LOT COVERAGE CALCULATIONS

A.	Gross Lot Area	12733	Square Feet
B.	Net Lot Area	12517	Square Feet
C.	Allowed Lot Coverage Area	5006.8	Square Feet
D.	Allowed Lot Coverage	40	% of Lot
E.	Existing Lot Coverage:		
	1. Main Structure Roof Area	3303	Square Feet
	2. Accessory Building Roof Area	0	Square Feet
	3. Vehicular Use (driveway, paved access easements [portion used by the lot for access], parking	1231	Square Feet
	4. Covered Patios and Covered Decks	0	Square Feet
	5. Total Existing Lot Coverage Area (E1+E2+E3+E4)	4534	Square Feet
F.	(Total Lot Coverage Area Removed)	0	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	3585	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)	1231	Square Feet
	4. Covered Patios and Covered Decks	90	Square Feet
	5. Total New Lot Coverage Area (I1 + I2 + I3 + I4)		
J.	Total Project Lot Coverage Area = (E5 - F) + I5	4906	Square Feet
K.	Proposed Lot Coverage Area = (J/B) x 100	31.6%	% of Lot

HARDSCAPE CALCULATIONS

A.	Gross Lot Area	12733	Square Feet
B.	Net Lot Area	12517	Square Feet
C.	Area Borrowed from Lot Coverage	100.8	Square Feet
D.	Allowed Hardscape Area = 9% of lot area + C	9%	% of Lot
E.	Allowed Hardscape Area	1126.5	Square Feet
F.	Total Existing Hardscape Area:		
	1. Uncovered Decks	262.3	Square Feet
	2. Uncovered Patios	316.6	Square Feet
	3. Walkways	0	Square Feet
	4. Stairs	0	Square Feet
	5. Rockeries and Retaining Walls	0	Square Feet
	6. Other		Square Feet
	7. Total Existing Hardscape Area (F1+F2+F3+F4+F5+F6)	841.2	Square Feet
G.	(Total Hardscape Area Removed)	0	Square Feet
H.	Total New Hardscape Area:		
	1. Uncovered Decks	262.3	Square Feet
	2. Uncovered Patios	316.6	Square Feet
	3. Walkways	0	Square Feet
	4. Stairs	0	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)	841.2	Square Feet
I.	Total Project Hardscape Area = (F7 - G) + H7	841.2	Square Feet
J.	Total Project Hardscape Area = (I/B)x100	6.7%	% of Lot

Potential Slide Area

Erosion Area

2

PROJECT DATA

OWNER

Pang Ngernsupaluck
Tom Mulcahy
4311 85th Ave. SE
Mercer Island, WA

ARCHITECT

HhLodesign
215 W. Crockett St.
Seattle, WA 98119
Contact: Henry H Lo
206-229-8082

CONTRACTOR

TBD
Phone
Fax
Email
CONTACT:

STRUCTURAL ENGINEER

TBD
Phone
Fax
Email
CONTACT

PROPERTY DATA

PROJECT ADDRESS

4311 85th Ave. SE
Mercer Island, WA

ZONING DESIGNATION

R-9.6

HEIGHT LIMIT

30'-0" to Highest point of Roof

SETBACKS

Front Yard Setback	20'-0"
Rear Yard Setback	25'-0"
Side Yard Setback	17% of Lot Width (107.2') = 18.2' total Min = 33% of 18.2' = 6'

LOT AREA
12,733 sq ft

ASSESSOR'S TAX NUMBER
182405-9138

LEGAL DESCRIPTION
LOT A MERCER ISLAND LLR # 99-1353 REC #20010522900002 SD LLR BEING POR SW 1/4 OF NW 1/4 LY BETWEEN 84TH AVE SE & 86TH AVE SE

PROJECT NARRATIVE

This project proposes the construction of a 230 SF Exterior covered deck on the Main Floor. As a part of this project, there is an existing living space in the daylight basement of the existing SFR. We intend to add a new door at the basement level to separate the basement living area and the SFR on the main and upper levels and define the basement level as an ADU. No new square footage will be added. The separation between the proposed ADU and existing SFR will be fire rated per code. We also propose the Addition of a new roof over basement entry. The entry to the main residence will be rebuilt as part of this project as well. There will be a slight reconfiguring of a wall at the garage entry to the house at the main floor. On the 2nd floor we will reconfigure the master bedroom, bath, and closet.

1

CONSTRUCTION DATA

AREA SUMMARY

Enclosed Square Footage

Lower Level (Existing)	651 sq ft
Main Level (Existing)	2882 sq ft
Upper Level (Existing)	2102 sq ft
Upper Level (New)	230 sq ft
Total (New)	230 sq ft
Total (Combined)	5635 sq ft
ADU	651 sq ft

Verfiy Fire Sprinkler System is installed

1

ENERGY DATA

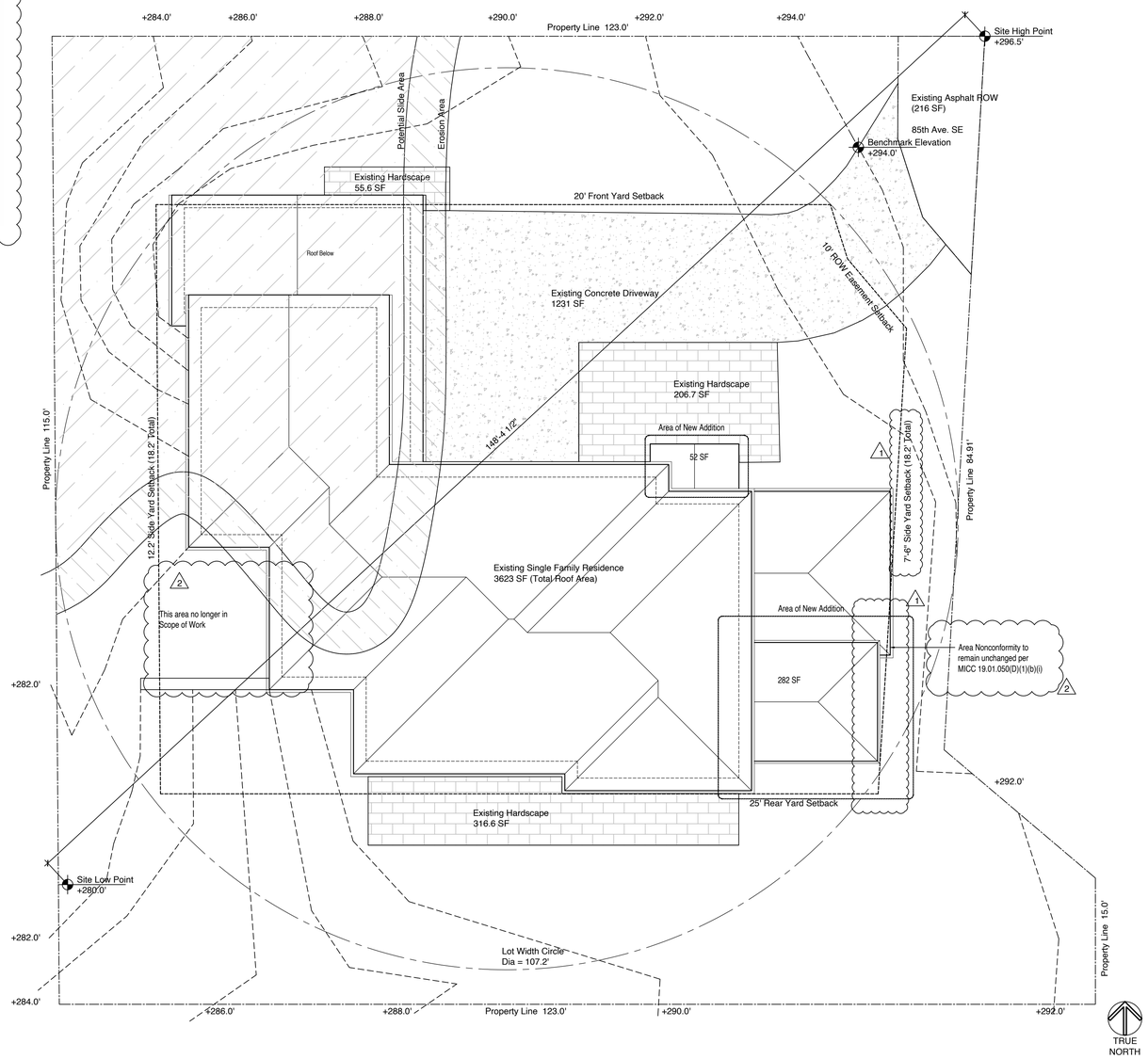
New Conditioned Square footage added: 0 sq ft

Additions Less than 500SF =
1.5 Energy Credits Required

Heat pump system to be used = 1.0 Credit
5.2 Water Heating System shall be Energy Star rated gas or propane water heater with a min UEF of 0.80 = 0.5 Credits

All new and altered building elements to have the following values:

Glazing U-Factor (Vertical):	0.30
Glazing U-Factor (Overhead):	0.50
Door U-Factor:	0.30
Entire Slab:	R-10 + R10 Perimeter
Below grade walls (interior):	R-21
Below grade walls (exterior):	R-10
Above grade walls:	R-21+R4 ci
Floor Insulation:	R-38
Ceilings:	R-49 or R-38 adv
Vaulted Ceilings:	R-38



1 Site Plan
Scale: 1/8" = 1'-0"

H h L o d e s i g n
minimalist.spatial.creation

215 West Crockett Street
Seattle, Washington 98119
206.229.8082

DRAWN BY

DESIGN BY

CHECKED BY

APPROVED BY

DATE
June 29, 2022

REVISIONS
April 04, 2023 1
June 12, 2023 2
September 13, 2023 3

NM MERCER ISLAND RESIDENCE

4311 85th Ave SE
Mercer Island, Washington

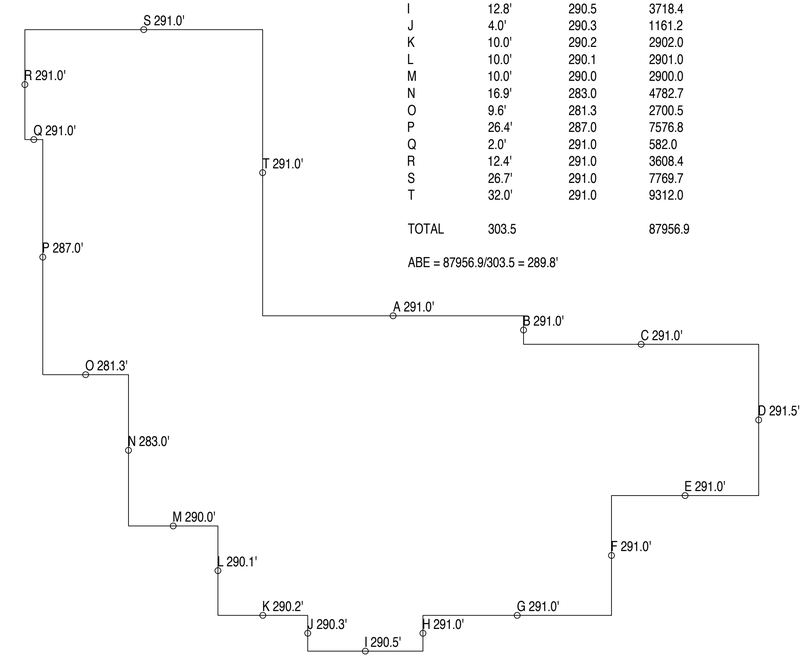
8190 REGISTERED ARCHITECT
HENRY H. LO
STATE OF WASHINGTON

Site Plan

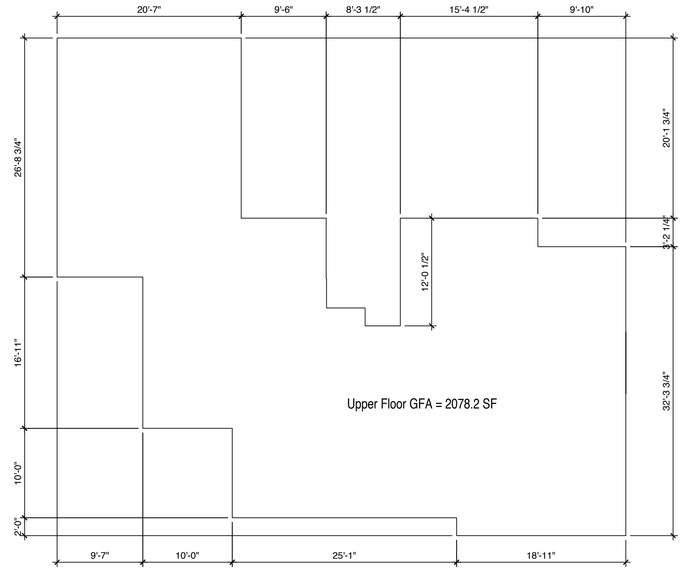
A-1.0

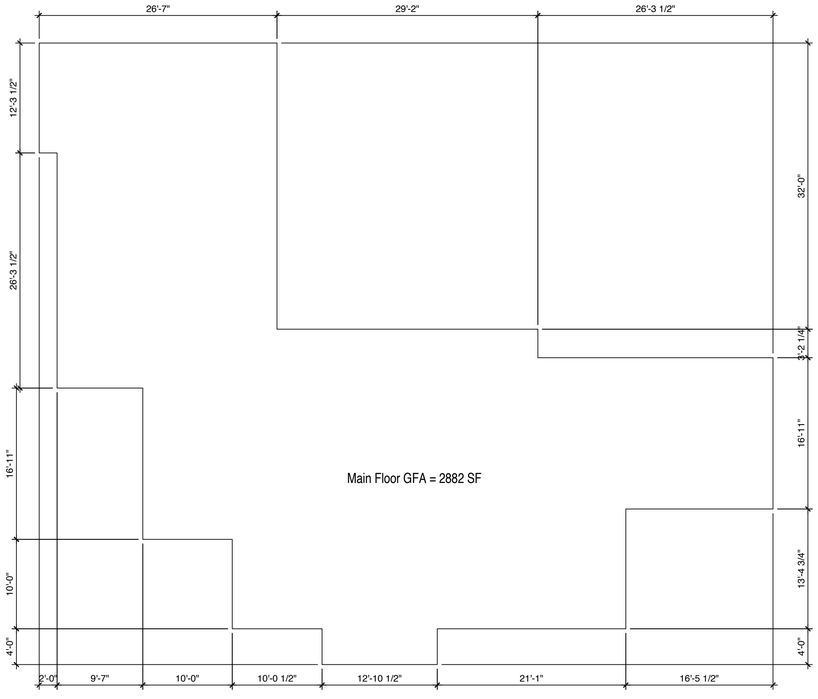
Segment	Length	Elev	Product
A	29.2'	291.0	8497.2
B	3.2'	291.0	931.2
C	26.4'	291.0	7682.4
D	16.9'	291.5	4926.4
E	16.5'	291.0	4801.5
F	13.4'	291.0	3899.4
G	21.1'	291.0	6140.1
H	4.0'	291.0	1164
I	12.8'	290.5	3718.4
J	4.0'	290.3	1161.2
K	10.0'	290.2	2902.0
L	10.0'	290.1	2901.0
M	10.0'	290.0	2900.0
N	16.9'	283.0	4782.7
O	9.6'	281.3	2700.5
P	26.4'	287.0	7576.8
Q	2.0'	291.0	582.0
R	12.4'	291.0	3608.4
S	26.7'	291.0	7769.7
T	32.0'	291.0	9312.0
TOTAL	303.5		87956.9

ABE = 87956.9/303.5 = 289.8'



2 ABE Calculation
Scale: 1/8" = 1'-0"





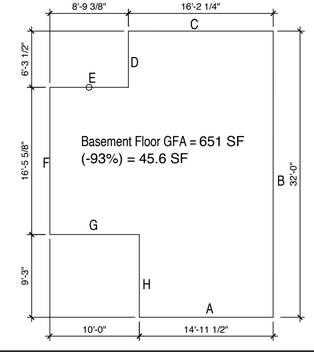
GROSS FLOOR AREA
Lot Area = 12,733 SF
Access Easement Area = 216 SF

Net Lot Area = 12,517 SF

GFA allowed = 40% = 5006.8 SF

Basement Area = 651 SF (-93%) = 45.6 SF
Main Floor Area = 2882 SF
Upper Floor Area = 2078.2 SF

Total Proposed GFA = 5005.8 SF



Segment	Length	Coverage	Result
A	15.0'	75%	11.25
B	32.0'	100%	32
C	16.2'	100%	16.2
D	6.3'	100%	6.3
E	8.6'	100%	8.6
F	16.5'	45%	16.5
G	10.0'	75%	7.5
H	9.3'	90%	8.4
TOTAL	113.9		106.8

1 GFA Calculation
Scale: 1/8" = 1'-0"

H h L o d e s i g n
minimalist.spatial.creation

215 West Crockett Street
Seattle, Washington 98119
206.229.8082

DRAWN BY

DESIGN BY

CHECKED BY

APPROVED BY

DATE
January 12, 2022

REVISIONS
September 13, 2023

NM MERCER ISLAND RESIDENCE

4311 85th Ave SE
Mercer Island, Washington

8190 REGISTERED ARCHITECT
HENRY H. LO
STATE OF WASHINGTON

Land Use Calculations

A-1.1

GENERAL NOTES

GN-1 GENERAL NOTE
All work to comply with the following current codes:
- 2018 INTERNATIONAL BUILDING CODE (IBC)
- 2018 INTERNATIONAL RESIDENTIAL CODE (IRC)
- 2018 INTERNATIONAL MECHANICAL CODE
- 2018 INTERNATIONAL FIRE CODE
- 2018 INTERNATIONAL FUEL GAS CODE (Natural Gas)
- 2018 UNIFORM PLUMBING CODE
- 2018 WASHINGTON STATE ENERGY CODE
- and all other applicable local codes

GN-2 GENERAL NOTE
All applicable codes, ordinances, and minimal structural requirements take precedence over drawings, notes, and specifications.

GN-3 GENERAL NOTE
Dimensions are to face of stud unless noted otherwise.

GN-4 GENERAL NOTE
Plumbing work and Electrical work is "Design/Build" and executed under separate permit.

EARTH WORK

EW-1 VERIFY SOIL CONDITIONS
Geotechnical Engineer shall field verify conformance of actual soil conditions with design assumptions

EW-2 GEOTECHNICAL ENGINEER SITE VISITS
General contractor is responsible for scheduling site visits by Geotechnical Engineer

EW-3 BEARING DEPTH
Extend excavation down to undisturbed soil of the specified strength with a minimu depth of 18" below finish grade

EW-4 COMPACTED FILL
Compacted fill to be well graded and granular with no more than 5% passing a 200 sieve. Place in 8: loose lifts and compact to 95% modified AASHO density at optimum moisture content.

EW-5 BACKFILL
Backfill behind all retauning walls with free draining granular fill and provide for subsurface drainage. (Subject to field review by Geotechnical Engineer)

MOISTURE PROTECTION

MP-1 (IRC R317.1)

Provide a minimum clearance of 12" between untreated beams & girders and earth

Provide a minimum clearance of 18" between untreated joists and earth

Provide a minimum of 8" clear between untreated framing members in contact concrete or masonry exterior walls and earth

All wood in contact with concrete or masonry exterior walls to be pressure treated

All sills and sleepers on concrete slab that is in direct contact with the earth to be pressure treated

All wood in direct contact with the ground or embedded in concrete shall be pressure treated

Wood siding, sheathing and framing shall have a clearance of 6" to earth and 2" from concrete steps, porch slabs, patio slabs and similar horizontal surfaces exposed to weather.

MP-2 (IRC R408) CRAWLSPACE VENTILATION
Crawlspace ground surface shall be covered with a Class 1 (0.1 per or less) vapor retarder material.
Provide 1 sf of net free vent area for each 300 sf of crawlspace area.
A vent shall be located within 3 feet of each corner.
Vents shall be protected by 1/8" minimum, 1/4" maximum non-corrosive screen.

MP-3 (IRC R806) ROOF VENTILATION
Provide 1 sf of net free vent area for each 150 sf of attic area.
Venting my be reduced to 1 sf of net free vent area for each 300 sf of attic area provided at least 50% but no more than 80% of the vent area is located in the upper portion of the roof at least 3 feet above the eave.
Vents shall be protected by 1/8" minimum, 1/4" maximum non-corrosive screen or approved soffit vents.
A minimum 1" clear air space shall be provided between the insulation and the roof sheathing through the roof.
All rafter bays to be ventilated.

FIRE PROTECTION

FP-1 (IRC R302.6) SEPARATION REQUIRED
The garage shall be separated from the residence and its attic by not less than 1/2" thick GWB on the garage side.
Garages beneath habitable rooms above by not less than 5/8" thick GWB Type X. Where the separation is a ceiling-floor assembly the structure supporting the assembly shall also be protected by not less than 1/2" thick GWB.

FP-2 (IRC R302.5) OPENING PROTECTION
Openings between garage and residence shall be protected by either
- Solid wood door not less than 1 3/8" thick, or
- Solid or honeycomb metal door not less than 1 3/8" thick, or
- 20-minute fire rated door

FP-3 (IRC R302.5.2) DUCT PENETRATION
Ducts in the garage and ducts penetrating the walls or ceiling separating the dwelling from the garage shall be a minimum of 26 gauge sheet metal and have no openings into the garage.

FP-4 (IRC R302.7) UNDER-STAIR PROTECTION
Enclosed accessible space under stairs shall have walls and under-stair-surfaces protected on the enclosed side by not less than 1/2" thick GWB.

FP-5 (IRC R314.1) SMOKE DETECTION AND NOTIFICATION
All smoke alarms shall be listed in accordance with UL 217 and installed in accordance with the provisions of the IRC and the household fire warning equipment provisions of NFPA 72.

FP-6 (IRC R314.3) SMOKE DETECTION LOCATION
Smoke alarms shall be installed in the following locations
-In each sleeping room
-Outside each separate sleeping area in the immediate vicinity of the bedrooms
-On each additional story of the building including basements and habitable attics
When more than one smoke alarm is required to be installed within an individual dwelling unit, the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual unit.

FP-7 (IRC R314.3.1) SMOKE ALARMS - ALTERATIONS, REPAIRS AND ADDITIONS
When alterations, repairs or additions requiring a permit occur, or when one or more sleeping rooms are added or created in existing dwellings, the individual dwelling unit shall be equipped with smoke alarms located as required for new dwellings.

FP-8 (IRC R314.4) SMOKE ALARM POWER SOURCE
Smoke alarms shall receive their primary power from the building and have battery backup. Wiring shall be permamnent and without disconnecting switch other than those required for overcurrent protection

FIRE PROTECTION cont'd.

FP-9 (IRC R315.1) CARBON MONOXIDE ALARMS
For new construction, an approved carbon monoxide alarm shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms in dwelling units within which fuel-fired appliances are installed and in dwelling units that have attached garages.

FP-10 (IRC R315.3) CARBON MONOXIDE ALARM REQUIREMENTS
Single station carbon monoxide alarms shall be listed as complying with UL 2034 and shall be installed in accordance with this code and the manufacturer's installation instructions.

FP-11 (IRC R302.11) FIREBLOCKING REQUIRED
Fire blocking is required in the following locations.

-In concealed spaces of stud walls and partitions including furred spaces, parallel rows of studs, staggered studs as follows:
Vertically at ceiling and floor levels
Horizontally at intervals not exceeding 10 feet
-At all interconnections between consealed vertical and horizontal spaces such as soffits, dropped ceilings, and coved ceilings
-In concealed spaces between stair stringers at the top and bottom of the run.
-At openings around vents, pipes, ducts, cables, and wire at ceiling and floor level
-At fireplaces & chimneys per IRC R1003.19
-Fireblocking cornices of a 2-family dwelling is required at the line of dwelling unit separation

SAFETY AND SECURITY

SS-1 (IRC R308.4) SAFETY GLAZING - HAZARDOUS LOCATIONS
Provide safety glazing in the following locations

- Glazing in swinging doors

- Glazing in fixed and sliding panels of sliding door assemblies and panels in sliding and bifold closet door assemblies

- Glazing in storm doors

-Glazing in unframed swinging doors

- Glazing in door or enclosure for hot tub, whirlpool, sauna, steam room, bathtub, and shower. Glazing in any part of the a building wall enclosing these where the the bottom edge of the glazing is less than 60" above a standing or walking surface.

- Glazing in an individual fixed or operable panel adjacent to a door where the nearest vertical edge is within a 24" arc of the door in a closed position AND whose bottom edge is less than 60" from the floor or walking surface

- Glazing that meets all of the following conditions

  Exposed area of an individual pane larger than 9 sf
  Bottom edge less than 18" above the floor
  Top edge more than 36" above the floor
  Walking surface within 36" horizontally of the glazing

-All glazing in railings (regardless of area or height)

-Glazing in walls and fences enclosing swimming pools, hot tubs, spas where the bottom edge is less than 60" above walking surface and within 60" horizontally of the water's edge.

-Glazing adjacent to stairways, landings, and ramps within 36" horizontally of a walking surface when the exposed surface of the glass is less than 60" above the the plane of the adjacent walking surface

-Glazing adjacent to stairways within 60" horizontally of the bottom tread in any direction when the exposed surface of the glass is less than 60" above the nose of the tread

(SEE CODE SECTION FOR LIMITED LIST OF EXCEPTIONS)

SS-2 (IRC R310.1.1,2,3,4) EMERGENCY ESCAPE (EGRESS)
Emergency escape opening shall have a minimum net clear opening of 5.7 sf
Grade floor openings shall have a minimum net clear opening of 5.0 sf

- Emergency escape opening shall have a minimum net clear opening height of 24"
- Emergency escape opening shall have a minimum net clear opening width of 20"
- Emergency escape opening shall have a maximum sill height of 44"

SS-3 (IRC R311.2) EXIT DOOR
Not less than one exit door shall be provided.
Minimum size of 3'-0" x 6'-8"

SS-4 (IRC R311.7) STAIRWAYS
WIDTH
Stairway width shall be no less than 36" in clear width above the handrail height and below the required headroom height, handrails may project no more than 4.5" on either side of the stairway

HEADROOM
The minimum headroom of all parts of the stairway shall be no less than 6'-8" measured vertically from the sloped plane adjoining the tread nosings

RISER HEIGHT
The maximum riser height is 7-3/4"
The maximum discrepancy between tallest & shortest risers shall not exceed 3/8"

TREAD DEPTH
The minimum tread depth is 10" measured from nosing projection to nosing projection
The maximum discrepancy between widest & narrowest treads shall not exceed 3/8"

NOSING
Provide a nosing not less than 3/4" but not more than 1-1/4" wide on stairways with solid risers.

