BUILDING CODE ANALYSIS

SUMMARY OF THE PROJECT:
ADDITION TOWARDS THE REAR ON THE MAIN FLOOR AND INTERIOR ALTERATION

BUILDING DEPARTMENT CONTACT:
CITY OF MERCER ISLAND
COMMUNITY PLANNING AND DEVELOPMENT
9611 SE 236TH STREET
MERCER ISLAND, WA 98040
EPERMIT.TECH@MERCERISLAND.GOV

APPLICABLE BUILDING CODES:
2018 INTERNATIONAL BUILDING CODE (IBC)
2020 NATIONAL ELECTRICAL CODE (NEC)
2018 INTERNATIONAL MECHANICAL CODE (IMC)
2018 INTERNATIONAL PLUMBING CODE (IPC)
2018 INTERNATIONAL FIRE CODE (IFC)
2018 ACCESSIBILITY STANDARDS
2018 WASHINGTON STATE ENERGY CODE - RESIDENTIAL

ENERGY CODE DATA:
2018 WASHINGTON STATE ENERGY CODE - RESIDENTIAL
PRESCRIPTIVE ENERGY CODE COMPLIANCE FOR ALL CLIMATE ZONES IN WASHINGTON
SINGLE FAMILY - NEW & ADDITIONS (EFFECTIVE FEBRUARY 1, 2021)

PROJECT CLASSIFICATION:	4. ADDITIONS LESS THAN 500 SF:	1.5 CREDITS REQUIRED
HEATING OPTION:	1 COMBUSTION MIN NAECA	0.0 CREDITS
ENERGY OPTION:	5.4 EFFICIENT WATER HEATING:	1.5 CREDITS
	TOTAL CREDITS CLAIMED	1.5 CREDITS

1 DATA: AMERICAN STANDARD FREEDOM 80 AFUE 80%

5.4 DATA: BRADFORD WHITE RE2H50S6 ELECTRIC HEAT PUMP (OR SIMILAR TIER 1)

HOLLENBECK RESIDENCE

INTERIOR ALTERATION & ADDITION

7701 SE 39TH ST.
MERCER ISLAND, WA 98040

REVISION 1, MARCH 10, 2023

PROJECT DIRECTORY

OWNER:
TYLER & SARAH HOLLENBECK
7701 SE 39TH ST.
MERCER ISLAND, WA 98040

DESIGNER:
DAN V. GARVIDA
GARVIDA DESIGN GROUP, LLC
12613 SE 237TH PLACE
KENT, WA 98031
206.590.1232
GARVIDADESIGNGROUP@GMAIL.COM

STRUCTURAL ENGINEER:
ROLAND HEIMISCH
TECINSTRUCT, LLC
4111 164TH ST. SW, UNIT 51
LYNNWOOD, WA 98087
206.553.9076
RHEIMISCH@YAHOO.COM

GENERAL CONTRACTOR:
TO BE DETERMINED

PROPERTY INFORMATION

PARCEL #:
545880-0525

ZONING:
R-9.6

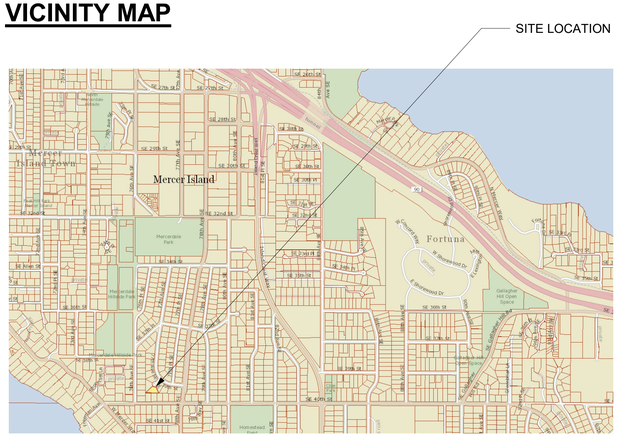
LOT SIZE #:
10,884 SF (0.25 ACRES)

LEGAL DESCRIPTION:
MERCERDALE ADD LESS BEG AT SW COR TH S 89 DEG 05 MIN 27 SEC E 82 FT TH N 01 DEG 10 MIN 58 SEC E 3.60 FT TH N 85 DEG 28 MIN 00 SEC W 73.36 FT TH S 48 DEG 01 MIN 42 SEC W 12.04 FT TO POB
PLAT BLOCK: 6
PLAT LOT: 27

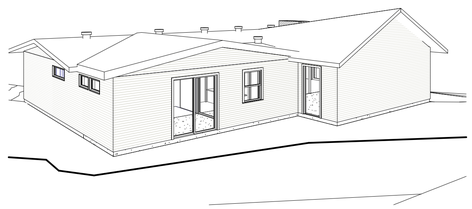
SHEET INDEX

DEFERRED SUBMITTAL:

VICINITY MAP



1 3D View 2
SCALE:



2 3D View 3
SCALE:

GENERAL NOTES:

2018 IRC M1504.3 Exhaust Openings
Air exhaust openings shall terminate as follows:
1. Not less than 3 feet from property lines.
2. Not less than 3 feet from gravity air intake openings, operable windows and doors.
3. Not less than 10 feet from mechanical air intake openings except where either of the following apply:
   - 3.1. The exhaust opening is located not less than 3 feet above the air intake opening.
   - 3.2. The exhaust opening is part of a factory-built intake/exhaust combination termination fitting installed in accordance with the manufacturer's instructions, and the exhaust air is drawn from a living space.
4. Openings shall comply with Sections R303.5.2 and R303.6.

2018 UPC 507.2 Seismic Provisions.
1. Water heaters shall be anchored or strapped to resist horizontal displacement due to earthquake motion.
2. Strappings shall be at points within the upper one-third and lower one-third of its vertical dimensions. At the lower point, a distance of not less than four (4) inches (102 mm) shall be maintained from the controls to the strapping.

2018 WSEC R404.1 Lighting Equipment
1. Not less than 90 percent of lamps in permanently installed lighting fixtures shall be high-efficacy lamps.

2018 WSEC R403.5.3 Hot Water Pipe Insulation
1. Insulation for hot water pipe, both within and outside the conditioned space, shall have a minimum thermal resistance (R-value) of R-3.

   Exception: Pipe insulation is permitted to be discontinuous where it passes through studs, joists or other structural members and where the insulated pipes pass other piping, conduit or vents, provided the insulation is installed tight to each obstruction.

2018 IRC M1502.3 Duct Termination
1. Clothes Dryer Exhaust ducts shall terminate on the outside of the building.

2. Exhaust duct terminations shall be in accordance with the dryer manufacturer's installation instructions. If the manufacturer's instructions do not specify a termination location, The exhaust duct shall terminate not less than 3 feet in any direction from openings into buildings.

3. Exhaust duct terminations shall be equipped with a backdraft damper. Screens shall not be installed at the duct termination.

2018 UPC 504.6 Temperature, Pressure, and Vacuum Relief Devices
1. emperature, pressure, and vacuum relief devices or combinations thereof, and automatic gas shutoff devices shall be installed in accordance with the terms of their listings and the manufacturer's installation instructions.

2. A shutoff valve shall not be placed between the relief valve and the water heater or on discharge pipes between such valves and the atmosphere. The hourly British thermal units (Btu) discharge capacity or the rated steam relief capacity of the device shall be not less than the input rating of the water heater.

3. Discharge piping shall be installed in accordance with Section 608.5.

2018 IRC R317.3.1 Fasteners for Preservative-Treated Wood
1. Fasteners, including nuts and washers, for preservative-treated wood shall be of hot-dipped, zinc-coated galvanized steel, stainless steel, silicon bronze or copper.

   Exceptions:
   1. 1/2-inch-diameter (12.7 mm) or greater steel bolts.
   2. Fasteners other than nails, staples and timber rivets shall be permitted to be of mechanically deposited zinc-coated steel with coating weights in accordance with ASTM B695, Class 55 minimum.
   3. Plain carbon steel fasteners in SBX/DOT and zinc borate preservative-treated wood in an interior, dry environment shall be permitted.

2018 UPC 909.0 Special Venting for Island Fixtures.
1. 909.1 General. Traps for island sinks and similar equipment shall be roughed in above the floor and shall be permitted to be vented by extending the vent as high as possible, but not less than the drainboard height and then returning it downward and connecting it to the horizontal sink drain immediately downstream from the vertical fixture drain. The return vent shall be connected to the horizontal drain through a wyebranch fitting and shall, in addition, be provided with a foot vent taken off the vertical fixture vent by means of a wye branch immediately below the floor and extending to the nearest partition and then through the roof to the open air, or shall be permitted to be connected to other vents at a point not less than 6 inches (152 mm) above the flood-level rim of the fixtures served.

2018 UPC 807.3 Domestic Dishwashing Machine.
1. No domestic dishwashing machine shall be directly connected to a drainage system or food waste disposer without the use of an approved dishwasher air gap fitting on the discharge side of the dishwashing machine. Listed air gaps shall be installed with the flood-level (FL) marking at or above the flood level of the sink or drainboard, whichever is higher.

Ventilation:

M1505.4.2 System controls. The whole-house mechanical ventilation system shall be provided with controls that comply with the following:
1. The whole house ventilation system shall be controlled with manual switches, timers or other means that provide for automatic operation of the ventilation system that are readily accessible by the occupant;
2. Whole-house mechanical ventilation system shall be provided with controls that enable manual override off of the system by the occupant during periods of poor outdoor air quality. Controls shall include permanent text or a symbol indicating their function. Recommended control permanent labeling to include text similar to the following: "Leave on unless outdoor air quality is very poor." Manual controls shall be readily accessible by the occupant;
3. Whole house ventilation systems shall be configured to operate continuously except where intermittent off controls and sizing are provided per Section M1505.4.3.2.

M1505.4.3 Mechanical ventilation rate. The whole-house mechanical ventilation system shall provide outdoor air at a continuous rate as determined in accordance with Table M1505.4.3(1) or Equation 15-1.

Equation 15-1

Ventilation rate in cubic feet per minute = (0.01 × total square foot area of house) + [7.5 × (number of bedrooms + 1)] but not less than 30 cfm for each dwelling unit

Table M1505.4.3(1)
Whole-House Mechanical Ventilation Airflow Rate

Dwelling Unit Floor Area (square feet)	Number of Bedrooms				
	0 - 1	2	3	4	5 or more
	Airflow in cfm				
< 500	30	30	35	45	50
501 - 1,000	30	35	40	50	55
1,001 - 1,500	30	40	45	55	60
1,501 - 2,000	35	45	50	60	65
2,001 - 2,500	40	50	55	65	70
2,501 - 3,000	45	55	60	70	75
3,001 - 3,500	50	60	65	75	80
3,501 - 4,000	55	65	70	80	85
4,001 - 4,500	60	70	75	85	90
4,501 - 5,000	65	75	80	90	95

M1505.4.3.1 Ventilation quality adjustment. The minimum whole house ventilation rate from Section 1505.4.3 shall be adjusted by the system coefficient in Table M1505.4.3(2) based on the system type not meeting the definition of a *balanced whole house ventilation* system and/or not meeting the definition of a *distributed whole house ventilation* system.

$$Q_V = Q_T * C_{system}$$
(Equation 15-2)

Where:

Q_v = Quality-adjusted ventilation airflow rate in cubic feet per minute (cfm).

Q_T = Ventilation airflow rate, cubic feet per minute (cfm) from 15-1 or Table M1505.4.3(1).

C_{system} = System coefficient from Table 1505.4.3(2).

Table M1505.4.3(2)
System Coefficient (C_{system})

System Type	Distributed	Not Distributed
Balanced	1.0	1.25
Not balanced	1.25	1.5

M1505.4.3.2 Intermittent off operation. Whole-house mechanical ventilation systems shall be provided with advanced controls that are configured to operate the system with intermittent off operation shall operate for a least two hours in each four-hour segment. The whole house ventilation airflow rate determined in accordance with Section M1505.4.3 as corrected by Section M1505.4.3.1 is multiplied by the factor determined in accordance with Table M1505.4.3(3).

Table M1505.4.3(3)
Intermittent Off Whole House-Mechanical Ventilation Rate Factors[a,b]

Run-time % in Each 4-hour Segment	50%	66%	75%	100%
Factor[a]	2	1.5	1.3	1.0

a. For ventilation system run-time values between those given, the factors are permitted to be determined by interpolation.
b. Extrapolation beyond the table is prohibited.

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HOLLENBECK RESIDENCE
SINGLE FAMILY RES. ADDITION & ALTERATION

TYLER & SARAH HOLLENBECK
7701 SE 39TH ST.
MERCER ISLAND, WA 98040
PARCEL #: 545880-0525

GENERAL NOTES

REVISIONS:

MAR 10, 2023	1

Project #:	2022-020
Date:	07/16/2022
Drawn by:	Dan Garvida
Checked by:	Hollenbeck

G-200

Scale: AS NOTED

PROJECT INFORMATION:

DESCRIPTION OF PROJECT:
ADDITION TOWARDS THE REAR OF AN EXISTING SFR ON THE MAIN LEVEL, AND INTERIOR ALTERATION.

