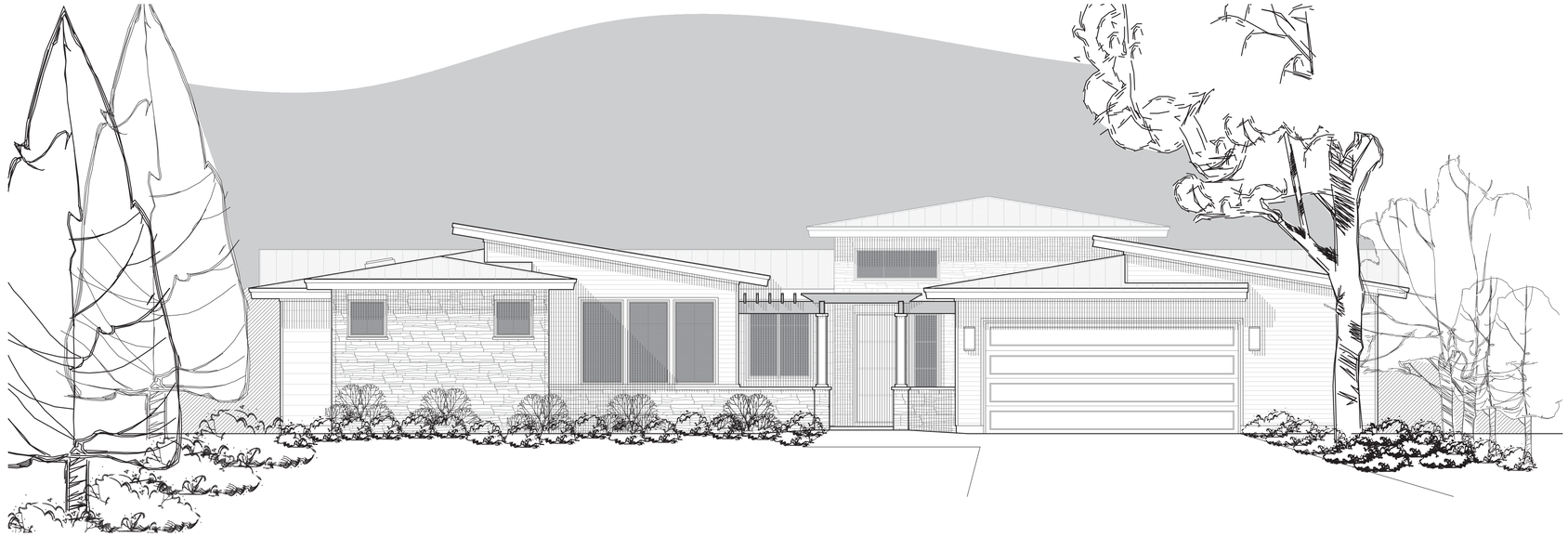
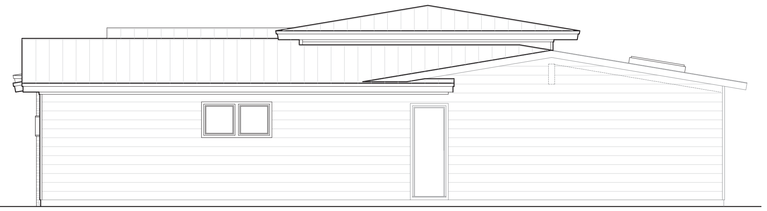
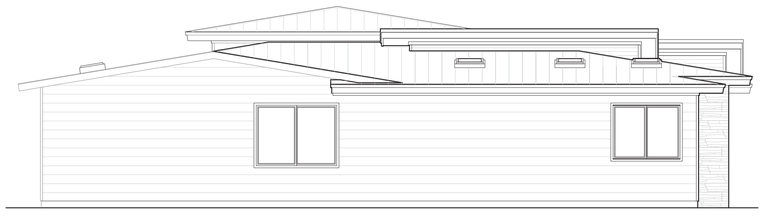




Side Elevation

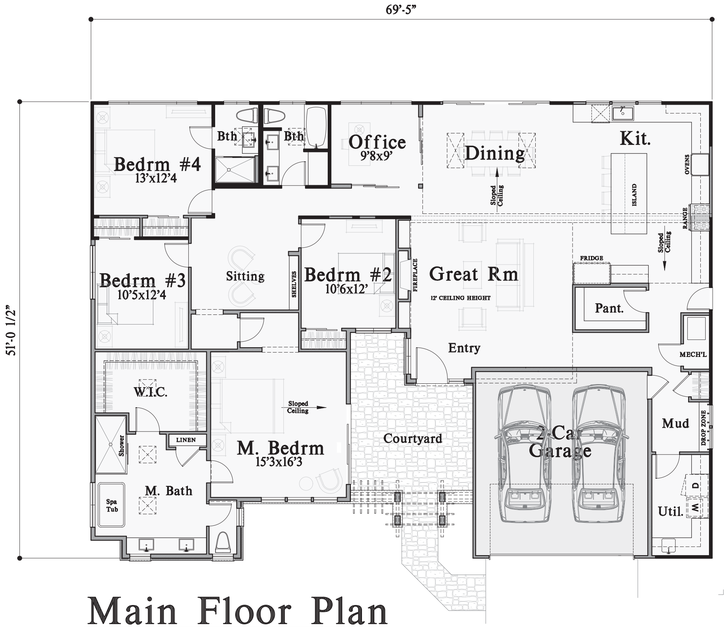


Side Elevation

Rear Elevation

Lee Remodel

8904 SE 58th St Mercer Island, WA



Main Floor Plan

SQUARE FOOTAGE

UPPER FLR	N/A SF	N/A SF
MAIN FLR	1854 SF	2748 SF
LOWER FLR	N/A SF	N/A SF
TOTAL	1854 SF	2748 SF
UNFINISHED	N/A SF	N/A SF
GARAGE	459 SF	407 SF
CVRD PORCH	SF	SF
CVRD PATIO	SF	SF

DRAWING INDEX

REGISTERED ARCHITECT JAMES A. LEE STATE OF WASHINGTON 8979
ORIGINAL SIGNATURE REQUIRED

Date	By		Description
8-8824	REV	PERMIT SET	

Lee Remodel
8904 SE 58th St Mercer Island, WA

ARCHITECTURAL INNOVATIONS, P.S.
Forward Thinking Design Solutions For Your Environment
14311 SE 16th St
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TITLE

JOB NO. : 24000.05
STARTING NO. : 24000.03

SHEET

COVER SHEET

Division 1
GENERAL REQUIREMENTS

Ø1000 GENERAL

1. This coversheet has been prepared in a generic outline form following the standards set by the Construction Standards Institute (CSI). It is for the convenience of the Contractor/Owner. This outline is intended to work with a material selection list following the (CSI) format. Not all items are necessarily required to complete this specific project. Coordinate with Contractor/Owner for complete listing of specifications. Within this coversheet it will state, 'Coordinate with materials finish selection schedule'.

2. These drawings are copyrighted. ARCHITECTURAL INNOVATIONS P.S. retains all rights, ownership and copyright, of this design under the federal copyright act. Reproductions of illustrations or working drawings in any form is by authorization of ARCHITECTURAL INNOVATIONS P.S. only.

3. Authorized reproductions must bear the name of ARCHITECTURAL INNOVATIONS P.S.

4. Construction/working drawings by their very nature are diagrammatic and do not purport to show all details or conditions of construction. Questions generally arise to the architectural/design intent and to construction technical detailing within these drawings. As clarifications, interpretations, and revisions are all part of the construction process, ARCHITECTURAL INNOVATIONS P.S. therefore shall not be liable for any direct, indirect, or consequential damages as a result of not participating in the construction process.

5. Do not vary or modify the work shown, except with written instruction from ARCHITECTURAL INNOVATIONS P.S. Report discrepancies and/or omissions to the architect immediately.

6. Due to the nature of construction and the building process there will be bidder design and Contractor/Owner selection of the building products, components, and assemblies. This set of working drawings is considered a 'builder set' and does not include specifications or building materials list. Therefore it is the Contractor/Owners responsibility to provide and coordinate specifications, including product selection and installation or assembly. ARCHITECTURAL INNOVATIONS P.S. assumes no liability or responsibility for discrepancies or conflicts which occur through Contractor/Owner specified materials and their respective installation. ARCHITECTURAL INNOVATIONS P.S. assumes no liability or responsibility for any items, which may be called out or referred to by manufacturer as brand name. Items called out are done so for convenience only.

7. Do not scale these drawings for critical dimensions. Verify all dimensions and datum's before commencing work and be responsible for their accuracy. Report discrepancies and/or omissions to the architect immediately.

8. The Contractor/Owner is responsible for coordinating work with all trades to ensure proper and adequate interface of all trade works. The contractor shall be responsible for all required safety precautions and procedures required to do this work.

9. Except as specifically defined otherwise, interpretation for all definitions, abbreviations, and supplemental definitions shall follow accepted referenced standards.

10. All work within this contract shall represent that of industry standards for the respective trades in the location in which the project is built.

All references to I.R.C, I.B.C, and W.S.E.C are references to the 2021 code updates & WA state Amendments.

Ø1001 MISCELLANEOUS ASSEMBLY REQUIREMENTS

1. Provide crawl space access, minimum 18" x 24" unobstructed access through the floor, 16" x 24" through perimeter walls and below grade access, per I.R.C. section R408.4. Insulate and weather-strip per W.S.E.C R402.2.4. Allow 18" minimum space under wood joists and 12" minimum space under wood girders.
2. Provide attic access, minimum 22" x 30" with 30" minimum headroom, at unobstructed readily accessible opening per I.R.C. section R807.1. Insulate and weather-strip per W.S.E.C R402.2.4. requirements.
3. Provide ventilation per I.R.C. as follows:
   A) Crawl space ventilation. Minimum net area shall be not less than 1 s.f. per 300 s.f. under floor area. Required openings shall be evenly placed to provide cross ventilation of the space except one side of the building shall be permitted to have no ventilation openings per section R408.2.
   B) Attic ventilation. Minimum net area shall be not less than 1 s.f. per 150 s.f. of attic area or 1 s.f. per 300 s.f. of attic area if at least 40 percent, and not more than 50 percent, of the required ventilating area is provided by ventilators located in the upper portion of the space to be ventilated, and is no more than 3 feet below the ridge or highest point of the space. The balance of required ventilation to be provided by eave or cornice vents per I.R.C. section R806.2 and W.S.E.C. requirements.
4. Slope all decks, walks, driveways, exterior door landings, and patios away from building. Minimum 1/4" per foot.
5. Provide approved numbers or addresses in such a position as to be plainly visible and legible from the street or road fronting the property per I.R.C. section R319.1.
6. Garage/House separation:
   A) Garage ceilings separating attic spaces shall be protected with 1/2" GWB. When garages are beneath habitable rooms, the ceilings shall be covered with 5/8" type 'x' GWB on the garage side. Where the separation is a floor/ceiling assembly, the structure shall be protected with 1/2" GWB, per I.R.C. table R302.6.
   B) Door between garage and house shall be a self closing solid wood core, honeycomb core steel, or 20-minute fire rated door having a minimum thickness of 1-3/8" per I.R.C. section R302.5.1.
   C) Ducts in the garage and ducts penetrating the walls or ceilings separating the dwelling from the garage shall be constructed of a minimum No. 26 gage sheet steel or other approved material and shall have not openings into the garage per I.R.C. R302.5.2.
   D) Garage floor shall slope to facilitate the movement of liquids to a drain or toward the main vehicle entry doorway.
7. Stair assembly:
   A) Minimum headroom height 6'-8" per I.R.C. section R311.7.2.
   B) Minimum stair tread depth 10" with a 36" minimum width, measured above handrail height. Maximum riser height 7-3/4" per I.R.C. sections R311.7.5 & R311.7.6.
   C) Top of handrail shall be 34" minimum and 38" maximum above tread nosing and not less than 1-1/2" from the wall. Return rail ends to wall per I.R.C. section R311.7.8.
   D) Install fire blocking between stringers at the top and bottom of each run per I.R.C. section R302.11.
   E) Cover usable space under stairs with 1/2" GWB per I.R.C. section R302.7.
8. Laundry Chutes & Dumbwaiter Shafts - provide 5/8" type 'x' GWB or 26 gage sheet metal with lock joints on all openings to shaft surfaces shall be self closing solid core door 1-3/8".
9. Fireblocking shall be provided in wood-frame construction in the following locations:
   A) In concealed spaces of stud walls and partitions, including furred spaces and parallel rows of studs or staggered studs, as follows:
      1. Vertically at the ceiling and floor levels.
      2. Horizontally at intervals not exceeding 10' feet.
   B) At all interconnections between concealed vertical and horizontal spaces such as occur at soffits, drop ceilings and cove ceilings.
   C) In concealed spaces between stair stringers at the top and bottom of the run. Enclosed spaces under stairs shall comply with Section R302.7.
   D) At openings around vents, pipes, ducts, cables and wires at ceiling and floor level, with and approved material to resist the free passage of flame and products of combustion.
   E) For the fireblocking of chimneys and fireplaces, see Section R1003.19.
   F) Fireblocking of cornices of a two-family dwelling is required at the line of dwelling unit separation.
10. Fireblocking shall consist of the following materials per I.R.C. R302.11.
   A) 2" nominal lumber.
   B) Two thickness of 1" nominal lumber with broken lap joints.
   C) One thickness of 23/32" wood structural panels with joints backed by 23/32" wood structural panels.
   D) One thickness of 3/4" particleboard with joints backed by 3/4" particleboard.
   E) One 1/2" gypsum board.
   F) One 1/4" cement-based millboard.
   G) Batts or blankets of mineral wool or glass fiber or other approved materials installed in such a manner as to be securely retained in place.
11. Structural design criteria: These notes are provided for convenience only and do not imply that complete structural analysis has been done on this structure.
   A) Live Loading: (U.N.O.)
      Top chord live load: 25psf
      Top chord dead load: 7psf
      (15 psf, if tile)
      Bottom chord live load: 10psf without storage
      20psf if limited storage
      30psf if sleeping room
      TOTAL LOAD: 42psf
      or 52psf
      or 62psf
   B) Roof live load: 25 psf (U.N.O.)
   C) Floor live load: 40 psf (U.N.O.) Deck Live Load 60 psf U.N.O.
   D) Stair and corridor live load: 40 psf
   E) Mechanical units: weights provided by manufacturer
   F) Wind: 110 mph (U.N.O.)
   G) Seismic Design Category: D(2) (U.N.O.)
   H) Allowable soil pressure: Unless a soils report by a qualified engineer is provided, all footings and foundations shall be on assumed 1500 psf bearing capacity unless otherwise noted on drawing.
   J) Equivalent fluid pressure 35 pcf. (U.N.O.)
   K) All footings to be located below the frost line depth 18" (U.N.O.)

Ø1002 MISCELLANEOUS ASSEMBLY REQUIREMENTS CONT.

12. Prefabricated Fireplaces and Solid Fuel Burning Appliances per I.M.C. and I.R.C. Chapter 10\:
   A) Solid fuel burning appliances include airtight stoves, fireplace stoves, room heaters/fireplace stoves, factory built fireplaces, and fireplace inserts, and all shall comply with the provisions of I.M.C.
   B) Metal Chimneys shall be enclosed above the story in which the appliance served is located, in walls having one hour fire resistance rating, and with a space on all sides between chimney and enclosing walls sufficient for examination and repair for entire chimney. Walls shall be without openings per I.M.C.
      C) Provide firestopping at chimney per I.R.C. section R302.11.
      D) Install metal fireplace with hearth and surrounds per manufacturers specifications.
      E) Prefabricated fireplaces, chimneys, and related components to bear U.L. or ICBO seal of approval and be installed per manufacturers requirements.
13. Fireblocking per I.R.C. sections R302.11.

Ø1060 REGULATORY REQUIREMENTS

1. All construction shall conform to the 2021 International Residential Code (I.R.C.), 2021 International Building Code (I.B.C.) 2021 International Fire Code (I.F.C.), 2021 International Mechanical Code (I.M.C.) 2021 Uniform Plumbing Code (U.P.C.), 2021 Washington State Energy Code (W.S.E.C.) and be in accordance with all State Laws and Regulations and various codes imposed by jurisdictional requirements and local authorities.
2. Arrange inspections that are mandatory due to jurisdictional requirements.

Ø1500 CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

1. Provide Temporary Facilities - including electricity, water, and temporary toilet, per jurisdictional requirements.
2. Provide Contemporary Controls - including erosion sediment and surface water control and entrapment during construction per jurisdictional requirements.

END DIVISION 1

Division 2
SITE WORK

Ø2200 EARTHWORK

Part 3 - Execution
1. Rough grading: 4" below finish grading unless otherwise specified.
2. Finish grading: Landscaping division Ø2900.
3. Excavation, backfilling, and compacting for structures as needed.
4. Excavation, backfilling, and compacting for pavement as needed.
5. Hauling and disposal of excavated material as needed.
6. Importing of material as needed.
7. Rock removal as needed.

Ø2500 PAVING AND SURFACING

Part 2 - Product
1. Walk, road, and parking paving:
   A. Asphalt 2", class B, over 3" crushed rock or 2" ATB.
   B. Crushed rock 5/8" minus.
   C. Concrete per Division 3:
      i. Finish and color:
         Coordinate with materials finish selection schedule.
2. Unit Pavers: i. Coordinate with materials finish selection schedule.
3. Pavement marking: i. Coordinate with materials finish selection schedule.

Ø2700 SEWAGE AND DRAINAGE

Part 2 - Product
1. Subdrainage systems:
   A. Foundation drainage 4" SDR 35 or sched. 40 rigid PVC perforated pipe embedded in pea gravel or clean crushed rock and wrapped in filter fabric.
2. Storm sewage systems:
   A. Exterior catch basins, grates, and frames:
      i. Coordinate with materials finish selection schedule.
   B. Culverts:
      i. Coordinate with materials finish selection schedule.
   C. Drain pipe: 4" ADS non-perforated tight line.
3. Sanitary sewage systems:
   A. Sewage collection lines 8" PVC unless cast iron is noted.
   B. Septic system: Per drawings of bidders designer.

Part 3 - Execution
1. Subdrainage system:
   A. Slope to drain and surround in well draining material per details.
2. Surface drainage per I.R.C. section R401.3.

Ø2800 SITE IMPROVEMENTS

Part 2 - Product
1. Irrigation system: Bidder design
      i. Coordinate with materials finish selection schedule.
2. Fences and gates:
      i. Coordinate with materials finish selection schedule.

Ø2900 LANDSCAPING

Part 2 - Product
Bidder Design

END DIVISION 2

Division 3
CONCRETE

Ø3100 CONCRETE FORMWORK

Part 3 - Execution
1. Formwork and bracing for structural cast-in place concrete shall be by subcontractor and meet the requirements of the drawings and industry standards.
2. All formwork shall be placed in such a manner as to allow cast-in place concrete to be placed on solid substrate and to allow structural support members to sit below the frost line.

Ø3200 CONCRETE REINFORCING

Part 2 - Product
1. Reinforcing steel: Deformed bar sizes and locations per plans and details. Grade 60, F_y' = 60ksi per I.R.C. section R404.1.3.3.7.1. Unless otherwise noted per Engineer.
2. Welded wire fabric: at locations per plans and details: 6x6, W1.4xW1.4WF.

Part 3 - Execution
1. A minimum lap for all bars shall be 40 diameters taken from the smallest bar. Provide corner bars to match horizontal reinforcement. Minimum coverage per details and I.R.C. section R402.2.3.3.7.5.

Ø3250 CONCRETE ACCESSORIES

Part 2 - Product
1. Anchor bolts: 1/2"ø triple zinc ZMAX (G185 per ASTM A653) hot dipped galvanized steel (ASTM 153 for Anchors), with a minimum 1" embedment, per I.R.C. section R403.1.6., unless otherwise noted per Engineer.
2. Washers: 3"x3"x1/4" sq. triple zinc ZMAX (G185 per ASTM A653) hot dipped galv. steel (ASTM 153 for Anchors), plate washers per I.R.C. section R602.11.1. Unless otherwise noted per Engineer.

Part 3 - Execution
1. Anchor bolts at 6'-0" o.c. max. for one story 4'-0" o.c. for buildings over two stories in height, 12" from corners and joints, with a minimum embedment of 7". Provide a minimum of (2) bolts per plate section per I.R.C. section R403.1.6.

Ø3300 CAST-IN-PLACE CONCRETE

Part 2 - Product
1. Structural concrete: Design f'c = 2500 psi min 5-1/2 sacks of cement per cubic yard of concrete and a maximum of 6.0 gallons of water per 94lb sack of cement at 28 days. Max slump is 4", segregation of materials to be prevented. Use f'c = 3000 psi concrete at 28 days with air entrainment only for concrete exposed to weather, in accordance with I.R.C. Table R402.2. Special inspection not required unless noted otherwise per Engineer.
2. Architectural concrete: for exposed aggregate finish (washed); f'c = 4000 psi at 28 days, with 3/8" round aggregate.

Ø3300 CAST-IN-PLACE CONCRETE (cont.)

3. Admixtures:
   A. All concrete shall have water reducing admixtures except for footings.
   B. Air entrainment shall be 5-7% in all concrete exposed to weather, I.R.C. Table R402.2
   C. Coloring agent:
      i. Coordinate with materials finish selection schedule.

Part 3 - Execution

END DIVISION 3

Division 4
MASONRY

Ø4100 MORTAR

Part 2 - Product
1. Type 'M' or 'S' mortar with integral waterproofing agent per I.R.C. section R606.2.8

Part 3 - Execution
1. Per I.R.C. section R606.2

Ø4150 MASONRY ACCESSORIES

Part 2 - Product
1. Anchors and Ties: To be corrosion-resistant metal ties per I.R.C. section R703.8.4.
2. Joint reinforcement: Standard strand no. 9 U.S. gage wire per I.R.C. section R703.8.
Part 3 - Execution
1. Per I.R.C. Chapter 7.

Ø4200 UNIT MASONRY

Part 2 - Product
1. Brick, stone:
   A. Exterior locations: name/mfg:
      i. Coordinate with materials finish selection schedule (by others).
   B. Interior locations: name/mfg:
      i. Coordinate with materials finish selection schedule (by others).
   C. Pavers/planters: name/mfg:
      i. Coordinate with materials finish selection schedule (by others).
2. Concrete masonry units: grade N-1 CMU, unless otherwise indicated sizes per drawings.
   A. Special units:
      i. Coordinate with materials finish selection schedule (by others).
3. Glass masonry units: (glass block) Per I.R.C. section R610.
   A. Exterior locations: name/mfg:
      i. Coordinate with materials finish selection schedule (by others).
   B. Interior locations: name/mfg:
      i. Coordinate with materials finish selection schedule (by others).

Part 3 Execution
1. Brick and Veneer:
   A. Brick veneer shall be supported on footings, foundation, or other non-combustible supports. It shall have 15# felt backing and No. 9 gauge, non corrosive ties at 1 per each 2 s.f. of veneer. Provide 1" minimum air space between veneer and backing. Provide approved flashing at base of veneer with 3/16" min. round weepholes at 33" o.c. max., located immediately above the flashing, extending from the air space to the exterior. Veneer shall support no load other than its own weight and the vertical dead load of veneer above. Provide angle iron support at doors, windows, and other openings per R606.10.
2. Concrete unit (CMU)
   A. Concrete masonry unit walls shall be constructed to conform to ASTM C90. It shall be laid up, reinforced, and anchored as shown on drawings.

Ø4400 STONE

Part 2 - Product
1. As shown on drawings.
   A. Exterior locations: name/mfg:
      i. Coordinate with materials finish selection schedule (by others).
   B. Interior locations: name/mfg:
      i. Coordinate with materials finish selection schedule (by others).

Part 3 Execution
1. Stone Veneer: Adhered per manufacturer's installation instructions and in accordance with I.R.C. R703.12.1
   A. On exterior stud walls, adhered masonry veneer shall be installed:
      1. Minimum of 4 inches above the earth.
      2. Minimum of 2 inches above paved areas, or
      3. Minimum of 1/2 inch above exterior walking surfaces which are supported by the same foundation that supports the exterior wall.
   B. Flashing at foundation:
      i. A corrosion-resistant screed or flashing of a minimum 0.019-inch or 26-gage galvanized or plastic with a minimum vertical attachment flange of 3½ inches shall be installed.

END DIVISION 4

DIVISION 5
METALS

Ø5050 METAL FASTENINGS

Part 2 - Product
1. Bolts: Use sizes and shapes per dwgs, or as needed for intended purposes. Bolts, nuts and cut washers of plain with treated wood to be triple zinc ZMAX (G185 per ASTM A653) hot dipped galvanized steel (ASTM 153 for Anchors).

Ø5500 METAL FABRICATION

Part 2 - Product
1. Handrails and guardrails: Provide in sizes and locations as shown per dwg.

END DIVISION 5

Division 6
WOOD AND PLASTICS

Ø6100 ROUGH CARPENTRY

Part 2 - Product
1. Framing Lumber: Framing lumber shall be marked in conformance with the United States Dept. of Commerce, Standard Reference No. PS 20 (DOC PS 20) standards. All Kiln dried minimum 15%.
   A. Joist and rafters: (2x6 and larger) Hem-Fir #2 or better.
   B. Beams and stringers: (4x and larger) Doug-Fir #2 or better.
   C. Post and timbers: Doug-Fir #.
   D. Studs, plates, and misc. light framing: Hem-Fir #2 or better.
   E. " I " Joists and Engineered beams: Per manufacturer.
   F. Glue laminated timber:
      1. Simple span: 24F - V4 DF/DF
      2. Continuous or cantilever: 24F - V8 DF/DF
   G. All other lumber: Hem-Fir Standard or better.
   H. Plywood/oriented strand board (OSB.): APA graded.
   I. Wall sheathing: see 'TYPICAL BUILDING MATERIALS' list on the dwgs.
   J. Floor sheathing: see 'TYPICAL BUILDING MATERIALS LIST'on the dwg.
   K. Other: As noted on drawings.
   L. All wood members in contact with exposed concrete to be pressure treated members.
2. Particle Board:
   A. Underlayment:
      1. Floors: 5/8" (U.N.O.)
      2. Sheet vinyl: 1/4" (U.N.O.) see division 9
      3. Cabinet surfaces 3/4" (U.N.O.)
3. Trusses:
   A. Prefabricated connector plate wood roof trusses shall be designed and stamped by the manufacturer in accordance with the 'design specification for metal plate connected wood trusses". Design drawings and details to be available upon request.
      B. See 'Roof Framing Notes" on drawings.
      C. Roof design, layout, loading, and bracing shall be by manufacturer.
      D. Field alterations of truss must be designed by manufacturer.
4. Fasteners and adhesives: All nails shall be common wire of sizes for intended purpose per I.R.C. table R602.3(1). Attach timber joists to flush headers and beams with Simpson 'U' hanger series or equal to suit intended purpose. Simpson connectors at other locations as outlined per drawings. Bolt heads, nuts, and cut washers per Division 5. Connectors and fasteners in contact with treated wood to be triple zinc ZMAX (G185 per ASTM A653) hot dipped galv. steel (ASTM 153 for Fasteners), stainless steel, silicone bronze, or copper as required per dwgs.
5. Post to not footing connection. Provide pressure treated post and positive connection to footing per I.R.C. section 507.3.
6. All exposed glue laminated wood, if not protected by a roof or eave, must be preservative-treated.

Part 3 - Execution
1. The following will apply unless shown on drawings. All wood framing details shall be constructed to the minimum standards in the I.R.C. All framing shall conform to the requirements of Chapters 5,6, and 8 of the I.R.C. Minimum nailing shall conform to table R602.3(1) of the I.R.C. Height and spacing of studs shall conform to table R602.3(5) of the I.R.C.

Ø6200 FINISH CARPENTRY

Part 2 - Product
1. Cabinets:
   A. Coordinate with materials finish selection schedule (by others).
2. Millwork and casing:
   A. Coordinate with materials finish selection schedule (by others).
3. Paneling:
   A. Coordinate with materials finish selection schedule (by others).
4. Stair and handrail by:
   A. Coordinate with materials finish selection schedule (by others).
   B. See division Ø6100.1 misc. assembly requirements.
5. Bookcases and built-in shelves:
   A. Coordinate with materials finish selection schedule (by others).
6. Plastic laminate and solid surface material:
   A. Coordinate with materials finish selection schedule (by others).

END DIVISION 6

Division 7
THERMAL AND MOISTURE PROTECTION

Ø7150 WATER PROOFING & DAMP PROOFING

Part 2 - Product
1. Per I.R.C. section R406.
Part 3 - Execution
1. Per I.R.C. section R406.

Ø7190 VAPOR AND AIR RETARDER

Part 2 - Product
1. Ground cover: 6 mil polyethylene: black, with 12" minimum lap.
2. Building wrap: see the 'TYPICAL BUILDING MATERIALS' list on the drawings.

Part 3 - Execution
1. See Division 17, Energy Requirements.

Ø7200 INSULATION

Part 2 - Product
1. Fiberglass or mineral wool batts, bloom mineral wool, and extruded polystyrene:
   A. Walls: 1. See the 'TYPICAL BUILDING MATERIALS' list on the dwgs.
   B. Ceiling: 1. See the 'TYPICAL BUILDING MATERIALS' list on the dwgs.
   C. Floor: 1. See the 'TYPICAL BUILDING MATERIALS' list on the dwgs.
   D. Slab on Grade: R-10 (per W.S.E.C. Table R402.1.1).
2. Insulating foam: A. Standard sealant foam.

Part 3 - Execution
1. See division 17: energy requirements
2. Foam insulation markers for blown-in or sprayed insulation every 300 sq ft. Markers shall face the attic access per IECC Sec 303.1.1)
3. Crawl Space/Cantilevered Floors: Insulation shall be installed to maintain permanent contact with the underside of the sub-floor decking. Insulation supports shall be installed so spacing is no more than 24" on center. Cantilevered floor vents shall be placed below the lower surface of the floor insulation.

Ø7300 ROOFING MATERIAL

Part 2 - Product
1. Shingles and roofing tiles:
   A. See the 'TYPICAL BUILDING MATERIALS' list on the drawings
2. Membrane roofing: A. 3-ply hot mopped.

Part 3 - Execution
1. Install per manufacturer's recommendation and Chapter 9 of the I.R.C.

Ø7460 SIDING MATERIAL

Part 2 - Product
1. Siding: A. See the 'TYPICAL BUILDING MATERIALS' list on the drawings.
2. Trim: A. See the 'TYPICAL BUILDING MATERIALS' list on the drawings.
3. Soffits: A. See the 'TYPICAL BUILDING MATERIALS' list on the drawings.
4. Other: A. See the 'TYPICAL BUILDING MATERIALS' list on the drawings.

Part 3 - Execution
1. Install per manufacturer's recommendation and Chapter 7 of the I.R.C.

Ø7600 FLASHING AND SHEET METAL

Part 2 - Product
1. Min. 26 Gauge galvanized, prefinished.

Part 3 - Execution
1. Install per Chapter 7 and 9 of the I.R.C.
   A) Flashing against a vertical sidewall shall be by the step-flashing method. The flashing shall be a minimum of 4" high and 4" wide. At the end of the vertical sidewall the step flashing shall be turned out in a manner that directs water away from the wall and onto the roof and/or gutter, Per I.R.C. R903.2.

Ø7700 ROOFING SPECIALTIES

Part 2 - Product
1. Vents:
   A. Ridge vent: manufactured by:
      i. Coordinate with materials finish selection schedule (by others).
   B. Mushroom vent: manufactured by:
      i. Coordinate with materials finish selection schedule (by others).
2. Gutters:
   A. Continuous alum. precoated:
      1. Style: K profile
      2. Color: Match fascia
3. Downspouts:
   A. 2x3 rectangular aluminum precoated:
      1. Color: Match fascia & trim
   B. Tie to 1 drain system.

Ø7800 SKYLIGHTS

Part 2 - Product
1. Skylights to conform with I.R.C. section R308.6.
2. Manufacturer: A. Coordinate with materials finish selection schedule (by others).

Ø7900 SEALANTS AND CAULKING

Part 2 - Product
1. Caulking A. Styrene butadiene caulking (SBR) i. Color: Match siding

END DIVISION 7

Division 8
DOORS AND WINDOWS

Ø8100 WOOD DOORS (Lower Level, Main Level, Upper Level)

Part 2 - Product
1. Panel wood doors: A. Coordinate with materials finish selection schedule (by others).
2. Flush wood doors: A. Coordinate with materials finish selection schedule (by others).
3. Stile and rail/store door): A. Coordinate w/materials finish selection schedule (by others).
4. Patio door: A. Coordinate with materials finish selection schedule (by others).
5. Other: A. Coordinate with materials finish selection schedule (by others).

Ø8300 SPECIALTY DOORS

Part 2 - Product
1. Sliding glass door:
   A. Coordinate with materials finish selection schedule (by others).
2. Garage door: (make/style): (see division 1450)
   A. Coordinate with materials finish selection schedule (by others).

Ø8600 WOOD/VINYL WINDOWS

Part 2 - Product
1. Note: Egress -
   A. Every sleeping room shall have at least one operable window with a net clear opening of 5.7 s.f. The net clear opening height shall be a minimum of 24", with a minimum net clear width of 20", and a finished sill height of not more than 44" above the floor, per I.R.C. section R310.
      B. Safety glaze per I.R.C. section R308.
      C. See plans for egress and operation.
2. Manufactured by:
   A. Color: i. Coordinate with materials finish selection schedule (by others).
   B. Style: i. Coordinate with materials finish selection schedule (by others).

Ø8700 HARDWARE

Part 2 - Product
1. Type A. Coordinate with materials finish selection schedule (by others).
2. Weather Stripping: A. Coordinate with materials finish selection schedule (by others).
3. Thresholds: A. Coordinate with materials finish selection schedule (by others).

Ø8800 GLAZING

Part 2 - Product
1. Glass thickness to be determined by size and wind loading per I.R.C. section R308.
2. Safety glaze per I.R.C. section R308.
3. Mirrors to be silvered 1/4" float plate glass.

END DIVISION 8

Division 9
FINISHES

Ø9250 GYPSUM WALLBOARD

Part 2 - Product
1. Walls: See the 'TYPICAL BUILDING MATERIALS' list on the drawings.
   A. Finish: i. Coordinate with Contractor/Owner material selections.
2. Ceiling: See the 'TYPICAL BUILDING MATERIALS' list on the drawings.
   A. Finish i. Coordinate with materials finish selection schedule.
3. Wall and ceiling finishes shall have a flame spread index of not greater than 200, and a smoke-developed index of not greater than 450 per I.R.C. R302.9.
4. Code required areas:
   A. Type 'X' GWB as required.
      i. See division Ø1001 misc. assembly requirements.
   B. Waterproof GWB as req'd at wet or damp locations per I.R.C. section R702.4.2.
5. Wonderboard or durock at all tile locations (U.N.O.)
6. Metal corner bead profile:
      i. Coordinate with materials finish selection schedule.

Part 3 - Execution
1. Apply as required in I.R.C. Chapter 7 and Table R702.3.5). Nail or screw in place per table.

Ø9300 TILE

Part 2 - Product
1. Ceramic, quarry, and marble tiles:
   A. Coordinate with materials finish selection schedule (by others).

Part 3 - Execution
1. Refer to manufacturer's recommendations.

Ø9550 WOOD FLOORING

Part 2 - Products i. Type:
   A. Coordinate with materials finish selection schedule (by others).

Ø9650 RESILIENT FLOORING

Part 2 - Products i. Type:
   A. Coordinate with materials finish selection schedule (by others).

Ø9680 CARPETING

Part 2 - Products i. Carpet and Pad:
   A. Coordinate with materials finish selection schedule (by others).

Ø9900 PAINTING

Part 2 - Products
1. Painting over prepared surface per manufacturer's recommendations
   A. Coordinate with materials finish selection schedule (by others).

Ø9950 WALL COVERINGS

Part 2 - Products
1. Type: A. Coordinate with materials finish selection schedule (by others).

END DIVISION 9

Division 10
SPECIALTIES

Ø1020 LOUVERS AND VENTS

Part 2 - Products
1. Hardware cloth screen 1/4" x 1/4" on soffit vents as detailed.
2. Continuous 2" perforated metal soffit vents as detailed.
3. Roof vent. (See Division Ø7100)
4. Other vents as noted per plans.

Ø1030 PREFABRICATED FIREPLACES

Part 2 - Products
1. Location/Model/Accessories:
   A. Coordinate with materials finish selection schedule (by others).

Part 3 - Execution
1. See division Ø1001.12 for misc. assembly requirements for fireplaces.

Ø1400 IDENTIFYING DEVICES

Part 2 - Products
1. Building numbers:
   A. Coordinate with materials finish selection schedule (by others).

Part 3 - Execution
1. Install in location per jurisdictional requirements.

Ø1800 TOILET AND BATH ACCESSORIES

Part 2 - Products
1. Toilet and bath accessories:
   A. Coordinate with materials finish selection schedule (by others).

Ø1900 WARDROBE AND CLOSET SPECIALTIES

Part 2 - Products
1. Storage Closet:
   A. Coordinate with materials finish selection schedule (by others).
2. Clothes Closets:
   A. Coordinate with materials finish selection schedule (by others).
3. Pantry.

END DIVISION 10

Division 11
EQUIPMENT

1610 MAINTENANCE EQUIPMENT

Part 2 - Products
1. Vacuum system:
   A. Coordinate with materials finish selection schedule (by others).

1650 RESIDENTIAL EQUIPMENT

Part 2 - Products
1. Garage door opener/s:
   A. Coordinate with materials finish selection schedule (by others).
2. Ironing board cabinet (or drawer):
   A. Coordinate with materials finish selection schedule (by others).
3. Free-standing appliances:
   A. Coordinate with materials finish selection schedule (by others).

END DIVISION 11

Division 12
FURNISHINGS

12500 WINDOW TREATMENT

Part 2 - Products
1. Window treatment: A. Coordinate with materials finish selection schedule (by others).

END DIVISION 12

Division 13
SPECIAL CONSTRUCTION

13150 POOLS

Part 2 - Products 1. Bidder design

13156 HOT TUB

Part 2 - Products
1. By:
   A. Coordinate with materials finish selection schedule (by others).

END DIVISION 13

Division 14
CONVEYING SYSTEMS

14900 DUMBWAITER

Part 2 - Products
1. Dumbwaiter: A. Manufacturer/model number:
      i. Coordinate with materials finish selection schedule (by others).

