ALEXANDER RESIDENCE - RENOVATION & ADDITION

PROJECT AND SITE DATA

OWNER:
DEBORAH ALEXANDER

ADDRESS:
6010 E MERCER WAY
MERCER ISLAND, WA 98040

PARCEL NUMBER:
192405-9206

LEGAL DESCRIPTION:
POR OF SE 1/4 BEG AT NXN OF LN 1300 FT N OF S LN OF SEC WITH ELY LN OF E MERCER WAY TH S 88-33-02 E 470 FT TH S 01-26-58 W 20 FT TO TPOB TH S 88-33-02 E TO ELY LN OF SEC TH SLY TO PT 1200 FT N OF S LN OF SEC TH N 88-33-02 W TO PT S 01-26-58 W FR TPOB TH N 01-26-58 E 80 FT TO TPOB TGW SH LDS ADJ

LOT SIZE:
18,318 SF (0.42 ACRES)

ZONING INFORMATION

ZONE TYPE:
BASE ZONE: R15

BUILDING CODE:
IRC 2018

VICINITY MAP

SHEET INDEX

GENERAL NOTES

1. CONFORM TO ALL APPLICABLE CODES AND REGULATIONS
2. VERIFY CONDITIONS BEFORE STARTING WORK AND REPORT ANY DISCREPANCIES TO THE ARCHITECT.
3. TAKE EVERY PRECAUTION TO SAFEGUARD PERSONS AND PROPERTY
4. STORE MATERIALS IN AREA APPROVED BY OWNER. REPAIR ALL DAMAGES CAUSED BY CONSTRUCTION IN THIS CONTRACT.
5. REMOVE DEBRIS FROM THE BUILDING SITE AS IT ACCUMULATES TO PREVENT UNSAFE CONDITIONS. PROTECT CONSTRUCTION FROM WEATHER AS WORK PROCEEDS.
6. ELECTRICAL PLUMBING AND MECHANICAL WORK UNDER SEPARATE PERMIT.
7. INSTALL AND APPLY MATERIALS PER MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
8. DIMENSIONS ARE GIVEN TO FACE OF STUD, FACE OF CONCRETE AND TO ROUGH OPENING, UNO.
9. VERIFY FIGURES SHOWN ON THE DRAWINGS BEFORE LAYING OUT THE WORK, REPORT ERRORS AND INACCURACIES IN WRITING TO THE ARCHITECT BEFORE COMMENCING WORK.
10. ALIGN WINDOW AND DOOR HEADERS, UNO.
11. WRITTEN NOTES SUPERSEDE GRAPHIC DESCRIPTIONS.
12. WRITTEN DIMENSIONS SUPERSEDE SCALED DRAWINGS.

CONTACTS

ARCHITECT
CO DAVIDSON ARCHITECTS
15037 SE 171ST ST
RENTON, WA 98058
P. 206.992.1853
E. CDAVIDSON@CODARCHITECTS.COM
CONTACT. CHRIS DAVIDSON, AIA

STRUCTURAL ENGINEER
CT ENGINEERING
180 NICKERSON ST, SUITE 302
SEATTLE, WA 98109
P. 206.285.4512
E. CROBERTS@CTENGINEERING.COM
CONTACT. CRAIG ROBERTS

GEOTECHNICAL ENGINEER
EARTH SOLUTIONS NORTHWEST
15365 NE 90TH STREET, SUITE 100
REDMOND, WA 98052
P. 425.449.4704
E. SCOTTR@ESNW.COM
CONTACT. SCOTT S. RIEGEL, LG, LEG

SITE SURVEY
ENCOMPASS
ENGINEERING & SURVEYING
165 NE JUNIPER ST, SUITE 201
ISSAQUAH, WA 98027
P. 425.392.0250
E. SMCCASKEY@ENCOMPASSES.NET
CONTACT. STEVE McCASKEY, PLS

DEFERRED PERMIT LIST

ELECTRICAL, MECHANICAL, PLUMBING, AND FIRE PERMIT* 1

GROSS FLOOR AREA CALCULATIONS

FLOOR	SPECIAL FLOOR AREA	GFA MODIFIER	EXISTING	PROPOSED	TOTAL
UPPER FLOOR			690	0	690
MAIN FLOOR			1890	254	2144
	LIVING/ DINING AREA	12'-16' CLG (150% MOD)	900	0	900
GROSS BASEMENT AREA			420	0	420
GARAGE			500	0	500
		TOTAL	4400	254	4654

ALLOWED GROSS FLOOR AREA

ZONE	SITE AREA	ALLOWABLE %	ALLOWED GFA	EXISTING GFA	PROPOSED GFA
R-15	18318	40%	7327	4400	4654

*Note see sheets A0a and A0b for breakdown of Existing vs Proposed Gross Square Footage 1

CO DAVIDSON ARCHITECTS
15037 SE 171st St Renton, WA 98058
206.992.1853 tel

ALEXANDER RESIDENCE
RENOVATION & ADDITION
6010 E Mercer Way, Mercer Island, WA 98040

OWNER:
Deborah Alexander

9072 REGISTERED ARCHITECT
CHRIS DAVIDSON
STATE OF WASHINGTON

PERMIT NUMBER

PROJECT NUMBER
2022-4

SUBMITTAL:	DATE:
PERMIT SUBMITTAL	9/27/22
PERMIT RESUBMITTAL	3/31/23

APPROVAL STAMP

TITLE SHEET & GENERAL INFORMATION

G1

SOILS AND SITE WORK PER 401.4 (site-specific geotechnical reports shall govern)

A. Excavation cuts are to be no steeper than 1:1, horizontal to vertical.

B. Fill to be free of debris, organic contaminants and rock fragments larger than 6 inches. Use free-draining sand or sand and gravel conditioned to appropriate moisture content for adequate compaction. Fill shall contain no more than 5% fines relative to the fraction passing the ¾" sieve. For house, slab or pavement areas, compaction of fill to be at least 95% of the maximum dry density (MDD) per ASTM D-1557 testing procedures. Utility trench backfill in settlement-sensitive areas to be compacted at least 90% of the MDD, except for the top 2 feet which should be compacted to 95% of the MDD.

C. Structural fill to be placed in loose layers of not more than 8" layers for heavy equipment, or 4" for lightweight compaction equipment. Fill should be conditioned to the proper moisture content for compaction. Compact each lift before placing subsequent layers.

D. For footings supported on structural fill, the zone of structural fill should extend laterally out from the looting edges a distance at least equal to the thickness of the structural fill. Structural fill placed beneath footing should be compacted to at least 95% of the MDD in accordance with ASTM D-1557.

E. All exterior and interior footings to be at least 18" and 12" respectively below the lowest finished adjacent grade.

F. Crawl space per R408.

FRAMING (Site-specific structural engineering shall govern)

A. All materials and workmanship shall conform to the requirements of the drawings, notes, specifications, and all applicable codes and ordinances.

B. All frame construction shall conform to minimum standards of IBC/IRC. Fastening requirements to be in accordance with IBC. See Structural Drawings Structural Notes, and specifications for any other notes that may relate specifically to grades and sizing of all framing member.

C. 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.

Per IBC: penetrations, soffits, drop & cove ceilings

- Wood/Earth separation per R317

D. Maintain all integrity of required 1 hour separations between different Occupancy Types. See Drawings and details for Required One and Two Hour Party Walls between units.
- Garage/Dwelling per R302.5 & 302.6

E. Where installation includes manufactured products, comply with the manufacturer's applicable instructions and recommendations for installation. Verify rough-in dimensions for equipment and provide buck-outs, backing and jacks as required.

F. All Guardrails per R312 to be 36" high minimum from finished floor line. Openings in railing assemblies are not to exceed 4" in one direction. Guardrails and handrails to withstand a 200 lb/sf concentrated load applied in any direction at any point along the top. Guardrail in-fill components (all those except the handrail), balusters and panel fillers shall be designed to withstand a horizontally applies normal load of 50 lbs on an area equal to 1 square foot. This load need not be assumed to act concurrently with any other live load requirement. Handrails to be between 1½" dia. and 2" dia. with clearance of 1½" between rail and wall surface. mount between 34" and 38" off stair nosing.

G. DECKING: All wood exposed to weather, such as wood used for deck framing including decking, railings, joists, beams, and posts shall be pressure treated or of wood with natural resistance to decay.

H. Unless noted otherwise, dimensions are to face of studs, face of foundation walls, centerline of columns, centerline of doors and windows. When exterior walls rare dimensioned as 6", they include ½" sheathing over 2x6 studs @ 16" oc.

DOORS AND WINDOWS

A. Doors as selected by Owner, but must meet code, egress, hardware, requirements as per below:

B. See floor plans for sizes. Rating and required u-values shall be per plan and as set forth on this sheet. See schedules attached or in drawings. All exterior doors, windows and skylights shall be NFRC certified and shall meet SEC 402.4 for leakage.

C. All Dwelling Units shall have dead-bolts that have thumb-turn to the inside.

D. Electric Garage Door to be installed by Company familiar with Safety Requirements.

E. All doors with required fire rating shall comply with provisions in this section, and shall be self closing and latching with no hold-opens. fire doors and dampers shall have an approved label or listing mark, identifying the fire-protection rating permanently affixed at the factory per IBC 715.3.3 All treated doors to have 3 hinges per leaf. When spring hinges are used for self-closing requirements, not less than half of the hinges are to be spring hinges.

F. All glazing within 24" of a door, or within 18" from a floor surface to be tempered, including any glass shower or tub doors. Additionally, glazing within 5 feet of the bottom or top of stairways where the sill is less than 60" AFF shall be safety glazed. IRC R308.3 & 308.4 specifies other hazardous locations also requiring safety glazing.

G. Egress windows from sleeping rooms and basements with habitable space w/o sleeping room to have a minimum net clear opening of 5.7 SF, minimum of 24" clear height, 20" minimum clear width, with maximum sill height of 44" above finished floor per IRC R310.

H. SKYLIGHTS per R308.6

DRYWALL FINISH ASSUME TYPE IV FINISH, TYP.

A. Provide ½" gypsum wall board for non-rated assemblies and ⅝" type "x" gypsum wall board for 1-hour rated assemblies with all exposed joints and fastener heads smooth and flush with surface of board. joints taped and prepared for application of finish. use water-resistant board at all wet areas to 4'-0" AFF.

B. "Recommended Specifications for the Application and Finishing of Gypsum Board," latest edition, as published by the Gypsum Association (also published as ANSI 97.1 and "Using Gypsum Board and Ceiling," latest edition).

C. When gypsum board is used as a base for tile or wall panels for tub, shower or water closet compartment walls, water resistant gypsum backing board shall be used per IRC section R702.4.2.

MECHANICAL

A. HVAC and Plumbing work shall be performed in a "Bidder-Design" manner. The Contractor shall submit such systems separately for permit.

B. It is the Contractor's responsibility to design systems that meet all requirements and codes. Contractor shall submit drawings, pay for, and obtain permit and perform work in a manner that meets or exceeds the recognized workmanship standards for the industry.

C. All drawings are to be submitted for review and approval to the Owner before performing work.

D. Heating is electric or gas either piping of hydronic heat or forced air via duct and furnace, to be determined. All furnaces shall be listed and labeled by an approved agency and installed per listed specifications.

E. IC Chapter 24 covers fuel gas applications

F. Appliances intended for installation in closets, alcoves or confined spaces shall be sl listed per code, IMC.

G. Appliances installed in garages or other areas where they may be subject to mechanical damage shall be suitable guarded against such damage by being installed behind protective barriers or by being elevated or located out of the normal path of vehicles.

H. Equipment located in a garage and capable of igniting flammable vapors shall be installed with the pilots and burners or heating elements and switches at least 18 inches above the floor level.

I. 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 and IMC.

J. Verify types, Manufacturer, and locations of all plumbing fixtures and faucets with Owner prior to purchasing and/or installing.

K. Vent outlet for gas appliances shall be 3' minimum away from operable windows, and 10' minimum away from fresh air intakes per WSEC and IRC chapter 24

WATER CONSERVATION NOTES

A. Bathroom lavatory faucets: max flow rate = 1 gal/min
B. Kitchen faucets: max flow rate = 1.75 gal/min
C. Showerheads: max flow rate = 1.75 gal/min

FIREPLACE NOTES (see IRC Chapter 10; Pre-fab metal per R1002, R1003, R1005)

A. Gas fireplace shall be approved by the building official as applicable for safe use or comply with applicable nationally recognized standards as evidenced by the listing and labeling by an approved agency such as the EPA.
B. Instruction manuals for installation, operation repair and maintenance shall be left and attached to the appliance by the installer.
C. Direct vent outlet for fireplace shall be 3' minimum away from operable windows, and 10' minimum away from fresh air intakes per per WSEC.

VENTILATION per SRC M1507

A. Continuously operating whole house fan is proposed.
B. Provide outdoor air inlet with 4 sq. in. min net free area for each habitable space.

INDOOR AIR QUALITY NOTES

A. Range exhaust & dryers: Domestic kitchen range ventilation and domestic clothes dryers shall be of metal and have smooth interior surfaces. Ducts shall be substantially airtight and shall comply with the provisions of Chapter 6 UMC. Exhaust ducts shall terminate outside the building and be equipped with back-draft dampers.
B. Moisture exhaust ducts for clothes dryers shall terminate on the outside of the building anc shall be equipped with a back-draft damper. Screens shall NOT be installed at the duct termination. Ducts for exhausting clothes dryers shall NOT be connected or installed with sheet metal screws or other fasteners which will obstruct the flow.
C. Unless otherwise permitted or required by the dryer manufacturer's installation instructions and approved by the building official, dryer exhaust ducts shall not exceed a total combined horizontal and vertical length of 14 feet including two 90-degree elbows. Two feet shall be deducted for each 90-degree elbow in excess of two.

SMOKE ALARM / DETECTORS PER IRC R314

A. Smoke alarms shall be installed in the following locations:
   1. Each sleeping room
   2. Outside each separate sleeping area in the immediate vicinity of the bedrooms
   3. On each additional habitable story of the dwelling, including basements
B. When more than one smoke alarm is required to be installed within an individual dwelling unit the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual unit. The alarm shall be clearly audible in all bedroom over background noise levels with all intervening doors closed. All smoke alarms shall be listed and installed in accordance with the provisions of IRC and the household fire warning equipment provisions of NFPA 72. Primary power to come from building wiring per IRC R314 from commercial source with battery back-up.
C. Provide an approved carbon monoxide alarm on each level of the dwelling per R315.

FIRE-RESISTIVE REQUIREMENTS

A. CONSTRUCTION PER R302
   - Interior & exterior bearing walls, & non-bearing walls to be type V_B construction as required
   - Floors & floor/ceilings to be type VB construction
   - Roofs & roofs/ceilings to be type VB construction

NOTE: All garage interior walls, ceilings, structural support systems exposed therein, and voids under stairs shall be 1-hour construction per plans and details.

B. TYPES OF CONSTRUCTION: Standards of Quality - Construction materials shall be labeled appropriately, as required by the local municipality, showing that they comply with local code standards for such materials as building paper, decking material, foam plastics, wall and roofing materials.
C. FIRE RESISTIVE MATERIALS & SYSTEMS: Fire resistance ratings of walls, floors, roof assemblies shall meet criteria set forth in IBC or based on submitted information showing equivalent fire resistive rating.
D. FIRE BLOCKING AND DRAFTSTOP per R302.11, R302.12, 502.12 and R602.8
E. PROTECTION OF STRUCTURAL MEMBERS: Thickness of protection over structural members shall be as per IBC. See wall types and sections in these drawings for specifics.
F. COLUMN JACKETING: Where fire resistive covering on columns is exposed to injury from moving vehicles or other means, contractor shall protect area from damage and deterioration.

ELECTRICAL

A. Electrical work shall be performed in a "Bidder-Design" manner. The contractor shall submit such systems separately for permit.
B. It is the Contractor's responsibility to design systems that meet all requirements and codes. contractor shall submit drawings, pay for, and obtain permit and perform work in a manner that meets or exceeds the recognized workmanship standards for the industry.
C. All drawings are to be submitted for review and approval to the Owner before performing work. Specific attention is to be paid regarding Owner-requested locations of electrical, phone and computer cabling port locations.
D. Proper protection shall be provided around recessed light fixtures per manufacturer's recommendations so that overheating will not occur. Recessed light fixtures to be IC rated.
E. At least 75% of permanent lighting fixtures to be high efficacy lamps - WSEC R404

STAIRS

A. IRC R311.7, min 36" wide, max riser = 7¾" , min tread = 10". Hand rails shall not project more than 4½" into the 36" clear pathway on either side.
B. LANDINGS: There shall be a floor of landing at the top and bottom of each stairway except a door swinging except a door swinging away from the stairs is ok for interior stairs. The width of each landing shall not be less then the width of the stairway served, min 36" in the direction of travel. Max 2% slope.
C. HANDRAILS: 34" to 38", min 1½" clear from wall, continuous from full-length of flight where risers are. Handrail ends shall be returned or terminate in newel posts or safety terminals. Newel posts can interrupt handrails at turns. The lowest tread may have a volute, turnout or newel. Handrails shall be of the two type listed in IRC 311.7 or provide equivalent graspability.

SECURITY per Seattle Residential Code Section R329

A. Provide building entrance locks and observation ports at approx. 60" AFF in accordance with this section.

SOUND TRANSMISSION CONTROL per Seattle Residential Code section R330

A. Assemblies separating dwelling units shall provide:
   - At walls: airborne sound insulation at STC 45 per, ASTM E 90.
   - At floor-ceiling airborne and impact sound insulation at an "Impact Insulation Class" (IIC) or min. 50 per ASTM E 492.

B. Fire-resistive integrity shall be maintained.

MINIMUM AREAS FOR HABITABLE ROOMS per R304:

- Common room: 120 SF; Cooking + Living or Living + Sleeping: 150 SF; Kitchens are exempt from minimum area and dimensions.
- IRC DEFINITION OF HABITABLE SPACE: A space in a building for living, sleeping, eating or cooking. Bathrooms, toilet rooms, closets, halls, storage or utility spaces and similar areas are not considered habitable spaces.

CEILING HEIGHT per IRC R305

A. Habitable spaces/rooms, hallways, corridors, bathroom, toilet rooms, laundry rooms and basements shall have a ceiling height not less than 7 feet measured from FINISH floor to FINISH ceiling. Beams at least 4 feet on center can project into space 6 inches.
B. SLOPED CEILINGS: Not more than 50% of the REQUIRED floor area of a room/space is permitted to have a sloped ceiling less than 7 feet or a portion less than 5 feet, (i.e. minimum REQUIRED bedroom is 70 SF per R304.3, so at least 35 SF of a bedroom needs to have ceiling heights over 7 feet and the other 35 SF over 5 feet.

All Climate Zones (Table R402.1.1)		
	R-Value [a]	**U-Factor [a]**
Fenestration U-Factor [b]	n/a	0.30
Skylight U-Factor [b]	n/a	0.50
Glazed Fenestration SHGC [b,e]	n/a	n/a
Ceiling [e]	49 [j]	0.026
Wood Frame Wall [g,h]	21 int	0.056
Floor	30	0.029
Below Grade Wall [c,h]	10/15/21 int + TB	0.042
Slab [d,f] R-Value & Depth	10, 2 ft	n/a

a. *R*-values are minimums. *U*-factors and SHGC are maximums. When insulation is installed in a cavity that is less than the label or design thickness of the insulation, the compressed *R*-value of the insulation from Appendix Table A101.4 shall not be less than the *R*-value specified in the table.

b. The fenestration *U*-factor column excludes skylights.

c. "10/15/21 +5TB" means R-10 continuous insulation on the exterior of the wall, or R-15 continuous insulation on the interior of the wall, or R-21 cavity insulation plus a thermal break between the slab and the basement wall at the interior of the basement wall. "10/15/21 +5TB" shall be permitted to be met with R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the wall. "5TB" means R-5 thermal break between floor slab and basement wall.

d. R-10 continuous insulation is required under heated slab on grade floors. See Section R402.2.9.1.

e. For single rafter- or joist-vaulted ceilings, the insulation may be reduced to R-38 if the full insulation depth extends over the top plate of the exterior wall.

f. R-7.5 continuous insulation installed over an existing slab is deemed to be equivalent to the required perimeter slab insulation when applied to existing slabs complying with Section R503.1.1. If foam plastic is used, it shall meet the requirements for thermal barriers protecting foam plastics.

g. For log structures developed in compliance with Standard ICC 400, log walls shall meet the requirements for *climate zone* 5 of ICC 400.

h. Int. (intermediate framing) denotes framing and insulation as described in Section A103.2.2 including standard framing 16 inches on center, 78% of the wall cavity insulated and headers insulated with a minimum of R-10 insulation.

1. **Small Dwelling Unit:** 3 credits
   Dwelling units less than 1,500 sf in conditioned floor area with less than 300 sf of fenestration area.
   Additions to existing building that are greater than 500 sf of heated floor area but less than 1,500 sf.
2. **Medium Dwelling Unit:** 6 credits
   All dwelling units that are not included in #1 or #3
3. **Large Dwelling Unit:** 7 credits
   Dwelling units exceeding 5,000 sf of conditioned floor area
4. **Additions less than 500 square feet:** 1.5 credits
   All other additions shall meet 1-3 above

Before selecting your credits on this Summary table, review the details in Table 406.3 (Single Family), on page 4.