OWNER:
TYLER & SARAH HOLLENBECK
7701 SE 39TH ST.
MERCER ISLAND, WA 98040

LOT DESCRIPTION:
MERCERDALE ADD LESS BEG AT SW COR TH S 89 DEG 05 MIN 27 SEC E 82 FT TH N 01 DEG 10 MIN 58 SEC E 3.60 FT TH N 85 DEG 28 MIN 00 SEC W 73.36 FT TH S 48 DEG 01 MIN 42 SEC W 12.04 FT TO POB
PLAT BLOCK: 6
PLAT LOT: 27

ZONING:
R-9.6

PARCEL ID:
545880-0525

AREA OF COVERAGE:

LOT AREA:	=	10,884 SF (0.25 ACRES)
FLOOR AREAS:		
1ST FLOOR, EXISTING	=	1,636 SF
1ST FLOOR, ADDITION, NEW	=	230 SF
BASEMENT, CONDITIONED, EXISTING	=	845 SF
BASEMENT, CONDITIONED, NEW	=	107 SF
BASEMENT, UNCONDITIONED, EXISTING	=	197 SF
GARAGE, ATTACHED, BASEMENT LEVEL, EXISTING	=	452 SF
TOTAL FLOOR AREA	=	3,467 SF (31.85%)
LOT COVERAGE:		
MAIN STRUCTURE ROOF AREA, EXISTING	=	2,533 SF
DRIVEWAY, EXISTING	=	427 SF
BUILDING, ADDITION, NEW	=	230 SF
TOTAL LOT COVERAGE	=	3,190 SF (29.31%)
HARDSCAPE:		
WALKWAY, FRONT, EXISTING	=	141 SF
GRAVEL, EXISTING	=	744 SF
PATIO, BACK, EXISTING	=	35 SF
TOTAL LOT COVERAGE	=	920 SF (8.45%)
IMPERVIOUS SURFACE:		
MAIN STRUCTURE ROOF O.H., EXISTING & NEW	=	2,706 SF
WALKWAY, EXISTING	=	114 SF
DRIVEWAY, EXISTING	=	427 SF
GRAVEL, EXISTING	=	776 SF
TOTAL IMPERVIOUS SURFACE	=	4,023 SF (36.96%)

LOT SLOPE CALCULATIONS:

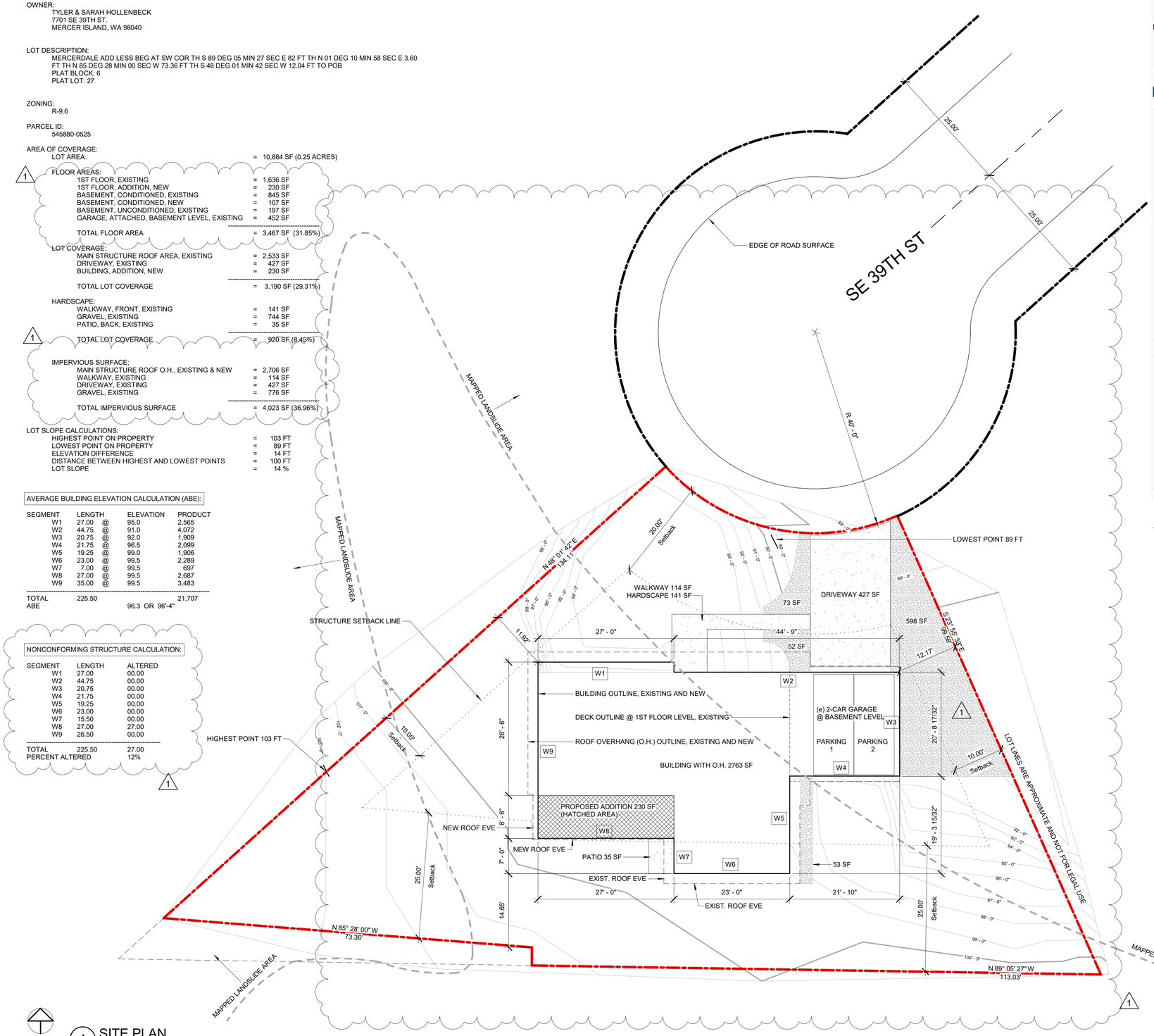
HIGHEST POINT ON PROPERTY	=	103 FT
LOWEST POINT ON PROPERTY	=	89 FT
ELEVATION DIFFERENCE	=	14 FT
DISTANCE BETWEEN HIGHEST AND LOWEST POINTS	=	100 FT
LOT SLOPE	=	14 %

AVERAGE BUILDING ELEVATION CALCULATION (ABE):

SEGMENT	LENGTH		ELEVATION	PRODUCT
W1	27.00	@	95.0	2,565
W2	44.75	@	91.0	4,072
W3	20.75	@	92.0	1,909
W4	21.75	@	96.5	2,099
W5	19.25	@	99.0	1,906
W6	23.00	@	99.5	2,289
W7	7.00	@	99.5	697
W8	27.00	@	99.5	2,687
W9	35.00	@	99.5	3,483
TOTAL	225.50			21,707
ABE			96.3 OR 96'-4"	

NONCONFORMING STRUCTURE CALCULATION:

SEGMENT	LENGTH	ALTERED
W1	27.00	00.00
W2	44.75	00.00
W3	20.75	00.00
W4	21.75	00.00
W5	19.25	00.00
W6	23.00	00.00
W7	15.50	00.00
W8	27.00	27.00
W9	26.50	00.00
TOTAL	225.50	27.00
PERCENT ALTERED		12%



1 SITE PLAN
SCALE: 1" = 10'-0"

PARCEL DATA

Parcel	545880-0525
Name	HOLLENBECK TYLER+SARAH
Site Address	7701 SE 39TH ST 98040
Residential Area	034-005 (SE Appraisal District)
Property Name	

Jurisdiction	MERCER ISLAND
Levy Code	1031
Property Type	R
Plat Block / Building Number	6
Plat Lot / Unit Number	27
Quarter-Section-Township-Range	SE-12-24-4

Legal Description
MERCERDALE ADD LESS BEG AT SW COR TH S 89 DEG 05 MIN 27 SEC E 82 FT TH N 01 DEG 10 MIN 58 SEC E 3.60 FT TH N 85 DEG 28 MIN 00 SEC W 73.36 FT TH S 48 DEG 01 MIN 42 SEC W 12.04 FT TO POB
PLat Block: 6
Plat Lot: 27

LAND DATA

Highest & Best Use As If Vacant	SINGLE FAMILY
Highest & Best Use As Improved	PRESENT USE
Present Use	Single Family(Res Use/Zone)
Land SqFt	10,884
Acres	0.25

Percentage Unusable	
Unbuildable	NO
Restrictive Size Shape	NO
Zoning	R-9.6
Water	WATER DISTRICT
Sewer/Septic	PUBLIC
Road Access	PUBLIC
Parking	ADEQUATE
Street Surface	PAVED

Views

Rainier	
Territorial	
Olympics	
Cascades	
Seattle Skyline	
Puget Sound	
Lake Washington	
Lake Sammamish	
Lake/River/Creek	
Other View	

Waterfront

Waterfront Location	
Waterfront Footage	0
Lot Depth Factor	0
Waterfront Bank	
Tide/Shore	
Waterfront Restricted Access	
Waterfront Access Rights	NO
Poor Quality	NO
Proximity Influence	NO

Designations

Historic Site	
Current Use	(none)
Nbr Bldg Sites	
Adjacent to Golf Fairway	NO
Adjacent to Greenbelt	NO
Other Designation	NO
Deed Restrictions	NO
Development Rights Purchased	NO
Easements	NO
Native Growth Protection Easement	NO
DNR Lease	NO

Nuisances

Topography	
Traffic Noise	
Airport Noise	
Power Lines	NO
Other Nuisances	NO

Problems

Water Problems	NO
Transportation Concurrency	NO
Other Problems	NO

Environmental

Environmental	NO

The following standards apply to all single family zoned property R-8.4, R-9.6, R-12, and R-15:

Minimum Front Yard Setbacks	Minimum Rear Yard Setbacks	Minimum Side Yard Setbacks	Minimum Setback From Public Rights-of-ways and vehicular access easements	Maximum Building Height[2]	Maximum Gross Floor Area[3]
20 feet	25 feet	Lots with a width of 90 feet or less, the side yard setback must sum to 15 feet; provided that no side yard shall be less than 5 feet. Lots with a width of more than 90 feet, the side yard setbacks must sum to 17% of the lot width; provided that no side yard shall be less than 33% of the required side yard width.	10 feet	30 feet	40% of net lot area.

LOT AVERAGE WIDTH 116.7'
17% OF AVERAGE WIDTH 19.84' ROUNDED TO 20.0'

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HOLLENBECK RESIDENCE

SINGLE FAMILY RES. ADDITION & ALTERATION

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7701 SE 39TH ST.
MERCER ISLAND, WA 98040
PARCEL #: 545880-0525

SITE PLAN & PROJECT INFORMATION

REVISIONS:

MAR 10, 2023	1

Project #:	2022-020
Date:	07/16/2022
Drawn by:	Dan Garvida
Checked by:	Hollenbeck

C-100

Scale: AS NOTED

SMALL PROJECT STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

DRAINAGE ASSESSMENT:

THIS PROJECT CONSIST OF CONSTRUCTING 230 SF OF 1ST FLOOR ADDITION TOWARDS THE REAR OF THE EXISTING SFR. NEW DOWNSPOUTS WILL BE CONNECTED TO EXISTING DRAINAGE SYSTEM ON SITE.

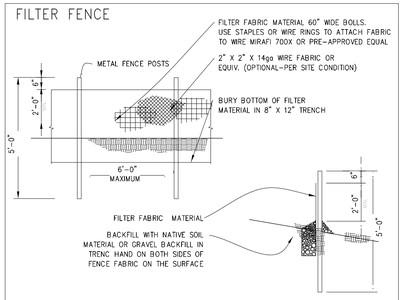
THIS PLAN IS REQUIRED FOR ALL PROJECTS WITH GREATER THAN 750 SQUARE FEET BUT LESS THAN 7,000 SF OF LAND DISTURBING ACTIVITIES.

A FIRST GROUND DISTURBANCE INSPECTION IS REQUIRED PRIOR TO START OF WORK ON ALL SITES WITH LAND DISTURBING ACTIVITY. SEE ESC INSPECTION PROCESS BELOW.

TEMPORARY AND PERMANENT BEST MANAGEMENT PRACTICES (BMPS) SHALL BE USED TO ACCOMPLISH THE FOLLOWING MINIMUM REQUIREMENTS. ADDITIONAL BMPS ARE REQUIRED WHEN MINIMUM CONTROLS ARE NOT SUFFICIENT TO PREVENT EROSION OR TRANSPORT OF SEDIMENT OR OTHER POLLUTANTS FROM THE SITE.

- MARK CLEARING LIMITS
- DELINEATE ENVIRONMENTALLY CRITICAL AREAS
- RETAIN TOP LAYER AND NATIVE VEGETATION
- ESTABLISH CONSTRUCTION ACCESS
- PROTECT DOWNSTREAM PROPERTIES AND RECEIVING WATERS
- PREVENT EROSION AND SEDIMENT TRANSPORT FROM THE SITE
- STABILIZE SOILS
- PROTECT SLOPES
- PROTECT STORM DRAINS
- STABILIZE CHANNEL AND OUTLETS
- CONTROL POLLUTANTS
- CONTROL DEWATERING
- MAINTAIN AND INSPECT BMPS
- EXECUTE CONSTRUCTION STORMWATER CONTROL PLAN
- MINIMIZE OPEN TRENCHES
- PHASE THE PROJECT
- INSTALL PERMANENT FLOW CONTROL AND WATER QUALITY FACILITIES

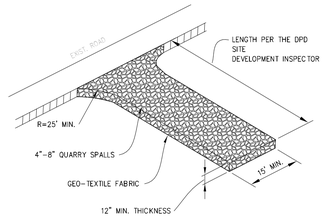
FILTER FENCE



NOTE: ANGLE SILT FENCE BACK UP THE SLOPE AT THE END OF RUN.

SYMBOL: FF

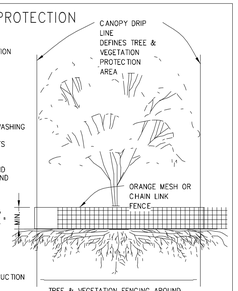
STABILIZED CONSTRUCTION ACCESS



STABILIZED ACCESS SHALL BE USED IN ALL AREAS OF THE SITE WITH VEHICLE TRAFFIC AND PARKING, INCLUDING PLANTING STRIPS.

SYMBOL: CE

TREE & VEGETATION PROTECTION



TREE PROTECTION FENCING

1. MUST BE INSTALLED PRIOR TO DEMOLITION OR GROUND DISTURBANCE
2. KEPT IN PLACE FOR THE DURATION OF CONSTRUCTION
3. NO SOIL DISTURBANCE OR ACTIVITY ALLOWED WITHIN FENCED AREA, SUCH AS MATERIAL STORAGE/STOCKPILING, PARKING, EXCAVATION, DUMPING, OR WASHING
4. MODIFICATIONS OF THESE REQUIREMENTS BY APPROVAL OF DPD PLANNER ONLY
5. IF ROOTS GREATER THAN 2 INCH FOUND OUTSIDE OF FENCING, PROTECT BY HAND EXCAVATION AND, IF NECESSARY, CUT CLEANLY AND KEEP MOIST
6. USE 3 INCHES OR DEEPER WOOD CHIP-MULCH OUTSIDE FENCED AREAS TO PROTECT FEEDER ROOTS

VEGETATION PROTECTION

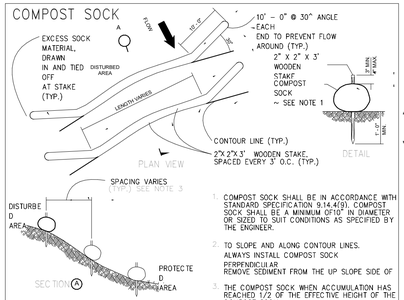
1. MINIMIZE CONSTRUCTION ZONE
2. PROTECT VEGETATION OUTSIDE CONSTRUCTION ZONE WITH FENCING AS SHOWN
3. USE 3 INCHES OR DEEPER WOOD CHIP MULCH OUTSIDE FENCED AREAS TO PROTECT FEEDER ROOTS

TREE & VEGETATION FENCING AROUND ENTIRE DRIP LINE ON PERMIT SITE. ALTERNATIVE TREE PROTECTION, IF APPROVED BY DPD, AS SHOWN ON SITE PLAN

SYMBOL: VEG

LINK TO MORE TREE PROTECTION INFORMATION:

COMPOST SOCK



1. COMPOST SOCK SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATION 9.14.4(9). COMPOST SOCK SHALL BE A MINIMUM OF10" IN DIAMETER OR SIZED TO SUIT CONDITIONS AS SPECIFIED BY THE ENGINEER.
2. TO SLOPE AND ALONG CONTOUR LINES. ALWAYS INSTALL COMPOST SOCK PERPENDICULAR. REMOVE SEDIMENT FROM THE UP SLOPE SIDE OF
3. THE COMPOST SOCK WHEN ACCUMULATION HAS REACHED 1/2 OF THE EFFECTIVE HEIGHT OF THE COMPOST SOCK. MAY BE USED IN PLACE OF FILTER FENCE FOR PERIMTER CONTROL.
4. PERIMTER CONTROL.

SYMBOL: CS

EROSION AND SEDIMENT CONTROL (ESC) INSPECTION NOTES:

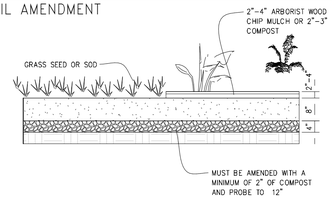
At least three ESC inspections are required. The ESC inspections will be performed by city staffs. The inspectors will verify if the proper installation and maintenance have been made.

