PROJECT SCOPE DECLARATION

THE FOLLOWING ALTERATIONS AND EXTERIOR ADDITIONS ARE PROPOSED AND DEFINED IN THE CONTENT OF THIS SUBMITTAL:

1) REPLACEMENT OF THE EXISTING SINGLE PITCHED GARAGE ROOF (NORTH END OF THE STRUCTURE) WITH A COVERED DECK. THE EXISTING GARAGE IS UNCONDITIONED AND NO MODIFICATION TO THE THERMAL ENVELOPE IS PROPOSED, BEYOND REQUIRED CONSTRUCTION ACCESS. EXISTING CAVITIES OPENED SHALL BE INSULATED PER 2018 WSEC R503.

2) THE INSTALLATION OF A NEW EXTENSION TO THE EXISTING ROOF LINE, TO PROVIDE COVER TO THE NEW NORTH DECK.

3) THE GARAGE WALL AND FOOTING MUST BE IMPROVED TO ADDRESS NEW LATERAL FORCES INTRODUCED BY THE NORTH DECK & ROOF EXTENSION.

4) THE EXISTING CONCRETE TILE ROOFING IS TO BE REPLACED THROUGHOUT WITH A RECYCLABLE & LONG LIFESPAN STANDING SEAM METAL ROOFING SYSTEM.

5) TWO NEW DOORS AT THE NEW NORTH DECK, AND THE REPLACEMENT OF THE DOOR AT THE PRIMARY ENTRANCE ARE REQUIRED. THE AREA WEIGHTED AVERAGE U-VALUE FOR ALL NEW FENESTRATION SHALL NOT EXCEED U=0.30. SEE A700

6) THE EXISTING EAST DECK AND STAIRS WILL BE REPLACED WITH NEW DECKING, FRAMING, BEAMS, AND COLUMNS. THE COLUMNS WILL CONNECT TO HELICAL PILES INSTALLED UNDER PERMIT 2012-223 USING THE STRUCTURAL ENGINEER'S DETAILING. ALL FINISHED WORK WILL BE INSTALLED WITHIN THE PLAN VIEW FOOTPRINT OF THE EXISTING DECK.

7) THE EXISTING PORTICO AT THE PRIMARY ENTRANCE IS TO BE REMOVED. IT WILL BE REPLACED BY A CONTINUATION OF THE PRINCIPAL ROOF SURFACE AND EXISTING EAVE LINE.

8) CONNECT NEW AND REPLACED GUTTERS TO EXISTING DOWNSPOUT LOCATIONS. NO NET INCREASE IN RAINWATER CATCHMENT AREA OR OTHER DEMAND ON EXISTING STORMWATER SYSTEM.

LAND USE CODE SUMMARY

1) NO INCREASE IN EXISTING LOT COVERAGE
2) EXISTING RETAINING WALL, WALKWAY AND STAIRS INSTALLED IN CONFORMANCE TO MICC 17.14.010
3) NO HEIGHT INCREASE PROPOSED

ENERGY CODE SUMMARY

1) ALL WORK CLASSIFIED AS ADDITION IS EXTERIOR OR UNCONDITIONED.
2) NO ADDITION TO THE THERMAL ENVELOPE PROPOSED, THEREFORE GOVERNING SECTION IS 2018 WSEC R503
3) NO ENERGY CREDITS REQUIRED FOR ALTERATION
4) ALL CAVITIES ACCESSED TO BE FULLY INSULATED
5) ALL FENESTRATION U=0.30 MAX (SEE A700)
6) ALTERATION OF MECHANICAL SYSTEMS LIMITED TO RE-ROUTING DIRECT VENT EXHAUST OF THE EXISTING GAS FIREPLACE APPLIANCE. NO CHANGE TO EXISTING HEATING, COOLING, OR VENTILATION SYSTEMS.
7) ALL PROPOSED LIGHTING TO BE HIGH EFFICACY

FIRE SUMMARY

1) SHALL COMPLY WITH ANY CONDITIONS ESTABLISHED BY THE FIRE MARSHALL'S REVIEW

FOUNDATION SYSTEMS

1) SEE STRUCTURAL DESIGN FOR PILE CONNECTIONS,
2) SEE GEOTECHNICAL REPORT FOR SUB-GRADE DESIGN CRITERIA.
3) SEE PERMIT 2012-223 FOR RECORD OF SYSTEM INSTALLATION AND ON SITE LOAD TESTING.

APPLICABLE CODES

ALL WORK SHALL FULLY COMPLY WITH THE FOLLOWING CODES, AS AMENDED BY THE AUTHORITY HAVING JURISDICTION:

2018 INTERNATIONAL RESIDENTIAL CODE
2018 INTERNATIONAL BUILDING CODE
2018 INTERNATIONAL MECHANICAL CODE
2018 UNIFORM PLUMBING CODE
2018 INTERNATIONAL FUEL GAS CODE
2018 WASHINGTON STATE ENERGY CODE
2018 INTERNATIONAL FIRE CODE

PROJECT INFORMATION

ADDRESS: 3206 74TH PLACE SOUTHEAST
MERCER ISLAND, WA 98040

PARCEL NUMBER: 130030-2288

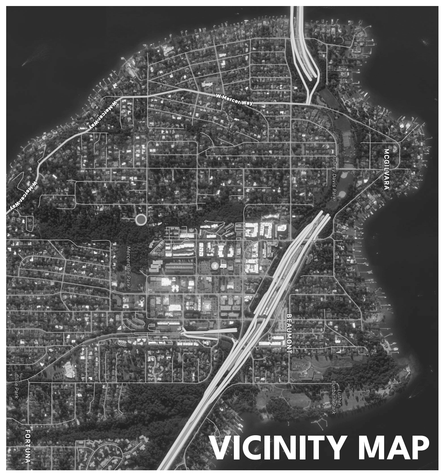
LEGAL DESCIPTION: CALKINS C C 1ST TO EAST SEATTLE N 170 FT OF VAC CEDAR PLAZA LESS BEG AT NE COR TH S 100 FT TH NWLY TO NW COR TH E TO BEG

ZONING: R - 8.4

LOT AREA: 13,200 SQUARE FEET
NO INCREASE TO LOT COVERAGE OR IMPERVIOUS SURFACE AREA

LOT SLOPE: 17.5% (SEE SHEET A011)

CRITICAL AREAS: SLOPE HAZARD ON PARCEL, ALL PROPOSED WORK IS OUTSIDE OF SLOPE HAZARD AREA AND BUFFER.
SEE GEOTECHNICAL REPORT FOR CLARIFICATION OF MINIMAL RISK, CRITERIA & RECOMMENDATIONS.



SHEET INDEX

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ISSUED / REVISED
1 OTC PERMIT SUBMITTAL
2
3
4
5
6
PRINTED 6/3/21

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FIRST HILL TREEHOUSE
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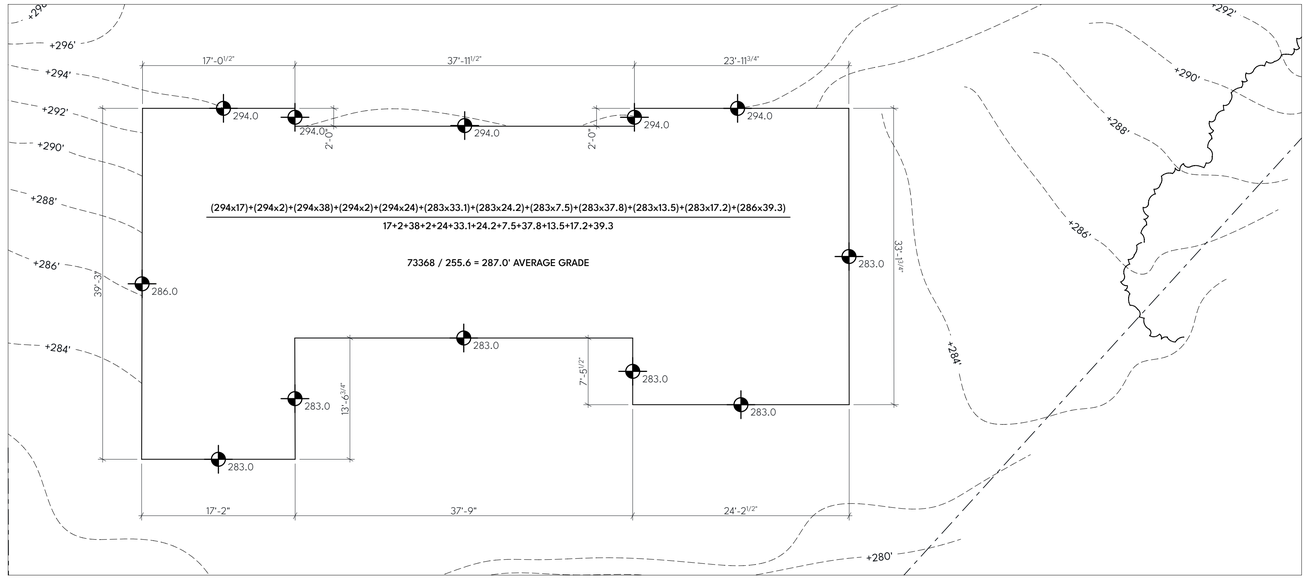
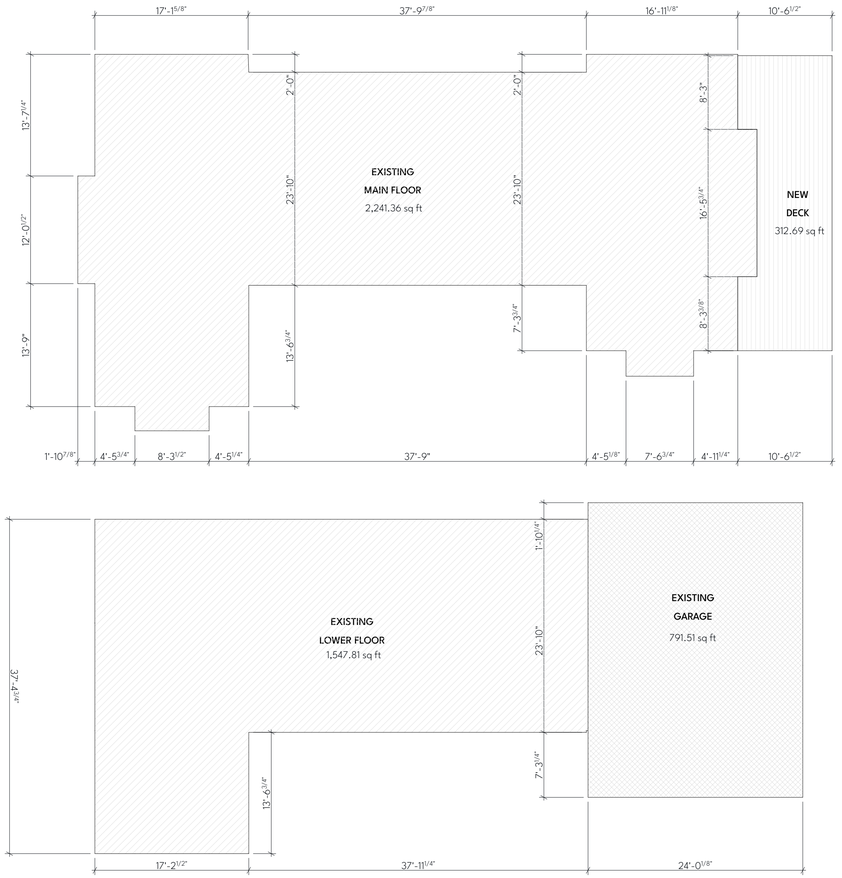
MERCER ISLAND, WA
98040
PROJECT

PROJECT INFORMATION
A001



1 A002 AVERAGE GRADE

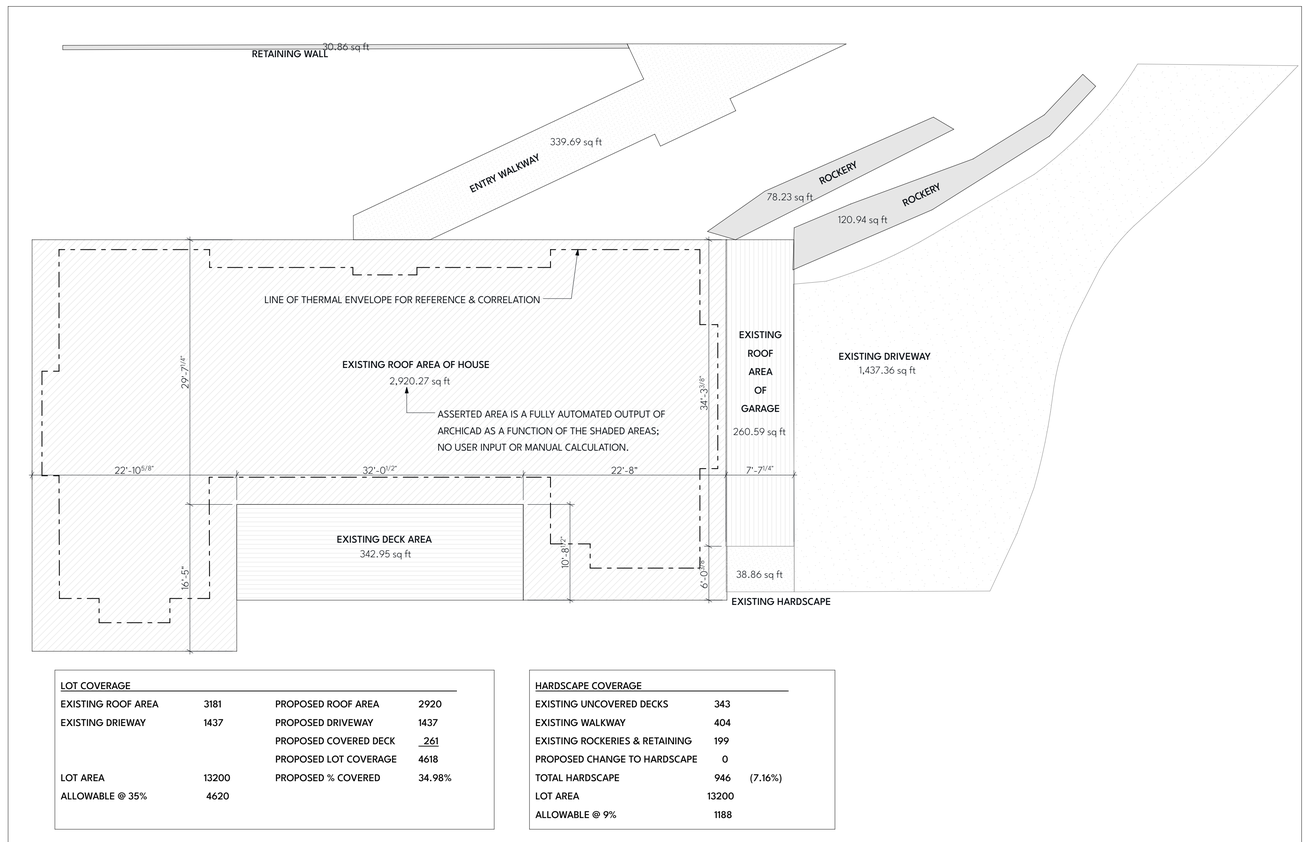
SCALE: 1/8" = 1'-0"



GROSS FLOOR AREA	
MAIN FLOOR TO EXTERIOR FACE	2241
SECOND STORY COVERED DECK	313
LOWER FLOOR TO EXTERIOR FACE	1548
GARAGE TO EXTERIOR FACE	792
TOTAL	4894

3 A002 GFA AREA TAKEOFF

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



LOT COVERAGE			
EXISTING ROOF AREA	3181	PROPOSED ROOF AREA	2920
EXISTING DRIEWAY	1437	PROPOSED DRIVEWAY	1437
		PROPOSED COVERED DECK	261
		PROPOSED LOT COVERAGE	4618
LOT AREA	13200	PROPOSED % COVERED	34.98%
ALLOWABLE @ 35%	4620		

HARDSCAPE COVERAGE		
EXISTING UNCOVERED DECKS	343	
EXISTING WALKWAY	404	
EXISTING ROCKERIES & RETAINING	199	
PROPOSED CHANGE TO HARDSCAPE	0	
TOTAL HARDSCAPE	946	(7.16%)
LOT AREA	13200	
ALLOWABLE @ 9%	1188	

2 A002 LOT COVERAGE

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

HAVN

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12812
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STATE OF WASHINGTON

ISSUED / REVISED
1 OTC PERMIT SUBMITTAL
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COMPLIANCE DIAGRAMS

A002

CODES

All work shall comply with the current edition of the International Residential Codes (IRC) and International Energy Conservation Code (IECC) and any governing state, county, or city amendments to the code. In addition, the current versions of the codes covering plumbing, mechanical, electrical and fire shall be followed. Notify Architect of any discrepancies between the contract documents and the building codes. Work shall be done to current area wide standards and practices by experienced craftsmen.

SCOPE

The Contractor shall verify all existing and new dimensions and job conditions and notify the Architect of any discrepancies prior to proceeding with the work. The Contractor shall be responsible for all safety precautions and the methods, techniques, sequence or procedures required performing the Work.

Communicate any questions, oversights, conflicts, errors, omissions, mistakes, complete f-ups or other project relevant observations to the Architect. I do care.

GRADING

Grade entire area of property to reasonably true and even surfaces. Slope ground away from building walls to facilitate drainage. Grade to uniform levels or slopes between points where grades are noted on drawings. Round surfaces at abrupt changes in level.

Backfill behind retaining walls with free draining, granular fill and provide for subsurface drainage.
Cut slopes for permanent excavations shall not be steeper than 2 horizontal to 1 vertical and slopes for permanent fills shall be not steeper than 2 horizontal to 1 vertical unless substantiating data justifying steeper slopes are submitted.

FOUNDATIONS   Also see Structural Notes for additional requirements.

Assumed allowable wall bearing value 2000PSF unless indicated otherwise in Geotechnical Report. Foundation footings shall be placed upon firm, undisturbed native soil. Notify Architect if undisturbed soil depth is different from drawings. See structural drawings for minimum footing depth below adjacent grade.

Foundations supporting wood shall extend at least 6 inches above the adjacent finish grade.
Foundations for all buildings where the surface of the ground slopes more than 1 foot in 10 feet shall be level, or shall be stepped so that both top and bottom of such foundation are level.
Individual concrete pier footings shall project a minimum of 8 inches above exposed ground unless the columns or posts which they support are of approved wood of natural resistance to decay or treated wood.

Columns and posts located on concrete or masonry floors or decks exposed to the weather or to water splash or in basements and which support permanent structures shall be supported by concrete piers or metal pedestals projecting above floors unless approved wood of natural resistance to decay or treated wood is used. The pedestals shall project at least 6 inches above exposed earth and at least 1 inch above such floors.

Provide 18 inch minimum crawl space under wood joints and 12 inches under wood girders or be of wood with natural resistance to decay or be pressure treated.
Foundation walls enclosing a basement below finished grade shall be damp proofed outside by approved methods and materials.

WOOD   Also see Structural Notes for additional requirements.

