

CLIMATIC & GEOGRAPHIC DESIGN CRITERIA IRC TABLE R301(2)													
ROOF SNOW LOAD *	WIND SPEED **	TOPOGRAPHIC EFFECTS †	SPECIAL WIND REGION	WINDBORNE DEBRIS ZONE	SEISMIC DESIGN CATEGORY	WEATHERING ‡	FROST LINE DEPTH	TERMITES	OUTDOOR DESIGN TEMP (°F) - HEAT/COOL	ICE BARRIER UNDERLAYMENT REQUIRED	FLOOD HAZARDS §	AIR FREEZING INDEX	MEAN ANNUAL TEMP
20	10	YES	NO	NO	D2	MODERATE	12	SLIGHT TO MODERATE	05/17	NO	NO	15	85

MANUAL J DESIGN CRITERIA ¹						
ELEVATION	LATITUDE	WINTER HEATING	SUMMER COOLING	ALTITUDE CORRECTION FACTOR	INTERIOR DESIGN TEMPERATURE	DESIGN TEMPERATURE COOLING
104 FT	47°30'22"	72°F MAX	78°F MIN	0.00	78°F	78°F
COOLING TEMPERATURE DIFFERENCE	WIND VELOCITY HEATING	WIND VELOCITY COOLING	CONCIDENT WET BULB	DAILY RANGE	WINTER HUMIDITY	SUMMER HUMIDITY
0°F	NA	NA	66	MEDIUM	78%	60%

1. THIS IS THE MINIMUM ROOF SNOW LOAD. WHEN USING THIS SNOW LOAD IT WILL BE LEFT TO THE ENGINEER'S JUDGMENT WHETHER TO CONSIDER DRIFT OR SLUING SNOW. HOWEVER, RAIN ON SNOW SURCHARGE OF 0.5 PSF MUST BE CONSIDERED FOR ROOF SLICES LESS THAN 9 DEGREES.

2. WIND EXPOSURE CATEGORY AND TOPOGRAPHIC EFFECTS (WIND SPEED UP FACTOR) SHALL BE DETERMINED ON A SITE-SPECIFIC BASIS BY THE ENGINEER OF RECORD (COMPONENTS AND CLADDING NEED NOT CONSIDER TOPOGRAPHIC EFFECTS UNLESS OTHERWISE DETERMINED BY THE ENGINEER OF RECORD).

3. WEATHERING MAY REQUIRE A HIGHER STRENGTH CONCRETE OR GRADE OF MASONRY THAN NECESSARY TO SATISFY THE STRUCTURAL REQUIREMENTS OF THIS CODE. THE GRADE OF MASONRY UNITS SHALL BE DETERMINED FROM ASTM C 24, C 90, C 92, C 95, C 100, C 140, C 150 OR C 260.

4. THE CITY OF ISLAND PARTICIPATES IN THE NATIONAL FLOOD INSURANCE PROGRAM (NFIP). REGULAR PROGRAM (NO SPECIAL FLOOD HAZARD AREA).

2021 WSEC & IRC VENTILATION TABLE 401.3	
CLIMATE ZONE 5 AND MARINE 4	
PERMEATION U-FACTOR (U _i)	0.22
SKYLIGHT (S _i) U-FACTOR	0.50
CEILING R-VALUE (c)	6.0
WOOD FRAME WALL (W _i) R-VALUE	20.15 OR 15+10
FLOOR R-VALUE	5.0
BELOW-GRADE (G _i) WALL R-VALUE	10/16/21 int. + 8TB
SLAB (L _i) R-VALUE & DEPTH	10, 4 FT.

FOR S1 FOOT = 3/4 @ 16 IN. C1 = CONTINUOUS INSULATION, INT = INTERMEDIATE FRAMING.

a. R-VALUES ARE MINIMUM U-FACTORS AND SHGC ARE MAXIMUMS. WHEN INSULATION IS INSTALLED IN A CAVITY WHICH IS LESS THAN THE LABEL OR DESIGN THICKNESS OF THE INSULATION, THE COMPRESSED R-VALUE OF THE INSULATION FROM APPENDIX TABLE A4.14 SHALL NOT BE LESS THAN THE R-VALUE SPECIFIED IN THE TABLE.

b. THE PENETRATION U-FACTOR COLUMN ENCOMPASSES SKYLIGHTS.

c. 1/8" (2) INT. MEANS R-10 CONTINUOUS INSULATION ON THE EXTERIOR OF THE WALL OR R-5 CONTINUOUS INSULATION ON THE INTERIOR OF THE WALL, OR R-2 CAVITY INSULATION PLUS A THERMAL BREAK BETWEEN THE SLAB AND THE BARRIERTOP WALL AT THE INTERIOR OF THE BASEMENT WALL. 1/8" (2) INT. SHALL BE PERMITTED TO BE MET WITH R-5 CAVITY INSULATION ON THE INTERIOR OF THE BASEMENT WALL PLUS R-5 CONTINUOUS INSULATION ON THE INTERIOR OR EXTERIOR OF THE WALL. 1/8" (2) INT. MEANS R-5 THERMAL BREAK BETWEEN FLOOR SLAB AND BASEMENT WALL.

d. R-5 CONTINUOUS INSULATION IS REQUIRED UNDER HEATED SLAB ON GRADE FLOORS. SEE SECTION R402.4.1.

e. FOR SINGLE RAFTER OR JOIST-VAULTED CEILING, THE INSULATION MAY BE REDUCED TO R-3.5 IF THE FULL INSULATION DEPTH EXTENDS OVER THE TOP PLATE OF THE EXTERIOR WALL.

f. R-7.5 CONTINUOUS INSULATION INSTALLED OVER AN EXISTING SLAB IS DEEMED TO BE EQUIVALENT TO THE REQUIRED PERMEATION SLAB INSULATION WHEN APPLIED TO EXISTING SLABS COMPLYING WITH SECTION R801.1.1 F OAM PLASTIC (USED). IT SHALL MEET THE REQUIREMENTS FOR THE BARRIER PROTECTING FOAM PLASTIC.

g. FOR LOG STRUCTURES DEVELOPED IN COMPLIANCE WITH STANDARD ICC 400, LOG WALLS SHALL MEET THE REQUIREMENTS FOR CLIMATE ZONE 5 OF ICC 400.

h. INT (INTERMEDIATE FRAMING) DENOTES FRAMING AND INSULATION AS DESCRIBED IN SECTION A92.2 INCLUDING STANDARD FRAMING 16 INCHES ON CENTER, 75 PERCENT OF THE WALL CAVITY INSULATED AND HEADERS INSULATED WITH MINIMUM OF R-5 INSULATION.

i. THE FIRST VALUE IN THE CAVITY INSULATION THE SECOND VALUE IS CONTINUOUS INSULATION. THEREFORE, 10/16/21 INT. MEANS R-10 CAVITY INSULATION PLUS R-16 CONTINUOUS INSULATION.

j. A MAXIMUM U-FACTOR OF .452 SHALL APPLY TO VERTICAL PENETRATION PRODUCTS INSTALLED IN BUILDINGS LOCATED ABOVE 100 FEET IN ELEVATION ABOVE SEA LEVEL OR IN WINDBORNE DEBRIS REGIONS WHERE PROTECTION OF OPENINGS IS REQUIRED UNDER SECTION R801.1 OF THE INTERNATIONAL RESIDENTIAL CODE.

GENERAL NOTES:
 THESE GENERAL NOTES ARE TO BE USED AS A SUPPLEMENT TO THE DRAWINGS. ANY DISCREPANCIES FOUND AMONG THE DRAWINGS, GENERAL NOTES AND SITE CONDITIONS SHALL BE REPORTED TO THE ARCHITECT, WHO SHALL CORRECT SUCH DISCREPANCY IN WRITING. ANY WORK DONE BY THE CONTRACTOR AFTER THE DISCOVERY OF A DISCREPANCY SHALL BE DONE AT THE CONTRACTOR'S OWN RISK.

ALL METHODS AND MATERIALS TO CONFORM TO THE 2021 INTERNATIONAL BUILDING CODE, 2021 INTERNATIONAL RESIDENTIAL CODE AND 2021 WASHINGTON STATE ENERGY CODE AS AMENDED AND ADOPTED BY APPLICABLE JURISDICTION.

DESIGN CRITERIA (IRC 301): THE ENGINEER LATERAL DESIGN FOR THE BUILDING IS IN ACCORDANCE WITH THE 2021 INTERNATIONAL BUILDING CODE AND IS PROVIDED BY THE ENGINEER OF RECORD.

DESIGN LOADS:
 ROOF: LL+20, DL+10, TL+40
 FLOOR: LL+40, DL+10, TL+80
 DECK: LL+10, DL+60, TL+70

CONCRETE FOUNDATIONS:
 CONCRETE FOUNDATIONS SHALL BE DESIGNED IN ACCORDANCE WITH IRC CHAPTER 4.

MIN. CONCRETE COMPRESSIVE STRENGTH (f'_c): 3,000 PSI (R404.1.3.3)
 MIN. YIELD STRENGTH OF STEEL REINFORCEMENT: 60,000 PSI (R404.1.3.3.7)
 CONCRETE MIXING & DELIVERY SHALL COMPLY WITH ASTM 94 OR ASTM C 685 MIN. REINFORCEMENT COVER: IF CAST AGAINST EARTH: 3" MIN COVER. IF CAST AGAINST REMOVABLE FORMS: 1 1/2" FOR NO. 9 BARS AND SMALLER, 2" FOR NO. 6 BARS OR LARGER. (R402.1.3.3.3 & R404.1.3.3.7.4)

FORMS SHALL BE MADE OF AN APPROVED MATERIAL. FORMS SHALL BE POSITIONED AND SECURED BEFORE PLACING CONCRETE AND SHALL PROVIDE SUFFICIENT STRENGTH TO CONTAIN CONCRETE DURING THE CONCRETE PLACEMENT OPERATION (IRC R404.1.3.3.6)

CONCRETE SHALL BE CONSOLIDATED BY SUITABLE MEANS DURING PLACEMENT AND SHALL BE WORKED AROUND EMBEDDED ITEMS AND REINFORCEMENT AND INTO CORNER OF FORMS (IRC 404.1.3.3.5)

VERTICAL AND HORIZONTAL WALL REINFORCEMENT SHALL BE THE LONGEST LENGTHS PRACTICAL. WHERE SPLICES ARE NECESSARY IN REINFORCEMENT, THE LENGTH SHALL BE IN ACCORDANCE WITH TABLE R602.5.4(1) AND FIGURE R602.5.4(1). THE MAXIMUM GAP BETWEEN NON-CONTACT PARALLEL BARS AT A LAP SPlice SHALL NOT EXCEED THE SMALLER OF ONE-FIFTH THE REQUIRED LAP LENGTH AND 6 INCHES. FOR GRADE 60 STEEL #4 BAR (TABLE R602.5.4(1)):
 -LAP SPlice LENGTH-TENSION = 30 INCHES
 -TENSION DEVELOPMENT LENGTH FOR STRAIGHT BAR = 25 INCHES
 -TENSION DEVELOPMENT LENGTH FOR 90-DEGREE AND 180-DEGREE WITH NOT LESS THAN 25 INCHES OF SIDE COVER PERPENDICULAR TO PLANE OF HOOK AND 90-DEGREE STANDARD HOOKS WITH NOT LESS THAN 2 INCHES OF COVER ON THE BAR EXTENSION BEYOND HOOK = 0 INCHES
 -TENSION DEVELOPMENT LENGTH FOR BAR WITH 90-DEGREE AND 180 DEGREE STANDARD HOOK HAVING LESS COVER THAN REQUIRED ABOVE + 12 INCHES.

DAMPENING (IRC R402):
 FOUNDATION WALLS THAT RETAIN EARTH AND ENCLOSE INTERIOR SPACES AND FLOORS BELOW GRADE SHALL BE DAMPENING FROM THE TOP OF THE FOOTING TO THE FINISHED GRADE. CONCRETE WALLS SHALL BE DAMPENING BY APPLYING ANY ONE OF THE MATERIALS LISTED IN R 406.1 & R406.2

INFILTRATION CONTROL (WSEC 402):
 1. EXTERIOR JOINTS AROUND WINDOW AND DOOR FRAMES, OPENINGS BETWEEN WALLS AND FOUNDATIONS, BETWEEN WALLS AND ROOF AND BETWEEN WALL PANELS, OPENINGS AT PENETRATION OF UTILITY SERVICES THROUGH WALLS, FLOOR AND ROOFS AND ALL OTHER OPENING IN THE BUILDING ENVELOPE SHALL BE SEALED, CAULKED OR GASKETED OR WEATHERSTRIPPED TO LIMIT AIR LEAKAGE. OTHER EXTERIOR JOINTS AND SEAMS SHALL BE SIMILARLY TREATED, OR TAPED, OR COVERED WITH MOISTURE VAPOR PERMEABLE HOUSEWRAP.

2. ALL EXTERIOR DOORS OR DOORS SERVING AS ACCESS TO AN ENCLOSED UNHEATED AREA SHALL BE WEATHERSTRIPPED TO LIMIT LEAKAGE AROUND THEIR PERIMETER WHEN IN A CLOSED POSITION.

3. RECESSED LIGHTING FIXTURES (402.4.4): WHEN INSTALLED IN THE BUILDING ENVELOPE SHALL BE:
 -TYPE IC RATED AND CERTIFIED UNDER ASTM E203 TO HAVE NO MORE THAN 2.0 CFM AIR MOVEMENT
 -THE LIGHTING FIXTURE SHALL BE TESTED AT 76 PASCALS OR 107 LBS/5F PRESSURE DIFFERENCE AND LABELED SHOWING COMPLIANCE
 -SHALL BE INSTALLED WITH A GASKET OR CAULK AT THE CEILING TO PREVENT AIR LEAKAGE

VAPOR BARRIERS/GROUND COVERS:
 CLASS I (SHEET POLYETHYLENE, UNPERFORATED ALUMINUM FOIL) OR CLASS II (KRAFT-FACED FIBERGLASS BATT) VAPOR RETARDERS ARE REQUIRED ON THE INTERIOR SIDE OF FRAMED WALLS (R702.7.1)

CLASS III VAPOR RETARDER (LATEX OR ENAMEL PAINT) PERMITTED AT VENTED CLADDING OVER WOOD STRUCTURAL PANELS, FIBERBOARD, OR GYPSUM, OR CONTINUOUS INSULATION WITH R-VALUE > 2.0 OVER 2x4 WALLS OR R-VALUE > 3.75 OVER 2x6 WALLS. (R702.7.3)

VAPOR RETARDER UNDER SLAB (R902.2.3): 10 MIL POLYETHYLENE OR APPROVED VAPOR RETARDER WITH JOINTS LAPPED NOT LESS THAN 6" SHALL BE PLACED BETWEEN THE CONCRETE FLOOR SLAB AND THE BASE COURSE OR THE PREPARED SUBGRADE WHERE NO BASE COURSE EXISTS, EXCEPT AT GARAGES, UTILITY BUILDINGS AND OTHER UNHEATED ACCESSORY STRUCTURES.

GROUND COVER (R402.3): 6 MIL BLACK POLYETHYLENE OR APPROVED EQUAL SHALL BE Laid OVER THE GROUND WITHIN CRAWL SPACES AND SHALL BE OVERLAPPED 12" MINIMUM AT THE JOINTS AND SHALL EXTEND TO THE FOUNDATION WALL.

SMOKE ALARMS AND HEAT DETECTION (R314):
 ALL SMOKE ALARMS SHALL BE LISTED IN ACCORDANCE WITH UL217 AND INSTALLED IN ACCORDANCE WITH THE PROVISIONS OF THIS CODE AND THE HOUSEHOLD FIRE WARNING EQUIPMENT PROVISIONS OF NFPA 72. SMOKE ALARMS SHALL RECEIVE PRIMARY POWER FROM THE BUILDING WIRING AND BE 10V INTERCONNECTED WITH BATTERY BACK-UP.

EXHAUST HOOD MAKEUP AIR (M102.4): KITCHEN EXHAUST HOODS EXHAUSTING OVER 400CFM SHALL BE EQUIPPED WITH MAKEUP AIR AT A RATE APPROXIMATELY EQUAL TO THE EXHAUST RATE. SUCH MAKE UP SYSTEMS SHALL BE EQUIPPED WITH A MEANS OF CLOSURE AND SHALL BE AUTOMATICALLY CONTROLLED TO START AND OPERATE SIMULTANEOUSLY WITH THE EXHAUST SYSTEM.

FIREBLOCKING: SHALL BE PROVIDED TO CUT OFF ALL CONCEALED DRAFT OPENINGS AND TO FORM AN EFFECTIVE FIRE BARRIER BETWEEN STORIES AND BETWEEN TOP STORY AND ROOF SPACE. INSTALL PER IRC 302.11

WATER-RESISTANT GYPSUM BOARDING BOARD (IRC 702.5.7): GYPSUM BOARD USED AS A BACKER BOARD FOR CERAMIC TILE SHALL CONFORM TO ASTM C910, C917 OR C917.1

WATER-RESISTANT GYPSUM BOARD SHALL NOT BE INSTALLED OVER A VAPOR RETARDER IN A SHOWER OR TUB COMPARTMENT, CUT OR EXPOSED EDGES, INCLUDING THOSE AT WALL INTERSECTIONS, SHALL BE SEALED AS RECOMMENDED BY THE MANUFACTURER.

FASTENERS IN PRESERVATIVE TREATED WOOD (R301.3.1): FASTENERS, INCLUDING NUTS AND WASHERS, FOR PRESERVATIVE TREATED WOOD SHALL BE HOT DIPPED ZINC-COATED, GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER. STAPLES SHALL BE OF STAINLESS STEEL.

DRIP EDGE (IRC R0902.0.9): A DRIP EDGE SHALL BE PROVIDED AT EAVES AND GABLES OF ASPHALT SHINGLE ROOFS AND SHALL EXTEND 20 INCHES BELOW SHEATHING AND 2" UP ROOF DECK

WHOLE-HOUSE VENTILATION SYSTEM USED:
 INTERMITTENTLY OPERATING WHOLE-HOUSE VENTILATION SYSTEM
 PER SECTION M102.4.1 VENTILATION RATE = 75 CFM (2500 S.F. / 5 BEDROOMS) PER TABLE M102.4.3(3), INTERMITTENT RATE FACTOR = 15 FOR 66% RUN TIME. PER TABLE M102.4.3(2) SYSTEM FACTOR = 15 FOR NOT BALANCED NOT DISTRIBUTED INTERMITTENT FAN AIRFLOW RATE = 75 CFM X 15 X 15 = 168.75 CFM

INTERMITTENT OFF OPERATION (M102.4.3.2):
 WHOLE HOUSE MECHANICAL VENTILATION SYSTEMS SHALL BE PROVIDED WITH ADVANCED CONTROLS THAT ARE CONFIGURED TO OPERATE THE SYSTEM WITH INTERMITTENT OFF OPERATION AND SHALL OPERATE FOR AT LEAST TWO HOURS IN EACH FOUR-HOUR SEGMENT.

SYSTEM CONTROLS (M102.4.3):
 THE WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM SHALL BE PROVIDED WITH CONTROLS THAT COMPLY WITH THE FOLLOWING:

1. THE WHOLE-HOUSE VENTILATION SYSTEM SHALL BE CONTROLLED WITH MANUAL SWITCHES, TIMERS OR OTHER MEANS THAT PROVIDE FOR AUTOMATIC OPERATION OF THE VENTILATION SYSTEM THAT ARE READILY ACCESSIBLE BY THE OCCUPANT;
2. WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM SHALL BE PROVIDED WITH CONTROLS THAT ENABLE MANUAL OVERRIDE OFF OF THE SYSTEM BY THE OCCUPANT DURING PERIODS OF POOR OUTDOOR AIR QUALITY. CONTROLS SHALL INCLUDE PERMANENT TEXT OR A SYMBOL INDICATING THEIR FUNCTION. RECOMMENDED CONTROL PERMANENT LABELING TO INCLUDE TEXT SIMILAR TO THE FOLLOWING: "LEAVE ON UNLESS OUTDOOR AIR QUALITY IS VERY POOR." MANUAL CONTROLS SHALL BE READILY ACCESSIBLE BY THE OCCUPANT;
3. WHOLE-HOUSE VENTILATION SYSTEMS SHALL BE CONFIGURED TO OPERATE CONTINUOUSLY EXCEPT WHERE INTERMITTENT OFF CONTROLS AND SENSING ARE PROVIDED PER SECTION M102.4.3.2.

PERMANENT CERTIFICATE SHALL BE POSTED WITHIN 3 FEET OF THE ELECTRICAL PANEL OR ON THE PANEL ITSELF. THE CERTIFICATE SHALL BE COMPLETED BY THE BUILDER OR REGISTERED DESIGN PROFESSIONAL AND LIST THE FOLLOWING: INSULATION R-VALUES FOR ALL BUILDING FRAMING AND FOUNDATION/SLAB COMPONENTS, DUCT INSULATION OUTSIDE CONDITIONED AREAS, GLAZING U VALUES AND/OR SHGC VALUES, TYPE AND EFFICIENCY OF HEATING/COOLING SYSTEM AND HEATING EQUIPMENT, DUCT LEAKAGE RATES INCLUDING TEST CONDITIONS AND AIR LEAKAGE RESULTS (WSEC 419).

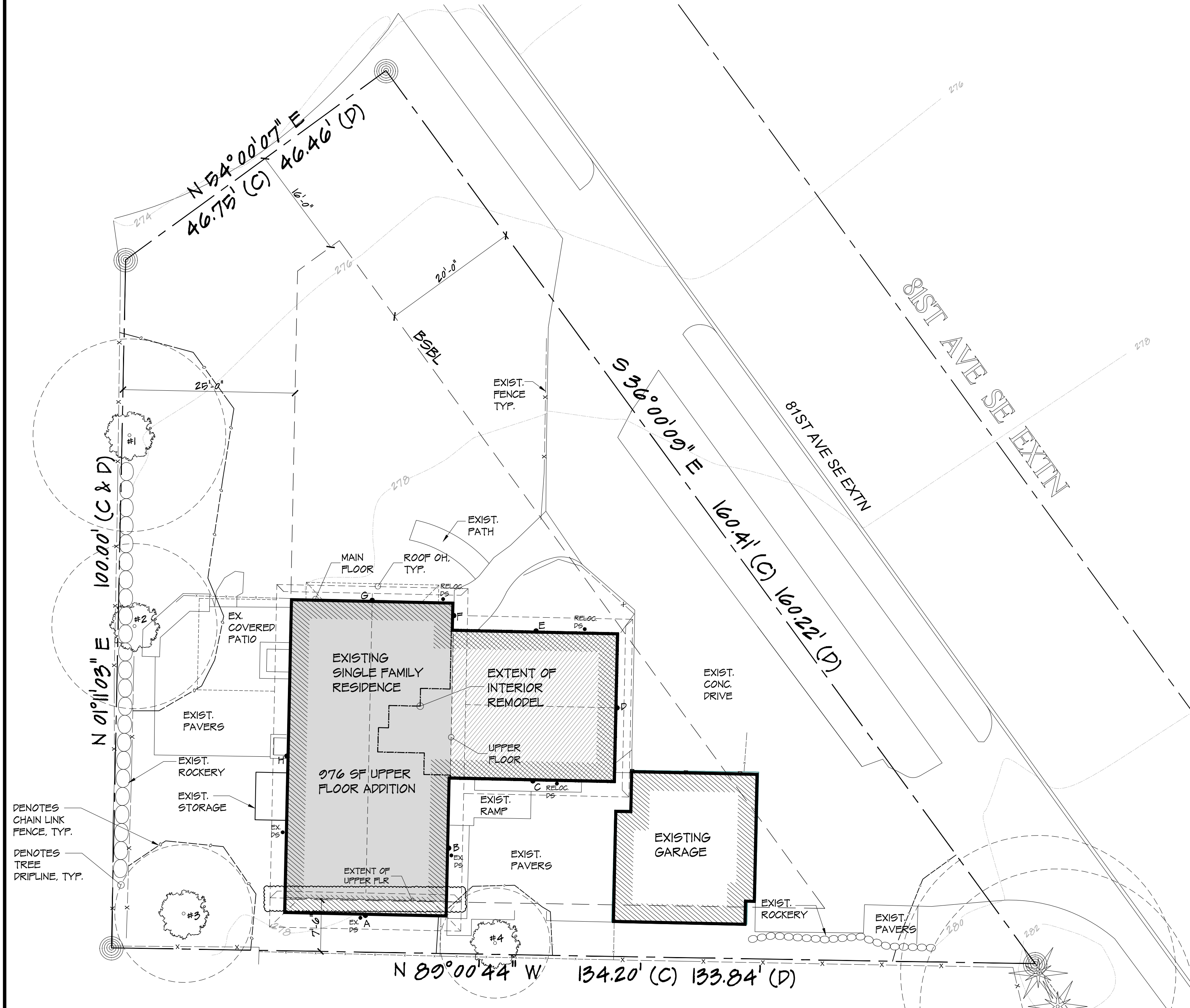
EXHAUST DUCTS: EXHAUST DUCTS SHALL BE EQUIPPED WITH BACK-DRAFT DAMPERS. ALL EXHAUST DUCTS IN UNCONDITIONED SPACES SHALL BE INSULATED TO A MINIMUM OF R-4.