- ESC INSPECTION 1: PRIOR TO CLEARING AND GRADING ACTIVITIES
  - THE APPLICANT CALL IN AND COORDINATES WITH AN ESC INSPECTOR. THE ESC INSPECTOR WILL OUTLINE THE EROSION AND SEDIMENT CONTROL MEASURES AND PROCESS
- ESC INSPECTION 2: DURING CONSTRUCTION
  - THE APPLICANT CONTACTS THE ESC INSPECTOR FOR A SITE INSPECTION AFTER INSTALLING SELECTED ESC BMPs. THE INSPECTOR CHECKS THAT ALL THE BMPs ARE INSTALLED PROPERLY. NO CLEARING AND GRADING ACTIVITIES SHALL TAKE PLACE PRIOR TO AN APPROVAL BY THE INSPECTOR. THE INSPECTOR MAY CONDUCT AND MONITOR THE SELECTED TOOLS DURING CONSTRUCTION.
- ESC INSPECTION 3: AFTER CONSTRUCTION
  - THE APPLICANT CONTACTS THE INSPECTOR FOR A SITE INSPECTION AFTER COMPLETING THE CONSTRUCTION PROJECT. THE INSPECTOR VERIFIES THAT ANY DISTURBED SOILS ON THE SITE ARE STABILIZED PRIOR TO OCCUPANCY

DEFINITIONS:

- TOTAL SITE AREA: SIZE OF THE LOT, EXPRESSED IN SQUARE FEET.
- IMPERVIOUS AREA (AI): THE TOTAL SQUARE FOOTAGE OF NEW AND/OR REPLACED IMPERVIOUS AREA. IMPERVIOUS AREAS ARE THOSE THAT WILL NOT BE VEGETATED SUCH AS BUILDING ROOF AREA, DRIVEWAYS, WALKWAYS, PATIOS, ETC. LABEL THESE AREAS AS (AI) ON THE PLAN SHEET AND NOTE THE TOTAL SQUARE FOOTAGE ON THE COMPOST CALCULATION WORKSHEET.
- NON-DISTURBED AREA (ND): VEGETATED AREAS THAT WILL NOT BE SUBJECT TO LAND DISTURBING ACTIVITY (SEE D) DO NOT REQUIRE SOIL AMENDMENT IF THEY ARE FENCED AND CONTINUOUSLY PROTECTED THROUGHOUT CONSTRUCTION. THE FENCING MUST BE IN PLACE AT THE FIRST GROUND DISTURBANCE INSPECTION. THIS WILL BE MONITORED BY THE DPD SITE INSPECTOR. NO DISTURBANCE, INCLUDING VEHICLE TRAFFIC OR MATERIAL STORAGE, IS ALLOWED IN THESE AREAS UNTIL FINAL INSPECTION. LABEL THESE AREAS AS (ND) ON THE PLAN SHEET AND NOTE THE TOTAL SQUARE FOOTAGE ON THE COMPOST CALCULATION WORKSHEET.
- OTHER (O): OTHER REPRESENTS EXISTING IMPERVIOUS SURFACE TO REMAIN, DRAINAGE FACILITIES, ENGINEERED STRUCTURAL FILL AREAS, RAIN GARDENS, ETC. LABEL THESE AREAS AS (O) ON THE PLAN SHEET AND NOTE THE TOTAL SQUARE FOOTAGE ON THE COMPOST CALCULATION WORKSHEET.
- DISTURBED AREA (D): AREA (TURF AND LANDSCAPE) THAT MUST BE AMENDED WITH A MINIMUM OF 2 INCHES OF COMPOST AND BE LOOSENED SO IT WILL PROBE TO A DEPTH OF 12 INCHES PRIOR TO SITE FINAL INSPECTION. THIS INCLUDES AREAS IMPACTED BY CLEARING AND GRADING, STOCKPILING, SITE ACCESS, PATHWAYS AND MATERIALS OR EQUIPMENT STORAGE. LABEL THESE AREAS AS (D) ON THE PLAN SHEET AND NOTE THE TOTAL SQUARE FOOTAGE ON THE COMPOST CALCULATION WORKSHEET.

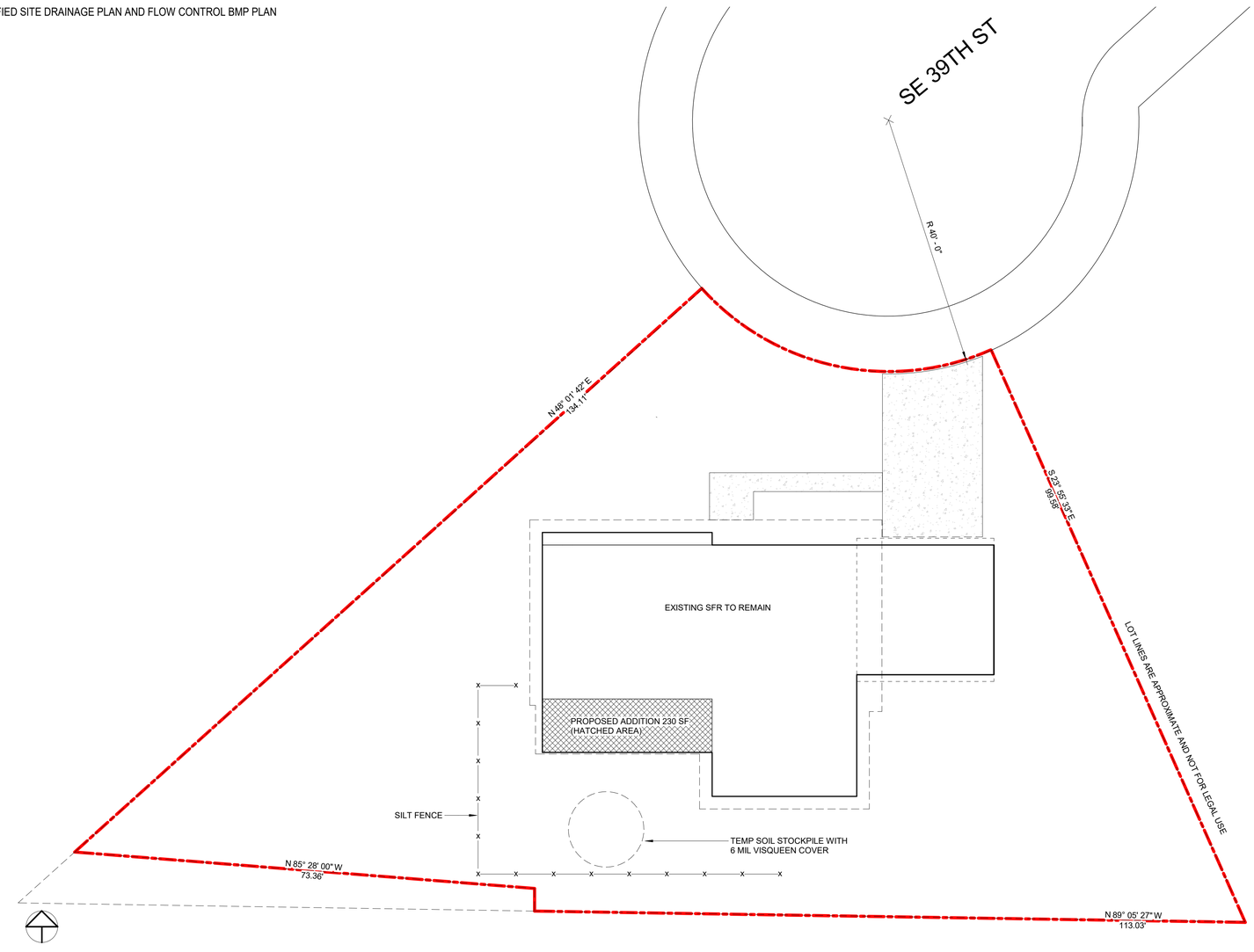
SOIL AMENDMENT



NOTES:

1. POST CONSTRUCTION SOIL AMENDMENT IS REQUIRED ON ALL AREAS NOT COVERED BY IMPERVIOUS SURFACE WHERE SOIL IS DISTURBED DURING CONSTRUCTION.
2. SOIL AMENDMENT CALCULATIONS SHALL BE SHOWN ON THE POST-CONSTRUCTION COMPOST CALCULATION WORKSHEET.
3. SOIL AMENDMENT MUST PASS A 12 INCH MINIMUM PROBE TEST.

SIMPLIFIED SITE DRAINAGE PLAN AND FLOW CONTROL BMP PLAN



1 SITE PLAN - DRAINAGE
SCALE: 1" = 10'-0"

NOTE: THIS PLAN IDENTIFIES THE MINIMUM MEASURES REQUIRED; ADDITIONAL MEASURES MAY BE REQUIRED BASED ON CONSTRUCTION METHODS AND ACTUAL AREA OF DISTURBANCE.

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HOLLENBECK RESIDENCE

SINGLE FAMILY RES. ADDITION & ALTERATION

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PARCEL #: 5456880-0525

DRAINAGE & TEMPORARY EROSION CONTROL PLAN

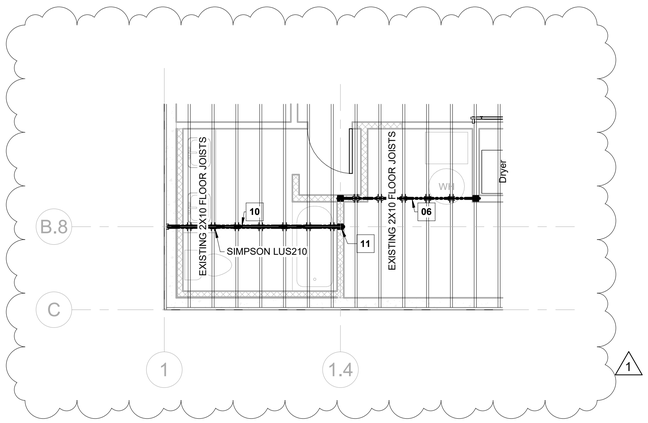
REVISIONS:

MAR 10, 2023	1

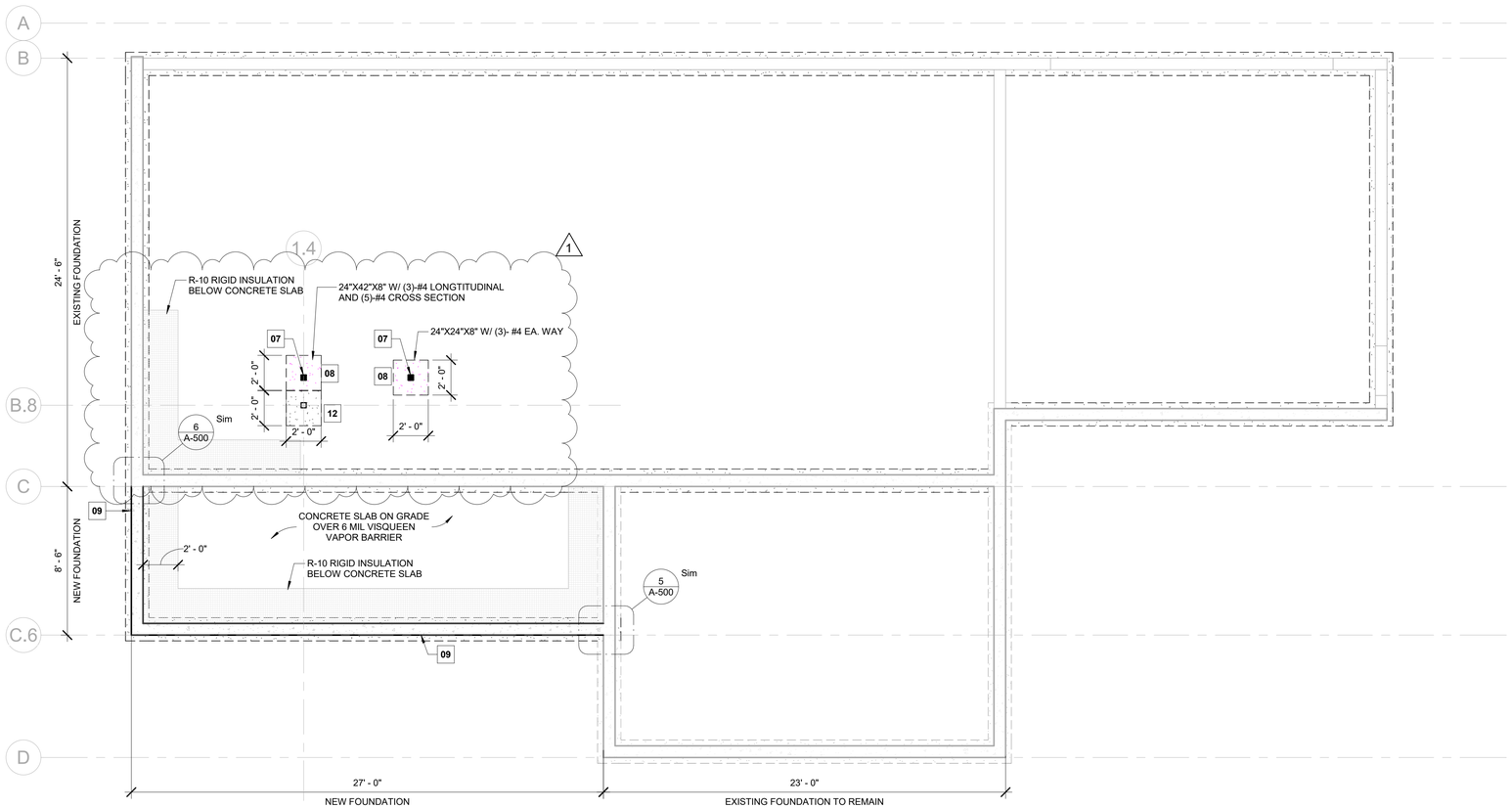
Project #:	2022-020
Date:	07/16/2022
Drawn by:	Dan Garvida
Checked by:	Hollenbeck

C-200

Scale: AS NOTED



2 1ST FLOOR, PARTIAL FLOOR FRAMING PLAN
SCALE: 1/4" = 1'-0"



1 FOUNDATION & 1ST FLOOR FRAMING PLAN
SCALE: 1/4" = 1'-0"

STRUCTURAL MEMBER KEY:

Key No. 01	**Rafters, HF No. 2, 2x10", @ 24" o.c.**
Key No. 02	**Overframing, HF No. 2, 2x6", @ 24" o.c.**
Key No. 03	**Header, DF No. 2, 4x8"**
Key No. 04	**Header, DF No. 2, 4x6"**
Key No. 05	**Ridge Beam, Glulam WS, 24F-1.8E, 3-1/2x12"**
Key No. 06	**Beam, DF No. 2, 4x12"**
Key No. 07	**Post, DF No. 2, 4x4"**
Key No. 08	**Spread Footing, fc = 2,500 psi, 24x24x8", WITH 3-#4 EA. WAY**
Key No. 09	**Continuous Footing, fc = 2,500 psi, 16x8"**
Key No. 10	Beam, DF No. 2, 6x10
Key No. 11	Post in Basement, DF No. 2, 4x4
Key No. 12	Spread Footing, fc=2,500 psi, 24"x24"x8" with 3-#4 ea. way