All lumber, plywood, particleboard, structural glued-laminated timber, and jointed lumber, fiberboard sheathing (when used structurally), hardboard siding (when used structurally), piles and poles shall conform to the applicable standards or grading rules specified in the IRC and shall be so identified by the grade mark or a Certificate of Inspection issued by an approved agency.
All lumber, timber, plywood, and poles required to be Treated Wood under shall be identified by the quality mark of an approved inspection agency which maintains continued supervision, testing, and inspection over the quality of the product as specified in IRC.
Delivery and Storage: Keep materials under cover and dry. Protect against exposure to weather and contact with damp or wet surfaces. Stack lumber as well as plywood and other panels; provide for air circulation within and around stacks and under temporary coverings including polyethylene and similar materials.

Frame nailing to be in compliance with Table R602.3(1), IRC.

Wood members entering masonry or concrete require one-half inch net air space on top, sides, and end.
Foundation cripple walls shall be framed of studs not less in size than the studding above. When exceeding 4 feet in height, such walls shall be framed of studs having the size requirements for an additional story. Cripple walls having a stud height less than 14 inches shall be sheathed on at least one side with a wood structural panel that is fastened to both the top and bottom plates or the cripple wall shall be constructed of solid blocking.

For conventional construction, the ends of each joist shall have not less than 1-1/2 inches of bearing on wood or metal, nor less than 3 inches on masonry except where supported on a 1 x 4 ribbon strip nailed to adjacent stud or by approved joist hanger.

Bearing partitions perpendicular to joists shall not be offset from supporting girders, walls, or partitions more than joist depth unless sized to carry the additional load.

Joists under and parallel to bearing partitions shall be of adequate size to support the load. Double joist, sized to support the load, that are separated to permit the installation of piping or vents shall be full depth solid blocked with lumber not less than 2 inches nominal and spaced not more than 4 feet on center.

Solid blocking shall be provided over bearing partitions, walls, and beams.

Fire blocking and draftstopping shall be installed to cut off all concealed draft openings (both vertical and horizontal) and shall form and effective barrier between floors, between top story and a roof or attic space. Fire blocking shall consist of 2 inch nominal lumber. Fireblocking shall be required in concealed spaces of stud walls and partitions, including furred spaces, at the ceiling and floor levels and at 10 foot intervals both horizontally and vertically; At all interconnections between concealed vertical and horizontal spaces such as soffits, drop ceilings and cove ceilings; Between stair stringers at top and bottom and along run between studs; In openings around vents, pipes, ducts and similar openings that afford a passage for fire at ceiling and floor levels, with approved non-combustible materials. All spaces between chimneys and floors and ceilings through which chimneys pass shall be fire- blocked with noncombustible material securely fastened into place to a depth of 1 inch and shall only be placed on strips of metal or metal lath laid across the spaces between combustible material and the chimney.
All wood exposed to weather, such as wood used for deck framing including decking, railings, joists, beams, and posts shall be an approved species and grade of lumber pressure treated and/or decay-resistant heartwood of redwood, black locust or cedars.

ROOF

Roof sheathing shall be in accordance with IRC roof sheathing. Panels exposed in outdoor applications shall be bonded with exterior glue identified as Exposure 1. Application of roof covering materials shall be in accordance with IRC.

The net free ventilating area of enclosed rafter or attic spaces or other enclosed but unheated spaces shall be not less than 1/150 of the area of each space to be ventilated, except that the area may be 1/300, provided that at least 50% and not more than 80% of the required ventilating area is located at least 3 feet above eave or cornice vents with the balance being provided by the eave or cornice vents, or if a vapor retarder not exceeding a 1 perm rating is installed on the warm side of the insulation. The vent area openings shall be covered with an IRC approved corrosion-resistant material provided that the least dimension of the covering shall not exceed one-quarter inch.

TRUSSES

Trusses as shown on drawings are only representations; actual truss configuration may vary per manufactures design. Stress analysis and drawings/details shall be stamped by an approved State of Washington Registered Engineer. (Drawings/details shall be provided to building officials and approved prior to installation.) Pre-manufactured trusses shall be identified by manufacturer's stamp.Girder and field identification of light metal plate connected trusses is required. Information branded, marked, or otherwise permanently affixed to each truss shall contain the following: 1) identification of the truss manufacturing company; 2) the design load; and 3) the truss spacing. Engineering data and details shall be approved by the Architect before any field cuts or truss alterations. All roof trusses shall be so framed and tied into the framework and supporting walls so as to form an integral part of the whole building. Roof trusses shall have joints well fitted and shall have all tension members well tightened before any load is placed upon the truss. Diagonal and sway bracing shall be used to brace all roof trusses.

EGRESS

Basements and every sleeping room shall have at least one operable window or exterior door approved for emergency escape or rescue. Escape or rescue windows shall have a minimum net clear opening of 5.7 square feet. The minimum net clear opening height dimension shall be 24 inches. The minimum net clear opening width dimension shall be 20 inches. Where windows are provided as a means of escape or rescue, they shall have a finished sill height not more than 44 inches above the floor. Emergency escape and rescue openings shall be operational from the inside of the room without the use of keys or tools.
All corridors shall be not less than 36 inches wide. Not less than one exit door shall be provided for direct access to the exterior without requiring travel though a garage.The required exit door shall be side-hinged not less than 3 feet in width and 6 feet 8 inches in height. A floor or landing is required on each side of the exit door. The floor or landing at the exit door shall not be more than 1 1/2-inches lower than the top of the threshold. Other than the required exit door where a stairway of two or fewer risers is located on the exterior side of a door a landing is not required for the exterior side of the door. Floors or landings at exterior doors other than the required exit door shall have a rise less than 7 3/4-inch below the top of the threshold, provided the door, other than an exterior storm or screen door does not swing over the landing. The width of each landing shall not be less than the door served. Every landing shall have a minimum dimension of 36 inches measured in the direction of travel.

STAIRWAYS & RAILS

Enclosed accessible space under stairs shall have walls, under stair surface and any soffits protected on the enclosed side with 1/2-inch gypsum board.

Stairways: Maximum riser height 7 3/4-inches, minimum tread depth 10 inches, headroom minimum 6 feet 8 inches, minimum clear finished width 36 inches. Handrails shall be provided on at least one side of each continuous run of treads or flight with four or more risers. Handrail ends shall be returned or shall terminate in newel post or safety terminals. Handrails height shall be not less than 34 inches and not more than 38 inches above slope plane adjoining the tread nosing. Handrails with circular cross-section shall have an outside diameter of at least 1.25 inches and not greater than 2 inches. Non-circular handrails shall have a perimeter dimension of at least 4 inches and not greater than 6.25 inches with maximum cross-section dimension of 2.25 inches. Handrails adjacent to a wall shall have a space of not less than 1 1/2-inches between the wall and the handrail.

Stairs, exit balconies and similar exit facilities shall be positively anchored to the primary to resist both vertical and lateral forces. Such attachment shall not be accomplished by use of toenails or nails subject to withdrawal.

When decks, screened porches, balconies or raised floor surfaces are more than 30 inches above the floor or grade below shall have guards not less than 36 inches in height. Open sides of stairs with total rise of more than 30 inches above the floor or grade below shall have guards not less than 34 inches in height measured vertically from the nosing of the treads. Intermediate rails or ornamental closures are required that do not allow passage of a sphere 4 inches or more in diameter. Triangular openings created by stair risers, treads and bottom rail shall not allow the passage of a 6 inch sphere.

GLAZING

HAZARDOUS LOCATIONS: Each pane of glazing installed in hazardous locations shall be visibly labeled with a non-removable label that designates the type and thickness of glass and safety glazing standard.

The following shall be considered specific hazardous locations for the purposes of glazing:
1. Glazing in swinging doors except jalousies.
2. Glazing in fixed and sliding panels of sliding door assemblies and panels in sliding and bifold closet door assemblies.
3. Glazing in storm doors.
4. Glazing in all unframed swinging doors.
5. Glazing in doors and enclosures for hot tubs, whirlpools, saunas, steam rooms, bathtubs and showers. Glazing in any part of a building wall enclosing these compartments where the bottom exposed edge of the glazing is less than 60 inches measured vertically above any standing or walking surface.
6. Glazing in an individual fixed or operable panel adjacent to a door where the nearest vertical edge is within a 24 inch arc of the door in a closed position and whose bottom edge is less than 60 inches above the floor or walking surface.
7. Glazing in an individual fixed or operable panel, other than those locations described in Items 5 and 6 above, that meets all of the following conditions:
7.1 Exposed area of an individual pane greater than 9 square feet.
7.2 Bottom edge less than 18 inches above the floor.
7.3 Top edge greater than 36 inches above the floor.
7.4 One or more walking surfaces within 36 inches horizontally of the glazing.
8. All glazing in railings regardless of an area or height above a walking surface. Included are structural baluster panels and nonstructural in-fill panels.
9. Glazing in walls and fences enclosing indoor and outdoor swimming pools, hot tubs and spas where the bottom edge of the glazing is less than 60 inches above a walking surface and within 60 inches horizontally of the water's edge. This shall apply to single glazing and all panes in multiple glazing.
10. Glazing adjacent to stairways, landings and ramps within 36 inches horizontally of a walking surface when the exposed surface of the glass is less than 60 inches above the plane of the adjacent walking surface.
11. Glazing adjacent to stairways within 60 inches horizontally of the bottom tread of a stairway in any direction when the exposed surface of the glass is less than 60 inches above the nose of the tread.

GLAZING (CONT.)

EXCEPTION: The following products, materials and uses are exempt from the above hazardous locations:
1. Openings in doors through which a 3-inch sphere is unable to pass.
2. Decorative glass in exception items, 1, 6 or 7.
3. Glazing in hazardous locations, item 6, when there is an intervening wall or other permanent barrier between the door and the glazing.
4. Glazing in hazardous locations, item 6, in walls perpendicular to the plane of the door in a closed position or where access through the door is to a closet or storage area 3 feet or less in depth. Glazing in these applications shall comply with hazardous location item 7.
5. Glazing in hazardous locations, items 7 and 10, when a protective bar is installed on the accessible side(s) of the glazing 36 inches ± 2 inches above the floor. The bar shall be capable of withstanding a horizontal load of 50 pounds per linear foot without contacting the glass and be a minimum of 1 1/2-inches in height.
6. Outboard panes in insulating glass units and other multiple glazed panels in hazardous locations, item 7, when the bottom edge of the glass is 25 feet or more above grade, a roof, walking surface, or other horizontal [within 45° of horizontal] surface adjacent to the glass exterior. 7. Louvered windows and Jalousies complying with the following: Regular, float, wired or patterned glass shall be no thinner than nominal 3/8 inch and no longer than 48 inches with smooth exposed edges. Longitudinal edges may not have exposed wire.
8. Mirrors and other glass panels mounted or hung on a surface that provides a continuous backing support.
9. Safety glazing in hazardous locations, Items 10 and 11 is not required where:
9.1 The side of a stairway, landing or ramp has a guardrail or handrail, including balusters or in-fill panels, complying with the provisions of Sections 1012 and 1607.7 of the International Building Code; and
9.2 The plane of the glass is greater than 18 inches from the railing.

FINISH CARPENTRY

Fasteners and Anchorages: Provide nails, screws and other anchoring devices of type, size, material and finish suitable for intended use and required to provide secure attachment, concealed where possible. Hot-dip galvanized fasteners for work exposed to exterior and high humidities to comply with ASTM A 153.

Standing and Running Trim: Install with minimum number of joints possible, using full-length pieces from maximum length of lumber available. Cope at returns, miter at corners to produce tight fitting joints. Use scarf joints for end-to-end joints.

Install finish carpentry work plumb, level, true and straight with no distortions. Shim as required using concealed shims. Scribe and cut finish carpentry items to fit adjoining work. Anchor finish carpentry work securely to supports and substrates, using concealed fasteners and blind nailing where possible. Use fine finishing nails for exposed nailing except as indicated, countersunk and filled flush with finished surface.

FLASHINGS

All flashings to be 26 GA galvanized metal or aluminum alloy anodized finish. Install flashings in all locations to make building watertight. These areas would include but not be limited to copings, caps, gravel stops, beam caps, drip caps over doors windows and other openings, and roof and wall intersections.

CAULKING AND SEALANT

The following openings in the building envelope shall be caulked or otherwise sealed to limit infiltration. Around glazing and door frames, between the unit and the interior sheet rock or the rough framing as shown in details with spray foam sealer; Between all exterior wall sole plates and the structural floor, using two rows of caulking as shown in details; Over all framing joints where floors over conditioned spaces intersect exterior walls (e.g. at rim and band joists) as shown in details; Around openings in the building envelope for ducts, plumbing, electricity, telephone, and cable television lines in walls, ceilings and floors; At openings in the ceiling, (e.g. where ceiling panels meet interior and exterior walls; at exposed beams, masonry fireplaces, woodstove flues, etc.); At penetrations. All openings in the air barrier including spaces around plumbing, electric conduits and boxes, and telephone service entrances. Penetrationsofexteriorceilingsandwallsbymetalinsultedfluesshallbesealedaccordingtomanufacturer's specifications; at recessed lighting fixtures in unheated areas, seal around the exterior can to be air tight, the mounting flange on the exterior can is caulked to the GWB. At electrical outlets; seal gaps between GWB and outlet box.

ACCESS HATCHES & DOORS

Access doors from conditioned spaces to unconditioned spaces (e.g., attics and crawl spaces) shall be weather-stripped and insulated to a level equivalent to the insulation on the surrounding surfaces. Access shall be provided to all equipment which prevents damaging or compressing the insulation. A wood framed or equivalent baffle or retainer must be provided when loose fill insulation is installed to prevent fill from spilling into conditioned space and to maintain installed R-value.

INSULATION
Clearances. Where required, insulation shall be installed with clearances according to manufacturer's specifications. Insulation shall be installed so that required ventilation is unobstructed. For blown or poured loose fill, insulation clearances shall be maintained through installation of a permanent retainer.
All insulation materials, including facings such as vapor barriers or breather papers, installed with in floor/ceiling assemblies, roof/ ceiling assemblies, walls, crawlspaces, or attics shall have a flame-spread rating of less than 25, and a smoke density not to exceed 450 when tested in accordance with ASTME84-01. EXCEPTIONS: 1.) foam plastic insulation shall comply with Section 2603 of the International Building Code; and 2.) when such materials are installed in concealed spaces of TypesIII, IV and V construction, the flame spread and smoke developed limitations do not apply to the facing, provided that the facing is installed in substantial contact with the unexposed surface of the ceiling, floor, finish. 3.) Cellulose insulation shall comply with section 719 of the International Building code.
Walls. All wall insulation shall fill the entire cavity. Exterior wall cavities isolated during framing (such as behind bathtubs and showers) shall be fully insulated to the levels of surrounding walls. All faced insulation shall be face stapled to avoid compression.
Floors. All floor insulation shall be installed in a permanent manner in substantial contact with the surface being insulated. Insulation supports shall be installed so spacing is no more than 24 inches on center. Foundation vents shall be placed so that the top of the vent is below the lower surface of the floor insulation.
Slabs. Perimeter insulation installed on the inside of the foundation wall shall extend downward from the top of the slab for a minimum of 24 inches or downward and then horizontally beneath the slab for a combined minimum of 24 inches. Insulation installed on the outside of the foundation shall extend downward a minimum 24 inches or to the frostline or for monolithic slabs from the top to the bottom of the footing. Above grade insulation shall be protected. Thermal breaks shall be placed in the slab between conditioned and unconditioned spaces. The entire area of a radiant slab shall be thermally isolated from the soil with minimum R-10 insulation. The insulation shall be an approved product for its intended use. If a soil gas control system is present below the radiant slab, which results in increased convective flow, the slab shall be thermally isolated from the sub-slab gravel layer.
Below-Grade Walls. Below grade exterior wall insulation (cold) side of the wall shall extend from the top of the below grade wall to the top of the footing and shall be approved for below-grade use. Above grade insulation shall be protected. Insulation used on the interior (warm) side of the wall shall extend from the top of the below-grade wall to the below-grade floor level.

VENTILATION
Ventilation. All habitable rooms shall be provided with aggregate glazing area of not less than 8 percent of the floor area of such rooms. Ventilation shall comply with the VIAQ.
WHOLE HOUSE MECHCANICAL VENTILATION
Whole house ventilation system shall comply with Washington State Ventilation and Indoor Air Quality Code Requirements, for sizing, controls, ducting, noise and other requirements.
Exhaust fans providing source specific ventilation shall have minimum fan flow rating not less than 50 CFM at 0.25 inches water gauge for bathroom laundries or similar rooms and 100 CFM at 0.25 inches water gauge for kitchens.
Whole house ventilation systems may consist of whole house exhaust, integration with forced-air systems or dedicated heat recovery ventilation systems. Whole house exhaust systems shall meet the following requirements:
CFM Min. Requirements
OF BEDROOMS
SF 0-1 2-3 4-5 6-7 >7
<1500 30 45 60 75 90

HEATING SYSTEMS
Each dwelling unit shall be provided with heating facilities capable of maintaining 70 degrees F at a point 3 feet above the floor in all habitable rooms at the 97 1/2% outside design temperature for the location of the building.
Liquefied petroleum gas burning appliances shall not be installed in a pit, basement, or similar location where heavier-than- air gas might collect. Appliances so fueled shall not be installed in an above grade under floor space or basement.
Appliances designed to be in a fixed position shall be securely fastened in place. Supports for appliances shall be designed and constructed to sustain vertical and horizontal loads within the stress limitations in the building code.
All fuel burning equipment shall be provided with combustion air and meet the provisions of Chapter 14 IRC and and any state ventilation requirements. Appliances located within the building envelope shall obtain combustion air from outdoors. Heating equipment located within the Building Envelope shall be thermally isolated from the heated area.
Every appliance designed to be vented shall be connected to a venting system complying with the IRC.
Every factory built chimney, Type L vent, Type B gas vent, or Type BW gas vent shall be installed in accordance with the terms of its listing, manufacturer's instructions, and the applicable provisions of IRC.
Vent connectors shall be installed within the space or area in which the appliance is located and shall be connected to a chimney or vent in such a manner as to maintain the clearance to combustibles per IRC.
Thermostat-Wall thermostat, low voltage, he at anticipating. Four time periods per day with intelligent recovery feature.

SMOKE DETECTORS
Smoke alarms shall be installed in the following locations, coordinate with drawings:
1. In each sleeping room.
2. Outside each separate sleeping area in the immediate vicinity of the bedrooms.
3. On each additional story of the dwelling, including basements but not including crawlspaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.
All alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the dwelling unit. The alarms shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed. The required smoke alarms shall receive their primary power from the building wiring and be equipped with a battery backup. The detector shall emit a signal when the batteries are low.