HANDRAIL
A continuous handrail is required on at least one side of each continuous run of treads or flight with 4 or more risers

HANDRAIL HEIGHT
Not less than 34" or more than 38" above the sloped plan adjoinging the tread nosings

HANDRAIL CONTINUITY
Handrail shall be continuous for the full length of the flight from a point ditectly above the top riser to a point directly above the bottom riser. Handrails shall be returned to the wall or terminate in a newel post or safety terminus.

HANDRAIL SPACE
There shall be a space of no less than 1-1/2" between handrail and adjacent wall surface.

HANDRAIL GRIP SIZE
Handrails with a circular cross section shall have an outside diameter of at least 1-1/4" and no more than 2". If the handrail is not circular it shall have a perimeter dimension of at least 4" and not more than 6-1/4" with a maximum cross section dimension of 2-1/4"
(See code for additional options)

SS-5 (IRC R312) GUARDS
Porches, balconies, ramps, and raised floor surfaces more than 30" above the floor or grade below shall have a guard not less than 36" in height.
Open side of stairs with a total rise of 30" or more shall shall have guards a minimum height of 34" above nosings.
Guards shall have intermediate rails or balusters spaced so as not to allow the passing of a 4" diameter sphere.
Contractor shall verify to inspector that all guards and railings shall be capable of resisting 200 lb. lo0ad on top rail acting in any direction as required by
IRC Table R301.5.

BATHROOM NOTES

BN-1 (2018 IRC 307.1) SPACE REQUIREMENTS
Toilet - Minimum 15" clear each side, Minimum 21" clear in front of bowl
Vanity - Minimum 21" clear in front
Shower - Minimum 30" x 30", 24" clear in front of opening

BN-2 (2018 IRC 307.2) TUB & SHOWER WALLS
Bathtub and shower floors and walls above bathtubs with shower heads shall be finished with a non-absorbant surface to a height of at least 6 feet above the floor.

ENERGY CODE

EC-1 CODE
All work to comply with 2018 WSEC

EC-2 (2018 R402) BUILDING ENVELOPE REQUIREMENTS

Climate Zone 4C - King County
Compliance Path: Mandatory plus Prescriptive

Table 402.1.1

Glazing U-Factor (Vertical):	0.30
Glazing U-Factor (Overhead):	0.50
Door U-Factor:	0.20
Entire Slab:	R-10
Below grade walls (interior):	10/15/21 int + TB
Below grade walls (exterior):	10/15/21 int + TB
Above grade walls:	R-21
Floor Insulation:	R-30
Ceilings:	R-49 or R-38 adv
Vaulted Ceilings:	R-38

See Table 402.1.1 for footnotes

EC-3 (2018 R406) ADDITIONAL ENERGY EFFICIENCY REQUIREMENTS
Dwelling units shall comply with all provisions of WSEC Chapter 4 and shall comply with sufficient options from Table R406.2 so as to achieve the at least the minimum number of Energy Credits as required (WSEC R406.2).

EC-4 (2018 R402.2.4) ACCESS HATCHES & DOORS
Access hatches from conditioned spaces to crawlspaces and attics shall be weatherstripped and insulated to a level equivalent to the surrounding surfaces

EC-5 (2018 R303.1.3) FENESTRATION (DOOR & WINDOW) U-FACTOR LABELS
All products shall be identified with NFRC labels Indicating U-value, SHGC (or VT).

EC-6 (2018 402.4.1.1) AIR BARRIER
A continuous air barrier shall be installed in the building envelope. Breaks or joints in the barrier shall be sealed.
Air-permeable insulation shall not be uses as a sealing material.

EC-7 GROUND COVER
A ground cover of 6 mil black polyethelyene, Class 1 (0.1 per or less), vapor retarder material shall be installed over the ground in crawlspaces. Joints should be lapped 12" and the ground cover should extend to the foundation walls.
Gound cover can be omitted if crawlspaces have a concrete slab with a minimum thickness of 3-1/2"

EC-8 (2018 R402.4.3) AIR LEAKAGE OF FENESTRATION
Exterior doors and windows shall be constructed to limit air leakage and be fitted with weatherstripping. Joints around door and window frames, openings between walls and foundations, between walls and roof, and any other penetrations shall be sealed, caulked, gasketed, or weatherstripped to prevent air leakage. Windows, skylights and sliding glass doors shall have an air infiltration rate of not more than 0.3 cfm per square foot, and swinging doors no more than 0.5 cfm per square foot, and be listed and labeled by the manufacturer

EC-9 (2018 R402.4.4) RECESSED LIGHTING
Recessed light cans installed in the building envelope shall be Type IC rated and certified under ASTM 283 to have no more than 2.0 cfm air movement into the unconditioned cavity. They shall be installed with a gasket or caulk between the frame and the ceiling to prevent air leakage

EC-10 (2018 503.4) EQUIPMENT PERFORMANCE
All heating equipment shall meet the requirements of the National Appliance Energy Conservation Act and be so labeled and compy with Section 1411.

EC-11 (2018 R403.5) MECHANICAL VENTILATION
Mechanical ventilation system fans shall meet the efficacy requirements of Table R403.5.1

EC-12 (2018 R403.1) CONTROLS
Provide a programmable thermostat for regulation of temperature. Thermostat shall allow for a 5-2 programmable schedule (weekdays/weekends) and be capable of providing at least two programmable setback periods per day.

EC-13 (2018 R403.2) DUCTS
Ducts within or partial exposed to unconditioned spaces shall be insulated to a minimum of R-8 (WSEC R403.2.1).
Framing cavities shall not be used as ducts or plenums. Installation of ducts in exterior walls shall not displace required envelope insulation (WSEC R403.2.3)

EC-14 (2018 R403.2.2) SEALING OF MECHANICAL SYSTEM
Ducts, air handlers, and filter boxes shall be sealed. Ducts shall be leak tested in accordance with the provisions of 2012 WSEC R403.2.2

EC-15 (2018 R403.2.2) DUCT LEAKAGE TEST
Duct leakage test results shall be provided to the building inspector and homeowner prior to an approved final inspection. A signed affidavit documenting the duct leakage test results shall be provided to the building inspector prior to an approved final inspection.

EC-16 (2018 R403.3) MECHANICAL SYSTEM PIPING
Mechanical system piping capable of carrying fluids above 105 deg. F shall be insulated to a minimum of R-6.

EC-17 (2018 R40.3.4.2) HOT WATER PIPE INSULATION
Insulation for hot water pipes shall have a minimum thermal resistance of R-4.

EC-18 (2018 R403.4.3) ELECTRIC WATER HEATER INSULATION
Electric water heaters in unconditioned space or on concrete floors shall be placed on an incompressible insulated surface with a minimum R-10.

EC-19 (2018 R404.1) LIGHTING EQUIPMENT
A minimum of 75 percent of permanently installed lamps in lighting fixtures shall be high efficacy lamps.

EC-20 (2018 402.4.1.2) AIR LEAKAGE TESTING
The building or dwelling shall be tested and verified to have an air leakage rate not exceeding 5 air changes per hour. Testing shall be conducted with a blower door at a pressure of 0.2 inches w.g. Where required by the building official testing shall be conducted by an approved third party. Testing shall be performed any time after creation of all penetrations in the building thermal envelope. The test results shall be posted on the Residential Energy Compliance Certificate.

EC-21 (2018 401.3) ENERGY COMPLIANCE CERTIFICATE
A Residential Energy Compliance Certificate complying with SEC 105.4 is required to be completed by the design professional or builder and permanently posted within 3'-0" of the electrical panel prior to inspection.

EXHAUST SYSTEMS CODE

VC-1 CODE
All work to comply with International Residential Code (IRC), Chapter 15, Exhaust Systems

VC-2 (IRC Section M1507) MECHANICAL VENTILATION
Source Specific Exhaust Fans
- Exhaust fans providing source specific ventilation shall have a minimum fan flow rating not less than 50 cfm at 0.25 inches water gauge for bathrooms, laundries, or similar rooms and 100 cfm at 0.25 inches water gauge for kitchens.
- Source specific ventilation systems shall be controlled by manual switches, dehumidistats, timers, or other approved means.
- Source specific ventilation ducts shall terminate outside the building. Exhaust ducts shall be equipped with backdraft dampers. All ducts in unconditioned spaces shall be insulated to a minimum of R-8.

VC-3 (IRC Section M1507.3) WHOLE HOUSE VENTILATION
Intermittent Whole House Ventilation Integrated with a Forced-Air System
- Integrated whole house ventilation systems shall provide outdoor air at the rate calculated using Section M1507.3.3,4
- Integrated forced-air ventilation systems shall distribute outdoor air to each habitable room through the forced-air system ducts.
- Integrated forced-air ventilation systems shall have an outdoor air inlet duct connecting a terminal element on the outside of the building to the return air plenum of the forced air system at a point within 4 feet upstream of the air handler.
- The outdoor air inlet duct connection to the return air stream shall be located upstream of the forced-air system blower and shall not be connected directly into a furnace cabinet to prevent thermal shock to the heat exchanger.
- The system shall be equipped with a motorized damper connected to the automatic ventilation control as specified in Section M1508.5.2. The required flow rate shall be verified by field testing with a flow hood or a flow measuring station.
Controls
- The whole house ventilation system shall be controlled by a 24-hour clock timer with the capability of continuous operation, manual and automatic control. At the time of final inspection the automatic control timer shall be set to operate the whole house system for at least 8 hours a day. A label shall be affixed to the control that reads "WHOLE HOUSE VENTILATION - See operating instructions"

MECHANICAL WORK

MW-1 (IRC M1307.2) WATER HEATER ANCHORAGE
Water heater shall be strapped at points within the upper 1/3 and lower 1/3 of the appliance. Strapping shall be a minimum of 4" above the controls.

MW-2 (IRC M1307.3) ELEVATION OF IGNITION SOURCE
Appliances having an ignition source shall be elevated such that the source of the ignition is not less than 18" above the floor.

MW-3 (IRC M1307.3.1) PROTECTION FROM IMPACT
Appliances located in the garage shall be protected from impact by approved barriers.

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DATE
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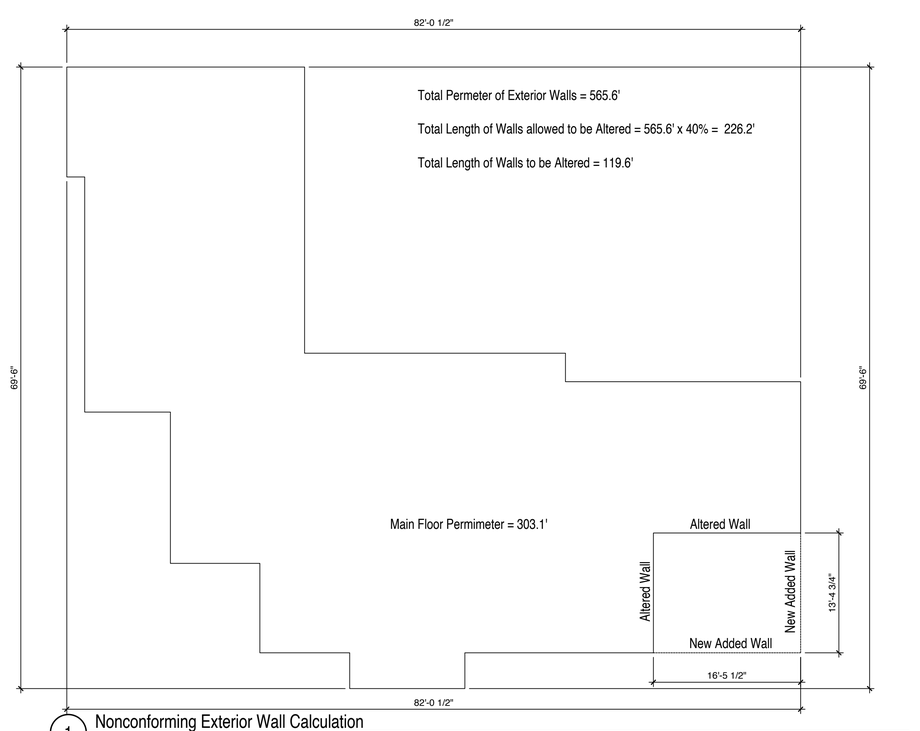
NM MERCER ISLAND RESIDENCE

4311 85th Ave SE
Mercer Island, Washington

8190 REGISTERED ARCHITECT
HENRY H. LO
STATE OF WASHINGTON

General Notes

A-1.2



1 Nonconforming Exterior Wall Calculation

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

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Land Use Calculations

A-1.3

FLOOR PLAN LEGEND

SEE A-01 FOR GENERAL LEGEND

SYMBOL	DESCRIPTION	REMARKS
(cfm)	EXHAUST FAN	Vent to exterior
SA	SMOKE DETECTOR	See General Notes FP-5, FP-6 and FP-7
CM	CO2 DETECTOR	
	EXISTING WALLS (to remain)	2x studs @ 16" O.C.
	EXISTING WALLS (to be demolished)	all non-bearing
	NEW WALL	2x6 @ 16" O.C. (exterior) 2x4 @ 16" O.C. (interior U.N.O.)
	NEW SOUND WALL	

Crawlspace Ventilation Calculation

Total Square Feet of Crawlspace = 1393 SF

Ventiltation required = 1393 / 150 = 9.3 SF = 1337.3 Square Inches

18" x 6" Ventilation Openings used = 1337.3 / 84 SI = 16 Vents Required

1

1 Basement Floor Plan - Option 1.2

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

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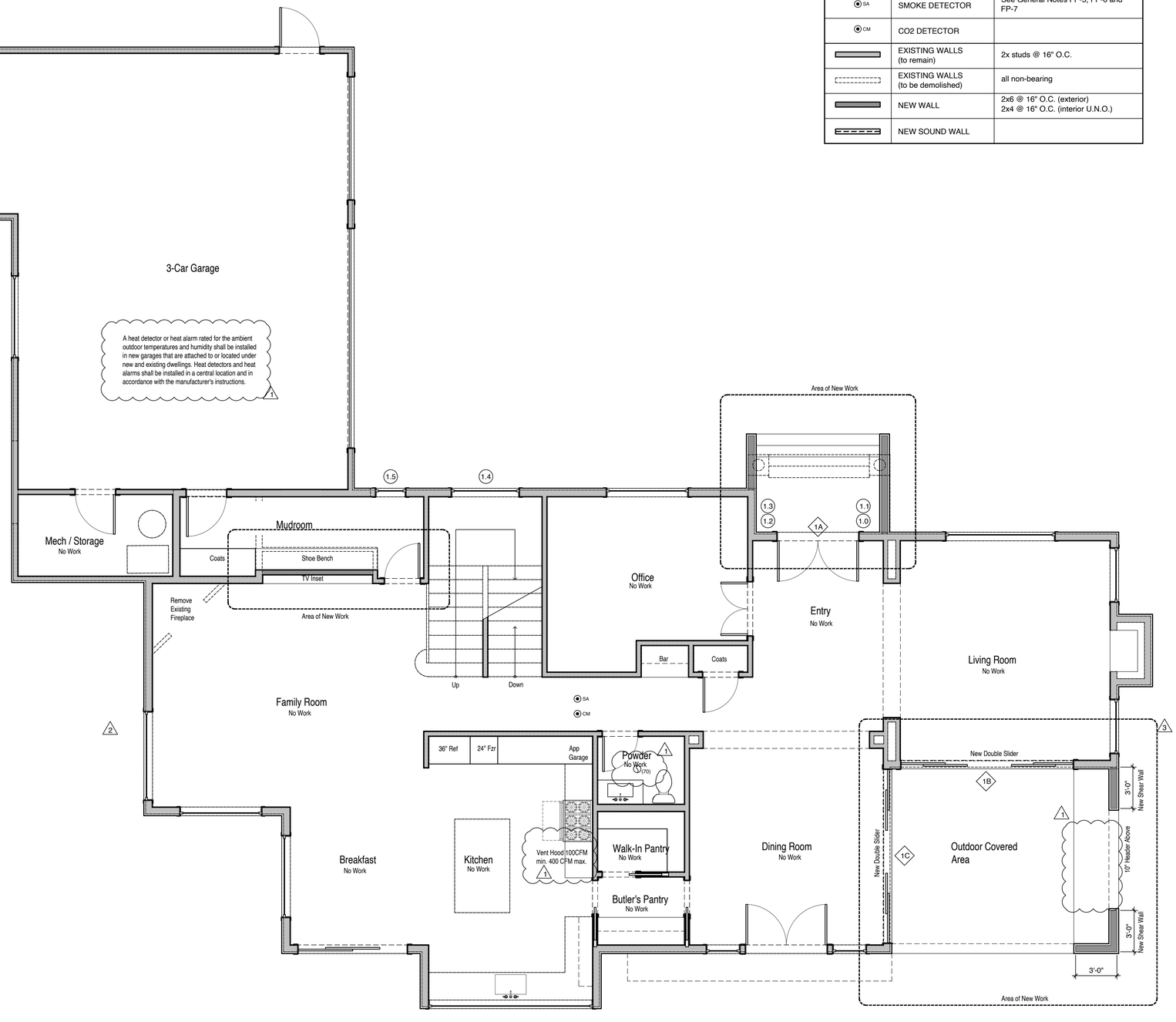
Lower Floor Plan

A-2.0

FLOOR PLAN LEGEND

SEE A-01 FOR GENERAL LEGEND

SYMBOL	DESCRIPTION	REMARKS
(cfm)	EXHAUST FAN	Vent to exterior
SA	SMOKE DETECTOR	See General Notes FP-5, FP-6 and FP-7
CM	CO2 DETECTOR	
	EXISTING WALLS (to remain)	2x studs @ 16" O.C.
	EXISTING WALLS (to be demolished)	all non-bearing
	NEW WALL	2x6 @ 16" O.C. (exterior) 2x4 @ 16" O.C. (interior U.N.O.)
	NEW SOUND WALL	



TRUE NORTH

1 Main Floor Plan - Option 1.2

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

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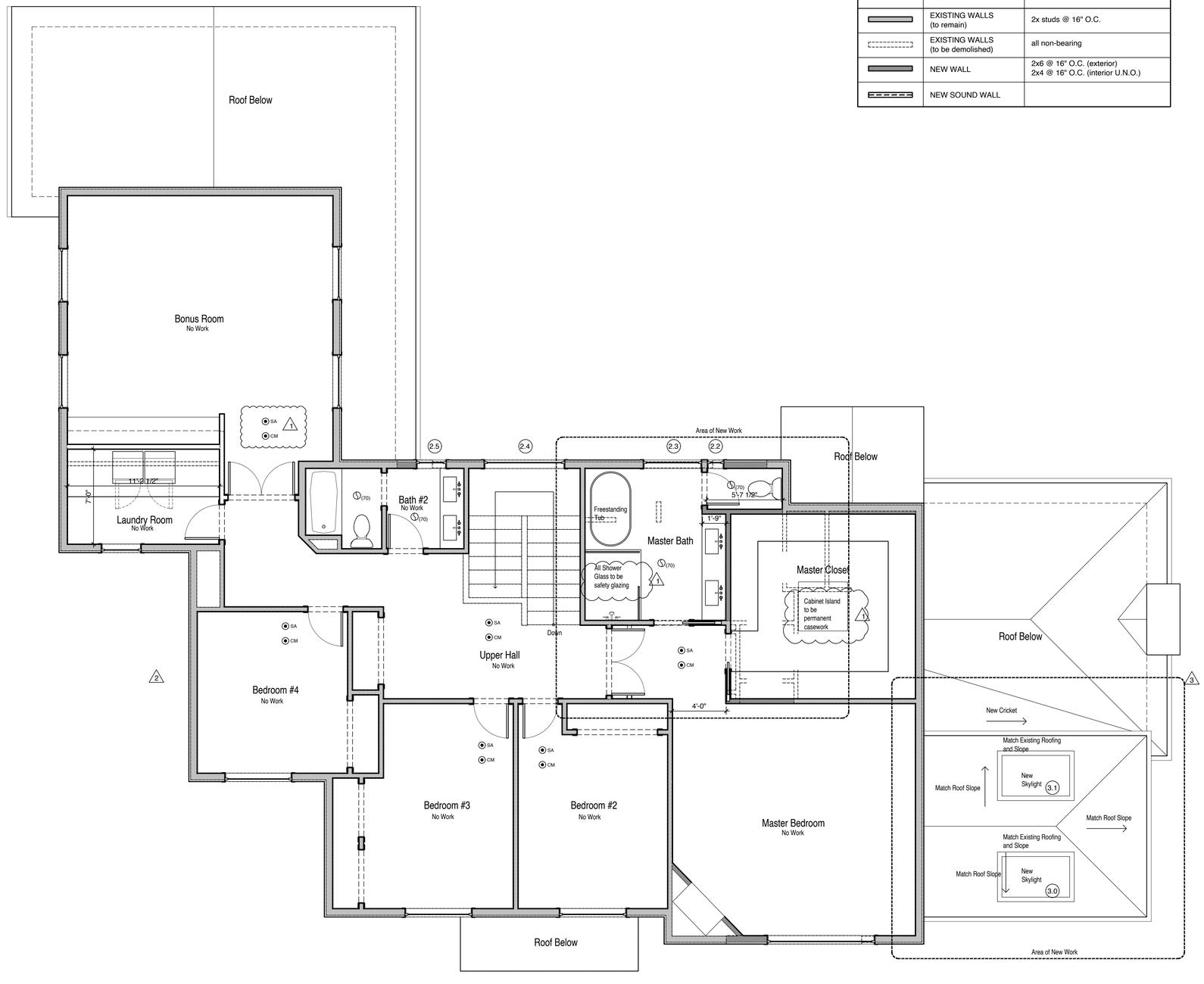
Main Floor Plan

A-2.1

FLOOR PLAN LEGEND

SEE A-01 FOR GENERAL LEGEND

SYMBOL	DESCRIPTION	REMARKS
(cfm)	EXHAUST FAN	Vent to exterior
SA	SMOKE DETECTOR	See General Notes FP-5, FP-6 and FP-7
CM	CO2 DETECTOR	
	EXISTING WALLS (to remain)	2x studs @ 16" O.C.
	EXISTING WALLS (to be demolished)	all non-bearing
	NEW WALL	2x6 @ 16" O.C. (exterior) 2x4 @ 16" O.C. (interior U.N.O.)
	NEW SOUND WALL	



1 Upper Floor Plan - Option 1.2

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

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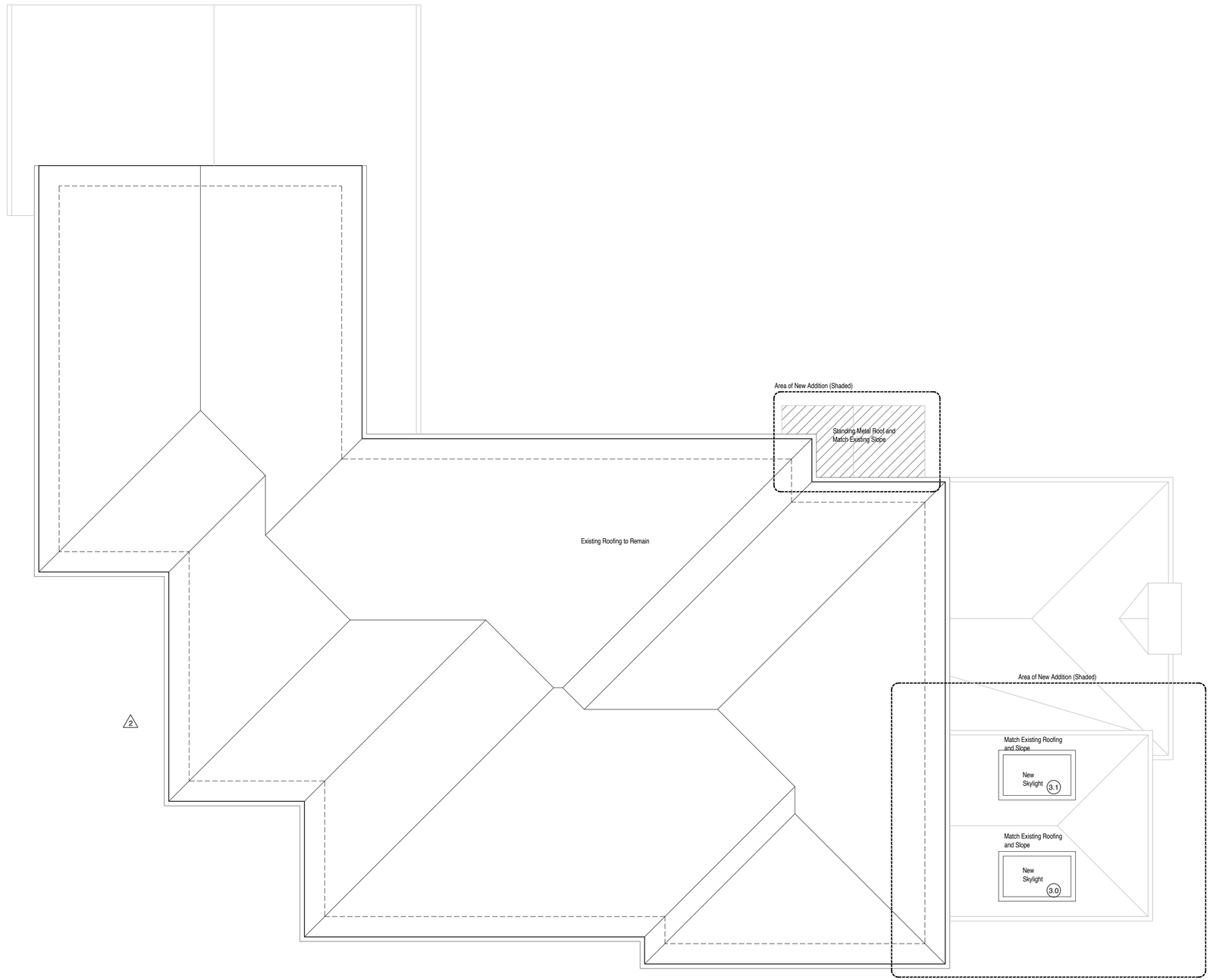
Upper Floor Plan