1

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PARCEL #: 545880-0525

FOUNDATION PLAN & BASEMENT FLOOR PLAN

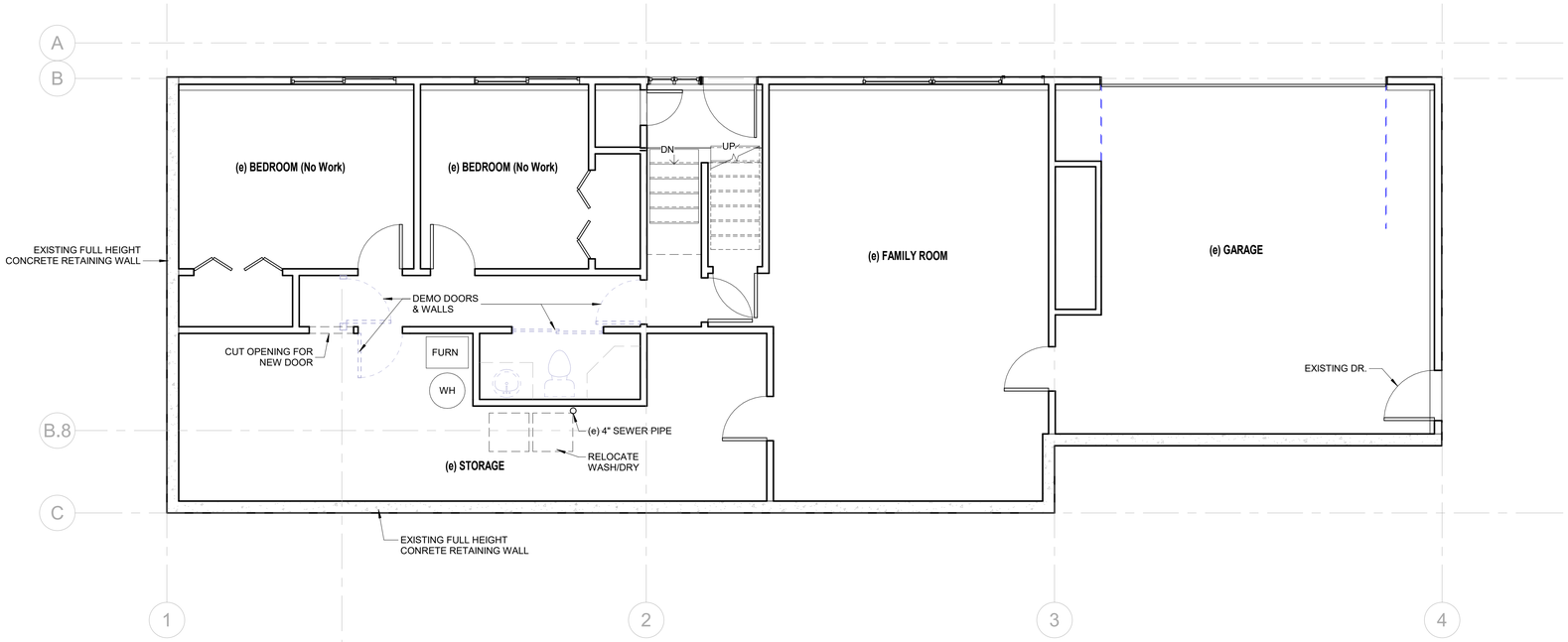
REVISIONS:

MAR 10, 2023	1

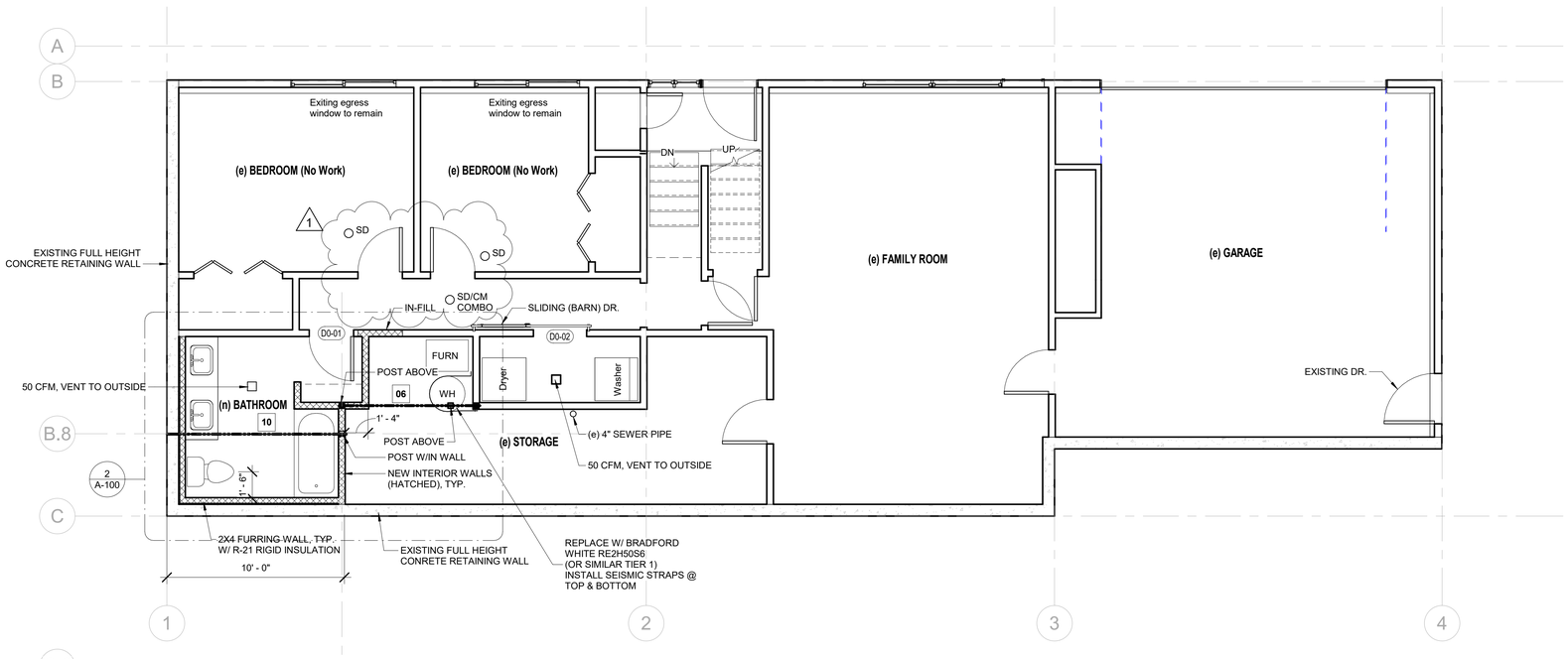
Project #:	2022-020
Date:	07/16/2022
Drawn by:	Dan Garvida
Checked by:	Hollenbeck

A-100

Scale: AS NOTED



1 BASEMENT FLOOR, EXISTING & DEMO PLAN
SCALE: 1/4" = 1'-0"



2 BASEMENT FLOOR, NEW
SCALE: 1/4" = 1'-0"

DOOR SCHEDULE - BASEMENT

Mark	Width	Height	Comments
D0-01	2' - 6"	6' - 8"	INTERIOR, WOOD FRAME AND DOOR, HOLLOW CORE
D0-02	3' - 0"	7' - 0"	INTERIOR, SLIDING BARN DOOR

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PARCEL #: 545880-0525

BASEMENT FLOOR PLAN, EXISTING, DEMO, & NEW

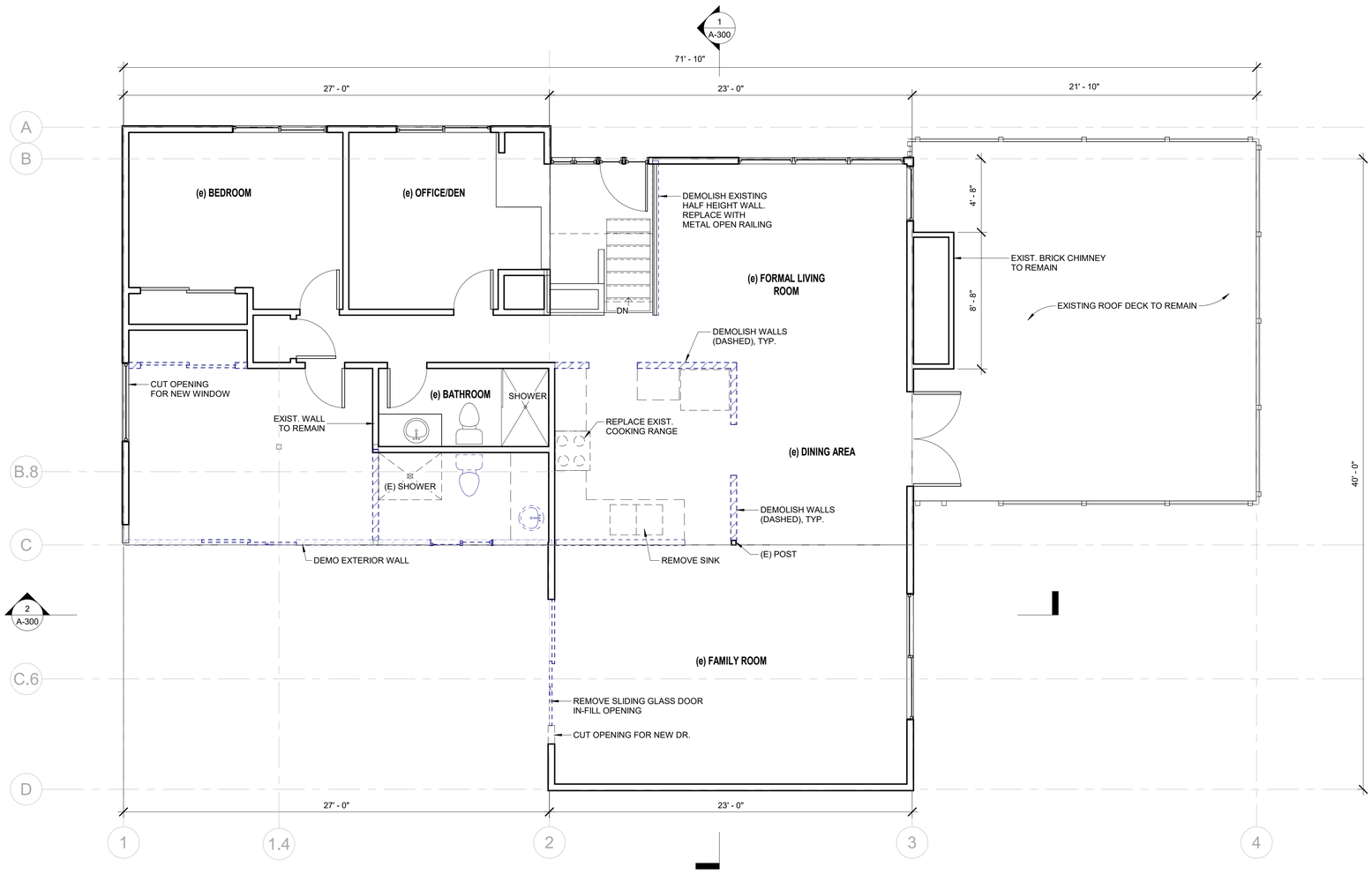
REVISIONS:

MAR 10, 2023	1

Project #:	2022-020
Date:	07/16/2022
Drawn by:	Dan Garvida
Checked by:	Hollenbeck

A-101

Scale: AS NOTED



1 1ST FLOOR, EXISTING & DEMO PLAN
SCALE: 1/4" = 1'-0"

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MERCER ISLAND, WA 98040
PARCEL #: 545880-0525

1ST FLOOR, EXISTING & DEMO PLANS

REVISIONS:

MAR 10, 2023	1

Project #:	2022-020
Date:	07/16/2022
Drawn by:	Dan Garvida
Checked by:	Hollenbeck

A-102

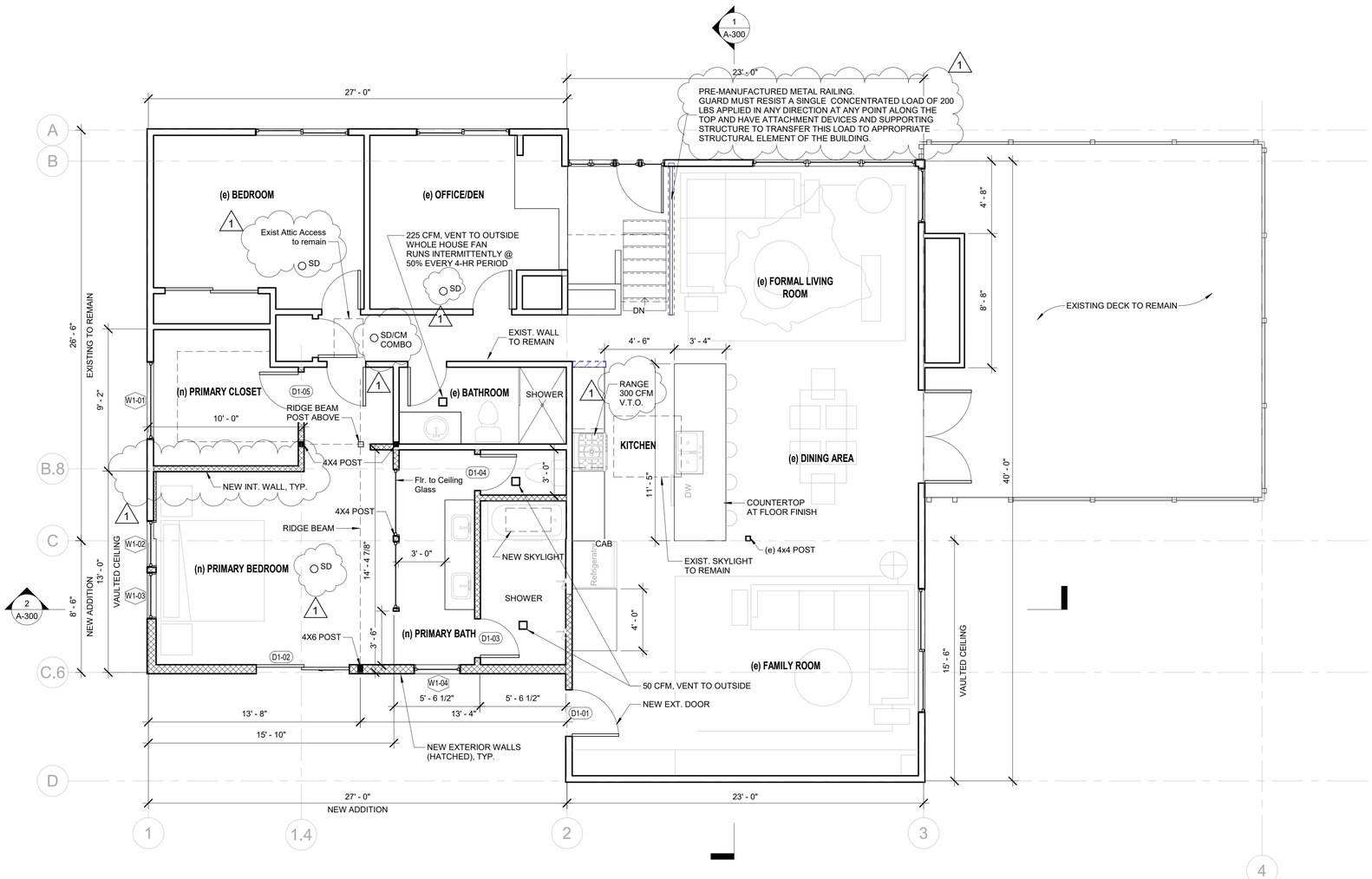
Scale: AS NOTED

DOOR SCHEDULE - 1ST FLOOR

Mark	Width	Height	Comments
D1-01	3' - 0"	6' - 8"	EXTERIOR, WOOD FRAME, STEEL DOOR, FOAM CORE
D1-02	6' - 0"	6' - 8"	EXTERIOR, VINYL FRAME, GLASS DOOR, SLIDING
D1-03	2' - 6"	6' - 8"	INTERIOR, WOOD FRAME AND DOOR, HOLLOW CORE
D1-04	2' - 4"	6' - 8"	INTERIOR, WOOD FRAME AND DOOR, HOLLOW CORE
D1-05	2' - 6"	6' - 8"	INTERIOR, WOOD FRAME AND DOOR, HOLLOW CORE

