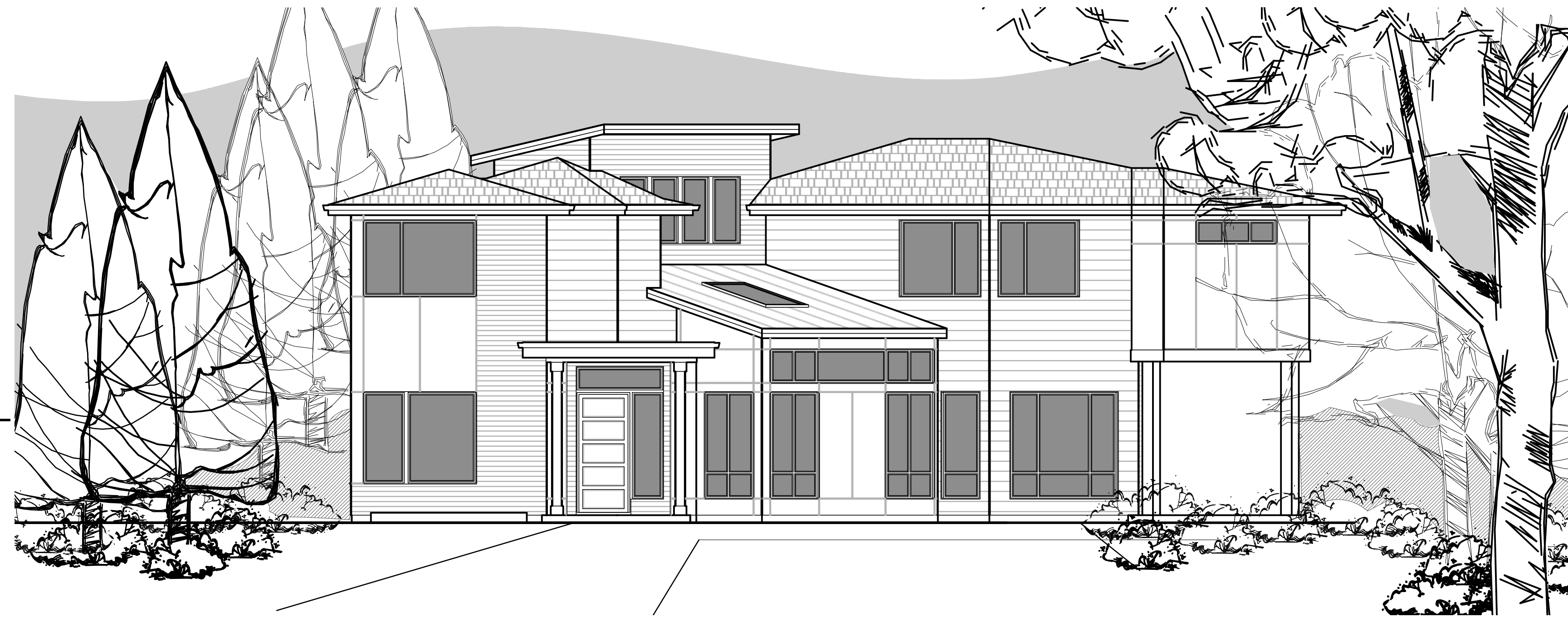




Side Elevation



Milestone NW Mercer Island Lot 1

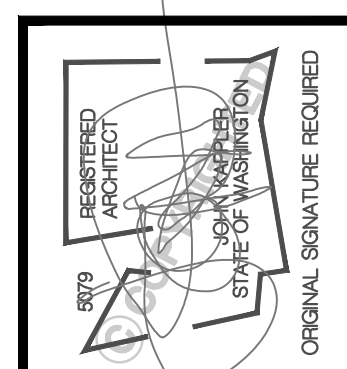
7621 SE 22nd ST. Mercer Island, WA 98040

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
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- 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



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

Milestone NW
Mercer Island Lot 1

7621 SE 22nd ST. Mercer Island, WA 98040
THIS DRAWING IS © COPYRIGHTED ARCHITECTURAL INNOVATIONS, P.S. ALL RIGHTS RESERVED

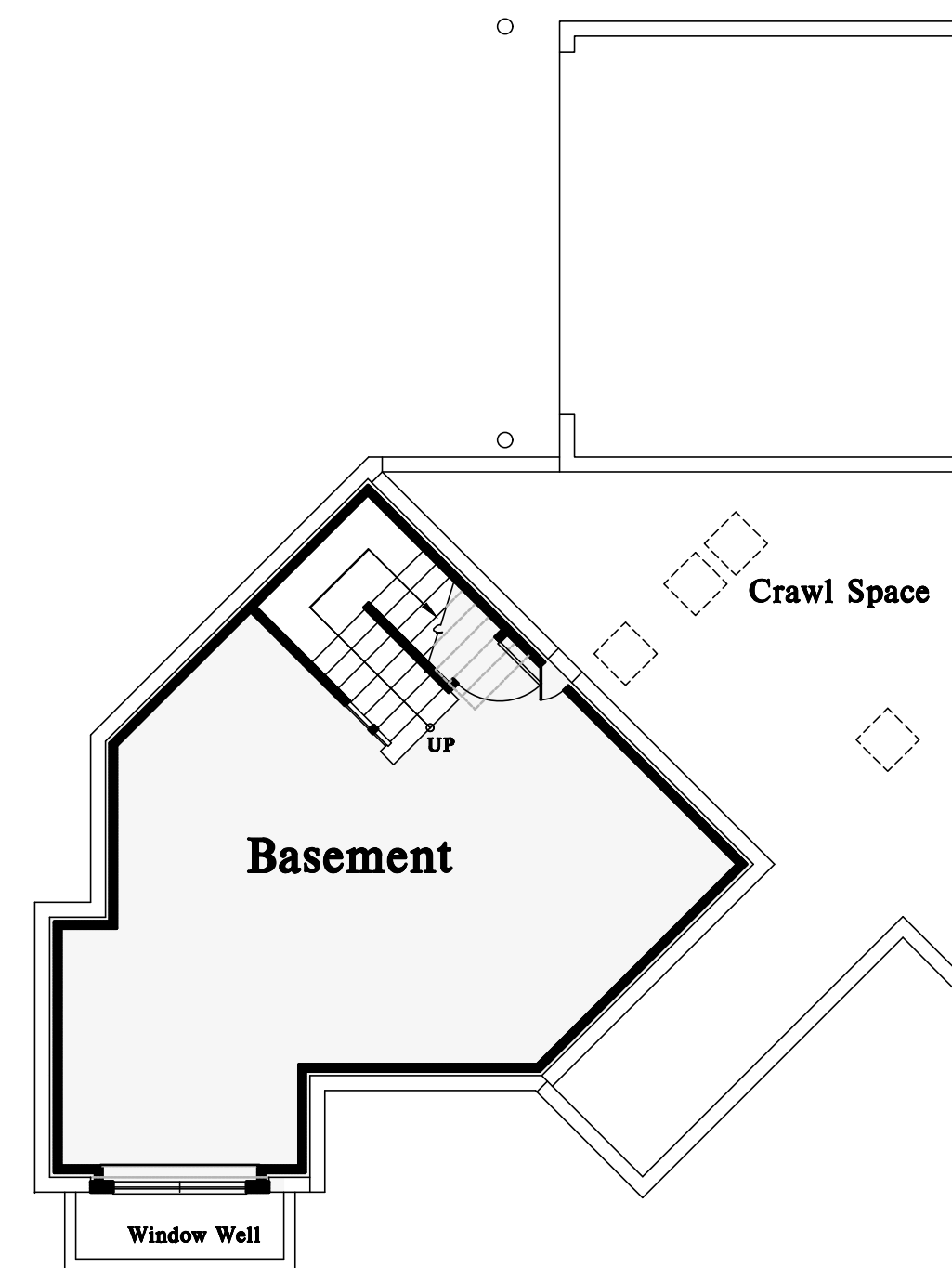


Rear Elevation

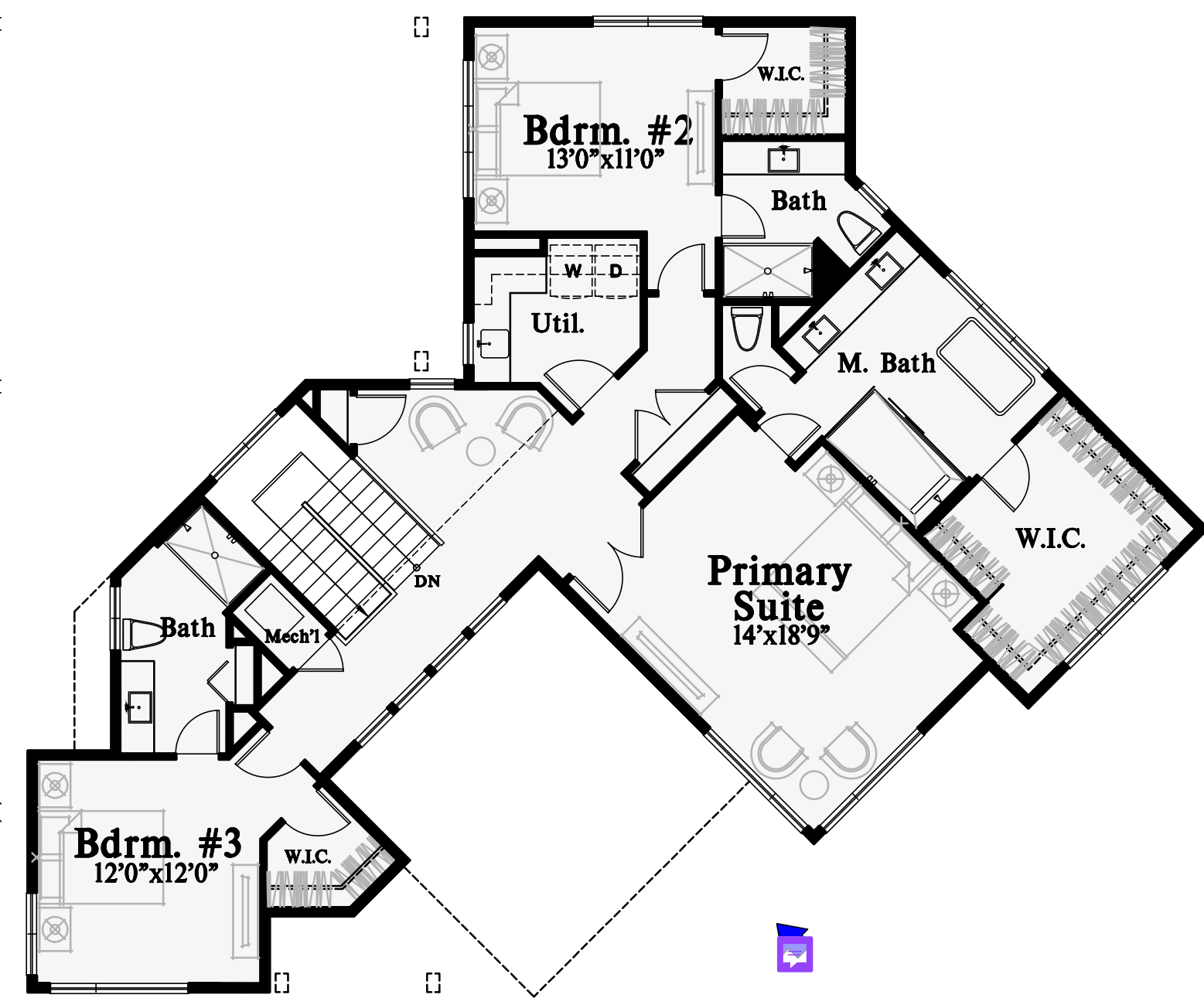
1. A NFA 72-CHAPTER 29 MONITORED FIRE ALARM SYSTEM IN COMPLIANCE WITH NFPA 72 AND CoMI STANDARDS SHALL BE INSTALLED THROUGHOUT THE RESIDENCE THE RESIDENCE. A SEPARATE FIRE PERMIT IS REQUIRED.
2. A NFPA 13R FIRE SPRINKLER SYSTEM IN COMPLIANCE WITH NFPA 13R AND CoMI STANDARDS SHALL BE INSTALLED THROUGHTOUT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



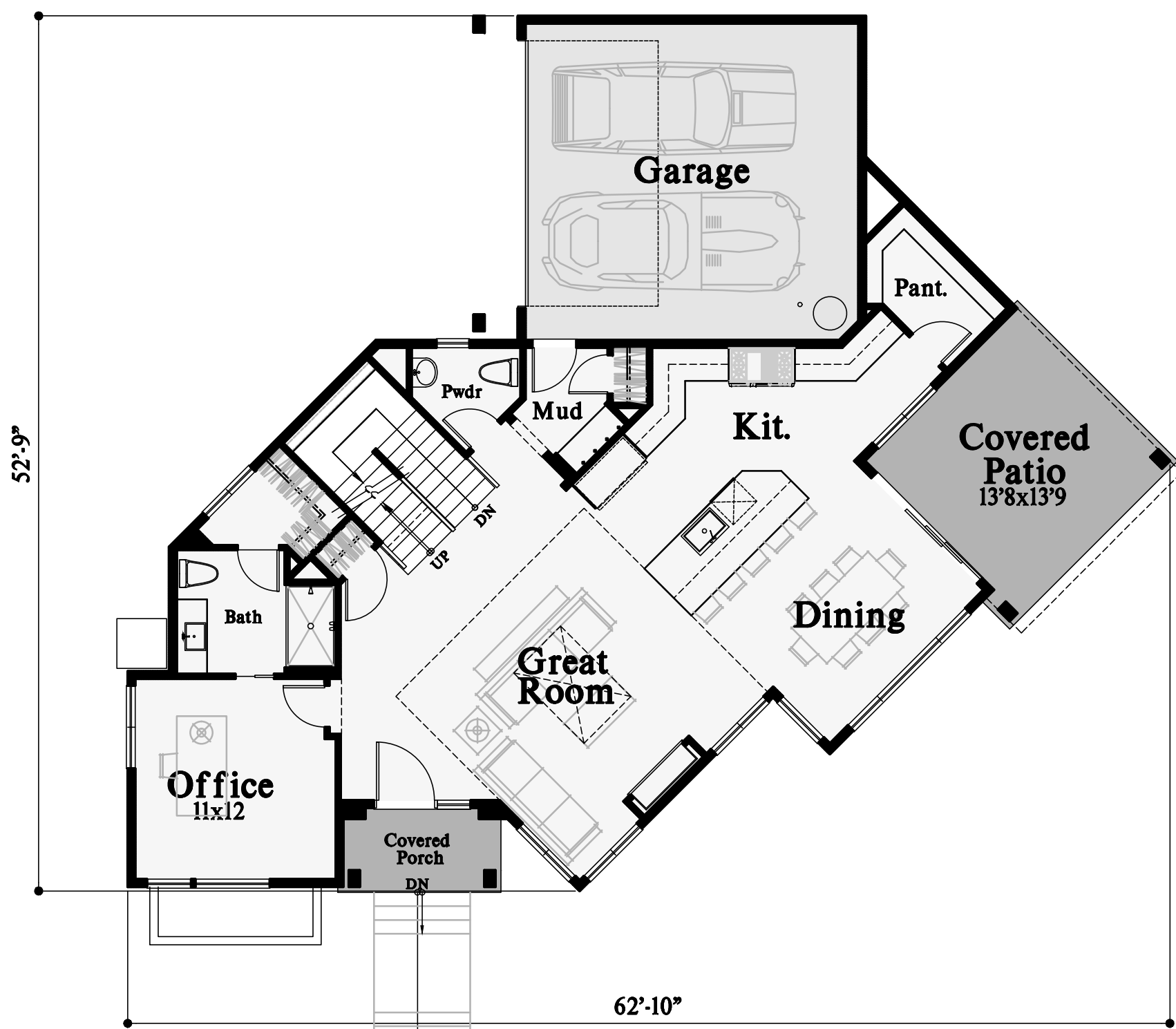
Side Elevation



Basement



Upper Floor Plan



Main Floor Plan

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TITLE
JOB NO. : 2102221
STARTING NO. : 2102205

SHEET

COVER SHEET

**Division 1
GENERAL REQUIREMENTS**

01000 GENERAL
 1. This cover sheet 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 a complete listing of specifications. Within this cover sheet it will state, "Coordinate with materials finish selection schedule".

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

3. Authorized reproductions must bear the name of ARCHITECTURAL INNOVATIONS P.S.
 4. Construction/working drawings by their very nature are diagrammatic and do not purport to show all details or conditions of construction. Questions generally arise to the architect/design intent and to construction technical detailing within these drawings. As clarification, interpretation, 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 selection process does not constitute a "bidder select" and does not include specifications or building materials list. Therefore it is the Contractor/Owner's responsibility to provide and coordinate specifications, including product selection and installation or assembly. ARCHITECTURAL INNOVATIONS P.S. assumes no liability or responsibility for discrepancies or conflicts which occur through Contractor/Owner specified materials and their respective installation. ARCHITECTURAL INNOVATIONS P.S. assumes no liability or responsibility for any items which may be called out or referred to by manufacturer as brand name. Items called out are done so for convenience only.

7. Do not scale these drawings for critical dimensions. Verify all dimensions and details 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 work. The contractor will be responsible for all required safety procedures and procedures required to do the 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 IRC, IBC, and WSEC are references to the 2021 code updates I WA state Amendments.

02000 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 IRC section R402.4, Insulate and weather-strip per WSEC R402.4. Allow 18" minimum space under wood joists and 12" minimum space under wood girders.

2. Provide attic access, minimum 22" x 36" with 36" minimum headroom, at unobstructed readily accessible opening per IRC R402.4. Insulate and weather-strip per WSEC R402.4, requirements.

3. Provide ventilation per IRC, 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 IRC R402.2.
 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. The balance of required ventilation to be provided by eave or cornice vents per IRC section R900.2, and WSEC requirements.

4. Slope all decks, walk, driveway, 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 IRC section R301.1.

6. Garage/house separation:
 A) Garage ceilings separating attic spaces shall be protected with 1/2" Gypsum. When garages are beneath habitable rooms, the ceilings shall be covered with 5/8" type "X" Gypsum on the garage side. Where the separation is a floor/ceiling assembly, the structure shall be protected with 1/2" Gypsum per IRC table R302.1.
 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 IRC section R302.1.

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 gauge sheet steel or other approved material and shall have no openings into the garage per IRC R302.1.
 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 IRC section R301.12.
 B) Minimum stair tread depth 10" with a 3/8" minimum width measured above handrail height. Minimum riser height 1-3/4" per IRC sections R301.14 & R301.1.
 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 IRC section R301.14.
 D) Install the blocking between stringers at the top and bottom of each run per IRC section R302.1.

8. Cover outside spaces under stairs with 1/2" Gypsum per IRC section R302.1.
 9. Landing Guard: 1) Decking: Provide 5/8" type "X" Gypsum or 3/8" gauge sheet metal with lock joints on all openings to shaft surfaces shall be self-closing solid core door 1-3/8".
 2) Fireblocking shall be provided in wood-frame construction in the following locations:
 A) In concealed spaces of stud walls and partitions, including turned studs and parallel runs 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 cover ceilings.
 C) In concealed spaces between shaft stringers at the top and bottom of the run. Enclosed spaces under stairs shall comply with Section R302.1.
 D) At openings around vents, pipes, ducts, cables and wires at ceiling and floor level, with approved material to resist the free passage of flame and products of combustion.
 E) For the fireblocking of chimneys and fireplaces, see Section R1003.3.
 F) Fireblocking of cornices of a two-family dwelling is required at the line of walling unit separation.