END DIVISION 14

Division 15
MECHANICAL

15000 GENERAL

Part 1 - General
1. Mechanical system to be bidder design.
2. Regulatory requirements:
   A. Refer to Division 1 General Requirements.
   B. See plans for total maximum btu.
   C. Heating and cooling equipment shall be sized based on building loads calculated in accordance with ACCA manual J or other approved heating and cooling calculation methodologies. Per M1401.3
3. Contractor work out plumbing and HVAC diagram layout.
   A. Coordinate with other trades.

15400 PLUMBING

Part 2 - Product
1. Pipes and Fittings:
   A. Waste 4 soil: ABS plastic of sizes req'd for the intended purpose.
      i. Provide cast iron with compression neoprene joints per locations shown on the drawings.
      2. Provide clean-outs at bends.
   B. Vents: ABS
   C. Gas: Per code, verify location of appliances.
      i. Provide an approved earthquake shutoff valve installed in the building supply line immediately after the gas meter. The valve shall be located outside of the structure and be accessible.
   D. Water Line:
      i. Below Grade: 1 1/4" type K, with hard solder
      2. Above Grade: Type L, w/soft solder
2. Plumbing equipment:
   A. Hot water heater: (Dual's in tandem)
      i. Size per U.P.C. 5.01 and Table 501(1) and jurisdictional amendments.
      2. Coordinate with owner's material selection (by others).
   B. Hose bib, frost proof type: Mansfield units
   C. Main shut-off valve in garage.
   D. Plumbing fixtures i. Coordinate with owners material selection (by others).
3. Irrigation: (bidder design)
   A. Provide "T" connection in main line in garage by main shut-off valve with separate shut-off and drain valve.

15400 PLUMBING (cont.)
4. Automatic Sprinkler System: (bidder design)

Part 3 - Execution
1. The installer to design the system to appropriate jurisdictional requirements and function in a manner consistent with industry standards. Refer to general requirements.

15500 HVAC

Part 2 - Product
1. Forced Air:
   A. Furnace system:
      i. Coordinate with materials finish selection schedule (by others).
   B. Duct work and insulation:
      i. Coordinate with materials finish selection schedule (by others).
   C. Air cleaner:
      i. Coordinate with materials finish selection schedule (by others).
   D. Controls:
      i. Coordinate with materials finish selection schedule (by others).
   E. Registers with adjustable supply:
      i. Coordinate with materials finish selection schedule (by others).
   F. Provide firestopping at 'B' vent location per I.R.C. sections R302.11.
2. Fans: see division 17 energy requirements.
3. See floor plans for ducte house ventilation.
4. Vents:
      i. Coordinate with materials finish selection schedule (by others).
5. Exhaust Ducts:
   A. Terminate outside building and equip with backdraft dampers per I.R.C. section M1504.
6. Dryer Ducts:
   A. Clothe Dryers shall be exhausted in accordance with manufacturers instructions & I.R.C. M1501.
   B. Protective shield plates shall be placed per I.R.C. M1305.

Part 3 - Execution
1. The installer to design the system to appropriate jurisdictional requirements and function in a manner consistent with industry standards. Refer to general requirements.

END DIVISION 15

Division 16
ELECTRICAL

16000 GENERAL

Part 1 - General
1. Electrical systems to be bidder designed.
2. Regulatory requirements: refer to Division 1 - General Requirements.
3. Contractor to provide electrical diagramming layouts, design circuitry. follow lighting plan if provided.
   A. Coordinate with other trades.

16200 POWER

Part 2 - Product
1. Wire and Boxes.
   A. Volts: 12 & 4 /3 Wire
      i. GFI 4 Damp Locations
   B. Low voltage: standard type
2. Panels: Circuit breaker box fully labeled
   A. Capacity: Bidder Design
   B. Circuitry: Bidder Design
3. Grounding:
   A. Provide (1) 2 1/2" schedule 80 PVC conduit at concrete stem wall for electrical service and (1) 5/8" diameter x 8'0" long galvanized rod (4 Ufer ground) for electrical grounding.
4. Smoke Detectors:
   A. Provide and install per I.R.C. section R314.
5. Fire alarm:
   A. Provide and install per N.E.C. and as required by governing fire marshal.

Part 3 - Execution
1. The installer to design the system to appropriate jurisdictional requirements and function in a manner consistent with the industry standards. Refer to general requirements and I.R.C.

16200 COMMUNICATIONS

Part 2 - Product
1. Intrusion alarm and security detection systems:
   A. Coordinate with materials finish selection schedule (by others).
2. Phone system:
   A. Coordinate with materials finish selection schedule (by others).
3. Intercommunication systems:
   A. Coordinate with materials finish selection schedule (by others).
4. Stereo system:
   A. Coordinate with materials finish selection schedule (by others).

16500
LIGHTING

Part 2 - Product
1. Fixtures: i. Coordinate with materials finish selection schedule (by others).
Note: A minimum of 90% of all luminaries shall be high efficiency per W.S.E.C. R404.1.
2. Control: A. Switches: i. Coordinate with materials finish selection schedule.
3. Dimmers: i. Coordinate with materials finish selection schedule (by others).
4. Boxes: i. Coordinate with materials finish selection schedule (by others).
5. Other: i. Coordinate with materials finish selection schedule (by others).

Part 3 - Execution
1. The installer to design the system to appropriate jurisdictional requirements and function in a manner consistent with the industry standards. Refer to general requirements.

END DIVISION 16

Division 17
ENERGY REQUIREMENTS

WASHINGTON STATE ENERGY CODE:
General Notes:
1. Per U.S.E.C. R402.4. The building Envelope shall be constructed to limit the air leakage rate not to exceed 5 air changes per hour. The results of the test shall be signed by the party conducting the test and provided to the code official (R402.4.1.2).
2. Per U.S.E.C. R403.3.1. at least one thermostat per dwelling unit shall be capable of controlling the heating and cooling system on a daily schedule.
3. Per U.S.E.C. R403.3.2. ducts, air handlers, and filter boxes shall be sealed.

Date	By	Description
8.26.24	REV	PERMIT SET

REGISTERED ARCHITECT
RITA KAPLER
STATE OF WASHINGTON
ORIGINAL SIGNATURE REQUIRED

Lee Remodel

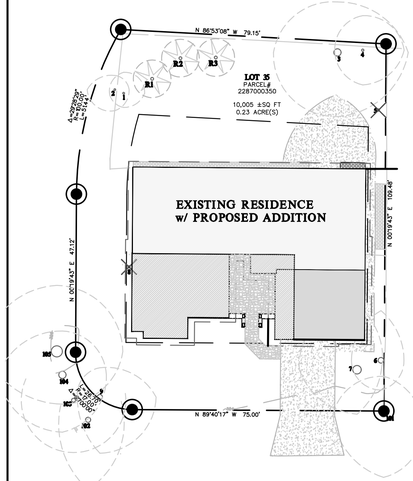
8904 SE 58th St — **Mercer Island, WA**

ARCHITECTURAL INNOVATIONS, P.S.
Forward Thinking Design Solutions For Your Environment
14311 SE 16th St
Bellevue

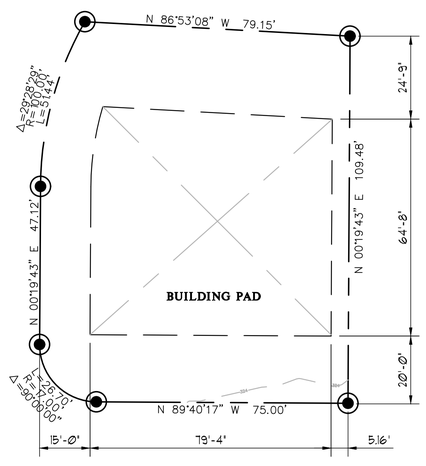
REPLACEMENT TREE IDENT.

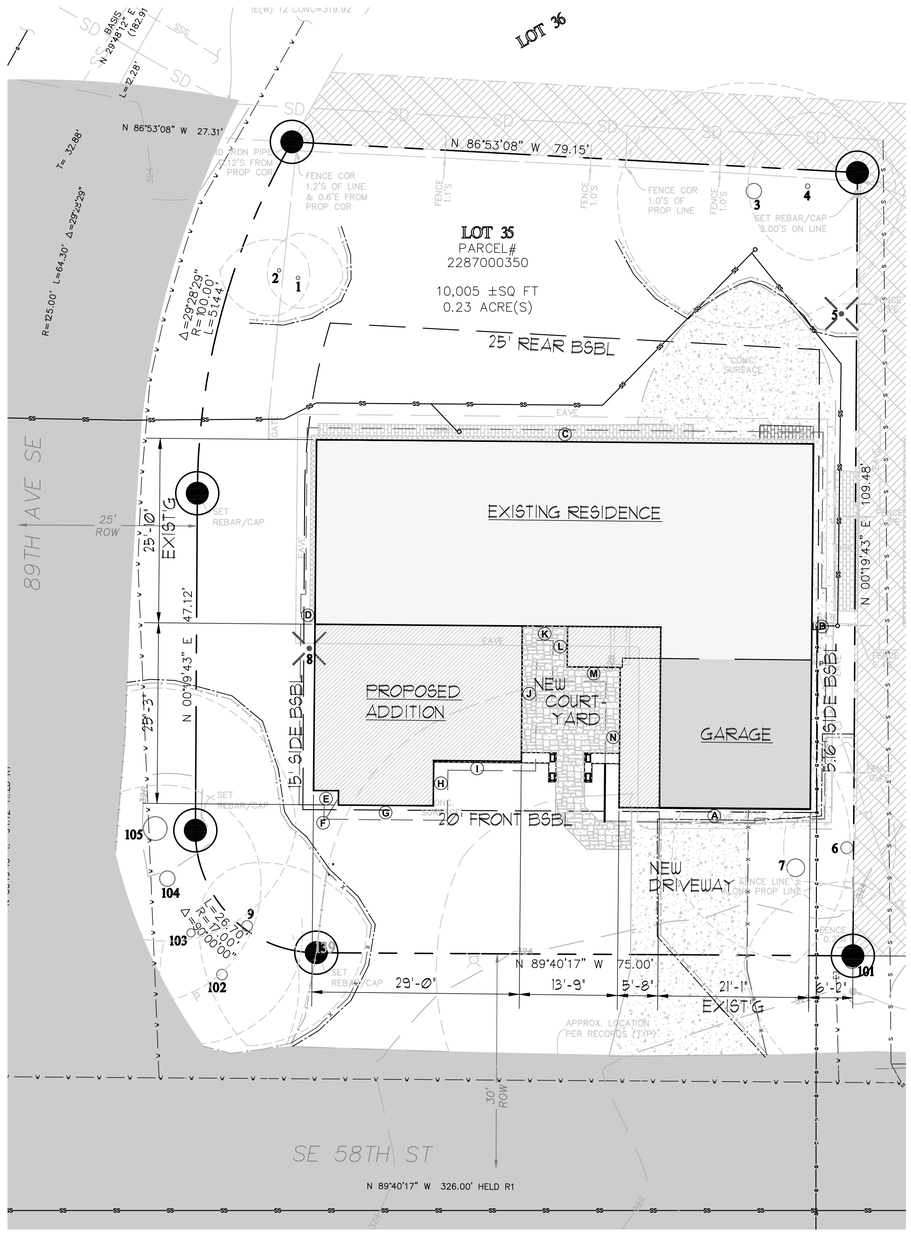
TAG	TREE/SPECIES	NATIVE
R1	CHINESE DOGWOOD	YES
R2	CHINESE DOGWOOD	YES
R3	CHINESE DOGWOOD	YES
3/3 NATIVE : 100% NATIVE		

TREE REPLACEMENT



LOT SLOPE CALCULATION





SITE PLAN

Scale 1" = 10'

0 5 10 20

TREE IDENTIFICATION

TAG	TREE/SPECIES	SIZE (DBH)	PROPOSED
1.	ZEBRINA CEDAR	7"	RETAIN
2.	CHERRY PLUM	6"	RETAIN
3.	WESTERN HEMLOCK	29"	RETAIN
4.	PORTUGUESE LAUREL	9"	RETAIN
5.	PORTUGUESE LAUREL	8"	REMOVE
6.	DOUGLAS FIR	22"	RETAIN
7.	DOUGLAS FIR	33"	RETAIN
8.	SCOTS PINE	11"	REMOVE
9.	AUSTRIAN PINE	22"	RETAIN
TOTAL DBH =		147"	
TOTAL RETAINED =		128/147=87%	

OFFSITE TREES

TAG	TREE/SPECIES	SIZE (DBH)	PROPOSED
101	DOUGLAS FIR	36"	PROTECT
102	AUSTRIAN PINE	22"	PROTECT
103	AUSTRIAN PINE	18"	PROTECT
104	DOUGLAS FIR	28	PROTECT
105	DOUGLAS FIR	40"	PROTECT

NOTE: DBH DOES NOT INCLUDE OFF SITE TREE

- Tree protection fencing (TPF) shall consist of chain link fencing, or other fencing as may be required or approved by the City of Mercer Island, installed at the dripline radius of Tree #2 and Tree #3 and shall be staked into place, as required by the City. Plan Sheet A1.1 details the location of the Tree Protection Fencing.
- Signage shall be installed at intervals of 20' or less along the fence line declaring the fenced area as a "TREE PROTECTION ZONE - NO TOOLS, EQUIPMENT, OR CONSTRUCTION RELATED MATERIALS MAY BE PLACED WITHIN THE TREE PROTECTION ZONE". Signage shall be a minimum of 8.5" by 11.0" and shall be resistant to weather conditions.
- An ISA certified arborist shall verify the location of the fencing. The fencing shall be installed prior to any site clearing or grading and shall remain in place until the construction phase is completed.
- An ISA certified arborist shall be on-site for any excavation in the backyard area or anywhere near these protected trees.
- Any roots that are encountered and in need of removal shall be assessed by the Project Arborist. Severing of encountered roots shall be undertaken as detailed in ANSI Standard A300 (Part 8)-2013, Root Management.
- Any roots that are encountered and severed shall be covered with moist compost or mulch material as soon as is reasonable following the root exposure and severance.
- Protected trees shall be re-assessed after completion of the construction activity.
- The Ivy in Tree #2 and #3 should be removed, as much as possible.

SEE ADDITIONAL STORM & UTILITY PLAN

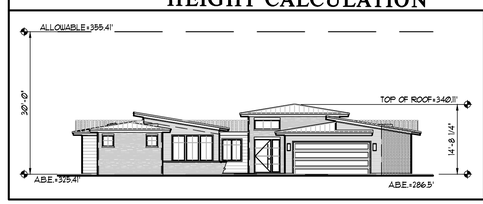
City of Mercer Island GFA Calculations

Lower Level Area Calculation (N.A.)

Wall Length	Percentage	Finish or Existing	Results

Lot Size =	10,005 x 40% =	4,002 S F	
Main Floor	3332.5 (3155+177.5)	AREA >12' LESS THAN 16'	
	3332.5 /33.3%		

HEIGHT CALCULATION



City of Mercer Island Avg. Grade Calculations

Midpoint Sattain Elmevation		F or E		Wall Segment Length			
A	+	325.33	E	a	+	26.75	A*a
B	+	325.50	E	b	+	51.00	B*b
C	+	326.51	E	c	+	66.50	C*c
D	+	326.40	E	d	+	49.00	D*d
E	+	326.27	E	e	+	3.50	E*e
F	+	326.37	E	f	+	2.00	F*f
G	+	326.27	E	g	+	13.20	G*g
H	+	326.24	E	h	+	6.33	H*h
I	+	326.28	E	i	+	12.25	I*i
J	+	326.48	E	j	+	19.00	J*j
K	+	326.40	E	k	+	6.25	K*k
L	+	326.40	E	l	+	5.67	L*l
M	+	326.30	E	m	+	7.50	M*m
N	+	326.59	E	n	+	19.50	N*n
		4554.84				291.50	94856.20
Address				3038 91st Ave SE			325.41 AVG. GRADE

VICINITY MAP

SITE INFO

STREET ADDRESSES:
8904 SE 58th St

PARCEL #:
2287000350

LEGAL DESCRIPTION:
EL DORADO ESTATES ADD

ZONING

ZONING: R-9.6

SINGLE FAMILY RESIDENTIAL SETBACKS.
FRONT YARD - 20'-0"
REAR YARD - 25'
TOTAL SIDE YARD(S) - 17% OF 92.0" = 15.64' COMBINED
INTERIOR SIDE YARD - 5'-0" OR 33% OF 15.64'= 5.16' MIN.

HEIGHT LIMIT
30' ABOVE AVERAGE BUILDING ELEVATION
35' DOWNHILL HIGHEST PLATE FROM EXISTING GRADE

LOT COVERAGE
35% MAX OF GROSS LOT AREA

G.F.A.
40% MAX. OF NET LOT AREA

SITE CALCULATIONS

LOT AREA
10,005 SF GROSS LOT AREA

G.F.A. CALCULATION
10,005 SF GROSS LOT AREA
x 40%
4,002 SF ALLOWABLE G.F.A.

2,925.5 SF MAIN FLOOR (see G.F.A. calculations this sheet)
407 SF GARAGE (see G.F.A. calculations below this sheet)
3,332.5 SF/33.3% TOTAL G.F.A.

LOT COVERAGE CALCULATION
10,005 SF GROSS LOT AREA
x 40%
4,002 SF ALLOWABLE LOT COVERAGE

3,700 SF STRUCTURE (including eaves)
300 SF DRIVEWAY (excluding portion under eaves)
4,000 SF/39.9% TOTAL LOT COVERAGE

HARDSCAPE SURFACE CALCULATION
10,005 SF GROSS LOT AREA
x 09%
900 SF ALLOWABLE HARDSCAPE COVERAGE

182 SF NEW COURTYARD AND WALKWAY (excluding portion under deck)
600 SF EXISTING REAR PATIO AND WALKWAY (excluding portion u/ eaves)
782 SF/7.8% TOTAL HARDSCAPE SURFACE AREA

LEGEND

- DESIGNATES WATER
- DESIGNATES SEWER
- DESIGNATES STORM
- DESIGNATES EXISTING GRADE
- DESIGNATES TREE DRIPLINE
- DESIGNATES PHASE I TREE FENCING
- DESIGNATES PHASE II TREE FENCING
- DESIGNATES PHASE II TREE FENCING

DISCIPLINE: ARCHITECTURAL
PROJECT STATUS: PERMIT SET
DATE: 8.28.24
ORIGINAL SIGNATURE REQUIRED

Date	By	Description
8.28.24	REY	PERMIT SET

Lee Remodel

SE 58th St
Mercer Island, WA

8904 SE 58th St

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Bellevue, WA 98007
1-800-888-4517
www.kaplerhenplans.com

TITLE

JOB NO. : 24000.03
STARTING NO. : 24000.22

SHEET

A1.1

TOPOGRAPHIC & BOUNDARY SURVEY

LEGAL DESCRIPTION

PER TRUSTEE'S DEED RECORDING # 20231102000233

LOT 35, EL DORADO ESTATES, ACCORDING TO PLAT RECORDED IN VOLUME 62 OF PLATS, PAGE 7, IN KING COUNTY, WASHINGTON.

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

SUBJECT TO AND TOGETHER WITH EASEMENTS, CONDITIONS, COVENANTS AND RESTRICTIONS OF RECORD.

BASIS OF BEARINGS

ACCEPTED THE BEARING OF N 29°48'12" E BETWEEN MONUMENTS FOUND ALONG THE CENTERLINE OF 89TH AVE SE, PER REFERENCE NO. 1.

REFERENCES

R1. EL DORADO ESTATES, VOL. 62 OF PLATS, PG. 07, RECORDS OF KING COUNTY, WASHINGTON.

VERTICAL DATUM

NAVD 88 PER CITY OF MERCER ISLAND BENCHMARK NO. 1800
DESCRIPTION: CONC. MON W/ TACK IN LEAD
LOCATION: C/L 89TH AVE SE OPP HSE #5639
ELEVATION: 323.242'

SITE TEMP. BENCHMARK
DESCRIPTION: PK NAIL W/ RED WASHER
LOCATION: 67.7'S & 53.8'W FROM THE NW PROPERTY CORNER
ELEVATION: 324.96'

SURVEYOR'S NOTES

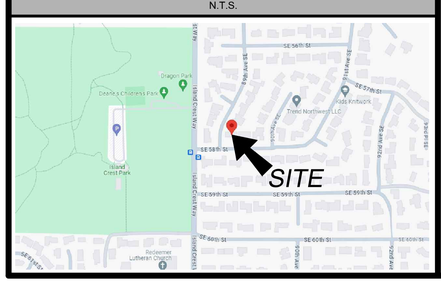
1. THE TOPOGRAPHIC SURVEY SHOWN HEREON WAS PERFORMED IN JANUARY OF 2024. THE FIELD DATA WAS COLLECTED AND RECORDED ON MAGNETIC MEDIA THROUGH AN ELECTRONIC THEODOLITE. THE DATA FILE IS ARCHIVED ON DISC OR CD. WRITTEN FIELD NOTES MAY NOT EXIST. CONTOURS ARE SHOWN FOR CONVENIENCE ONLY. DESIGN SHOULD RELY ON SPOT ELEVATIONS.
2. ALL MONUMENTS SHOWN HEREON WERE LOCATED DURING THE COURSE OF THIS SURVEY UNLESS OTHERWISE NOTED.
3. THE TYPES AND LOCATIONS OF ANY UTILITIES SHOWN ON THIS DRAWING ARE BASED ON INFORMATION PROVIDED TO US, BY OTHERS OR GENERAL INFORMATION READILY AVAILABLE IN THE PUBLIC DOMAIN INCLUDING, AS APPLICABLE, IDENTIFYING MARKINGS PLACED BY UTILITY LOCATE SERVICES AND OBSERVED BY TERRANE IN THE FIELD. AS SUCH, THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS ARE FOR INFORMATIONAL PURPOSES ONLY AND SHOULD NOT BE RELIED ON FOR DESIGN OR CONSTRUCTION PURPOSES; TERRANE IS NOT RESPONSIBLE OR LIABLE FOR THE ACCURACY OR COMPLETENESS OF THIS UTILITY INFORMATION. FOR THE ACCURATE LOCATION AND TYPE OF UTILITIES NECESSARY FOR DESIGN AND CONSTRUCTION, PLEASE CONTACT THE SITE OWNER AND THE LOCAL UTILITY LOCATE SERVICE (800-424-5555).
4. SUBJECT PROPERTY TAX PARCEL NO. 2287000350
5. SUBJECT PROPERTY AREA PER THIS SURVEY IS 10,005 ±S.F. (0.23 ACRES)
6. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT. EASEMENTS AND OTHER ENCUMBRANCES MAY EXIST THAT ARE NOT SHOWN HEREON.
7. EXISTING STRUCTURE(S) LOCATION AND DIMENSIONS ARE MEASURED FROM THE FACE OF THE SIDING UNLESS OTHERWISE NOTED.
8. FIELD DATA FOR THIS SURVEY WAS OBTAINED BY DIRECT FIELD MEASUREMENTS WITH A CALIBRATED ELECTRONIC 3-SECOND TOTAL STATION AND/OR SURVEY GRADE GPS OBSERVATIONS. ALL ANGULAR AND LINEAR RELATIONSHIPS ARE ACCURATE AND MEET THE STANDARDS SET BY WAC 332-130-090.

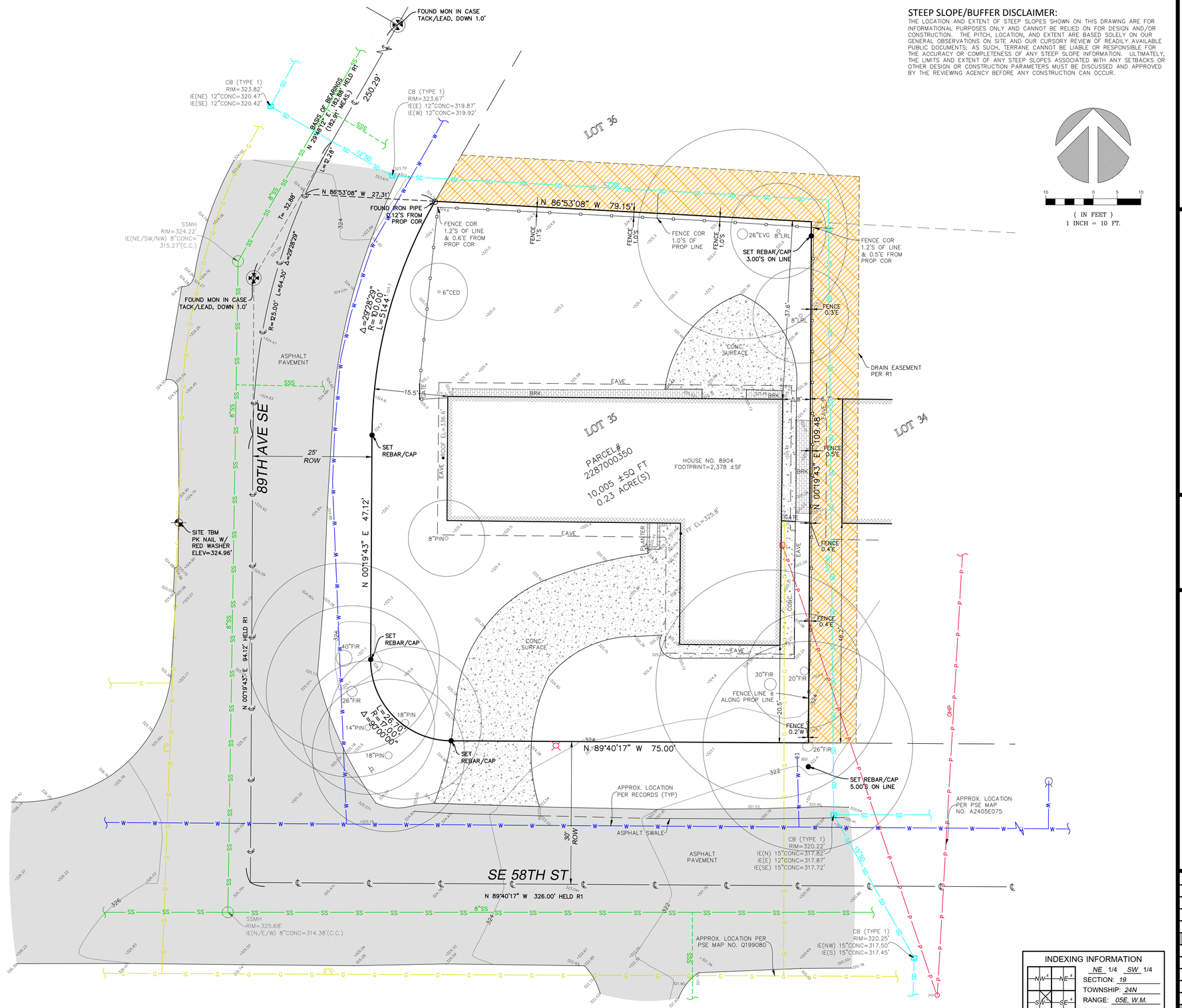
LEGEND

- BENCHMARK
- BRASS DISC (FOUND)
- CENTERLINE ROW
- FENCE LINE (WOOD)
- IRON PIPE (FOUND)
- MONUMENT (IN CASE, FOUND)
- NAIL AS NOTED
- PROPERTY LINES (ADJACENT)
- PROPERTY LINE (SUBJECT)
- REBAR & CAP (SET)
- RETAINING WALL
- RIGHT-OF-WAY LINES
- BUILDING
- SIGN (AS NOTED)
- TREE (AS NOTED)
- ASPHALT SURFACE
- BRICK SURFACE
- CONCRETE SURFACE
- DECK
- GAS METER
- GAS LINE
- INLET (TYPE 1)
- STORM DRAIN LINE
- SEWER MANHOLE
- SEWER LINE
- POWER METER
- POWER POLE
- POWER (OVERHEAD)
- YARD LIGHT
- FIRE HYDRANT
- WATER METER
- WATER LINE
- DRAIN EASEMENT PER R1

VICINITY MAP

N.T.S.





STEEP SLOPE/BUFFER DISCLAIMER:

THE LOCATION AND EXTENT OF STEEP SLOPES SHOWN ON THIS DRAWING ARE FOR INFORMATIONAL PURPOSES ONLY AND CANNOT BE RELIED ON FOR DESIGN AND/OR CONSTRUCTION. THE PITCH, LOCATION, AND EXTENT ARE BASED SOLELY ON OUR GENERAL OBSERVATIONS ON SITE AND OUR CURSORY REVIEW OF READILY AVAILABLE PUBLIC DOCUMENTS; AS SUCH, TERRANE CANNOT BE LIABLE OR RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY STEEP SLOPE INFORMATION. ULTIMATELY, THE LIMITS AND EXTENT OF ANY STEEP SLOPES ASSOCIATED WITH ANY SETBACKS OR OTHER DESIGN OR CONSTRUCTION PARAMETERS MUST BE DISCUSSED AND APPROVED BY THE REVIEWING AGENCY BEFORE ANY CONSTRUCTION CAN OCCUR.

10 0 5 10
(IN FEET)
1 INCH = 10 FT.

INDEXING INFORMATION

NE 1/4 SW 1/4
SECTION: 19
TOWNSHIP: 24N
RANGE: 05E, W.M.
COUNTY: KING

We are the measure | terrane.net

TOPOGRAPHIC & BOUNDARY SURVEY
PARCEL NO. 2287000350

JENNIE LEE RESIDENCE
8904 SOUTHEAST 58TH STREET
MERCER ISLAND, WA 98040

JACOB GOODMAN MILLER — STATE OF WASHINGTON — 22410 — REGISTERED PROFESSIONAL LAND SURVEYOR
01/19/24

TERRANE
10801 Main Street, Suite 102
Bellevue, WA 98004
p: 425-458-4488 | e: info@terrane.net

JOB NUMBER:	232300
DATE:	01/19/24
DRAFTED BY:	CAS
CHECKED BY:	JGM / WMS
SCALE:	1" = 10'

REVISION HISTORY

SHEET NUMBER
1 OF 1

LEE RESIDENCE

NW 1/4, SW 1/4, SECTION 19, TOWNSHIP 24 NORTH, RANGE 5 EAST, W.M.

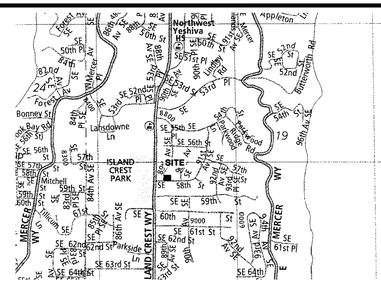
CITY OF MERCER ISLAND, WASHINGTON

OWNER:
JENNIE LEE
8904 SE 58TH STREET,
MERCER ISLAND, WA

ARCHITECT: ARCHITECTURAL INNOVATIONS
NAME: ROBERT YOUNG
COMPANY
PH: 425-641-5320

CIVIL ENGINEER:
EASTSIDE CONSULTANTS, INC
1320 NW MALL STREET, STE B
ISSAQUAH, WA 98027
PHONE: 425.392.5351
CONTACT: RON FREDERIKSEN

SHEET INDEX



VICINITY MAP
N.T.S.

LEGAL DESCRIPTION

PER TRUSTEE'S DEED RECORDING # 20231102000233

LOT 35, EL DORADO ESTATES, ACCORDING TO PLAT RECORDED IN VOLUME 62 OF PLATS, PAGE 7, IN KING COUNTY, WASHINGTON.

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

SUBJECT TO AND TOGETHER WITH EASEMENTS, CONDITIONS, COVENANTS AND RESTRICTIONS OF RECORD.

SURVEYOR'S NOTES

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4. SUBJECT PROPERTY TAX PARCEL NO. 2287000350
5. SUBJECT PROPERTY AREA PER THIS SURVEY IS 10,005 ±S.F. (0.23 ACRES)
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BASIS OF BEARINGS

ACCEPTED THE BEARING OF N 29°48'12" E BETWEEN MONUMENTS FOUND ALONG THE CENTERLINE OF 89TH AVE SE, PER REFERENCE NO. 1.

REFERENCES

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VERTICAL DATUM

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LOCATION: C/L 89TH AVE SE OPP HSE #5639
ELEVATION:323.242'

SITE TEMP. BENCHMARK
DESCRIPTION: PK NAIL W/ RED WASHER
LOCATION: 67.7'S & 53.8'W FROM THE NW PROPERTY CORNER
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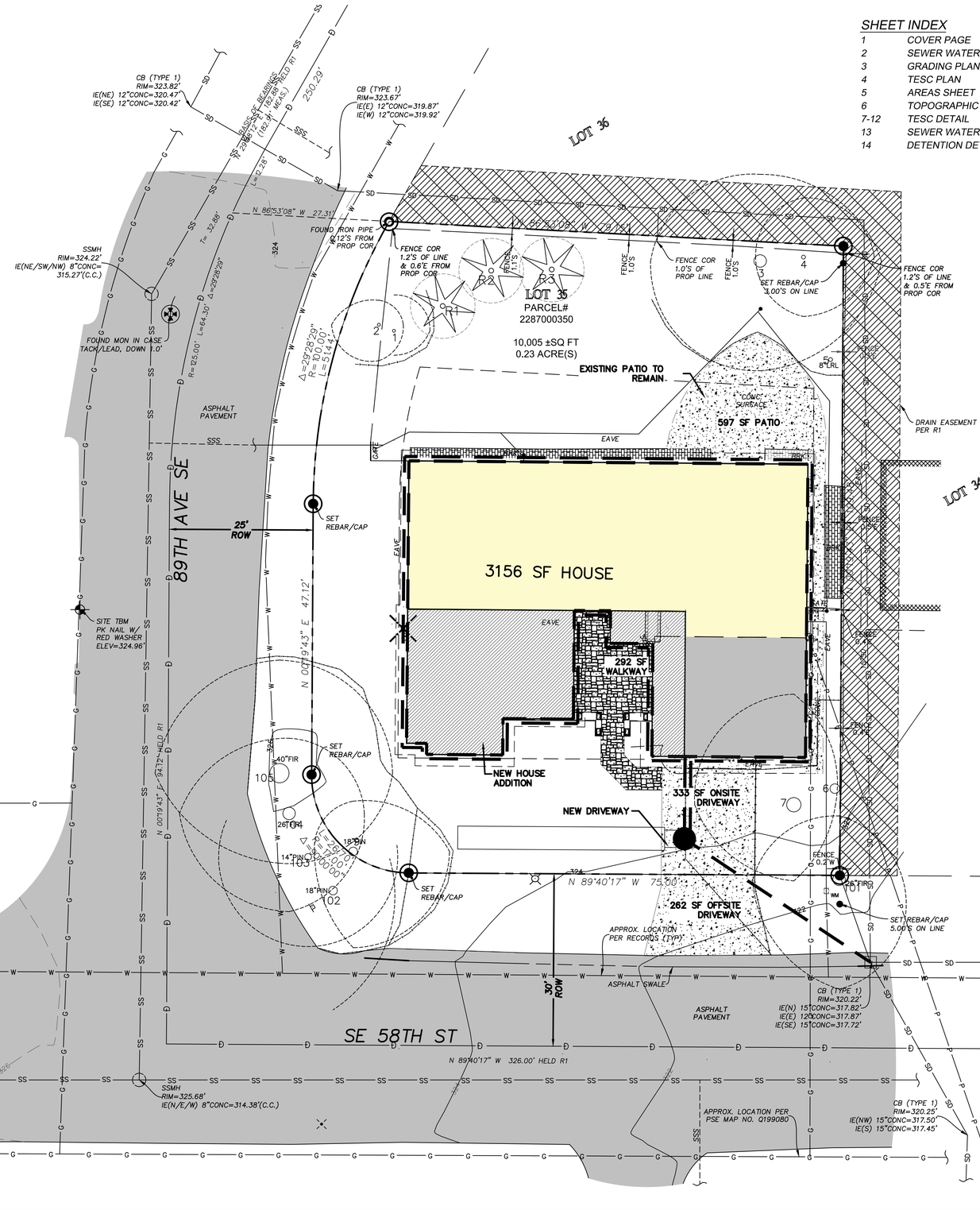

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- IRON PIPE (FOUND)
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ONSITE IMPERVIOUS SURFACE COVERAGE CAL

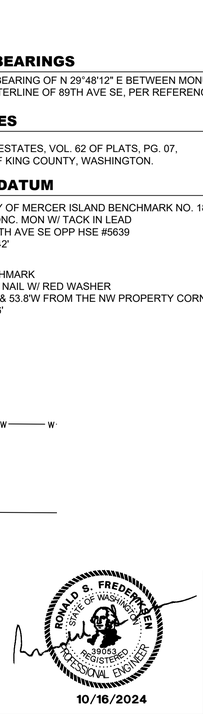
TOTAL IMPERVIOUS COVERAGE ALLOWED (50%): 10,005 SF X 0.500 =5,003 SF

	(E)EXISTING AREA	(N)PROPOSED AREA	NET AREA
HOUSE	2,378 SF	3156 SF (NEW)+REMAIN)	+937 SF
WALKWAY	0 SF	292 SF (NEW)	+292 SF
PATIO	661 SF	597 SF (REMAIN)	- 64 SF
BRICK	169 SF	169 SF (REMAIN)	0 SF
DRIVEWAY	996 SF	167 SF (NEW/PERVIOUS*)	- 829 SF
TOTAL	4,204 SF	4,381 SF (43.8%)	+236 SF
		<5,003 SF ... OK	

*NOTE - ONLY HALF OF THE 333 SF DRIVEWAY WAS COUNTED BECAUSE IT WILL BE MADE OF PERVIOUS MATERIAL

OFFSITE IMPERVIOUS SURFACE

	(E)EXISTING AREA	(N)PROPOSED AREA	NET AREA
DRIVEWAY (OLD)	252 SF	0	-252 SF
DRIVEWAY (NEW)	0 SF	262 SF (NEW)	+262 SF
TOTAL	252 SF	262 SF	+ 10 SF



10/16/2024

INDEX LOCATION:
SEC.30 T.24N.R.5E. W.M.

30

REVISIONS	BY	DATE

SITE ADDRESS: 8904 SE 58TH ST.

JENNIE LEE
8904 SE 58TH ST.
MERCER ISLAND, WA

COVER SHEET

ENGINEERS - SURVEYORS
EASTSIDE CONSULTANTS, INC.
1320 NW MALL ST, SUITE B
ISSAQUAH, WASHINGTON 98027
PH:(425)392-5351 FAX:392-4676

JOB NO.	24081
DATE	10/24
SCALE	1"=10'
DESIGNED	R.E.H.
DRAWN	R.E.H.
CHECKED	R.S.F.
APPROVED	R.S.F.