CARBON MONOXIDE DETECTORS
Carbon monoxide alarms shall be installed outside each separate sleeping area in the immediate vicinity of the bedrooms in dwelling units which fuel-fired appliances are installed or in dwelling units that have attached garages.
1501-3000 3001-4500 4501-6000 6001-7500 >7500 105
45 60 60 75 75 90 90 105 120 135
75 90 105 90 105 120 105 120 135 120 135 150 150 165
Outdoor air shall be supplied by either mechanical means or with individual room outdoor air inlets.
Individual room outdoor air inlets shall have a controllable and secure opening and be capable of a total opening area of not less than four square inches and tested by a nationally recognized standard or approved agency and located to avoid drafts.
Domestic kitchen range ventilation and domestic clothes dryers shall be of metal and have smooth interior surfaces. Ducts shall be substantially air tight and shall comply with the provisions of the IRC. Exhaust ducts shall terminate outside of the building and be equipped with back draft dampers. Domestic clothes dryers shall be exhausted directly to the outside if in an area that is habitable or containing other fuel burning appliances and shall meet the provisions of the IRC, as well as clothes dryer manufacturer's instructions and recommendations. Dryer exhaust ducts shall terminate on the outside of the building and shall be equipped with a backdraft damper.
Ductsshallnotbeconnectedorinstalledwithsheetmetalscrewsorotherfastenerswhichwillobstructtheflow.
Unless otherwise permitted or required by the dryer manufacturer's instructions and approved by the building official, dryer exhaust ducts shall not exceed a total combined horizontal and vertical length of 15 feet, including two 90 degree elbows. Five feet shall be deducted for each 90 degree elbow in excess of two.

FIREPLACES
Hearth Extensions. Hearths shall extend at least 16" from the front of, and at least 8" beyond each side of, the fireplace opening. Where the fireplace opening is 6 square feet or larger the hearth extension shall extend at least 20" in front, and at least 12" beyond each side of the fireplace.
Combustible materials shall not be placed within 2 inches of fireplace, smoke chamber or chimney walls.
Combustible material shall not be placed within 6 inches of the fireplace opening. No such combustible material within 12 inches of the fireplace opening.

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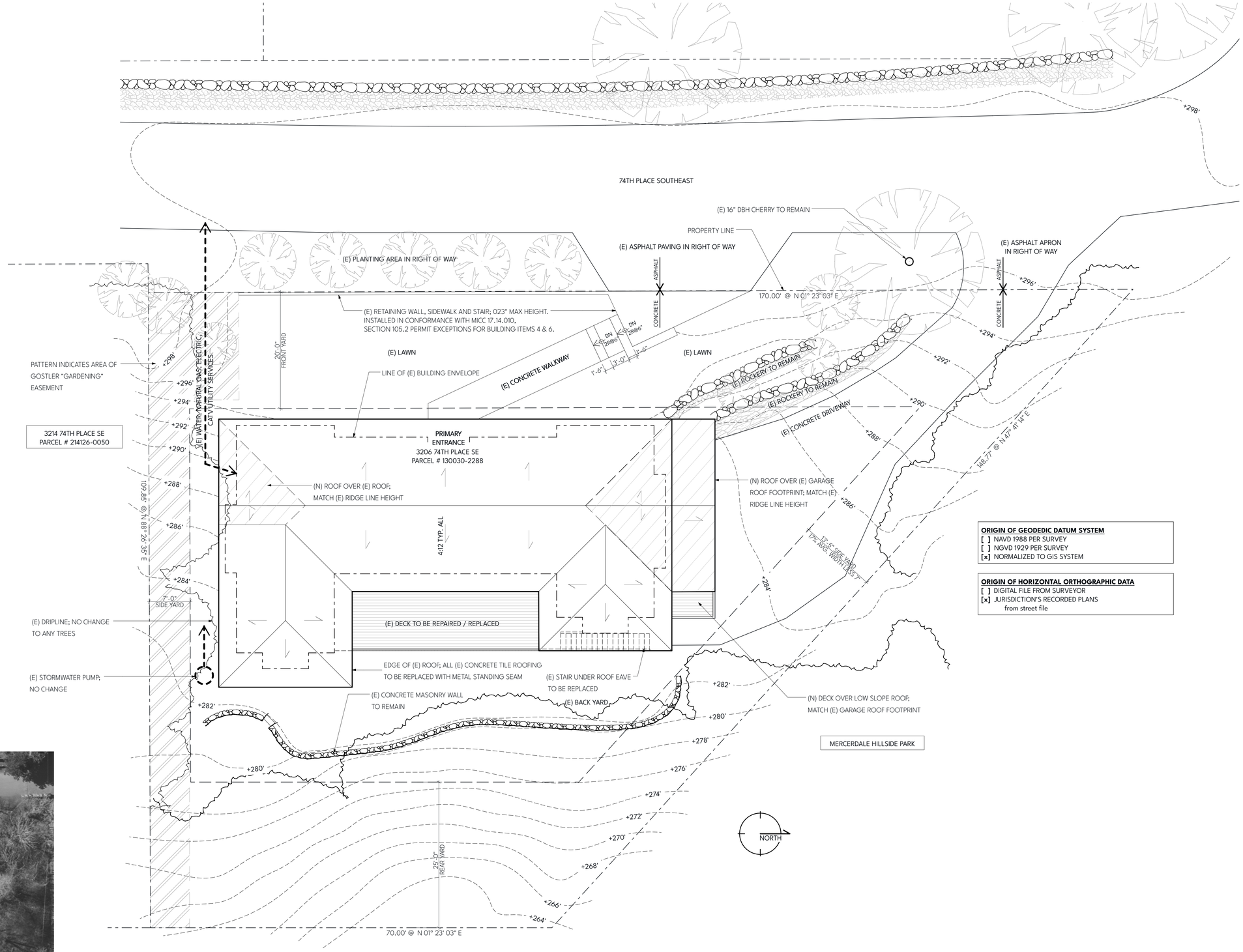
GENERAL NOTES
A003



ORIGIN OF GEODEDIC DATUM SYSTEM
[ ] NAVD 1988 PER SURVEY
[ ] NGVD 1929 PER SURVEY
[x] NORMALIZED TO GIS SYSTEM

ORIGIN OF HORIZONTAL ORTHOGRAPHIC DATA
[ ] DIGITAL FILE FROM SURVEYOR
[x] JURISDICTION'S RECORDED PLANS
from street file

2 A010 AERIAL RASTER IMAGE
SCALE: 1/32" = 1'-0"

1 A010 SITE PLAN
SCALE: 1/8" = 1'-0"

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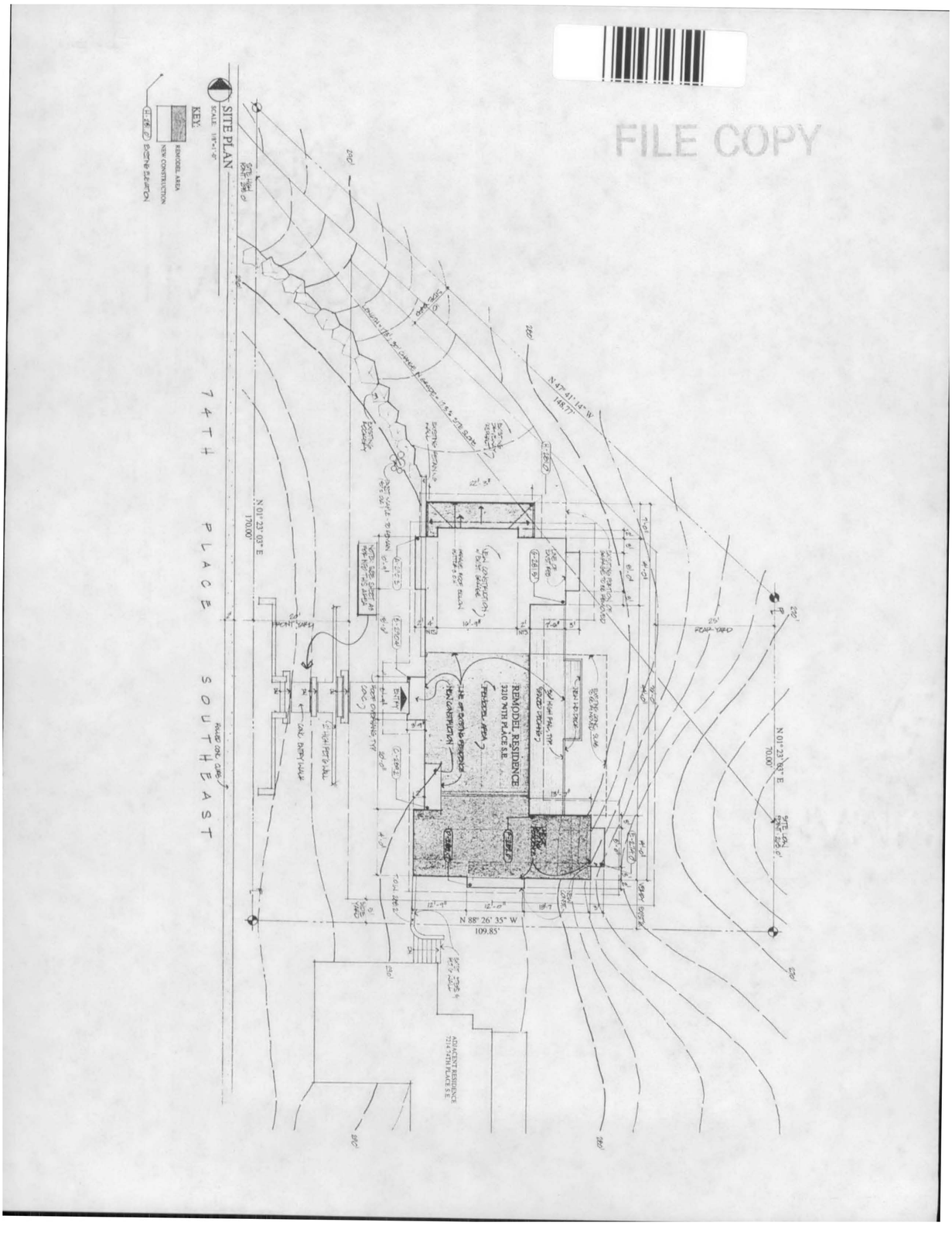
SITE PLAN
A010

1 A011 CITY RECORD SITE PLAN
NOT TO SCALE



CITY RECORD SITE PLAN

A011

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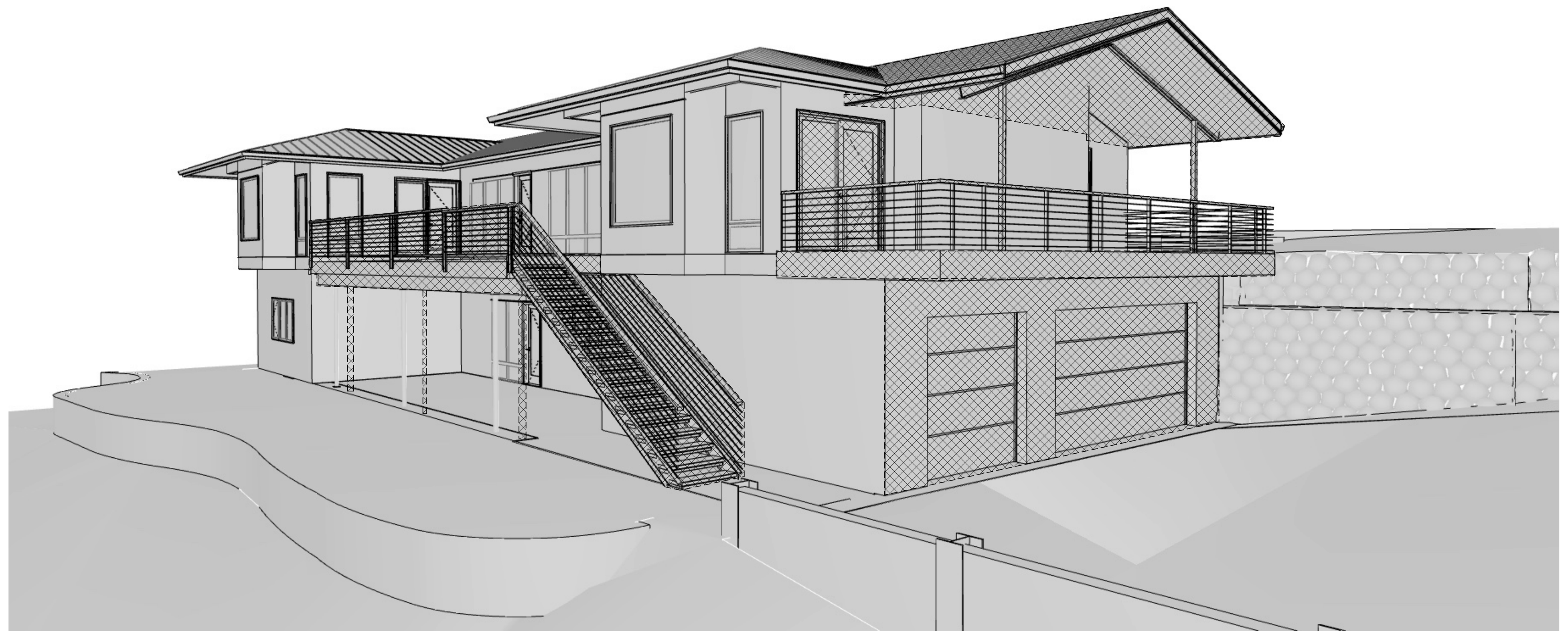
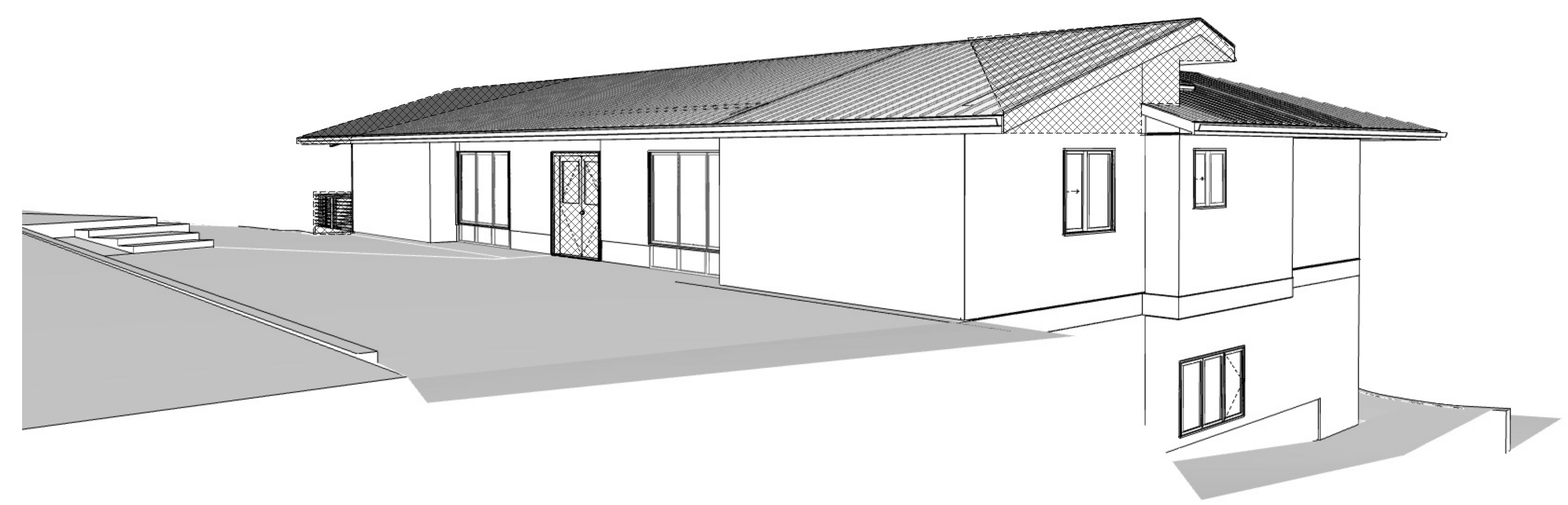


1 A020 FROM NW

4 A020 FROM NE

2 A020 FROM SW



3 A020 FROM SE

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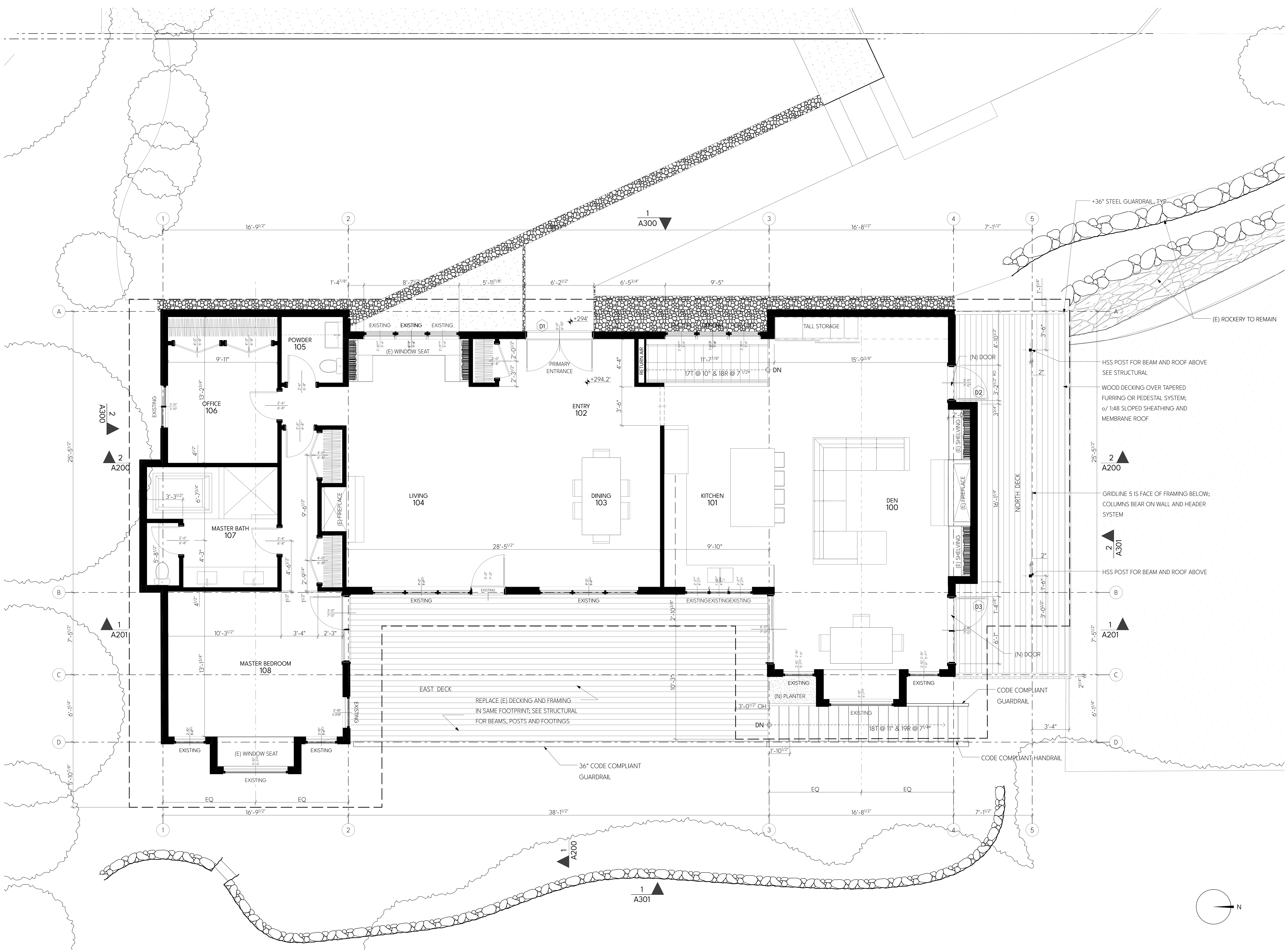
PERSPECTIVE GRAPHICS

