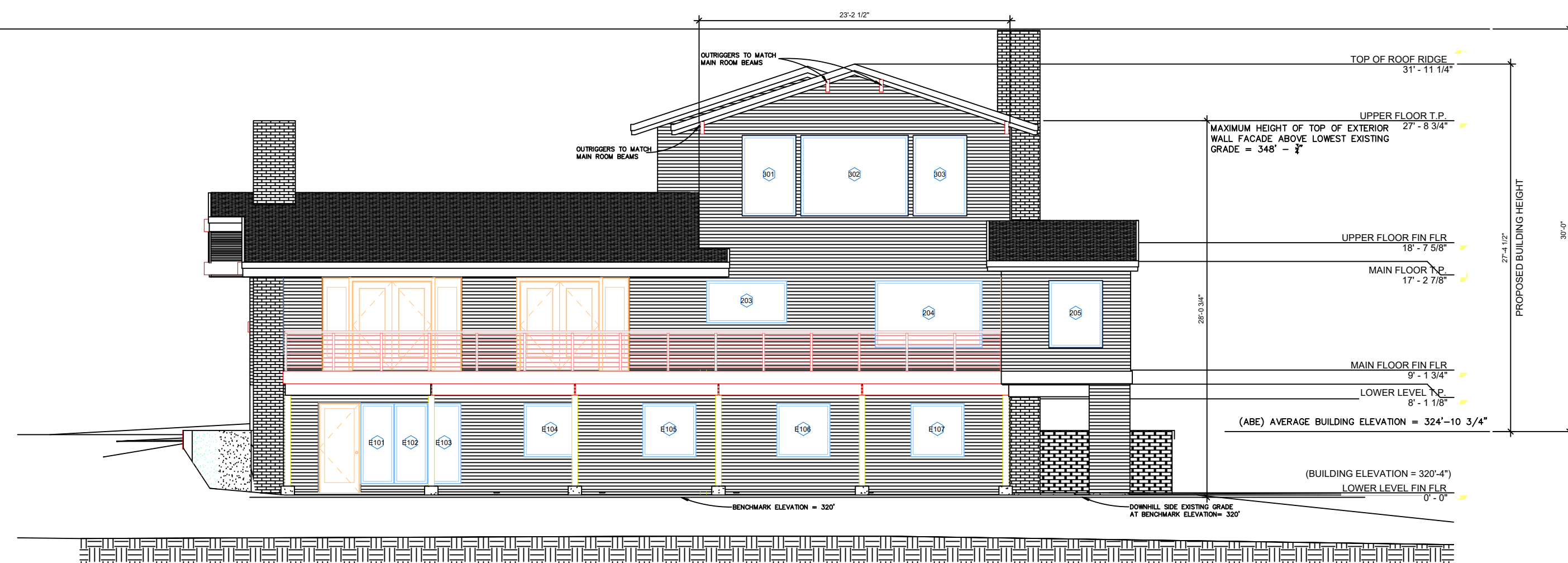
1. CAULK OR WEATHERSTRIP ALL JOINTS AND PENETRATION TO HEATING SPACES.
2. ALL GLAZING TO COMPLY WITH WSEC 2021.
3. PROVIDE ATTIC VENTILATION OF 1/150 OF ATTIC AREA OR 1/300 PROVIDED 40-50 PERCENT IS LOCATED WITHIN 3 FEET OF ROOF RIDGE. THE OPENING SHALL BE COVERED WITH 1/4" MESH CORROSION RESISTANT WIRE.
4. PROVIDE ADDRESS ON EVERY DWELLING. ADDRESS SHALL BE LEGIBLE AND VISIBLE FROM THE STREET. NUMBERS SHALL CONTRAST FROM THEIR BACKGROUND.

2.0" Trim around all windows & doors

VENTILATION CALCULATIONS	
ATTIC FLOOR AREA:	1,498 SQ. FT.
VENT RATIO:	1/300
REQUIRED VENT AREA:	$1,498/300 = 4.99$ SQ. FT.



NORTH



SOUTH

SEE ENGINEERING SHEETS FOR DETAILS

NEW NORTH & SOUTH ELEVATION

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

NOTE: FIELD VERIFY ALL MEASUREMENTS

Rich Design Group, LLC

DESIGNED BY:
RICH MELCHIOR
253-951-8049
RICHDESIGN@COMCAST.NET

NO.	DATE	REVISION

A Home Project for
RENEE LUND
8520 SE 82ND ST
MERCER ISLAND, WA 98040

10-11-24

A 11
RICH DESIGN 1
PROJECT NO.: 21-6

NOTE: FIELD VERIFY ALL MEASUREMENTS

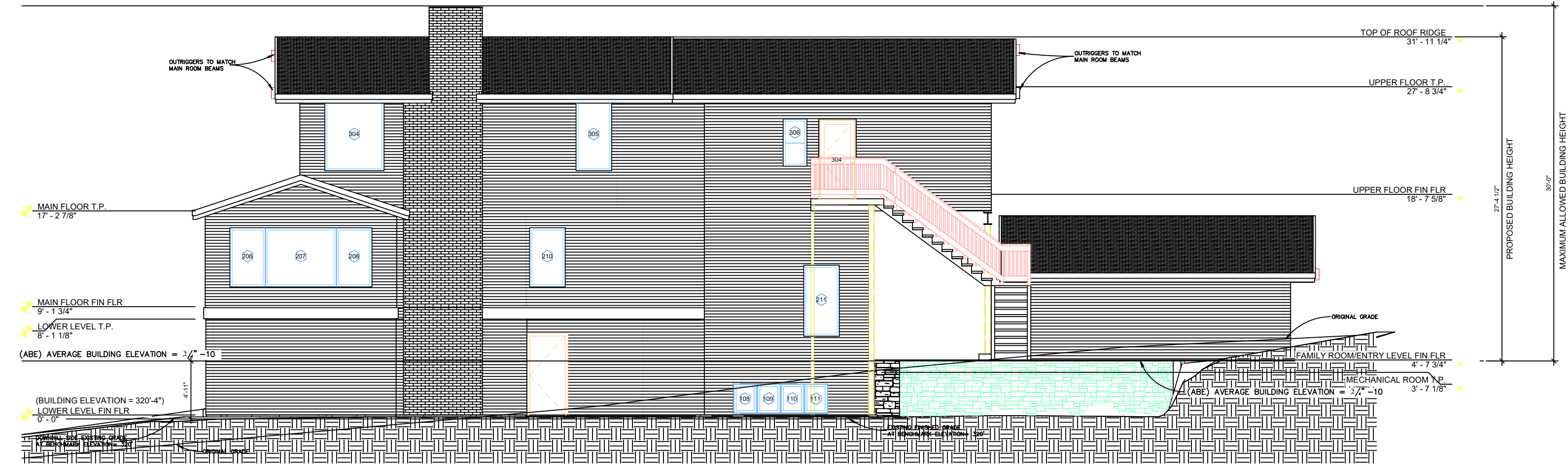
- NOTES:
1. CAULK OR WEATHERSTRIP ALL JOINTS AND PENETRATION TO HEATING SPACES.
 2. ALL GLAZING TO COMPLY WITH WSEC 2021.
 3. PROVIDE ATTIC VENTILATION OF 1/150 OF ATTIC AREA OR 1/300 PROVIDED 40-50 PERCENT IS LOCATED WITHIN 3 FEET OF ROOF RIDGE. THE OPENING SHALL BE COVERED WITH 1/4" MESH CORROSION RESISTANT WIRE.
 4. PROVIDE ADDRESS ON EVERY DWELLING. ADDRESS SHALL BE LEGIBLE AND VISIBLE FROM THE STREET. NUMBERS SHALL CONTRAST FROM THEIR BACKGROUND.

2.0" Trim around all windows & doors

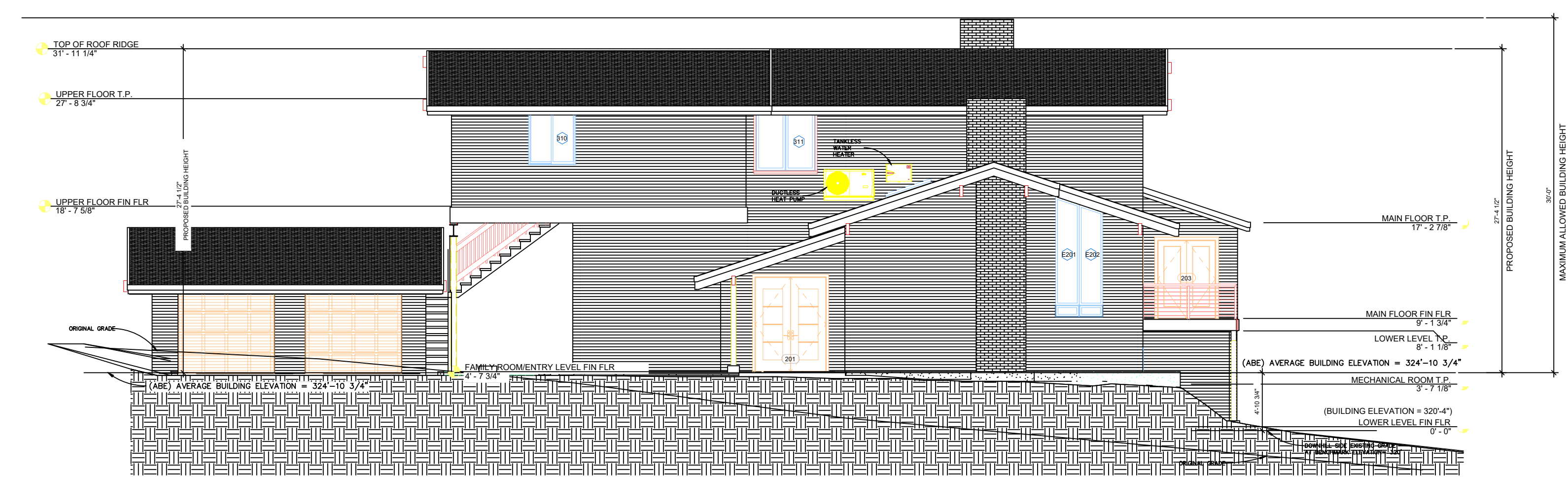
VENTILATION CALCULATIONS

ATTIC FLOOR AREA: 1,498 SQ. FT.
VENT RATIO: 1/300

REQUIRED VENT AREA:
 $1,498/300 = 4.99$ SQ. FT.