10. Fireblocking shall consist of the following materials per IRC R302.11:
 A) 2" nominal lumber.
 B) Top thickness of 1/2" nominal lumber with broken lap joints.
 C) One thickness of 7/8" wood structural panels with joints backed by 3/4" wood structural panels.
 D) One 1/2" gypsum board.
 E) One 1/2" 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.
 H) 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: 25pcf
 Top chord dead load: 1pcf
 Bottom chord live load: 10pcf without storage
 20pcf if limited storage
 TOTAL LOAD: 42pcf or 52pcf or 62pcf

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: 10 mph (UNO)
 G) Seismic Design Category: D12 (UNO)
 H) Allowable soil pressure: Unless a soils report by a qualified engineer is provided, all footings and foundations shall be assumed 1500 psf bearing capacity unless otherwise noted on drawing.
 J) Equivalent fluid pressure 35 psf (UNO).
 K) All footings to be located below the frost line depth: 18" (UNO).

03000 MISCELLANEOUS ASSEMBLY REQUIREMENTS CONT.

1. Prefabricated Fireplaces and Solid Fuel Burning Appliances per I.M.C. and I.R.C. Chapter 10:
 A) Solid fuel burning appliances include airtight stoves, fireplaces stoves, room heaters/fireplace stoves, factory built fireplaces, and fireplace inserts, and all shall comply with the provisions of IRC.
 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 chimneys and enclosing walls sufficient for examination and repair for entire chimney. Walls shall be without openings for I.M.C.
 C) Provide fireblocking at chimney per IRC section R302.1.
 D) Install metal fireplace with hearth and surround per manufacturers specifications.
 E) Prefabricated fireplaces, chimneys, and related components to bear UL or IBCO seal of approval and be installed per manufacturers requirements.
 F. Fireblocking per IRC sections R302.1.

04000 REGULATORY REQUIREMENTS
 1. All construction shall conform to the 2021 International Residential Code (IRC), 2021 International Building Code (IBC), 2021 International Fire Code (IFC), 2021 International Mechanical Code (IMC) 2021 Uniform Plumbing Code (UPC), 2021 Washington State Energy Code (WSEC) 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.

05000 CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS
 1. Provide Temporary Facilities, including electricity utility, 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**

07000 EARTHWORK
 Part 3 - Execution
 1. Rough grading: 4" below finish grading unless otherwise specified.
 2. Finish grading: Landscaping division 07300.
 3. Excavation, backfilling and compacting for structures as needed.
 4. Excavation backfilling and compacting for pavement as needed.
 5. Heating and disposal of excavated material as needed.
 6. Importing of material as needed.
 7. Rock removal as needed.

08000 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" max.
 C. Concrete per Division 3.
 1. Finish and color.
 2. 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.

09000 FINISH WORK
 1. All work within this contract shall represent that of industry standards for the respective trades in the location in which the project is built.
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02000 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 IRC section R402.4, Insulate and weather-strip per WSEC R402.4. Allow 18" minimum space under wood joists and 12" minimum space under wood girders.

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4. Slope all decks, walk, driveway, exterior door landings, and patios away from building. Minimum 1/4" per foot.
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 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 IRC section R301.14.
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 2) Fireblocking shall be provided in wood-frame construction in the following locations:
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 E) One 1/2" 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.
 H) 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: 25pcf
 Top chord dead load: 1pcf
 Bottom chord live load: 10pcf without storage
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 TOTAL LOAD: 42pcf or 52pcf or 62pcf

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: 10 mph (UNO)
 G) Seismic Design Category: D12 (UNO)
 H) Allowable soil pressure: Unless a soils report by a qualified engineer is provided, all footings and foundations shall be assumed 1500 psf bearing capacity unless otherwise noted on drawing.
 J) Equivalent fluid pressure 35 psf (UNO).
 K) All footings to be located below the frost line depth: 18" (UNO).

03000 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 vertical support members to sit below the frost line.

03100 CONCRETE REINFORCING
 Part 2 - Product
 1. Reinforcing steel: Deformed bar sizes and locations per plans and details. Grade 60, fy 60ksi per IRC section R404.13.3.11. Unless otherwise noted per Engineer.
 2. Welded wire fabric: at locations per plans and details: 6x6, 10x14, 14x14.
 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 IRC section R404.13.3.15.

03200 CONCRETE ACCESSORIES
 Part 2 - Product
 1. Anchor bolts: 1/2" triple zinc ZMAX (G95 per ASTM A653) hot dipped galvanized steel (ASTM B3 for Anchors), with a minimum 1" embedment, per IRC section R403.6, unless otherwise noted per Engineer.
 2. Washers: 3/2"x1/4" sq. triple zinc ZMAX (G95 per ASTM A653) hot dipped galv. steel (ASTM B3 for Anchors) plate washers per IRC section R602.11. Unless otherwise noted per Engineer.
 Part 3 - Execution
 1. Anchor bolts at 6'-0" o.c. max. for one story 1'-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 12" bolts per plate section per IRC section R403.6.

03300 CAST-IN-PLACE CONCRETE
 Part 2 - Product
 1. Structural concrete: Design Fc = 2500 psi min 5-1/2" sacks of cement per cubic yard of concrete and a maximum of 6.0 gallons of water per 34lb sack of cement at 28 days. Max slump in 4". Segregation of materials to be prevented. Use Fc = 3000 psi concrete at 28 days with air entrainment only for concrete exposed to weather. In accordance with IRC Table R402.2. Special inspection not required unless noted otherwise per Engineer.
 2. Architectural concrete: (or exposed aggregate finish (astrod), Fc = 2000 psi at 28 days, with 3/8" round aggregate.

03300 CAST-IN-PLACE CONCRETE (cont.)
 3. Admixtures:
 A. All concrete shall have water reducing admixtures except for footings.
 B. Air entrainment shall be 5-7% in all concrete exposed to weather. IRC Table R402.2
 C. Coloring agent:
 1. Coordinate with materials finish selection schedule.

Part 3 - Execution
 1. All construction shall conform to the 2021 International Residential Code (IRC), 2021 International Building Code (IBC), 2021 International Fire Code (IFC), 2021 International Mechanical Code (IMC) 2021 Uniform Plumbing Code (UPC), 2021 Washington State Energy Code (WSEC) 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.

05000 CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS
 1. Provide Temporary Facilities, including electricity utility, 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 3

**Division 4
MASONRY**

04000 MORTAR
 Part 2 - Product
 1. Type "N" or "S" mortar with integral waterproofing agent per IRC section R606.2B
 Part 3 - Execution
 1. Per IRC section R606.2

04100 MASONRY ACCESSORIES
 Part 2 - Product
 1. Anchor bolts and ties: To be corrosion-resistant metal ties per IRC section R103.8.4.
 2. Joint reinforcement: Standard strand no. 9 US. gauge wire per IRC section R103.8.
 Part 3 - Execution
 1. Per IRC Chapter 1.

04200 UNIT MASONRY
 Part 2 - Product
 1. Brick masonry:
 A. Exterior locations name/fg.
 B. Interior locations name/fg.
 1. Coordinate with materials finish selection schedule (by others).
 C. Pavers/planters: name/fg.
 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 IRC section R601.
 A. Exterior locations name/fg.
 B. Interior locations name/fg.
 1. Coordinate with materials finish selection schedule (by others).

Part 3 - Execution
 1. Brick and Veneer:
 A. Exterior locations name/fg.
 B. Interior locations name/fg.
 1. Coordinate with materials finish selection schedule (by others).
 2. Concrete masonry unit (CMU)
 A. Concrete masonry unit shall be constructed to conform to ASTM C90. It shall be laid up, reinforced, and anchored as shown on drawings.

Part 3 - Execution
 1. Brick and Veneer shall be supported on footings, foundation, or other non-combustible supports. It shall have 1/2" fall 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 3/8" min round weepholes at 32" o.c. max, located immediately above the flashing extending from the air space to the exterior. Veneer shall support no load other than its own weight, and the vertical dead load of veneer above. Provide angle iron supports at doors, windows, and other openings per R606.10.
 2. Concrete masonry unit (CMU)
 A. Concrete masonry unit shall be constructed to conform to ASTM C90. It shall be laid up, reinforced, and anchored as shown on drawings.

04300 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 topped.

Part 3 - Execution
 1. Install per manufacturer's recommendation and Chapter 9 of the IRC.
04400 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.
 B. Soffits: A. See the "TYPICAL BUILDING MATERIALS" list on the drawings.
 C. Other: A. See the "TYPICAL BUILDING MATERIALS" list on the drawings.

Part 3 - Execution
 1. Install per manufacturer's recommendation and Chapter 9 of the IRC.
04500 STONE
 Part 2 - Product
 1. As shown on drawings.
 A. Exterior locations name/fg.
 1. Coordinate with materials finish selection schedule (by others).
 B. Interior locations name/fg.
 1. Coordinate with materials finish selection schedule (by others).

Part 3 - Execution
 1. Install per manufacturer's recommendation and Chapter 1 of the IRC.
04600 FLASHING AND SHEET METAL
 Part 2 - Product
 1. Min. 26 gauge galvanized, prefinished.
 Part 3 - Execution
 A. On exterior stud walls, adhered masonry veneer shall be installed:
 1. Minimum of 4 inches above the eave.
 2. Minimum of 2 inches above paved areas, or
 3. Minimum of 1/2 inch above exterior walking surfaces which are supported by the same foundation.
 B. Flashing at foundation:
 1. A corrosion-resistant screed or flashing of a minimum 0.019-inch or 20-gauge galvanized or aluminum with a minimum vertical extension (flange of 3) inches shall be installed.

END DIVISION 4

**Division 5
METALS**

05000 METAL FASTENINGS
 Part 2 - Product
 1. Bolts: Use sizes and shapes per draws, or as needed for intended purposes. Bolts, nuts and cut washers in contact with treated wood to be triple zinc ZMAX (G95 per ASTM A653) hot dipped galvanized steel (ASTM B3 for Anchors).
05100 METAL FABRICATION
 Part 2 - Product
 1. Handrails and guardrails: Provide in sizes and locations as shown per draw.

END DIVISION 5

**Division 6
WOOD AND PLASTICS**

06000 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 (DCC PS 20) standards. All K1n 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. Purlin and ladders: Doug-Fir #2.
 D. Studs, plates, and misc. light framing: Hem-Fir #2 or better.
 E. 1" Joists and Engineered beams: Per manufacturer.
 F. Glue laminated timber:
 1. Simple span: 24F V4 DFN31N
 2. Continuous or cantilever: 24F V8 DF8P
 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 draws.
 J. Floor sheathing: See "TYPICAL BUILDING MATERIALS" list on the draw.
 K. Other: As noted on drawings.
 L. All wood members in contact with exposed concrete to be pressure treated members.
 Part 3 - Execution
 A. Underlayment:
 1. Floors: 5/8" (UNO).
 2. Stair string: 1x4" (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 may be designed by manufacturer.
 E. Fasteners and adhesives: All nails shall be common type of steel for intended purpose per IRC table R603.11). Attach timber joists to rafter 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 (G95 per ASTM A653) hot dipped galv. steel (ASTM B3 for fasteners), stainless steel, silicone bronze, or copper as required per draws.
 F. Manufactured by:
 A. Color: 1. Coordinate with materials finish selection schedule (by others).
 B. Style: 1. Coordinate with materials finish selection schedule (by others).

06100 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. Sillie and rail/stone door: A. Coordinate with materials finish selection schedule (by others).
 4. Patio door: A. Coordinate with materials finish selection schedule (by others).
 5. Other: A. Coordinate with materials finish selection schedule (by others).

06200 SPECIALTY DOORS
 Part 2 - Product
 1. Bliding glass door:
 A. Coordinate with materials finish selection schedule (by others).
 2. Garage door: (Inkless) (see division 1450)
 A. Coordinate with materials finish selection schedule (by others).

06300 WOOD/VINYL WINDOWS
 Part 2 - Product
 1. Note: Egress:
 A. Every sleeping room shall have at least one operable window with a net clear opening of 5.7 sq. ft. The net clear opening height shall be a minimum of 24" with a minimum clear width of 20", and a finished sill height of not more than 44" above the floor, per IRC section R310.
 B. Safety glaze per IRC section R310.
 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).

06400 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).

06500 GLAZING
 Part 2 - Product
 1. Glass thickness to be determined by size and wind loading per IRC section R308.
 2. Mirrors to be silvered 1/4" float plate glass.

END DIVISION 6

**Division 7
THERMAL AND MOISTURE PROTECTION**

07000 WATER PROOFING & DAMP PROOFING
 Part 2 - Product
 1. Per IRC section R406.
 Part 3 - Execution
 1. Per IRC section R406.

07100 VAPOR AND AIR RETARDERS
 Part 2 - Product
 1. Ground cover: 6 mil polyethylene black, with 12" minimum lap.
 2. Wrapping seal: see the "TYPICAL BUILDING MATERIALS" list on the drawings.
 Part 3 - Execution
 1. See Division 11, Energy Requirements.

07200 INSULATION
 Part 2 - Product
 1. Fiberglass or mineral wool batts, blown mineral wool, and extruded polystyrene:
 A. Walls: 1. See the "TYPICAL BUILDING MATERIALS" list on the draws.
 B. Ceilings: 1. See the "TYPICAL BUILDING MATERIALS" list on the draws.
 C. Floor: 1. See the "TYPICAL BUILDING MATERIALS" list on the draws.
 D. Slab on grade: R-10 (per WSEC, Table R402.11).
 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.
 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 low surface of the floor insulation.

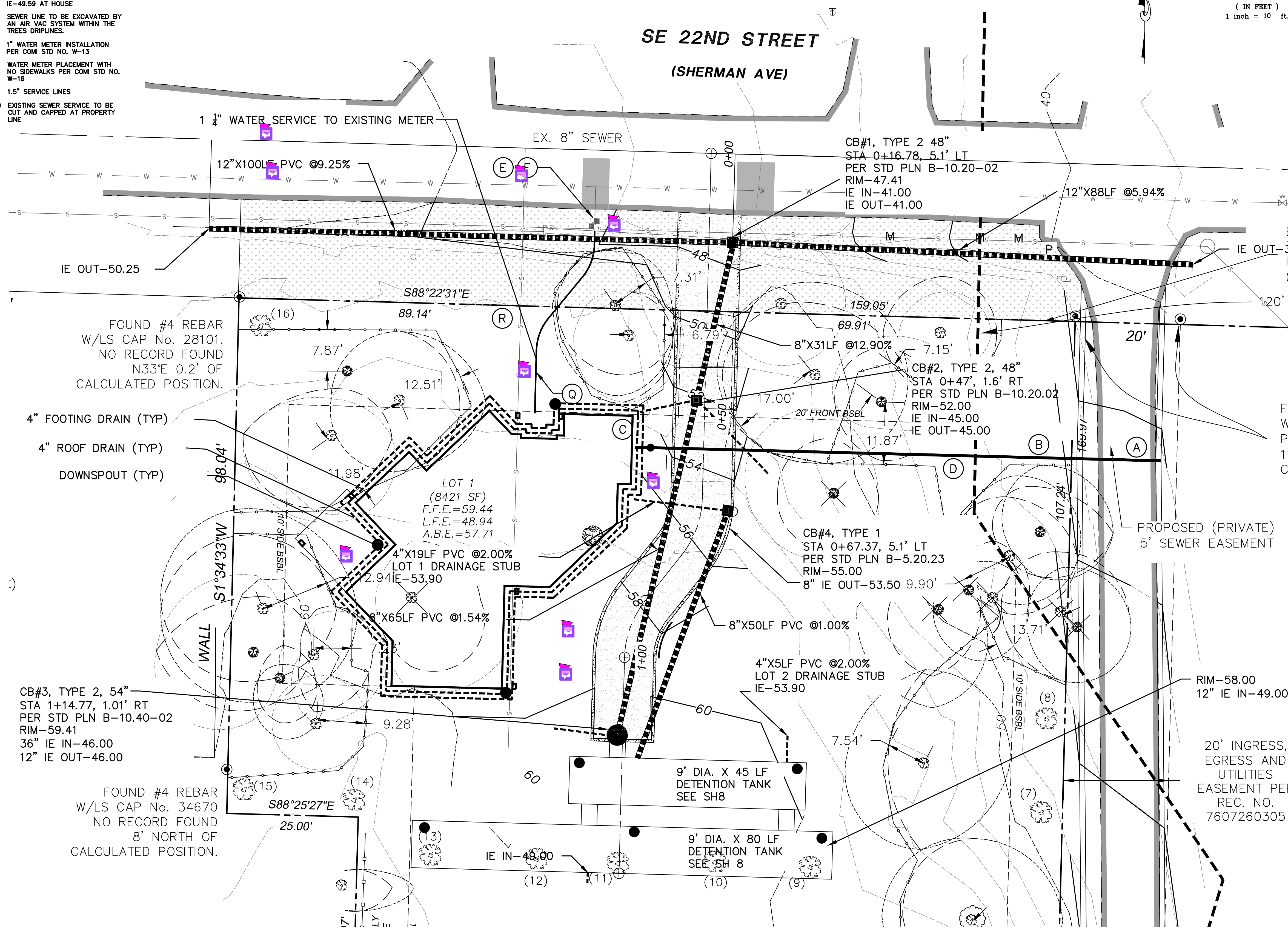
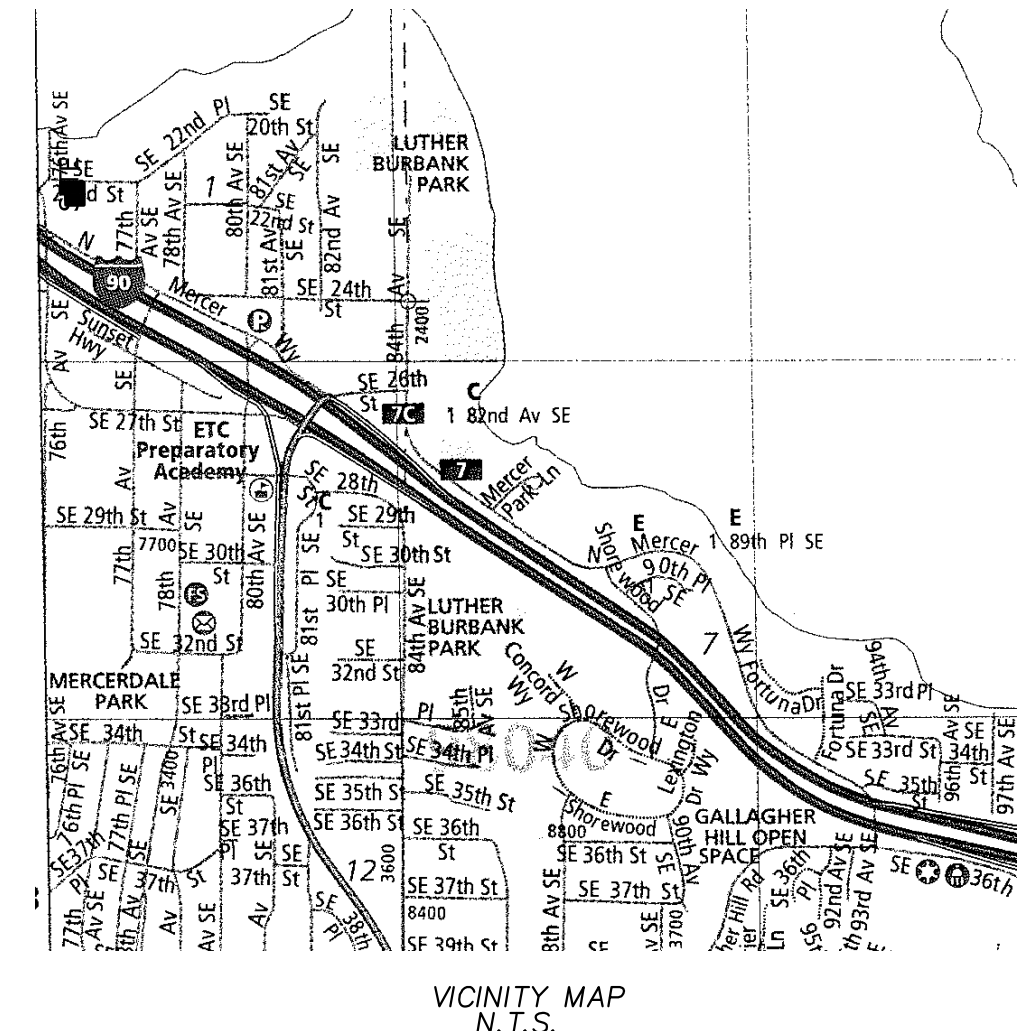
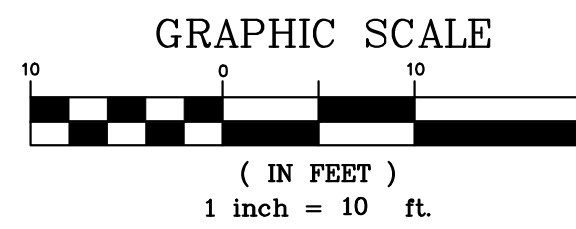
07300 ROOFING MATERIAL
 Part 2 - Product
 1. Shingles and roofing tiles:
 A. See the "TYPICAL BUILDING MATERIALS" list on the drawings.
 2. Membrane roofing: A- 3-ply hot topped.