A020



1
A100
UPPER FLOOR PLAN
SCALE: 1/4" = 1'-0"

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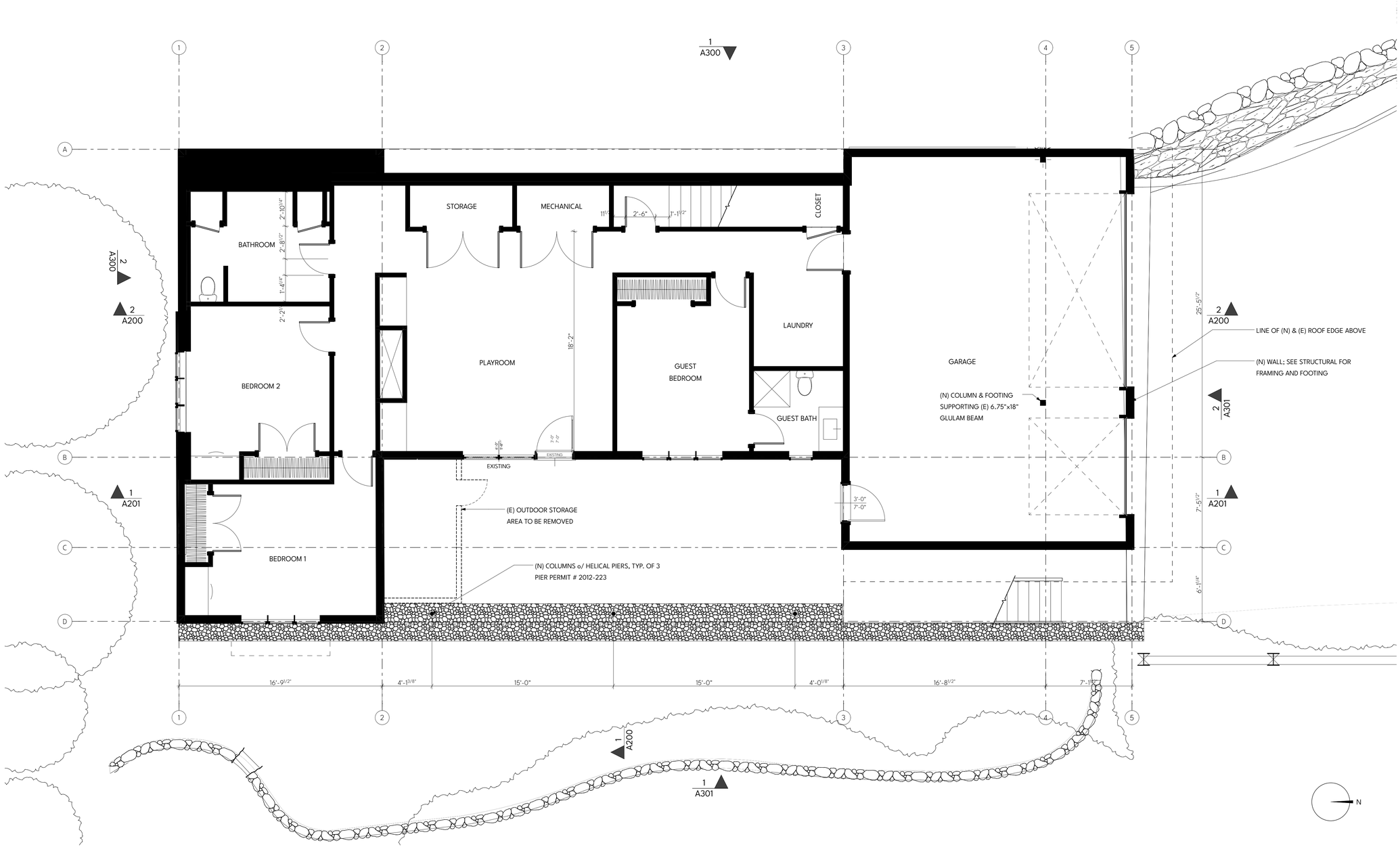
PRIMARY FLOOR PLAN
A100



1 / A101 LOWER FLOOR PLAN

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

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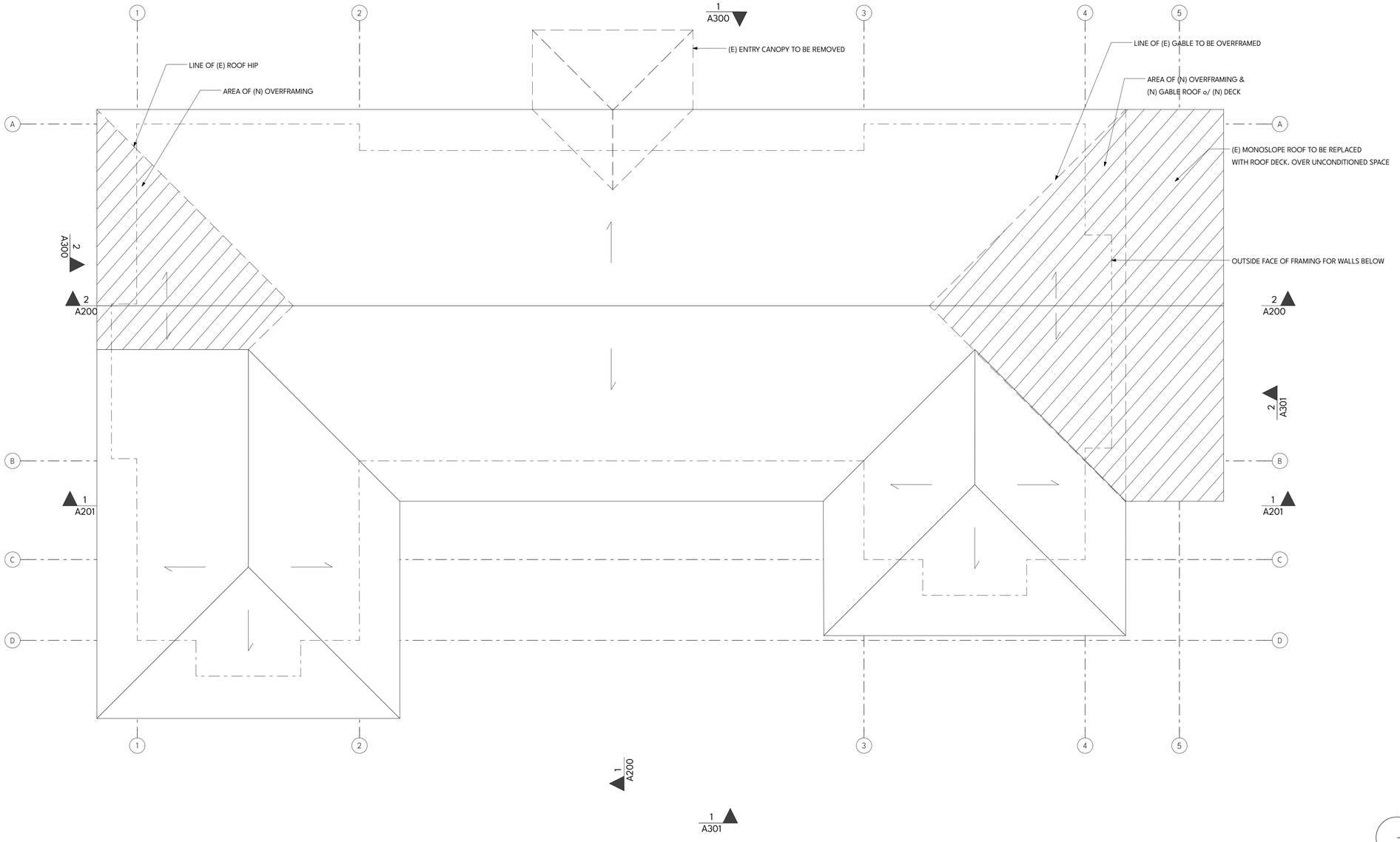
LOWER FLOOR PLAN

A101



1 / A102 ROOF PLAN

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

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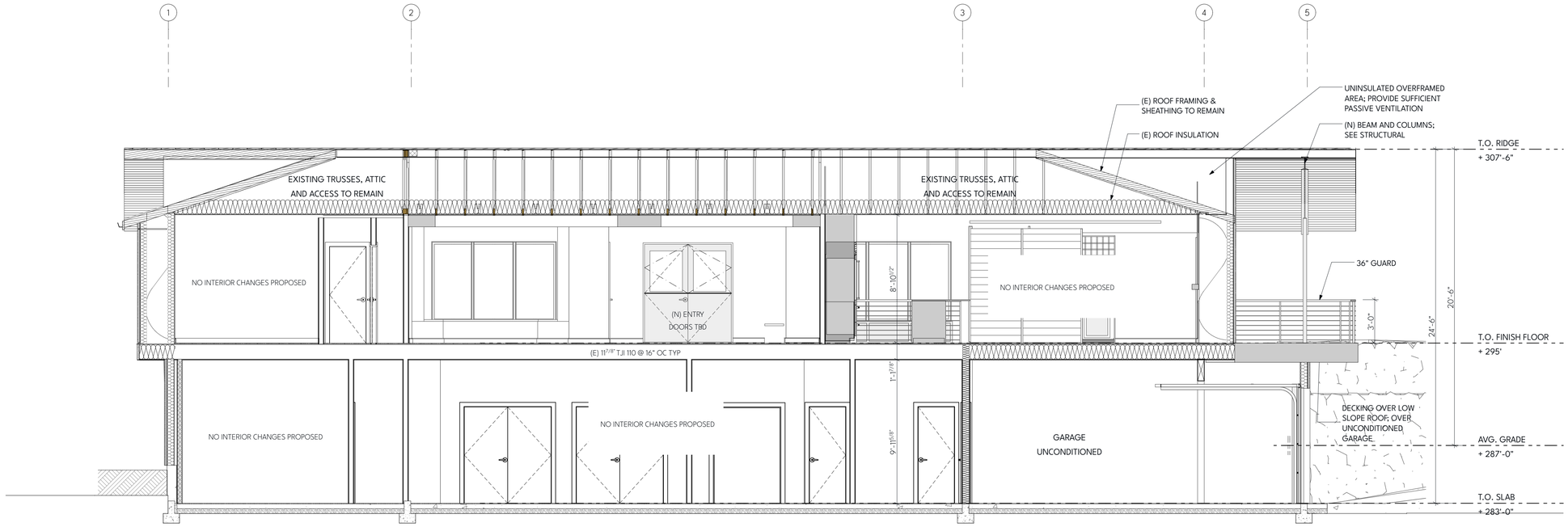
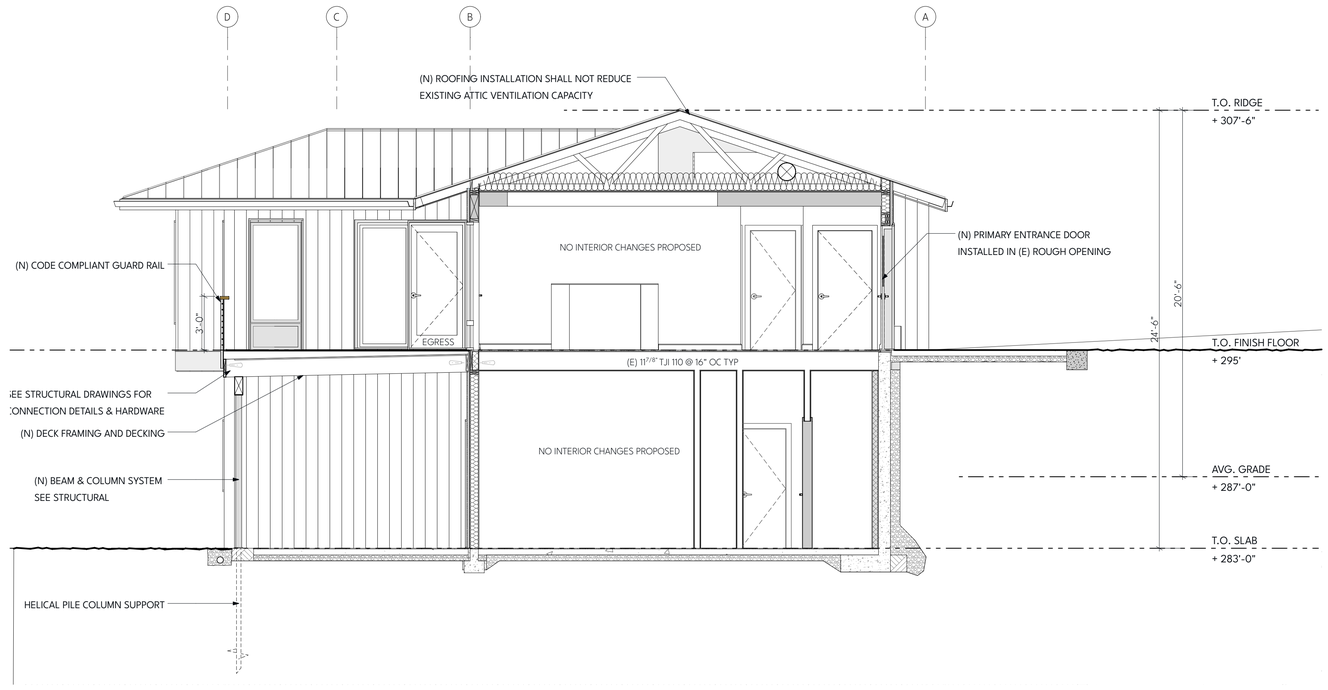
ROOF PLAN

A102



2 A200 LONGITUDINAL AT RIDGELINE

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



1 A200 LATERAL AT ENTRY

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

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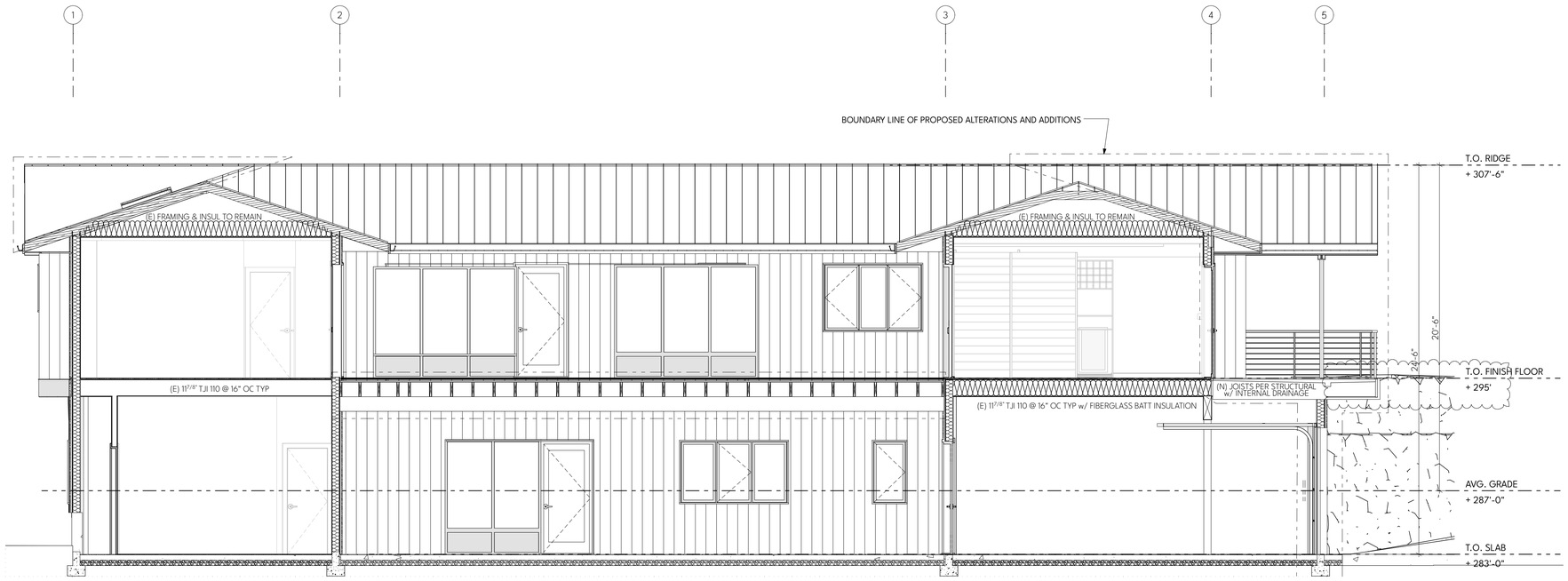
COMPLETE SECTIONS

A200



1 / A201 LONGITUDINAL THROUGH MASTER, DECK & BREAKFAST

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

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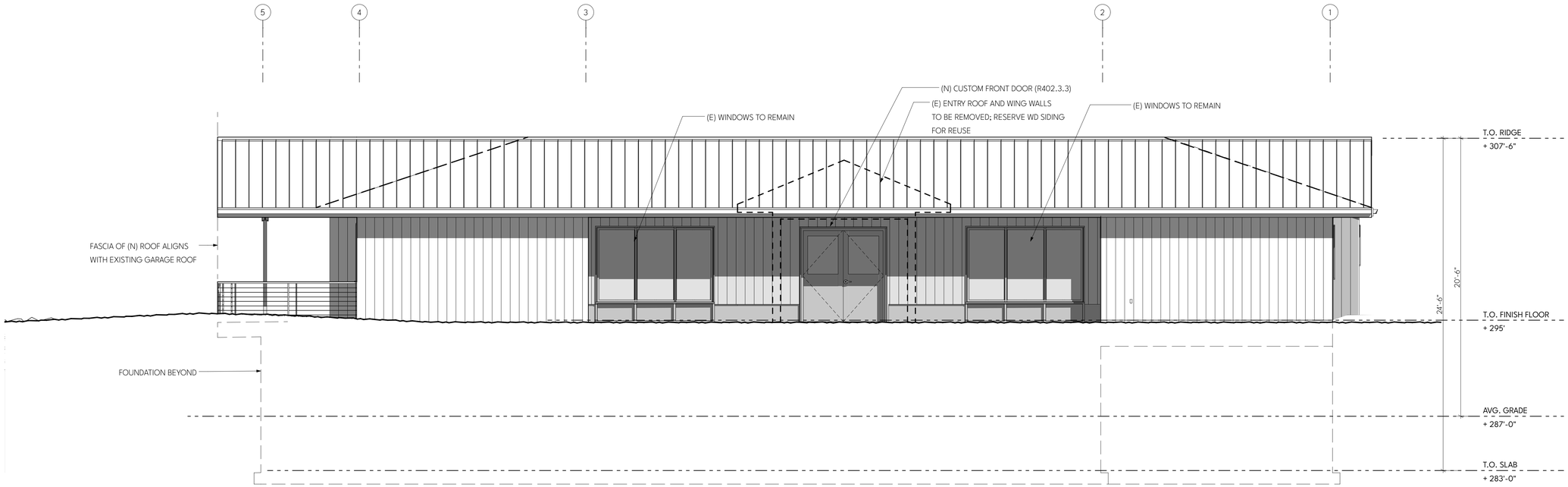
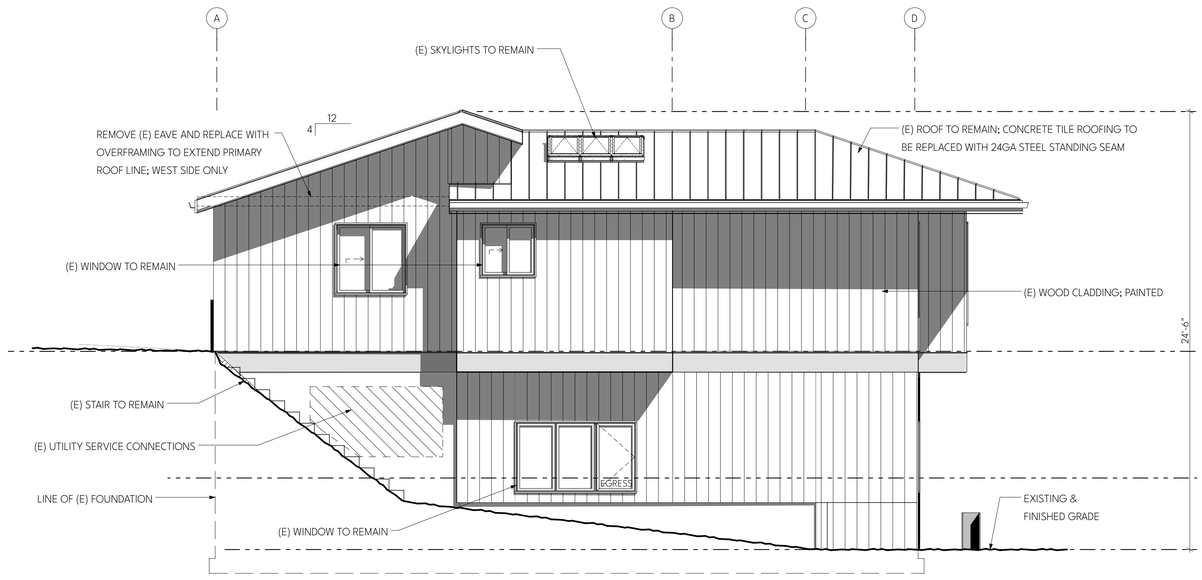