EAST



WEST

SEE ENGINEERING SHEETS FOR DETAILS

NEW EAST & WEST ELEVATION

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

NOTE: FIELD VERIFY ALL MEASUREMENTS

Rich Design Group, LLC

DESIGNED BY:
RICH MELCHIOR
253-951-8049
RICHDESIGN@COMCAST.NET

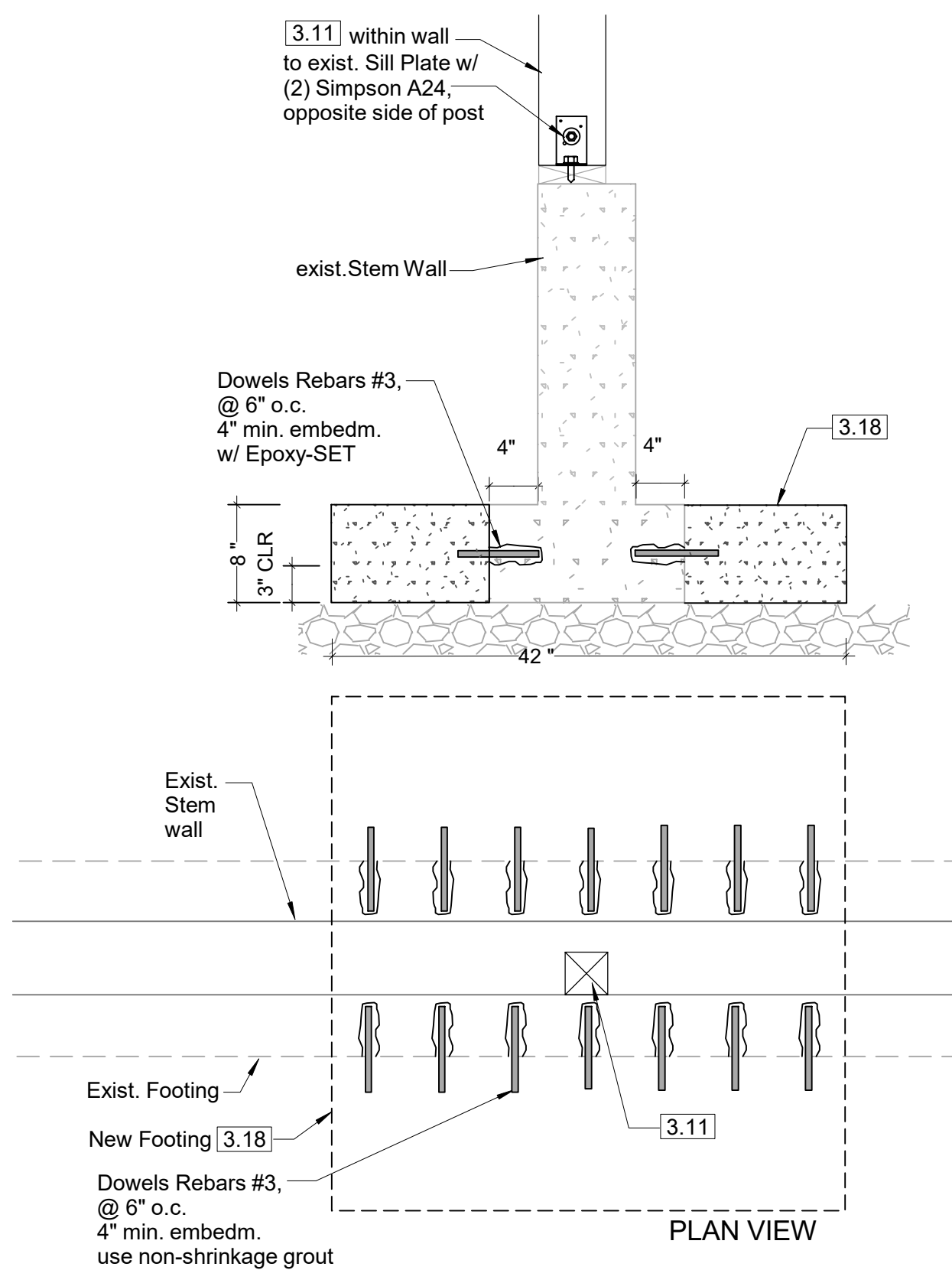
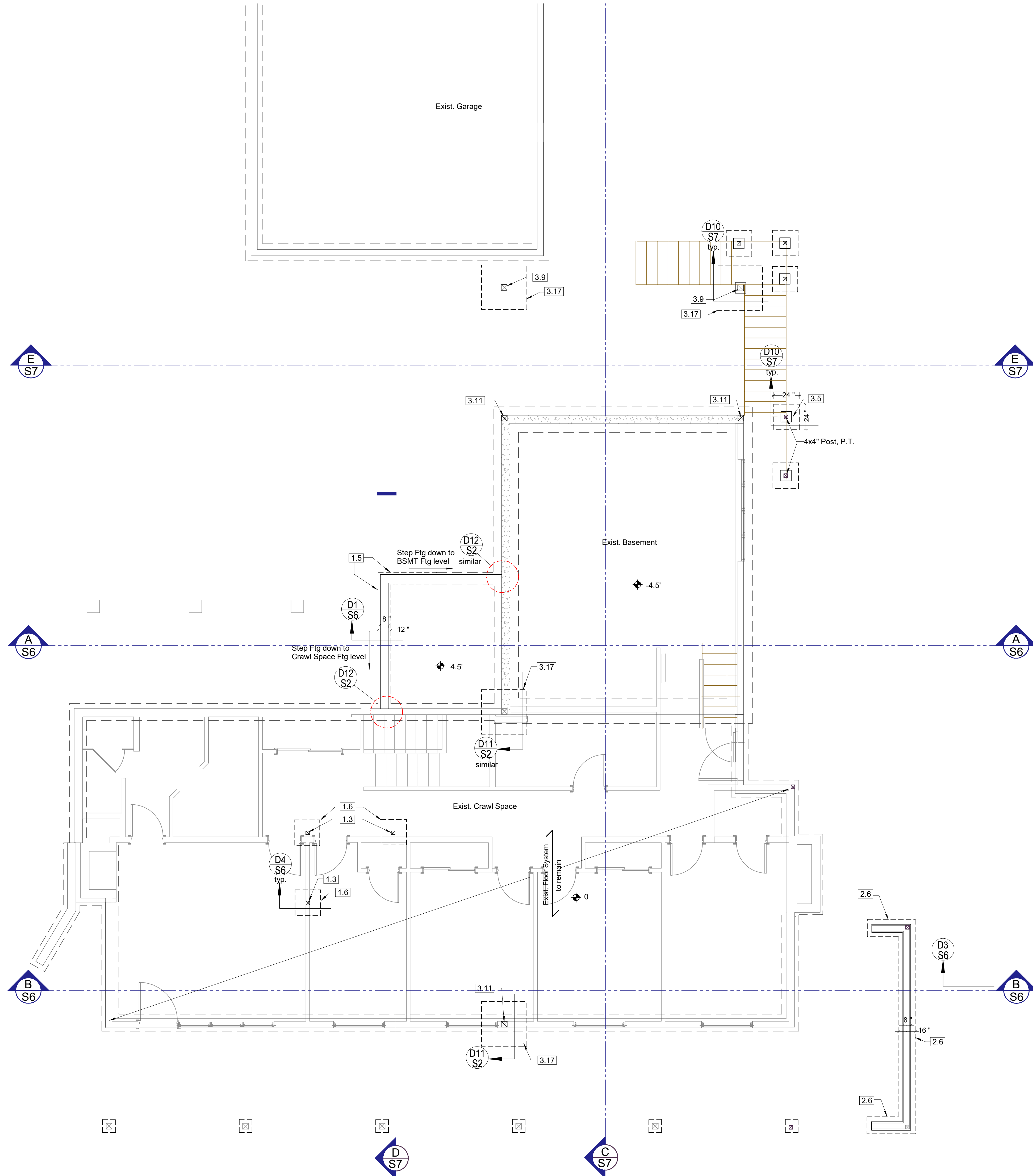
NO.	DATE	REVISION

A Home Project for
RENEE LUND
8520 SE 82ND ST
MERCER ISLAND, WA 98040

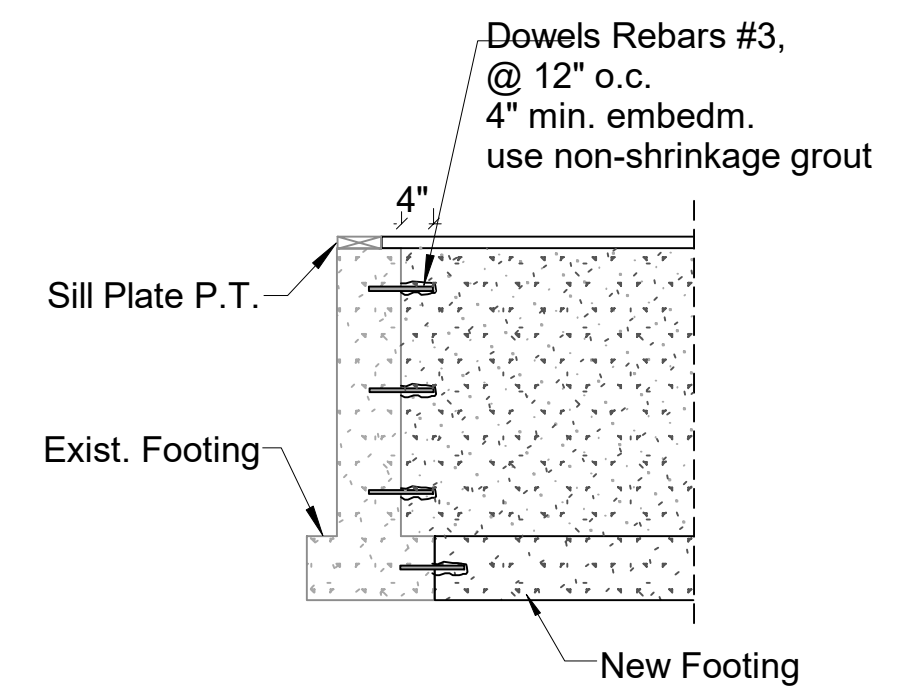
10-11-24

A 12

RICH DESIGN 1
PROJECT NO.: 21-6



DETAIL 11 SCALE: 1" = 1'-0" (1:12)



DETAIL 12 DOWEL DETAIL (TYP.) SCALE: 1/2" = 1'-0" (1:24)

KEY NO.	MAIN FLOOR ALTERATIONS
1.1	Rafters, HF No.2, 2x12" @ 24" o.c.
1.2	Glulam WS, 24F-1.8E, 3-1/8x12"
1.3	Post, PSL, 1.8E, 3-1/2x3-1/2"
1.4	Header, DF No.2, 4x8"
1.5	Cont. Footing, fc = 2,500 psi, 12x8"
1.6	Spread Footing, fc = 2,500 psi, 24x24x8"