Summary of Table R406.2				
Heating Options	**Fuel Normalization Descriptions**	**Credits - select ONE heating option**		**User Notes**
1	Combustion heating minimum NAECA[b]	0.0	○	
2	Heat pump[c]	1.0	◉	
3	Electric resistance heat only - furnace or zonal	-1.0	○	
4	DHP with zonal electric resistance per option 3.4	0.5	○	
5	All other heating systems	-1.0	○	
Energy Options	**Energy Credit Option Descriptions**	**Credits - select ONE energy option from each category [d]**		
1.1	Efficient Building Envelope	0.5	○	
1.2	Efficient Building Envelope	1.0	○	
1.3	Efficient Building Envelope	0.5	◉	Floor insulation to R-38
	Total Credits		1.5	CLEAR FORM

CO DAVIDSON
ARCHITECTS
15037 SE 171st St Renton, WA 98058
206.992.1853 tel

ALEXANDER RESIDENCE
RENOVATION & ADDITION
6010 E Mercer Way, Mercer Island, WA 98040

OWNER:
Deborah Alexander

9072 REGISTERED ARCHITECT
CHRIS DAVIDSON
STATE OF WASHINGTON

PERMIT NUMBER

PROJECT NUMBER
2022-4

SUBMITTAL:	DATE:
PERMIT SUBMITTAL	9/27/22
PERMIT RESUBMITTAL	3/31/23

APPROVAL STAMP

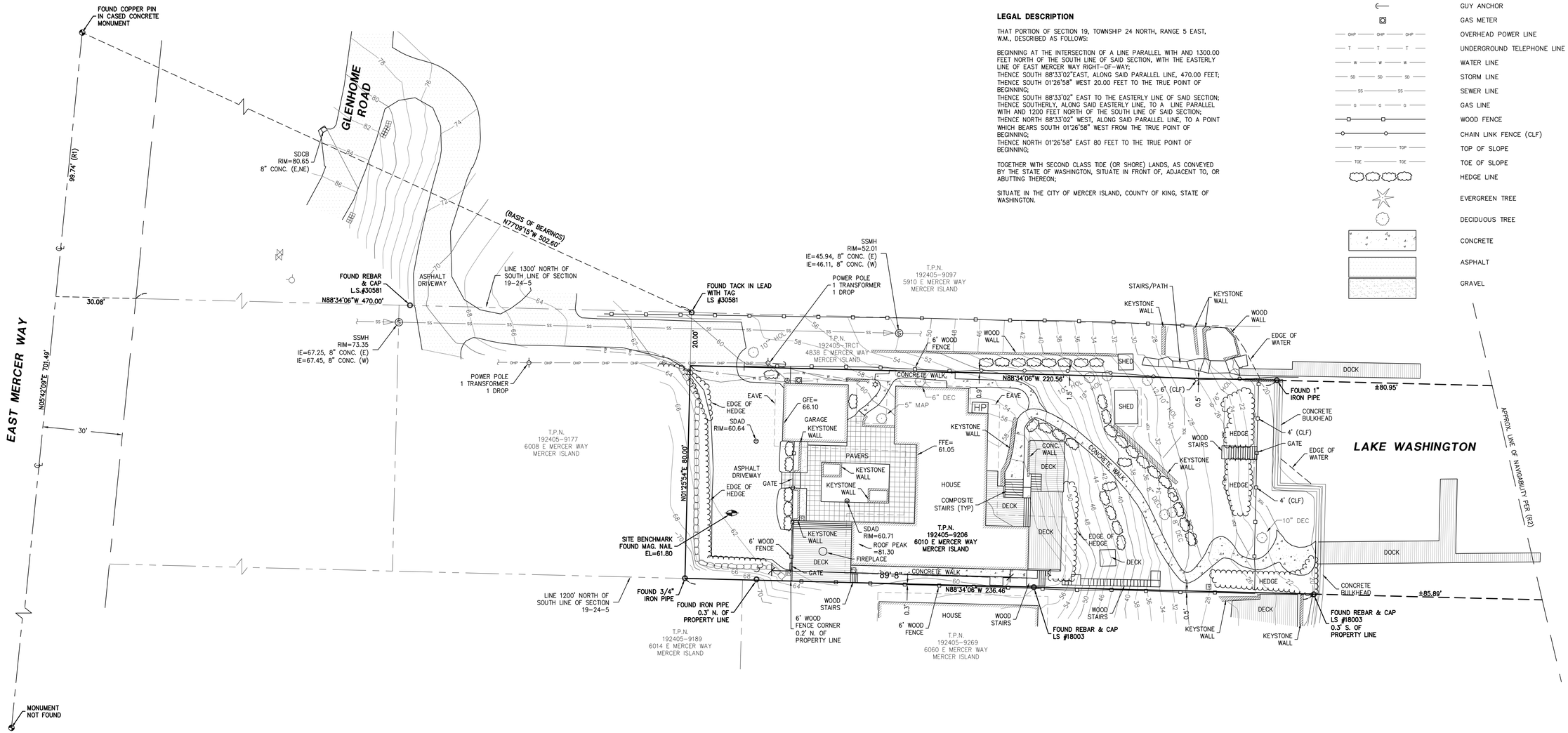
GENERAL PROJECT NOTES

G2

ALEXANDER TOPOGRAPHIC SURVEY

A PORTION OF THE SE 1/4 OF THE SE 1/4 OF SEC. 19, TWP 24 N., RNG. 5 E., W.M.
KING COUNTY, STATE OF WASHINGTON

NORTH
0 5 10 20
SCALE 1" = 20'



TAX PARCEL

192405-9206

VERTICAL DATUM

NAVD 88

BENCHMARK

FOUND MAG. NAIL ±16' NORTH AND 7.5' EAST OF SOUTHWEST CORNER ASPHALT DRIVEWAY (SEE MAP FOR LOCATION)
ELEVATION = 61.80 FEET ESTABLISHED BY WSRN GPS OBSERVATION.

HORIZONTAL DATUM

NAD 83(2011)

BASIS OF BEARINGS

N77°09'15"W BETWEEN THE NORTHEAST CORNER OF TAX PARCEL 192405-9177 AND MONUMENT IN CASE IN EAST MERCER WAY (SEE MAP FOR LOCATION).

INSTRUMENTATION

INSTRUMENT USED: 5 SECOND TOTAL STATION.

FIELD SURVEY WAS BY CLOSED TRAVERSE LOOPS, MINIMUM CLOSURE OF LOOPS WAS 1:22,000, IN ACCORDANCE WITH WAC 332-130-090.

LEGAL DESCRIPTION

THAT PORTION OF SECTION 19, TOWNSHIP 24 NORTH, RANGE 5 EAST, W.M., DESCRIBED AS FOLLOWS:

BEGINNING AT THE INTERSECTION OF A LINE PARALLEL WITH AND 1300.00 FEET NORTH OF THE SOUTH LINE OF SAID SECTION, WITH THE EASTERLY LINE OF EAST MERCER WAY RIGHT-OF-WAY;
THENCE SOUTH 88°33'02"EAST, ALONG SAID PARALLEL LINE, 470.00 FEET;
THENCE SOUTH 01°26'58" WEST 20.00 FEET TO THE TRUE POINT OF BEGINNING;
THENCE SOUTH 88°33'02" EAST TO THE EASTERLY LINE OF SAID SECTION;
THENCE SOUTHERLY, ALONG SAID EASTERLY LINE, TO A LINE PARALLEL WITH AND 1200 FEET NORTH OF THE SOUTH LINE OF SAID SECTION;
THENCE NORTH 88°33'02" WEST, ALONG SAID PARALLEL LINE, TO A POINT WHICH BEARS SOUTH 01°26'58" WEST FROM THE TRUE POINT OF BEGINNING;
THENCE NORTH 01°26'58" EAST 80 FEET TO THE TRUE POINT OF BEGINNING;

TOGETHER WITH SECOND CLASS TIDE (OR SHORE) LANDS, AS CONVEYED BY THE STATE OF WASHINGTON, SITUATE IN FRONT OF, ADJACENT TO, OR ABUTTING THEREON;

SITUATE IN THE CITY OF MERCER ISLAND, COUNTY OF KING, STATE OF WASHINGTON.

LEGEND

	FOUND MONUMENT IN CASE
	FOUND CORNER AS NOTED
	BENCHMARK
(R1)	REFERENCE RECORD OF SURVEY, REC. NO. 20111228900004
(R2)	REFERENCE RECORD OF SURVEY, REC. NO. 8601289004
	WATER VALVE
	FIRE HYDRANT
	WATER METER
	IRRIGATION CONTROL VALVE
S	SEWER MANHOLE
	CATCH BASIN
	AREA DRAIN
	MAILBOX
HP	HEAT PUMP
	POWER TRANSFORMER
	LIGHT POLE
T	TELEPHONE RISER
	ROCKERY
	ELECTRIC METER
	UTILITY POLE
	GUY ANCHOR
	GAS METER
OHP	OVERHEAD POWER LINE
T	UNDERGROUND TELEPHONE LINE
W	WATER LINE
SD	STORM LINE
SS	SEWER LINE
G	GAS LINE
	WOOD FENCE
	CHAIN LINK FENCE (CLF)
TOP	TOP OF SLOPE
TOE	TOE OF SLOPE
	HEDGE LINE
	EVERGREEN TREE
	DECIDUOUS TREE
	CONCRETE
	ASPHALT
	GRAVEL

REVISIONS			
DESCRIPTION	BY	DATE	

DAVID B. MATTHEWS — STATE OF WASHINGTON — 36804 — REGISTERED PROFESSIONAL LAND SURVEYOR — 9/14/22

TOPOGRAPHIC SURVEY FOR DEBORAH ALEXANDER

Encompass
ENGINEERING & SURVEYING
Western Washington Division
165 NE Juniper Street, Suite 201 • Issaquah, WA 98027 • Phone: (425) 392-0250
Eastern Washington Division
407 Swiftwater Blvd. • Cle Elum, WA 98922 • Phone: (509) 674-7433

JOB NO.	22654
DATE	9/14/22
SCALE	1"=20'
DESIGNED	N/A
DRAWN	LFM
CHECKED	DBM
APPROVED	DBM
SHEET	1 OF 1

BUILDING HEIGHT CALCUATIONS

WALL SEGMENTS	LENGTH (FT)	ELEVATION @ MIDPOINT OF FAÇADE (FT)	WEIGHTED SUM OF MID-POINT ELEVATIONS (SF)
A	21.5	60	1290
B	27.5	54	1486
C	9.2	54.5	503
D	7.4	56	416
E	42.3	59.2	2501
F	16.3	60.2	983
G	16.4	59	965
H	66.6	60.3	4017
I	16.4	60.5	989
J	23.5	61	1434
K	29.6	61	1803
L	8.6	61	523
Total Perimeter	285.2		16909
AVERGAGE BUILDING ELEVATION		(ABE= WSMPE/TOTAL WALL LENGTH	
ABE =	59		
MAX BLDG HEIGHT=	89		

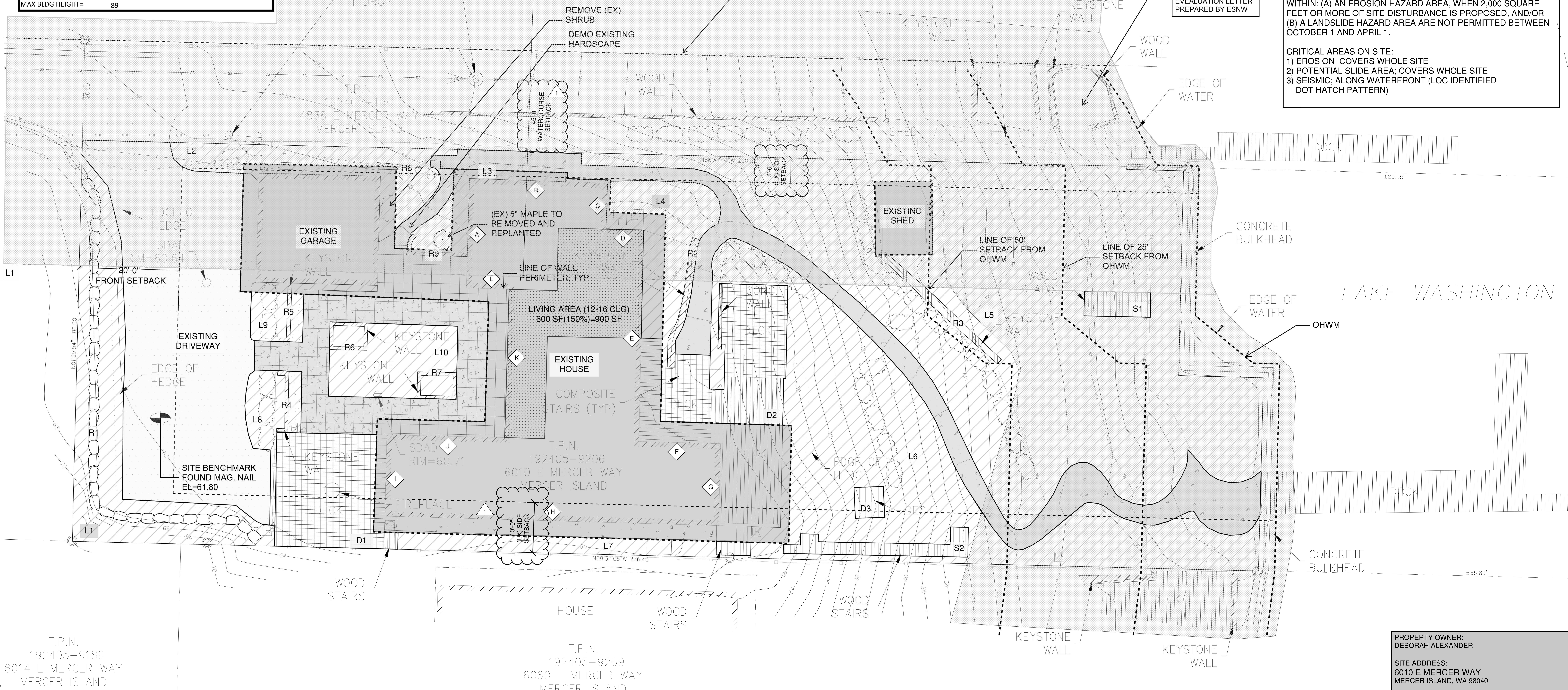
PLAN LEGEND

- BUILDING(S) PRIMARY AND ACCESSORY
- PROPOSED NEW LANDSCAPE AREA
- EXISTING LANDSCAPING AREA
- EXISTING HARDSCAPE AREA
- EXISTING DECK & STAIR AREA
- ELEV @ MIDPOINT OF FAÇADE
- EXISTING DRIVEWAY AREA
- WATERCOURSE SETBACK

GENERAL NOTE:

LAND CLEARING, GRADING, FILLING, AND FOUNDATON WORK WITHIN: (A) AN EROSION HAZARD AREA, WHEN 2,000 SQUARE FEET OR MORE OF SITE DISTURBANCE IS PROPOSED, AND/OR (B) A LANDSLIDE HAZARD AREA ARE NOT PERMITTED BETWEEN OCTOBER 1 AND APRIL 1.

CRITICAL AREAS ON SITE:
1) EROSION; COVERS WHOLE SITE
2) POTENTIAL SLIDE AREA; COVERS WHOLE SITE
3) SEISMIC; ALONG WATERFRONT (LOC IDENTIFIED DOT HATCH PATTERN)



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

NORTH

ZONING SUMMARY AND CALCULATIONS (EXISTING):

TOTAL LOT AREA	18318	
MAX LOT COVERAGE	35%	
REQUIRED LANDSCAPE AREA	65%	
MAX HARDSCAPE	9%	NET LOT AREA

ALLOWABLE MAX LOT COVERAGE	Existing Lot Coverage	Proposed Lot Coverage
6411	6640	6576
Required Landscape Area	Existing Landscape Area	Proposed Landscape Area
11907	8812	8848
ALLOWABLE MAX HARDSCAPE	Existing Hardscape	Proposed Hardscape
1072	3224	3160

NOTE:
RESIDENCE ORIGINALLY CONSTRUCTED IN 1969 AND RENOVATED IN 1998. PROJECT CONFORMS TO THE REQUIREMENTS OF NONCONFORMING STRUCTURES PER 19.01.050.D.1.b

Lot Coverage	
Existing Lot Coverage	
House	4646
Shed	166
Driveway	1828
TOTAL	6640

Landscape Area	
Existing	
L1	717
L2	388
L3	163
L4	398
L5	4252
L6	2068
L7	213
L8	141
L9	130
L10	342
Total	8812

Hardscape Area		
Existing		
Walkway		1065
Retaining Wall		
	R1	169
	R2	40
	R3	50
	R4	10
	R5	10
	R6	25
	R7	25
	R8	10
	R9	11
Stairs		
	S1	65
	S2	106
Deck		
	D1	466
	D2	515
	D3	36
Paved Courtyard		621
		3224

PROPERTY OWNER:
DEBORAH ALEXANDER

SITE ADDRESS:
6010 E MERCER WAY
MERCER ISLAND, WA 98040

PARCEL NUMBER:
192405-9206

SITE AREA:
18,318 SF (0.42 ACRES)

DATUM:
NAD 83 (2011)

ZONE: R-15

ZONING REQUIREMENTS:

SITE SLOPE:	21%
HIGH POINT - 70'	
LOW POINT - 20'	
HORIZONTAL DISTANCE - 236'	
SLOPE = 50'/236' = 21% SLOPE	
MAX. IMPERVIOUS SURFACE ALLOWED:	35%
MAX. BUILDING HEIGHT ALLOWED:	30'-0"
MIN. BUILDING SETBACK FROM FRONT:	20'-0"
MIN. BUILDING SETBACK FROM SIDE:	5'-0"
MIN. BUILDING SETBACK FROM REAR:	25'-0"

GROSS FLOOR AREA ALLOWED:
18,318 SF(.40%) = 7,327 SF >

CO
DAVIDSON
ARCHITECTS
15037 SE 171st St Renton, WA 98058
206.992.1853 tel

ALEXANDER RESIDENCE RENOVATION & ADDITION
6010 E Mercer Way, Mercer Island, WA 98040

OWNER:
Deborah Alexander

9072 REGISTERED ARCHITECT
CHRIS DAVIDSON
STATE OF WASHINGTON

PERMIT NUMBER

PROJECT NUMBER
2022-4

SUBMITTAL:	DATE:
PERMIT SUBMITTAL	9/27/22
PERMIT RESUBMITTAL	3/31/23

APPROVAL STAMP

EXISTING SITE PLAN

A0a

PLAN LEGEND

- BUILDING(S) PRIMARY AND ACCESSORY
- EXISTING LANDSCAPING AREA
- EXISTING DECK & STAIR AREA
- EXISTING DRIVEWAY AREA
- PROPOSED NEW LANDSCAPE AREA
- EXISTING HARDSCAPE AREA
- (A) WALL SEGMENT
- NEW LOT COVERAGE AREA
- WATERCOURSE SETBACK (1)

GENERAL NOTE:

LAND CLEARING, GRADING, FILLING, AND FOUNDATON WORK WITHIN: (A) AN EROSION HAZARD AREA, WHEN 2,000 SQUARE FEET OR MORE OF SITE DISTURBANCE IS PROPOSED, AND/OR (B) A LANDSLIDE HAZARD AREA ARE NOT PERMITTED BETWEEN OCTOBER 1 AND APRIL 1.

CRITICAL AREAS ON SITE:
1) EROSION; COVERS WHOLE SITE
2) POTENTIAL SLIDE AREA; COVERS WHOLE SITE
3) SEISMIC; ALONG WATERFRONT (LOC IDENTIFIED DOT HATCH PATTERN)

ZONING SUMMARY AND CALCULATIONS (PROPOSED):

TOTAL LOT AREA	18318
MAX LOT COVERAGE	35%
REQUIRED LANDSCAPE AREA	65%
MAX HARDSCAPE	9% NET LOT AREA

ALLOWABLE MAX LOT COVERAGE	Existing Lot Coverage	Proposed Lot Coverage
6411	6640	6576

Required Landscape Area	Existing Landscape Area	Proposed Landscape Area
11907	8812	8848

ALLOWABLE MAX HARDSCAPE	Existing Hardscape	Proposed Hardscape
1072	3224	3160

NOTE:
RESIDENCE ORIGINALLY CONSTRUCTED IN 1969 AND RENOVATED IN 1998. PROJECT CONFORMS TO THE REQUIREMENTS OF NONCONFORMING STRUCTURES PER 19.01.050.D.1.b

Lot Coverage	
Proposed Lot Coverage	
House	4830
Shed	166
Driveway	1580
TOTAL	6576
Landscape Area	
Proposed	
L1	717
L2	265
L3	58
L4	398
L5	4252
L6	2068
L7	213
L8	141
L9	130
L10	342
L11	264
Total	8848

Hardscape Area		
Proposed		
Walkway		1022
Retaining Wall		
	R1	169
	R2	40
	R3	50
	R4	10
	R5	10
	R6	25
	R7	25
Stairs		
	S1	65
	S2	106
Deck		
	D1	466
	D2	515
	D3	36
Paved Courtyard		621
		3160

STRUCTURAL ALTERATION CALCULATION (PROPOSED):

ALLOWABLE STRUCTURAL ALTERATION NON-CONFORMING USE		
WALL SEGMENTS		
A	21.5	
B	27.525	
C	9.225	
D	7.425	
E	42.25	
F	16.325	
G	16.35	
H	66.625	
I	16.35	
J	23.5	
K	29.55	
L	8.575	
Total Perimeter	285.2 lf	
Max Modified Wall	0.4 %	
Allowed % of Modified Wall	114.1 lf	
Actual Amount of Modified Wall	21.5 lf	<114.1 lf OK

PROPERTY OWNER:
DEBORAH ALEXANDER

SITE ADDRESS:
6010 E MERCER WAY
MERCER ISLAND, WA 98040

PARCEL NUMBER:
192405-9206

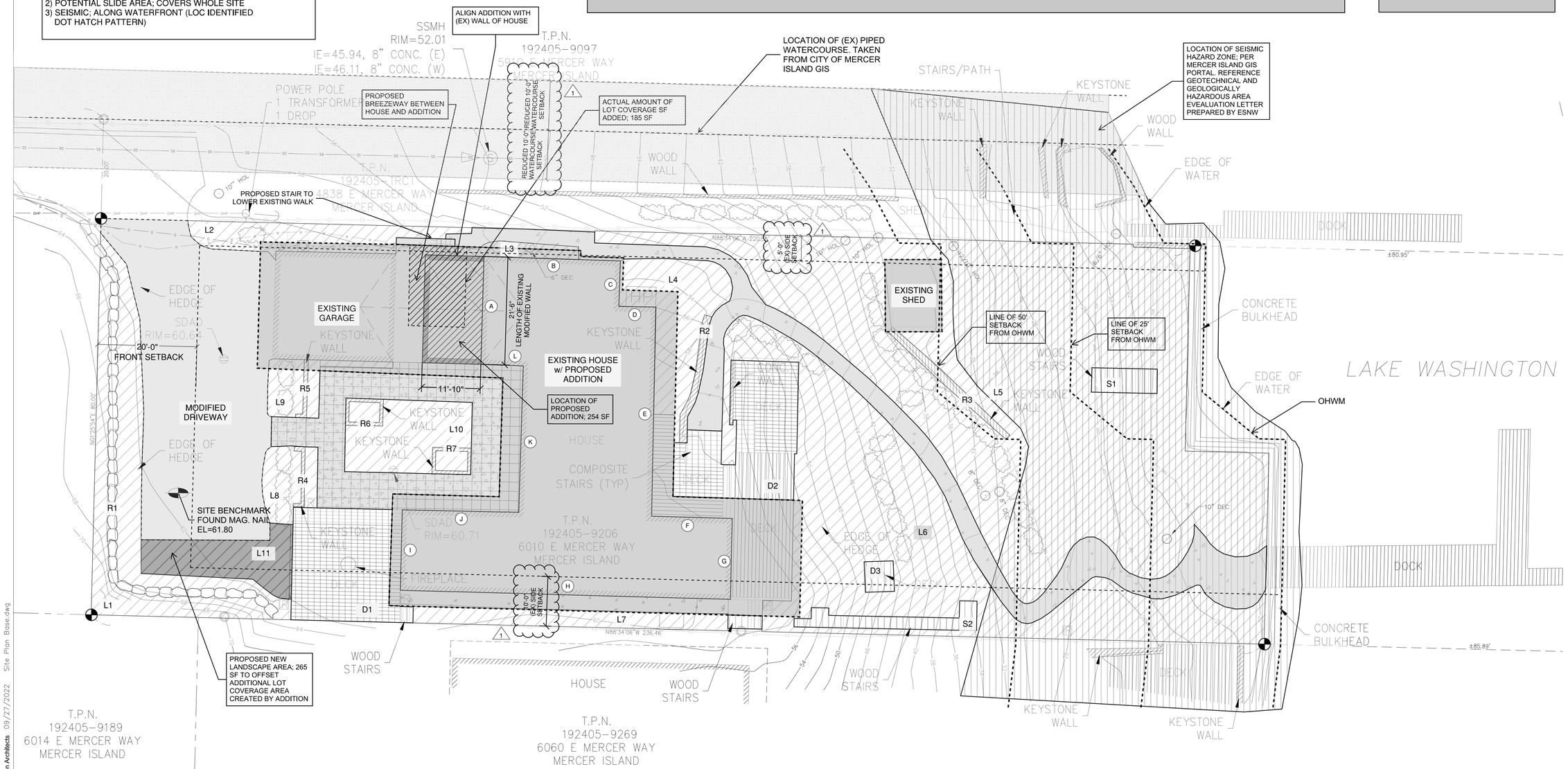
SITE AREA:
18,318 SF (0.42 ACRES)

DATUM:
NAD 83 (2011)

ZONE: R-15

ZONING REQUIREMENTS:

SITE SLOPE:	21%
MAX. IMPERVIOUS SURFACE ALLOWED:	35%
MAX. BUILDING HEIGHT ALLOWED:	30'-0"
MIN. BUILDING SETBACK FROM FRONT:	20'-0"
MIN. BUILDING SETBACK FROM SIDE:	5'-0"
MIN. BUILDING SETBACK FROM REAR:	25'-0"