1 A300 WEST ELEVATION

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



2 A300 SOUTH ELEVATION

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

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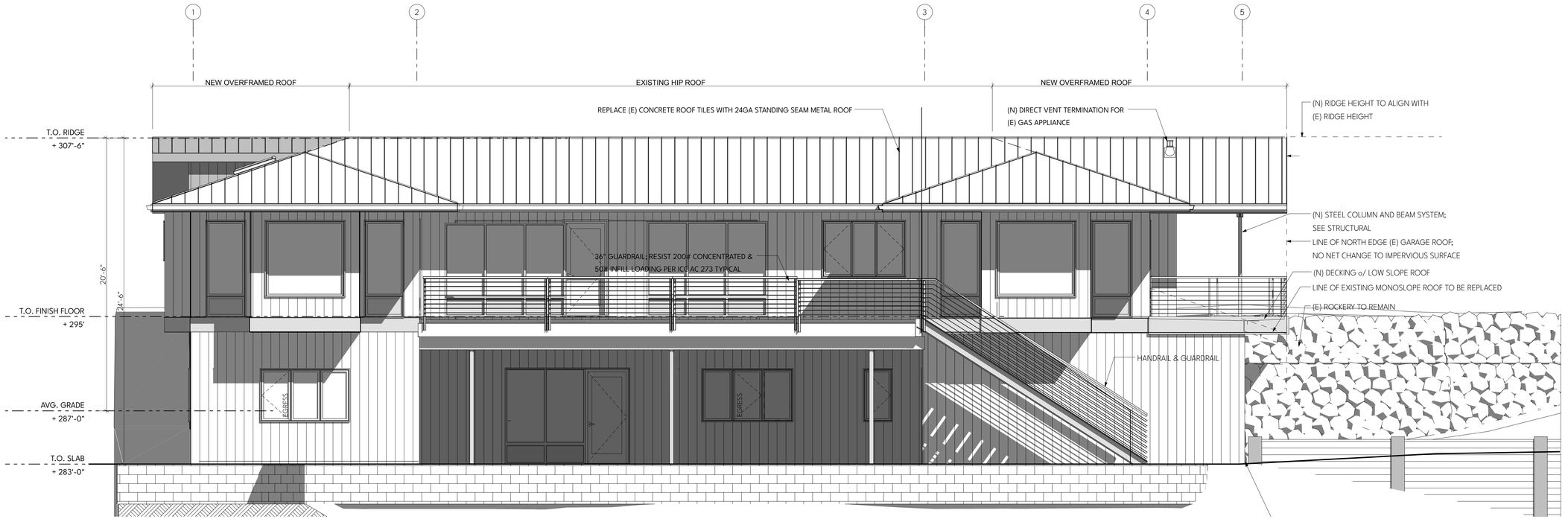
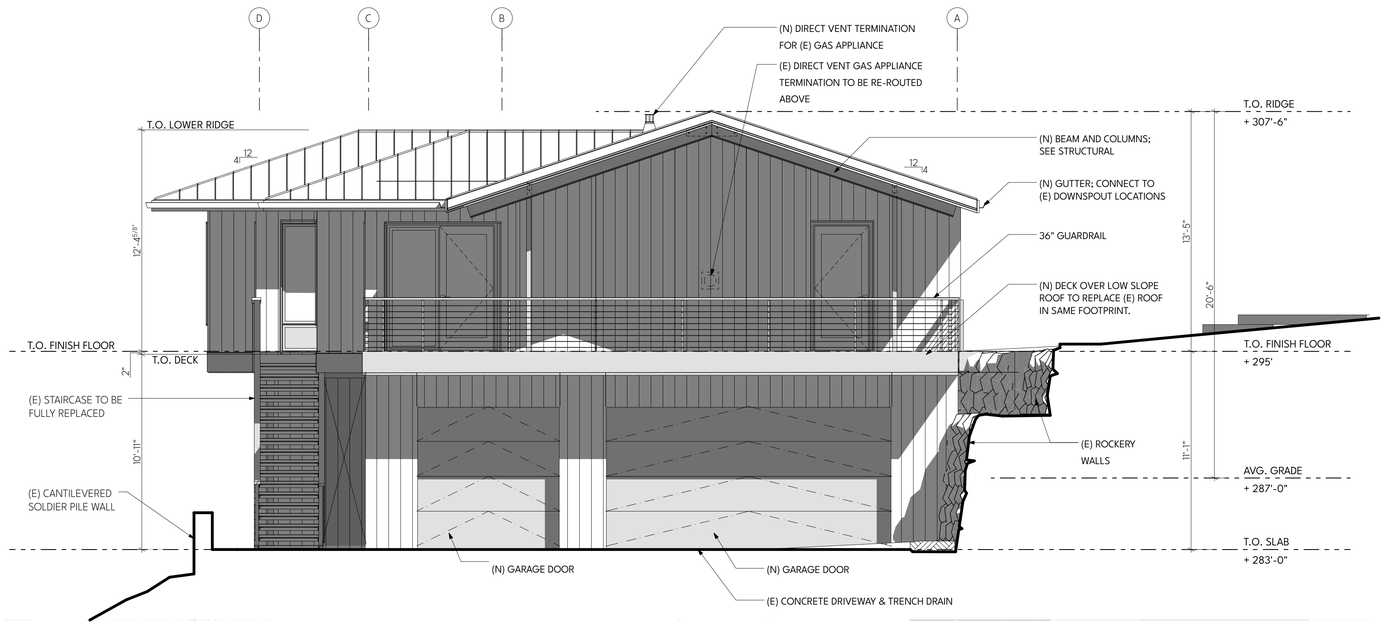
EXTERIOR ELEVATIONS

A300



1 / A301 EAST ELEVATION

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



2 / A301 NORTH ELEVATION

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

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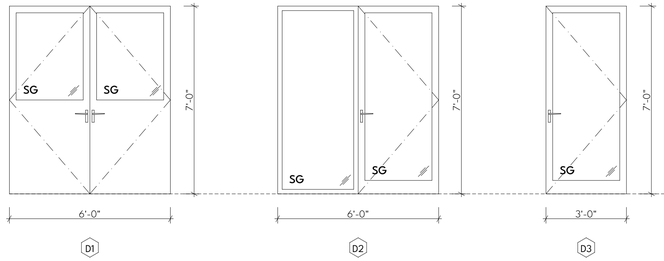
EXTERIOR ELEVATIONS

A301

DOOR SCHEDULE

DOOR #	TYPE	WIDTH	HEIGHT	U-VALUE	NFRC	UA	MANUFACTURER
D1	DOUBLE SWING ENTRY	6'-0"	7'-0"	0.34 MAX	TBD	14.49 MAX	TBD
D2	SWING W/ SIDELITE	6'-0"	7'-0"	0.27	Y	11.34	MARVIN
D3	SINGLE SWING	3'-0"	7'-0"	0.27	Y	5.67	MARVIN
			TOTAL:	0.30 MAX		31.5	

SG = SAFETY GLAZING



WINDOW SCHEDULE

WINDOW #	TYPE	WIDTH	HEIGHT	U-VALUE	NFRC	UA	MANUFACTURER
			TOTAL:	0.30 MAX			

NO WINDOW MODIFICATIONS PROPOSED

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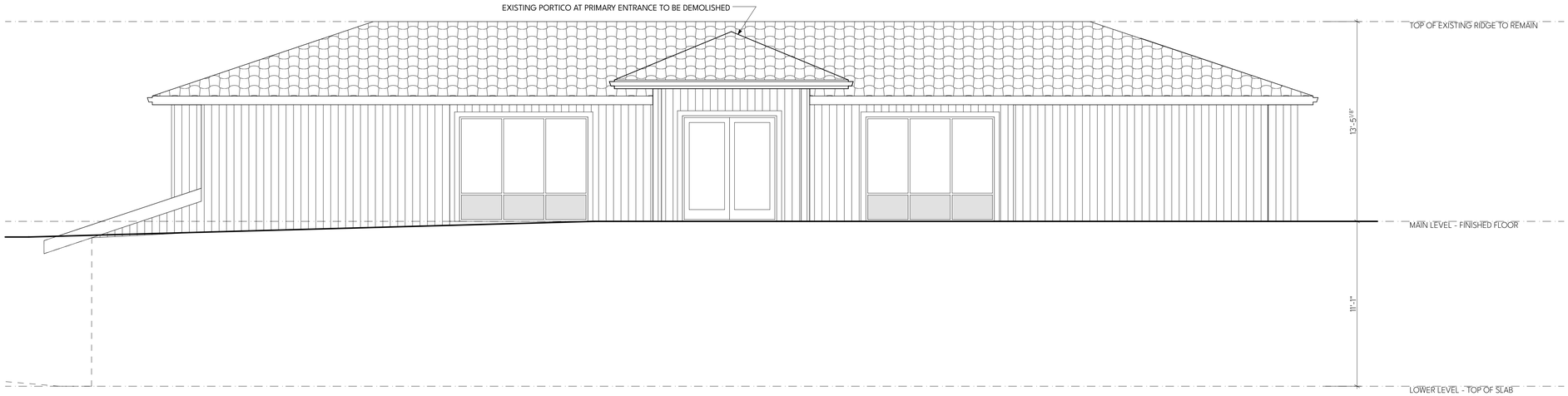
SCHEDULES
A700



1 / A901 EAST ELEVATION

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

2 / A901 SOUTH ELEVATION

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

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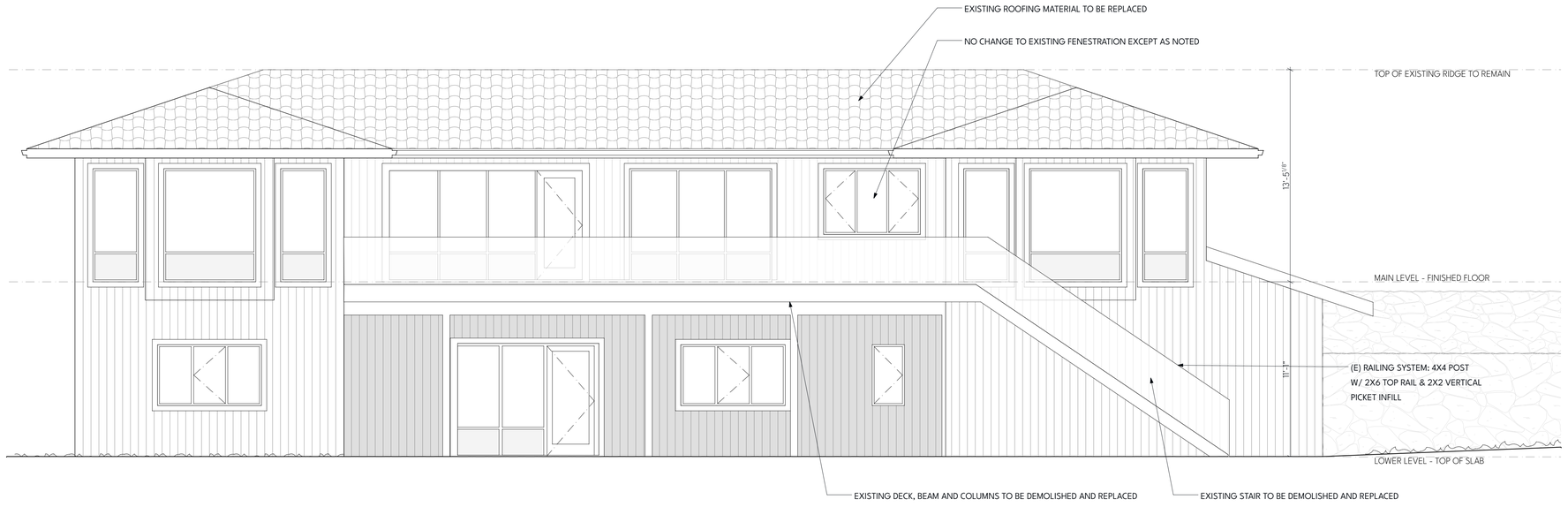
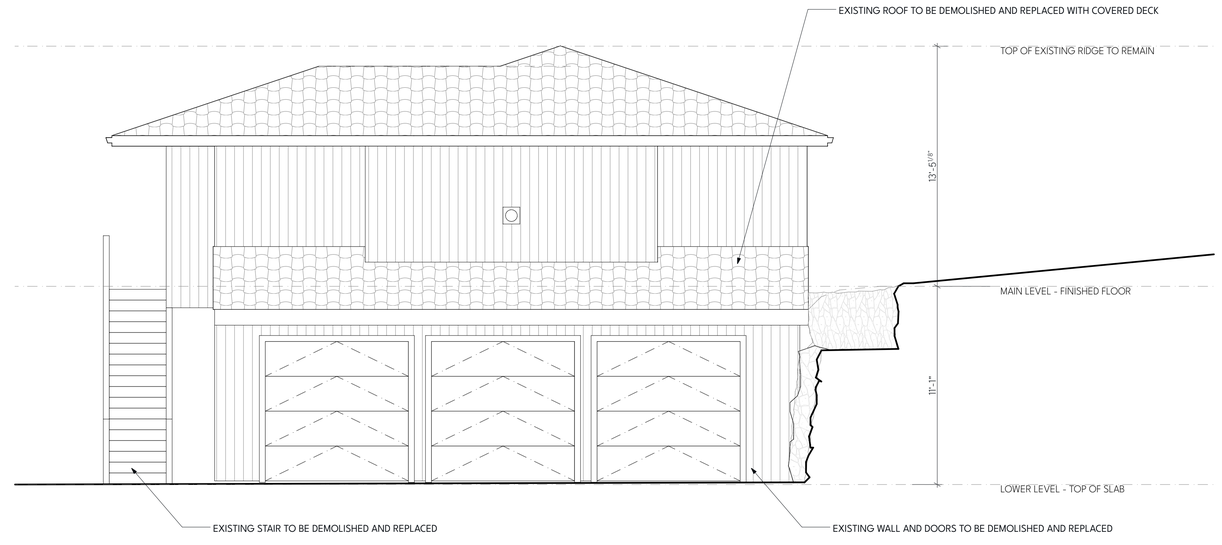
EXISTING CONDITIONS | EXTERIOR ELEVATIONS

A901



1 / A902 WEST ELEVATION

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



2 / A902 NORTH ELEVATION

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

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EXISTING CONDITIONS | EXTERIOR ELEVATIONS

A902

GENERAL NOTES

1.0 GENERAL

1.1 Construction shall conform to the 2018 INTERNATIONAL RESIDENTIAL CODE and all local regulatory agencies' requirements.

1.2 These drawings are the property of O.G. Engineering, PLLC ("Engineer"). These drawings and the information contained herein shall not be used for completion of or revisions to this Project by others, extensions of this Project or any other project without Engineer's express written permission.

1.3 Refer to Architectural Plans for all dimensions and elevations not shown. Do not scale drawings. The contractor shall verify all pertinent dimensions and existing conditions prior to beginning construction. Conflicts, differences in information, and omissions in drawings shall be brought to the attention of the Engineer for resolution prior to construction. Changes from the drawings shall be made only with the prior approval of the Engineer. All work is subject to review and approval by the local building department. All work shall conform to all permit and building department requirements. All details shall be considered typical at similar conditions. Details shall be used where applicable, unless otherwise noted. Details intend to show concepts that may not exactly match specific site conditions. All work shown on these drawings is new unless noted as existing.

1.4 The contractor shall be solely responsible for jobsite and construction safety and compliance with all current safety regulations. Jobsite visits performed by the Engineer do not include a review of the adequacy of the contractor's safety measures. The Engineer has no authority to exercise any control over any construction contractor or their employees in connection with their work or any health or safety precautions. Only the final, permanent structure is shown on these drawings. The contractor shall be solely responsible for the means and methods of construction, including but not limited to construction sequencing and providing all necessary shoring, bracing and other temporary supports during construction. The contractor shall be solely responsible for obtaining all necessary independent engineering reviews of all temporary conditions and support systems during construction.

1.5 Utility information is not shown on these drawings. The contractor shall be solely responsible for locating and protecting utilities prior to and during construction. The contractor shall be solely responsible for all damage to utilities resulting from their work, and all damage to utilities shall be repaired solely at the contractor's expense.

1.6 All waterproofing and drainage information shown on these drawings is for illustrative purposes only. Waterproofing and drainage are the design responsibility of others.

1.7 Review of shop drawings or other submittals by the Engineer is for general conformance with the contract documents and design concept only. The contractor shall be solely responsible for all dimensions, quantities, construction safety, and the means and methods of construction.