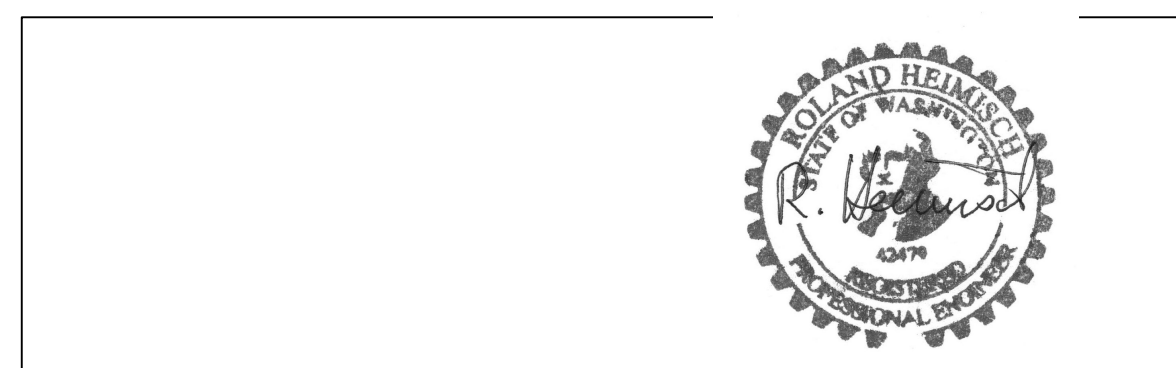
KEY NO.	NEW SUN ROOM
2.1	Manufactured Trusses @ 24" o.c.
2.2	Header, DF No.2, 4x8"
2.3	TJI 110, 1-3/4x11-7/8" @ 16" o.c.
2.4	Beam, DF No.2, 4x8"
2.5	Dbl. Joists, HF No.2, (2) 2x8", P.T.
2.6	Cont. Footing, fc = 2,500 psi, 16x8"

KEY NO.	SECOND STORY ADDITION
3.1	Manufactured Trusses @ 24" o.c.
3.2	Header, DF No.2, 4x10"
3.3	Header, DF No.2, 4x6"
3.4	Beam, PSL, 2.2E, 2900Fb, 3-1/2x11-7/8"
3.5	Post, HF No.2, 6x6", P.T.
3.6	TJI 210, 2-1/16x16" @ 16" o.c.
3.7	Beam, LSL, 1.55E, 2325Fb, 3-1/2x11-7/8"
3.8	Beam, LSL, 1.55E, 2325Fb, 3-1/2x11-7/8"
3.9	Post, HF No.2, 6x6", P.T.
3.10	Glulam WS, 24F-1.8E, 5-1/2x21"
3.11	Post within Wall, DF No.2, 6x6"
3.12	TJI 230, 2-5/16x11-7/8" @ 16" o.c.
3.13	Header, DF No.2, 4x12"
3.14	Stair Stringers, HF No.2, 2x12" @ 12" o.c., P.T.
3.15	Landing Joists, HF No.2, 2x6" @ 16" o.c., P.T.
3.16	Beam, flush, LSL, 1.55E, 2325Fb, 3-1/2x11-7/8"
3.17	Spread Footing, fc = 2,500 psi, 72x72x16"



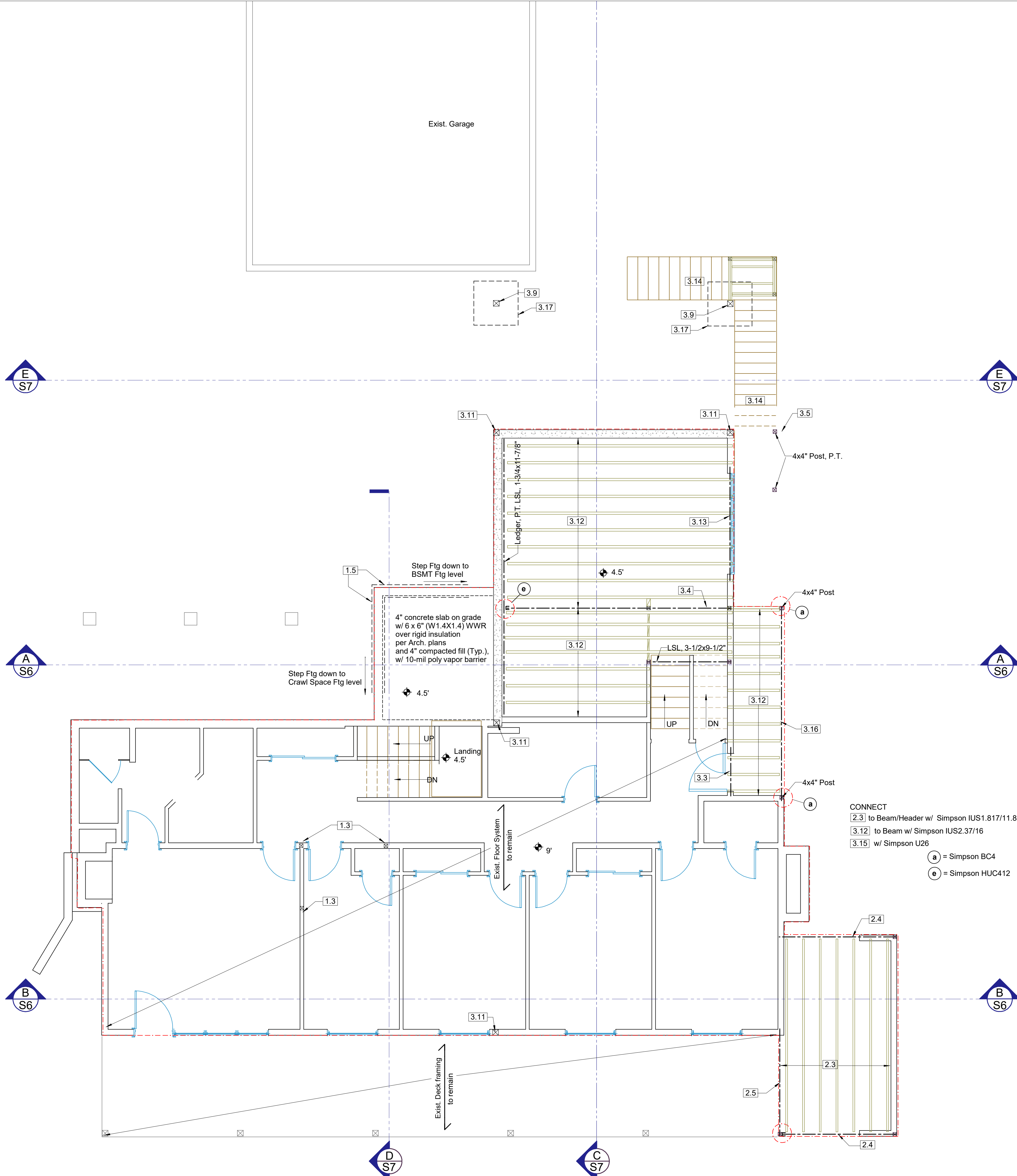
BASEMENT / FOUNDATION PLAN

SCALE: 1/4" = 1'-0" (1:48)



tec instruct LLC
 4111 164th St. SW #51, Lynnwood, WA 98087
 Telephone (206) 553-9076 - email: www.rolandheimisch@yahoo.com
 ENGINEERING

CLIENT:	Renee Lund	SHEET
JOB SITE:	8520 SE 82nd St., Mercer Island, WA 98040	S2
PROPERTY #:		
DESCRIPTION:	Remodel and Addition	
DATE:	10/28/2024 SCALE: as noted	
ENGINEER:	Roland Heimisch, P. E.	

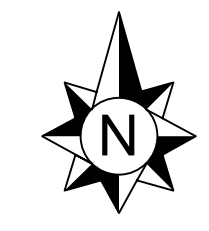


KEY NO.	MAIN FLOOR ALTERATIONS
1.1	Rafters, HF No.2, 2x12" @ 24" o.c.
1.2	Glulam WS, 24F-1.8E, 3-1/8x12"
1.3	Post, PSL, 1.8E, 3-1/2x3-1/2"
1.4	Header, DF No.2, 4x8"
1.5	Cont. Footing, fc = 2,500 psi, 12x8"
1.6	Spread Footing, fc = 2,500 psi, 24x24x8"

KEY NO.	NEW SUN ROOM
2.1	Manufactured Trusses @ 24" o.c.
2.2	Header, DF No.2, 4x8"
2.3	TJI 110, 1-3/4x11-7/8" @ 16" o.c.
2.4	Beam, DF No.2, 4x8"
2.5	Dbl. Joists, HF No.2, (2) 2x8", P.T.
2.6	Cont. Footing, fc = 2,500 psi, 16x8"

KEY NO.	SECOND STORY ADDITION
3.1	Manufactured Trusses @ 24" o.c.
3.2	Header, DF No.2, 4x10"
3.3	Header, DF No.2, 4x6"
3.4	Beam, PSL, 2.2E, 2900Fb, 3-1/2x11-7/8"
3.5	Post, HF No.2, 6x6", P.T.
3.6	TJI 210, 2-1/16x16" @ 16" o.c.
3.7	Beam, LSL, 1.55E, 2325Fb, 3-1/2x11-7/8"
3.8	Beam, LSL, 1.55E, 2325Fb, 3-1/2x11-7/8"
3.9	Post, HF No.2, 6x6", P.T.
3.10	Glulam WS, 24F-1.8E, 5-1/2x21"
3.11	Post within Wall, DF No.2, 6x6"
3.12	TJI 230, 2-5/16x11-7/8" @ 16" o.c.
3.13	Header, DF No.2, 4x12"
3.14	Stair Stringers, HF No.2, 2x12" @ 12" o.c., P.T.
3.15	Landing Joists, HF No.2, 2x6" @ 16" o.c., P.T.
3.16	Beam, flush, LSL, 1.55E, 2325Fb, 3-1/2x11-7/8"
3.17	Spread Footing, fc = 2,500 psi, 72x72x16"

CONNECT
 2.3 to Beam/Header w/ Simpson IUS1.817/11.88
 3.12 to Beam w/ Simpson IUS2.37/16
 3.15 w/ Simpson U26
 a = Simpson BC4
 e = Simpson HUC412