WINDOW SCHEDULE - 1ST FLOOR

Type Mark	Width	Height	Type Comments	Comments
W1-01	5' - 0"	1' - 6"	WINDOW-FIXED	NEW, VINYL FRAME, U=0.30
W1-02	3' - 0"	1' - 6"	WINDOW-FIXED	NEW, VINYL FRAME, U=0.30
W1-03	3' - 0"	1' - 6"	WINDOW-FIXED	NEW, VINYL FRAME, U=0.30
W1-04	3' - 0"	4' - 0"	DOUBLE-HUNG	NEW, VINYL FRAME, U=0.30



1 1ST FLOOR PLAN, NEW
SCALE: 1/4" = 1'-0"

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PARCEL #: 545880-0525

1ST FLOOR PLAN, PROPOSED

REVISIONS:

MAR 10, 2023	1

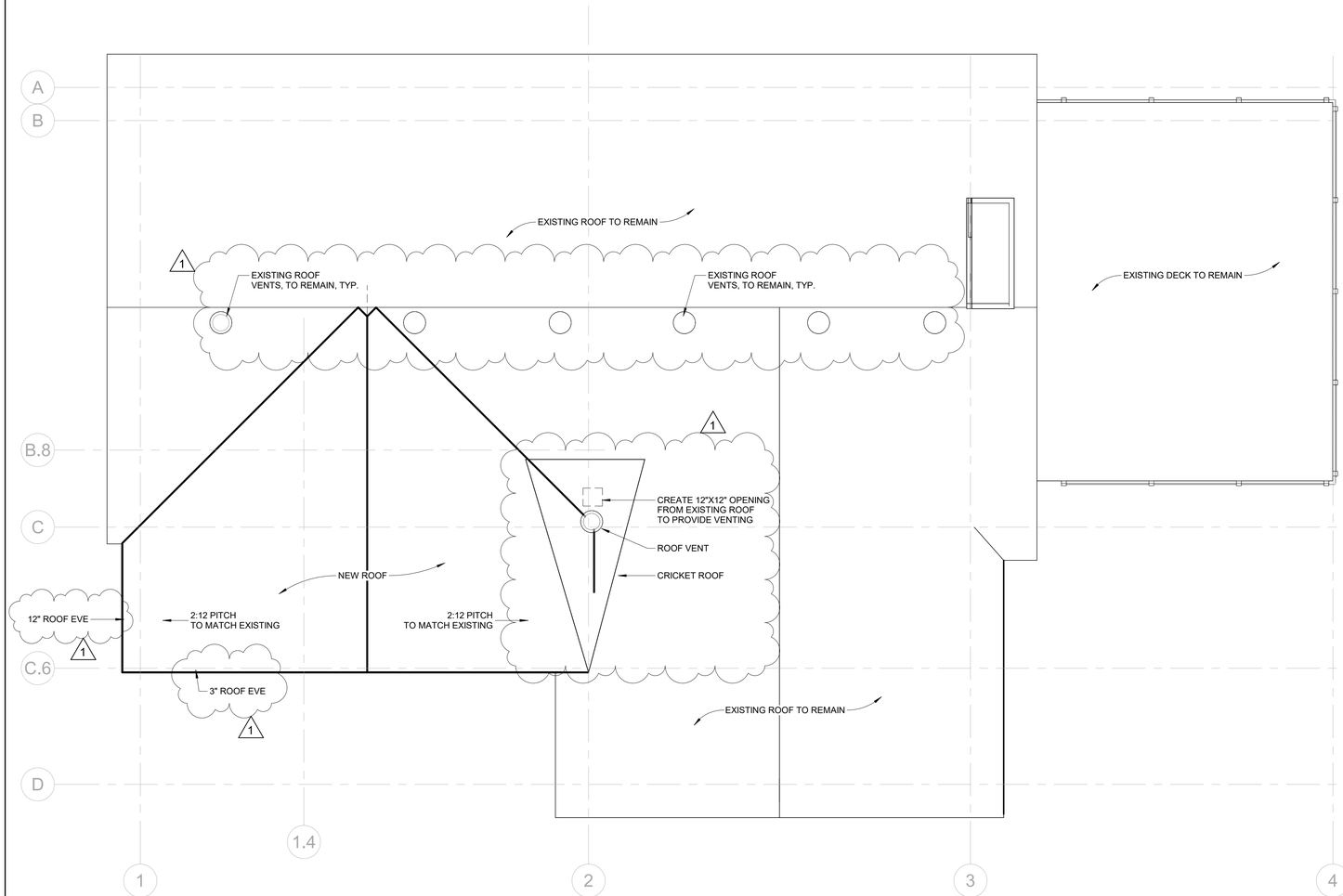
Project #:	2022-020
Date:	07/16/2022
Drawn by:	Dan Garvida
Checked by:	Hollenbeck

A-103

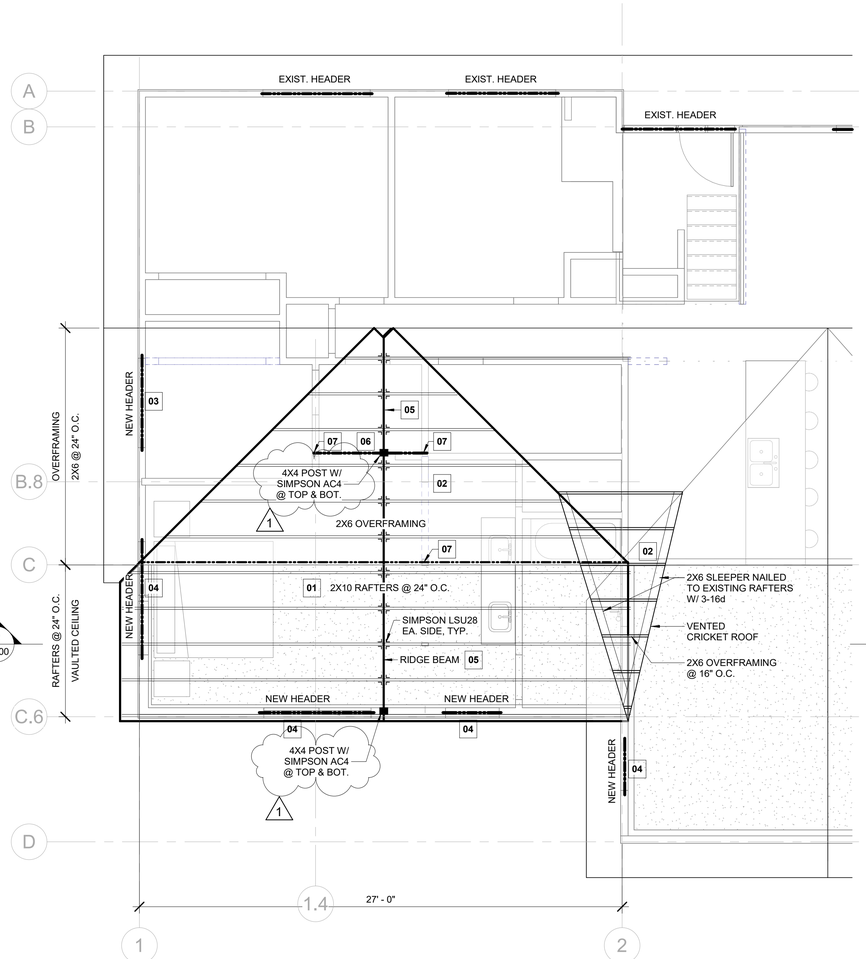
Scale: AS NOTED

STRUCTURAL MEMBER KEY:

Key No. 01	**Rafters, HF No. 2, 2x10", @ 24" o.c.**
Key No. 02	**Overframing, HF No. 2, 2x6", @ 24" o.c.**
Key No. 03	**Header, DF No. 2, 4x8"**
Key No. 04	**Header, DF No. 2, 4x6"**
Key No. 05	**Ridge Beam, Glulam WS, 24F-1.8E, 3-1/2x12"**
Key No. 06	**Beam, DF No. 2, 4x12"**
Key No. 07	**Post, DF No. 2, 4x4"**
Key No. 08	**Spread Footing, fc = 2,500 psi, 24x24x8"**
Key No. 09	**Continuous Footing, fc = 2,500 psi, 16x8"**



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



2 ROOF FRAMING PLAN
SCALE: 1/4" = 1'-0"

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PARCEL #: 545880-0525

ROOF PLAN & ROOF FRAMING PLANS

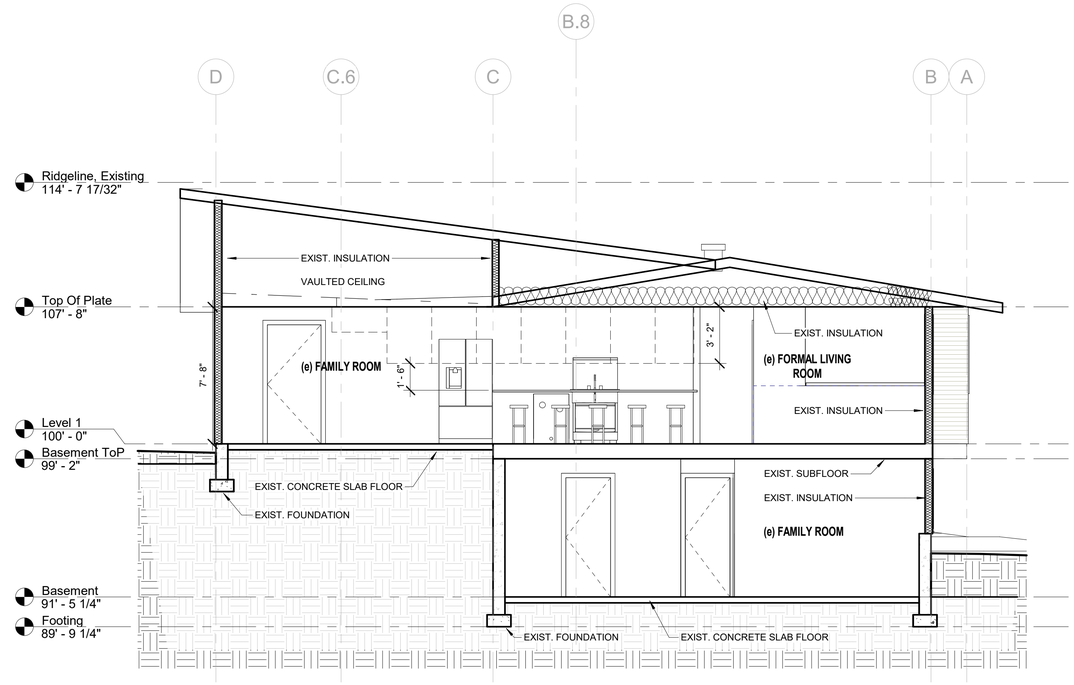
REVISIONS:

MAR 10, 2023	1

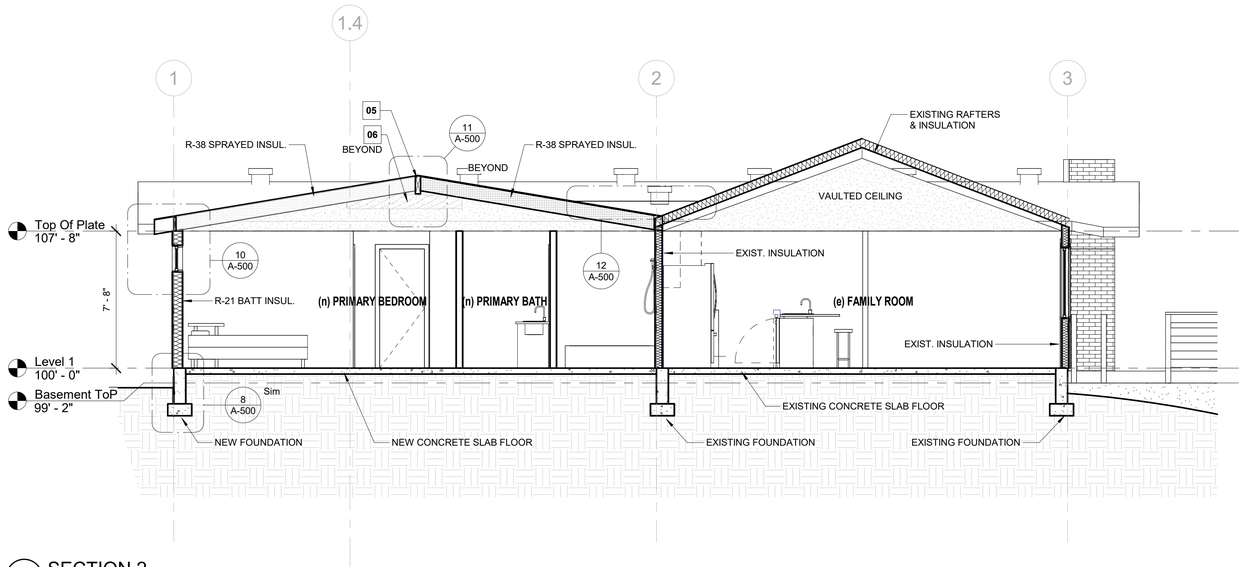
Project #:	2022-020
Date:	07/16/2022
Drawn by:	Dan Garvida
Checked by:	Hollenbeck