HIGH EFFICACY LUMINAIRES (WSEC R404): 90% OF ALL LUMINAIRES SHALL BE HIGH EFFICACY.

TESTING (WSEC R402.4.3.3): REQUIRED FOR ALL BUILDINGS AND SHALL OCCUR ANYTIME AFTER ROUGH-IN AND AFTER INSTALLATION OF PENETRATIONS OF THE BUILDING ENVELOPE. ACCEPTABLE AIR LEAKAGE TO BE LESS THAN 8 AIR CHANGES PER HOUR WITH A BLOWER DOOR AT A PRESSURE OF 2 INCH W.G. (50 PASCALS)

SEALING (WSEC R402.3.4): DUCTS SHALL BE LEAK TESTED IN ACCORDANCE WITH WSU R5-35 USING THE MAXIMUM DUCT LEAKAGE RATES SPECIFIED:
 -POST CONSTRUCTION & ROUGH-IN: TOTAL LEAKAGE TO BE LESS THAN OR EQUAL TO 4CFM PER 100 SF OF CONDITIONED FLOOR AREA AT 0.1 INCHES W.G. FOR ENTIRE SYSTEM, INCLUDING AIR HANDLER ENCLOSURE. ALL REGISTER BOOTHS SHALL BE TAPED OR OTHERWISE SEALED DURING TEST. LEAKAGE TO OUTDOORS SHALL BE LESS THAN OR EQUAL TO 4CFM PER 100 SQUARE FEET OF CONDITIONED FLOOR AREA.

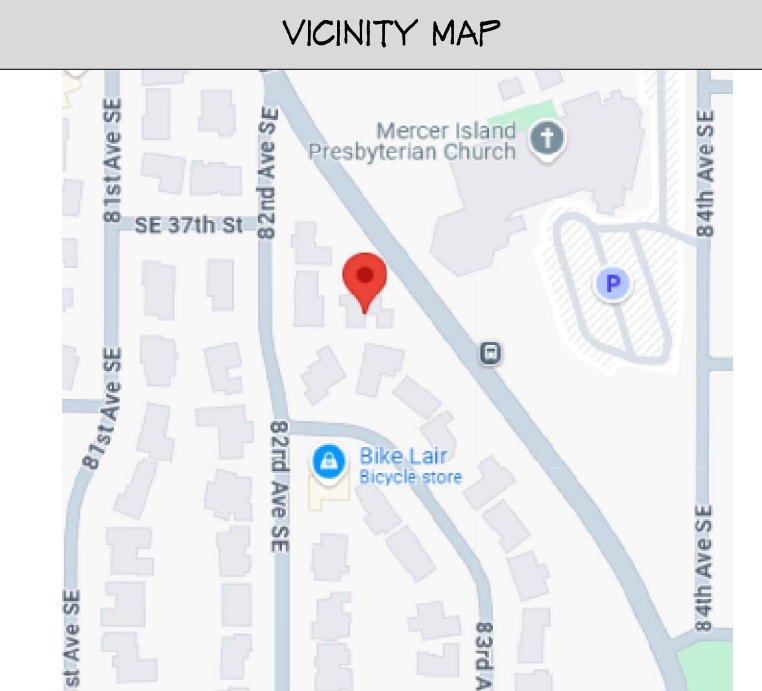
DUCT INSULATION & INSTALLATION (WSEC R402.3.4 & R402.3.7):
 DUCTS SHALL BE INSULATED TO A MINIMUM R-5 EXCEPT IF LOCATED COMPLETELY WITHIN THE BUILDING THERMAL ENVELOPE. BUILDING FRAMING CAVITIES SHALL NOT BE USED AS DUCTS OR PLENUMS. INSTALLATION OF DUCTS IN EXTERIOR WALLS, FLOORS OR CEILING SHALL NOT DISPLACE REQUIRED ENVELOPE INSULATION.



NOTE: THE PROPOSED UPPER FLOOR ADDITION STACKS DIRECTLY OVER THE EXISTING MAIN FLOOR. NO CHANGE IN IMPERVIOUS AREA IS PROPOSED FOR THIS PROJECT

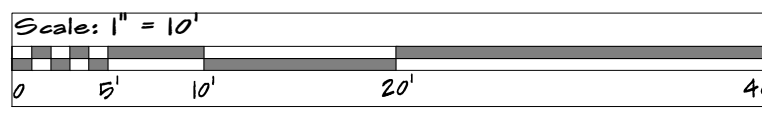
NOTE: A NFPA 13D FIRE SPRINKLER SYSTEM IN COMPLIANCE WITH NFPA 13D AND COMI STANDARDS SHALL BE INSTALLED THROUGHOUT THE RESIDENCE. A SEPARATE FIRE PERMIT IS REQUIRED

PROJECT INFORMATION			
ADDRESS	3633 ISLAND CREST WAY 08040		
PARCEL NUMBER	122494-006B		
OWNER	RANKIN EWAN		
LEGAL DESCRIPTION	FOR OF S 7 AC OF N 16 AC OF S 3/4 OF E 1/2 OF E 1/2 OF SE 1/4 PAR-BEG ON S LN OF S 7 AC TR 80 FT E OF SW COR TH N PLW W LN 50 TR 100 FT TH N 83-82-04 E 46.46 FT TO CO RD TH SE ALG SWLY LN OF CO RD 160.22 FT TO S LN OF S 7 AC TR TH W ALG S 16 LN 133.84 FT TO BEG		
SCOPE OF WORK			
976 SF UPPER FLOOR ADDITION, INTERIOR REMODEL OF EXISTING SINGLE FAMILY RESIDENCE			
LOT SLOPE			
HIGHEST ELEVATION FT. OF LOT	282		
LOWEST ELEVATION FT. OF LOT	272		
ELEVATION DIFF.	8		
HORIZONTAL DISTANCE	160		
LOT SLOPE	5%		
ZONING			
ZONE	R06		
SETBACKS	FRONT: 20', SIDE: 8/10', REAR: 20'		
LOT AREA	9083		
LOT COVERAGE	40%		
HARDSCAPE	0%		
HEIGHT LIMIT	30'		
GROSS FLOOR AREA	40%		
LOT COVERAGE			
NO CHANGE			
HARDSCAPE			
NO CHANGE			
HEIGHT CALCULATION			
ELEVATIONS	LENGTH	AVERAGE	
A	278.00	23.00	6464.00
B	278.00	24.00	6672.00
C	278.00	24.00	6672.00
D	278.00	21.75	6057.50
E	278.00	24.00	6672.00
F	279.15	3.80	1060.77
G	278.00	23.00	6464.00
H	277.00	45.00	12717.50
	TOTAL		278.24
MAX ALLOWED	30		308.24
HIGHEST RIDGE			301.82
PROPOSED GROSS FLOOR AREA			
EXISTING MAIN FLOOR & GARAGE	2095		
UPPER FLOOR ADDITION	976		
STORAGE	31		
TOTAL GROSS FLOOR AREA	3062		
LOT AREA	9083		
PERCENTAGE	0.32		



AREA CALCULATION			
LEVEL/ROOM	EXIST.	NEW	TOTAL
MAIN FLOOR (SF)	1615	0	1615
UPPER FLOOR (SF)	0	976	976
TOTAL (SQFT)	1615	976	2591
GARAGE:	442	0	442

SHEET INDEX	
C	COVER-GENERAL NOTES
SURVEY	
1	FOUNDATION PLAN
2	MAIN FLOOR PLAN
3	UPPER FLOOR FRAMING
4	UPPER FLOOR PLAN
5	ROOF FRAMING
6	ELEVATIONS
AD-1	ARCHITECTURAL DETAILS/ SECTIONS
SI-5B	STRUCTURAL DETAILS



REGISTERED ARCHITECT
 Neil Jorgensen, Architect
 11702 88th Ave NE #105, Kirkland, WA 98034
 www.jarchitects.com • 425.422.0866

REGISTERED ARCHITECT
 STATE OF WASHINGTON
 11702 88th Ave NE #105, Kirkland, WA 98034
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PROPOSED ADDITION FOR:
 RANKIN RESIDENCE
 3633 ISLAND CREST WAY
 MERCER ISLAND WA 98040

COVER SHEET

JOB #
 24-033

DATE:
 12-20-24

REV: 03-03-25

SHEET #
 C

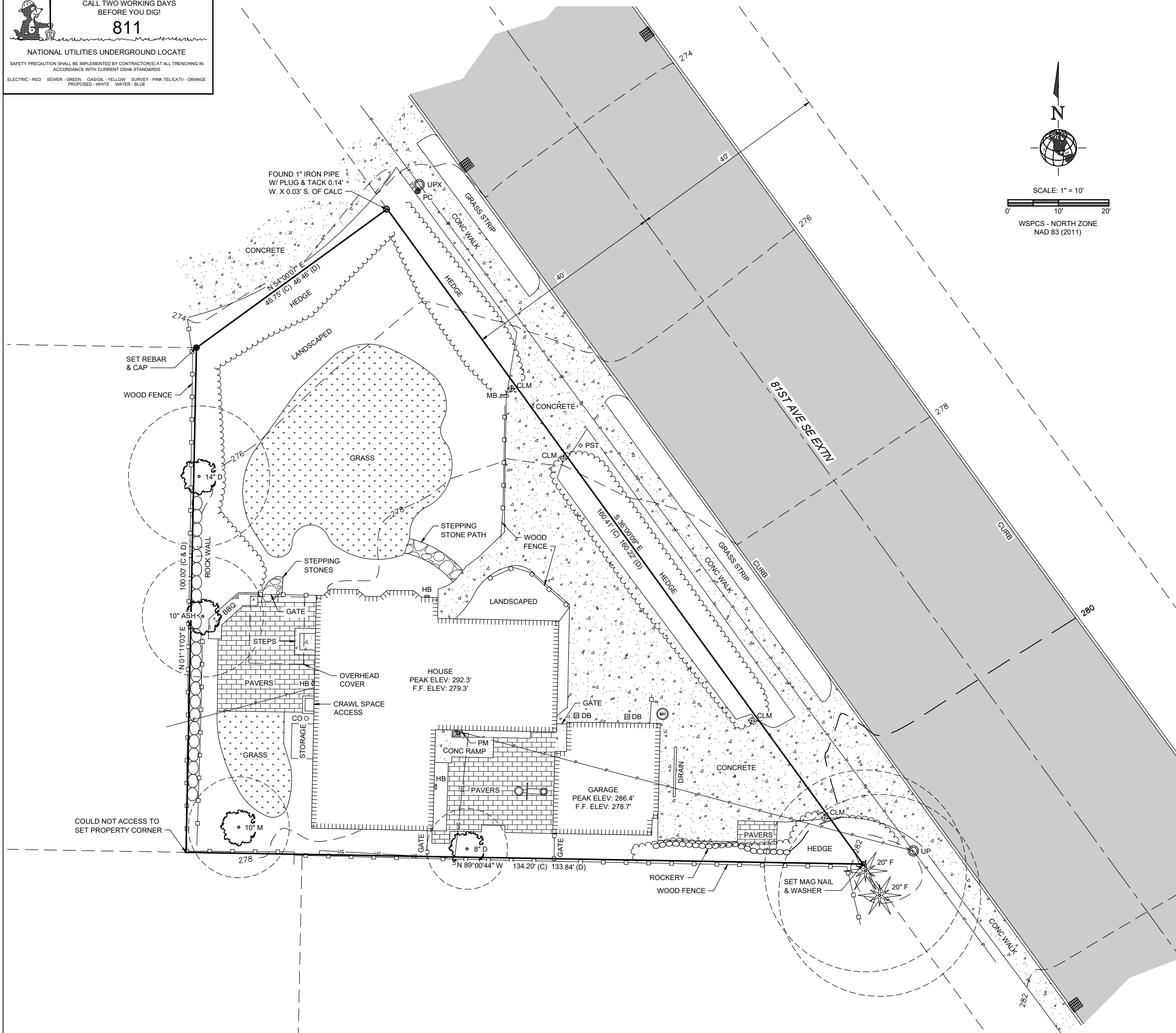
CALL TWO WORKING DAYS BEFORE YOU DIG!

811

NATIONAL UTILITIES UNDERGROUND LOCATE

SAFETY PRECAUTION SHALL BE IMPLEMENTED BY CONTRACTOR(S) AT ALL TRENCHING IN ACCORDANCE WITH CURRENT OSHA STANDARDS

ELECTRIC - RED SEWER - GREEN GAS/OIL - YELLOW SURVEY - PINK TEL/CATV - ORANGE PROPOSED - WHITE WATER - BLUE

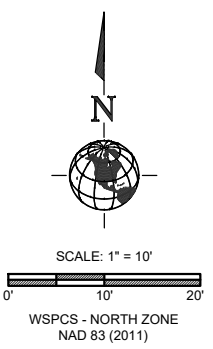


BASIS OF BEARING
WASHINGTON STATE PLANE COORDINATE SYSTEM - NORTH ZONE

BASIS OF ELEVATION
CONTINUOUSLY OPERATING REFERENCE STATIONS (CORS) SSHA, SMAI & CHCM

EQUIPMENT & PROCEDURES
TOTAL STATION: TOPCON GPT-3500 SERIES. METHOD: FIELD TRAVERSE.
GPS UNIT: IGS GNSS STATIC RECEIVER. METHOD: STATIC OBSERVATION.
ACCURACY MEETS OR EXCEEDS WAC 332-130-090.

SURVEY REFERENCES
(R1) PLAT OF LUCAS HILL, VOL. 54, PG. 51
(R2) PLAT OF LUCAS HILL DIVISION 2, VOL. 56, PG. 93
(R3) PLAT OF LUCAS HILL DIVISION 3, VOL. 57, PG. 9
(R4) RECORD OF SURVEY, RECORDING NO. 20100908900001
(R5) RECORD OF SURVEY, RECORDING NO. 8609229006



SITE INFORMATION
ASSESSORS PARCEL NO. 122404-9058
SITE OWNER: EWAN RANKIN
SITE ADDRESS: 3633 ISLAND CREST WAY, MERCER ISLAND, WA 98040
LOT AREA: 10,460± S.F. (CALCULATED) 9,583± S.F. (ASSESSOR)
ZONING: R-9.6
JURISDICTION: MERCER ISLAND

LEGAL DESCRIPTION
PER STATUTORY WARRANTY DEED, RECORDING NO. 20240731000769.

THAT PORTION OF THE SOUTH 7 ACRES OF THE NORTH 16 ACRES OF THE SOUTH THREE QUARTERS OF THE EAST HALF OF THE EAST HALF OF THE SOUTHEAST QUARTER OF SECTION 12, TOWNSHIP 24 NORTH, RANGE 4 EAST, W.M., IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE SOUTH LINE OF SAID 7 ACRE TRACT FROM WHICH THE SOUTHWEST CORNER THEREOF BEARS SOUTH 89°55'47\"/>

- NOTES**
1. THIS SURVEY WAS CONDUCTED WITHOUT BENEFIT OF A TITLE REPORT AND DOES NOT PURPORT TO SHOW EASEMENTS OF RECORD.
 2. THE BOUNDARY LINES DEPICTED HEREON REPRESENT DEED LINES AND DO NOT PURPORT TO REPRESENT OWNERSHIP LINES THAT MAY OTHERWISE BE DETERMINED BY LEGAL ACTION OR A COURT OF LAW.
 3. ALL ELEVATIONS SHOWN ARE ABOVE MEAN SEA LEVEL (AMSL) ELEVATIONS REFERENCED TO THE NAVD 88 DATUM.
 4. RECORD BEARINGS HAVE BEEN ROTATED TO HEREIN REFERENCED NAD 83 (2011) MERIDIAN.
 5. THE INFORMATION SHOWN HEREON REPRESENTS THE RESULTS OF A FIELD SURVEY MADE ON 08/28/24 & 08/29/24 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS AT THAT TIME.
 6. UTILITIES SHOWN HEREON ARE BASED UPON ABOVE GROUND OBSERVATIONS. ACTUAL LOCATION OF UNDERGROUND UTILITIES MAY VARY AND UTILITIES NOT SHOWN HEREON MAY EXIST ON THIS SITE.
 7. TREES SHOWN HEREON WERE SIZED & TYPED TO THE BEST OF OUR ABILITY. HOWEVER, WE ARE NOT CERTIFIED ARBORISTS. ANY TREES DEEMED TO BE CRITICAL SHOULD BE SIZED & TYPED BY A CERTIFIED ARBORIST.

