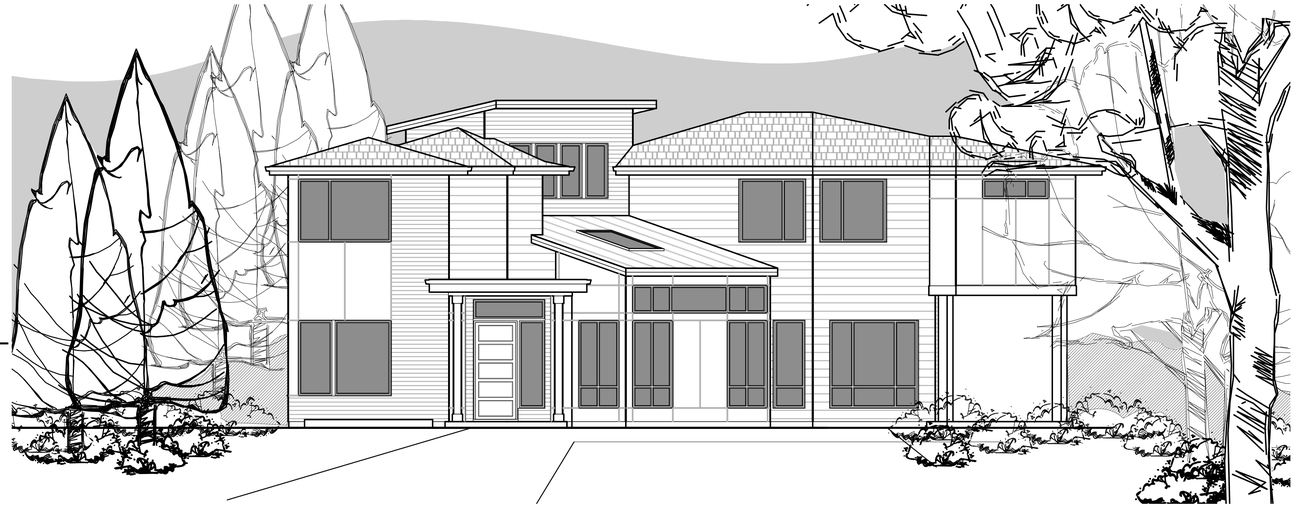


Side Elevation





Rear Elevation

Milestone NW

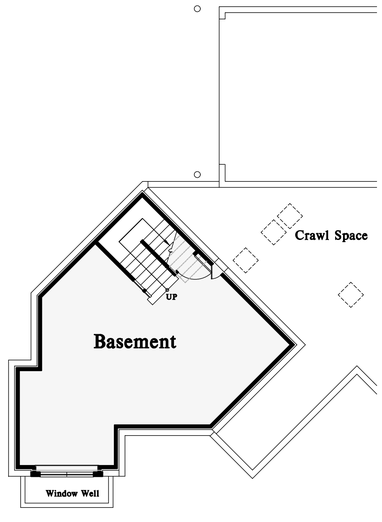
Mercer Island Lot 1

7621 SE 22nd ST. Mercer Island, WA 98040

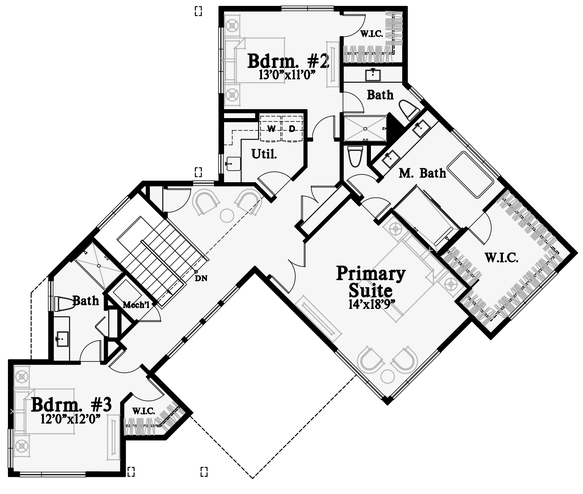
1. A NFA 72-CHAPTER 29 MONITORED FIRE ALARM SYSTEM IN COMPLIANCE WITH NFPA 72 AND CoMI STANDARDS SHALL BE INSTALLED THROUGHOUT THE RESIDENCE THE RESIDENCE. A SEPARATE FIRE PERMIT IS REQUIRED.
2. A NFPA 13R FIRE SPRINKLER SYSTEM IN COMPLIANCE WITH NFPA 13R AND CoMI STANDARDS SHALL BE INSTALLED THROUGHTOUT THE RESIDENCE. SEPARATE PERMIT IS REQUIRED.
3. SPRINKLERS SYSTEM REQUIRES A MINIMUM OF 1.5" WATER METER AND 2" WATER SUPPLY LINE.



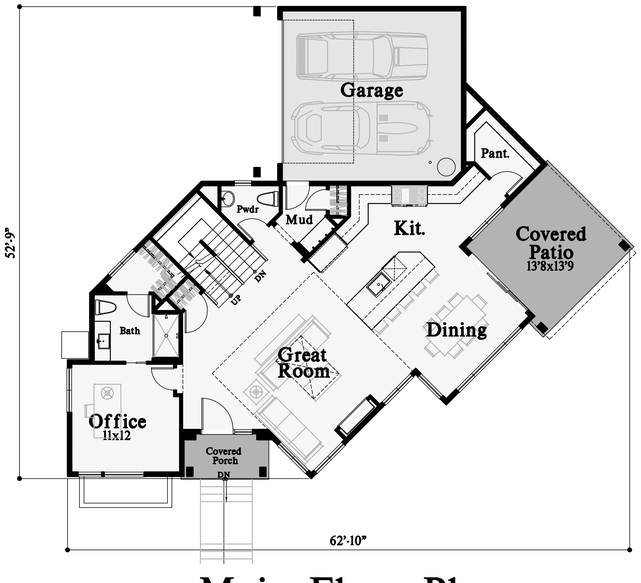
Side Elevation



Basement



Upper Floor Plan



Main Floor Plan

DRAWING INDEX

A1. CODE NOTES
A1.1. SITE PLAN
GRADING AND DRAINAGE PLAN
A2.0. FOUNDATION PLAN
A2.1. BASEMENT PLAN
A2.2. MAIN FLOOR FRAMING PLAN
A3. MAIN FLOOR PLAN
A4. UPPER FLOOR FRAMING
A5. UPPER FLOOR PLAN
A6. UPPER ROOF FRAMING
A7. ELEVATIONS
A8. ELEVATIONS
A9. BUILDING SECTION
D1. STANDARD DETAILS
E1. ENERGY FORMS
S-0.0. STRUCTURAL NOTES
SD-1. STRUCTURAL DETAILS
SD-1.1.STRUCTURAL DETAILS
SD-2. STRUCTURAL DETAILS
SD-3. STRUCTURAL DETAILS

SQUARE FOOTAGE

MAIN FLOOR	1315 SF
UPPER FLOOR	1541 SF
BASEMENT	590 SF
TOTAL	3446 SF
GARAGE	405 SF
PORCH/PATIO	44/170 SF

REGISTERED ARCHITECT
STATE OF WASHINGTON
ORIGINAL SIGNATURE REQUIRED

Date	By	Description
3/2/24	AG	PERMIT SET
3/10/25		JURISDICTIONAL COMMENTS

Milestone NW
Mercer Island Lot 1
7621 SE 22nd ST. Mercer Island, WA 98040

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TITLE

JOB NO.: 21022.21
STARTING NO.: 21022.05

SHEET

COVER SHEET

Division 1
GENERAL REQUIREMENTS

01000 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 is still 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 of 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.

01002 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 weatherstrip 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 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 swelling 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 3/4" gypsum board.
   F) One 3/4" 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) Truss Loading: (UNO.)
      Top chord live load: 25psf
      Top chord dead load: 15psf
      (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 (UNO.)
   C) Floor live load: 40 psf (UNO.) Deck Live Load 60 psf UNO.
   D) Stair and corridor live load: 40 psf
   E) Mechanical units: weights provided by manufacturer
   F) Wind: 110 mph (UNO.)
   G) Seismic Design Category: D(2) (UNO.)
   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.
   I) Equivalent fluid pressure 35 psf. (UNO.)
   K) All footings to be located below the frost line depth 18" (UNO.)

01002 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 all-tight 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 fireblocking at chimney per I.R.C. section R302.11.
   D) Install metal fireplace ash 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.

01060 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.

01500 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

02200 EARTHWORK

Part 3 - Execution
1. Rough grading: 4" below finish grading unless otherwise specified.
2. Finish grading: Landscaping division 02900.
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.

02500 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:
      1. Finish and color:
         Coordinate with materials finish selection schedule.
2. Unit Pavers: 1. Coordinate with materials finish selection schedule.
3. Pavement marking: 1. Coordinate with materials finish selection schedule.

02700 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:
      1. Coordinate with materials finish selection schedule.
   B. Culverts:
      1. Coordinate with materials finish selection schedule.
   C. Drain pipe: 4" ADS non-perforated light 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.

02800 SITE IMPROVEMENTS

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

02900 LANDSCAPING

Part 2 - Product
Bidder Design

END DIVISION 2

Division 3
CONCRETE

03100 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.

03200 CONCRETE REINFORCING

Part 2 - Product
1. Reinforcing steel: Deformed bar sizes and locations per plans and details. Grade 60, Fy' = 60ksi per I.R.C. section R402.3.3.3.1). 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 R404.1.3.3.7.6.

03250 CONCRETE ACCESSORIES

Part 2 - Product
1. Anchor bolts: 1/2"ø triple zinc ZMAX (G185 per ASTM A653) hot dipped galvanized steel (ASTM B3 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 B3 for Fasteners), stainless steel, silicone bronze, or copper as required per dugs.
3. Post to mat footing connection. Provide pressure treated post and positive connection to footing per I.R.C. section 507.3.
4. Shear wall 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 1". Provide a minimum of (2) bolts per plate section per I.R.C. section R403.1.6.

03300 CAST-N-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 = 2000 psi at 28 days, with 3/8" round aggregate.

03300 CAST-N-PLACE CONCRETE (cont.)

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

Part 3 - Execution

END DIVISION 3

Division 4
MASONRY

04100 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

04150 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.

04200 UNIT MASONRY

Part 2 - Product
1. Brick masonry:
   A. Exterior locations: name/mfg:
      1. Coordinate with materials finish selection schedule (by others).
   B. Interior locations: name/mfg:
      1. Coordinate with materials finish selection schedule (by others).
   C. Pavers/planters: name/mfg:
      1. 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:
      1. 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:
      1. Coordinate with materials finish selection schedule (by others).
   B. Interior locations: name/mfg:
      1. 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 iron support at doors, windows, and other openings per R606.10.
2. Concrete masonry 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.

04400 STONE

Part 2 - Product
1. As shown on drawings.
   A. Exterior locations: name/mfg:
      1. Coordinate with materials finish selection schedule (by others).
   B. Interior locations: name/mfg:
      1. 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.
   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 10 inch above exterior walking surfaces which are supported by the same foundation that supports the exterior wall.
   B. Flashing at foundation:
      1. 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

05050 METAL FASTENINGS

Part 2 - Product
1. Bolts: Size and shapes per dugs, or as needed for intended purposes. Bolts, nuts and cut washers in contact with treated wood to be triple zinc ZMAX (G185 per ASTM A653) hot dipped galvanized steel (ASTM B3 for Anchors).

05500 METAL FABRICATION

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

END DIVISION 5

Division 6
WOOD AND PLASTICS

06100 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 20-20 (DOC PS 20) standards. All Kiln dried minimum 19%.
   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 #1.
   D. Studs, plates, and misc. light framing: Hem-Fir #2 or better.
   E. "1" Joists and Engineered beams: Per manufacturer.
   F. Glued laminated timber:
      1. Simple span: 24F V4 DFN3&N
      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 dugs.
   J. Floor sheathing: see "TYPICAL BUILDING MATERIALS LIST" on the dug.
   K. Other: As noted on drawings.
   L. All wood members in contact with exposed concrete to be pressure treated members.
2. Particle Board: APA graded
   A. Underlayment
      1. Floors: 5/8" (UNO.)
      2. Sheet vinyl: 1/4" (UNO.) see division 9
      3. Cabinet surfaces 3/4" (UNO.)
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 mast 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 B3 for Fasteners), stainless steel, silicone bronze, or copper as required per dugs.
5. Post to mat 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 all 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.

06200 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 01060.1 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

07150 WATER PROOFING & DAMP PROOFING

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

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

07190 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 11, Energy Requirements.

07100 INSULATION

Part 2 - Product
1. Fiberglass or mineral wood batts, blown mineral wool, and extruded polystyrene:
   A. Walls: 1. See the "TYPICAL BUILDING MATERIALS" list on the dugs.
   B. Ceiling: 1. See the "TYPICAL BUILDING MATERIALS" list on the dugs.
   C. Floor: 1. See the "TYPICAL BUILDING MATERIALS" list on the dugs.
   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 11 energy requirements
2. Provide 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.

07300 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.

07460 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.

07600 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 will be turned out in a manner that directs water away from the wall and onto the roof and/or gutter, Per I.R.C. R905.2.1

07700 ROOFING SPECIALTIES

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

07800 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).

07900 SEALANTS AND CAULKING

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

END DIVISION 7

Division 8
DOORS AND WINDOWS

08100 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 doors: A. Coordinate with materials finish selection schedule (by others).
5. Other: A. Coordinate with materials finish selection schedule (by others).

08300 SPECIALTY DOORS

Part 2 - Product
1. Sliding glass door:
   A. Coordinate with materials finish selection schedule (by others).
2. Garage door: (make/style) 1 (see division 14500)
   A. Coordinate with materials finish selection schedule (by others).

08600 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 5.1 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: 1. Coordinate with materials finish selection schedule (by others).
   B. Style: 1. Coordinate with materials finish selection schedule (by others).

08700 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).

08800 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

09250 GYPSUM WALLBOARD

Part 2 - Product
1. Walls: See the "TYPICAL BUILDING MATERIALS" list on the drawings.
   A. Finish: 1. Coordinate with Contractor/Owner material selections.
2. Ceiling: See the "TYPICAL BUILDING MATERIALS" list on the drawings.
   A. Finish: 1. 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.
      1. See division 01060.1 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 durroc at all tile locations (U.N.O.)
6. Metal corner bead profiles:
   1. 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.

09300 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.

09550 WOOD FLOORING

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

09630 RESILIENT FLOORING

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

09680 CARPETING

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

09900 PAINTING

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

09950 WALL COVERINGS

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

END DIVISION 9

Division 10
SPECIALTIES

10300 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 vent as detailed.
3. Roof vent (See Division 07100)
4. Other vents as noted per plans.

10300 PREFABRICATED FIREPLACES

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

Part 3 - Execution
1. See division 01060.12 for misc. assembly requirements for fireplaces.

10400 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.

10800 TOILET AND BATH ACCESSORIES

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

10900 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

11010 MAINTENANCE EQUIPMENT

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

11450 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

14100 DUMBWAITER

Part 2 - Products
1. Dumbwaiter: A. Manufacturer/model number:
   1. 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 + soil: ABS plastic of sizes req'd for the intended purpose.
      1. Provide clean-outs at bends.
   B. Vents: ABS
   C. Gas: Per code, verify location of appliances.
      1. 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 Lines:
      1. Below Grade: 1 1/4" type K with hard solder or PEX
      2. Above Grade: Type L w/soft solder or PEX
2. Plumbing equipment:
   A. Hot water heater: (Dual in tandem)
      1. Size per U.P.C. 501 and Table 501.1) and jurisdictional amendments.
      2. Coordinate with owner's material selection (by others).
   B. Hose bib, frost proof type: Marsfield units
   C. Main shut-off valve in garage.
   D. Plumbing fixtures 1. 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.
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:
      1. Coordinate with materials finish selection schedule (by others).
   B. Duct work and insulation:
      1. Coordinate with materials finish selection schedule (by others).
   C. Air cleaner:
      1. Coordinate with materials finish selection schedule (by others).
   D. Controls:
      1. Coordinate with materials finish selection schedule (by others).
   E. Registers with adjustable supply:
      1. Coordinate with materials finish selection schedule (by others).
   F. Provide fireslopping at 1 1/2" rated location per I.R.C. sections R302.11.
2. Fans: see division 11 energy requirements.
3. See floor plans for Whole House Ventilation requirements.
4. Vents:
   1. 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 manufactures instructions 4 I.R.C. M1502.
   B. Protective shield plates shall be placed per I.R.C. M1305.3.

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. Volt: 1) 64 (3) Wire
      1. GFI = 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: 1. Coordinate with materials finish selection schedule (by others).
Note: All permanently installed fixtures shall be high efficiency per W.S.E.C. R404.1.
2. Control: A. Switches:1. Coordinate with materials finish selection schedule.
3. Dimmers: 1. Coordinate with materials finish selection schedule (by others).
4. Boxes: 1. Coordinate with materials finish selection schedule (by others).
5. Other: 1. 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 industry standards. Refer to general requirements.

END DIVISION 16

Division 17
ENERGY REQUIREMENTS

WASHINGTON STATE ENERGY CODE:
General Notes:
1. Per W.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 W.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 W.S.E.C. R403.3.2. ducts, air handlers, and filter boxes shall be sealed.

REGISTERED ARCHITECT
8079
STATE OF WASHINGTON
JAMES C. CARPENTER
ORIGINAL SIGNATURE REQUIRED

Date	By	Description
9/22/24	AG	PERMIT SET
3/10/25	AG	JURISDICTIONAL COMMENTS

Miles Milestone NW
Mercer Island Lot 1
7621 SE 22nd ST. Mercer Island, WA 98040

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

TITLE

JOB NO. : 21022.21
STARTING NO. : 21022.05

SHEET
A1

BUILDING HEIGHT CALCULATION



City of Mercer Island Avg. Grade Calculations

Midpoint		Datum Elevation	F or E		Wall Segment Length			
A	=	58.49	E	a	=	5.74	A*a	= 335.73
B	=	58.91	E	b	=	19.54	B*b	= 1151.10
C	=	59.75	E	c	=	23.67	C*c	= 1414.28
D	=	59.75	E	d	=	8.50	D*d	= 507.88
E	=	58.90	E	e	=	25.91	E*e	= 1526.10
F	=	58.06	E	f	=	13.67	F*f	= 793.68
G	=	57.95	E	g	=	2.00	G*g	= 115.90
H	=	57.45	E	h	=	13.33	H*h	= 765.81
I	=	56.90	E	i	=	4.83	I*i	= 274.83
J	=	56.20	E	j	=	16.50	J*j	= 927.30
K	=	55.75	E	k	=	6.15	K*k	= 342.86
L	=	55.75	E	l	=	4.09	L*l	= 228.02
M	=	55.60	E	m	=	22.17	M*m	= 1232.65
N	=	55.25	E	n	=	13.00	N*n	= 718.25
O	=	56.70	E	o	=	2.50	O*o	= 141.75
P	=	57.00	E	p	=	7.50	P*p	= 427.50
Q	=	58.20	E	q	=	17.62	Q*q	= 1025.48
		976.61				**206.72**		**11929.12**
Address		**Lot 1**				**57.71**		***AVG. GRADE***

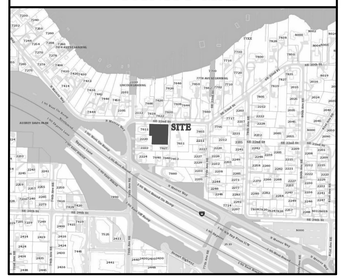
City of Mercer Island GFA Calculations

Lower Level Area Calculation

Wall	Length	Percentage	Finish or Existing	Result
A	16.64	99.20%	E	16.51
B	24.44	98.60%	E	24.10
C	13.41	87.50%	E	11.73
D	10.39	79.30%	E	8.24
E	4.55	76.90%	E	3.50
F	1.83	75.30%	E	1.38
G	0.67	73.30%	E	0.49
H	8.00	68.20%	E	5.46
I	0.67	65.00%	E	0.44
J	1.83	62.60%	E	1.15
K	11.67	71.20%	E	8.31
L	2.50	81.00%	E	2.03
M	7.89	87.80%	E	6.93
	104.49			90.24
		Total Average Result		**0.86**
Flr	Sq Ft	Result		Excluded Area
	590.00	0.86		509.56

Lot Size =	8421.00 x	40.00% =	3368.40
Main Floor	1315.00		
Upper Floor	1541.00	(1622-81)	STAIRS
Basement	80.44	(590-509.56)	EXCLUDED
Garage	405.00		
	3341.44 /	39.68%	

VICINITY MAP



SITE INFO

STREET ADDRESSES:
7621 SE 22nd Street, Mercer Island, WA 98040

PARCEL NUMBER:
531510-1846

LEGAL DESCRIPTION:
PARCEL A
THE WEST 158.97 FEET OF THE EAST 178.97 FEET OF LOT 1, AND THE WEST 133.97 FEET OF THE EAST 153.97 FEET OF LOT 2, BLOCK 24, McGILVRA'S ISLAND ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 16 OF PLATS, PAGE 58, IN KING COUNTY, WASHINGTON.

ZONING

ZONING: R 8.4

SINGLE FAMILY RESIDENTIAL SETBACKS
FRONT YARD - 20'-0"
REAR YARD - 25'
SIDE YARD - 7'-6" min. / 15'-0" COMBINED

HEIGHT LIMIT
30' ABOVE AVERAGE BUILDING ELEVATION
30' DOWNHILL HIGHEST PLATE

LOT COVERAGE
40% MAX OF GROSS LOT AREA

HARDSCAPE COVERAGE
9% MAX OF GROSS LOT AREA

G.F.A.
5,000SF OR 40% MAX. OF NET LOT AREA, WHICHEVER IS LESS

SITE CALCULATIONS

LOT AREA	
8,421 SF	**GROSS LOT AREA**
COVERAGE CALCULATION	
8,421 SF	**LOT AREA**
x 40%	
3,368.4 SF	**ALLOWABLE IMPERVIOUS COVERAGE**
2,382 SF	**HOUSE ROOF (includes gutters)**
876 SF	**DRIVEWAY (excludes area under eaves)**
3,258 SF / 38.7%	**TOTAL COVERAGE**
HARDSCAPE COVERAGE CALCULATION	
8,421 SF	**LOT AREA**
x 9%	
757.8 SF	**ALLOWABLE HARDSCAPE COVERAGE**
135 SF	**FRONT WALK (excludes portion w/ eaves)**
4.3 SF	**A/C PAD (excludes protion w/ eaves)**
139.3 SF / 1.6%	**TOTAL HARDSCAPE COVERAGE**

LEGEND

- v — v — DESIGNATES WATER
- s — s — DESIGNATES SEWER
- st — st — DESIGNATES STORM
- DESIGNATES EXISTING GRADE
- DESIGNATES FINISHED GRADE
- DESIGNATES TREE DRIPLINE
- DESIGNATES TREE DRIPLINE (EXCEPTIONAL TREE)
- DESIGNATES LIMITS OF DISTURBANCE
- x — x — DESIGNATES TREE FENCING
- DESIGNATES EXISTING WOOD FENCE
- EXISTING FENCE TO BE REMOVED

SEE PERMIT #2301-060 FOR ADD'L UTILITY INFO

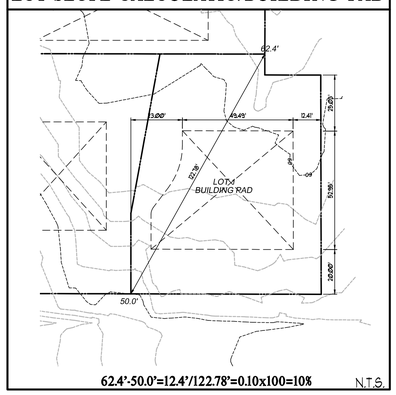
TREE RETENTION SCHEDULE

#	TREE SPECIES	SCIENTIFIC NAME	DBH	COND.	RETAIN
1.	DOUGLAS FIR	PSEUDOTSUGA MENZIESII	30	FAIR-GOOD	YES
2.	DOUGLAS FIR	PSEUDOTSUGA MENZIESII	28	FAIR-GOOD	YES
3.	DEODAR CEDAR	CEDRUS DEODARA	23	GOOD	NO
4.	DOUGLAS FIR	PSEUDOTSUGA MENZIESII	18	FAIR	YES
5.	DOUGLAS FIR	PSEUDOTSUGA MENZIESII	40	GOOD	YES
6.	BIGLEAF MAPLE	ACER MACROPHYLLUM	18	FAIR	YES
7.	SCOULERS WILLOW	SALIX SCOULERIANA	9	FAIR-POOR	YES
24.	WESTERN RED CEDAR	THUJA PLICATA	10	FAIR	YES

REPLACEMENT TREE LEGEND

DESIGNATION	SPECIES	QUANTITY
(30)	WESTERN RED CEDAR (8' tall)	3

LOT SLOPE CALCULATIO/BUILDING PAD



62.4'-50.0'=12.4'/122.78'=0.10x100=10% N.T.S.

TREE PROTECTION AREA (TPZ)

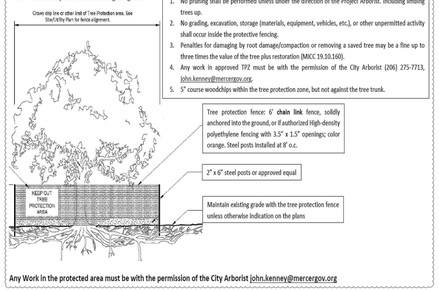
KEEP OUT!