A-2.2



1 Roof Plan - Option 1.2

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

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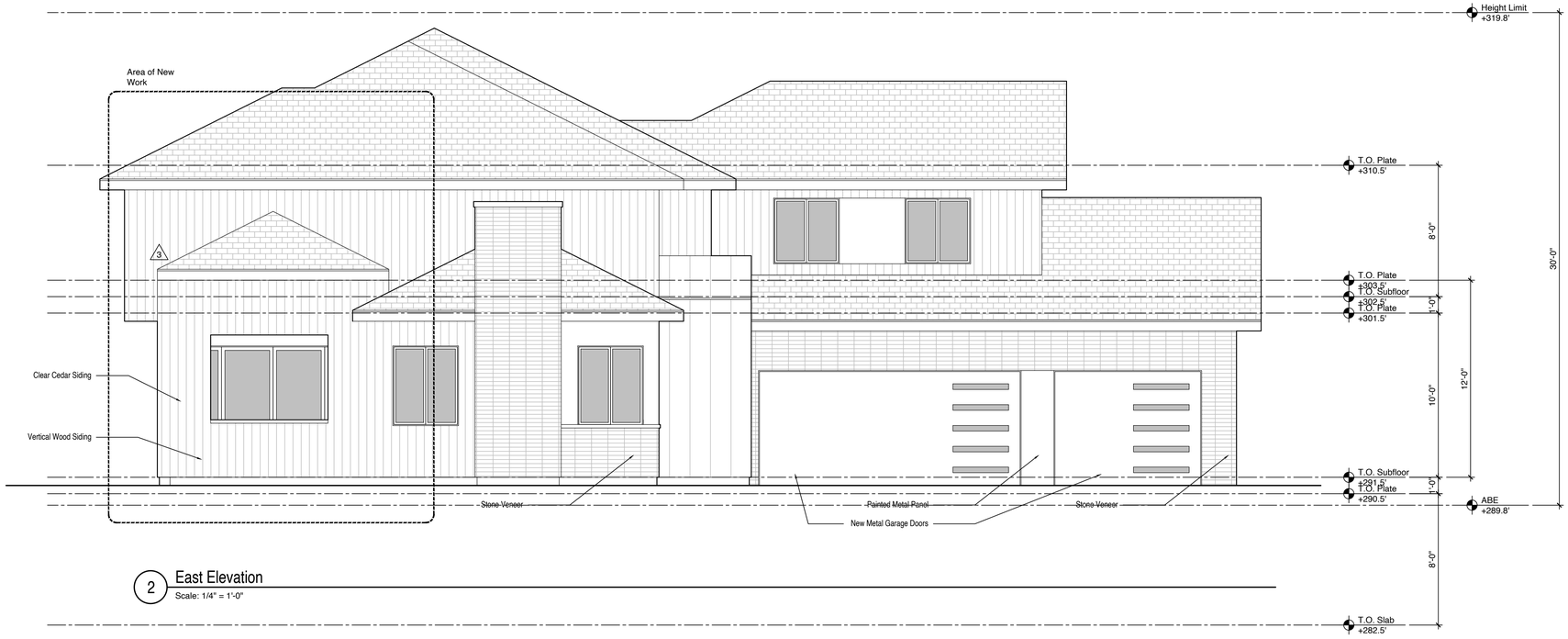
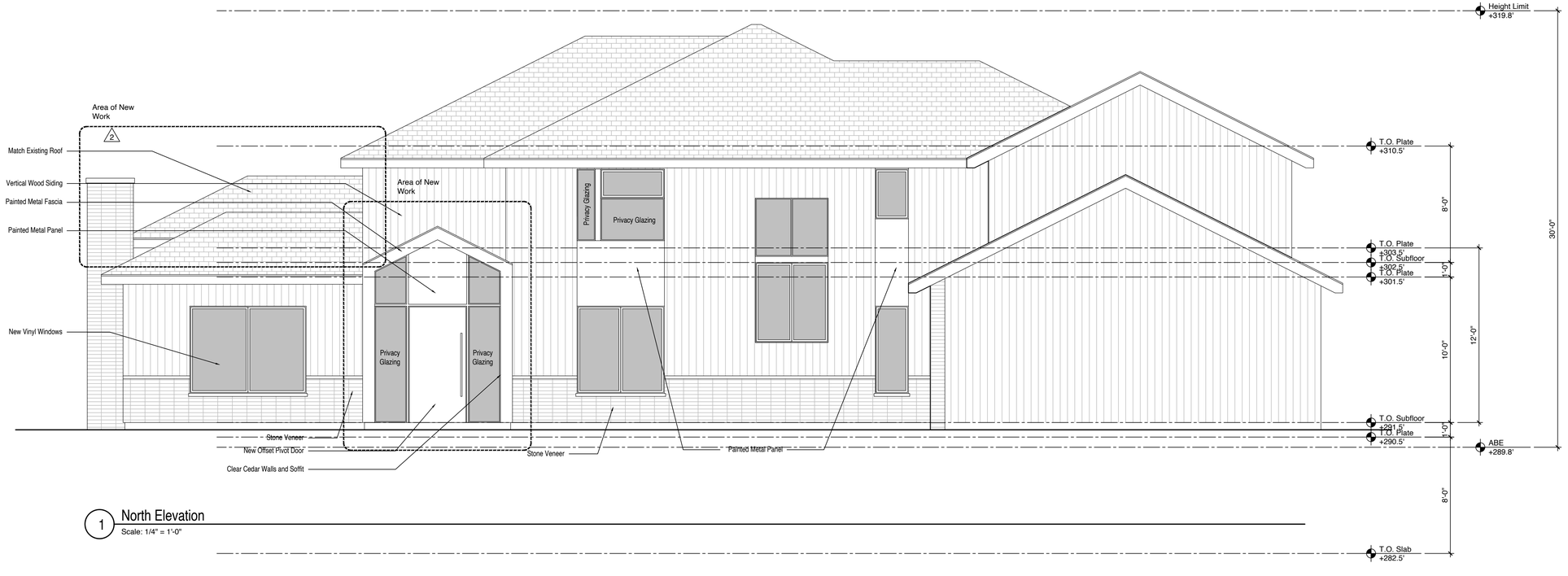
Roof Plan

A-2.3



2 East Elevation

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



1 North Elevation

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

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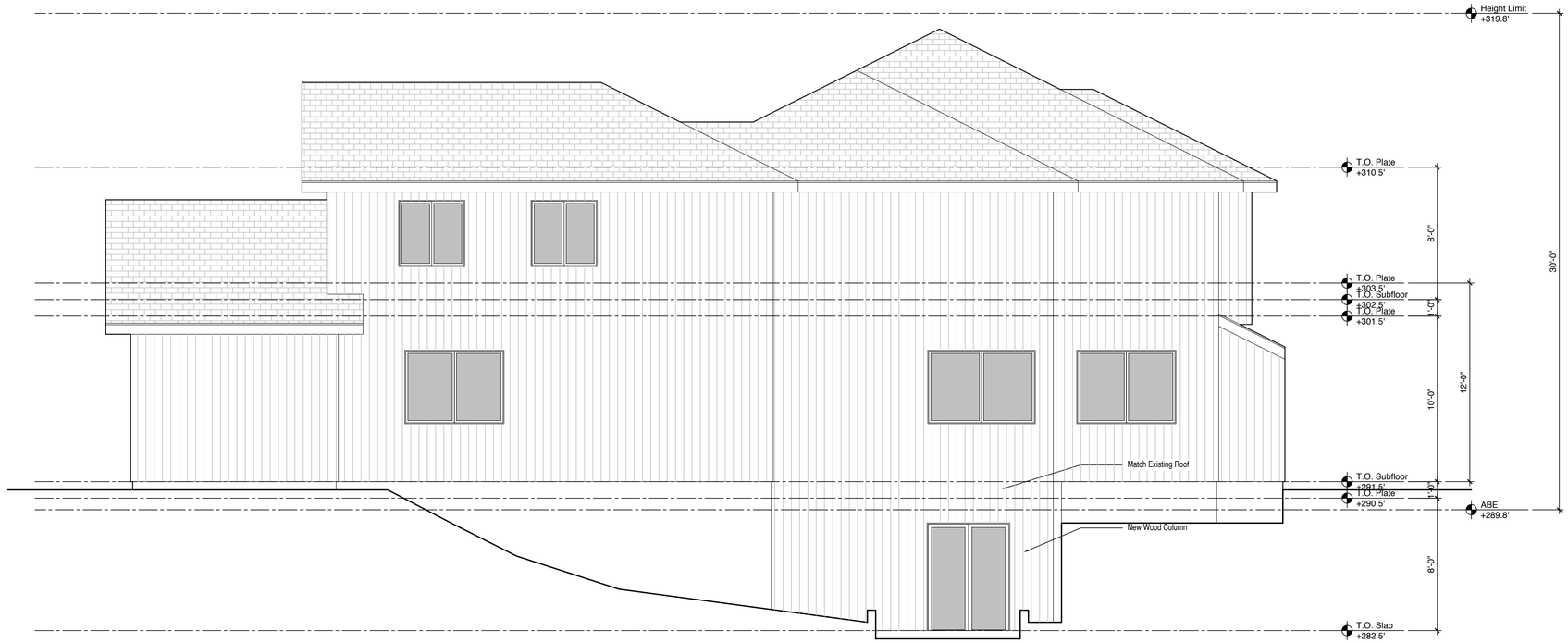
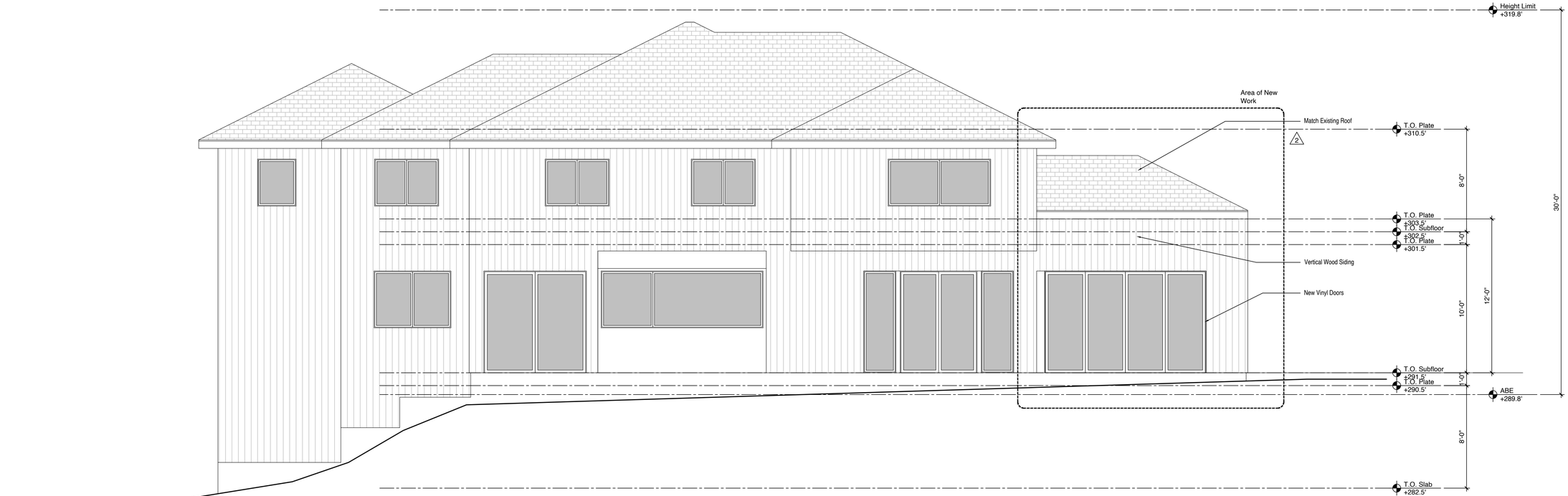
Elevations

A-3.0



2 West Elevation

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



1 South Elevation

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

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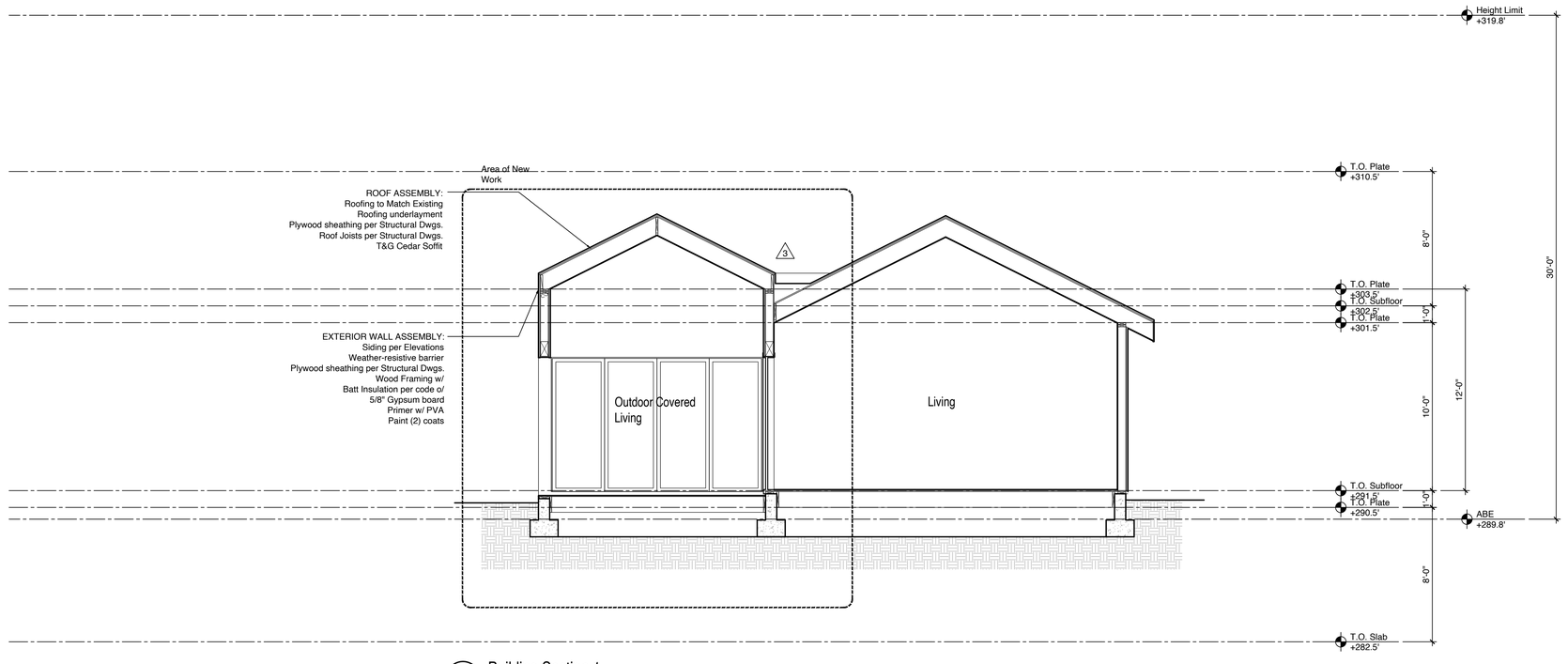
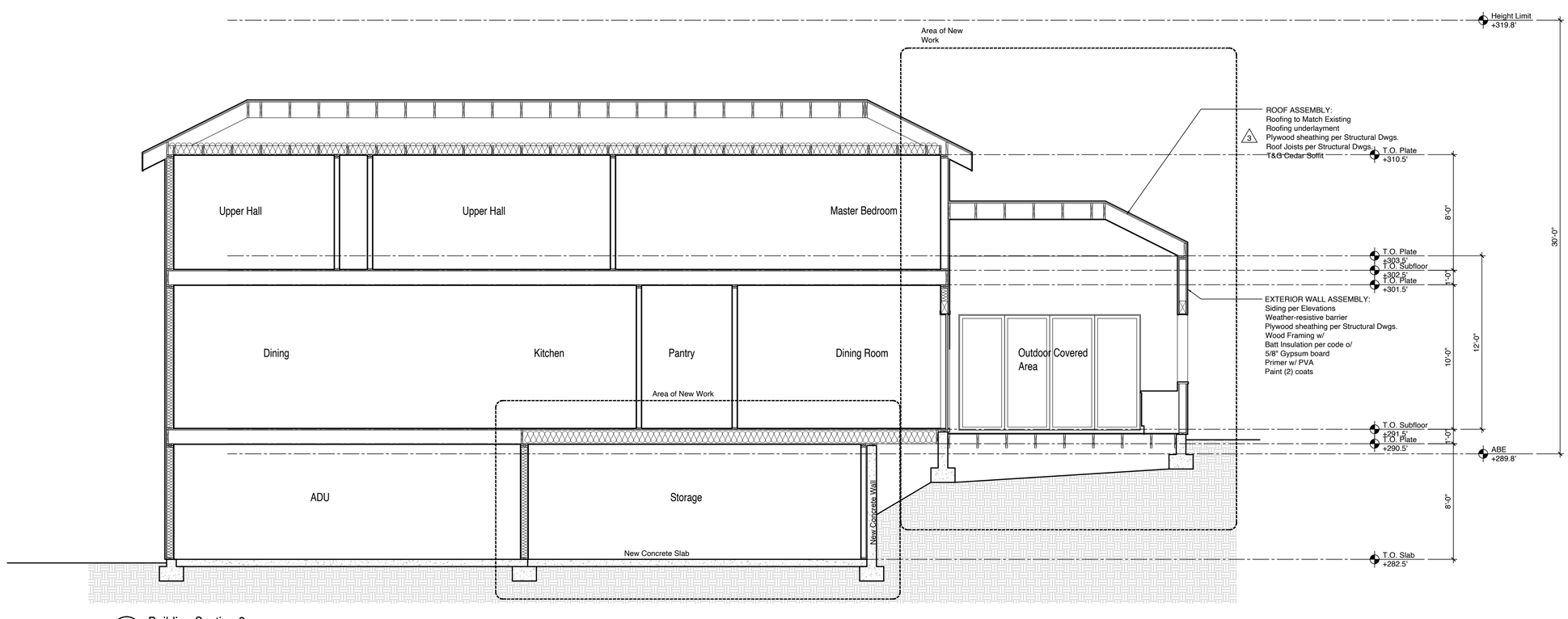
Elevations

A-3.1



1 Building Section 1

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



2 Building Section 2

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

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Sections

A-4.0

EXTERIOR DOOR SCHEDULE

SYMBOL	LOCATION	ROOM	DIAGRAM	TYPE	SIZE	AREA	FINISH	U	REMARKS
1A	Entry	-	1A below	Inswing	1-3/4" x See diagram		Stained Wood	NA	Offset Pivot
1B	Living Room	-	1B Below	Double Slider	1-3/4" x See diagram		Aluminum Clad	0.30	Safety Glazing
1C	Dining Room	-	1B Below	Double Slider	1-3/4" x See diagram		Aluminum Clad	0.30	Safety Glazing

WINDOW DIAGRAM NOTES
1. Windows are shown from the exterior side.

2. General Contractor to confirm all rough opening sizes and installation requirements with manufacturer prior to order.

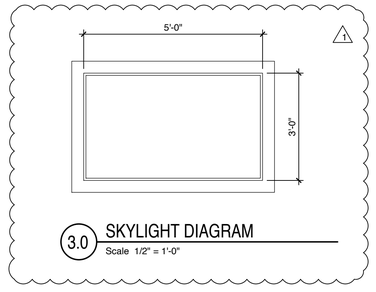
3. Manufacturer to review installation locations and confirm safety glazing requirements.

4. Manufacturer to review installation locations and confirm designated units meet egress requirements.

5. Install units per all manufacturer's recommendations.

6. All exterior doors and windows to comply with security requirements of 2018 IRC Section R329

7. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR APPROVAL BY ARCHITECT PRIOR TO FABRICATION.



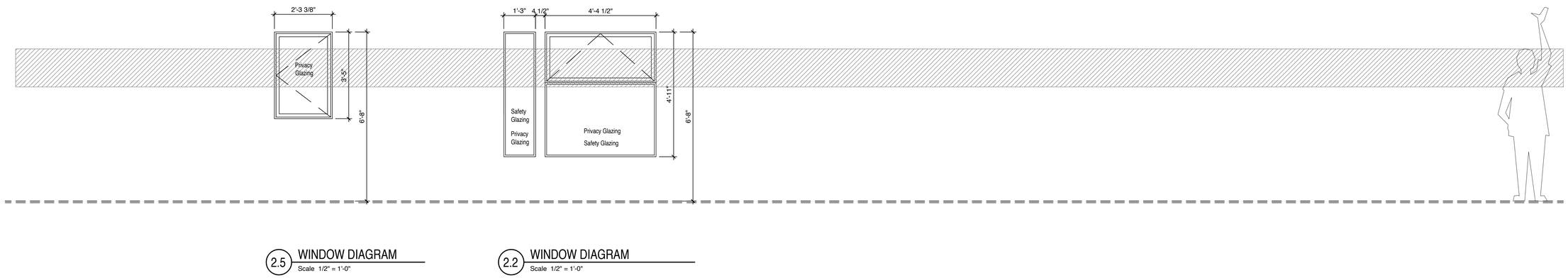
3.0 SKYLIGHT DIAGRAM
Scale 1/2" = 1'-0"

WINDOW SCHEDULE - Lower Level / Main Level

SYM	LOCATION	ROOM	DIAGRAM	TYPE	SIZE	AREA	FINISH	U	REMARKS
1.0	Entry	-	1.0 below	Picture	See diagram		Aluminum Clad / Ptd.	0.30	
1.1	Entry	-	1.0 below	Picture	See diagram		Aluminum Clad / Ptd.	0.30	
1.2	Entry	-	1.0 below	Picture	See diagram		Aluminum Clad / Ptd.	0.30	
1.3	Entry	-	1.0 below	Picture	See diagram		Aluminum Clad / Ptd.	0.30	
1.4	Stairwell	-	1.4 below	Double Casement	See diagram		Aluminum Clad / Ptd.	0.30	
1.5	Mudroom	-	1.5 below	Casement	See diagram		Aluminum Clad / Ptd.	0.30	
2.2	Master Bath	-	2.2 below	Picture/Awning	See diagram		Aluminum Clad / Ptd.	0.30	
2.3	Master Bath	-	2.2 below	Picture	See diagram		Aluminum Clad / Ptd.	0.30	
2.4	Stairwell	-	1.4 below	Picture	See diagram		Aluminum Clad / Ptd.	0.30	
2.5	Bath #2	-	2.5 below	Casement	See diagram		Aluminum Clad / Ptd.	0.30	

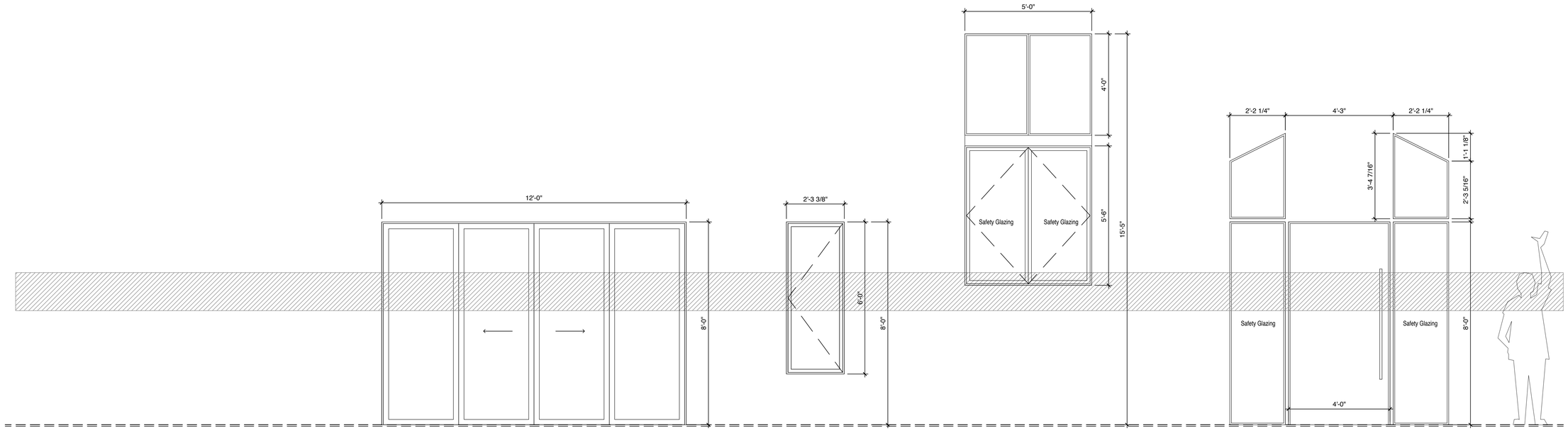
SKYLIGHT SCHEDULE

SYM	LOCATION	ROOM	DIAGRAM	TYPE	SIZE	AREA	FINISH	U	REMARKS
3.0	Sunroom	-	3.0 below	Picture	See diagram		Aluminum Clad / Ptd.	0.50	Laminated Glazing
3.1	Sunroom	-	3.0 below	Picture	See diagram		Aluminum Clad / Ptd.	0.50	Laminated Glazing



2.5 WINDOW DIAGRAM
Scale 1/2" = 1'-0"

2.2 WINDOW DIAGRAM
Scale 1/2" = 1'-0"



1B DOOR DIAGRAM
Scale 1/2" = 1'-0"

1.5 WINDOW DIAGRAM
Scale 1/2" = 1'-0"

1.4 WINDOW DIAGRAM
Scale 1/2" = 1'-0"

1.0 WINDOW DIAGRAM
Scale 1/2" = 1'-0"

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NM MERCER ISLAND RESIDENCE

4311 85th Ave SE
Mercer Island, Washington

8190 REGISTERED ARCHITECT
HENRY H. LO
STATE OF WASHINGTON

Window and Door Schedules

A-5.0

SFR REMODEL - ADDITION

SITE NAME:

MERCER ISLAND (NM) RESIDENCE
(STRUCTURAL)

VICINITY MAP

SCALE: (NTS)

COUNTY:
KING COUNTY

ZONING:
R-9.6

SITE PARCEL NUMBER:
182405-9138

LEGAL DESCRIPTION:
LOT A MERCER ISLAND LLR # 99-1353 REC #20010522900002 SD LLR BEING POR SW 1/4 OF NW 1/4 LY BETWEEN 84TH AVE SE & 86TH AVE SE

OWNER:
PANG NGERNSUPALUCK & TOM MULCAHY
4311 85TH AVE SE
MERCER ISLAND, WA 98040

ARCHITECT:
HENRY LO
HHLO DESIGN
215 W. CROCKETT ST.
SEATTLE, WA 98119

ENGINEER:
KOLBY BURKE, PE, SE
BURKE CONSULTING ENGINEERS, INC.
(925)639-5512
kolby.burke@burke-engineers.com

PROJECT INFORMATION

NEW (TWO-STORY) ADDITION TO EXISTING SINGLE-FAMILY RESIDENCE.