Part 3 - Execution
 1. Install per manufacturer's recommendation and Chapter 9 of the IRC.
07400 SIDING MATERIAL
 Part 2 - Product
 1. Siding: A. See the "TYPICAL BUILDING MATERIALS" list on the drawings.
 2

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

- (A) 6" SIDE SEWER CONNECTION AND STUB PER COMI STD NO. S-17 IE-41.434 (POT HOLE 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-48.59 AT HOUSE
- (D) SEWER LINE TO BE EXCAVATED BY AN AIR VAC SYSTEM WITHIN THE TREES DRUPLINES.
- (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:**
1. BASIS OF BEARINGS IS THE WASHINGTON STATE PLANE COORDINATE SYSTEM, N.A.D. 1983/2011, BASED ON GPS TIES TO THE WASHINGTON STATE REFERENCE NETWORK (WSRN).
 2. ELEVATION DATUM IS N.A.V.D. 1988 BASED ON GPS TIES TO THE WSRN.
 3. FIELD WORK WAS DONE IN FEBRUARY OF 2020 USING A TRIMBLE R8 GNSS GPS RECEIVER, AND A SPECTRA PRECISION FOCUS 35 ROBOTIC TOTAL STATION IN ACCORDANCE WITH W.A.C. 332-130.
 4. THE PURPOSE OF THIS SURVEY IS TO PROVIDE A BASE MAP FOR CIVIL ENGINEERING DESIGN.
 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).
 6. PROPERTY LINES SHOWN ARE PER UNRECORDED SHORT PLAT BY JONES, BASSI & ASSOCIATES DATED 1/16/1974.
 7. THE UNDERGROUND UTILITIES SHOWN ARE BASED ON A COMBINATION OF PAINT MARKS PROVIDED BY APPLIED PROFESSIONAL SERVICES, INC. AND THE SURVEYED LOCATION OF OBVIOUS SURFACE FEATURES. ADDITIONAL UNDERGROUND UTILITIES MAY EXIST ON AND AROUND THIS SITE.
 8. THE LEGAL DESCRIPTION AS SHOWN HEREON IS PER STEWART TITLE INSURANCE COMPANY FILE NO. 561998, COMMITMENT DATE: OCTOBER 8, 2019.
 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 MICILVRA'S ISLAND ADDITION VOLUME 16, PAGE 68 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 -L 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:

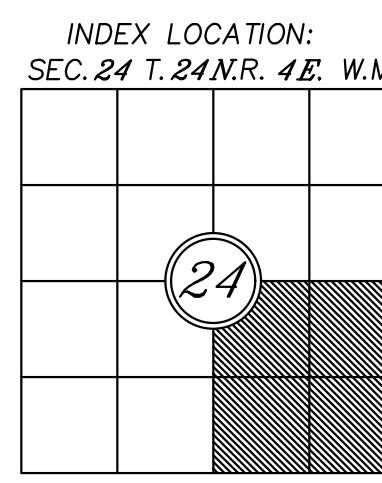
SHEET NO.	DESCRIPTION
1	WATER, SEWER, AND DRAINAGE PLAN
2	DRIVEWAY AND GRADING PLAN
3	DRIVEWAY AND DRAINAGE PROFILES
4	DETENTION TANK PLAN VIEW AND SECT.
5	DETENTION TANK PROFILES
6	DRAINAGE DETAILS
7	DRAINAGE DETAILS
8	WATER AND SEWER DETAILS

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. HARDCAPE (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



REVISIONS

NO.	DATE	DESCRIPTION

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.
 1320 N.W. WALL ST., SUITE 8
 ISSAQUAH, WASHINGTON 98027
 PH: (425) 392-5351 FAX: 392-6676

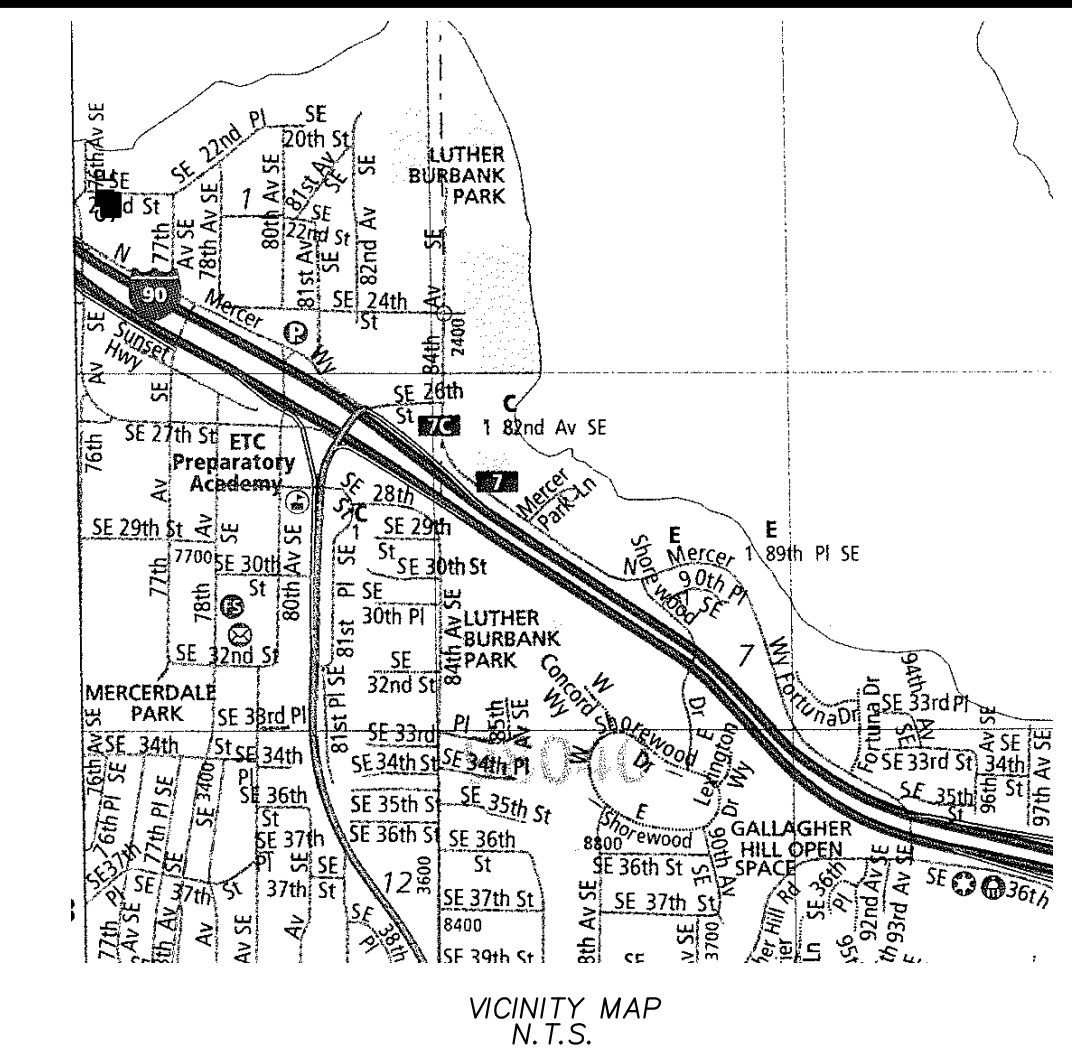
JOB NO. 20025
 DATE 07/2025
 SCALE 1"=10'
 DESIGNED ADP
 DRAWN ADP
 CHECKED RSF
 APPROVED RSF

03/20/2025

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



VICINITY MAP
N.T.S.

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.

REVISIONS	BY	DATE

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.
1320 N.W. WALL ST., SUITE B
ISSAQUAH, WASHINGTON 98027
PH: (425) 392-5351 FAX: 392-4676

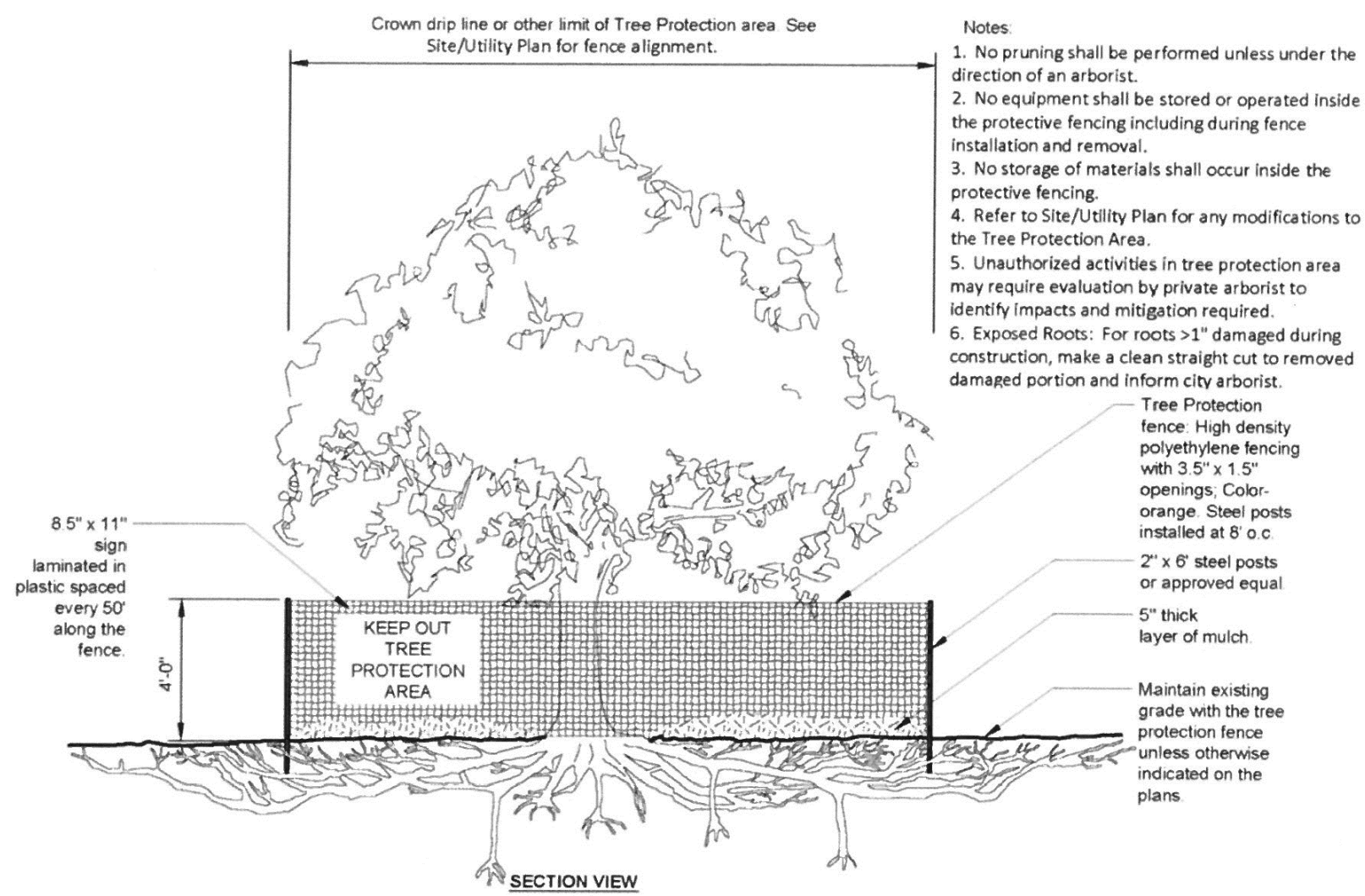
Call Before You Dig 811

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

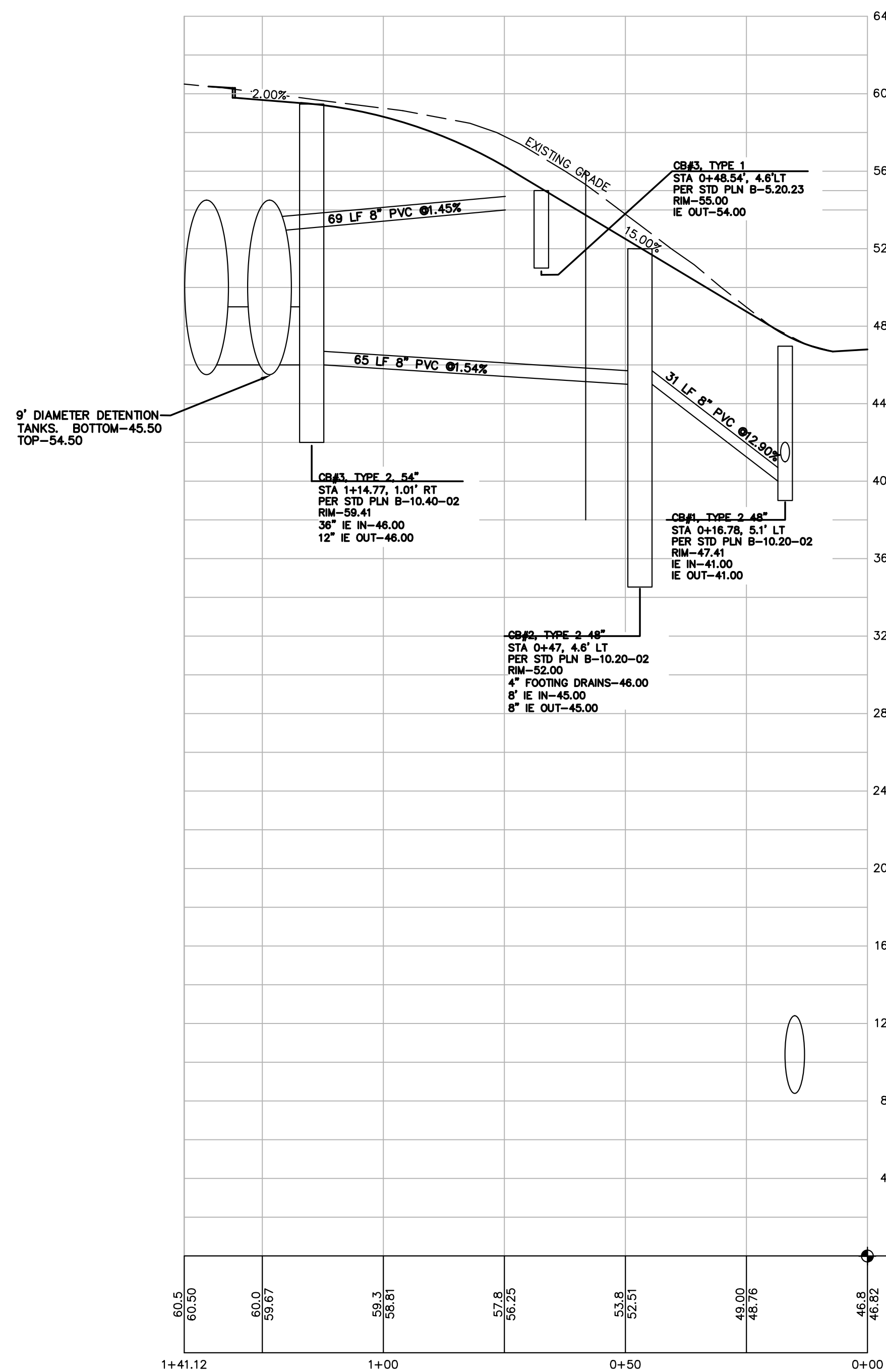
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JOB NO. 20025
DATE 12/22
SCALE 1"=20'
DESIGNED RSF
DRAWN RSF
CHECKED RSF
APPROVED RSF