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

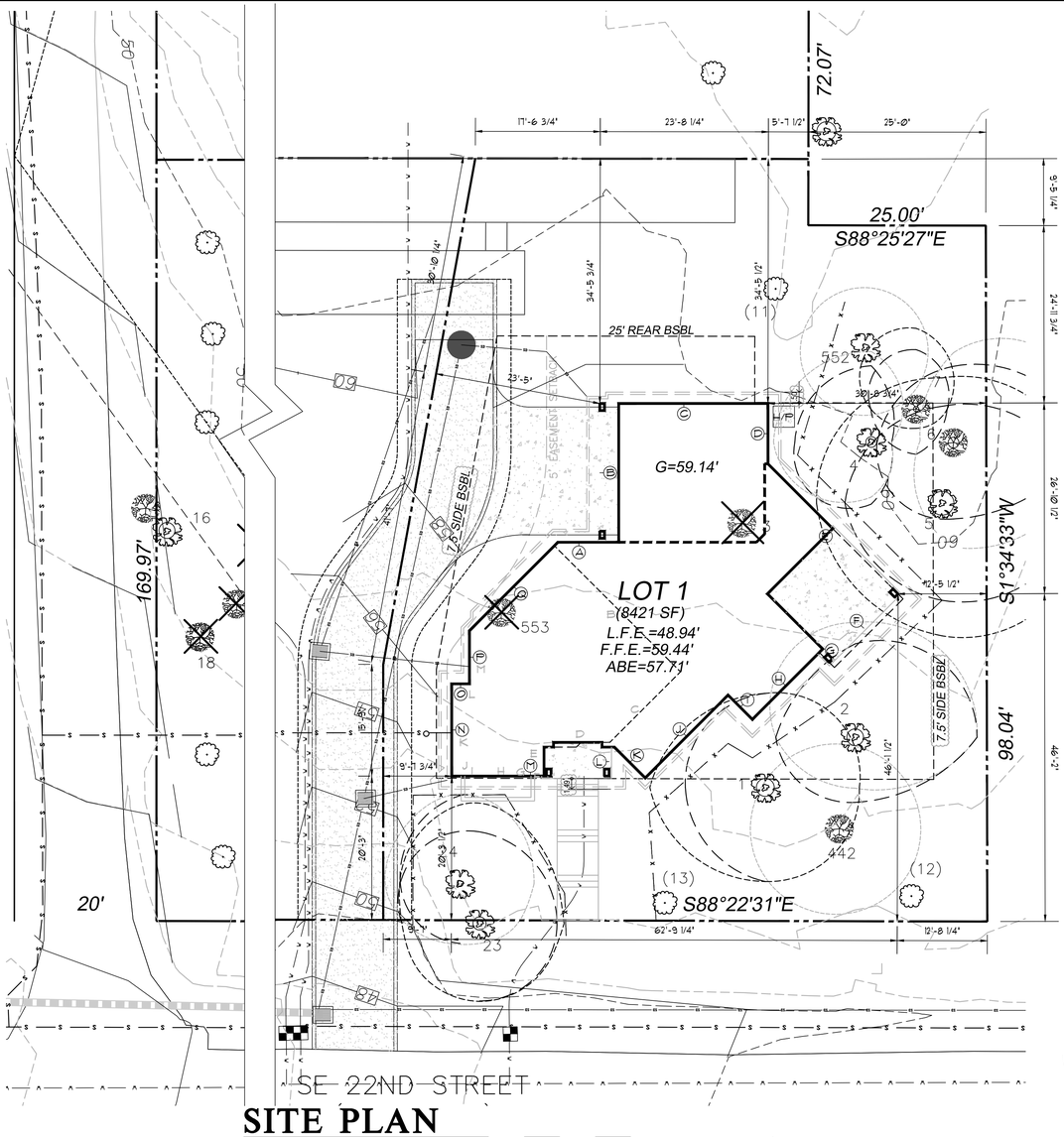
Trees enclosed by this fence are protected and are subject to the conditions of the tree permit. Violation of tree conditions may lead to:

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



SITE PLAN

Scale 1" = 10'

0 5 10 15 20 40

NORTH

Date	By	Description
12.2.24	AG	PERMIT SET
3/10/25		JURISDICTIONAL COMMENTS

REGISTERED ARCHITECT
STATE OF WASHINGTON
ORIGINAL SIGNATURE REQUIRED

Milestone NW
Mercer Island 3-Lot 1
Lot 1
7621 SE 22nd Street Mercer Island, WA

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

TITLE

JOB NO.: 2001202
STARTING NO.:

SHEET
A1.1

RAND-MILESTONE LOT 1 GRADING AND DRAINAGE PLAN

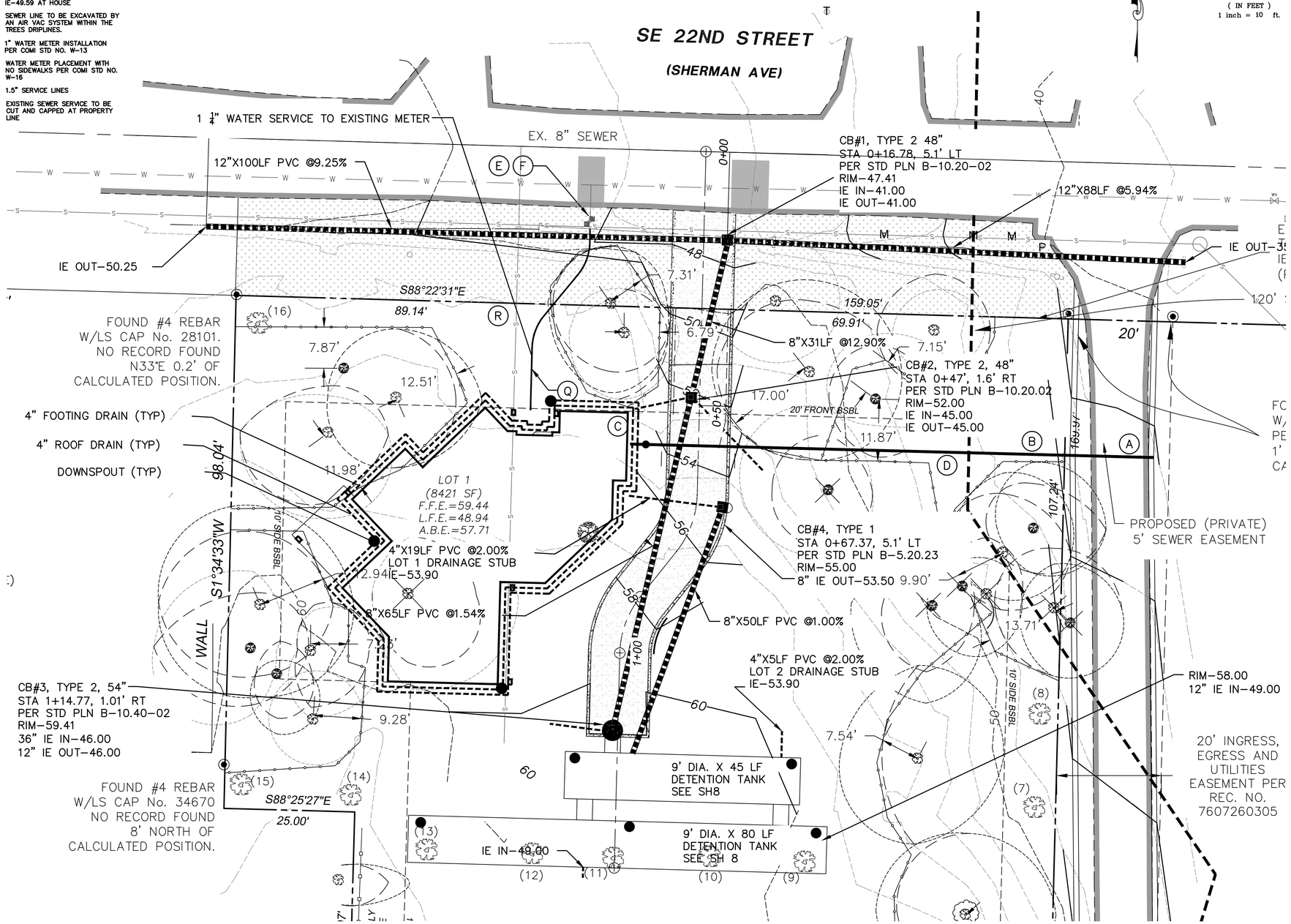
LOT 1 BUILDING PERMIT

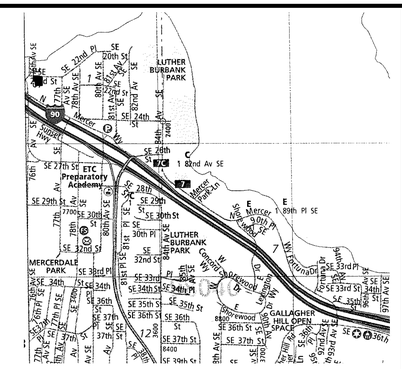
SE 1/4 OF SEC.1, T.24N., R.4E., W.M.

CITY OF MERCER ISLAND, WASHINGTON

WATER AND SEWER CALLOUTS

- (A) 6" SIDE SEWER CONNECTION AND STUB PER COMI STD NO. S-17 IE=41.43± (POTHOLE EX. 6" SEWER)
- (B) 6"X36LF PVC @2.00%
- (C) STA 0+98, 0' RT 6" SIDE SEWER, HOUSE CONNECTION, CLEANOUT, AND MARKER POST PER COMI STD S-17, S-18, S-19, AND S-20. IE=49.59 AT HOUSE
- (D) SEWER LINE TO BE EXCAVATED BY AN AIR VAC SYSTEM WITHIN THE TREES DRIPLINES.
- (E) 1" WATER METER INSTALLATION PER COMI STD NO. W-13
- (F) WATER METER PLACEMENT WITH NO SIDEWALKS PER COMI STD NO. W-16
- (G) 1.5" SERVICE LINES
- (H) EXISTING SEWER SERVICE TO BE CUT AND CAPPED AT PROPERTY LINE





TOPOGRAPHY SURVEY NOTES:

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5. *THE CONTOURS SHOWN ARE DERIVED FROM DIRECT FIELD OBSERVATIONS. THE CONTOUR INTERVAL IS 2.0 FEET AND THE CONTOUR ACCURACY IS ONE HALF OF THE INTERVAL (±1.0 FEET).*
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9. *ARBORIST REPORT PROVIDED BY LAYTON TREE CONSULTING LLC*
10. *THE FOLLOWING SURVEYS OF RECORD WERE USED TO CALCULATE AND/OR ASCERTAIN THE BOUNDARY AS SHOWN HEREON...*
    THE PLAT OF McGILVRA'S ISLAND ADDITION VOLUME 16, PAGE 58
    UNRECORDED SHORT PLAT BY JONES, BASSI & ASSOCIATES DATED 1/16/1974
    RECORD OF SURVEY VOLUME 402, PAGE 142

1. *THE SPOT ELEVATIONS INDICATED ON THIS PLAN REPRESENT THE DESIGN TOP OF PAVEMENT OR SURFACE, UNLESS OTHER~SE NOTED.*
2. *CONTRACTOR IS RESPONSIBLE FOR DEMOLITION OF EXISTING STRUCTURES INCLUDING REMOVAL OF ANY EXISTING UTILITIES SERVING THE STRUCTURE. UTILITIES ARE TO BE REMOVED TO THE RIGHT-OF-WAY.*
3. *CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES 3H:1V OR STEEPER. CONTRACTOR SHALL STABILIZE DISTURBED AREAS IN ACCORDANCE WITH LOCAL SPECIFICATION.*
4. *ALL CUT AND FILL SLOPES SHALL BE 3: 1 OR FLATTER UNLESS OTHERWISE NOTED.*
5. *CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDING FOR ALL NATURAL AND PAVED AREAS AND SHALL GRADE ALL AREAS TO PRECLUDE PONDING OF WATER.*
6. *ALL POLLUTANTS OTHER THAN SEDIMENT ON-SITE DURING CONSTRUCTION SHALL BE HANDLED AND DISPOSED OF IN A MANNER THAT DOES NOT CAUSE CONTAMINATION OF STORMWATER. THE CONTRACTOR SHALL ADHERE TO ALL TERMS AND CONDITIONS AS OUTLINED IN THE GENERAL N.P.D.E.S. PERMIT FOR STORMWATER DISCHARGE ASSOCIATED ~TH CONSTRUCTION ACTIVITIES.*
7. *PROPERTIES AND WATERWAYS DOWNSTREAM OF THE SITE SHALL BE PROTECTED FROM EROSION DUE TO INCREASES IN THE VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF FROM PROJECT SITE .*
8. *CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO SAME.*
9. *CONTRACTOR TO REMOVE UNSUITABLE SOILS LOCATED ~THIN THE BUILDINGS FOOTING AREA.*
10. *FOR BOUNDARY AND TOPOGRAPHIC INFORMATION REFER TO PROJECT SURVEY AND FINAL ENGINEERING PLANS.*
11. *ALL GRADING, SITE PREPARATION, AND EARTHWORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL ENGINEERING REPORT.*
12. *ALL FILL MATERIAL SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT AND COMPACTION.*
13. *IF NEW FILL IS PLACED OVER EXISTING SLOPES OF 20% OR GREATER, THE STRUCTURAL FILL SHOULD BE KEYED AND BENCHED INTO COMPETENT NATIVE SLOPE SOILS. SEE FIGURE 4 ON SHEET C-2.6.*
14. *ALL EXISTING TREES THAT CAN FEASIBLY BE RETAINED WILL BE PRESERVED. CONTRACTOR ~LL WORK ~TH CITY ARBORIST AND OTHER STAFF TO MAXIMIZE TREE RETENTION.*
15. *THE TOTAL IMPERVIOUS SURFACE ON LOT WILL NOT EXCEED THE NET MAXIMUM LOT COVERAGE AREA.*

SHEET INDEX:

SHEET NO.	DESCRIPTION
1	WATER, SEWER, AND DRAINAGE PLAN
2	DRIVEWAY AND GRADING PLAN
3	DRIVEWAY AND DRAINAGE PROFILES
4	DETENTION TANK PLAN VIEW AND SECT.
5	DETENTION TANK PROFILES
6	DRAINAGE DETAILS
7	DRAINAGE DETAILS
8	WATER AND SEWER DETAILS

NOTE: THE EXISTING UTILITIES AS SHOWN ARE ONLY APPROXIMATE. OTHER EXISTING UTILITIES MAY EXIST ALONG THIS PROPOSED ALIGNMENT. IT SHALL BE THE CONTRACTOR AND OR OWNERS RESPONSIBILITY TO VERIFY THE SIZE TYPE LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO STARTING CONSTRUCTION

Call Before You Dig 811

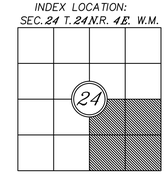
LOT INFORMATION:

LOT #	GROSS LOT AREA	MAX GFA 40%	NET LOT AREA	MAX. LOT COVERAGE (40%)	MAX. HARDSCAPE (9%)
1	8,402	3,361	8,402	3,361	756
2	8,419	3,368	8,410	3,364	757
3	8,400	3,360	8,400	3,360	756

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

03/20/2025

INDEX LOCATION:
SEC. 24 T. 24N.R. 4E. W.M.



PROJECT NO.: 2412-106 SUB1 MILESTONE-WCMI LLC

REVISIONS	BY	DATE

© THE PLANS SET FORTH ON THIS SHEET ARE AND SHALL REMAIN THE PROPERTY OF EASTSIDE CONSULTANTS, INC.

WATER, SEWER, AND DRAINAGE PLAN

MILESTONE NORTHWEST, LLC
8 CRESCENT KEY
BELLEVUE, WA 98006
CONTACT: GREG ARMS
PHONE: (206) 817-4192

ENGINEERS - SURVEYORS
EASTSIDE CONSULTANTS, INC.
KEITH MACKIE, P.E. PRESIDENT
ISSAQUAH, WASHINGTON 98027
PH:(425)392-5351 FAX:392-4676

JOB NO.	20025
DATE	01/2025
SCALE	1"=10'
DESIGNED	ADP
DRAWN	ADP
CHECKED	RSF
APPROVED	RSF

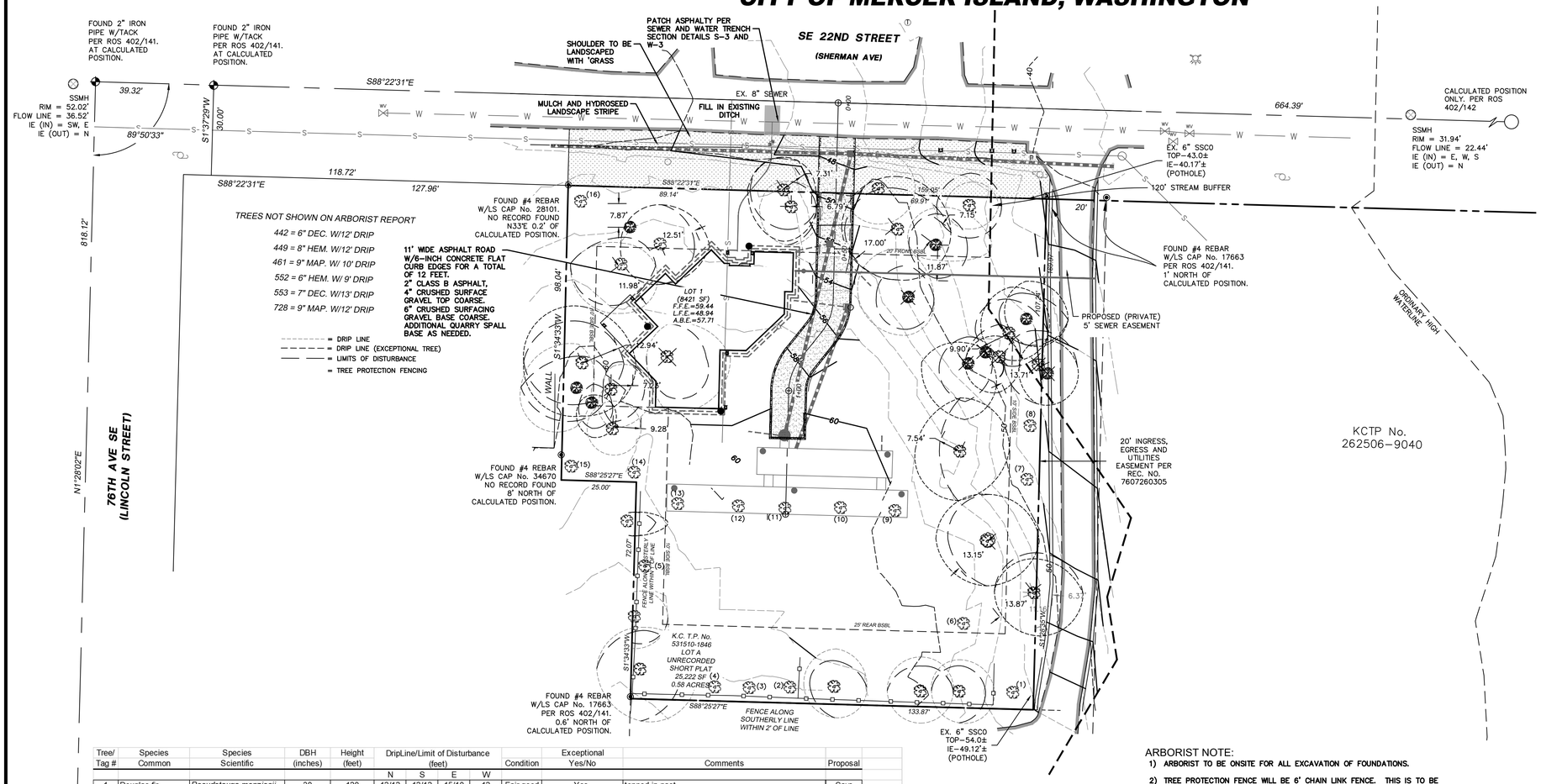
SHEET 1 OF 8

RAND-MILESTONE LOT 1 GRADING AND DRAINAGE PLAN

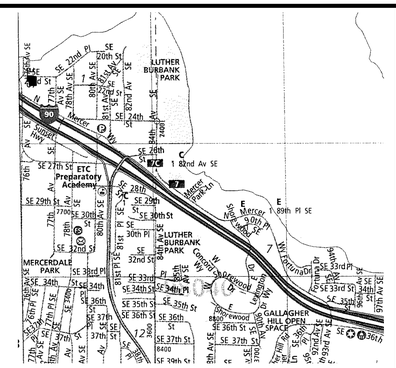
LOT 1 BUILDING PERMIT

SE 1/4 OF SEC.1, T.24N., R.4E., W.M.

CITY OF MERCER ISLAND, WASHINGTON



ACCESS ROAD SECTION VIEW
NTS



VICINITY MAP
N.T.S.

GRAPHIC SCALE
20 0 20 40
(IN FEET)
1 inch = 20 ft.

LEGAL DESCRIPTION:

THE WEST 158.97 FEET OF THE EAST 178.97 FEET OF LOT 1, AND THE WEST 133.97 FEET OF THE EAST 153.97 FEET OF LOT 2, BLOCK 24, McGILVRA'S ISLAND ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 16 OF PLATS, PAGE 58, IN KING COUNTY, WASHINGTON.

Tree/ Tag #	Species Common	Species Scientific	DBH (inches)	Height (feet)	DripLine/Limit of Disturbance (feet) N	S	E	W	Condition	Exceptional Yes/No	Comments	Proposal
1	Douglas fir	*Pseudotsuga menziesii*	30	120	12/12	12/12	15/10	12	Fair-good	Yes	topped in past	Save
2	Douglas fir	*Pseudotsuga menziesii*	28	113	8/10	15/12	10/10	16	Fair-good	No	topped in past, crook, regenerated top, cambial rupture	Save
3	Deodar cedar	*Cedrus deodara*	23	96	10/10	17/12	20/12	6	Good	No	asymmetric crown to southeast	Remove
4	Douglas fir	*Pseudotsuga menziesii*	18	79	7/8	12/10	13/10	0	Fair	No	asymmetric crown, somewhat suppressed	Save
5	Douglas fir	*Pseudotsuga menziesii*	40	116	17/12	16/12	16/12	18	Good	Yes	topped in past	Save
6	bigleaf maple	*Acer macrophyllum*	18	30	14/10	12/10	0/10	18	Fair	No	trunk forks at 4 feet, asymmetric crown to west	Save
7	Scoulers willow	*Salix scouleriana*	9	32	2/6	11/8	6/6	4	Fair-poor	Yes	decay at root crown, suppressed	Save
8	Douglas fir	*Pseudotsuga menziesii*	26	93	13/12	16	17/12	14	Fair-good	No	large crook, large exposed surface roots,good vigor	Save
9	Deodar cedar	*Cedrus deodara*	11	44	12/8	10	10	10/8	Good	No	young, no concerns	Save
10	Deodar cedar	*Cedrus deodara*	12	45	11/8	10	10	11	Good	No	young, no concerns	Save
11	Deodar cedar	*Cedrus deodara*	12	46	10/8	10	11/8	9	Good	No	young, no concerns	Save
12	Western red cedar	*Thuja plicata*	29	70	14/14	14/14	16	16/12	Good	Yes,Grove	exposed surface roots, good vigor	Save
13	Douglas fir	*Pseudotsuga menziesii*	38	101	16/16	15/15	15	13/5	Fair-good	Yes	topped in past, large cambial rupture, 4 feet to house	Save
14	bigleaf maple	*Acer macrophyllum*	18	60	6/8	18/12	8	14/8	Fair	Yes,Grove	asymmetric crown to south	Remove
15	Douglas fir	*Pseudotsuga menziesii*	21	95	6/10	11/11	6	10/10	Fair	Yes,Grove	natural lean south, topped in past	Remove
16	Douglas fir	*Pseudotsuga menziesii*	27	62	7/10	12/12	12	5/10	Fair	Yes,Grove	broken top, small crown	Save
17	Douglas fir	*Pseudotsuga menziesii*	26	103	14/10	8/10	12	8/10	Fair	Yes,Grove	topped in past, crook, regenerated top	Save
18	bigleaf maple	*Acer macrophyllum*	9,7 (11)	51	12/8	8/8	14	6/8	Fair	Yes,Grove	poor taper, some dead cambium on 12 inch stem	Save
19	horse chestnut	*Aesculus hippocastanum*	14	47	15/10	12/10	8/8	16/10	Fair-good	No	decent form	Remove
20	bigleaf maple	*Acer macrophyllum*	12,9,8 (17)	61	12/10	4/10	18/10	8/10	Fair	No	somewhat suppressed	Save
21	Douglas fir	*Pseudotsuga menziesii*	19	86	7/10	7/10	9/10	7/10	Fair	No	narrow crown, large cambial rupture	Save
22	Douglas fir	*Pseudotsuga menziesii*	40	94	16/12	15/15	16/16	17/16	Fair-good	Yes	topped in past, crook, regenerated top	Save
24	Western red cedar	*Thuja plicata*	10	20	8/8	12/12	10/8	10/10	Fair	No	suppressed, under pine	Save
25	Douglas fir	*Pseudotsuga menziesii*	30	118	10/12	13/13	16	12/12	Fair-good	Yes	topped in past,good vigor	Save
	NEIGHBORING TREES											
23	shore pine	*Pinus contorta*	22	65	10/10	16/12	10/10	11/10	Fair	Yes	forked tops	Save
101	Western red cedar	*Thuja plicata*	32	88	2/0	NA	12/8	NA	Fair-good	Yes	sparse top foliage, sound	Protect
102	Western red cedar	*Thuja plicata*	13	45	8	10	10/8	NA	Good	No	boundary line tree, good vigor	Protect
Drip-Line measurements from face of trunk											Percent Retained 20/24	83.33 %
Measurements for neighboring trees from property line												
Calculated DBH: the DBH in parenthesis is the square root of the sum of the dbh for each individual stem squared (example with 3 stems: dbh = square root [(stem1)2 +(stem2)2 +(stem3)2]).												
TBD - to be determined												

ARBORIST NOTE:

1) ARBORIST TO BE ONSITE FOR ALL EXCAVATION OF FOUNDATIONS.
2) TREE PROTECTION FENCE WILL BE 6' CHAIN LINK FENCE. THIS IS TO BE PLACED AT THE ARBORIST GIVEN LIMITS OF ALLOWABLE DISTURBANCE.
3) LIMITS OF EXCAVATION FOR FUTURE DETENTION SYSTEM WILL NOT ENCROACH INTO TREE 13'S TREE PROTECTION ZONE.
4) A QUALIFIED ARBORIST SHALL BE ON SITE FOR ALL EXCAVATION WITHIN SAVED TREES DRIPLINES WITH AIR EXCAVATION TO LOCATE AND CLEAN-CUT ROOTS ENCOUNTERED AT LIMITS OF DISTURBANCE.
5) SEE TREE PROTECTION DETAIL ON PAGE 10

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Call Before You Dig 811

INDEX LOCATION:
SEC. 1 T. 24N. R. 4E. W.M.