PROJECT DESCRIPTION

SHEET	DESCRIPTION	SHEET	DESCRIPTION
T-1	TITLE SHEET		
T-2	GENERAL STRUCTURAL NOTES		
T-3	GENERAL STRUCTURAL NOTES		
S-1	FDTN & LOWER FLR FRAMING		
S-2	LOWER FLR WALL FRAMING		
S-3	UPPER FLR FRAMING		
S-4	UPPER FLR WALL FRAMING		
S-5	ROOF FRAMING PLAN		
SD-1	STRUCTURAL DETAILS		
SD-2	STRUCTURAL DETAILS		

SHEET INDEX

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF ALL GOVERNING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUCTED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

CODE COMPLIANCE

KOLBY KEVIN BURKE
STATE OF WASHINGTON
55484
STRUCTURAL ENGINEER
PROFESSIONAL ENGINEER
6/29/22

BURKE CONSULTING ENGINEERS
KOLBY BURKE
kolby.burke@burke-engineers.com
(925) 639-5512

REV	DATE	DESCRIPTION	BY
1	-	-	-

PROJECT
MERCER ISLAND (NM) RESIDENCE
4311 85TH AVENUE SE
MERCER ISLAND, WA 98040

PROJECT NO.
22-014

SHEET TITLE
TITLE SHEET

SHEET
T-1

PROJECT AND SITE INFORMATION:

PROJECT NAME: MERCER ISLAND (NM) RESIDENCE
PARCEL NUMBER: 182405-9138
CLIENT NAME: PANG NSERNGPALUCK & TOM MULCAHY
SITE LOCATION: 4311 85TH AVE SE
MERCER ISLAND, WA 98040

PROJECT DESCRIPTION:

NEW TWO-STORY ADDITION TO EXISTING SINGLE-FAMILY RESIDENCE

APPLICABLE CODE AND STANDARDS:

ALL DESIGN AND CONSTRUCTION SHALL CONFORM TO THE FOLLOWING CODES AND STANDARDS.

NDS: NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION, 2018 EDITION

ASTM: AMERICAN SOCIETY FOR TESTING AND MATERIALS, LATEST EDITION.

IRC: INTERNATIONAL RESIDENTIAL CODE, 2018 EDITION.

ACI: AMERICAN CONCRETE INSTITUTE, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, LATEST EDITION.

AISC: AMERICAN INSTITUTE OF STEEL CONSTRUCTION, STEEL CONSTRUCTION MANUAL, LATEST EDITION

DESIGN CRITERIA:

LOAD COMBINATIONS: LOAD COMBINATIONS SHALL BE IN ACCORDANCE WITH SECTION 1605 OF THE IBC.

DEAD LOADS: INCLUDE THE FOLLOWING:
THE SELF-WEIGHT OF STRUCTURAL MEMBERS, COMPONENTS AND CLADDING (WHERE APPLICABLE)
5 PSF (MISC. UNIFORM SUPERIMPOSED LOAD)

LIVE LOADS: LIVE LOADS ARE CALCULATED IN ACCORDANCE WITH ASCE 7-16:
LIVE ROOF LOAD, Lo: 20 PSF
LIVE CEILING LOAD, Lo: 20 PSF (W/STORAGE, WHERE OCCURS)
LIVE FLOOR LOAD, Lo: 40 PSF (NON-SLEEPING AREA)

SNOW LOADS: SNOW LOADS ARE CALCULATED IN ACCORDANCE WITH ASCE 7-16 AND SEAN SNOW MAP.
GROUND SNOW LOAD, Pg: 16 PSF
ROOF SNOW LOAD, Ps: 25 PSF (MIN.)

WIND LOADS:
ULTIMATE WIND SPEED: 98 MPH
EXPOSURE: B
Kzt: 1.0

SEISMIC LOADS:
SITE CLASSIFICATION: D
SS: 1.205, SDS: 1.138
S1: 0.42, SD1: N/A

DEFLECTION LIMITS:
TOTAL LOAD L/240
LIVE LOAD L/360

GENERAL:

ALL WORK INDICATED ON THESE DRAWINGS SHALL BE PERFORMED BY QUALIFIED CONTRACTORS EXPERIENCED IN THE GENERAL TYPE OF CONSTRUCTION REQUIRED.

CONTRACTOR SHALL BE RESPONSIBLE FOR SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE WORK.

SUBSTITUTIONS: ANY SUBSTITUTIONS MUST CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS AND SHALL BE SIMILAR TO THOSE SHOWN. ALL SUBSTITUTIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD (EOR) FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.

PRE-MANUFACTURED ELEMENTS: MUST CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS AND SHOULD BE SIMILAR TO THOSE SHOWN. THESE DESIGN ELEMENTS MUST BE STAMPED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF WASHINGTON, AND SUBMITTED TO THE EOR FOR APPROVAL PRIOR TO FABRICATION.

SPECIAL CONDITIONS: CONTRACTOR SHALL VERIFY LEVELS, DIMENSIONS, AND EXISTING CONDITIONS IN THE FIELD BEFORE PROCEEDING. DIMENSIONS OF EXISTING CONDITIONS MAY BE BASED ON RECORD DRAWINGS AND ARE TO BE FIELD-VERIFIED BY THE CONTRACTOR. DIMENSIONS NOTED AS PLUS OR MINUS (+/-) INDICATE UNVERIFIED DIMENSIONS AND ARE APPROXIMATE. IN CASE OF DISCREPANCIES BETWEEN THE EXISTING CONDITIONS AND THE DRAWINGS, OR OF ANY CONFLICTS OR EXCESSIVE VARIATIONS FROM INDICATED DIMENSIONS, THE CONTRACTOR SHALL OBTAIN DIRECTION FROM THE EOR BEFORE PROCEEDING. CONTRACTOR SHALL NOTIFY THE EOR OF ANY DISCREPANCIES OR FIELD CHANGES PRIOR TO INSTALLATION OR FABRICATION.

DIMENSIONS: DO NOT SCALE DRAWINGS TO DETERMINE DIMENSIONS AS COMPONENTS OF THE DRAWINGS MAY NOT BE DRAWN TO SCALE. UTILIZE ONLY NOTED DIMENSIONS AND FOR DIMENSIONS NOT NOTED, CONTRACTOR SHALL REQUEST CLARIFICATION OF DIMENSIONS NOT SHOWN. THE ENGINEER OF RECORD IS NOT RESPONSIBLE TO VERIFY DIMENSIONS THAT CAN BE DETERMINED FROM INFORMATION CONTAINED IN THE DOCUMENTS.

MEANS AND METHODS, SITE SAFETY: THE CONTRACTOR IS RESPONSIBLE FOR ALL MEANS AND METHODS OF CONSTRUCTION AND SITE SAFETY FOR THE PROJECT. NO ACTIONS BY THE ENGINEER OF RECORD SHALL BE INTERPRETED TO SUPERSEDE THE CONTRACTOR'S RESPONSIBILITY FOR MEANS AND METHODS AND SITE SAFETY.

THE STRUCTURE HAS BEEN DESIGNED TO RESIST CODE SPECIFIED FORCES AFTER THE CONSTRUCTION OF ALL STRUCTURAL ELEMENTS HAS BEEN COMPLETED. STABILITY OF THE STRUCTURE PRIOR TO COMPLETION IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THIS RESPONSIBILITY INCLUDES BUT IS NOT LIMITED TO JOB SITE SAFETY; ERECTION MEANS, METHODS, AND SEQUENCES; TEMPORARY BRACING INSTALLATION; TEMPORARY SHORING; USE OF EQUIPMENT AND CONSTRUCTION PROCEDURES.

INSPECTIONS:

REFERENCE STANDARDS: IBC 110

INSPECTIONS ARE TO BE PERFORMED BY THE BUILDING OFFICIAL. INSPECTIONS REQUIRED ARE AS FOLLOWS:

SOIL: VERIFY SUBGRADE IS DRY, DENSE AND DOES NOT HAVE STANDING WATER PRIOR TO POURING FOOTINGS.

CONCRETE: INSPECTIONS REQUIRED ONLY FOR DESIGN MIXES WITH F'c SPECIFIED GREATER THAN 2500 PSI. TAKE CONCRETE CYLINDERS AS REQUIRED. VERIFY SLUMP AND STRENGTH.

REINFORCING: VERIFY ALL REINFORCING IS PLACED IN ACCORDANCE WITH APPROVED PLANS. CHECK FOR REQUIRED COVER, SIZE, AND GRADE OF STEEL.

WOOD: DIAPHRAGM NAILING, BLOCKING AND HOLDOWN CONNECTIONS.

SOILS, FOUNDATIONS, AND SLABS:

REFERENCE STANDARDS: DESIGN AND CONSTRUCTION SHALL CONFORM TO IBC CHAPTER 18 "SOILS AND FOUNDATIONS"

SOIL CONDITIONS: ALL CONCRETE CONSTRUCTION SHALL BEAR ON COMPETENT SOILS (UNDISTURBED NATIVE SOIL OR COMPACTED STRUCTURAL FILL TO 95%MAXIMUM DENSITY). BEARING SOILS SHALL BE FREE OF EXCESSIVE GROUND WATER AND SHALL BE LOCATED BELOW THE FROST LINE, AT A MINIMUM OF 18" BELOW GRADE.

FOOTING DEPTH: EXTERIOR STRIP FOOTINGS SHALL BEAR AT LEAST (18") BELOW FINISH GRADE. INTERIOR FOOTINGS SHALL BEAR AT ANY CONVENIENT DEPTH BELOW THE FLOOR SLAB.

UNDERGROUND UTILITIES: DO NOT DAMAGE ANY UTILITIES. CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES IN THE AREA WHERE THE WORK IS TO BE PERFORMED. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REPAIRS AS REQUIRED.

CONNECTION TO EXISTING FOUNDATIONS: WHERE NEW FOOTINGS ARE CAST AGAINST EXISTING FOOTINGS, A MINIMUM OF (4) POST-INSTALLED ANCHORS/REBAR SHALL BE INSTALLED, (2) IN THE FOOTING AND (2) IN THE STEM WALL, MAXIMUM 12" OC SPACING.

CONCRETE SLABS-ON-GRADE: CONCRETE SLABS ON GRADE SHALL BE NO LESS THAN 4" THICK AND REINFORCED WITH #4 BARS SPACED AT 12" O.C. IN EACH ORTHOGONAL DIRECTION (OR WITH W1.4 X W1.4 6X6 WELDED WIRE FABRIC) UNO. REBAR SHALL BE SUPPORTED TO REMAIN IN PLACE BETWEEN MID-DEPTH OF THE SLAB AND THE UPPER THIRD. SLABS SHALL BE CAST ON A 10 MIL POLYETHYLENE VAPOR RETARDER WITH LAPPED JOINTS AT LEAST 6" WIDE, OVER A PREPARED COMPACTED SUB-BASE OF 6" THICK CLEAN GRAVEL, OR CRUSHED STONE PASSING A 2" SIEVE BUT < 10%PASSING A #4 SIEVE. FOR INSULATED SLABS THE VAPOR RETARDER SHALL BE PLACED BETWEEN THE RIGID FOAM AND THE SLAB.(A VAPOR RETARDER IS NOT REQUIRED FOR EXTERIOR SLABS OR SLABS IN UNHEATED STRUCTURES. A BASE COURSE IS NOT REQUIRED OVER WELL-DRAINED GRAVEL OR GRAVEL/SAND MIXTURES HAVING A PERCOLATION RATE NOT LESS THAN 4" PER HOUR. (REFER TO IRC SECTION R506.2.2 EXCEPTION, AND IRC TABLE R405.1 GROUP 1 AND FOOTNOTE "A".)

CONCRETE:

MIXING AND PLACING OF ALL CONCRETE AND SELECTION OF MATERIALS SHALL BE IN ACCORDANCE WITH THE BUILDING CODE. PROPORTIONS OF AGGREGATE TO CEMENT SHALL PRODUCE DENSE, WORKABLE MIX WHICH CAN BE PLACED WITHOUT SEGREGATION OR EXCESS FREE SURFACE WATER.

COMPRESSIVE STRENGTH:
CONCRETE STRENGTH SHALL BE VERIFIED BY STANDARD 28-DAY CYLINDER TESTS, UNLESS APPROVED OTHERWISE. CONCRETE MIXES SHALL CONFORM TO THE FOLLOWING REQUIREMENTS.

MIN. F'c	MAXIMUM WATER/CEMENT RATIO (BY WEIGHT) NON-AIR ENTRAINED	AIR-ENTRAINED	MAXIMUM SLUMP	LOCATION
2500 PSI	.44	0.40	5	TOPPING SLAB
2500 PSI	.45	0.45	6	FOOTINGS/STEMWALL FOUNDATIONS
4000 PSI	-	0.35	8	STEEL PIPE FILL
4000 PSI	0.40	0.35	5	ALL OTHER CONC
5000 PSI	-	0.35		CONC PRE-CAST

THE CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGNS FOR APPROVAL 2 WEEKS PRIOR TO PLACING CONCRETE. THE MIX DESIGN SHALL BE IN CONFORMANCE WITH ACI CHAPTER 26. THE SUBMITTAL SHALL INDICATE WHERE EACH CONCRETE MIX IS TO BE USED ON THE PROJECT, AS WELL AS THE MAXIMUM AGGREGATE SIZE OF EACH MIX. MAXIMUM AGGREGATE SIZE SHALL CONFORM TO THE SPECIFICATIONS.

AGGREGATES: MAXIMUM SIZE OF AGGREGATE SHALL BE 1-1/2 INCHES, BUT MAXIMUM SIZE OF AGGREGATE SHALL NOT BE MORE THAN THREE QUARTERS OF THE CLEAR DISTANCE BETWEEN REINFORCING BARS.

WATER/CEMENT RATIO: W/C RATIO SHALL BE MEASURED BY WEIGHT AND SHALL BE BASED ON THE TOTAL CEMENTITIOUS MATERIAL. WATER/CEMENT RATIO SHALL BE DETERMINED BY THE SUPPLIER BASED ON STRENGTH REQUIREMENTS.

WATER: SHALL BE CLEAN AND POTABLE.

TOTAL CEMENTITIOUS MATERIAL: THE SUM OF ALL CEMENT PLUS FLYASH AND SLAG, AT THE CONTRACTORS OPTION FLYASH OR SLAG MAY BE SUBSTITUTED FOR CEMENT BUT SHALL NOT EXCEED 25% BY WEIGHT OF TOTAL CEMENTITIOUS MATERIAL. IN NO CASE SHALL THE AMOUNT OF FLYASH OR SLAG BE LESS THAN REQUIRED BY THE CONCRETE MIX DESIGN TABLE. FOOTING MIXES SHALL CONTAIN NOT LESS THAN 5 SACKS OF CEMENTITIOUS MATERIAL PER CUBIC YARD, ALL OTHER MIXES SHALL CONTAIN NOT LESS THAN 5-1/2 SACKS OF CEMENTITIOUS MATERIAL PER CUBIC YARD, UNLESS NOTED OTHERWISE.

MAXIMUM CHLORIDE CONTENT: THE MAXIMUM WATER SOLUBLE CHLORIDE CONTENT SHALL NOT EXCEED 0.15% BY WEIGHT OF CEMENTITIOUS MATERIAL UNLESS NOTED OTHERWISE.

ADMIXTURES: WATER-REDUCING ADMIXTURES MAY BE INCORPORATED IN CONCRETE MIX DESIGNS, SHALL CONFORM TO ASTM C 494, AND SHALL BE USED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. CALCIUM CHLORIDE OR OTHER WATER-SOLUBLE CHLORIDE ADMIXTURES SHALL NOT BE USED.

AIR ENTRAINMENT: CONCRETE EXPOSED TO WEATHER: PROVIDE 5.0% TOTAL AIR CONTENT FOR ALL CONCRETE EXPOSED TO WEATHER. TOTAL AIR CONTENT IS THE SUM OF ENTRAINED AIR PROVIDED BY ADMIXTURES AND NATURALLY OCCURRING ENTRAPPED AIR. AIR CONTENT SHALL BE TESTED PRIOR TO BEING PLACED IN THE PUMP HOPPER OR BUCKET. IT IS NOT REQUIRED TO BE TESTED AT THE DISCHARGE END OF THE PUMP HOSE. THE TOLERANCE ON ENTRAPPED AIR SHALL BE +2.0% AND -1.5% WITH THE AVERAGE OF ALL TESTS NOT LESS THAN THE SPECIFIED AMOUNT.

SLUMP: SLUMP TOLERANCE SHALL BE PER ASTM C 94. MAX SLUMP SHALL NOT EXCEED 4".

CURING CONDITIONS: IF THE AIR TEMPERATURE WILL EXCEED 75 DEGREES FAHRENHEIT (ŠF) WITHIN 48 HOURS OF PLACING CONCRETE, A MOIST CURE SHALL BE APPLIED TO THE CONCRETE FOR A PERIOD OF 36 HOURS AFTER FINISHING CONCRETE SURFACES.

CONCRETE CONSTRUCTION:

CONTROL AND CONSTRUCTION JOINTS: CONSTRUCTION JOINTS SHALL MEET THE REQUIREMENTS OF ACI 301 SECTIONS 2.2.2.5 AND 5.3.2.6. SPECIAL BONDING METHODS PER SECTION 5.3.2.6 SHALL BE SATISFIED BY ITEM 2 BELOW UNLESS OTHERWISE DETAILED ON THE STRUCTURAL DRAWINGS. WHERE CONSTRUCTION JOINTS ARE NOT SHOWN ON PLAN OR ADDITIONAL CONSTRUCTION JOINTS ARE REQUIRED SUBMIT PROPOSED JOINTING FOR STRUCTURAL ENGINEERS APPROVAL. PROVIDE CONSTRUCTION JOINTS AS INDICATED BELOW UNLESS NOTED OTHERWISE ON THE PLANS:

1. SLABS ON GRADE: PROVIDE CONSTRUCTION AND/OR CONTROL JOINTS AT 16 FEET O.C. MAXIMUM FOR UNEXPOSED SLABS ON GRADE AND 12 FEET O.C. FOR EXPOSED SLABS ON GRADE. COORDINATE JOINTS WITH ARCHITECTURAL DRAWINGS.
2. ATTACHMENT OF NEW CONCRETE TO EXISTING: WHERE SHOWN, ROUGHEN CONCRETE TO A MINIMUM AMPLITUDE OF 1/4" USING IMPACT HAMMER. REMOVE ALL LOOSE OR DAMAGED CONCRETE. THOROUGHLY FLUSH ALL SURFACES WITH POTABLE WATER. AIR BLAST WITH OIL FREE COMPRESSED AIR TO REMOVE ALL WATER. WET SURFACES BEFORE PLACING CONCRETE.

FOOTING/PLINTHS: FOOTINGS SHALL BE CENTERED ON POSTS OR SHEAR WALL BOUNDARY ELEMENTS. PROVIDE 2" PLINTHS FOR ALL POSTS AND SILL PLATES, PROVIDE 6" PLINTHS ABOVE GRADE OR WHEN SUPPORTING PRESSURE TREATED WOOD.

DRILLED EXPANSION (WEDGE) ANCHORS: ACCEPTABLE DRILLED-IN-CONCRETE ANCHORS OF SIZE, NUMBER AND SPACING AS SHOWN ON THE DRAWINGS SHALL BE AS FOLLOWS: HILTI KWIK-BOLT II CARBON STEEL WEDGE ANCHORS (ICBO #4627); MEJ-IT ANCHOR BOLT (ICBO #1372); ITW RAMSET/RED HEAD TRUBOLT CARBON STEEL WEDGE ANCHORS (ICBO #1372) OR APPROVED EQUAL.

POST-INSTALLED WALL ANCHORS: SILL PLATE WALL ANCHORS TO EXISTING CONCRETE SHALL BE HILTI ADHESIVE ANCHORS WITH HILTI HIT-RE 500 V3 EPOXY MORTAR. PROVIDE 5/8" (MIN.) DIAMETER HAS-E-55 ANCHOR BOLTS EMBEDDED A MINIMUM OF 8" INTO CONCRETE, UNLESS NOTED OTHERWISE.

NON-SHRINK GROUT FOR BASE PLATES: APPROVED GROUTS INCLUDE: MASTER BUILDER'S "MASTER FLOW 928," SIKA CORPORATION'S "SIKAGROUT 212," BURKE COMPANY'S "NONFERROUS NONSHRINK GROUT," OR APPROVED EQUAL. GROUT SHALL BE MIXED, APPLIED AND CURED STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS.

DRILLED AND DOWELLED REBAR: EPOXY ADHESIVE SHALL BE "CIA GEL" (ICBO #4846) AS MANUFACTURED BY COVERT OPERATIONS COMPANY, LONG BEACH, CALIFORNIA; "POWERFAST" (ICBO 4514) AS MANUFACTURED BY POWERS RAWL, NEW ROCHELLE, NY, "SOLID BOND 200" (ICBO #4948) AS MANUFACTURED BY ADHESIVES TECHNOLOGY CORPORATION, KENT, WASHINGTON, "HIT HY150 (ICBO #5193) AS MANUFACTURED BY HILTI CORP, TULSA, OKLAHOMA, OR APPROVED EQUAL.

REINFORCING STEEL:

ALL REINFORCING SHALL BE NEW BILLET STOCK ASTM A615, GRADE 60. BARS SHALL BE SECURELY TIED IN PLACE WITH #16 DOUBLE-ANNEALED IRON WIRE. BARS SHALL BE SUPPORTED ON ACCEPTABLE NON-CORROSIBLE CHAIRS. REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE ACI 315 "MANUAL OF STANDARD PRACTICE FOR DETAILING OF REINFORCED CONCRETE STRUCTURES." CONTRACTOR SHALL COORDINATE REINFORCING STEEL PLACEMENT DETAILS AND PROVIDE TEMPLATES FOR PLACING STEEL IN CONGESTED AREAS AS NECESSARY.

REINFORCING STEEL MATERIALS:

DEFORMED BARS	ASTM A615, GRADE 60
SMOOTH WELDED WIRE FABRIC	ASTM A185 (FY = 65 KSI)
DEFORMED WELDED WIRE FABRIC	ASTM A497 (FY = 70 KSI)
EPOXY COATED REINFORCING	ASTM A775
DEFORMED BARS TO BE WELDED OR SPECIFIED	ASTM A706, GRADE 60
DEFORMED BARS MARKED "SDG"	SEE SDG REINFORCING

BAR SPLICES: CONFORM TO ACI FOR CLASS "B" SPLICES OR 40 BAR DIAMETERS, WHICHEVER IS GREATER. LAP REINFORCING BARS LENGTH SHALL BE A MINIMUM OF 48 TIMES THE BAR DIAMETERS.

BAR CLEAR COVER: MINIMUM CAST-IN-PLACE CONCRETE COVER OVER REINFORCING STEEL, UNLESS NOTED OTHERWISE, SHALL BE AS FOLLOWS:

FOOTINGS & RETAINING WALLS:	
WHERE CAST AGAINST EARTH:	3" (INCHES)
EXPOSED TO EARTH/WEATHER:	2" (NO. 6 THU NO. 18 BARS)
	1-1/2" (NO. 5 BAR AND SMALLER)
NOT EXPOSED TO WEATHER:	1-1/2" (NO. 14 AND NO. 18 BARS)
	3/4" (NO. 11 BAR AND SMALLER)
OTHER CONCRETE:	
WALLS - INTERIOR FACE	¾ INCH
SLABS AND JOISTS	1-1/2 INCH
STIRRUPS, TIES AND SPIRALS	2 INCHES
OF BEAMS OR COLUMNS	

IF WELDING OF REINFORCING IS REQUIRED, IT SHOULD BE OBSERVED AS DEFINED IN IBC SECTION 1704.4, WITH PARTICULAR EMPHASIS ON JOINT CONFIGURATION, SUITABILITY OF LOW HYDROGEN ELECTRODES, PREHEAT AND INTERPASS TEMPERATURE, AND INTERPASS SLAG REMOVAL. WELDING PROCEDURES SHALL CONFORM TO AWS D1.4. ALL WELDING OF REINFORCING STEEL SHALL BE DONE BY AWS/WABO (CALIFORNIA) STATE ASSOCIATION OF BUILDING OFFICIALS) CERTIFIED WELDERS.

REINFORCING WITH SPECIAL DUCTILE QUALITY REQUIREMENT (SDQ REINFORCING): REINFORCEMENT MARKED "SDQ" SHALL COMPLY WITH ASTM A 706. ASTM A 615 GRADES 40 AND 60 REINFORCEMENT SHALL BE PERMITTED IN THESE MEMBERS IF:

(1) THE ACTUAL YIELD STRENGTH BASED ON MILL TESTS DOES NOT EXCEED THE SPECIFIED YELD STRENGTH BY MORE THAN 18,000 PSI (RETESTS SHALL NOT EXCEED THIS VALUE BY MORE THAN AN ADDITIONAL 3,000 PSI); AND

(2) THE RATIO OF THE ACTUAL ULTIMATE TENSILE STRENGTH TO THE ACTUAL TENSILE YIELD IS NOT LESS THAN 1.25.