2.0 DESIGN BASIS – BUILDING STRUCTURES

2.1 Vertical Loads

	Dead	Live	Snow	
Existing Roof	14	20	25	psf
Deck Roof	10	20	25	psf
Existing Upper Floor	14	40		psf
Exterior Deck	19	60	25	psf

2.2 Seismic Design Data (per the 2018 IBC)
Risk Category: II
Importance Factor: Ie=1.0
Site Coordinates: 47.5814°N, 122.2390°W
Mapped Spectral Response Acceleration: Ss=1.41, S1=0.49
Site Class: Default D
Spectral Response Coefficients: Sds=1.13
Seismic Design Category: D
Main Seismic Force–Resisting System: Wood Structural Panel Shear Walls
Response Modification Factor: R=6.5
Seismic Response Coefficient: Cs=0.17
Redundancy Factor: ρ=1.3
Over–strength Factor: Ω=2.5
Analysis Procedure Used: Equivalent Lateral Force Procedure

2.3 Wind Design Data (per the 2018 IBC)
Risk Category: II
Basic Wind Speed: 98 mph
Exposure Category: B
Topographic Factor: 1.6 (Per Mercer Island Wind Map)

3.0 INSPECTIONS

The construction work shall be inspected as required by the IRC Section R109. The contractor is solely responsible for understanding the requirements of and coordinating all inspections, observations and testing and ensuring that all required work is performed to the satisfaction of the inspector.

4.0 SHALLOW FOUNDATIONS

4.1 The following shallow foundation design criteria are assumed, have not been verified by a geotechnical engineer and therefore must be approved by the building official. If design criteria are found to be different than assumed, notify Engineer for additional requirements prior to construction:

* Allowable Vertical Bearing Pressures:
Dead + Live 2000 psf

4.2 Footing & Slab on Grade Excavations

Remove any deleterious, loose or softened material from footing & slab on grade excavations and compact sub–grades to a firm and unyielding condition. If loose sub–grades can not be adequately compacted, over–excavate loose material to competent soil and replace with properly compacted structural fill. Do not allow water to stand in excavations; if sub–grades become softened before concrete is cast, excavate softened material and replace with properly compacted structural fill at no additional cost to the owner. Structural fill and compaction requirements are the design responsibility of others.

5.0 MATERIALS

5.1 Wood:

5.1.1 All untreated sawn lumber shall be Douglas Fir grade number 2, U.O.N. Mudsills and all sawn lumber in contact with concrete, masonry, ground, exposed to weather or moisture, shall be P.T. Hem Fir or Doug Fir grade number 2, U.O.N. Preservative retention levels in P.T. wood shall meet the requirements of the applicable use category in accordance with AWPA U1–16, and shall not exceed those required to comply with AWPA Use Category UC4A. Do not use wood treated with ACZA. Field–cut ends, notches and drilled holes of P.T. wood shall be treated in the field in accordance with AWPA M4. P.T. is not required at naturally decay–resistant (i.e. redwood, cedar etc.) sawn lumber members.

5.1.2 Glulam framing members shall be DF/DF, stress class 24F–1.8E, combination symbol 24F–V8, U.O.N. Glulam framing members exposed to weather shall be treated with HI–CLEAR II wood preservative or approved equal. Field–cut ends, notches and drilled holes of treated glulam framing shall be re–treated in the field in accordance with AWPA M4. Surfaces, ends, notches and drilled holes in glulam framing exposed to weather shall be sealed in accordance with the recommendations of the manufacturer, APA and AITC after preservative treatment.

5.1.3 All wood framing members shall have 19% maximum moisture content at time of installation.

5.2 Concrete:

Hardrock, normal–weight concrete with a minimum 28–day compressive strength of 3,000 psi for concrete exposed to weather and 2,500psi for concrete not exposed to weather. Slump range shall be 3–5 inches. Maximum aggregate size shall be 1". Maximum water/cement ratio shall be 0.5. Concrete exposed to weather shall be air–entrained with total air content between 5%–7% of total concrete volume.

5.3 Reinforcing Steel Bars:

ASTM A615, Grade 60

5.4 Welded Wire Fabric

ASTM A1064 or A185, Grade 75

5.5 Epoxy: (for dowels and anchors)

Concrete: Simpson SET–3G (Installed & inspected per ICC No. ESR–4057)

5.6 Bolts and Threaded Rods:

5.6.1 Threaded Rod: ASTM F1554 Grade 36

5.6.2 Sill Anchor Bolts: ASTM A307
Bent bar "J" anchor bolts shall have a hook with a 90–degree bend with an inside diameter of three bolt diameters, plus an extension of one and one half bolt diameters at the free end.

5.6.3 Bolts in Timber Connections: ASTM A307

5.7 Structural Steel:

Plate and Bar:	A36 (Fy = 36 ksi)
Channel (C or MC):	A36 (Fy = 36 ksi)
Rectangular Tube (HSS):	A500 Gr. B (Fy = 46 ksi)
Pipe (Pipe):	A53 Gr. B (Fy = 35 ksi)

6.0 CONCRETE CONSTRUCTION

6.1 Concrete elements shall be constructed in single continuous pours, without construction joints, unless otherwise approved by the Engineer. Reinforcement shall be the longest lengths practical. Splices in rebar are not allowed in footings or walls less than 20 feet long. Lap splices shall be staggered at least 2 ft. in adjacent bars. Where reinforcement or anchor edge distances are noted on the drawings as "clear", the distance shall be taken from the face of reinforcement or anchor to edge of concrete. Cast–in–place reinforcement and anchor bolts shall be installed prior to concrete placement and <u>shall not</u> be "wet–set" into freshly poured concrete.

6.2 Reinforcement installation details, including rebar bends, hooks, splices and development lengths shall be in accordance with the requirements of the IRC Section R608.5.4, U.O.N. Concrete materials, forms, mixing and delivery shall be in accordance with the requirements of the IRC Section R404.1.3.3.

6.3 Slabs on Grade

6.3.1 Crack Control Joints

Cut crack control joints in top of slab @10'–0"o.c. (max.) each way. Joint depth shall be 1/4 of the slab depth or 1", whichever is greater. Joints shall be conventional saw–cut within 4 to 12 hrs of concrete placement, or early–entry saw–cut within 1 to 4 hrs of concrete placement. Jointed panels shall be rectangular, as square as possible, with a max length–to–width ratio of 1 1/2:1.

6.3.2 Slab Sub–Base

Slab sub–base shall be 3/8" to 3/4" clean, crushed drain rock, compacted to a firm and unyielding condition.

6.4 Concrete Coverage over Reinforcing Steel

Unless otherwise noted, maintain the minimum concrete cover to face of reinforcement or anchors as follows:

1) 3" Where concrete is cast against and permanently exposed to earth except slab on grade.
2) 2" Where concrete is exposed to earth but formed, or exposed to weather.
3) 1 1/2" Where concrete is not exposed to earth or weather.

7.0 WOOD CONSTRUCTION

7.1 General Framing

Connections not specified on these drawings shall conform to the IRC fastening schedule, refer to Table R602.3(1). Depth of all posts in walls shall match stud depth, U.O.N. Block floor joist space solid under posts and cripple studs supporting headers and continue support to foundation. Face nail all plies of multi–ply studs with 10d@6"o.c. Obtain approval from engineer prior to ripping or creating notches or holes in framing members, U.O.N. Install double joists below all interior walls parallel to floor joists and solid blocking below all interior walls perpendicular to floor joists, U.O.N. All beams shall be continuous across supports unless explicitly shown as multiple pieces. Install full depth blocking between framing members over supports, unless otherwise noted. Orientation of dowels in exposed concealed framing connections (ex. 'CBTZ') by architect, S.A.D.

7.2 Fasteners

Nails specified on these drawings are common nails, U.O.N. Fasteners in contact with P.T. wood, exposed to weather or in contact with ground shall be hot–dipped galvanized per IRC Section 317.3, or shall have equivalent corrosion resistance. Dissimilar metals & coatings shall not be in contact. Bolt holes shall be a minimum of 1/32" to a maximum of 1/16" larger than the bolt diameter. Bolts shall not be forcibly driven, and shall be tightened to the snug–tight condition. Install standard cut washers under all bolt heads and nuts bearing against wood.

7.3 Connectors

Connectors specified on these drawings are manufactured by the SIMPSON STRONG–TIE® Company. Refer to latest catalog for information not specifically noted herein. Connectors in contact with P.T. wood, exposed to weather or in contact with ground shall be ZMAX or HDG galvanized. All connectors shall receive the maximum number of fasteners, U.O.N. Dissimilar metals & coatings shall not be in contact. Shim gaps in connectors for different framing sizes with plywood as required. Non–field–adjustable hangers specified as sloped or skewed shall be manufactured sloped or skewed.

7.4 Wood Structural Panels

WSPs shall bear the APA trademark and shall meet the requirements of the latest edition of USDOC PS1 or PS2. Use 10d common wire nails to fasten panels with 1 1/2" minimum penetration into framing at all panel edge and field nailing, U.O.N. Nails shall be located at least 3/8" from panel ends and edges. Stagger nails at adjoining panel edges. Drive nail heads flush with panel surface. Maintain 1/8" gap between all adjoining panel edges. Center interior panel joints on framing members or blocking. Provide 1/2" space between untreated panel and concrete or masonry. Minimum panel dimension shall be 2'–0". Panel storage and handling during transport and construction shall be in accordance with APA recommendations and shall protect the panels from prolonged exposure to moisture from rain, snow, ground or other sources. WSPs permanently exposed to weather shall be exterior grade.

7.5 Shear Walls and Exterior Wall Sheathing

7.5.1 Shear walls are noted on the plans. Shear walls shall be sheathed with 1/2" APA RATED SHEATHING, EXPOSURE 1 WSPs with a span rating of 32/16. Panels shall not be less than 4'–0"x8'–0", except at boundaries and changes in framing. Panels shall be laid with strength axis vertical. Install 2x blkg under all unsupported panel edges; all panel edges shall be supported by and fastened to min. 2x common studs or blocking, U.O.N. on shear wall schedule. Edge nail panels to posts that have holdowns or straps. Install double stud or min. 4x post at the ends of all shear walls. Provide solid blocking under double studs & posts between floors and continue support to foundation. See shear wall schedule for more information.

7.5.2 WSP Wall Nailing, U.O.N.:

Panel Edge Nailing: 10d@6"o.c. maximum.
Intermediate (Field) Nailing: 10d@12"o.c. maximum.

7.5.3 All new exterior walls not called out as shear walls shall be sheathed on their exterior face with 1/2" APA RATED SHEATHING, EXPOSURE 1 WSPs with a span rating of 32/16 and nailing per note 7.6.2., U.O.N. All other fasteners & requirements shall conform to the shear wall schedule for wall type (1).

7.6 Holdowns and Tiedown Straps

Holdowns and tiedown straps shall be attached to double studs or min. 4x posts, U.O.N. See latest Simpson Catalog for additional requirements not noted herein. See holdown schedule for anchor bolt sizes and additional specifications. Refer to note 7.1 for nailing and framing requirements at holdown/tiedown posts. Install solid post at shear wall corners or intersections where holdowns/tiedowns occur. All holdowns/tiedowns shall have the maximum number of fasteners.

7.7 Sill Anchor Bolts

There shall be a minimum of two sill anchor bolts per piece with one bolt located not more than 12" or less than 4 1/2" from each end of each piece. Holes in sills for bolts shall not be oversized. Sill anchor bolts shall be 5/8"ø with 7" min. embed. into concrete. Sill anchor bolts into existing concrete shall be all–thread rod, drill and epoxy. See shear wall schedule for spacing of sill anchor bolts in shear walls. Maximum sill anchor bolt spacing at non–shear–walls shall be 6'–0"o.c. at interior walls and 4'–0"o.c. at exterior walls. All sill anchor bolts at shear walls and mudsills shall be installed with 0.229"x3"x3" steel plate washers. Edge of sill anchor bolt plate washers shall be located 1/2" max. from inside face of wall sheathing or rim joist where occurs.

7.8 Floor and Roof Sheathing

7.8.1 Wood structural panel sheets at floors and roofs shall be laid with strength axis perpendicular to supports and continuous over two or more spans, unless otherwise noted on drawings. Stagger adjacent panels 4'–0"o.c. lengthwise.

7.8.2 Unless otherwise noted, typical roof sheathing shall be unblocked 5/8" APA RATED SHEATHING, EXPOSURE 1 WSPs with a span rating of 40/20. Panels shall be fastened to framing members with 10d nails @6"o.c. at all supported panel edges and 10d nails @12"o.c. intermediate (field) nailing. Install 'PSCL' sheathing clips (one mid–way between each support) at all unsupported panel joints.

7.8.3 Unless otherwise noted, typical floor sheathing shall be unblocked 3/4" APA RATED STURD–I–FLOOR EXPOSURE 1 WSPs with a span rating of 48/24 and T&G edges. Panels shall be fastened to framing members with 10d nails @6"o.c. at all supported panel edges and 10d nails @12"o.c. field nailing. Glue sheathing to all supports (including blocking) with 1/4" minimum beads of approved adhesive meeting APA specification AFG–01.

8.0 STRUCTURAL STEEL

8.1 Steel fabrication and erection shall be in accordance with "Specification for Structural Steel Buildings" (AISC 360–10).

8.2 Welding shall be in accordance with "Structural Welding Code – Steel" (AWS D1.1–10) Specifications. Minimum tensile strength of weld metal shall be 70 ksi, U.O.N. Welding electrodes shall be as recommended by their manufacturer for the position and other conditions of actual use. All welding shall be performed by AWS Certified Welders.

8.3 Bolt holes shall be drilled or punched. Bolt holes shall be standard, and hole size shall be 1/16" larger diameter than the nominal size of bolt used, U.O.N. Bolts shall be installed snug–tight, U.O.N.

8.4 All steel framing and fasteners exposed to weather or in contact with ground shall be hot–dipped galvanized after fabrication to meet the requirements of ASTM 153. Upon completion of erection; touch–up, de–slag, clean and apply zinc–rich primer to exposed welds or other unprotected markings incurred during the transportation, handling or erection process. Dissimilar metals & coatings shall not be in contact.

8.5 No penetrations shall be made through steel framing except as specifically indicated on these structural drawings or with the prior written permission of the engineer.

9.0 HELICAL PILES

9.1 Installation, testing and refusal criteria shall be in accordance with the project Geotechnical Report by Cobalt Geosciences dated 08/19/20. The Geotechnical Report is part of the construction documents and a copy may be obtained from the Geotechnical Engineer's office. The contractor shall notify Cobalt Geosciences (206–331–1097) in advance of any pile installation operations and Cobalt Geosciences should be present to observe and test, as necessary, the pile installation phases of the project.

9.2 Helical piles shall consist of 2 7/8" O.D. x0.203" (wall thickness) round shafts, ASTM A500, 80ksi steel. Helix plates shall be min. 3/8" thick x8", 10", 12" or 14"ø Gr. ASTM A572 Gr. 50 steel. Bolts shall be heavy hex ASTM A325 and nuts shall be heavy hex ASTM A194 Gr. 2 (not tempered). All helical pile components shall be H.D.G. Spacing of the lower helix on extensions shall be three times the diameter of upper helix on the preceding shaft.

9.3 Required Pile Capacity

The pile supplier shall select piles with a number, size and depth of helixes and extensions to provide the following minimum pile capacities and installation torques:

Minimum Installation Torque: 4000 ft–lbs
Required Ultimate Capacity: 36000 lbs
Required Allowable Capacity (SF=2): 18000 lbs

9.4 Submit shop drawings showing pile materials, construction details and demonstration of conformance with required pile capacity as noted above to Architect and Engineer for review and acceptance prior to fabrication.

ABBREVIATIONS

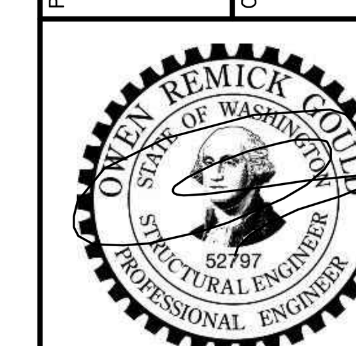
@	AT
ADJ.	ADJACENT
AEF	ARCHITECTURALLY–EXPOSED FRAMING MEMBER
ALT.	ALTERNATE
ARCH.	ARCHITECT
A.T.R.	ALL–THREAD ROD
B.F.	BALLOON–FRAMED
BLKG	BLOCKING
BLW.	BELOW
BM	BEAM
BOTT.	BOTTOM
C.I.P.	CAST–IN–PLACE
C.J.	CONSTRUCTION JOINT
CL	CENTERLINE
CLR.	CLEAR
CONT.	CONTINUOUS
CSK.	COUNTERSINK
ø	DIAMETER
DBL.	DOUBLE
DF	DOUGLAS FIR
DIM	DIMENSION
D.J.	DOUBLE JOIST
ELEV.	ELEVATION
EMBED.	EMBEDMENT
ENGR.	ENGINEER
E.N.	EDGE NAILING
E.O.R.	ENGINEER OF RECORD
EQ.	EQUAL
E/W	EACH WAY
(E)	EXISTING
F.J.	FLOOR JOIST
F.N.	FIELD NAILING
FTG	FOOTING
G.L.	GRID LINE
GLB	GLULAM BEAM
G.C.	GENERAL CONTRACTOR
H.D.G.	HOT–DIPPED GALVANIZED
HDR	HEADER
HF	HEM FIR
IBC	2018 INTERNATIONAL BUILDING CODE®
INV.	INVERTED
IRC	2018 INTERNATIONAL RESIDENTIAL CODE®
LOCN	LOCATION
MAX.	MAXIMUM
MANUF.	MANUFACTURER
MIN.	MINIMUM
MPCW(T)	METAL PLATE–CONNECTED WOOD (TRUSS)
NSFC	NOT SHOWN FOR CLARITY
N.T.S.	NOT TO SCALE
o/	OVER
o.c.	ON CENTER
O.D.	OUTSIDE DIAMETER
O/H	OPPOSITE HAND
OPNG	OPENING
PL	PLATE
PLF	POUNDS PER LINEAR FOOT
PSF	POUNDS PER SQUARE FOOT
P.T.	PRESSURE–PRESERVATIVE–TREATED
QUAD.	QUADRUPLE
REQ'D	REQUIRED
R.O.	ROUGH OPENING
R.R.	ROOF RAFTER
R.W.	REDWOOD
S.A.D.	SEE ARCHITECTURAL DRAWINGS
S.C.D.	SEE CIVIL DRAWINGS
S.F.	SQUARE FOOT (OR FEET)
S.O.G.	SLAB ON GRADE
SIM.	SIMILAR
SQ.	SQUARE
STD	STANDARD
S.W.S.	SHEAR WALL SCHEDULE
T.B.D.	TO BE DETERMINED
T&B	TOP & BOTTOM
T&G	TONGUE & GROOVE
TYP.	TYPICAL
TRPL.	TRIPLE
U.O.N.	UNLESS OTHERWISE NOTED
U/S	UNDERSIDE
u/	UNDER
V.I.F.	VERIFY IN FIELD
W.R.C.	WESTERN RED CEDAR
WSP	WOOD STRUCTURAL PANEL
W.W.F.	WELDED WIRE FABRIC

PERMIT SET

REV.	DATE	DESCRIPTION
	04–26–21	PERMIT SET

PROJECT: ADDITIONS & ALTERATIONS
3206 74th Pl SE
Mercer Island, WA 98040

CLIENT: HAVN Architects
3206 74th Pl SE
Mercer Island, WA 98040



ENGINEER OF RECORD

O.G. ENGINEERING, PLLC
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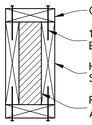
(206) 290-4608
owen@ogengineer.com