3/20/2025

PROJECT NO.: 2412-106 SUB1 MILESTONE-WCMI LLC

SE COR. S.1 FOUND 3.5" BRASS CAP W/PUNCH & LS No. 32429 PER ROS 402/141. AT CALCULATED POSITION.

N88°29'56"W 2678.10'

S. 1/4 S. 1 FOUND 3.5" BRASS CAP W/PUNCH & LS No. 32429 PER ROS 402/141. AT CALCULATED POSITION.

REVISIONS	BY	DATE

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DRIVEWAY AND GRADING PLAN

MILESTONE NORTHWEST, LLC
8 CRESCENT KEY
BELLEVUE, WA 98006
CONTACT: GREG ARMS
PHONE: (206) 817-4192

EASTSIDE CONSULTANTS, INC.
ENGINEERS - SURVEYORS
1829 ALDER AVE SE, SUITE B
ISSAQUAH, WASHINGTON 98027
PH:(425)392-5351 FAX:392-4676

JOB NO.	20025
DATE	12/22
SCALE	1"=20'
DESIGNED	RSF
DRAWN	RSF
CHECKED	RSF
APPROVED	RSF

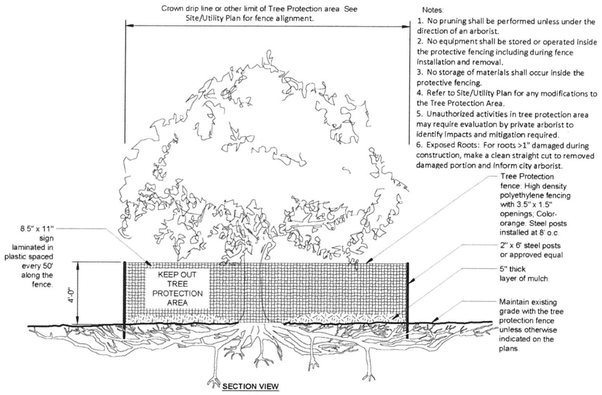
SHEET 2 OF 8

RAND-MILESTONE LOT 1 GRADING AND DRAINAGE PLAN

LOT 1 BUILDING PERMIT

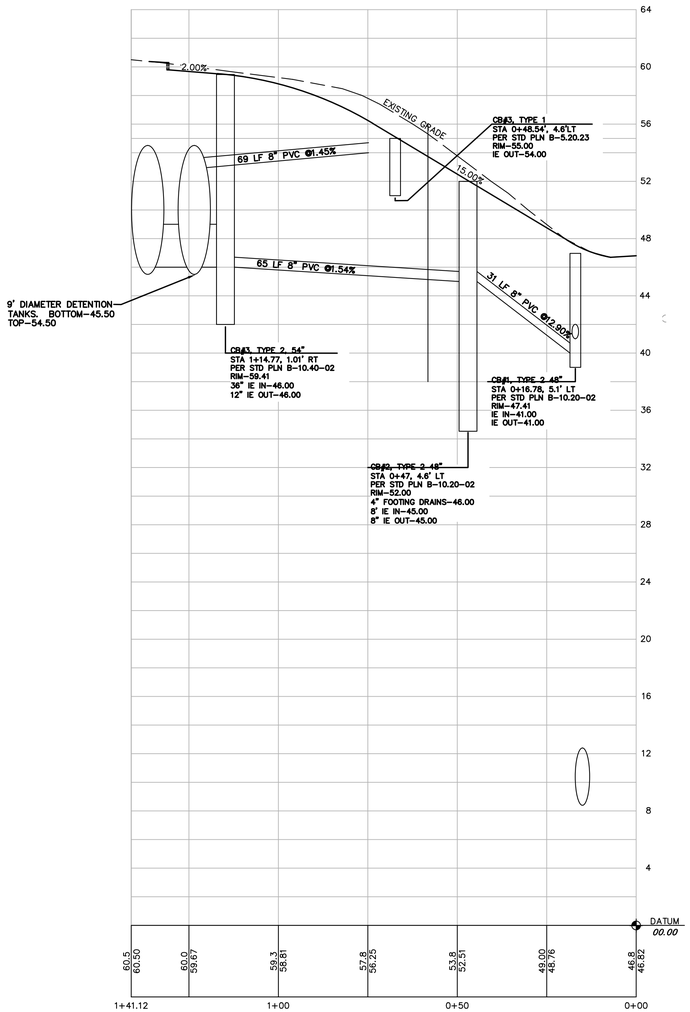
SE 1/4 OF SEC.1, T.24N., R.4E., W.M.

CITY OF MERCER ISLAND, WASHINGTON



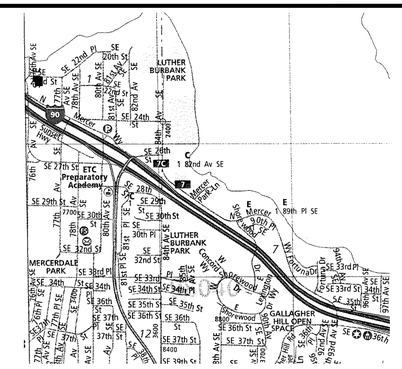
Notes:
1. No pruning shall be performed unless under the direction of an arborist.
2. No equipment shall be stored or operated inside the protective fencing including during fence installation and removal.
3. No storage of materials shall occur inside the protective fencing.
4. Refer to Site/Utility Plan for any modifications to the Tree Protection Area.
5. Unauthorized activities in tree protection area may require evaluation by private arborist to identify impacts and mitigation required.
6. Exposed Roots: For roots >1" damaged during construction, make a clean straight cut to removed damaged portion and inform city arborist.

TREE PROTECTION DETAIL



DRIVEWAY DRAINAGE PROFILE

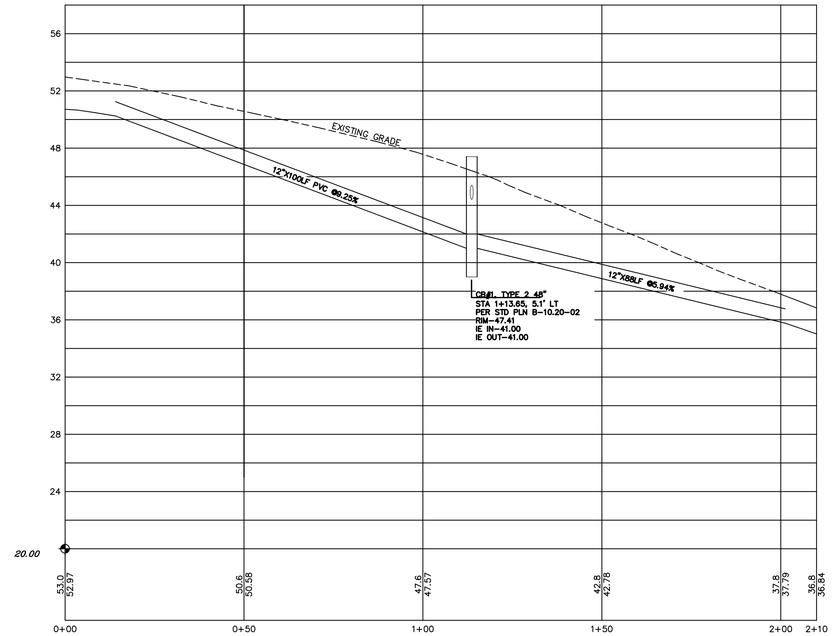
SCALE: VER-1"=5'
HOR-1"=20'



VICINITY MAP
N.T.S.

LEGAL DESCRIPTION:

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SE 22ND STREET DRAINAGE PROFILE

SCALE: VER-1"=5'
HOR-1"=20'

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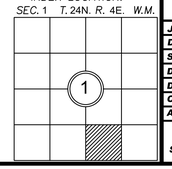
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Call Before You Dig 811



3/20/2025

INDEX LOCATION:
SEC. 1 T. 24N. R. 4E. W.M.



PROJECT NO.: 2412-106 SUB1 MILESTONE-WCMI LLC

REVISIONS	BY	DATE

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DRIVEWAY AND DRAINAGE PROFILE

MILESTONE NORTHWEST, LLC
8 CRESCENT KEY
BELLEVUE, WA 98006
CONTACT: GREG ARMS
PHONE: (206) 817-4192

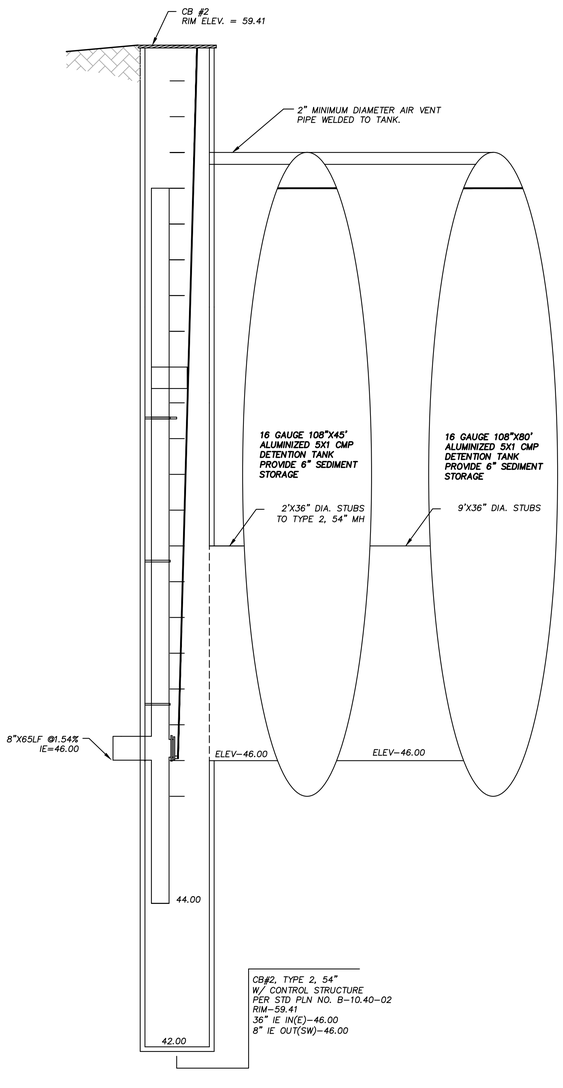
ENGINEERS - SURVEYORS
EASTSIDE CONSULTANTS, INC.
CORPORATE MAIL STOP: E
ISSAQUAH, WASHINGTON 98027
PH:(425)392-5351 FAX:392-4676

JOB NO.	20025
DATE	12/22
SCALE	1"=20'
DESIGNED	RSF
DRAWN	RSF
CHECKED	RSF
APPROVED	RSF

SHEET 3 OF 8

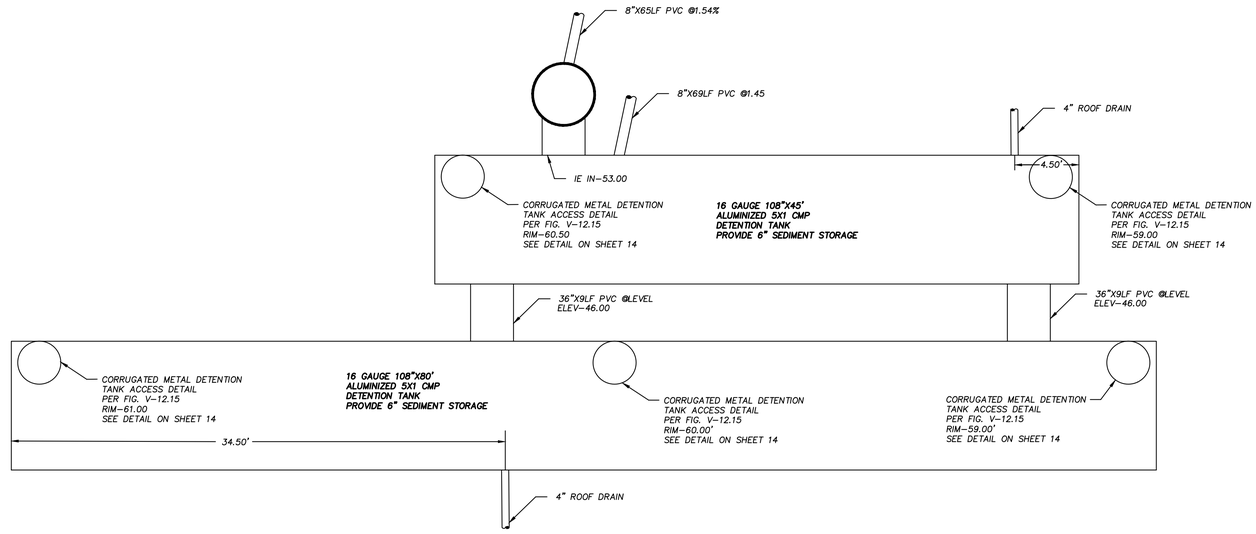
RAND-MILESTONE LOT 1 GRADING AND DRAINAGE PLAN

LOT 1 BUILDING PERMIT
SE 1/4 OF SEC.1, T.24N., R.4E., W.M.
CITY OF MERCER ISLAND, WASHINGTON



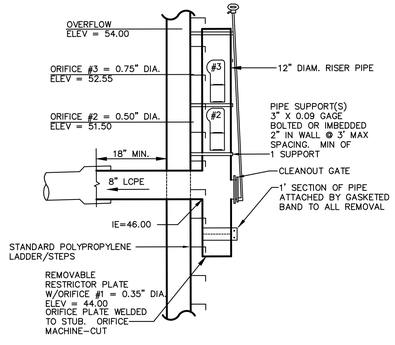
DETENTION TANK CROSS SECTION

SCALE: VER-1"=5'
HOR-1"=1'



DETENTION TANK PLAN VIEW

SCALE: 1"=1'



18" RISER DETAIL

N.T.S.

REQUIRED DEAD STORAGE	0 CF
PROVIDED DEAD STORAGE	0 CF
AS-BUILT DEAD STORAGE	

REQUIRED LIVE STORAGE	7,449 CF
PROVIDED LIVE STORAGE	7,732 CF
AS-BUILT LIVE STORAGE	

18" RISER DETAIL

SCALE: 1"=20'

MILESTONE NORTHWEST, LLC
8 CRESCENT KEY
BELLEVUE, WA 98006
CONTACT: GREG ARMS
PHONE: (206) 817-4192

ENGINEERS - SURVEYORS
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ISSAQUAH, WASHINGTON 98027
PH:(425)392-5351 FAX:392-4676
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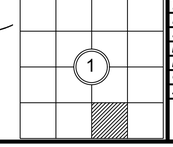
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DETENTION TANK PLAN VIEW AND SECT.

RONALD S. FREDERICKSEN
STATE OF WASHINGTON
39953
REGISTERED PROFESSIONAL ENGINEER
3/20/2025

INDEX LOCATION:
SEC. 1 T. 24N. R. 4E. W.M.



JOB NO.	20025
DATE	12/22
SCALE	1"=20'
DESIGNED	RSF
DRAWN	RSF
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APPROVED	RSF

SHEET 4 OF 8

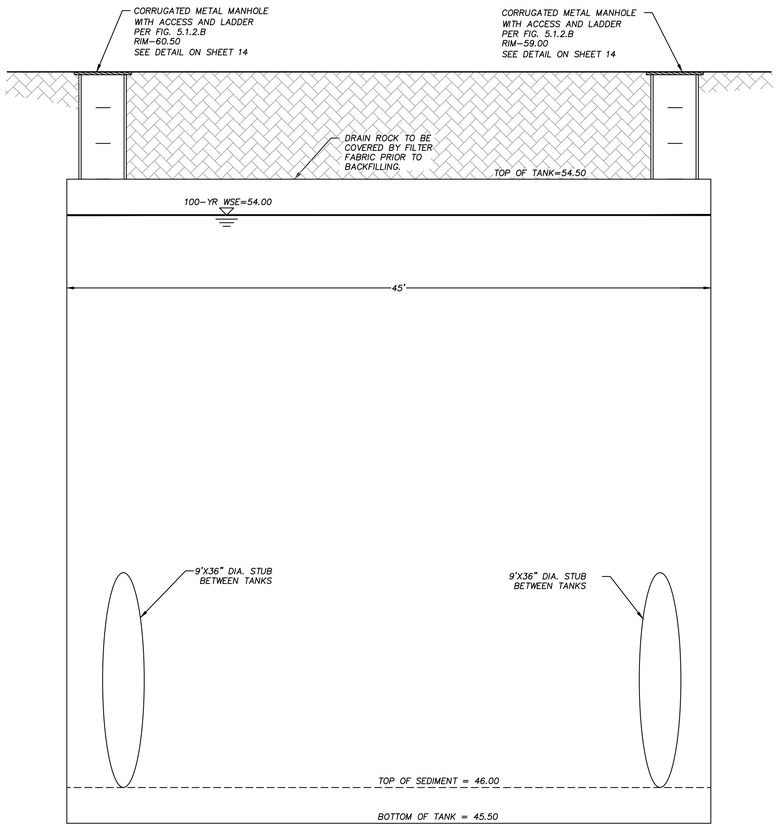
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RAND-MILESTONE LOT 1 GRADING AND DRAINAGE PLAN

LOT 1 BUILDING PERMIT

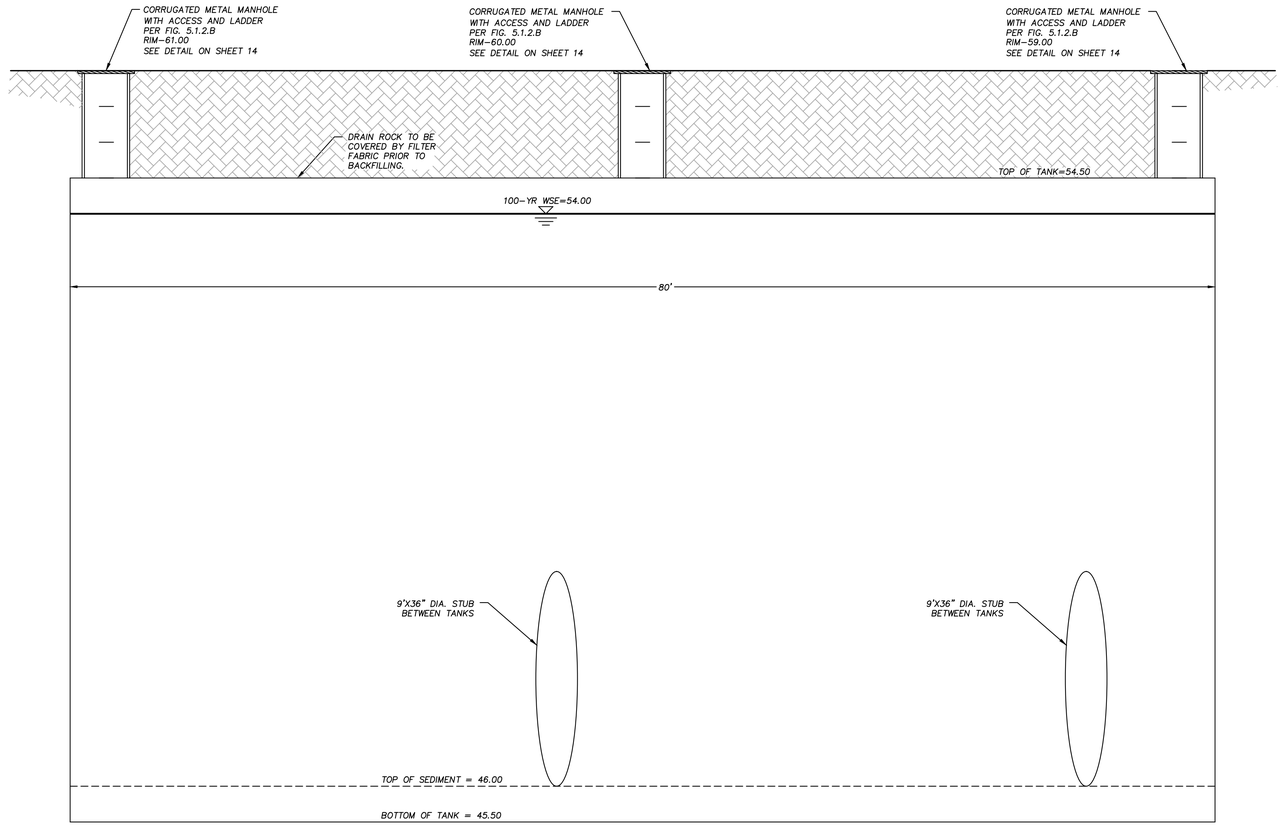
SE 1/4 OF SEC.1, T.24N., R.4E., W.M.

CITY OF MERCER ISLAND, WASHINGTON



FRONT TANK PROFILE

SCALE: VER-1"=5'
HOR-1"=20'



BACK TANK PROFILE

SCALE: VER-1"=5'
HOR-1"=20'

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DETENTION TANK PROFILES

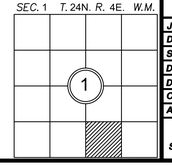
MILESTONE NORTHWEST, LLC
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RONALD S. FREDERICKSEN
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PROFESSIONAL ENGINEER

3/20/2025

INDEX LOCATION:
SEC. 1 T. 24N. R. 4E. W.M.



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CHECKED	RSF
APPROVED	RSF

SHEET 5 OF 8

PROJECT NO.: 2412-106 SUB1 MILESTONE-WCMI LLC

RAND-MILESTONE LOT 1 GRADING AND DRAINAGE PLAN

LOT 1 BUILDING PERMIT

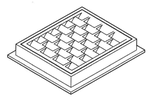
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CITY OF MERCER ISLAND, WASHINGTON

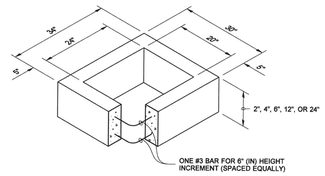
RONALD S. FREDERICKSEN — STATE OF WASHINGTON — 39053 — REGISTERED PROFESSIONAL ENGINEER

3/20/2025

DRAWN BY: FERN LIDDELL



FRAME AND VANED GRATE



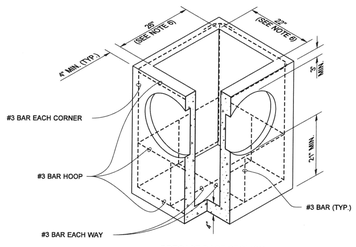
RECTANGULAR ADJUSTMENT SECTION

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"

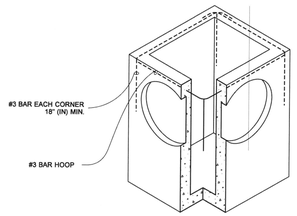
✱ CORRUGATED POLYETHYLENE STORM SEWER PIPE

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.