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

CO DAVIDSON ARCHITECTS
15037 SE 171st St Renton, WA 98058
206.992.1853 tel

ALEXANDER RESIDENCE RENOVATION & ADDITION

6010 E Mercer Way, Mercer Island, WA 98040

OWNER:
Deborah Alexander

9072 REGISTERED ARCHITECT
CHRIS DAVIDSON
STATE OF WASHINGTON

PERMIT NUMBER

PROJECT NUMBER
2022-4

SUBMITTAL:	DATE:
PERMIT SUBMITTAL	9/27/22
PERMIT RESUBMITTAL	3/31/23

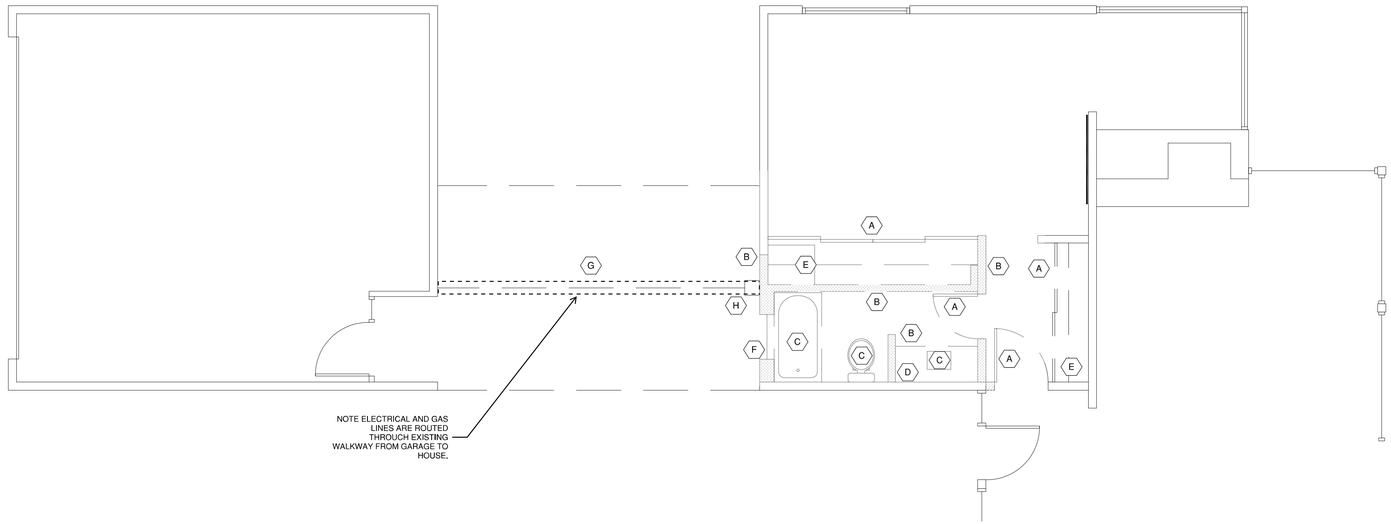
APPROVAL STAMP

PROPOSED SITE PLAN

A0b

DEMOLITION NOTES:

- (A) DEMOLISH ALL DASHED DOORS, TYP.
- (B) DEMOLISH ALL DASHED AND HATCHED WALLS, TYP.
- (C) DEMOLISH PLUMBING FIXTURES
- (D) DEMOLISH CASEWORK
- (E) DEMOLISH CLOSET PACKAGES
- (F) DEMOLISH EXISTING WINDOW
- (G) DEMOLISH EXTERIOR COVERED WALKWAY.
- (H) RELOCATE EXISTING DRAIN



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

FLOOR PLAN LEGEND

WALL TO BE DEMOLISHED

EXISTING FULL HT WALL

CO DAVIDSON ARCHITECTS
15037 SE 171st St Renton, WA 98058
206.992.1853 tel

ALEXANDER RESIDENCE RENOVATION & ADDITION

6010 E Mercer Way, Mercer Island, WA 98040

OWNER:
Deborah Alexander

9072 REGISTERED ARCHITECT
CHRIS DAVIDSON
STATE OF WASHINGTON

PERMIT NUMBER

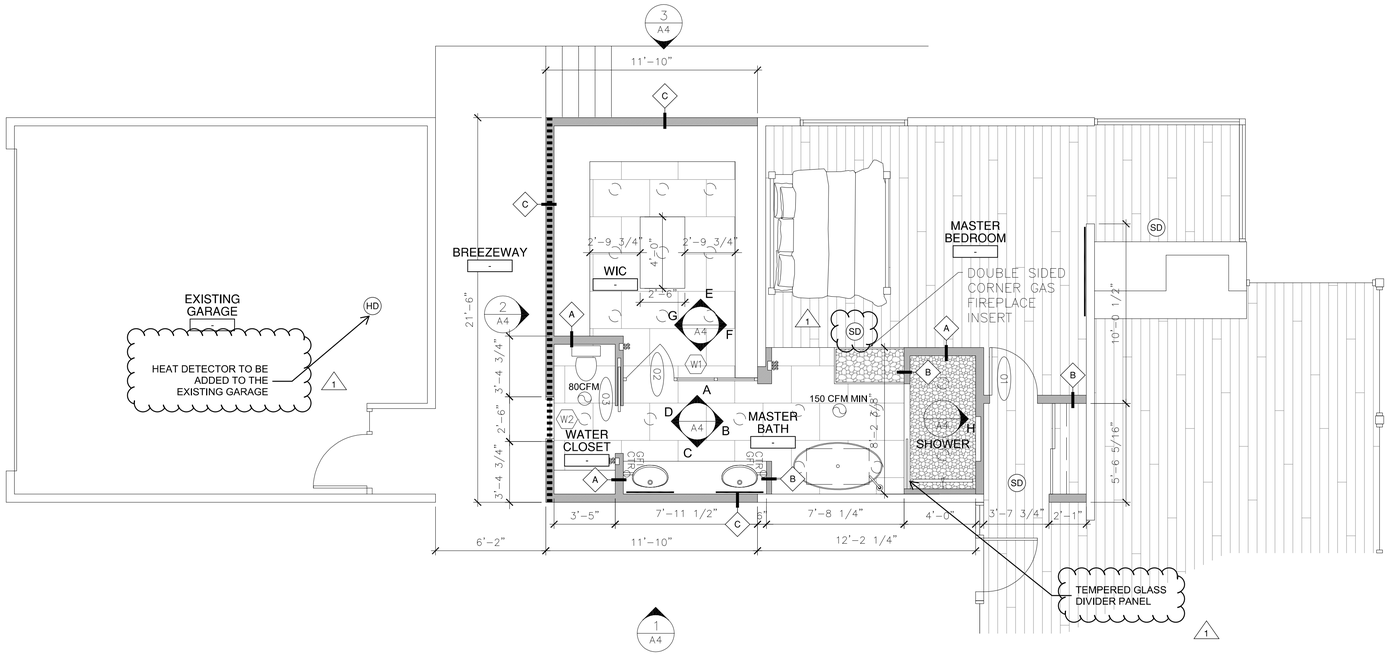
PROJECT NUMBER
2022-4

SUBMITTAL:	DATE:
PERMIT SUBMITTAL	9/27/22
PERMIT RESUBMITTAL	3/31/23

APPROVAL STAMP

FIRST FLOOR - DEMO PLAN

A1



1 MAIN FLOOR PLAN

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

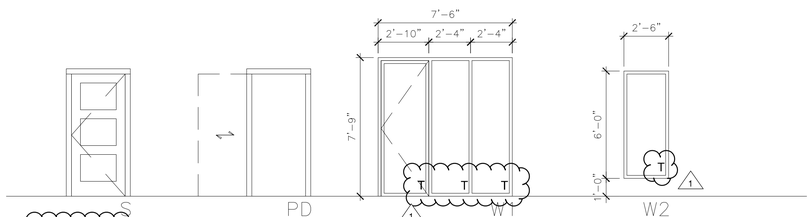
FLOOR PLAN LEGEND

- NEW 3'-0" HT WALL
- EXISTING FULL HT WALL
- NEW FULL HT WALL
- 1 HR RATED WALL
- NEW 4" DIA LED CAN LIGHT
- NEW LED VANITY LIGHT
- 80CFM BATHROOM/ LAUNDRY FAN
- (SD) COMBO CO/ SMOKE DETECTOR
- (#) WINDOW TAG
- (#) DOOR TAG
- (#) WALL TAG
- (1/A001) ELEVATION TAG
- SPECIAL PURPOSE OUTLET
- $ ELECTRICAL SWITCH +44" AFF TO CENTER
- DUPLEX RECEPTACLE +18" AFF TO CENTER
- DUPLEX RECEPTACLE /SWITCHED
- CTR DUPLEX RECEPTACLE ABOVE COUNTER
- GFI GFI RECEPTACLE

DOOR SCHEDULE

opening number	DOOR manufacturer	type	matl	con	nominal size leaf width	height	thickness	special detail	threshold detail	FRAME type	matl	sections head	jamb	special	hdware group	remarks	area (sf)	U value
01	SIMPSON	S	WD	WD	2'-8"	MATCH EX	1 1/2"			S	WD					PRIVACY SET		
02	SLIDING DOOR CO	W1	ST	ST	2'-8"	7'-9"	2"			BD	MT					MFR PROVIDED HDW, FV		
03	SIMPSON	PD	WD	WD	2'-8"	MATCH EX	1 1/2"			S	WD					PRIVACY SET		

NOTE: MATCH NEW HARDWARE TO EXISTING HARDWARE SETS



5 DOOR AND WINDOW SCHEDULE

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

WALL CONSTRUCTION GENERAL NOTES

A. PROVIDE 6" HIGH WOOD BLOCKING OR METAL STRAP AT WALL HUNG ACCESSORY LOCATIONS INCLUDING, BUT NOT LIMITED TO MARKER BOARDS, TACKBOARD, CASEWORK, ETC. VERIFY WITH ARCHITECT IF ANY . CLARIFICATION IS REQUIRED. PROVIDE FIRE RETARDENT TREATED WOOD IN RATED WALL AREA.

B. ALL DIMENSIONS ARE FROM FACE OF STUD TO FACE OF STUD AND FROM FACE OF STUD TO EXISTING WALL FINISH WHERE DIMENSIONS TAKEN FROM EXISTING WALL TO REMAIN. CONTACT ARCHITECT WITH ANY DISCREPANCIES IN DIMENSION PRIOR TO COMMENCEMENT OF CONSTRUCTION. GENERAL CONTRACTOR IS RESPONSIBLE FOR REVIEW OF EXISTING CONDITIONS AND LAYOUT OF NEW CONSTRUCTION PRIOR TO STARTING WORK.

C. PROVIDE 5/8" THICK CEMENT BOARD AT ALL WALLS WHERE TILE INSTALLATION IS REQUIRED IN LIEU OF GYP BOARD.

D. SCRIBE GYPSUM BOARD TIGHT TO THE BOTTOM OF DECK AND SPECIFICALLY WHEN PERPENDICULAR TO DECK. CAULK ALL JOINTS

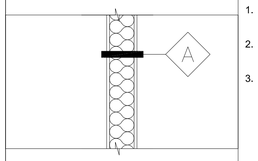
E. ALL NEW WALLS TO BE WALL TYPE (B), UNLESS NOTED OTHERWISE.

F. (EX) WALLS TO REMAIN MAY REQUIRE PATCHING AND REPAIR.

WALL TYPES

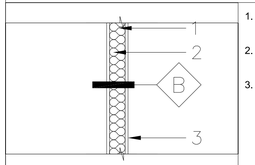
INTERIOR WALLS

TYPE A - INTERIOR 2X6 WOOD STUD WALL



1. 2X6 WOOD STUDS AT 24" O.C. TO THE BOTTOM OF STRUCTURAL ROOF FRAMING.
2. 4" THICK SOUND ATTENUATION BATT INSULATION. FRICTION FIT BETWEEN STUDS. OPTIONAL
3. BOTH SIDES: 5/8" THICK TYPE GYP BOARD TO THE BOTTOM OF FINISH CEILING. TAPE, TEXTURE, AND PAINT. COLOR TO BE SELECTED. PROVIDE MOISTURE-RESISTANT GYP BOARD AT WET LOCATIONS BATHROOM AND WET AREAS) AND CEMENT BOARD UNDER CERAMIC/ PORCELAIN TILE FINISHES

TYPE B - INTERIOR 2X4 WOOD STUD WALL

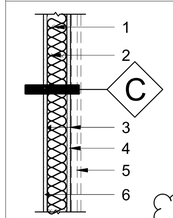


1. 2X4 WOOD STUDS AT 24" O.C. TO THE BOTTOM OF STRUCTURAL ROOF FRAMING.
2. 4" THICK SOUND ATTENUATION BATT INSULATION. FRICTION FIT BETWEEN STUDS. OPTIONAL
3. BOTH SIDES: 5/8" THICK TYPE GYP BOARD TO THE BOTTOM OF FINISH CEILING. TAPE, TEXTURE, AND PAINT. COLOR TO BE SELECTED. PROVIDE MOISTURE-RESISTANT GYP BOARD AT WET LOCATIONS BATHROOM AND WET AREAS) AND CEMENT BOARD UNDER CERAMIC/ PORCELAIN TILE FINISHES

EXTERIOR WALLS

GA WP3510

TYPE C - EXTERIOR 2X6 WOOD STUD WALL



1. 2X6 WOOD STUDS AT 24" O.C. TO THE BOTTOM OF ROOF DECK.
2. R-21 BATT INSULATION
3. INTERIOR SIDES: 5/8" THICK TYPE GYP BOARD TO THE BOTTOM OF FINISH CEILING. PROVIDE MOISTURE RESISTANT GYP BOARD AT WET LOCATIONS (RESTROOMS, KITCHENS, AND OTHER WET AREAS) AND CEMENT BOARD UNDER CERAMIC / PORCELAIN TILE FINISHES.
4. EXTERIOR PLY SHEATHING WITH WRB / AB MEMBRANE *
5. NEW SIDING TO MATCH EXISTING, PAINT TO MATCH

* ADD 5/8" DENSGLASS TYPE X GWB OVER PLYWOOD @ 1HR RATED WALL

CO DAVIDSON ARCHITECTS
15037 SE 171st St Renton, WA 98058
206.992.1853 tel

ALEXANDER RESIDENCE
RENOVATION & ADDITION
6010 E Mercer Way, Mercer Island, WA 98040

OWNER:
Deborah Alexander

9072 REGISTERED ARCHITECT
CHRIS DAVIDSON
STATE OF WASHINGTON

PERMIT NUMBER

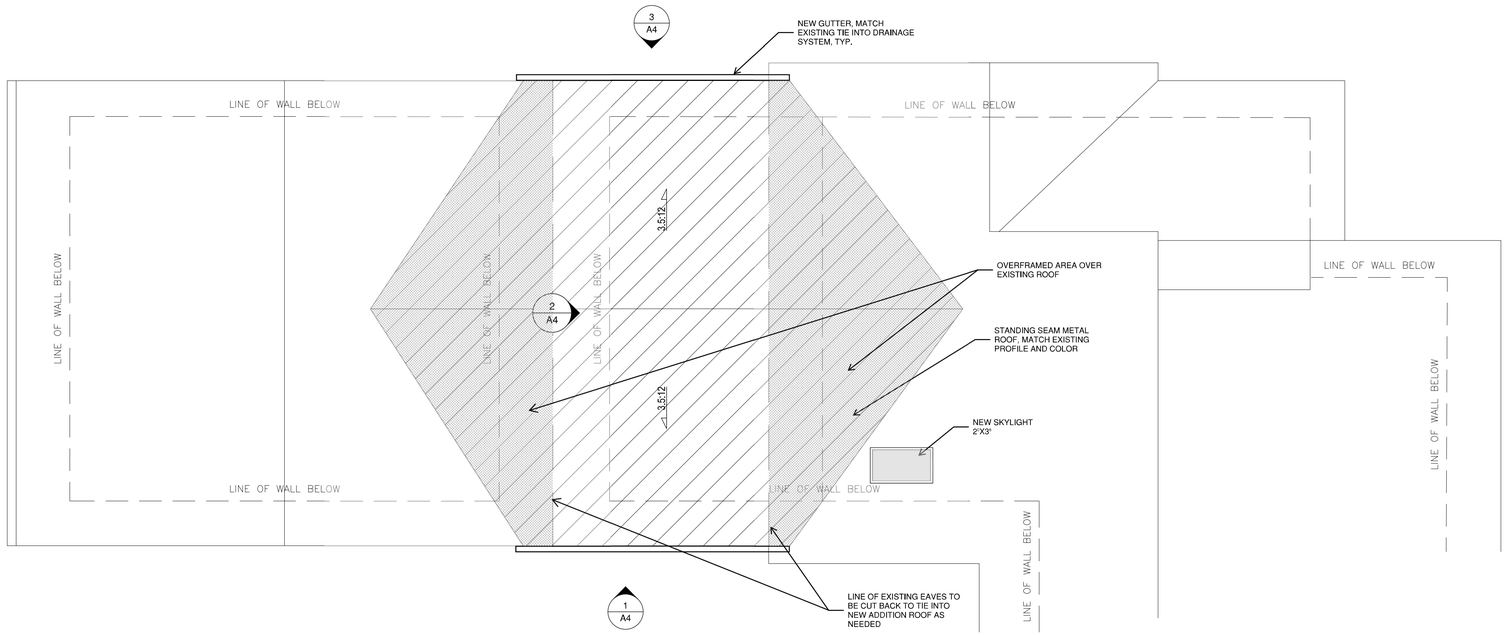
PROJECT NUMBER
2022-4

SUBMITTAL:	DATE:
PERMIT SUBMITTAL	9/27/22
PERMIT RESUBMITTAL	3/31/23

APPROVAL STAMP

FLOOR PLAN AND DOOR & WINDOW SCHEDULES

A2



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

ROOF PLAN LEGEND	
	AREA OF NEW ROOF

CO
DAVIDSON
ARCHITECTS
15037 SE 171st St Renton, WA 98058
206.992.1853 tel

ALEXANDER RESIDENCE
RENOVATION & ADDITION
6010 E Mercer Way, Mercer Island, WA 98040

OWNER:
Deborah Alexander

9072 REGISTERED ARCHITECT
CHRIS DAVIDSON
STATE OF WASHINGTON

PERMIT NUMBER

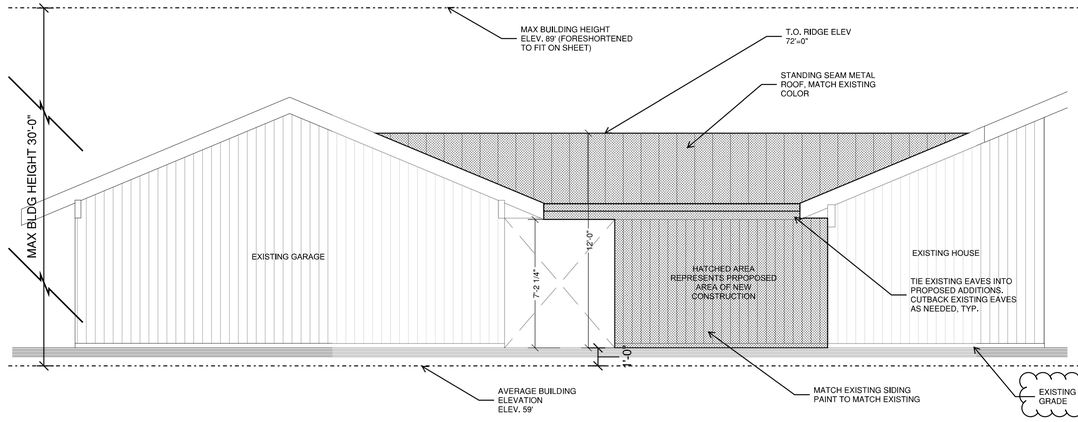
PROJECT NUMBER
2022-4

SUBMITTAL:	DATE:
PERMIT SUBMITTAL	9/27/22
PERMIT RESUBMITTAL	3/31/23

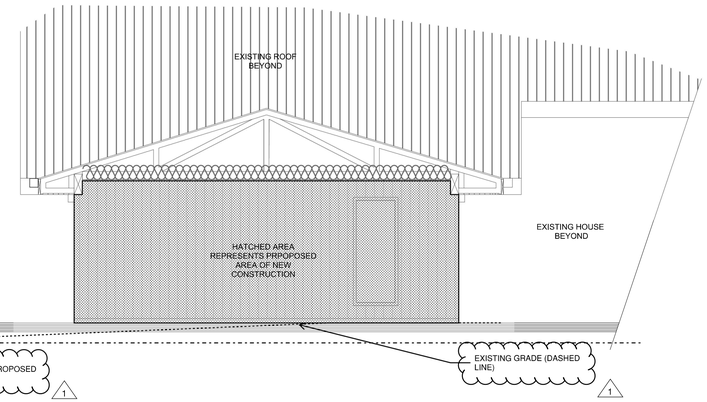
APPROVAL STAMP

ROOF PLAN

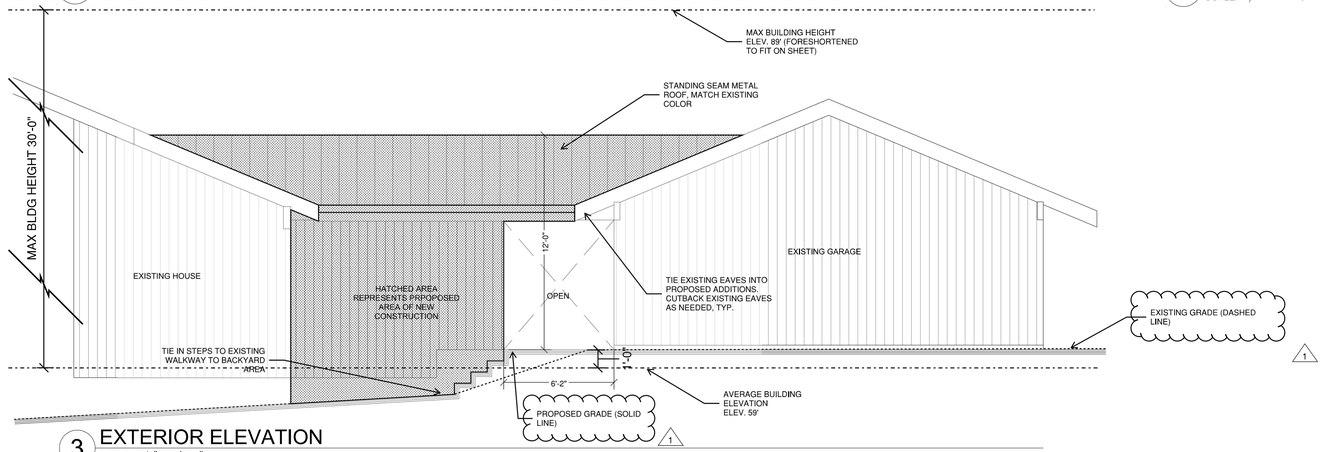
A3



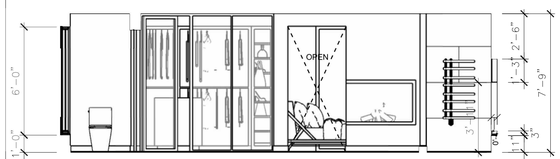
1 EXTERIOR ELEVATION
SCALE: 1/4" = 1'- 0"



2 EXTERIOR ELEVATION
SCALE: 1/4" = 1'- 0"

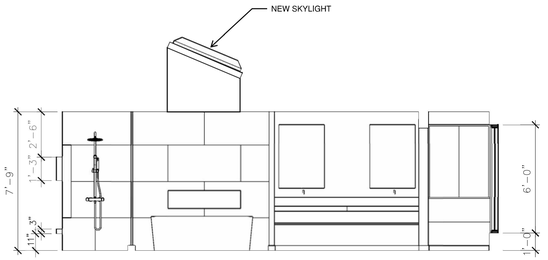


3 EXTERIOR ELEVATION
SCALE: 1/4" = 1'- 0"

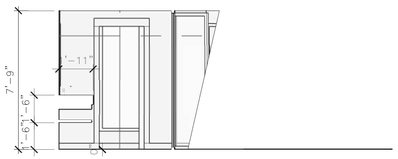


A INT ELEVATION @ MASTER BATH
SCALE: 1/4" = 1'- 0"

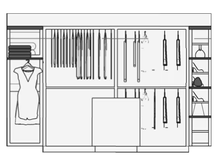
B INT ELEVATION @ MASTER BATH
SCALE: 1/4" = 1'- 0"



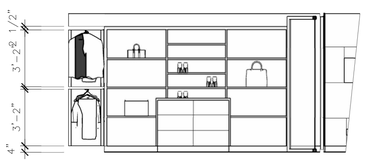
C INT ELEVATION @ MASTER BATH
SCALE: 1/4" = 1'- 0"



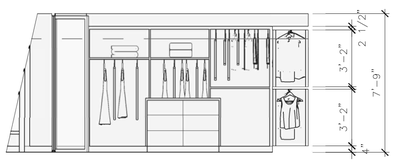
D INT ELEVATION @ MASTER BATH
SCALE: 1/4" = 1'- 0"



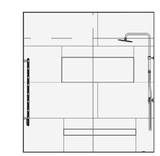
E INT ELEVATION WIC
SCALE: 1/4" = 1'- 0"



F INT ELEVATION WIC
SCALE: 1/4" = 1'- 0"



G INT ELEVATION WIC
SCALE: 1/4" = 1'- 0"



H INT ELEVATION SHOWER
SCALE: 1/4" = 1'- 0"

CO DAVIDSON ARCHITECTS
15037 SE 171st St Renton, WA 98058
206.992.1853 tel

ALEXANDER RESIDENCE
RENOVATION & ADDITION
6010 E Mercer Way, Mercer Island, WA 98040

OWNER:
Deborah Alexander

9072 REGISTERED ARCHITECT
CHRIS DAVIDSON
STATE OF WASHINGTON

PERMIT NUMBER

PROJECT NUMBER
2022-4

SUBMITTAL:	DATE:
PERMIT SUBMITTAL	9/27/22
PERMIT RESUBMITTAL	3/31/23

APPROVAL STAMP

EXTERIOR & INTERIOR ELEVATIONS

A4

STRUCTURAL NOTES

01000: GENERAL REQUIREMENTS
THE STRUCTURAL NOTES SUPPLEMENT THE PLANS AND SPECIFICATIONS. ANY DISCREPANCY FOUND BETWEEN THE DRAWINGS, NOTES, SPECIFICATIONS, SITE CONDITIONS, AND ARCHITECTURAL PLANS SHALL BE REPORTED TO THE ARCHITECT WHO SHALL CORRECT THE DISCREPANCY IN WRITING. ANY WORK COMPLETED AFTER DISCOVERY OF THE DISCREPANCY SHALL BE DONE AT THE CONTRACTOR'S RISK. REFER TO ARCHITECTURAL PLANS FOR OPENINGS, ARCHITECTURAL TREATMENTS, AND DIMENSIONS NOT SHOWN. CONSULT MECHANICAL PLANS FOR DUCTS AND PIPES ETC. NOT SHOWN.