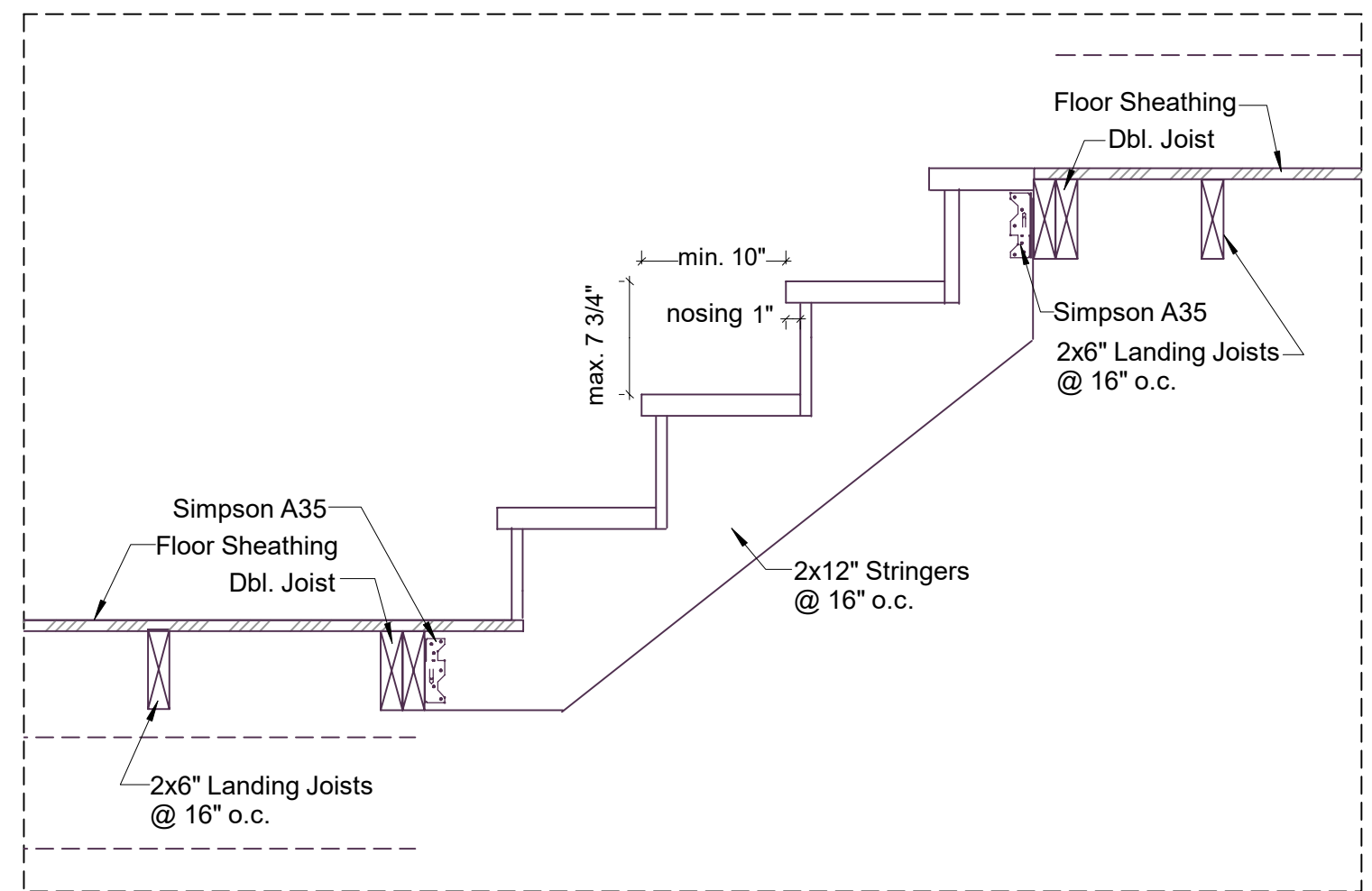
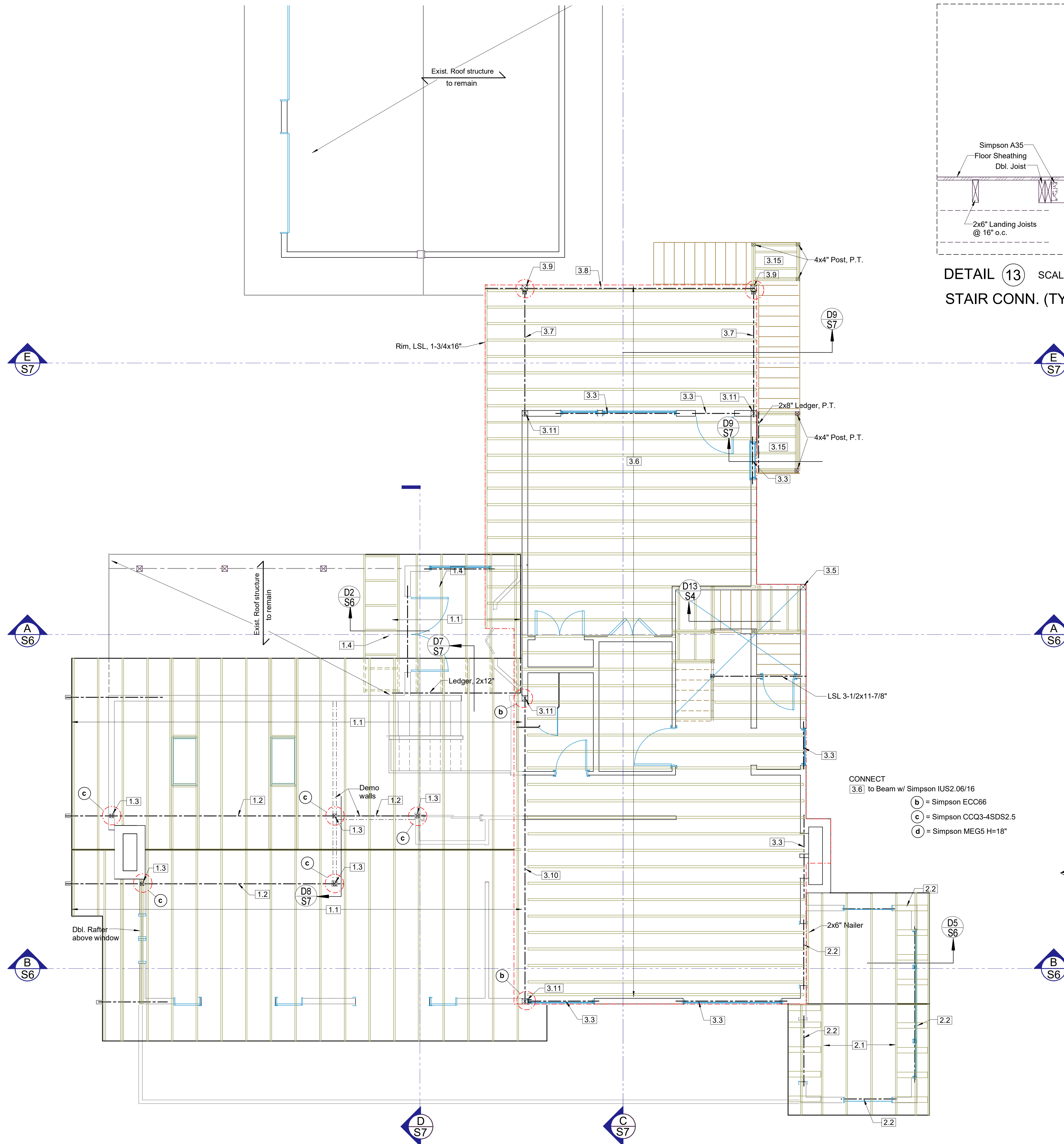
FRAMING ABOVE LOWER FLOOR

SCALE: 1/4" = 1'-0" (1:48)



tec instruct LLC
 4111 164th St SW #51, Lynnwood, WA 98087
 Telephone (206) 553-9076 - email: www.heimisch@yahoo.com
 ENGINEERING

CLIENT:	Renee Lund	SHEET
JOB SITE:	8520 SE 82nd St., Mercer Island, WA 98040	S3
PROPERTY #		
DESCRIPTION:	Remodel and Addition	
DATE:	10/28/2024	
ENGINEER:	Roland Heimisch, P. E.	



DETAIL 13 SCALE: 1" = 1'-0" (1:12)
STAIR CONN. (TYP.)

KEY NO.	MAIN FLOOR ALTERATIONS
1.1	Rafters, HF No.2, 2x12" @ 24" o.c.
1.2	Glulam WS, 24F-1.8E, 3-1/8x12"
1.3	Post, PSL, 1.8E, 3-1/2x3-1/2"
1.4	Header, DF No.2, 4x8"
1.5	Cont. Footing, fc = 2,500 psi, 12x8"
1.6	Spread Footing, fc = 2,500 psi, 24x24x8"

KEY NO.	NEW SUN ROOM
2.1	Manufactured Trusses @ 24" o.c.
2.2	Header, DF No.2, 4x8"
2.3	TJI 110, 1-3/4x11-7/8" @ 16" o.c.
2.4	Beam, DF No.2, 4x8"
2.5	Dbl. Joists, HF No.2, (2) 2x8", P.T.
2.6	Cont. Footing, fc = 2,500 psi, 16x8"

KEY NO.	SECOND STORY ADDITION
3.1	Manufactured Trusses @ 24" o.c.
3.2	Header, DF No.2, 4x10"
3.3	Header, DF No.2, 4x6"
3.4	Beam, PSL, 2.2E, 2900Fb, 3-1/2x11-7/8"
3.5	Post, HF No.2, 6x6", P.T.
3.6	TJI 210, 2-1/16x16" @ 16" o.c.
3.7	Beam, LSL, 1.55E, 2325Fb, 3-1/2x11-7/8"
3.8	Beam, LSL, 1.55E, 2325Fb, 3-1/2x11-7/8"
3.9	Post, HF No.2, 6x6", P.T.
3.10	Glulam WS, 24F-1.8E, 5-1/2x21"
3.11	Post within Wall, DF No.2, 6x6"
3.12	TJI 230, 2-5/16x11-7/8" @ 16" o.c.
3.13	Header, DF No.2, 4x12"
3.14	Stair Stringers, HF No.2, 2x12" @ 12" o.c., P.T.
3.15	Landing Joists, HF No.2, 2x6" @ 16" o.c., P.T.
3.16	Beam, flush, LSL, 1.55E, 2325Fb, 3-1/2x11-7/8"
3.17	Spread Footing, fc = 2,500 psi, 72x72x16

CONNECT
3.6 to Beam w/ Simpson IUS2.06/16
(b) = Simpson ECC66
(c) = Simpson CCQ3-4SDS2.5
(d) = Simpson MEG5 H=18"