WOOD:

FRAMING LUMBER: ALL LUMBER IN CONTACT WITH MASONRY, CONCRETE, OR EARTH SHALL BE PRESSURE PRESERVATIVE TREATED IN ACCORDANCE AWPA (AMERICAN WOOD PROTECTION ASSOCIATION) STANDARDS. PROVIDE TWO LAYERS OF ASPHALT IMPREGNATED BUILDING PAPER BETWEEN UNTREATED LEDGERS, BLOCKING, ETC., AND CONCRETE OR MASONRY.

SAWN LUMBER SHALL CONFORM TO THE WCLIB (WEST COAST LUMBER INSPECTION BUREAU). ALL LUMBER WITH A LEAST DIMENSION OF 2" (NOMINAL) SHALL BE STAMPED SURFACE-DRY AND SHALL HAVE A MOISTURE CONTENT WHEN SURFACED AND WHEN INSTALLED OF NOT MORE THAN 19 PERCENT. LUMBER WITH A LEAST DIMENSION OF 4" (NOMINAL) OR GREATER SHALL BE STAMPED SURFACE-GREEN AND AIR-DRIED TO A MOISTURE CONTENT OF NOT MORE THAN 19 PERCENT PRIOR TO ITS USE IN FRAMING THE STRUCTURE.LUMBER SHALL BE GRADED AND MARKED IN CONFORMANCE WITH WCLIB STANDARD GRADING RULES FOR WEST COAST LUMBER NO. 17. FURNISH TO THE FOLLOWING MINIMUM STANDARDS:

WALL STUDS	2X MEMBERS 3X MEMBERS	HEM-FIR STUD GRADE HEM-FIR NO. 2
WALL PLATES	(2X, 3X MEMBERS)	HEM-FIR STANDARD GRADE (PT SILL PLATES @ FDTN)
JOISTS AND BEAMS	(2X, 3X MEMBERS) (4X MEMBERS)	HEM-FIR NO. 2 MIN. BASE VALUE, FB = 850 PSI DOUGLAS FIR-LARCH NO. 1 MIN. BASE VALUE, FB = 1000 PSI
BEAMS	(6X AND LARGER)	DOUGLAS FIR-LARCH NO. 1 MIN. BASE VALUE, FB = 1350 PSI
POSTS	(4X MEMBERS) (6X AND LARGER)	DOUGLAS FIR-LARCH NO. 2 MIN. BASE VALUE, FC = 1350 PSI DOUGLAS FIR-LARCH NO. 1 MIN. BASE VALUE, FC = 1000 PSI

ENGINEERED WOOD PRODUCTS: SHALL CONFORM TO ASTM 5456

PSL - PARALLEL STRAND LUMBER	2.0E
LSL - LAMINATED STRAND LUMBER	1.5E
LVL - LAMINATED VENEER LUMBER	1.8E

GLUED LAMINATED MEMBERS: SHALL BE FABRICATED IN CONFORMANCE WITH ANSI STANDARD A190.1. EACH MEMBER SHALL BEAR AN AITC OR APA EWS IDENTIFICATION MARK AND SHALL BE ACCOMPANIED BY AN AITC OR APA EWS CERTIFICATE OF CONFORMANCE. CAMBER ALL GLULAM BEAMS TO 2,000' RADIUS, UNLESS SHOWN OTHERWISE ON THE PLANS. ONE COAT OF END SEALER SHALL BE APPLIED IMMEDIATELY AFTER TRIMMING IN EITHER SHOP OR FIELD. MEMBERS SHALL BE VISUALLY GRADED WESTERN SPECIES "FRAMING" *INDUSTRIAL, ARCHITECTURAL, PREMIUM* GRADE WITH STRENGTH INDICATED AS FOLLOWS:

	SYMBOL	SPECIES	SIZES	USES
BEAMS	24F - V4	DF/DF	ANY DEPTH	SIMPLE SPAN
	24F - V8	DF/DF	ANY DEPTH	CONTINUOUS OR CANTILEVER SPAN
COLUMNS	2 - L2	DF	ALL	ALL
TRUSSES	2 - L2	DF	ALL	ALL
PITCHED AND CURVED BEAMS	24F - V8	DF/DF	ALL	ALL

TIMBER TRUSSES: SHALL BE CONSTRUCTED TO THE LINES AND PROFILES AS INDICATED ON THE DRAWINGS. CONTRACTOR SHALL VERIFY ALL TRUSS DIMENSIONS PRIOR TO FABRICATION. CONNECTIONS AND CONNECTION HARDWARE SHALL BE TIGHT FITTING. TRUSSES ARE ENGINEERED FOR DESIGN GRAVITY AND LATERAL LOADS ONLY. CONTRACTOR SHALL PROVIDE ADDITIONAL BRACING AS REQUIRED FOR HANDLING AND ERECTION.

TIMBER CONNECTORS: TIMBER CONNECTORS INDICATED ON THE DRAWINGS USE NOMENCLATURE AND PART NUMBERS CONTAINED IN THE CATALOGS BY SIMPSON STRONG-TIE COMPANY. CONNECTORS SHALL BE INSTALLED PER THE MANUFACTURER'S INSTRUCTIONS. EQUIVALENT DEVICES BY OTHER MANUFACTURERS MAY BE SUBSTITUTED, PROVIDED THEY HAVE ICBO APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. SUBMIT MANUFACTURER'S CATALOG AND ICBO REPORTS TO ARCHITECT AND ENGINEER FOR REVIEW WHEN REQUESTING SUBSTITUTIONS. ALL SPECIFIED FASTENERS MUST BE USED AND PROPER INSTALLATION PROCEDURES MUST BE OBSERVED IN ORDER TO OBTAIN ICBO APPROVED LOAD CAPACITIES. VERIFY THAT THE DIMENSIONS OF THE SUPPORTING MEMBER ARE SUFFICIENT TO RECEIVE THE SPECIFIED FASTENERS. WHERE CONNECTOR STRAPS CONNECT TWO MEMBERS, PLACE ONE-HALF OF THE NAILS OR BOLTS IN EACH MEMBER. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD, UNLESS NOTED OTHERWISE ALL NAILS SHALL BE COMMON. FOR EXTERIOR APPLICATIONS CONNECTORS SHALL BE PROTECTED WITH Z-MAX COATING PER ASTM A653, HOT DIPPED GALVANIZED (HDG) PER ASTM A123, OR TYPE 316L STAINLESS STEEL AND FASTENED WITH "DOUBLE-BARRIER COATING" SDS SCREWS OR HDG NAILS AS REQUIRED FOR THAT CONNECTOR. ALTERNATIVE TIMBER CONNECTORS MAY BE SUBMITTED FOR APPROVAL, PROVIDED THAT THEY HAVE EQUAL OR GREATER STRUCTURAL CAPACITY AND ARE FIT DIMENSIONALLY WITHIN ARCHITECTURAL FINISHES. UNLESS OTHERWISE NOTED ALL JOIST CONNECTORS SHALL BE LU AND U SERIES JOIST CONNECTORS. UNLESS OTHERWISE NOTED ALL ROOF JOISTS AND RAFTERS SHALL UTILIZE H2.5 HURRICANE ANCHORS AT EACH JOIST TO TOP WALL PLATES.

BOLTS: ALL TYPICAL, LAG AND MACHINE BOLTS SHALL BE ASTM 307 BOLTS, BOLTS, NUTS, AND WASHERS EXPOSED TO WEATHER OR MOISTURE SHALL BE HOT-DIPPED GALVANIZED. PROVIDE FLAT WASHERS UNDER BOTH HEADS AND NUTS OF BOLTS USED IN TIMBER CONNECTIONS. ALL FRAMING NAILS SHALL BE COMMON NAILS. NAILS USED FOR FLOOR DIAPHRAGM NAILING SHALL BE EITHER COMMON GALVANIZED OR "SINKER" NAILS UTILIZING APPROVED GLUE. POWER DRIVEN NAILS SHALL HAVE COMPLETE HEADS, I.E. NOT NOTCHED. NOTCHED HEAD POWER DRIVEN NAILS MAY BE USED IF 16d NAILS ARE SUBSTITUTED FOR 8d, 10d, AND 12d NAILS. NOTCHED HEAD POWER DRIVEN NAILS MAY BE SUBSTITUTED FOR 16d COMMON NAILS IF THE INDICATED SPACING IS REDUCED BY ONE-THIRD.

GALVANIZED FASTENERS: ALL NAILS INTO PRESSURE TREATED WOOD SHALL BE HOT DIPPED GALVANIZED PER ASTM A153 OR STAINLESS STEEL. ALL METAL CONNECTORS IN CONTACT WITH PRESSURE TREATED WOOD SHALL BE HOT DIPPED GALVANIZED AND CONFORM TO ASTM A653 DESIGNATION CLASS G185 (1.85 oz OF ZINC PER SQ FT MIN) OR TYPE 304/316 STAINLESS STEEL. SIMPSON STRONG-TIE Z-MAX CONNECTORS MEET THIS REQUIREMENT. FASTENERS AND CONNECTORS USED TOGETHER SHALL BE OF THE SAME TYPE (E.G. HOT DIPPED NAILS WITH HOT DIPPED HANGERS).

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1	-	-	-

PROJECT: MERCER ISLAND (NM) RESIDENCE
4311 85TH AVENUE SE
MERCER ISLAND, WA 98040

PROJECT NO. 22-014

SHEET TITLE: GENERAL NOTES

SHEET: T-2

WOOD FRAMING:

ALL WOOD FRAMING DETAILS NOT SHOWN OTHERWISE SHALL BE CONSTRUCTED TO THE MINIMUM STANDARDS OF THE BUILDING CODE. MINIMUM NAILING, UNLESS OTHERWISE NOTED, SHALL CONFORM TO TABLE 2304.10.1 OF THE BUILDING CODE. COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH MECHANICAL AND ARCHITECTURAL DRAWINGS.

GENERAL WOOD CONSTRUCTION: CONFORM TO IBC 2304. UNLESS NOTED OTHERWISE, STUDS SHALL BE SPACED AT 16" OC, EXTERIOR STUDS SHALL BE 2X6, AND INTERIOR STUDS SHALL BE 2X4. ALL STUD WALLS SHOWN ON STRUCTURAL DRAWINGS SHALL HAVE THEIR LOWER PLATES ATTACHED TO WOOD FRAMING BELOW WITH 16D NAILS AT 6"OC STAGGERED OR BOLTED TO CONCRETE OR MASONRY PER WALL ANCHORAGE.

WALL ANCHORAGE: SILL PLATES SHALL BE ANCHORED TO THE CONCRETE FOUNDATION WITH A MINIMUM 1/2" DIAMETER A-307 ANCHOR BOLT EMBEDDED AT LEAST 7" AND SPACED A MAXIMUM OF 5' ON CENTER. MINIMUM (2) ANCHOR BOLTS PER SILL PLATE. PROVIDE (1) ANCHOR WITHIN 12" BUT NOT LESS THAN 7 BOLT DIAMETERS FROM THE END OF EACH SILL PLATE. SEE SHEAR WALL SCHEDULE FOR SHEAR WALL ANCHORAGE. PROVIDE 3" SQUARE MINIMUM X 1/4" THICK STEEL PLATE WASHERS AND HEX NUTS. ANCHORS SHALL BE CENTERED ON THE SILL PLATE AND WASHERS SHALL EXTEND TO WITHIN 1/2" OF THE WALL SHEATHING AT SHEAR WALLS.

HEADERS SHALL BE PER THE PLANS AND HEADER SCHEDULE. UNO PROVIDE TWO STUDS MINIMUM AT THE END OF ALL WALLS AND AT EACH SIDE OF ALL OPENINGS. NAIL TOGETHER INDIVIDUAL MEMBERS OF BUILT UP POSTS WITH TWO ROWS OF 16D @ 12" O.C. STAGGERED. REFER TO THE PLANS AND SHEARWALL SCHEDULE FOR REQUIRED SHEATHING AND NAILING. WHEN NOT OTHERWISE NOTED, PROVIDE 5/8" GYPSUM WALLBOARD ON INTERIOR SURFACES. ALL WALLS SHALL HAVE SINGLE BOTTOM PLATE AND A DOUBLE TOP PLATE. END NAIL TOP PLATE TO EACH STUD WITH TWO 16D NAILS, AND TOENAIL OR END NAIL EACH STUD TO BOTTOM PLATE WITH TWO 16D NAILS. UNLESS NOTED OTHERWISE FACE NAIL DOUBLE TOP PLATE WITH 16D @ 12A O.C. AND LAP MINIMUM 4'-0A AT JOINTS AND PROVIDE EIGHT 16D NAILS @ 4A O.C. EACH SIDE JOINT.

UNLESS OTHERWISE NOTED, GYPSUM WALLBOARD SHALL BE FASTENED TO THE INTERIOR SURFACE OF ALL STUDS AND PLATES WITH NO. 6 X 1-1/4A TYPE S OR W SCREWS @ 8A ON-CENTER.

TIMBER SHIMS SHALL BE EITHER METAL, PLASTIC, OR HARDWOOD SPECIES. WOOD SHIMS SHALL NOT BE USED IN CONTACT WITH MASONRY OR CONCRETE OR FOR MOISTURE EXPOSED APPLICATIONS.

NAILING: CONFORM TO IBC 2304.10 "CONNECTIONS AND FASTENERS". UNLESS NOTED OTHERWISE ALL NAILS SHALL BE COMMON. NAILS SHALL BE DRIVEN FLUSH AND SHALL NOT FRACTURE THE SURFACE OF SHEATHING. NO COUNTERSINKING PERMITTED, TOE-NAILS SHALL BE DRIVEN AT AN ANGLE OF 30 DEGREES WITH THE MEMBER AND STARTED 1/3 THE LENGTH OF THE NAIL FROM THE MEMBER END. NAIL SIZES SPECIFIED ON THE DRAWINGS ARE BASED ON THE FOLLOWING SPECIFICATIONS:

SIZE	LENGTH	COMMON	SINKER	BOX
6d	2"	.113"	.099"	
8d	2 1/2"	.131"	.113	
10d	3"	.148"	.120	.128
12d	3 1/4"	.148"	.135	
16d	3 1/2"	.162"	.148	.135
20d	4"	.192"	.177	.148

14G STPL = 14GAGE STAPLE WITH 7/16" MINIMUM CROWN

WOOD STRUCTURAL PANELS (SHEATHING): WOOD SHEATHING SHALL CONFORM TO THE U.S. DEPARTMENT OF COMMERCE STANDARDS PS-1 AND PS-2 ACCORDING TO TYPE AND SHALL BE IDENTIFIED BY THE TRADEMARKS OF AN APPROVED TESTING & INSPECTION AGENCY.

SHEATHING SHALL BE APA PERFORMANCE RATED PANELS PER NER REPORT NUMBER 108. SHEATHING MAY BE PLYWOOD PER UBC STD 23-2 OR ORIENTED STRAND BOARD (OSB) PER UBC STD 23-3, UNLESS NOTED OTHERWISE. PLYWOOD PANELS SHALL BE GRADE CD AND ALSO CONFORM TO PS 1-83 (UBC STD 23-2). ALL PANELS SHALL BE IDENTIFIED AS EXPOSURE 1 UNLESS NOTED OTHERWISE. PANEL RATING TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

ROOF: 19/32" (OR 5/8") THICK, 40/20
WALLS: 7/16" (OR 1/2") THICK, 32/16
FLOORS: 23/32" (OR 3/4") THICK, TONGUE AND GROOVE, 48/24

UNLESS OTHERWISE NOTED ON THE PLANS, ROOF AND FLOOR SHEATHING SHALL BE INSTALLED STAGGERED WITH GRAIN PERPENDICULAR TO SUPPORTS AND NAILED WITH 10D NAILS @ 6"OC TO FRAMED PANEL EDGES AND OVER STUD WALLS SHOWN ON PLANS AND @ 12"OC TO INTERMEDIATE SUPPORTS. PROVIDE APPROVED SHEATHING EDGE CLIPS @ 16"OC AT UNBLOCKED ROOF SHEATHING EDGES. INSTALLED WITH 1/8" GAP BETWEEN PANELS.

UNLESS OTHERWISE NOTED ON THE PLANS, WALL SHEATHING MAY BE INSTALLED HORIZONTALLY OR VERTICALLY, UNSUPPORTED EDGES SHALL BE BLOCKED AND ALL EDGES INSTALLED SHALL BE NAILED WITH 10D @ 6"OC, NAIL WITH 10D @ 12"OC AT INTERMEDIATE SUPPORTS. NAIL SHEAR WALL SHEATHING TO ALL HOLDOWN STUDS USING EDGE NAIL SPACING WHEN HOLDOWN STUD DOES NOT OCCUR AT PANEL EDGE.

NOTCHES AND HOLES IN WOOD FRAMING: NOTCHES ON THE ENDS OF SOLID SAWN JOISTS AND RAFTERS SHALL NOT EXCEED ONE-FOURTH THE JOIST DEPTH. NOTCHES IN THE TOP OR BOTTOM OF SOLID SAWN JOISTS SHALL NOT EXCEED ONE-SIXTH THE DEPTH AND SHALL NOT BE LOCATED IN THE MIDDLE THIRD OF THE SPAN. HOLES BORED IN THE SOLID SAWN JOISTS AND RAFTERS SHALL NOT BE WITHIN 2 INCHES OF THE TOP OR BOTTOM OF THE JOIST, AND THE DIAMETER OF ANY SUCH HOLE SHALL NOT EXCEED ONE-THIRD THE DEPTH OF THE JOIST.

IN EXTERIOR WALLS AND BEARING PARTITIONS, ANY WOOD STUD IS PERMITTED TO BE CUT OR NOTCHED TO A DEPTH NOT EXCEEDING 25 PERCENT OF ITS WIDTH. A HOLE NOT GREATER IN DIAMETER THAN 40 PERCENT OF THE STUD WIDTH IS PERMITTED TO BE BORED IN ANY WOOD STUD. IN NO CASE SHALL THE EDGE OF THE BORED HOLE BE NEARER THAN 5/8 INCH TO THE EDGE OF THE STUD. BORED HOLES SHALL NOT BE LOCATED AT THE SAME SECTION OF STUD AS A CUT OR NOTCH.

FLOOR AND ROOF FRAMING: PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS THAT EXTEND OVER MORE THAN HALF THE JOIST LENGTH AND AROUND ALL OPENINGS IN FLOORS OR ROOFS UNLESS OTHERWISE NOTED. PROVIDE SOLID BLOCKING AT ALL BEARING POINTS. TOE-NAIL JOISTS TO SUPPORTS WITH TWO 16D NAILS. ATTACH TIMBER JOISTS TO FLUSH HEADERS OR BEAMS WITH SIMPSON METAL JOIST HANGERS IN ACCORDANCE WITH NOTES ABOVE. NAIL ALL MULTI JOIST BEAMS TOGETHER WITH TWO ROWS 16D @ 12A ON-CENTER.

POST-INSTALLED ANCHORS: ANCHORS TO EXISTING CONCRETE SHALL BE HILTI ADHESIVE ANCHORS WITH HILTI HIT-RE 500 V3 EPOXY MORTAR. PROVIDE 5/8" DIAMETER HAS-E-55 ANCHOR BOLTS EMBEDDED A MINIMUM OF 8" INTO CONCRETE, UNLESS NOTED OTHERWISE.

SETTLEMENT SHRINKAGE:

DUE TO CROSS GRAIN WOOD SHRINKAGE, NEW BUILDING CONSTRUCTION IS EXPECTED TO SETTLE APPROXIMATELY ⅜" PER STORY. ALL PLUMBING AND MECHANICAL DUCTS SHALL BE DESIGNED WITH FLEXIBLE JOINTS OR OTHER MEANS TO APPROPRIATELY ACCOMMODATE THIS NORMAL SETTLEMENT. ALL INTERIOR AND EXTERIOR SHEATHING AND FINISHES SHALL BE INSTALLED SUCH THAT NO DAMAGE WILL OCCUR. SHRINKAGE IS EXPECTED IN THE DEPTH OF THE FLOOR PLATES AND NOT IN THE LENGTH OF THE WALL.

LEGEND

- EXISTING WALL
- NEW WALL
- CEILING LINE ABOVE
- XXXX — DOOR DESIGNATION (WIDTH THEN HEIGHT) IN FEET & INCHES (EX. 3068 = 3'-0" X 6'-8") (SC=SOLID CORE HC=HOLLOW CORE)
- NEW EXTERIOR LIGHT
- NEW INCANDESCENT LIGHT
- NEW WALL SCONCE/VANITY LIGHT
- EXHAUST FAN
- WINDOW TYPE
- DOOR TYPE
- DUPLEX OUTLET
- SURFACE MOUNTED LED LIGHT
- AF-50 ROOF VENT
- GRID REFERENCE
- DETAIL REFERENCE
- ELEVATION REFERENCE
- SECTION REFERENCE
- SPOT ELEVATION
- SET POINT
- REVISION
- GROUT OR PLASTER
- (E) BRICK
- (E) MASONRY
- CONCRETE
- EARTH
- GRAVEL
- PLYWOOD
- SAND
- WOOD CONT.
- WOOD BLOCKING
- STEEL
- CENTERLINE
- PROPERTY/LEASE LINE
- MATCH LINE
- WORK POINT
- GROUND CONDUCTOR
- T — TELEPHONE CONDUIT
- E — ELECTRICAL CONDUIT (POWER)
- X — CHAIN LINK FENCING
- JOIST SPAN DIRECTION
- EXTENTS OF JOISTS
- BEAM
- HANGER
- HORIZONTAL FRAMING STRAP
- CSxx — STRAP HOLDOWN
- HD # — HOLDOWN
- # — SHEAR WALL TYPE
- # — HEADER
- DECK LATERAL LOAD CONN

ABBREVIATION LIST

±	DIM TO BE FIELD VERIFIED	HORIZ	HORIZONTAL
@	AT	HSS	HOLLOW STRUCTURAL SECTION
AB	ANCHOR BOLT	HT	HEIGHT
AFF	ABOVE FINISH FLOOR	INT	INTERIOR
AGL	ABOVE GRADE LEVEL	ID	INSIDE DIAMETER
ALT	ALTERNATE	JST	JOIST
APPROX	APPROXIMATELY	JT	JOINT
ARCH.	ARCHITECTURAL	k	KIPS
AMSL	ABOVE MEAN SEA LEVEL	KSF	KIPS PER SQUARE FOOT
B/	BOTTOM OF	L	AISC STD ANGLE
BLDG	BUILDING	LF	LINEAL FOOT
BLKG	BLOCKING	LL	LIVE LOAD
BM	BEAM	LLH	LONG LEG HORIZONTAL
BOF	BOTTOM OF FOOTING	LLV	LONG LEG VERTAICAL
BOT	BOTTOM	LOC	LOCATION
BP	BASEPLATE	LONGIT	LONGITUDINAL
BRG	BEARING	MAS	MASONRY
BTWN	BETWEEN	MAX	MAXIMUM
B.U.	BUILT-UP	M.B.	MACHINE BOLT
C	AISC STD CHANNEL	MECH	MECHANICAL
(C=)	CAMBER	MFR	MANUFACTURER
CANT.	CANTILEVER	MIN	MINIMUM
CIP	CAST IN PLACE	MISC	MISCELLANEOUS
CJ	CONTROL/CONSTRUCTION JOINT	MTL	METAL
CJP	COMPLETE JOINT PENETRATION	(N)	NEW
CL	CENTERLINE	NF	NEAR FACE
CLR	CLEAR(ANCE)	NS	NEAR SIDE
CMU	CONCRETE MASONRY UNIT	NTS	NOT TO SCALE
COL	COLUMN	OC	ON CENTER
CONC	CONCRETE	OD	OUTSIDE DIAMETER
CONN	CONNECTION	OF	OUTSIDE FACE
CONST	CONSTRUCTION	OPNG	OPENING
CONT	CONTINUOUS	OPP	OPPOSITE
CONTR	CONTRACTOR	PAF	POWDER ACTUATED FASTENER
COORD	COORDINATE	PC	PRECAST
CTR	CENTER	PERP	PERPENDICULAR
CY	CUBIC YARD	PJP	PARTIAL JOINT PENETRATION
DBL	DOUBLE	PL	PLATE
DEMO	DEMOLISH OR DEMOLITION	PREFAB	PREFABRICATED
DF	DOUGLAS FIR	PSF	POUNDS PER SQUARE FOOT
DIA OR	DIAMETER	PSI	POUNDS PER SQUARE INCH
DIAG	DIAGONAL	PT	PRESSURE TREATED
DIM	DIMENSION	QTY	QUANTITY
DIST	DISTRIBUTED	R	RADIUS
DL	DEAD LOAD	REF	REFERENCE
DN	DOWN	REINF	REINFORCING
DP	DEPTH/DEEP	REQ'D	REQUIRED
DWG	DRAWING	RET	RETAIN(ING)
DWL	DOWEL	SCHED	SCHEDULE
EA	EACH	SF	SQUARE FOOT
EF	EACH FACE	SIM	SIMILAR
EJ	EXPANSION JOINT	SOG	SLAB ON GRADE
EL	ELEVATION	SPEC	SPECIFICATION(S)
ELEV.	ELEVATOR	SQ	SQUARE
EMBED	EMBEDMENT	SR	SOLID ROUND MEMBER
ENGR	ENGINEER	STD	STANDARD
EOR	ENGINEER OF RECORD	STGR	STAGGER(ED)
EQUIP	EQUIPMENT	STRUCT	STRUCTURAL
EQ	EQUAL	SUPP	SUPPORT
EW	EACH WAY	SYM	SYMMETRICAL
EX OR (E)	EXISTING	T/	TOP OF
EXP	EXPANSION JOINT	T&B	TOP AND BOTTOM
EXT	EXTERIOR	T&G	TONGUE AND GROOVE
F/	FACE OF	THRD	THREAD(ED)
FDN	FOUNDATION	THRU	THROUGH
FF	FAR FACE	TKND	THICKENED
FIN	FINISH	TOF	TOP OF FOOTING
FLR	FLOOR	TOS	TOP OF STEEL
FRMG	FRAMING	TRANSV	TRANSVERSE
FS	FAR SIDE	TRT'D	TREATED
FTG	FOOTING	TYP	TYPICAL
GA	GAUGE	UNO	UNLESS NOTED OTHERWISE
GALV	GALVANIZED	UT	ULTRASONIC TESTING
GEO	GEOTECHNICAL	VERT	VERTICAL
GLB	GLULAM BEAM	W	AISC STD WIDE FLANGE
GR	GRADE	W/	WITH
GWB	GYPSUM WALL BOARD	W/O	WITHOUT
HD	HOLD-DOWN	WD	WIDTH
HDR	HEADER	WP	WORK(ING) POINT
HF	HEM-FIR	WT	WEIGHT
HGR	HANGER	WWF	WELDED WIRE FABRIC