SHEET TITLE: GENERAL NOTES

SCALE: AS NOTED
JOB NO. 20025
SHEET NO. S1

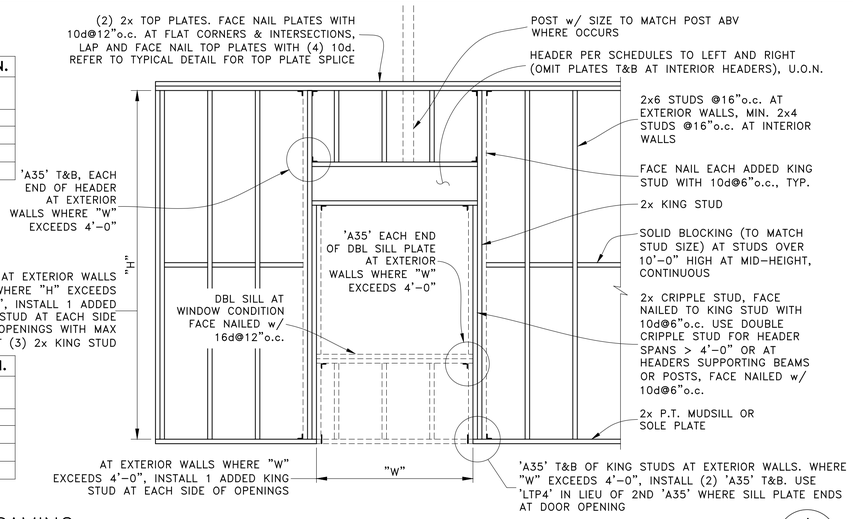
EXTERIOR HEADER SCHEDULE, U.O.N.	
"W" MAX. OPENING	MIN. HEADER
4'–0"	2–2x8
6'–0"	2–2x10
8'–0"	2–2x12
10'–0"	2–2x14



TYP. EXTERIOR (INSULATED) HEADER

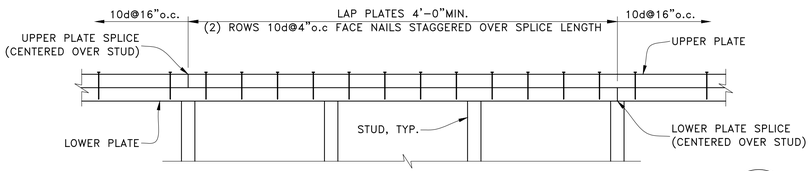
INTERIOR HEADER SCHEDULE, U.O.N.	
"W" MAX. OPENING	MIN. HEADER
4'–0"	4x8
6'–0"	4x10
8'–0"	4x12
10'–0"	4x14

NOTE: AT 4x INSULATED HEADER, PLACE 2" INSULATION ON INTERIOR SIDE



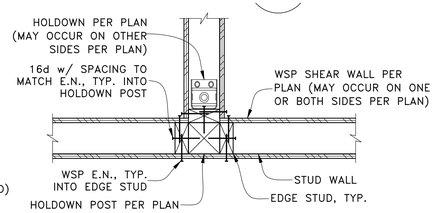
TYPICAL STUD WALL FRAMING — A

SCALE: NTS



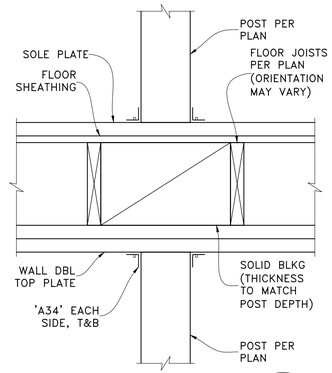
TYPICAL DOUBLE TOP PLATE SPLICE — D

SCALE: NTS



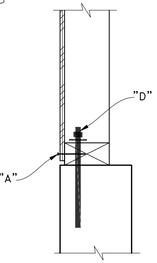
HOLDOWN AT CORNER — E

SCALE: NTS

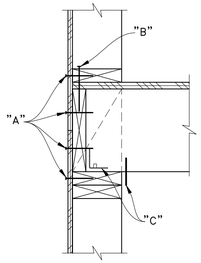


POST IN WALL — F

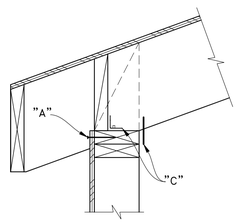
SCALE: NTS



FOUNDATION LEGEND



UPPER FLOOR LEGEND



ROOF LEGEND

SHEAR WALL SCHEDULE (1/2" SHEATHING–RATED WOOD STRUCTURAL PANELS)							
SHEAR WALL MARK	CAPACITY (PLF)	EDGE NAILING "A"	FIELD NAILING[2]	FRAMING AT ADJOINING PANEL EDGES	SOLE PLATE FASTENERS "B"	FRAMING CLIPS "C"	SILL ANCHOR BOLT SPACING – "D"
①	310	10d@6"o.c.	10d@12"o.c.	2x NOMINAL	'SDS25600' @ 8"o.c.[4]	'A34' OR 'LTP4' @ 16"o.c.[5]	4'–0"o.c.[6]
②	460	10d@4"o.c.	10d@12"o.c.	2x NOMINAL	'SDS25600' @ 8"o.c.[4]	'A34' OR 'LTP4' @ 8"o.c.[5]	2'–8"o.c.[6]
③	600	10d@3"o.c.[1]	10d@12"o.c.	3x OR 2–2x NOMINAL[3]	'SDS25600' @ 8"o.c.[4]	'A34' OR 'LTP4' @ 8"o.c.[5]	2'–8"o.c.[6]
④	770	10d@2"o.c.[1]	10d@12"o.c.	3x OR 2–2x NOMINAL[3]	'SDS25600' @ 4"o.c.[4]	'A34' OR 'LTP4' @ 8"o.c.[5]	1'–4"o.c.[6]
DBL SIDED ②	920	10d@4"o.c.[1]	10d@12"o.c.	3x OR 2–2x NOMINAL[3]	'SDS25600' @ 4"o.c.[4]	'A34' OR 'LTP4' @ 4"o.c.[5]	1'–4"o.c.[6]
DBL SIDED ③	1200	10d@3"o.c.[1]	10d@12"o.c.	3x OR 2–2x NOMINAL[3]	'SDS25600' @ 4"o.c.[4]	'A34' OR 'LTP4' @ 4"o.c.[5]	1'–4"o.c.[6]
DBL SIDED ④	1540	10d@2"o.c.[1]	10d@12"o.c.	3x OR 2–2x NOMINAL[3]	'SDS25600' @ 3"o.c.[4]	'A34' OR 'LTP4' @ 4"o.c.[5]	8"o.c.[6]

NOTES

1) STAGGER ROWS OF EDGE NAILING ½" APART. ON DBL SIDED WALLS, STAGGER EDGE NAILS ON PANELS ON OPPOSITE SIDES OF WALL.

2) NAILING TO ALL INTERMEDIATE FRAMING MEMBERS IN FIELD OF PANEL

3) PANEL EDGE NAILING SHALL BE STAGGERED. 2–2x FRAMING MEMBERS SUPPORTING PANEL EDGES SHALL BE FACE NAILED WITH 10d, SPACING TO MATCH PANEL EDGE NAILING, STAGGERED. STAGGER PANEL EDGES IN OPPOSITE PANELS MIN. 2'–0" APART ON DBL SIDED SHEAR WALLS.

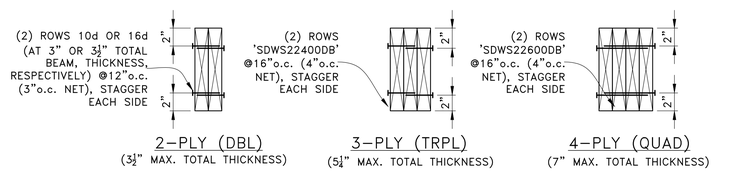
4) SCREWS SHALL HAVE MIN. 2" PENETRATION INTO RIM JOIST/ BLOCKING – USE LONGER SCREWS IF NECESSARY.

5) FRAMING CLIPS ARE ONLY REQUIRED WHERE SPECIFIED ON FRAMING DETAILS.

6) SEE GENERAL NOTES 7.6 & 7.8 FOR MORE INFORMATION.

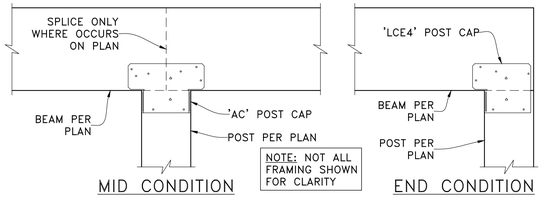
SHEAR WALL SCHEDULE (S.W.S.) — H

SCALE: NTS



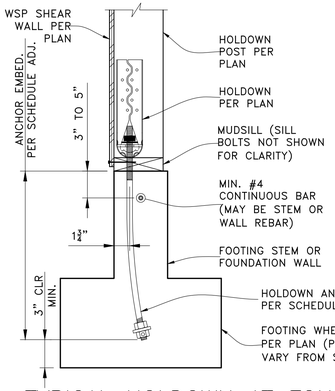
TYPICAL MULTI–PLY BEAM FASTENING — C

SCALE: NTS



BEAM TO ISOLATED POST — G

SCALE: NTS

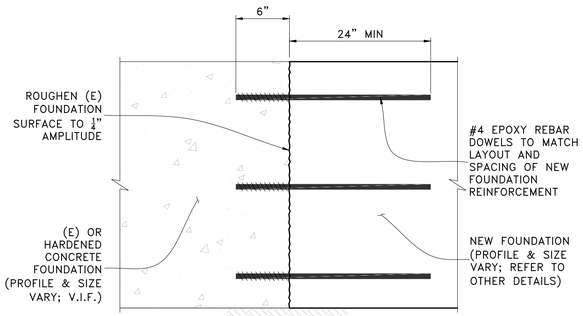


HOLDOWN SCHEDULE		
HOLDOWN	ANCHOR	ANCHOR EMBEDMENT
HDU2	SB⅝x24	18"
HDU4	SB⅝x24	18"
HDU5	SB⅝x24	18"
HDU8	SB⅝x24	18"

NOTES:
1) SEE GENERAL NOTE 7.6 FOR ADDITIONAL HOLDOWN SPECIFICATIONS NOT NOTED HEREIN.
2) NOT ALL FOUNDATION REINFORCEMENT SHOWN FOR CLARITY (REFER TO OTHER DETAILS)

TYPICAL HOLDOWN AT FOUNDATION — K

SCALE: NTS



TYPICAL NEW TO EXISTING FOUNDATION — J

SCALE: NTS

PERMIT SET

REV.	DATE	DESCRIPTION
	04–26–21	PERMIT SET

PROJECT: ADDITIONS & ALTERATIONS
3206 74th Pl SE
Mercer Island, WA 98040

CLIENT: HAVN Architects
3206 74th Pl SE
Mercer Island, WA 98040

OWEN CHEMICAL GOLDEN — STATE OF WASHINGTON — 52707 — STRUCTURAL ENGINEER — PROFESSIONAL ENGINEER

ENGINEER OF RECORD

O.G. ENGINEERING, PLLC
8645 22nd Ave SW, SEATTLE, WA 98106
(206) 290-4608
owen@ogengineer.com

SHEET TITLE: TYPICAL DETAILS

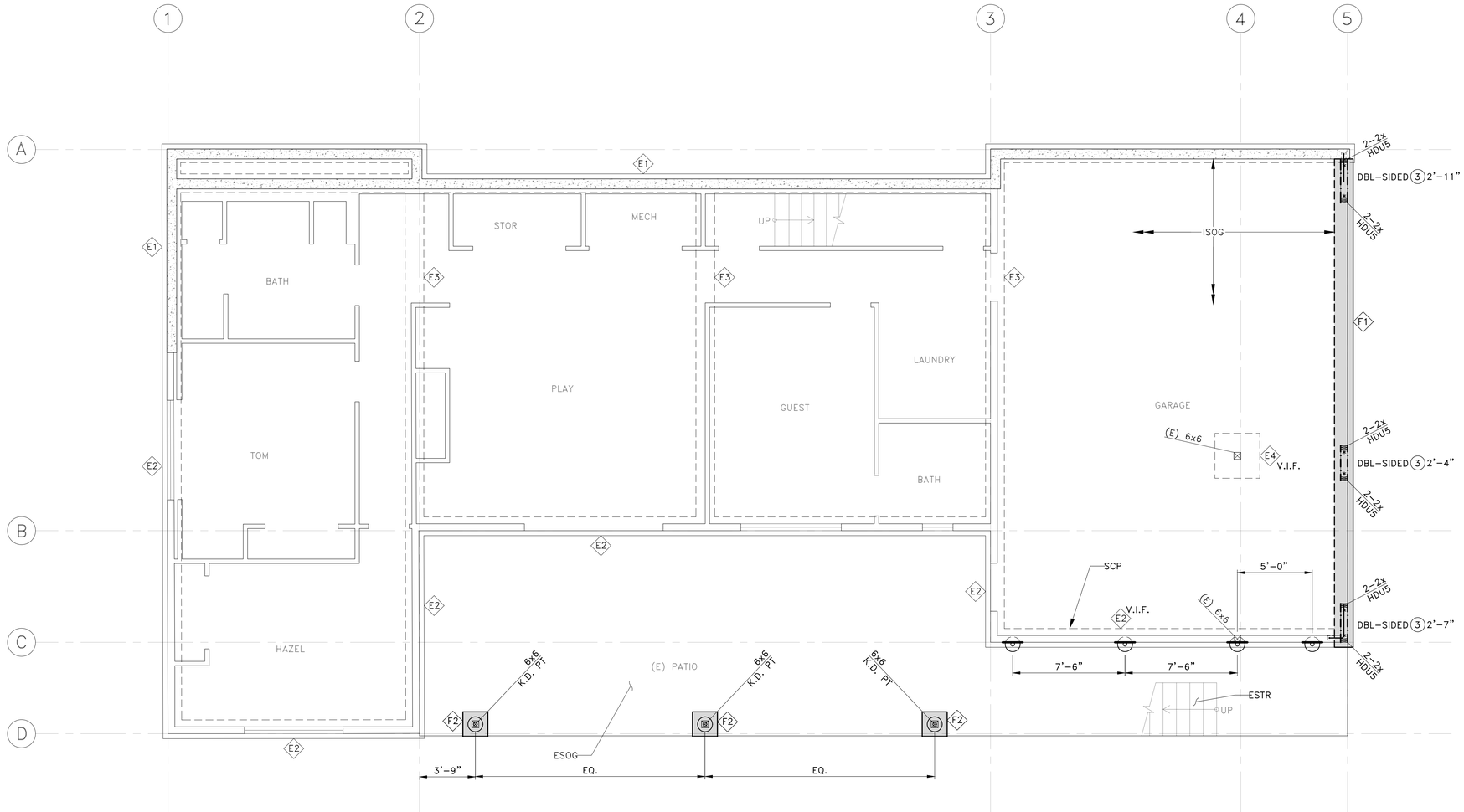
SCALE: AS NOTED
JOB NO. 20025
SHEET. NO. S2

PLAN LEGEND

	SHALLOW CONCRETE SPREAD FOOTING PER FOUNDATION SCHEDULE BLW
	(E) 8" CONCRETE FOUNDATION WALL
	(E) CONCRETE SPREAD FOOTING PER FOUNDATION SCHEDULE BLW
	NEW OR EXISTING STUD WALL ABOVE FLOOR
(X) 'L'	½" W.S.P. SHEAR WALL TYPE (X) (H/S2)(A/S6)(K/S6) w/ MIN. LENGTH 'L', PER
4x4	POST ABOVE FLOOR PER (F/S2)(C/S6)
2-2x HDU2	POST & HOLDOWN PER (K/S2)
	EPOXY REBAR DOWEL NEW TO (E) FOUNDATION PER (J/S2) BEND AROUND CORNERS WHERE OCCURS
	RETROFIT HELICAL PILE w/ WALL BRACKET CENTERED BLW POST, U.O.N., (B/S6) 7 LOCNS PER SHEET S1 GENERAL NOTE 9.0 AND
SCP	LIFTING OF (E) EAST GARAGE FOUNDATION USING HELICAL PILES TO CORRECT SETTLEMENT BY OTHERS
ESTR	EXTERIOR STAIR PER (F/S6)
ESOG	(E) PATIO CONCRETE SLAB ON GRADE (4" MIN, V.I.F.)
ISOG	(E) PATIO CONCRETE SLAB ON GRADE (4" MIN, V.I.F.)

FOUNDATION SCHEDULE

F1	15" WIDE EXTERIOR STRIP FOOTING PER (A/S6)
F2	18"SQ. PILE CAP w/ HELICAL PILE PER SHEET S1, GENERAL NOTE 9.0 & (C/S6) 3 LOCNS
E1	(E) 8" FOUNDATION WALL w/ 15" WIDE T-FOOTING
E2	(E) 15" WIDE EXTERIOR STRIP FOOTING (V.I.F WHERE NOTED ON PLAN)
E3	(E) 15" WIDE INTERIOR STRIP FOOTING
E4	(E) 3'-0"SQ. INTERIOR PAD FOOTING (MIN, V.I.F.)