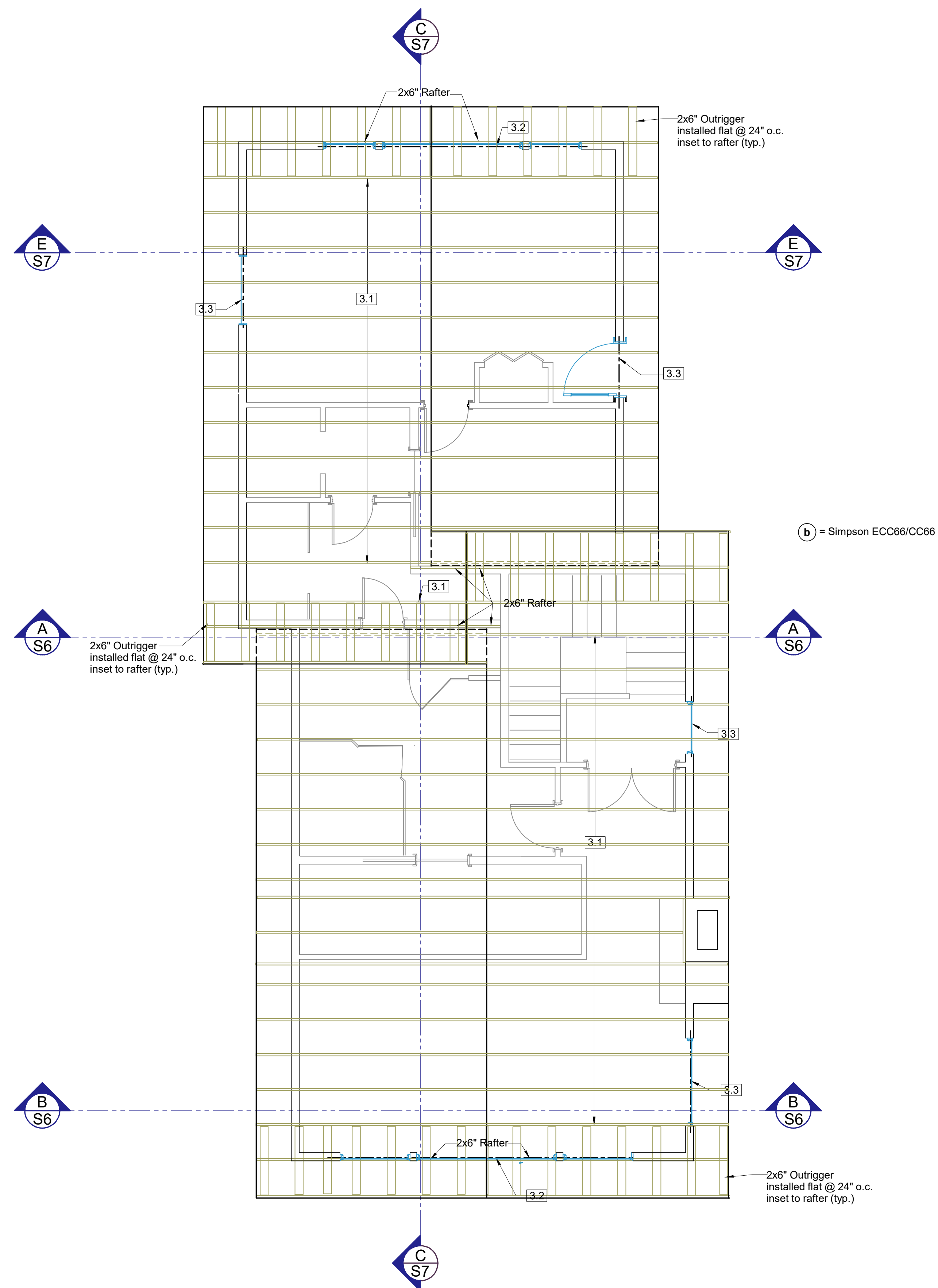
FRAMING ABOVE MAIN FLOOR
LOWER ROOF FRAMING
SCALE: 1/4" = 1'-0" (1:48)



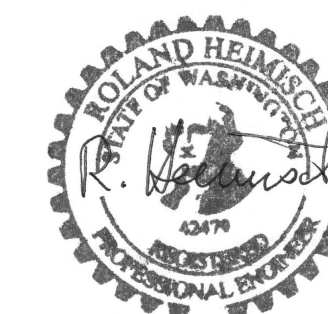
tec instruct LLC
4111 164th St. SW #51, Lynnwood, WA 98087
Telephone (206) 553 9076 - email: www.rheinisch@yahoo.com
ENGINEERING

CLIENT:	Renee Lund	SHEET
JOB SITE:	8520 SE 82nd St., Mercer Island, WA 98040	S4
PROPERTY #		
DESCRIPTION:	Remodel and Addition	
DATE:	10/28/2024 SCALE: as noted	
ENGINEER:	Roland Heimisch, P. E.	

KEY NO.	SECOND STORY ADDITION
3.1	Manufactured Trusses @ 24" o.c.
3.2	Header, DF No.2, 4x10"
3.3	Header, DF No.2, 4x6"
3.4	Beam, PSL, 2.2E, 2900Fb, 3-1/2x11-7/8"
3.5	Post, HF No.2, 6x6", P.T.
3.6	TJI 210, 2-1/16x16" @ 16" o.c.
3.7	Beam, LSL, 1.55E, 2325Fb, 3-1/2x11-7/8"
3.8	Beam, LSL, 1.55E, 2325Fb, 3-1/2x11-7/8"
3.9	Post, HF No.2, 6x6", P.T.
3.10	Glulam WS, 24F-1.8E, 5-1/2x21"
3.11	Post within Wall, DF No.2, 6x6"
3.12	TJI 230, 2-5/16x11-7/8" @ 16" o.c.
3.13	Header, DF No.2, 4x12"
3.14	Stair Stringers, HF No.2, 2x12" @ 12" o.c., P.T.
3.15	Landing Joists, HF No.2, 2x6" @ 16" o.c., P.T.
3.16	Beam, flush, LSL, 1.55E, 2325Fb, 3-1/2x11-7/8"
3.17	Spread Footing, fc = 2,500 psi, 72x72x16

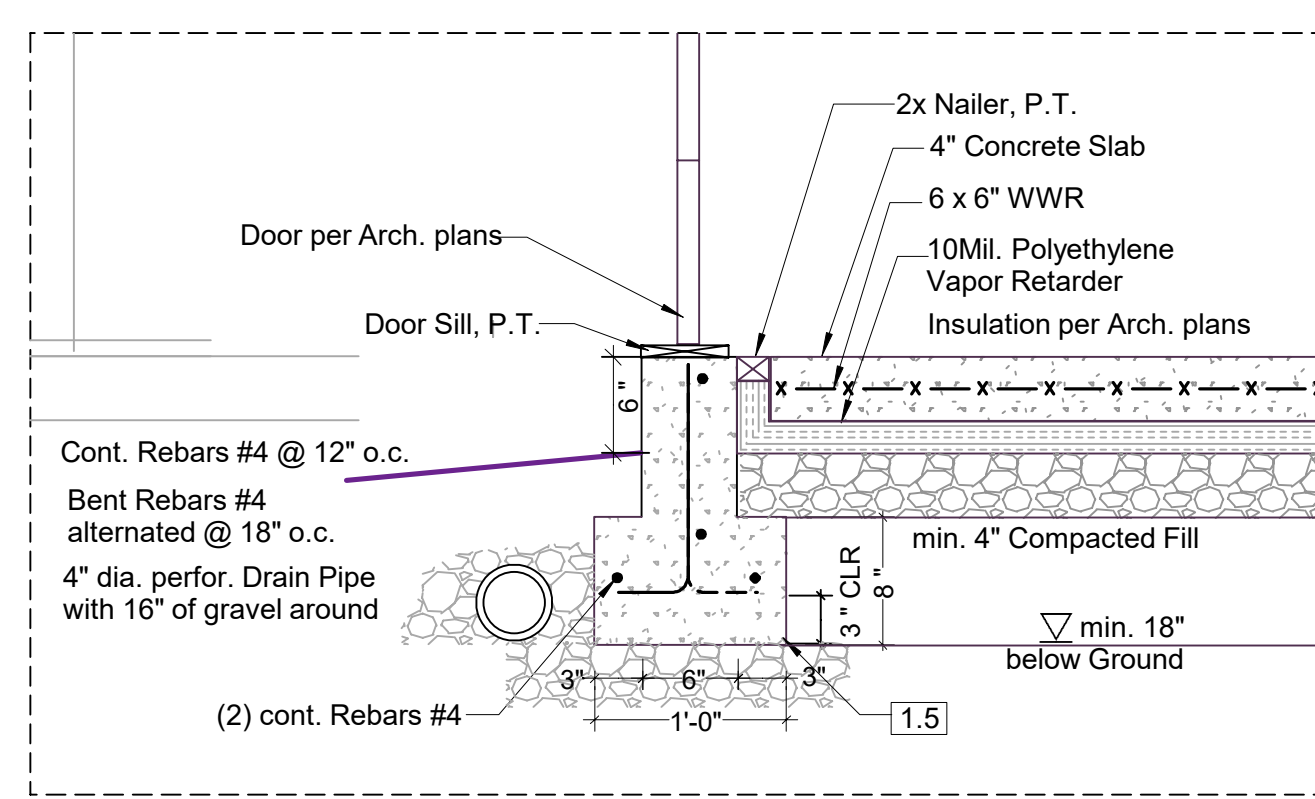
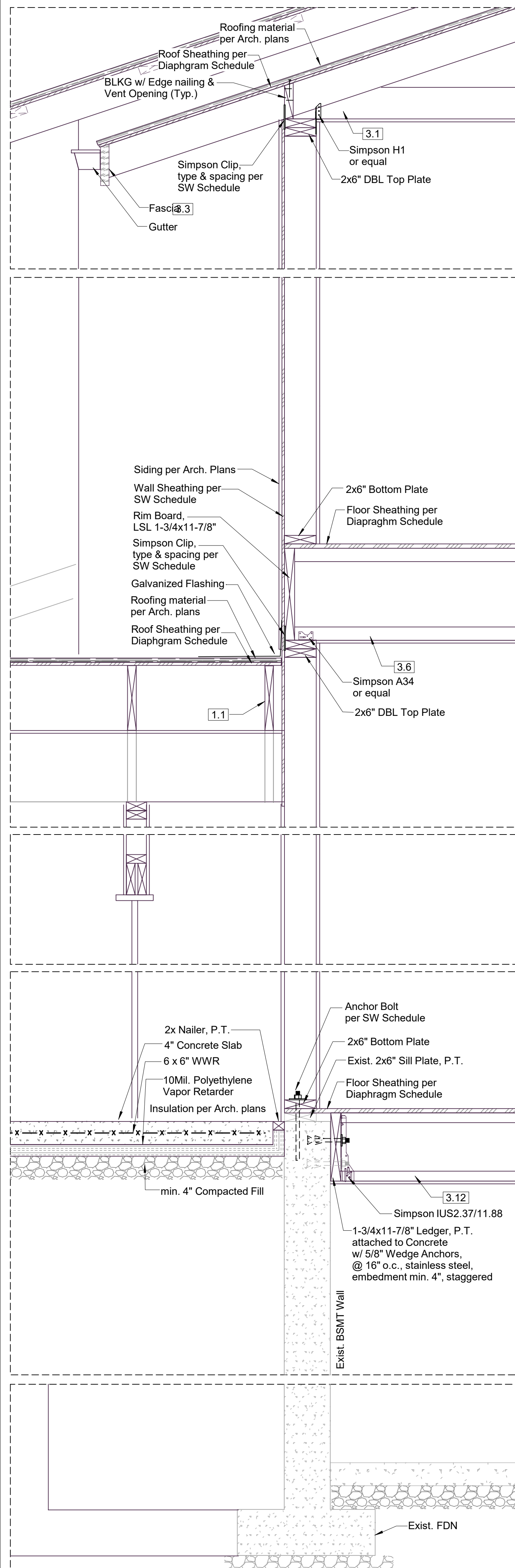