SHEET 1 OF 14

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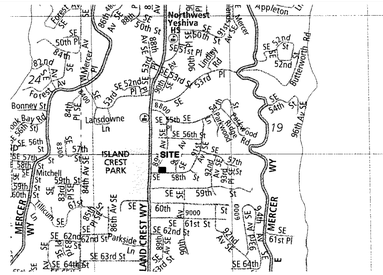

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N.T.S.

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1 inch = 10 ft.

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OFFSITE IMPERVIOUS SURFACE

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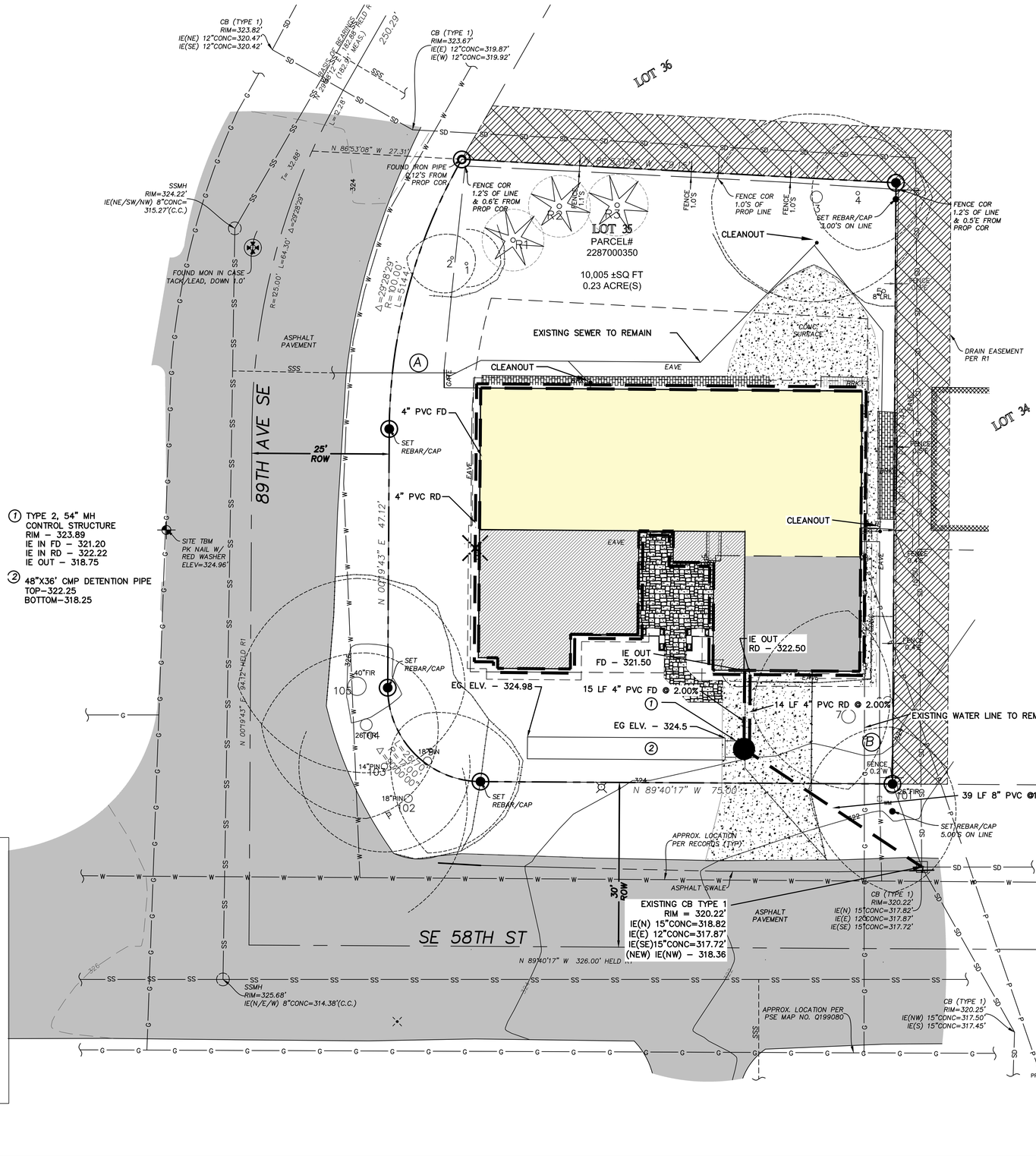
DRIVEWAY (OLD)	252 SF	0	-252 SF
DRIVEWAY (NEW)	0 SF	262 SF (NEW)	+262 SF
TOTAL	252 SF	262 SF	+ 10 SF

(A) EXISTING SEWER AND STUB TO BE TV'D TO DETERMINE IF IT IS UP TO STANDARDS (CMI STD. # S-17, S-18). IF SEWER AND STUB IS DETERMINED 'NOT UP TO STANDARDS' REPLACE PER CMI STD. # S-17, S-18

(B) EXISTING WATER LINE AND METER TO BE TV'D TO DETERMINE IF IT IS UP TO STANDARDS (CMI STD. #W-13). IF WATER LINE AND METER IS DETERMINED 'NOT UP TO STANDARDS' REPLACE PER CMI STD. #W-13.



① TYPE 2, 54" MH
CONTROL STRUCTURE
RIM – 323.89
IE IN FD – 321.20
IE IN RD – 322.22
IE OUT – 318.75

② 48"X36' CMP DETENTION PIPE
TOP–322.25
BOTTOM–318.25

LEGAL DESCRIPTION

PER TRUSTEE'S DEED RECORDING # 20231102000233

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- POWER POLE
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- FIRE HYDRANT
- WATER METER
- WATER LINE
- DRAIN EASEMENT PER R1

INDEX LOCATION:
SEC.30 T.24N.R. 5E. W.M.

10/16/2024

REVISIONS	BY	DATE

SEWER WATER
STORM PLAN

SITE ADDRESS: 8904 SE 58TH ST.
JENNIE LEE
8904 SE 58TH ST.
MERCER ISLAND, WA

EASTSIDE CONSULTANTS, INC.
ENGINEERS - SURVEYORS
1320 NW MALL ST, SUITE B
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PH:(425)392-5351 FAX:392-4676

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DRAWN	R.E.H.
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SHEET 2 OF 14

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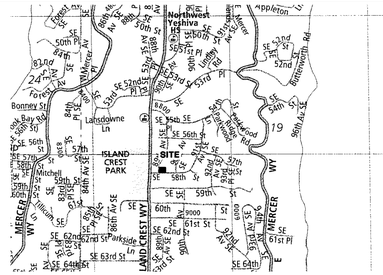

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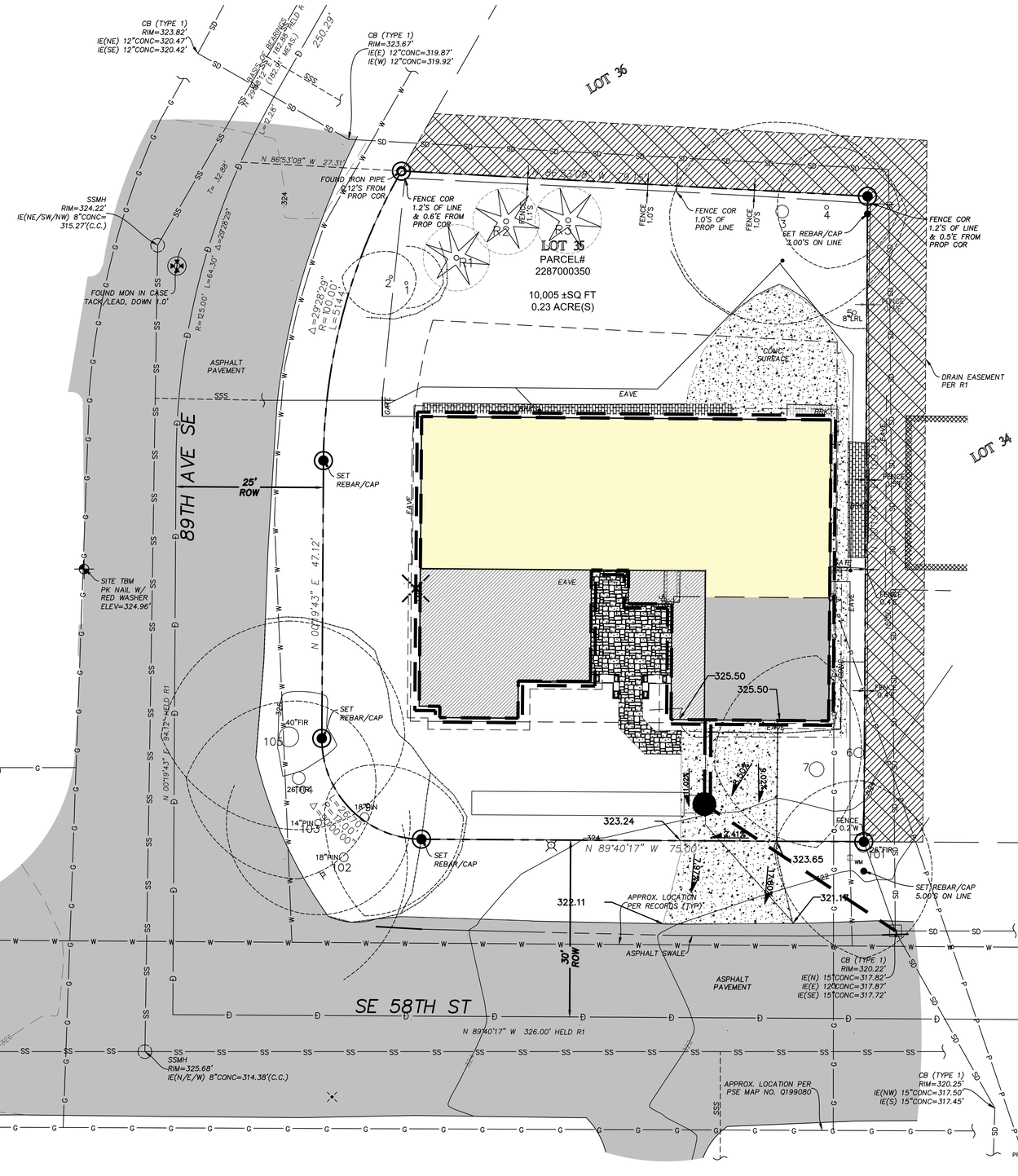

GRAPHIC SCALE

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GRADING PLAN

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RONALD S. FREDERIKSEN
STATE OF WASHINGTON
39053
REGISTERED PROFESSIONAL ENGINEER

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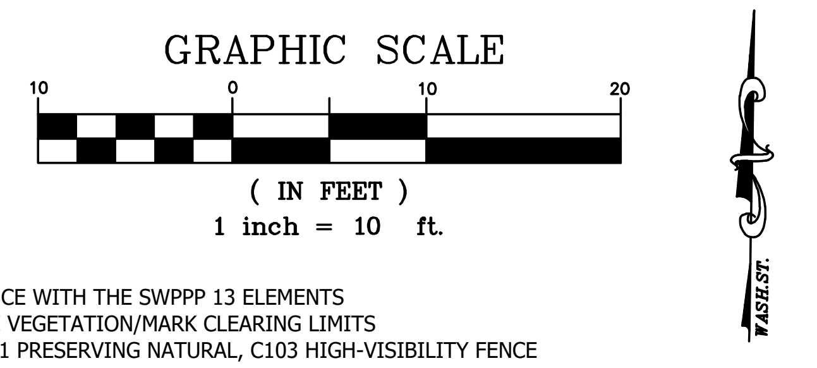
PH: 425-641-5320

CIVIL ENGINEER:
EASTSIDE CONSULTANTS, INC
1320 NW MALL STREET, STE B
ISSAQUAH, WA 98027
PHONE: 425.392.5351
CONTACT: RON FREDERIKSEN



IN COMPLIANCE WITH THE SWPPP 13 ELEMENTS

1. PRESERVE VEGETATION/MARK CLEARING LIMITS
USE BMP C101 PRESERVING NATURAL, C103 HIGH-VISIBILITY FENCE VEGETATION, & C233 SILT FENCE
2. ESTABLISH CONSTRUCTION ACCESS
USE BMP C105 STABILIZED CONSTRUCTION
3. CONTROL FLOW RATES
USE BMP C235 WATTLES
4. INSTALL SEDIMENT CONTROLS
USE BMP C233 SILT FENCE & C235 WATTLES
5. STABILIZE SOILS
USE BMP C121 MULCHING, C120 TEMPORARY AND PERMANENT SEEDING & C123 PLASTIC COVERING
6. PROTECT SLOPES
USE BMP C121 MULCHING, C120 TEMPORARY AND PERMANENT SEEDING & C123 PLASTIC COVERING
7. PROTECT DRAIN INLET
USE BMP C220 STORM DRAIN INLET
8. STABILIZE CHANNELS AND OUTLETS
C122 NETS AND BLANKETS
9. CONTROL POLLUTANTS
USE BMP C153 MATERIAL, DELIVERY, STORAGE, AND CONTAINMENT
10. CONTROL DEWATERING
NO DEWATERING EXPECTED, IF NEEDED USE BMP C236 VEGETATIVE FILTRATION
11. MAINTAIN BMPS
ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL (ESC) SHALL BE MAINTAINED AND REPAIRED AS NEEDED TO ENSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION AND USE BMP C150 MATERIALS ON HAND
12. MANAGE THE PROJECT
THE PROJECT WILL BE MANAGED APPROPRIATELY BY THE TESC SUPERVISOR AND USE BMP C150 MATERIALS ON HAND
13. PROTECT LOW IMPACT DEVELOPMENT (LID) BMPS
USE BMP C233 SILT FENCE AS NECESSARY

① PRESERVING NATURAL VEGETATION PER BMP C101
② STABILIZED CONSTRUCTION ACCESS PER BMP C105
③ TEMPORARY AND PERMANENT SEEDING PER BMP C120
④ MULCHING PER BMP C121
⑤ PLASTIC COVERING PER BMP C123
⑥ CONCRETE HANDLING PER BMP C151
⑦ MATERIAL DELIVERY STORAGE AND CONTAINMENT PER BMP C153
⑧ WATTLES PER BMP C235
⑨ NETS AND BLANKETS PER BMP C122
⑩ VEGETATIVE FILTRATION PER BMP C236
⑪ MATERIALS ON HAND PER BMP C150

ONSITE IMPERVIOUS SURFACE COVERAGE CAL

TOTAL IMPERVIOUS COVERAGE ALLOWED (50%): 10,005 SF X 0.500 =5,003 SF

	(E)EXISTING AREA	(N)PROPOSED AREA	NET AREA
HOUSE	2,378 SF	3156 SF (NEW+REMAIN)	+837 SF
WALKWAY	0 SF	292 SF (NEW)	+292 SF
PATIO	661 SF	597 SF (REMAIN)	- 64 SF
BRICK	169 SF	169 SF (REMAIN)	0 SF
DRIVEWAY	996 SF	167 SF (NEW/PERVIOUS*)	- 829 SF
TOTAL	4,204 SF	4,381 SF (43.8%)	+236 SF
		<5,003 SF ... OK	

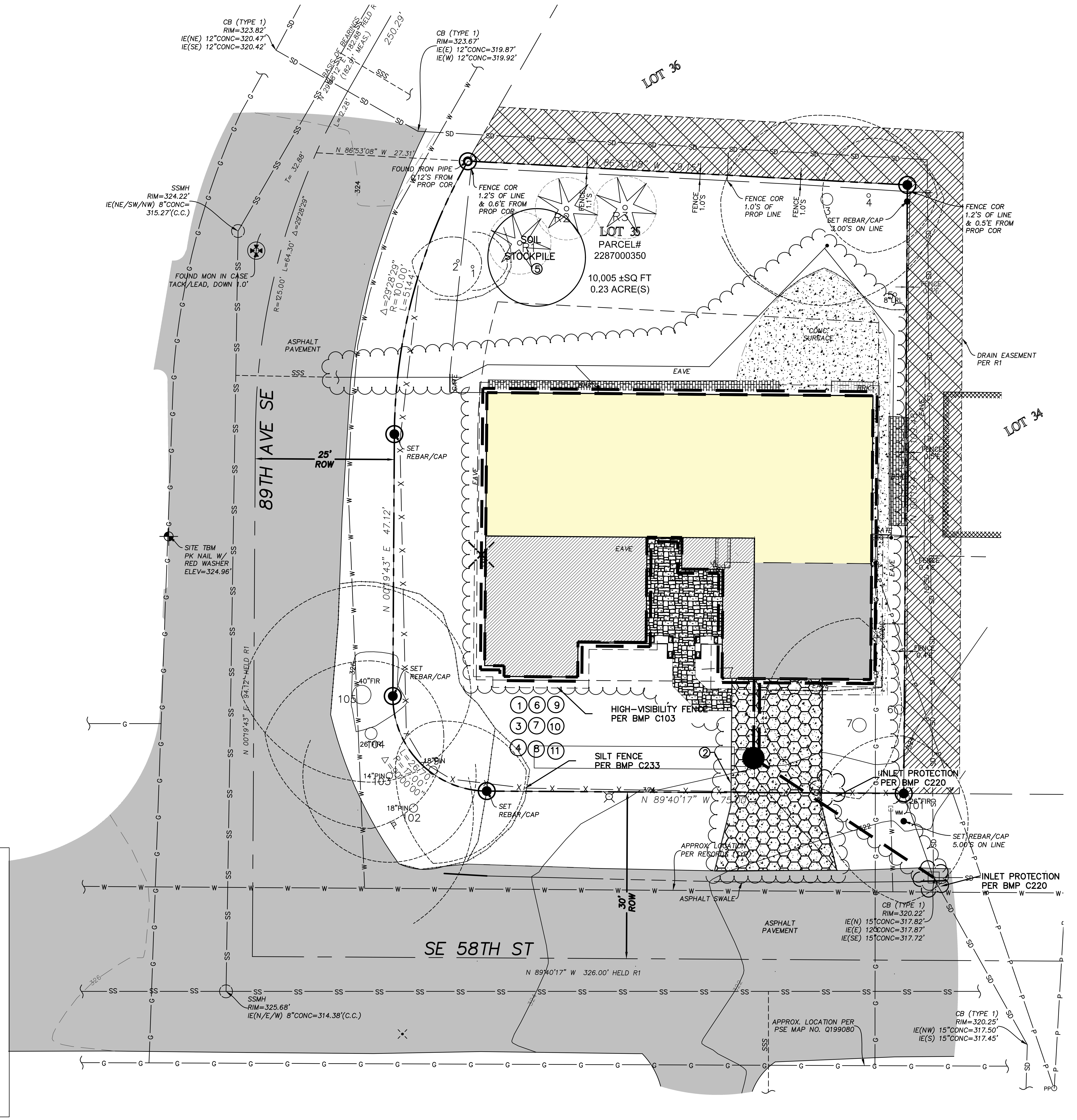
*NOTE - ONLY HALF OF THE 333 SF DRIVEWAY WAS COUNTED BECAUSE IT WILL BE MADE OF PERVIOUS MATERIAL

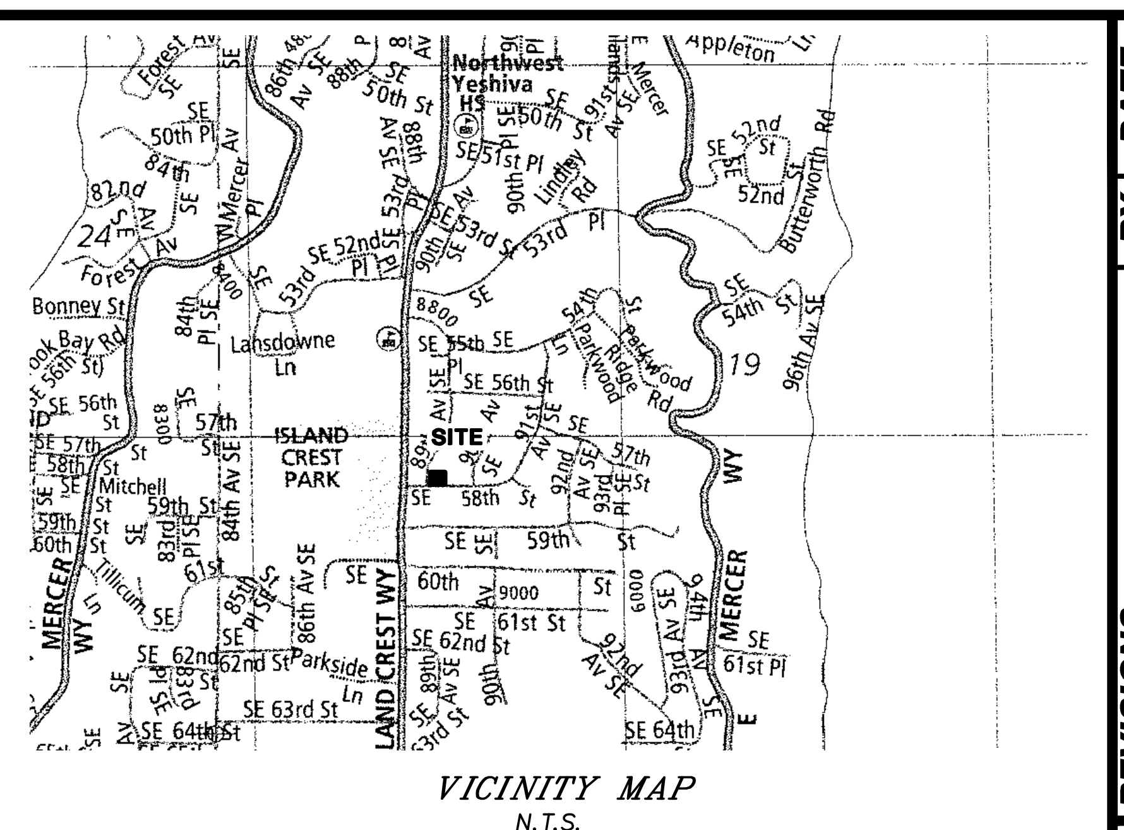
OFFSITE IMPERVIOUS SURFACE

	(E)EXISTING AREA	(N)PROPOSED AREA	NET AREA
DRIVEWAY (OLD)	252 SF	0	-252 SF
DRIVEWAY (NEW)	0 SF	262 SF (NEW)	+262 SF
TOTAL	252 SF	262 SF	+ 10 SF

LEGEND

	BENCHMARK	▦	BRICK SURFACE
⊕	BRASS DISC (FOUND)	⛆	CONCRETE SURFACE
——	CENTERLINE ROW	▨	DECK
——— —	FENCE LINE (WOOD)	G □	GAS METER
IP○	IRON PIPE (FOUND)	—— G ——	GAS LINE
⊗	MONUMENT (IN CASE, FOUND)	▣	INLET (TYPE 1)
✱	NAIL AS NOTED	—— SD ——	STORM DRAIN LINE
– – – – – –	PROPERTY LINES (ADJACENT)	◯	SEWER MANHOLE
——	PROPERTY LINE (SUBJECT)	—— SS ——	SEWER LINE
●	REBAR & CAP (SET)	P □	POWER METER
▨	RETAINING WALL	PP ○	POWER POLE
—— ——	RIGHT-OF-WAY LINES	—— P ——	POWER (OVERHEAD)
▨	BUILDING	✱	YARD LIGHT
⊢▷ ⊣	SIGN (AS NOTED)	○	FIRE HYDRANT
SIZE TYPE ◎	TREE (AS NOTED)	WM □	WATER METER
▭	ASPHALT SURFACE	—— W ——	WATER LINE
—x—x—x—x—	PHASE 2 TREE PROTECTION	▨	***DRAIN EASEMENT PER R1***
-+-+-+-+-+-	PHASE 1 TREE PROTECTION		





VICINITY MAP
N.T.S.

LEGAL DESCRIPTION

PER TRUSTEE'S DEED RECORDING # 20231102000233

LOT 35, EL DORADO ESTATES, ACCORDING TO PLAT RECORDED IN VOLUME 62 OF PLATS, PAGE 7, IN KING COUNTY, WASHINGTON.

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

SUBJECT TO AND TOGETHER WITH EASEMENTS, CONDITIONS, COVENANTS AND RESTRICTIONS OF RECORD.

SURVEYOR'S NOTES

1. THE TOPOGRAPHIC SURVEY SHOWN HEREON WAS PERFORMED IN JANUARY OF 2024. THE FIELD DATA WAS COLLECTED AND RECORDED ON MAGNETIC MEDIA THROUGH AN ELECTRONIC THEODOLITE. THE DATA FILE IS ARCHIVED ON DISC OR CD. WRITTEN FIELD NOTES MAY NOT EXIST. CONTOURS ARE SHOWN FOR CONVENIENCE ONLY. DESIGN SHOULD RELY ON SPOT ELEVATIONS.
2. ALL MONUMENTS SHOWN HEREON WERE LOCATED DURING THE COURSE OF THIS SURVEY UNLESS OTHERWISE NOTED.
3. THE TYPES AND LOCATIONS OF ANY UTILITIES SHOWN ON THIS DRAWING ARE BASED ON INFORMATION PROVIDED TO US, BY OTHERS OR GENERAL INFORMATION READILY AVAILABLE IN THE PUBLIC DOMAIN INCLUDING, AS APPLICABLE, IDENTIFYING MARKINGS PLACED BY UTILITY LOCATE SERVICES AND OBSERVED BY TERRANE IN THE FIELD. AS SUCH, THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS ARE FOR INFORMATIONAL PURPOSES ONLY AND SHOULD NOT BE RELIED ON FOR DESIGN OR CONSTRUCTION PURPOSES; TERRANE IS NOT RESPONSIBLE OR LIABLE FOR THE ACCURACY OR COMPLETENESS OF THIS UTILITY INFORMATION. FOR THE ACCURATE LOCATION AND TYPE OF UTILITIES NECESSARY FOR DESIGN AND CONSTRUCTION, PLEASE CONTACT THE SITE OWNER AND THE LOCAL UTILITY LOCATE SERVICE (800-424-5555).
4. SUBJECT PROPERTY TAX PARCEL NO. 2287000350
5. SUBJECT PROPERTY AREA PER THIS SURVEY IS 10,005 ±S.F. (0.23 ACRES)
6. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT. EASEMENTS AND OTHER ENCUMBRANCES MAY EXIST THAT ARE NOT SHOWN HEREON.
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BASIS OF BEARINGS

ACCEPTED THE BEARING OF N 29°48'12" E BETWEEN MONUMENTS FOUND ALONG THE CENTERLINE OF 89TH AVE SE, PER REFERENCE NO. 1.

REFERENCES

R1. EL DORADO ESTATES, VOL. 62 OF PLATS, PG. 07, RECORDS OF KING COUNTY, WASHINGTON.

VERTICAL DATUM

NAVD 88 PER CITY OF MERCER ISLAND BENCHMARK NO. 1800
DESCRIPTION: CONC. MON W/ TACK IN LEAD
LOCATION: C/L 89TH AVE SE OPP HSE #5639
ELEVATION:323.242'

SITE TEMP. BENCHMARK
DESCRIPTION: PK NAIL W/ RED WASHER
LOCATION: 67.7'S & 53.8'W FROM THE NW PROPERTY CORNER
ELEVATION:324.96'

INDEX LOCATION:
SEC.30 T.24N.R. 5E. W.M.

30

RONALD S. FREDERIKSEN
39053

10/16/2024

REVISIONS | BY | DATE

TESC PLAN

SITE ADDRESS: 8904 SE 58TH ST.

JENNIE LEE
8904 SE 58TH ST.
MERCER ISLAND, WA

ENGINEERS - SURVEYORS
EASTSIDE CONSULTANTS, INC.
1320 N.W. MALL ST., SUITE B
ISSAQUAH, WASHINGTON 98027
PH:(425)392-5351 FAX:392-4676

JOB NO. 24081
DATE 10/24
SCALE 1"=10'
DESIGNED R.E.H.
DRAWN R.E.H.
CHECKED R.S.F.
APPROVED R.S.F.

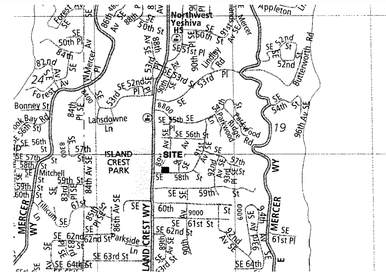
LEE RESIDENCE

NW 1/4, SW 1/4, SECTION 19, TOWNSHIP 24 NORTH, RANGE 5 EAST, W.M.
CITY OF MERCER ISLAND, WASHINGTON

OWNER:
JENNIE LEE
8904 SE 58TH STREET,
MERCER ISLAND, WA

ARCHITECT: ARCHITECTURAL INNOVATIONS
NAME: ROBERT YOUNG
COMPANY
PH: 425-641-5320

CIVIL ENGINEER:
EASTSIDE CONSULTANTS, INC
1320 NW MALL STREET, STE B
ISSAQUAH, WA 98027
PHONE: 425.392.5351
CONTACT: RON FREDERIKSEN



VICINITY MAP
N.T.S.

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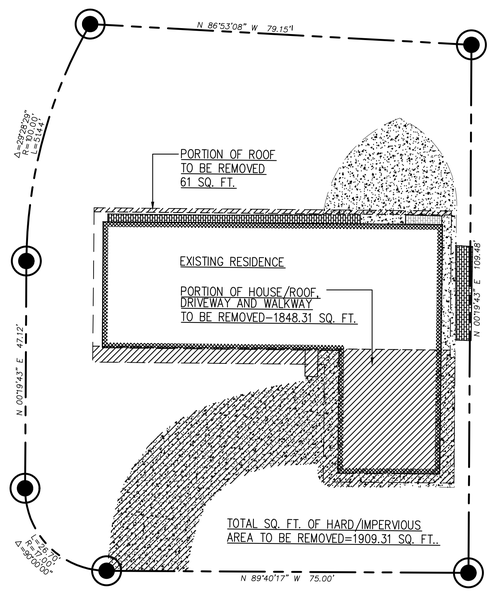
LOCATION: 67.7'S & 53.8'W FROM THE NW PROPERTY CORNER
ELEVATION:324.96'

GRAPHIC SCALE
15 0 15 30
(IN FEET)
1 inch = 15 ft.

TO BE REMOVED



ONSITE IMPERVIOUS SURFACE TO BE REMOVED

	AREA (SF)
ROOF	61 SF
HOUSE/DRIVEWAY/WALKWAY	1848 SF
TOTAL	- 1,909 SF

ONSITE IMPERVIOUS SURFACE NEW/REPLACED

	AREA (SF)
HOUSE/DRIVEWAY	2215 SF
TOTAL	+ 2215 SF

NET CHANGE ONSITE IMPERVIOUS SURFACE

	NET AREA (SF)
TOTAL	+306 SF

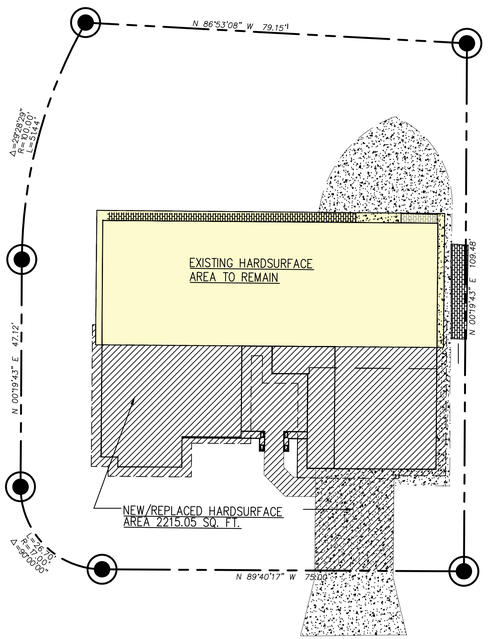
ONSITE IMPERVIOUS SURFACE REMAIN

	AREA (SF)
PATIO	597
BRICK	57 SF
HOUSE	2006 SF
TOTAL	2660 SF

TOTAL ONSITE IMPERVIOUS SURFACE

	AREA (SF)
TOTAL	4875 SF

TO BE ADDED



LEGEND

- BENCHMARK
- BRASS DISC (FOUND)
- CENTERLINE ROW
- FENCE LINE (WOOD)
- IRON PIPE (FOUND)
- MONUMENT (IN CASE, FOUND)
- NAIL AS NOTED
- PROPERTY LINES (ADJACENT)
- PROPERTY LINE (SUBJECT)
- REBAR & CAP (SET)
- RETAINING WALL
- RIGHT-OF-WAY LINES
- BUILDING
- SIGN (AS NOTED)
- SIZE TYPE TREE (AS NOTED)
- ASPHALT SURFACE
- PHASE 2 TREE PROTECTION
- PHASE 1 TREE PROTECTION
- BRICK SURFACE
- CONCRETE SURFACE
- DECK
- GAS METER
- GAS LINE
- INLET (TYPE 1)
- STORM DRAIN LINE
- SEWER MANHOLE
- SEWER LINE
- POWER METER
- POWER POLE
- POWER (OVERHEAD)
- YARD LIGHT
- FIRE HYDRANT
- WATER METER
- WATER LINE
- DRAIN EASEMENT PER R1

INDEX LOCATION:
SEC. 30 T. 24 N.R. 5 E. W.M.

10/16/2024

REVISIONS	BY	DATE

AREAS SHEET

SITE ADDRESS: 8904 SE 58TH ST.

JENNIE LEE
8904 SE 58TH ST.
MERCER ISLAND, WA

EASTSIDE CONSULTANTS, INC.
ENGINEERS - SURVEYORS
1320 NW MALL ST., SUITE B
ISSAQUAH, WASHINGTON 98027
PH:(425)392-5351 FAX:392-4676

JOB NO.	24081
DATE	10/24
SCALE	1"=10'
DESIGNED	R.E.H.
DRAWN	R.E.H.
CHECKED	R.S.F.
APPROVED	R.S.F.

SHEET 5 OF 14

TOPOGRAPHIC & BOUNDARY SURVEY

LEGAL DESCRIPTION

PER TRUSTEE'S DEED RECORDING # 20231102000233

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LEGEND

- BENCHMARK
- BRASS DISC (FOUND)
- CENTERLINE ROW
- FENCE LINE (WOOD)
- IRON PIPE (FOUND)
- MONUMENT (IN CASE, FOUND)
- NAIL AS NOTED
- PROPERTY LINES (ADJACENT)
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- REBAR & CAP (SET)
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- BUILDING
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- TREE (AS NOTED)
- ASPHALT SURFACE
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- POWER POLE
- POWER (OVERHEAD)
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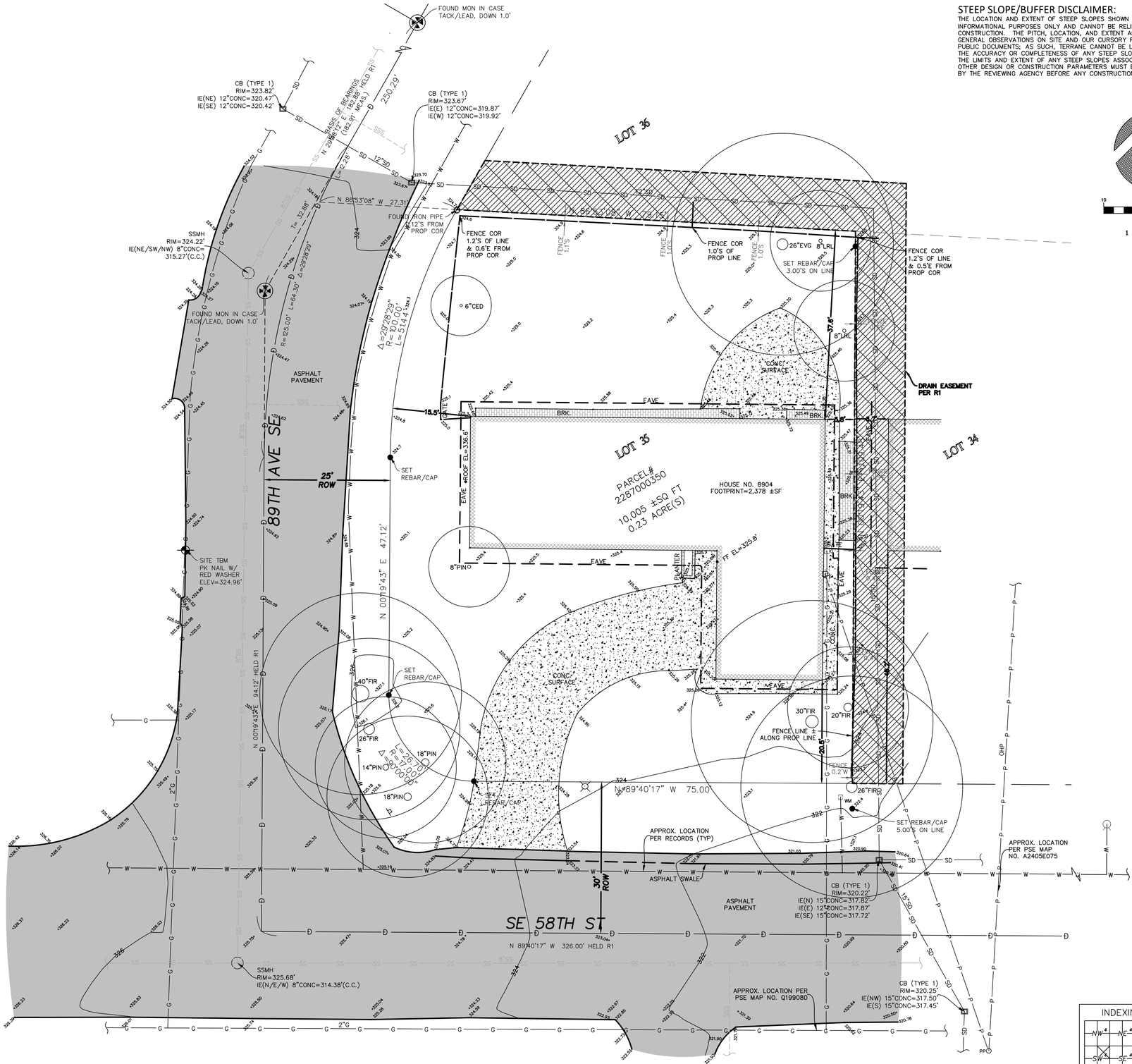
- FIRE HYDRANT
- WATER METER
- WATER LINE
- DRAIN EASEMENT PER R1

VICINITY MAP

N.T.S.