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REV	DATE	DESCRIPTION
1	-	-

PROJECT
MERCER ISLAND (NM) RESIDENCE
4311 85TH AVENUE SE
MERCER ISLAND, WA 98040

PROJECT NO.
22-014

SHEET TITLE
GENERAL NOTES

SHEET
T-3

LEGEND

(N) INTERIOR CONC STRIP FTG

(N) CONC STEM WALL & STRIP FTG

(N) CONC SPREAD FTG

(E) CONC STEM WALL & STRIP FTG (TO REMAIN)

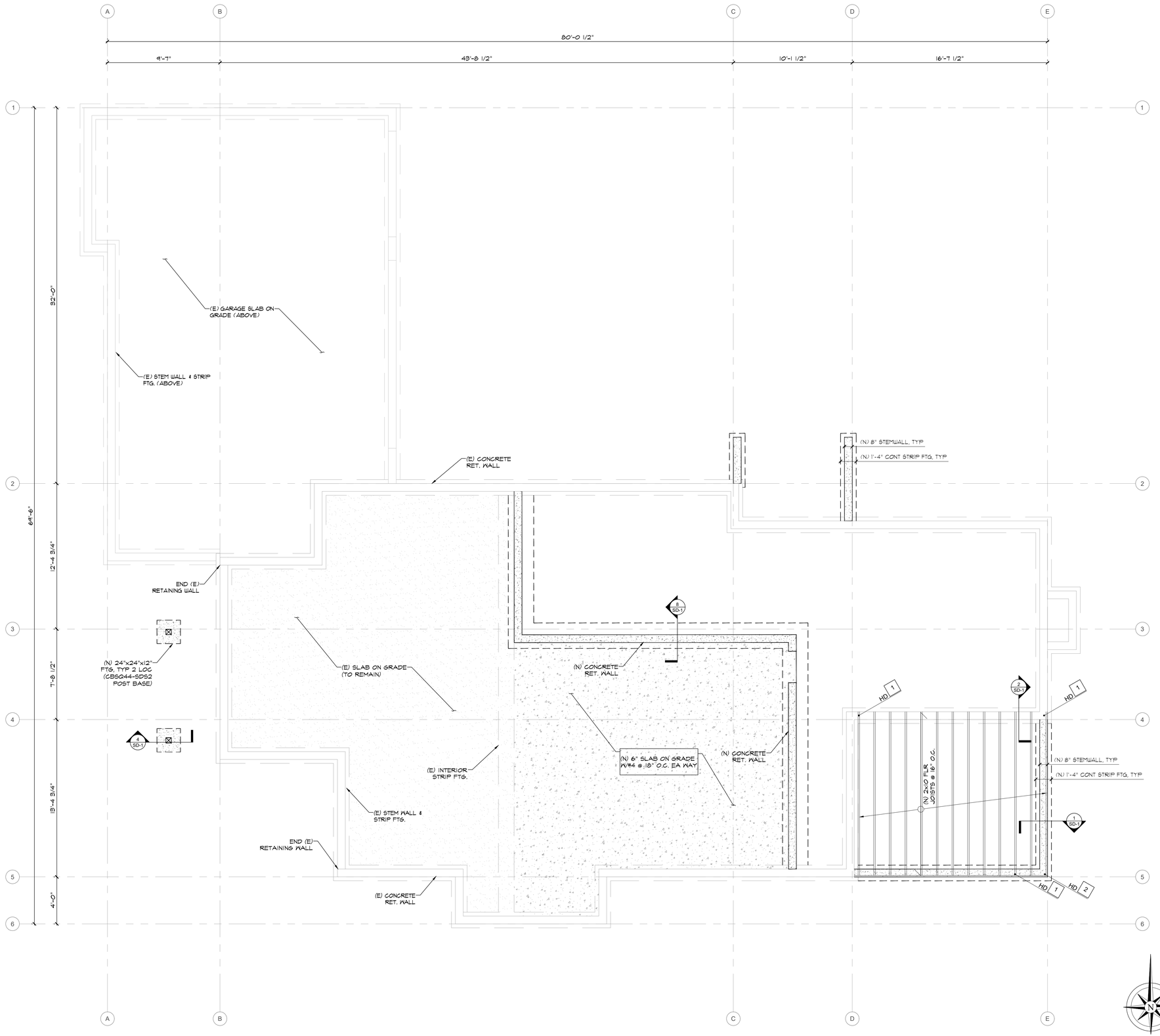
HD # HOLDOWN

TYP. FOUNDATION PLAN NOTES:

1. GENERAL STRUCTURAL NOTES AND ABBREVIATIONS PER SHEET T-2 AND T-3.
2. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH ARCH. PROVIDED DIMENSIONS ARE TO FACE OF CONCRETE STEM WALL OR CENTER OF INDIVIDUAL FOOTING. OUTSIDE FACE OF STEM WALL ALIGNS WITH OUTSIDE FACE OF STUD WALL UNO. STHD HOLDOWNS ARE DIMENSIONED TO CENTER OF STRAP. HDU/HD/HTT HOLDOWNS ARE DIMENSIONED TO CENTER OF ANCHOR BOLT.
3. VERIFY ALL T/CONC ELEVATIONS ON ALL CONCRETE INCLUDING PARTIAL HEIGHT RETAINING WALLS. CONCRETE TO EXTEND MIN 8" ABOVE FINISHED GRADE. PROVIDE 1" RECESS AT DOUBLE SIDED SHEARWALLS TO ACCOMODATE 3X SILL PLATE.
4. PROVIDE 6 MIL BLACK POLYETHYLENE VAPOR BARRIER OVER ENTIRE CRAWL SPACE. LAP EDGES 6" MIN.
5. FOOTINGS ARE TO BEAR ON COMPETENT NATIVE SOIL OR STRUCTURAL FILL CAPABLE OF SUPPORTING THE ASSUMED BEARING PRESSURE PER GENERAL NOTES. REFERENCE GEOTECHNICAL REPORT (IF AVAILABLE) FOR SUBGRADE PREPARATION, FILL REQUIREMENTS, FOOTING DRAINS, AND OTHER REQUIREMENTS. PROVIDE FOOTING DRAINS AROUND PERIMETER OF BUILDING.
6. PRIOR TO POURING CONCRETE CONTRACTOR SHALL LOCATE AND VERIFY LOCATIONS OF ALL FOUNDATION OPENINGS, PENETRATIONS, AND SLOPES.
7. SILL ANCHOR BOLTS (J-BOLTS) SHALL BE ASTM F1554 (36KSI) HDG, ASTM A307 GR C (36KSI) HDG, OR SIM. ANCHOR BOLTS TO BE 1/2"Ø X 7" MIN EMBEDMENT. SPACING PER SHEARWALL SCHEDULE (60" O.C. MAX). EACH ANCHOR BOLT TO HAVE STANDARD HDG NUT AND WASHER INSTALLED OVER 3"X3"X1/4" HDG PLATE WASHER WITH EDGE OF PLATE WASHER LOCATED WITHIN 1/2" OF SHEATHED FACE OF WALL. FOR TWO-SIDED SHEARWALLS W/2X6 WALL FRAMING USE 4X4X1/4" PLATE WASHERS OR STAGGER ANCHOR BOLTS SO THAT EVERY OTHER PLATE WASHER IS LOCATED WITHIN 1/2" OF EACH FACE OF WALL.
8. HOLDOWNS BY SIMPSON STRONG-TIE. INSTALLATION PER MANUFACTURERS SPECIFICATIONS. ALTERNATIVE SOLUTIONS SHALL BE SUBMITTED TO EOR FOR APPROVAL PRIOR TO INSTALLATION. HOLDOWN THREADED RODS SHALL BE ASTM F1554 (36KSI) HDG UNO. EMBEDDED END OF THREADED ROD TO HAVE 3"X3"X1/4" HDG PLATE WASHER BETWEEN TWO SNUG-TIGHT HDG STANDARD NUTS.
9. CJ INDICATES CONTROL JOINT.

TYP. FRAMING PLAN NOTES:

1. LUMBER GRADE PER GENERAL STRUCTURAL NOTES.
2. FLOOR SHEATHING PER GENERAL NOTES. ALL SHEATHING TO BE GLUED AND NAILED TO FRAMING PER MANUFACTURER RECOMMENDATIONS. USE 10d COMMON NAILS (0.148 "X 2 1/2") @ 6" O.C. AT PANEL EDGES AND AT ALL FRAMING DESIGNATED WITH "EDGE NAILING" OR "WEN", AND 12" O.C. IN THE FIELD, UNO. PANEL EDGE JOINTS TO BE STAGGERED BETWEEN ADJACENT PANELS OF SHEATHING. PROVIDE GAP BETWEEN PANELS TO ALLOW FOR NATURAL EXPANSION/CONTRACTION (1/8" GAP TYP).
3. LOCATE ALL OPENINGS AND PENETRATIONS AND VERIFY NO CONFLICT WITH FLOOR FRAMING. MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS BY OTHERS.
4. ALL WOOD LOCATED WITHIN 8" OF FINISHED GRADE, EXPOSED TO WEATHER OR IN CONTACT WITH CONCRETE SHALL BE PRESSURE TREATED. ALL FASTENERS IN CONTACT WITH FIRE-RETARDANT OR PRESSURE-TREATED WOOD SHALL BE COVERED IN PROTECTIVE COATING (I.E. HDG OR SIM).
5. ALL POSTS ABOVE THE FLOOR FRAMING SHALL BE BLOCKED WITHIN THE FLOOR DEPTH ("VERTICAL GRAIN BLKG", "VERTICAL CRUSH BLKG", OR "VCB"). BLOCKING WIDTH SHALL MATCH WIDTH OF POST OR BUNDLED STUDS ABOVE AND EXTEND FULL FLOOR DEPTH.
6. ALL TIES AND HANGERS TO BE MANUFACTURED BY SIMPSON STRONG-TIE. INSTALLATION PER MANUFACTURER'S RECOMMENDATIONS. ALTERNATIVE SOLUTIONS SHALL BE SUBMITTED TO EOR FOR APPROVAL PRIOR TO INSTALLATION.



FOUNDATION & MAIN FLOOR FRAMING PLAN

0 1' 2' 4'

SCALE: 1/4" = 1'-0" (24x36)
(OR) 1/8" = 1'-0" (11x17)

1

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6/29/22

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REV	DATE	DESCRIPTION	BY
1	-	-	-

PROJECT: MERCER ISLAND (NM) RESIDENCE
4311 85TH AVENUE SE
MERCER ISLAND, WA 98040

PROJECT NO. 22-014

SHEET TITLE
FDTN & MAIN FLR FRAMING PLAN

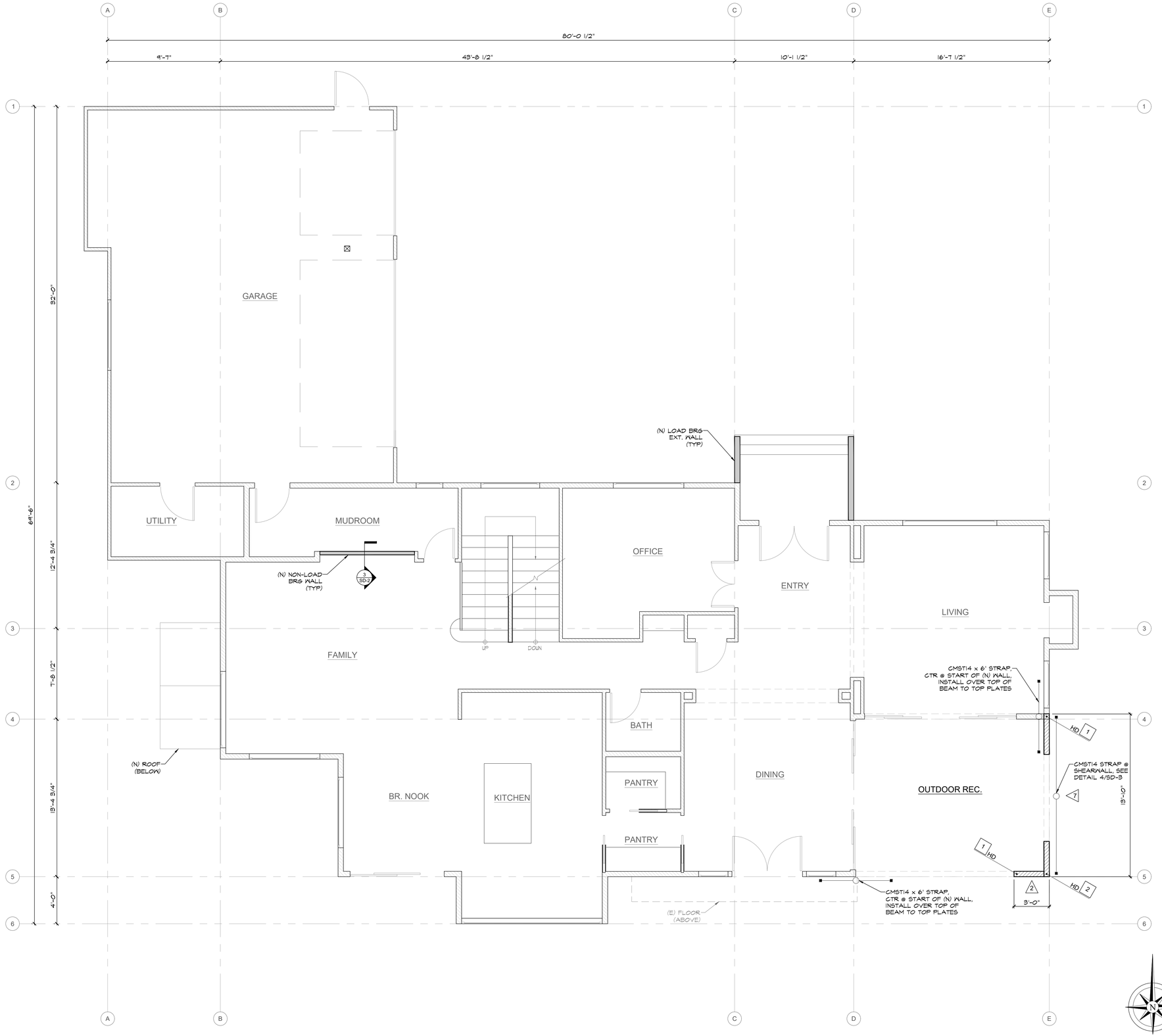
SHEET
S-1

LEGEND

- (E) WALL (TO REMAIN)
- (N) WALL
- (N) SHEAR WALL
- HORIZONTAL FRAMING STRAP
- HD # — HOLDOWN
- CSxx — VERTICAL STRAP HOLDOWN
- # — SHEAR WALL TYPE

TYP. WALL FRAMING NOTES:

1. GENERAL STRUCTURAL NOTES AND ABBREVIATIONS PER SHEET T-2 AND T-3.
2. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH ARCH.
3. LUMBER GRADE PER GENERAL STRUCTURAL NOTES.
4. ALL BUNDLED STUDS SPECIFIED PER PLAN SHALL BE CONNECTED TOGETHER WITH 16d @ 6"O.C.
5. EXTERIOR WALL STUDS SHALL BE 2X6 @ 16"O.C. (SIO), 2X6 @ 12"O.C. (HO) UNO. INTERIOR WALL STUDS SHALL BE 2X4 @ 16"O.C. UNO.
6. ALL NON-LOAD BEARING WALLS TO BE FRAMED MIN 0.25" UNDER FLOOR SYSTEM.
7. PROVIDE ONE KING STUD AND ONE JACK/TRIMMER STUD MINIMUM AT EVERY HEADER UNO. JACK/TRIMMER STUDS SHOULD BE CONTINUOUS TO THE FOUNDATION AND SHALL HAVE ("VERTICAL GRAIN BLKG", "VERTICAL CRUSH BLKG", OR "VCB") WITHIN THE FLOOR FRAMING DEPTH MATCHING THE WIDTH OF JACK/TRIMMER STUDS.
8. ALL POSTS ABOVE THE FLOOR FRAMING SHALL BE BLOCKED WITHIN THE FLOOR DEPTH ("VERTICAL GRAIN BLKG", "VERTICAL CRUSH BLKG", OR "VCB"). BLOCKING WIDTH SHALL MATCH WIDTH OF POST OR BUNDLED STUDS ABOVE AND EXTEND FULL FLOOR DEPTH.
9. SHEAR WALL SHEATHING AND NAILING REQUIREMENTS PER SHEAR WALL SCHEDULE. ALL EXTERIOR WALLS SHALL BE TYPE 1 UNO.
10. STUD QUANTITIES, POST SIZE, HOLDOWN, AND SHEARWALL REQUIREMENTS PER GENERAL NOTES 'WOOD FRAMING', SHEAR WALL SCHEDULE, AND TYPICAL WALL FRAMING DETAILS.
11. ALL SHEATHING PANEL EDGES TO OCCUR OVER STUDS, PLATES, RIMS, OR HORIZONTAL BLOCKING. PANEL EDGE NAILING PER SHEARWALL SCHEDULE, FIELD NAILING AT 12" O.C. UNO.
12. PROVIDE MIN TWO 2X STUDS AT EACH END OF SHEARWALL UNO. PROVIDE PANEL EDGE NAILING INTO EACH STUD AT END OF WALL.
13. SHEAR WALL PANEL EDGE STUDS INDICATE THE MINIMUM STUD WIDTH AT ABUTTING PANEL EDGES. TWO 2X STUDS ARE AN ACCEPTABLE ALTERNATE FOR 3X STUDS. TWO 2X STUDS ARE TO BE NAILED TOGETHER WITH TWO ROWS 10d NAILS AT 6" O.C. (4" O.C. @ SW TYPE 6 AND SW TYPE 7). AT DOUBLE SIDED SHEAR WALLS VERTICAL PANEL EDGES TO BE STAGGERED ON OPPOSITE SIDES OF THE WALL EXCEPT END OF SHEAR WALL.
14. RBC INSTALLED DIRECTLY AGAINST FRAMING USE 10d SHORT (.148X 1.5"). LTP4 INSTALLED OVER PLYWOOD SHALL USE 8d COMMON NAILS (.131Ø X 2.5"). LTP4 INSTALLED DIRECTLY AGAINST FRAMING MAY USE 8d SHORT (.131X 1.5").
15. HORIZONTAL STRAPS INDICATED ON FRAMING PLANS SHALL BE CENTERED OVER THE TOP PLATE, BEAM, OR BLOCKING. STRAP LENGTH PER PLAN.
16. STRAPS AT SHEAR WALLS INDICATES THAT A WINDOW IS INCORPORATED WITHIN THE SHEAR WALL. REFER TO FORCE-TRANSFER AROUND OPENING DETAIL FOR FRAMING REQUIREMENTS.
17. STHD HOLDOWNS ARE DIMENSIONED TO CENTER OF STRAP. HDU/HD HOLDOWNS ARE DIMENSIONED TO CENTER OF ANCHOR BOLT.
18. SILL ANCHOR BOLTS (J-BOLTS) SHALL BE ASTM F1554 (36KSI) HDG, ASTM A307 (36KSI) HDG, OR SIM. ANCHOR BOLTS TO BE 1/2"Ø X 7" MIN EMBEDMENT. SPACING PER SHEARWALL SCHEDULE (60" O.C. MAX). EACH ANCHOR BOLT TO HAVE STANDARD HDG NUT AND WASHER INSTALLED OVER 3"X3"X1/4" HDG PLATE WASHER WITH EDGE OF PLATE WASHER LOCATED WITHIN 1/2" OF SHEATHED FACE OF WALL. FOR TWO-SIDED SHEARWALLS W/2X6 WALL FRAMING USE 4X4X1/4" PLATE WASHERS OR STAGGER ANCHOR BOLTS SO THAT EVERY OTHER PLATE WASHER IS LOCATED WITHIN 1/2" OF EACH FACE OF WALL.
19. ALL TIES AND HANGERS TO BE MANUFACTURED BY SIMPSON STRONG-TIE. INSTALLATION PER MANUFACTURER'S RECOMMENDATIONS. ALTERNATIVE SOLUTIONS SHALL BE SUBMITTED TO EOR FOR APPROVAL PRIOR TO INSTALLATION.



MAIN FLOOR WALL FRAMING PLAN

10' 0' 5' 10'

SCALE: 1" = 10'-0" (24x36)
(OR) 1/2" = 10'-0" (11x17)

1

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REV	DATE	DESCRIPTION	BY
1	-	-	-

PROJECT
MERCER ISLAND (NM) RESIDENCE
4311 85TH AVENUE SE
MERCER ISLAND, WA 98040

PROJECT NO.
22-014

SHEET TITLE
MAIN FLOOR WALL FRAMING

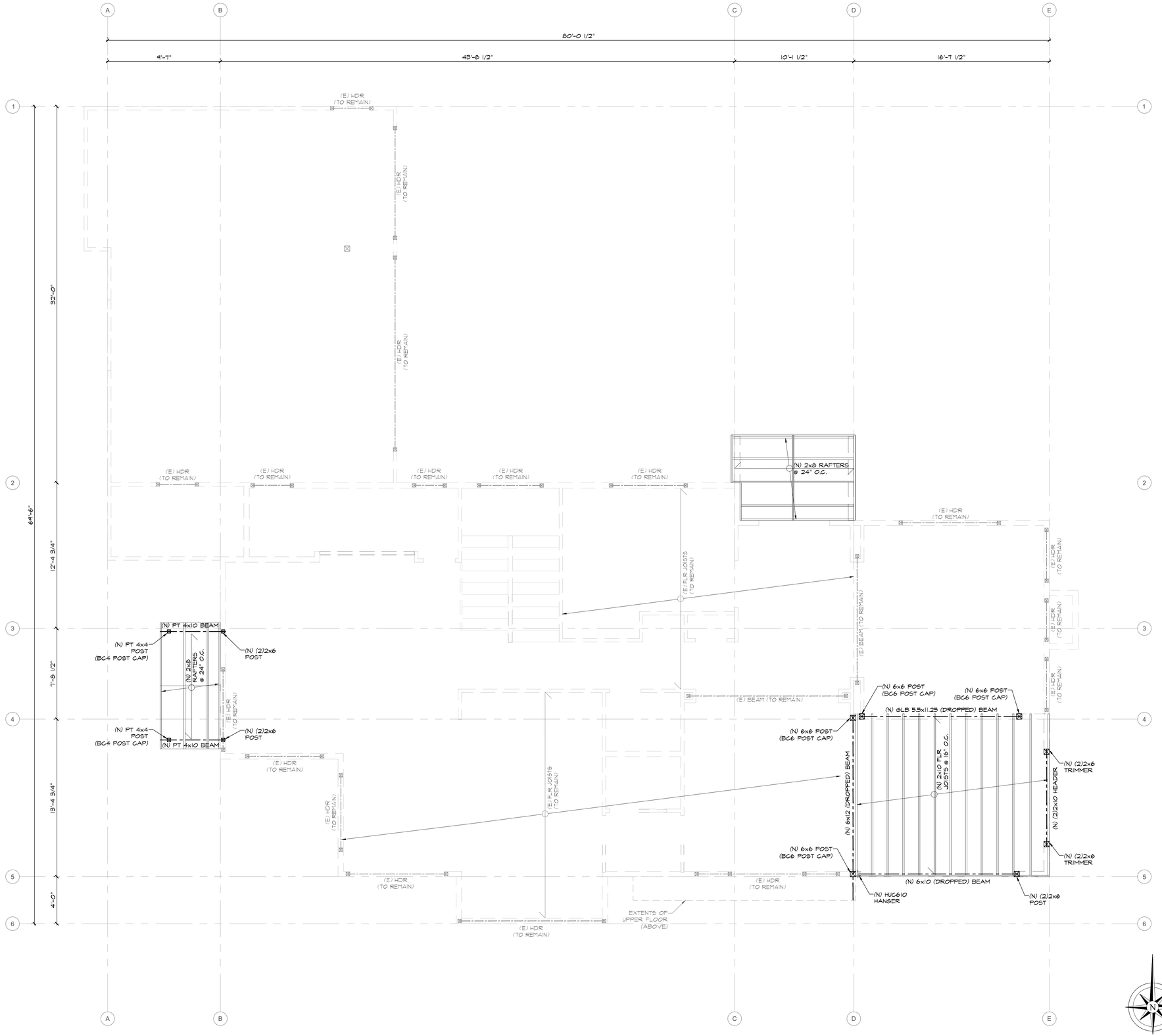
SHEET
S-2

LEGEND

- (E) WALL (TO REMAIN) AND/OR (N) WALL (BELOW)
- (N) OR MODIFIED JOISTS/RAFTERS
- (E) JOISTS/RAFTERS
- SPAN/EXTENTS OF JOISTS/RAFTERS
- (N) OR (E) BEAM/HEADER
- # (N) HEADER (SEE DETAILS FOR SCHEDULE)
- HANGER

TYP. FRAMING PLAN NOTES:

1. GENERAL STRUCTURAL NOTES AND ABBREVIATIONS PER SHEET T-2 AND T-3.
2. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH ARCH.
3. LUMBER GRADE PER GENERAL STRUCTURAL NOTES.
4. FLOOR SHEATHING PER GENERAL NOTES. ALL SHEATHING TO BE GLUED AND NAILED TO FRAMING PER MANUFACTURER RECOMMENDATIONS. USE 10d COMMON NAILS (0.148 "X 2 1/2") @ 6" O.C. AT PANEL EDGES AND AT ALL FRAMING DESIGNATED WITH "EDGE NAILING" OR "WEN", AND 12" O.C. IN THE FIELD, UNO. PANEL EDGE JOINTS TO BE STAGGERED BETWEEN ADJACENT PANELS OF SHEATHING. PROVIDE GAP BETWEEN PANELS TO ALLOW FOR NATURAL EXPANSION/CONTRACTION (1/8" GAP TYP).
5. LOCATE ALL OPENINGS AND PENETRATIONS AND VERIFY NO CONFLICT WITH FLOOR FRAMING. MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS BY OTHERS.
6. ALL WOOD LOCATED WITHIN 8" OF FINISHED GRADE, EXPOSED TO WEATHER OR IN CONTACT WITH CONCRETE SHALL BE PRESSURE TREATED. ALL FASTENERS IN CONTACT WITH FIRE-RETARDANT OR PRESSURE-TREATED WOOD SHALL BE COVERED IN PROTECTIVE COATING (I.E. HDG OR SIM).
7. ALL BEAMS SHALL BE SUPPORTED BY MIN TWO STUDS BELOW EACH END, UNO. ALL BEAMS SHALL BE FRAMED "TOP FLUSH" WITH JOISTS, UNO. "TOP FLUSH "OR "TF" INDICATES T/BEAM EQUAL T/JOISTS AND B/BEAM EXTENDING BELOW B/JOISTS. "BOTTOM FLUSH" OR "BF" INDICATES B/BEAM EQUAL B/JOISTS AND T/BEAM EXTENDING ABOVE T/JOISTS. "DROPPED BEAM" OR "DB" INDICATES T/BEAM EQUAL B/JOISTS.
8. ALL NON-LOAD BEARING WALLS TO BE FRAMED MIN 0.25" UNDER FLOOR SYSTEM.
9. STUD QUANTITIES, POST SIZE, HOLDOWN, AND SHEARWALL REQUIREMENTS PER GENERAL NOTES 'WOOD FRAMING', SHEAR WALL SCHEDULE, AND TYPICAL WALL FRAMING DETAILS.
10. ALL POSTS ABOVE THE FLOOR FRAMING SHALL BE BLOCKED WITHIN THE FLOOR DEPTH ("VERTICAL GRAIN BLKG", "VERTICAL CRUSH BLKG", OR "VCB"). BLOCKING WIDTH SHALL MATCH WIDTH OF POST OR BUNDLED STUDS ABOVE AND EXTEND FULL FLOOR DEPTH.
11. ALL TIES AND HANGERS TO BE MANUFACTURED BY SIMPSON STRONG-TIE. INSTALLATION PER MANUFACTURER'S RECOMMENDATIONS. ALTERNATIVE SOLUTIONS SHALL BE SUBMITTED TO EOR FOR APPROVAL PRIOR TO INSTALLATION.
12. ENGINEERED FLOOR TRUSSES TO BE DESIGNED BY OTHERS. REFER TO STRUCTURAL GENERAL NOTES FOR SUBMITTAL INFORMATION AND DESIGN CRITERIA.
13. FIRE-PROOFING AND MOISTURE-PROOFING REQUIREMENTS PER IRC.