THE CONTRACTOR SHALL PROVIDE BRACING AND SUPPORT REQUIRED FOR TEMPORARY CONSTRUCTION LOADS AND FOR STRUCTURAL COMPONENTS AS REQUIRED DURING ERECTION. BACKFILL BEHIND WALLS SHALL NOT BE PLACED UNTIL THE WALLS ARE PROPERLY SUPPORTED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF THE EXCAVATION, SHORING, AND OTHER WORK WITH ALL UTILITIES AND ADJACENT PROPERTIES. CALL THE UTILITY LOCATE SERVICE PRIOR TO ANY WORK AT 1-800-424-5555.

01100: CODE REQUIREMENTS
ALL DESIGN AND CONSTRUCTION SHALL CONFORM TO THE 2018 INTERNATIONAL BUILDING CODE AS ADOPTED BY THE CITY OF MERCER ISLAND.

01200: DESIGN LOADS
FLOOR LIVE LOADS
- FLOORS (DECK) 40 PSF
- ROOF (SNOW) 25 PSF

SNOW LOAD DESIGN DATA:
Pg = 20 PSF, Pf = 20 PSF, Ce = 0.9, Is = 1.0, Ct = 1.0,

WIND DESIGN DATA:

BASIC WIND SPEED:	100 MPH (3-SECOND GUST)
WIND IMPORTANCE FACTOR:	Iw = 1.0
WIND EXPOSURE:	EXPOSURE B
TOPOGRAPHIC (Kz)	1.00
ANALYSIS PROCEDURE:	ASCE 7-16

EARTHQUAKE DESIGN DATA:

SEISMIC IMPORTANCE FACTOR:	Ie = 1.0
SPECTRAL RESPONSE ACCELERATIONS:	Ss = 1.606 S1 = 0.5558
SITE CLASS:	SITE CLASS D
SPECTRAL RESPONSE COEFFICIENTS:	SDS = 1.285
SEISMIC DESIGN CATEGORY:	SEISMIC DESIGN CATEGORY D
BASIC FORCE RESISTING SYSTEM:	BEARING WALL SYSTEM
RESPONSE MODIFICATION FACTOR:	R = 6.5
ANALYSIS PROCEDURE:	EQUIVALENT LATERAL FORCE

01300: GEOTECHNICAL INFORMATION
ALL FOUNDATIONS ARE TO BE FOUNDED ON COMPETENT NATIVE MATERIAL FOUNDATIONS ARE TO BE SUPPORTED ON CONVENTIONAL FOOTINGS. ALLOWABLE BEARING PRESSURE USED IS 1500 PSF.

01330: SHOP DRAWING SUBMITTAL PROCESS
SHOP DRAWINGS ARE TO BE SUBMITTED TO THE ARCHITECT AND ENGINEER OF RECORD FOR APPROVAL PRIOR TO FABRICATION. IF SHOP DRAWINGS DIFFER FROM THE APPROVED DESIGN DRAWINGS, NEW DESIGN DRAWINGS BEARING THE SEAL AND SIGNATURE OF A LICENSED WASHINGTON STATE STRUCTURAL ENGINEER SHALL BE SUBMITTED ALONG WITH THE SHOP DRAWINGS TO THE APPROPRIATE JURISDICTION FOR APPROVAL PRIOR TO FABRICATION.

SHOP DRAWINGS ARE REQUIRED FOR ROOF AND TJI FLOOR JOISTS AND GLB'S.

01400: SPECIAL INSPECTIONS
SPECIAL INSPECTIONS REQUIRED FOR POST INSTALLED EPOXY AND MECHANICAL ANCHORS AND SHEARWALL AND HOLDOWN SYSTEM.

02000: SITE CONSTRUCTION
ALL SITE CONSTRUCTION SHALL BE CONSISTENT WITH THE GEOTECHNICAL ENGINEERING RECOMMENDATIONS AS NOTED IN THE GEOTECHNICAL ENGINEERING REPORT (SEE SECTION 01300) AND IN SUBSEQUENT DIRECTIVES.

03000: CONCRETE
CONCRETE CONSTRUCTION SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE STANDARD ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE".

CEMENT AND CONCRETE SHALL CONFORM TO IBC. ADMIXTURES SHALL BE APPROVED BY THE ENGINEER OF RECORD AND SHALL COMPLY WITH ACI 318. THE USE OF WATER SOLUBLE CHLORIDE ION SHALL NOT BE USED.

CONCRETE MIX DESIGNS SHALL MEET THE FOLLOWING REQUIREMENTS:

28 DAY f'c (PSI)	MAX. W/C RATIO	MAX. SLUMP (INCHES)	AIR ENTAINMENT (PERCENT)	SPECIAL INSPECTION REQUIRED	LOCATION AND APPLICATION
2500	0.45	5±1	0±1	NO	FOOTINGS/STEM WALLS

ONE COMPRESSION TEST MINIMUM SHALL BE COMPILED FOR EVERY 150 CUBIC YARDS OR 5000 SQUARE FEET OF SURFACE AREA FOR EACH MIX DESIGN PLACED EACH DAY. A TEST SHALL BE THE AVERAGE STRENGTH OF TWO CYLINDERS MADE FROM THE SAME SAMPLE AND TESTED AT THE SPECIFIED AGE. ADDITIONAL CYLINDERS MAY BE MADE FOR INFORMATION REGARDING POST TENSIONING, FORM REMOVAL, STRENGTH DEVELOPMENT, OR OTHER PURPOSES. CONCRETE IS ACCEPTABLE IF:
(1) NO TEST FALLS 500 PSI BELOW THE SPECIFIED STRENGTH
(2) THE AVERAGE OF ALL SETS OF 3 CONSECUTIVE TESTS DOES NOT FALL BELOW THE SPECIFIED STRENGTH.

CONCRETE NOT MEETING THE ABOVE CRITERIA IS SUBJECT TO FURTHER TESTING AT NO ADDITIONAL EXPENSE TO THE OWNER.

03002 REINFORCING STEEL
REINFORCING STEEL DETAILING, FABRICATION, AND PLACEMENT SHALL BE PER ACI 318. REINFORCING STEEL SHALL BE ASTM A-615 DEFORMED BARS GRADE 40 (fy=40 KSI) FOR #3 BARS ONLY AND ASTM A-615 DEFORMED BARS GRADE 60 (fy=60 KSI) FOR #4 BARS AND LARGER. REINFORCING STEEL AT ALL WALLS, SLABS, AND FOOTINGS SHALL BE CONTINUOUS AROUND CORNERS ELSE CORNER BARS SHALL BE PROVIDED. COVER REQUIREMENTS SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:

CONCRETE CAST AGAINST EARTH ALL BAR SIZES	3"
FORMED SURFACE EXPOSED TO EARTH OR WEATHER #5 AND SMALLER	1 1/2"

REINFORCING STEEL SHALL BE ACCURATELY PLACED AND ADEQUATELY SECURED IN PLACE PRIOR TO CONCRETE PLACEMENT. REINFORCING STEEL SHALL NOT BE FIELD BENT EXCEPT AS NOTED IN THE DESIGN DRAWINGS.

03162: ADHESIVE ANCHORS IN CONCRETE
ALL ADHESIVE ANCHORS SHALL BE ICC APPROVED AND INSTALLED PER ICC EVALUATION REPORT REQUIREMENTS. BOLT SPACING AND EMBEDMENTS SHALL BE AS DESIGNATED ON THE DRAWINGS TYPICAL, UNLESS NOTED OTHERWISE. ALL EXPANSION BOLTS SHALL BE INSTALLED WITH CONTINUOUS INSPECTION.

ADHESIVE ANCHORS IN CONCRETE SHALL BE THE FOLLOWING TYPES OR A PREAPPROVED EQUAL;
SIMPSON SET-XP (ICC ESR-2508)

BOLT SIZE	MINIMUM EFFECTIVE EMBEDMENT U.N.O.
1/2" DIA. OR #4 REBAR	4"
5/8" DIA. OR #5 REBAR	10"

06071: PRESERVATIVE TREATED WOOD PRODUCTS
ALL LUMBER EXPOSED TO WEATHER OR IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESERVATIVE TREATED U.N.O. PER PLAN. PRESERVATIVE TREATMENT SHALL BE PER AMERICAN WOOD PRESERVERS' ASSOCIATION (AWPA) SPECIFICATION "PRESERVATIVE TREATMENT BY PRESSURE PROCESS".

ALL FASTENERS (NAILS, BOLTS, PLATES, HANGERS, ETC.) IN CONTACT WITH TREATED LUMBER SHALL BE CORROSION RESISTANT G-185 HOT DIPPED GALVANIZED PER ASTM A 153 OR STAINLESS STEEL TYPE 304 OR 316.

ALL FIELD CUTS, NOTCHES AND DRILLED HOLES OF PRESSURE-TREATED WOOD SHALL BE TREATED IN THE FIELD IN ACCORDANCE WITH AWPA M4.

06100: ROUGH FRAMING
SAWN LUMBER SHALL CONFORM TO WEST COAST LUMBER INSPECTION BUREAU (WCLIB) "GRADING AND DRESSING RULES" NO. 17 LATEST EDITION. SAWN LUMBER SHALL BE S4S AND SURFACED DRIED, 19 PERCENT MAXIMUM MOISTURE CONTENT. PROTECT LUMBER FROM WEATHER AND PROVIDE FURTHER DRYING OF ASSEMBLED FRAMING TO MINIMIZE WOOD SHRINKAGE POTENTIAL. ALL LUMBER EXPOSED TO WEATHER OR IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESERVATIVE TREATED U.N.O. PER PLAN. LUMBER SPECIES, GRADE, AND PROPERTIES FOR EACH USE/LOCATION SHALL BE AS FOLLOWS U.N.O. PER PLAN/SCHEDULE:

USE/LOCATION	SPECIES	GRADE	Fb (PSI)	Fv (PSI)	Fcp (PSI)	Fc (PSI)	E (PSI)
WALL STUDS/BLOCKING							
2X, 3X 4" WIDE	HEM-FIR	STUD	675	150	405	800	1.2E6
2X, 3X 6" & WIDER	HEM-FIR	NO. 2	850	150	405	1300	1.3E6
WALL PLATES							
2X4, 3X4	HEM-FIR	STUD	675	150	405	800	1.2E6
2X6, 3X6	HEM-FIR	NO. 2	850	150	405	1300	1.3E6
JOISTS							
2X, 3X	HEM-FIR	NO. 2	850	150	405	1300	1.3E6
BEAMS AND POSTS							
4X	DOUGLAS FIR-LARCH	NO. 2	900	180	625	1350	1.6E6
6X	DOUGLAS FIR-LARCH	NO. 1	1200	170	625	1000	1.6E6

06102: FRAMING NOTES
FRAMING CONNECTORS, ACCESSORIES, AND FASTENERS AS NOTED IN THE PLANS AND DETAILS ARE AS MANUFACTURED BY SIMPSON STRONG-TIE. EQUIVALENT HARDWARE MAY BE USED WHEN APPROVED BY ENGINEER OF RECORD. INSTALL ALL HARDWARE PER MANUFACTURERS' SPECIFICATIONS. WHERE STRAPS CONNECT TWO MEMBERS TOGETHER PLACE HALF OF THE REQUIRED FASTENERS INTO EACH MEMBER. PROVIDE SOLID BLOCKING AT ALL BEARING POINTS. SEE SECTION 06071 FOR FASTENER REQUIREMENTS AT TREATED LUMBER. TYPICAL NAILING NOT SHOWN PER PLAN, DETAIL, OR SCHEDULE SHALL COMFORM TO FASTENING SCHEDULE PER IBC TABLE 2304.9.1.

NAILS SHALL BE COMMON U.N.O. COMMON NAIL DIMENSION ARE AS FOLLOWS:

NAIL SIZE	DIAMETER	LENGTH
8d	0.131"	2.5"
10d	0.148"	3.0"
12d	0.148"	3.25"
16d	0.162"	3.5"

UNLESS NOTED OTHERWISE PER SHEARWALL SCHEDULE OR PLANS, ANCHOR BOLTS AT SILL PLATES SHALL BE 1/2" DIAMETER WITH 7" MINIMUM EMBEDMENT INTO CONCRETE AND SHALL BE SPACED NOT MORE THAN 6 FEET APART. THERE SHALL BE A MINIMUM OF TWO BOLTS PER SILL PIECE WITH ONE BOLT LOCATED NOT MORE THAN 12" NOR LESS THAN 4.5" FROM EACH END OF THE PIECE. A 2"X2"X3/16" PLATE WASHER SHALL BE PROVIDED FOR ALL ANCHOR BOLTS (DO NOT COUNTERSINK PLATE WASHERS). VERIFY ANCHOR BOLTS AT EXISTING CONSTRUCTION. PROVIDE NEW ANCHOR BOLTS (SIMPSON TITEN HD'S OR SIMPSON UFP PLATES AT 6'-0" OC

ALL BEAMS SHALL BE SUPPORTED WITH A MINIMUM OF (2)2X'S UNLESS OTHERWISE NOTED ON THE PLANS.

06103: JOIST AND BEAM HANGERS
JOIST AND BEAM HANGERS AS NOTED IN THE PLANS SHALL BE AS MANUFACTURED BY SIMPSON STRONG-TIE. EQUIVALENT HARDWARE MAY BE USED WITH PRIOR APPROVAL BY ENGINEER OF RECORD. JOIST AND BEAM HANGERS SHALL BE INSTALLED PER MANUFACTURERS' SPECIFICATIONS AND SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE PER PLANS OR DETAILS:

MEMBER SIZE	HANGER
SAWN LUMBER JOISTS	"U" SERIES TO MATCH LUMBER SIZE
I-JOISTS	"ITS" SERIES TO MATCH JOIST SIZE
3.125" WIDE GLULAM BEAM	HGUS3.25/10
3.5" WIDE BEAM	HGUS412
5.125" WIDE GLULAM BEAM	HGUS5.25/10
5.5" WIDE GLULAM BEAM	HGUS5.5/10

06160: WOOD SHEATHING
STRUCTURAL WOOD SHEATHING PANELS SHALL HAVE APA GRADE TRADEMARK OF THE AMERICAN PLYWOOD ASSOCIATION. WOOD SHEATHING PANELS SHALL BE C-D INT APA WITH EXTERIOR GLUE (CDX). ORIENTED STRAND BOARD (OSB) PANELS SHALL BE EXPOSURE 1. PANELS SHALL HAVE THE FOLLOWING THICKNESS, SPAN RATING, AND FASTENING UNLESS NOTED OTHERWISE PER PLAN:

	EDGE NAILS	FIELD NAILS
ROOF: 7/16" 40/20 C-D APA CDX T&G	8d AT 6"	8d AT 12"
FLOOR: 3/4" APA RATED STURD-I-FLOOR OSB 40/20 T&G	10d AT 6"	10d AT 12"
SHEARWALL: 7/16" C-D W/EXTERIOR GLUE	SEE SCHEDULE SHEET S1.1	

ALL ROOF AND FLOOR SHEATHING PANELS SHALL BE INSTALLED FACE GRAIN PERPENDICULAR TO SUPPORTS AND IN A STAGGERED PATTERN UNLESS NOTED OTHERWISE PER PLAN. BLOCKING AT INTERMEDIATE FLOOR AND ROOF SHEATHING JOINTS SHALL NOT BE REQUIRED UNLESS NOTED OTHERWISE PER PLAN. SHEARWALL SHEATHING SHALL BE BLOCKED AT ALL EDGES WITH 2X OR 3X FRAMING PER SHEARWALL SCHEDULE

HOLDOWN & FASTENER SCHEDULE (HF STUDS)

HARDWARE TYPE	WOOD MEMBER/POST 2X4 WALL	WOOD MEMBER/POST 2X6 WALL	FASTENER	ROD DIAMETER	EMBEDMENT
STHD14 STHD14RJ	(2) 2X4	(2) 2X6	(24) 12d	STRAP	14"
MST48	(2) 2X4	(2) 2X6	(22) 16d	N.A.	N.A.

HOLDOWN AND FASTENER SCHEDULE NOTES;
1. HOLDOWNS SHALL BE AS MANUFACTURED BY THE SIMPSON STRONG-TIE COMPANY.
2. 16d = 0.162" DIA. X 3 1/2" LONG.
3. FILL ALL HOLES UNLESS NOTED OTHERWISE..
4. SCREWS SHALL BE SDS 1/4" DIA. X 2 1/2" AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY.
5. HOLDOWN ANCHORS SHALL BE SECURED IN PLACE PRIOR TO PLACING CONCRETE.
6. ANCHOR BOLT NUT SHALL BE FINGER-TIGHT PLUS 1/3 – 1/2" TURN WITH HAND WRENCH.
7. HDU HOLDOWNS SHALL BE INSTALLED CENTERED ALONG THE WIDTH OF THE ATTACHED POST.
8. ANCHOR BOLT HOLDOWNS SHALL BE ASTM A307 OR A36 STEEL. ANCHOR HEAD REQUIRES NUT/WASHER NUT.
9. POST INSTALLED ANCHOR SHALL USE SIMPSON SET XP OR EQUAL. USE EMBEDMENTS INDICATED IN TABLE.

SHEARWALL SCHEDULE - 7/16" APA RATED SHEATHING W/ HEM-FIR STUDS AND HEM-FIR PLATES

WALL TYPE	SHEATHING	PANEL EDGE NAILING	FIELD NAILING	BOTTOM PLATE NAILING ROWS	BOTTOM PLATE NAILING SPACING	RIM OR BLOCKING TO TOP PLATE CONN. 0.148"x3.25" TOENAIL	RIM OR BLOCKING TO TOP PLATE CONN. LTP4 OR A35 OPTION	FRAMING AT ADJOINING PANEL EDGES	FOUNDATION SILL PLATE	ANCHOR BOLT SPACING 5/8" DIA. 7" EMBED
P6	7/16" SHT. ONE SIDE	6" O.C.	12" O.C.	(1)	4" O.C.	N/A	24" O.C.	2x	2x	48" O.C.
P4	7/16" SHT. ONE SIDE	4" O.C.	12" O.C.	(2)	6" O.C.	N/A	16" O.C.	(2)2x OR 3x	2x	32" O.C.
P3	7/16" SHT. ONE SIDE	3" O.C.	12" O.C.	(2)	4" O.C.	N/A	12" O.C.	(2)2x OR 3x	2x	24" O.C.
P2	7/16" SHT. ONE SIDE	2" O.C.	12" O.C.	(3)	6" O.C.	N/A	10" O.C.	(2)2x OR 3x	2x	18" O.C.

SHEARWALL SCHEDULE NOTES:
1. STUDS SHALL NOT BE SPACED MORE THAN 16" O.C..
2. SHEATHING PANELS MAY BE INSTALLED EITHER HORIZONTALLY OR VERTICALLY WITH ALL PANEL EDGES BACKED/BLOCKED WITH 2" NOMINAL OR WIDER FRAMING. SEE NOTE 5.
5. FRAMING MEMBERS RECEIVING EDGE NAILING FROM ABUTTING PANELS SHALL NOT BE LESS THAN 3" NOMINAL AND NAILS SHALL BE STAGGERED FOR ALL SHEARWALL MARKS EXCEPT "P6".
7. NAILS FOR PLYWOOD AND OSB PANEL EDGE AND FIELD NAILING SHALL BE 8d (0.131" X 2 1/4").
8. NAILS FOR BOTTOM PLATE FRAMING SHALL BE 12d COMMON (0.148" X 3.25").
9. ANCHOR BOLTS SHALL BE GALVANIZED 5/8" DIAMETER A-307 AND SHALL BE SECURED IN PLACE PRIOR TO CONCRETE POUR. WET STICKING OF ANCHOR BOLTS IS NOT ALLOWED.
10. GALVANIZED PLATE WASHERS PER STRUCTURAL NOTES ARE REQUIRED AT EACH ANCHOR BOLT – SEE 8 THIS SHEET FOR PLACEMENT REQUIREMENTS. RECESSING PLATE WASHERS IN PLATES IS NOT ALLOWED.
11. LTP4 FRAMING PLATES SHALL BE INSTALLED WITH 12-8d X 1 1/2" (0.131" X 2 1/2") NAILS. RE: DETAILS 1, 2, & 3.
12. A35 FRAMING ANGLES SHALL BE INSTALLED WITH 12-8d X 1 1/2" (0.131" X 1 1/2") NAILS. RE: DETAILS 1, 2, & 3.
13. ALL NAILS INTO PRESSURE TREATED WOOD SHALL BE HOT-DIPPED GALVANIZED CONFORMING TO ASTM 153 OR STAINLESS STEEL.
14. WHERE BOTTOM PLATE NAILING SPECIFIES A SPACING OF 4 INCHES OR LESS NAILS SHALL BE INSTALLED IN TWO ROWS OFFSET 1/2 INCH AND STAGGERED.