PRECAST BASE SECTION



(SEE NOTE 1)

ALTERNATIVE PRECAST BASE SECTION

Julie Heilman — STATE OF WASHINGTON — 41819 — REGISTERED PROFESSIONAL ENGINEER

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

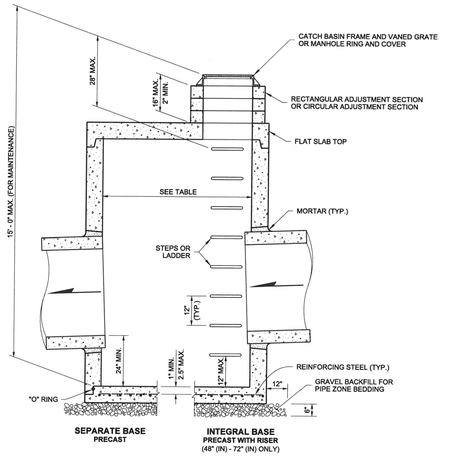
CATCH BASIN TYPE 1

STANDARD PLAN B-5.20-03

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Roark, Steve Digitally signed by Roark, Steve Date: 2020.09.09 09:45:23 -07'00'
STATE DESIGN ENGINEER
Washington State Department of Transportation

DRAWN BY: FERN LIDDELL



SEPARATE BASE PRECAST

INTEGRAL BASE PRECAST WITH RISER (48" (IN) - 72" (IN) ONLY)

NOTES

1. No steps are required when height is 4' or less.
2. The bottom of the precast catch basin may be sloped to facilitate cleaning.
3. The rectangular frame and grate may be installed with the flange up or down. The frame may be cast into the adjustment section.
4. 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.**

CATCH BASIN DIMENSIONS				
CATCH BASIN DIAMETER	MIN. WALL THICKNESS	MIN. BASE THICKNESS	MAXIMUM KNOCKOUT SIZE	MINIMUM DISTANCE BETWEEN KNOCKOUTS
48"	4"	6"	36"	8"
54"	4.5"	8"	42"	8"
60"	5"	8"	48"	8"
72"	6"	8"	60"	12"
84"	8"	12"	72"	12"
96"	8"	12"	84"	12"
120"	10"	12"	96"	12"
144"	12"	12"	108"	12"

PIPE ALLOWANCES					
CATCH BASIN DIAMETER	PIPE MATERIAL WITH MAXIMUM INSIDE DIAMETER				
	CONCRETE	ALL METAL	CPSSP ① PP ④	SOLID WALL PVC ②	PROFILE WALL PVC ③
48"	24"	30"	24"	30"	30"
54"	30"	36"	30"	36"	36"
60"	36"	42"	36"	42"	42"
72"	42"	54"	42"	48"	48"
84"	54"	60"	54"	48"	48"
96"	60"	72"	60"	48"	48"
120"	66"	84"	60"	48"	48"
144"	78"	96"	60"	48"	48"

① Corrugated Polyethylene Storm Sewer Pipe (See **Standard Specification Section 9-05.20**)
② (See **Standard Specification Section 9-05.12(1)**)
③ (See **Standard Specification Section 9-05.12(2)**)
④ Polypropylene Pipe (See **Standard Specification Section 9-05.24**)

Julie Heilman — STATE OF WASHINGTON — 41819 — REGISTERED PROFESSIONAL ENGINEER

Heilman, Julie Feb 20 2018 12:49 PM

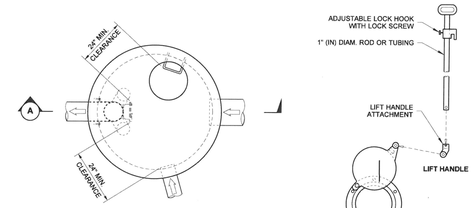
CATCH BASIN TYPE 2

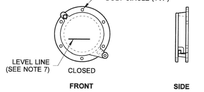
STANDARD PLAN B-10.20-02

SHEET 1 OF 1 SHEET

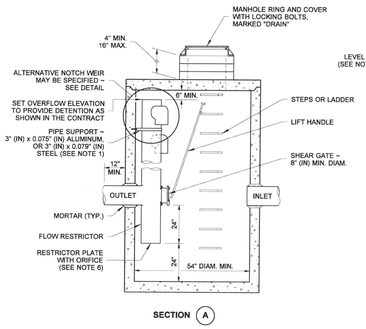
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Washington State Department of Transportation

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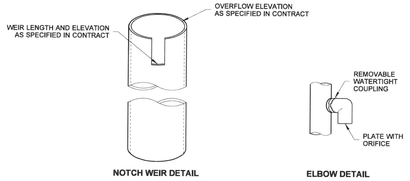




SHEAR GATE DETAILS



SECTION (A)



NOTCH WEIR DETAIL

ELBOW DETAIL

NOTES

1. The pipe supports and the flow restrictor shall be constructed of the same material and be anchored at a maximum spacing of 36" (in). Attach the pipe supports to the manhole with 5/8" (in) stainless steel expansion bolts or embed the supports into the manhole wall 2" (in).
2. The vertical riser stem of the flow restrictor shall be the same diameter as the horizontal outlet pipe with a minimum diameter of 12" (in).
3. The flow restrictor shall be fabricated from one of the following materials:
   0.060" (in) Corrugated Aluminum Alloy Drain Pipe
   0.064" (in) Corrugated Galvanized Steel Drain Pipe with Treatment 1
   0.064" (in) Corrugated Aluminized Steel Drain Pipe
   0.060" (in) Aluminum alloy flat sheet, in accordance with **ASTM B 209, 5052 H32 or EPS** High Density Polyethylene Storm Sewer Pipe
4. The frame and ladder or steps are to be offset so that: the shear gate is visible from the top; the climb-down space is clear of the riser and gate; the frame is clear of the curb.
5. The multi-orifice elbows may be located as shown, or all placed on one side of the riser to assure ladder clearance. The size of the elbows and their placement shall be specified in the Contract.
6. Restrictor plate with orifice as specified in the Contract. The opening is to be cut round and smooth.
7. The shear gate shall be made of aluminum alloy in accordance with **ASTM B 26 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 shear gate maximum opening shall be controlled by limited hinge movement, a stop tab, or some other device.
9. Alternative shear gate designs are acceptable if material specifications are met.

Julie Heilman — STATE OF WASHINGTON — 41819 — REGISTERED PROFESSIONAL ENGINEER

Aug 17, 2021

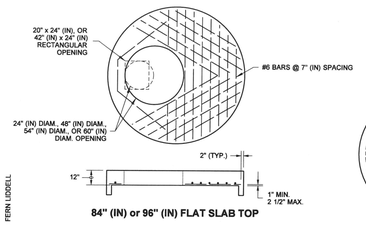
CATCH BASIN TYPE 2 WITH FLOW RESTRICTOR

STANDARD PLAN B-10.40-02

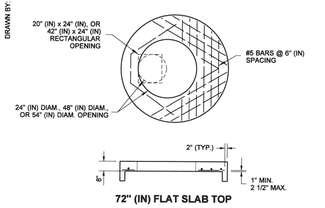
SHEET 1 OF 1 SHEET

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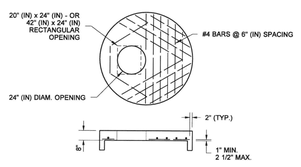
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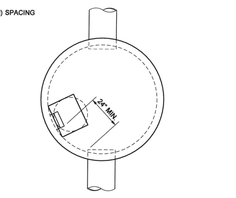
84" (IN) or 96" (IN) FLAT SLAB TOP



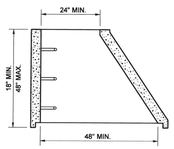
72" (IN) FLAT SLAB TOP



48" (IN), 54", or 60" (IN) FLAT SLAB TOP



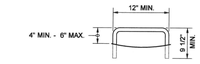
TYPICAL ORIENTATION FOR ACCESS AND STEPS



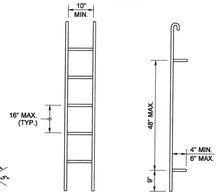
ECCENTRIC CONE SECTION

NOTE

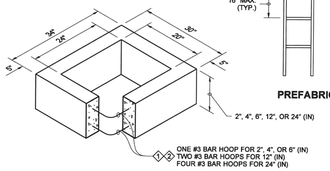
1. Ladder rungs for manholes and catch basins shall meet the requirements of **AASHTO M 199.**



STEP

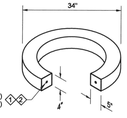


PREFABRICATED LADDER



RECTANGULAR ADJUSTMENT SECTION

1. As an acceptable alternative to rebar, wire mesh having a minimum area of 0.12 square inches per foot may be used for adjustment sections.
2. As an acceptable alternative to conventional steel reinforcement, manufacturers shall use Synthetic Structural Fibers meeting the requirements of **Standard Specification Section 9-05.50(10)**.



CIRCULAR ADJUSTMENT SECTION

For rectangular and circular adjustment sections, approved alternate material compositions are acceptable in lieu of precast concrete designs

Julie Heilman — STATE OF WASHINGTON — 41819 — REGISTERED PROFESSIONAL ENGINEER

Heilman, Julie Jan 25 2017 3:01 PM

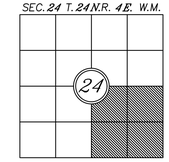
MISCELLANEOUS DETAILS FOR DRAINAGE STRUCTURES

STANDARD PLAN B-30.90-02

SHEET 1 OF 1 SHEET

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SCALE	1"=20'
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CHECKED	RSF
APPROVED	RSF

SHEET 6 OF 8

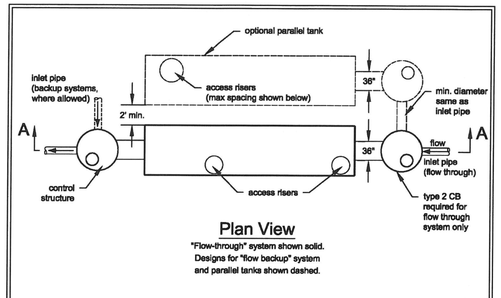
RAND-MILESTONE LOT 1 GRADING AND DRAINAGE PLAN

LOT 1 BUILDING PERMIT

SE 1/4 OF SEC.1, T.24N., R.4E., W.M.

CITY OF MERCER ISLAND, WASHINGTON

Figure V-12.14: Typical Detention Tank



Note:
All metal parts corrosion resistant. Steel parts galvanized and asphalt coated (Treatment 1 or better), or aluminized steel (Type II or better).

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State of Washington

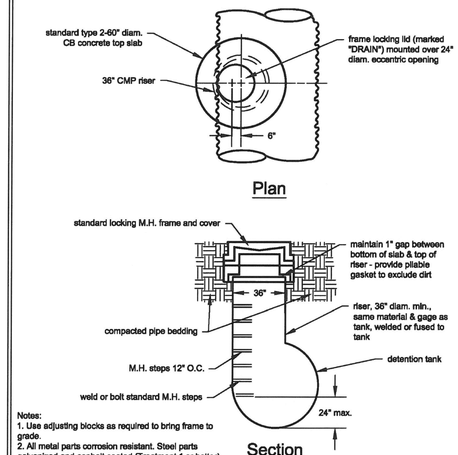
Typical Detention Tank

Revised May 2019

2019 Stormwater Management Manual for Western Washington

Volume V - Chapter 12 - Page 986

Figure V-12.15: Detention Tank Access Detail



Notes:
1. Use adjusting blocks as required to bring frame to grade.
2. All metal parts corrosion resistant. Steel parts galvanized and asphalt coated (Treatment 1 or better), or aluminized steel (Type II or better).
3. Must be located for access by maintenance vehicles.
4. May substitute WSDOT special Type IV manhole (RCP only)

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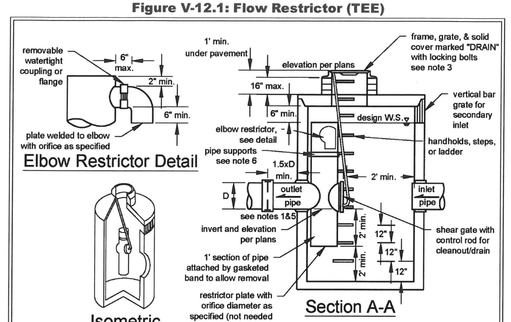
Detention Tank Access Detail

Revised May 2019

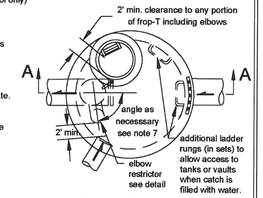
2019 Stormwater Management Manual for Western Washington

Volume V - Chapter 12 - Page 987

Figure V-12.1: Flow Restrictor (TEE)



Notes:
1. Use a minimum of a 54" diameter type 2 catch basin.
2. Outlet Capacity: 100-yr developed peak flow.
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 ¼".
6. Provide at least one 3" x 0.90 inches support bracket anchored to concrete wall. (maximum 3'-0" vertical spacing)
7. Locate elbow restrictor(s) as necessary to provide minimum clearance as shown.
8. Locate additional ladder rungs in structures used as access to tanks or vaults to allow access when catch basin is filled with water.



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DEPARTMENT OF ECOLOGY
State of Washington

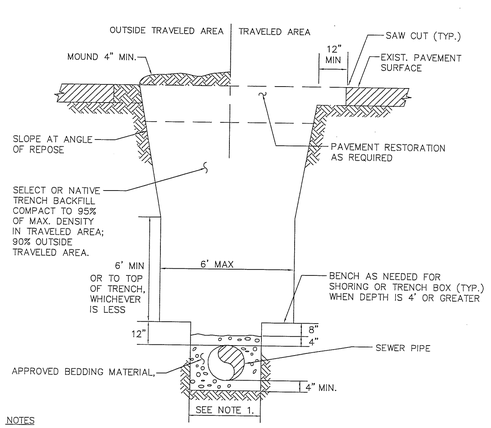
Flow Restrictor (TEE)

Revised June 2016

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2019 Stormwater Management Manual for Western Washington

Volume V - Chapter 12 - Page 950



NOTES

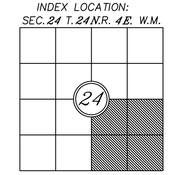
1. TRENCH BACKFILL BELOW TOP 4 FEET MAY BE NATIVE MATERIALS OR AS REQUIRED BY THE SPECIFICATIONS, OR AS DIRECTED BY THE PUBLIC WORKS INSPECTOR
2. MAXIMUM WIDTH OF TRENCH AT TOP OF PIPE
   * 30 INCHES FOR PIPE UP TO AND INCLUDING 12" NOMINAL DIAMETER.
   * O.D. PLUS 16 INCHES FOR PIPE LARGER THAN 12" NOMINAL DIAMETER.
3. IN PAVED AREAS USE CRUSHED ROCK BACKFILL
   * FULL DEPTH OF TRENCH WHERE SEWER MAIN CROSSES PERPENDICULAR TO THE TRAVELED LANE OR DRIVEWAY.
   * TOP FOUR FEET WHERE SEWER MAIN RUNS PARALLEL TO THE TRAVELED LANE, UNLESS EXISTING MATERIAL IS DETERMINED BY THE ENGINEER TO BE SUITABLE FOR BACKFILL.

TRENCH DETAIL



3/20/25

INDEX LOCATION:
SEC. 24 T. 24N.R. 4E. W.M.



REVISIONS	BY	DATE

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DRAINAGE DETAILS

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PHONE: (206) 817-419

ENGINEERS - SURVEYORS
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1550 NW MAIN STREET, SUITE B
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PH:(425)392-5351 FAX:392-4676

JOB NO.	20025
DATE	12/22
SCALE	1"=20'
DESIGNED	RSF
DRAWN	RSF
CHECKED	RSF
APPROVED	RSF

RAND-MILESTONE LOT 1 GRADING AND DRAINAGE PLAN

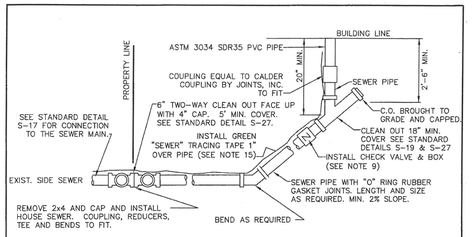
LOT 1 BUILDING PERMIT

SE 1/4 OF SEC.1, T.24N., R.4E., W.M.

CITY OF MERCER ISLAND, WASHINGTON



7/28/2023



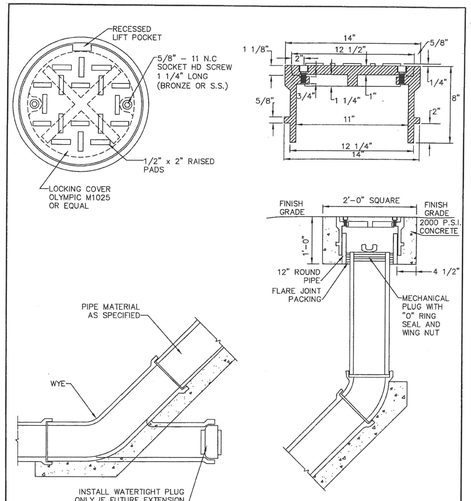
BUILDING CONNECTION

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-36 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

REV DATE								6-5-2009	NO SCALE	S-18
										APPROVED



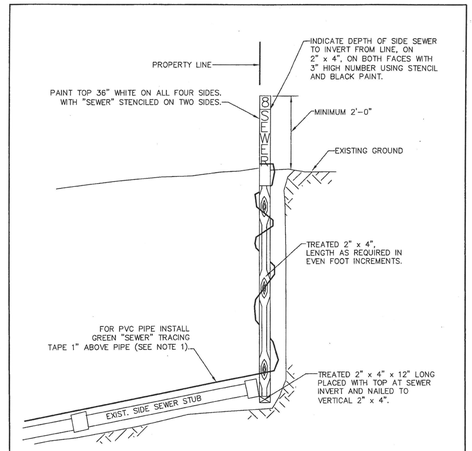
FOR PVC PIPE

NOTES

1. SEE S-27 FOR INSTALLATION DETAILS.

CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER
CLEAN OUT DETAIL

REV DATE								6-5-2009	NO SCALE	S-19
										APPROVED

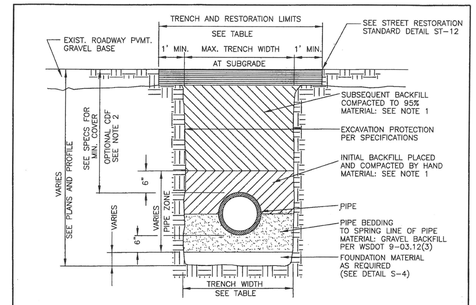


NOTES

1. 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 MARKER POST

REV DATE								6-5-2009	NO SCALE	S-20
										APPROVED



NOTES

1. 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.
2. CDF FOR BACKFILL MAY BE REQUIRED BY CITY ENGINEER WHEN PROPER COMPACTION AROUND EXISTING UTILITIES MAY NOT BE POSSIBLE. CDF SHALL BE PER WSDOT 2-09.3(1)E.
3. SEE S-4 FOR PIPE BEDDING DETAILS.

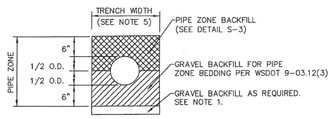
TRENCH WIDTH

PIPE SIZE	PIPE ZONE MAX. TRENCH WIDTH	MAX. TRENCH WIDTH AT SUBGRADE	MAX. RESTORATION WIDTH AT SURFACE
SIDE SEWER	2'-0"	2'-0"	6'-0"
4" OR 6"	2'-2"	3'-0"	8'-0"
8"	2'-4"	4'-0"	8'-0"
10"	2'-6"	4'-0"	8'-0"
12"	2'-8"	4'-6"	8'-6"

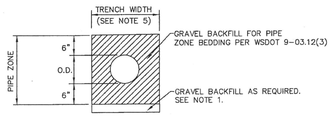
CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER
SEWER TRENCH DETAIL

REV DATE								6-5-2009	NO SCALE	S-3
										APPROVED

BEDDING FOR RIGID PIPE MATERIAL



BEDDING FOR FLEXIBLE PIPE MATERIAL

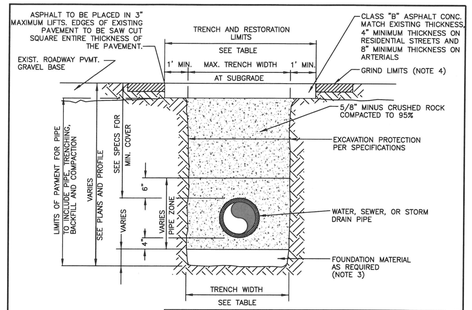


NOTES

1. EXCAVATE UNSTABLE MATERIAL DOWN TO FIRM SOIL. REPLACE WITH GRAVEL BACKFILL PER WSDOT 9-03.12(3) AS DIRECTED BY THE CITY ENGINEER.
2. PROVIDE UNIFORM SUPPORT UNDER BARREL.
3. HAND TAMP UNDER HAUNCHES.
4. COMPACT BEDDING AND BACKFILL MATERIAL TO 95% MAX. DENSITY EXCEPT DIRECTLY OVER PIPE. HAND TAMP ONLY UNTIL MINIMUM 6" ABOVE TOP OF PIPE.
5. 30" MAXIMUM TRENCH WIDTH FOR PIPE UP TO AND INCLUDING 12", FOR PIPE LARGER THAN 12", USE O.D. PLUS 16".

CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER
PIPE BEDDING

REV DATE								6-5-2009	NO SCALE	S-4
										APPROVED



WIDTH TRENCH

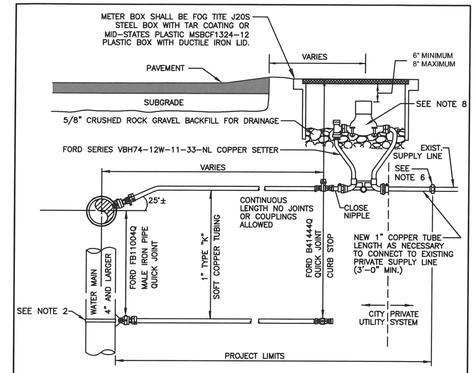
PIPE SIZE	PIPE ZONE MAX. TRENCH WIDTH	MAX. TRENCH WIDTH AT SUBGRADE	MAX. RESTORATION WIDTH AT SURFACE
WATER SERVICES	2'-0"	2'-0"	4'-0"
4" OR 6"	2'-2"	3'-0"	5'-0"
8"	2'-4"	4'-0"	6'-0"
10"	2'-6"	4'-0"	6'-0"
12"	2'-8"	4'-6"	6'-6"
16"	3'-0"	5'-0"	7'-0"

NOTES

1. CALL IN LOCATES TWO BUSINESS DAYS BEFORE YOU DIG. (1-800-424-5555)
2. IN RIGHT-OF-WAY USE 100% 5/8 MINUS CRUSHED ROCK FOR BEDDING, PIPE ZONE AND BACKFILL
3. FOUNDATION MATERIAL SHALL BE 1 ¼" MINUS CRUSHED ROCK OR OTHER AGGREGATE AS APPROVED BY CITY ENGINEER.
4. GRIND AND OVERLAY LIMITS SHALL EXTEND A MINIMUM OF 10' PAST THE END OF TRENCH AREAS.
5. SEAL ALL FINAL PATCHING AND PAVING SEAMS WITH LIQUID ASPHALT. SQUEEGEE OR MOP THE SEALER. COVER WITH DRY SAND.