UPPER FLOOR FRAMING PLAN

0 1' 2' 4'

SCALE: 1/4" = 1'-0" (24x36)
(OR) 1/8" = 1'-0" (11x17)

1

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REV	DATE	DESCRIPTION	BY
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PROJECT
MERCER ISLAND (NM) RESIDENCE
4311 85TH AVENUE SE
MERCER ISLAND, WA 98040

PROJECT NO.
22-014

SHEET TITLE
UPPER FLOOR FRAMING PLAN

SHEET
S-3

LEGEND

- (E) WALL (TO REMAIN)
- (N) WALL
- (N) SHEAR WALL
- HORIZONTAL FRAMING STRAP
- HD # — HOLDOWN
- CSxx — VERTICAL STRAP HOLDOWN
- # — SHEAR WALL TYPE

TYP. WALL FRAMING NOTES:

1. GENERAL STRUCTURAL NOTES AND ABBREVIATIONS PER SHEET T-2 AND T-3.
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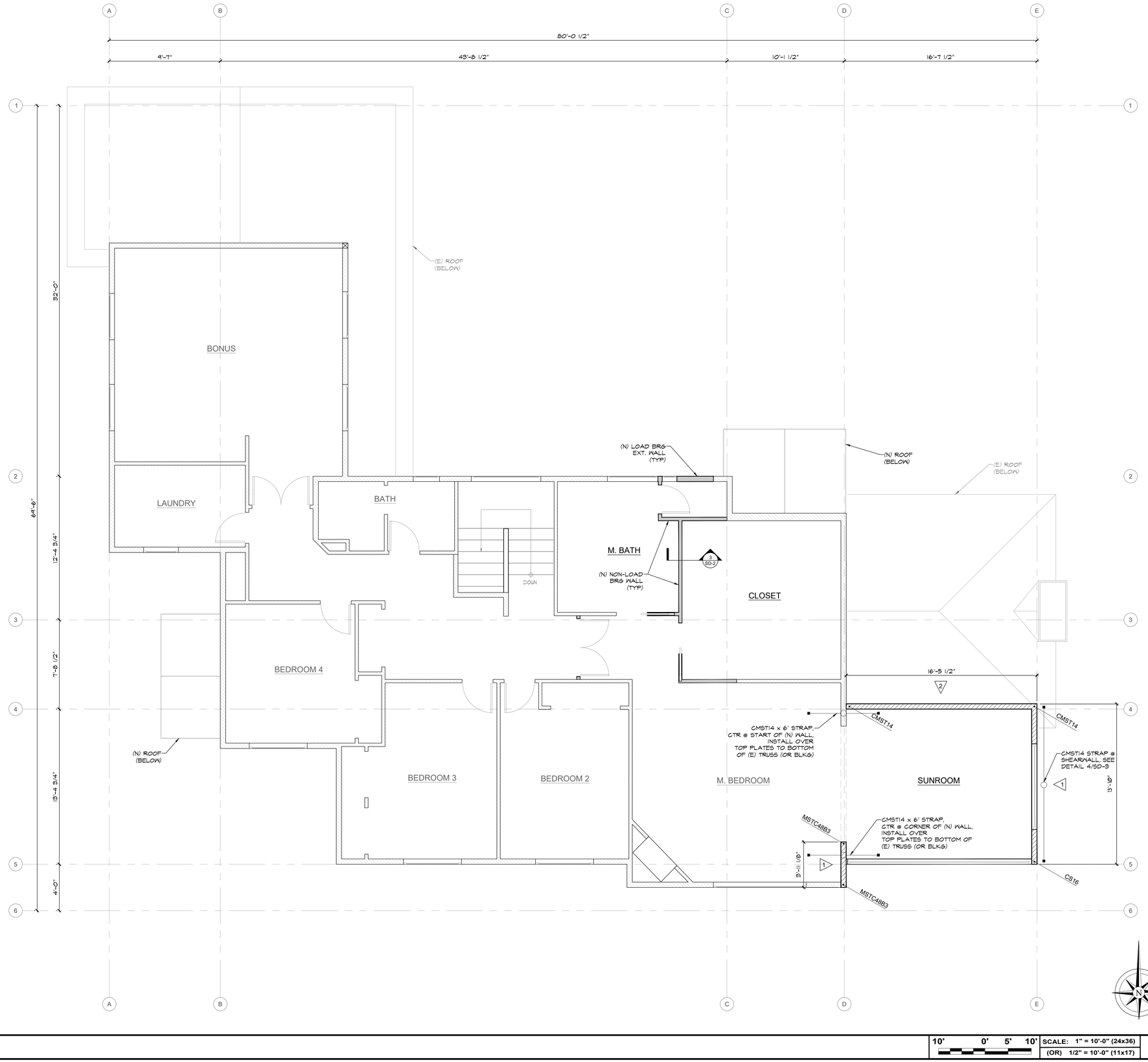
3. LUMBER GRADE PER GENERAL STRUCTURAL NOTES.
4. ALL BUNDLED STUDS SPECIFIED PER PLAN SHALL BE CONNECTED TOGETHER WITH 16d @ 6"O.C.
5. EXTERIOR WALL STUDS SHALL BE 2X6 @ 16"O.C. (SIO'), 2X6 @ 12"O.C. (10') UNO. INTERIOR WALL STUDS SHALL BE 2X4 @ 16"O.C. UNO.
6. ALL NON-LOAD BEARING WALLS TO BE FRAMED MIN 0.25" UNDER FLOOR SYSTEM.
7. PROVIDE ONE KING STUD AND ONE JACK/TRIMMER STUD MINIMUM AT EVERY HEADER UNO. JACK/TRIMMER STUDS SHOULD BE CONTINUOUS TO THE FOUNDATION AND SHALL HAVE ("VERTICAL GRAIN BLKG", "VERTICAL CRUSH BLKG", OR "VCB") WITHIN THE FLOOR FRAMING DEPTH MATCHING THE WIDTH OF JACK/TRIMMER STUDS.
8. ALL POSTS ABOVE THE FLOOR FRAMING SHALL BE BLOCKED WITHIN THE FLOOR DEPTH ("VERTICAL GRAIN BLKG", "VERTICAL CRUSH BLKG", OR "VCB"). BLOCKING WIDTH SHALL MATCH WIDTH OF POST OR BUNDLED STUDS ABOVE AND EXTEND FULL FLOOR DEPTH.
9. SHEAR WALL SHEATHING AND NAILING REQUIREMENTS PER SHEAR WALL SCHEDULE. ALL EXTERIOR WALLS SHALL BE TYPE 1 UNO.
10. STUD QUANTITIES, POST SIZE, HOLDOWN, AND SHEARWALL REQUIREMENTS PER GENERAL NOTES 'WOOD FRAMING', SHEAR WALL SCHEDULE, AND TYPICAL WALL FRAMING DETAILS.
11. ALL SHEATHING PANEL EDGES TO OCCUR OVER STUDS, PLATES, RIMS, OR HORIZONTAL BLOCKING. PANEL EDGE NAILING PER SHEARWALL SCHEDULE, FIELD NAILING AT 12" O.C. UNO.
12. PROVIDE MIN TWO 2X STUDS AT EACH END OF SHEARWALL UNO. PROVIDE PANEL EDGE NAILING INTO EACH STUD AT END OF WALL.
13. SHEAR WALL PANEL EDGE STUDS INDICATE THE MINIMUM STUD WIDTH AT ABUTTING PANEL EDGES. TWO 2X STUDS ARE AN ACCEPTABLE ALTERNATE FOR 3X STUDS. TWO 2X STUDS ARE TO BE NAILED TOGETHER WITH TWO ROWS 10d NAILS AT 6" O.C. (4" O.C. @ SW TYPE 6 AND SW TYPE 7). AT DOUBLE SIDED SHEAR WALLS VERTICAL PANEL EDGES TO BE STAGGERED ON OPPOSITE SIDES OF THE WALL EXCEPT END OF SHEAR WALL.
14. RBC INSTALLED DIRECTLY AGAINST FRAMING USE 10d SHORT (.148X 1.5"). LTP4 INSTALLED OVER PLYWOOD SHALL USE 8d COMMON NAILS (.131Ø X 2.5"). LTP4 INSTALLED DIRECTLY AGAINST FRAMING MAY USE 8d SHORT (.131X 1.5").
15. HORIZONTAL STRAPS INDICATED ON FRAMING PLANS SHALL BE CENTERED OVER THE TOP PLATE, BEAM, OR BLOCKING. STRAP LENGTH PER PLAN.
16. STRAPS AT SHEAR WALLS INDICATES THAT A WINDOW IS INCORPORATED WITHIN THE SHEAR WALL. REFER TO FORCE-TRANSFER AROUND OPENING DETAIL FOR FRAMING REQUIREMENTS.
17. STHD HOLDOWNS ARE DIMENSIONED TO CENTER OF STRAP. HDU/HD HOLDOWNS ARE DIMENSIONED TO CENTER OF ANCHOR BOLT.
18. SILL ANCHOR BOLTS (J-BOLTS) SHALL BE ASTM F1554 (36KSI) HDG, ASTM A307 (36KSI) HDG, OR SIM. ANCHOR BOLTS TO BE 1/2"Ø X 7" MIN EMBEDMENT. SPACING PER SHEARWALL SCHEDULE (60" O.C. MAX). EACH ANCHOR BOLT TO HAVE STANDARD HDG NUT AND WASHER INSTALLED OVER 3"X3"X1/4" HDG PLATE WASHER WITH EDGE OF PLATE WASHER LOCATED WITHIN 1/2" OF SHEATHED FACE OF WALL. FOR TWO-SIDED SHEARWALLS W/2X6 WALL FRAMING USE 4X4X1/4" PLATE WASHERS OR STAGGER ANCHOR BOLTS SO THAT EVERY OTHER PLATE WASHER IS LOCATED WITHIN 1/2" OF EACH FACE OF WALL.
19. ALL TIES AND HANGERS TO BE MANUFACTURED BY SIMPSON STRONG-TIE. INSTALLATION PER MANUFACTURER'S RECOMMENDATIONS. ALTERNATIVE SOLUTIONS SHALL BE SUBMITTED TO EOR FOR APPROVAL PRIOR TO INSTALLATION.



UPPER FLOOR WALL FRAMING PLAN

10' 0' 5' 10'

SCALE: 1" = 10'-0" (24x36)
(OR) 1/2" = 10'-0" (11x17)

1

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REV	DATE	DESCRIPTION	BY
1	-	-	-

PROJECT
MERCER ISLAND (NM) RESIDENCE
4311 85TH AVENUE SE
MERCER ISLAND, WA 98040

PROJECT NO.
22-014

SHEET TITLE
UPPER FLOOR WALL FRAMING

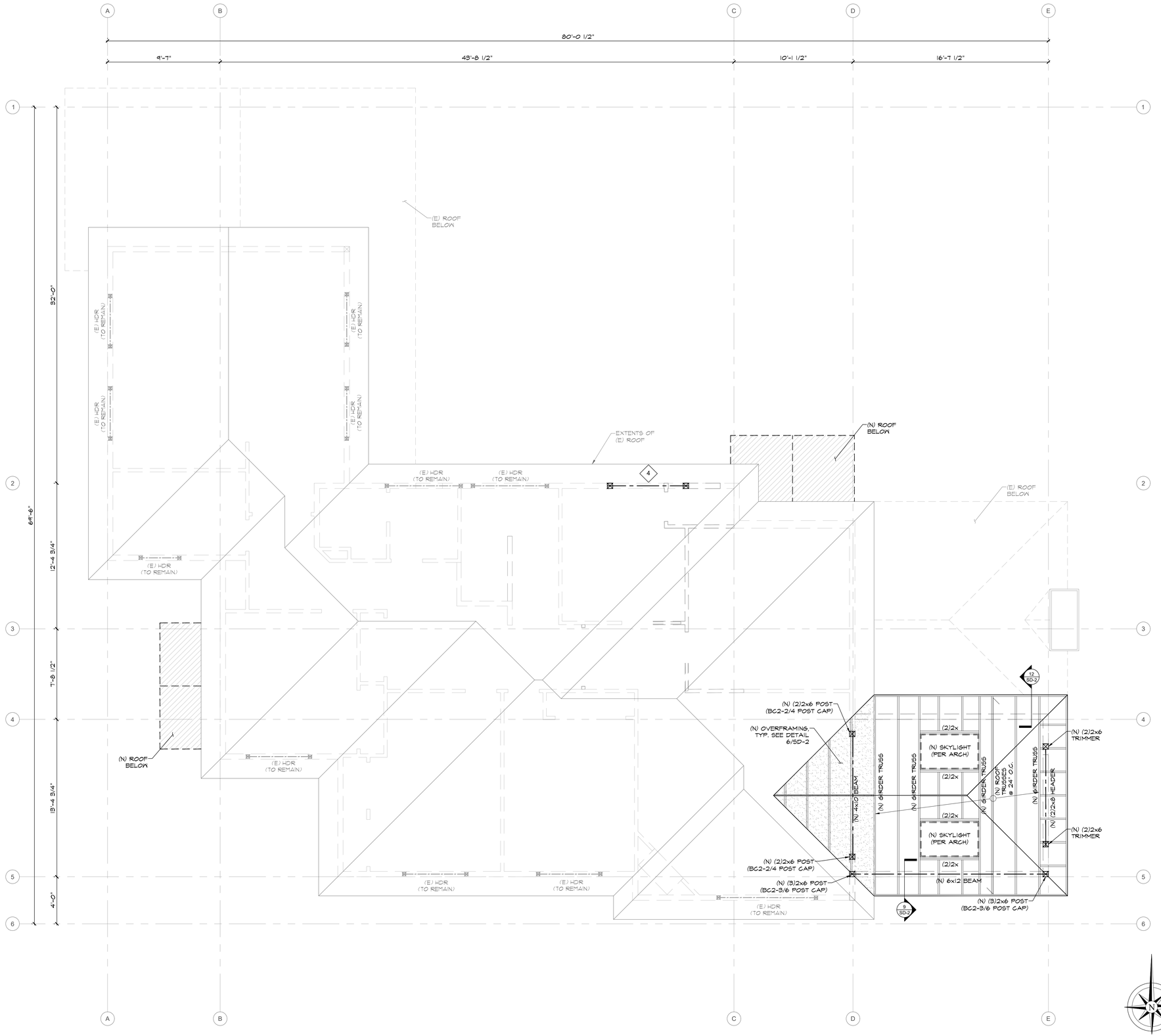
SHEET
S-4

LEGEND

- (E) WALL (TO REMAIN) AND/OR (N) WALL (BELOW)
- (N) OR MODIFIED JOISTS/RAFTERS
- (E) JOISTS/RAFTERS
- SPAN/EXTENTS OF JOISTS/RAFTERS
- LOC OF (N) BEAM OR HEADER
- (#) (N) HEADER (SEE DETAIL 4/SD-2 FOR SCHEDULE)
- HANGER

TYP. ROOF FRAMING PLAN NOTES:

1. GENERAL STRUCTURAL NOTES AND ABBREVIATIONS PER SHEET T-2 AND T-3.
2. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH ARCH.
3. LUMBER GRADE PER GENERAL STRUCTURAL NOTES.
4. ROOF SHEATHING PER GENERAL NOTES. ALL SHEATHING TO BE GLUED AND NAILED TO FRAMING PER MANUFACTURER RECOMMENDATIONS. USE 10d COMMON NAILS (0.148 "X 3") @ 6" O.C. AT PANEL EDGES AND AT ALL FRAMING DESIGNATED WITH "EDGE NAILING" OR "WEN", AND 12" O.C. IN THE FIELD, UNO. PANEL EDGE JOINTS TO BE STAGGERED BETWEEN ADJACENT PANELS OF SHEATHING. PROVIDE GAP BETWEEN PANELS TO ALLOW FOR NATURAL EXPANSION/CONTRACTION (1/8" GAP TYP).
5. ALL ROOF TRUSSES OR RAFTERS SHALL BE SPACED NO FURTHER APART THAN 24" O.C. AND SHALL BE CONNECTED TO TOP PLATE WITH H2.5 TIE UNO.
6. ALL GIRDER TRUSSES SHALL BE CONNECTED TO TOP PLATE WITH TWO H6 TIES UNO.
7. LOCATE ALL OPENINGS AND PENETRATIONS AND VERIFY NO CONFLICT WITH FLOOR FRAMING, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS BY OTHERS.
8. ALL BEAMS AND GIRDER TRUSSES SHALL BE SUPPORTED BY MIN TWO STUDS BELOW EACH END, UNO. ALL BEAMS SHALL BE FRAMED "TOP FLUSH" WITH JOISTS, UNO. "TOP FLUSH "OR "TF" INDICATES T/BEAM EQUAL T/JOISTS AND B/BEAM EXTENDING BELOW B/JOISTS. "BOTTOM FLUSH" OR "BF" INDICATES B/BEAM EQUAL B/JOISTS AND T/BEAM EXTENDING ABOVE T/JOISTS. "DROPPED BEAM" OR "DB" INDICATES T/BEAM EQUAL B/JOISTS.
9. ALL NON-LOAD BEARING WALLS TO BE FRAMED MIN 0.25" UNDER FLOOR SYSTEM.
10. HORIZONTAL STRAPS INDICATED ON FRAMING PLANS SHALL BE CENTERED OVER THE TOP PLATE, BEAM, OR BLOCKING. STRAP LENGTH PER PLAN.
11. ALL TIES AND HANGERS TO BE MANUFACTURED BY SIMPSON STRONG-TIE. INSTALLATION PER MANUFACTURER'S RECOMMENDATIONS. ALTERNATIVE SOLUTIONS SHALL BE SUBMITTED TO EOR FOR APPROVAL PRIOR TO INSTALLATION.
12. ENGINEERED ROOF TRUSSES, WHEN CALLED OUT ON PLANS, TO BE DESIGNED BY OTHERS. REFER TO STRUCTURAL GENERAL NOTES FOR SUBMITTAL INFORMATION AND DESIGN CRITERIA.
    a. DEAD AND LIVE LOADS INDICATED IN GENERAL STRUCTURAL NOTES SHALL BE USED FOR TRUSS DESIGN.
    b. CHANGES TO LAYOUT MUST BE SUBMITTED TO THE ARCHITECT AND EOR FOR REVIEW AND APPROVAL.
    c. TRUSS SUBMITTAL PACKAGE TO BE PROVIDED TO EOR FOR REVIEW. REFERENCE GENERAL STRUCTURAL NOTES FOR SUBMITTAL REQUIREMENTS
    d. (XXX LBS SHEAR/DRAG) INDICATE SHEAR TRANSFER LOAD. SHEAR TRUSS SHALL BE DESIGNED TO BE ABLE TO TRANSFER SPECIFIED LATERAL LOAD APPLIED AT THE TOP CHORD TO THE BOTTOM CHORD AND INTO SHEARWALL BELOW.
    e. ROOF TRUSSES SHOULD BE DESIGNED FOR ADDITIONAL LOADS WHERE APPLICABLE AS SPECIFIED BY THE ARCHITECT (I.E. MECHANICAL UNITS, ROOF DECKS AND PATIOS, GREEN ROOFS, SOLAR UNITS, ETC).
    f. TRUSS DESIGN FOR BEARING AT TOP PLATES TO BE DESIGNED FOR COMPRESSION PERPENDICULAR TO GRAIN.
13. COMPOSITE ROOFING MATERIAL TO MATCH EXISTING.
14. ROOF DRAINAGE TO MATCH EXISTING.



ROOF FRAMING PLAN

0 1' 2' 4'

SCALE: 1/4" = 1'-0" (24x36)
(OR) 1/8" = 1'-0" (11x17)

1

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REV	DATE	DESCRIPTION	BY
1	-	-	

PROJECT
MERCER ISLAND (NM) RESIDENCE
4311 85TH AVENUE SE
MERCER ISLAND, WA 98040

PROJECT NO.
22-014

SHEET TITLE
ROOF FRAMING PLAN

SHEET
S-5

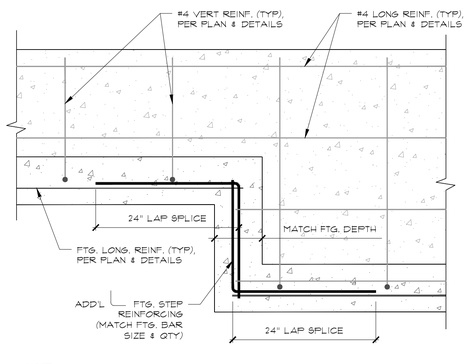
NOT USED

SCALE N.T.S. — 12

NOT USED

SCALE N.T.S. — 11

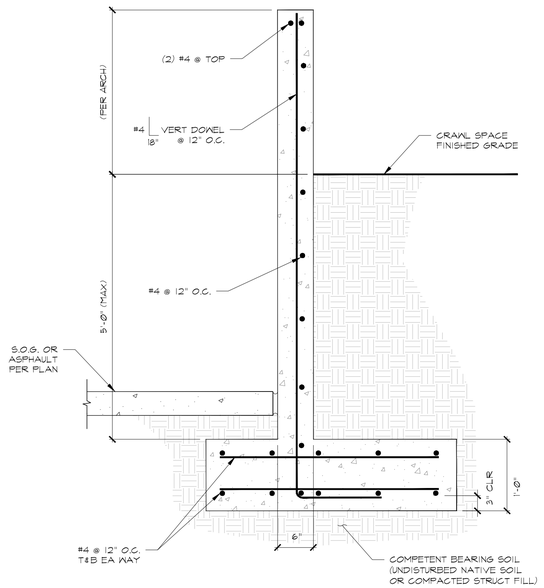
TYPICAL STEPPED FOOTING



NOTE:
UNLESS NOTED OTHERWISE, FTG. STEP DOWN SHALL NOT EXCEED 24" DROP. MAINTAIN 48" MIN. DISTANCE BETWEEN CONSECUTIVE STEP DOWNS.