SCALE: N/A

SCALE: N/A

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street Suite 302 Seattle, WA 98109
206.285.0618 (F) 206.285.4512 (V)

NO.	REVISION	DATE

PERMIT SUBMITTAL DATE: 05/27/22
ENGR: ENG CAD: JMA FILE: 220555100
JOB #: 22055

Structural Plan and Notes
ALEXANDER RESIDENCE
6010 E MERCER WAY
Mercer Island, Washington 98040

S1.00

FRAMING LEGEND

- FB — FLUSH BEAM
- DB — DROPPED BEAM
- HR — HEADER
- GLB — GLUED-LAMINATED BEAM
- GT — GIRDER TRUSS
- ③ — INDICATES NO. OF BUNDLED STUDS PROVIDE (2) TYP. U.N.O.
- 4X4 — POST TYPE PER PLAN CONTINUE TO FOUNDATION OR BEAM BELOW
- FB-1 — BEAM SIZE PER SCHEDULE
- SW1 — WOOD PANEL SHEARWALL PER SCHEDULE
- SW1 — SHEARWALL WITH FORCE TRANSFER DETAIL
- HD1 HD1 — HOLDOWN PER SCHEDULE
- BEARING WALL PER SCHEDULE THIS SHEET
- BEAM/JOIST HANGER PER PLAN/NOTES/SCHEDULE
- OVER FRAMING AT ROOF SEE DETAIL 12/S6.00
- SLOPING FRAMING AT DECKS (PER ARCH.)
- BLOCKED FLOOR DIAPHRAGM

Note:
ALL SECTION CUTS ARE TYPICAL

FB – FLUSH BEAM
DB – DROPPED BEAM
HR – HEADER
RIM – RIM JOIST (MIN. WIDTH – COORD. W/ SHEARWALL SCHEDULE)
W – WIDE FLANGE STEEL BEAM

FRAMING NOTES

1. ROOF FRAMING SHALL BE PREENGINEERED TRUSSES AT 24" O.C. SEE DETAILS ON S6.0 FOR TRUSS TO WALL CONNECTIONS. SEE ARCHITECTURAL DRAWINGS FOR ALL ROOF PITCHES AND CEILING VAULTS.

2. FLOOR FRAMING SHALL BE 2X10'S AT 16" O.C. LAP JOISTS 4" ATOP WALLS. SECURE JOIST TO TOP PLATES WITH (2) 8d NAILS. JOISTS UNDER AND PARALLEL TO BEARING AND SHEAR WALLS SHALL BE DOUBLE JOISTS U.N.O. BLOCKING AT BEARING AND SHEAR WALLS SHALL BE DOUBLED U.N.O.

3. WALLS INDICATED ARE BELOW THE FRAMING LEVEL. SEE BEARING WALL SCHEDULE THIS SHEET.

4. PLUMBING, MECHANICAL, AND ELECTRICAL SYSTEMS SHALL BE DESIGNED AND BUILT TO ACCOMMODATE 1/4" PER FLOOR WOOD SHRINKAGE (ACCUMULATIVE).

5. FRAMING MEMBERS AND SHEATHING SHALL BE PER STRUCTURAL NOTES ON SHEET S1.0.

6. HANGERS INDICATED ARE AS MANUFACTURED BY SIMPSON STRONG-TIE.

10. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS.

11. BUNDLED STUDS FROM THIS LEVEL SHALL BE CONTINUED DOWN TO FOUNDATION OR SUPPORTING BEAM.

12. ALL BEAMS AND HEADERS SHALL HAVE A MINIMUM OF (1) KING STUD AT EACH END FOR BRACING U.N.O.

FOUNDATION NOTES

1. ALL FOOTING SHALL BEAR ON COMPETENT NATIVE MATERIAL.

2. CENTER INTERIOR FOOTINGS ON WALLS OR COLUMNS TYPICAL U.N.O.

3. VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.

4. SEE ARCHITECTURAL PLANS FOR WALL LOCATIONS.

5. SEE DETAIL FOR STEPPED FOOTING DETAIL.

6. SEE ROOF/ FLOOR FRAMING PLAN SHEETS FOR WOOD FRAMING LEGEND, NOTES, AND SCHEDULES.

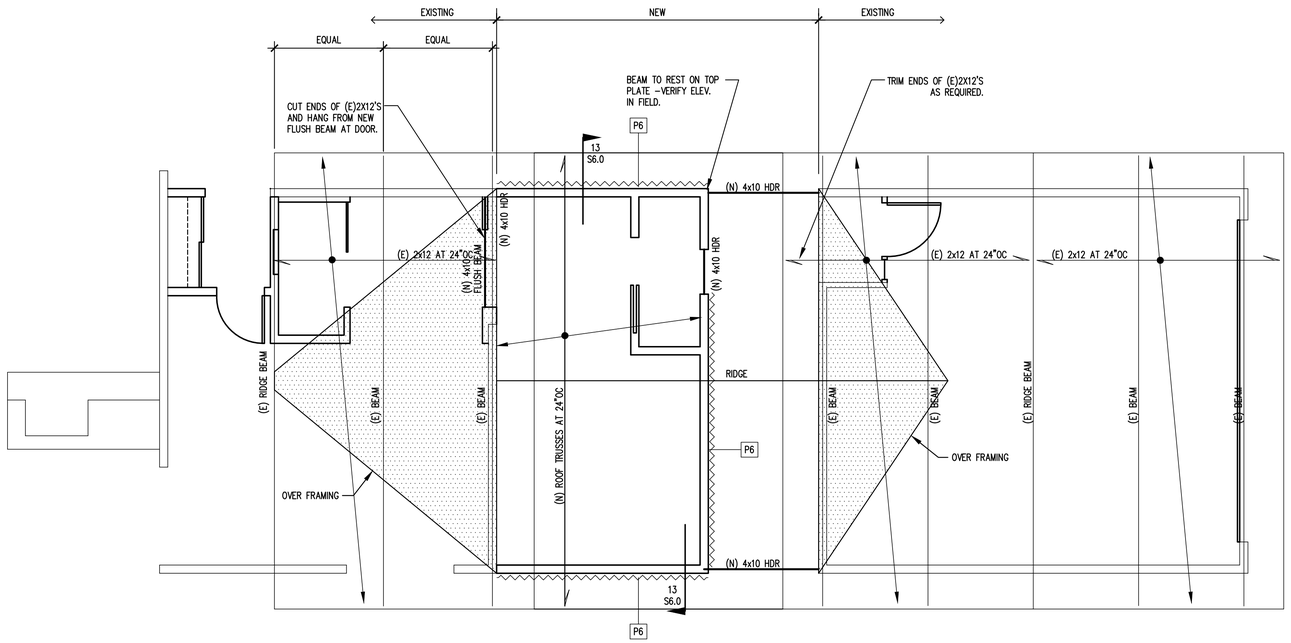
7. FOOTING DRAINS ARE TYPICALLY AT PERIMETER OF FOUNDATIONS. FOOTING DRAINS, DOWNSPOUTS AND THEIR CONNECTIONS BY OTHERS. SEE CIVIL DRAWINGS FOR ADDITIONAL INFORMATION.

8. ALL TOP OF CONCRETE AND TOP OF FOOTING ELEVATIONS TO BE VERIFIED PRIOR TO CONSTRUCTION.

FOUNDATION LEGEND

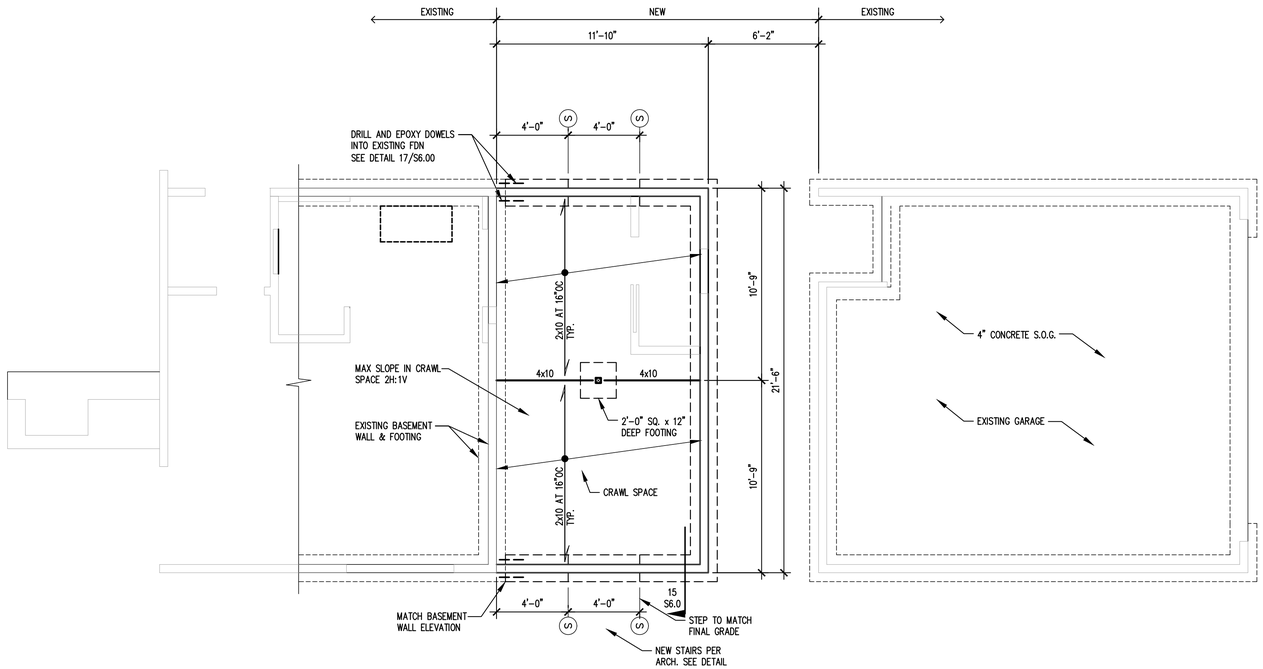
- F1 — SEE FOOTING TYPE THIS SHEET
- (-2'-0") — TOP OF FOOTING ELEVATION
- 0'-0" — TOP OF CONCRETE ELEVATION
- S.J. — SHRINKAGE CONTROL JOINT PER DETAIL 4/S6.0
- C.J. — CONSTRUCTION JOINT PER DETAIL 5/S6.0
- S — STEP FOOTING PER DETAIL 6/S6.0
- SW1 — WOOD PANEL SHEARWALL PER SCHEDULE
- SW2 — SHEARWALL WITH FORCE TRANSFER DETAIL
- HD1 HD1 — HOLDOWN PER SCHEDULE: REF. FRAMING PLANS

Note:
ALL SECTION CUTS ARE TYPICAL



Roof Framing Plan

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



Foundation and First Floor Framing Plan

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

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street, Suite 302 Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)