SHEET 3 OF 8

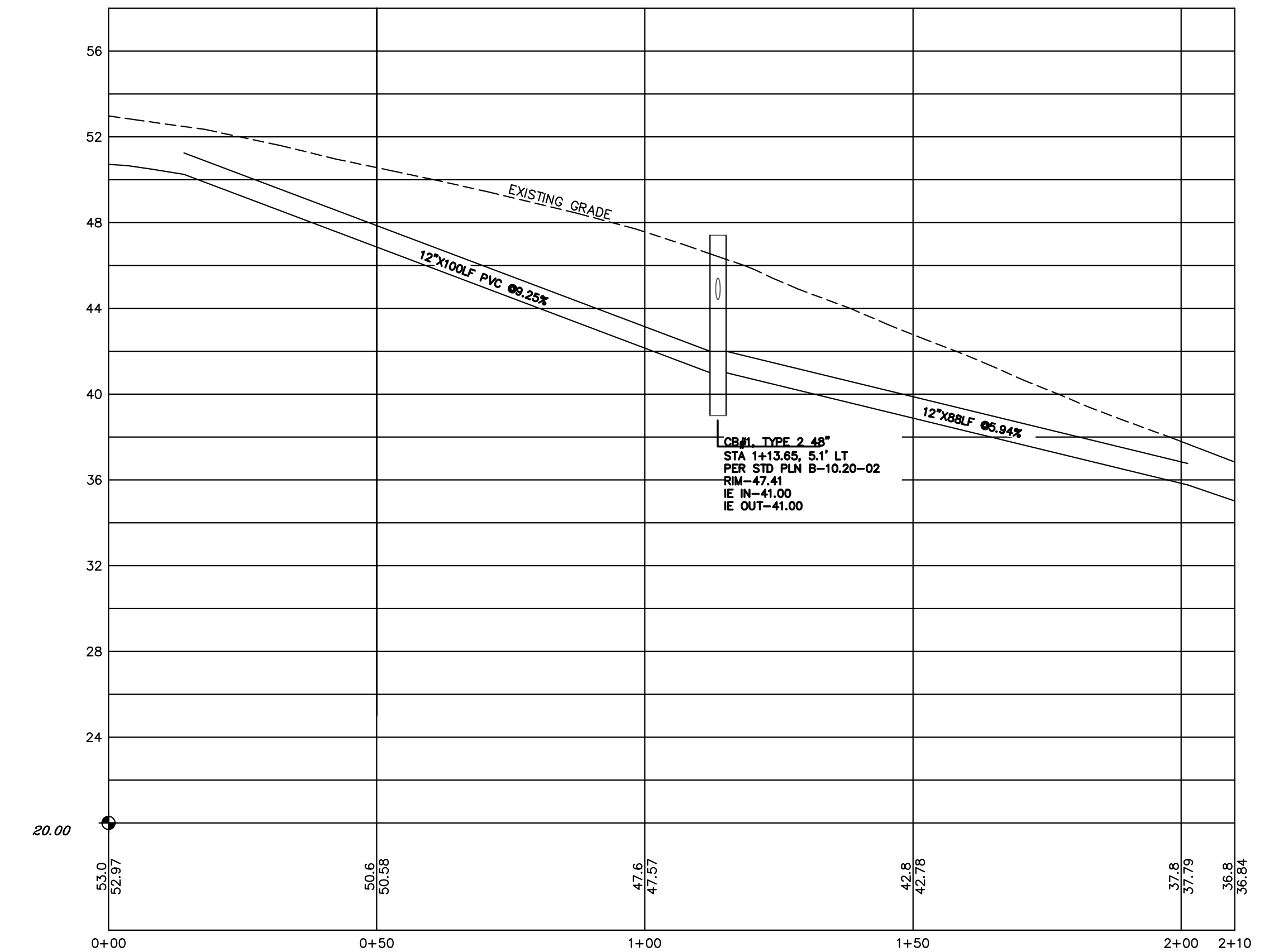


TREE PROTECTION DETAIL



DRIVEWAY DRAINAGE PROFILE

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



SE 22ND STREET DRAINAGE PROFILE

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

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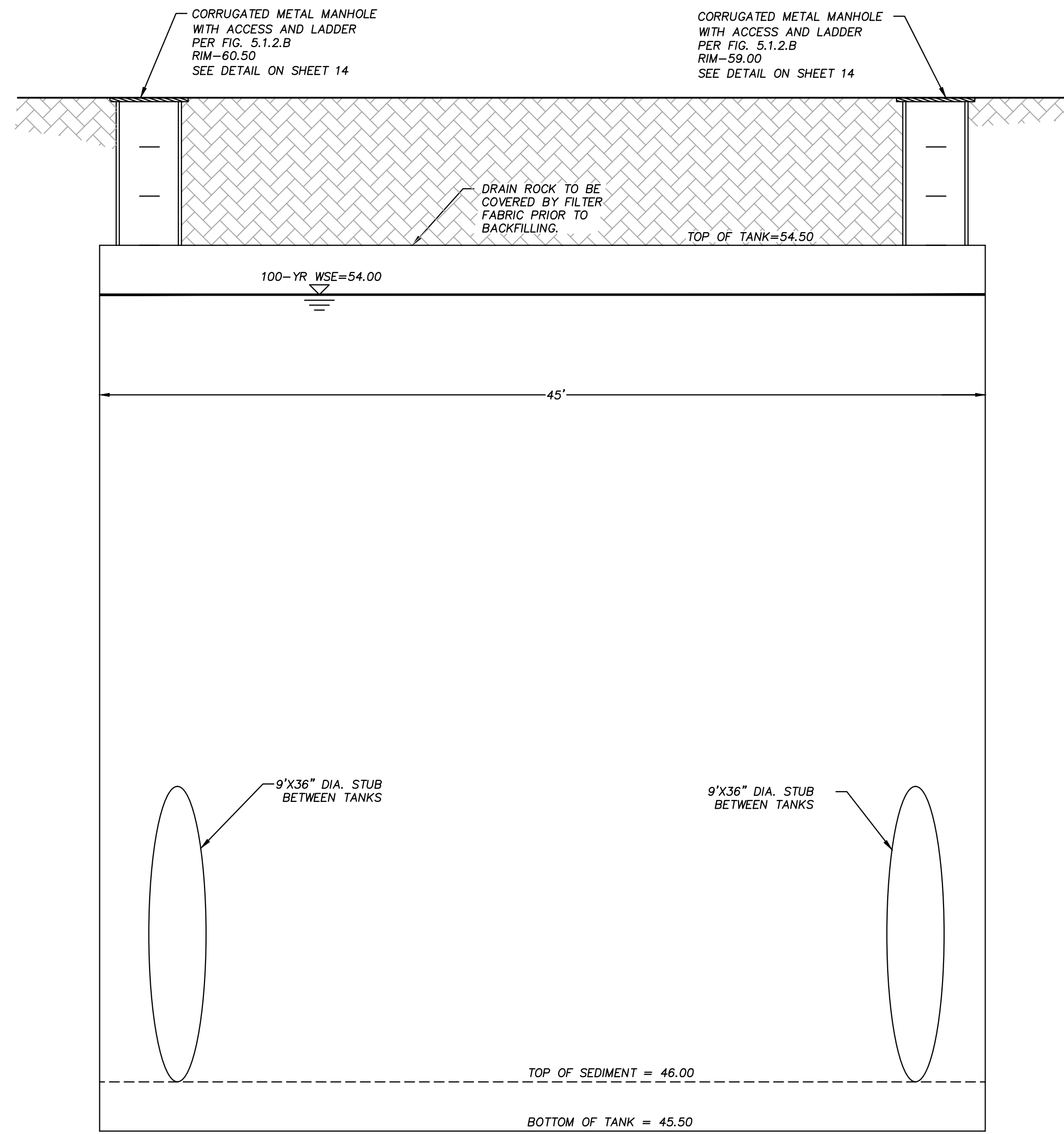


3/20/2025

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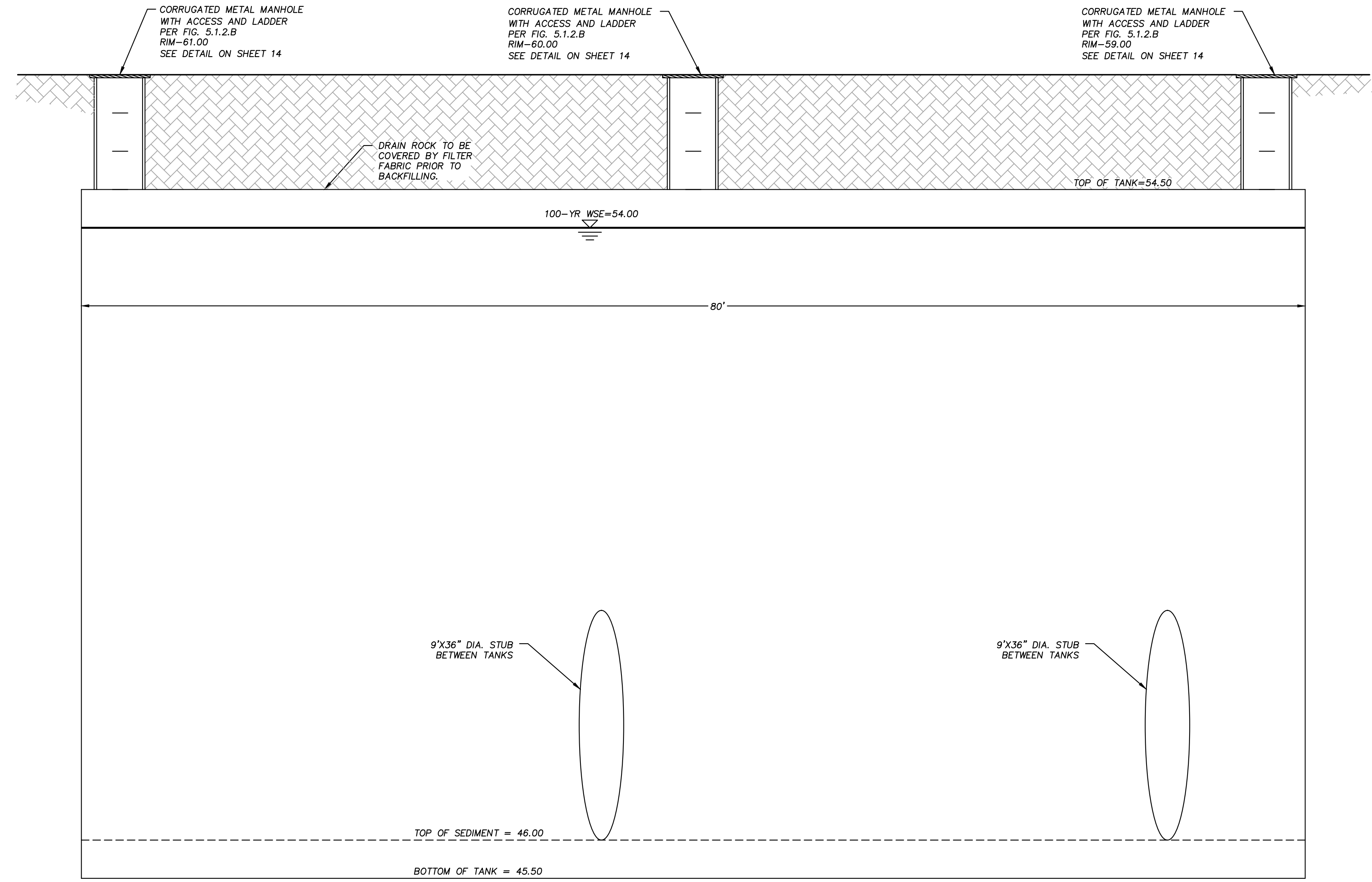
RAND-MILESTONE LOT 1 GRADING AND DRAINAGE PLAN

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'

REVISIONS	BY	DATE

DETENTION TANK PROFILES

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

ENGINEERS - SURVEYORS
EASTSIDE CONSULTANTS, INC.
618 EAST FIRST
CLE ELUM, WASHINGTON 98922
PH: (206) 974-7433 FAX: (206) 974-7419



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

	1	

JOB NO. 20025
DATE 12/22
SCALE 1"=20'
DESIGNED RSF
DRAWN RSF
CHECKED RSF
APPROVED RSF
SHEET 5 OF 8

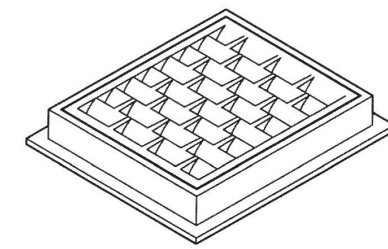
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RAND-MILESTONE LOT 1 GRADING AND DRAINAGE PLAN

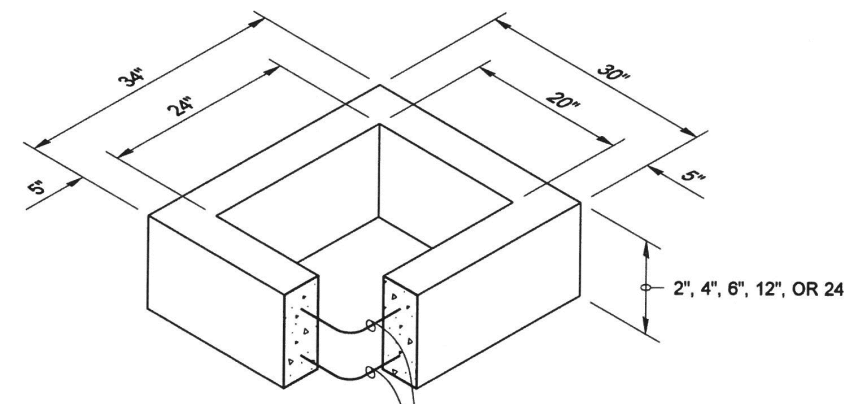
LOT 1 BUILDING PERMIT SE 1/4 OF SEC.1, T.24N., R.4E., W.M. CITY OF MERCER ISLAND, WASHINGTON



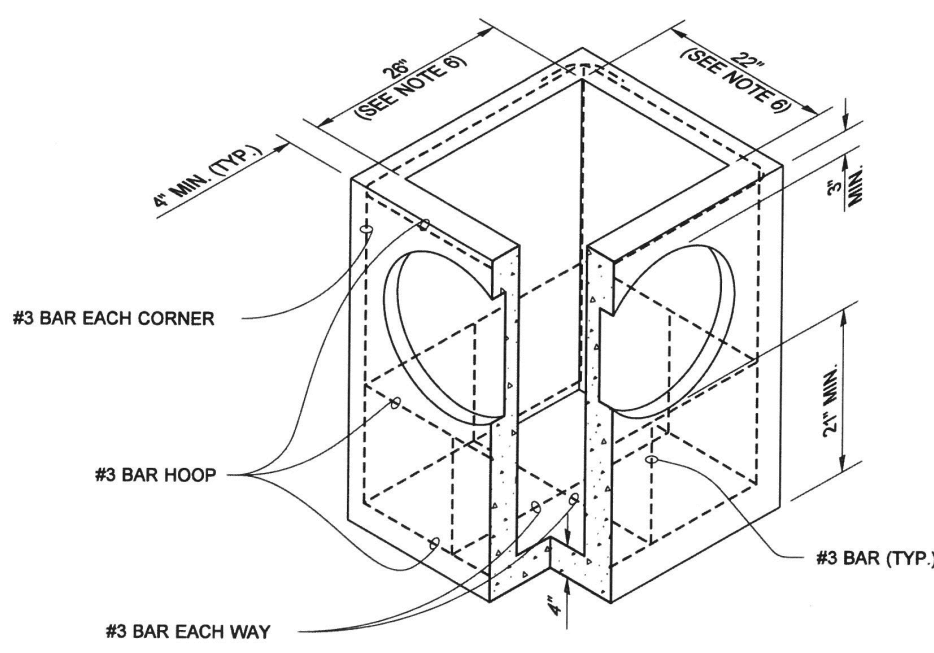
DRAWN BY: FERIN LIDDELL



FRAME AND VANED GRATE



RECTANGULAR ADJUSTMENT SECTION



PRECAST BASE SECTION

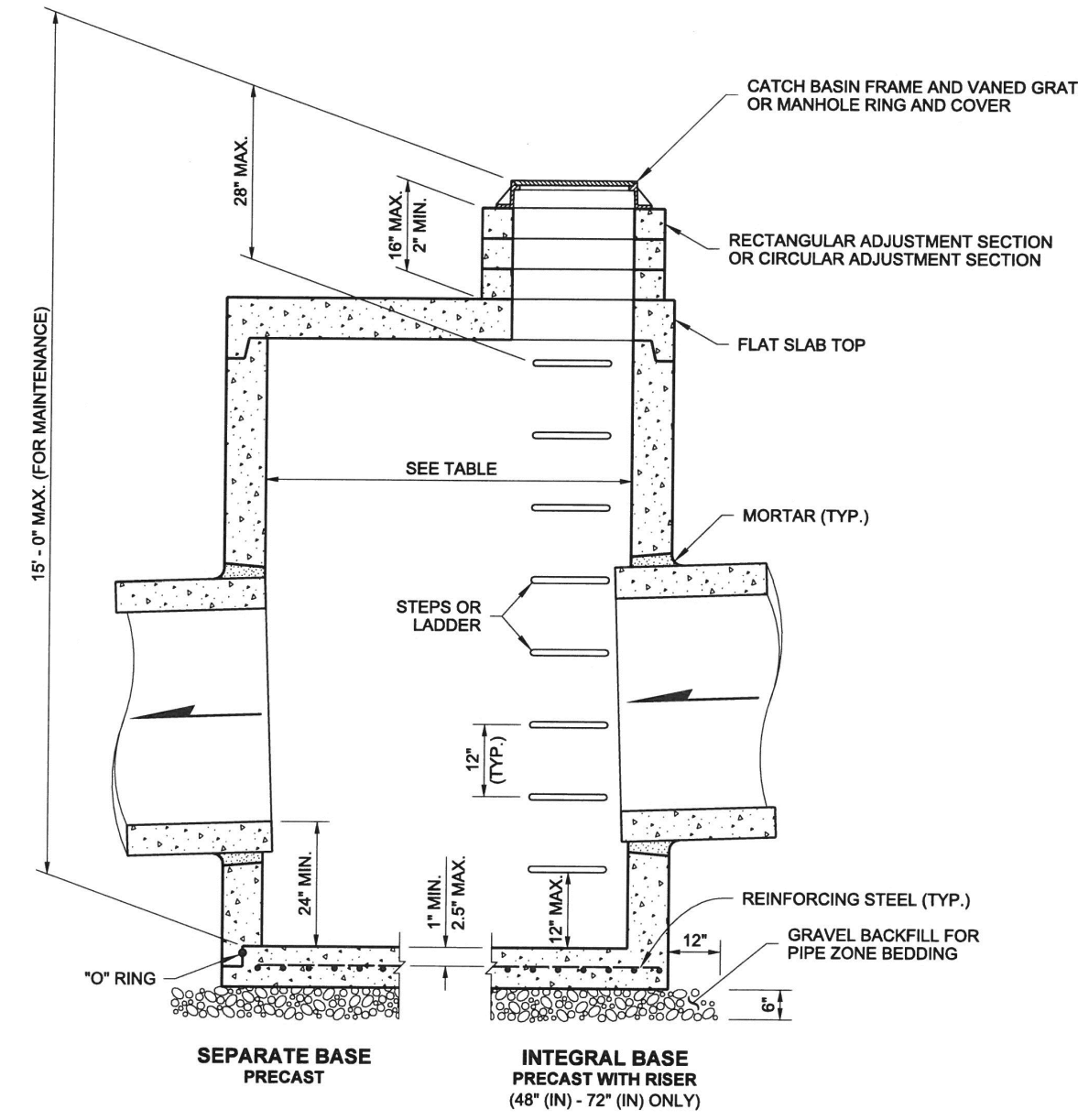
PIPE ALLOWANCES	
PIPE MATERIAL	MAXIMUM INSIDE DIAMETER (INCHES)
REINFORCED OR PLAIN CONCRETE	12"
ALL METAL PIPE	15"
CPSSP # (STD. SPEC. SECT. 9-05.20)	12"
SOLID WALL PVC (STD. SPEC. SECT. 9-05.12(1))	15"
PROFILE WALL PVC (STD. SPEC. SECT. 9-05.12(2))	15"

* CORRUGATED POLYETHYLENE STORM SEWER PIPE

NOTES

- 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.
- 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.
- The maximum depth from the finished grade to the lowest pipe invert shall be 5' (ft).
- The frame and grate may be installed with the flange down, or integrally cast into the adjustment section with flange up.
- The Precast Base Section may have a rounded floor, and the walls may be sloped at a rate of 1:24 or steeper.
- The opening shall be measured at the top of the Precast Base Section.
- All pickup holes shall be grouted full after the basin has been placed.