LINETYPE LEGEND

- — — — — OVERHEAD UTILITY LINES
- — — — — WOOD FENCE
- ~~~~~ HEDGE LINE

HATCH LEGEND

- [Hatched pattern] ASPHALT
- [Dotted pattern] CONCRETE
- [Stippled pattern] GRAVEL
- [Brick pattern] PAVERS
- [Circular pattern] STEPPING STONES
- [Wavy line] HEDGE

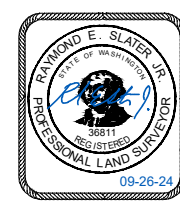
ABBREVIATION LEGEND

- (C) CALCULATED
- (D) PER DEED
- UP UTILITY POLE
- UPX UTILITY POLE W/ TRANSFORMER
- PC POWER CONDUIT
- PM POWER METER
- DB AREA DRAIN
- HB HOSE BIB
- CLM CONCRETE COLUMN
- PST ADDRESS POST
- MB MAIL BOX
- F FIR TREE
- M MAPLE TREE
- D DECIDUOUS TREE

SYMBOLS LEGEND

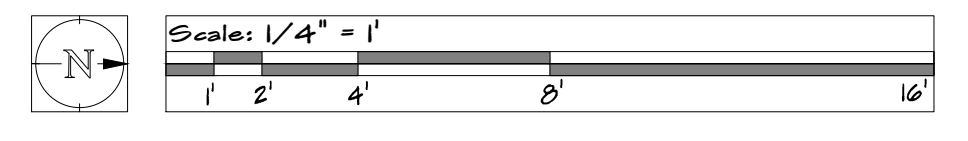
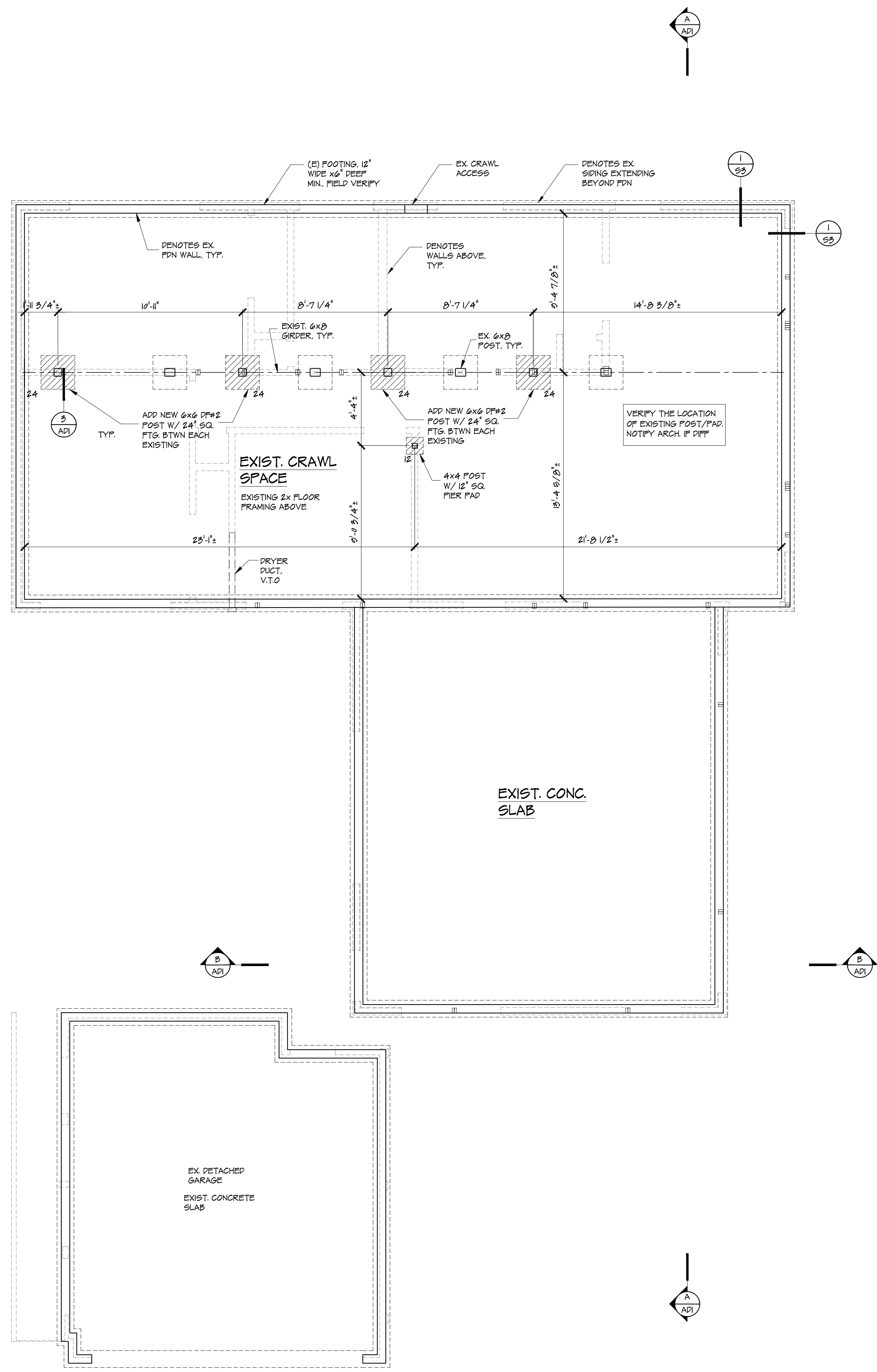
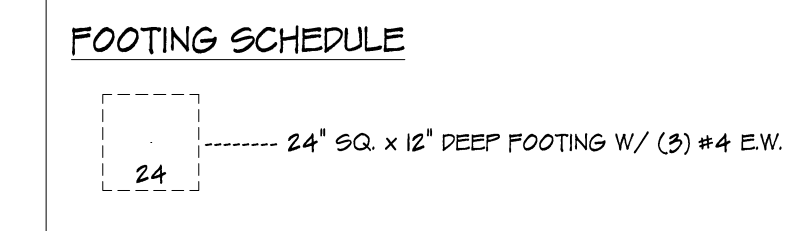
- [Circle with dot] UTILITY POLE
- [Circle with cross] POWER METER
- [Circle with horizontal line] POWER CONDUIT
- [Circle with vertical line] GAS METER
- [Circle with 'X'] UTILITY COVER
- [Circle with dot and line] HOSE BIB
- [Square with cross] CONCRETE COLUMN
- [Circle with dot] CLEAN OUT
- [Square with cross] CATCH BASIN
- [Square with cross] AREA DRAIN
- [Square with dot] MAIL BOX
- [Square with dot] ADDRESS POST
- [Circle with dot] SET REBAR & CAP
- [Circle with cross] SET MAG NAIL & WASHER
- [Circle with cross] BASKETBALL HOOP
- [Star symbol] CONIFER TREE
- [Circle with dot] DECIDUOUS TREE

PORTION OF THE SE1/4 OF THE SE1/4 OF SECTION 12, T. 24 N., R 4 E., W.M., KING COUNTY, WASHINGTON



DATE: 09-24-24	REVISED: 09-26-24	JOB NO.: RAN-080124
SCALE: 1" = 10'	DRAWN BY: JRS	SHEET: 1 OF 1

- NOTES:**
- ANCHOR BOLTS, HOLDINGS & PLATE WASHERS PER ENGINEER OF RECORD. SEE S-SHEETS.
 - ALL WOOD IN DIRECT CONTACT WITH THE GROUND OR CONCRETE TO BE AN APPROVED PRESSURE-PRESERVATIVE TREATED WOOD.



REGISTERED ARCHITECT
Neil Jorgensen, Architect
 11702 88th Ave NE, #105, Kirkland, WA 98034
 www.jaarchitects.com • 425.242.0369 •

JA ARCHITECTS

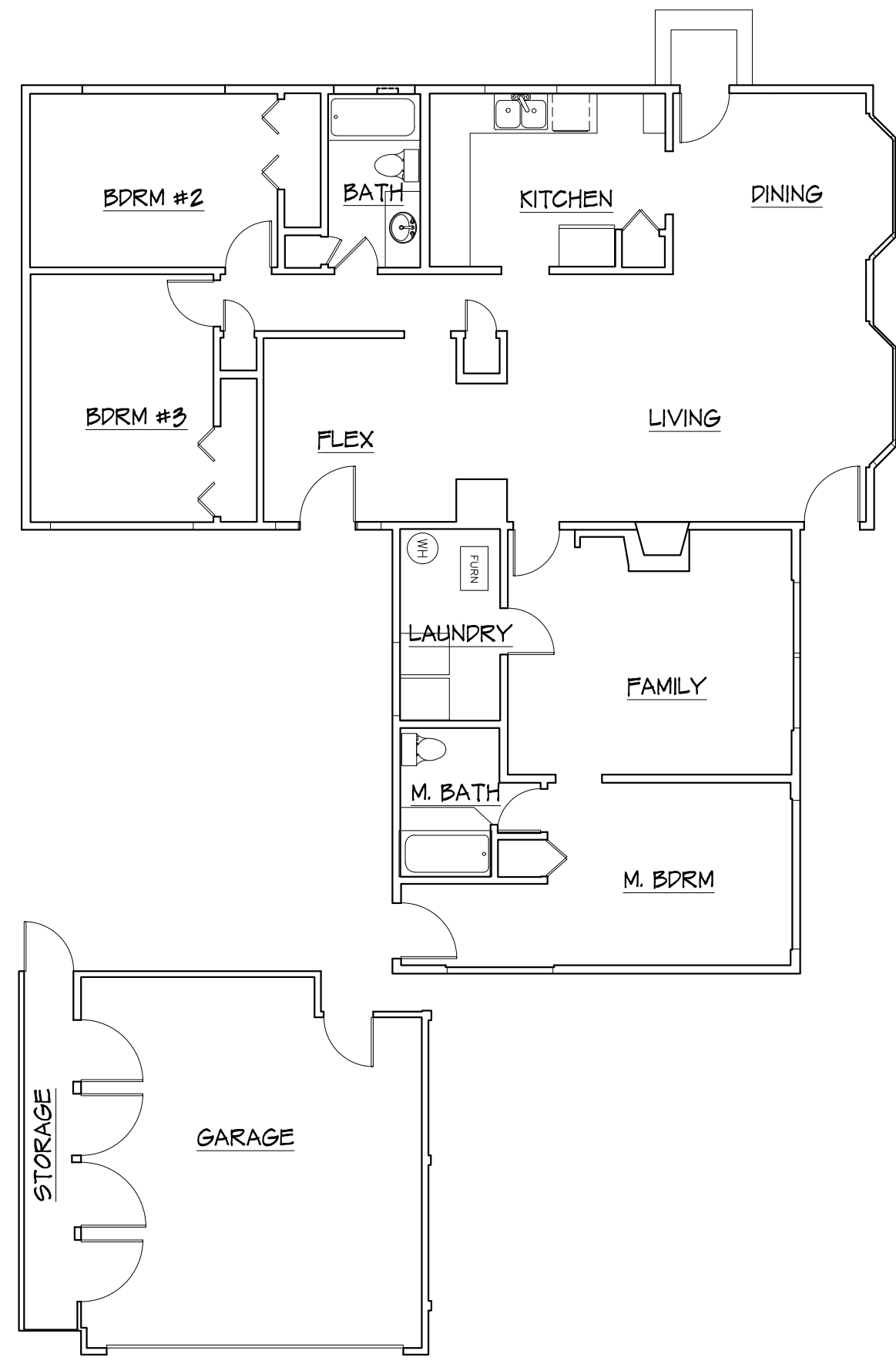
PROPOSED ADDITION FOR:
RANKIN RESIDENCE
 3633 ISLAND CREST WAY
 MERCER ISLAND WA 98040

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

JOB #
24-033

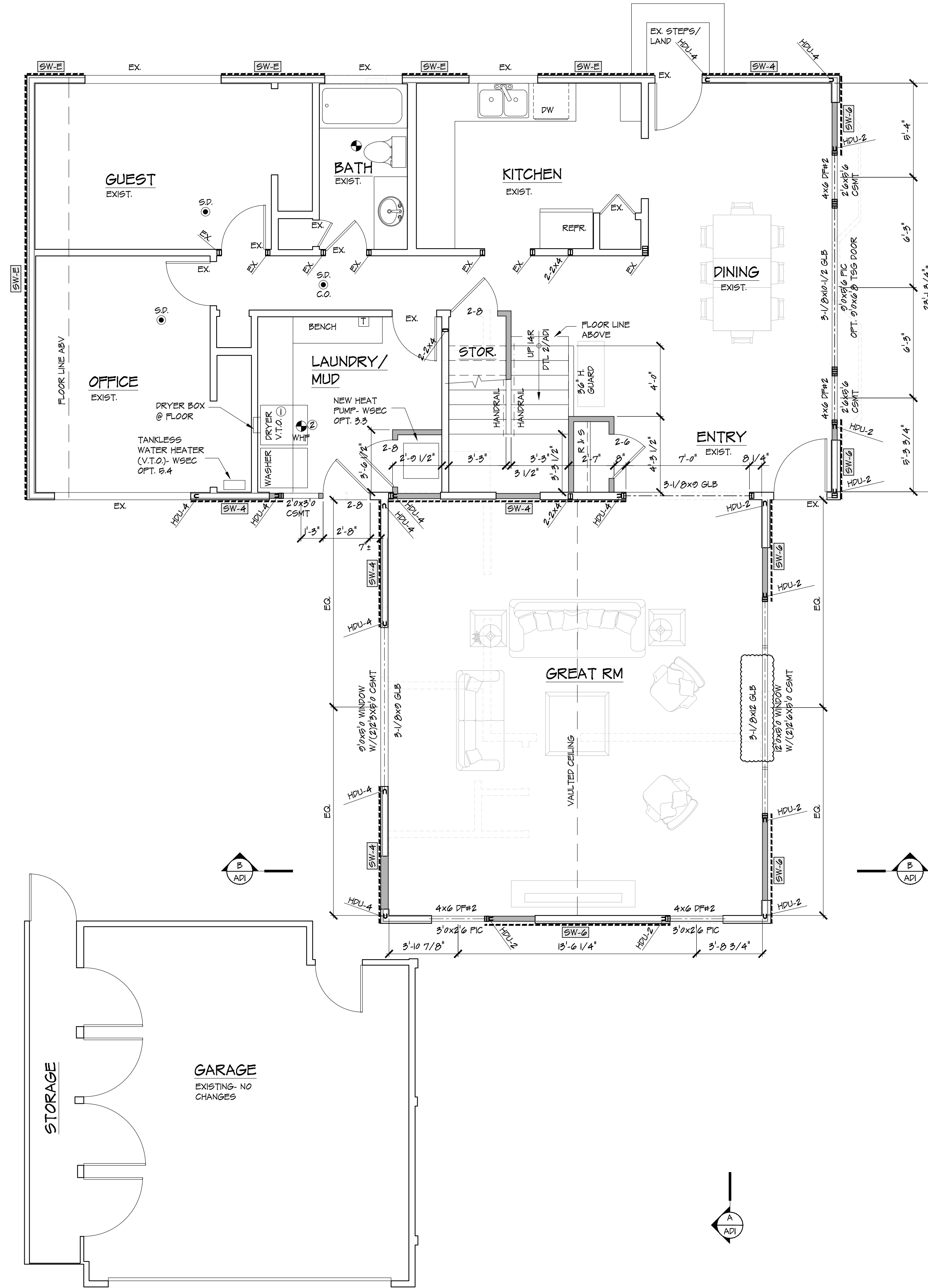
DATE:
 12-20-24
 REV: 03-03-25

SHEET #
1



EXISTING MAIN FLOOR PLAN

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



NOTE: VERIFY ALL DIMENSIONS IN FIELD. ASULT DRAWINGS PROVIDED BY SCANNING SERVICE WHICH ARE VERY PRECISE AND INCLUDE THE TOTAL WALL THICKNESS. AS WITH ALL OLDER CONSTRUCTION, SOME WALLS ARE NOT STRAIGHT AND REFLECTED AS SUCH ON THIS PLAN. JS ARCHITECTS HAS MADE EVERY EFFORT TO ALIGN WALLS IN PLAN BUT THE CONTRACTOR WILL NEED TO VERIFY/ALIGN IN THE FIELD.

- LEGEND**
- S.D. --- DENOTES 12V. SMOKE DETECTOR W/ BATTERY BACK-UP & INTERCONNECTED ALARMS - VERIFY EXISTING LOCATION OR INSTALL
 - C.O. --- DENOTES 12V. SMOKE DETECTOR CARBON MONOXIDE DETECTOR W/ BATTERY BACK-UP & INTERCONNECTED ALARMS - VERIFY EXISTING LOCATION OR INSTALL
 - 80 CPM MIN. BATH FAN
 - TSG --- SAFETY GLAZING
 - WHF --- WHOLE HOUSE FAN- 1/6 CPM MIN. - SEE COVER SHEET
 - WHF --- WHOLE HOUSE FAN INTERMITTENT TIMER- SEE COVER SHEET FOR FRACTIONAL ON TIME
 - EXISTING CONSTRUCTION
 - NEW CONSTRUCTION
 - EXISTING REMOVED

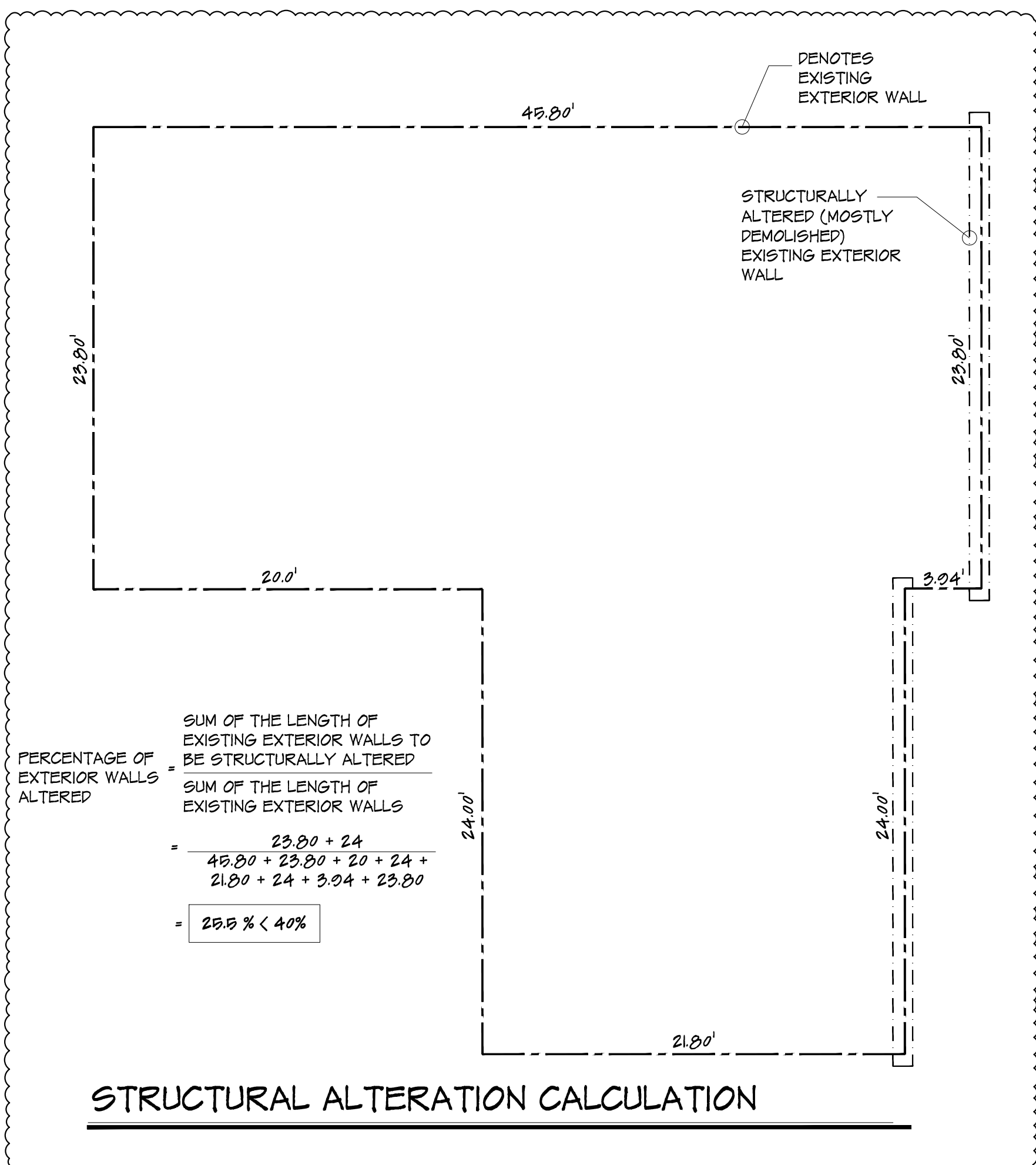
- GENERAL NOTES:**
1. DOORS TO BE 6'-8" HIGH UNO.
 2. NEW WINDOWS TO HAVE U-VALUE = 0.22 MIN. SEE WSEC OPT. #11
 3. ALL EXISTING WALL CAVITY EXPOSED DURING CONSTRUCTION TO BE FILLED WITH INSULATION MIN. R-10 AT 2-4 WALLS AND R-21 AT 2-6 WALLS.
 4. FILL CAVITY AT 4x EXTERIOR HEADERS W/ R-10 RIGID INSULATION.
 5. VERIFY/INSTALL MIN. BATTERY OPERATED S.D. IN EA. BDRM. & C.O./S.D. OUTSIDE EACH SLEEPING AREA & ON EA. FLOOR.

- ARCHITECTURAL NOTES:**
1. EQUIVALENT LENGTH OF DRYER DUCT TO BE POSTED ON A PERMANENT LABEL OR TAG WITHIN 6' DRYER
 2. AFFIX LABEL NEAR CONTINUOUSLY OPERATED WHOLE HOUSE FAN CONTROL THAT READS "WHOLE HOUSE VENTILATION CONTROL- SEE OPERATING INSTRUCTIONS". SEE SHEET C FOR VENTILATION SYSTEM AND CONTROLS.

- ENGINEERING NOTES:**
1. [SW-X] DENOTES SHEARWALL TYP. SEE S-SHEETS FOR SCHEDULE, DETAILS & NOTES
 2. ALL EXTERIOR WALLS SHALL BE FRAMED AS SHEARWALL TYPE 6, UNLESS NOTED OTHERWISE.
 3. VERIFY / UPGRADE EXISTING WALLS AS REQUIRED FOR SHEAR WALL SCHEDULE
 4. FLOOR SHEATHING SHALL BE 3/4" TIG OSB OR PLYWOOD. NAIL PANEL EDGES W/ 10d @ 6" OC. & PANEL FIELD W/ 10d @ 12" OC. UNLESS NOTED OTHERWISE.

2021 WASHINGTON STATE ENERGY CODE:
 - ENERGY CREDITS (DEBITS) REQUIRED: SEE ATTACHED FORMS AND BELOW:
 * SMALL DWELLING UNIT: DWELLING UNITS WITH SF < 1,000 SF = 5.0 CREDITS REQUIRED

- HEATING CREDIT OPTIONS**
- * OPTION 4 = 3.0 CREDITS: HEAT PUMP
- ENERGY CREDIT OPTIONS (AS PER TABLE 402.5)**
- * OPTION #11 = 0.5 CREDIT: PRESCRIPTIVE COMPLIANCE IS BASED ON TABLE R402.1.3 WITH THE FOLLOWING MODIFICATIONS: VERTICAL PENETRATION U = 0.22
 - * OPTION #3.3 = 0.5 CREDIT: HIGH EFFICIENCY HVAC - AIR SOURCE, CENTRALLY DUCTED HEAT PUMP WITH MINIMUM HSPFF 2 OF 01 (HSPFF OF 0.8)
 - * OPTION #9.4 = 1.0 CREDIT: HIGH EFFICIENCY WATER HEATER- ENERGY STAR RATED GAS OR PROPANE WATER HEATER WITH A MINIMUM UEF OF 0.91

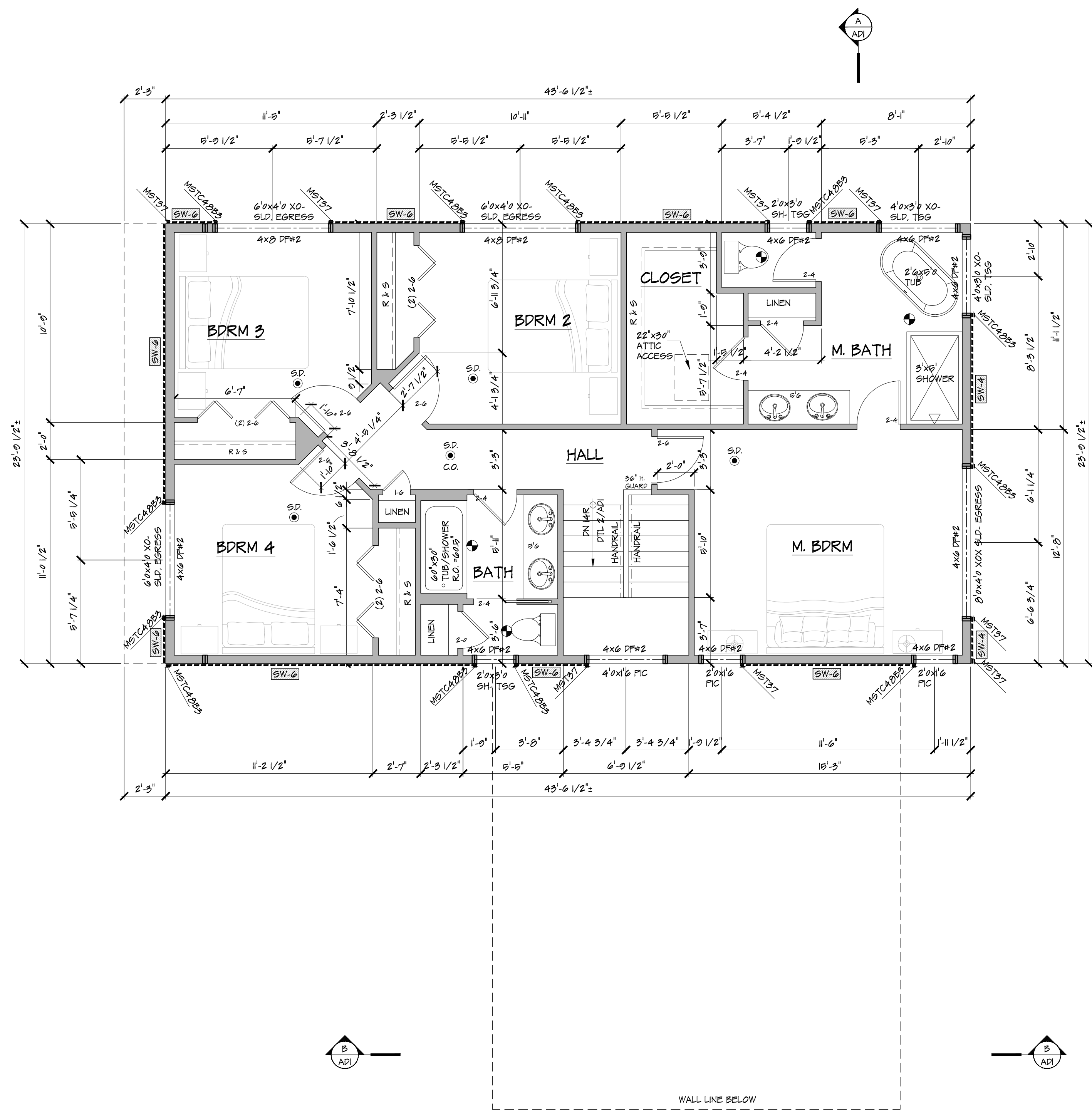


STRUCTURAL ALTERATION CALCULATION

AREA CALCULATION