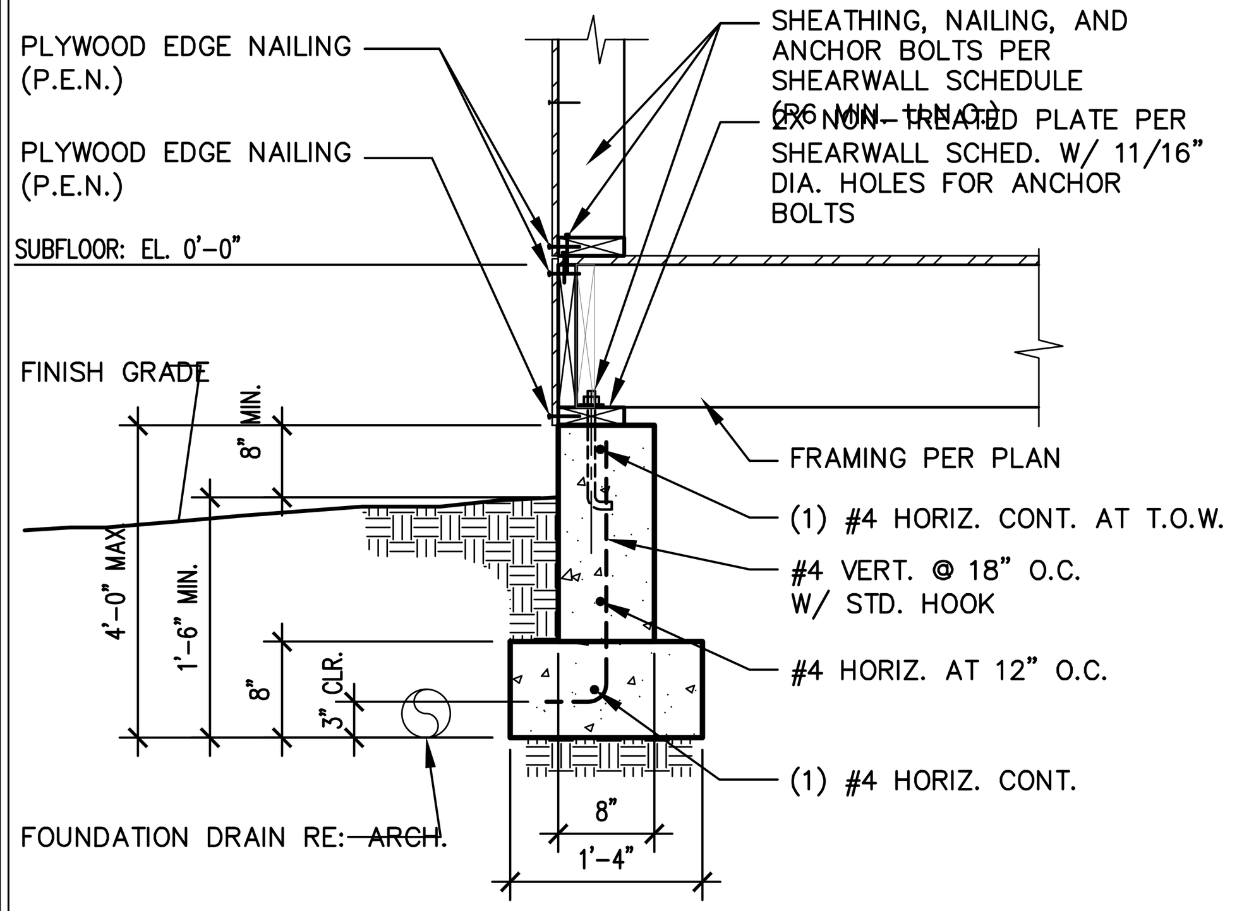
REVISION

NO.		DATE
	PERMIT SUBMITTAL	05/27/22
	ENGR: CFR CAD: CFR	DATE: 05/27/22 FILE: 07
		JOB #: 22055

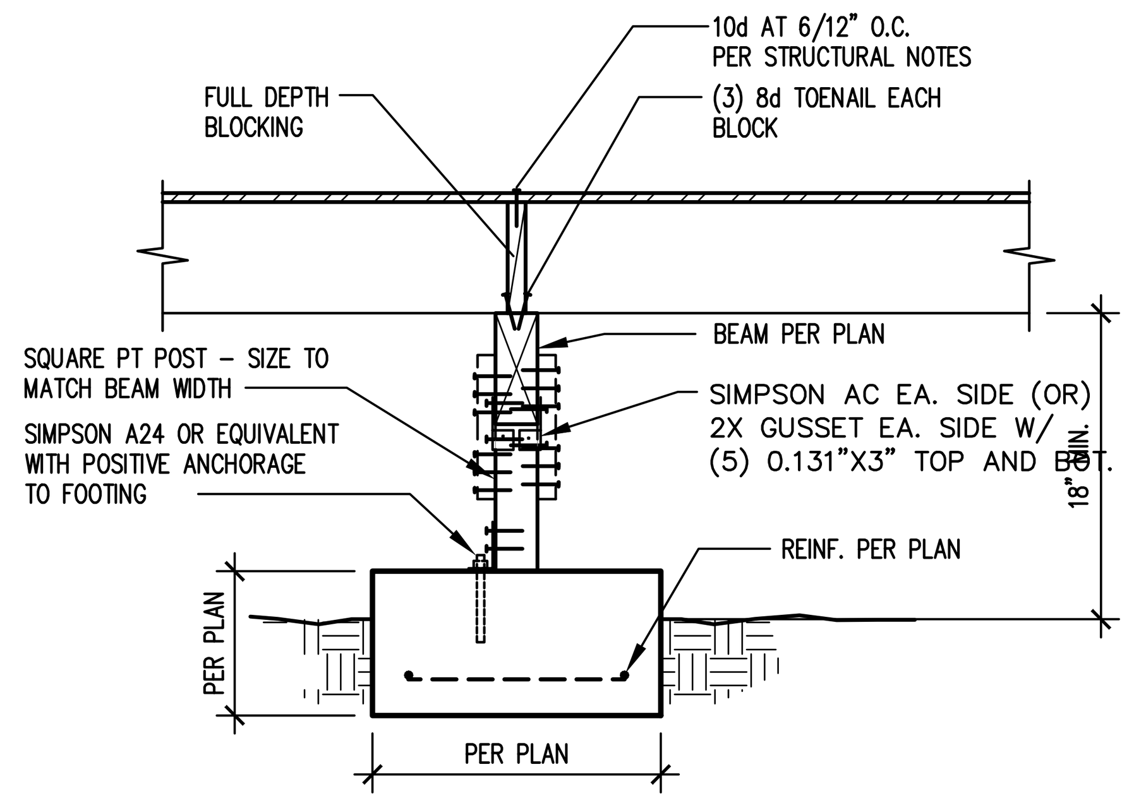
Foundation & Roof Framing Plans

ALEXANDER RESIDENCE
6010 E MERCER WAY
Mercer Island, Washington 98040

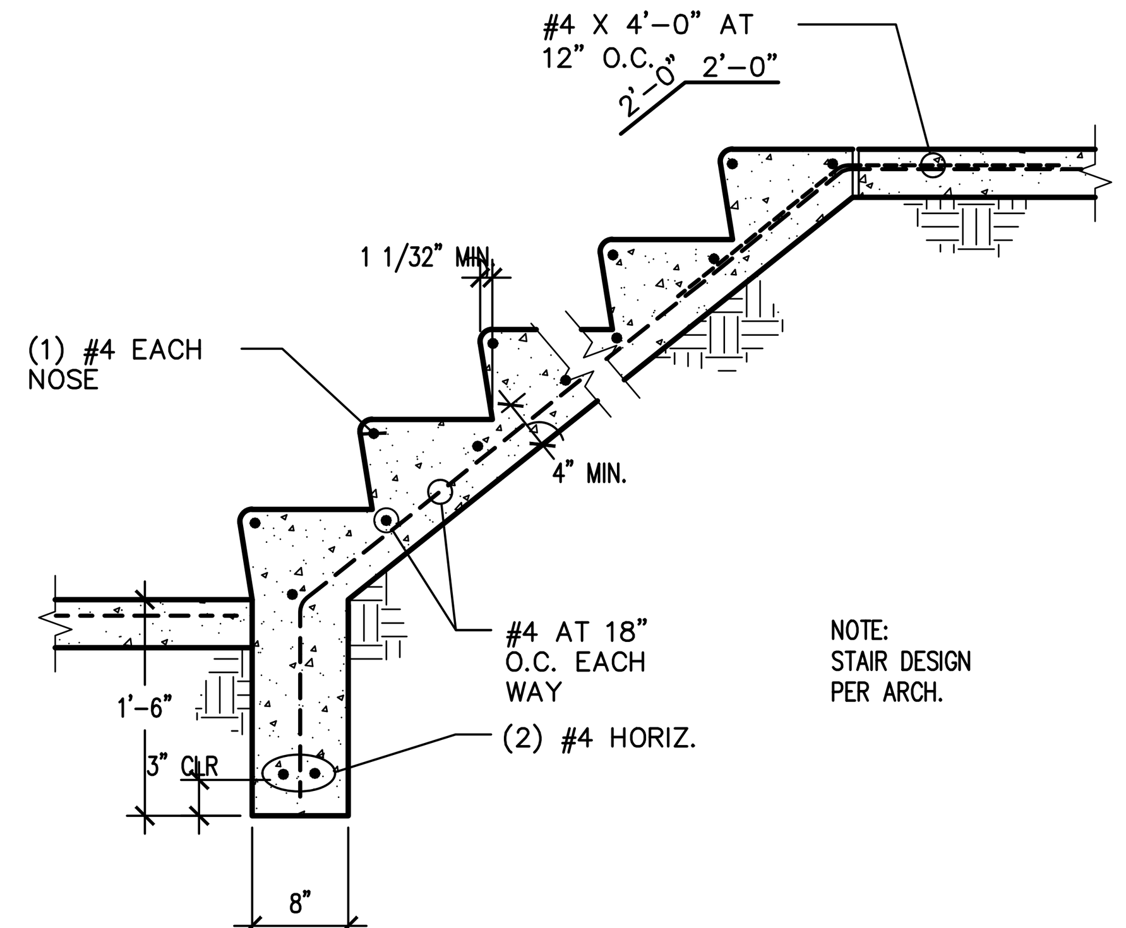
S2.0



1 TYP. EXT. FOOTING DETAIL



2 TYPICAL INTERIOR FOOTING (PERP.)

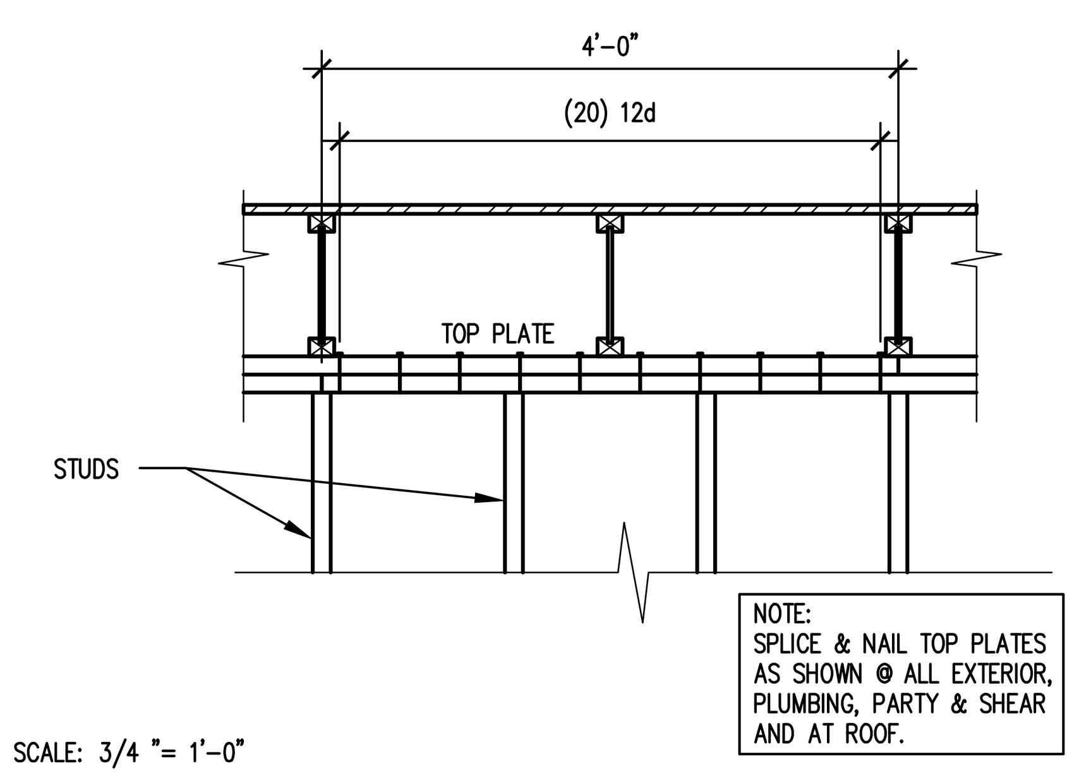


3 TYPICAL STAIR ON GRADE

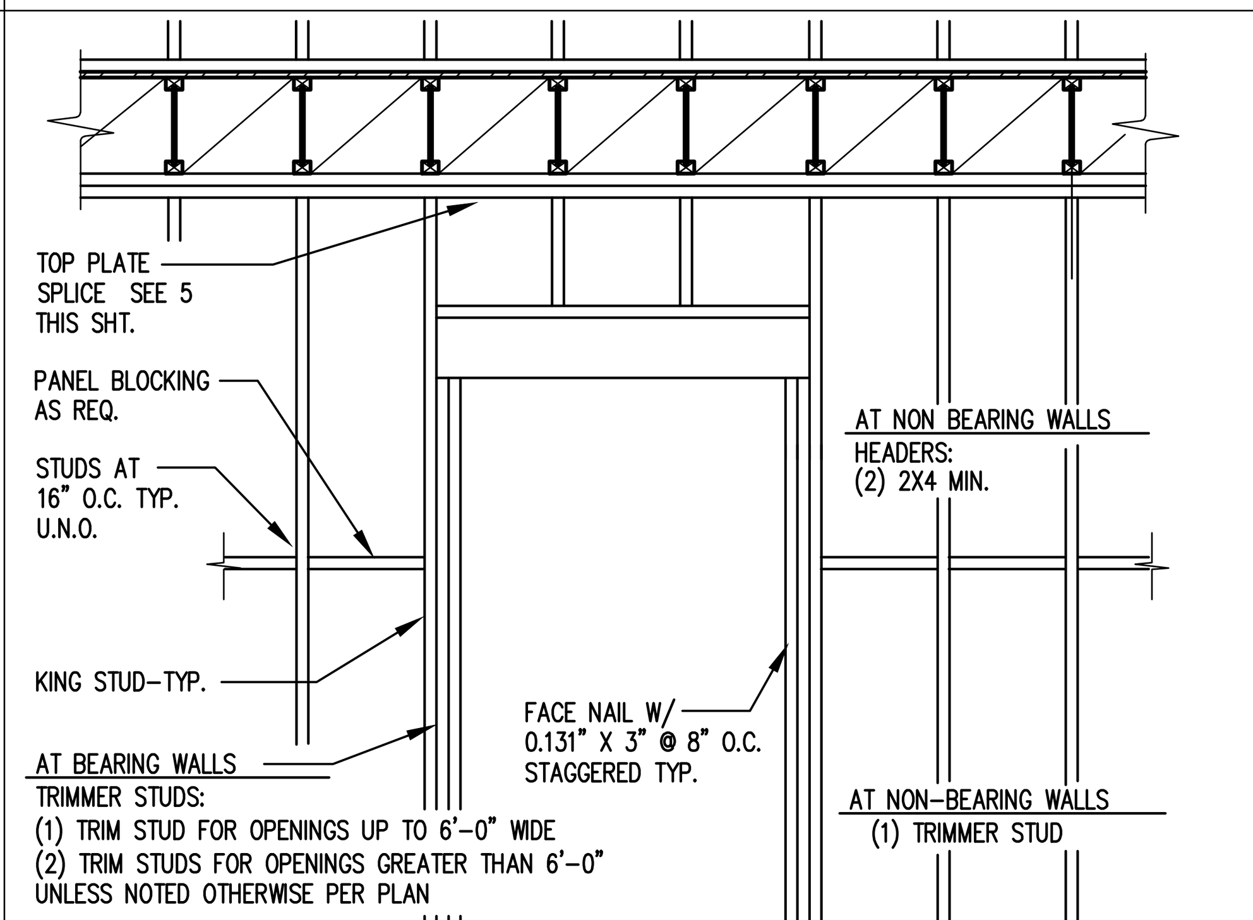
BAR SIZE	f'c = 2500 psi		
	Ld	OTHER BARS LAP SPLICE	TOP BARS LAP SPLICE
#3	16"	21"	28"
#4	22"	28"	37"
#5	27"	36"	46"
#6	33"	43"	56"

1. TENSION LAP SPLICE SHOWN ABOVE ARE FOR CONCRETE COVER GREATER THAN OR EQUAL TO BAR DIAMETER AND CENTER TO CENTER SPACING GREATER THAN OR EQUAL TO TWO BAR DIAMETERS (SPACING AND COVER CASE 1). TENSION LAP SPLICE SHOWN ABOVE ARE CLASS B SPLICES.
2. "OTHER BARS" ARE ALL VERTICAL BARS AND HORIZONTAL BARS WITH LESS THAN 12" OF CONCRETE CAST BELOW THE BAR.
3. "TOP BARS" ARE HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST BELOW THE BARS.
4. DEVELOPMENT LENGTH (Ld) IS "OTHER BARS", CLASS A.

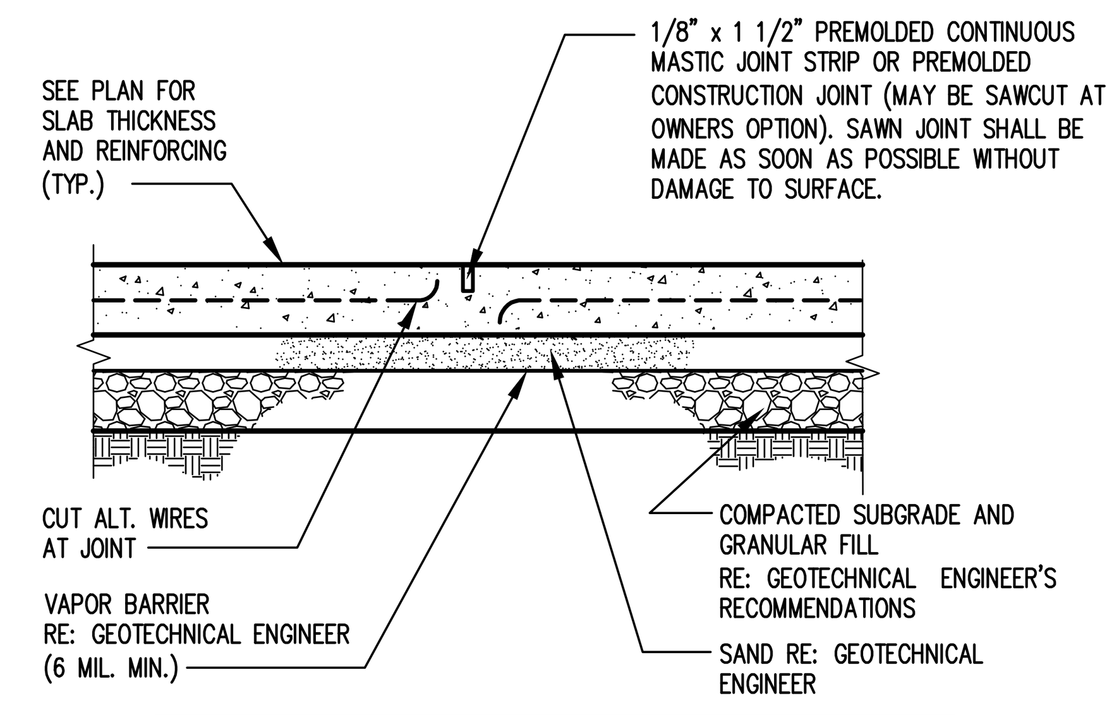
5 TYP. LAP SPLICE SCHEDULE



6 TYPICAL TOP PLATE SPLICE



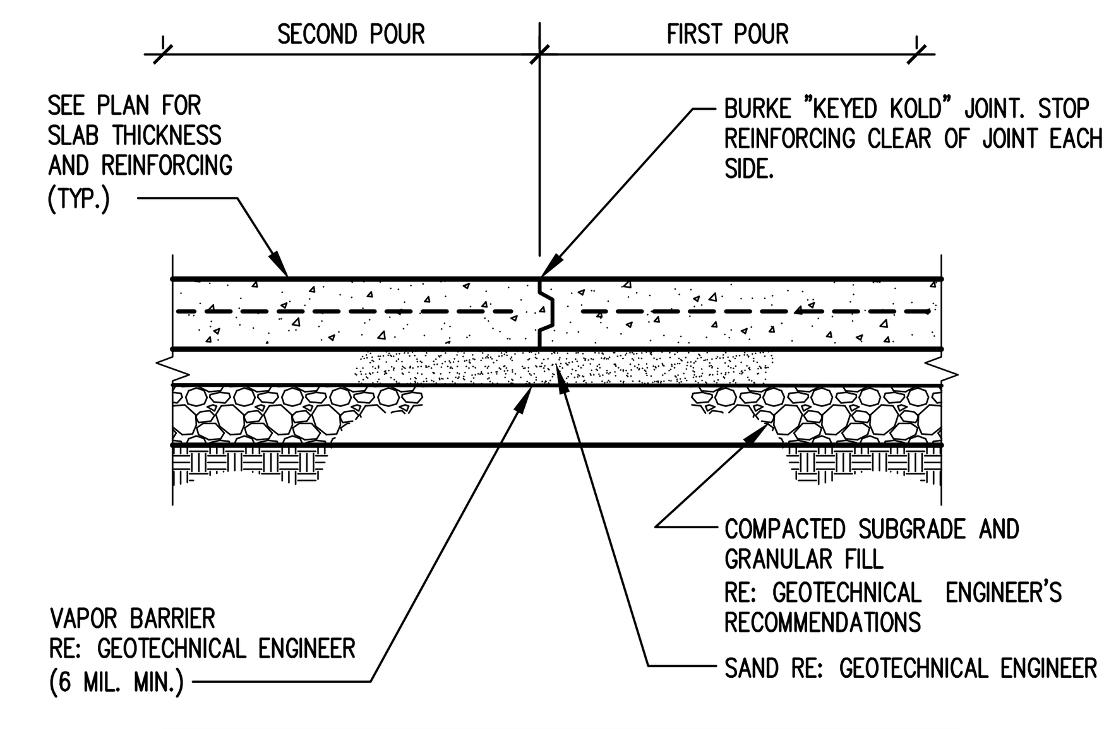
7 TYPICAL HEADER AT STRUCTURAL WALL



PROVIDE CONTROL OR CONSTRUCTION JOINTS IN SLABS ON GRADE TO BREAK UP SLAB INTO RECTANGULAR AREAS OF 400 SQUARE FEET OR LESS. AREAS TO BE APPROX. SQUARE AND HAVE NO ACUTE ANGLES. JOINT LOCATIONS TO BE APPROVED BY THE ARCHITECT.

SCALE: NONE

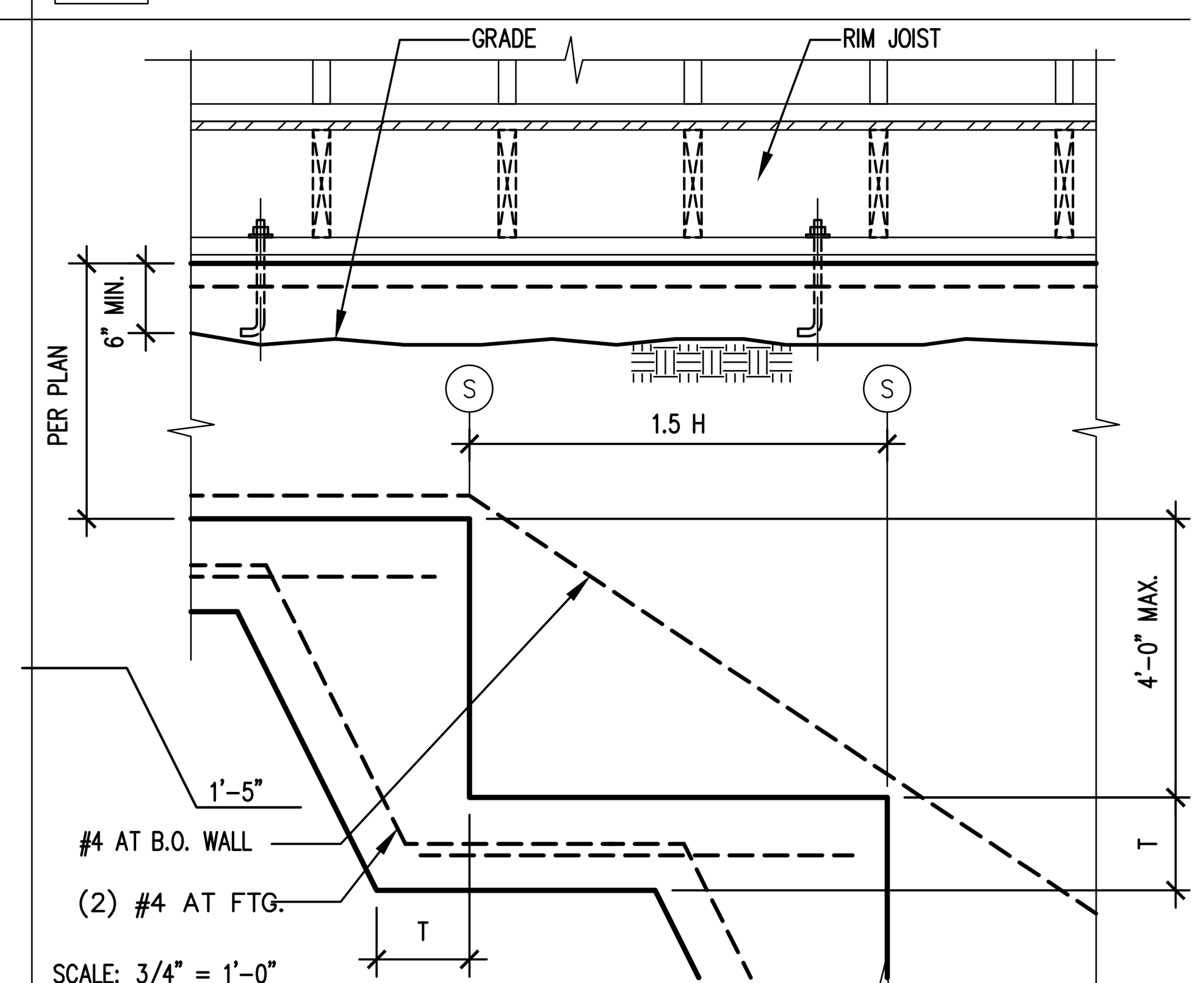
8 TYP. SHRINKAGE CONTROL JOINT (S.J.)



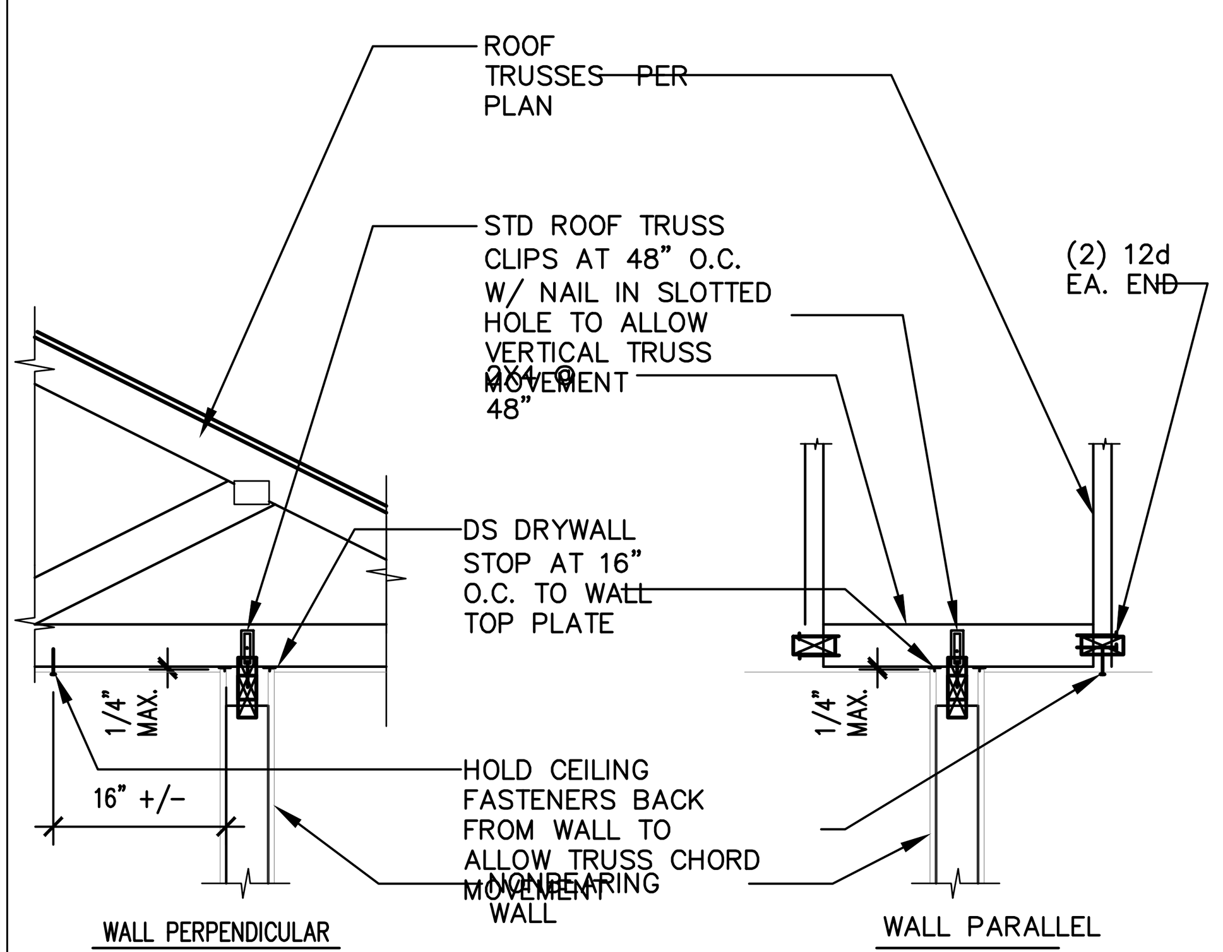
PROVIDE CONTROL OR CONSTRUCTION JOINTS IN SLABS ON GRADE TO BREAK UP SLAB INTO RECTANGULAR AREAS OF 400 SQUARE FEET OR LESS. AREAS TO BE APPROX. SQUARE AND HAVE NO ACUTE ANGLES. JOINT LOCATIONS TO BE APPROVED BY THE ARCHITECT.

SCALE: NONE

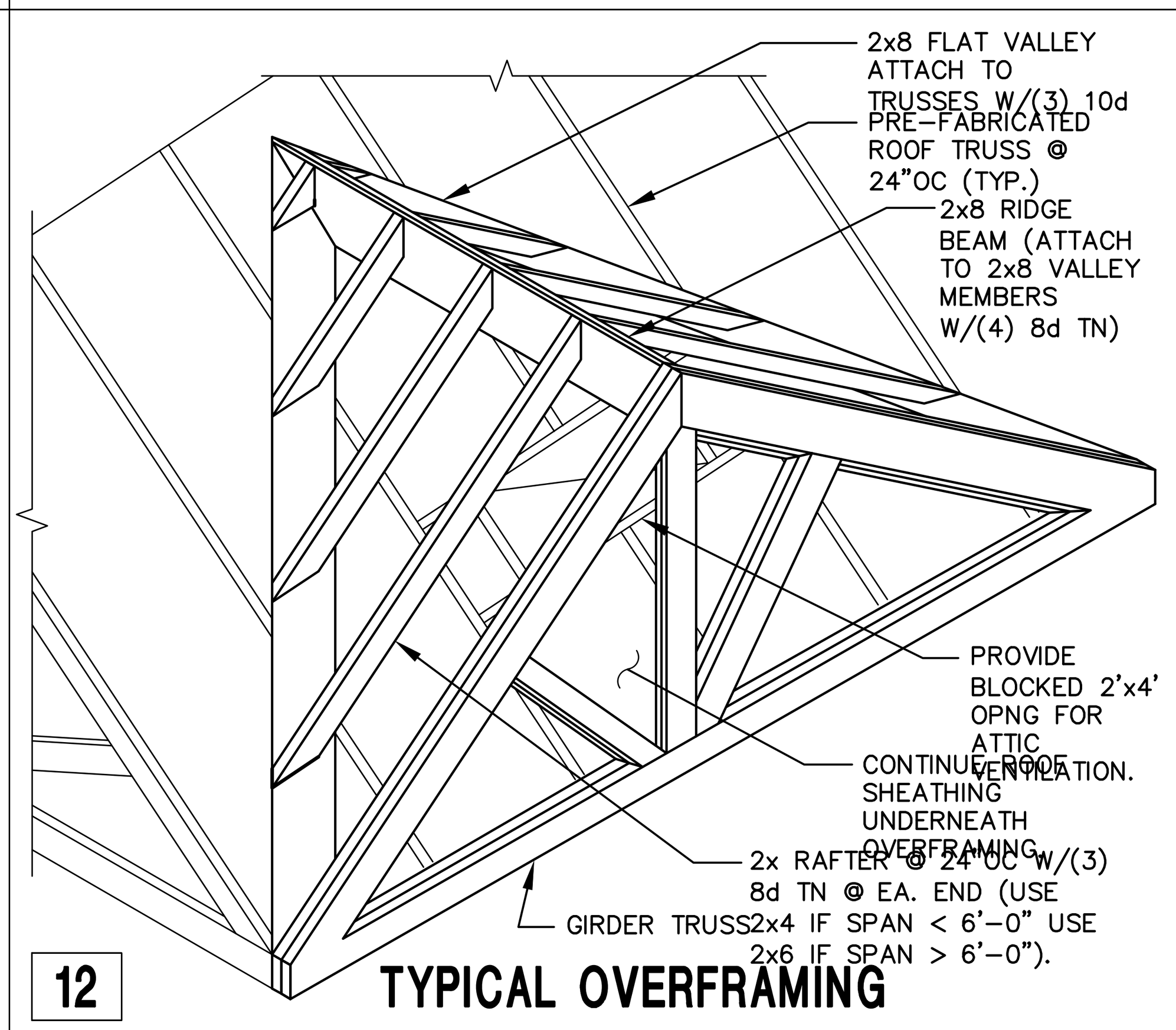
9 TYPICAL CONSTRUCTION JOINT (C.J.)