DRAWN BY: FERIN LIDDELL



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	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"

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



Julie Heilmann
Feb 20 2018 12:49 PM
CATCH BASIN TYPE 2
STANDARD PLAN B-10.20-02
SHEET 1 OF 1 SHEET

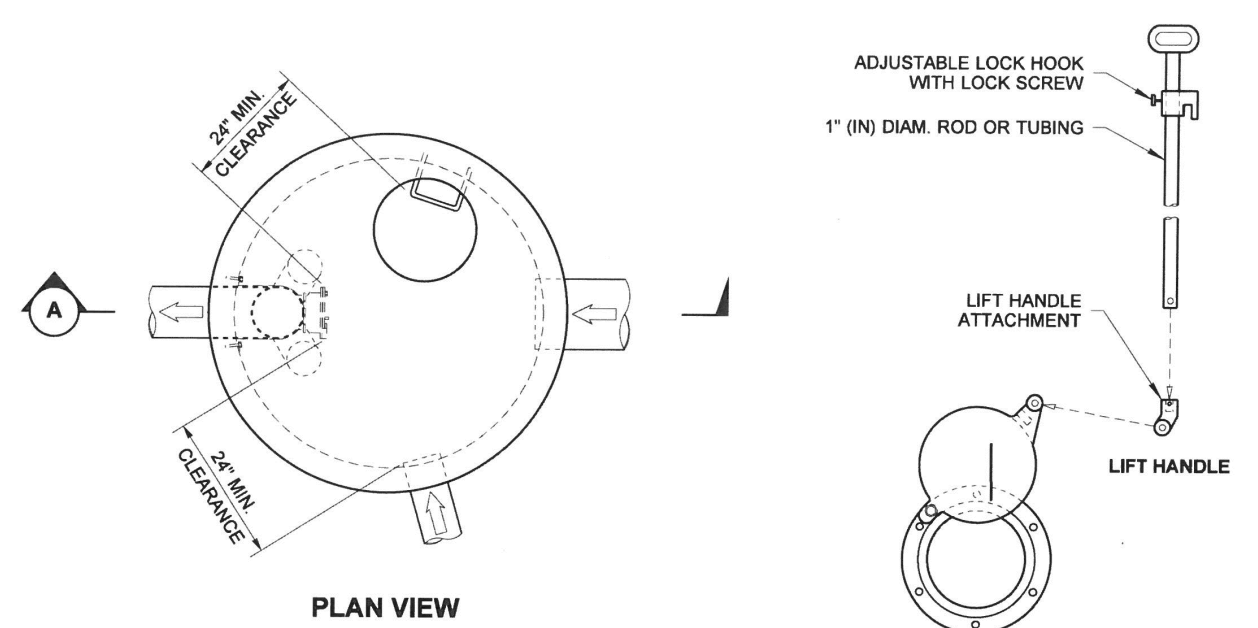
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STATE DESIGN ENGINEER
Washington State Department of Transportation



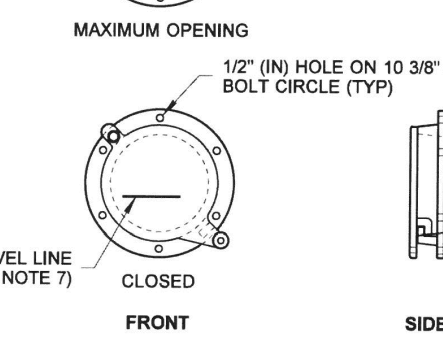
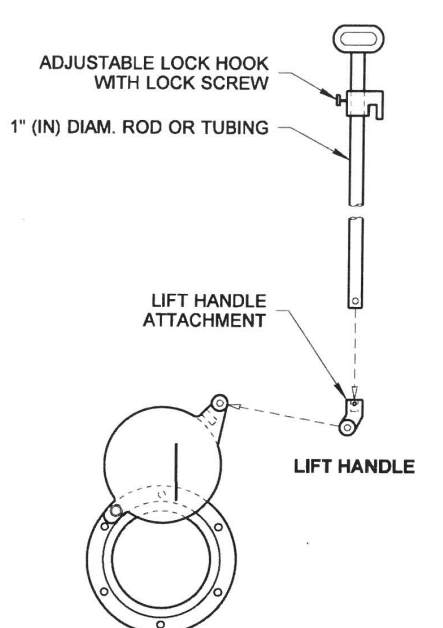
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STANDARD PLAN B-5.20-03
SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
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Washington State Department of Transportation

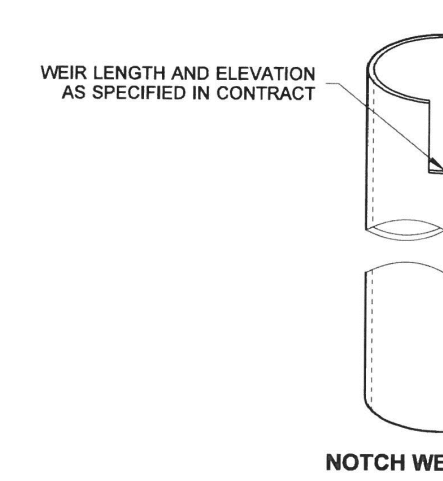
DRAWN BY: FERIN LIDDELL



PLAN VIEW



SHEAR GATE DETAILS



NOTCH WEIR DETAIL

NOTES

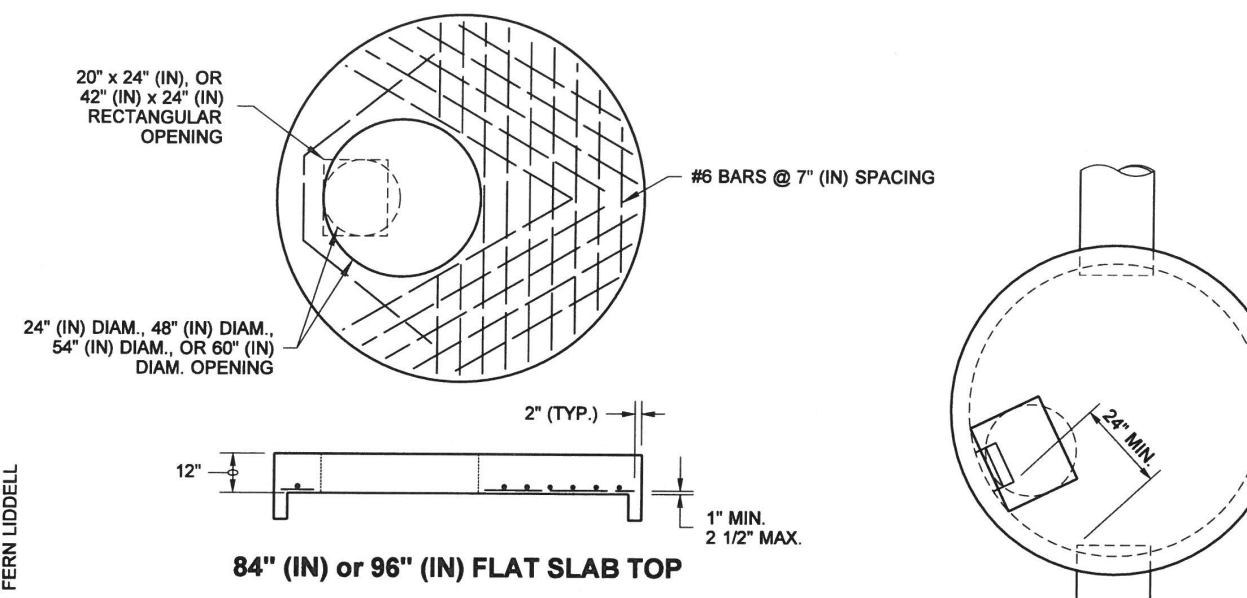
- The pipe supports and the flow restrictor shall be constructed of the same material and be anchored at a maximum spacing of 36" (in). Attach the pipe supports to the manhole with 5/8" (in) stainless steel expansion bolts or embed the supports into the manhole wall 2" (in).
- The vertical riser stem of the flow restrictor shall be the same diameter as the horizontal outlet pipe with a minimum diameter of 12" (in).
- 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 Aluminum Alloy 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
- 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.
- 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.
- Restrictor plate with orifice as specified in the Contract. The opening is to be cut round and smooth.
- The shear gate shall be made of aluminum alloy in accordance with ASTM B 26 and ASTM B 275, designation X332A, 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.
- The shear gate maximum opening shall be controlled by limited hinge movement, a stop tab, or some other device.
- Alternative shear gate designs are acceptable if material specifications are met.



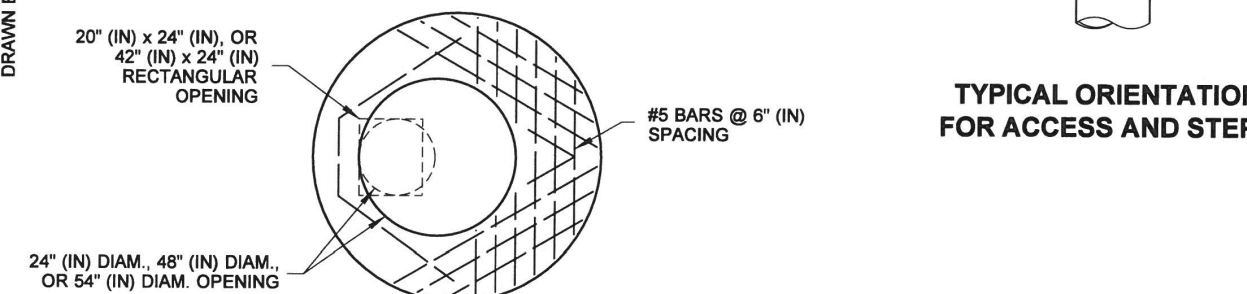
Julie Heilmann
Aug 17, 2021
CATCH BASIN TYPE 2 WITH FLOW RESTRICTOR
STANDARD PLAN B-10.40-02
SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
DATE: 08/17/2021
STATE DESIGN ENGINEER
Washington State Department of Transportation

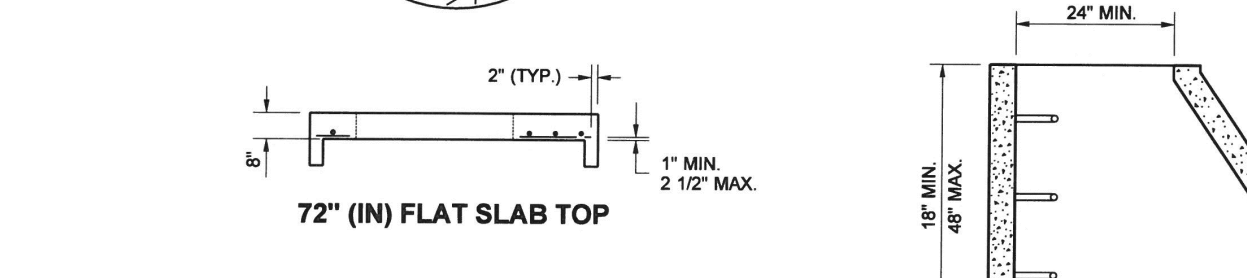
DRAWN BY: FERIN LIDDELL



TYPICAL ORIENTATION FOR ACCESS AND STEPS

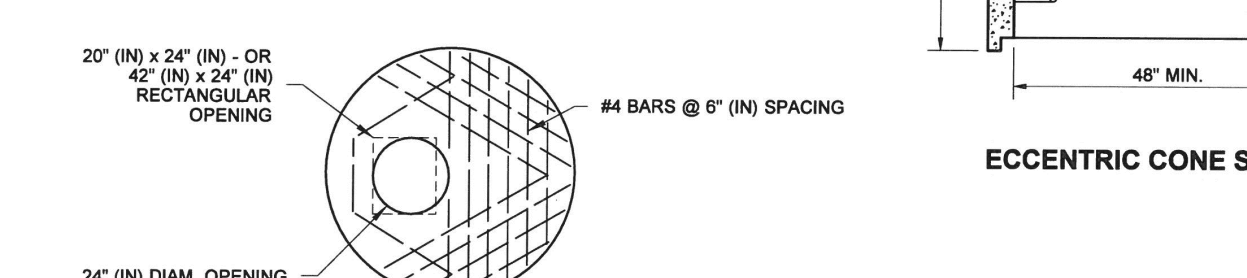


ECCENTRIC CONE SECTION



RECTANGULAR ADJUSTMENT SECTION

- 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.
- 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).

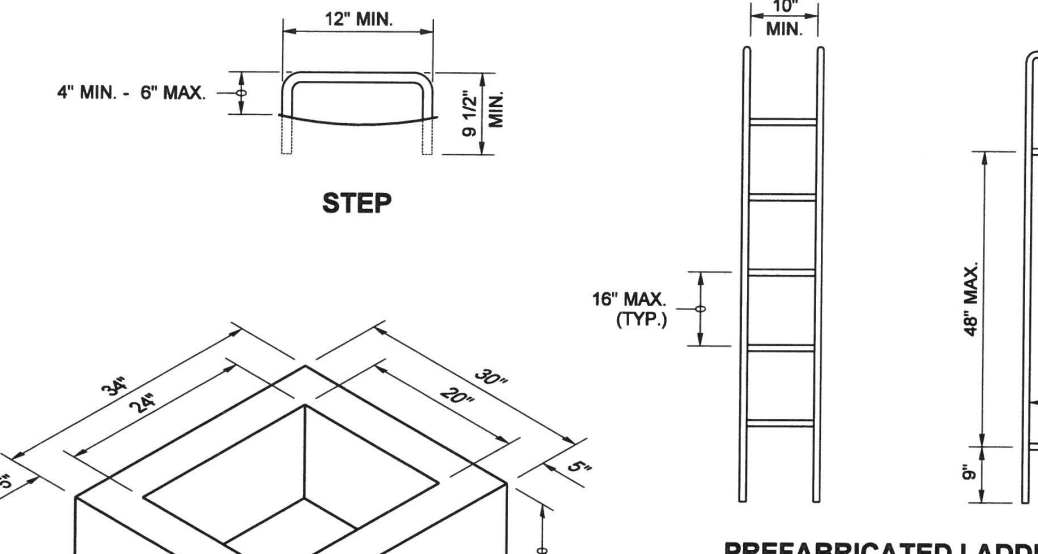


CIRCULAR ADJUSTMENT SECTION

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

NOTE

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



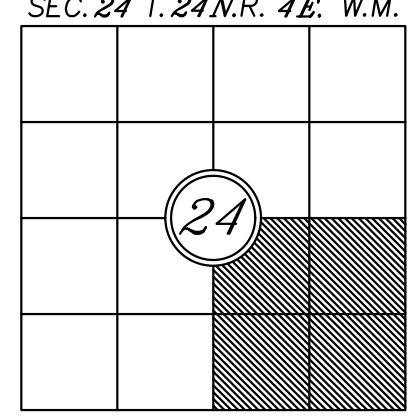
PREFABRICATED LADDER



Julie Heilmann
Aug 23 2017 01:01 PM
MISCELLANEOUS DETAILS FOR DRAINAGE STRUCTURES
STANDARD PLAN B-30.90-02
SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
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PHONE: (206) 817-4192

ENGINEERS - SURVEYORS EASTSIDE CONSULTANTS, INC.

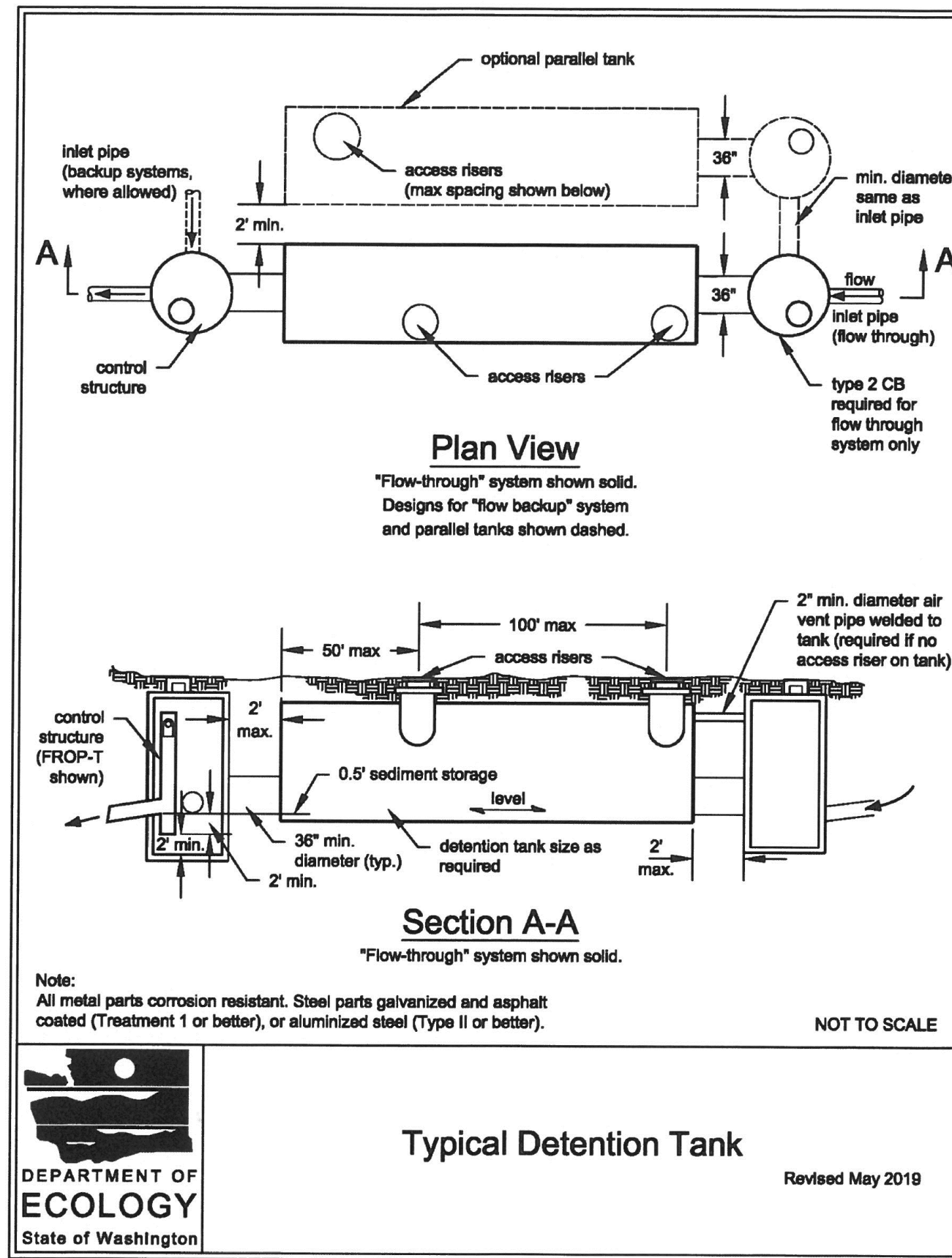
1520 N.W. WALL ST., SUITE B
ISSAQUAH, WASHINGTON 98027
PH: (425) 392-5351 FAX: 392-4676