ROOF FRAMING FOR
2ND STORY ADDITION
SCALE: 1/4" = 1'-0" (1:48)

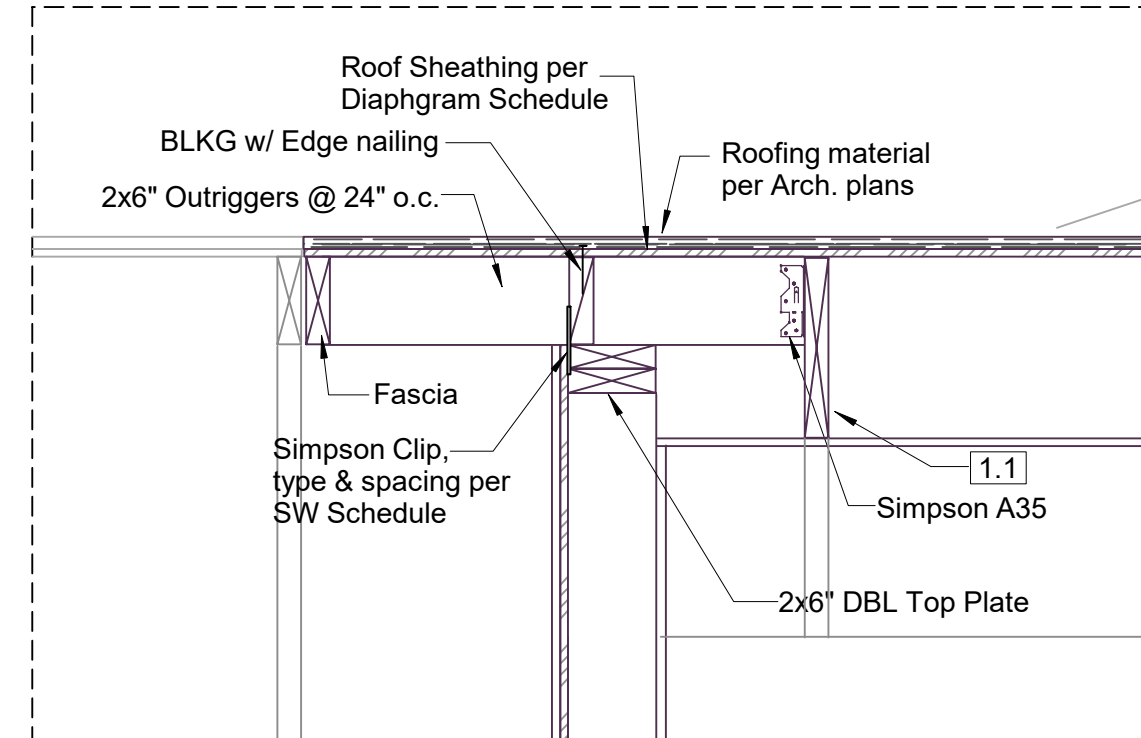


tec instruct LLC
4111 164th St. SW #51, Lynnwood, WA 98087
Telephone (206) 553 9076 - email: www.rheimisch@yahoo.com
ENGINEERING

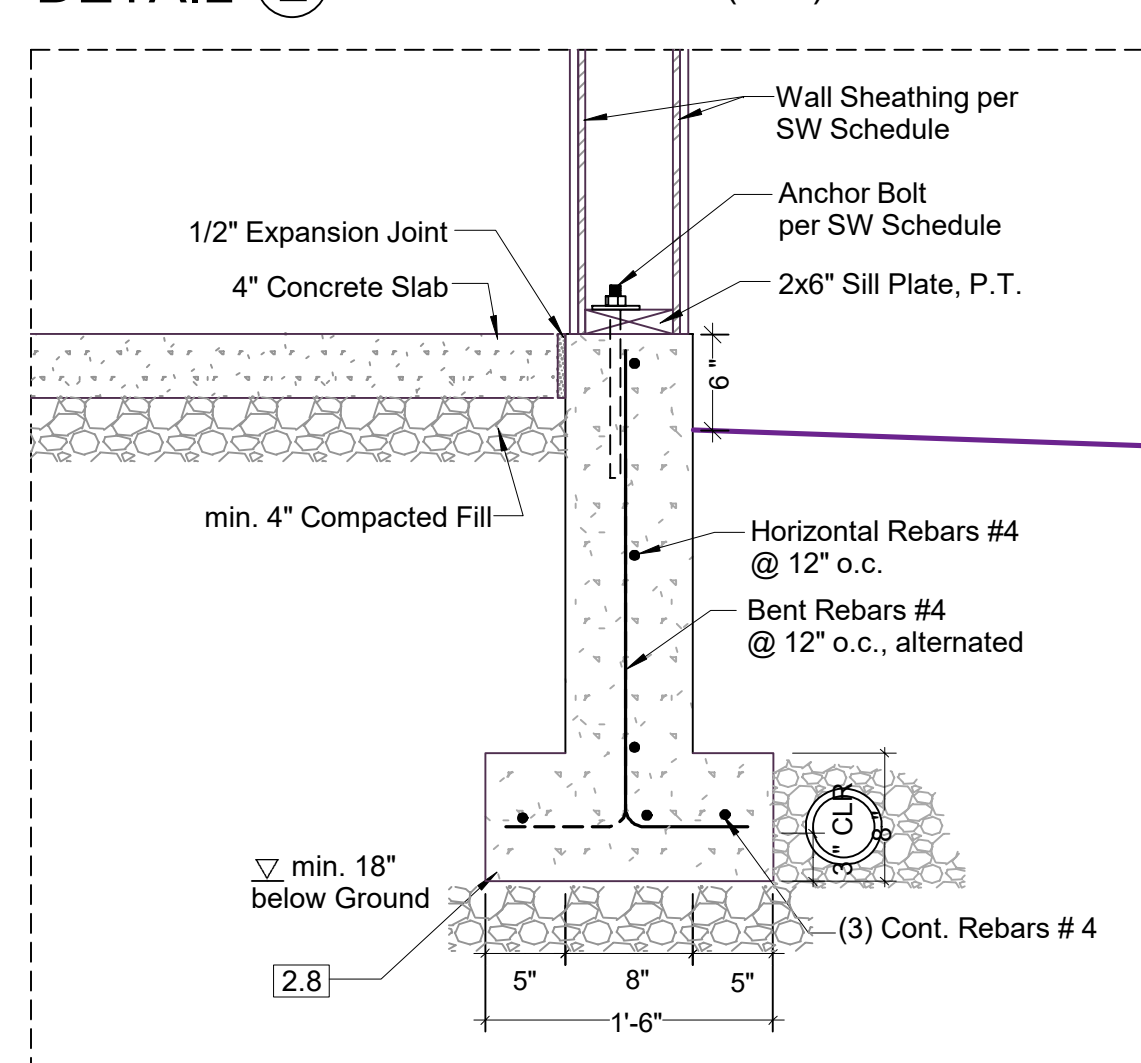
CLIENT:	Renee Lund	SHEET
JOB SITE:	8520 SE 82nd St., Mercer Island, WA 98040	S5
PROPERTY #		
DESCRIPTION:	Remodel and Addition	
DATE:	10/28/2024 SCALE: as noted	
ENGINEER:	Roland Heimisch, P. E.	



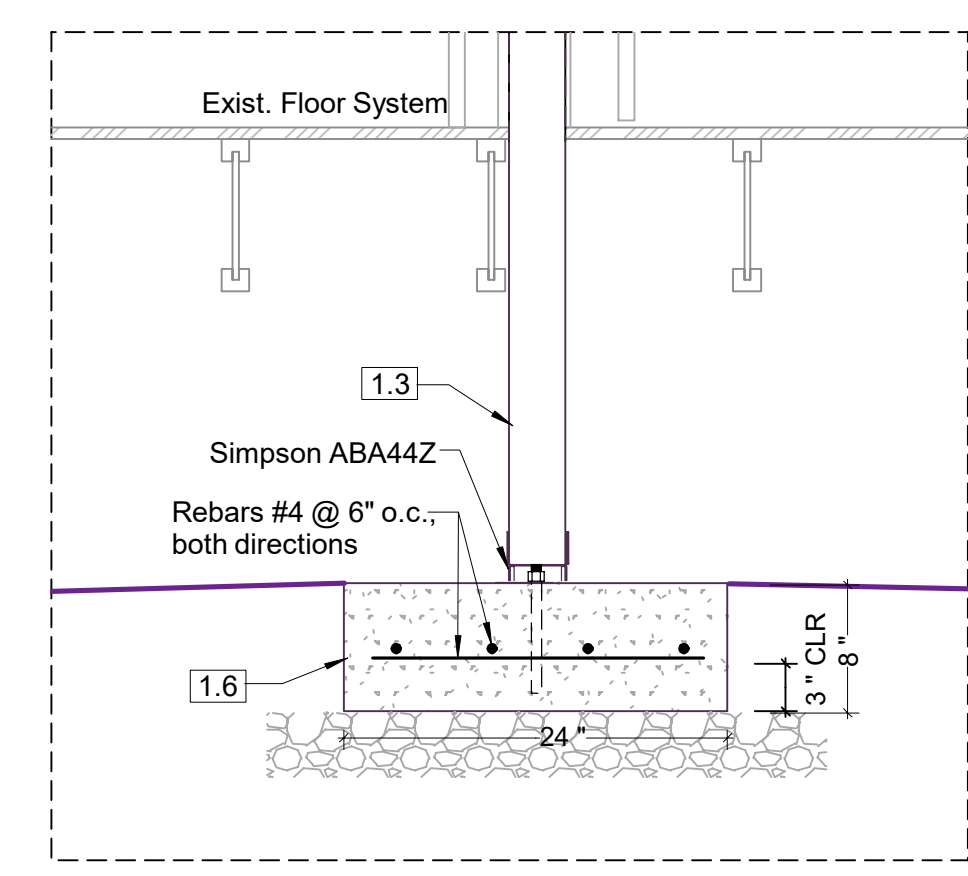
DETAIL 1 SCALE: 1" = 1'-0" (1:12)