VMAP.png



STEEP SLOPE/BUFFER DISCLAIMER:

THE LOCATION AND EXTENT OF STEEP SLOPES SHOWN ON THIS DRAWING ARE FOR INFORMATIONAL PURPOSES ONLY AND CANNOT BE RELIED ON FOR DESIGN AND/OR CONSTRUCTION. THE PITCH, LOCATION, AND EXTENT ARE BASED SOLELY ON OUR GENERAL OBSERVATIONS ON SITE AND OUR CURSORY REVIEW OF READILY AVAILABLE PUBLIC DOCUMENTS; AS SUCH, TERRANE CANNOT BE LIABLE OR RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY STEEP SLOPE INFORMATION. ULTIMATELY, THE LIMITS AND EXTENT OF ANY STEEP SLOPES ASSOCIATED WITH ANY SETBACKS OR OTHER DESIGN OR CONSTRUCTION PARAMETERS MUST BE DISCUSSED AND APPROVED BY THE REVIEWING AGENCY BEFORE ANY CONSTRUCTION CAN OCCUR.

10 0 5 10
(IN FEET)
1 INCH = 10 FT.

INDEXING INFORMATION

NE 1/4 SW 1/4
SECTION: 19
TOWNSHIP: 24N
RANGE: 05E, W.M.
COUNTY: KING

T-LOGO.jpg

TOPOGRAPHIC & BOUNDARY SURVEY
PARCEL NO. 2287000350

JENNIE LEE RESIDENCE
8904 SOUTHEAST 58TH STREET
MERCER ISLAND, WA 98040

JOB NUMBER:	232300
DATE:	01/19/24
DRAFTED BY:	CAS
CHECKED BY:	JGM / WMS
SCALE:	1" = 10'

REVISION HISTORY

SHEET NUMBER
6 OF 13

ate.dwg
Xref Stam-p.dwg

LEE RESIDENCE

NW 1/4, SW 1/4, SECTION 19, TOWNSHIP 24 NORTH, RANGE 5 EAST, W.M.
CITY OF MERCER ISLAND, WASHINGTON

OWNER:
JENNIE LEE
8904 SE 58TH STREET,
MERCER ISLAND, WA

ARCHITECT: ARCHITECTURAL INNOVATIONS
NAME: ROBERT YOUNG
COMPANY
PH: 425-641-5320

CIVIL ENGINEER:
EASTSIDE CONSULTANTS, INC
1320 NW MALL STREET, STE B
ISSAQUAH, WA 98027
PHONE: 425.392.5351
CONTACT: RON FREDERIKSEN

BMP C101: Preserving Natural Vegetation

Purpose

The purpose of preserving natural vegetation is to reduce erosion wherever practicable. Limiting site disturbance is the single most effective method for reducing erosion. For example, conifers can hold up to about 50 percent of all rain that falls during a storm. Up to 20-30 percent of this rain may never reach the ground but is taken up by the tree or evaporates. Another benefit is that the rain held in the tree can be released slowly to the ground after the storm.

Conditions of Use

Natural vegetation should be preserved on steep slopes, near perennial and intermittent watercourses or swales, and on building sites in wooded areas.

- As required by local governments.
- Phase construction to preserve natural vegetation on the project site for as long as possible during the construction period.

Design and Installation Specifications

Natural vegetation can be preserved in natural clumps or as individual trees, shrubs and vines.

The preservation of individual plants is more difficult because heavy equipment is generally used to remove unwanted vegetation. The points to remember when attempting to save individual plants are:

- Is the plant worth saving? Consider the location, species, size, age, vigor, and the work involved. Local governments may also have ordinances to save natural vegetation and trees.
- Fence or clearly mark areas around trees that are to be saved. It is preferable to keep ground disturbance away from the trees at least as far out as the dripline.

Plants need protection from three kinds of injuries:

- *Construction Equipment* - This injury can be above or below the ground level. Damage results from scarring, cutting of roots, and compaction of the soil. Placing a fenced buffer zone around plants to be saved prior to construction can prevent construction equipment injuries.
- *Grade Changes* - Changing the natural ground level will alter grades, which affects the plant's ability to obtain the necessary air, water, and minerals. Minor fills usually do not cause problems although sensitivity between species does vary and should be checked. Trees can typically tolerate fill of 6 inches or less. For shrubs and other plants, the fill should be less.

  When there are major changes in grade, it may become necessary to supply air to the roots of plants. This can be done by placing a layer of gravel and a tile system over the roots before the fill is made. The tile system should be laid out on the original grade leading from a dry well

BMP C105: Stabilized Construction Access

Purpose

Stabilized construction accesses are established to reduce the amount of sediment transported onto paved roads outside the project site by vehicles or equipment. This is done by constructing a stabilized pad of quarry spalls at entrances and exits for project sites.

Conditions of Use

Construction accesses shall be stabilized wherever traffic will be entering or leaving a construction site if paved roads or other paved areas are within 1,000 feet of the site.

For residential subdivision construction sites, provide a stabilized construction access for each residence, rather than only at the main subdivision entrance. Stabilized surfaces shall be of sufficient length/width to provide vehicle access/parking, based on lot size and configuration.

On large commercial, highway, and road projects, the designer should include enough extra materials in the contract to allow for additional stabilized accesses not shown in the initial Construction SWPPP. It is difficult to determine exactly where access to these projects will take place; additional materials will enable the contractor to install them where needed.

Design and Installation Specifications

See Figure II-3.1: Stabilized Construction Access for details. Note: the 100' minimum length of the access shall be reduced to the maximum practicable size when the size or configuration of the site does not allow the full length (100').

Construct stabilized construction accesses with a 12-inch thick pad of 4-inch to 8-inch quarry spalls, a 4-inch course of asphalt treated base (ATB), or use existing pavement. Do not use crushed concrete, cement, or calcium chloride for construction access stabilization because these products raise pH levels in stormwater and concrete discharge to waters of the State is prohibited.

A separation geotextile shall be placed under the spalls to prevent fine sediment from pumping up into the rock pad. The geotextile shall meet the standards listed in Table II-3.2: Stabilized Construction Access Geotextile Standards.

Table II-3.2: Stabilized Construction Access Geotextile Standards

Geotextile Property	Required Value
Grab Tensile Strength (ASTM D4751)	200 psi min.

around the tree trunk. The system should then be covered with small stones to allow air to circulate over the root area.

Lowering the natural ground level can seriously damage trees and shrubs. The highest percentage of the plant roots are in the upper 12 inches of the soil and cuts of only 2-3 inches can cause serious injury. To protect the roots it may be necessary to terrace the immediate area around the plants to be saved. If roots are exposed, construction of retaining walls may be needed to keep the soil in place. Plants can also be preserved by leaving them on an undisturbed, gently sloping mound. To increase the chances for survival, it is best to limit grade changes and other soil disturbances to areas outside the dripline of the plant.

- *Excavations* - Protect trees and other plants when excavating for drainfields, power, water, and sewer lines. Where possible, the trenches should be routed around trees and large shrubs. When this is not possible, it is best to tunnel under them. This can be done with hand tools or with power augers. If it is not possible to route the trench around plants to be saved, then the following should be observed:
  - Cut as few roots as possible. When you have to cut, cut clean. Paint cut root ends with a wood dressing like asphalt base paint if roots will be exposed for more than 24-hours.
  - Backfill the trench as soon as possible.
  - Tunnel beneath root systems as close to the center of the main trunk to preserve most of the important feeder roots.

Some problems that can be encountered with a few specific trees are:

- Maple, Dogwood, Red alder, Western hemlock, Western red cedar, and Douglas fir do not readily adjust to changes in environment and special care should be taken to protect these trees.
- The windthrow hazard of Pacific silver fir and madrona is high, while that of Western hemlock is moderate. The danger of windthrow increases where dense stands have been thinned. Other species (unless they are on shallow, wet soils less than 20 inches deep) have a low windthrow hazard.
- Cottonwoods, maples, and willows have water-seeking roots. These can cause trouble in sewer lines and infiltration fields. On the other hand, they thrive in high moisture conditions that other trees would not.
- Thinning operations in pure or mixed stands of Grand fir, Pacific silver fir, Noble fir, Sitka spruce, Western red cedar, Western hemlock, Pacific dogwood, and Red alder can cause serious disease problems. Disease can become established through damaged limbs, trunks, roots, and freshly cut stumps. Diseased and weakened trees are also susceptible to insect attack.

Maintenance Standards

Inspect flagged and/or fenced areas regularly to make sure flagging or fencing has not been removed or damaged. If the flagging or fencing has been damaged or visibility reduced, it shall be repaired or replaced immediately and visibility restored.

Table II-3.2: Stabilized Construction Access Geotextile Standards (continued)

Geotextile Property	Required Value
Grab Tensile Elongation (ASTM D4632)	30% max.
Mullen Burst Strength (ASTM D3786-80a)	400 psi min.
AOS (ASTM D4751)	20-45 (U.S. standard sieve size)

- Consider early installation of the first lift of asphalt in areas that will be paved; this can be used as a stabilized access. Also consider the installation of excess concrete as a stabilized access. During large concrete pours, excess concrete is often available for this purpose.
- Fencing (see BMP C103: High-Visibility Fence) shall be installed as necessary to restrict traffic to the construction access.
- Whenever possible, the access shall be constructed on a firm, compacted subgrade. This can substantially increase the effectiveness of the pad and reduce the need for maintenance.
- Construction accesses should avoid crossing existing sidewalks and back of walk drains if at all possible. If a construction access must cross a sidewalk or back of walk drain, the full length of the sidewalk and back of walk drain must be covered and protected from sediment leaving the site.

Alternative Material Specification

WSDOT has raised safety concerns about the Quarry Spall rock specified above. WSDOT observes that the 4-inch to 8-inch rock sizes can become trapped between Dually truck tires, and then released off-site at highway speeds. WSDOT has chosen to use a modified specification for the rock while continuously verifying that the Stabilized Construction Access remains effective. To remain effective, the BMP must prevent sediment from migrating off site. To date, there has been no performance testing to verify operation of this new specification. Jurisdictions may use the alternative specification, but must perform increased off-site inspection if they use, or allow others to use, it.

Stabilized Construction Accesses may use material that meets the requirements of WSDOT's *Standard Specifications for Road, Bridge, and Municipal Construction* Section 9-03.9(1) (WSDOT, 2016) for ballast except for the following special requirements.

The grading and quality requirements are listed in Table II-3.3: Stabilized Construction Access Alternative Material Requirements.

Table II-3.3: Stabilized Construction Access Alternative Material Requirements

Sieve Size	Percent Passing
2½"	99-100

If tree roots have been exposed or injured, "prune" cleanly with an appropriate pruning saw or loppers directly above the damaged roots and recover with native soils. Treatment of sap flowing trees (fir, hemlock, pine, soft maples) is not advised as sap forms a natural healing barrier.

BMP C103: High-Visibility Fence

Purpose

High-visibility fencing is intended to:

- Restrict clearing to approved limits.
- Prevent disturbance of sensitive areas, their buffers, and other areas required to be left undisturbed.
- Limit construction traffic to designated construction entrances, exits, or internal roads.
- Protect areas where marking with survey tape may not provide adequate protection.

Conditions of Use

To establish clearing limits plastic, fabric, or metal fence may be used:

- At the boundary of sensitive areas, their buffers, and other areas required to be left uncleared.
- As necessary to control vehicle access to and on the site.

Design and Installation Specifications

High-visibility plastic fence shall be composed of a high-density polyethylene material and shall be at least four feet in height. Posts for the fencing shall be steel or wood and placed every 6 feet on center (maximum) or as needed to ensure rigidity. The fencing shall be fastened to the post every six inches with a polyethylene tie. On long continuous lengths of fencing, a tension wire or rope shall be used as a top stringer to prevent sagging between posts. The fence color shall be high-visibility orange. The fence tensile strength shall be 360 lbs/ft using the ASTM D4595 testing method.

If appropriate install fabric silt fence in accordance with BMP C233: Silt Fence to act as high-visibility fence. Silt fence shall be at least 3 feet high and must be highly visible to meet the requirements of this BMP.

Metal fences shall be designed and installed according to the manufacturer's specifications.

Metal fences shall be at least 3 feet high and must be highly visible.

Fences shall not be wired or stapled to trees.

Table II-3.3: Stabilized Construction Access Alternative Material Requirements (continued)

Sieve Size	Percent Passing
2"	65-100
¾"	40-80
No. 4	5 max.
No. 100	0-2
% Fracture	75 min.

- All percentages are by weight.
- The sand equivalent value and dust ratio requirements do not apply.
- The fracture requirement shall be at least one fractured face and will apply the combined aggregate retained on the No. 4 sieve in accordance with FOP for AASHTO T 335.

Maintenance Standards

Quarry spalls shall be added if the pad is no longer in accordance with the specifications.

- If the access is not preventing sediment from being tracked onto pavement, then alternative measures to keep the streets free of sediment shall be used. This may include replacement/cleaning of the existing quarry spalls, street sweeping, an increase in the dimensions of the access, or the installation of BMP C106: Wheel Wash.
- Any sediment that is tracked onto pavement shall be removed by shoveling or street sweeping. The sediment collected by sweeping shall be removed or stabilized on site. The pavement shall not be cleaned by washing down the street, except when high efficiency sweeping is ineffective and there is a threat to public safety. If it is necessary to wash the streets, the construction of a small sump to contain the wash water shall be considered. The sediment would then be washed into the sump where it can be controlled.
- Perform street sweeping by hand or with a high efficiency sweeper. Do not use a non-high efficiency mechanical sweeper because this creates dust and throws soils into storm systems or conveyance ditches.
- Any quarry spalls that are loosened from the pad, which end up on the roadway shall be removed immediately.
- If vehicles are entering or exiting the site at points other than the construction access(es), BMP C103: High-Visibility Fence shall be installed to control traffic.

Maintenance Standards

If the fence has been damaged or visibility reduced, it shall be repaired or replaced immediately and visibility restored.

BMP C105: Stabilized Construction Access

Purpose

Stabilized construction accesses are established to reduce the amount of sediment transported onto paved roads outside the project site by vehicles or equipment. This is done by constructing a stabilized pad of quarry spalls at entrances and exits for project sites.

Conditions of Use

Construction accesses shall be stabilized wherever traffic will be entering or leaving a construction site if paved roads or other paved areas are within 1,000 feet of the site.

For residential subdivision construction sites, provide a stabilized construction access for each residence, rather than only at the main subdivision entrance. Stabilized surfaces shall be of sufficient length/width to provide vehicle access/parking, based on lot size and configuration.

On large commercial, highway, and road projects, the designer should include enough extra materials in the contract to allow for additional stabilized accesses not shown in the initial Construction SWPPP. It is difficult to determine exactly where access to these projects will take place; additional materials will enable the contractor to install them where needed.

Design and Installation Specifications

See Figure II-3.1: Stabilized Construction Access for details. Note: the 100' minimum length of the access shall be reduced to the maximum practicable size when the size or configuration of the site does not allow the full length (100').

Construct stabilized construction accesses with a 12-inch thick pad of 4-inch to 8-inch quarry spalls, a 4-inch course of asphalt treated base (ATB), or use existing pavement. Do not use crushed concrete, cement, or calcium chloride for construction access stabilization because these products raise pH levels in stormwater and concrete discharge to waters of the State is prohibited.

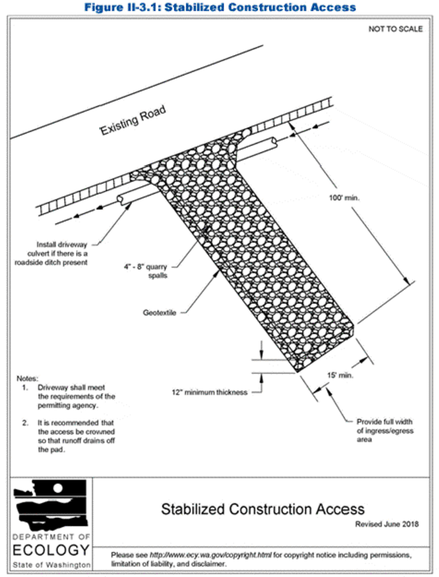
A separation geotextile shall be placed under the spalls to prevent fine sediment from pumping up into the rock pad. The geotextile shall meet the standards listed in Table II-3.2: Stabilized Construction Access Geotextile Standards.

Table II-3.2: Stabilized Construction Access Geotextile Standards

Geotextile Property	Required Value
Grab Tensile Strength (ASTM D4751)	200 psi min.

- Upon project completion and site stabilization, all construction accesses intended as permanent access for maintenance shall be permanently stabilized.

Figure II-3.1: Stabilized Construction Access



10/16/2024

REVISIONS | BY | DATE

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JOB NO. 24081
DATE 10/24
SCALE 1"=10'
DESIGNED R.E.H.
DRAWN R.E.H.
CHECKED R.S.F.
APPROVED R.S.F.

SHEET 7 OF 14

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BMP C120: Temporary and Permanent Seeding

Purpose

Seeding reduces erosion by stabilizing exposed soils. A well-established vegetative cover is one of the most effective methods of reducing erosion.

Conditions of Use

Use seeding throughout the project on disturbed areas that have reached final grade or that will remain unworked for more than 30 days.

The optimum seeding windows for western Washington are April 1 through June 30 and September 1 through October 1.

Between July 1 and August 30 seeding requires irrigation until 75 percent grass cover is established.

Between October 1 and March 30 seeding requires a cover of mulch or an erosion control blanket until 75 percent grass cover is established.

Review all disturbed areas in late August to early September and complete all seeding by the end of September. Otherwise, vegetation will not establish itself enough to provide more than average protection.

Mulch is required at all times for seeding because it protects seeds from heat, moisture loss, and transport due to runoff. Mulch can be applied on top of the seed or simultaneously by hydroseeding. See BMP C121: Mulching for specifications.

Seed and mulch all disturbed areas not otherwise vegetated at final site stabilization. Final stabilization means the completion of all soil disturbing activities at the site and the establishment of a permanent vegetative cover, or equivalent permanent stabilization measures (such as pavement, riprap, gabions, or geotextiles) which will prevent erosion. See BMP T5.13: Post-Construction Soil Quality and Depth.

Design and Installation Specifications

General

- Install channels intended for vegetation before starting major earthwork and hydroseed with a Bonded Fiber Matrix. For vegetated channels that will have high flows, install erosion control blankets over the top of hydroseed. Before allowing water to flow in vegetated channels, establish 75 percent vegetation cover. If vegetated channels cannot be established by seed

permanent areas shall use soil amendments to achieve organic matter and permeability performance defined in engineered soil/landscape systems. For systems that are deeper than 8 inches complete the rototilling process in multiple lifts, or prepare the engineered soil system per specifications and place to achieve the specified depth.

Fertilizers

- Conducting soil tests to determine the exact type and quantity of fertilizer is recommended. This will prevent the over-application of fertilizer.
- Organic matter is the most appropriate form of fertilizer because it provides nutrients (including nitrogen, phosphorus, and potassium) in the least water-soluble form.
- In general, use 10-4-6 N-P-K (nitrogen-phosphorus-potassium) fertilizer at a rate of 90 pounds per acre. Always use slow-release fertilizers because they are more efficient and have fewer environmental impacts. Do not add fertilizer to the hydromulch machine, or agitate, more than 20 minutes before use. Too much agitation destroys the slow-release coating.
- There are numerous products available that take the place of chemical fertilizers. These include several with seaweed extracts that are beneficial to soil microbes and organisms. If 100 percent cottonseed meal is used as the mulch in hydroseed, chemical fertilizer may not be necessary. Cottonseed meal provides a good source of long-term, slow-release, available nitrogen.

Bonded Fiber Matrix and Mechanically Bonded Fiber Matrix

- On steep slopes use Bonded Fiber Matrix (BFM) or Mechanically Bonded Fiber Matrix (MBFM) products. Apply BFM/MBFM products at a minimum rate of 3,000 pounds per acre with approximately 10 percent tackifier. Achieve a minimum of 95 percent soil coverage during application. Numerous products are available commercially. Most products require 24-36 hours to cure before rainfall and cannot be installed on wet or saturated soils. Generally, products come in 40-50 pound bags and include all necessary ingredients except for seed and fertilizer.
- Install products per manufacturer's instructions.
- BFMs and MBFMs provide good alternatives to blankets in most areas requiring vegetation establishment. Advantages over blankets include:
  - BFM and MBFMs do not require surface preparation.
  - Helicopters can assist in installing BFM and MBFMs in remote areas.
  - On slopes steeper than 2.5H:1V, blanket installers may require ropes and harnesses for safety.
  - Installing BFM and MBFMs can save at least $1,000 per acre compared to blankets.

before water flow; install sod in the channel bottom — over top of hydromulch and erosion control blankets.

- Confirm the installation of all required surface water control measures to prevent seed from washing away.
- Hydroseed applications shall include a minimum of 1,500 pounds per acre of mulch with 3 percent tackifier. See BMP C121: Mulching for specifications.
- Areas that will have seeding only and not landscaping may need compost or meal-based mulch included in the hydroseed in order to establish vegetation. Re-install native topsoil on the disturbed soil surface before application. See BMP T5.13: Post-Construction Soil Quality and Depth.
- When installing seed via hydroseeding operations, only about 1/3 of the seed actually ends up in contact with the soil surface. This reduces the ability to establish a good stand of grass quickly. To overcome this, consider increasing seed quantities by up to 50 percent.
- Enhance vegetation establishment by dividing the hydromulch operation into two phases:
  - Phase 1- Install all seed and fertilizer with 25-30 percent mulch and tackifier onto soil in the first lift.
  - Phase 2- Install the rest of the mulch and tackifier over the first lift.

  Or, enhance vegetation by:
  - Installing the mulch, seed, fertilizer, and tackifier in one lift.
  - Spread or blow straw over the top of the hydromulch at a rate of 800-1000 pounds per acre.
  - Hold straw in place with a standard tackifier.

  Both of these approaches will increase cost moderately but will greatly improve and enhance vegetative establishment. The increased cost may be offset by the reduced need for:
  - Irrigation.
  - Reapplication of mulch.
  - Repair of failed slope surfaces.

  This technique works with standard hydromulch (1,500 pounds per acre minimum) and Bonded Fiber Matrix/ Mechanically Bonded Fiber Matrix (BFM/MBFMs) (3,000 pounds per acre minimum).
- Seed may be installed by hand if:
  - Temporary and covered by straw, mulch, or topsoil.
  - Permanent in small areas (usually less than 1 acre) and covered with mulch, topsoil, or erosion blankets.
- The seed mixes listed in Table II-3.4: Temporary and Permanent Seed Mixes include

Maintenance Standards

Reseed any seeded areas that fail to establish at least 75 percent cover (100 percent cover for areas that receive sheet or concentrated flows). If reseeding is ineffective, use an alternate method such as sodding, mulching, nets, or blankets.

- Reseed and protect by mulch any areas that experience erosion after achieving adequate cover. Reseed and protect by mulch any eroded area.
- Supply seeded areas with adequate moisture, but do not water to the extent that it causes runoff.

Approved as Functionally Equivalent

Ecology has approved products as able to meet the requirements of this BMP. The products did not pass through the Technology Assessment Protocol – Ecology (TAPE) process. Local jurisdictions may choose not to accept these products, or may require additional testing prior to consideration for local use. Products that Ecology has approved as functionally equivalent are available for review on Ecology's website at:

https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Stormwater-permittee-guidance-resources/Emerging-stormwater-treatment-technologies

BMP C121: Mulching

Purpose

Mulching soils provides immediate temporary protection from erosion. Mulch also enhances plant establishment by conserving moisture, holding fertilizer, seed, and topsoil in place, and moderating soil temperatures. There are a variety of mulches that can be used. This section discusses only the most common types of mulch.

Conditions of Use

As a temporary cover measure, mulch should be used:

- For less than 30 days on disturbed areas that require cover.
- At all times for seeded areas, especially during the wet season and during the hot summer months.
- During the wet season on slopes steeper than 3H:1V with more than 10 feet of vertical relief.

Mulch may be applied at any time of the year and must be refreshed periodically.

For seeded areas, mulch may be made up of 100 percent:

- cottonseed meal;
- fibers made of wood, recycled cellulose, hemp, or kenaf;

recommended mixes for both temporary and permanent seeding.

- Apply these mixes, with the exception of the wet area seed mix, at a rate of 120 pounds per acre. This rate can be reduced if soil amendments or slow-release fertilizers are used. Apply the wet area seed mix at a rate of 60 pounds per acre.
- Consult the local suppliers or the local conservation district for their recommendations. The appropriate mix depends on a variety of factors, including location, exposure, soil type, slope, and expected foot traffic. Alternative seed mixes approved by the local authority may be used, depending on the soil type and hydrology of the area.

Table II-3.4: Temporary and Permanent Seed Mixes

Common Name	Latin Name	% Weight	% Purity	% Germination
Temporary Erosion Control Seed Mix A standard mix for areas requiring a temporary vegetative cover.				
Chewings or annual blue grass	*Festuca rubra var. commutata* or *Poa anna*	40	98	90
Perennial rye	*Lolium perenne*	50	98	90
Redtop or colonial bentgrass	*Agrostis alba* or *Agrostis tenuis*	5	92	85
White dutch clover	*Trifolium repens*	5	98	90
Landscaping Seed Mix A recommended mix for landscaping seed.				
Perennial rye blend	*Lolium perenne*	70	98	90
Chewings and red fescue blend	*Festuca rubra var. commutata* or *Festuca rubra*	30	98	90
Low-Growing Turf Seed Mix A turf seed mix for dry situations where there is no need for watering. This mix requires very little maintenance.				
Dwarf tall fescue (several varieties)	*Festuca arundinacea var.*	45	98	90
Dwarf perennial rye (Barclay)	*Lolium perenne var. barclay*	30	98	90
Red fescue	*Festuca rubra*	20	98	90
Colonial bentgrass	*Agrostis tenuis*	5	98	90
Bioswale Seed Mix A seed mix for bioswales and other intermittently wet areas.				
Tall or meadow fes-	*Festuca arundin-*	75-80	98	90

- compost;
- or blends of these.

Tackifier shall be plant-based, such as guar or alpha plantago, or chemical-based such as polyacrylamide or polymers.

Generally, mulches come in 40-50 pound bags. Seed and fertilizer are added at time of application.

Recycled cellulose may contain polychlorinated biphenyl (PCBs). Ecology recommends that products should be evaluated for PCBs prior to use.

Refer to BMP C126: Polyacrylamide (PAM) for Soil Erosion Protection for conditions of use. PAM shall not be directly applied to water or allowed to enter a water body.

Any mulch or tackifier product used shall be installed per the manufacturer's instructions.

Design and Installation Specifications

For mulch materials, application rates, and specifications, see Table II-3.6: Mulch Standards and Guidelines. Consult with the local supplier or the local conservation district for their recommendations. Increase the application rate until the ground is 95% covered (i.e. not visible under the mulch layer). Note: Thickness may be increased for disturbed areas in or near sensitive areas or other areas highly susceptible to erosion.

Where the option of "Compost" is selected, it should be a coarse compost that meets the size gradations listed in Table II-3.5: Size Gradations of Compost as Mulch Material when tested in accordance with Test Method 02.02-B found in *Test Methods for the Examination of Composting and Compost* (Thompson, 2001).

Table II-3.5: Size Gradations of Compost as Mulch Material

Sieve Size	Percent Passing
3"	100%
1"	90% - 100%
3/4"	70% - 100%
1/4"	40% - 100%

Mulch used within the ordinary high-water mark of surface waters should be selected to minimize potential flotation of organic matter. Composted organic materials have higher specific gravities (densities) than straw, wood, or chipped material. Consult the Hydraulic Permit Authority (HPA) for mulch mixes if applicable.

Maintenance Standards

The thickness of the mulch cover must be maintained.

Any areas that experience erosion shall be remulched and/or protected with a net or blanket. If the erosion problem is drainage related, then the problem shall be fixed and the eroded area remulched.

Table II-3.4: Temporary and Permanent Seed Mixes (continued)

Common Name	Latin Name	% Weight	% Purity	% Germination
cue	*acea* or *Festuca elatior*			
Seaside/Creeping bentgrass	*Agrostis palustris*	10-15	92	85
Redtop bentgrass	*Agrostis alba* or *Agrostis gigantea*	5-10	90	80
Wet Area Seed Mix A low-growing, relatively non-invasive seed mix appropriate for very wet areas that are not regulated wetlands. Consult Hydraulic Permit Authority (HPA) for seed mixes if applicable.				
Tall or meadow fescue	*Festuca arundinacea* or *Festuca elatior*	60-70	98	90
Seaside/Creeping bentgrass	*Agrostis palustris*	10-15	98	85
Meadow foxtail	*Alepocurus pratensis*	10-15	90	80
Alsike clover	*Trifolium hybridum*	1-6	98	90
Redtop bentgrass	*Agrostis alba*	1-6	92	85
Meadow Seed Mix A recommended meadow seed mix for infrequently maintained areas or non-maintained areas where colonization by native plants is desirable. Likely applications include rural road and utility right-of-way. Seeding should take place in September or very early October in order to obtain adequate establishment prior to the winter months. Consider the appropriateness of clover, a fairly invasive species, in the mix. Amending the soil can reduce the need for clover.				
Redtop or Oregon bentgrass	*Agrostis alba* or *Agrostis oregonensis*	20	92	85
Red fescue	*Festuca rubra*	70	98	90
White dutch clover	*Trifolium repens*	10	98	90

Roughening and Rototilling

- The seedbed should be firm and rough. Roughen all soil no matter what the slope. Track walk slopes before seeding if engineering purposes require compaction. Backblading or smoothing of slopes greater than 4H:1V is not allowed if they are to be seeded.
- Restoration-based landscape practices require deeper incorporation than that provided by a simple single-pass rototilling treatment. Wherever practical, initially rip the subgrade to improve long-term permeability, infiltration, and water inflow qualities. At a minimum,

Table II-3.6: Mulch Standards and Guidelines

Mulch Material	Guideline	Description
Straw	Quality Standards	Air-dried; free from undesirable seed and coarse material.
	Application Rates	2"-3" thick; 5 bales per 1,000 sf or 2-3 tons per acre
	Remarks	Cost-effective protection when applied with adequate thickness. Hand-application generally requires greater thickness than blown straw. The thickness of straw may be reduced by half when used in conjunction with seeding. In windy areas straw must be held in place by crimping, using a tackifier, or covering with netting. Blown straw always has to be held in place with a tackifier as even light winds will blow it away. Straw, however, has several deficiencies that should be considered when selecting mulch materials. It often introduces and/or encourages the propagation of weed species and it has no significant long-term benefits It should also not be used within the ordinary high-water elevation of surface waters (due to flotation).
Hydromulch	Quality Standards	No growth inhibiting factors.
	Application Rates	Approx. 35-45 lbs per 1,000 sf or 1,500 - 2,000 lbs per acre
	Remarks	Shall be applied with hydromulcher. Shall not be used without seed and tackifier unless the application rate is at least doubled. Fibers longer than about 3/4 - 1 inch clog hydromulch equipment. Fibers should be kept to less than 3/4 inch.
Compost	Quality Standards	No visible water or dust during handling. Must be produced per WAC 173-350, Solid Waste Handling Standards, but may have up to 35% biosolids.
	Application Rates	2" thick min.; approx. 100 tons per acre (approx. 750 lbs per cubic yard)
	Remarks	More effective control can be obtained by increasing thickness to 3". Excellent mulch for protecting final grades until landscaping because it can be directly seeded or tilled into soil as an amendment. Compost used for mulch has a coarser size gradation than compost used for BMP C125: Topsoiling / Composting or BMP T5.13: Post-Construction Soil Quality and Depth. It is more stable and practical to use in wet areas and during rainy weather conditions. Do not use near wetlands or near phosphorous impaired water bodies.
Chipped Site Vegetation	Quality Standards	Gradations from fines to 6 inches in length for texture, variation, and interlocking properties. Include a mix of various sizes so that the average size is between 2- and 4- inches.
	Application Rates	2" thick min.;

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Table II-3.6: Mulch Standards and Guidelines (continued)

Mulch Material	Guideline	Description
	Remarks	This is a cost-effective way to dispose of debris from clearing and grubbing, and it eliminates the problems associated with burning. Generally, it should not be used on slopes above approx. 10% because of its tendency to be transported by runoff. It is not recommended within 200 feet of surface waters. If permanent seeding or planting is expected shortly after mulch, the decomposition of the chipped vegetation may tie up nutrients important to grass establishment. Note: thick application of this material over existing grass, herbaceous species, and some groundcovers could smother and kill vegetation.
Wood-Based Mulch	Quality Standards	No visible water or dust during handling. Must be purchased from a supplier with a Solid Waste Handling Permit or one exempt from solid waste regulations.
	Application Rates	2" thick min.; approx. 100 tons per acre (approx. 750 lbs. per cubic yard)
	Remarks	This material is often called "wood straw" or "hog fuel". The use of mulch ultimately improves the organic matter in the soil. Special caution is advised regarding the source and composition of wood-based mulches. Its preparation typically does not provide any weed seed control, so evidence of residual vegetation in its composition or known inclusion of weed plants or seeds should be monitored and prevented (or minimized).
Wood Strand Mulch	Quality Standards	A blend of loose, long, thin wood pieces derived from native conifer or deciduous trees with high length-to-width ratio.
	Application Rates	2" thick min.
	Remarks	Cost-effective protection when applied with adequate thickness. A minimum of 95-percent of the wood strand shall have lengths between 2 and 10-inches, with a width and thickness between 1/16 and 1/2-inches. The mulch shall not contain resin, tannin, or other compounds in quantities that would be detrimental to plant life. Sawdust or wood shavings shall not be used as mulch. [Specification 9-14.4(4) from the *Standard Specifications for Road, Bridge, and Municipal Construction* (WSDOT, 2016)]

- Always use forms or solid barriers for concrete pours, such as pilings, within 15-feet of surface waters.
- Refer to BMP C252: Treating and Disposing of High pH Water for pH adjustment requirements.
- Refer to the Construction Stormwater General Permit (CSWGP) for pH monitoring requirements if the project involves one of the following activities:
  - Significant concrete work (as defined in the CSWGP).
  - The use of soils amended with (but not limited to) Portland cement-treated base, cement kiln dust or fly ash.
  - Discharging stormwater to segments of water bodies on the 303(d) list (Category 5) for high pH.

Maintenance Standards

Check containers for holes in the liner daily during concrete pours and repair the same day.

BMP C153: Material Delivery, Storage, and Containment

Purpose

Prevent, reduce, or eliminate the discharge of pollutants to the stormwater system or watercourses from material delivery and storage. Minimize the storage of hazardous materials on-site, store materials in a designated area, and install secondary containment.

Conditions of Use

Use at construction sites with delivery and storage of the following materials:

- Petroleum products such as fuel, oil and grease
- Soil stabilizers and binders (e.g., Polyacrylamide)
- Fertilizers, pesticides and herbicides
- Detergents
- Asphalt and concrete compounds

BMP C123: Plastic Covering

Purpose

Plastic covering provides immediate, short-term erosion protection to slopes and disturbed areas.

Conditions of Use

Plastic covering may be used on disturbed areas that require cover measures for less than 30 days, except as stated below.

- Plastic is particularly useful for protecting cut and fill slopes and stockpiles. However, the relatively rapid breakdown of most polyethylene sheeting makes it unsuitable for applications greater than six months.
- Due to rapid runoff caused by plastic covering, do not use this method upslope of areas that might be adversely impacted by concentrated runoff. Such areas include steep and/or unstable slopes.
- Plastic sheeting may result in increased runoff volumes and velocities, requiring additional on-site measures to counteract the increases. Creating a trough with wattles or other material can convey clean water away from these areas.
- To prevent undercutting, trench and backfill rolled plastic covering products.
- Although the plastic material is inexpensive to purchase, the cost of installation, maintenance, removal, and disposal add to the total costs of this BMP.
- Whenever plastic is used to protect slopes, install water collection measures at the base of the slope. These measures include plastic-covered berms, channels, and pipes used to convey clean rainwater away from bare soil and disturbed areas. Do not mix clean runoff from a plastic covered slope with dirty runoff from a project.
- Other uses for plastic include:
  - Temporary ditch liner.
  - Pond liner in temporary sediment pond.
  - Liner for bermed temporary fuel storage area if plastic is not reactive to the type of fuel being stored.
  - Emergency slope protection during heavy rains.
  - Temporary drainpipe ("elephant trunk") used to direct water.

Design and Installation Specifications

- Plastic slope cover must be installed as follows:
  1. Run plastic up and down the slope, not across the slope.
  2. Plastic may be installed perpendicular to a slope if the slope length is less than 10 feet.

- Hazardous chemicals such as acids, lime, adhesives, paints, solvents, and curing compounds
- Any other material that may be detrimental if released to the environment

Design and Installation Specifications

- The temporary storage area should be located away from vehicular traffic, near the construction entrance(s), and away from waterways or storm drains.
- Safety Data Sheets (SDS) should be supplied for all materials stored. Chemicals should be kept in their original labeled containers.
- Hazardous material storage on-site should be minimized.
- Hazardous materials should be handled as infrequently as possible.
- During the wet weather season (Oct 1 – April 30), consider storing materials in a covered area.
- Materials should be stored in secondary containments, such as an earthen dike, horse trough, or even a children's wading pool for non-reactive materials such as detergents, oil, grease, and paints. Small amounts of material may be secondarily contained in "bus boy" trays or concrete mixing trays.
- Do not store chemicals, drums, or bagged materials directly on the ground. Place these items on a pallet and, when possible, within secondary containment.
- If drums must be kept uncovered, store them at a slight angle to reduce ponding of rainwater on the lids to reduce corrosion. Domed plastic covers are inexpensive and snap to the top of drums, preventing water from collecting.
- Liquids, petroleum products, and substances listed in 40 CFR Parts 110, 117, or 302 shall be stored in approved containers and drums and shall not be overfilled. Containers and drums shall be stored in temporary secondary containment facilities.
- Temporary secondary containment facilities shall provide for a spill containment volume able to contain 10% of the total enclosed container volume of all containers, or 110% of the capacity of the largest container within its boundary, whichever is greater.
- Secondary containment facilities shall be impervious to the materials stored therein for a minimum contact time of 72 hours.
- Sufficient separation should be provided between stored containers to allow for spill cleanup and emergency response access.
- During the wet weather season (Oct 1 – April 30), each secondary containment facility shall be covered during non-working days, prior to and during rain events.
- Keep material storage areas clean, organized and equipped with an ample supply of appropriate spill clean-up material (spill kit).
- The spill kit should include, at a minimum:

3. Provide a minimum of 8-inch overlap at the seams.
4. On long or wide slopes, or slopes subject to wind, tape all seams.
5. Place plastic into a small (12-inch wide by 6-inch deep) slot trench at the top of the slope and backfill with soil to keep water from flowing underneath.
6. Place sand filled burlap or geotextile bags every 3 to 6 feet along seams and tie them together with twine to hold them in place.
7. Inspect plastic for rips, tears, and open seams regularly and repair immediately. This prevents high velocity runoff from contacting bare soil, which causes extreme erosion.
8. Sandbags may be lowered into place tied to ropes. However, all sandbags must be staked in place.