CITY OF MERCER ISLAND
STANDARD DETAILS
WATER
TRENCH SECTION

								3-29-2021	NO SCALE	W-3
										APPROVED

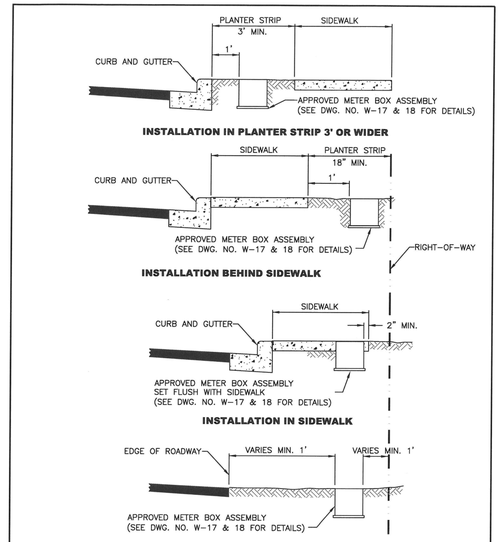


NOTES

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 HORIZONTALLY 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

REV DATE								02-05-2021	NO SCALE	W-13
										APPROVED



CITY OF MERCER ISLAND
STANDARD DETAILS
WATER
WATER METER PLACEMENT

REV DATE								3-20-2006	NO SCALE	W-16
										APPROVED

REVISIONS	BY	DATE

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WATER AND SEWER DETAILS

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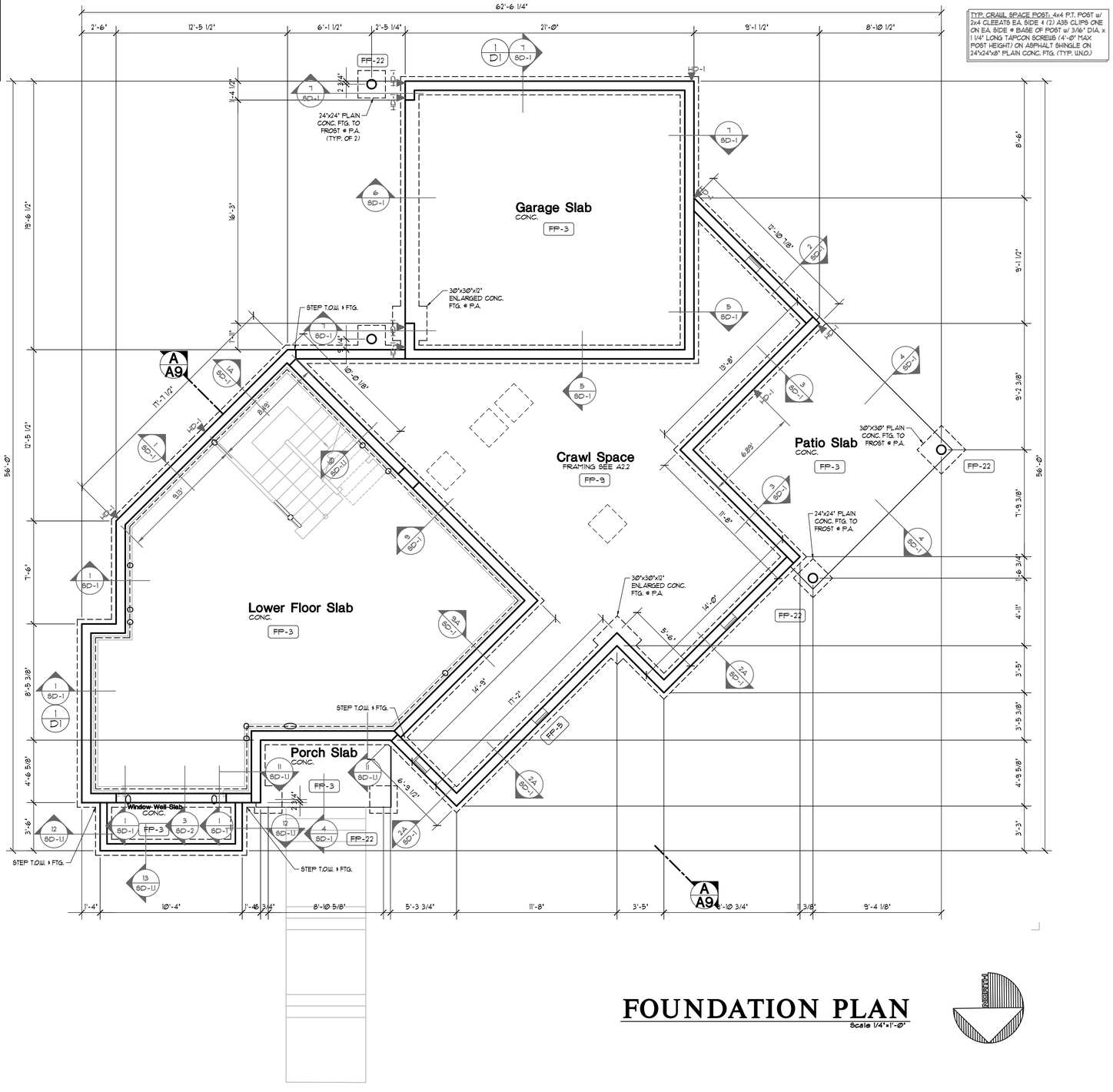
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ISSAQUAH, WASHINGTON 98027
PH:(425)392-5351 FAX:392-4676

JOB NO. 20025
DATE 12/22
SCALE 1"=20'
DESIGNED RSF
DRAWN RSF
CHECKED RSF
APPROVED RSF

SHEET 8 OF 8

CRAWL SPACE VENTS

1. CRAWL SPACE AREA 625 SF
2. CRAWL SPACE AREA / 300 = 2.08 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 = 3.58 VENTS REQUIRED.
5. 4 VENTS SHOWN (SEE PLAN FOR LOCATION)
6. 4 VENTS x .58 = 2.32 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. WSEC 402.2.1



FOUNDATION PLAN

Scale 1/4"=1'-0"

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 @ SHEET A-1
   - TRUSS LOADING. SEE DIV. 2 @ 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. 6 @ SHEET A-1 HEADERS TO BE INSULATED W/ MIN. R-10 INSULATION
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"x1" 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 WWF ON 4" GRANULAR FILL. SLOPE 2" TO DOOR. PROVIDE THICKENED EDGE AT DOOR SEE DIV. 3 SHEET A-1 FOR SLABS AT CONDITIONED SPACE PROVIDE A MIN. 10-MIL VAPOR RETARDER WITH JOINTS LAPPED NOT LESS THAN 6" PLACED BETWEEN THE CONCRETE FLOOR SLAB AND THE BASE COURSE OF THE PREPARED SUBGRADE.
FP-5	CRAWL SPACE VENT. SEE CALCULATION. SEE DIV. 1 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 (6CAB 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. SEE DIV. 6 SHEET A-1
FP-9	6 MIL BLACK POLYETHYLENE GROUND COVER ON GRADE. SEE DIV. 7 SHEET A-1
FP-12	18"x24" CRAWL SPACE ACCESS. INSULATE AND WEATHER STRIP. SEE DIV. 2 @ 2 SHEET A-1
FP-17	STUB STEEL 12" INTO SLAB @ 12"oc
FP-18	FLOOR JOIST 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
- HORIZONTAL STRAP WITH SIZE DESIGNATION
- INDICATES BEAM CALCULATION WITH INDEXED NUMBER
- WALL ABOVE / WALL BELOW

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

ARCHITECTURAL INNOVATIONS, P.S.
Forward Thinking Design Solutions For Your Environment
14311 SE 16th St
Bellevue, WA 98007
1-800-888-4517
www.kaplerhomeplans.com

Date	By	Description
9/27/24	AG	PERMIT SET
3/10/25		JURISDICTIONAL COMMENTS

Milestone NW

7621 SE 22nd ST. Mercer Island, WA 98040

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TITLE

JOB NO. : 21022.21
STARTING NO. : 21022.05

SHEET

A2.0

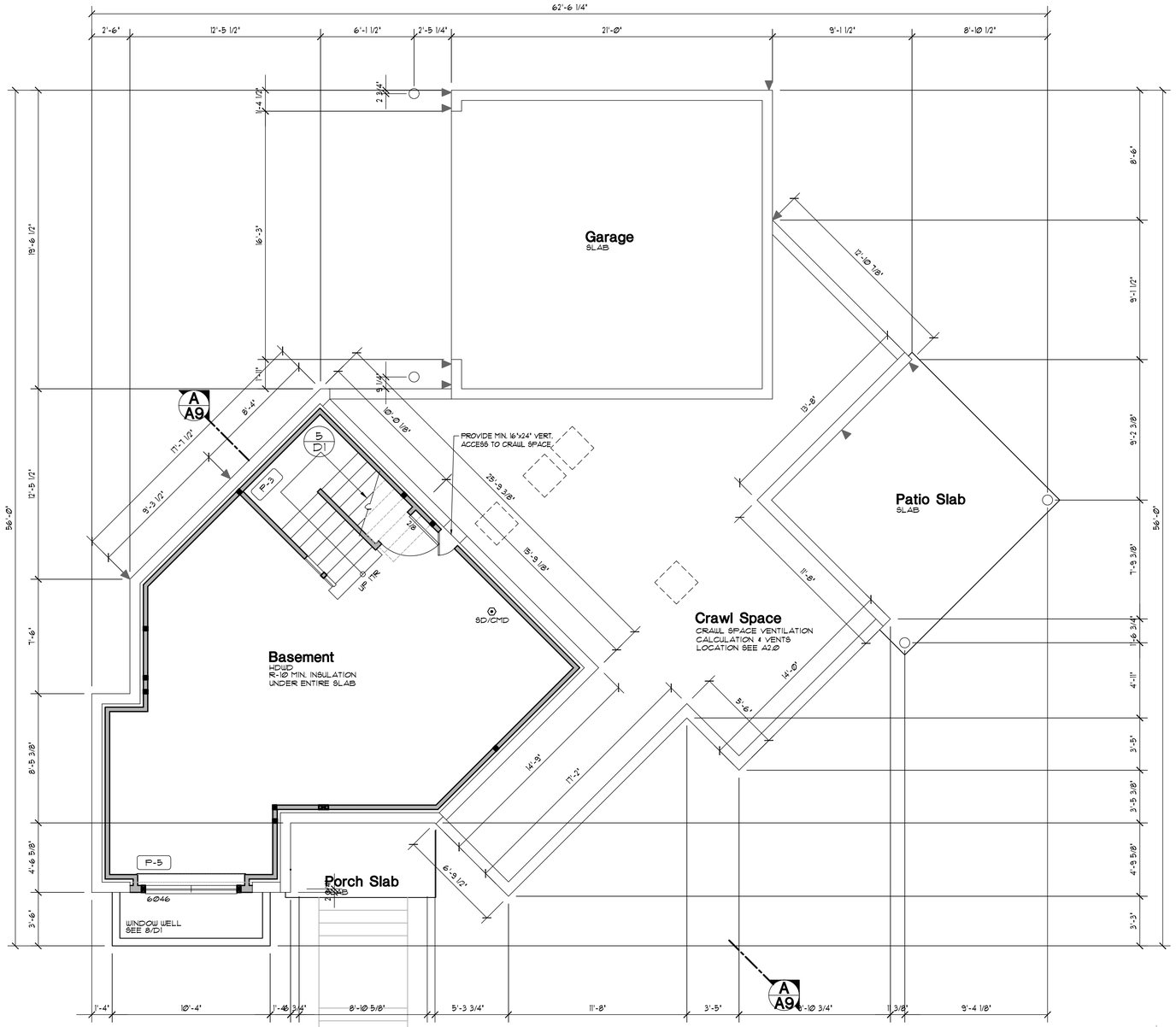
SYMBOLS AND LEGEND

- (F) FAN- DIRECT VENT TO OUTSIDE
  -BATHROOMS/LAUNDRY 50 CFM MIN.
  -KITCHEN EXHAUST HOOD OVER A COMBUSTION RANGE TO BE MIN. OF 250CFM. IF EXHAUST HOOD EXCEEDS 400 CFM MAKE UP AIR MUST BE PROVIDED PER SECTION M1503.6.
- (WF) WHOLE-HOUSE FAN TO RUN CONTINUOUS & CONFORM TO IRC, M1508.4. FAN SIZE PER PLAN. FAN RATE TO BE ADJUSTED BY A FACTOR OF 1.5 FOR A NON BALANCED NON DISTRIBUTED SYSTEM. FRESH AIR TO BE PROVIDED BY THE FORCED AIR SYSTEM DUCTS PER SECTION M1505.4.1. FAN TO HAVE A SONE RATING OF 1.0 OR LESS MEASURED AT .01 INCHES WATER GAUGE
- (T) THERMOSTAT @ 50" ABOVE FLOOR
- (SD/CMD) 110v SMOKE ALARM PER I.R.C. R314 WITH BATTERY BACKUP INTERCONNECTED PER R314.4 & R315.5. USE A COMBINATION SMOKE/CARBON MONOXIDE ALARM WHEN NOTED
- (H) HEAT DETECTOR OR HEAT ALARM RATED FOR THE AMBIENT OUTDOOR TEMPERATURES & HUMIDITY PER I.R.C. R314.

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 AIR 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.



BASEMENT 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. 17 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. 01002.6.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. 01002.6.B. SHEET A-1
- P-3 STAIR ASSEMBLY NOTES: PER I.R.C. SECTION R311.7
  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 1 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 R303.7.
  SEE DIV. 01002.7 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. 08800 SHEET A-1
- P-5 EGRESS WINDOW PER I.R.C., SECTION R310 SEE DIV. 08600 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. 09250 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. 01002.7 SHEET A-1
- P-10 18"x24" CRAWL SPACE ACCESS, INSULATE AND WEATHER STRIP. SEE DIV. 01002.1 SHEET A-1
- P-11 22"x30" ATTIC SPACE ACCESS W/ 30" HEAD CLEARANCE. INSULATE AND WEATHER STRIP. SEE DIV. 01002.2 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, MUST BE LISTED, LABELED &INSTALLED PER MFG. SPECIFICATIONS, SHALL CONFORM TO I.R.C.REQUIREMENTS. SEE DIV. 01002.12 SHEET A-1
  B. ZERO CLEARANCE FIREPLACES SHALL CONFORM TO I.R.C. REQUIREMENTS. SEE DIV. 01002.12 SHT A-1
  C. HEARTH SHALL CONFORM TO I.R.C REQUIREMENT SEE DIV. 01002.12
  D. FIREBLOCK OPENINGS AROUND PENETRATIONS @ EACH FLOOR PER I.R.C. SECTION R1003.19.
  E. FIREPLACE MUST COMPLY WITH UL 127 TESTING
- P-16 SEE SITE PLAN FOR EXTENT OF WALKS & 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 R302.11. 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.

REGISTERED ARCHITECT 8079 STATE OF WASHINGTON
ORIGINAL SIGNATURE REQUIRED

Date	By	Description
10/2/24	AG	PERMIT SET
3/10/25	AG	JURISDICTIONAL COMMENTS

Milestone NW

Mercer Island Lot 1

7621 SE 22nd ST. Mercer Island, WA 98040

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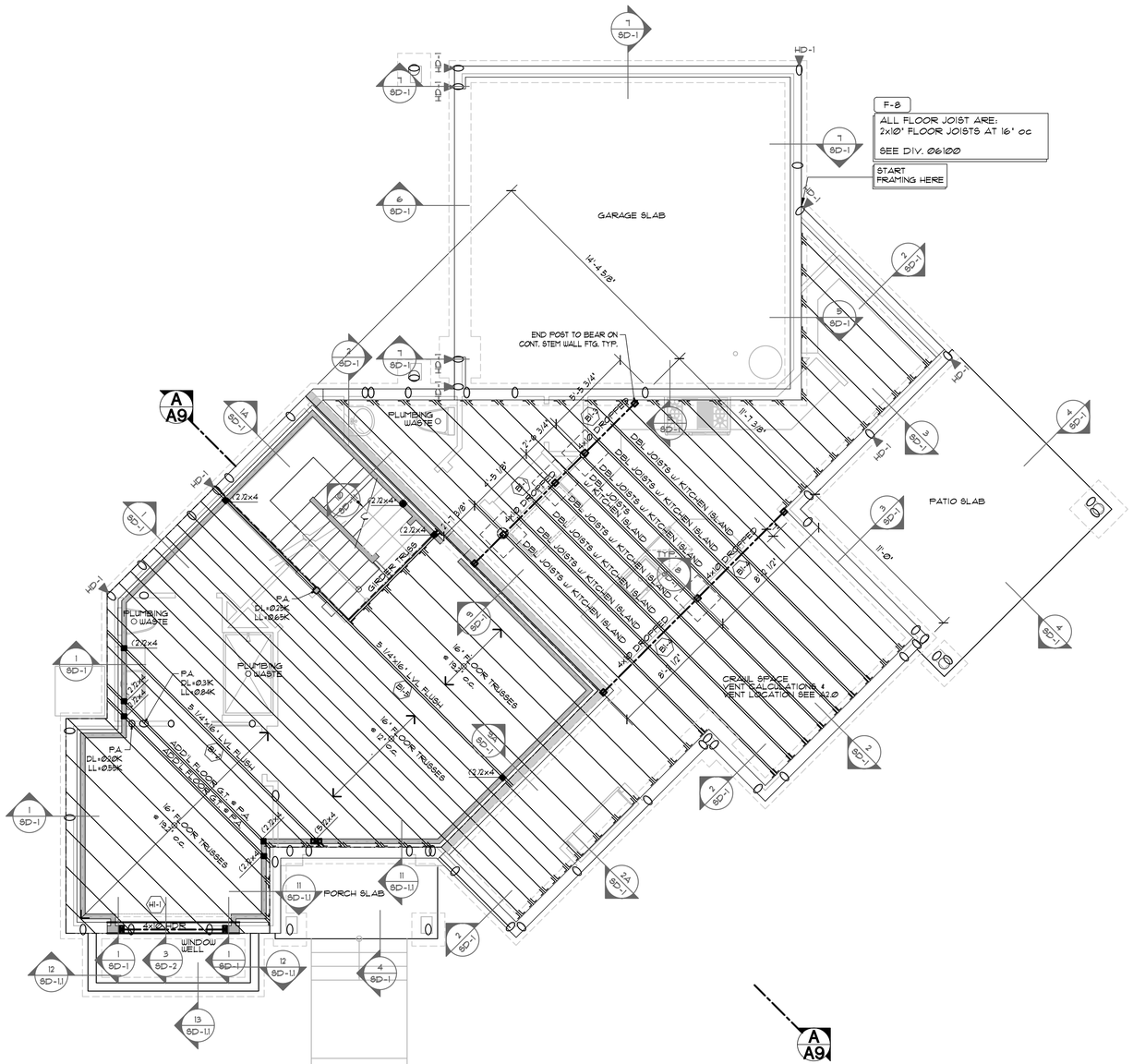
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TITLE

JOB NO. : 21022.21
STARTING NO. : 21022.05

SHEET

A2.1


GARAGE SLAB
14'-4 5/8"
END POST TO BEAR ON CONT. STEM WALL FTG. TYP.
PLUMBING WASTE
DBL. JOISTS w/ KITCHEN ISLAND
11'-1 3/8"
PATIO SLAB
11'-0"
GIRDER TRUSS
16" FLOOR TRUSSES @ 19.2" oc
CRAWL SPACE VENT CALCULATIONS & VENT LOCATIONS SEE S2.0
PORCH SLAB
WINDOW WELL
P.A. DL=0.2K LL=0.6K
P.A. DL=0.3K LL=0.8K
P.A. DL=0.2K LL=0.5K
ADDL FLOOR SUPT @ P.A. ABOVE FOOTING BELOW
2x12 FLUSH
2x12 DROPPED
2x4 DROPPED
2x4 FLUSH
2x12 BEAM

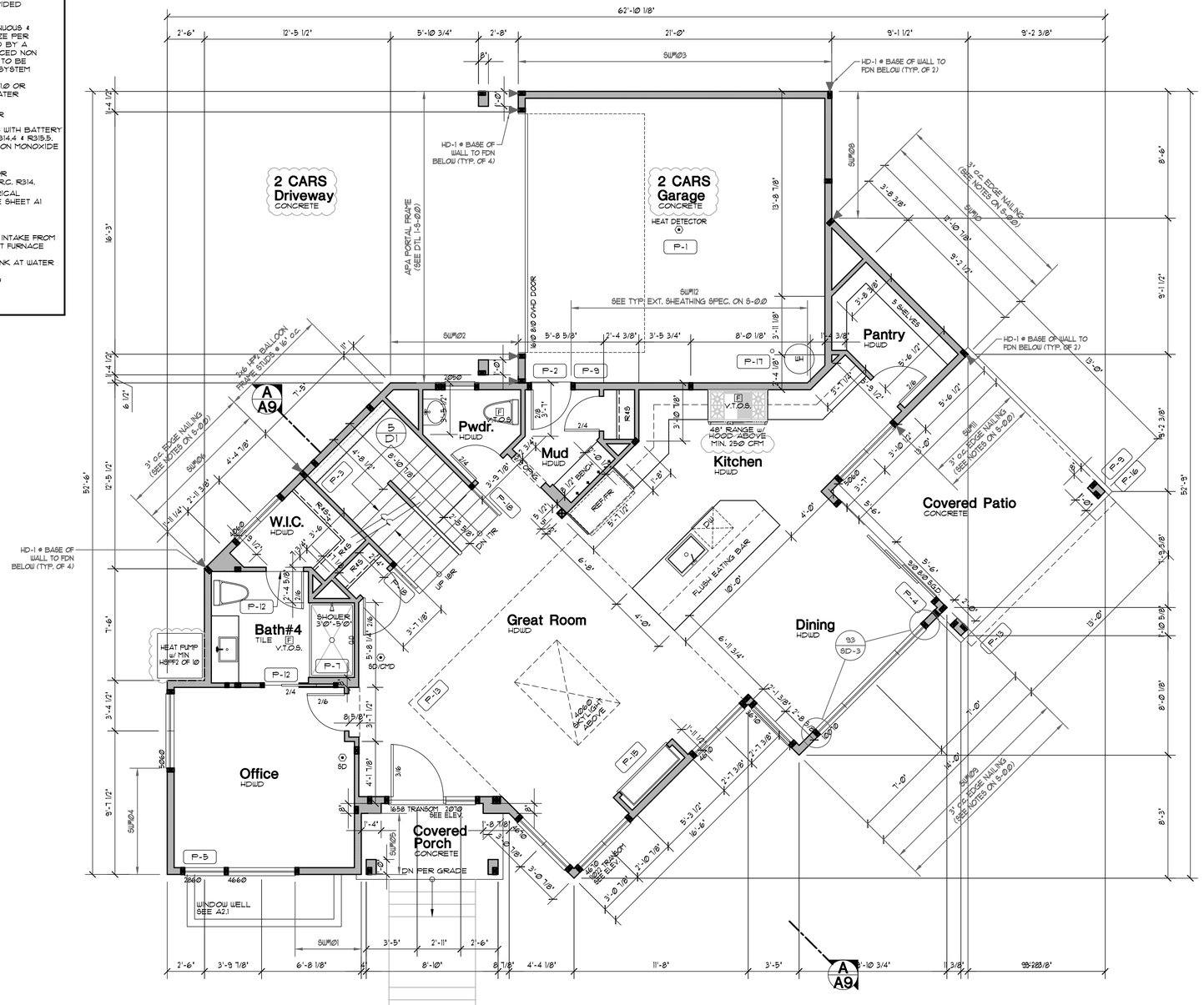
SYMBOLS AND LEGEND

- (F) FAN- DIRECT VENT TO OUTSIDE
  -BATHROOMS/LAUNDRY 50 CFM MIN.
  -KITCHEN EXHAUST HOOD OVER A COMBUSTION RANGE TO BE MIN. OF 250CFM, IF EXHAUST HOOD EXCEEDS 400 CFM MAKE UP AIR MUST BE PROVIDED PER SECTION M1503.6.
- (WF) WHOLE-HOUSE FAN TO RUN CONTINUOUS & CONFORM TO IRC, M1508.4. FAN SIZE PER PLAN. FAN RATE TO BE ADJUSTED BY A FACTOR OF 1.5 FOR A NON BALANCED NON DISTRIBUTED SYSTEM. FRESH AIR TO BE PROVIDED BY THE FORCED AIR SYSTEM DUCTS PER SECTION M1505.4.1. FAN TO HAVE A SONE RATING OF 1.0 OR LESS MEASURED AT .01 INCHES WATER GAUGE
- (T) THERMOSTAT @ 50" ABOVE FLOOR
- (SD/CMD) 110v SMOKE ALARM PER I.R.C. R314 WITH BATTERY BACKUP INTERCONNECTED PER R314.4 & R315.5. USE A COMBINATION SMOKE/CARBON MONOXIDE ALARM WHEN NOTED
- (HD) HEAT DETECTOR OR HEAT ALARM RATED FOR THE AMBIENT OUTDOOR TEMPERATURES & HUMIDITY PER I.R.C. R314.

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 AIR 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.



MAIN FLOOR PLAN

Scale 1/4"=1'-0"

NORTH

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 R311.7
  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 R303.7.
  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@30 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, MUST BE LISTED, LABELED &INSTALLED 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 SHT A-1
  C. HEARTH SHALL CONFORM TO I.R.C REQUIREMENT SEE DIV. 01@02.12
  D. FIREBLOCK OPENINGS AROUND PENETRATIONS @ EACH FLOOR PER I.R.C. SECTION R1003.19.
  E. FIREPLACE MUST COMPLY WITH UL 127 TESTING
- P-16 SEE SITE PLAN FOR EXTENT OF WALKS & 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 R302.11. 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

MAIN FLOOR	1315 SF
UPPER FLOOR	1541 SF
BASEMENT	590 SF
TOTAL	3446 SF
GARAGE	405 SF
PORCH/PATIO	44/170 SF

SQUARE FOOTAGE IS MEASURED TO THE OUTSIDE FACE OF WALLS. STAIRS ARE COUNTED ONCE IN CALCULATIONS. OPEN TO BELOW SPACES AND GARAGES ARE NOT INCLUDED IN CALCULATIONS.