A-201

Scale: AS NOTED



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



2 SECTION 2
SCALE: 1/4" = 1'-0"

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PARCEL #: 545880-0525

SECTION VIEWS

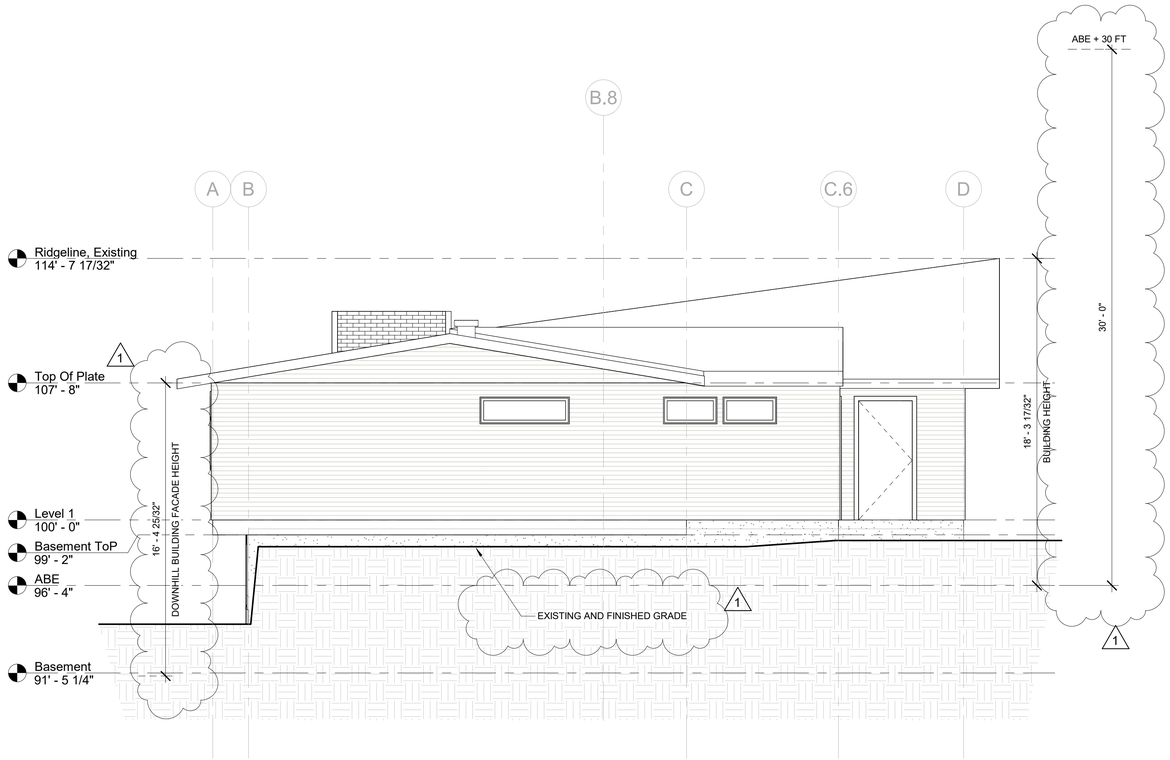
REVISIONS:

MAR 10, 2023	1

Project #:	2022-020
Date:	07/16/2022
Drawn by:	Dan Garvida
Checked by:	Hollenbeck

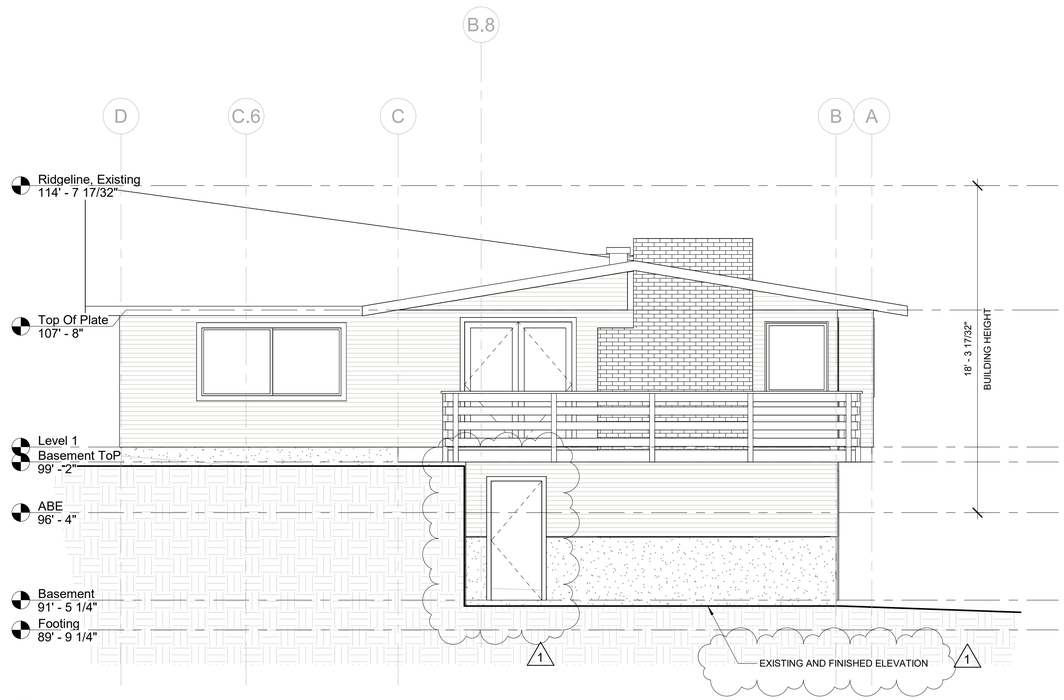
A-300

Scale: AS NOTED



1 WEST (RIGHT) ELEVATION

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



2 EAST (LEFT) ELEVATION

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

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HOLLENBECK RESIDENCE

SINGLE FAMILY RES. ADDITION & ALTERATION

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7701 SE 39TH ST.
MERCER ISLAND, WA 98040
PARCEL #: 545880-0525

EAST & WEST ELEVATIONS

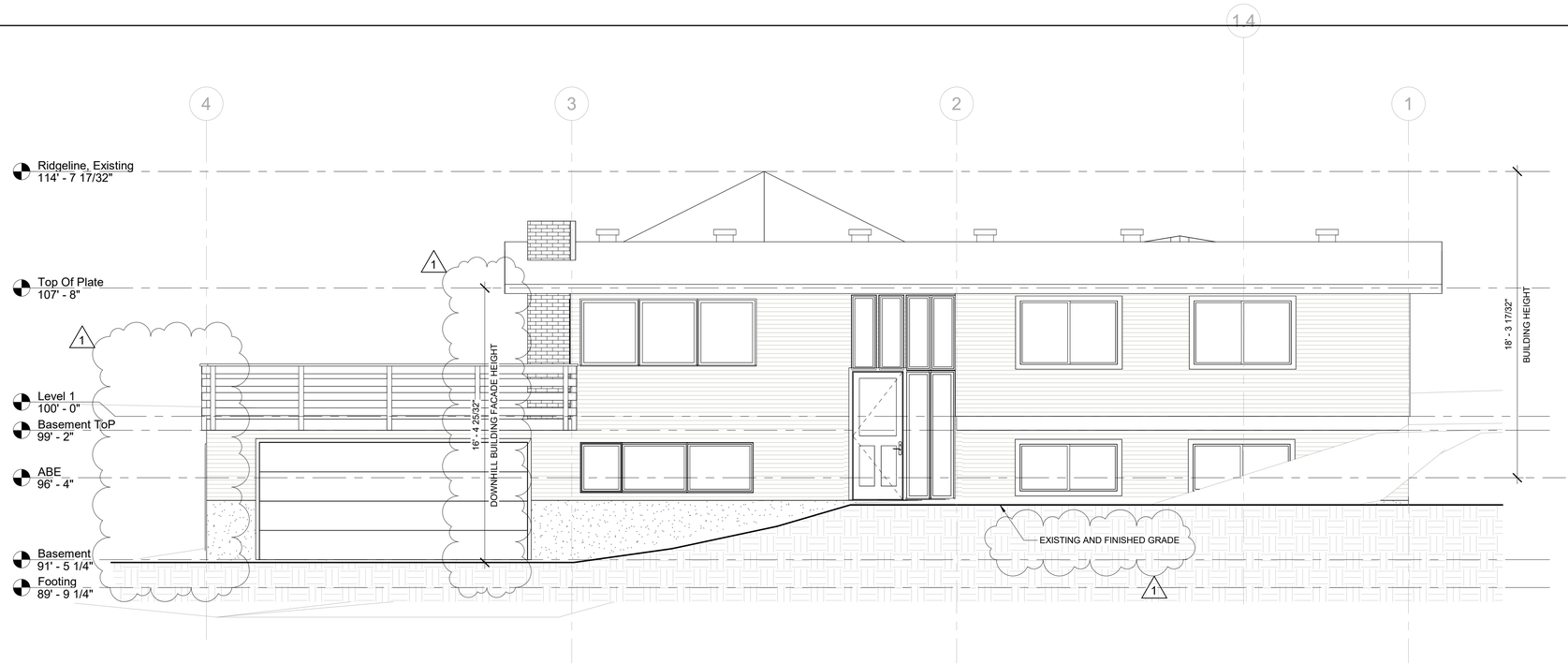
REVISIONS:

MAR 10, 2023	1

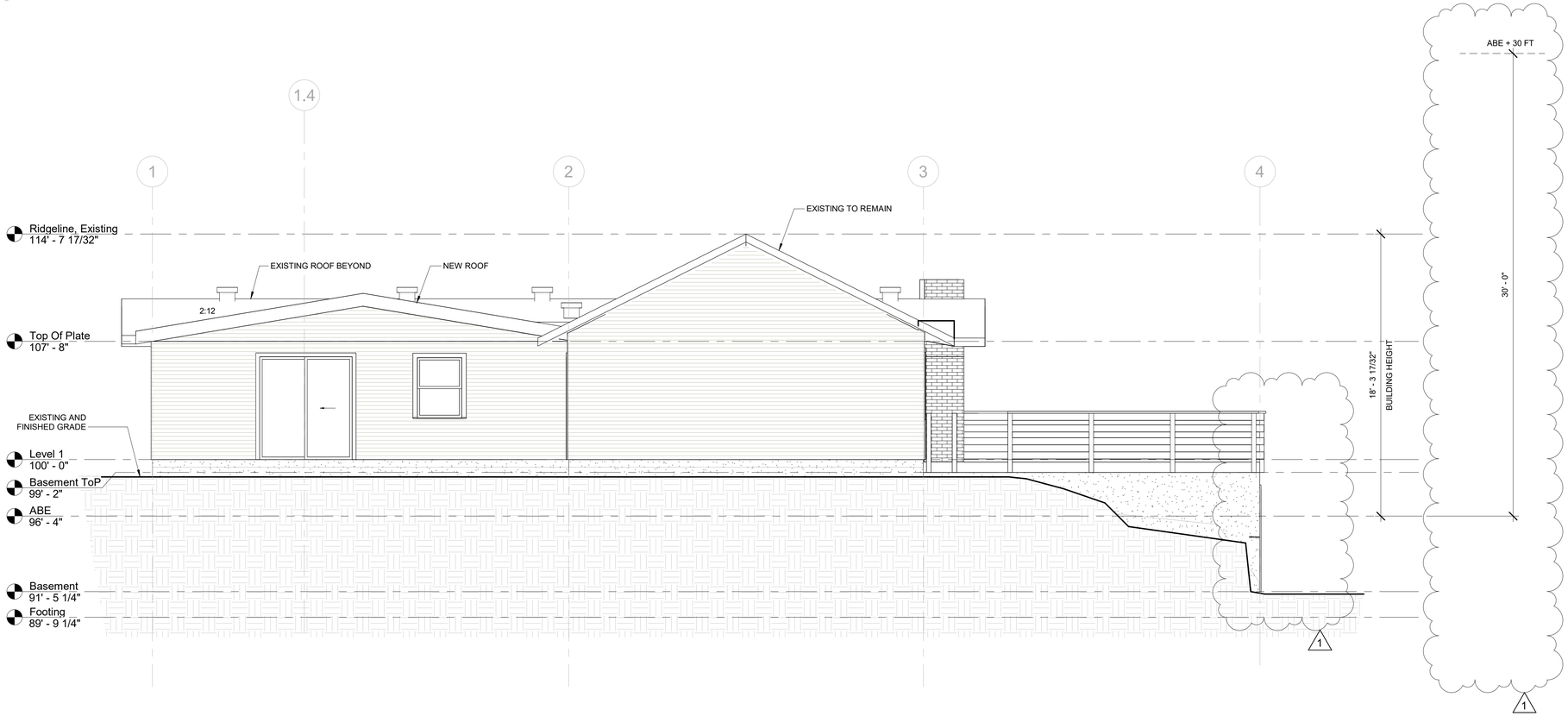
Project #:	2022-020
Date:	07/16/2022
Drawn by:	Dan Garvida
Checked by:	Hollenbeck

A-401

Scale: AS NOTED



2 NORTH (FRONT) ELEVATION
SCALE: 1/4" = 1'-0"



3 SOUTH (REAR) ELEVATION
SCALE: 1/4" = 1'-0"

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MERCER ISLAND, WA 98040
PARCEL #: 545880-0525

NORTH & SOUTH ELEVATIONS

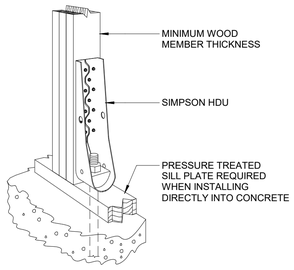
REVISIONS:

MAR 10, 2023	1

Project #:	2022-020
Date:	07/16/2022
Drawn by:	Dan Garvida
Checked by:	Hollenbeck

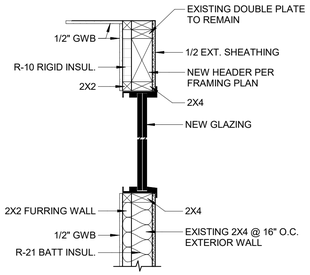
A-400
10

Scale: AS NOTED

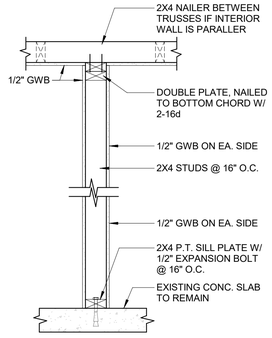


VERTICAL HDU INSTALLATION

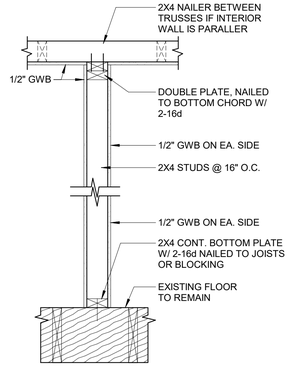
1 SIMPSON HDU2
SCALE: 3/4" = 1'-0"



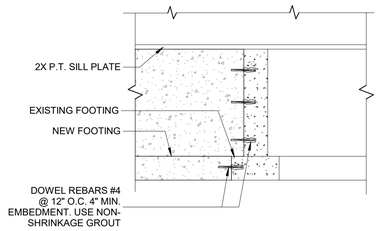
2 WINDOW OPENING DETAIL, TYP.
SCALE: 1" = 1'-0"



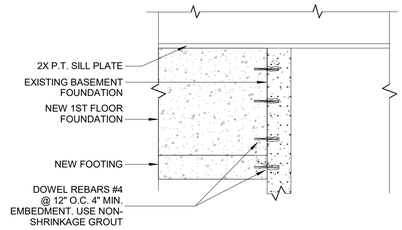
3 INTERIOR WALL DETAIL, TYP. - CONCRETE SLAB
SCALE: 1" = 1'-0"



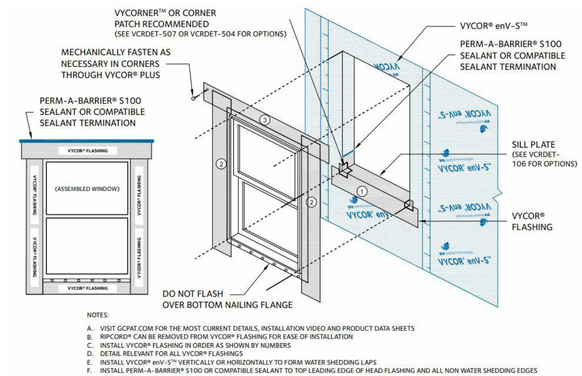
4 INTERIOR WALL DETAIL, TYP. - WOOD FLOOR
SCALE: 1" = 1'-0"