LEVEL/ROOM	EXIST.	NEW	TOTAL
MAIN FLOOR (S.F.)	1613	0	1613
UPPER FLOOR (S.F.)	0	076	076
TOTAL (SQ.FT.):	1613	076	2089
GARAGE:	442	0	442

Scale: 1/4" = 1'



- LEGEND**
- SD DENOTES 10V. SMOKE DETECTOR W/ BATTERY BACK-UP & INTERCONNECTED ALARMS
 - CO DENOTES 10V. SMOKE DETECTOR CARBON MONOXIDE DETECTOR W/ BATTERY BACK-UP & INTERCONNECTED ALARMS
 - 80 CFM MIN. BATH FAN
 - TSG SAFETY GLAZING
 - NEW CONSTRUCTION

- GENERAL NOTES:**
1. DOORS TO BE 6'-0" HIGH UNLQ.
 2. NEW WINDOWS TO HAVE U-VALUE = 0.22 MIN. SEE WSEC OPT. #11
 3. FILL CAVITY AT 4" EXTERIOR HEADERS W/ R-10 RIGID INSULATION.

- ENGINEERING NOTES:**
1. [SW-x] DENOTES SHEARWALL TYP. SEE S-SHEETS FOR SCHEDULE, DETAILS & NOTES
 2. ALL EXTERIOR WALLS SHALL BE FRAMED AS SHEARWALL TYPE 6, UNLESS NOTED OTHERWISE
 3. VERIFY / UPGRADE EXISTING WALLS AS REQUIRED FOR SHEAR WALL SCHEDULE
 4. FLOOR SHEATHING SHALL BE 3/4" T&G OSB OR PLYWOOD. NAIL PANEL EDGES W/ 10# @ 6" O.C. & PANEL FIELD W/ 10# @ 12" O.C. UNLESS NOTED OTHERWISE.

REGISTERED ARCHITECT
Neil Jorgensen
 11702 88th Ave NE #105, Kirkland, WA 98034
 www.jaarchitects.com • 425.242.0369

PROPOSED ADDITION FOR:
RANKIN RESIDENCE
 3633 ISLAND CREST WAY
 MERCER ISLAND WA 98040

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

AREA CALCULATION

LEVEL/ROOM	EXIST.	NEW	TOTAL
MAIN FLOOR (SQ. FT.)	1613	0	1613
UPPER FLOOR (SQ. FT.)	0	976	976
TOTAL (SQ. FT.)	1613	976	2589
GARAGE:	442	0	442

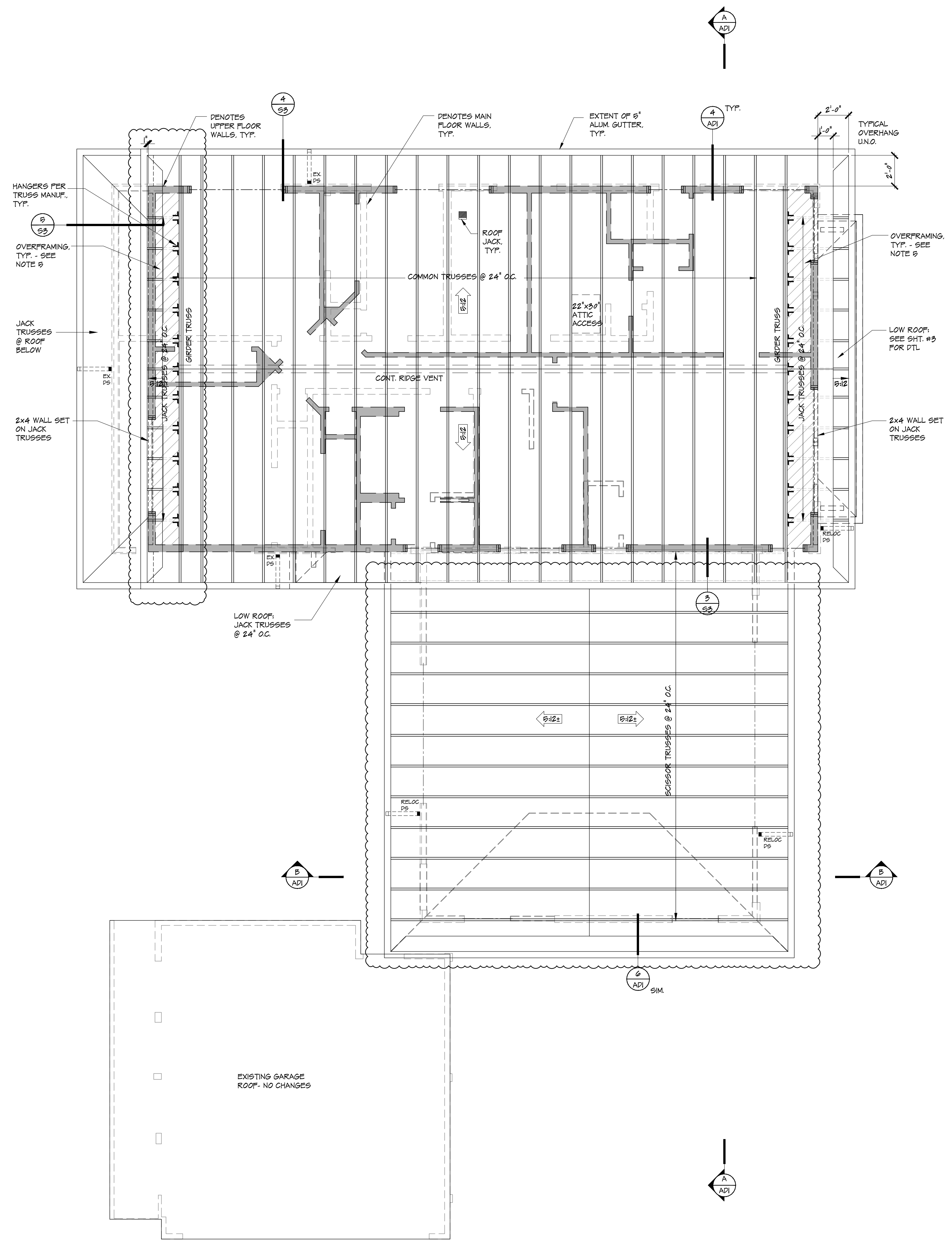


JOB #
24-033

DATE:
 12-20-24

REV: 03-03-25

SHEET #
4

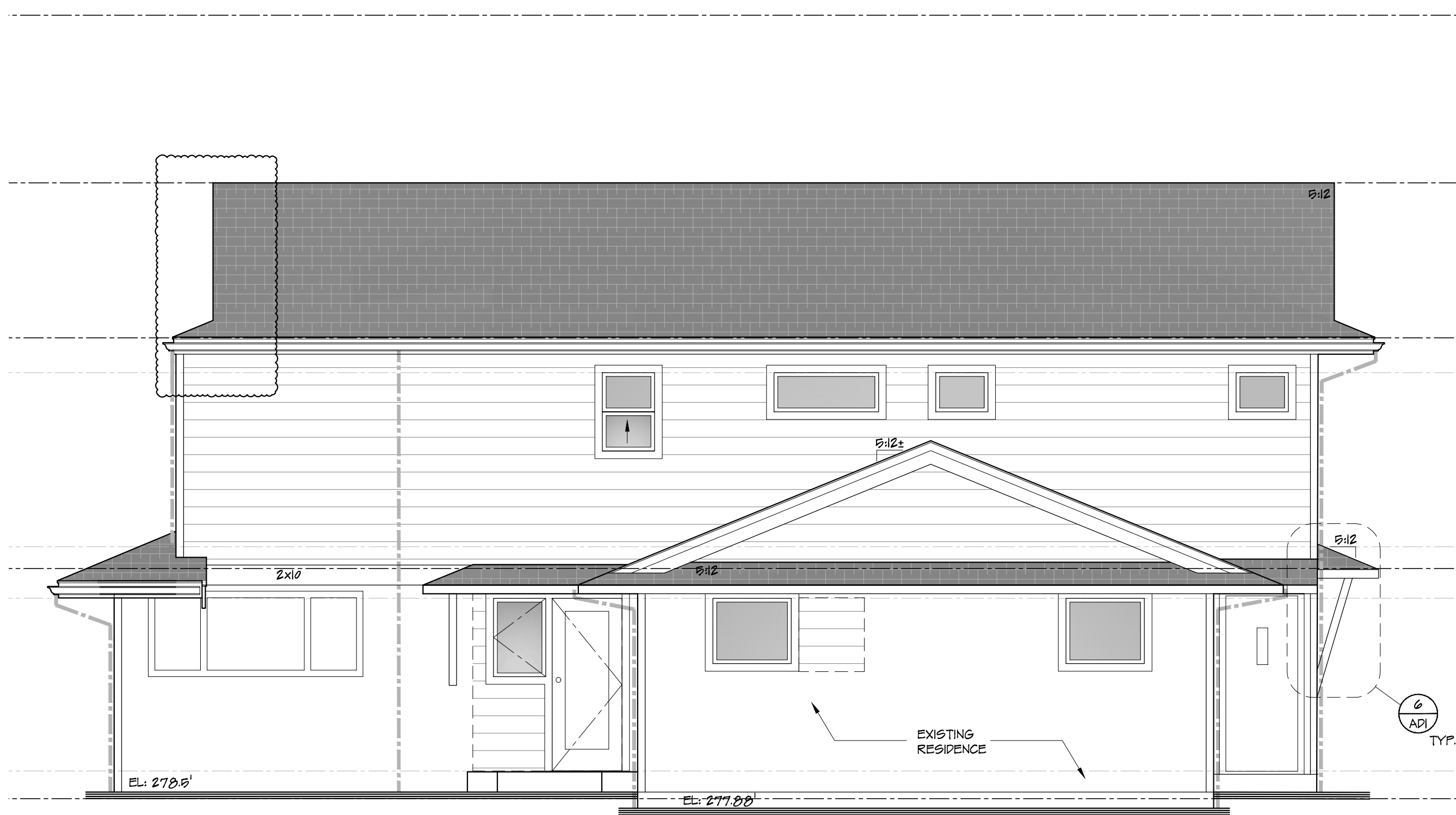


UPPER ROOF VENTILATION	
ROOF AREA:	1414
VENTILATION REQUIRED (AREAx144/300)	679
VENTILATION PROVIDED:	
VENT BLOCKS (TOTAL BLOCKS):	44
LOWER TOTAL (X71 S1 PER BLOCK):	312
LOW ROOF JACKS: (1) @ 49 S1 EA:	49
*TOTAL LOWER PROVIDED:	3614
% AT LOWER (80 MIN. 60 MAX.):	0.53
% REQ'D AT UPPER (40 MIN. 80 MAX.):	0.47
UPPER AREA REQUIRED (UPPER %xTOTAL AREA):	317
CONT. RIDGE VENT (10 S1 / FT. x 42FT)	427
*UPPER TOTAL PROVIDED:	427
*TOTAL VENT PROVIDED (LOWER+UPPER):	781

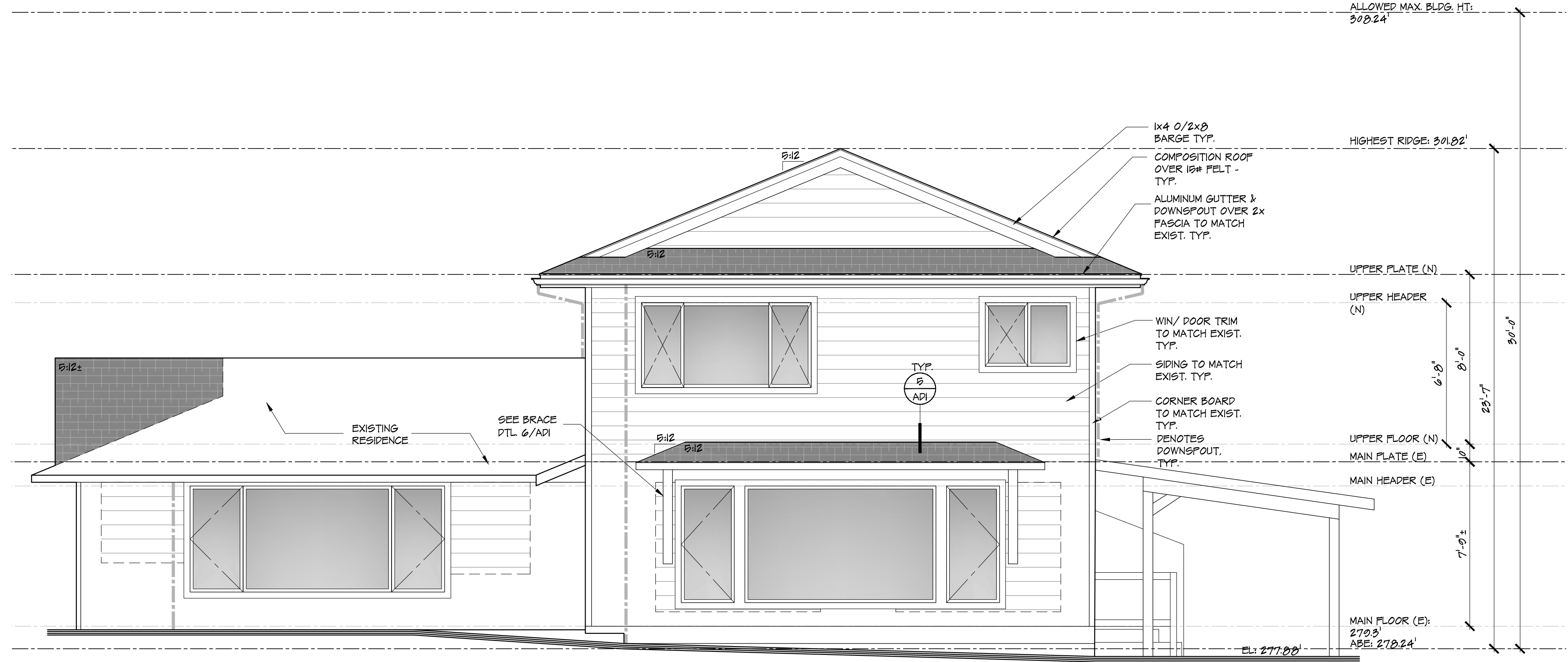
LOWER ROOF VENTILATION	
ROOF AREA:	925
VENTILATION REQUIRED (AREAx144/300)	281
VENTILATION PROVIDED:	
VENT BLOCKS (TOTAL BLOCKS):	18
LOWER TOTAL (X71 S1 PER BLOCK):	129
LOW ROOF JACKS: (2) @ 49 S1 EA:	98
*TOTAL LOWER PROVIDED:	127.8
% AT LOWER (80 MIN. 60 MAX.):	0.51
% REQ'D AT UPPER (40 MIN. 80 MAX.):	0.49
UPPER AREA REQUIRED (UPPER %xTOTAL AREA):	123
CONT. RIDGE VENT (10 S1 / FT. x 18FT)	180
*UPPER TOTAL PROVIDED:	180
*TOTAL VENT PROVIDED (LOWER+UPPER):	308

- NOTES:**
- VENT BLOCKS TO HAVE (3) 2" DIAMETER SCREENED HOLES LOCATION NOTED PER PLAN. NOTE: VENTED EAVES AND SHARLE END VENTS ARE NOT PERMITTED WHEN BUILDING IS LOCATED 5' FROM A PROPERTY LINE.
 - PROVIDE SOLID BEARING UNDER ALL GIRDER TRUSSES OF MULTIPLE STUDS TO MATCH TRUSS WIDTH, UNO.
 - ALL TRUSS BOTTOM CHORDS TO BE DESIGNED AS ATTICS WITHOUT STORAGE (NO PSF LL). TRUSSES SHALL BE DESIGNED WITH A BOTTOM CHORD OPENING LESS THAN 42"x24" WHERE (2) OR MORE TRUSSES HAVE THE SAME WEB CONFIGURATION.
 - ROOF TRUSSES & DESIGN TO CONFORM TO IRC R802.1(1).
 - ROOF OVERFRAMING: 2X4 RAFTERS @ 24" OC. W/ 2X4 POST SUPPORT @ 48" OC. STAGGERED. BRACE POSTS OVER 6'-0" (IN 2X PLAT DIRECTION).
 - TRUSS DESIGNS AND DETAILS SHALL BE PREPARED & STAMPED BY AN ENGINEER REGISTERED IN WASHINGTON STATE AND SHALL BE PROVIDED TO THE BUILDING OFFICIAL FOR APPROVAL PRIOR TO INSTALLATION. TRUSS DRAWINGS SHALL REMAIN ON THE JOB SITE.
 - DROPPED BEAMS & HEADERS ARE SPECIFIED ON THE FLOOR BELOW. FLUSH BEAMS ARE SPECIFIED ON FRAMING PLANS.
 - ROOF SHEATHING SHALL BE 1/2" T&G OSB OR PLYWOOD. NAIL PANEL EDGES W/10d @ 6" OC. & PANEL FIELD W/10d @ 12" OC. UNLESS NOTED OTHERWISE.

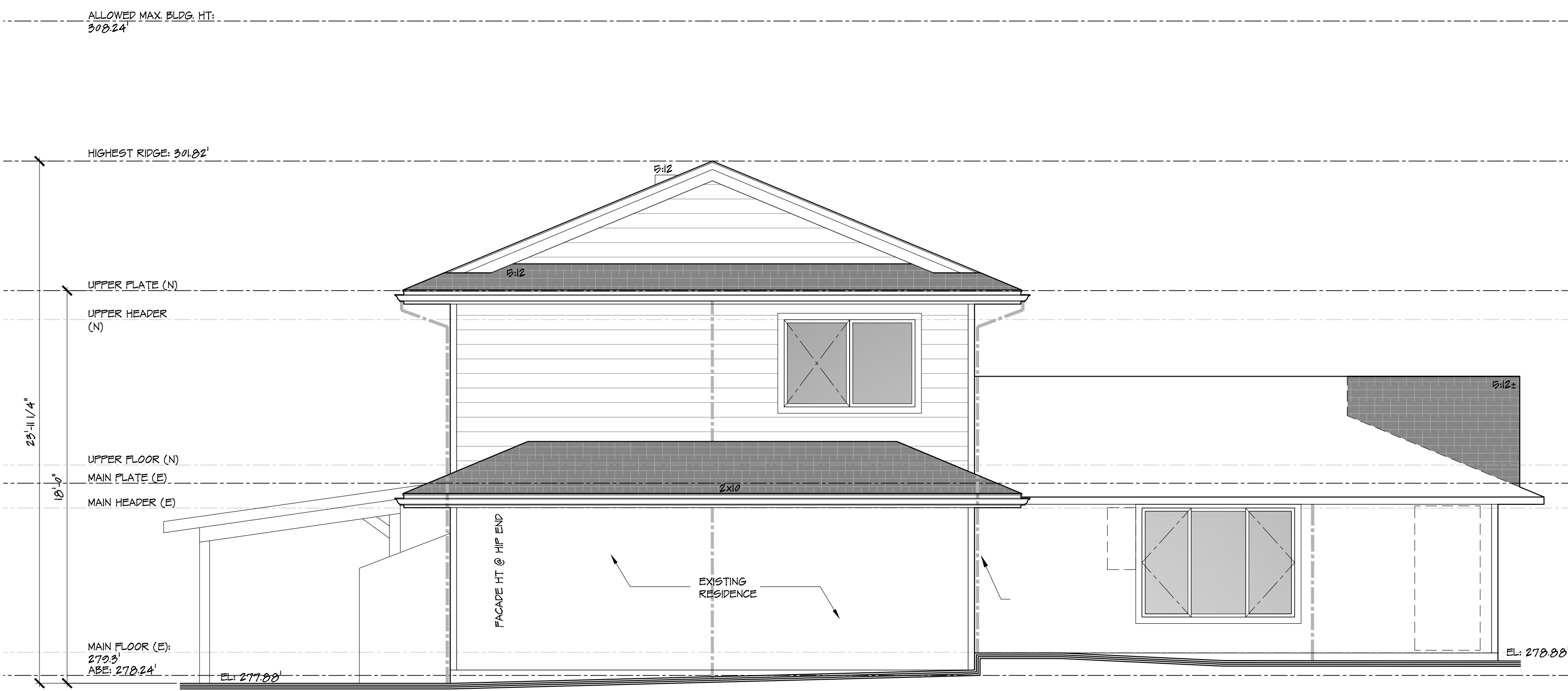




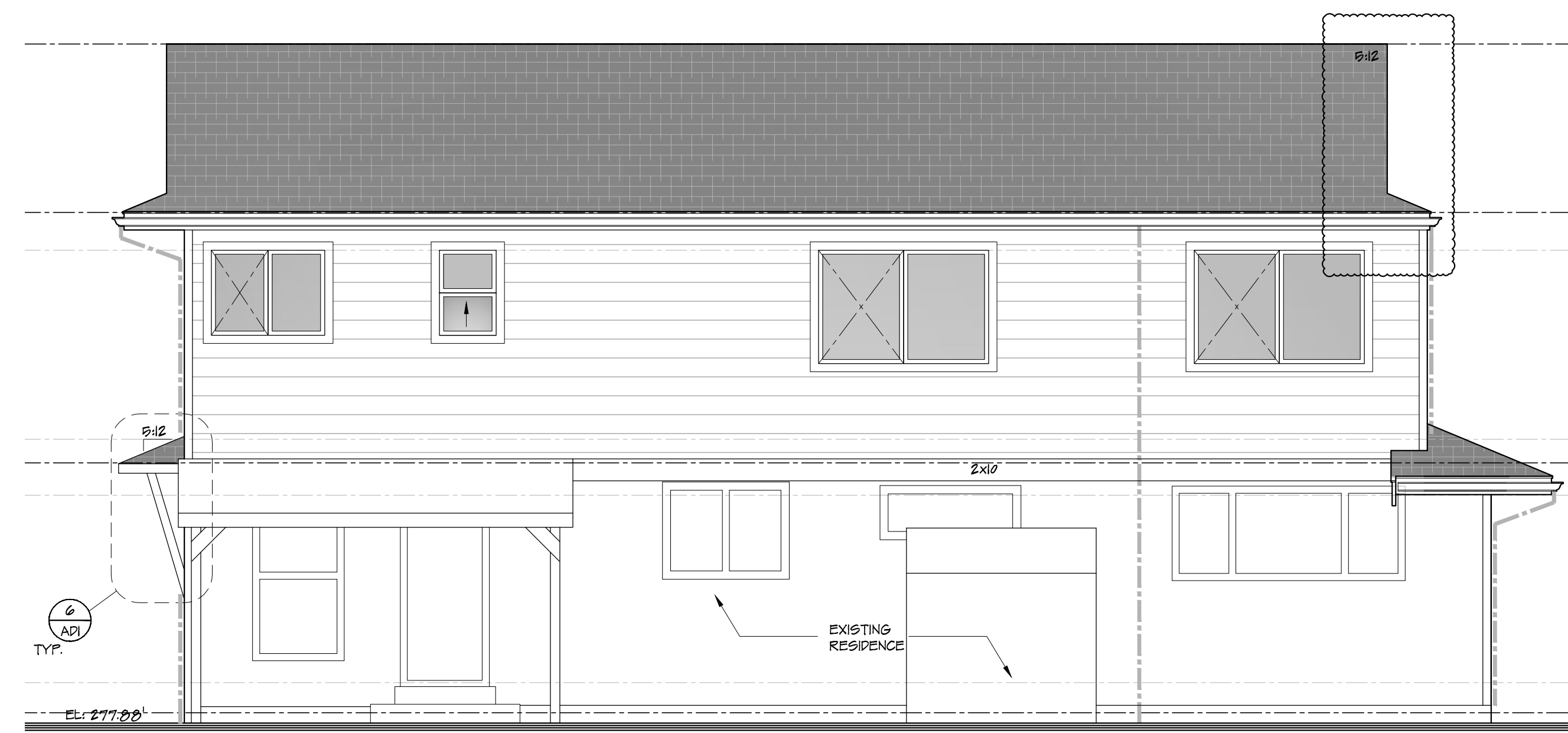
EAST ELEVATION



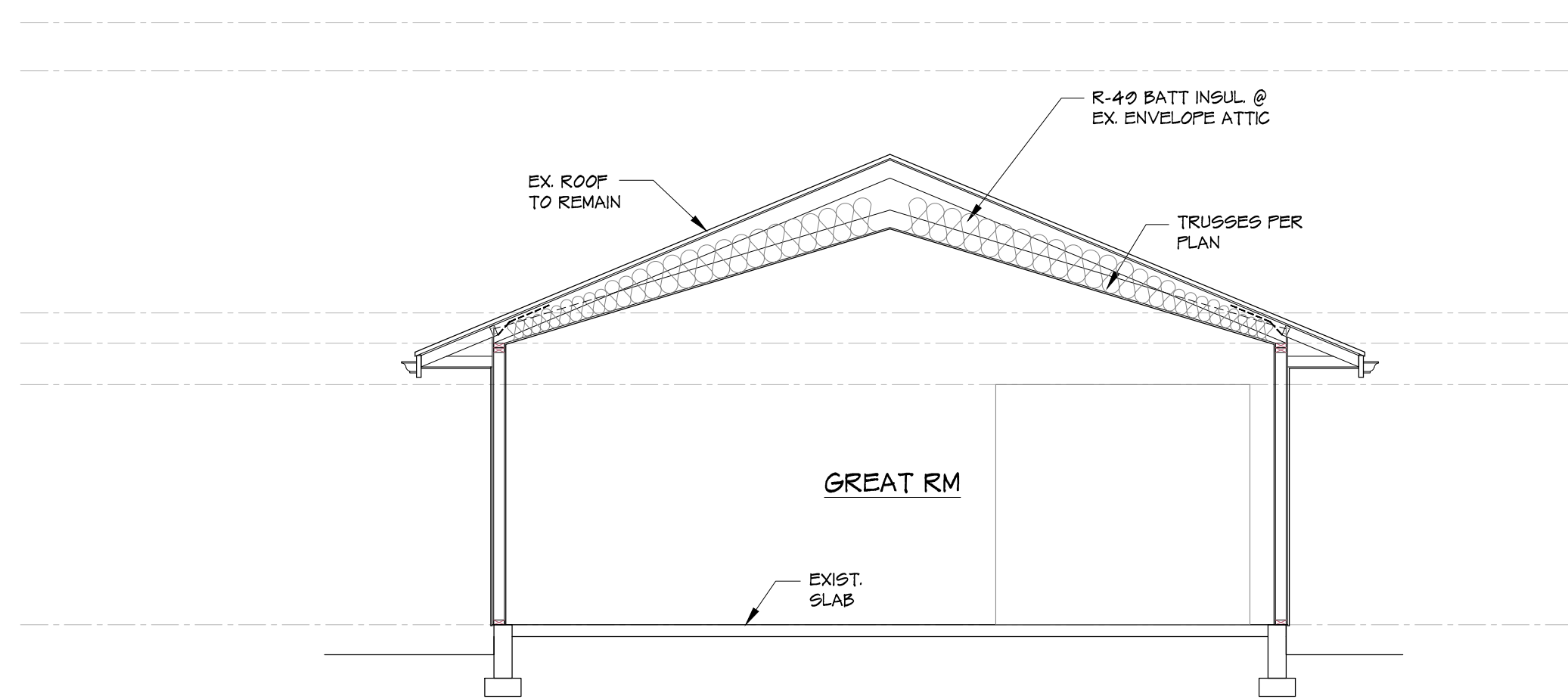
NORTH ELEVATION



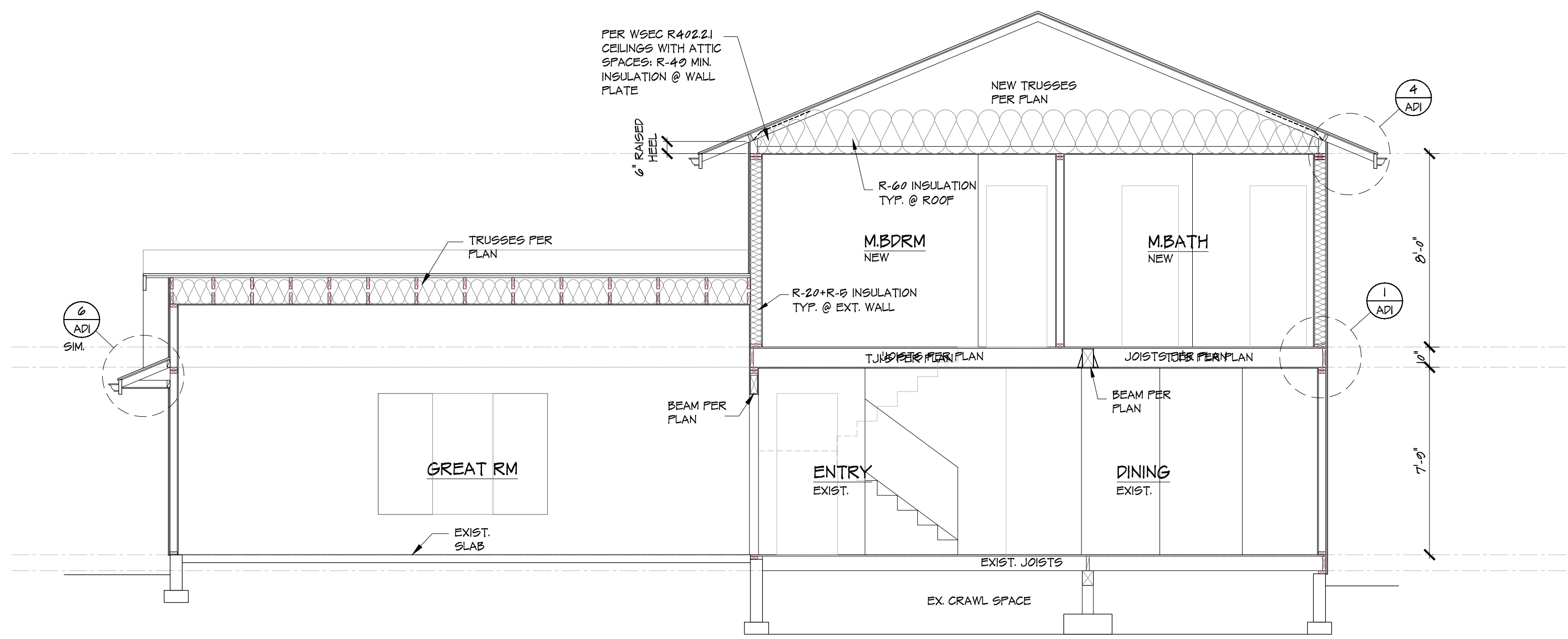
SOUTH ELEVATION



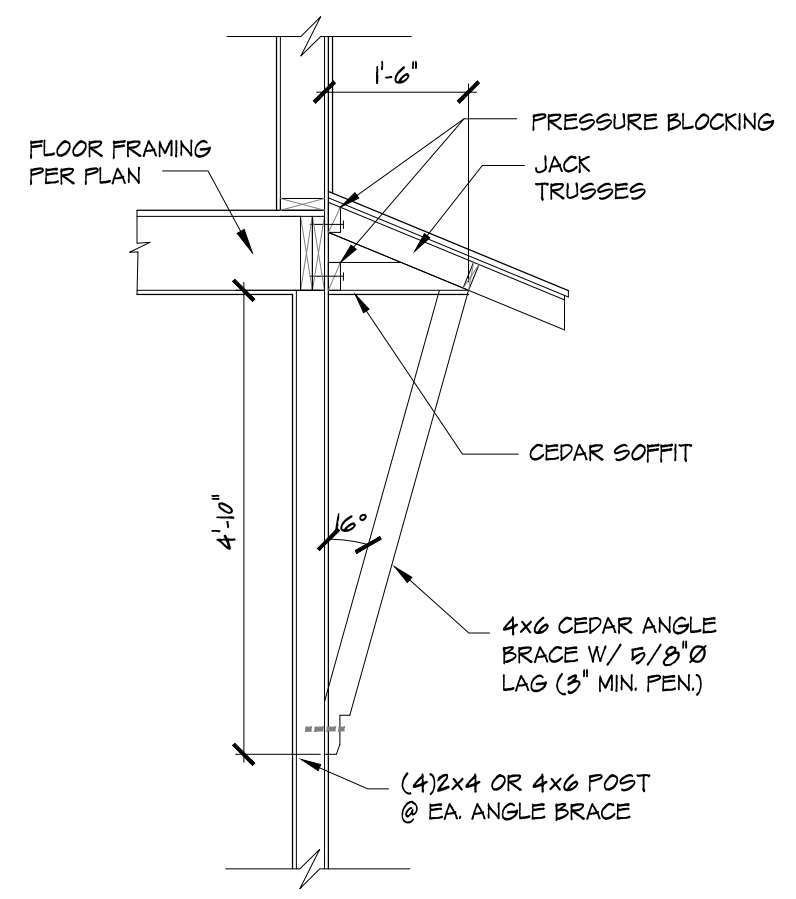
WEST ELEVATION



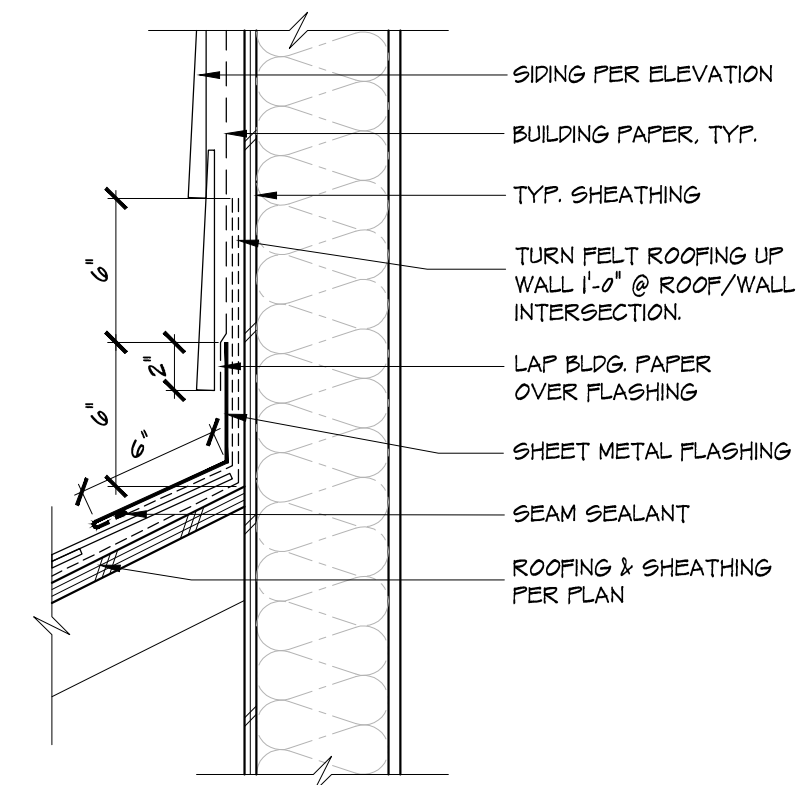
SECTION 'B'
SCALE: 1/4" = 1'-0"



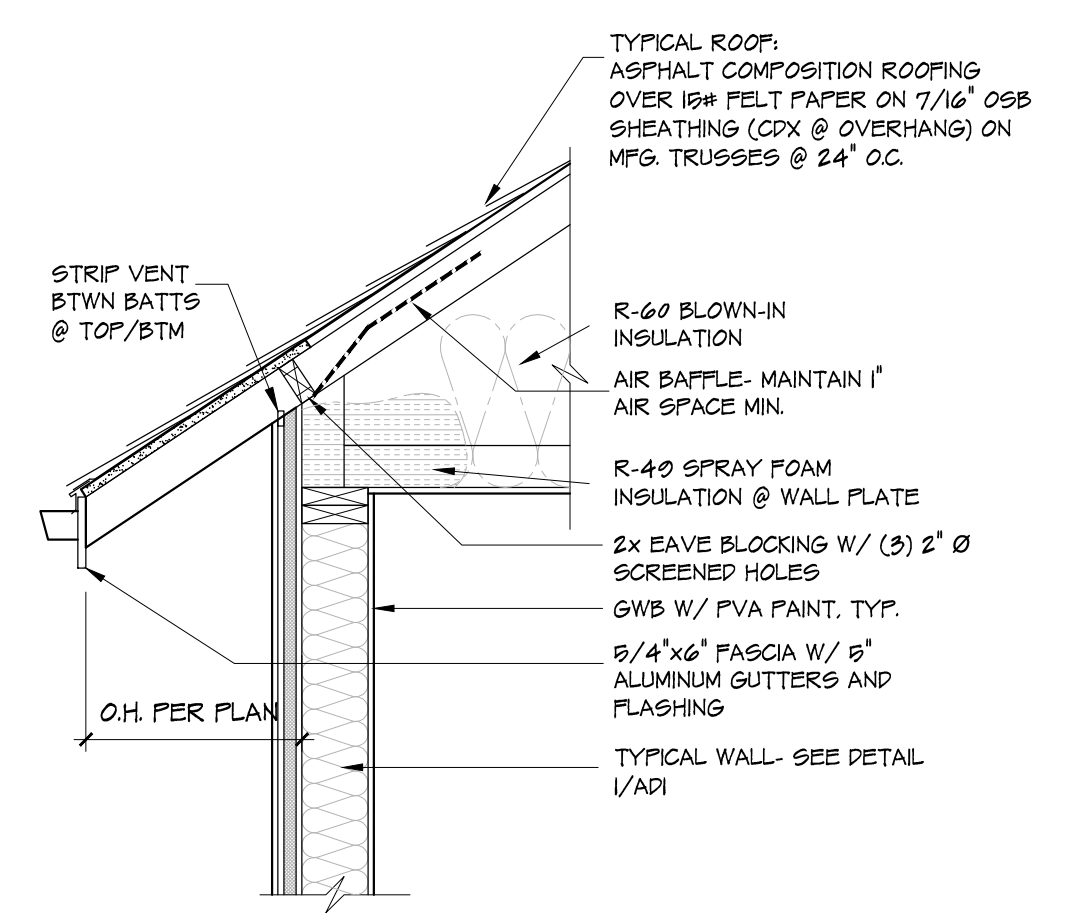
SECTION 'A'
SCALE: 1/4" = 1'-0"



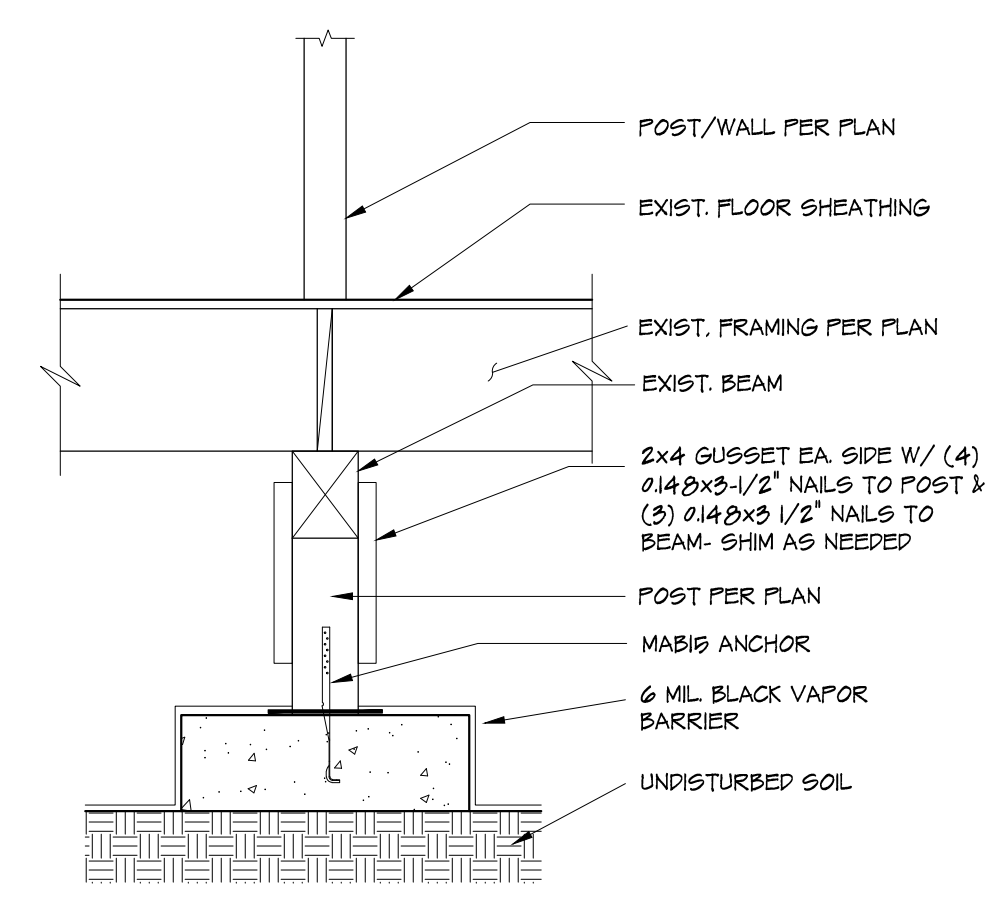
6 BRACE DETAIL
SCALE: 1/2" = 1'-0"



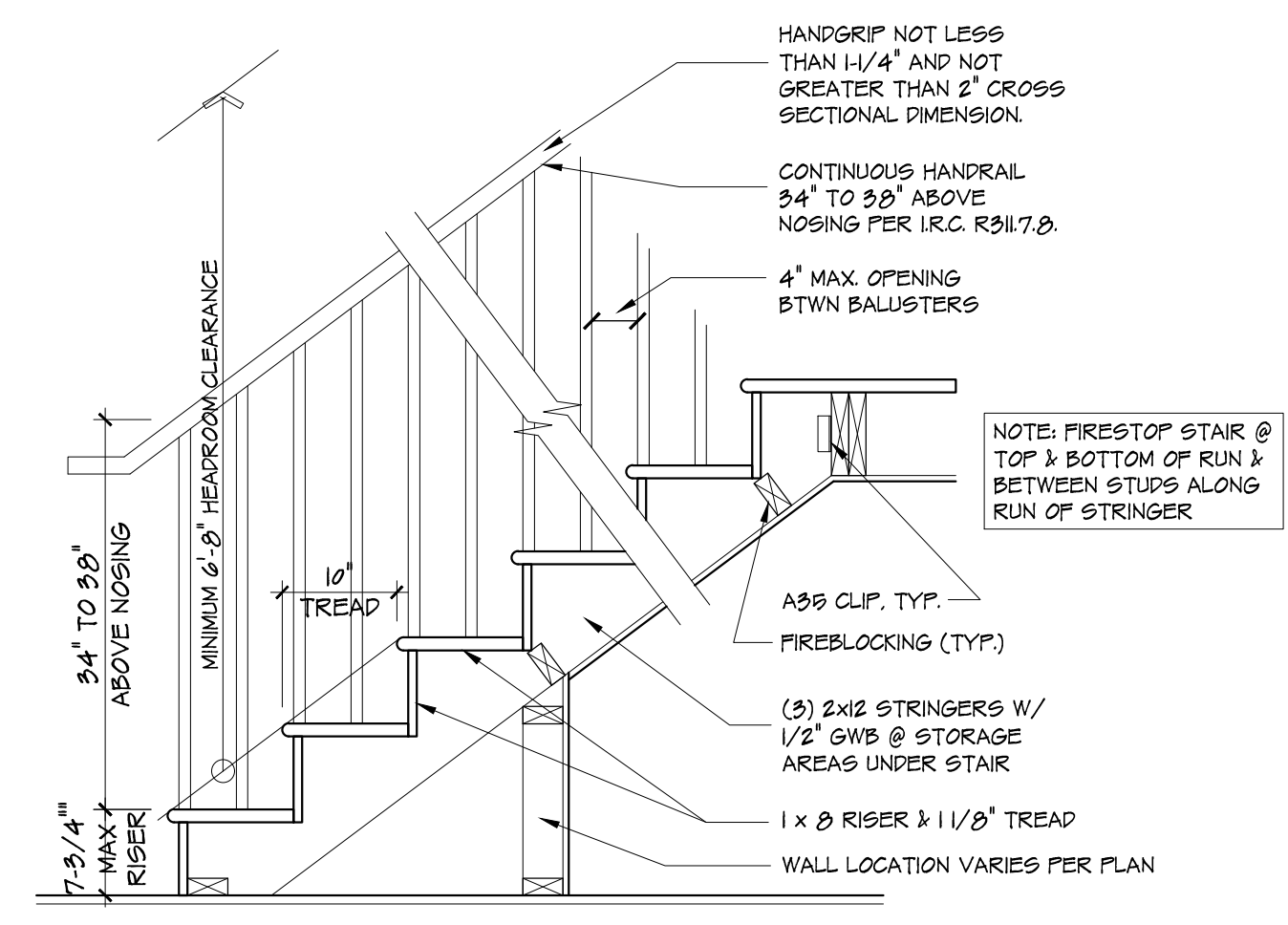
5 TYPICAL WALL-ROOF FLASHING
SCALE: 1/2" = 1'-0"



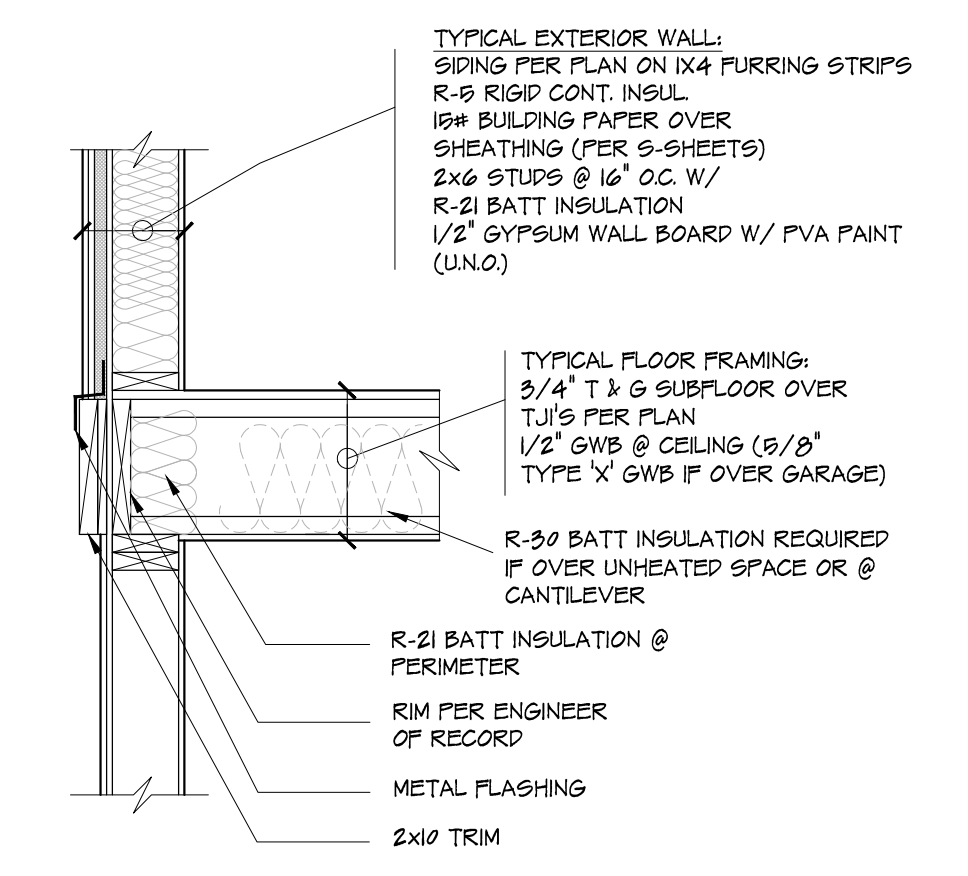
4 TYPICAL ROOF- VENTED EAVE
SCALE: 3/4" = 1'-0"



3 TYPICAL ISOLATED FOOTING @ EXIST.
SCALE: 3/4" = 1'-0"



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



1 TYPICAL WALL @ FLOOR FRAMING
SCALE: 3/4" = 1'-0"

GENERAL STRUCTURAL NOTES

BUILDING CODE
2021 INTERNATIONAL BUILDING CODE

DESIGN METHOD
ALLOWABLE STRESS DESIGN (ASD)

FLOOR LOADS
DEAD LOAD: **15 psf**
LIVE LOAD: **40 psf**

ROOF LOADS
DEAD LOAD: **15 psf**
LIVE LOAD (SNOW): **25 psf**

WIND DESIGN DATA
1. BASIC WIND SPEED: **110 MPH**
2. RISK CATEGORY: **II**
3. WIND EXPOSURE: **B**
4. $K_{zt} = 1.3$
5. ANALYSIS PROCEDURE: ENVELOPE SIMPLIFIED

SEISMIC DESIGN DATA
1. SEISMIC IMPORTANCE FACTOR: **1.0**
2. RISK CATEGORY: **II**
3. SPECTRAL RESPONSE ACCEL (S_s): **1.409**
4. SITE CLASS: **D**
5. SPECTRAL RESPONSE COEFF (S_{DS}): **0.939**