REGISTERED ARCHITECT 8079 STATE OF WASHINGTON JAMES A. GRAHAM ORIGINAL SIGNATURE REQUIRED

Date	By	Description
10/22/24	JAG	PERMIT SET
3/10/25	JAG	JURISDICTIONAL COMMENTS

Milestone NW

7621 SE 22nd ST. Mercer Island, WA 98040

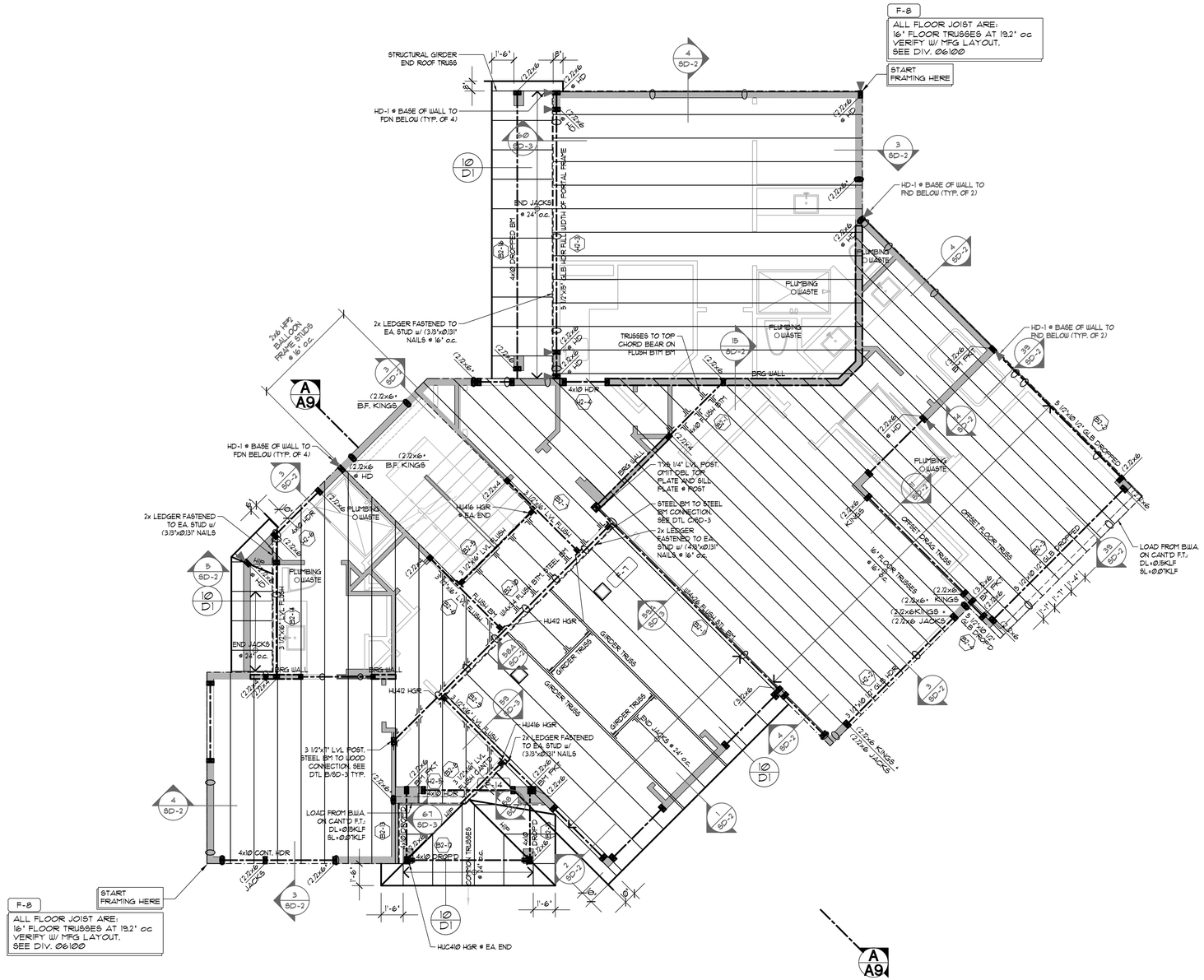
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1-800-888-4517
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TITLE

JOB NO.: 21022.21
STARTING NO.: 21022.05

SHEET
A3



UPPER FLOOR/LOWER ROOF FRAMING PLAN

Scale 1/4"=1'-0"

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. 6100 SHEET A-1
   - TRUSS LOADING, SEE DIV. 0100/0.10A 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. 0610 SHEET A-1 HEADERS TO BE INSULATED W/ MIN. R-10 INSULATION (H2)
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. 0100/2.3B SHEET A-1
F-8	FLOOR JOIST - SEE SCHEDULE DWG. SEE DIV. 0610 SHEET A-1
F-9	SEE ELEVATIONS AND SECTIONS FOR PLATE HEIGHT
F-10	PRESSURE BLOCKING SEE DIV. 0610 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 BE TOP CHORD BEARING.
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 376 SF/300 =1.25 SF OF VENT AREA REQ.

40% MIN. AT 36" MAX BELOW RIDGE = 0.5 SF MIN.
50% MAX. AT 36" MAX BELOW RIDGE = 0.625 SF MAX.

2 ROOF JACKS AT 50 SQ. IN. EACH= 100 SQ. IN.=0.69 SF (36" MAX. BELOW RIDGE)

60 L.F. OF EAVE VENTS AT 3.3 SQ. IN./LF= 198 SQ. IN.= 1.37 SF

TOTAL SF OF VENTILATION PROVIDED = 2.06 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
- 67xx — HORIZONTAL STRAP WITH SIZE DESIGNATION
- 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
10/2/24	AG	PERMIT SET
3/10/25	AG	JURISDICTIONAL COMMENTS

Milestone NW
Mercer Island Lot 1
7621 SE 22nd ST. Mercer Island, WA 98040

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TITLE

JOB NO.: 21022.21
STARTING NO.: 21022.05

SHEET
A4

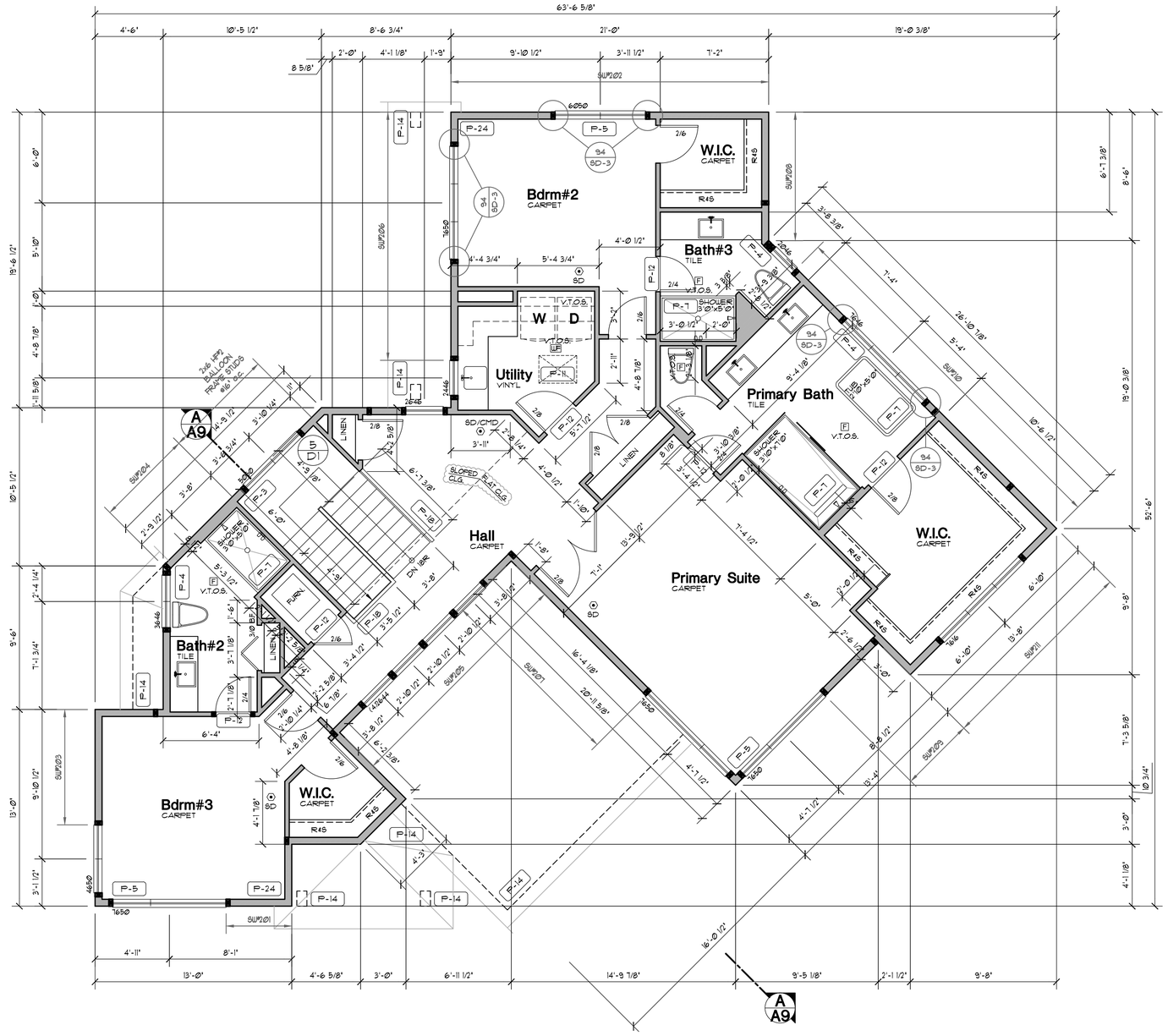
SYMBOLS AND LEGEND

- (F) FAN- DIRECT VENT TO OUTSIDE
  -BATHROOMS/LAUNDRY 50 CFM MIN.
  -KITCHEN EXHAUST HOOD OVER A COMBUSTION RANGE TO BE MIN. OF 250CFM. IF EXHAUST HOOD EXCEEDS 400 CFM MAKE UP AIR MUST BE PROVIDED PER SECTION M1503.6.
- (WF) WHOLE-HOUSE FAN TO RUN CONTINUOUS & CONFORM TO IRC, M1508.4. FAN SIZE PER PLAN. FAN RATE TO BE ADJUSTED BY A FACTOR OF 1.5 FOR A NON BALANCED NON DISTRIBUTED SYSTEM. FRESH AIR TO BE PROVIDED BY THE FORCED AIR SYSTEM DUCTS PER SECTION M1505.4.1. FAN TO HAVE A SONE RATING OF 1.0 OR LESS MEASURED AT .01 INCHES WATER GAUGE
- (T) THERMOSTAT @ 50" ABOVE FLOOR
- (SD/CMD) 110v SMOKE ALARM PER I.R.C. R314 WITH BATTERY BACKUP INTERCONNECTED PER R314.4 & R315.5. USE A COMBINATION SMOKE/CARBON MONOXIDE ALARM WHEN NOTED
- (CO) HEAT DETECTOR OR HEAT ALARM RATED FOR THE AMBIENT OUTDOOR TEMPERATURES & HUMIDITY PER I.R.C. R314.

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 AIR PLENUM AT FURNACE WITH MOTORIZED FLAMPAMPERS.
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.



UPPER FLOOR PLAN

Scale 1/4"=1'-0"

NORTH

GENERAL PLAN NOTES

1. SEE SHEET A-1 FOR ALL GENERAL NOTES AND REQUIREMENTS.
2. ENERGY AND AIR QUALITY INFORMATION SEE DIV. 17 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. 01002.6.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. 01002.6.B. SHEET A-1
- P-3 STAIR ASSEMBLY NOTES: PER I.R.C. SECTION R311.7
  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 1 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.
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  G. PROVIDE STAIRWAY ILLUMINATION PER I.R.C. SECTION R303.7.
  SEE DIV. 01002.7.1 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. 08800 SHEET A-1
- P-5 EGRESS WINDOW PER I.R.C., SECTION R310 SEE DIV. 08600 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. 09350 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. 01002.7.1 SHEET A-1
- P-10 18"x24" CRAWL SPACE ACCESS. INSULATE AND WEATHER STRIP. SEE DIV. 01002.1 SHEET A-1
- P-11 22"x30" ATTIC SPACE ACCESS W/ 30" HEAD CLEARANCE. INSULATE AND WEATHER STRIP. SEE DIV. 01002.2 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, MUST BE LISTED, LABELED, &INSTALLED PER MFG. SPECIFICATIONS, SHALL CONFORM TO I.R.C.REQUIREMENTS. SEE DIV. 01002.12 SHEET A-1
  B. ZERO CLEARANCE FIREPLACES SHALL CONFORM TO I.R.C. REQUIREMENTS. SEE DIV. 01002.12 SHT A-1
  C. HEARTH SHALL CONFORM TO I.R.C REQUIREMENT SEE DIV. 01002.12
  D. FIREBLOCK OPENINGS AROUND PENETRATIONS @ EACH FLOOR PER I.R.C. SECTION R1003.19.
  E. FIREPLACE MUST COMPLY WITH UL 127 TESTING
- P-16 SEE SITE PLAN FOR EXTENT OF WALKS & 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 R302.11. 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.

REGISTERED ARCHITECT 8079 STATE OF WASHINGTON DAVID A. GOLDSTEIN ORIGINAL SIGNATURE REQUIRED

Date	By	Description
10/2/24	AG	PERMIT SET
3/10/25	AG	JURISDICTIONAL COMMENTS

Milestone NW

Mercer Island Lot 1

7621 SE 22nd ST. Mercer Island, WA 98040

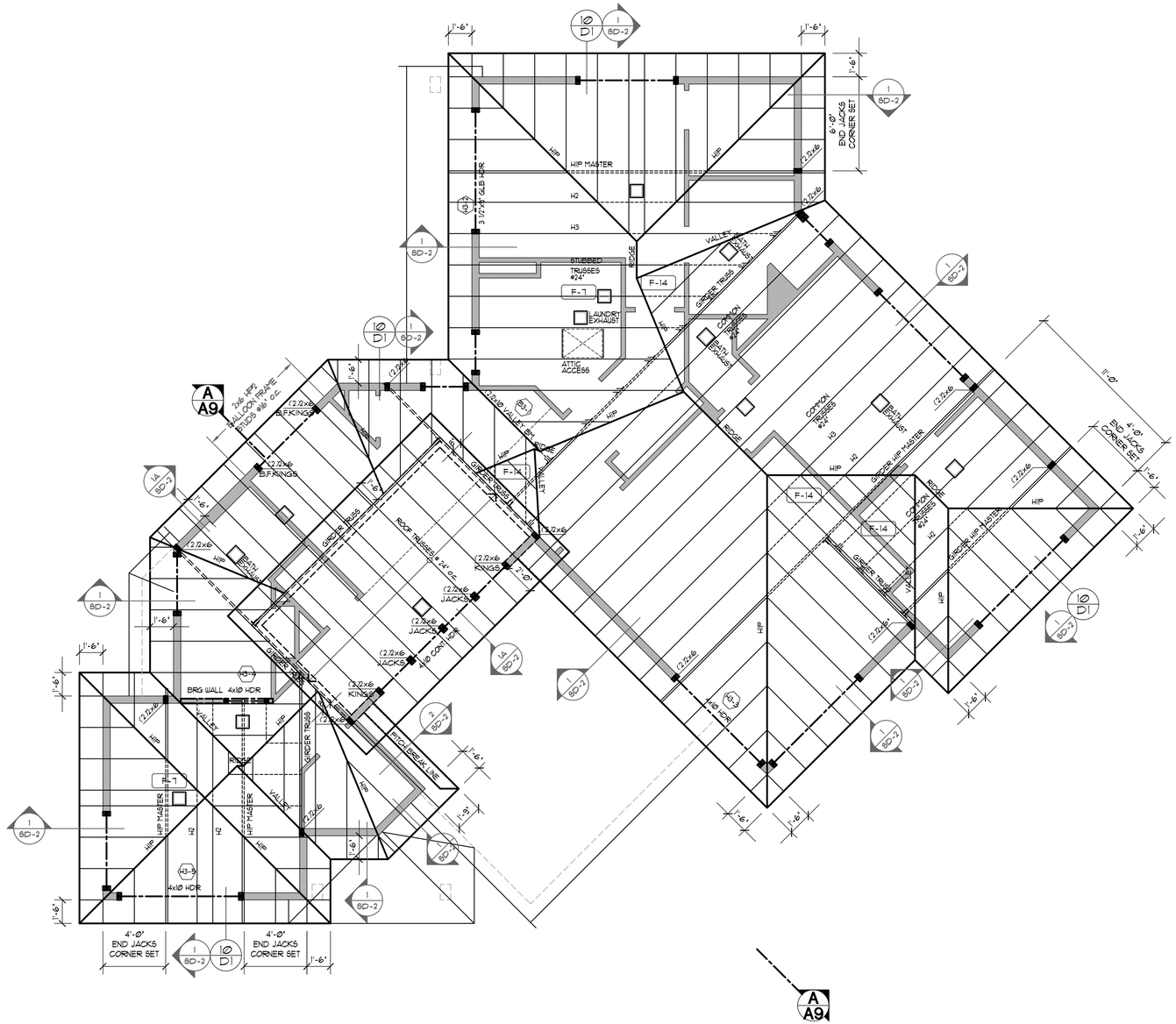
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TITLE

JOB NO.: 21022.21
STARTING NO.: 21022.05

SHEET
A5



UPPER ROOF FRAMING PLAN

SCALE 1/4"=1'-0"

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. 6100 SHEET A-1
   - TRUSS LOADING, SEE DIV. 09060/10A 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. 06100 SHEET A-1 HEADERS TO BE INSULATED W/ MIN. R-10 INSULATION (B3)
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. 09060/3.B SHEET A-1
- F-8 FLOOR JOIST - SEE SCHEDULE DWG. SEE DIV. 06100 SHEET A-1
- F-9 SEE ELEVATIONS AND SECTIONS FOR PLATE HEIGHT
- F-10 PRESSURE BLOCKING SEE DIV. 06100 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 BE TOP CHORD BEARING.
- 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 1622 SF/300 =5.4 SF OF VENT AREA REQ.

40% MIN. AT 36" MAX BELOW RIDGE = 2.16 SF MIN.
50% MAX. AT 36" MAX BELOW RIDGE = 2.7 SF MAX.

7 ROOF JACKS AT 50 SQ. IN. EACH= (36" MAX. BELOW RIDGE) 350 SQ. IN.÷ 2.43 SF

237 L.F. OF EAVE VENTS AT 3.3÷SQ. IN./LF= 782.1 SQ. IN.÷ 5.43 SF

TOTAL SF OF VENTILATION PROVIDED = 7.86 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
8079
STATE OF WASHINGTON
ORIGINAL SIGNATURE REQUIRED

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3/10/25	AG	JURISDICTIONAL COMMENTS

Milestone NW

Mercer Island Lot 1

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TITLE

JOB NO. : 21022.21
STARTING NO. : 21022.05

SHEET

A6

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-60 BLOWN-IN
SOFFIT: (DIV. 7)	PER SPEC.
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-23 BLOW-IN BLANKET PROVIDE CLASS II VAPOR RETARDER IN MARINE ZONE 4
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)	PER SPEC.

TRIM:(DIV. 6)

WINDOW: (WITH NO BRICK MOLD)	HEAD: METAL FLASHING JAMB: METAL FLASHING SILL: METAL FLASHING
CORNER BOARDS:	INSIDE: MEATL CORNER OUTSIDE: METAL CORNER
FASCIA:	2x8 UNO



WEST ELEVATION

Scale 1/4"=1'-0"



NORTH ELEVATION

Scale 1/4"=1'-0"

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JAMES A. JACOBSEN
STATE OF WASHINGTON
ORIGINAL SIGNATURE REQUIRED

Date	By	Description
12/2/24	AG	PERMIT SET
3/10/25	AG	JURISDICTIONAL COMMENTS

Milestone NW

Mercer Island Lot 1

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JOB NO.: 21022.21
STARTING NO.: 21022.05

SHEET

A7

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-60 BLOWN-IN
SOFFIT: (DIV. 7)	PER SPEC.
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-23 BLOW-IN BLANKET PROVIDE CLASS II VAPOR RETARDER IN MARINE ZONE 4
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)	PER SPEC.

TRIM:(DIV. 6)

WINDOW: (WITH NO BRICK MOLD)	HEAD: METAL FLASHING JAMB: METAL FLASHING SILL: METAL FLASHING
CORNER BOARDS:	INSIDE: MEATL CORNER OUTSIDE: METAL CORNER
FASCIA:	2x8 UNO



SOUTH ELEVATION

Scale 1/4"=1'-0"



EAST ELEVATION

Scale 1/4"=1'-0"

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12/2/24	AG	PERMIT SET
3/10/25	AG	JURISDICTIONAL COMMENTS

Milestone NW

Mercer Island Lot 1

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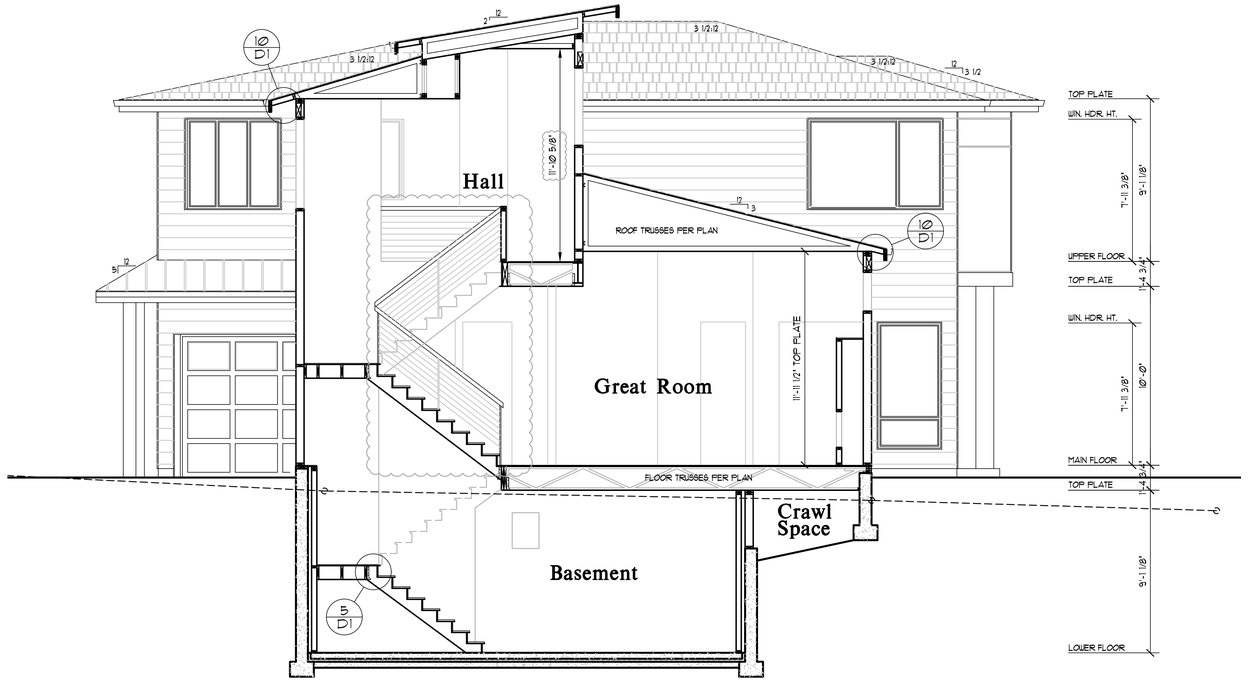
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STARTING NO.: 21022.05

SHEET

A8



BUILDING SECTION A-A

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-60 BLOWN-IN
SOFFIT: (DIV. 7)	PER SPEC.
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-23 BLOW-IN BLANKET PROVIDE CLASS II VAPOR RETARDER IN MARINE ZONE 4
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)	PER SPEC.