5 DOWEL CONNECTION DETAIL 1
SCALE: 1/2" = 1'-0"

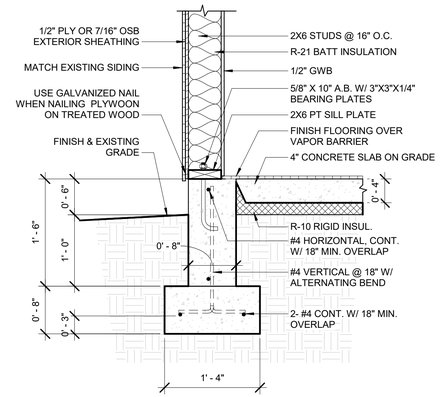


6 DOWEL CONNECTION DETAIL 2
SCALE: 1/2" = 1'-0"

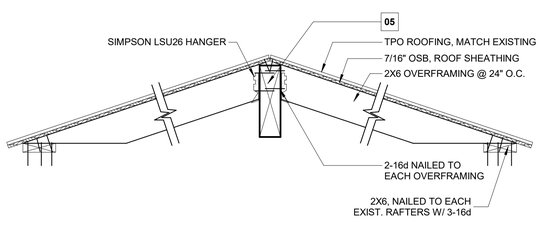


NOTES:
A. VISIT GCPAT.COM FOR THE MOST CURRENT DETAILS, INSTALLATION VIDEO AND PRODUCT DATA SHEETS
B. RIPCORD® CAN BE REMOVED FROM VYCOR® FLASHING FOR EASE OF INSTALLATION
C. INSTALL VYCOR® FLASHING IN ORDER AS SHOWN BY NUMBERS
D. DETAIL RELEVANT FOR ALL VYCOR® FLASHINGS
E. INSTALL VYCOR® enV-S™ VERTICALLY OR HORIZONTALLY TO FORM WATER SHEDDING LAPS
F. INSTALL PERM-A-BARRIER® 5100 OR COMPATIBLE SEALANT TO TOP LEADING EDGE OF HEAD FLASHING AND ALL NON WATER SHEDDING EDGES

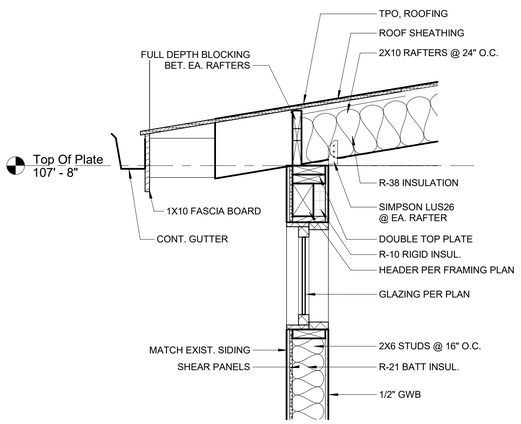
7 WINDOW FLASHING DETAIL
SCALE: 1 1/2" = 1'-0"



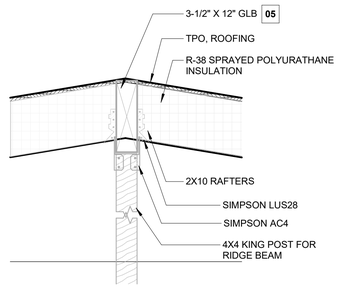
8 8" FOUNDATION, TYP.
SCALE: 1" = 1'-0"



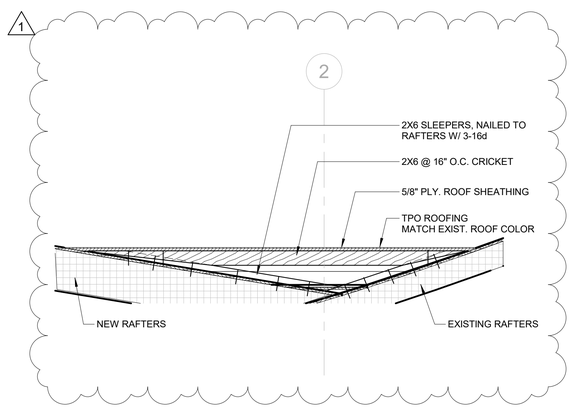
9 OVERFRAMING CONNECTION DETAILS
SCALE: 1" = 1'-0"



10 RAFTER TO EXT. WALL CONNECTION
SCALE: 1" = 1'-0"



11 RIDGE BEAM & RAFTER CONNECTION
SCALE: 1" = 1'-0"



12 CRICKET ROOF DETAILS
SCALE: 3/4" = 1'-0"

GARVIDA DESIGN GROUP, LLC
Dan Garvida
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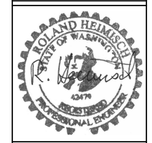

HOLLENBECK RESIDENCE
SINGLE FAMILY RES. ADDITION & ALTERATION

TYLER & SARAH HOLLENBECK
7701 SE 39TH ST.
MERCER ISLAND, WA 98040
PARCEL #: 545880-0525

TYPICAL WALLS & MICS. DETAILS

REVISIONS:

MAR 10, 2023	1

Project #:	2022-020
Date:	07/16/2022
Drawn by:	Dan Garvida
Checked by:	Hollenbeck

A-500

Scale: AS NOTED

GENERAL STRUCTURAL NOTES

1. ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, THE INTERNATIONAL BUILDING CODE (IBC, 2018 EDITION) AND MODIFICATIONS TO THE INTERNATIONAL BUILDING CODE BY THE LOCAL JURISDICTION.

2. DESIGN LOAD CRITERIA

DEAD LOADS

ROOF	15 PSF
FLOORS	20 PSF
DECKS	8 PSF
EXTERIOR WALLS	10 PSF
INTERIOR WALLS	8 PSF

LIVE LOADS

ROOF	20 PSF
FLOOR / LIVING SPACE	40 PSF
DECKS / BALCONIES	60 PSF

SNOWLOADS

GROUND LOAD	25 PSF
ROOF SNOW LOAD	25 PSF

WIND

ULTIMATE DEIGN WIND SPEED		110 MPH
WIND EXPOSURE		B
IMPORTANCE FACTOR	I_W =	1.0
ADJUSTMENT FACTOR	λ =	1.0
WIND SPEED UP FACTOR		1.0

SEISMIC

SEISMIC USE GROUP		II
IMPORTANCE FACTOR I_E		1.0
SITE CLASS		D
SEISMIC DESIGN CATEGORY		D
RESPONSE FACTOR	R =	6.5
MAPPED ACCELERATION	S_S =	1.5
(PER USGS)	S_1 =	0.61
BASE SHEAR	V =	10,800
SEISMIC RESPONSE COEFFICIENT	Cs =	0.18

SOIL PRESSURE:

ALL SOIL PRESSURE	1,500 PSF

3. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS FOR BIDDING AND CONSTRUCTION. CONTRACTOR SHALL VERIFY DIMENSIONS AND CONDITIONS FOR COMPATIBILITY AND SHALL NOTIFY ARCHITECT AND STRUCTURAL ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
4. CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS, MEMBER SIZES, AND CONDITIONS PRIOR TO COMMENCING WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS ARE INTENDED AS GUIDELINES ONLY AND MUST BE VERIFIED.
5. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE CONTRACTORS WORK. THE STRUCTURAL ENGINEER HAS NO OVERALL SUPERVISORY AUTHORITY OR ACTUAL AND/OR DIRECT RESPONSIBILITY FOR THE SPECIFIC WORKING CONDITIONS AT THE SITE AND/OR FOR ANY HAZARDS RESULTING FROM THE ACTIONS OF ANY TRADE CONTRACTOR. THE STRUCTURAL ENGINEER HAS NO DUTY TO INSPECT, SUPERVISE, NOTE, CORRECT, OR REPORT ANY HEALTH OR SAFETY DEFICIENCIES OF THE OWNER, CONTRACTORS, OR OTHER SITE ENTITIES OR PERSONS AT THE PROJECT SITE.
7. CONTRACTOR-INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS ONLY WILL NOT SATISFY THIS REQUIREMENT.
8. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND THE STRUCTURAL ENGINEER.
9. ALL STRUCTURAL SYSTEMS WHICH ARE TO BE COMPOSED OF COMPONENTS TO BE FIELD ERECTED SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE AND ERECTION IN ACCORDANCE WITH INSTRUCTIONS PREPARED BY THE SUPPLIER.

FOUNDATIONS

10. ALL FOOTINGS AND FOUNDATIONS SHALL BE SUPPORTED BY COMPETENT NATIVE SOIL 18" BELOW FINISHED GRADE FOR EXTERIOR SIDE AND 12" FOR INTERIOR FOOTINGS, FREE OF ORGANIC MATERIALS. OVEREXCAVATION MIGHT BE NEEDED TO REACH THE COMPETENT SOIL.
11. FOOTINGS AND FOUNDATION EXCAVATION SHALL BE FREE OF LOOSE SOILS, SLOUGHS, DEBRIS, AND FREE OF WATER AT ALL TIMES.
12. FOUNDATION WALL BACKFILL SHALL BE PLACED SIMULTANEOUSLY ON BOTH SIDES OF WALL PROVIDING 4" PERFORATED PIPE (AS REQUIRED) FOR SUBSURFACE DRAINAGE.
13. U.N.O. IN AN APPROVED GEOTECHNICAL REPORT, THE FOLLOWING METHOD FOR BACKFILL PLACEMENT AND COMPACTION IS TO BE USED:

    EXCEPT FOR BACKFILL AGAINST BELOW-GRADE WALLS OR RETAINING WALLS, ALL OTHER STRUCTURAL FILL AND STRUCTURAL BACKFILL MATERIALS SHALL BE PLACED IN RELATIVELY HORIZONTAL LOOSE LIFTS NOT EXCEEDING 10 INCHES IN THICKNESS AND COMPACTED TO AT LEAST 95 PERCENT OF THE MODIFIED PROCTOR (ASTM D1557) MAXIMUM DENSITY AT MOISTURE CONTENTS WITHIN TWO (2) PERCENT OF OPTIMUM. THE SPECIFIED COMPACTION DENSITY AND MOISTURE CONTENT OF EACH LIFT MUST BE VERIFIED BY INSPECTION, PRIOR TO PLACEMENT OF SUBSEQUENT LIFTS. BACKFILL AGIANST BELOW-GRADE WALLS AND RETAINING WALLS SHOULD BE COMPACTED AS DESCRIBDED ABOVE TO ONLY 90 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557.
14. FOOTING SIZE SHALL BE AS INDICATED ON DRAWINGS OR MIN. AS PER IBC SECTION 1806.
15. WHERE THE SURFACE IS SLOPED MORE THAN OE (1) FOOT IN TEN (10) FEET THE FOUNDATION SHALL BE LEVEL OR STEPPED SO THAT BOTH, TOP AND BOTTOM, OF SUCH FOUNDATION ARE LEVEL PER IBC.
16. WHERE STRUCTURAL COLUMNS AND POSTS ARE EXPOSED TO WATER SPLASH ABOVE, A CONCRETE SURFACE OR TO THE WEATHER, PROVIDE A MIN. OF 1" ABOVE CONCRETE SURFACE, OR 8" ABOVE THE EXPOSED EARTH PER IBC.

CONCRETE

17. CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH IBC SECTION 1905, 1906, AND ACI 301. STRENGTH AT AGE 28 DAYS AND MIX CRITERIA SHALL BE AS FOLLOWS, U.N.O.:

MEMBER TYPE (IN)	PSI	MAX AGGR RATIO	MAX W/C
SLABS ON GRADE	2,500	1	0.45
FOUNDATIONS	2,500	1	0.45
WALLS	2.500	1	0.50
COLUMNS, ELEVATED SLABS & BEAMS	4,500	¾	0.40

18. CONCRETE MIX FOR FOUNDATION AND SLAB:
    CEMENT: 5.5 SACK TYPE I NORMAL PORTLAND CEMENT
    1,210 LBS OF WET SAND
    1,925 LBS GRAVEL
19. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, FY = 60,000 PSI, UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM-185.
20. DETAILING OF REINFORCING STEEL (INCLUDING HOOKS AND BENDS) SHALL BE IN ACCORDANCE WITH ACI 318-14. LAP ALL REINFORCEMENTS IN ACCORDANCE WITH "THE REINFORCING SPLICE AND DEVELOPMENT LENGTH SCHEDULE".PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 8" AT SIDES AND ENDS.
21. NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY SO DETAILED AND APPROVED BY THE STRUCTURAL ENGINEER.
22. CONCRETE PROTECTION (COVER) FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

    FOOTINGS AND OTHER UNFORMED SURFACES
    CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3"

    FORMED SURFACES EXPOSED TO EARTH OR WEATHER

    (NO. 6 BARS OR LARGER) 2"
    (NO 5 BARS OR SMALLER) 1-1/2"
    COLUMN TIES OR SPIRALS AND BEAM STIRRUPS 1-1/2"

    SLABS AND WALLS: GREATER OF BAR DIAMETER + 1/8 OR 3/4"
23. CAST–IN-PLACE CONCRETE: SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND DIMENSIONS OF DOOR AND WINDOW OPENINGS IN ALL CONCRETE WALLS. SEE MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF MISCELLANEOUS MECHANICAL OPENINGS THROUGH CONCRETE WALLS .
24. NON-SHRINK GROUT SHALL BE FURNISHED BY AN APPROVED MANUFACTURER AND SHALL BE MIXED AND PLACED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED RECOMMENDATIONS. GROUT STRENGTH SHALL BE AT LEAST EQUAL TO THE MATERIAL ON WHICH IT IS PLACED (2,500 PSI MIN).

PROTECTION FOR REINFORCEMENT OF CAST IN-PLACE CONCRETE	MIN. COVER
Concrete cast against and permanently exposed to earth	3"
Concrete exposed to earth or weather	
Wall panels:	
No. 6 through No. 18 bars	2"
No. 5 bars, W31 or D31 wire, and smaller	1 ½"
Concrete exposed to neither earth or weather	
Slabs, walls, and joists:	
No. 14 and no. 18 bars	1 ½"
No. 11 and smaller bars	¾"
Beams and Columns:	
Primary reinforcement, ties, stirrups, and spirals	1 ½"
Shells and folded-plate members:	
No. 6 bars and larger	¾"
No. 5 bars, W31 or D31 or smaller	¾"

FLOOR SLABS

25. INTERIOR CONCRETE SLAB-ON-GRADE FLOORS SHOULD BE UNDERLAIN BY CAPILARY BREAK CONSISTING OF AT LEAST 4 INCHES PEA GRAVEL OR COMPACTED ¾- INCH CLEAN CRUSHED ROCK (LESS THAN 3 PERCENT FINES).

ANCHORAGE

26. EPOXY-GROUTED ITEMS (THREADED RODS OR REINFORCING BARS) SPECIFIED ON THE DRAWINGS SHALL BE INSTALLED WITH SIMPSON EPOXY "SET-XP" OR EQUAL. SPECIAL INSPECTION IS REQUIRED. RODS SHALL BE ASTM A-36 UNLESS NOTED OTHERWISE.
27. DRIVEN PINS AND OTHER POWDER ACTUATED FASTENERS SHALL BE LOW VELOCITY TYPE. INSTALL IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MINIMUM EMBEDMENT IN CONCRETE SHALL BE 1" UNLESS OTHERWISE NOTED. MAINTAIN AT LEAST 3" TO NEAREST CONCRETE.
28. PERIODIC SPECIAL INSPECTION FOR EPOXIED ANCHORS AND BOLTS IS REQUIRED.