10 TYPICAL STEPPED FOOTING



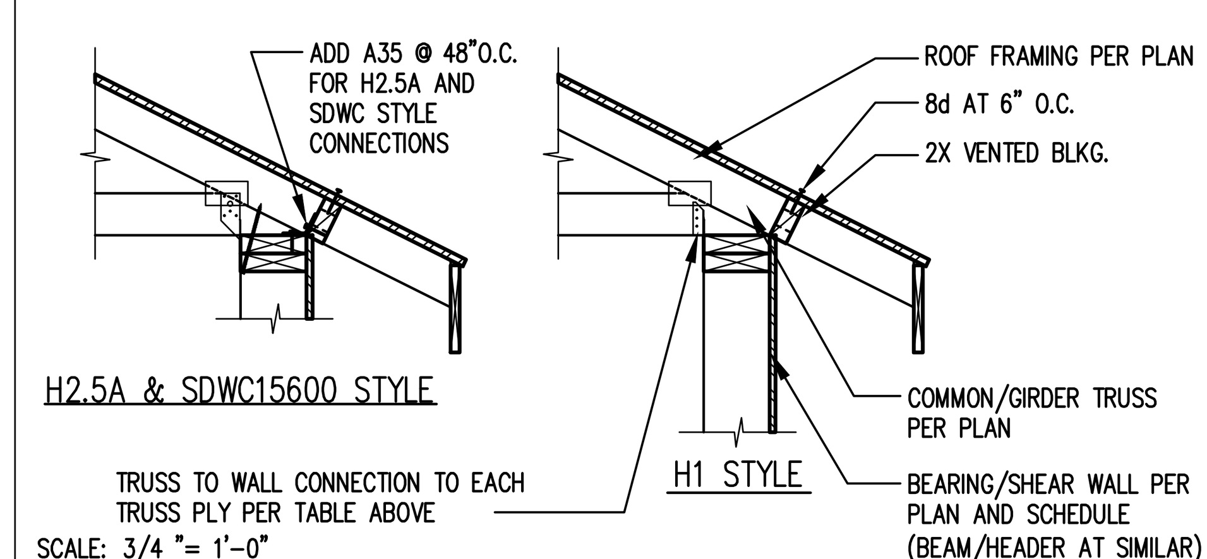
11 TYPICAL NONBEARING WALL SUPPORT



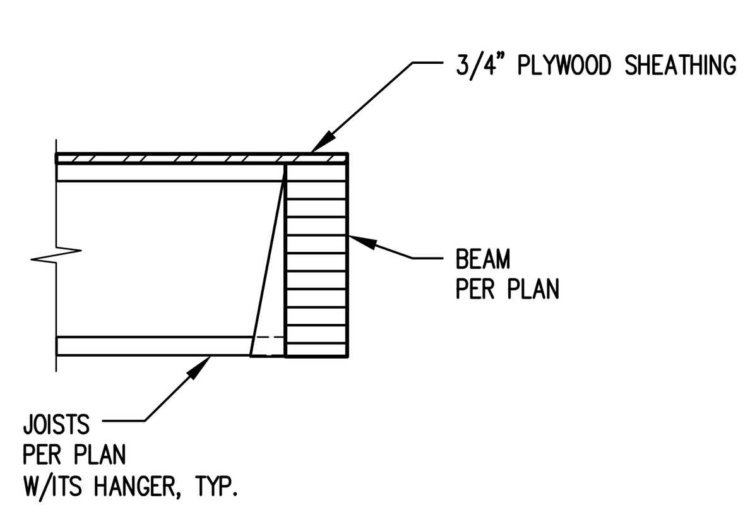
12 TYPICAL OVERFRAMING

TRUSS TO WALL CONNECTION OPTIONS

# OF TRUSS PLIES	CONNECTOR	TO TRUSS	TO TOP PLATES
1	H1	(6) 0.131" X 1.5"	(4) 0.131" X 2.5"
1	H2.5A	(5) 0.131" X 2.5"	(5) 0.131" X 2.5"
1	SDWC15600	–	–
2	H10–2	(9) 0.148" X 1.5"	(9) 0.148" X 1.5"
2	(2) H2.5A	(5) 0.131" X 2.5" EA.	(5) 0.131" X 2.5" EA.
2	(2) SDWC15600	–	–
3	(3) SDWC15600	–	–

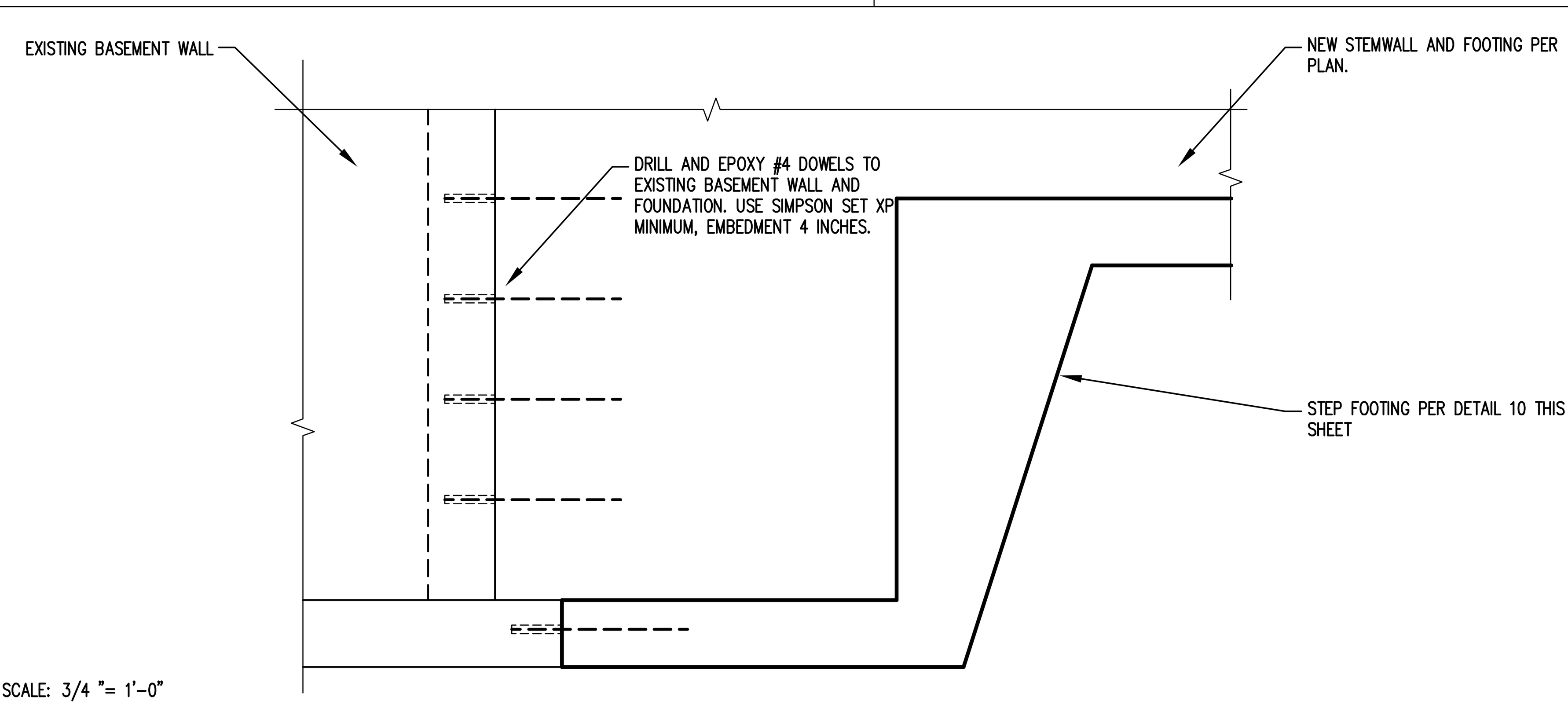


13 TYPICAL TRUSS TO WALL



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

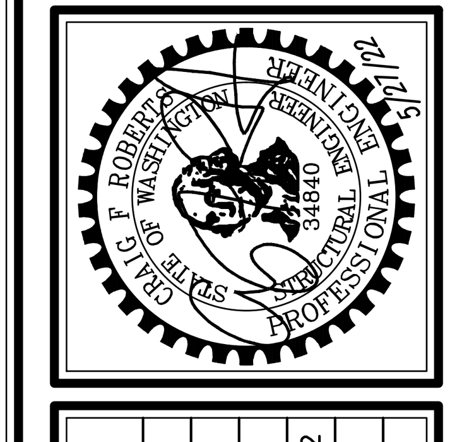
16 BEAM DETAIL



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

17 FOUNDATION CONNECTION TO EXISTING

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street Suite 302 Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)

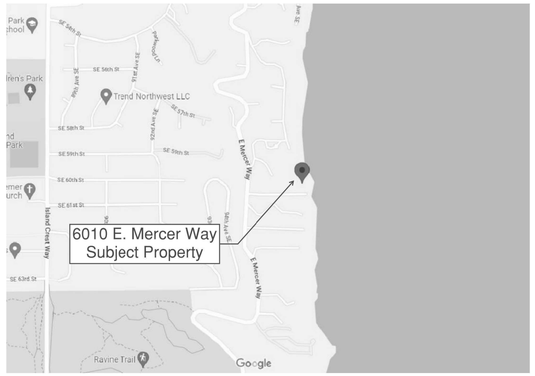


NO.	REVISION	DATE
	PERMIT SUBMITTAL	05/27/22
ENGR: ENG	CAD: CAD	DATE:05/27/22 FILE: 07 JOB #: 22055

Structural Details
ALEXANDER RESIDENCE
6010 E MERCER WAY
Mercer Island, Washington 98040

S6.00

A PORTION OF THE SE 1/4 OF THE SE 1/4 OF SEC. 19, TWP 24 N., RNG. 5 E., W.M.
KING COUNTY, STATE OF WASHINGTON



N

VICINITY MAP (NTS)

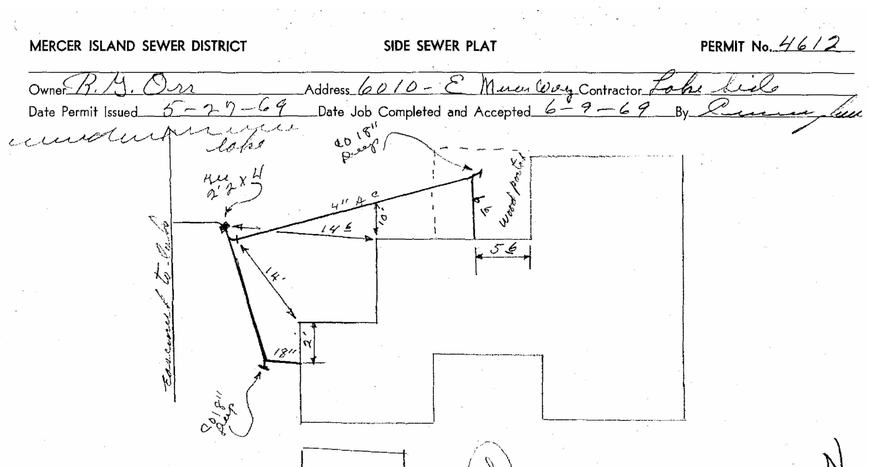
WATER NOTES:

WATER INFO PROVIDED BY AND AS RECORDED BY CITY OF MERCER ISLAND WATER AS-BUILT / FIELD SURVEY FOR PROJECT WW523R - WATER SYSTEM IMPROVEMENTS EMW 5400 TO 6000 BLOCK DATED 6-14-18 AND INCLUDED ON THIS PAGE

MERCER ISLAND SEWER DISTRICT — SIDE SEWER PLAT — PERMIT No. 4612

Owner R.G. Orr — Address 6010 - E Mercer Way — Contractor Lake Side

Date Permit Issued 5-27-69 — Date Job Completed and Accepted 6-9-69 — By [illegible]



1. Commercial or Domestic _____ Joint _____
2. Dist. from property line to sewer main _____
3. Dist. from house bldg. line to property line _____
4. Min. grade from main to property line _____ From property line _____
5. Dist. of M. H. No. _____ to Wye _____
6. Depth of sewer main to wye _____
7. Basement _____ Basement connection _____
8. Depth of pipe at house connection _____
9. Type of pipe 4" C. Size of pipe 4" _____
10. Remarks _____

COMMERCIAL ONLY

1. Name _____
2. Type _____
3. Frontage _____
4. No. of Floors _____
5. Remarks _____

PERMIT No. _____

SEWER AS-BUILT INFO 1969

CITY OF MERCER ISLAND
Water As-Built / Field Survey

JOB # WW523R
PROJECT: WATER SYSTEM IMPROVEMENTS
EMW 5400 TO 6000 BLOCK

Type of As-Built (check one): ☐ New Water Service ☒ Service Line Replaced ☐ Service Line Repair ☐ Main Line Repair

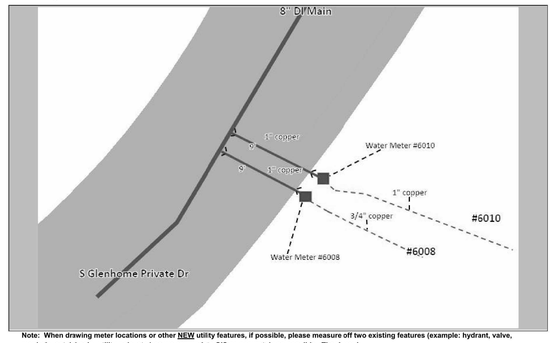
Homeowner's Name: ALEXANDER — Date: 6-14-18 — Work Order: 6567
Address: 6010 EMW — Map Page: _____ — Permit: _____
Contractor's Name: B&B UTILTIES
Pavement Type: ASPHALT — Area Cut: _____
Main Size: 8" — Type: AC: ___ DI: X CI: ___ PVC: ___ STL: ___
Depth of Line: 4' — Service Line Size: 1" — Service Line Material: COPPER
Main Line Location: 1' ACTUAL 8' EAST OF THE EDGE OF SOUTH GLEN HOME
Main Line Condition: NEW 8" CLASS 52 DUCTILE IRON
Supply Line Size: 3/4" — Supply Line Material: COPPER
Meter Location: 2' OFF WEST EDGE OF S GLEN HOME
Old Meter Number: 31970800 — Size: 3/4" — Make: SENSUS
New Meter Number: 11201353 — Size: 3/4" — Make: MASTER METER
MXU: _____ — REG: _____
Comment: OLD METER READ 4615

(Turn Page Over for Map)

Please Return Form to GIS: Leah Llamas.

Definitions: Service Line = Main to Meter — Supply Line = Meter to House

Sketch Map Below:



Note: When drawing meter locations or other NEW utility features, if possible, please measure off two existing features (example: hydrant, valve, manhole, catch basin, utility pole, etc.) so we can update GIS as accurately as possible. Thank you!

WATER AS-BUILT INFO 2018

CITY OF MERCER ISLAND
WATER DEPARTMENT
FIELD SURVEY - METER & TAP LOCATION

W.O 10[illegible]240

Address 6010 E. Mer. Way
Legal Description leak
Lot _____ Block _____ in _____ Addition
Date installed 8/15/84 New (work service) Order No. _____
Pavement (width & type) 16' blacktop road
Main (size & location) 6" C.I 3' deep 5' North East of road.
Location of Tap Same 1" Copp. 3' deep 5' North east of road.
Material (size & type) 1" Copper. 26' Copper
Meter Location Same
Original Meter No. 31970800 Size 1" Make R.W
City # 7440 — Redd. 267

WATER AS-BUILT INFO 1984

Developing Services
Construction and Real Estate Development Consulting
Chris@developingsvcs.com
206.280.3278

#	ISSUE	DATE
	Submittal set	3/25/23

TITLE BLOCK / DESCRIPTION

EXISTING UTILITY/AS-BUILTS

ALEXANDER RESIDENCE & RENOVATION
6010 E. MERCER WAY
MERCER ISLAND, WA 98040
PARCEL#192405-9206

JURISDICTION / PROJECT # / STAMP

CITY OF MERCER ISLAND

SHEET/TITLE

(E) UTILITIES

C0.1

A PORTION OF THE SE 1/4 OF THE SE 1/4 OF SEC. 19, TWP 24 N., RNG. 5 E., W.M.
KING COUNTY, STATE OF WASHINGTON

SIDE SEWER CONNECTION TO LAKE LINE & BACKFLOW VALVE REQUIRMENTS

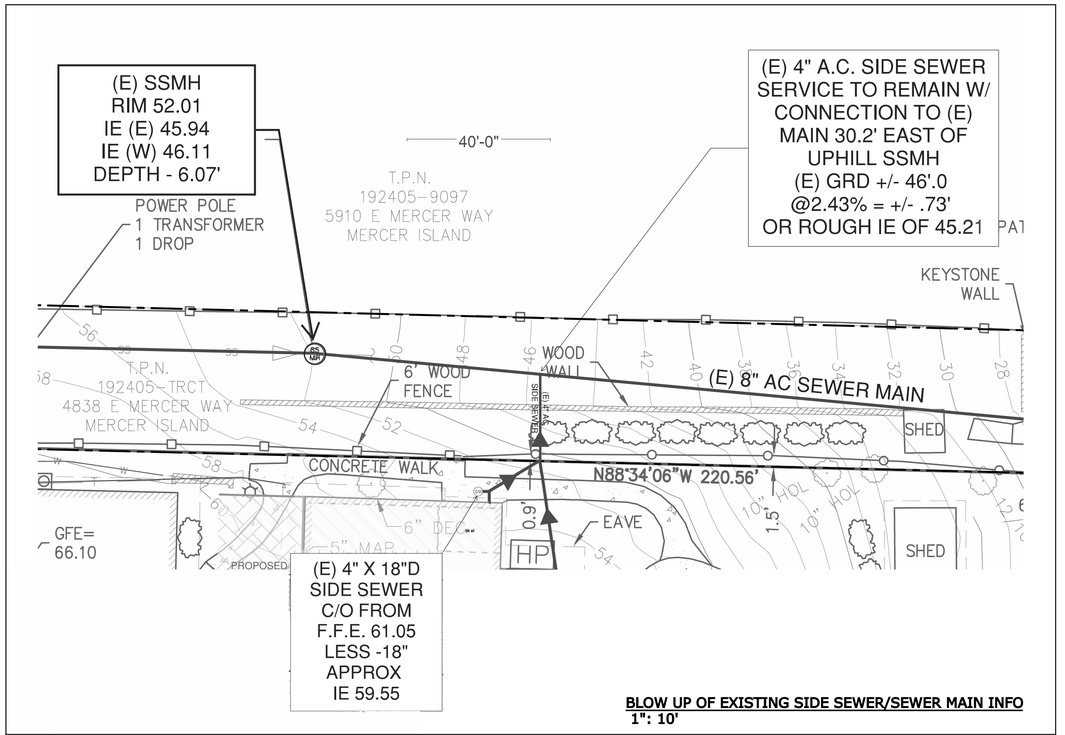
As our Side Sewer is NOT a direct connection to the Lake Line, CoMI details S23-S26 are not applicable. Per CoMI/Kevin Nguyen - as long as the upstream manhole (from side sewer) is lower than the lowest fixture within the SFR, existing conditions are suitable and a backflow device is not required.

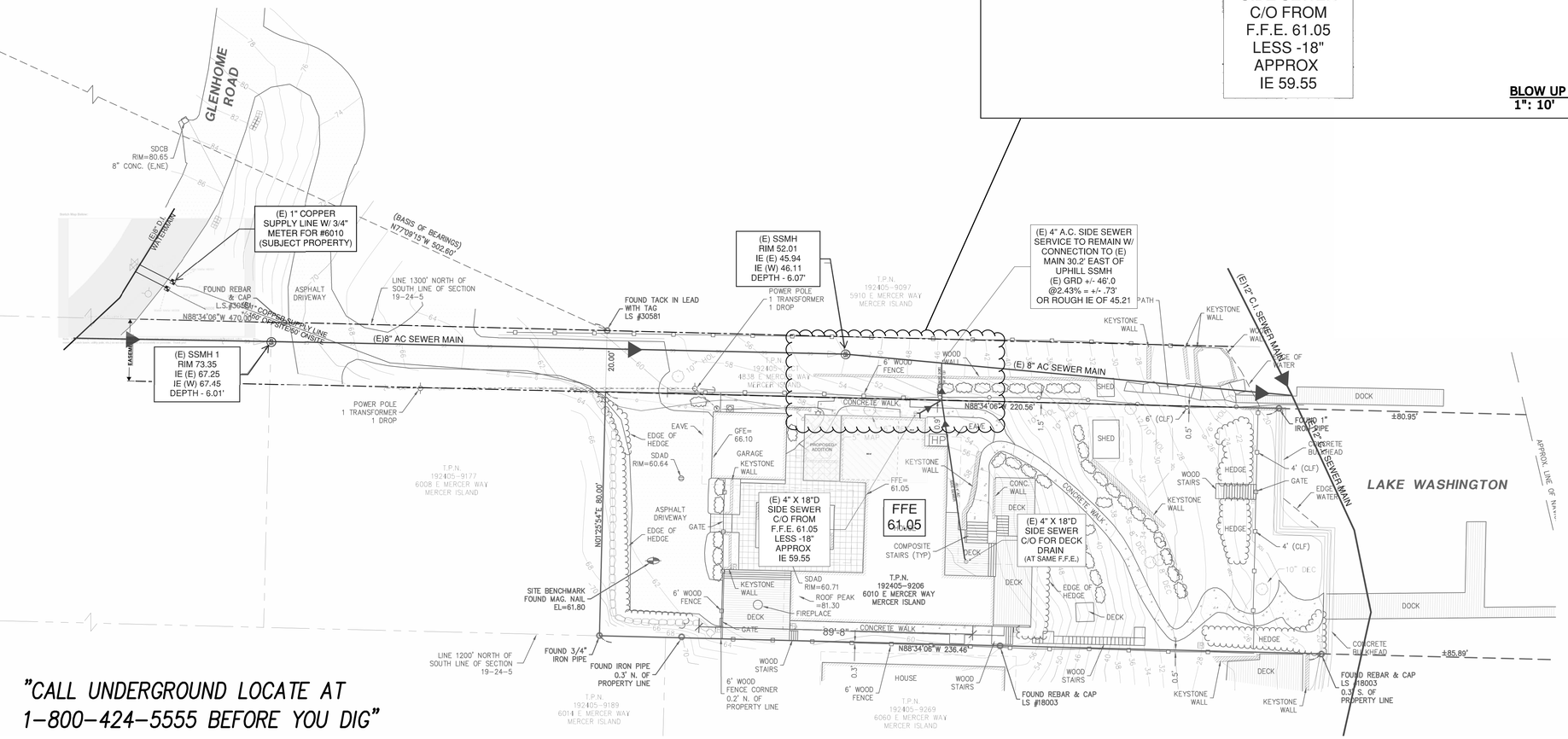
Upstream manhole info:
Rim52.01
IE (E)45.94
IE (W) 46.11

Existing SFR / Side Sewer:

SS Tap IE at public main	+/- 45.21
C/O IE at entrance to SFR	59.55 (18" below F.F./GRADE)
SFR main finish floor elevation	61.05 (+/- 15' above upstream MH)

With the line entering the SFR at +/- 59.55 in elevation, and no connections exist below this POC into the SFR, no backflow valves are required for the private sewer portion of this residence.