TRIM:(DIV. 6)

WINDOW: (WITH NO BRICK MOLD)	HEAD: METAL FLASHING JAMB: METAL FLASHING SILL: METAL FLASHING
CORNER BOARDS:	INSIDE: MEATL CORNER OUTSIDE: METAL CORNER
FASCIA:	2x8 UNO

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STATE OF WASHINGTON
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3/10/25	AG	JURISDICTIONAL COMMENTS

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SHEET

A9

17

13

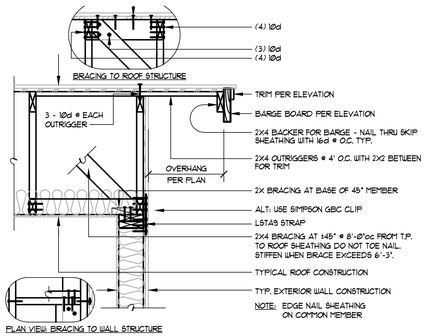
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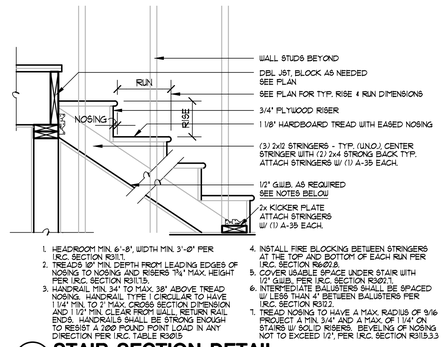
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20



9 GABLE END DETAIL
3/4"=1'-0"

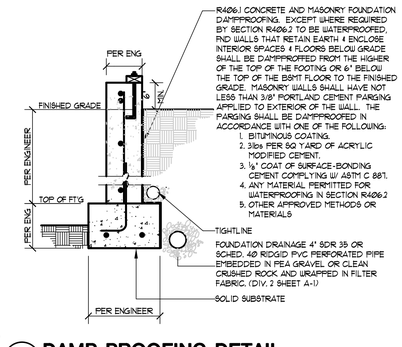
06100-07300-12



1. HEADROOM MIN. 6'-8", WIDTH MIN. 3'-0" PER I.R.C. SECTION R311.1
2. TREADS 10" MIN. DEPTH FROM LEADING EDGES OF NOSING TO NOSING AND RISERS 7¾" MAX. HEIGHT PER I.R.C. SECTION R311.7.5
3. HANDRAIL MIN. 34" TO MAX. 38" ABOVE TREAD NOSING. HANDRAIL TYPE I CIRCULAR TO HAVE 1 1/4" 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
4. INSTALL FIRE BLOCKING BETWEEN STRINGERS AT THE TOP AND BOTTOM OF EACH RUN PER I.R.C. SECTION R602.8.
5. COVER USABLE SPACE UNDER STAIR WITH 1/2" GWB. PER I.R.C. SECTION R302.7.
6. INTERMEDIATE BALUSTERS SHALL BE SPACED W/ LESS THAN 4" BETWEEN BALUSTERS PER I.R.C. SECTION R312.2.
7. TREAD NOSING TO HAVE A MAX. RADIUS OF 9/16 PROJECT A MIN. 3/4" AND A MAX. OF 1 1/4" ON STAIRS W/ SOLID RISERS. BEVELING OF NOSING NOT TO EXCEED 1/2", PER I.R.C. SECTION R311.3.3

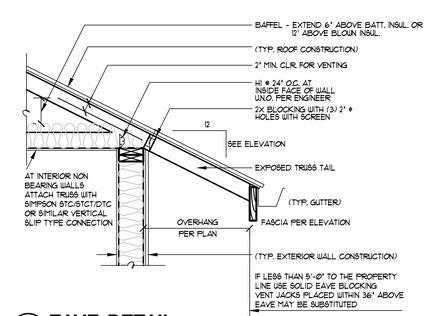
5 STAIR SECTION DETAIL
3/4"=1'-0"

06200-06100-01



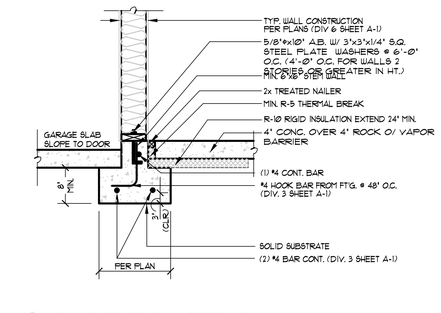
1 DAMP PROOFING DETAIL
3/4"=1'-0"

03300-0710



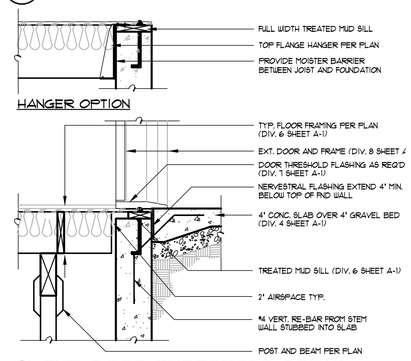
10 EAVE DETAIL
3/4"=1'-0"

06100-07300-01



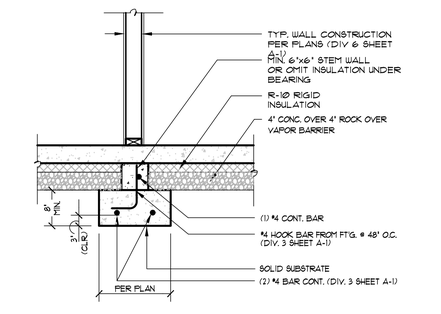
6 FOUNDATION DETAIL
3/4"=1'-0"

03300-00000-78



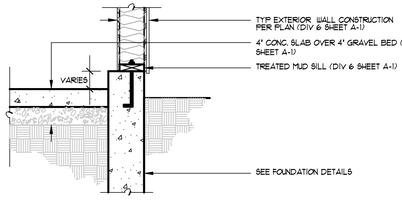
2 EXT. DOOR THRESHOLD DETAIL
3/4"=1'-0"

06100-03300-06_



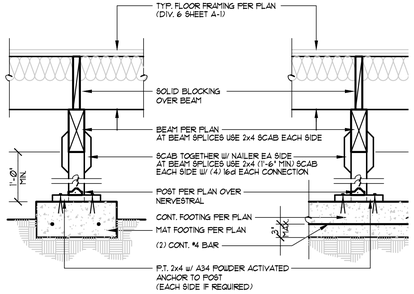
7 FOUNDATION DETAIL
3/4"=1'-0"

03300-00000-79



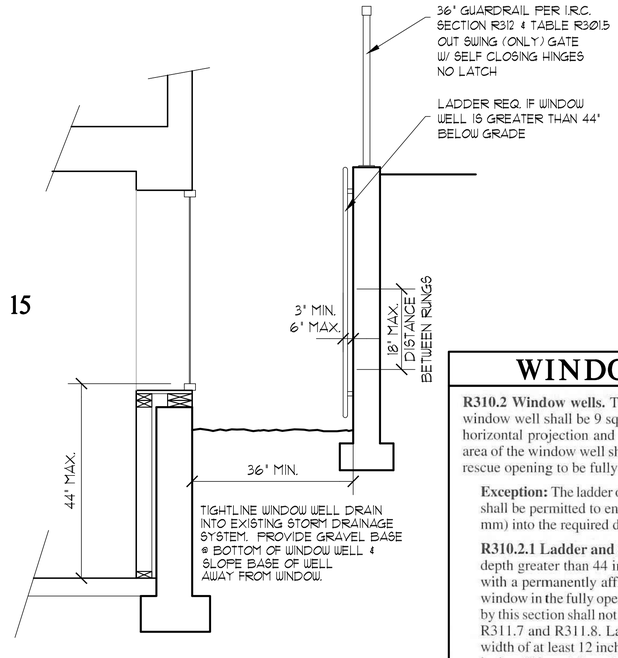
3 SLAB @ STEM WALL
3/4"=1'-0"

06100-0330



4 POST/FOOTING CONNECTION
3/4"=1'-0"

06100-03300-10_



8 WINDOW WELL DETAIL
3/4"=1'-0"

WINDOW WELL

R310.2 Window wells. The minimum horizontal area of the window well shall be 9 square feet (0.9 m²), with a minimum horizontal projection and width of 36 inches (914 mm). The area of the window well shall allow the emergency escape and rescue opening to be fully opened.

Exception: The ladder or steps required by Section R310.2.1 shall be permitted to encroach a maximum of 6 inches (152 mm) into the required dimensions of the window well.

R310.2.1 Ladder and steps. Window wells with a vertical depth greater than 44 inches (1118 mm) shall be equipped with a permanently affixed ladder or steps usable with the window in the fully open position. Ladders or steps required by this section shall not be required to comply with Sections R311.7 and R311.8. Ladders or rungs shall have an inside width of at least 12 inches (305 mm), shall project at least 3 inches (76 mm) from the wall and shall be spaced not more than 18 inches (457 mm) on center vertically for the full height of the window well.

REGISTERED ARCHITECT
8079
STATE OF WASHINGTON
GIVEN D. KAPALE
ORIGINAL SIGNATURE REQUIRED

Date	By	Description
9/27/24	AG	PERMIT SET
3/10/25		JURISDICTIONAL COMMENTS

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TITLE

JOB NO. : 21022.21
STARTING NO. : 21022.05

SHEET

D1

Project Information

Milestone NW LLC
Mercer Island - Lot 1
7621 SE 22nd St., Mercer Island, WA 98040

Contact Information

Architectural Innovations
14311 SE 16th St., Bellevue, WA 98007
425-641-5320
Scott McMillen

Messages / Results *

UA Reduction = 1.71, Proposed UA is better than baseline by 0%

Vertical glazing area exceeds 15% of floor area.
-
Whole House Mechanical Ventilation Airflow Rate: 112.5 CFM with Run Time Percent of 100%, Unbalanced, Not Distribu
Maximum allowable total measured duct leakage: 276 CFM25

* 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?	Table R406.3 UA Trade Off
Project Building Type?	New Construction
Occupancy Type?	R3 Single family homes and duplexes
Code Version?	WSEC 2021
Classification:	Medium Dwelling Unit -- 3446 sq. ft.
Baseline Description:	Code Baseline - Baseline and proposed window areas are equal.
About Your Selection:	No exempt window or door areas

WSEC-R Rev: Oct. 2023, https://www.sbcc.wa.gov/sites/default/files/2023-12/C

RESULTS - Comparison of Baseline and Proposed Design

Component Performance, R occupancies	Baseline U *	Baseline Area	Baseline UA	Proposed Design U	Proposed Design Area	Proposed Design UA
Doors U =	0.300	49	14.8	0.160	49	7.9
Overhead Glazing U =	0.500	0	0.0		0	0.0
Vertical Glazing U =	0.300	517	155.1	0.240	858	205.8
Flat/Vaulted Ceilings U =	0.024	1,998	48.0	0.025	1,998	50.0
Wall (above grade) U =	0.056	3,352	187.7	0.049	3,011	147.5
Floors over Crawlspace U =	0.029	1,226	35.6	0.025	1,226	30.7
Slab on Grade F =	0.540	0	0.0		0	0.0
Below Grade Wall U =	0.040	923	36.9	0.064	923	59.1
Below Grade Slab F =	0.560	105	58.5	0.324	105	33.9

* Values from Table R402.1.2 (Oct 2023)

Baseline UA Total	536.5	Proposed UA Total	534.8
Required Credits	8.0	Proposed Credits	8.0 from Tables 406.2 and 406
		UA Percent Reduction	0.3%
		UA Reduction	1.7

If the Proposed UA ≤ the Target UA, and the Proposed Credits from Table 406 are ≥ those required in Section R406, then the home meets the WSEC.

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(9) 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	5.0	8.0

Table R406.3 Energy Credits

Option No.	Category	Select Options	Energy Credits	Brief Description of Selected Options*
1	Efficient Building Envelope	Option 1.2	1.0	Perscriptive compliance per Table 402.1.3 / U-0.25 vertical fenestration / R-38 floors or R-10 perimeter & fully insulated slab. Or 15% reduction in UA per section R402.1.5
2	Air Leakage Control and Efficient Ventilation	Option 2.1	1.0	Per Section R402.4.1.2 / 2.0 ACH50 / For R-2, 0.25 cfm per ft2 at 50 Pa. / HRV with min SHR eff of 0.85 per IRC Section M1505.3 or IMC Section 403.8
3.1 -3.10	High Efficiency HVAC	Option 3.6	1.0	Air source ducted Heat Pump w/ Min HSPF2 of 10 (HSPF of 11). If htg design temp is 23F or below,a cold climate variable capacity heat pump is required.
3.11	High Efficiency HVAC: Smart Thermostat	Not Selected	0.0	-
4	High Efficiency HVAC Distribution System	Not Selected	0.0	-
5.1	Efficient Water Heating: Drain Heat Recovery		0.0	
5.2	Efficient Water Heating: Compact Hot Water Distribution		0.0	
5.3-5.8	Efficient Water Heating	Option 5.6	2.0	Electric heat pump water heater meeting NEEA Tier 3.
6	Renewable Electric Energy	kWh	0.0	
7	Appliance Package	Not Selected	0.0	-
		Energy Credits	5.0	

*Refer to WSEC 2015 Table R406.2 for complete option descriptions and requirements

THERMAL ENVELOPE DETAILS - Proposed Design

Conditioned Floor Area, Proposed Design: 3,446 sq. ft.
Classification: Medium Dwelling Unit
Notes:

Exterior Doors

Plan ID	Component Description	Ref.	Door U	Qt.	Width Feet	Width Inch	Height Feet	Height Inch	Area	UA
Mud	Insulated Steel, Wood Edge (ISteel/WE)	10-6C	0.16	1	2	9	8	0	21	3.4
Entry	Insulated Steel, Wood Edge (ISteel/WE)	10-6C	0.16	1	3	0	8	0	28	4.5
									0	0.0
									0	0.0
									0	0.0
									0	0.0
									0	0.0
									0	0.0
									0	0.0
									0	0.0
							Sum of Area and UA		49	7.9
							Exterior Doors Area Weighted U			0.160

Overhead Glazing

Plan ID	Component Description	Ref.	Glazing U	Qt.	Width Feet	Width Inch	Height Feet	Height Inch	Area	UA
									-	
									-	
									-	
									-	
									-	
							Sum of Area and UA		0.0	0
							Overhead Glazing Area Weighted U			

Vertical Glazing Schedule — Rows to Show: 28

	Plan ID	Component Description	Ref.	Glazing U	Qt.	Width Feet	Width Inch	Height Feet	Height Inch	Area	UA
1	Basement	U=0.24 (2018 1.1)	Table 406.2	0.24	1	6	0	4	0	27.0	6.48
2	Entry	U=0.24 (2018 1.1)	Table 406.2	0.24	1	2.00	0	7	0	14.0	3.36
3	Entry	U=0.24 (2018 1.1)	Table 406.2	0.24	1	1	6	5	0	8.5	2.04
4	Office	U=0.24 (2018 1.1)	Table 406.2	0.24	1	4	0	6	0	27.0	6.48
5	Office	U=0.24 (2018 1.1)	Table 406.2	0.24	1	2	0	8	0	16.0	3.84
6	Office	U=0.24 (2018 1.1)	Table 406.2	0.24	1	5	0	6	0	30.0	7.20
7	W.I.C.	U=0.24 (2018 1.1)	Table 406.2	0.24	1	4	0	6	0	24.0	5.76
8	Powder	U=0.24 (2018 1.1)	Table 406.2	0.24	1	2	0	5	0	10.0	2.40
9	Kitchen	U=0.24 (2018 1.1)	Table 406.2	0.24	1	5	0	6	0	30.0	7.20
10	Dining	U=0.24 (2018 1.1)	Table 406.2	0.24	1	9	0	8	0	72.0	17.28
11	Dining	U=0.24 (2018 1.1)	Table 406.2	0.24	1	10	0	7	0	70.0	16.80
12	Dining	U=0.24 (2018 1.1)	Table 406.2	0.24	1	3	0	7	0	24.5	5.88
13	Great Rm	U=0.24 (2018 1.1)	Table 406.2	0.24	3	4	0	7	0	94.5	22.68
14	Great Rm	U=0.24 (2018 1.1)	Table 406.2	0.24	1	11	0	2	0	23.8	5.72
15	Great Rm	U=0.24 (2018 1.1)	Table 406.2	0.24	1	4	0	6	0	24.0	5.76
16	Hall	U=0.24 (2018 1.1)	Table 406.2	0.24	4	2	0	4	4	43.3	10.40
17	Bdrm#3	U=0.24 (2018 1.1)	Table 406.2	0.24	1	7	0	5	0	37.5	9.00
18	Bdrm#3	U=0.24 (2018 1.1)	Table 406.2	0.24	1	4	0	5	0	22.5	5.40
19	Bath#2	U=0.24 (2018 1.1)	Table 406.2	0.24	1	3	0	4	0	15.8	3.78
20	Stairway	U=0.24 (2018 1.1)	Table 406.2	0.24	1	5	0	5	0	25.0	6.00
21	Hall	U=0.24 (2018 1.1)	Table 406.2	0.24	1	2	0	4	0	11.3	2.70
22	Utility	U=0.24 (2018 1.1)	Table 406.2	0.24	1	2	0	4	0	10.5	2.52
23	Bdrm#2	U=0.24 (2018 1.1)	Table 406.2	0.24	1	7	0	5	0	37.5	9.00
24	Bdrm#2	U=0.24 (2018 1.1)	Table 406.2	0.24	1	6	0	5	0	30.0	7.20
25	Bath#3	U=0.24 (2018 1.1)	Table 406.2	0.24	1	2	0	4	0	9.0	2.16
26	P.Bath	U=0.24 (2018 1.1)	Table 406.2	0.24	1	7	0	4	0	33.8	8.10
27	W.I.C.	U=0.24 (2018 1.1)	Table 406.2	0.24	1	7	0	1	0	11.3	2.70
28	P.Suite	U=0.24 (2018 1.1)	Table 406.2	0.24	2	7	0	5	0	75.0	18.00
							Sum of Area and UA		857.7	205.8
							Vertical Glazing Area Weighted U			0.240
							Vertical Glazing and Doors Area Weighted U			0.236

Floor (over crawl or exterior)

Plan ID	Component Description	Ref.	Floor U	Area	UA
	R38 vented Joist (2021 1.2, 1.3; 2018 1.3-1.5)	10-3	0.025	1,226	31
			Sum of Area and UA	1,226	31

Slab on Grade (less than 2 feet below grade)

Plan ID	Component Description	Ref.	Slab F	Slab Perim	FP
			Sum of Perimeter and FP	0	0

Below Grade Walls and Slabs

Plan ID	Component Description	Slab Depth	Ref.	Wall U	Wall Area	Wall UA	Slab F	Slab Perim	Slab UA
	R10 Foam Ext w/TB, R10 Full Underslab	3.5' depth	Bayon & Ket	0.06	923	59.1	0.324	105	34
			Sum of Area, Length and UA		923	59.1		105	34

Links to Download Forms, Checklists and Other Resources — Link

Compliance Certificate	Compliance Certificate	Instructions
Insulation Certificate for Residential New Construction	Insulation Certificate	
Duct Testing Affadavits		
Existing Construction	Affidavit: Existing	
New Construction	Affidavit: New	
Prescriptive Checklist for 2018 WSEC	Prescriptive Checklist	
Alterations (Remodel) Worksheet	Worksheet	

Show Ventilation Calculator? Show

Ventilation Requirements

Conditioned Floor Area	3,446 sq. ft.
Number of Bedrooms	4
Run-Time Percent in Each 4-Hour Segment	100%
Is the system Balanced?	Unbalanced
Is the system Distributed?	Not Distributed
Ventilation Code Section	IRC, Chapter 15
Whole House Mechanical Ventilation Airflow Rate	113 CFM

Show Distribution System Calculator? Show

HVAC Thermal Distribution System — Download RS-33 (2018): http://www.energy.wsu.edu/Documents/Duct%20Testing%20Standards%2

Is this a hydronic heating system?	No
Location of Ducts	Conditioned Space
Location of Air Handler	Conditioned Space
Is Duct Testing Required? Yes	
Maximum Duct Leakage:	
Maximum total measured duct leakage per square foot	0.08 CFM25 per sq. ft.
Maximum allowable total measured duct leakage	276 CFM25

A maximum of 10 feet of return ducts and 6 feet of supply ducts are allowed to be located outside of the building thermal envelope, if insulated and sealed per R403.3.7.

Show Heating System Sizing? Show

Heating System Sizing - Proposed Design — Try Out BetterBuiltNW's HVAC Sizing Tool: https://betterbuiltnw.com/resources/hvac-sizing-tool

Nearest Weather Station	Mercer Island
Indoor Design Temperature	70 F
Outdoor Design Temperature	25 F
Design Temperature Difference (ΔT)	45 F
Conditioned Floor Area, Proposed Design	3,446 ft2
Conditioned Volume	27,568 ft3

Leave blank to use default of 8.5 ft. ceiling height

HVAC System Type	Heat Pump
Location of HVAC Distribution System	Conditioned Space
Sum of UA, including exempt door and window	535
Envelope Heat Load (Sum of UA X ΔT)	24,066 Btu / Hour
Air Leakage Heat Load (Volume X 0.6) X 4.7) X .018))	13,398 Btu / Hour
Building Design Heat Load (Air Leakage + Envelope Heat Loss)	37,464 Btu / Hour
Building and Duct Heat Load (For ducts located in unconditioned space: Sum of Building Heat Loss X 1.1 / For ducts located in conditioned space or ductless: Sum of Building Heat Loss X 1	37,464 Btu / Hour
Maximum Heat Equipment Output (Building and Duct Heat Loss X 1.25 for heat pumps / Building and Duct Heat Loss X 1.40 for all other systems	46,830 Btu / Hour 13.7 kW

REGISTERED ARCHITECT 8079 STATE OF WASHINGTON SCOTT A. McMILLEN ORIGINAL SIGNATURE REQUIRED

Description: PERMIT SET; AS JURISDICTIONAL COMMENTS
Date: 9/2/24; 3/10/25
By: AS

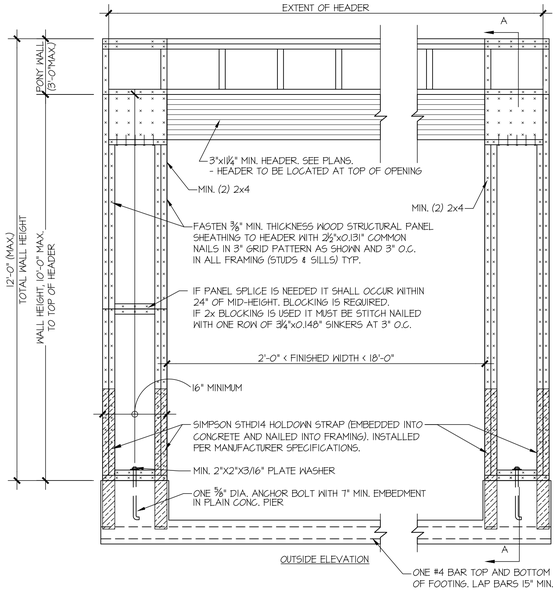
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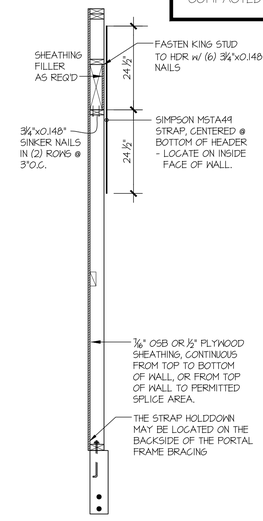
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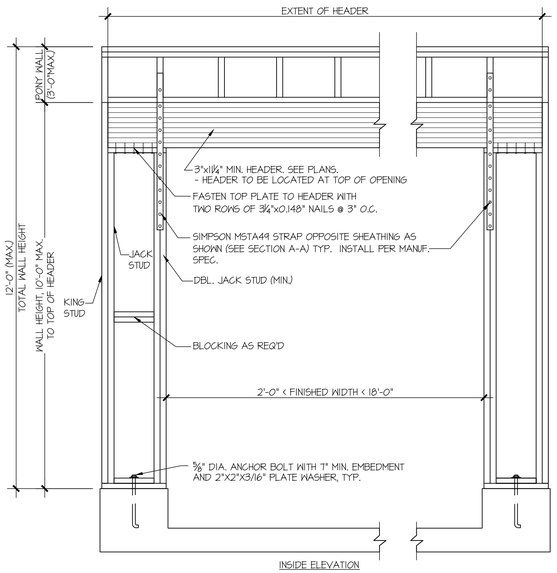
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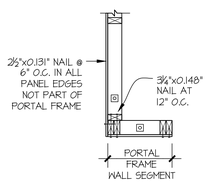
OUTSIDE ELEVATION



SECTION A-A THROUGH PIER



INSIDE ELEVATION



PLAN VIEW OF CORNER DETAIL

APA PORTAL FRAME DETAIL WITH HOLDOWNS

SCALE: N.T.S.

BASEMENT SLAB

4" CONC. SLAB ON 10 MIL VAPOR BARRIER ON 4" MIN. GRANULAR FILL ON 95% COMPACTED FILL/VIRGIN SOIL

GARAGE SLAB

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

PORCH SLAB

4" CONC. SLAB ON GRADE ON 10 MIL VAPOR BARRIER ON 4" MIN. GRANULAR FILL ON 95% COMPACTED FILL/VIRGIN SOIL

GENERAL STRUCTURAL NOTES

FOUNDATION

- DESIGN IS BASED ON 2021 INTERNATIONAL RESIDENTIAL CODE & 2021 INTERNATIONAL BUILDING CODE
- DESIGN LOADS:
  SOIL 1500 PSF ALLOWABLE BEARING PRESSURE
- CONCRETE SHALL ATTAIN THE FOLLOWING MINIMUM COMPRESSIVE STRENGTHS IN 28 DAYS, U.N.O.:
  f'c = 3,000 psi:* ..... FOUNDATION WALLS
  3,000 psi:* ..... FOOTINGS
  2,500 psi: ..... INTERIOR SLABS ON GRADE
  3,500 psi:* ..... GARAGE & EXT. SLABS ON GRADE
  fy = 60,000 psi

  * ALL CONCRETE HAS BEEN DESIGNED FOR 2500 PSI, ANYTHING GREATER THAN THIS SPECIFICATION IS FOR WEATHERING ONLY.
- ALL CONCRETE EXPOSED TO THE WEATHER SHALL NOT HAVE LESS THAN 5% OR MORE THAN 7% AIR ENTRAINMENT.
- FOUNDATION WALL DESIGN IS BASED ON BACKFILL SOIL PRESSURE OF 55 PCF AT-REST, 35 PCF ACTIVE & 7H SEISMIC SURCHARGE.
- 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"x.229" PLATE WASHERS (EDGE OF WASHER TO BE LOCATED WITHIN ½" OF EXTERIOR EDGE OF SILL PLATE) 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.
- ARCH/BUILDER TO VERIFY ALL DIMENSIONS

LOADING AND DESIGN PARAMETERS

GRAVITY DESIGN LOADS:
DEAD LOAD (PSF):
- ROOF TRUSSES TOP CHORD: 10
- ROOF TRUSSES BOTTOM CHORD: 7
- FLOOR TRUSSES: 15
- 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 : C
- INTERNAL PRESSURE COEFF. (GC_{pi}) : ±0.18
- TOPOGRAPHIC FACTOR (K_{zt}) : 1.00

SEISMIC LOAD: (IBC 1613)
- SEISMIC RISK CATEGORY : II
- SEISMIC IMPORTANCE FACTOR (I_e) : 1.0
- MAPPED SPECTRAL RESPONSE : S_s: 1.385 S_1: 0.483
- SITE CLASS : D
- SPECTRAL RESPONSE COEFF. : S_{DS}: 1.108 S_{D1}: 0.585
- SEISMIC DESIGN CATEGORY: D
- BASIC SEISMIC-FORCE-RESISTING SYS : LIGHT FRAMED WALLS w/WOOD STRUCTURAL PANELS
- ULTIMATE BASE SHEAR: TRANS: 14 k LONG: 14 k
- SEISMIC RESPONSE COEFF. (C_s): TRANS: 0.170 LONG: 0.170
- 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 M&K 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. 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)2½"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 HOLDOWN.