- Plastic sheeting shall have a minimum thickness of 0.06 millimeters.
- If erosion at the toe of a slope is likely, a gravel berm, riprap, or other suitable protection shall be installed at the toe of the slope in order to reduce the velocity of runoff.

Maintenance Standards

- Torn sheets must be replaced and open seams repaired.
- Completely remove and replace the plastic if it begins to deteriorate due to ultraviolet radiation.
- Completely remove plastic when no longer needed.
- Dispose of old tires used to weight down plastic sheeting appropriately.

Approved as Functionally Equivalent

Ecology has approved products as able to meet the requirements of this BMP. The products did not pass through the Technology Assessment Protocol – Ecology (TAPE) process. Local jurisdictions may choose not to accept these products, or may require additional testing prior to consideration for local use. Products that Ecology has approved as functionally equivalent are available for review on Ecology's website at:

https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Stormwater-permittee-guidance-resources/Emerging-stormwater-treatment-technologies

BMP C151: Concrete Handling

Purpose

Concrete work can generate process water and slurry that contain fine particles and high pH, both of which can violate water quality standards in the receiving water. Concrete spillage or concrete discharge to waters of the State is prohibited. Use this BMP to minimize and eliminate concrete, concrete process water, and concrete slurry from entering waters of the State.

Conditions of Use

Any time concrete is used, utilize these management practices. Concrete construction project components include, but are not limited to:

- Curbs
- Sidewalks
- Roads
- Bridges
- Foundations
- Floors
- Runways

Disposal options for concrete, in order of preference are:

1. Off-site disposal
2. Concrete wash-out areas (see BMP C154: Concrete Washout Area)
3. De minimus washout to formed areas awaiting concrete

Design and Installation Specifications

- Wash concrete truck drums at an approved off-site location or in designated concrete washout areas only. Do not wash out concrete trucks onto the ground (including formed areas awaiting concrete), or into storm drains, open ditches, streets, or streams. Refer to BMP C154: Concrete Washout Area for information on concrete washout areas.
  - Return unused concrete remaining in the truck and pump to the originating batch plant for recycling. Do not dump excess concrete on site, except in designated concrete washout areas as allowed in BMP C154: Concrete Washout Area.
- Wash small concrete handling equipment (e.g. hand tools, screeds, shovels, rakes, floats, trowels, and wheelbarrows) into designated concrete washout areas or into formed areas awaiting concrete pour.
- At no time shall concrete be washed off into the footprint of an area where an infiltration feature will be installed.
- Wash equipment difficult to move, such as concrete paving machines, in areas that do not directly drain to natural or constructed stormwater conveyance or potential infiltration areas.
- Do not allow washwater from areas, such as concrete aggregate driveways, to drain directly (without detention or treatment) to natural or constructed stormwater conveyances.
- Contain washwater and leftover product in a lined container when no designated concrete washout areas (or formed areas, allowed as described above) are available. Dispose of contained concrete and concrete washwater (process water) properly.

- 1-Water Resistant Nylon Bag
- 3-Oil Absorbent Socks 3"x 4'
- 2-Oil Absorbent Socks 3"x 10'
- 12-Oil Absorbent Pads 17"x19"
- 1-Pair Splash Resistant Goggles
- 3-Pair Nitrile Gloves
- 10-Disposable Bags with Ties
- Instructions

Maintenance Standards

- Secondary containment facilities shall be maintained free of accumulated rainwater and spills. In the event of spills or leaks, accumulated rainwater and spills shall be collected and placed into drums. These liquids shall be handled as hazardous waste unless testing determines them to be non-hazardous.
- Re-stock spill kit materials as needed.

BMP C220: Inlet Protection

Purpose

Inlet protection prevents coarse sediment from entering drainage systems prior to permanent stabilization of the disturbed area.

Conditions of Use

Use inlet protection at inlets that are operational before permanent stabilization of the disturbed areas that contribute runoff to the inlet. Provide protection for all storm drain inlets downslope and within 500 feet of a disturbed or construction area, unless those inlets are preceded by a sediment trapping BMP.

Also consider inlet protection for lawn and yard drains on new home construction. These small and numerous drains coupled with lack of gutters can add significant amounts of sediment into the roof drain system. If possible, delay installing lawn and yard drains until just before landscaping, or cap these drains to prevent sediment from entering the system until completion of landscaping. Provide 18-inches of sod around each finished lawn and yard drain.

Table II-3.10: Storm Drain Inlet Protection lists several options for inlet protection. All of the methods for inlet protection tend to plug and require a high frequency of maintenance. Limit contributing drainage areas for an individual inlet to one acre or less. If possible, provide emergency overflows with additional end-of-pipe treatment where stormwater ponding would cause a hazard.

10/16/2024

SITE ADDRESS: 8904 SE 58TH ST.

JENNIE LEE
8904 SE 58TH ST.
MERCER ISLAND, WA

REVISIONS	BY	DATE

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JOB NO. 24081
DATE 10/24
SCALE 1"=10'
DESIGNED R.E.H.
DRAWN R.E.H.
CHECKED R.S.F.
APPROVED R.S.F.

SHEET 9 OF 14

LEE RESIDENCE

NW 1/4, SW 1/4, SECTION 19, TOWNSHIP 24 NORTH, RANGE 5 EAST, W.M.
CITY OF MERCER ISLAND, WASHINGTON

OWNER:
JENNIE LEE
8904 SE 58TH STREET,
MERCER ISLAND, WA

ARCHITECT: ARCHITECTURAL INNOVATIONS
NAME: ROBERT YOUNG
COMPANY
PH: 425-641-5320

CIVIL ENGINEER:
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Table II-3.10: Storm Drain Inlet Protection

Type of Inlet Protection	Emergency Overflow	Applicable for Paved/ Earthen Surfaces	Conditions of Use
Drop Inlet Protection			
Excavated drop inlet protection	Yes, temporary flooding may occur	Earthen	Applicable for heavy flows. Easy to maintain. Large area requirement: 30'x30'/acre
Block and gravel drop inlet protection	Yes	Paved or Earthen	Applicable for heavy concentrated flows. Will not pond.
Gravel and wire drop inlet protection	No	Paved or Earthen	Applicable for heavy concentrated flows. Will pond. Can withstand traffic.
Catch basin filters	Yes	Paved or Earthen	Frequent maintenance required.
Curb Inlet Protection			
Curb inlet protection with wooden weir	Small capacity overflow	Paved	Used for sturdy, more compact installation.
Block and gravel curb inlet protection	Yes	Paved	Sturdy, but limited filtration.
Culvert Inlet Protection			
Culvert inlet sediment trap	N/A	N/A	18 month expected life.

Design and Installation Specifications

Excavated Drop Inlet Protection

Excavated drop inlet protection consists of an excavated impoundment around the storm drain inlet. Sediment settles out of the stormwater prior to entering the storm drain. Design and installation specifications for excavated drop inlet protection include:

- Provide a depth of 1-2 ft as measured from the crest of the inlet structure.
- Slope sides of excavation should be no steeper than 2H:1V.
- Minimum volume of excavation is 35 cubic yards.
- Shape the excavation to fit the site, with the longest dimension oriented toward the longest inflow area.
- Install provisions for draining to prevent standing water.
- Clear the area of all debris.

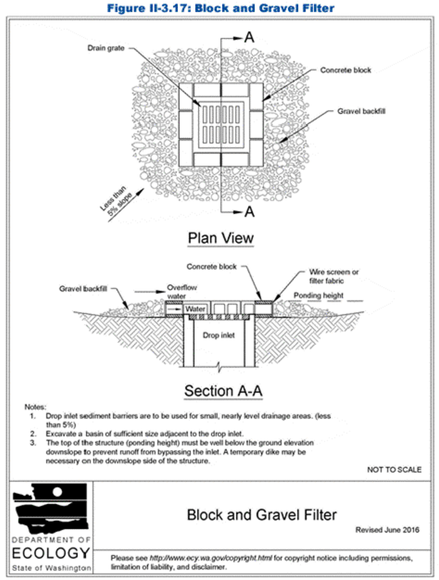
- Grade the approach to the inlet uniformly.
- Drill weep holes into the side of the inlet.
- Protect weep holes with screen wire and washed aggregate.
- Seal weep holes when removing structure and stabilizing area.
- Build a temporary dike, if necessary, to the down slope side of the structure to prevent bypass flow.

Block and Gravel Filter

A block and gravel filter is a barrier formed around the inlet with standard concrete blocks and gravel. See Figure II-3.17: Block and Gravel Filter. Design and installation specifications for block gravel filters include:

- Provide a height of 1 to 2 feet above the inlet.
- Recess the first row of blocks 2-inches into the ground for stability.
- Support subsequent courses by placing a pressure treated wood 2x4 through the block opening.
- Do not use mortar.
- Lay some blocks in the bottom row on their side to allow for dewatering the pool.
- Place hardware cloth or comparable wire mesh with ½-inch openings over all block openings.
- Place gravel to just below the top of blocks on slopes of 2H:1V or flatter.
- An alternative design is a gravel berm surrounding the inlet, as follows:
  - Provide a slope of 3H:1V on the upstream side of the berm.
  - Provide a slope of 2H:1V on the downstream side of the berm.
  - Provide a 1-foot wide level stone area between the gravel berm and the inlet.
  - Use stones 3 inches in diameter or larger on the upstream slope of the berm.
  - Use gravel ½- to ¾-inch at a minimum thickness of 1-foot on the downstream slope of the berm.

Figure II-3.17: Block and Gravel Filter



Maintenance Standards

- Inspect all forms of inlet protection frequently, especially after storm events. Clean and replace clogged catch basin filters. For rock and gravel filters, pull away the rocks from the inlet and clean or replace. An alternative approach would be to use the clogged rock as fill and put fresh rock around the inlet.
- Do not wash sediment into storm drains while cleaning. Spread all excavated material evenly over the surrounding land area or stockpile and stabilize as appropriate.

Approved as Functionally Equivalent

Ecology has approved products as able to meet the requirements of this BMP. The products did not pass through the Technology Assessment Protocol – Ecology (TAPE) process. Local jurisdictions may choose not to accept these products, or may require additional testing prior to consideration for local use. Products that Ecology has approved as functionally equivalent are available for review on Ecology's website at:

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BMP C233: Silt Fence

Purpose

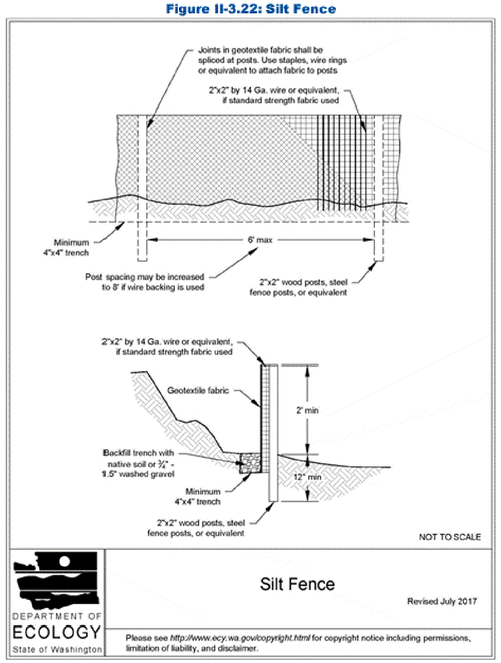
Silt fence reduces the transport of coarse sediment from a construction site by providing a temporary physical barrier to sediment and reducing the runoff velocities of overland flow.

Conditions of Use

Silt fence may be used downslope of all disturbed areas.

- Silt fence shall prevent sediment carried by runoff from going beneath, through, or over the top of the silt fence, but shall allow the water to pass through the fence.
- Silt fence is not intended to treat concentrated flows, nor is it intended to treat substantial amounts of overland flow. Convey any concentrated flows through the drainage system to a sediment trapping BMP.
- Do not construct silt fences in streams or use in V-shaped ditches. Silt fences do not provide an adequate method of silt control for anything deeper than sheet or overland flow.

Figure II-3.22: Silt Fence



Maintenance Standards

- Repair any damage immediately.
- Intercept and convey all evident concentrated flows uphill of the silt fence to a sediment trapping BMP.
- Check the uphill side of the silt fence for signs of the fence clogging and acting as a barrier to flow and then causing channelization of flows parallel to the fence. If this occurs, replace the fence and remove the trapped sediment.
- Remove sediment deposits when the deposit reaches approximately one-third the height of the silt fence, or install a second silt fence.
- Replace geotextile fabric that has deteriorated due to ultraviolet breakdown.

REVISIONS | BY | DATE

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RONALD S. FREDERIKSEN STATE OF WASHINGTON 39053 REGISTERED PROFESSIONAL ENGINEER
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Table II-3.6: Mulch Standards and Guidelines (continued)

Mulch Material	Guideline	Description
	Remarks	This is a cost-effective way to dispose of debris from clearing and grubbing, and it eliminates the problems associated with burning. Generally, it should not be used on slopes above approx. 10% because of its tendency to be transported by runoff. It is not recommended within 200 feet of surface waters. If permanent seeding or planting is expected shortly after mulch, the decomposition of the chipped vegetation may tie up nutrients important to grass establishment. Note: thick application of this material over existing grass, herbaceous species, and some groundcovers could smother and kill vegetation.
Wood-Based Mulch	Quality Standards	No visible water or dust during handling. Must be purchased from a supplier with a Solid Waste Handling Permit or one exempt from solid waste regulations.
	Application Rates	2" thick min.; approx. 100 tons per acre (approx. 750 lbs. per cubic yard)
	Remarks	This material is often called "wood straw" or "hog fuel". The use of mulch ultimately improves the organic matter in the soil. Special caution is advised regarding the source and composition of wood-based mulches. Its preparation typically does not provide any weed seed control, so evidence of residual vegetation in its composition or known inclusion of weed plants or seeds should be monitored and prevented (or minimized).
Wood Strand Mulch	Quality Standards	A blend of loose, long, thin wood pieces derived from native conifer or deciduous trees with high length-to-width ratio.
	Application Rates	2" thick min.
	Remarks	Cost-effective protection when applied with adequate thickness. A minimum of 95-percent of the wood strand shall have lengths between 2 and 10-inches, with a width and thickness between 1/16 and 1/2-inches. The mulch shall not contain resin, tannin, or other compounds in quantities that would be detrimental to plant life. Sawdust or wood shavings shall not be used as mulch. [Specification 9-14.4(4) from the *Standard Specifications for Road, Bridge, and Municipal Construction* (WSDOT, 2016)

BMP C122: Nets and Blankets

Purpose

Erosion control nets and blankets are intended to prevent erosion and hold seed and mulch in place on steep slopes and in channels so that vegetation can become well established. In addition, some nets and blankets can be used to permanently reinforce turf to protect drainage ways during high flows.

Nets (commonly called matting) are strands of material woven into an open, but high-tensile strength net (for example, coconut fiber matting). Blankets are strands of material that are not tightly woven, but instead form a layer of interlocking fibers, typically held together by a biodegradable or photodegradable netting (for example, excelsior or straw blankets). They generally have lower tensile strength than nets, but cover the ground more completely. Coir (coconut fiber) fabric comes as both nets and blankets.

Conditions of Use

Erosion control netting and blankets shall be made of natural plant fibers unaltered by synthetic materials.

Erosion control nets and blankets should be used:

- To aid permanent vegetated stabilization of slopes 2H:1V or greater and with more than 10 feet of vertical relief.
- For drainage ditches and swales (highly recommended). The application of appropriate netting or blanket to drainage ditches and swales can protect bare soil from channelized runoff while vegetation is established. Nets and blankets also can capture a great deal of sediment due to their open, porous structure. Nets and blankets can be used to permanently stabilize channels and may provide a cost-effective, environmentally preferable alternative to riprap.

Disadvantages of nets and blankets include:

- Surface preparation is required.
- On slopes steeper than 2.5H:1V, net and blanket installers may need to be roped and harnessed for safety.
- They cost at least $4,000-6,000 per acre installed.

Advantages of nets and blankets include:

- Installation without mobilizing special equipment.
- Installation by anyone with minimal training
- Installation in stages or phases as the project progresses.
- Installers can hand place seed and fertilizer as they progress down the slope.
- Installation in any weather.
- There are numerous types of nets and blankets that can be designed with various parameters in mind. Those parameters include: fiber blend, mesh strength, longevity, biodegradability, cost, and availability.

An alternative to nets and blankets in some limited conditions is BMP C202: Riprap Channel Lining. Ensure that BMP C202: Riprap Channel Lining is appropriate before using it as a substitute for nets and blankets.

Design and Installation Specifications

- See Figure II-3.3: Channel Installation (Clackamas County et al., 2008) and Figure II-3.4: Slope Installation for typical orientation and installation of nets and blankets used in channels and as slope protection. Note: these are typical only; all nets and blankets must be installed per manufacturer's installation instructions.
- Installation is critical to the effectiveness of these products. If good ground contact is not achieved, runoff can concentrate under the product, resulting in significant erosion.
- Installation of nets and blankets on slopes:
  1. Complete final grade and track walk up and down the slope.
  2. Install hydromulch with seed and fertilizer.
  3. Dig a small trench, approximately 12 inches wide by 6 inches deep along the top of the slope.
  4. Install the leading edge of the net/blanket into the small trench and staple approximately every 18 inches. NOTE: Staples are metal, "U"-shaped, and a minimum of 6 inches long. Longer staples are used in sandy soils. Biodegradable stakes are also available.
  5. Roll the net/blanket slowly down the slope as the installer walks backward. NOTE: The net/blanket rests against the installer's legs. Staples are installed as the net/blanket is unrolled. It is critical that the proper staple pattern is used for the net/blanket being installed. The net/blanket is not to be allowed to roll down the slope on its own as this stretches the net/blanket, making it impossible to maintain soil contact. In addition, no one is allowed to walk on the net/blanket after it is in place.
  6. If the net/blanket is not long enough to cover the entire slope length, the trailing edge of the upper net/blanket should overlap the leading edge of the lower net/blanket and be stapled. On steeper slopes, this overlap should be installed in a small trench, stapled, and covered with soil.
- With the variety of products available, it is impossible to cover all the details of appropriate use and installation. Therefore, it is critical that the designer consult the manufacturer's information and that a site visit takes place in order to ensure that the product specified is appropriate. Information is also available in WSDOT's *Standard Specifications for Road, Bridge, and Municipal Construction* Division 8-01 and Division 9-14 (WSDOT, 2016).
- Use jute matting in conjunction with mulch (BMP C121: Mulching). Excelsior, woven straw blankets and coir (coconut fiber) blankets may be installed without mulch. There are many other types of erosion control nets and blankets on the market that may be appropriate in certain circumstances.
- In general, most nets (e.g., jute matting) require mulch in order to prevent erosion because they have a fairly open structure. Blankets typically do not require mulch because they usually provide complete protection of the surface.
- Extremely steep, unstable, wet, or rocky slopes are often appropriate candidates for use of synthetic blankets, as are riverbanks, beaches and other high-energy environments. If

synthetic blankets are used, the soil should be hydromulched first.

- 100-percent biodegradable blankets are available for use in sensitive areas. These organic blankets are usually held together with a paper or fiber mesh and stitching which may last up to a year.
- Most netting used with blankets is photodegradable, meaning it breaks down under sunlight (not UV stabilized). However, this process can take months or years even under bright sun. Once vegetation is established, sunlight does not reach the mesh. It is not uncommon to find non-degraded netting still in place several years after installation. This can be a problem if maintenance requires the use of mowers or ditch cleaning equipment. In addition, birds and small animals can become trapped in the netting.

Maintenance Standards

- Maintain good contact with the ground. Erosion must not occur beneath the net or blanket.
- Repair and staple any areas of the net or blanket that are damaged or not in close contact with the ground.
- Fix and protect eroded areas if erosion occurs due to poorly controlled drainage.

Figure II-3.3: Channel Installation

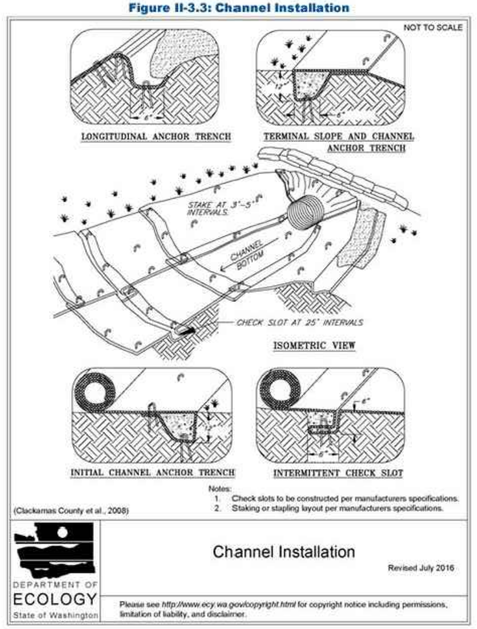
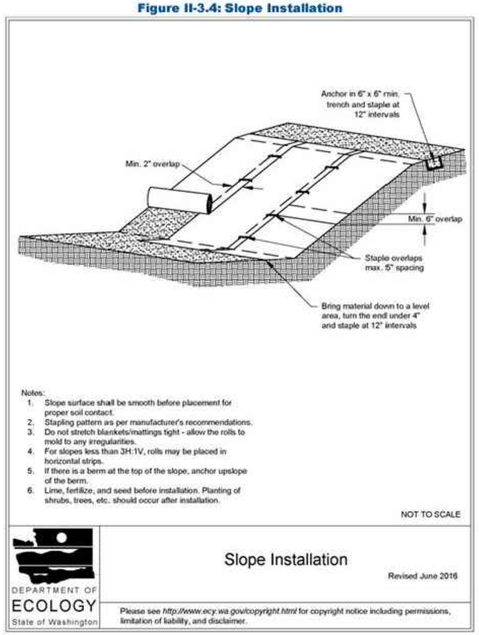


Figure II-3.4: Slope Installation



compliance with this BMP.

- Use vacuum street sweepers.
- Remove mud and other dirt promptly so it does not dry and then turn into dust.
- Techniques that can be used for unpaved roads and lots include:
  - Lower speed limits. High vehicle speed increases the amount of dust stirred up from unpaved roads and lots.
  - Upgrade the road surface strength by improving particle size, shape, and mineral types that make up the surface and base materials.
  - Add surface gravel to reduce the source of dust emission. Limit the amount of fine particles (those smaller than .075 mm) to 10 to 20 percent.
  - Use geotextile fabrics to increase the strength of new roads or roads undergoing reconstruction.
  - Encourage the use of alternate, paved routes, if available.
  - Apply chemical dust suppressants using the admix method, blending the product with the top few inches of surface material. Suppressants may also be applied as surface treatments.
  - Limit dust-causing work on windy days.
  - Pave unpaved permanent roads and other trafficked areas.

Maintenance Standards

Respray area as necessary to keep dust to a minimum.

BMP C150: Materials on Hand

Purpose

Keep quantities of erosion prevention and sediment control materials on the project site at all times to be used for regular maintenance and emergency situations such as unexpected heavy rains. Having these materials on-site reduces the time needed to replace existing or implement new BMPs when inspections indicate that existing BMPs are not meeting the Construction SWPPP requirements. In addition, contractors can save money by buying some materials in bulk and storing them at their office or yard.

Conditions of Use

- Construction projects of any size or type can benefit from having materials on hand. A small commercial development project could have a roll of plastic and some gravel available for immediate protection of bare soil and temporary berm construction. A large earthwork project, such as highway construction, might have several tons of straw, several rolls of plastic, flexible

pipe, sandbags, geotextile fabric and steel "T" posts.

- Materials should be stockpiled and readily available before any site clearing, grubbing, or earthwork begins. A large contractor or project proponent could keep a stockpile of materials that are available for use on several projects.
- If storage space at the project site is at a premium, the contractor could maintain the materials at their office or yard. The office or yard must be less than an hour from the project site.

Design and Installation Specifications

Depending on project type, size, complexity, and length, materials and quantities will vary. A good minimum list of items that will cover numerous situations includes:

- Clear Plastic, 6 mil
- Drainpipe, 6 or 8 inch diameter
- Sandbags, filled
- Straw Bales for mulching
- Quarry Spalls
- Washed Gravel
- Geotextile Fabric
- Catch Basin Inserts
- Steel "T" Posts
- Silt fence material
- Straw Wattles

Maintenance Standards

- All materials with the exception of the quarry spalls, steel "T" posts, and gravel should be kept covered and out of both sun and rain.
- Re-stock materials as needed.

BMP C151: Concrete Handling

Purpose

Concrete work can generate process water and slurry that contain fine particles and high pH, both of which can violate water quality standards in the receiving water. Concrete spillage or concrete discharge to waters of the State is prohibited. Use this BMP to minimize and eliminate concrete, concrete process water, and concrete slurry from entering waters of the State.

RONALD S. FREDERIKSEN
STATE OF WASHINGTON
39053
REGISTERED PROFESSIONAL ENGINEER
10/16/2024

REVISIONS | BY | DATE

TESC DETAILS

SITE ADDRESS: 8904 SE 58TH ST.
JENNIE LEE
8904 SE 58TH ST.
MERCER ISLAND, WA

ENGINEERS - SURVEYORS
EASTSIDE CONSULTANTS, INC.
1320 NW MALL ST., SUITE B
ISSAQUAH, WASHINGTON 98027
PH:(425)392-5351 FAX:392-4676

JOB NO. 24081
DATE 10/24
SCALE 1"=10'
DESIGNED R.E.H.
DRAWN R.E.H.
CHECKED R.S.F.
APPROVED R.S.F.

SHEET 11 OF 14

Design and Installation Specifications

- The vegetated strip shall consist of a continuous strip of dense vegetation with topsoil for a minimum of a 25-foot length along the flowpath. Grass-covered, landscaped areas are generally not adequate because the volume of sediment overwhelms the grass. Ideally, vegetated strips shall consist of undisturbed native growth with a well-developed soil that allows for infiltration of runoff.
- The slope within the vegetated strip shall not exceed 4H:1V.
- The uphill boundary of the vegetated strip shall be delineated with clearing limits.

Maintenance Standards

- Any areas damaged by erosion or construction activity shall be seeded immediately and protected by mulch.
- If more than 5 feet of the original vegetated strip width has had vegetation removed or is being eroded, sod must be installed.
- If there are indications that concentrated flows are traveling across the vegetated strip, stormwater runoff controls must be installed to reduce the flows entering the vegetated strip, or additional perimeter protection must be installed.

BMP C235: Wattles

Purpose

Wattles are temporary erosion and sediment control barriers consisting of straw, compost, or other material that is wrapped in netting made of natural plant fiber or similar encasing material. They reduce the velocity and can spread the flow of rill and sheet runoff, and can capture and retain sediment.

Conditions of Use

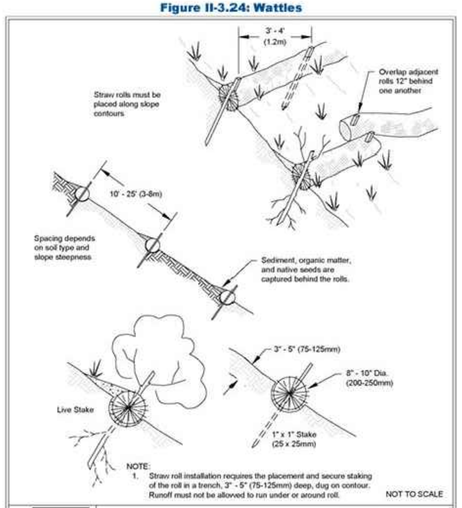
- Wattles shall consist of cylinders of plant material such as weed-free straw, coir, wood chips, excelsior, or wood fiber or shavings encased within netting made of natural plant fibers unaltered by synthetic materials.
- Use wattles:
  - In disturbed areas that require immediate erosion protection.
  - On exposed soils during the period of short construction delays, or over winter months.
  - On slopes requiring stabilization until permanent vegetation can be established.
- The material used dictates the effectiveness period of the wattle. Generally, wattles are effective for one to two seasons.

- Prevent rilling beneath wattles by entrenching and overlapping wattles to prevent water from passing between them.

Design Criteria

- See Figure II-3.24: Wattles for typical construction details.
- Wattles are typically 8 to 10 inches in diameter and 25 to 30 feet in length.
- Install wattles perpendicular to the flow direction and parallel to the slope contour.
- Place wattles in shallow trenches, staked along the contour of disturbed or newly constructed slopes. Dig narrow trenches across the slope (on contour) to a depth of 3- to 5-inches on clay soils and soils with gradual slopes. On loose soils, steep slopes, and areas with high rainfall, the trenches should be dug to a depth of 5- to 7- inches, or 1/2 to 2/3 of the thickness of the wattle.
- Start building trenches and installing wattles from the base of the slope and work up. Spread excavated material evenly along the uphill slope and compact it using hand tamping or other methods.
- Construct trenches at intervals of 10- to 25-feet depending on the steepness of the slope, soil type, and rainfall. The steeper the slope the closer together the trenches.
- Install the wattles snugly into the trenches and overlap the ends of adjacent wattles 12 inches behind one another.
- Install stakes at each end of the wattle, and at 4-foot centers along entire length of wattle.
- If required, install pilot holes for the stakes using a straight bar to drive holes through the wattle and into the soil.
- Wooden stakes should be approximately 0.75 x 0.75 x 24 inches min. Willow cuttings or 3/8-inch rebar can also be used for stakes.
- Stakes should be driven through the middle of the wattle, leaving 2 to 3 inches of the stake protruding above the wattle.

Figure II-3.24: Wattles



Maintenance Standards

- Wattles may require maintenance to ensure they are in contact with soil and thoroughly entrenched, especially after significant rainfall on steep sandy soils.
- Inspect the slope after significant storms and repair any areas where wattles are not tightly abutted or water has scoured beneath the wattles.

Approved as Functionally Equivalent

Ecology has approved products as able to meet the requirements of this BMP. The products did not pass through the Technology Assessment Protocol – Ecology (TAPE) process. Local jurisdictions may choose not to accept these products, or may require additional testing prior to consideration for local use. Products that Ecology has approved as functionally equivalent are available for review on Ecology's website at:

https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Stormwater-permittee-guidance-resources/Emerging-stormwater-treatment-technologies

BMP C236: Vegetative Filtration

Purpose

Vegetative filtration as a BMP is used in conjunction with detention storage in the form of portable tanks or BMP C241: Sediment Pond (Temporary), BMP C206: Level Spreader, and a pumping system with surface intake. Vegetative filtration improves turbidity levels of stormwater discharges by filtering runoff through existing vegetation where undisturbed forest floor duff layer or established lawn with thatch layer are present. Vegetative filtration can also be used to infiltrate dewatering waste from foundations, vaults, and trenches as long as runoff does not occur.

Conditions of Use

- For every five acres of disturbed soil use one acre of grass field, farm pasture, or wooded area. Reduce or increase this area depending on project size, ground water table height, and other site conditions.
- Wetlands shall not be used for vegetative filtration.
- Do not use this BMP in areas with a high ground water table, or in areas that will have a high seasonal ground water table during the use of this BMP.
- This BMP may be less effective on soils that prevent the infiltration of the water, such as hard till.
- Using other effective source control measures throughout a construction site will prevent the generation of additional highly turbid water and may reduce the time period or area need for this BMP.
- Stop distributing water into the vegetated filtration area if standing water or erosion results.

- On large projects that phase the clearing of the site, areas retained with native vegetation may be used as a temporary vegetative filtration area.

Design Criteria

- Find land adjacent to the project site that has a vegetated field, preferably a farm field, or wooded area.
- If the site does not contain enough vegetated field area consider obtaining permission from adjacent landowners (especially for farm fields).
- Install a pump and downstream distribution manifold depending on the project size. Generally, the main distribution line should reach 100 to 200-feet long (large projects, or projects on tight soil, will require systems that reach several thousand feet long with numerous branch lines off of the main distribution line).
- The manifold should have several valves, allowing for control over the distribution area in the field.
- Install several branches of 4-inch diameter schedule 20 polyvinyl chloride (PVC), swaged-fit common septic tight-lined sewer line, or 6-inch diameter fire hose, which can convey the turbid water out to various sections of the field. See Figure II-3.25: Manifold and Branches in a Wooded, Vegetated Spray Field.
- Determine the branch length based on the field area geography and number of branches. Typically, branches stretch from 200-feet to several thousand feet. Lay the branches on contour with the slope.
- On uneven ground, sprinklers perform well. Space sprinkler heads so that spray patterns do not overlap.
- On relatively even surfaces, a level spreader using 4-inch perforated pipe may be used as an alternative option to the sprinkler head setup. Install drain pipe at the highest point on the field and at various lower elevations to ensure full coverage of the filtration area. Place the pipe with the holes up to allow for gentle weeping evenly out all holes. Leveling the pipe by staking and using sandbags may be required.
- To prevent over saturating of the vegetative filtration area, rotate the use of branches or spray heads. Repeat as needed based on monitoring the spray field.

Table II-3.13: Flowpath Guidelines for Vegetative Filtration

Average Slope	Average Area % Slope	Estimated Flowpath Length (ft)
1.5H:1V	67%	250
2H:1V	50%	200
4H:1V	25%	150
6H:1V	16.7%	115
10H:1V	10%	100

Figure II-3.25: Manifold and Branches in a Wooded, Vegetated Spray Field

Maintenance Standards

- Monitor the spray field on a daily basis to ensure that over saturation of any portion of the field doesn't occur at any time. The presence of standing puddles of water or creation of concentrated flows visually signify that over saturation of the field has occurred.
- Monitor the vegetated spray field all the way down to the nearest surface water, or farthest spray area, to ensure that the water has not caused overland or concentrated flows, and has not created erosion around the spray nozzle(s).
- Do not exceed water quality standards for turbidity.
- Ecology recommends that a separate inspection log be developed, maintained and kept with the existing site logbook to aid the operator conducting inspections. This separate "Field Filtration Logbook" can also aid in demonstrating compliance with permit conditions.
- Inspect the spray nozzles daily, at a minimum, for leaks and plugging from sediment particles.
- If erosion, concentrated flows, or over saturation of the field occurs, rotate the use of branches or spray heads or move the branches to a new field location.
- Check all branches and the manifold for unintended leaks.

BMP C240: Sediment Trap

Purpose

A sediment trap is a small temporary ponding area with a gravel outlet used to collect and store sediment from sites during construction. Sediment traps, along with other perimeter controls, shall be installed before any land disturbance takes place in the drainage area.

Conditions of Use

- Sediment traps are intended for use on sites where the tributary drainage area is less than 3 acres, with no unusual drainage features, and a projected build-out time of six months or less. The sediment trap is a temporary measure (with a design life of approximately 6 months) and shall be maintained until the tributary area is permanently protected against erosion by vegetation and/or structures.
- Sediment traps are only effective in removing sediment down to about the medium silt size fraction. Runoff with sediment of finer grades (fine silt and clay) will pass through untreated, emphasizing the need to control erosion to the maximum extent first.
- Projects that are constructing permanent Flow Control BMPs, or Runoff Treatment BMPs that use ponding for treatment, may use the rough-graded or final-graded permanent BMP footprint for the temporary sediment trap. When permanent BMP footprints are used as temporary sediment traps, the surface area requirement of the sediment trap must be met. If the surface area requirement of the sediment trap is larger than the surface area of the permanent BMP, then the sediment trap shall be enlarged beyond the permanent BMP footprint to comply with the surface area requirement.

LEE RESIDENCE

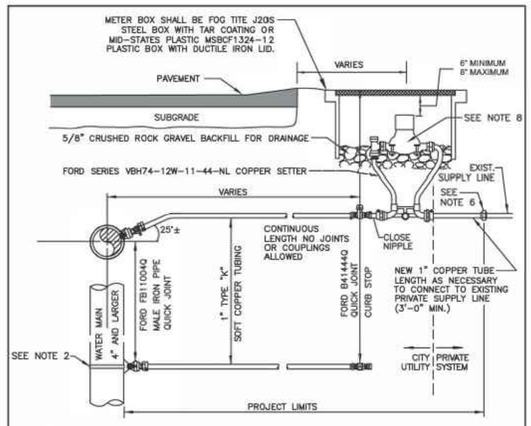
NW 1/4, SW 1/4, SECTION 19, TOWNSHIP 24 NORTH, RANGE 5 EAST, W.M.

CITY OF MERCER ISLAND, WASHINGTON

OWNER:
JENNIE LEE
8904 SE 58TH STREET,
MERCER ISLAND, WA

ARCHITECT: ARCHITECTURAL INNOVATIONS
NAME: ROBERT YOUNG
COMPANY
PH: 425-641-5320

CIVIL ENGINEER:
EASTSIDE CONSULTANTS, INC
1320 NW MALL STREET, STE B
ISSAQUAH, WA 98027
PHONE: 425.392.5351
CONTACT: RON FREDERIKSEN



NOTES

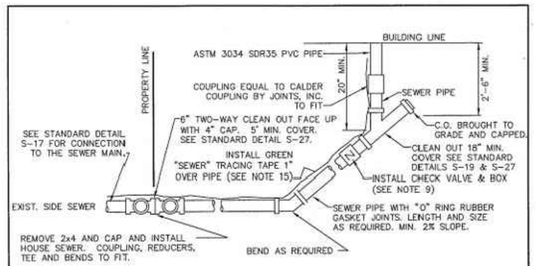
1. WATER SERVICES SHALL COMPLY WITH THE REDUCTION OF LEAD IN DRINKING WATER ACT DATED 01/04/2014.
2. ON EXISTING WATER MAINS USE NYLON COATED D.I. SADDLE WITH STAINLESS STEEL DOUBLE STRAPS, ROMAC 202NS, OR APPROVED EQUAL.
3. MINIMUM DISTANCE BETWEEN CORP STOPS SHALL BE 18". MINIMUM DISTANCE BETWEEN TAPS, BETWEEN CORP STOP AND PIPE ENDS SHALL BE 24", ALL HORIZONALLY STAGGERED.
4. PLASTIC METER BOXES SHALL NOT BE INSTALLED WITHIN ROADWAY, SIDEWALK, OR DRIVEWAYS.
5. UPON CITY ENGINEER'S APPROVAL, METER BOXES ARE ALLOWED TO BE INSTALLED IN PORTLAND CEMENT CONCRETE PAVEMENT OR SIDEWALK.
6. WHEN CONNECTING TO EXISTING PRIVATE SUPPLY LINE CONTAINING FERROUS METAL, PROVIDE INSULATING COUPLING (DB SERIES WITH C21 SERIES ADAPTERS) AND PROVIDE REDUCER AS NECESSARY TO MATCH EXISTING PRIVATE SUPPLY LINE DIAMETER.
7. SERVICE LINE SHALL BE PERPENDICULAR TO THE WATER MAIN AND STRAIGHT TO WATER METER, UNLESS OTHERWISE APPROVED BY CITY ENGINEER. PROVIDE WINDING SLACK IN THE SERVICE LINE BETWEEN THE MAIN AND WATER METER.
8. WATER METER SUPPLIED BY CITY.
9. ALL FITTINGS TO BE BRASS COMPRESSION TYPE, FORD QUICK JOINT OR EQUAL.
10. NO SERVICE CONNECTIONS BETWEEN BLOW-OFF AND END OF MAIN.