6. SEISMIC DESIGN CATEGORY: **D**
7. LFRS: WOOD SHEATHED SHEARWALLS
8. SEISMIC RESPONSE COEFFICIENT (C_s): **0.144**
9. RESPONSE MODIFICATION FACTOR (R): **6.5**
10. ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE

GENERAL

1. ANY DISCREPANCY FOUND AMONG THE DRAWINGS, THESE NOTES, AND THE SITE CONDITIONS SHALL BE REPORTED TO THE DESIGNER, WHO SHALL CORRECT SUCH DISCREPANCY IN WRITING. ANY WORK DONE BY THE CONTRACTOR AFTER DISCOVERY OF SUCH DISCREPANCY SHALL BE DONE AT THE CONTRACTORS RISK.

2. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE CONTRACT DRAWINGS.

3. DURING THE CONSTRUCTION PERIOD THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE BUILDING. THE CONTRACTOR SHALL PROVIDE ERECTION BRACING, FORMWORK, AND TEMPORARY CONSTRUCTION SHORING IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL SAFETY ORDINANCES. ANY DEVIATION MUST BE APPROVED IN WRITING PRIOR TO ERECTION.

4. ALL ERECTION PROCEDURES SHALL CONFORM TO OSHA STANDARDS. ANY DEVIATION MUST BE APPROVED BY OSHA PRIOR TO ERECTION.

5. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION PROCEDURES.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND SHALL CHECK ALL DIMENSIONS. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER AND BE RESOLVED PRIOR TO PROCEEDING WITH THE WORK.

7. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED SUBJECT TO REVIEW BY THE ENGINEER.

8. ALL DETAILS DESIGNATED AS STANDARD OR TYPICAL SHALL OCCUR IN ADDITION TO ANY OTHER SPECIFIC DETAIL CALLED OUT.

9. ALL INFORMATION SHOWN ON THE DRAWINGS RELATIVE TO EXISTING CONDITIONS IS GIVEN AS THE BEST PRESENT KNOWLEDGE, BUT WITHOUT GUARANTEE OF ACCURACY. WHERE ACTUAL CONDITIONS CONFLICT WITH THE DRAWINGS, THEY SHALL BE REPORTED TO THE ENGINEER SO THE PROPER REVISIONS MAY BE MADE. MODIFICATIONS TO CONSTRUCTION DETAILS SHALL NOT BE MADE WITHOUT PRIOR WRITTEN APPROVAL BY THE ENGINEER.

FOUNDATIONS

1. THE FOUNDATION DESIGN IS BASED ON THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT PROVIDED BY THE RILEY GROUP, DATED AUGUST 30, 2025. FOUNDATION WORK SHALL BE PERFORMED IN ACCORDANCE WITH THIS REPORT.

2. THE FOUNDATION DESIGN IS BASED ON THE FOLLOWING VALUES:

ALLOW. SOIL BEARING	2,000 PSF
SOIL FRICTION	.30
EQUIV. FLUID PRESSURES	
ACTIVE PRESSURE	35 PCF
AT REST PRESSURE	50 PCF
PASSIVE PRESSURE	250 PCF

3. ALL FOOTINGS SHALL BE FOUNDED AT LEAST 12" BELOW THE UNDISTURBED GROUND SURFACE OR TO FROST DEPTH. ALL FOOTINGS SHALL BE FOUNDED ON COMPACTED FILL OR UNDISTURBED NATURAL GRADE UNLESS OTHERWISE NOTED.

4. COMPACTION: MATERIAL FOR FILLING AND BACKFILLING SHALL CONSIST OF THE EXCAVATED MATERIAL AND/OR IMPORTED BORROW AND SHALL BE FREE OF ORGANIC MATTER, TRASH, LUMBER, OR OTHER DEBRIS. ALL WALLS SHALL BE ADEQUATELY BRACED PRIOR TO BACKFILLING. FILL AND BACKFILL SHALL BE DEPOSITED IN LAYERS NOT TO EXCEED 8 INCHES THICK, PROPERLY MOISTENED TO APPROXIMATE OPTIMUM REQUIREMENTS AND THOROUGHLY ROLLED OR COMPACTED WITH APPROVED EQUIPMENT IN SUCH A MANNER AND EXTENT AS TO PRODUCE A RELATIVE COMPACTION OF 90% OF MAXIMUM POSSIBLE DENSITY AS DETERMINED BY ASTM D1557. HAND TAMPERS SHALL WEIGH AT LEAST 50 POUNDS EACH AND SHALL HAVE A FACE AREA NOT IN EXCESS OF 64 SQUARE INCHES. HAND TAMPERS MAY BE OPERATED EITHER MANUALLY OR MECHANICALLY AND SHALL BE USED WHERE LARGER POWER DRIVEN COMPACTION EQUIPMENT CANNOT BE USED.

CONCRETE

1. ALL CONCRETE UNLESS OTHERWISE NOTED SHALL BE REGULAR WEIGHT HARD ROCK TYPE (150 PCF) AGGREGATES SHALL CONFORM TO ASTM C33 WITH PROVEN SHRINKAGE CHARACTERISTICS OF LESS THAN 0.05%.

2. ALL CONCRETE DESIGN IS BASED ON A 28 DAY COMPRESSIVE STRENGTH (f_c) OF 2500 PSI. WHERE 3000 PSI CONCRETE IS REQUIRED BY THE BUILDING DEPARTMENT FOR WEATHERING PURPOSES ONLY, NO SPECIAL INSPECTION IS REQUIRED.

3. CEMENT SHALL CONFORM TO ASTM C150, TYPE I, CSA NORMAL.

4. MAXIMUM SLUMP SHALL NOT EXCEED 4 INCHES IN FLATWORK.

5. PLACEMENT OF CONCRETE SHALL CONFORM WITH ACI 301.

6. CONCRETE SHALL BE MAINTAINED IN A MOIST CONDITION FOR A MINIMUM OF FIVE (5) DAYS AFTER PLACEMENT. ALTERNATE METHODS WILL BE APPROVED IF SATISFACTORY PERFORMANCE CAN BE ASSURED.

7. POUR JOINTS CAN BE USED TO MINIMIZE EFFECTS OF SHRINKAGE AS WELL AS PLACED AT POINTS OF LOW STRESS. RECOMMENDED MAXIMUM AREA OF POUR JOINTS IS 400 SF.

8. MINIMUM CONCRETE COVERAGE OF REINFORCING STEEL FOR FORMED WORK SHALL BE AS FOLLOWS:

 INTERIOR WALL: 3/4"
 EXT. WALLS, EXPOSED TO WEATHER: 1 1/2"
 EXPOSED TO EARTH OR WEATHER (#5 OR SMALLER): 1 1/2"

*NOTE: CONCRETE CAST AGAINST GROUND SHALL HAVE 3" MIN. COVERAGE

9. PIPES AND CONDUITS SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE EXCEPT WHERE SPECIFICALLY APPROVED.

10. CONCRETE MIXES SHALL BE PROVIDED IN ACCORDANCE WITH ACI 318 (WHEN STRENGTH DATA FROM TRIAL BATCHES OR FIELD EXPERIENCE ARE NOT AVAILABLE). ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (F_c) OF 2500 PSI, WITH A MINIMUM CEMENT CONTENT OF 470 LBS/CUBIC YARD (5 SACKS PER CUBIC YARD). MIXES SHALL BE PROPORTIONED TO PRODUCE A SLUMP OF 5" OR LESS. NO MORE THAN A 1" PLUS TOLERANCE SHALL BE ALLOWED.

REINFORCING STEEL

1. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60 ($f_y = 60$ KSI) FOR BAR SIZES NO. 4 & LARGER, GRADE 40 ($f_y = 40$ KSI) FOR NO. 3 BARS.

2. ALL REINFORCING STEEL SHALL BE LAPPED AS NOTED ON THE PLANS. WHERE LAP OR SPLICE LOCATIONS ARE NOT SPECIFICALLY INDICATED ON THE CONSTRUCTION DOCUMENTS, LAPS AND/OR SPLICES SHALL BE 42 BAR DIA AND BE WELL STAGGERED. NO MORE THAN 50% OF HORIZONTAL OR VERTICAL BARS SHALL BE SPLICED AT ONE LOCATION.

3. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A82 AND A185 AND SHALL BE 6x6 W1.4xW1.4 UNLESS OTHERWISE NOTED. LAP REINFORCEMENT 6" MINIMUM.

4. ANCHOR BOLTS, DOWELS AND OTHER EMBEDDED ITEMS SHALL BE SECURELY TIED IN PLACE BEFORE CONCRETE IS POURED. SLAB ON GRADE REINFORCEMENT SHALL BE PLACED AT MID-DEPTH OF SLAB AND SHALL BE HELD SECURELY IN PLACE WITH MECHANICAL DEVICES DURING PLACING OF THE CONCRETE.

FRAMING LUMBER

1. FRAMING LUMBER SHALL BE DOUG-FIR NO. 2 FOR STUDS AND JOISTS, DOUG-FIR NO. 1. FOR BEAMS AND POSTS. GRADES ARE TYPICAL UNLESS OTHERWISE NOTED ON PLANS. LUMBER TO BE GRADE MARKED PER WCLIB SPECIFICATIONS.

2. GLU-LAMINATED MEMBERS SHALL BE 24F-V4 (DF-L) FOR SINGLE SPAN AND 24F-V8 FOR CONTINUOUS SPAN & CANTILEVERED.

3. STRUCTURAL SHEATHING SHALL BE APA RATED PLYWOOD OR OSB, EXPOSURE 1 SHEATHING CONFORMING TO EITHER COMMERCIAL STANDARDS P51-83, APA PRP-108, OR VOLUNTARY PRODUCT STANDARD PSE-92. PROVIDE A MINIMUM OF 3/8" EDGE DISTANCE ON ALL NAILS AND 1/8" EXPANSION JOINT BETWEEN ALL PANEL EDGES. MINIMUM SHEATHING REQUIREMENTS ARE AS FOLLOWS, UNLESS NOTED OTHERWISE ON THE PLANS:

4. NAILING SHALL CONFORM TO TABLE 2304.10.1 OF THE INTERNATIONAL BUILDING CODE UNLESS NOTED OTHERWISE. USE COMMON NAILS THROUGHOUT UNLESS NOTED OTHERWISE.

5. NO STRUCTURAL MEMBER SHALL BE CUT OR NOTCHED UNLESS SPECIFICALLY DETAILED OR APPROVED IN WRITING BY THE STRUCTURAL ENGINEER.

6. PROVIDE PROPERLY SIZED WASHERS UNDER HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD.

7. PROVIDE 3"x3"x0.229" WASHERS AT ALL ANCHOR BOLTS.

8. BOLT HOLES SHALL BE NOMINAL DIAMETER OF BOLT PLUS 1/16" UNLESS NOTED OTHERWISE. LAG BOLT PILOT HOLES SHALL BE PRE-DRILLED TO 60% OF THE NOMINAL DIAMETER OF THE LAG BOLT UNLESS NOTED OTHERWISE.

9. ALL SILL PLATES SHALL BE BOLTED TO THE FOUNDATION WITH 3/8" MINIMUM DIAMETER BOLTS SPACED AT A MAXIMUM OF 48" ON CENTER. BOLTS MUST BE EMBEDDED A MINIMUM OF 7" INTO CONCRETE OR MASONRY. SEE PLANS AND DETAILS FOR SPECIFIC REQUIREMENTS WHERE APPLICABLE.

10. PROVIDE DOUBLE JOIST UNDER ALL PARALLEL PARTITION WALLS AND SOLID BLOCKING UNDER PERPENDICULAR PARTITION WALLS.

11. WHERE LEDGERS, SILL PLATES, POSTS, OR STUDS ARE IN DIRECT CONTACT WITH CONCRETE OR MASONRY, USE PRESERVE TREATED LUMBER OR PROVIDE GRACE VYCOR PLUS BARRIER BETWEEN WOOD MEMBERS AND CONCRETE OR MASONRY.

12. ALL FASTENERS IN CONTACT WITH PRESERVE TREATED LUMBER OR EXPOSED TO THE ELEMENTS SHALL BE HOT-DIPPED GALVANIZED OR STAINLESS STEEL.

GLUED-LAMINATED TIMBER

1. ADHESIVE SHALL BE FOR WET USE.

2. LAMINATIONS SHALL BE OF DOUGLAS FIR/WESTER LARCH, COMBINATION 24F-V4 FOR SIMPLE SPAN BEAMS AND 24F-V8 FOR CONTINUOUS MULTIPLE SPAN AND CANTILEVERED BEAMS, FABRICATED IN ACCORDANCE WITH AITC A190.1 AND ASTM D 3737.

3. FABRICATION SHALL BE BY A LICENSED FABRICATOR.

4. GLULAM BEAMS EXPOSED TO WEATHER SHALL BE PROPERLY SEALED OR FLASHED TO PREVENT DECAY.

PREFABRICATED WOOD JOISTS/TRUSSES

1. THE JOISTS/TRUSSES SHALL BE MANUFACTURED BY TRUS JOIST, OR APPROVED EQUAL AND SHALL BE FABRICATED IN ACCORDANCE WITH ASTM D 5065. (SUBSTITUTIONS MUST BE APPROVED BY THE STRUCTURAL ENGINEER OR ARCHITECT IN WRITING, PRIOR TO INSTALLATION)

2. SEE PLANS FOR SIZE, TYPE, AND LOCATIONS OF JOISTS/TRUSSES.

3. THE JOISTS/TRUSSES ARE TO BE ERECTED AND INSTALLED IN ACCORDANCE WITH THE PLANS AND THE MANUFACTURER'S INSTALLATION REQUIREMENTS AND RECOMMENDATIONS. CONTRACTOR SHALL GIVE NOTIFICATION PRIOR TO ENCLOSING THE JOISTS/TRUSSES TO PROVIDE AN OPPORTUNITY FOR INSPECTION OF THE INSTALLATION. PROVIDE BRIDGING, CONTINUOUS LATERAL BRACING, AND DIAGONAL BRACING BETWEEN THE JOISTS/TRUSSES PER THE MANUFACTURER'S RECOMMENDATIONS.

4. DRAWINGS AND CALCULATIONS SHALL BE STAMPED AND SIGNED BY A REGISTERED PROFESSIONAL ENGINEER. THE DRAWINGS SHALL SHOW ALL CRITICAL DIMENSIONS AS WELL AS THE LOADS THE JOISTS/TRUSSES ARE DESIGNED TO SUPPORT. THE JOISTS/TRUSSES ARE TO BE ERECTED AND INSTALLED IN ACCORDANCE WITH THE PLANS, APPROVED FABRICATOR DRAWINGS, AND INSTALLATION SUGGESTIONS.

POST-INSTALLED ANCHORS

1. POST-INSTALLED ANCHOR SYSTEMS SHALL COMPLY WITH THE LATEST REVISION OF ICC-ES ACCEPTANCE CRITERIA AND HAVE A VALID ICC-ES REPORT (OR APPROVED EQUIVALENT) IN ACCORDANCE WITH THE APPLICABLE BUILDING CODE.

2. UNLESS OTHERWISE NOTES ON THE DRAWINGS USE ANCHORS LISTED BELOW:

EXPANSION ANCHORS IN CONCRETE SHALL BE ONE OF THE FOLLOWING:

A. HILTI HSL-3 CARBON STEEL HEAVY DUTY EXPANSION ANCHOR (ICC-ES ESR-1545)

B. HILTI HDA CARBON AND STAINLESS STEEL ANCHORS (ICC-ES ESR-1546)

C. HILTI KWIK BOLT TZ CARBON AND STAINLESS STEEL ANCHORS (ICC-ES ESR-1917)

D. POWERS POWER-STUD+SD2 ANCHOR (ICC-ES ESR-2502)

E. SIMPSON STRONG-TIE STRONG-BOLT 2 ANCHOR (ICC-ES ESR-3037)

ADHESIVE ANCHORS IN CONCRETE SHALL BE ONE OF THE FOLLOWING:

A. HILTI HIT-RE 500-SD ADHESIVE ANCHOR (ICC-ES ESR-2322)

B. HILTI HIT-HY 200 ADHESIVE ANCHOR (ICC-ES ESR-3187)

C. POWERS PURE 110+ EPOXY ADHESIVE ANCHOR (ICC-ES ESR-3298)

D. SIMPSON STRONG-TIE SET-3G EPOXY ADHESIVE ANCHOR (ICC-ES ESR-4507)

E. SIMPSON STRONG-TIE AT-XP EPOXY ADHESIVE ANCHOR (IAPMO UES ER-263)

SCREW ANCHORS IN CONCRETE SHALL BE ONE OF THE FOLLOWING:

A. POWERS WEDGE-BOLT+ SCREW ANCHOR (ICC-ES ESR 2526)

B. HILTI KWIK HUS-EZ SCREW ANCHOR (ICC-ES ESR-3027)

C. SIMPSON STRONG-TIE TITEN HD SCREW ANCHOR (ICC-ES ESR-2713)

SCREW ANCHORS IN CONCRETE SHALL BE ONE OF THE FOLLOWING:

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ABBREVIATION LIST

A.B.	ANCHOR BOLT
ACI	AMERICAN CONCRETE INSTITUTE
AITC	AMERICAN INSTITUTE OF TIMBER CONSTRUCTION
ANCH	ANCHORAGE
ARCH	ARCHITECTURAL
ASD	ALLOWABLE STRESS DESIGN
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS

BM	BEAM
BP	BASE PLATE
BRG	BEARING
CIP	CAST-IN-PLACE
CL	CENTER LINE
CMU	CONCRETE MASONRY UNIT
CONC	CONCRETE
CONT	CONTINUOUS
DF	DOUGLAS FIR
DIA	DIAMETER
DIAG	DIAGONAL
DL	DEAD LOAD
DP	DEEP
EA	EACH
EF	EACH FACE
EL	ELEVATION
EQ	EQUAL
EQUIP	EQUIPMENT
(E)	EXISTING
FLR	FLOOR
FS	FAR SIDE
FT	FOOT
FTG	FOOTING
GA	GAUGE
GALV	GALVANIZED
GLB	GLU-LAMINATED BEAM
GYP	GYP SUM
HF	HEMLOCK FIR
HORIZ	HORIZONTAL
INCL	INCLUDE
K	KILOPOUND
L	ANGLE
LL	LIVE LOAD
LLV	LONG LEG VERTICAL
LSL	LAMINATED STRAND LUMBER
LVL	LAMINATED VENEER LUMBER
MAX	MAXIMUM
MECH	MECHANICAL
MEZZ	MEZZANINE
MFR	MANUFACTURER
MISC	MISCELLANEOUS
MIN	MINIMUM
NS	NEAR SIDE
NTS	NOT TO SCALE
OF	OUTSIDE FACE
PCF	POUNDS PER CUBIC FOOT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PRESSURE TREATED
QTY	QUANTITY
REINF	REINFORCING
RF	ROOF
SCHED	SCHEDULE
SF	SQUARE FOOT
SHTG	SHEATHING
SIM	SIMILAR
SLV	SHORT LEG VERTICAL
SPECS	SPECIFICATIONS
SS	STAINLESS STEEL
STD	STANDARD
STRUCT	STRUCTURAL
T&B	TOP & BOTTOM
T&G	TONGUE & GROOVE
TOB	TOP OF BEAM
TOF	TOP OF FOOTING
TOS	TOP OF STEEL
TYP	TYPICAL
ULT	ULTIMATE
U.N.O	UNLESS NOTED OTHERWISE
VERT	VERTICAL
V.I.F.	VERIFY IN FIELD
W/	WITH
WF	WIDE FLANGE
W/O	WITHOUT
WT	WEIGHT
WWF	WELDED WIRE FABRIC

BM	BEAM
BP	BASE PLATE
BRG	BEARING
CIP	CAST-IN-PLACE
CL	CENTER LINE
CMU	CONCRETE MASONRY UNIT
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HF	HEMLOCK FIR
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K	KILOPOUND
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LL	LIVE LOAD
LLV	LONG LEG VERTICAL
LSL	LAMINATED STRAND LUMBER
LVL	LAMINATED VENEER LUMBER
MAX	MAXIMUM
MECH	MECHANICAL
MEZZ	MEZZANINE

Rankin Addition

3633 Island Crest Way
Mercer Island, WA 98040

Owner:
Rankin Family

Architect/Designer:
J3 Architects, LLC
PO Box 82581,
Kenmore, WA 98028
w: www.j3architectsllc.com
p: 206-412-9296

Structural Engineer:
Nabil Kausal-Hayes, PE

(Lateral Only)



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Revisions:

Revision	Issue Date

Issue Set: Field Revisions

Issue Date: March 3rd, 2025

Drawn By: AKR

Checked By: NKH

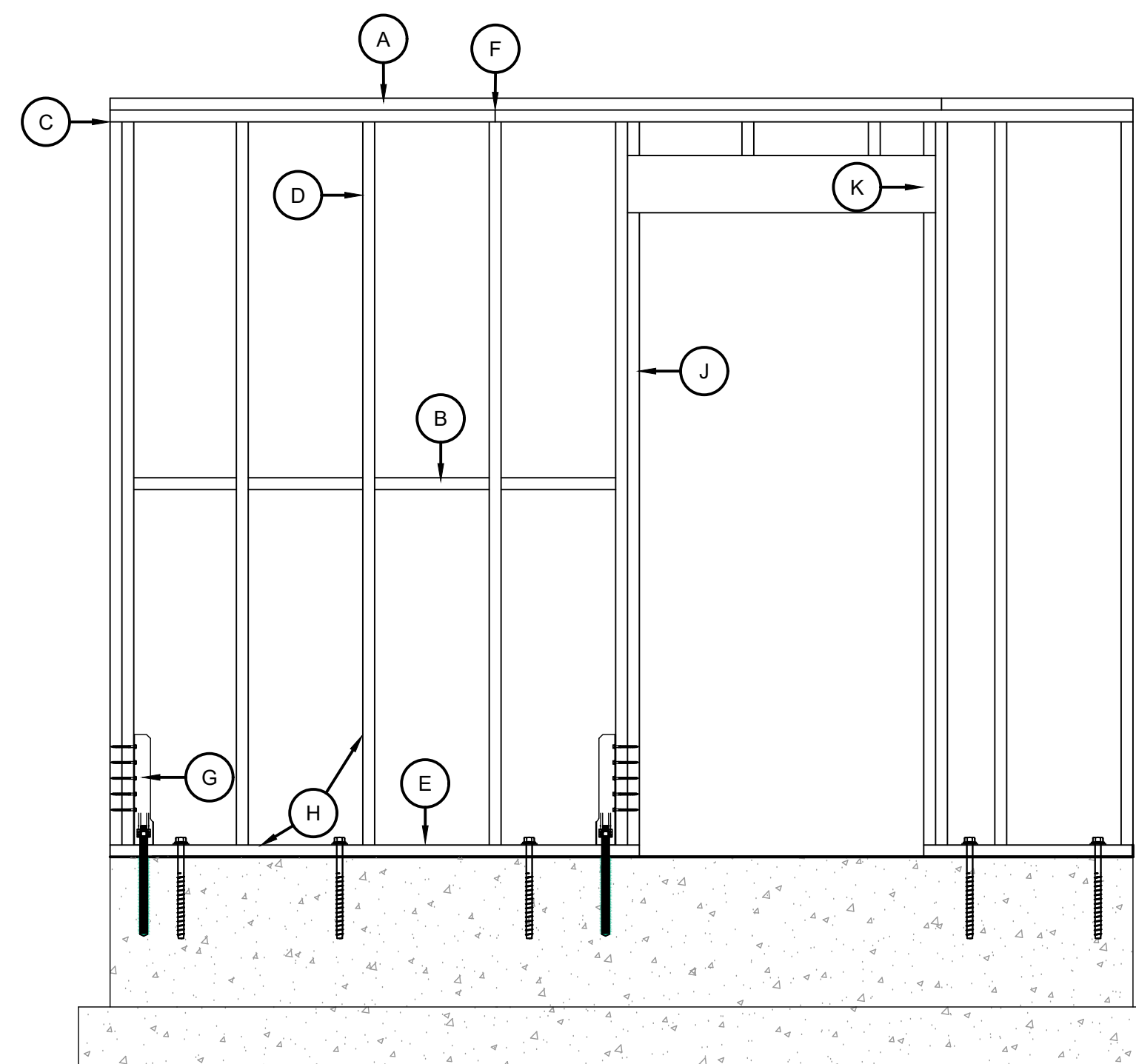
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SHEARWALL & HOLDOWN SCHEDULES

Sheet:

S2

Job Number: 24-123



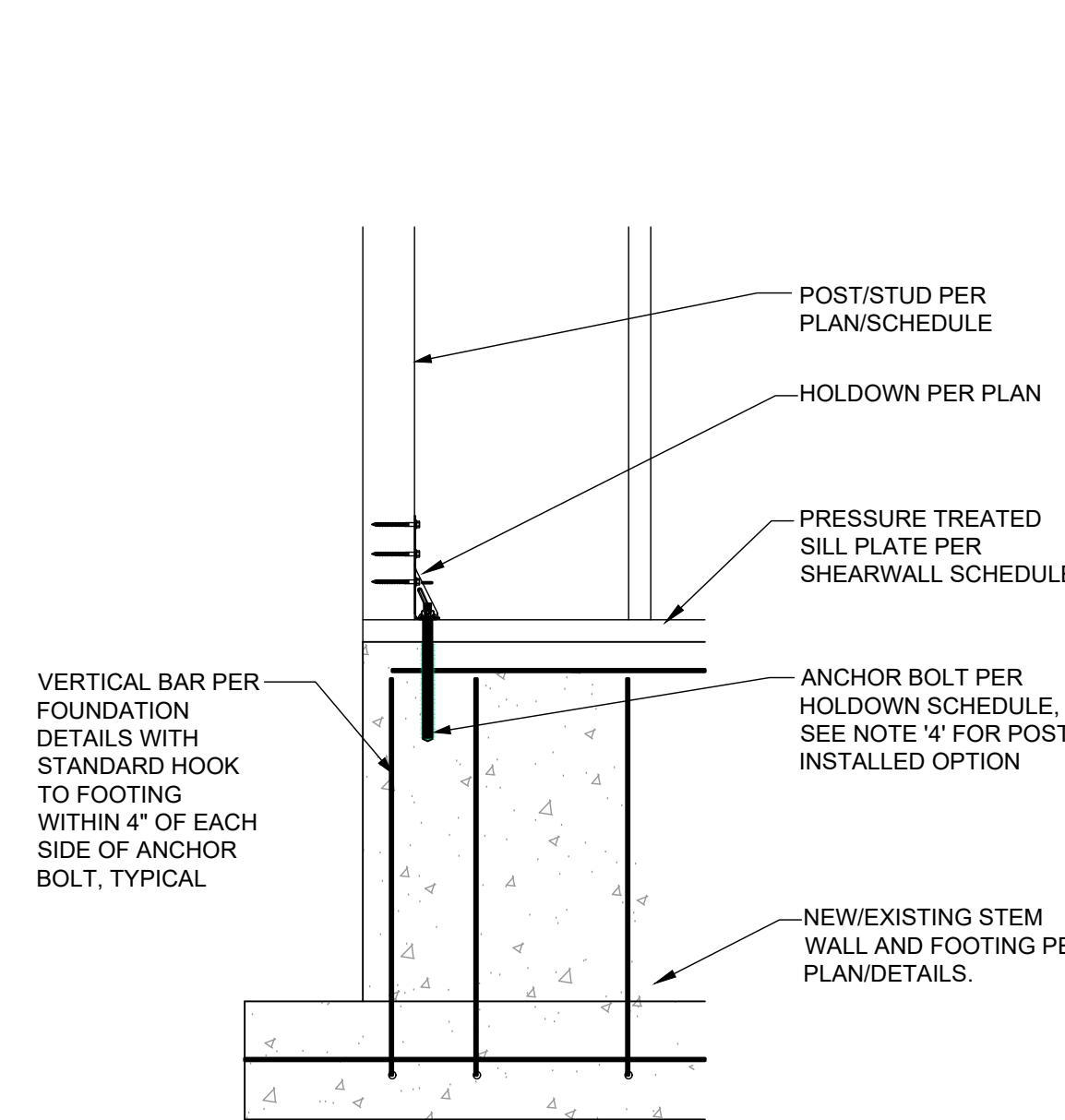
- A DOUBLE TOP PLATE W/ EDGE NAILING (STAGGER)
- B SHEARWALL EDGE NAILING AT ALL PANEL EDGES. BLOCKING AT ALL PANEL EDGES WHERE APPLICABLE.
- C EDGE NAILING TO HOLDDOWN POST (FULL HEIGHT) STAGGER INTO DOUBLE STUDS
- D STUDS AT 16" ON CENTER
- E PRESSURE TREATED SILL PLATE WITH EDGE NAILING AND ANCHOR BOLTS PER SHEARWALL SCHEDULE.
- F TOP PLATE SPLICE NAILING TO BE (12) 10d COMMONS (MIN). LAP 48" MINIMUM. CENTER SPLICE ON STUD.
- G HOLDDOWN PER SCHEDULE AND PLAN
- H COORDINATE ALL STUD AND PLATE SIZES W/ SHEARWALL SCHEDULE REQUIREMENTS
- I EDGE NAILING TO POSTS, TRIM STUDS, AND KING STUDS
- K BEARING STUD FOR HEADER

1 TYPICAL SHEARWALL ELEVATION
S2 NTS

SHEARWALL SCHEDULE								
SHEARWALL MARK	SHEATHING MATERIAL	FASTENER TYPE AND SIZE	PANEL EDGE NAILING	PANEL FIELD NAILING	SILL PLATE MATERIAL AND ANCHOR BOLT SIZE AND SPACING (MIN EMBED 7")	BOTTOM PLATE SIZE AND CONNECTION	ALLOWABLE CAPACITY FOR SEISMIC LOADS (8d, 1/4")	ALLOWABLE CAPACITY FOR WIND LOADS (8d, 1/4")
SW-6	1/4" OR 3/8" OSB OR PLYWOOD SHEATHING ONE FACE	8d (0.134") COMMON NAIL (1-1/2" MIN PENETRATION INTO FRAMING MEMBERS)	6" O.C.	12" O.C.	PT 2x SILL PLATE w/ 3/4" AB @ 48" O.C.	2x BOTTOM PLATE w/ 16d AT 6" O.C. INTO RIM JOIST/BLOCKING	240 PLF	335 PLF
SW-4			4" O.C.		PT 2x SILL PLATE w/ 3/4" AB @ 32" O.C.	2x BOTTOM PLATE w/ 16d AT 4" O.C. INTO RIM JOIST/BLOCKING	350 PLF	490 PLF
SW-3			3" O.C.		PT 3x SILL PLATE w/ 3/4" AB @ 16" O.C.	3x BOTTOM PLATE w/ 16d AT 4" O.C. INTO RIM JOIST/BLOCKING	450 PLF	630 PLF
SW-2			2" O.C.		PT 3x SILL PLATE w/ 3/4" AB @ 16" O.C.	3x BOTTOM PLATE w/ (2) ROWS OF SIMPSON 6" SDW SCREWS AT 6" O.C. INTO RIM JOIST AND BLOCKING	585 PLF	820 PLF

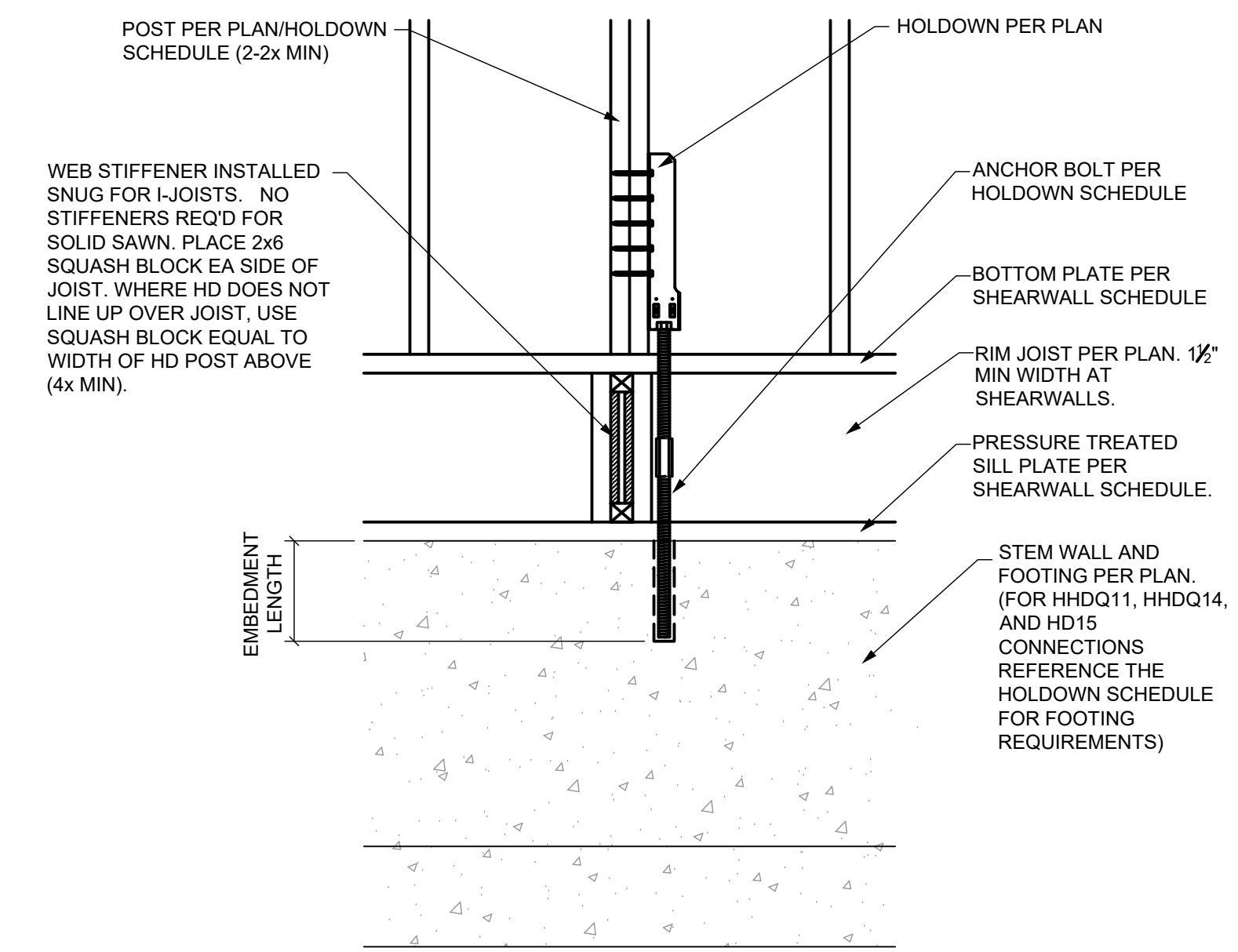
SHEARWALL NOTES

- ALL STUDS, BLOCKING, TOP AND BOTTOM PLATES SHALL BE DOUG-FIR NO. 2 UNLESS NOTED OTHERWISE ON PLANS. ALL SHEATHING EDGES MUST BE BACKED WITH 2x OR WIDER FRAMING (SEE NOTE #3).