NORTH

PERMIT SET

REV.	DATE	DESCRIPTION
	04-26-21	PERMIT SET

PROJECT:
ADDITIONS & ALTERATIONS
3206 74th Pl SE
Mercer Island, WA 98040

CLIENT:
HAVN Architects
3206 74th Pl SE
Mercer Island, WA 98040

OWEN REMICK COLLETT
STATE OF WASHINGTON
52707
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ENGINEER OF RECORD

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SHEET TITLE:
LOWER FLOOR
FRAMING & FOUNDATION PLAN

SCALE: AS NOTED
JOB NO. 20025
SHEET NO. S3

PLAN LEGEND

	NEW OR EXISTING STUD WALL ABOVE FLOOR
	NEW OR EXISTING WALL BELOW FLOOR
	NEW OR EXISTING WINDOW BY ARCH (S.A.D.)
(X) 'L'	½" W.S.P. SHEAR WALL TYPE (X) (H/S2) (G/S6) (K/S6) w/ MIN. LENGTH 'L', PER
4x4 OR 4x4 BLW	POST ABOVE OR BELOW FLOOR PER (F-G/S2) U.O.N.
2-2x MSTC28	POST & BENT TIEDOWN STRAP PER PLAN AND SIMPSON MANUAL
	METAL STRAP PER PLAN
DST1	CONT. 'CS16' STRAP o/ DECK SHEATHING o/ 2x BLKG PER (K/S6)
DST2	CONT. 'CS16' STRAP o/ INTERIOR & EXTERIOR WALL SHEATHING o/2x4 FLAT BLKG, CONTINUE FOR 2'-0" MIN ACROSS OUTSIDE FACE OF HEADERS OVER GARAGE DOORS
PBX	SUSPENDED PLANTER BOX PER (E/S7)
EHDR	(E) DROPPED HEADER OVER WALL OPENING BLW
ISTR	(E) INTERIOR STAIR
BEAM HANGER	FLUSH-FRAMED JOIST OR BEAM CONNECTION; SEE FRAMING SCHEDULE FOR HANGERS, U.O.N. ON PLAN OR DETAILS (JOIST HANGERS NOT SHOWN ON PLAN FOR CLARITY)
	JOIST OR BEAM BEARING ON DROPPED BEAM OR HEADER (BEARING WALL SIM). POST DOWN TO HEADER WHERE OCCURS (POST WIDTH TO MATCH BEAM, NOT SHOWN FOR CLARITY). INSTALL FULL-DEPTH BLKG EACH SIDE OF JOIST OR BEAM OVER SUPPORT

FRAMING SCHEDULE

CALLOUT	JOIST/BEAM	HANGER (U.O.N. ON PLAN)	REFER TO DETAIL(S) (OR SEE NOTES BLW)
UFB2	1¾x11⅞ LVL (FLUSH RIM BEAM)	HUS1.81/10	(E/S7)
DJ1	2x12 @16"o.c.	LRU212Z	(I/S7)
DB2	4x12 (FLUSH)	HUC410 (MANUF. SLOPED)	(F/S6) (E/S7)
DB3	5½x13¾ PT GLB (DROPPED)	N/A	N/A
DJ4	2x8 @16"o.c.	N/A	(E/S6) (K/S6)
DH6	5½x9 GLB (DROPPED HEADER)	N/A	(A/S2) USE DBL CRIPPLE STUDS EACH END
DH7	5½x12 GLB (DROPPED HEADER)	N/A	(A/S2) USE DBL CRIPPLE STUDS EACH END
DB8	DBL 1¾x7¼ LVL (FLUSH w/ DJ4)	N/A	SIM (K/S6) INSTALL 'H8' EACH SIDE, EACH END TO NORTH FACE OF BEAM OR WALL BLW (PLACE (C/S2) o/ SHEATHING WHERE OCCURS)
EUFJ1	(E) 11⅞ TJI @16"o.c.	N/A	N/A
EUFB2	(E) 3½x11⅞ PSL (FLUSH, V.I.F.)	N/A	STRAP EACH END DOWN TO (E) DBL TOP PLATE OR BEAM BLW w/ 'H8' EACH SIDE
EUFB3	(E) 6¾x18 GLB (DROPPED)	N/A	N/A

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CLIENT:
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SHEET TITLE:
UPPER FLOOR FRAMING PLAN

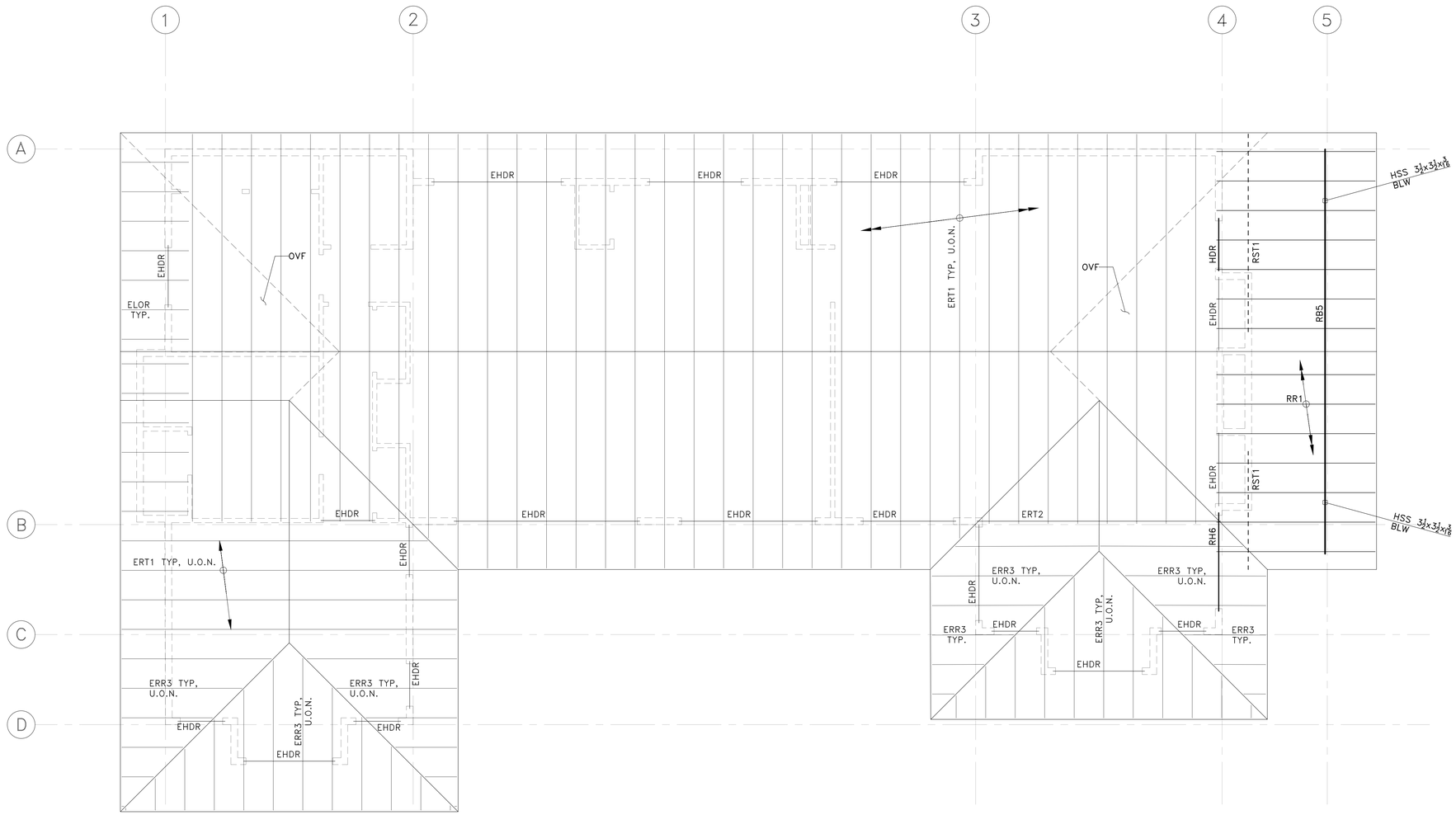
SCALE: AS NOTED
JOB NO. 20025
SHEET NO. S4

PLAN LEGEND

⊏⊏⊏⊏⊏⊐	NEW OR EXISTING WALL BELOW FLOOR
4x4 BLW	POST BELOW FLOOR PER (F–G / S2)
- - - - - - - -	METAL STRAP PER PLAN
RST1	CONT. 'CS16' STRAP o/ SHEATHING o/ 2x4 FLAT BLKG; CONTINUE OVER 2x RIM BLKG ABOVE WALL FOR 4'–0" MIN.
HDR	DROPPED HEADER OVER WALL OPENING BLW PER (A / S2)
OVF	OVER–FRAMING PER (H / S7)
EHDR	(E) DROPPED HEADER OVER WALL OPENING BLW
ELOR	(E) LOOKOUT RAFTERS
BEAM HANGER	FLUSH–FRAMED JOIST OR BEAM CONNECTION; SEE FRAMING SCHEDULE FOR HANGERS, U.O.N. ON PLAN OR DETAILS (JOIST HANGERS NOT SHOWN ON PLAN FOR CLARITY)
	JOIST OR BEAM BEARING ON DROPPED BEAM OR HEADER (BEARING WALL SIM). POST DOWN TO HEADER WHERE OCCURS (POST WIDTH TO MATCH BEAM, NOT SHOWN FOR CLARITY). INSTALL FULL–DEPTH BLKG EACH SIDE OF JOIST OR BEAM OVER SUPPORT

FRAMING SCHEDULE

CALLOUT	JOIST/BEAM	HANGER (U.O.N. ON PLAN)	REFER TO DETAIL(S) (OR SEE NOTES BLW)
RR1	2x6 @24"o.c.	N/A	(H / S6) (C / S7)
RB5	(2) C10x15.3 (DROPPED)	N/A	(H / S6)
RH6	(2) 1¾x7¼ LVL (DROPPED HEADER)	N/A	(A / S2) USE TRPL CRIPPLE STUDS BLW WEST END
ERT1	(E) MPCWT @24"o.c.	N/A	N/A
ERT2	(E) GIRDER TRUSS (V.I.F.)	N/A	N/A
ERR3	(E) RAFTERS @24"o.c.	N/A	N/A



NORTH

PERMIT SET

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	04-26-21	PERMIT SET

PROJECT:
ADDITIONS & ALTERATIONS
3206 74th Pl SE
Mercer Island, WA 98040

CLIENT:
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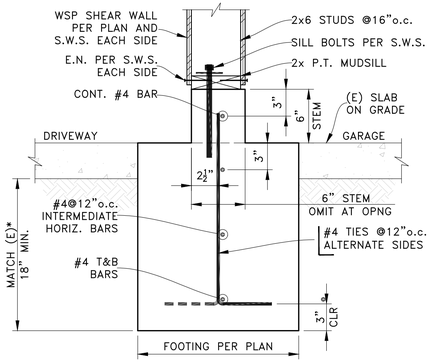
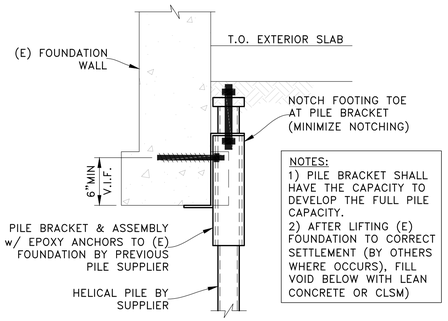
SHEET TITLE:
ROOF FRAMING PLAN

SCALE: AS NOTED
JOB NO. 20025
SHEET NO. S5



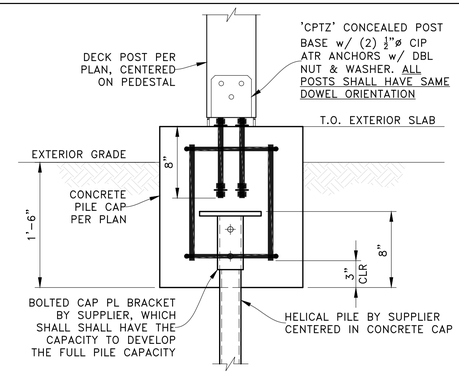
EXTERIOR STRIP FOOTING — A

SCALE: NTS



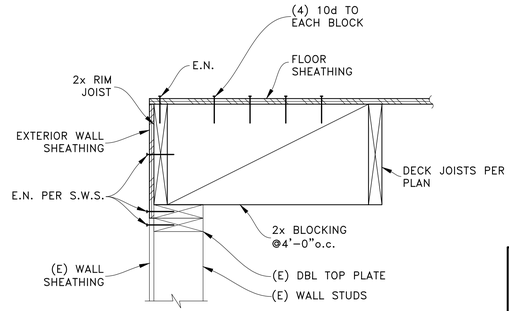
RETROFIT HELICAL PILE — B

SCALE: NTS



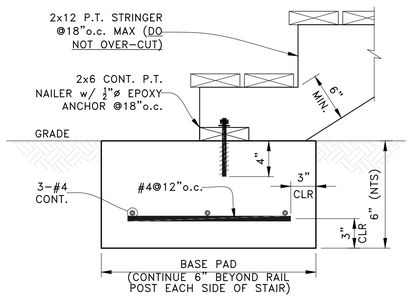
DECK POST PILE CAP — C

SCALE: NTS

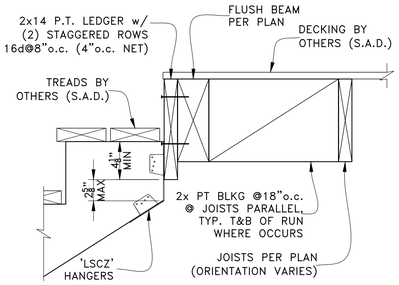


NORTH DECK AT EXISTING WALL — E

SCALE: NTS



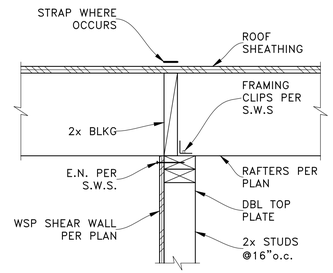
BOTTOM OF RUN



TOP OF RUN

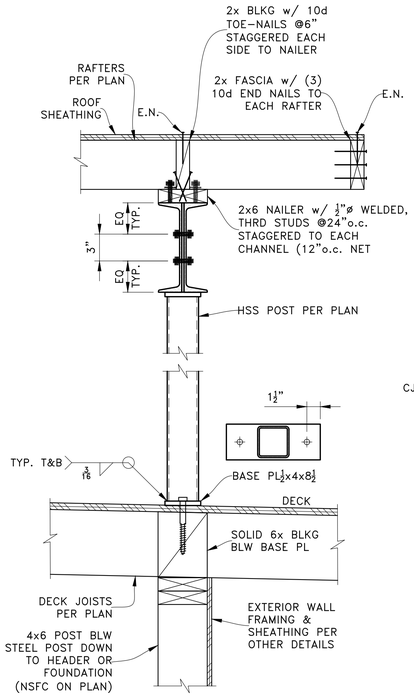
EXTERIOR STAIR — F

SCALE: NTS



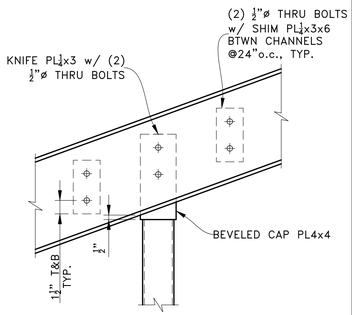
SHEAR WALL AT ROOF — G

SCALE: NTS

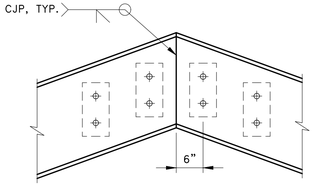


STEEL DECK BEAM & POST — H

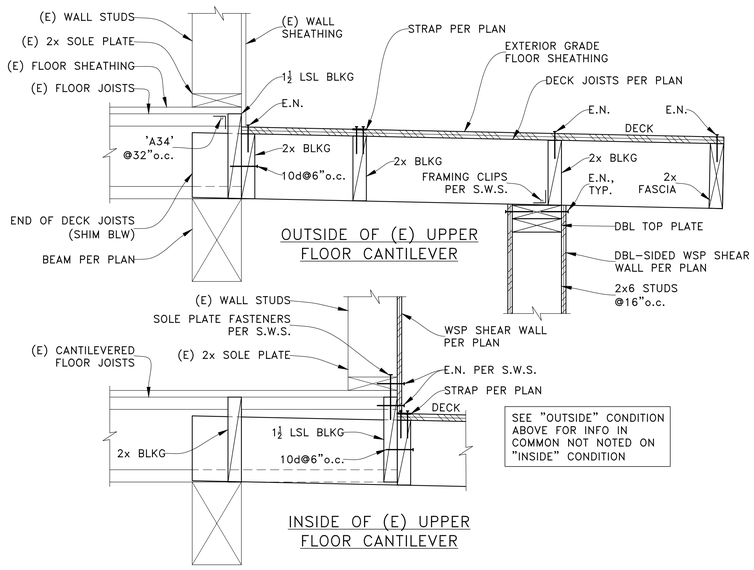
SCALE: NTS



STEEL BEAM AT POST CAP



STEEL BEAM AT RIDGE



NORTH DECK — K

SCALE: NTS

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3206 74th Pl SE
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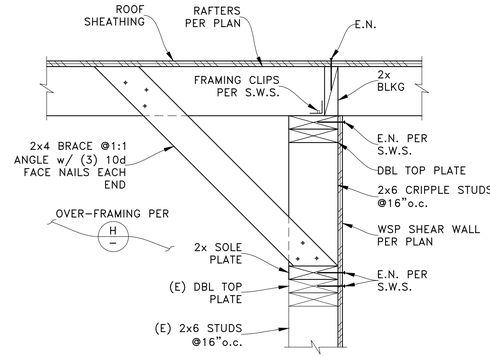
SHEET TITLE:
SECTIONS & DETAILS

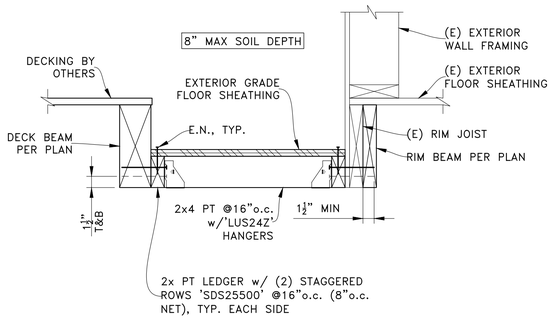
SCALE: AS NOTED
JOB NO. 20025
SHEET NO. S6



DECK ROOF AT EXTERIOR WALL

SCALE: NTS

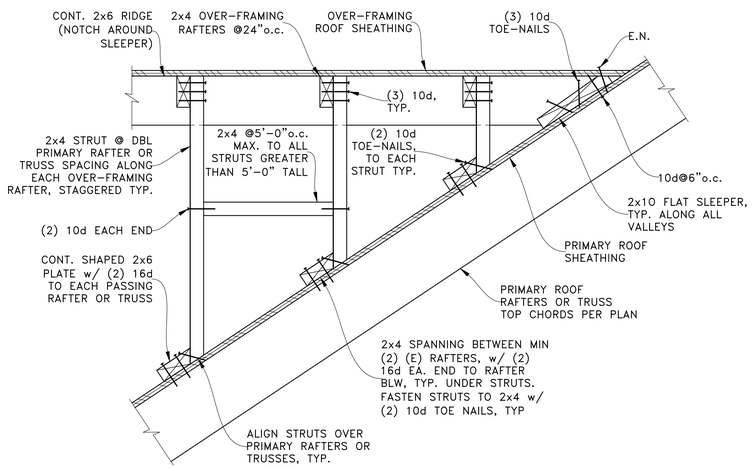
C



SUSPENDED PLANTER

SCALE: NTS

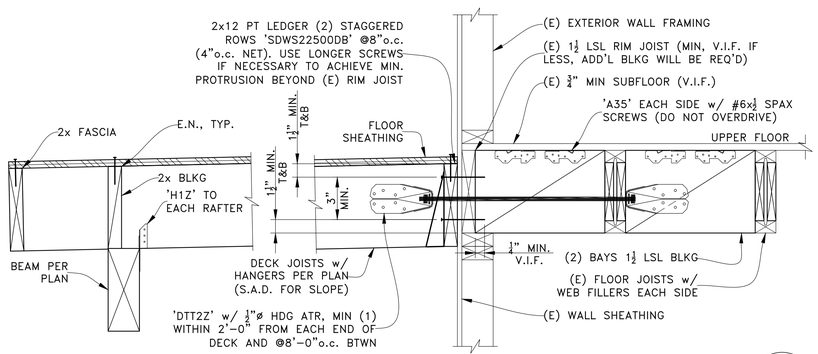
E



TYPICAL OVER-FRAMING

SCALE: NTS

H



EAST DECK

SCALE: NTS

I

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SHEET TITLE:
SECTIONS & DETAILS

SCALE: AS NOTED
JOB NO. 20025
SHEET NO. S7