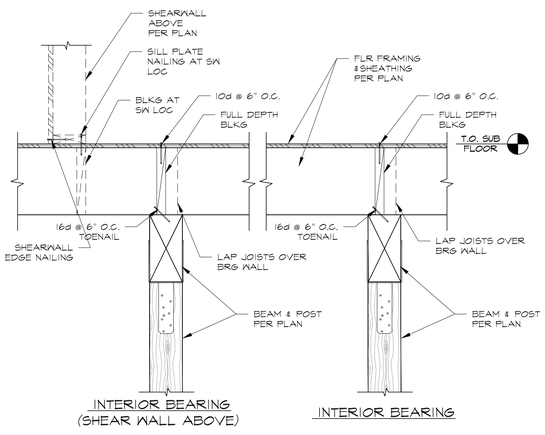
SCALE N.T.S. — 10

CRAWL SPACE WALL



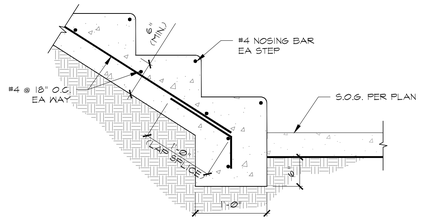
SCALE N.T.S. — 8

FLR FRAMING (@ POST & BEAM)



SCALE N.T.S. — 7

TYP. CONC. ENTRY STAIRS



SCALE N.T.S. — 6

CORNER BARS AT CONC WALLS

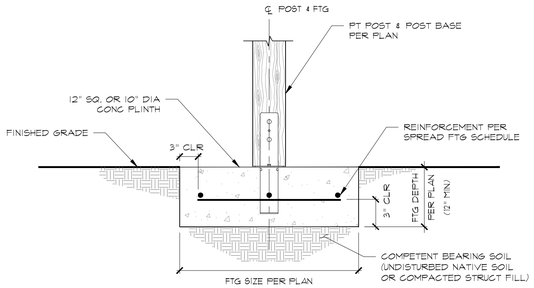
LAP SPLICE & STD HOOK LENGTH FOR CORNER BARS		
BAR SIZE PER WALL	LAP SPLICE LENGTH	STD HOOK LENGTH
#4	2' - 6"	0' - 8"
#5	3' - 0"	0' - 10"
#6	3' - 8"	1' - 0"
#8	5' - 0"	1' - 3"

NOTE:
WHERE INTERSECTING WALLS CONTAIN DIFFERENT SIZE HORIZONTAL REINF BARS, CORNER BARS INSTALLED SHALL MATCH THE LARGER OF THE REINF BAR SIZES

SCALE N.T.S. — 5

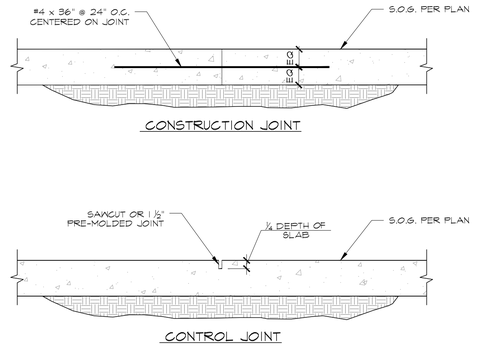
TYP EXTERIOR SPREAD FTG

SPREAD FTG SCHEDULE	
FTG SIZE PER PLAN	REINFORCEMENT
18" x 18" x 12"	(2) #4 EA WAY, BOT
24" x 24" x 12"	(3) #4 EA WAY, BOT
30" x 30" x 12"	(3) #4 EA WAY, BOT
36" x 36" x 12"	(4) #4 EA WAY, BOT
48" x 48" x 12"	(5) #4 EA WAY, TOP & BOT
60" x 36" x 12"	(6) #4 SHORT, (4) #4 LONG



SCALE N.T.S. — 4

S.O.G CONSTR/CONTROL JOINT



NOTE:
PROVIDE CONSTRUCTION OR CONTROL JOINTS TO ENGLOSE APPROXIMATE SQUARE AREAS OF 225 SF MAX. WITH MAX ASPECT RATIO OF 1.3

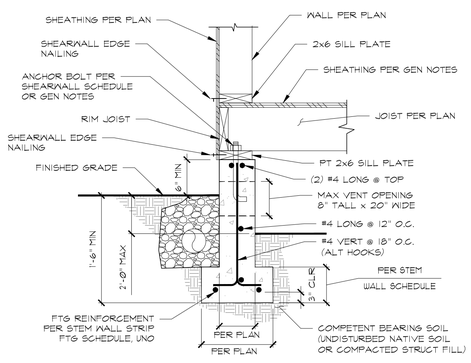
SCALE N.T.S. — 3

(N) TO (E) STEM WALL & FTG

SCALE N.T.S. — 2

TYP STEM WALL & STRIP FTG

STEM WALL STRIP FTG SCHEDULE			
FTG WIDTH PER PLAN	FTG DEPTH	REINFORCEMENT	
		LONGITUDINAL	TRANSVERSE
1' - 0"	6"	(2) #4, CONT.	N/A
1' - 4"	8"	(2) #4, CONT.	N/A
2' - 0"	8"	(3) #4, CONT.	N/A
2' - 6"	10"	(3) #4, CONT.	#4 @ 12" O.C.



SCALE N.T.S. — 1

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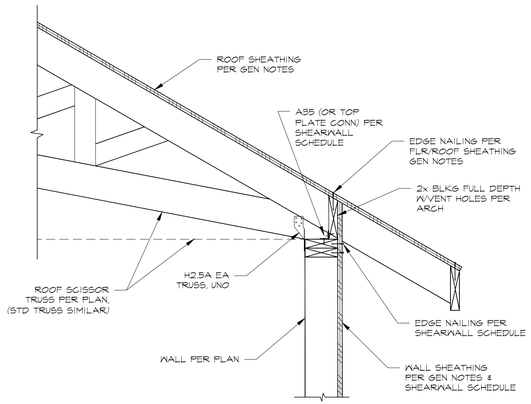
REV	DATE	DESCRIPTION	BY
1	-		

PROJECT
MERCER ISLAND (NM) RESIDENCE
4311 85TH AVENUE SE
MERCER ISLAND, WA 98040

PROJECT NO.
22-014

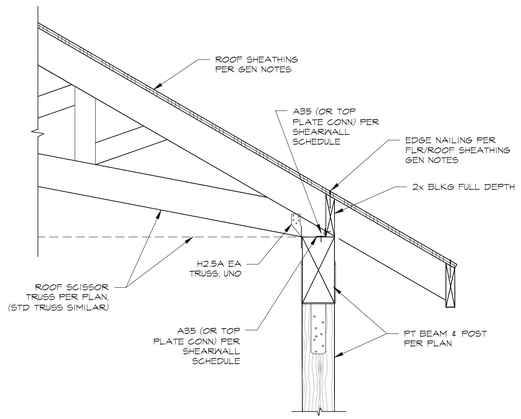
SHEET TITLE
STRUCTURAL DETAILS

SHEET
SD-1



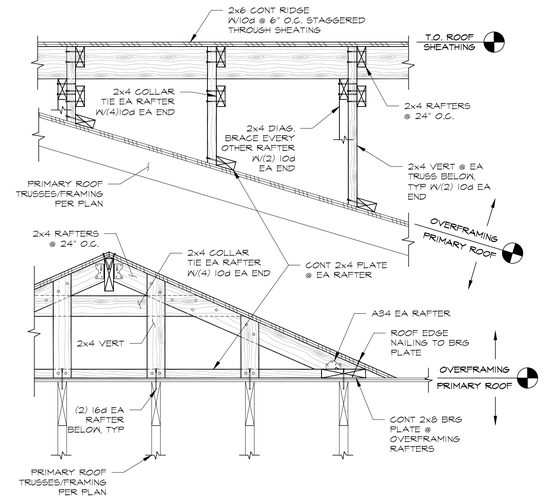
EXTERIOR WALL (@ TRUSS)

SCALE N.T.S. 12



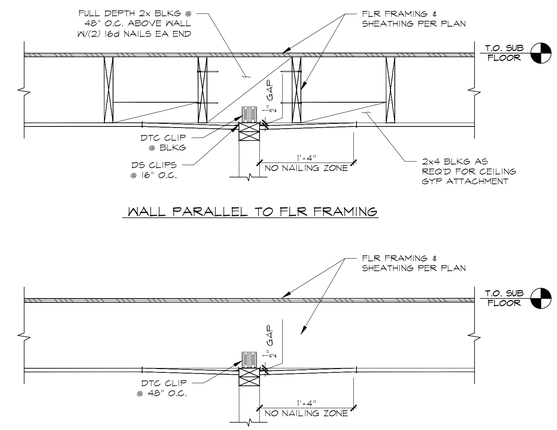
BEAM & POST (@ TRUSS)

SCALE N.T.S. 9



ROOF OVERFRAMING

SCALE N.T.S. 6

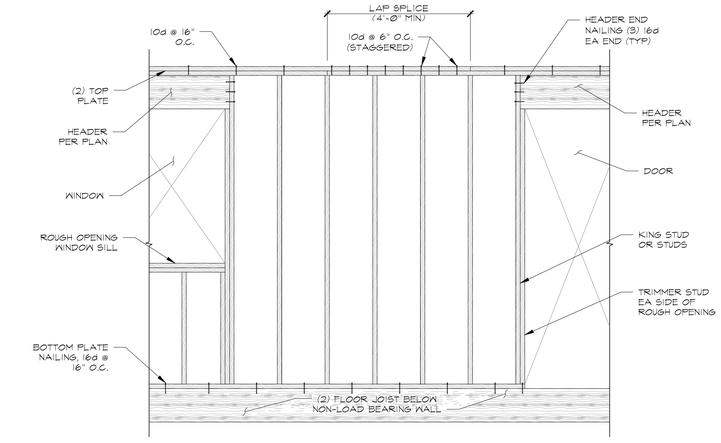


WALL PARALLEL TO FLR FRAMING

WALL PERPENDICULAR TO FLR FRAMING

CEILING @ PARTITION WALL

SCALE N.T.S. 3



TYPICAL NON-LOAD BEARING WALL FRAMING

SCALE N.T.S. 8

BUNDLED STUD SCHEDULE

QTY BUNDLED STUDS	STUD SIZE	FACE NAILING FOR BUNDLED STUDS
2	2x	10d @ 6" O.C. STAGGERED ALT FACE
3	2x	30d @ 8" O.C. STAGGERED ALT FACE
4	2x	20d @ 8" O.C. STAGGERED ALT FACE

NOTES:

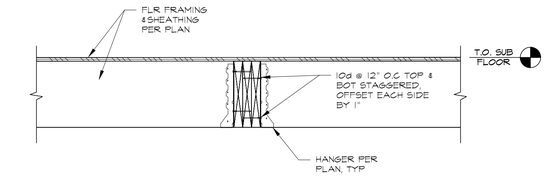
1. AS ALTERNATIVE TO BUNDLED STUD NAILING FOR BUNDLES OF 3 OR MORE, STUDS MAY BE BUNDLED PER 2 STUDS WITH 10d @ 6" O.C. STAGGERED FOR EACH ADDITIONAL STUD.

WINDOW SILL SCHEDULE

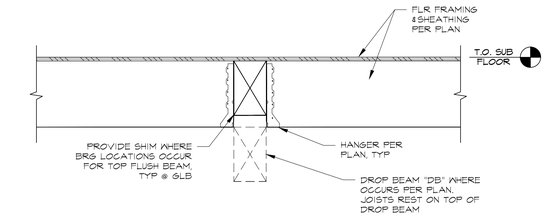
ROUGH OPENING	MIN # OF SILL PLATES REQ'D	END ATTACHMENT
4'-0" MAX	1	(2) 16d END NAIL
8'-0" MAX	2	(2) 16d END NAIL

NOTES:

1. UNLESS NOTED OTHERWISE, NAILING SHALL CONFORM TO IBC TABLE 2304.10.1
2. HEADER WIDTH SHALL MATCH STUD WIDTH



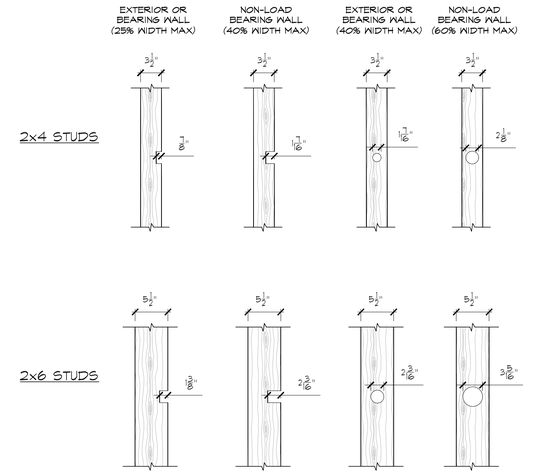
(2) & (3) PLY JOIST/BEAM



SOLID SAWN/ENGINEERED WOOD BEAM

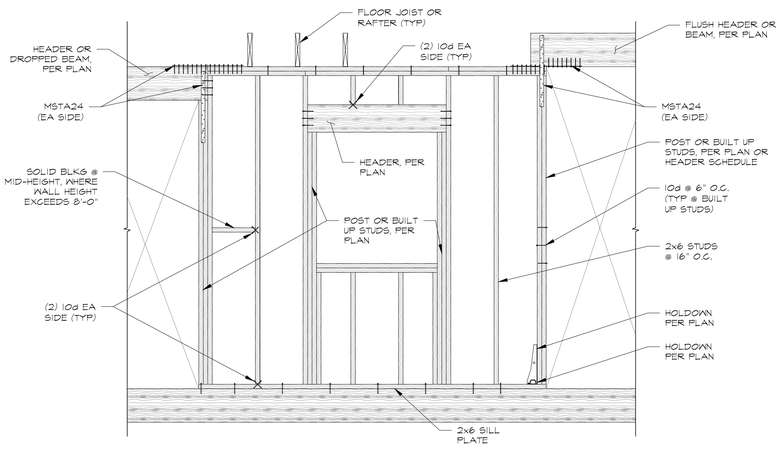
FLOOR JOIST TO BEAM CONN.

SCALE N.T.S. 5



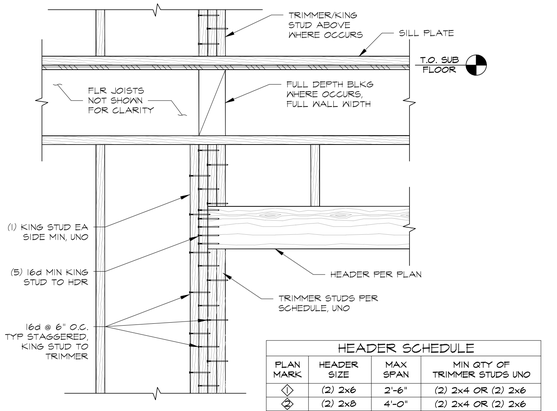
ALLOWABLE STUD NOTCH & HOLE

SCALE N.T.S. 2



TYPICAL LOAD BEARING WALL FRAMING

SCALE N.T.S. 7



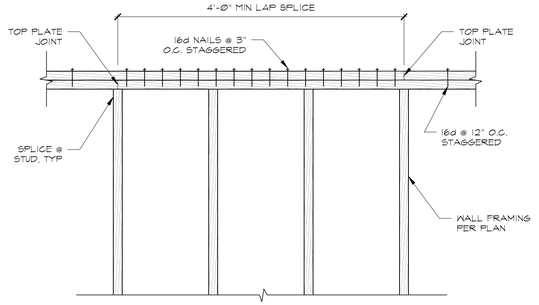
HEADER SCHEDULE

PLAN MARK	HEADER SIZE	MAX SPAN	MIN QTY OF TRIMMER STUDS UNO
1	(2) 2x6	2'-6"	(2) 2x4 OR (2) 2x6
2	(2) 2x8	4'-0"	(2) 2x4 OR (2) 2x6
3	4x8	5'-6"	(2) 2x4 OR (2) 2x6
4	4x10	6'-9"	(3) 2x4 OR (2) 2x6
5	4x12	8'-0"	(3) 2x4 OR (2) 2x6

NOTE: (1) 4x4 MAY BE SUBSTITUTED FOR (3) 2x4

HEADER FRAMING & SCHEDULE

SCALE N.T.S. 4



TOP PLATE SPLICE

SCALE N.T.S. 1

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REV	DATE	DESCRIPTION
1	-	-

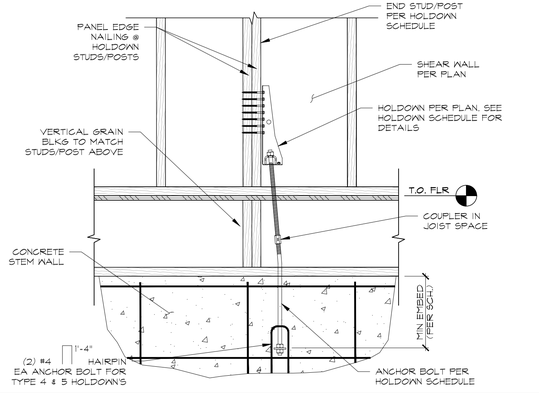
PROJECT: MERCER ISLAND (NM) RESIDENCE
4311 85TH AVENUE SE
MERCER ISLAND, WA 98040

PROJECT NO. 22-014

SHEET TITLE: STRUCTURAL DETAILS

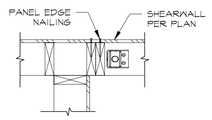
SHEET: SD-2

CONCRETE ANCHOR HOLDOWN SCHEDULE						
PLAN MARK	HOLDOWN TYPE	ANCHOR SIZE	MINIMUM EMBEDMENT	MIN END STUD OR POST	QTY/SIZE OF FASTENERS TO STUD/POST	ALLOWABLE UPLIFT CAPACITY (K)
HD 1	HDU5-SDS2.5	⅝"Ø	12"	(2) 2x6 HF	(14) ¼"x2-½" SDS	4.065K
HD 2	HDU8-SDS2.5	⅞"Ø	12"	(2) 2x6 HF	(20) ¼"x2-½" SDS	4.870K
HD 3	HDU8-SDS2.5	⅞"Ø	14"	6x6 DFL #1	(20) ¼"x2-½" SDS	7.870K
HD 4	HDU11-SDS2.5	1"Ø	16"	6x6 DFL #1	(30) ¼"x2-½" SDS	9.535K
HD 5	HDU14-SDS2.5	1"Ø	18"	6x6 DFL #1	(36) ¼"x2-½" SDS	14.445K

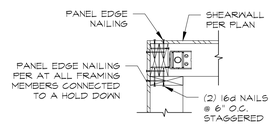


EMBED HOLDOWN SCHEDULE

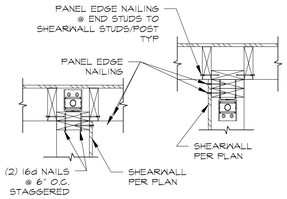
SCALE N.T.S. | 12



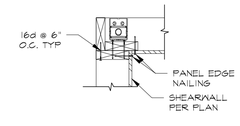
EXTERIOR WALL



EXTERIOR CORNERS



INTERIOR SHEARWALL INTERSECTION



INTERIOR CORNERS

SHEAR WALL END FRAMING

SCALE N.T.S. | 9

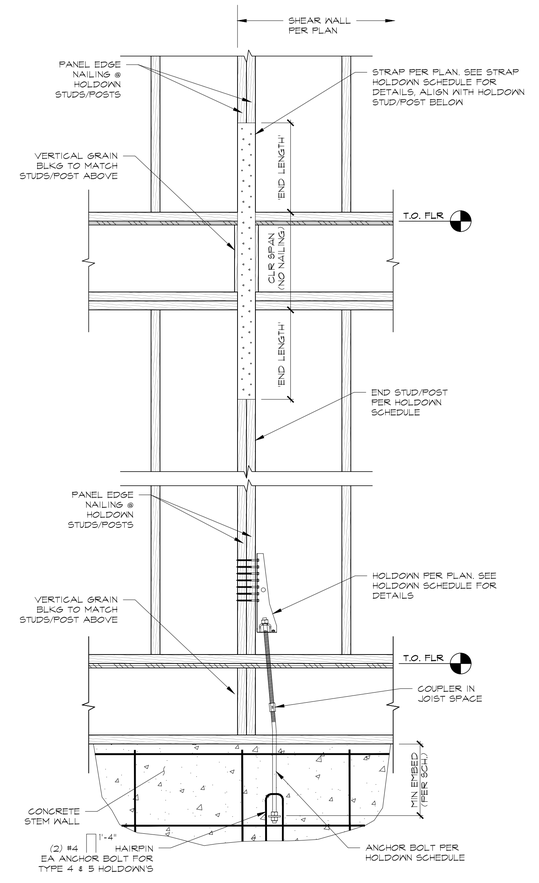
SHEAR WALL SCHEDULE								
PLAN MARK	APA RATED SHEATHING	PANEL EDGE NAILING (COMMON OR GALV BOX)	MIN PANEL EDGE STUD & BLKG SIZE	ALLOWABLE SHEAR (LB/FT)		MUDSILL (ANCHOR BOLT CONN.)	RIM JOIST/BLKG CONNECTION	
				EQ	WIND		TO SILL PLATE	TO TOP PLATE
1	SINGLE-SIDED 15/32"	10d @ 6" O.C.	2x	288	405	½"Ø @ 60" O.C.	16d @ 6" O.C.	RBC @ 10" O.C. OR A35 @ 16" O.C.
2	SINGLE-SIDED 15/32"	10d @ 4" O.C.	2x	428	600	½"Ø @ 48" O.C.	16d @ 5" O.C.	RBC @ 8" O.C. OR A35 @ 10" O.C.
3	SINGLE-SIDED 15/32"	10d @ 3" O.C.	3x	558	781	½"Ø @ 36" O.C.	16d @ 4" O.C.	RBC @ 6" O.C. OR A35 @ 8" O.C.
4	SINGLE-SIDED 15/32"	10d @ 2" O.C.	3x	716	1002	½"Ø @ 32" O.C.	16d @ 3" O.C.	A35 @ 6" O.C.
5	DOUBLE-SIDED 15/32"	10d @ 4" O.C.	3x	856	1200	⅝"Ø @ 40" O.C.	(2 ROWS) 16d @ 4" O.C.	A35 @ 6" O.C.
6	DOUBLE-SIDED 15/32"	10d @ 3" O.C.	3x	1116	1562	⅝"Ø @ 32" O.C.	(2 ROWS) 16d @ 3" O.C.	RBC AND A35 @ 6" O.C.
7	DOUBLE-SIDED 15/32"	10d @ 2" O.C.	3x	1432	2004	⅝"Ø @ 24" O.C.	(2 ROWS) 16d @ 2" O.C.	RBC AND A35 @ 6" O.C.

NOTES:

1. INSTALL SINGLE-SIDED SHEAR WALLS ON FACE INDICATED BY # ON PLAN
2. ALL SHEAR WALLS TO BE FRAMED IN 2x6 WALLS, MIN
3. ENSURE MINIMUM 1-1/2" NAIL PENETRATION
4. PANELS SHALL BE 4'x8', MIN, EXCEPT AT BOUNDARIES AND CHANGES IN FRAMING
5. PROVIDE FULL DEPTH BLOCKING AT ALL UNSUPPORTED SHEATHING EDGES
6. EDGE NAILS SHALL BE LOCATED AT LEAST 3/8" FROM PANEL EDGES
7. SHEATHING SHALL NOT BE USED TO SPLICE BOUNDARY ELEMENTS
8. LOCATE (1) ANCHOR BOLT 6" - 12" FROM EA END OF WALL AND EA SIDE OF SILL PL SPLICES
9. PROVIDE ANCHOR BOLT WASHER PER GENERAL NOTES, WALL ANCHORAGE
10. STAGGER NAILS IN SILL PLATE CONNECTION
11. SEE GENERAL NOTES FOR ADDITIONAL CONCRETE CONNECTION INFORMATION

SHEAR WALL SCHEDULE

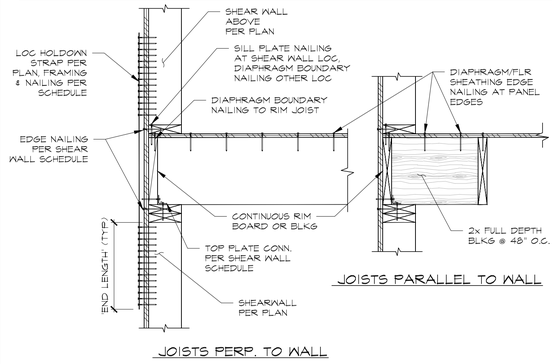
SCALE N.T.S. | 3



HOLDOWN & STRAP ELEVATION

SCALE N.T.S. | 10

WOOD STRAP HOLDOWN SCHEDULE					
PLAN MARK	HOLDOWN TYPE	MIN. FRAMING MEMBER WIDTH	MIN. END LENGTH	QTY OF FASTENERS IN END LENGTH'	ALLOWABLE UPLIFT CAPACITY (K)
CS20	COILED STRAP (20 GA.)	2x	9"	(14) 10d (COMMON)	1.030K
CS16	COILED STRAP (16 GA.)	2x	13"	(22) 10d (COMMON)	1.705K
CS14	COILED STRAP (14 GA.)	2x	16"	(30) 10d (COMMON)	2.440K
CMST14	COILED STRAP (14 GA.)	(2) 2x	24"	(54) 10d (COMMON)	4.60K
CMST14	COILED STRAP (14 GA.)	(2) 2x	34"	(78) 10d (COMMON)	6.475K
CMST12	COILED STRAP (12 GA.)	(2) 2x	44"	(98) 10d (COMMON)	9.215K

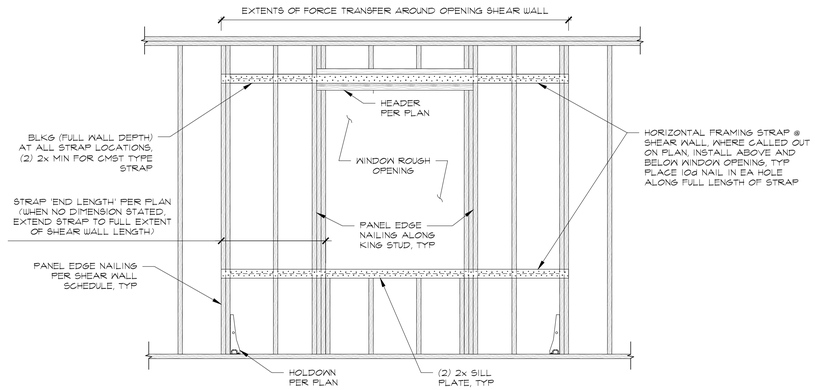


STRAP HOLDOWN SCHEDULE

SCALE N.T.S. | 8

NOT USED

SCALE N.T.S. | 5



STRAPPING @ WINDOW (FORCE TRANSFER SHEAR WALL)

SCALE N.T.S. | 4

NOT USED

SCALE N.T.S. | 2

NOT USED

SCALE N.T.S. | 1

KOLBY KEVIN BURKE
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STRUCTURAL ENGINEER
PROFESSIONAL ENGINEER
6/29/22

BURKE CONSULTING ENGINEERS
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REV	DATE	DESCRIPTION	BY
1	-	-	-

PROJECT
MERCER ISLAND (NM) RESIDENCE
4311 85TH AVENUE SE
MERCER ISLAND, WA 98040

PROJECT NO.
22-014

SHEET TITLE
STRUCTURAL DETAILS

SHEET
SD-3