STEEL

29. STRUCTURAL STEEL FABRICATION, ERECTION AND WELDING INSPECTION SHALL COMPLY WITH THE SPECIAL INSPECTION SCHEDULE.
30. STRUCTURAL STEEL SHALL BE GRADE A-36 UNLESS NOTED OTHERWISE.
31. ARCHITECTURALLY EXPOSED STEEL SHALL CONFORM TO SECTION 10 OF THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES.
32. THE FOLLOWING ADHESIVE-TYPE ANCHORING SYSTEMS SHALL BE USED FOR CONCRETE AND MASONRY, AS APPLICABLE AND IN ACCORDANCE WITH CORREPSONDING CURRENT ICC ESR REPORT.

    - SIMPSON "SET-XP" – ICC ESR 2508 FOR ANCHORING TO CONCRETE
33. ALL WELDING SHALL BE IN CONFORMANCE WITH AISC AND A.W.S STANDARDS AND SHALL BE PERFORMED BY W.A.B.O. CERTIFIED WELDERS USING E70 XX ELECTRODES. ONLY PREQUALIFIED WELDS(AS DEFINED BY A.W.S.) SHALL BE USED ALL COMPLETE JOINT PENETRATION GROOVE WELDS SHALL BE MADE WITH A FILLER MATERIAL THAT HAS A MINIMUM CVN TOUGHNESS OF 20 FT LBS AT -20 DEGREES F, AS DETERMINED BY AWS CLASSIFICATION OR MANUFACTURER CERTIFICATION
34. WELDING INSPECTION SHALL BE IN COMPLIANCE WITH AWS D1.1.

WOOD

35. ALL SOLID LUMBER TO BE GRADED BY WCLIB OR WWSA. ALL LUMBER SHALL BE HEM-FIR #2 (HF #2) OR BETTER. ALL SOLID LUMBER 5" X 4" OR LARGER SHALL BE DOUGLAS FIR #2 (DF #2) U.N.O. ALL GLUE-LAMINATED LUMBER SHALL BE GLULAM 24F-1.8E WS.

    DESIGN VALUES FOR GLULAM BEAMS

FLEXURAL STRESS TENSION ZONE	2,400 PSI
FLEXURAL STRESS COMPRESSION ZONE	1,850 PSI
COMPRESSION PERPENDICULAR TO GRAIN	650 PSI
SHEAR	266 PSI
APPARENT E	1.8x16 lb-in^2
TRUE E	1.9x10 lb-in^2

36. LUMBER IN CONTACT WITH CONCRETE AND ALL EXTERIOR WOOD SHALL BE PRESSURE TREATED, ALL CONNECTORS GALVANIZED.
37. INSTALL SOLID BLOCKING BTWN JOISTS AT ALL BEARING POINTS.

    THROUGH BOLTS AND LAG BOLTS SHALL BE ASTM A307. PROVIDE MALLEABLE IRON WASHER AT ALL BOLT AND LAG BOLT LOATIONS. PROVIDE CUT WASHER FOR ALL BOLTS PROTRUDING BEARING WOOD.
38. ALL METAL (CONNECTORS, NAILS, BOLTS, ETC.) IN CONTACT WITH P.T. WOOD SHALL BE HOT DIPPED GALVANIZED.
39. U.N.O. CONNECTORS AND FASTENERS SHALL COMPLY WITH IBC TABLE 2304.9.1

OPEN WEB TRUSSES

40. THE INSTALLATION OF OPEN WEB TRUSSES SHALL COMPLY WITH THE REQUIREMENTS OF IBC 2015 TABLE 1705.2.3.
41. OPEN WEB TRUSS SHOP DRAWINGS SHALL BE PREPARED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF WASHINGTON AND AFTER REVIEW AND APPROVAL BY ENGINEER OF RECORD SHALL BE SUBMITTED TO DCI FOR FINAL APPROVAL.

COMPARISON OF COMMON, BOX AND SINKER NAIL DIMENSIONS (inches) OF THE SAME PENNYWEIGHT.

TYPE	FEATURE	PENNYWEIGHT				
		6d	8d	10d	12d	16d
COMMON	Length	2	2-1/2	3	3-1/4	3-1/2
	Diameter	0.113	0.131	0.148	0.148	0.162
	Head	0.226	0.281	0.312	0.312	0.344
BOX	Length	2	2-1/2	3	3-1/4	3-1/2
	Diameter	0.099	0.113	0.128	0.128	0.135
	Head	0.266	0.297	0.312	0.312	0.344
SINKER	Length	1-7/8	2-3/8	2-7/8	3-1/8	3-1/4
	Diameter	0.092	0.113	0.120	0.135	0.148
	Head	0.231	0.266	0.281	0.312	0.344

Special Inspection Requirements per Chapter 17 IBC

Table 1705.3 Required Special Inspections and Tests of Concrete	Continuous Special Inspection	Periodic Special Inspection
1. Inspect reinforcement and verify placement		X
3. Inspect anchors cast in concrete		X
4. Inspect anchors post-installed in hardened concrete members		
a. Adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads	X	
b. Mechanical anchors and adhesive anchors not defined in 4.a		X
5. Verify use of required design mix		X
6. Prior to concrete placement, fabricate specimens for strength tests, perform slump and air content specimens, and determine the temperature of the concrete	X	
7. Inspect concrete placement for proper application techniques	X	
8. Verify maintenance of specified curing temperature and techniques		X
12. Inspect formwork for shape, location and dimensions of the concrete member being formed		X

Table 1705.6 Required Special Inspections and Tests of Soils	Continuous Special Inspection	Periodic Special Inspection
1. Verify materials below sahllow foundations are adequate to achieve the design bearing capacity		X
2. Verify excavations are extended to proper depth and have reached proper material		X
3. Perform classification and testing of compacted fill material		X
4. Verify use of proper materials, densities and lift thickness during placement and compaction of compacted fill	X	
5. Prior to placement of compacted fill, inspect subgrade and verify that site has been prepared properly		X

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ENGINEERING

CLIENT:	Tyler & Sarah Hollenbeck	SHEET
JOB SITE:	7701 SE 39th St., Mercer Island, WA 98040	S1
PROPERTY #		
DESCRIPTION:	Alteration & Addition	
DATE:	09/28/2022 SCALE: as noted	
ENGINEER:	Roland Heimisch, P. E.	

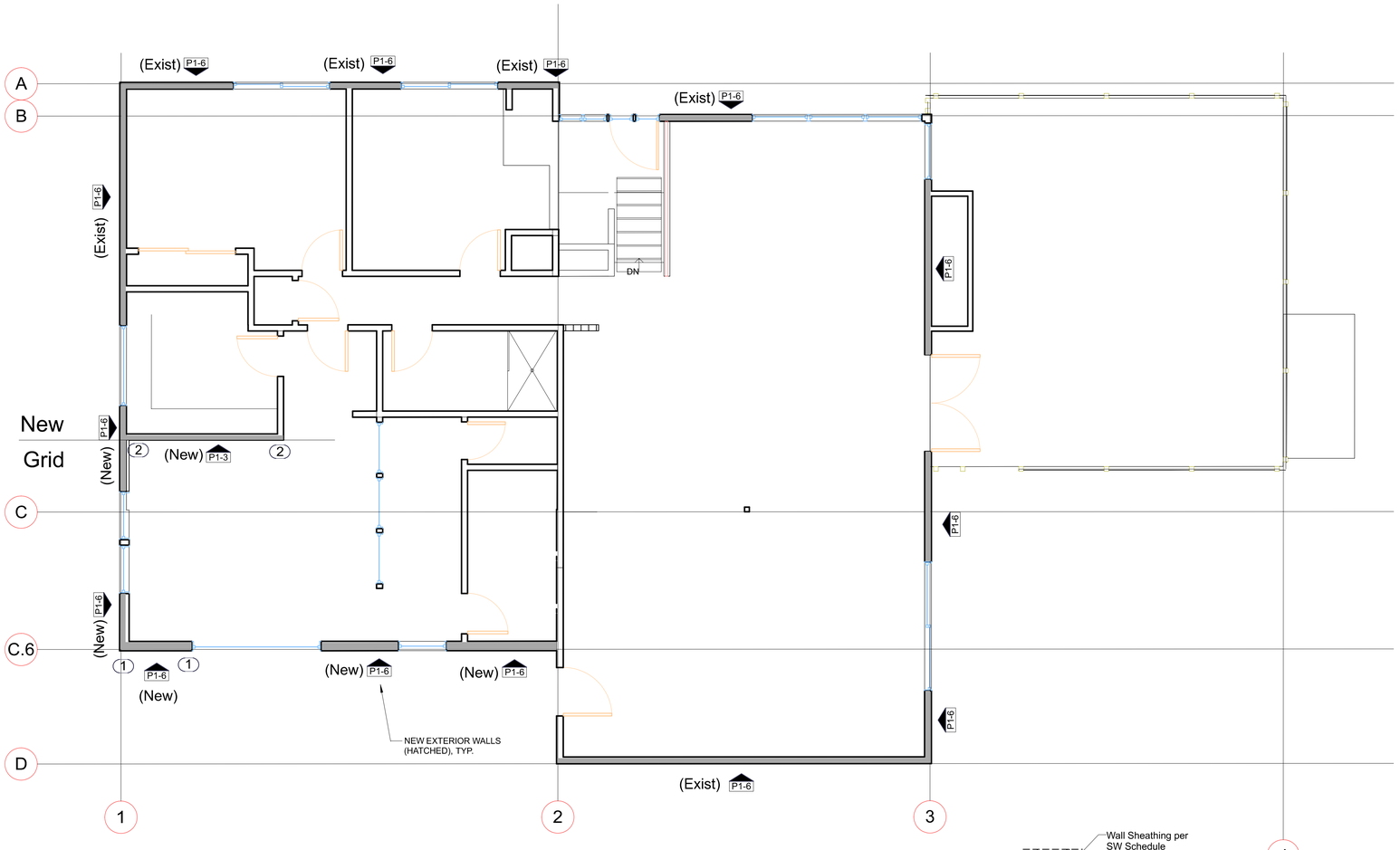
HOLDOWN SCHEDULE

SYMBOL	HOLDOWN	EMBED.	BOLT TYPE	MIN. WOOD MEMBER THICKNESS
1	HDU2	18"	SB5/8x24	(2) 2x
2	MST48	to Post below	NA	(2) 2x

SHEAR WALL SCHEDULE - NAILING PATTERN

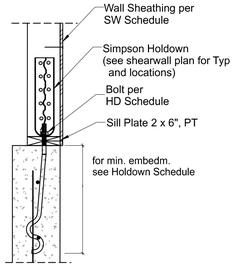
VERTICAL DIAPHRAGM

SHEARWALL TYPE	APA RATED SHEATHING THICKNESS & GRADE	SPAN INDEX	COMMON or GALVANIZED BOX NAILS	NAILING		WALL STUD GRADE &	BLKG REQ'D	BLOCK SIZE	ABUTTING PLYWOOD PANEL EDGE MEMBER SIZE	TOP PLATE NAILING SIZE & SPACING	SOLE PLATE NAILING SIZE &	FOUNDATION ANCHOR BOLTS SIZE & SPACING	ALLOWABLE LOAD SEISMIC / WIND (PLF)
				EDGE	FIELD								
P1-6	7/16" ONE FACE	24/0	8d	6" o.c.	12" o.c.	HEM-FIR @ 16" o.c.	yes	2x	2x	16d @ 5"	16d @ 5"	5/8" @ 48" o.c.	244 / 342 PLF
P1-3 [2]	7/16" ONE FACE	24/0	8d	3" o.c.	12" o.c.	HEM-FIR @ 16" o.c.	yes	3x	3x	(2) ROWS 16d @4"	(2) ROWS 16d @4"	5/8" @ 36" o.c.	425 / 590 PLF



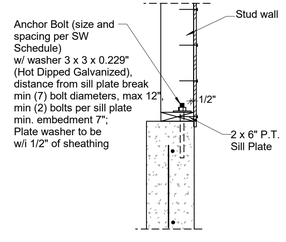
SHEAR WALL PLAN

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



HOLDOWN DETAIL (TYP.)

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



ANCHOR BOLT DETAIL (TYP.)

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

HORIZONTAL DIAPHRAGM

	THICKNESS & GRADE	SPAN INDEX	NAIL TYPE	NAILING		
				BDRY	EDGE	FIELD
FLOOR NAILING	3/4" CDX T&G APA RATED SHEATHING	48/24	10d	6" o.c.	6" o.c.	12" o.c.
ROOF NAILING	7/16" APA RATED SHEATHING	24/0	8d	6" o.c.	6" o.c.	12" o.c.

NOTE:
For all non-Shear Walls use nailing pattern, bolt and clip size/spacing for P1-6

SHEAR WALL NOTES

1. ALL SHEAR WALLS SHALL CONFORM TO IBC SECTION 23 REQMTS. APPLY NAILING TO ALL STUDS, TOP AND BOTTOM PLATES AND BLOCKINGS. SHEATHING SHALL BE INSTALLED VERTICALLY W/ 4x10 SHEETS FROM THE SILL PLATE AT THE FOUNDATION TO THE LOWER OF THE DOUBLED TOP PLATES AT THE MAIN LEVEL AND FROM THE UPPER OF THE DOUBLE TOP PLATES OF THE WALL TO THE TOP OF THE DOUBLED TOP PLATE AT THE UPPER LEVEL(S).
2. WHERE APA SHEATHING IS APPLIED ON BOTH FACES OF THE WALL AND NAILS SPACING IS LESS THAN 6" O.C. EITHER SIDE, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBER, OR FRAMING SHALL BE 3x NMOMINAL AND NAILS ON EACH SIDE SHALL BE STAGGERED, WHERE ALLOWABLE SHEAR VALUES EXCEED 350PLF (NAIL SPACING 4" OR LESS, OR SHEAR WALLS W/ PLYWOOD APPLIED ON EACH SIDE OF THE STUD WALL) FOUNDATION SILL PLATES AND FRAMING ABUTTING PANEL EDGES SHALL BE 3x NOMINAL OR (2) 2x W/ STAGGERED NAILING.
3. ABOVE LISTED ALLOWABLE SHEAR CAPACITIES ARE ADJUSTED FOR USE OF HEM-FIR STUDS, SPACED NO MORE THAN 16" O.C. AND SHEATHING APPLIED DIRECTLY TO FRAMING MEMBERS.
4. ALL FASTENERS SHALL BE DRIVEN FLUSH W/ SURFACE OF SHEATHING.
5. PROVIDE A SINGLE JOIST OR MIN. 2x SOLID BLOCKING BELOW AND AT THE TOP OF ALL SHEARWALLS.

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STATE OF WASHINGTON
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REGISTERED PROFESSIONAL ENGINEER

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ENGINEERING

BUILDER:	Tyler & Sarah Hollenbeck	SHEET
JOB SITE:	7701 SE 39th St, Mercer Island, WA 98040	S2
PROJECT #		
DESCRIPTION:	Alteration and Addition	
DATE:	03/08/2023 SCALE: as noted	
ENGINEER:	Roland Heimisch, P. E.	