JOB NO. 20025
DATE 12/22
SCALE 1"-20'
DESIGNED RSF
DRAWN RSF
CHECKED RSF
APPROVED RSF
SHEET 6 OF 8

RAND-MILESTONE LOT 1 GRADING AND DRAINAGE PLAN

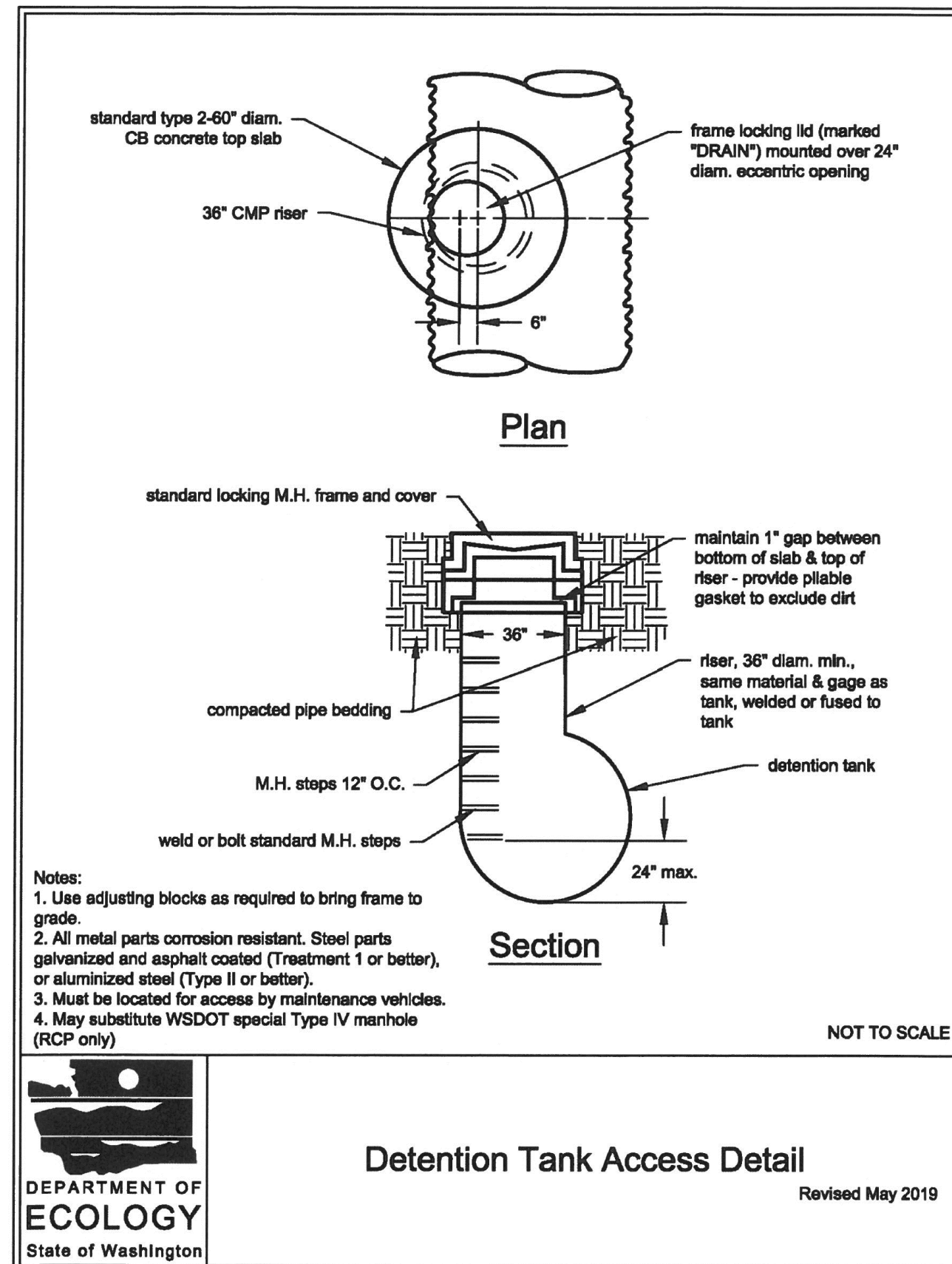
LOT 1 BUILDING PERMIT
SE 1/4 OF SEC.1, T.24N., R.4E., W.M.
CITY OF MERCER ISLAND, WASHINGTON

Figure V-12.14: Typical Detention Tank



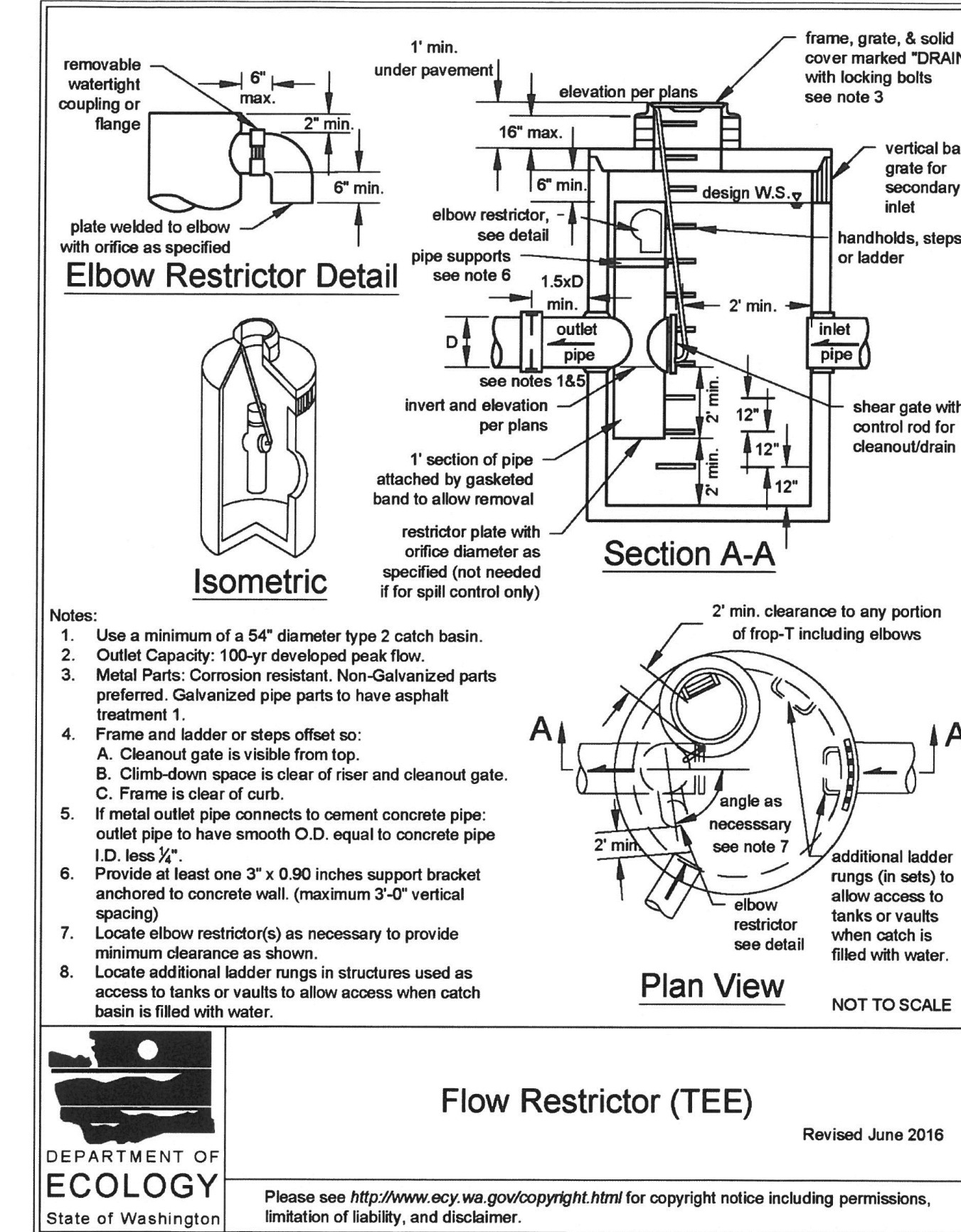
2019 Stormwater Management Manual for Western Washington
Volume V - Chapter 12 - Page 986

Figure V-12.15: Detention Tank Access Detail

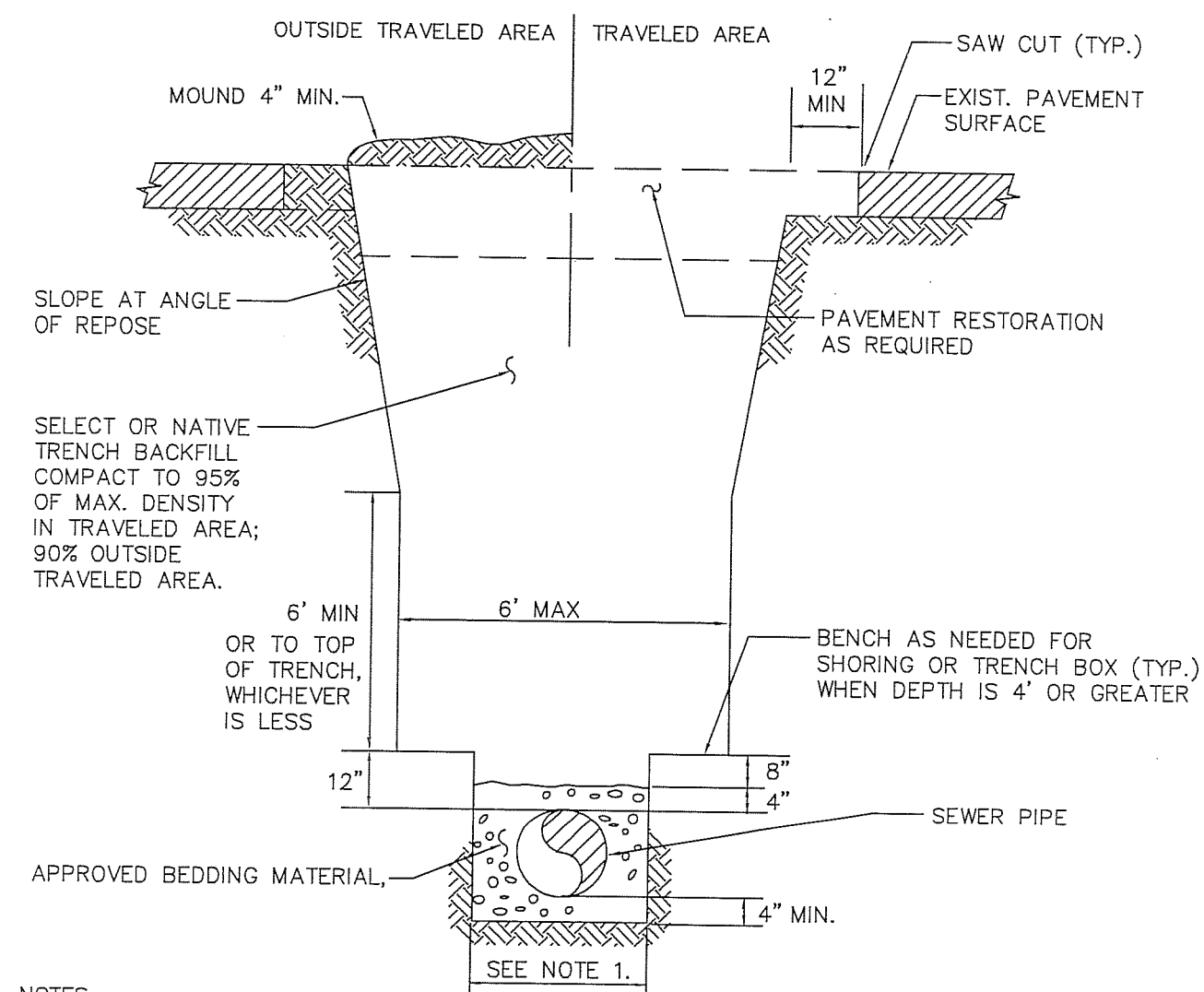


2019 Stormwater Management Manual for Western Washington
Volume V - Chapter 12 - Page 987

Figure V-12.1: Flow Restrictor (TEE)



2019 Stormwater Management Manual for Western Washington
Volume V - Chapter 12 - Page 950



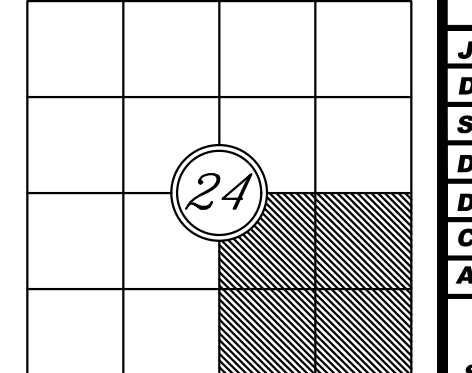
- NOTES
- TRENCH BACKFILL BELOW TOP 4 FEET MAY BE NATIVE MATERIALS OR AS REQUIRED BY THE SPECIFICATIONS, OR AS DIRECTED BY THE PUBLIC WORKS INSPECTOR
 - MAXIMUM WIDTH OF TRENCH AT TOP OF PIPE
 - * 30 INCHES FOR PIPE UP TO AND INCLUDING 12" NOMINAL DIAMETER.
 - * O.D. PLUS 16 INCHES FOR PIPE LARGER THAN 12" NOMINAL DIAMETER.
 - 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:
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REVISIONS	BY	DATE