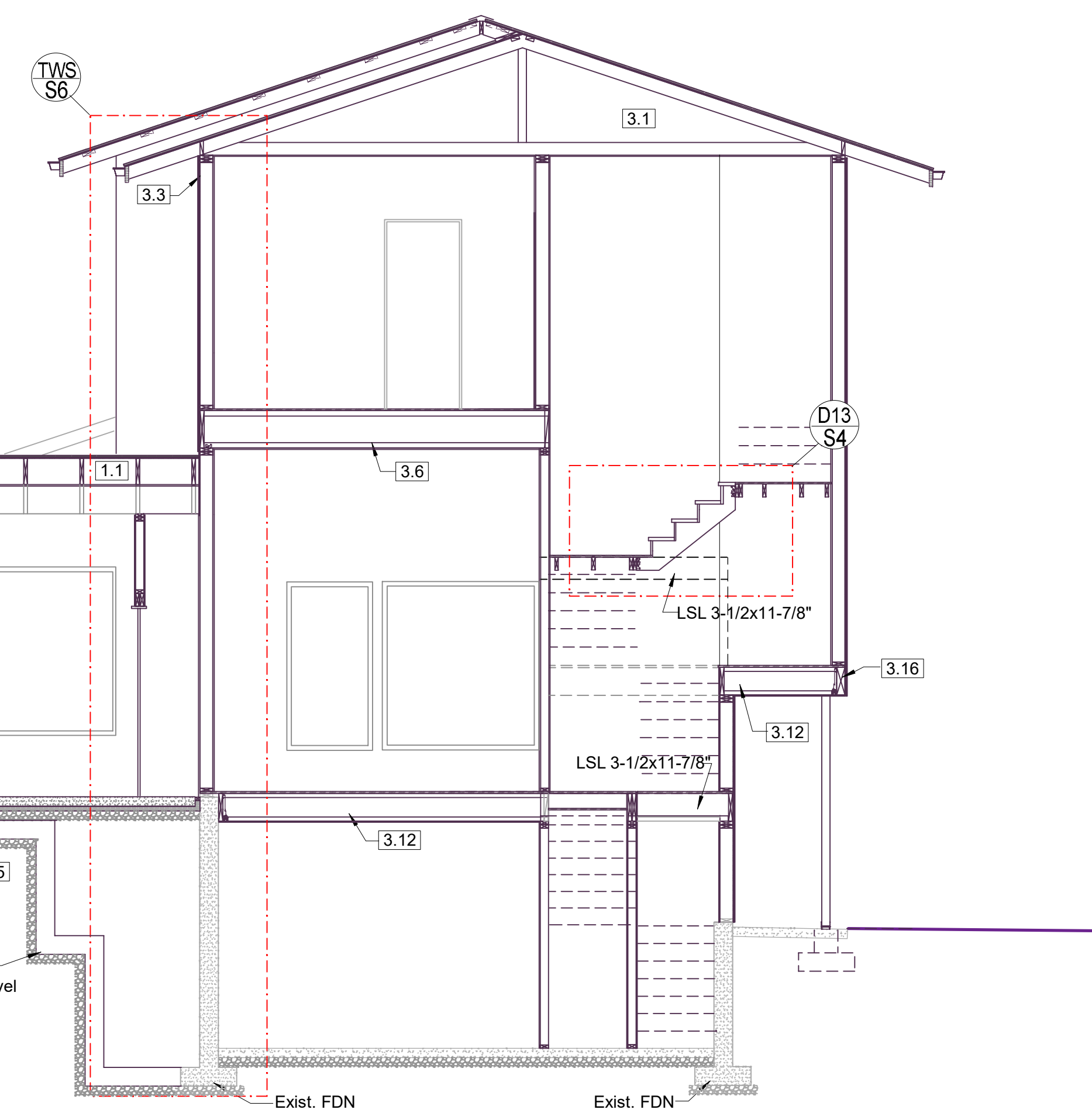
DETAIL 2 SCALE: 1" = 1'-0" (1:12)



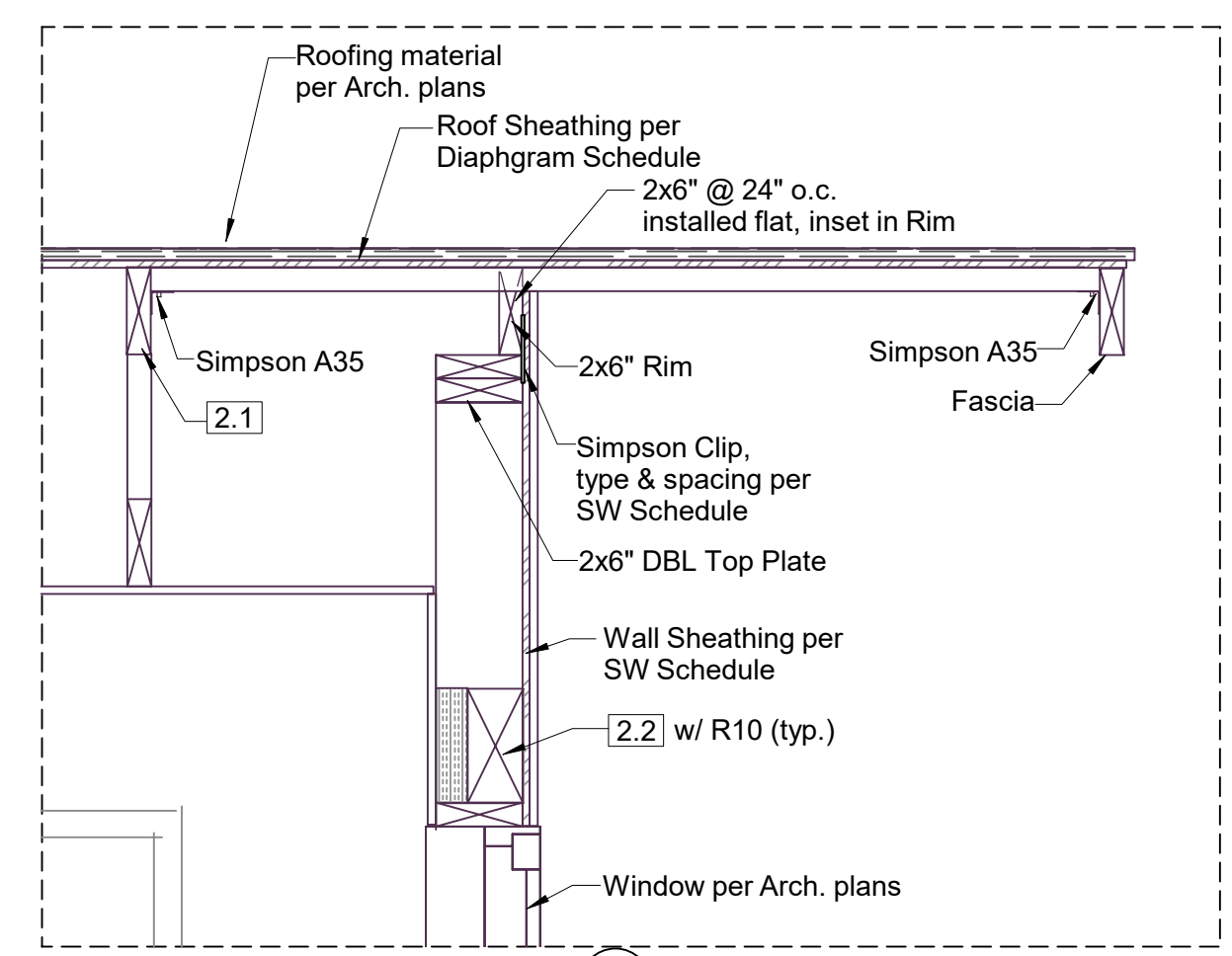
DETAIL 3 SCALE: 1" = 1'-0" (1:12)



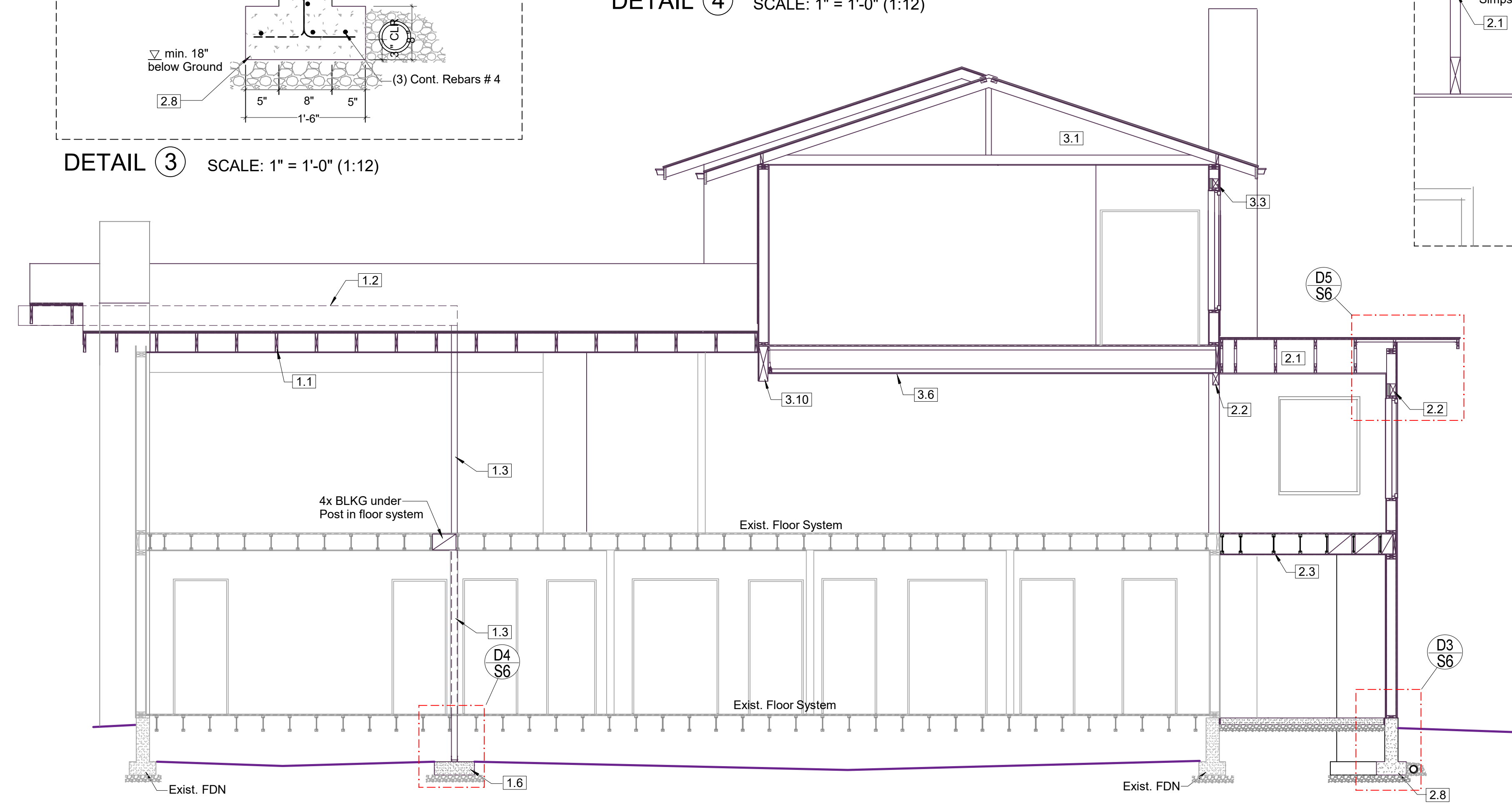
DETAIL 4 SCALE: 1" = 1'-0" (1:12)