HOLD-DOWN SCHEDULE

SYMBOL	SPECIFICATION
HD-1	SIMPSON STHD14 (R.J) HOLD-DOWN
HD-5	SIMPSON CS16 STRAP TIE (14' END LENGTH)
HD-6	SIMPSON MSTC40 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM U.N.O.)
HD-7	SIMPSON MSTC66 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM U.N.O.)

GENERAL STRUCTURAL NOTES

DESIGN PARAMETERS

- DESIGN IS BASED ON 2021 INTERNATIONAL RESIDENTIAL CODE & 2021 INTERNATIONAL 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 2x6 HEM FIR (HF) #2 GRADE LUMBER, OR BETTER. U.N.O.
- ALL SHEATHING AND LEDGERS ARE TO BE DIRECTLY APPLIED AND FASTENED TO FRAMING. DO NOT PROVIDE CONTINUOUS INSULATION BETWEEN FRAMING AND SHEATHING/LEDGERS
- 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..
- BUILT-UP POSTS SHALL BE 2x4 OR 2x6 HEM FIR (HF) "STUD" GRADE LUMBER, OR BETTER, U.N.O. & SOLID WOOD COLUMNS SHALL BE SPRUCE PINE FIR (SPF) #2 GRADE LUMBER, OR BETTER, 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, OR FLUSH BEAMS TO SUPPORTING BEAMS, 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 (U.N.O)
- ENGINEERED LUMBER POSTS TO MEET OR EXCEED THE FOLLOWING:
  - LVL MEMBERS - Fb=2400 PSI; Fc⊥=2500 PSI; E=1.8x10^6 PSI
- 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.
- TRUSS SHOP DWGS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF PROPOSED CONSTRUCTION SHALL BE SUBMITTED TO BUILDING DESIGNER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OR DELIVERY IN ACCORDANCE WITH TPI-1 2.3.2.3 & 2.3.4.3.
- REFER TO IRC FASTENING SCHEDULE TABLE R602.3(1) FOR ALL CONNECTIONS, TYP. U.N.O.
- BUILDER RESPONSIBLE TO DETERMINE CORROSION-RESISTANCE REQUIREMENTS AND COMPATIBILITY OF HARDWARE, FASTENERS AND CONNECTORS FOR ENVIRONMENTAL EXPOSURE AND IN CONTACT W/ PRESERVATIVE-TREATED WOOD OF ACTUAL FINAL CONDITIONS AND SOURCED MATERIALS. CONTACT LUMBER & HARDWARE SUPPLIERS TO, GOORD. IN THE ABSENCE OF MANUFACTURER'S RECOMMENDATIONS, NOT LESS THAN ASTM A653, TYPE G185 ZINC-COATED GALVANIZED STEEL, OR EQUIVALENT, SHALL BE USED.

FLOOR FRAMING

- I-JOISTS/TRUSSES SHALL BE DESIGNED BY MANUF. TO MEET OR EXCEED L/480 LIVE LOAD DEFLECTION CRITERIA AND SHALL RUN CONTINUOUS OVER SUPPORTS WHEREVER POSSIBLE. ALL LOADS SHOWN ON PLAN FOR MANUF. DESIGNS ARE ASD LEVEL LOADS, U.N.O. (EXCLUDES STONE/MARBLE OR WET BED CONSTRUCTED FLOORS - CONTACT M&K FOR EXCLUDED DESIGNS).
- ALL METAL I-JOIST/TRUSS HANGERS SHALL BE SPECIFIED BY I-JOIST/TRUSS MANUFACTURER, UNLESS OTHERWISE NOTED.
- 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

- 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, (2) 'SIMPSON' H2.5Y CLIPS AT 3-PLY GIRDER TRUSSES AT ALL BEARING POINTS.
- FASTEN EACH ROOF RAFTER TO TOP PLATE WITH (1) 'SIMPSON' H2.5T CLIP. PROVIDE (2) 'SIMPSON' H2.5T CLIPS AT FLUSH BEAMS IN THE ROOF - AT ALL BEARING POINTS.
- 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 & @ 6" 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.
- ALL METAL HANGERS SHALL BE SPECIFIED BY THE TRUSS MANUFACTURER, UNLESS OTHERWISE NOTED.
- ROOF TRUSS SHOP DRAWINGS & CALCULATIONS SHALL BE DESIGNED

seal:

NICHOLAS J. MARTINOVICH — STATE OF WASHINGTON — 36478 — REGISTERED PROFESSIONAL ENGINEER

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M&K project number: 203-24019

project mgr: NJM
drawn by: RSC
issue date: 10-24-24

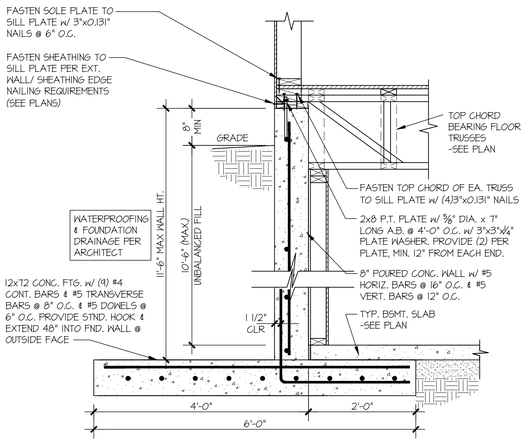
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ARCHITECTURAL INNOVATIONS

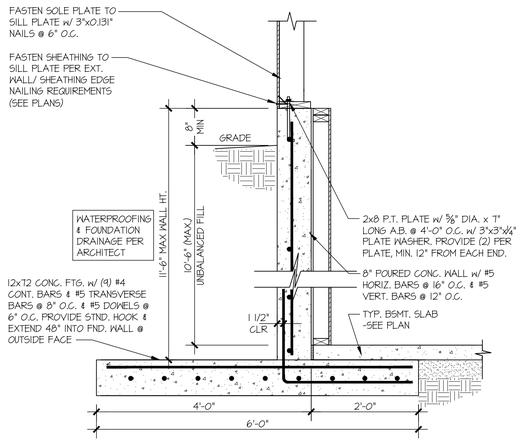
STRUCTURAL NOTES

MERCER ISLAND - LOT 1
7621 SE 22ND ST
MERCER ISLAND, WA

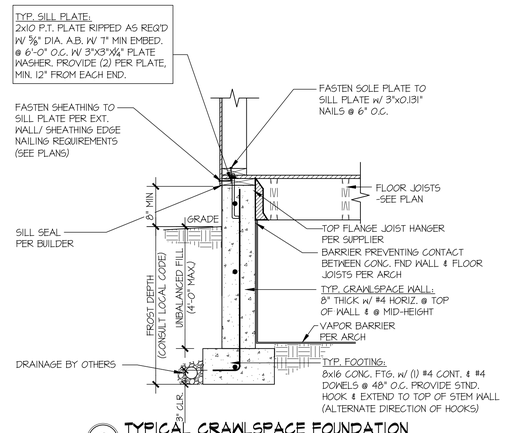
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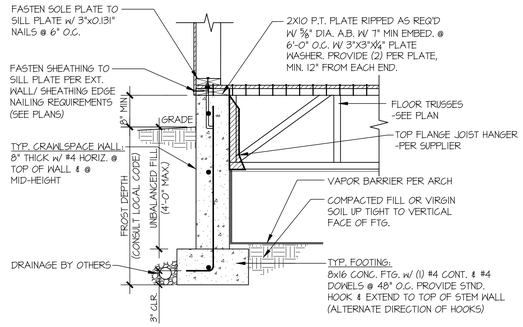
1 TYPICAL BASEMENT FOUNDATION WALL
SCALE: 3/4"=1'-0"



1A TYPICAL BASEMENT FOUNDATION WALL
SCALE: 3/4"=1'-0"



2 TYPICAL CRAWLSPACE FOUNDATION
SCALE: 3/4"=1'-0"



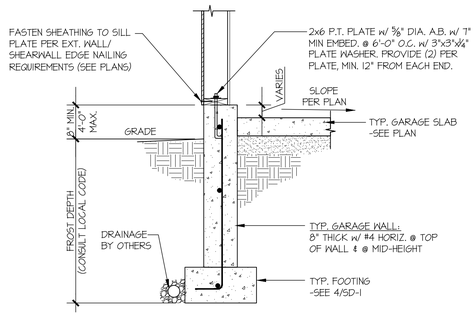
2A TYPICAL CRAWLSPACE FOUNDATION
SCALE: 3/4"=1'-0"

3 TYPICAL CRAWLSPACE FOUNDATION
SCALE: 3/4"=1'-0" @ PORCH SLAB

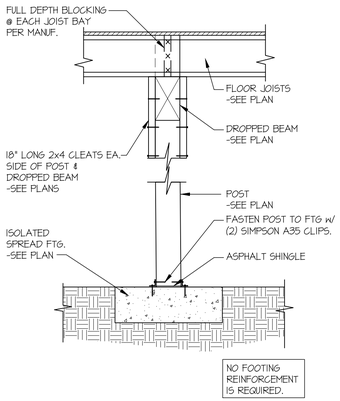
4 TYPICAL FOOTING @ PORCH SLAB
SCALE: 3/4"=1'-0"

5 TYPICAL CRAWLSPACE FOUNDATION @ GARAGE
SCALE: 3/4"=1'-0"

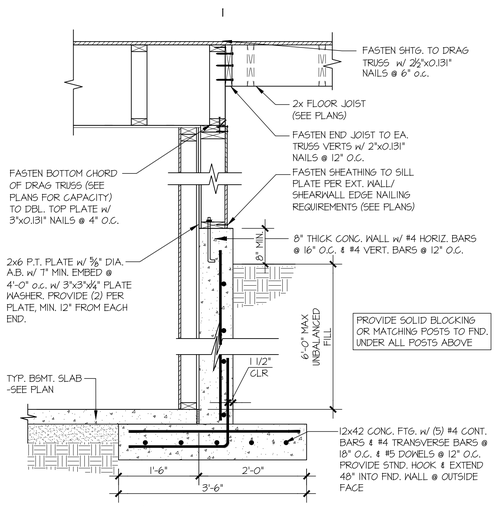
6 TYPICAL CONCRETE FOOTING @ GARAGE DOOR OPENING
SCALE: 3/4"=1'-0"



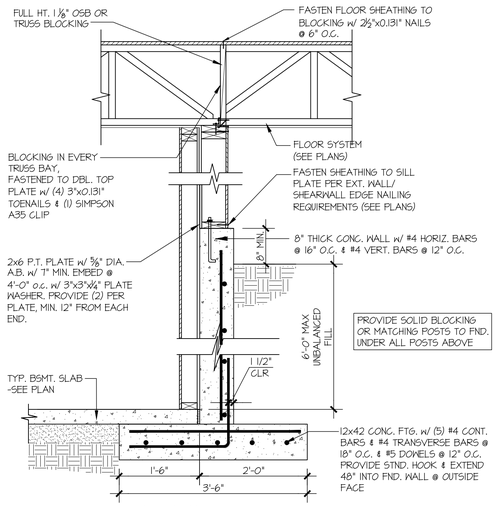
7 TYPICAL EXT. GARAGE FOUNDATION
SCALE: 3/4"=1'-0"



TYPICAL CRAWL SPACE FOOTING DETAIL
SCALE: 3/4"=1'-0"



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



9A SECTION
SCALE: 3/4"=1'-0"

seal:



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project mgr: NJM
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issue date: 10-24-24

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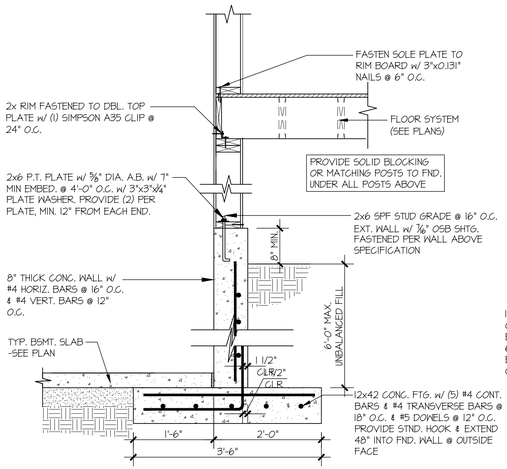
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ARCHITECTURAL INNOVATIONS

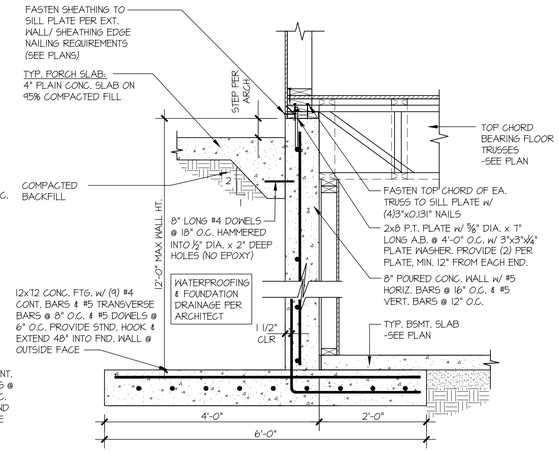
STRUCTURAL DETAILS

MERCER ISLAND - LOT 1
7621 SE 22ND ST
MERCER ISLAND, WA

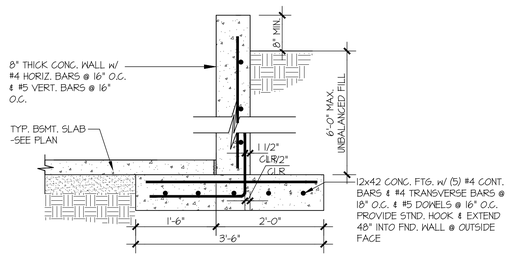
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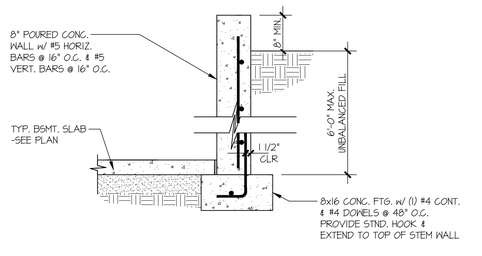
10 WOOD WALL @ LOW GRADE
SCALE: 3/4"=1'-0"



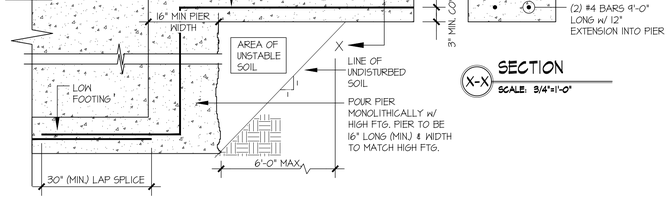
11 BASEMENT FOUNDATION WALL
SCALE: 3/4"=1'-0"



12 RETAINING WALL @ LOW GRADE
SCALE: 3/4"=1'-0"



13 RETAINING WALL @ LOW GRADE
SCALE: 3/4"=1'-0"



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

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

seal:
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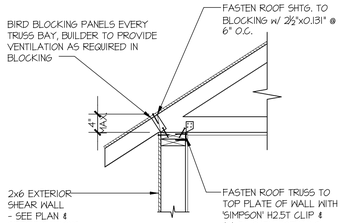
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ARCHITECTURAL INNOVATIONS

STRUCTURAL DETAILS

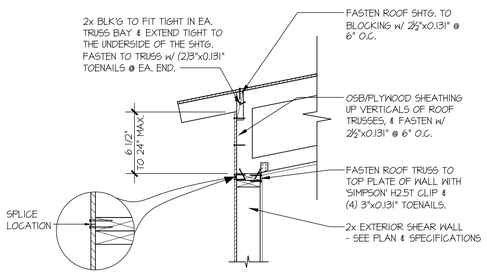
MERCER ISLAND - LOT 1
7621 SE 22ND ST
MERCER ISLAND, WA

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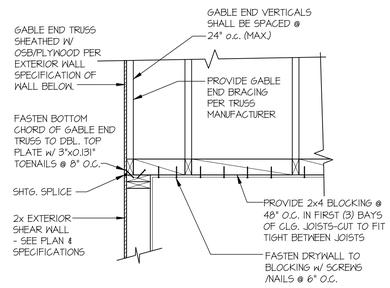
1 TYPICAL SHEAR TRANSFER DETAIL @ ROOF

SCALE: 3/4"=1'-0" HEEL HEIGHT LESS THAN 6 ½"



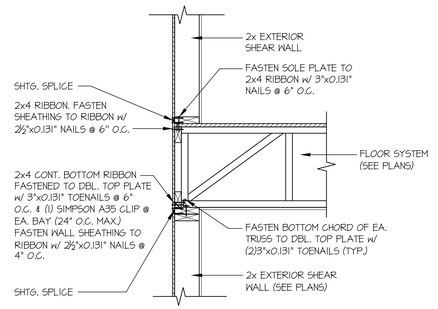
1A TYPICAL SHEAR TRANSFER DETAIL @ ROOF

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



2 TYPICAL GABLE END DETAIL

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



3 TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ EXTERIOR WALL

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

4 TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ EXTERIOR WALL

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

5 SECTION

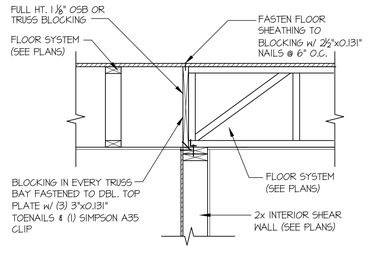
SCALE: 3/4"=1'-0"

11 SHEAR TRANSFER DETAIL @ SHEAR WALL BELOW

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

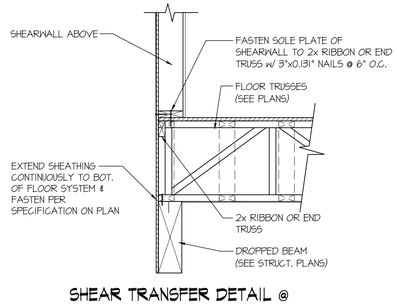
14 SHEAR TRANSFER DETAIL @ SHEAR WALL BELOW

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



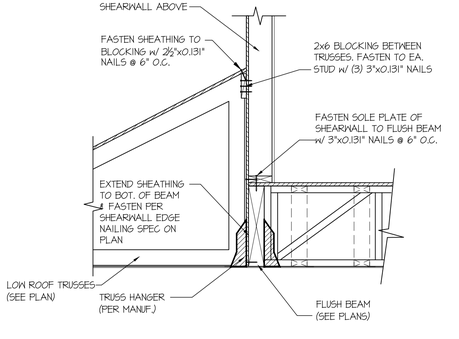
15 SHEAR TRANSFER DETAIL @ INTERIOR SHEAR WALL

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



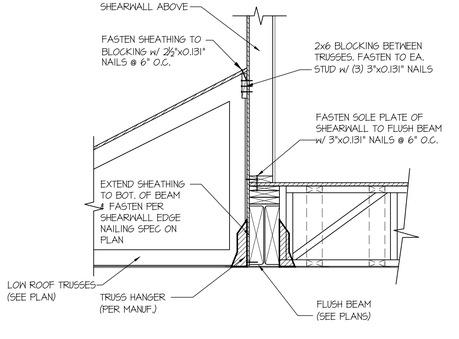
39 SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE

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



58 SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE

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



58A SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE

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

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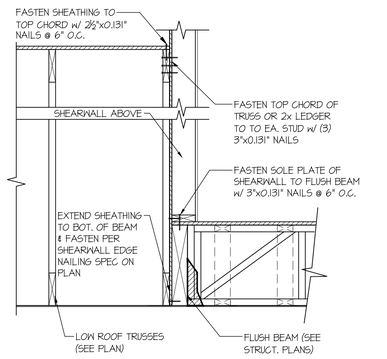
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ARCHITECTURAL INNOVATIONS

STRUCTURAL DETAILS

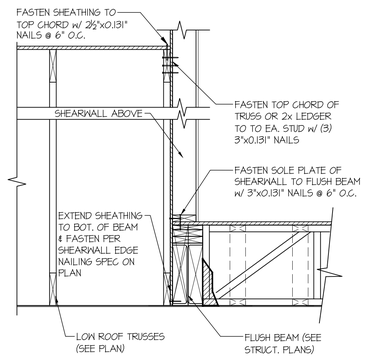
MERCER ISLAND - LOT 1
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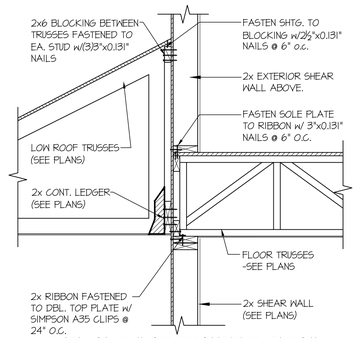
SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE

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



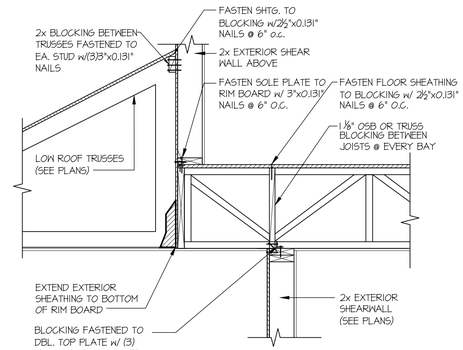
SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE

59A SCALE: 3/4"=1'-0"



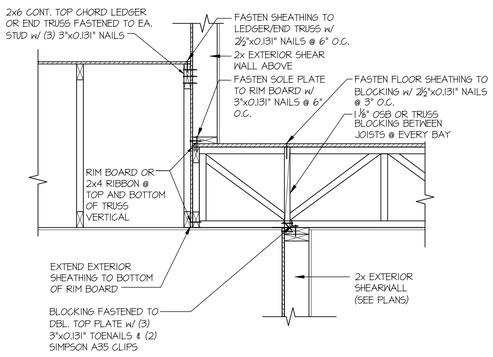
TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS

60 SCALE: 3/4"=1'-0" PERPENDICULAR FRAMING



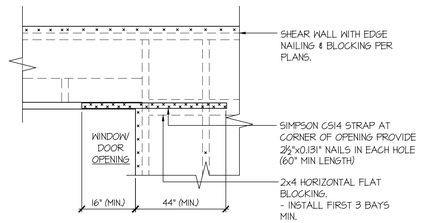
TYPICAL SHEAR TRANSFER DETAIL @ EXTERIOR WALL ABOVE

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



SHEAR TRANSFER DETAIL @ CANT'D EXTERIOR WALL ABOVE

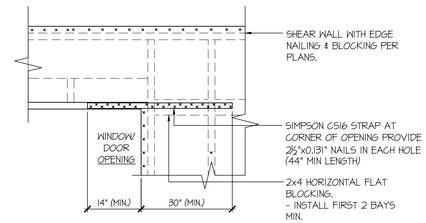
67 SCALE: 3/4"=1'-0"



- DETAIL SIMILAR AT BOTTOM CORNERS OF WINDOWS.
- ONLY REQUIRED WHERE SPECIFIED ON STRUCTURAL PLANS.
- IF MIN LENGTH IS NOT PROVIDED RUN STRAP TO END OF WALL

EXT. WALL & INT. SHEARWALL OPENING ELEVATION

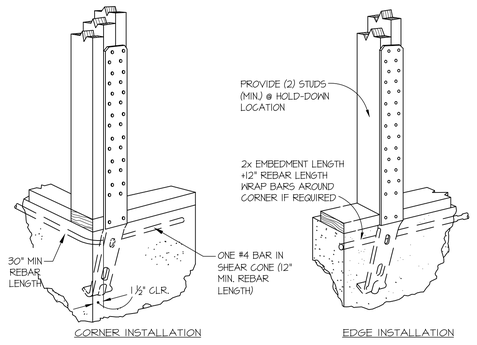
93 SCALE: NTS



- DETAIL SIMILAR AT BOTTOM CORNERS OF WINDOWS.
- ONLY REQUIRED WHERE SPECIFIED ON STRUCTURAL PLANS.
- IF MIN LENGTH IS NOT PROVIDED RUN STRAP TO END OF WALL

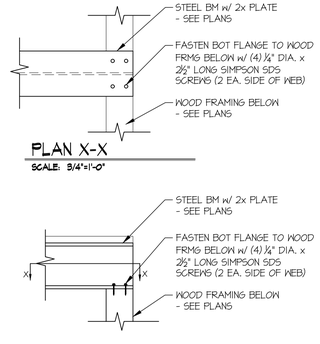
EXT. WALL & INT. SHEARWALL OPENING ELEVATION

94 SCALE: NTS



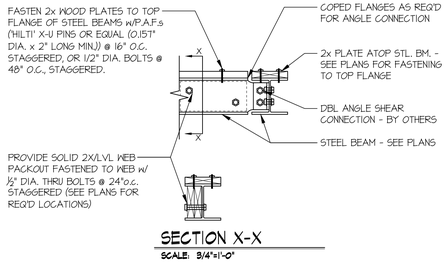
TYPICAL HOLD-DOWN INSTALLATION

A NOT TO SCALE — SIMPSON STHD HD @ FOUNDATION



STL BM TO WOOD FRMG CONNECTION

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



DOUBLE ANGLE STEEL CONNECTION

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

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ARCHITECTURAL INNOVATIONS

STRUCTURAL DETAILS

MERCER ISLAND - LOT 1
7621 SE 22ND ST
MERCER ISLAND, WA

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