CITY OF MERCER ISLAND
STANDARD DETAILS
WATER

1" WATER METER INSTALLATION

05-02-2023	NO SCALE	W-13

REV DATE | APPROVED



BUILDING CONNECTION

NOTES

1. ELBOWS SHALL NOT BE GREATER THAN 45 DEGREES.
2. CLEAN OUT IS REQUIRED FOR EACH PIPE LENGTH GREATER THAN 100' AND FOR EACH 90° ACCUMULATED ELBOW/100'.
3. ALL HOUSE PLUMBING OUTLETS MUST BE CONNECTED TO THE SEWER. NO DOWN SPOUTS OR STORM DRAINAGE MAY BE CONNECTED TO THE SEWER SYSTEM.
4. 18" MINIMUM COVERAGE OVER PIPE.
5. LAY PIPE IN STRAIGHT LINE BETWEEN BENDS. MAKE ALL CHANGES IN GRADE OR LINE WITH ⅛ BEND OR WYE. 90° CHANGE WITH 1/8 BEND AND WYE.
6. 4" SEWER PIPE MINIMUM SIZE ON PROPERTY. 2% MINIMUM GRADE.
7. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT SEWER ORDINANCES.
8. ALL CONSTRUCTION REQUIRES A PLAN SHOWING PROPERTY AND DIMENSIONS AND COMPLETION OF SIDE SEWER APPLICATION AND MAINTENANCE AGREEMENT, AS NEEDED.
9. BACK WATER VALVE (CHECK VALVE) IS REQUIRED:
   A. IF CONNECTED TO A SHARED SIDE SEWER.
   B. IF CONNECTION AT HOUSE IS LOWER THAN BOTH UPSTREAM AND DOWNSTREAM MANHOLE.
   C. SEE S-23 & S-24 FOR LAKE LINE REQUIREMENTS.
10. AS-BUILT DRAWING SHOWING LOCATION OF SIDE SEWER & ALL BENDS, C.O. ETC., IN RELATION TO THE HOUSE IS REQUIRED AFTER INSPECTION & INSTALLATION. SEE STANDARD DETAIL S-38 FOR A TYPICAL "AS BUILT".
11. THE MINIMUM PIPE SIZE FOR SIDE SEWERS SHALL BE:
    6" – WITHIN THE PUBLIC RIGHT-OF-WAY.
    4" – SINGLE FAMILY RESIDENCES.
    6" – 2 TO 6 SINGLE FAMILY RESIDENCES.
    6" – BUILDINGS OTHER THAN SINGLE FAMILY RESIDENCES.
12. UTILITY PIPE TRACER TAPE SHALL BE DETECTABLE BELOW GROUND SURFACE, COLOR CODED, WITH UTILITY NAME PRINTED ON TAPE. CONDUCTIVE WARNING TAPE REQUIRED OVER ALL WATER PIPE. TAPE SHALL BE MANUFACTURER'S STANDARD PERMANENT, BRIGHT-COLORED, CONTINUOUS PRINTED PLASTIC TAPE, ALUMINUM BACKED, INTENDED FOR DIRECT-BURIAL SERVICE. TAPE SHALL BE NOT LESS THAN 6" WIDE X 4 MILS THICK.

CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER

HOUSE SEWER CONNECTION

6-5-2009	NO SCALE	S-18

REV DATE | APPROVED

DISCONNECTION

WHEN DEMOLISHING AN EXISTING BUILDING, THE BUILDING SIDE SEWER SHALL BE DISCONNECTED PRIOR TO REMOVAL OF BUILDING FOUNDATIONS. THE CONTRACTOR SHALL INSTALL A MECHANICAL PLUG WITH NON-SHRINK GROUT AT THE END OF THE SIDE SEWER TO REMAIN IN PLACE. DISCONNECTION'S SHALL BE PERFORMED IN THE PRESENCE OF THE CITY'S UTILITY INSPECTOR. THE CONTRACTOR SHALL PROVIDE AN AS-BUILT DRAWING DEPICTING THE DISCONNECTED SIDE SEWER UPON COMPLETION OF THE WORK.

RECONNECTION

WHEN RECONNECTING TO AN EXISTING SIDE SEWER, THE POINT OF RECONNECTION WILL BE DETERMINED BASED ON THE MAGNITUDE OF THE CONSTRUCTION ON THE PROPERTY.

1. PARTIAL INTERIOR REMODEL AND/OR BUILDING ADDITION WITH NO ADDITIONAL PLUMBING FIXTURES – NO SIDE SEWER REPLACEMENT REQUIRED UNLESS A KNOWN PROBLEM EXISTS IN THE SIDE SEWER.
2. PARTIAL INTERIOR REMODEL AND/OR BUILDING ADDITION WITH ADDITIONAL PLUMBING FIXTURES– ASSESS CONDITION OF EXISTING SIDE SEWER THROUGH VIDEO INSPECTION FROM BUILDING TO PROPERTY LINE AND REPLACE AS NEEDED.
3. COMPLETE INTERIOR REMODEL OF RESIDENCE – ASSESS CONDITION OF EXISTING SIDE SEWER THROUGH VIDEO INSPECTION FROM BUILDING TO PROPERTY LINE AND REPLACE AS NEEDED. IF EXISTING SIDE SEWER IS ASBESTOS CEMENT OR CONCRETE, SIDE SEWER SHALL BE REPLACED FROM BUILDING TO PROPERTY LINE, UNLESS THE APPLICANT PROVES, TO THE SATISFACTION OF THE CITY ENGINEER, THAT THE SIDE SEWER IS WATER TIGHT AND IN SOUND CONDITION.*
4. COMPLETE INTERIOR REMODEL AND BUILDING ADDITION – NEW SIDE SEWER FROM BUILDING TO PROPERTY LINE.*
5. CONSTRUCTION OF A NEW SINGLE FAMILY RESIDENCE – NEW SIDE SEWER FROM BUILDING TO PROPERTY LINE.*

BACK WATER VALVE INSTALLATION PER CITY ENGINEER, IF SCENARIO 2, 3, 4, OR 5 IS DIRECTLY ATTACHED TO THE LAKE LINE OR THE ELEVATION OF THE LOWEST DRAIN IN THE RESIDENCE IS LOWER THAN THE RIM ELEVATION OF THE UPSTREAM SEWER MANHOLE ON THE MAIN.

VIDEO INSPECTION OF THE EXISTING SIDE SEWER, BETWEEN THE PROPERTY LINE AND THE SEWER MAIN SHALL BE PERFORMED FOR SCENARIOS NUMBER 4 AND 5.

PROVIDE A COPY OF THE VIDEO DOCUMENTATION (VIDEO AND HARDCOPY REPORT) TO THE CITY ENGINEER.

REPLACEMENT OR REPAIR OF THAT PORTION OF THE SIDE SEWER BETWEEN THE PROPERTY LINE AND THE SEWER MAIN, WILL BE DETERMINED BY THE CITY ENGINEER, BASED ON THE VIDEO INSPECTION.

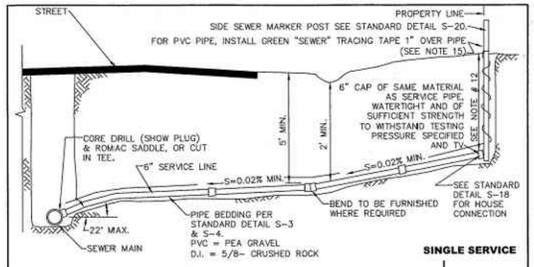
*IF THE EXISTING SIDE SEWER IS PVC AND IS LESS THAN TEN YEARS OLD, THE SIDE SEWER DOES NOT HAVE TO BE REPLACED IF A VIDEO INSPECTION AND/OR HYDROSTATIC PRESSURE TEST CONFIRMS THAT THE SIDE SEWER IS IN PROPER WORKING CONDITION. THESE TESTS SHALL BE PERFORMED AFTER ALL HEAVY EQUIPMENT THAT COULD DAMAGE THE SIDE SEWER IS OFF OF THE SITE.

CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER

RESIDENTIAL SIDE SEWER DISCONNECTION & RECONNECTION

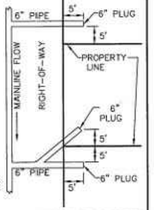
6-5-2009	NO SCALE	S-22

REV DATE | APPROVED



NOTES

1. ELBOWS SHALL NOT BE GREATER THAN 45 DEGREES.
2. CLEAN OUT IS REQUIRED FOR EACH PIPE LENGTH GREATER THAN 100' AND FOR EACH 90° ACCUMULATED ELBOW/100'.
3. RIGHT-OF-WAY RESTORATION SHALL MATCH OR EXCEED THE ORIGINAL CONDITION AND BE IN ACCORDANCE WITH CITY STANDARDS.
4. ALL TRENCH BACKFILL IN PUBLIC RIGHT-OF-WAY OR ROADWAY AREAS SHALL BE CRUSHED SURFACING PER WSDOT 9-09.9(3) OR BANK RUN GRAVEL PER WSDOT 9-03.19, COMPACTED IN 6" LIFTS OR MAY BE CDF WHEN DIRECTED BY THE CITY ENGINEER (SEE DETAIL S-3).
5. LAY PIPE IN STRAIGHT LINE BETWEEN BENDS. MAKE ALL CHANGES IN GRADE OR LINE WITH 1/8 BEND OR WYE. 90° CHANGE WITH 1/8 BEND AND WYE.
6. 6" SEWER PIPE MINIMUM SIZE IN RIGHT-OF-WAY, AND ELSEWHERE AS DIRECTED BY ENGINEER. 2% MIN. GRADE (UNLESS DIRECTED BY ENGINEER), 50% MAXIMUM.
7. ALL A.C. MAINS TO BE TAPPED IN ACCORDANCE WITH WAC 296-62-00775 STATE/FEDERAL GUIDELINES AND CERTIFICATION.
8. CONSTRUCTION IN RIGHT-OF-WAY MUST BE DONE BY A REGISTERED AND LICENSED CONTRACTOR.
9. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT CITY SEWER ORDINANCES.
10. WHERE CITY ENGINEER ALLOWS SIDE SEWER CONNECTIONS TO MANHOLE, INVERT OF SIDE SEWER SHALL BE EQUAL TO OR ABOVE MAIN SEWER CROWN, BUT NOT TO EXCEED 18" ABOVE INVERT OF MAIN SEWER.
11. UNLESS OTHERWISE INDICATED ON PLAN, SIDE SEWER SHALL BE MIN. OF 6' DEEP AT PROPERTY LINE, OR 6' LOWER THAN THE LOWEST ELEVATION, WHICH EVER IS LOWER.
12. ALL PIPE MATERIALS NOT TO STANDARDS WILL BE ABANDONED AND REPLACED WITH DUCTILE IRON OR PVC PIPE OF THE SAME SIZE.
13. IF A BUILDING SEWER IS TO SERVE MORE THAN ONE PROPERTY, BY JOINT AGREEMENT OF THE OWNERS, AN APPROVED EASEMENT INSURING THAT ALL PROPERTIES INVOLVED SHALL HAVE PERPETUAL USE OF THE SIDE SEWER, HAVING PROVISIONS FOR OPERATION, MAINTENANCE, RECONSTRUCTION AND FOR ACCESS FOR REPAIR PURPOSES, SHALL BE SIGNED BY THE OWNERS. THIS EASEMENT SHALL BE RECORDED WITH THE COUNTY AUDITOR. A SIX INCH (MINIMUM) DIAMETER PIPE SHALL BE USED FOR THE COMMON LINE AND A SIX INCH CLEANOUT EXTENDING TO WITHIN 12 INCHES OF THE GROUND SURFACE SHALL BE PROVIDED AT THE WYE WHERE THE UPPER GRADE CONNECTIONS ARE MADE. BACKWATER VALVES SHALL BE INSTALLED ON SERVICE LINES UPSTREAM OF THE CONNECTION TO THE SHARED SIDE SEWER.
14. THE CITY ENGINEER MAY REQUIRE BACKWATER VALVES ON SIDE SEWERS WHEN DEEMED NECESSARY. THE EFFECTIVE OPERATION AND MAINTENANCE OF ANY BACKWATER VALVE SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE SIDE SEWER.
15. UTILITY PIPE TRACER TAPE SHALL BE DETECTABLE BELOW GROUND SURFACE, COLOR CODED, WITH UTILITY NAME PRINTED ON TAPE. CONDUCTIVE WARNING TAPE REQUIRED OVER ALL WATER PIPE. TAPE SHALL BE MANUFACTURER'S STANDARD PERMANENT, BRIGHT-COLORED, CONTINUOUS PRINTED PLASTIC TAPE, ALUMINUM BACKED, INTENDED FOR DIRECT-BURIAL SERVICE. TAPE SHALL BE NOT LESS THAN 6" WIDE X 4 MILS THICK.



CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER

SIDE SEWER CONNECTION AND STUB

6-5-2009	NO SCALE	S-17

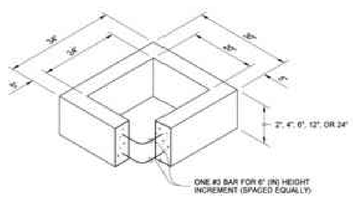
REV DATE | APPROVED

DRAWN BY: FERN LIDDELL

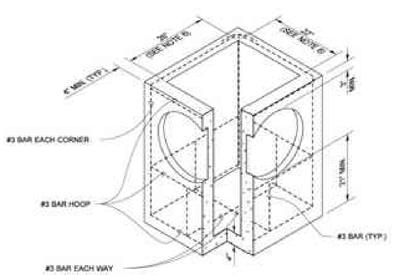
FRAME AND VANED GRATE

PIPE ALLOWANCES	
PIPE MATERIAL	MAXIMUM INSIDE DIAMETER (INCHES)
REINFORCED OR PLAIN CONCRETE	12"
ALL METAL PIPE	15"
CPSSP ★ (STD. SPEC. SECT. 9-05.20)	12"
SOLID WALL PVC (STD. SPEC. SECT. 9-05.12(1))	15"
PROFILE WALL PVC (STD. SPEC. SECT. 9-05.12(2))	15"

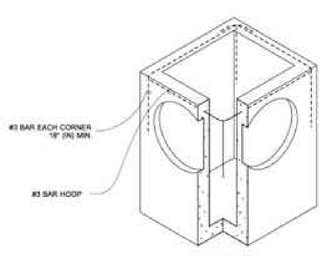
★ CORRUGATED POLYETHYLENE STORM SEWER PIPE



RECTANGULAR ADJUSTMENT SECTION



PRECAST BASE SECTION



ALTERNATIVE PRECAST BASE SECTION

NOTES

1. As acceptable alternatives to the rebar shown in the **PRECAST BASE SECTION**, fibers (placed according to the Standard Specifications), or wire mesh having a minimum area of 0.12 square inches per foot shall be used with the minimum required rebar shown in the **ALTERNATIVE PRECAST BASE SECTION**. Wire mesh shall not be placed in the knockouts.
2. The knockout diameter shall not be greater than 20" (in). Knockouts shall have a wall thickness of 2" (in) minimum to 2.5" (in) maximum. Provide a 1.5" (in) minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with **Standard Specification Section 9-04.3**.
3. The maximum depth from the finished grade to the lowest pipe invert shall be 5' (ft).
4. The frame and grate may be installed with the flange down, or integrally cast into the adjustment section with flange up.
5. The Precast Base Section may have a rounded floor, and the walls may be sloped at a rate of 1 : 24 or steeper.
6. The opening shall be measured at the top of the **Precast Base Section**.
7. All pickup holes shall be grouted full after the basin has been placed.

JULIE HEILMAN — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER

Julie Heilman
2020.09.01 07:52:50 -07'00'

CATCH BASIN TYPE 1

STANDARD PLAN B-5.20-03

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Roark, Steve
Digitally signed by Roark, Steve
Date: 2020.09.08 09:48:33 -07'00'
STATE DESIGN ENGINEER
Washington State Department of Transportation

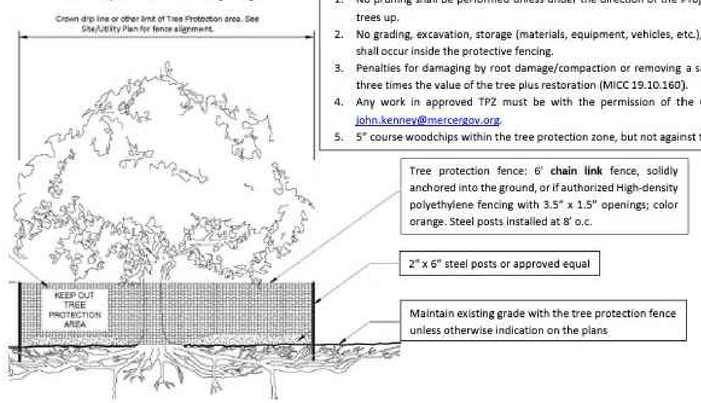
TREE PROTECTION AREA (TPZ)

KEEP OUT!

DO NOT REMOVE OR ADJUST THE APPROVED LOCATION OF THIS TREE PROTECTION AREA

Trees enclosed by this fence are protected and are subject to the conditions of the tree permit. Violation of tree conditions may lead to:

1. Correction Notices or Stop Work Orders until compliance is achieved
2. RE Inspection Fees/financial penalties
3. Arborist reports recommending mitigation



Notes

1. No pruning shall be performed unless under the direction of the Project Arborist. Including limbing trees up.
2. No grading, excavation, storage (materials, equipment, vehicles, etc.), or other unpermitted activity shall occur inside the protective fencing.
3. Penalties for damaging by root damage/compaction or removing a saved tree may be a fine up to three times the value of the tree plus restoration (MICC 19.10.160).
4. Any work in approved TPZ must be with the permission of the City Arborist (206) 275-7713, john.kenney@mercergov.org.
5. 5" course woodchips within the tree protection zone, but not against the tree trunk.

Any Work in the protected area must be with the permission of the City Arborist john.kenney@mercergov.org

RONALD S. FREDERIKSEN — STATE OF WASHINGTON — 39053 — REGISTERED PROFESSIONAL ENGINEER

10/16/2024

REVISIONS	BY	DATE

SEWER WATER TREE
STORM DETAILS

SITE ADDRESS: 8904 SE 58TH ST.
JENNIE LEE
8904 SE 58TH ST.
MERCER ISLAND, WA

EASTSIDE CONSULTANTS, INC.
ENGINEERS - SURVEYORS
1320 NW MALL ST., SUITE B
ISSAQUAH, WASHINGTON 98027
PH:(425)392-5351 FAX:392-4676

JOB NO.	24081
DATE	10/24
SCALE	1"=10'
DESIGNED	R.E.H.
DRAWN	R.E.H.
CHECKED	R.S.F.
APPROVED	R.S.F.

SHEET 13 OF 14

LEE RESIDENCE

NW 1/4, SW 1/4, SECTION 19, TOWNSHIP 24 NORTH, RANGE 5 EAST, W.M.
CITY OF MERCER ISLAND, WASHINGTON

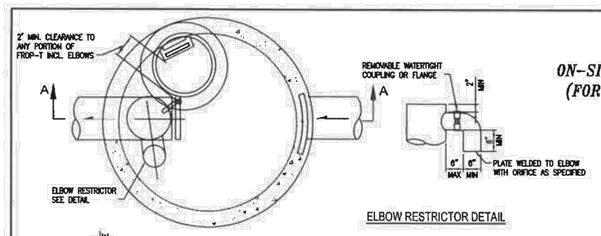
OWNER:
JENNIE LEE
8904 SE 58TH STREET,
MERCER ISLAND, WA

ARCHITECT: ARCHITECTURAL INNOVATIONS
NAME: ROBERT YOUNG
COMPANY
PH: 425-641-5320

CIVIL ENGINEER:
EASTSIDE CONSULTANTS, INC
1320 NW MALL STREET, STE B
ISSAQUAH, WA 98027
PHONE: 425.392.5351
CONTACT: RON FREDERIKSEN

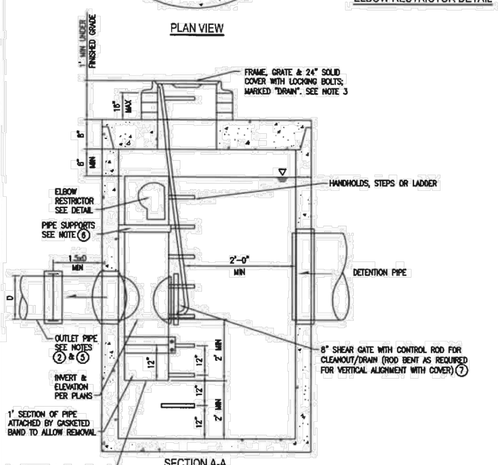
ATTACHMENT 1
CITY OF MERCER ISLAND
ON-SITE DETENTION SYSTEM WORKSHEET
(FOR NEW PLUS REPLACED IMPERVIOUS AREA OF 9,500 SF OR LESS)

OWNER: JENNIE LEE
PERMIT #: TBD
NEW PLUS REPLACED IMPERVIOUS SURFACE AREA (SF): 2215
SOIL TYPE: C
ADDRESS: 8904 SE 58TH ST, MERCER ISLAND, WA
DETENTION PIPE DIA (INCH): 48
PIPE MATERIAL: CMP
DETENTION PIPE LENGTH (FT): 36
PREPARED BY: EASTSIDE CONSULTANTS
PHONE: 425-392-5351
DATE: 10/16/2024
ORIFICE #1 DIA 0.5 INCH, ELEV 316.75'
ORIFICE #2 DIA 1.5 INCH, ELEV 321.55'



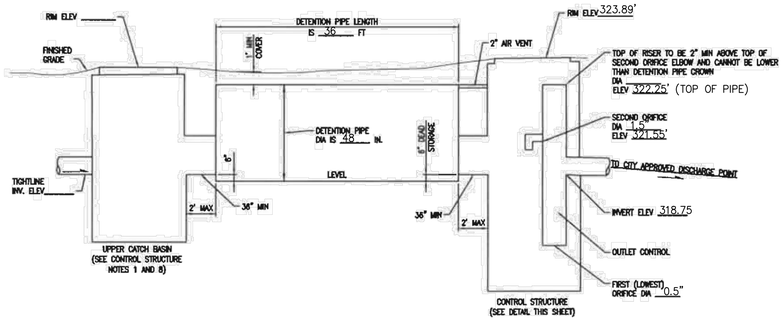
PLAN VIEW

ELBOW RESTRICTOR DETAIL



SECTION A-A

CONTROL STRUCTURE DETAIL
NOT TO SCALE



ON-SITE DETENTION SYSTEM
NOT TO SCALE (ENGINEER TO FILL IN BLANKS)

CONTROL STRUCTURE NOTES

1. USE A MINIMUM OF A 54 IN. DIAM. TYPE 2 CATCH BASIN. THE ACTUAL SIZE IS DEPENDENT ON CONNECTING PIPE MATERIAL AND DIAMETER.
2. OUTLET PIPE: MIN. 6 INCH.
3. METAL PARTS: CORROSION RESISTANT. NON-GALVANIZED PARTS PREFERRED. GALVANIZED PIPE PARTS TO HAVE ASPHALT TREATMENT 1.
4. FRAME AND LADDER OR STEPS OFFSET SO:
   A. CLEANOUT GATE IS VISIBLE FROM TOP;
   B. CLIMB-DOWN SPACE IS CLEAR OF RISER AND CLEANOUT GATE;
   C. FRAME IS CLEAR OF CURB.
5. IF METAL OUTLET PIPE CONNECTS TO CEMENT CONCRETE PIPE, OUTLET PIPE TO HAVE SMOOTH O.D. EQUAL TO CONCRETE PIPE I.D. LESS 1/4 IN.
6. PROVIDE AT LEAST ONE 3 X 0.090 GAUGE SUPPORT BRACKET ANCHORED TO CONCRETE WALL WITH 5/8 IN. STAINLESS STEEL EXPANSION BOLTS OR EMBEDDED SUPPORTS 2 IN. INTO CATCH BASIN WALL (MAXIMUM 3'-0" VERTICAL SPACING).
7. THE SHEAR GATE SHALL BE MADE OF ALUMINUM ALLOY IN ACCORDANCE WITH ASTM B 26M AND ASTM B 275, DESIGNATION ZG32A; OR CAST IRON IN ACCORDANCE WITH ASTM A 48, CLASS 30B.
   THE LIFT HANDLE SHALL BE MADE OF A SIMILAR METAL TO THE GATE (TO PREVENT GALVANIC CORROSION), IT MAY BE OF SOLID ROD OR HOLLOW TUBING, WITH ADJUSTABLE HOOK AS REQUIRED.
   A NEOPRENE RUBBER GASKET IS REQUIRED BETWEEN THE RISER MOUNTING FLANGE AND THE GATE FLANGE. INSTALL THE GATE SO THAT THE LEVEL-LINE MARK IS LEVEL WHEN THE GATE IS CLOSED.
   THE MATING SURFACES OF THE LID AND THE BODY SHALL BE MACHINED FOR PROPER FIT.
   ALL SHEAR GATE BOLTS SHALL BE STAINLESS STEEL.
8. THE UPPER CATCH BASIN IS REQUIRED IF THE LENGTH OF THE DETENTION PIPE IS GREATER THAN 50 FT.

ON-SITE DETENTION SYSTEM NOTES:

1. CALL DEVELOPMENT SERVICES (206-275-7605) 24 HOURS IN ADVANCE FOR A DETENTION SYSTEM INSPECTION BEFORE BACKFILLING AND FOR FINAL INSPECTIONS.
2. RESPONSIBILITY FOR OPERATION AND MAINTANANCE OF DRAINAGE SYSTEMS ON PRIVATE PROPERTY IS RESPONSIBILITY OF THE PROPERTY OWNER. MATERIAL ACCUMULATED IN THE STORAGE PIPE MUST BE REMOVED FROM CATCH BASINS TO ALLOW PROPER OPERATION. THE OUTLET CONTROL ORIFICE MUST BE KEPT OPEN AT ALL TIMES.
3. PIPE MATERIAL, JOINT, AND PROTECTIVE TREATMENT SHALL BE IN ACCORDANCE WITH SECTION 7.04 AND 8.05 OF THE WSDOT STANDARD SPECIFICATION FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, LATEST VERSION. SUCH MATERIALS INCLUDE THE FOLLOWING, LINED CORRUGATED POLYETHYLENE PIPE (LDPE), ALUMINIZED TYPE 2 CORRUGATED STEEL PIPE AND PIPE ARCH (MEETS AASHTO DESIGNATIONS M274 AND M36), CORRUGATED OR SPIRAL RIB ALUMINUM PIPE, OR REINFORCED CONCRETE PIPE. CORRUGATED STEEL PIPE IS NOT ALLOWED.
4. FOOTING DRAINS SHALL NOT BE CONNECTED TO THE DETENTION SYSTEM.

REVISIONS

BY	DATE

DETENTION DETAIL

SITE ADDRESS: 8904 SE 58TH ST.
JENNIE LEE
8904 SE 58TH ST.
MERCER ISLAND, WA

ENGINEERS - SURVEYORS
EASTSIDE CONSULTANTS, INC.
1320 NW MALL ST, SUITE B
ISSAQUAH, WASHINGTON 98027
PH:(425)392-5351 FAX:392-4676

RONALD S. FREDERIKSEN
STATE OF WASHINGTON
21053
REGISTERED
PROFESSIONAL ENGINEER

10/16/2024

JOB NO.	24081
DATE	10/24
SCALE	1"=10'
DESIGNED	R.E.H.
DRAWN	R.E.H.
CHECKED	R.S.F.
APPROVED	R.S.F.

SHEET 14 OF 14

CRAWL SPACE VENTS

1. CRAWL SPACE AREA ___758___ SF
2. CRAWL SPACE AREA / 300 = ___2.53___ SF OF VENT AREA REQUIRED
3. TYPICAL VENT SIZE = 14"x8"x.75 (75% EFFICIENCY) = .58 SF PER VENT NET FREE AREA
4. VENT AREA / .58 = ___4.36___ VENTS REQUIRED.
5. ___5___ VENTS SHOWN (SEE PLAN FOR LOCATION)
6. ___5___ VENTS x .58 = ___2.9___ SF OF VENT AREA PROVIDED.
7. VENTS SHALL BE COVERED WITH CORROSION RESISTANT WIRE MESH WITH OPENINGS OF 1/4" MAX.
8. VENTS LOCATED IN RIM JOIST MUST BE PERMANENTLY BAFFLED. USEC 502.14.1

WALL LEGEND

- EXISTING WALLS
- EXISTING WALLS TO BE REMOVED
- NEW WALLS
- EXISTING AND NEW WALLS ABOVE - U.N.O.
- EXISTING FOUND. WALLS
- NEW FOUND. WALLS

CONTRACTOR/BUILDER SHALL BE RESPONSIBLE FOR ALL TEMPORARY SHORING/BRACING

CONTACT MK IF EXIST FRAMING DIFFERS FROM THAT SHOWN/ASSUMED

GENERAL FRAMING NOTES

1. SEE TYPICAL MATERIALS LIST ON SECTION SHEET
2. SEE SHEET A-1 FOR ALL GENERAL NOTES AND FOR ALL REQUIREMENTS CONCERNING MECHANICAL, PLUMBING, AND ELECTRICAL.
3. TRUSS DESIGN BY MFG. TRUSS PLAN SHOWN IS FOR GENERAL LAYOUT ONLY. SEE DIV. 6\|00 SHEET A-1
   - TRUSS LOADING. SEE DIV. 6\|00\|0.1A SHEET A-1
   - TRUSS SPAN PER FLOOR PLANS
   - TRUSS TYPE PER ROOF FRAMING PLAN
4. ROOF FRAMING SPACING, 24" o.c. U.N.O.
5. ROOF PITCH- EXTERIOR PER ELEVATION INTERIOR PER SECTION.
6. RAFTER TAIL 2x4. VERIFY.
7. ROOF TAIL AND RAKE OVERHANG PER ROOF PLAN.
8. ALL HEADERS ARE 4x10 DF #2 U.N.O. PROVIDE (1) TRIMMER STUD UP TO 4'-0" SPAN AND (2) TRIMMER STUDS OVER 4'-0" U.N.O. SEE DIV. 06\|00 SHEET A-1
9. STUD NOTCHING AND BORING PER I.R.C. SECT. R602.6
   - BEARING OR EXTERIOR WALL MAXIMUM NOTCH 25%, BORING 40%.
   - 60% MAXIMUM BORING IF DOUBLED WITH NOT MORE THAN (2) SUCCESSIVE STUDS BORED.
   - NON-BEARING MAXIMUM NOTCH 40%, BORING 60%.
   - HOLES NO CLOSER THAN 5/8" TO FACE OF STUD.

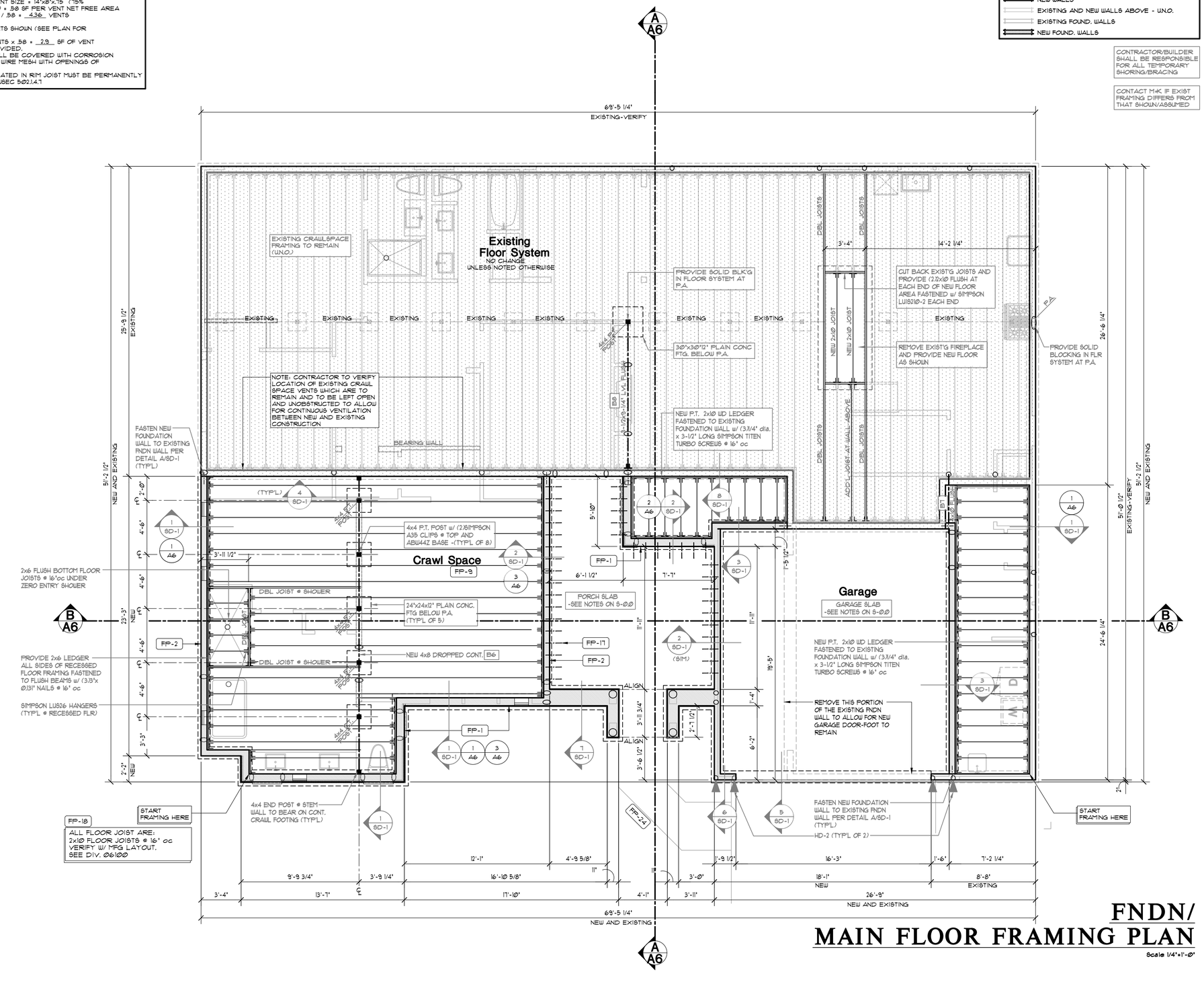
FOUNDATION KEYNOTES

- FP-1 CONCRETE STEM WALL 8" WIDE WITH MIN. 15"x7" FOOTING. SEE DETAILS FOR ADDITIONAL INFORMATION. SEE DIV. 3 SHEET A-1
- FP-2 CONCRETE STEM WALL 6" WIDE WITH MIN. 12"x6" FOOTING. SEE DETAILS FOR ADDITIONAL INFORMATION. SEE DIV. 3 SHEET A-1
- FP-3 CONCRETE SLAB ON GRADE SHALL BE 4" THICK STEEL TROWELED FINISH, W/ 6x6 W1.4xW1.4 WIF ON 4" GRANULAR FILL. SLOPE 2% TO DOOR. PROVIDE THICKENED EDGE AT DOOR SEE DIV. 3 SHEET A-1
- FP-4 6x6 POST ON CB66, 1" ABOVE SLAB ON 36"x36"x8" MAT FOOTING ON SOLID SUBSTRATE W/ (4) #4 BAR EACH WAY. SEE DIV. 3 SHEET A-1
- FP-5 CRAWL SPACE VENT. SEE CALCULATION. SEE DIV. 1 SHEET A-1
- FP-6 ALL CRIPPLE WALLS ARE 2x6 OR 3x4 @ 16" o.c. U.N.O. 14" MIN STUD LENGTH PER IRC SEE DIV. 6 SHEET A-1
- FP-7 4x10 BEAM LINE, U.N.O. MIN. 1" CLEARANCE FROM CONCRETE AT END OF BEAMS SEE DIV. 6 SHEET A-1
- FP-8 4x4 PRESSURE TREATED POST (SCAB POST AND BEAM WITH 2x4) ON 30# FELT ON MAT FOOTING U.N.O. PROVIDE 4x6 POST @ BEAM SPLICE & POSITIVE CONNECTION FROM POST TO FOOTING. PER DETAIL 16/D1. SEE DIV. 6 SHEET A-1
- FP-9 6 MIL BLACK POLYETHYLENE GROUND COVER ON GRADE. SEE DIV. 1 SHEET A-1
- FP-10 ELECTRICAL SERVICE. PROVIDE (1) 2 1/2" SCHEDULE 80 PVC CONDUIT FOR ELECTRICAL SERVICE AND (1) 5/8"x20' LONG GALVANIZED ROD FOR ELECTRICAL GROUNDING. SEE DIV. 16 AND VERIFY W/ SITE CONDITIONS
- FP-11 BLOCK OUT IN STEM WALL FOR DOORS, HVAC, ETC. AS REQUIRED
- FP-12 18"x24" CRAWL SPACE ACCESS, INSULATE AND WEATHER STRIP. SEE DIV. 01\|00\|2.1 SHEET A-1
- FP-13 PRESSURE BLOCKING OF SAME SIZE AS ADJACENT JOIST.
- FP-14 24"X24"X1' MAT FOOTING ON SOLID SUBSTRATE W/ (2) #4 BAR EACH WAY OR 12"X1' STRIP FOOTING PER DETAIL 16/D1
- FP-15 30"X30"X1' MAT FOOTING ON SOLID SUBSTRATE W/ (2) #4 BAR EACH WAY OR 15"X1' STRIP FOOTING PER DETAIL 16/D1
- FP-16 36"X36"X12" MAT FOOTING ON SOLID SUBSTRATE W/ (2) #4 BAR EACH WAY
- FP-17 STUB STEEL 12" INTO SLAB @ 12"oc
- FP-18 FLOOR JOIST SEE DIV. 6 SHEET A-1
- FP-19 4x8 BEAM LINE, SOLID BLOCKING BETWEEN JOIST OVER SUPPORT. SEE DIVISION 06\|00 SHEET A-1
- FP-20 PROVIDE SOLID BLOCKING THRU JOIST SYSTEM TO PROVIDE SAME AREA OF BEAM SUPPORT AS ABOVE AND BELOW SEE DIV. 6 SHEET A-1
- FP-21 MIN. 1" CLEARANCE FROM CONCRETE AT END OF BEAMS
- FP-22 EXTEND PIER MIN 18" BELOW SURROUNDING GRADE
- FP-23 3" DIAMETER STEEL POST
- FP-24 EDGE OF CONCRETE

SYMBOLS & LEGEND

- POINT LOADS FROM ABOVE
- POINT LOADS FROM ABOVE W/ LOADING
- POINT LOAD TRANSFERING DOWN
- POINT LOAD TRANSFERING DOWN W/ LOADING
- HANGER
- POINT LOAD TRANSFERED BY KICKER
- HOLD DOWN WITH SIZE DESIGNATION
- VERTICAL STRAP WITH SIZE DESIGNATION TO BE USED ON FLOOR BELOW
- STxx HORIZONTAL STRAP WITH SIZE DESIGNATION
- (1) INDICATES BEAM CALCULATION WITH INDEXED NUMBER
- WALL ABOVE / WALL BELOW

NOTE: UNLESS OTHERWISE NOTED, ENGINEERING AND CALCULATIONS ARE NOT PROVIDED IN THESE DRAWINGS.