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JOB NO. 20025
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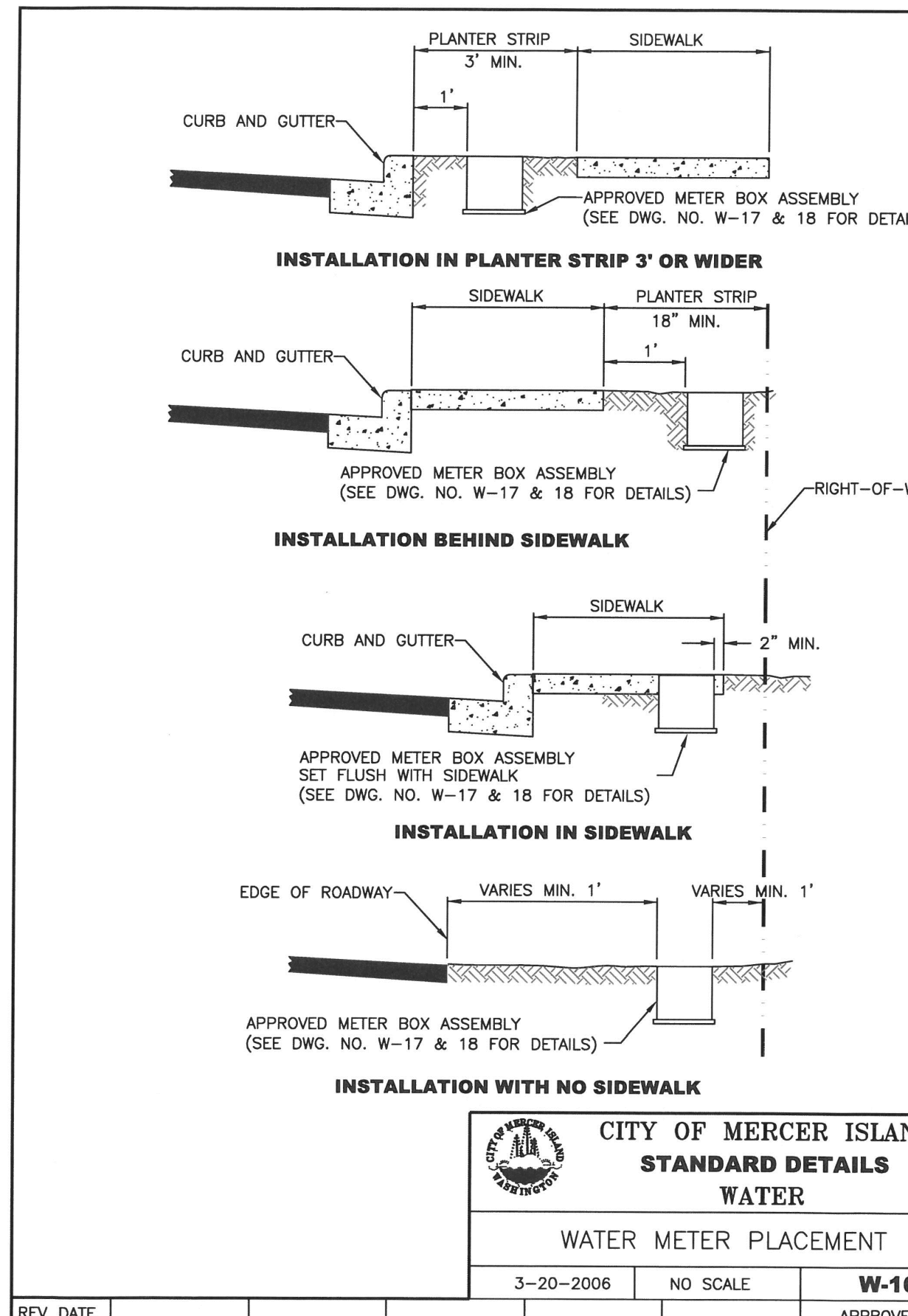
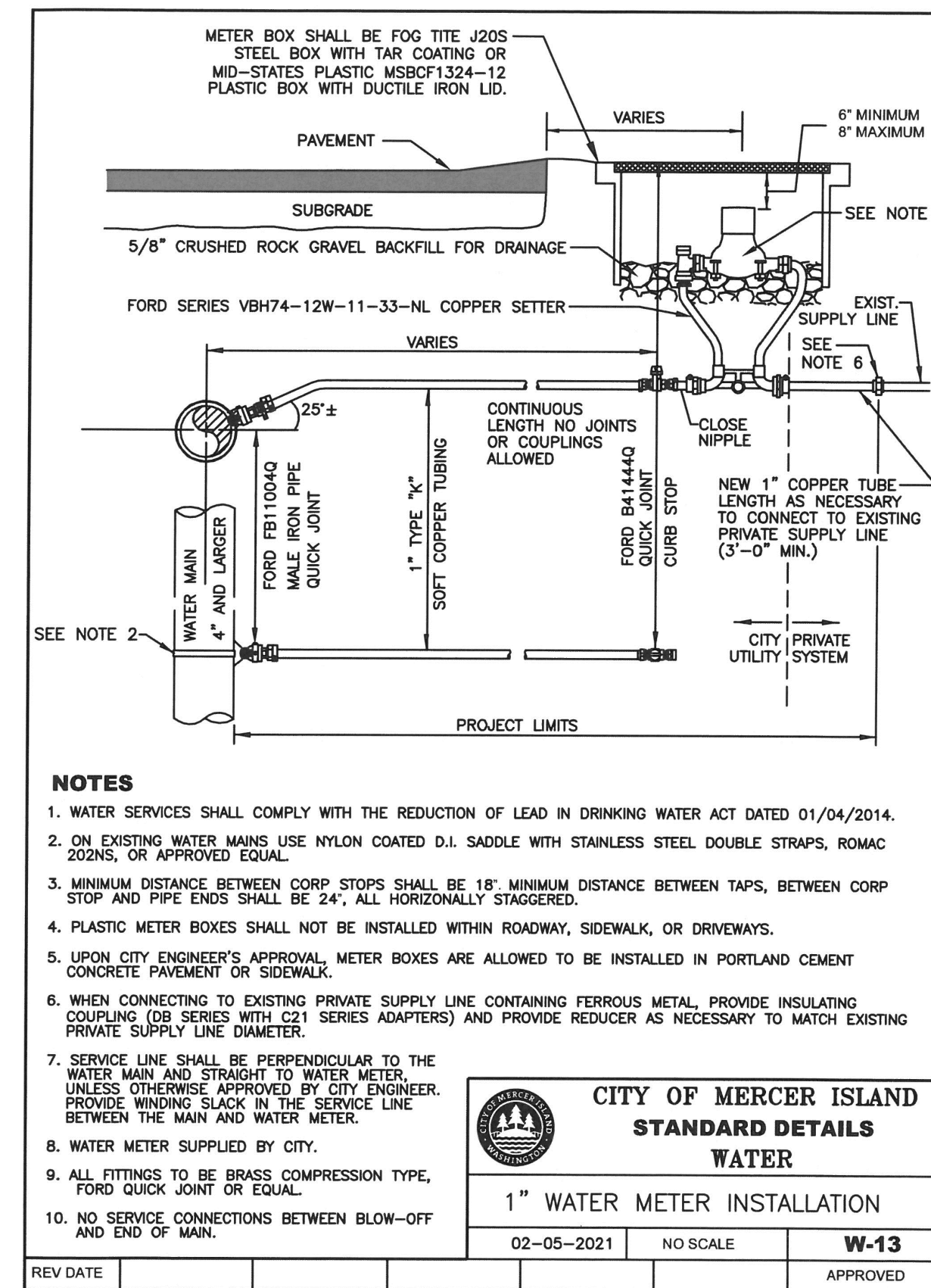
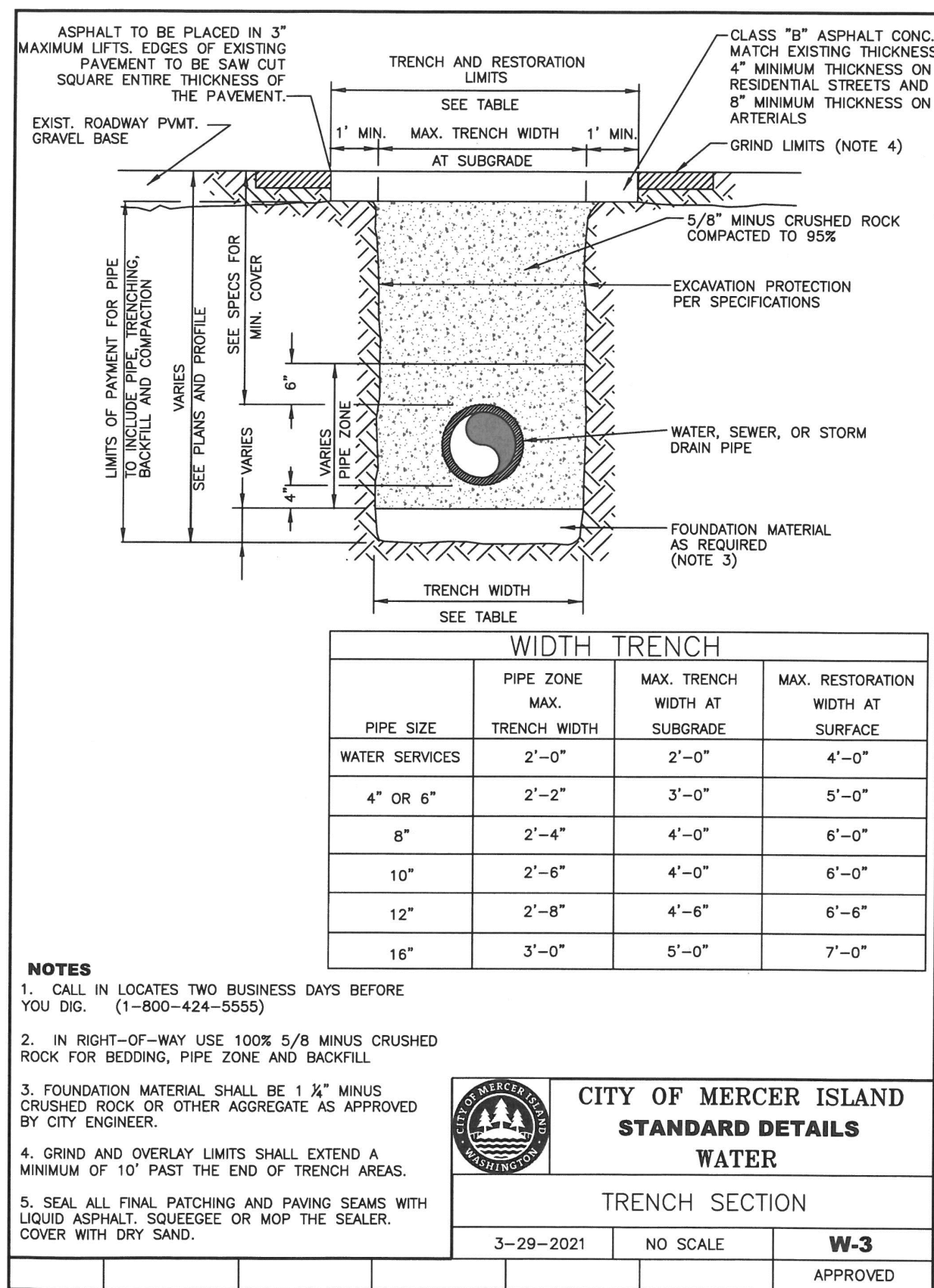
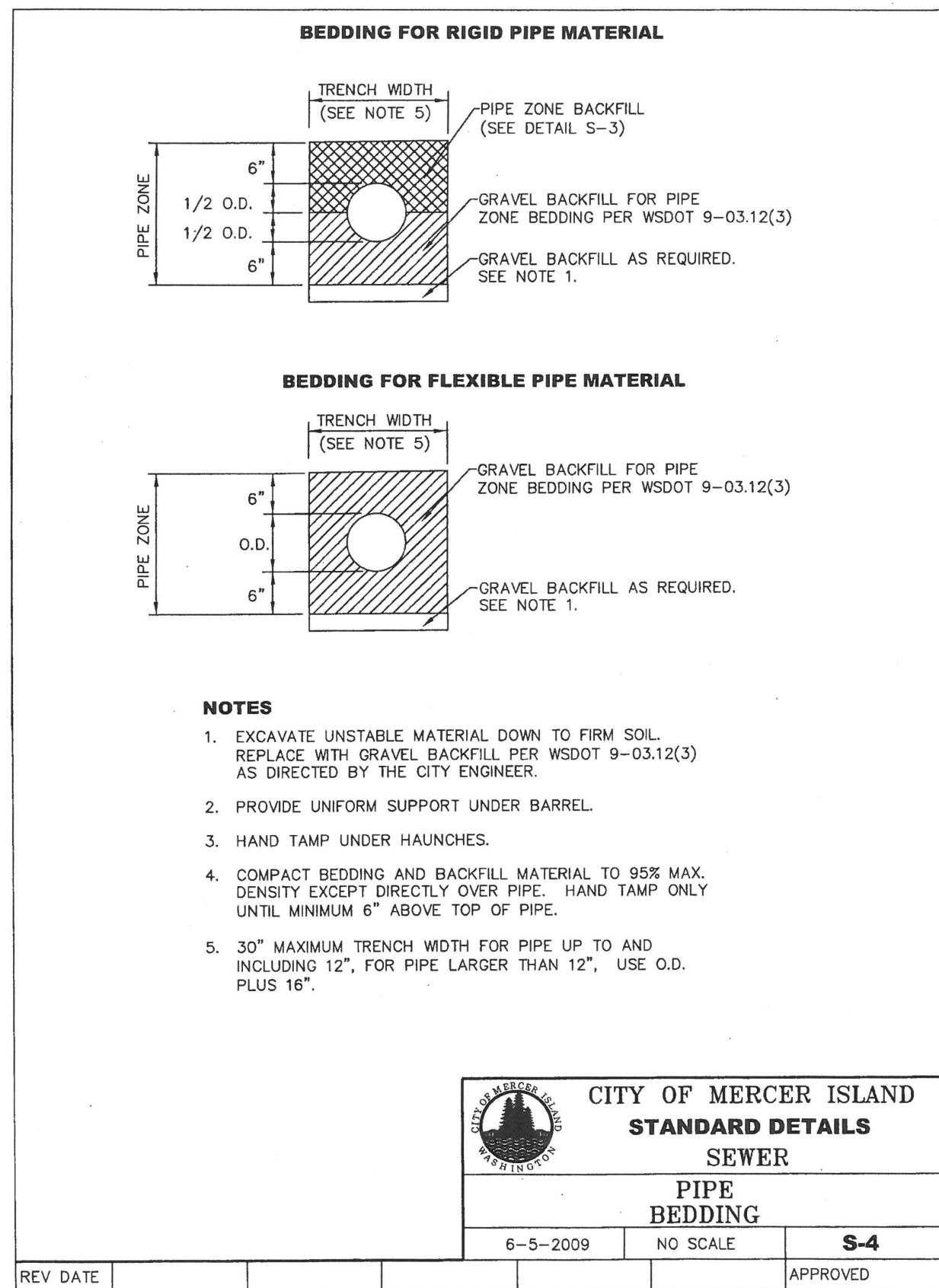
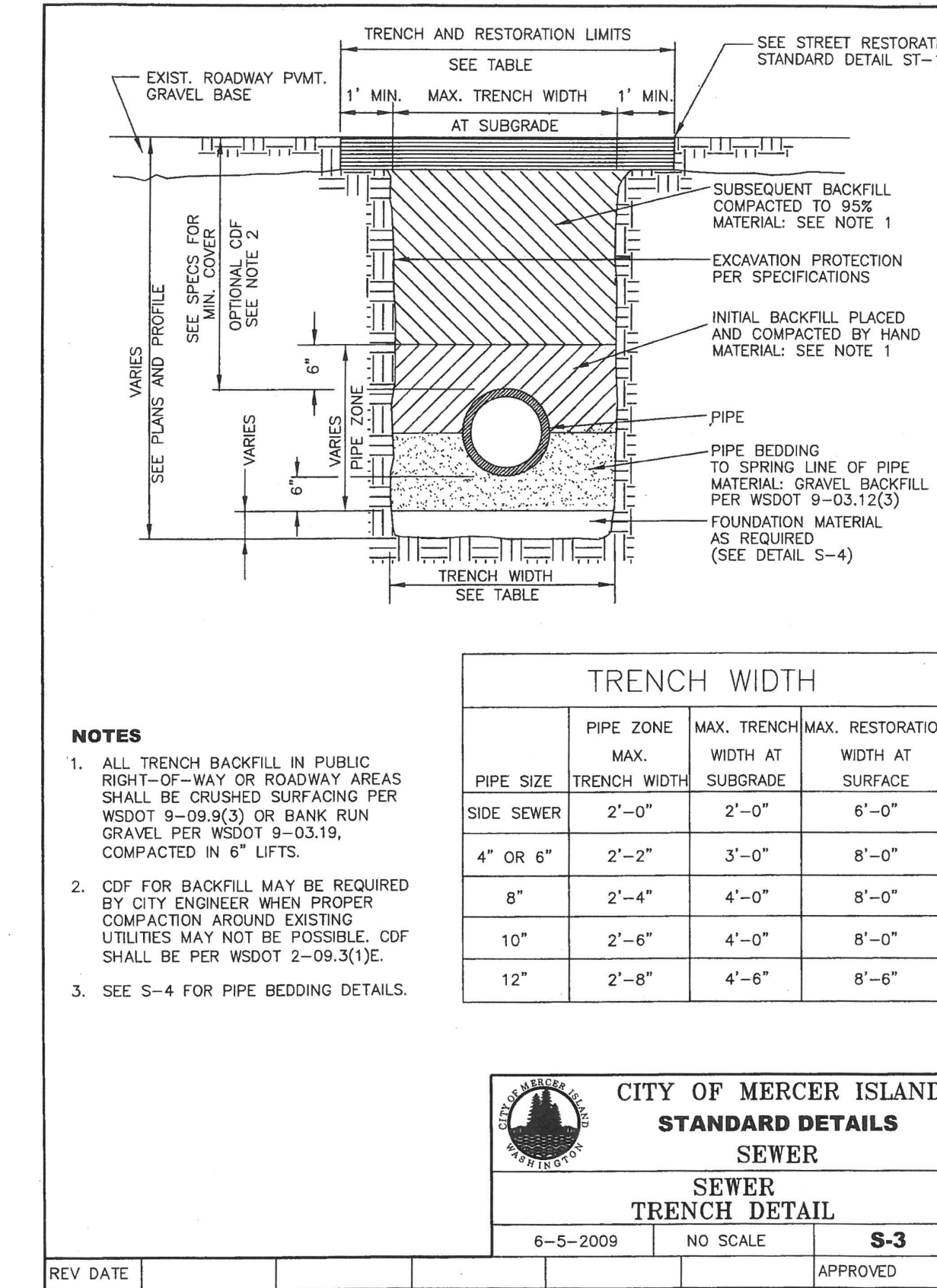
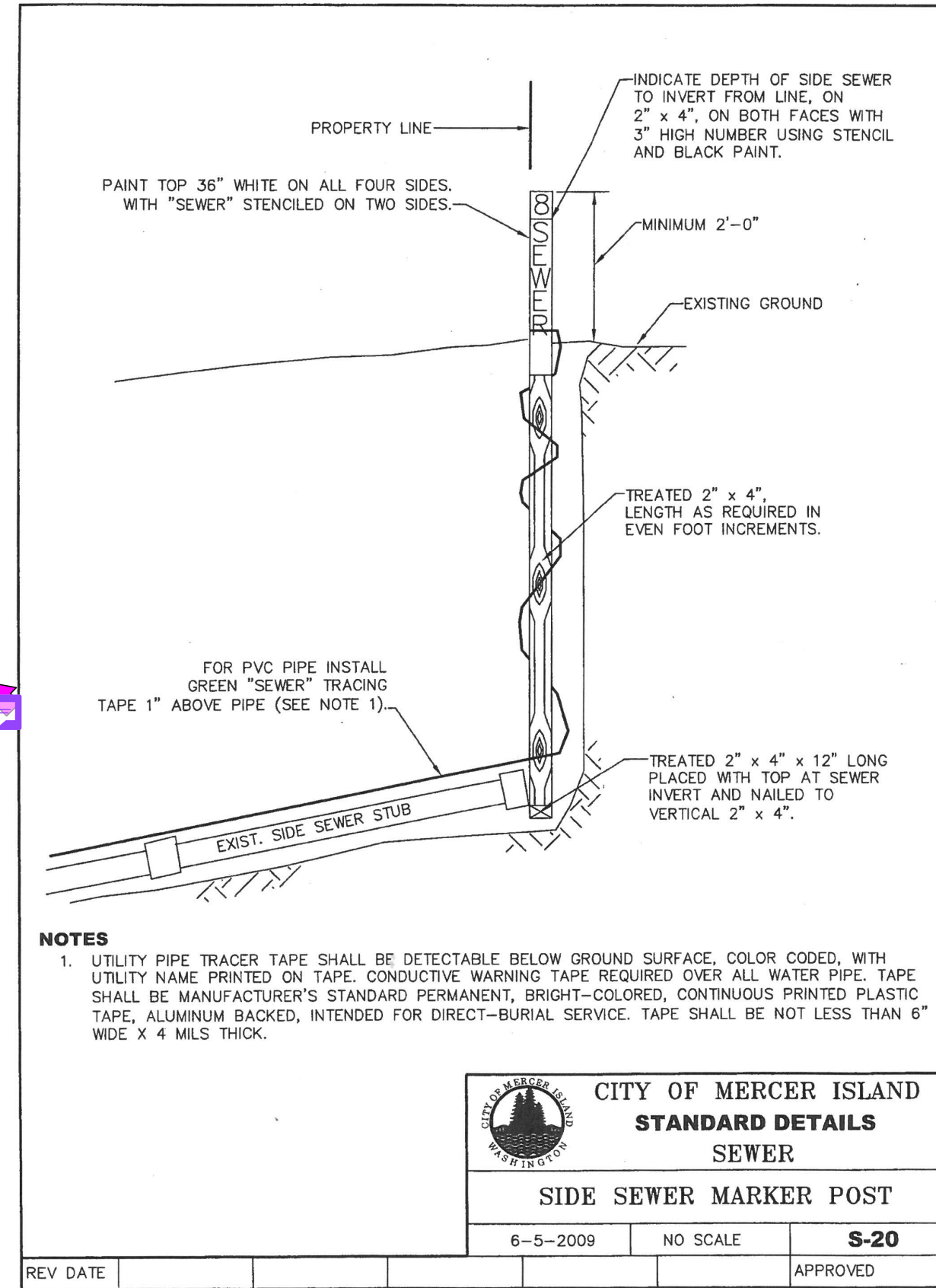
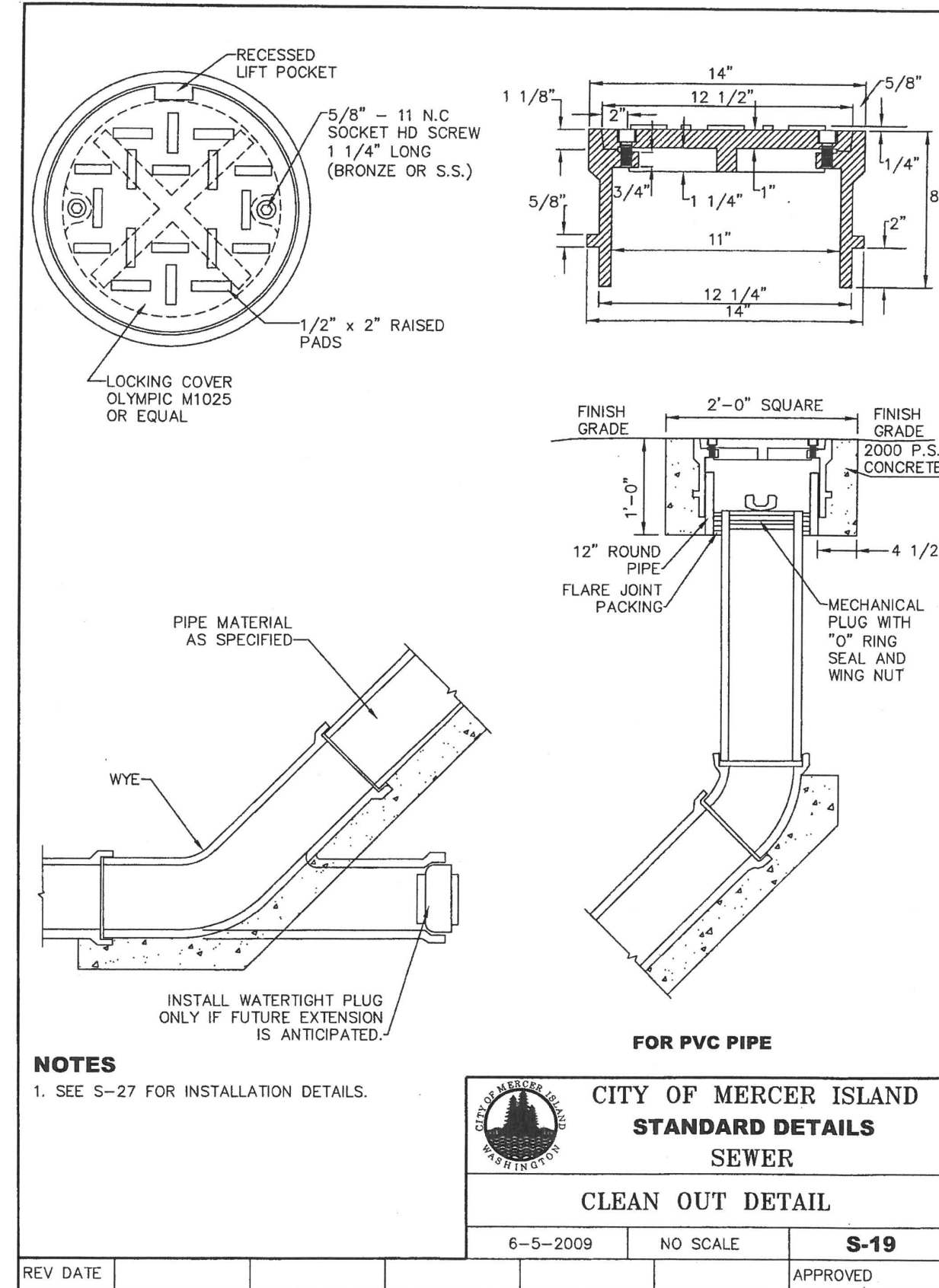
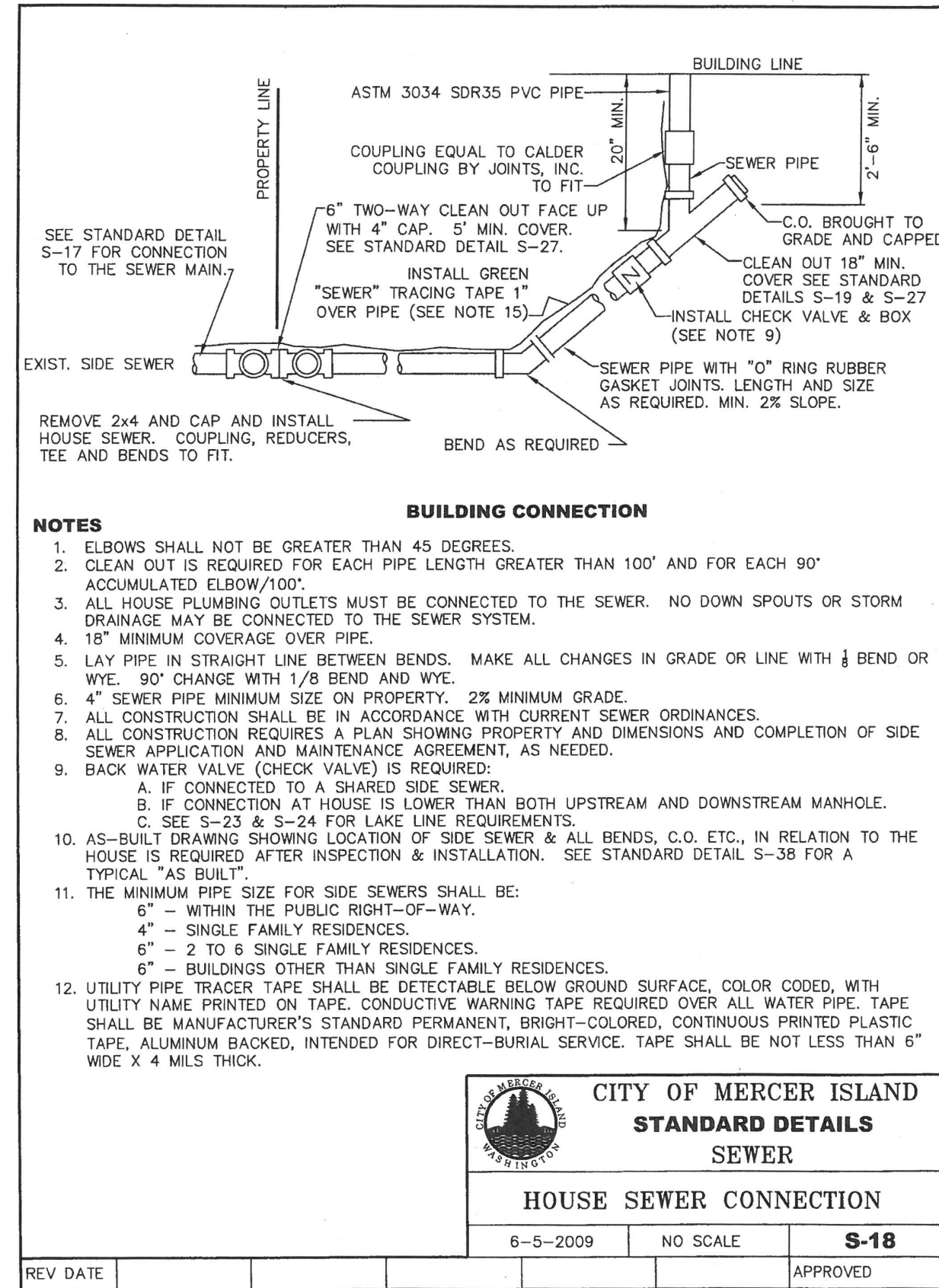
SHEET 7 OF 8