- SHEATHING MAY BE INSTALLED EITHER HORIZONTALLY OR VERTICALLY. ALL SHEARWALL SHEATHING MUST EXTEND TO THE OUTSIDE EDGE OF ALL HOLDDOWN POSTS AND CORNERS, AND TO THE INSIDE EDGE OF FRAMING AROUND OPENINGS.
- WHERE SHEATHING NAILING IS SHEARWALL TYPE SW-3 AND GREATER, ALL FRAMING MEMBERS RECEIVING EDGE NAILING FROM ABUTTING PANELS SHALL NOT BE LESS THAN A SINGLE 3-INCH NOMINAL MEMBER. ADDITIONALLY, WHERE SHEARWALLS ARE SHEATHED ON BOTH FACES, ALL STUDS AND PLATES RECEIVING EDGE NAILING FROM BOTH FACES MUST BE A SINGLE 3-INCH NOMINAL MEMBER OR PANEL JOINTS MUST BE OFFSET. (2)2x MAY BE SUBSTITUTED FOR A SINGLE 3x MEMBER PROVIDED THE STUDS ARE STITCH NAILED TOGETHER W/ 10d NAILS STAGGERED AT 24" O.C.
- SHEARWALL NAILING CRITERIA IS BASED ON TABLE 4.2A OF THE AF&PA SPECIAL DESIGN PROVISIONS FOR WIND AND SEISMIC. VALUES ARE BASED ON OSB OR PLYWOOD SHEATHING W/ DOUG-FIR NO. 2 FRAMING AND COMMON NAILS.
- HOLDOWNS AND OTHER CONNECTIONS MAY BE REQUIRED AT THE ENDS OF MANY SHEARWALLS. SIZES AND LOCATIONS OF THESE CONNECTORS ARE INDICATED ON THE PLANS. REFER TO THE APPROPRIATE DETAILS AND/OR HOLDOWN SCHEDULE FOR ADDITIONAL INFORMATION REGARDING ANCHOR BOLTS, EMBEDMENT LENGTH, ETC. WHERE (2) 2xs ARE USED AS A HOLDOWN POST, SHEARWALL EDGE NAILING MUST BE STAGGERED INTO EACH MEMBER OF THE POST.
- ANCHOR BOLTS MUST BE EMBEDDED A MINIMUM OF 7" INTO CONCRETE OR GROUTED CMU, AND SHALL BE PLACED TO PROVIDE A MINIMUM OF 2" COVER. PROVIDE 3" COVER FOR CONCRETE CAST AGAINST SOIL.
- ALL MACHINE BOLTS SHALL BE ASTM A307 OR BETTER. HILTI KWIK BOLTS/SIMPSON TITEN HD BOLTS OF THE SAME DIAMETER AS SHOWN IN THE SHEARWALL SCHEDULE MAY BE SUBSTITUTED FOR ANCHOR BOLTS INTO EXISTING CONCRETE. BOLTS SHALL BE EMBEDDED A MINIMUM OF 3 3/4" INTO EXISTING CONCRETE.
- ALL NAILS AND CONNECTORS IN CONTACT WITH PRESSURE TREATED WOOD (EXCEPT FOR BORITE TREATED WOOD) MUST BE HOT DIPPED GALVANIZED OR STAINLESS STEEL TO RESIST CORROSION.
- NAILS MUST BE STAGGERED WHEN SPACED AT 2" O.C.
- PROVIDE A MINIMUM OF 3" x 3" x 0.229" PLATE WASHERS AT ALL ANCHOR BOLTS. THE EDGE OF THE PLATE WASHER MUST BE LOCATED NO MORE THAN 1/2" FROM THE INSIDE FACE OF THE SHEARWALL SHEATHING. FOR SHEARWALLS SHEATHED ON BOTH FACES, SQUARE PLATE WASHERS SHALL HAVE A MINIMUM SQUARE DIMENSION OF SILL PLATE WIDTH MINUS 1". (E.G. 4.5" x 4.5" x 0.229" WASHER FOR 3x6 SILL PLATE.)

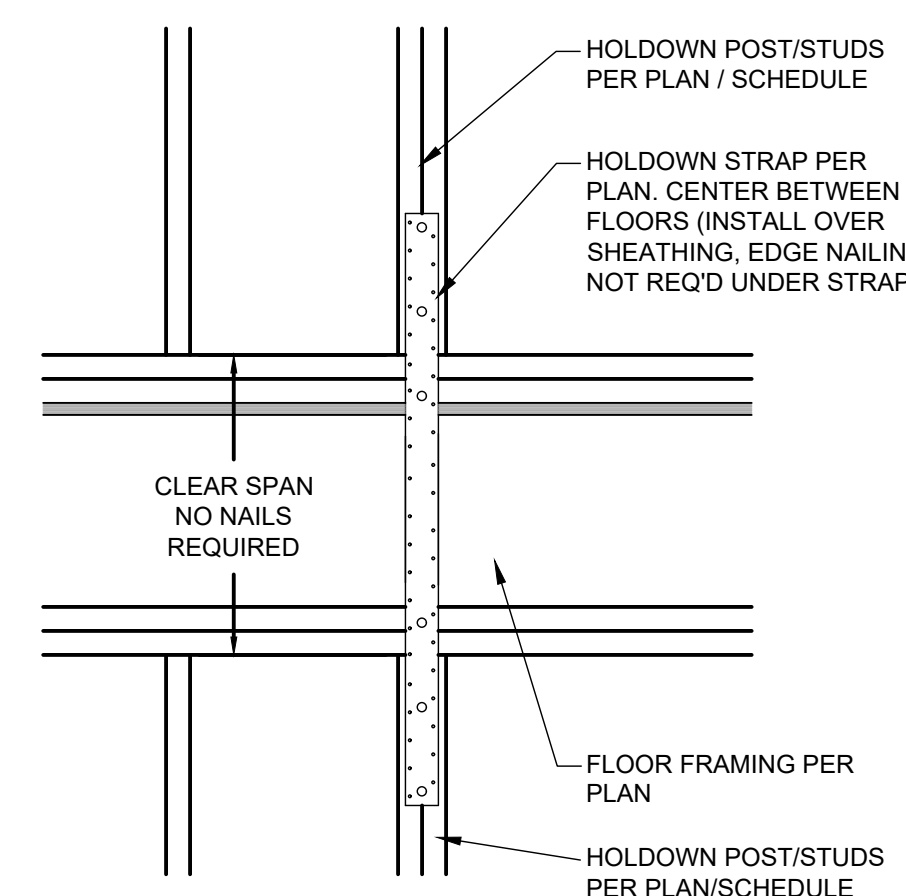


SLAB/STEMWALL

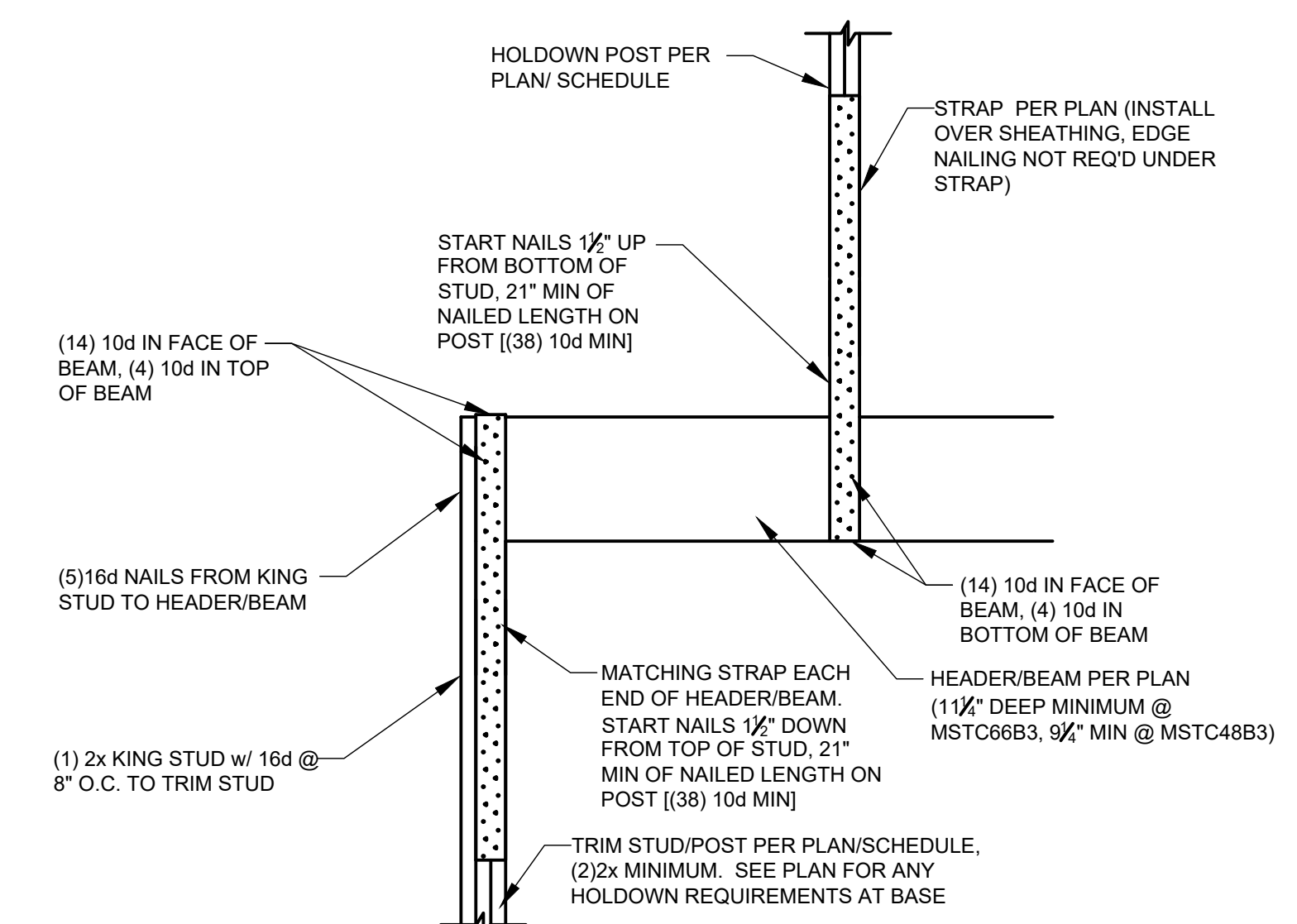
2 TYP BOLTED HOLDOWN
S2 1" = 1'-0"



AT RIM JOIST



3 TYP FLR TO FLR STRAP
S2 1" = 1'-0"



4 STRAP HD @ BEAM/HEADER
S2 NTS

HOLDOWN SCHEDULE							
HOLDOWN MARK	THREADED ROD SIZE	EMBED INTO CONCRETE	MIN EDGE DISTANCE	MINIMUM POST SIZE	TOTAL FASTENERS	CAPACITY	REMARKS
HDU2	3/4" Ø	10"	2 1/2"	(2) 2x	(6) SDS 1/2" x 1 1/2"	3075#	SEE DET 2/S2
HDU4	3/4" Ø	12"	3"	(2) 2x	(10) SDS 1/2" x 2 1/2"	4565#	SEE DET 2/S2
MST37	N/A	N/A	N/A	(2) 2x	(22) 16d	2705#	SEE DET 3/S2
MSTC48B3	N/A	N/A	N/A	(2) 2x	(38) 16d	3975#	SEE DET 4/S2

HOLDOWN NOTES

- ANCHOR BOLTS SHALL BE A307 ALL-THREAD W/ STANDARD CUT PLATE WASHER BETWEEN DOUBLE NUT OR EQUIVALENT SIMPSON PAB.
- MINIMUM CONCRETE COMPRESSIVE STRENGTH (f_c) SHALL BE 2500 PSI. MINIMUM WALL THICKNESS IS 8", U.N.O. ON PLAN OR DETAILS.
- ALL HOLDOWNS REQUIRE A (2)2x POST UNLESS NOTED OTHERWISE. WHERE HOLDOWNS ARE INSTALLED INTO THE WIDE FACE OF THE STUD, STUDS MUST BE STITCH NAILED TOGETHER W/ 16d SINKERS STAGGERED AT 4" O.C.
- THREADED RODS MAY BE POST INSTALLED WITH SIMPSON SET-3G, AT-XP, OR HILTI HY-150 EPOXY. UNO. CONSULT EOR FOR HDU8 & HEAVIER POST INSTALLED OPTIONS. SPECIAL INSPECTIONS ARE REQUIRED FOR POST-INSTALLED ANCHORS PER GENERAL STRUCTURAL NOTES.
- MINIMUM EDGE DISTANCE IS FOR FORMED CONCRETE EXPOSED TO WEATHER OR SOIL. FOR CONCRETE CAST AGAINST SOIL PROVIDE 3" CLEAR TO ANCHOR BOLT.
- NAILS/SCREWS TO HOLDOWN POST SHALL BE PER MANUFACTURER'S SPECIFICATIONS.
- WHEN FIELD CONDITION BECOME LESS THAN MINIMUM SHOWN, CONTACT ENGINEER PRIOR TO PROCEEDING.
- ALL HOLDOWN BOLTS MUST BE RE-TIGHTENED JUST PRIOR TO ENCLOSING SECOND SIDE OF WALL.

Rankin Addition

3633 Island Crest Way
Mercer Island, WA 98040

Owner:
Rankin Family

Architect/Designer:

J3 Architects, LLC
PO Box 82581,
Kenmore, WA 98028
w: www.j3architectsllc.com
p: 206-412-9296

Structural Engineer:

Nabil Kausal-Hayes, PE

(Lateral Only)



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Revisions:

Revision	Issue Date
1	3/3/25

Issue Set: Field Revisions

Issue Date: March 3rd, 2025

Drawn By: AKR

Checked By: NKH

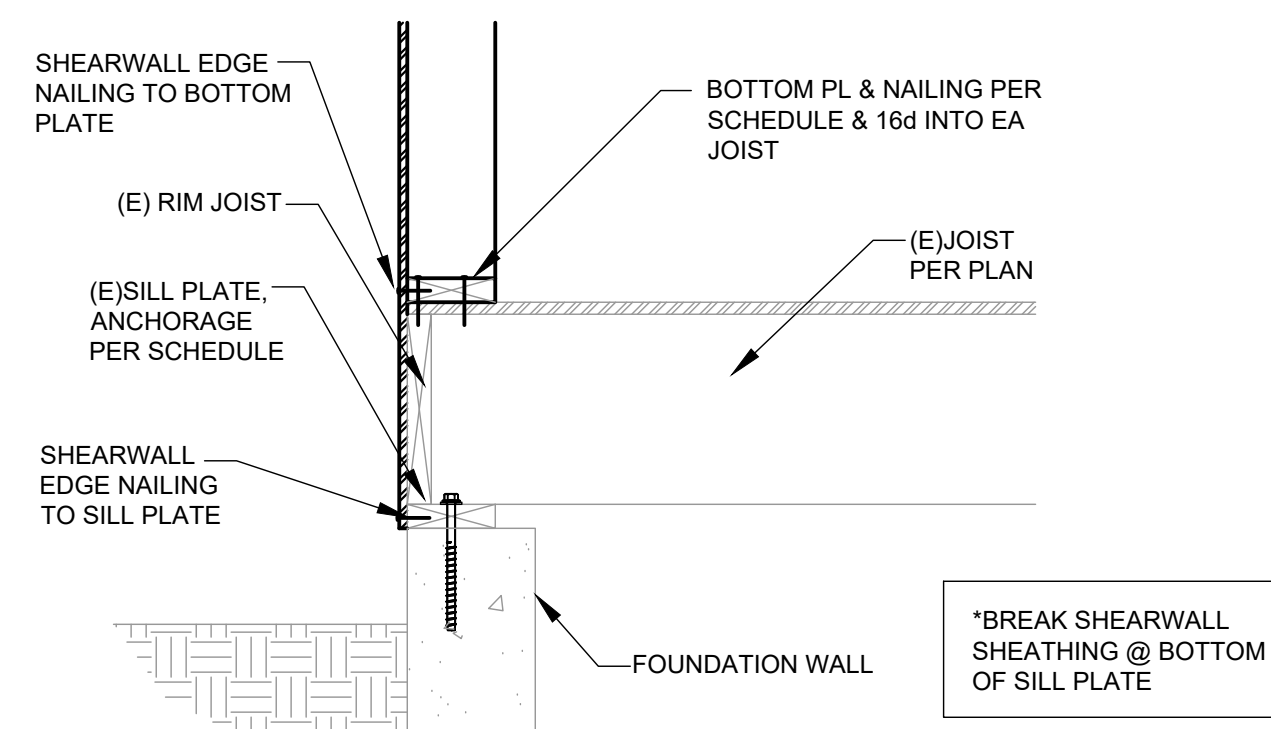
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**STRUCTURAL
DETAILS**

Sheet:

S3

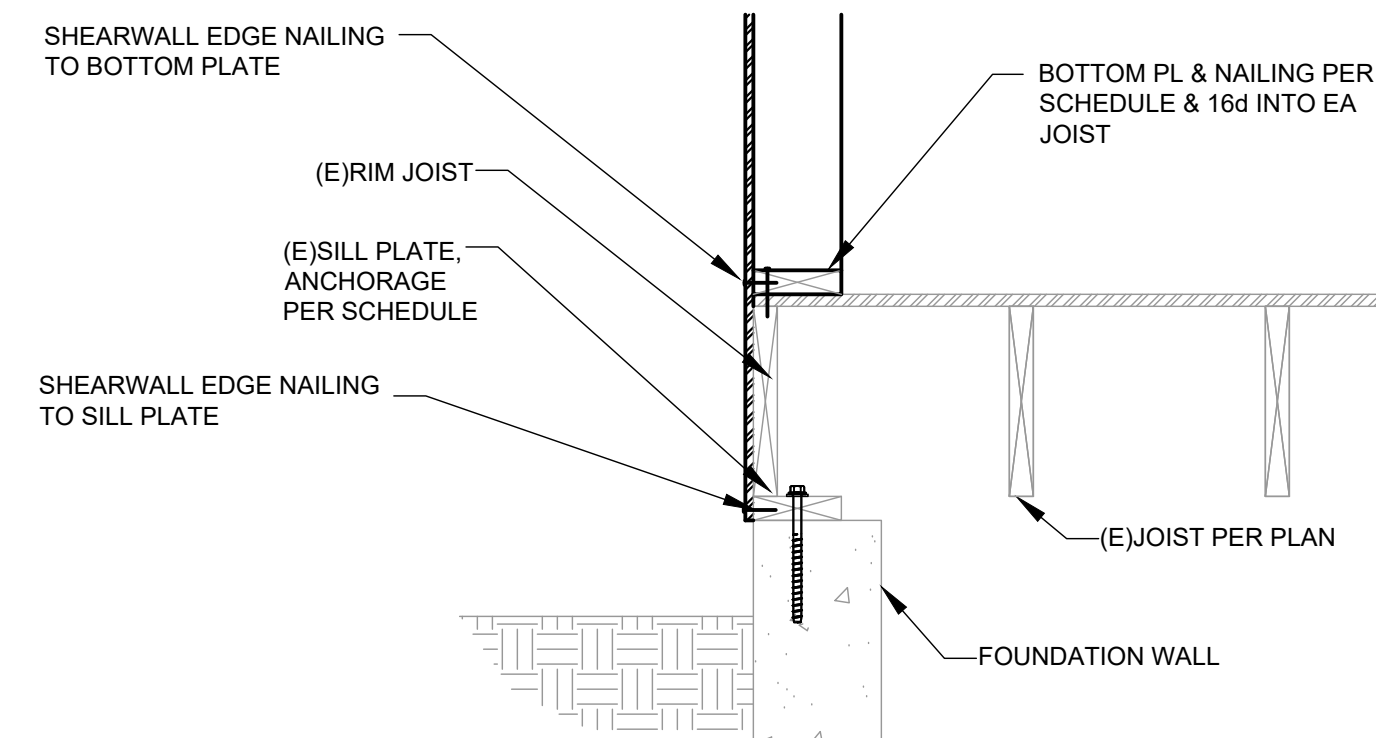
Job Number: 24-123



JOISTS PERPENDICULAR

1 WALL TO FOUNDATION

S3 1" = 1'-0"

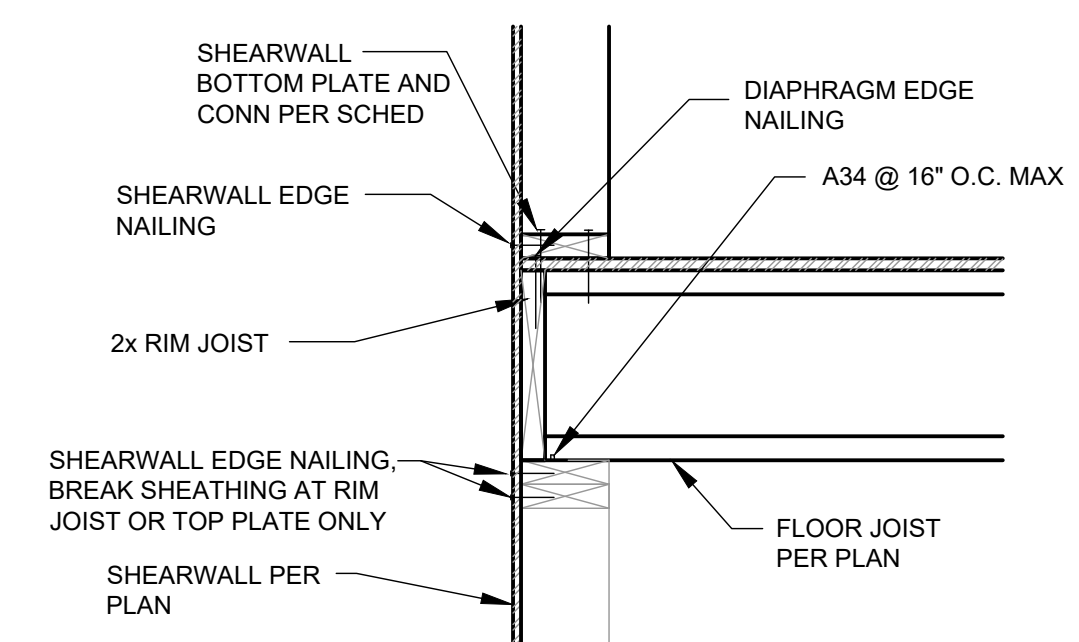


JOISTS PARALLEL

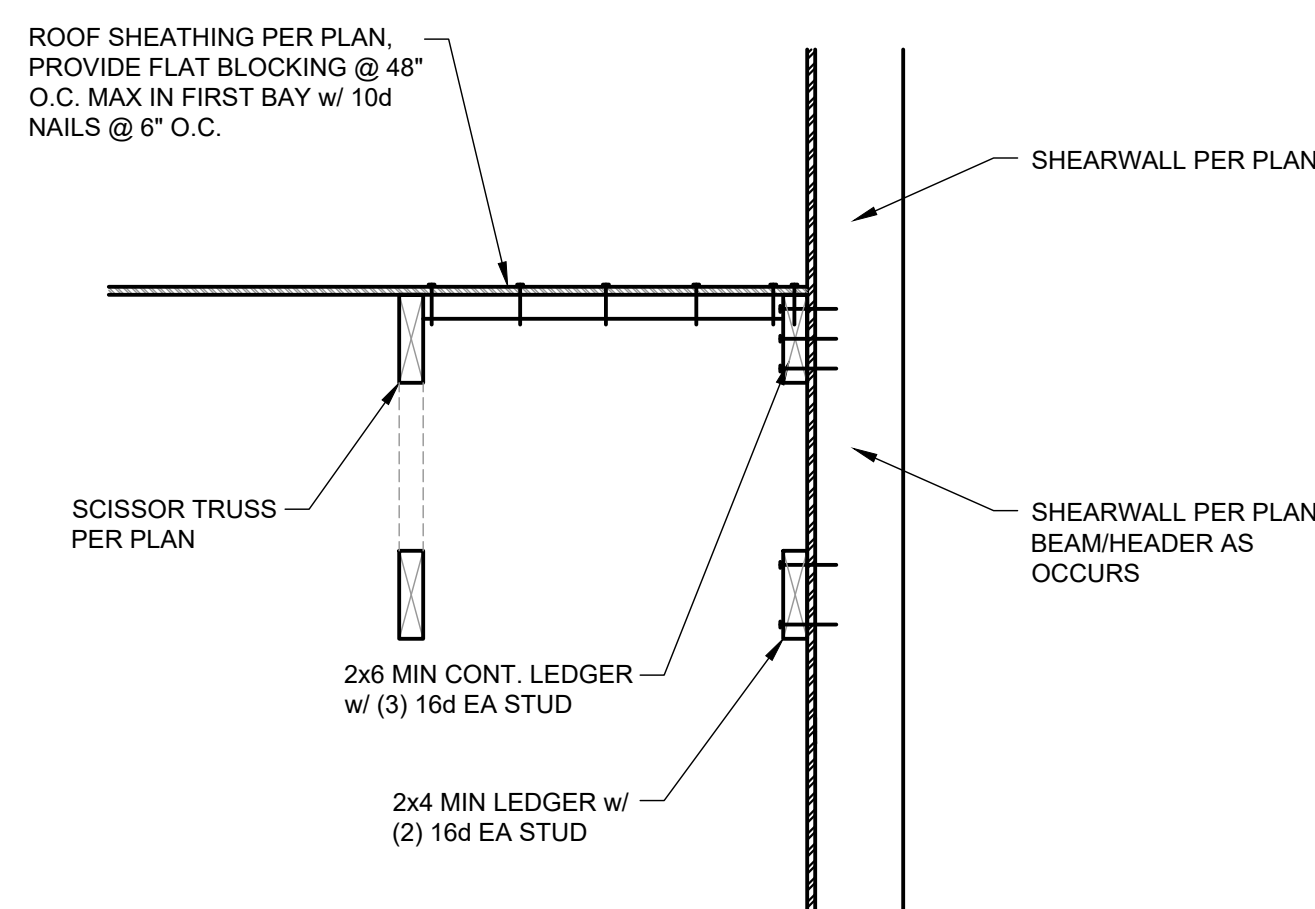
2 FLOOR JOIST TO WALL CONNECTION

S3 1" = 1'-0"

JOISTS PARALLEL

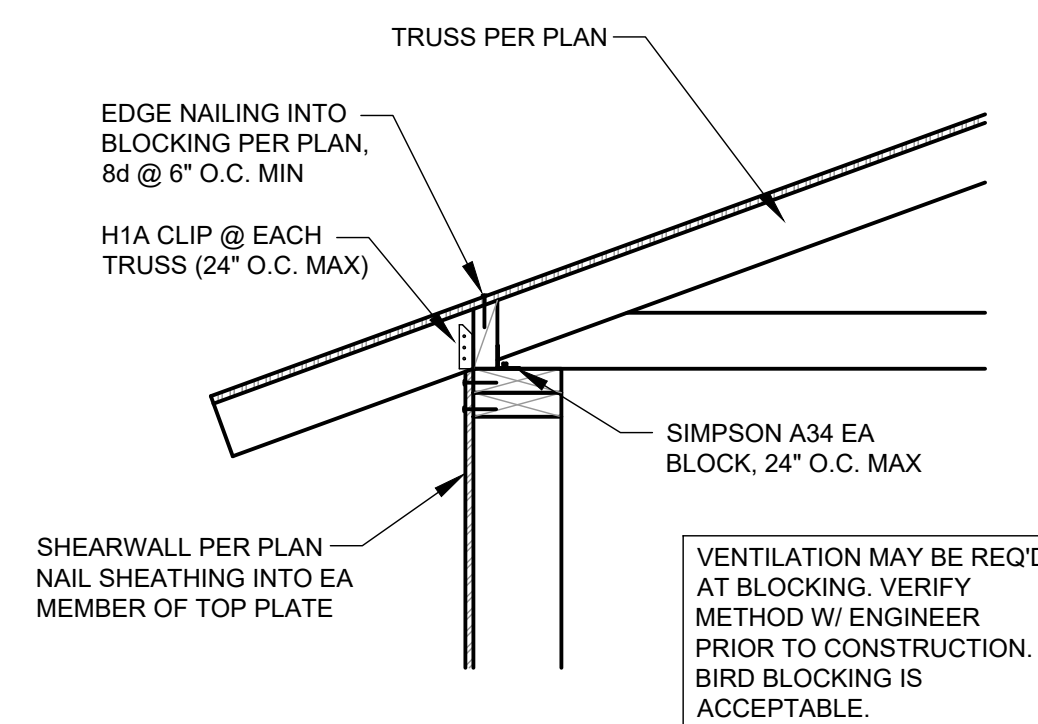


JOISTS PERPENDICULAR



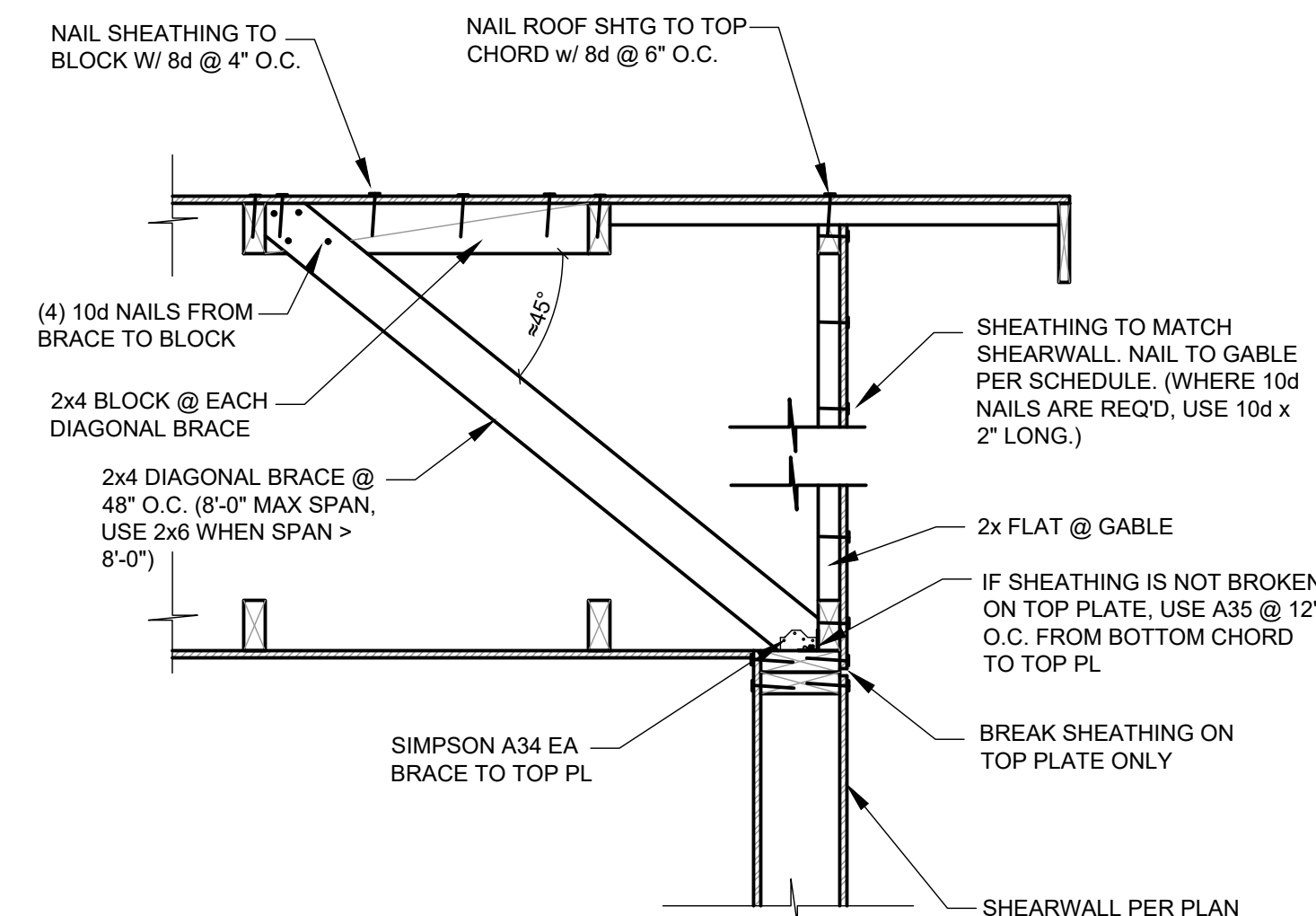
3 LOWER ROOF TO SW CONN

S3 1" = 1'-0"



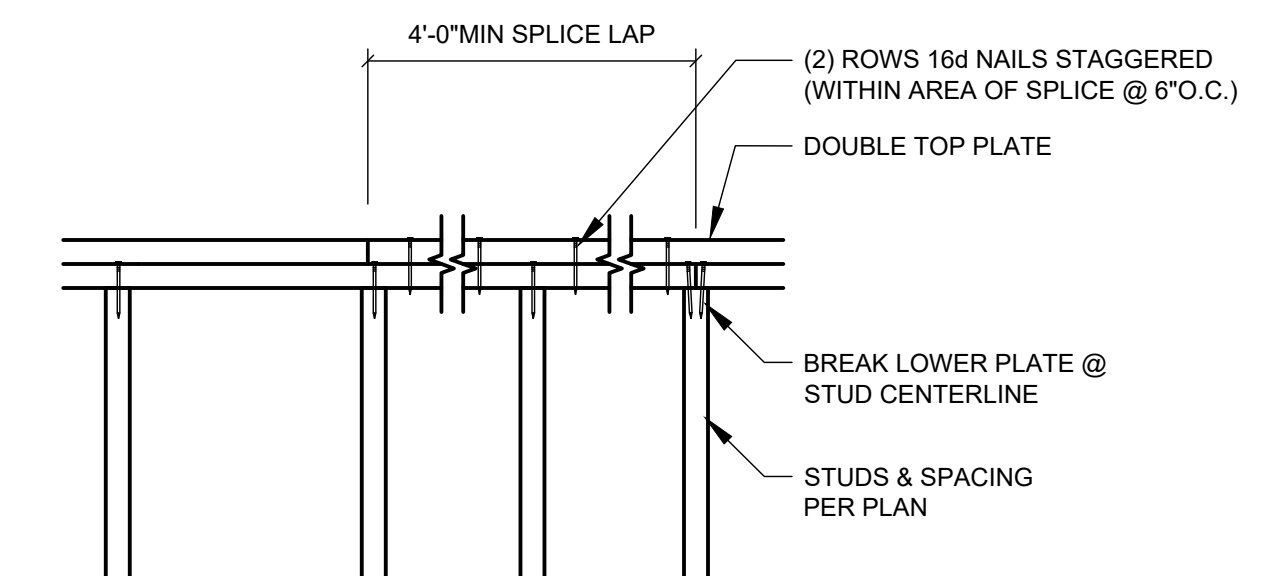
4 ROOF TO SHEARWALL CONNECTION

S3 1" = 1'-0"



5 SHEARWALL TO TRUSS

S3 1" = 1'-0"



6 TYPICAL TOP PLATE SPLICE

S3 NTS