FNDN/ MAIN FLOOR FRAMING PLAN

Scale 1/4"=1'-0"

ARCHITECTURAL INNOVATIONS, P.S.
Forward Thinking Design Solutions For Your Environment
14311 SE 16th St
Bellevue, WA 98007
1-800-858-4517
www.kapplehomeplans.com

Date	By	Description
8.8824	REV	PERMIT SET

Lee Remodel

Mercer Island, WA

8904 SE 58th St

REGISTERED ARCHITECT RICK D. KAPPLE STATE OF WASHINGTON ORIGINAL SIGNATURE REQUIRED

TITLE

JOB NO. : 24000.05
STARTING NO. : 24000.03

SHEET

A2

SYMBOLS AND LEGEND

- (F) FAN- DIRECT VENT TO OUTSIDE
  - -BATHROOMS/LAUNDRY 50 CFM MIN.
  - -KITCHEN EXHAUST HOOD TO BE MIN. OF 100CFM. IF EXHAUST HOOD EXCEEDS 400CFM MAKE UP AIR MUST BE PROVIDED PER SECTION M1503.6.
- (WF) CONTINUOUS WHOLE-HOUSE VENTILATION SHALL OPERATE CONTINUOUSLY. SYSTEMS MUST CONFORM TO I.R.C. M1505 & SIZED PER TABLE M1505.4.3(1). CONTROLS TO BE LOCATED AT FORCED AIR UNIT
- (T) THERMOSTAT @ 5'0" ABOVE FLOOR
- (SD) R314.2.3. A HEAT DETECTOR OR HEAT ALARM RATED FOR THE AMBIENT OUTDOOR TEMPERATURES AND HUMIDITY SHALL BE INSTALLED IN NEW GARAGES THAT ARE ATTACHED TO OR LOCATED UNDER NEW AND EXISTING DWELLINGS PER SECTION R314.2.3
- ⊙ 110V SMOKE ALARM PER I.R.C. R314 WITH BATTERY BACKUP INTERCONNECTED. USE A COMBINATION SMOKE/ CARBON MONOXIDE ALARM WHERE NOTED

MECHANICAL, PLUMBING, AND ELECTRICAL SYSTEM FOR UNITS: PER DIV. 15/16 SEE SHEET A1

FURN | WH

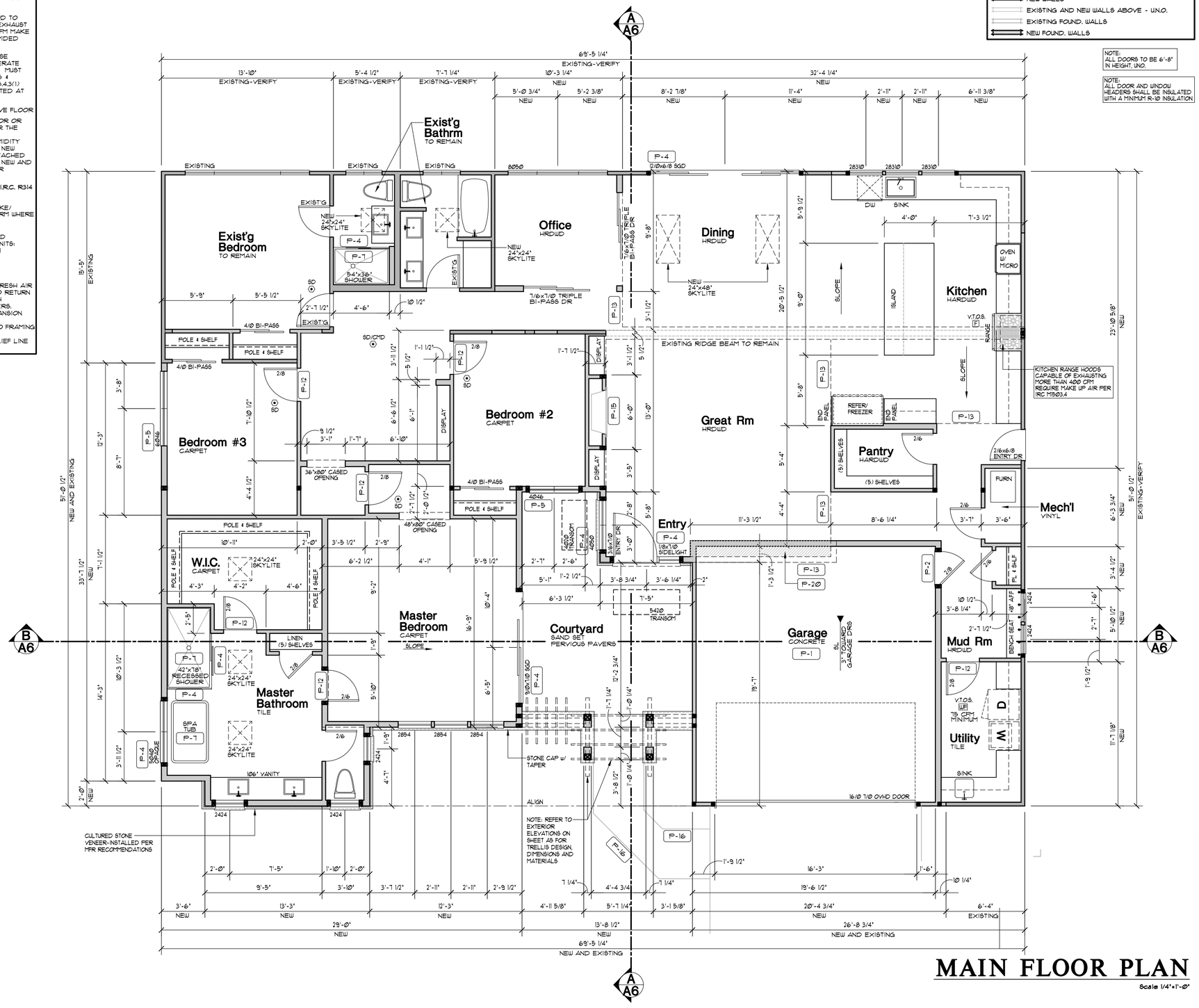
A. PROVIDE 6" DIAMETER FRESH AIR INTAKE FROM OUTSIDE TO RETURN PLENUM AT FURNACE WITH MOTORIZED FLOW DAMPERS.
B. PROVIDE THERMAL EXPANSION TANK AT WATER HEATER.
C. STRAP WATER HEATER TO FRAMING TOP AND BOTTOM.
D. PROVIDE PRESSURE RELIEF LINE PLUMBED TO OUTSIDE.

WALL LEGEND

- EXISTING WALLS
- EXISTING WALLS TO BE REMOVED
- NEW WALLS
- EXISTING AND NEW WALLS ABOVE - U.N.O.
- EXISTING FOUND. WALLS
- NEW FOUND. WALLS

NOTE:
ALL DOORS TO BE 6'-8" IN HEIGHT, U.N.O.

NOTE:
ALL DOOR AND WINDOW HEADERS SHALL BE INSULATED WITH A MINIMUM R-10 INSULATION



MAIN FLOOR PLAN

Scale 1/4"=1'-0"

GENERAL PLAN NOTES

1. SEE SHEET A-1 FOR ALL GENERAL NOTES AND REQUIREMENTS.
2. ENERGY AND AIR QUALITY INFORMATION SEE DIV. 11 SHEET A-1
3. SEE BUILDING ELEVATION FOR WINDOW OPERATION SEE DIV. 8 SHEET A-1
4. SEE TYP. MATERIALS LIST ON SECTION SHEET
5. SEE SHEET A-1 FOR ALL NOTES AND REQUIREMENTS CONCERNING MECHANICAL, PLUMBING, AND ELECTRICAL.

FLOOR PLAN KEY NOTES

- P-1 OCCUPANCY SEPARATION: APPLY (1) LAYER OF ½" GWB. TO GARAGE SIDE OF RESIDENCE, ATTIC SPACES, AND TO ALL BEAMS AND POSTS SUPPORTING A FLOOR-CEILING ASSEMBLY. APPLY (1) LAYER OF ⅝" TYPE 'X' GWB. TO GARAGE CEILING WHEN UNDER HABITABLE ROOMS. DUCTS THROUGH WALL OR CEILING COMMON TO HOUSE SHALL HAVE MINIMUM 26 GAUGE STEEL SEE DIV. 01@02.6.A. SHEET A-1.
- P-2 1⅜" MIN. SELF CLOSING SOLID WOOD CORE, HONEY-COMB CORE STEEL, OR 20-MINUTE FIRE RATED DOOR SEE DIV. 01@02.6.B. SHEET A-1
- P-3 STAIR ASSEMBLY NOTES: PER I.R.C. SECTION R311.5 AND DETAIL 12/D2.
  - A. HEADROOM MIN. 6'-8", WIDTH MIN. 3'-0".
  - B. TREADS 10" MIN. DEPTH AND MIN. WIDTH OF 36" ABOVE HANDRAIL HEIGHT. RISERS 7¾" MAX. HT. TREAD NOSING TO BE MINIMUM 3/4" AND A MAXIMUM OF 1 1/4" ON STAIRS WITH SOLID RISERS.
  - C. HANDRAIL MIN. 34" TO MAX 38" ABOVE TREAD NOSING. HANDRAIL TYPE I CIRCULAR TO HAVE 1¼" MIN. TO 2" MAX. CROSS SECTION DIMENSION AND 1 1/2" MIN. CLEAR FROM WALL, RETURN RAIL ENDS. HANDRAILS SHALL BE STRONG ENOUGH TO RESIST A 200 POUND POINT LOAD IN ANY DIRECTION PER I.R.C. TABLE R301.5
  - D. INSTALL FIRE BLOCKING BETWEEN STRINGERS AT THE TOP AND BOTTOM OF EACH RUN PER I.R.C. SECTION R302.11.
  - E. COVER USABLE SPACE UNDER STAIR W/ ½" GWB. PER I.R.C. SECTION R302.7.
  - F. INTERMEDIATE BALUSTERS SHALL BE SPACED W/ LESS THAN 4" BETWEEN BALUSTERS.
  - G. PROVIDE STAIRWAY ILLUMINATION PER I.R.C. SECTION R303.6.

  SEE DIV. 01@02.7 SHEET A-1.
- P-4 SAFETY GLAZING PER I.R.C. SECTION R308
  - A. WINDOWS WITHIN 18" OF FLOOR
  - B. WINDOWS WITHIN A 24" ARC OF DOORS
  - C. WINDOWS AT TUBS AND SHOWERS
  - D. GLAZING IN DOORS
  - E. LESS THAN 60" HORIZ. FROM THE BOT. STAIR TREAD NOSING & BOT. EDGE OF GLAZING IS LESS THAN 36" ABV. LANDING/WALKING SURFACE

  SEE DIV. 08@00 SHEET A-1
- P-5 EGRESS WINDOW PER I.R.C., SECTION R310 SEE DIV. 08@00 SHEET A-1
- P-6 IGNITERS FOR GAS FIRED APPLIANCES IN GARAGE TO BE 18" MIN. ABOVE TOP OF SLAB. SEE DIV. 15 SHEET A-1
- P-7 COVER WALLS ADJACENT TO TUBS AND SHOWERS WITH NON-ABSORBENT MATERIAL TO 72" ABOVE DRAIN INLETS, PER I.R.C. SECTION 307.2. SEE DIV. 09@50 SHEET A-1
- P-8 (2) LAYERS OF FLOOR SHEATHING OVER FRAMING.
- P-9 7¾" MAX. RISER WITH 10" MIN. RUN, IF MORE THAN (3) RISERS, HANDRAIL REQUIRED PER I.R.C. SECTION R311.7.8. SEE DIV. 01@02.7 SHEET A-1
- P-10 18"x24" CRAWL SPACE ACCESS, INSULATE AND WEATHER STRIP. SEE DIV. 01@02.1 SHEET A-1
- P-11 22"x30" ATTIC SPACE ACCESS W/ 30" HEAD CLEARANCE. INSULATE AND WEATHER STRIP. SEE DIV. 01@02.2 SHEET A-1
- P-12 FLOOR MATERIAL BREAK LINE
- P-13 WALL LINE ABOVE
- P-14 WALL LINE BELOW
- P-15 FIREPLACE ASSEMBLY NOTES:
  - A. DIRECT VENT GAS FIREPLACES, INSTALL PER MFG. SPECIFICATIONS, SHALL CONFORM TO I.R.C. REQUIREMENTS. SEE DIV. 01@02.12 SHEET A-1
  - B. ZERO CLEARANCE FIREPLACES SHALL CONFORM TO I.R.C. REQUIREMENTS. SEE DIV. 01@02.12 SHEET A-1
  - C. HEARTH SHALL CONFORM TO I.R.C. REQUIREMENTS. SEE DIV. 01@02.12
  - D. FIREBLOCK OPENINGS AROUND PENETRATIONS AT EACH FLOOR PER I.R.C. SECTION R1003.13.
- P-16 SEE SITE PLAN FOR EXTENT OF WALKS AND DRIVEWAYS
- P-17 3" DIAMETER STEEL POST
- P-18 36" GUARDRAIL PER I.R.C. SECTION R312 & TABLE R301.5 CONTRACTOR TO VERIFY TO INSPECTOR THAT ALL GUARDS & RAILINGS ARE CAPABLE OF RESISTING 200lb LOAD ON TOP RAIL ACTING IN ANY DIRECTION.
- P-19 "B" VENT FOR MECHANICAL, 1" CLEARANCE ALL SIDES PER I.R.C. SECTION R1005.3. SEE DIV. 15 SHEET A-1
- P-20 PLANT SHELF
- P-21 UPPER AND LOWER LINEN CABINETS
- P-22 SOFFIT AREA
- P-23 INTEGRATED MAKE UP AIR
- P-24 2x6 STUDS W/ R-21 INSULATION MIN.

SQUARE FOOTAGE

	EXISTING	PROPOSED	
UPPER FLR	N/A SF	N/A SF	
MAIN FLR	1854 SF	2748 SF	(+894)
LOWER FLR	N/A SF	N/A SF	
TOTAL	1854 SF	2748 SF	(+894)
UNFINISHED	N/A SF	N/A SF	
GARAGE	459 SF	407 SF	(-52)
CVRD PORCH	SF	SF	
CVRD PATIO	SF	SF	

REGISTERED ARCHITECT — ORIGINAL SIGNATURE REQUIRED

Date	By	Description
8.8824	REV	PERMIT SET

Lee Remodel

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Mercier Island, WA

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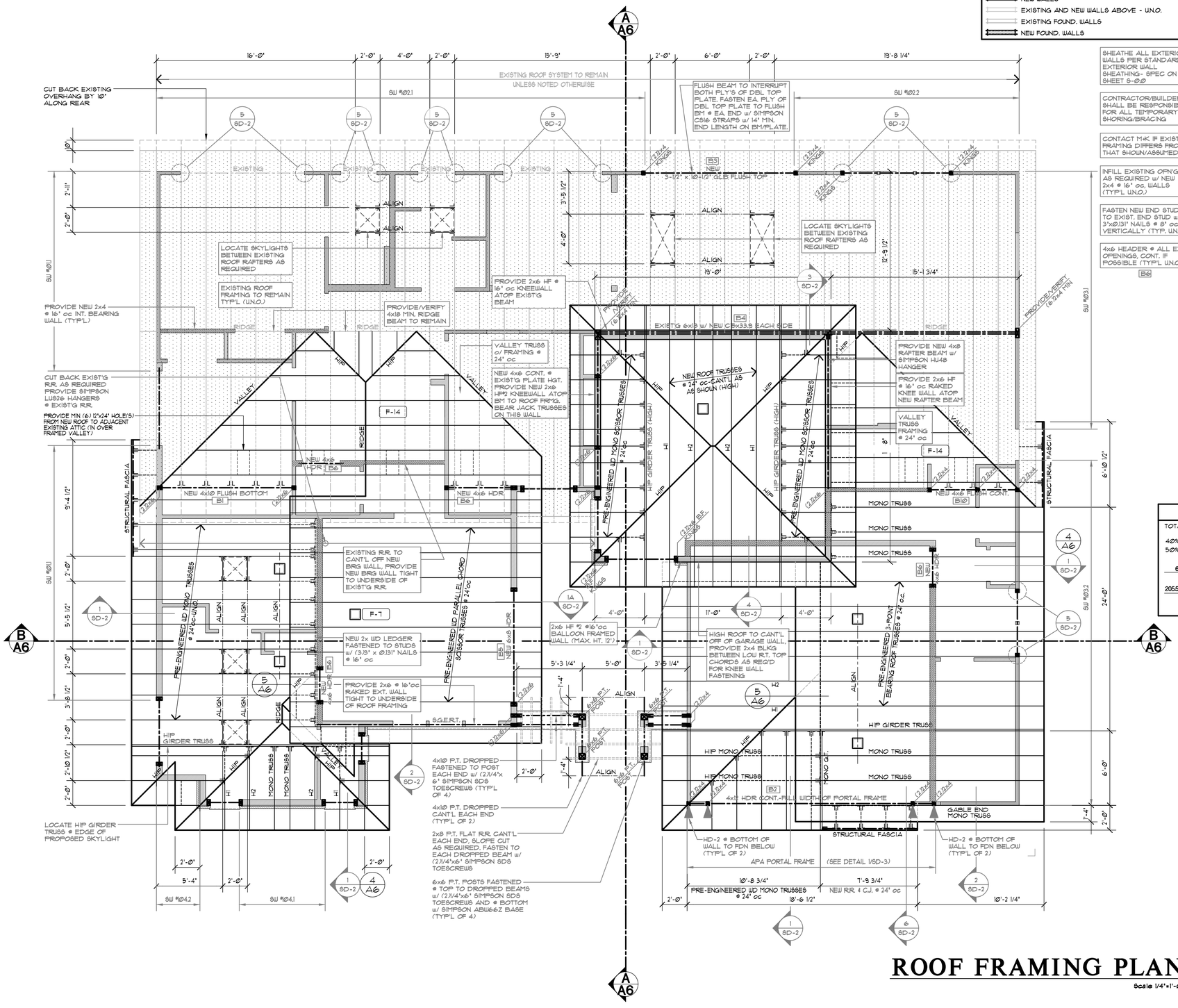
TITLE

JOB NO.: 24000.05
STARTING NO.: 24000.03

SHEET
A3



ROOF FRAMING PLAN

Scale 1/4"=1'-0"

WALL LEGEND

- EXISTING WALLS
- EXISTING WALLS TO BE REMOVED
- NEW WALLS
- EXISTING AND NEW WALLS ABOVE - U.N.O.
- EXISTING FOUND. WALLS
- NEW FOUND. WALLS

SHEATHE ALL EXTERIOR WALLS PER STANDARD EXTERIOR WALL SHEATHING- SPEC ON SHEET S-00

CONTRACTOR/BUILDER SHALL BE RESPONSIBLE FOR ALL TEMPORARY SHORING/BRACING

CONTACT M.K. IF EXIST FRAMING DIFFERS FROM THAT SHOWN/ASSUMED

INFILL EXISTING OPNGS AS REQUIRED w/ NEW 2x4 @ 16" oc WALLS (TYP'L U.N.O.)

FASTEN NEW END STUD TO EXIST. END STUD w/ 3"x0.131" NAILS @ 8" oc VERTICALLY (TYP. U.N.O.)

4x6 HEADER @ ALL EXT. OPENINGS, CONT. IF POSSIBLE (TYP'L U.N.O.)

GENERAL FRAMING NOTES

1. SEE TYPICAL MATERIALS LIST ON SECTION SHEET
2. SEE SHEET A-1 FOR ALL GENERAL NOTES AND FOR ALL REQUIREMENTS CONCERNING MECHANICAL, PLUMBING, AND ELECTRICAL.
3. TRUSS DESIGN BY MFG. TRUSS PLAN SHOWN IS FOR GENERAL LAYOUT ONLY. SEE DIV. 6\00 SHEET A-1
   - TRUSS LOADING. SEE DIV. 01\00.10A SHEET A-1
   - TRUSS SPAN PER FLOOR PLANS
   - TRUSS TYPE PER ROOF FRAMING PLAN
4. ROOF FRAMING SPACING, 24" o.c. U.N.O.
5. ROOF PITCH- EXTERIOR PER ELEVATION INTERIOR PER SECTION.
6. RAFTER TAIL 2x4. VERIFY.
7. ROOF TAIL AND RAKE OVERHANG PER ROOF PLAN.
8. ALL HEADERS ARE 4x10 DF #2 U.N.O. PROVIDE (1) TRIMMER STUD UP TO 4'-0" SPAN AND (2) TRIMMER STUDS OVER 4'-0" U.N.O. SEE DIV. 06\00 SHEET A-1
9. STUD NOTCHING AND BORING PER I.R.C. SECT. R602.6
   - BEARING OR EXTERIOR WALL MAXIMUM NOTCH 25%, BORING 40%.
   - 60% MAXIMUM BORING IF DOUBLED WITH NOT MORE THAN (2) SUCCESSIVE STUDS BORED.
   - NON-BEARING MAXIMUM NOTCH 40%, BORING 60%.
   - HOLES NO CLOSER THAN 5/8" TO FACE OF STUD.

FRAMING PLAN KEYNOTES

F-1	BACK FRAMING AND SOFFIT AREA AS REQUIRED TO ALLOW FOR HVAC DUCTING. SEE DIV.15 SHEET A-1
F-2	RAKED PONY WALL ON TOP OF LOWER ROOF FRAMING MEMBERS SUPPORTING UPPER ROOF FRAMING MEMBERS.
F-3	ALIGN EDGE OF JOIST WITH FACE OF WALL
F-4	ALIGN INSIDE FACE OF BEAM WITH OUTSIDE FACE OF WALL
F-5	UPSET - BOTTOM OF BEAM EVEN W/ BOTTOM OF JOIST AND TOP OF BEAM EXTENDS UP ABOVE JOISTS
F-6	TOP OF BEAM IS FLUSH WITH BOTTOM OF JOIST WITH NO TOP PLATE. CUT ADJACENT FRAMING MEMBERS INTO BEAM FOR ADEQUATE SUPPORT.
F-7	ATTIC SPACE VENT SEE CALCULATION SEE DIV. 01\00.3.B SHEET A-1
F-8	FLOOR JOIST - SEE SCHEDULE DWG. SEE DIV. 06\00 SHEET A-1
F-9	SEE ELEVATIONS AND SECTIONS FOR PLATE HEIGHT
F-10	PRESSURE BLOCKING SEE DIV. 06\00 SHEET A-1
F-11	FLUSH - BOTTOM OF BEAM EVEN W/ BOTTOM OF JOISTS
F-12	TOP OF BEAM FLUSH W/ TOP OF JOIST AND BEAM EXTENDS DOWN BELOW JOISTS
F-13	TOP OF BEAM 3" BELOW TOP OF FLOOR TRUSS. FLOOR TRUSSES TO NOTCH OVER BEAM.
F-14	2x OVERFRAMING @ 24" OC. PROVIDE 2x6 STRONGBACK PURLINS AND 2x KICKERS AT 6'-0" oc TO TRUSSES BELOW.
F-15	2X6 CEILING JOISTS @ 24" OC

ROOF VENT CALCULATION

TOTAL ROOF AREA 1220 SF/ 300 = 4.06 SF OF VENT AREA REQ

40% MIN. AT 36" MAX BELOW RIDGE = 163 SF MIN.
50% MAX. AT 36" MAX BELOW RIDGE = 203 SF MAX.

6 ROOF JACKS AT 50 SQ. IN. EACH = 300 SQ. IN. = 208 SF (36" MAX. BELOW RIDGE)

2055 L.F. OF EAVE VENTS AT 3.3=SQ. IN./L.F. = 678 SQ. IN. = 471 SF

TOTAL SF OF VENTILATION PROVIDED = 679 SF

SYMBOLS & LEGEND

- POINT LOADS FROM ABOVE
- POINT LOADS FROM ABOVE W/ LOADING
- POINT LOAD TRANSFERING DOWN
- POINT LOAD TRANSFERING DOWN W/ LOADING
- HANGER
- POINT LOAD TRANSFERED BY KICKER
- HOLD DOWN WITH SIZE DESIGNATION
- VERTICAL STRAP WITH SIZE DESIGNATION TO BE USED ON FLOOR BELOW
- 9Txx — HORIZONTAL STRAP WITH SIZE DESIGNATION
- (1) INDICATES BEAM CALCULATION WITH INDEXED NUMBER
- WALL ABOVE / WALL BELOW

NOTE: UNLESS OTHERWISE NOTED, ENGINEERING AND CALCULATIONS ARE NOT PROVIDED IN THESE DRAWINGS.

REGISTERED ARCHITECT 6079 STATE OF WASHINGTON — ORIGINAL SIGNATURE REQUIRED

Date	By	Description
8.8.24	KEY	PERMIT SET

Lee Remodel

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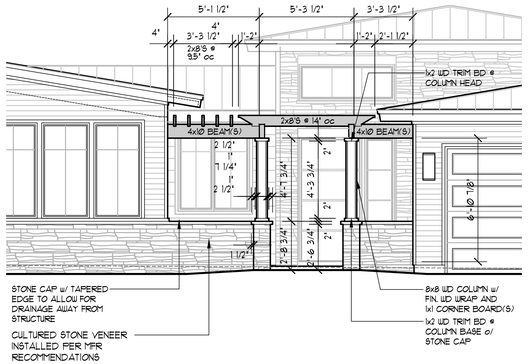
TITLE

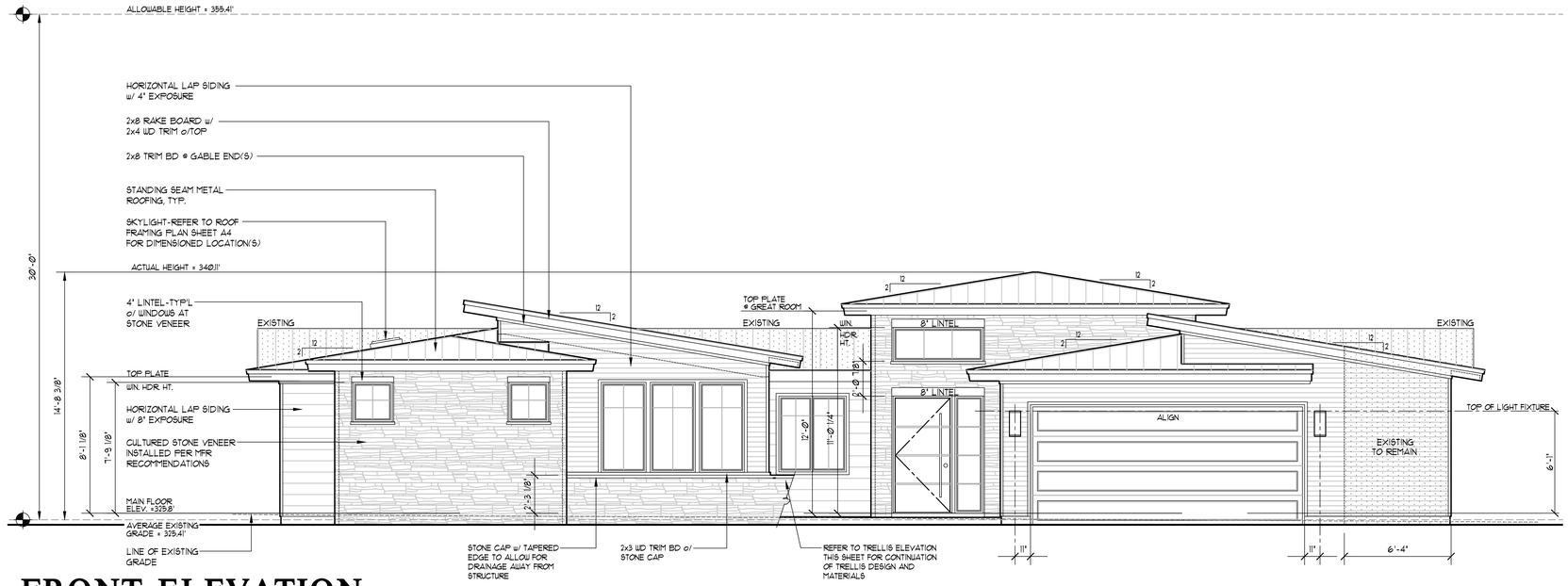
JOB NO. : 24000.05
STARTING NO. : 24000.03

SHEET
A4



TRELLIS ELEVATION

Scale 1/4"=1'-0"



FRONT ELEVATION

Scale 1/4"=1'-0"

TYPICAL BUILDING MATERIALS

ROOF CONSTRUCTION

ROOFING: (DIV. 7)	SHINGLES (DIV. 01000.5)
BUILDING PAPER: (DIV. 7)	30# BUILDING PAPER
SHEATHING: (DIV. 6)	7/16" O.S.B. OR EQUAL
FRAMING: (DIV. 6)	PER PLAN
INSULATION: (DIV. 7)	R-49 BLOWN-IN
SOFFIT: (DIV. 7)	1/2" RE-SAWN PLYWOOD
GWB: (DIV. 9)	5/8" GWB

EXTERIOR WALL CONSTRUCTION

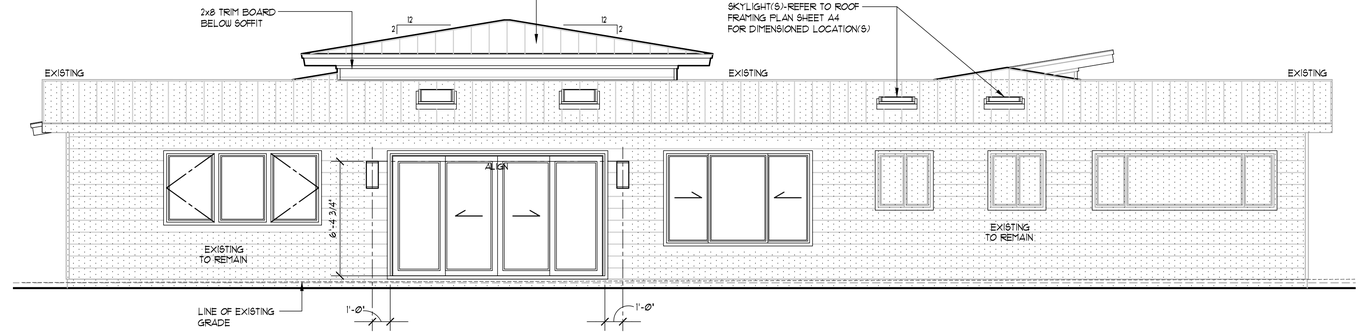
SIDING MATERIAL: (DIV. 7)	WOOD SIDING (DIV. 0100.5)
BUILDING WRAP: (DIV. 7)	15# BUILDING PAPER
SHEATHING: (DIV. 6)	1/2" CDX PLYWOOD OR EQUAL
FRAMING: (DIV. 6)	2 X 6 STUDS AT 16" OC
INSULATION: (DIV. 7)	R-21 BATT W/ INTEGRAL VAPOR BARRIER
GWB: (DIV. 9)	1/2" GWB

FLOOR CONSTRUCTION

FLOORING: (DIV. 9)	FINISH PER PLANS (DIV. 0100.5)
SUBFLOOR: (DIV. 6)	3/4" T&G (PLYWD, COMPLY, OR EQ.)
FRAMING: (DIV. 6)	PER PLANS
INSULATION: (DIV. 7)	R-38 BATT
SOFFIT: (DIV. 7)	1/2" RE-SAWN PLYWOOD

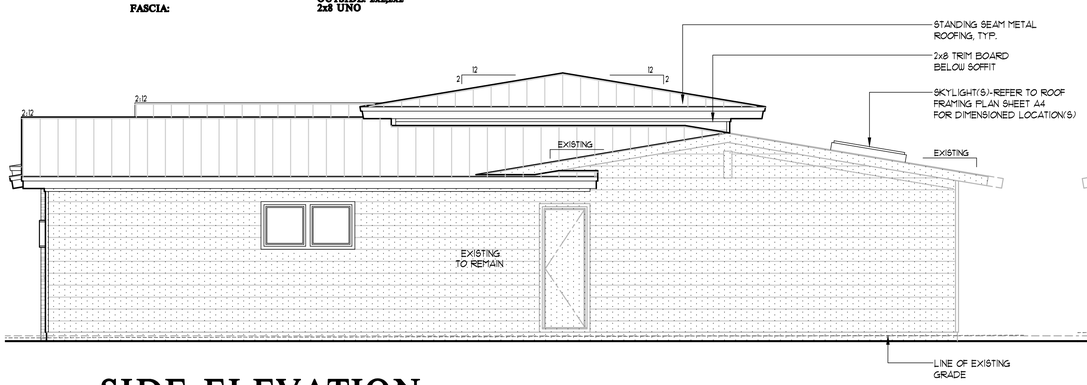
TRIM:(DIV. 6)

WINDOW: (WITH NO BRICK MOLD)	HEAD: 2x2 JAMB: 2x2 SILL: 2x2
CORNER BOARDS:	INSIDE: 2x2 OUTSIDE: 2x2,2x2
FASCIA:	2x8 UNO



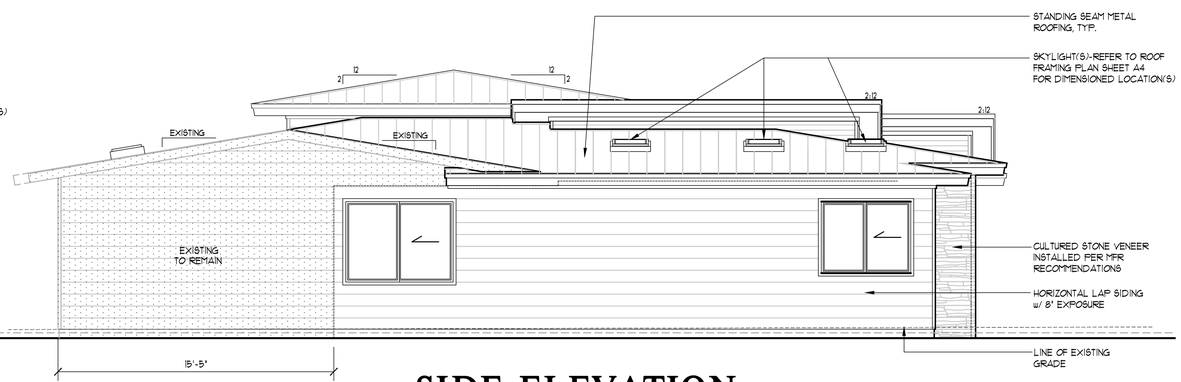
REAR ELEVATION

Scale 1/4"=1'-0"



SIDE ELEVATION

Scale 1/4"=1'-0"



SIDE ELEVATION

Scale 1/4"=1'-0"

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Date	By	Description
8.28.24	REY	PERMIT SET

Lee Remodel

Mercer Island, WA

8904 SE 58th St

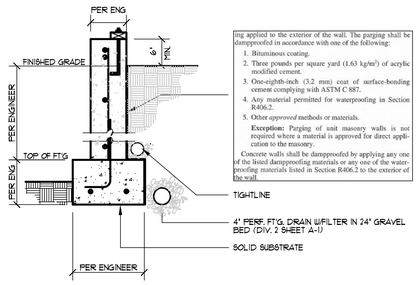
REGISTERED ARCHITECT — STATE OF WASHINGTON — 9979 — ORIGINAL SIGNATURE REQUIRED

TITLE

JOB NO. :	24000.05
STARTING NO. :	24000.03

SHEET

A5



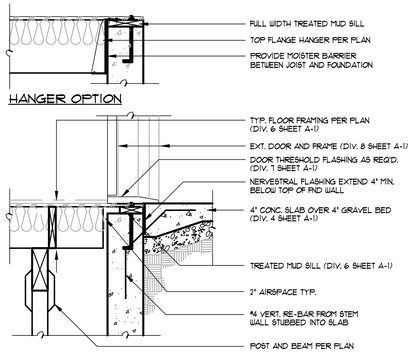
ling applied to the exterior of the wall. The parging shall be dampproofed in accordance with one of the following:

1. Bituminous coating.
2. Three pounds per square yard (1.63 kg/m²) of acrylic modified cement.
3. One-eighth-inch (3.2 mm) coat of surface-bonding cement complying with ASTM C 887.
4. Any material permitted for waterproofing in Section R406.2.
5. Other *approved* methods or materials.