BUILDING SECTION A-A SCALE: 1/4" = 1'-0" (1:48)



DETAIL 5 SCALE: 1" = 1'-0" (1:12)



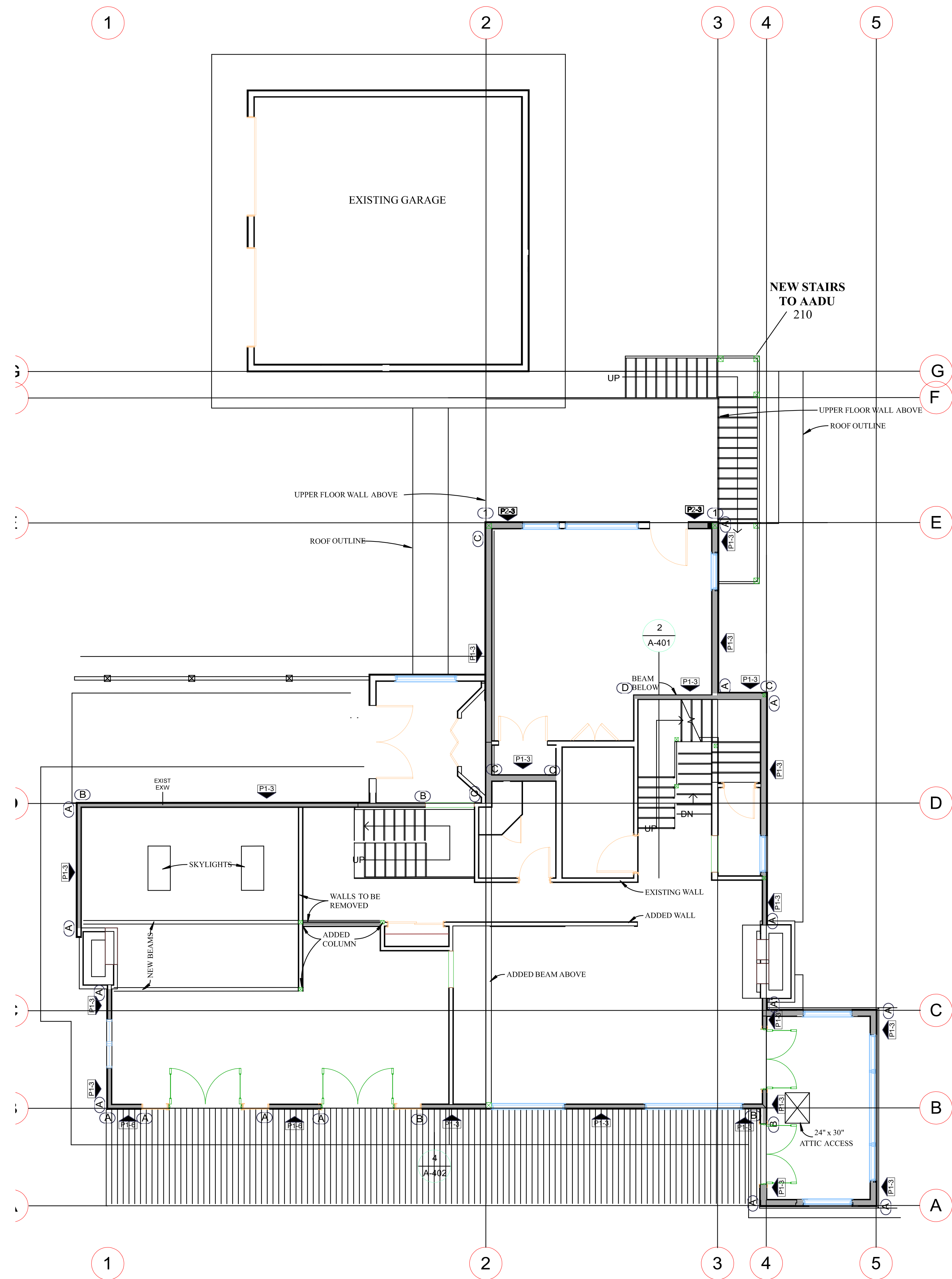
BUILDING SECTION B-B SCALE: 1/4" = 1'-0" (1:48)



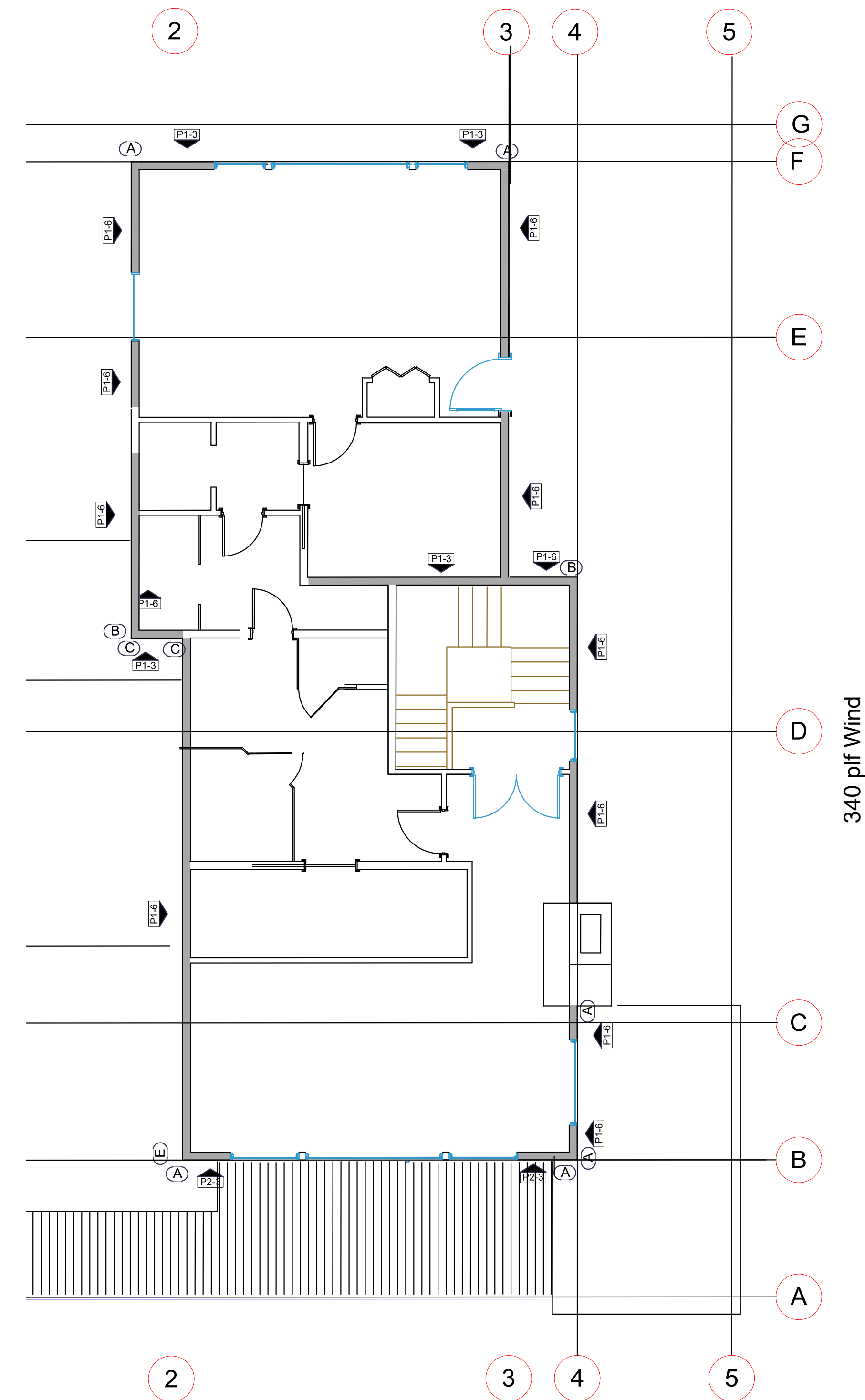
tec instruct LLC
 4111 164th St. SW #51, Lynnwood, WA 98087
 Telephone (206) 553 9076 - email: www.rheimisch@yahoo.com
ENGINEERING

CLIENT:	Renee Lund	SHEET
JOB SITE:	8520 SE 82nd St., Mercer Island, WA 98040	S6
PROPERTY #		
DESCRIPTION:	Remodel and Addition	
DATE:	10/28/2024 SCALE: as noted	
ENGINEER:	Roland Heimisch, P. E.	

TYPICAL WALL SECTION (TWS) SCALE: 1" = 1'-0" (1:12)



MAIN LEVEL SHEAR WALL PLAN
SCALE 1:64



UPPER LEVEL SHEAR WALL PLAN
SCALE 1:64

Revision 10/28/2024



tec instruct LLC
4111 164th St SW, Lynnwood, WA 98087
(206) 553 9076 - rheimisch@yahoo.com
ENGINEERING

BUILDER:	Renee Lund	SHEET
JOB SITE:	8520 SE 82nd St, Mercer Island, WA 98040	S9
PROJECT #		
DESCRIPTION:	Remodel and Addition	
DATE:	07/29/2023 SCALE: as noted	
ENGINEER:	Roland Heimisch, P. E.	