"CALL UNDERGROUND LOCATE AT 1-800-424-5555 BEFORE YOU DIG"

Developing Services
Construction and Real Estate Development Consulting
Chris@developingsvcs.com
206.280.3278

#	ISSUE	DATE
	Submittal set	3/25/23

TITLE BLOCK / DESCRIPTION

EXISTING SEWER / BACKFLOW REQUIREMENT DISCUSSED

ALEXANDER RESIDENCE & RENOVATION
6010 E. MERCER WAY
MERCER ISLAND, WA 98040
PARCEL#192405-9206

JURISDICTION / PROJECT # / STAMP

CITY OF MERCER ISLAND

SHEET/TITLE

(E) SEWER

C1.0

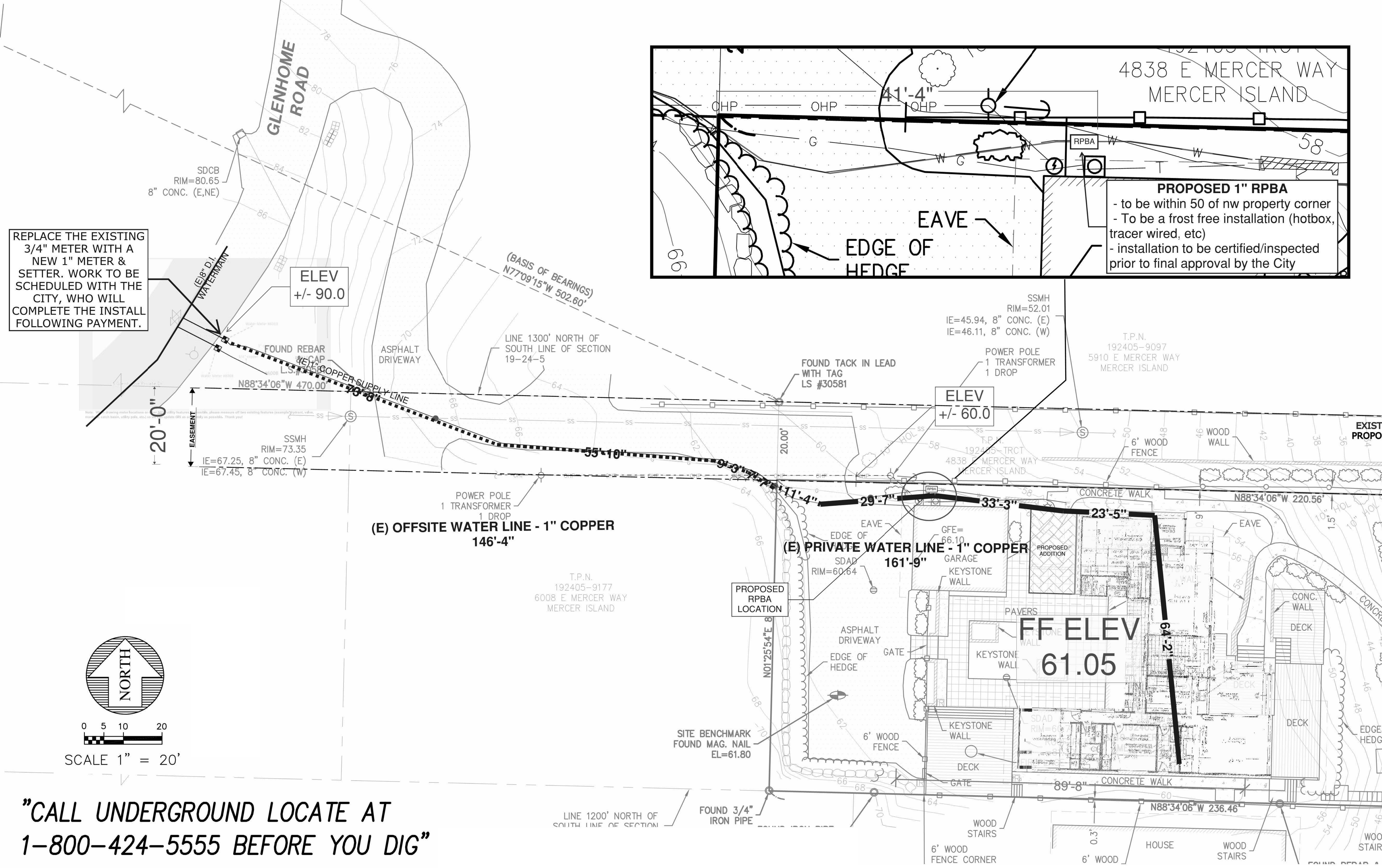


TABLE 610.4
FIXTURE UNIT TABLE FOR DETERMINING WATER PIPE AND METER SIZES

METER AND STREET SERVICE (inches)	BUILDING SUPPLY AND BRANCHES (inches)	MAXIMUM ALLOWABLE LENGTH (feet) 40	60	80	100	150	200	250	300	400	500	600	700	800	900	1000
PRESSURE RANGE – 30 to 45 psi[1]																
¾	½[2]	6	5	4	3	2	1	1	1	0	0	0	0	0	0	0
¾	¾	16	16	14	12	9	6	5	5	4	4	3	2	2	2	1
¾	1	29	25	23	21	17	15	13	12	10	8	6	6	6	6	6
1	1	36	31	27	25	20	17	15	13	12	10	8	6	6	6	6
¾	1¼	36	33	31	28	24	23	21	19	17	16	13	12	12	11	11
1	1¼	54	47	42	38	32	28	25	23	19	17	14	12	12	11	11
1½	1¼	78	68	57	48	38	32	28	25	21	18	15	12	12	11	11
1	1½	85	84	79	65	56	48	43	38	32	28	26	22	21	20	20
1½	1½	150	124	105	91	70	57	49	45	36	31	26	23	21	20	20
2	1½	151	129	129	110	80	64	53	46	38	32	27	23	21	20	20
1	2	85	85	85	85	85	85	82	80	66	61	57	52	49	46	43
1½	2	220	205	190	176	155	138	127	120	104	85	70	61	57	54	51
2	2	370	327	292	265	217	185	164	147	124	96	70	61	57	54	51
2	2½	445	418	390	370	330	300	280	265	240	220	198	175	158	143	133
PRESSURE RANGE – 46 to 60 psi[1]																
¾	½[2]	7	7	6	5	4	3	2	2	1	1	1	0	0	0	0
¾	¾	20	20	19	17	14	11	9	8	6	5	4	4	3	3	3
¾	1	39	39	36	33	28	23	21	19	17	14	12	10	9	8	8
1	1	39	39	39	36	30	25	23	20	18	15	12	10	9	8	8
¾	1¼	39	39	39	39	39	39	34	32	27	25	22	19	19	17	16
1	1¼	78	78	76	67	52	44	39	36	30	27	24	20	19	17	16
1½	1¼	78	78	78	78	66	52	44	39	33	29	24	20	19	17	16
1	1½	85	85	85	85	85	85	80	67	55	49	41	37	34	32	30
1½	1½	151	151	151	151	128	105	90	78	62	52	42	38	35	32	30
2	1½	151	151	151	151	150	117	98	84	67	55	42	38	35	32	30
1	2	85	85	85	85	85	85	85	85	85	85	85	85	85	83	80
1½	2	370	370	340	318	272	240	220	198	170	150	135	123	110	102	94
2	2	370	370	370	370	368	318	280	250	205	165	142	123	110	102	94
2	2½	654	640	610	580	535	500	470	440	400	365	335	315	285	267	250
PRESSURE RANGE – Over 60 psi[1]																
¾	½[2]	7	7	7	6	5	4	3	3	2	1	1	1	1	1	0
¾	¾	20	20	20	20	17	13	11	10	8	7	6	6	5	4	4
¾	1	39	39	39	39	35	30	27	24	21	17	14	13	12	12	11
1	1	39	39	39	39	38	32	29	26	22	18	14	13	12	12	11
¾	1¼	39	39	39	39	39	39	39	39	34	28	26	25	23	22	21
1	1¼	78	78	78	78	74	62	53	47	39	31	26	25	23	22	21
1½	1¼	78	78	78	78	78	74	65	54	43	34	26	25	23	22	21
1	1½	85	85	85	85	85	85	85	85	81	64	51	48	46	43	40
1½	1½	151	151	151	151	151	151	130	113	88	73	51	51	46	43	40
2	1½	151	151	151	151	151	151	142	122	98	82	64	51	46	43	40
1	2	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85
1½	2	370	370	370	370	360	335	305	282	244	212	187	172	153	141	129
2	2	370	370	370	370	370	370	370	340	288	245	204	172	153	141	129
2	2½	654	654	654	654	654	650	610	570	510	460	430	404	380	356	329

EXISTING
PROPOSED

For SI units: 1 inch = 25 mm, 1 foot = 304.8 mm, 1 pound-force per square inch = 6.8947 kPa

Notes:
1 Available static pressure after head loss.
2 Building supply, not less than ¾ of an inch (20 mm) nominal size.

WATER SUPPLY FIXTURE UNITS
PER UPC TABLE C 303.2
FOR
ALEXANDER RESIDENCE-RENOVATION/ADDITION
6010 E MERCER WAY - MERCER ISLAND, WA

ANALYSIS BY
D.R. YAEGER PLUMBING LLC
LIC# DRYAERY783NA
509-710-6969

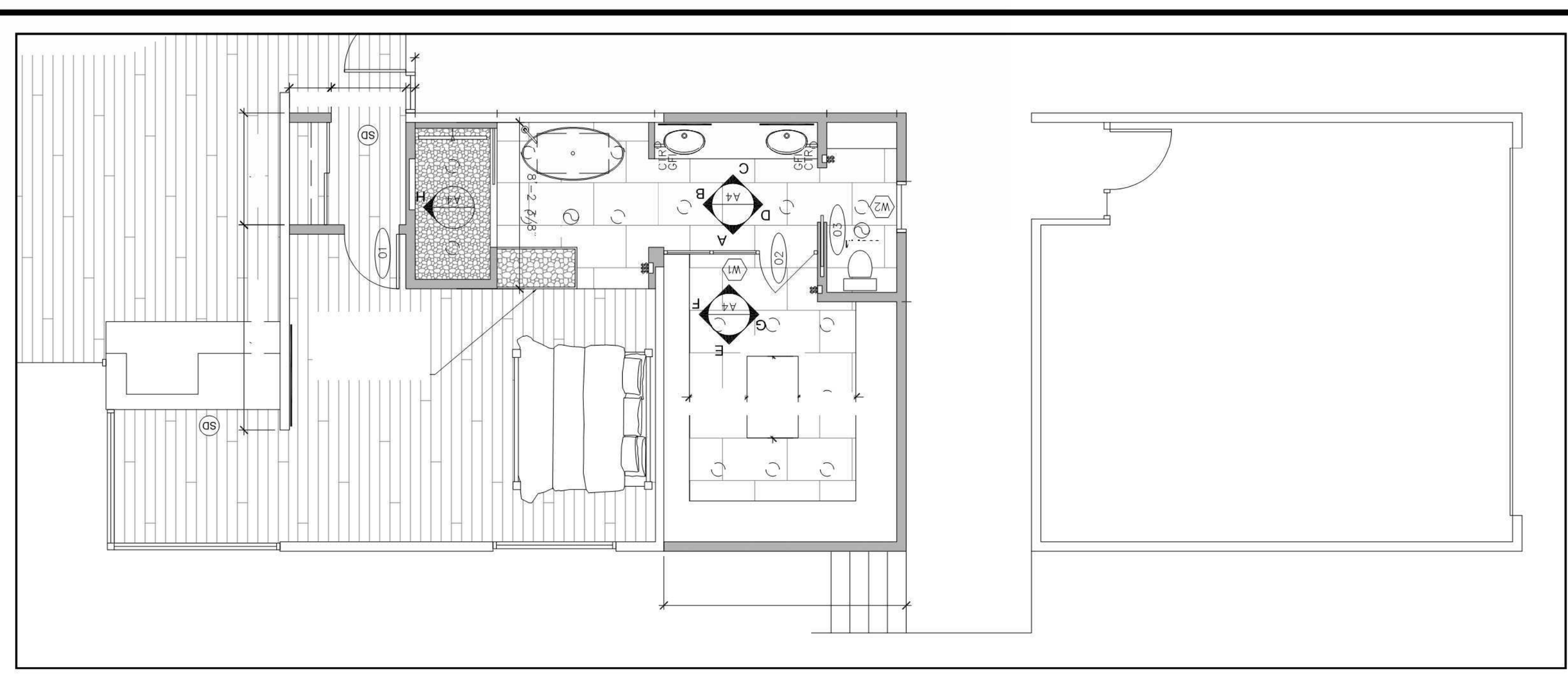
TABLE C 303.2
WATER SUPPLY FIXTURE UNIT (WSFU) FOR BATHROOM GROUPS[1, 2]

	PRIVATE USE BATHROOM GROUP		SERVING 3 OR MORE PRIVATE USE BATHROOM GROUPS	
	COLD	HOT[3]	COLD	HOT
Bathroom Groups Having up to 1.6 GPF Gravity-Tank Water Closets				
Half-Bath or Powder Room	3.5	0.8	2.5	0.5
1 Bathroom Group	5.0	2.5	3.5	1.8
1½ Bathrooms	6.0	2.5	—	—
2 Bathrooms	7.0	3.5	—	—
2½ Bathrooms	8.0	3.6	—	—
3 Bathrooms	9.0	4.5	3	3
Each Additional ½ Bath	0.5	0.1	—	—
Each Additional Bathroom Group	1.0	0.5	—	—
Bathroom Groups Having up to 1.6 GPF Pressure-Tank Water Closets				
Half-Bath or Powder Room	3.5	0.8	2.5	0.5
1 Bathroom Group	5.0	2.5	3.5	1.8
1½ Bathrooms	6.0	2.5	—	—
2 Bathrooms	7.0	3.5	—	—
2½ Bathrooms	8.0	3.6	—	—
3 Bathrooms	9.0	4.5	—	—
Each Additional ½ Bath	0.5	0.1	—	—
Each Additional Bathroom Group	1.0	0.5	—	—
Bathroom Group (1.6 GPF Flushometer Value)	6.0	2.5	4.0	1.7
Kitchen Group (Sink and Dishwasher)	2.0	2.0	1.5	1.5
Laundry Group (Sink and Clothes Washer)	5.0	5.0	3.0	3.0
Count			13.5	14.5
Combined Total			28.0	

Notes:
1 A bathroom group, for this table, consists of one water closet, up to two lavatories, and either one bathtub or one shower.
2 A half-bath or powder room, for this table, consists of one water closet and one lavatory.
3 Multi-unit dwellings with individual water heaters use the same WSFU as for individual dwellings.

SIGNATURE 3/24/2023 DATE

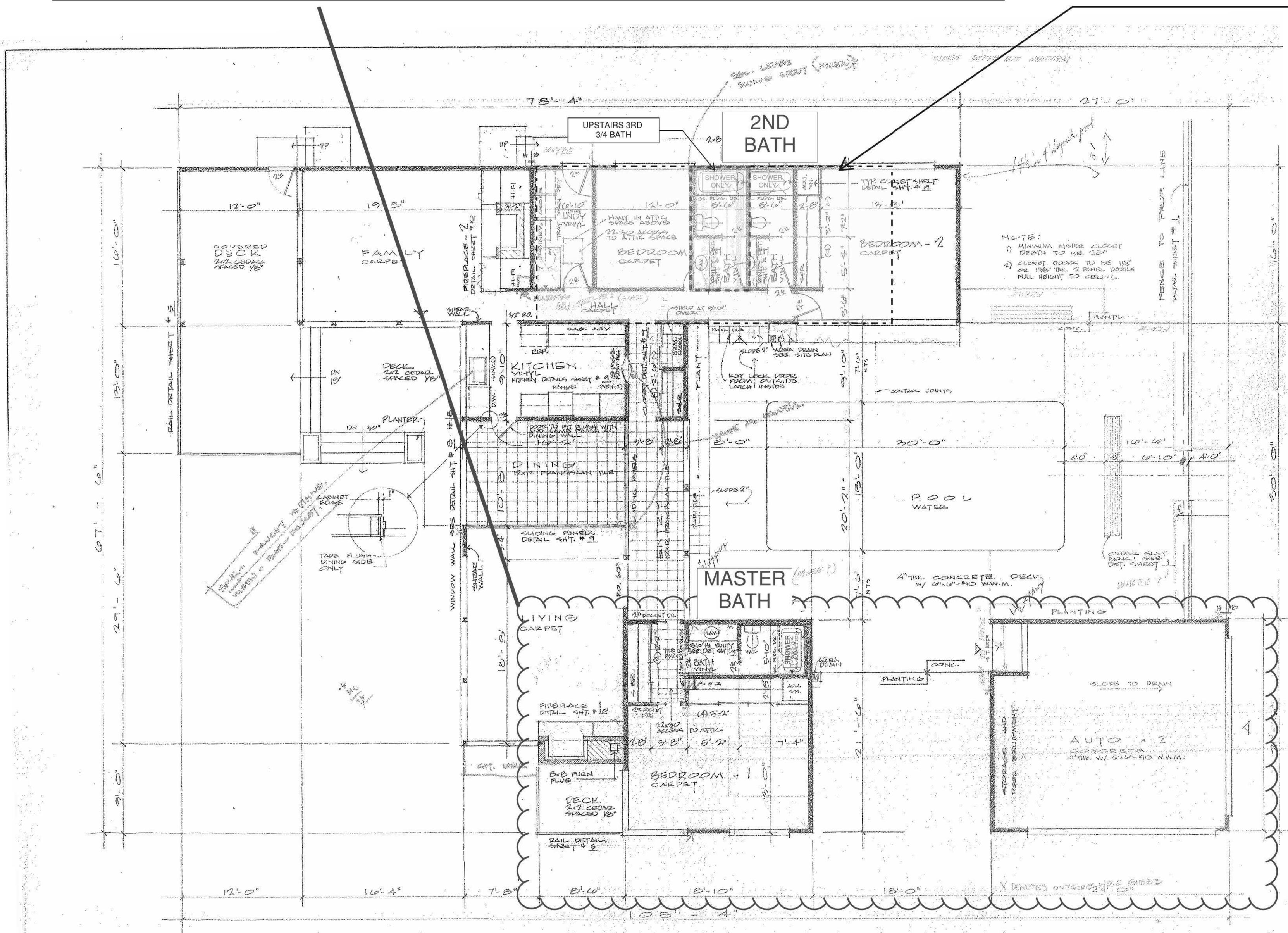
DAN YAEGER - OWNER
NAME/TITLE



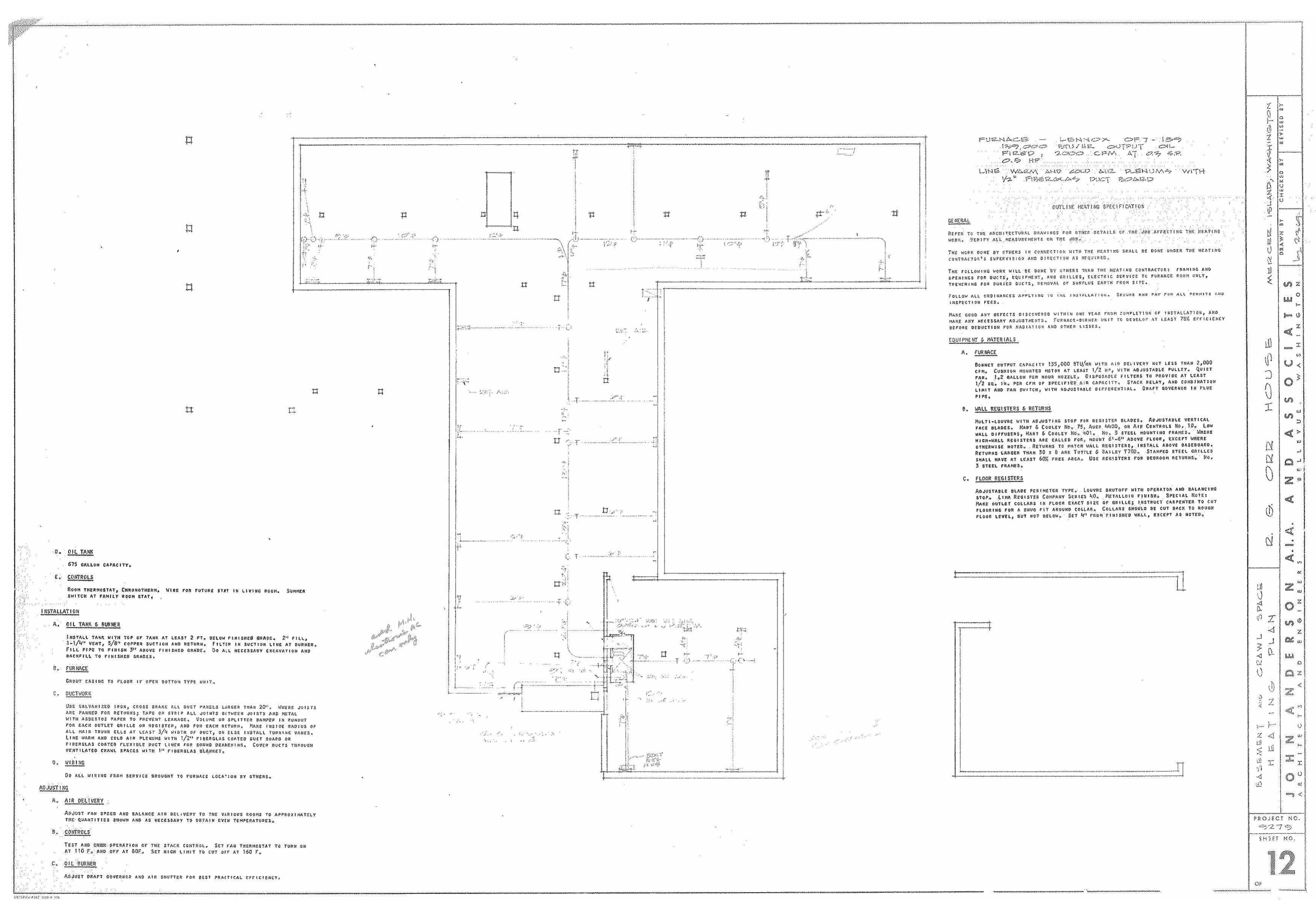
(N) BATH REMODEL/RENOVATION BASE PLAN

N.T.S. FOR REF ONLY

*3RD BATH IS IN ADDITION ABOVE BATH 2 AND WITH SAME LAYOUT/SHOWER SETUP



(E) MAIN LEVEL



(E) BASEMENT LEVEL - UNOCCUPIED/STORAGE

CITY OF MERCER ISLAND
COMMUNITY PLANNING & DEVELOPMENT
9611 SE 36TH STREET | MERCER ISLAND, WA 98040
PHONE: 206.275.7605 | www.mercergov.org
Inspection Requests: Online: www.mybuildingpermit.com VM: 206.275.7730

Residential Water Meter Sizing Worksheet

Owner's Name: Deborah Alexander	Main Permit #
Site Address: 6010 E Mercer Way Mercer Island, WA 98040	Water Permit #

Fixture Type	Number of Fixtures: New (For replacement, list as existing)	Existing	Total Fixtures	Fixture Units	Total Units
Bathtub or Combination Bath/Shower			0	x 4	= 0.00
3/4" Bathtub Fill Valve (Soaker Tubs)	1		1	x 10	= 10.00
Shower (per head)		3	3	x 2	= 6.00
Sink	1	3	4	x 1	= 4.00
Toilet		3	3	x 2.5	= 7.50
Bidet			0	x 1	= 0.00
Kitchen Sink		1	1	x 1.5	= 1.50
Dishwasher		1	1	x 1.5	= 1.50
Bar Sinks & Ice Makers			0	x 1	= 0.00
Clothes Washer		1	1	x 4	= 4.00
Laundry Sink		1	1	x 1.5	= 1.50
Drinking Fountain			0	x 0.5	= 0.00
Hose Bibs (first)		1	1	x 2.5	= 2.50
Each additional		2	2	x 1	= 2.00
Lawn Sprinkler Irrigation/per head			0	x 1	= 0.00
Other:			0	x 0	= 0.00
*BATH 2&3 REVSED TO 3/4 NOT FULL BATHS (SHOWER ONLY)				TOTAL UNITS	= 40.50

For Official Use Only

REQUIRED SERVICE SIZE
Requirements are based per 2015 U.P.C., Chapter 6, Table 610.4

Existing Meter Size:	Meter Number:
Upsize: ☐ Yes ☐ No If yes the code requires:	☐ 5/8" ☐ ¾" ☐ 1" ☐ 1 ½" ☐ 2" ☐ Larger:
Map Page & Hydrant #:	Required Supply Line Size:
Distance from meter to farthest Fixture outlet (in feet):	Required Service Line Size: (from water main to meter)
Known Static Pressure: (Otherwise use 65lb/in)	*REQUIRED METER SIZE:
Height difference (in feet):	** Pressure Reducing valve required: ☐ Yes ☐ No
Minus if Building Higher – x .5	
Building Design P.S.I.	

*Meter installation ***DEPOSIT*** for these items. Additional charges may be incurred for time and materials
**Pressure Reducing valve is required if the known water pressure is in excess of 80 psi.

Developing Services
Construction and Real Estate Development Consulting
Chris@developingsvcs.com
206.280.3278

This drawing is for informational purposes only. Developing Services, and its author, make no representation, neither legal nor implied, about the accuracy of the measurements, representations or data, presented herein

#	ISSUE	DATE
	Submittal set	3/25/23

TITLE BLOCK / DESCRIPTION

FIXTURE COUNT EXHIBIT / UPC TABLE C ALTERNATE BY GROUP

ALEXANDER RESIDENCE & RENOVATION
6010 E. MERCER WAY
MERCER ISLAND, WA 98040
PARCEL#192405-9206

JURISDICTION / PROJECT # / STAMP

CITY OF MERCER ISLAND

SHEET/TITLE

WATER

C2.0