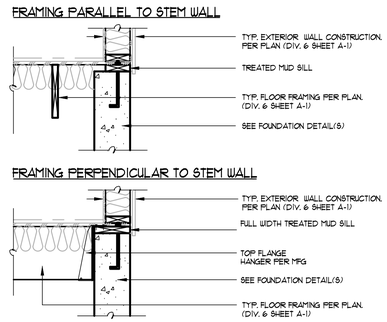
Exception: Parging of unit masonry walls is not required where a material is approved for direct application to the masonry.

Concrete walls shall be dampproofed by applying any one of the listed dampproofing materials or any one of the waterproofing materials listed in Section R406.2 to the exterior of the wall.

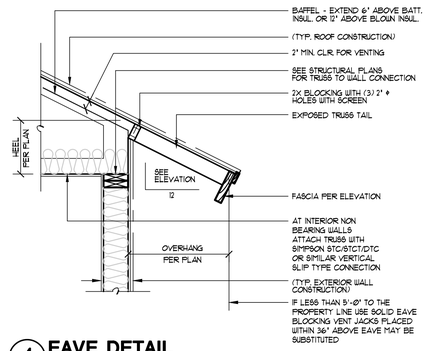
1 DAMP PROOFING DETAIL
3/4"=1'-0" 03300-07100-01



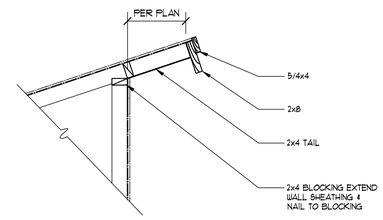
2 EXT. DOOR THRESHOLD DETAIL
3/4"=1'-0" 06100-03300-05_CUT



3 FRAMING/FOUNDATION DETAIL
3/4"=1'-0" 06100-03300-01_CUT



4 EAVE DETAIL
3/4"=1'-0" 06100-07300-67



5 EAVE DETAIL
3/4" = 1'-0"

2021 ENERGY CALCULATIONS

Project Information
Lee Remodel, Mercer Island
8904 SE 58th St
Mercer Island, WA

Contact Information
Architectural Innovations
14311 Se 16th St
Bellevue, Wa 98007

Messages / Results *
Window area is 0% of floor area
* Results assume your inputs are complete and correct. Results do not constitute an approval. Analysis should be reviewed by your AHJ.

ANALYSIS SET UP

What code compliance pathway are you using?	Prescriptive Path (Tables 406.2 and 406.3 Only)
Occupancy Type?	R-3 Single family homes and duplexes
Code Version?	WSEC 2021 — WSEC-R Rev. Oct. 2023, https://www.sbcc.wa.gov/sites/default/files/2023-12/C
Classification:	Small Dwelling Unit – 864 sq. ft.

RESULTS - Comparison of Baseline and Proposed Design

* Values from Table R402.1.2 (Oct 2023)

Required Credits	Proposed Credits	from Tables 406.2 and 406
5.0	5.0	

Table R406.2 Energy Equalization Credits

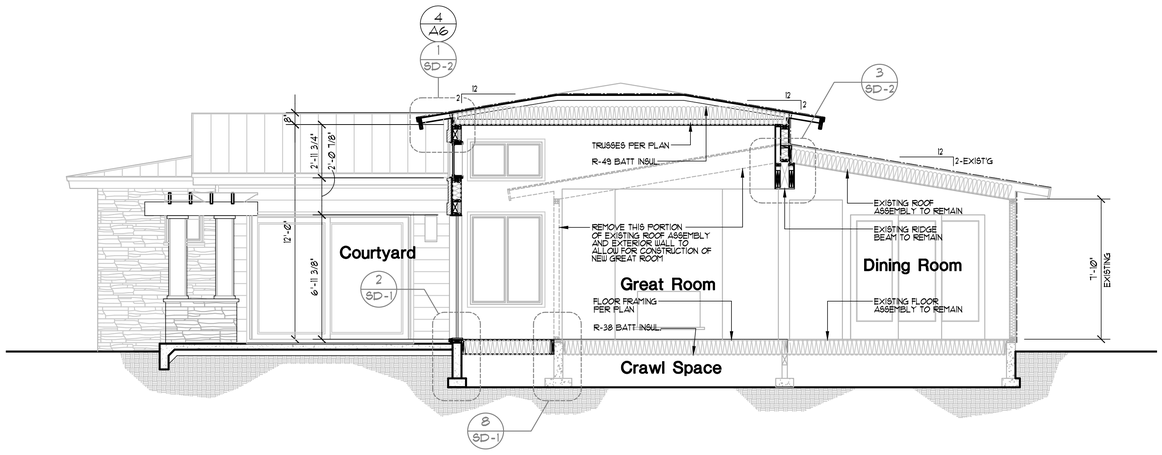
System No.	Full Description	Select System Type	Fuel Normalization Credits (406.2)	Energy Credits (406.3)	Total Credits (406.2 & 406.3)
4	For heating system using a heat pump that meets federal standards for the equipment listed in Table C403.3.2(2) or Table C403.3.2(3) OR Air to Water heat pump units that are configured to provide both heating and cooling and are rated in accordance with AHRI 550/590	Variable Refrigerant Heat Pump or Air-to-Water Heat Pump	3.0	2.0	5.0

Table R406.3 Energy Credits

Option No.	Category	Select Options	Energy Credits	Brief Description of Selected Options*
1	Efficient Building Envelope	Option 1.1	0.5	Prescriptive compliance based on Table R402.1.3 Vertical Fenestration = U 0.22
2	Air Leakage Control and Efficient Ventilation			
3.1-3.12	High Efficiency HVAC	Option 3.6	1.0	Air source ducted Heat Pump w/ Min HSPF2 of 10 (HSPF of 11) if fig design temp is 23F or below,a cold climate variable capacity heat pump is required.
3.11	High Efficiency HVAC: Smart Thermostat	Option 3.11	0.5	Connected Energy Star Certified smart thermostat.
4	High Efficiency HVAC Distribution System		0.0	
5.1	Efficient Water Heating: Drain Heat Recovery		0.0	
5.2	Efficient Water Heating: Compact Hot Water Distribution		0.0	
5.3-5.6	Efficient Water Heating	Not Selected	0.0	
6	Renewable Electric Energy	kWh	0.0	
7	Appliance Package	Not Selected	0.0	-
		Energy Credits	5.0	

THERMAL ENVELOPE DETAILS - Proposed Design

Conditioned Floor Area of Addition, Proposed Design	864 sq. ft.
Classification	Small Dwelling Unit
Notes	



BUILDING SECTION A-A
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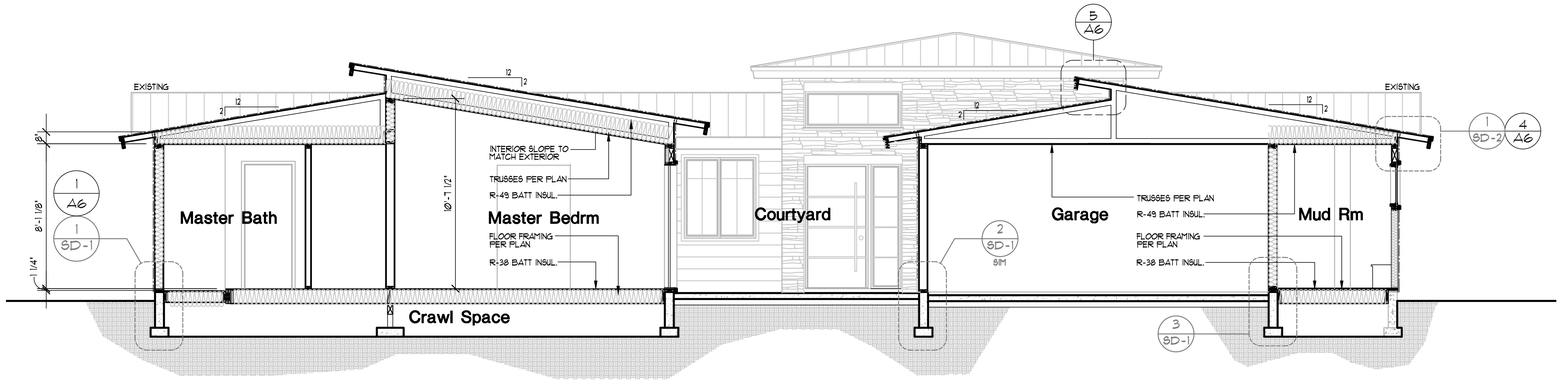

BUILDING SECTION B-B
Scale 1/4"=1'-0"

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Date	By	Description
8.28.24	REV	PERMIT SET

Lee Remodel

8904 SE 58th St
Mercer Island, WA

TITLE

JOB NO. : 24000.05
STARTING NO. : 24000.03

SHEET
A6

PORCH SLAB

4" CONC. SLAB ON 4" MIN. GRANULAR FILL ON 95% COMPACTED FILL/VIRGIN SOIL

GARAGE SLAB

3½" CONC. SLAB ON 4" MIN. GRANULAR FILL ON 95% COMPACTED FILL/VIRGIN SOIL (6x6 10/10 WWF OPT.)

GENERAL STRUCTURAL NOTES

FOUNDATION

- DESIGN IS BASED ON 2021 INTERNATIONAL RESIDENTIAL CODE & 2021 IEBC
- DESIGN LOADS:
  SOIL 1500 PSF ALLOWABLE BEARING PRESSURE
- CONCRETE SHALL ATTAIN THE FOLLOWING MINIMUM COMPRESSIVE STRENGTHS IN 28 DAYS, U.N.O.:
  f'c = 2,500 psi: ..... FOUNDATION WALLS*
  2,500 psi: ..... FOOTINGS*
  2,500 psi: ..... INTERIOR SLABS ON GRADE
  3,500 psi: ..... EXT. SLABS ON GRADE
  fy = 60,000 psi
  * UTILIZE 5½ SACK 2500 PSI CONCRETE MIXES THAT ARE EQUIVALENT TO 3,000 PSI CONCRETE FOR WEATHERING POTENTIAL
- ALL CONCRETE EXPOSED TO THE WEATHER SHALL NOT HAVE LESS THAN 5% OR MORE THAN 7% AIR ENTRAINMENT.
- TYPICAL REINFORCEMENT DETAILS: LAP ALL REBAR 24" MIN; BEND BARS AND LAP AT CORNERS; PROVIDE 6" HOOK INTO SUPPORTING FOOTINGS WHEN FOOTINGS INTERSECT; PROVIDE 3" MINIMUM COVER AT THE BOTTOM BARS AND 1 1/2" COVER AT THE SIDES.
- FOUNDATION WALLS SHALL BE BRACED, PRIOR TO BACKFILLING, BY EITHER ADEQUATE TEMPORARY BRACING OR INSTALLATION OF FIRST FLOOR DECK.
- ALL FOOTINGS SHALL BEAR BELOW FROST LINE. CONSULT SOILS REPORT/ LOCAL MUNICIPALITY FOR MINIMUM DEPTH BELOW GRADE.
- FOOTINGS AND SLABS ON GRADE SHALL BEAR ON VIRGIN SOIL OR 95% COMPACTED FILL.
- PROVIDE CONTROL JOINTS AT ALL INSIDE CORNERS OF SLAB EDGES, AND OTHER LOCATIONS WHERE SLAB CRACKS ARE LIKELY TO DEVELOP. (15'-0" O.C.)
- FASTEN SILL PLATES TO FOUNDATION WALLS WITH ⅝" DIA. ANCHOR BOLTS w/ MIN. 3"x3"x¼" PLATE WASHERS (EDGE OF WASHER TO BE LOCATED WITHIN½" OF EXTERIOR EDGE OF SILL PLATE) & NUTS @ 6'-0" O.C. w/ 7" MIN. EMBEDMENT INTO CONC. PROVIDE A MINIMUM OF 2 ANCHORS PER PLATE, 12" MAXIMUM FROM PLATE ENDS, U.N.O. (SEE FND. DETAILS)
- ALL LUMBER EXPOSED TO WEATHER OR IN CONTACT W/ CONCRETE OR MASONRY FOUNDATION SHALL BE PRESERVATIVE TREATED HEM FIR #2.
- BUILDER TO VERIFY CORROSION-RESISTANCE COMPATIBILITY OF HARDWARE & FASTENERS IN CONTACT w/ PRESERVATIVE-TREATED WOOD. CONTACT LUMBER & HARDWARE SUPPLIERS TO COORDINATE.
- ARCH/BUILDER TO VERIFY ALL DIMENSIONS

* 2018 IRC - SECT. 202

LOADING AND DESIGN PARAMETERS

GRAVITY DESIGN LOADS:
DEAD LOAD (PSF):
- ROOF TRUSSES: 17
- ROOF RAFTERS: 10
- FLOOR (2x): 10

LIVE LOAD (PSF):
- ROOF : 20
- RESIDENTIAL LIVING AREAS : 40
- RESIDENTIAL SLEEPING AREAS : 30
- GARAGE 50

SNOW LOAD:
- GROUND SNOW LOAD (P_g) (PSF) : 25
- FLAT ROOF SNOW LOAD (P_f) (PSF) : 25
- SNOW EXPOSURE FACTOR (C_e) : 0.9
- SNOW LOAD IMPORTANCE FACTOR (I) : 1.0
- THERMAL FACTOR (C_t) : 1.2

LATERAL DESIGN LOADS:
WIND LOAD: (IBC 1609)
- SPEED (V_{ult}) (MPH) : 100
- WIND RISK CATEGORY : II
- IMPORTANCE FACTOR (I_w) : 1.0
- EXPOSURE CATEGORY : B
- INTERNAL PRESSURE COEFF. (GC_{pi}) : ±0.18
- TOPOGRAPHIC FACTOR (K_{zt}) : 1.3

SEISMIC LOAD: (IBC 1613)
- SEISMIC RISK CATEGORY : II
- SEISMIC IMPORTANCE FACTOR (I_e) : 1.0
- MAPPED SPECTRAL RESPONSE :
  S_{DS}: 1.455 S_{D1}: 0.505
- SITE CLASS : D
- SPECTRAL RESPONSE COEFF. :
  S_{DS}: 1.164 S_{D1}: 0.906
- SEISMIC DESIGN CATEGORY: D
- BASIC SEISMIC-FORCE-RESISTING SYS : LIGHT FRAMED WALLS w/WOOD STRUCTURAL PANELS
- ULTIMATE BASE SHEAR:
  TRANS: 8.7 k LONG: 8.7 k
- SEISMIC RESPONSE COEFF. (C_s):
  TRANS: 0.179 LONG: 0.179
- RESPONSE MODIFICATION FACTOR (R) :
  TRANS: 6.5 LONG: 6.5
- ANALYSIS PROCEDURE USED: EQUIVALENT LATERAL FORCE

MEANS & METHODS NOTES

THE STRUCTURE IS DESIGNED TO BE SELF SUPPORTING AND STABLE AFTER THE BUILDING IS FINISHED AND ALL PLAN, DETAIL, AND NOTE SPECIFICATIONS HAVE BEEN COMPLETED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE THE ERECTION PROCEDURES AND SEQUENCE TO INSURE THE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING CONSTRUCTION. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS, AND TIE-DOWNS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SHORING AND BRACING REQUIRED TO STABILIZE AND PROTECT EXISTING AND ADJACENT STRUCTURES AND SYSTEMS DURING COURSE OF DEMOLITION AND CONSTRUCTION OF THE PROJECT.

STRUCTURAL DESIGN AND SPECIFICATIONS ASSUME THAT ALL SUPPORTING AND NON-SUPPORTING ELEMENTS IN CONTACT WITH FLOOR FRAMING ARE LEVEL, INCLUDING, BUT NOT LIMITED TO; FOUNDATIONS, SLABS ON GRADE, BEAMS, WALLS, AND NON-BEARING ELEMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LEVELNESS AND MAKE ADJUSTMENTS AS NECESSARY, INCLUDING CONSIDERATION OF THOSE AREAS THAT MAY BE WITHIN CONTRACTUAL, INDUSTRY, OR WARRANTY TOLERANCES.

ADDITIONAL NOTES FOR TRUSS & I-JOIST MANUFACTURER

ROOF TRUSS, FLOOR TRUSS AND ENGINEERED JOISTS SHALL BE DESIGNED TO MEET THE DIFFERENTIAL DEFLECTION CRITERIA BELOW, UNLESS NOTED OTHERWISE ON PLAN. MULHERN & KULP CANNOT BE HELD RESPONSIBLE FOR ANY STRUCTURAL ISSUES RELATED TO ANY BUILDING COMPONENT IF COMPONENT SHOP DRAWINGS ARE NOT SUBMITTED TO MK FOR REVIEW PRIOR TO FABRICATION, DELIVERY, OR INSTALLATION.

TRUSSES SHALL BE DESIGNED SO THAT DIFFERENTIAL DEFLECTION BETWEEN ADJACENT PARALLEL TRUSSES OR GIRDER TRUSSES DOES NOT EXCEED THE FOLLOWING:
A. ROOF TRUSSES:
   1/4" DEAD LOAD
B. FLOOR TRUSSES, ATTIC TRUSSES, & I-JOISTS:
   1/8" DEAD LOAD
C. FLOOR TRUSSES & ATTIC TRUSSES ADJACENT TO FLOOR FRAMING BY OTHERS:
   LIMIT ABSOLUTE TRUSS DEFLECTION TO 3/16" DEAD LOAD. (NOT DIFFERENTIAL DEFLECTION)

LATERAL BRACING NOTES

THIS ADDITION HAS BEEN ENGINEERED TO RESIST LATERAL FORCES RESULTING FROM: 100 MPH WIND SPEED, EXP. B/C (ASCE 7-16 WIND MAP, PER IRC R301.2.1.1) RISK CAT. 2 & SEISMIC CAT. D.

100 MPH WIND IN 2021 IRC MAP

ENGINEERED DESIGN WAS COMPLETED PER 2021 IBC (SECTION 1609) & ASCE 7-16, AS PERMITTED BY R301.1.3 OF THE 2021 IRC. ACCORDINGLY, THIS ADDITION, AS DOCUMENTED AND DETAILED HEREWITHIN, IS ADEQUATE TO RESIST THE CODE REQUIRED LATERAL FORCES, AND DOES NOT NEED TO CONFORM TO THE PRESCRIPTIVE PROVISIONS OF R602.10.

STANDARD EXTERIOR WALL SHEATHING SPECIFICATIONS

- 7/16" OSB OR 15/32" PLYWOOD:
  FASTEN SHEATHING w/ 2½"x0.131" NAILS @ 6"o.c. AT ALL SUPPORTED PANEL EDGES AND 12" O.C. IN THE PANEL FIELD. ALL SHEATHING SHEET PANEL EDGES SHALL OCCUR OVER WALL FRAMING MEMBERS OR 2x HORIZONTAL BLOCKING SHALL BE PROVIDED TO SUPPORT PANEL EDGE. ALL EXTERIOR WALLS SHALL BE CONSTRUCTED PER THIS SPECIFICATION U.N.O. ON PLANS.

NOTES:
1. LATERAL ANALYSIS ASSUMES STUD SPACING @ 16" o.c.
2. ALL SHEAR WALLS SHALL HAVE DOUBLE TOP PLATES FASTENED TOGETHER w/ 3"x0.131" NAILS @ 8" O.C. USE (12)3½"x0.135" NAILS AT EACH LAP SPLICE, (6) EACH SIDE OF JOINT (TYP. U.N.O)
3. ALL EXTERIOR WALLS ARE CONTINUOUSLY SHEATHED.
4. ALL INTERIOR SHEAR WALLS AND EXTERIOR WALLS ARE SHEATHED ABOVE AND BELOW OPENINGS.
5. WHERE OSB/PLYWOOD SHEATHING IS APPLIED TO BOTH FACES OF A SHEAR WALL, PANEL JOINT SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS

LEGEND

- INTERIOR BEARING WALL
- BEARING WALL ABOVE (B.W.A.), OR SHEARWALL ABOVE (S.W.A.)
- BEAM / HEADER
- INTERIOR SHEAR WALL PANEL OR EXTERIOR SHEAR WALL w/ 3" o.c. EDGE NAILING
- INDICATES AREA OF ROOF OVERFRAMING
- JL METAL HANGER
- INDICATES POST ABOVE. PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.
- INDICATES HOLDDOWN.

HOLD-DOWN SCHEDULE

SYMBOL	SPECIFICATION
HD-1	SIMPSON STHDRJ14 HOLD-DOWN
HD-2	SIMPSON HTT4 HOLDDOWN*

* UTILIZE SIMPSON "SET-3G" EPOXY SYSTEM TO FASTEN ⅝" DIA. THREADED ROD INTO CONCRETE FOUNDATION. PROVIDE 10" MIN. EMBEDMENT INTO CONCRETE. INSTALL PER MANUF. RECOMMENDATIONS. DO NOT LOCATE ANCHORS WITHIN 1 ¾" EDGE OF FOUNDATION.

GENERAL STRUCTURAL NOTES

DESIGN PARAMETERS

- DESIGN IS BASED ON 2021 INTERNATIONAL RESIDENTIAL CODE & 2021 INTERNATIONAL EXISTING BUILDING CODE
- WOOD FRAME ENGINEERING IS BASED ON NDS, "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" - LATEST EDITION.

GENERAL FRAMING

- EXTERIOR BEARING WALLS SHALL BE 2x4 OR 2x6 (AS SHOWN ON PLANS) @ 16" O.C. (W/ DOUBLE TOP PLATE) HEM FIR (HF) "STUD" GRADE LUMBER, OR BETTER, U.N.O.
- INTERIOR BEARING WALLS SHALL BE 2x4 OR 2x6 (AS SHOWN ON PLANS) @ 16" O.C. (W/ DOUBLE TOP PLATE) HEM FIR (HF) "STUD" GRADE LUMBER, OR BETTER, U.N.O.
- ALL NON-BEARING INTERIOR STUD WALLS SHALL BE CONSTRUCTED WITH 2x "STUD" GRADE MEMBERS SPACED @ 24" O.C. (MAX.)
- ALL WALLS TALLER THEN TYP. PLATE HEIGHT SHALL BE CONSIDERED BALLOON FRAMED & SHALL BE CONSTRUCTED FROM FLOOR TO UNDERSIDE OF FRAMING AT NEXT LEVEL. B.F. WALLS SHALL BE 2x4 OR 2x6 (AS SHOWN ON PLANS) HEM FIR (HF) #2 GRADE LUMBER, OR BETTER, U.N.O.
- ALL HEADERS SHALL BE SUPPORTED BY (1)2x JACK STUD & (1)2x KING STUD, MINIMUM.
  - THE NUMBER OF STUDS SPECIFIED AT A SUPPORT INDICATES THE NUMBER OF JACK STUDS REQUIRED, U.N.O..
- ALL 2x6 AND LARGER SOLID SAWN BEAMS/HEADERS SHALL BE HEM FIR #2 (HF #2) OR BETTER. ALL 4x6 AND LARGER SOLID SAWN LUMBER SHALL BE DOUG FIR #2 (DF #2) OR BETTER.
- ALL FRAMING LUMBER SHALL BE KILN DRIED TO 15% MC (KD-15).
- ALL TYP. NAIL FASTENER REQUIREMENTS ARE NOTED IN GENERAL NOTES, IN DETAILS, OR ON PLANS. ALL NAILS SPECIFIED ARE MIN DIAMETER AND LENGTH REQUIRED FOR CONNECTION. ALL HANGER NAILS SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS FOR MAX CHARTED CAPACITY. NOTE: HANGERS USE COMMON NAIL DIAMETERS NOT TYPICAL FRAMING GUN NAILS.
- FASTEN ALL BEAMS TO COLUMNS w/ (4) 3"x0.131" TOENAILS (MIN.), TYP. U.N.O.
- PROVIDE SOLID BLOCKING IN FLOOR SYSTEM UNDER ALL POSTS & HOLD-DOWNS CONTINUOUS TO FOUNDATION/BEARING. BLOCKING TO MATCH POST ABOVE.
- ENGINEERED LUMBER TO MEET OR EXCEED THE FOLLOWING:
  - LSL MEMBERS - Fb=2325 PSI; Fv=310 PSI; E=1.55x10^6 PSI
  - LVL MEMBERS - Fb=2600 PSI; Fv=285 PSI; E=2.0x10^6 PSI
  - GLB MEMBERS - Fb=+2400 PSI; Fb-=1850 PSI; Fv=265 PSI; E=1.8x10^6 PSI; DF/DF 24F-V4 (MIN.)
- FACE NAIL MULTI-PLY 2x BEAMS & HEADERS W/ 3-ROWS OF 3"x0.131" NAILS (MIN.) @ 12" O.C. STAGGERED. APPLY NAILING FROM BOTH FACES @ 3-PLY OR MORE CONDITIONS. UTILIZE 2 ROWS OF NAILS FOR 2x6 & 2x8 MEMBERS.
- ALL MEMBERS SPECIFIED AS MULTI-PLY 1¾" SHALL BE FASTENED TOGETHER PER MANUFACTURER. EQUIVALENT WIDTH SOLID MATERIAL MAY BE USED AS EQUAL.
- REFER TO IRC FASTENING SCHEDULE TABLE R602.3(1) FOR ALL CONNECTIONS, TYP. U.N.O.

FLOOR FRAMING

- 2x FLOOR JOISTS HAVE BEEN DESIGNED TO MEET OR EXCEED L/360 LIVE LOAD DEFLECTION CRITERIA.
- TYPICAL 2x JOIST HANGERS (U.N.O. ON PLANS):
  SINGLE PLY: SIMPSON LUS210
  DOUBLES: SIMPSON LUS210-2
- FLOOR SHEATHING SHALL BE 23/32" A.P.A. RATED "STURD-I-FLOOR" 24" O.C. EXPOSURE 1 (OR APPROVED EQUAL) WITH TONGUE AND GROOVE EDGES. FASTEN TO FRAMING MEMBERS W/ GLUE AND 2 ½" x 0.131" NAILS @ 6"o.c. @ PANEL EDGES & @ 12"o.c. FIELD.
- ALL FLUSH CONNECTIONS SHALL BE CONNECTED WITH HANGER APPROPRIATE FOR MEMBER SIZE. U.N.O.
- FASTEN HANGERS TO SINGLE PLY FLUSH BEAMS w/ ½" LONG NAILS.

ROOF FRAMING

- ROOF SHEATHING SHALL BE 7/16" A.P.A. RATED SHEATHING 24/16 EXPOSURE 1 (OR APPROVED EQUAL). FASTEN TO FRAMING MEMBERS w/ 2 ½" x 0.131" NAILS @ 6"o.c. AT PANEL EDGES & @ 12" O.C. AT INTERMEDIATE SUPPORTS. ROOF SHEATHING SHALL EXTEND BELOW ALL INSTANCES OF OVERFRAMING. BLOCKING SHALL BE INSTALLED AS REQUIRED TO LIMIT ROOF SHEATHING SPANS TO 24" MAX.
- WITHIN 48" OF ALL ROOF EDGES, RIDGES, & HIPS FASTEN ROOF SHEATHING FIELDS PER EDGE NAILING SPEC.
- FASTEN EACH ROOF TRUSS TO TOP PLATE W/ (4) 3"x0.131" TOENAILS (MIN.) & (1) 'SIMPSON' H2.5T CLIP @ ALL BEARING POINTS. PROVIDE (2) 'SIMPSON' H2.5T CLIPS AT 2-PLY GIRDER TRUSSES, (3) 'SIMPSON' H2.5T CLIPS AT 3-PLY GIRDER TRUSSES AT ALL BEARING POINTS.
- ROOF TRUSS SHOP DRAWINGS SHALL BE SUBMITTED TO ARCHITECT AND ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OR DELIVERY.
- ROOF TRUSS SHOP DRAWINGS & CALCULATIONS SHALL BE PREPARED BY A WASHINGTON STATE LICENSED ENGINEER AND SHALL BE DESIGNED FOR UNBALANCED SNOW LOADING PER ASCE 7-16, SECTION 7.6.
- ERECT AND INSTALL ROOF TRUSSES PER WTCA & TPI'S BCSI 1-08 "GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING & BRACING OF METAL PLATE CONNECTED WOOD TRUSSES."
- FASTEN OVER-FRAMED TRUSS SETS TO TRUSSES BELOW w/ (2) 3"x0.131" TOENAILS AT EA. TRUSS.

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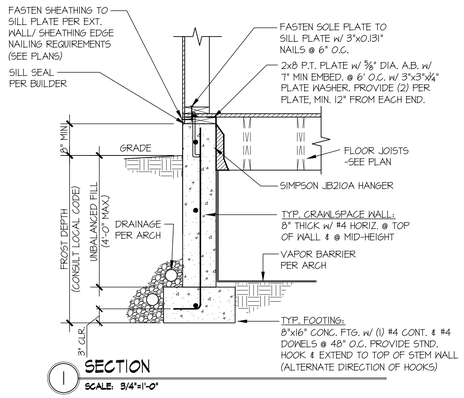

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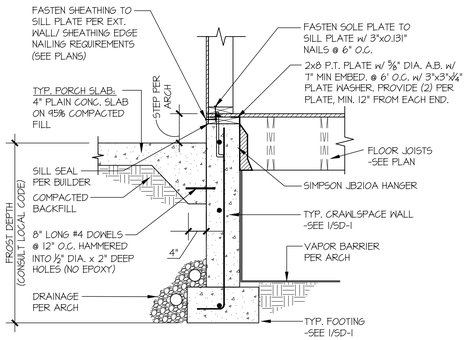

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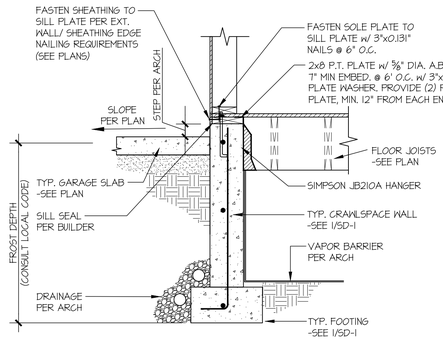

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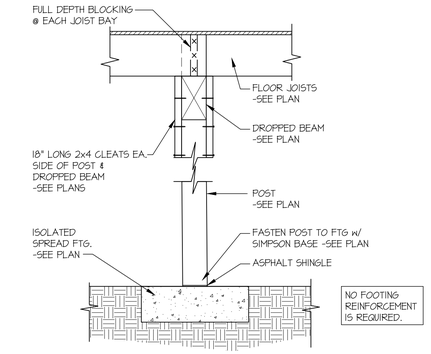

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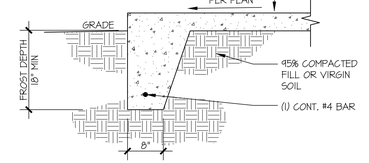
5 SECTION
SCALE: 3/4"=1'-0"

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



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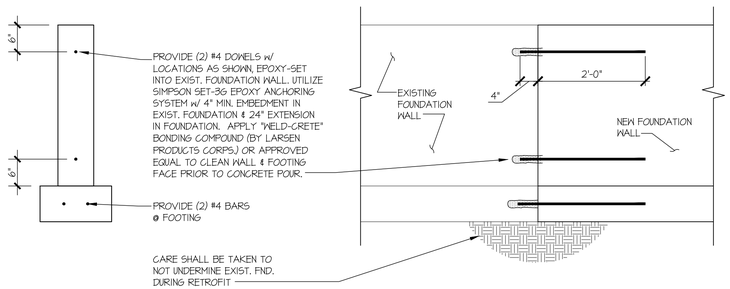
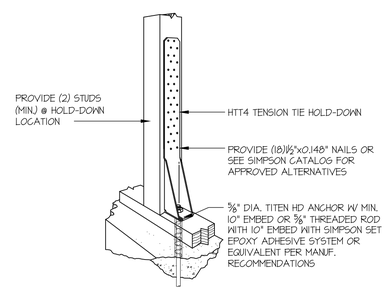
SCALE: 3/4"=1'-0"

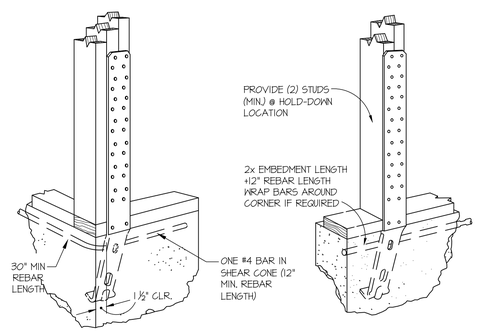
8 SECTION
SCALE: 3/4"=1'-0"



A TYPICAL FOUNDATION RETROFIT DETAIL
SCALE: 1/2"=1'-0"



B TYPICAL HOLD-DOWN ALTERNATE
NOT TO SCALE SIMPSON HTT4 SHOWN



C TYPICAL HOLD-DOWN INSTALLATION
NOT TO SCALE SIMPSON STHD HD @ FOUNDATION

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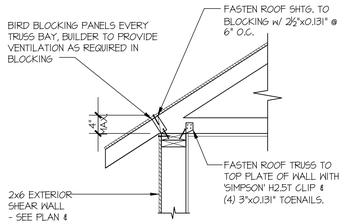

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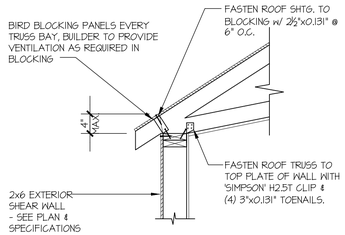
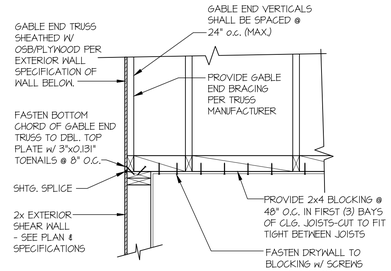


TYPICAL SHEAR TRANSFER DETAIL @ VAULTED CEILING

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



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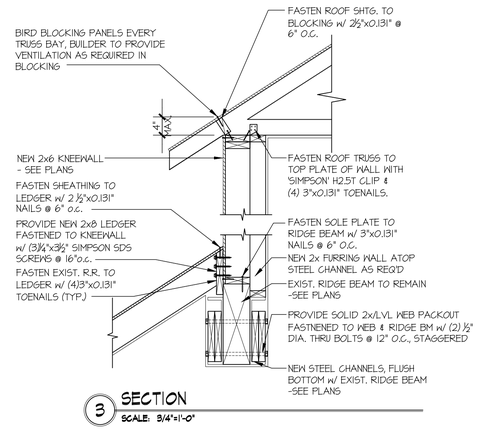


3 SECTION
SCALE: 3/4"=1'-0"

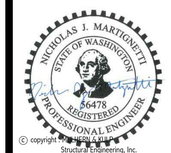
4 SECTION
SCALE: 3/4"=1'-0"

- STRAPS MAY BE INSTALLED ON EXTERIOR OR INTERIOR FACE OF WALL
- WHEN INSTALLED ON THE EXTERIOR FACE OF THE WALL, STRAPS TO BE INSTALLED ON EXTERIOR FACE OF SHTG. & MAY BE MOVED ½" FROM EDGE TO ALLOW FOR WINDOW NAILING
- REQUIRED ONLY @ OPENINGS AS SPECIFIED ON PLAN

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

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

seal:



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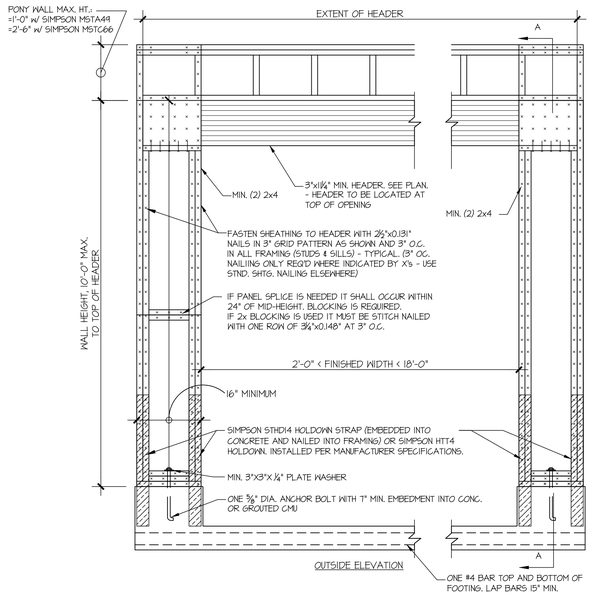
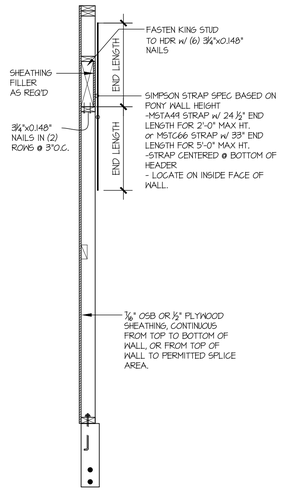
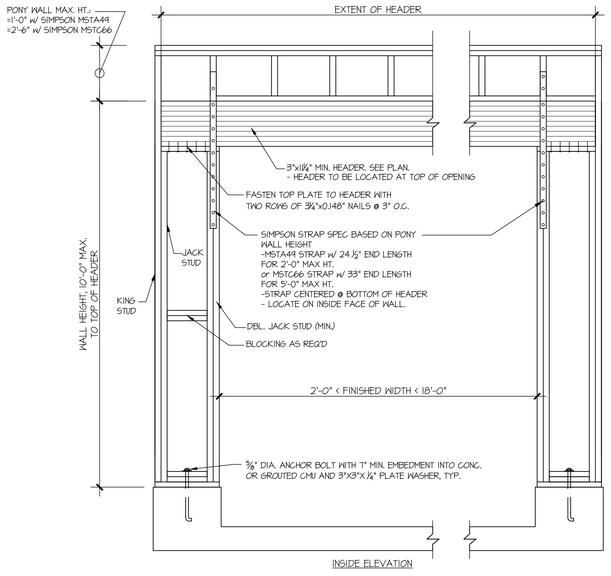


OUTSIDE ELEVATION

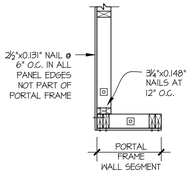


SECTION A-A THROUGH PIER



INSIDE ELEVATION

WALL FRAMING SPECIFICATION:
ø2x4 WALL: USE HF #2 GRADE STUDS (OR BETTER)
ø2x6 WALL: USE SPF 'STUD' GRADE STUDS (OR BETTER)



PLAN VIEW OF CORNER DETAIL

1 APA PORTAL FRAME DETAIL WITH HOLDOWNS

SCALE: N.T.S.

BOTH SIDES OF GARAGE DOOR

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