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



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JOB NO. 20025
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SCALE 1"=20'
DESIGNED RSF
DRAWN RSF
CHECKED RSF
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SHEET 8 OF 8

CRAWL SPACE VENTS

- CRAWL SPACE AREA = 625 SF
- CRAWL SPACE AREA / 300 = 2.08 SF OF VENT AREA REQUIRED
- TYPICAL VENT SIZE = 14"x8" (75% EFFICIENCY) = 3.9 SF PER VENT NET FREE AREA
- VENT AREA / 3.9 = 3.28 VENTS REQUIRED
- 4 VENTS SHOWN (SEE PLAN FOR LOCATION)
- 4 VENTS x 3.9 = 15.6 SF OF VENT AREA PROVIDED
- VENTS SHALL BE COVERED WITH CORROSION RESISTANT WIRE MESH WITH OPENINGS OF 1/4" MAX.
- VENTS LOCATED IN RIM JOIST MUST BE PERMANENTLY BAFFLED. USEC 4022.1

GENERAL FRAMING NOTES

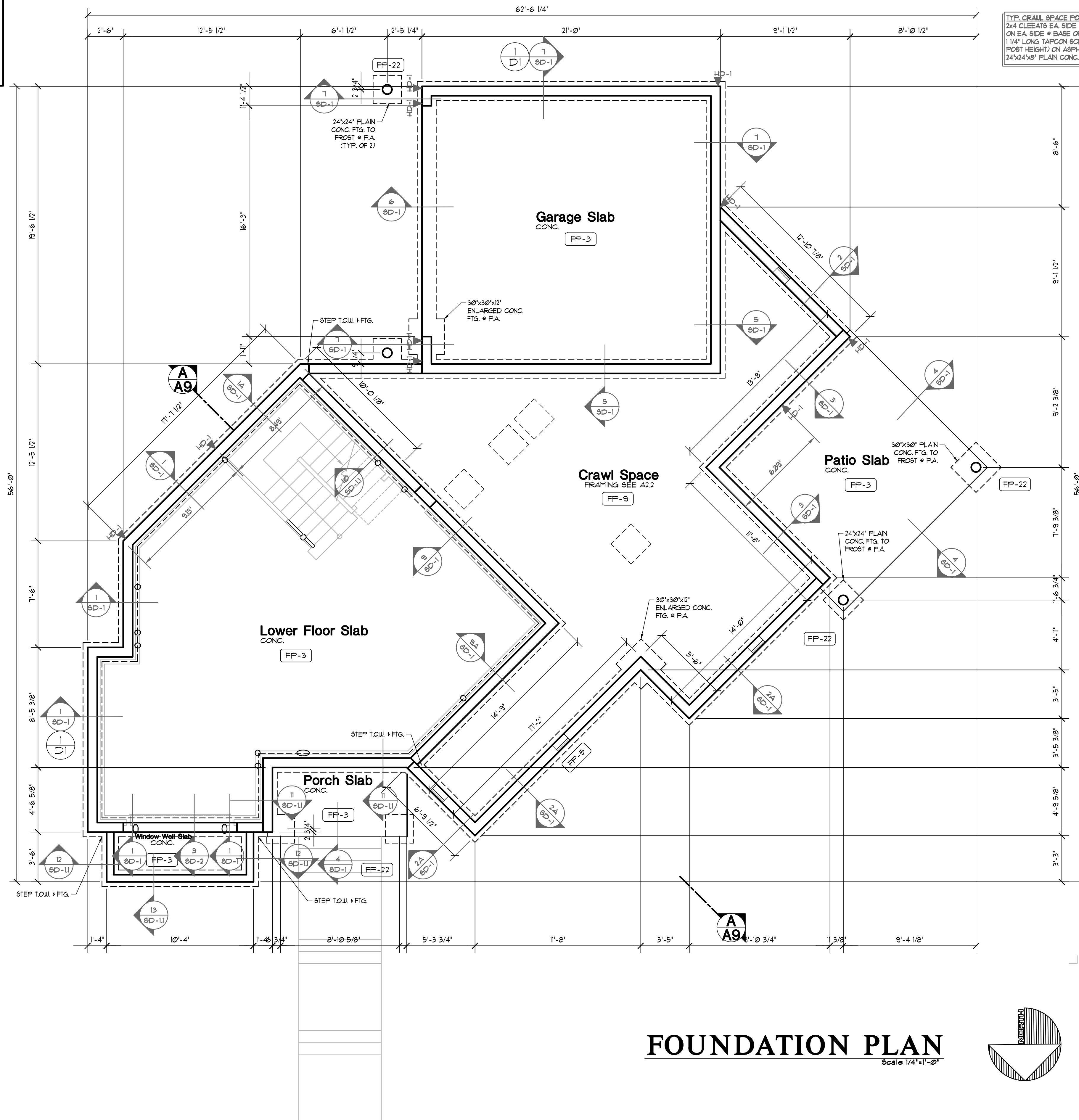
- SEE TYPICAL MATERIALS LIST ON SECTION SHEET
- SEE SHEET A-1 FOR ALL GENERAL NOTES AND FOR ALL REQUIREMENTS CONCERNING MECHANICAL, PLUMBING, AND ELECTRICAL.
- TRUSS DESIGN BY MFG. TRUSS PLAN SHOWN IS FOR GENERAL LAYOUT ONLY. SEE DIV. 6/20 SHEET A-1
 - TRUSS LOADING. SEE DIV. 2/10/20A SHEET A-1
 - TRUSS SPAN PER FLOOR PLAN
 - TRUSS TYPE PER ROOF FRAMING PLAN
- ROOF FRAMING SPACING, 24" o.c. UNO.
- ROOF PITCH: EXTERIOR PER ELEVATION INTERIOR PER SECTION.
- RAFTER TAIL 2x4. VERIFY.
- ROOF TAIL AND RAKE OVERHANG PER ROOF PLAN.
- ALL HEADERS ARE 4x10 DF #2 UNO. PROVIDE (1) TRIMMER STUD UP TO 4'-0" SPAN AND (2) TRIMMER STUDS OVER 4'-0" UNO. SEE DIV. 6/100 SHEET A-1. HEADERS TO BE INSULATED W/ MIN. R-10 INSULATION
- 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

- FF-1 CONCRETE STEM WALL 8" WIDE WITH MIN. 15"x1" FOOTING. SEE DETAILS FOR ADDITIONAL INFORMATION. SEE DIV. 3 SHEET A-1
- FF-2 CONCRETE STEM WALL 6" WIDE WITH MIN. 12"x6" FOOTING. SEE DETAILS FOR ADDITIONAL INFORMATION. SEE DIV. 3 SHEET A-1
- FF-3 CONCRETE SLAB ON GRADE SHALL BE 4" THICK STEEL TROULELED FINISH W/ 6x6 W/4x4 WLF 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. CRAWL SPACE VENT: SEE CALCULATION. SEE DIV. 1 SHEET A-1
- FF-5 4x10 BEAM LINE UNO. MIN. 1" CLEARANCE FROM CONCRETE AT END OF BEAMS. SEE DIV. 6 SHEET A-1
- FF-8 4x4 PRESSURE TREATED POST (SCAB POST AND BEAM WITH 2x4) ON 30# FULT ON FIAT FOOTING UNO. PROVIDE 4x6 POST + BEAM SPLICE + POSITIVE CONNECTION FROM POST TO FOOTING. SEE DIV. 6 SHEET A-1
- FF-9 6 MIL BLACK POLYETHYLENE GROUND COVER ON GRADE. SEE DIV. 1 SHEET A-1
- FF-12 18"x24" CRAWL SPACE ACCESS. INSULATE AND WEATHER STRIP. SEE DIV. 0/100/1 SHEET A-1
- FF-11 STUB STEEL 12" INTO SLAB @ 12"oc
- FF-10 FLOOR JOIST SEE DIV. 6 SHEET A-1
- FF-21 MIN. 1" CLEARANCE FROM CONCRETE AT END OF BEAMS
- FF-22 EXTEND PIER MIN 18" BELOW SURROUNDING GRADE
- FF-23 3" DIAMETER STEEL POST
- FF-24 EDGE OF CONCRETE

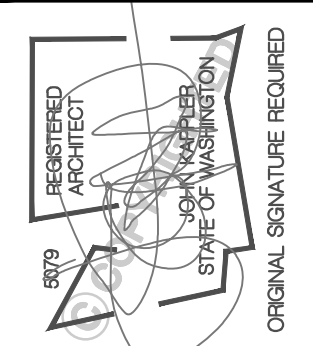
SYMBOLS & LEGEND

- POINT LOADS FROM ABOVE
 - POINT LOADS FROM ABOVE W/ LOADING
 - POINT LOAD TRANSFERING DOWN
 - POINT LOAD TRANSFERING DOWN W/ LOADING
 - 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.



FOUNDATION PLAN

Scale 1/4"=1'-0"



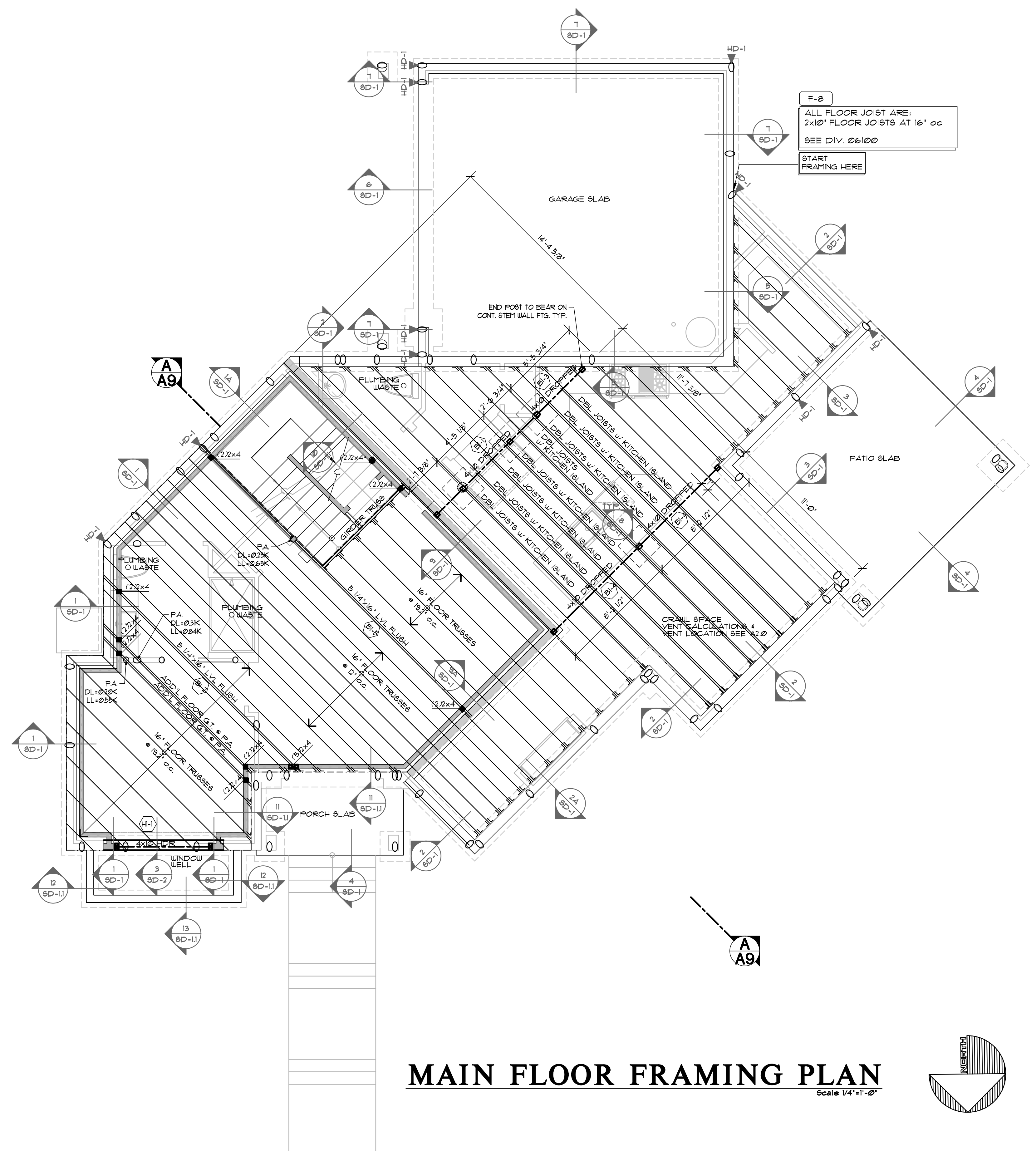
Date	By	Description
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3/10/25		JURISDICTIONAL COMMENTS

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 Mercer Island, WA 98040
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TITLE
JOB NO.: 2102221
STARTING NO.: 2102205

SHEET
A2.0



MAIN FLOOR FRAMING PLAN
Scale 1/4"=1'-0"

STRUCTURAL NOTES

- WE WOULD LIKE TO SEE THE TRUSS SHOP DWGS TO VERIFY THE PERFORMANCE OF THE TRUSS SPANS
- NOTE TO TRUSS MANUF: VERIFY NO INTERIOR BEAMS ARE REQUIRED, CONTACT MK IF ADDITIONAL BEAMS ARE REQUIRED

TYP. CRAIL SPACE POST, 4x4 P.T. POST W/ 2x4 CLEATS EA. SIDE (2) A35 CLIPS ONE ON EA. SIDE # BASE OF POST W/ 3/16" DIA. x 1 1/4" LONG TAPCON SCREWS (4'-0" MAX POST HEIGHT) ON ASPHALT SHINGLE ON 24"x4"x8" PLAN CONC. FIG. (TYP. UNO.)

- GENERAL FRAMING NOTES**
- SEE TYPICAL MATERIALS LIST ON SECTION SHEET
 - SEE SHEET A-1 FOR ALL GENERAL NOTES AND FOR ALL REQUIREMENTS CONCERNING MECHANICAL, PLUMBING, AND ELECTRICAL.
 - TRUSS DESIGN BY MFG. TRUSS PLAN SHOWN IS FOR GENERAL LAYOUT ONLY. SEE DIV. 6/20 SHEET A-1
 - TRUSS LOADING: SEE DIV. 0/20/10A SHEET A-1
 - TRUSS SPAN PER FLOOR PLAN
 - TRUSS TYPE PER ROOF FRAMING PLAN
 - ROOF FRAMING SPACING, 24" OC. UNO.
 - ROOF PITCH- EXTERIOR PER ELEVATION INTERIOR PER SECTION.
 - RAFTER TAIL 2x4. VERIFY.
 - ROOF TAIL AND RAKE OVERHANG PER ROOF PLAN.
 - ALL HEADERS ARE 4x10 DF #2 UNO. PROVIDE (1) TRIMMER STUD UP TO 4'-0" SPAN AND (2) TRIMMER STUDS OVER 4'-0" UNO. SEE DIV. 06/00 SHEET A-1. HEADERS TO BE INSULATED W/ MIN. R-10 INSULATION
 - 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/5 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. 0/20/3.B SHEET A-1
 - F-8 FLOOR JOIST - SEE SCHEDULE DWG. SEE DIV. 06/00 SHEET A-1
 - F-9 SEE ELEVATIONS AND SECTIONS FOR PLATE HEIGHT
 - F-10 PRESSURE BLOCKING SEE DIV. 06/00 SHEET A-1
 - F-11 FLUSH - BOTTOM OF BEAM EVEN W/ BOTTOM OF JOISTS
 - F-12 TOP OF BEAM FLUSH W/ TOP OF JOIST AND BEAM EXTENDS DOWN BELOW JOISTS
 - F-13 TOP OF BEAM 3" BELOW TOP OF FLOOR TRUSS. FLOOR TRUSSES TO BE TOP CHORD BEARING.
 - F-14 2x OVERFRAMING @ 24" OC. PROVIDE 2x6 STRONGBACK FURLING AND 2x KICKERS AT 6'-0" OC TO TRUSSES BELOW.
 - F-15 2x6 CEILING JOISTS @ 24" OC

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
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- WALL ABOVE — WALL BELOW

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

APPROVED	DATE	DESCRIPTION
APPROVED	12/22/24	AG PERMIT SET
APPROVED	3/10/25	JURISDICTIONAL COMMENTS

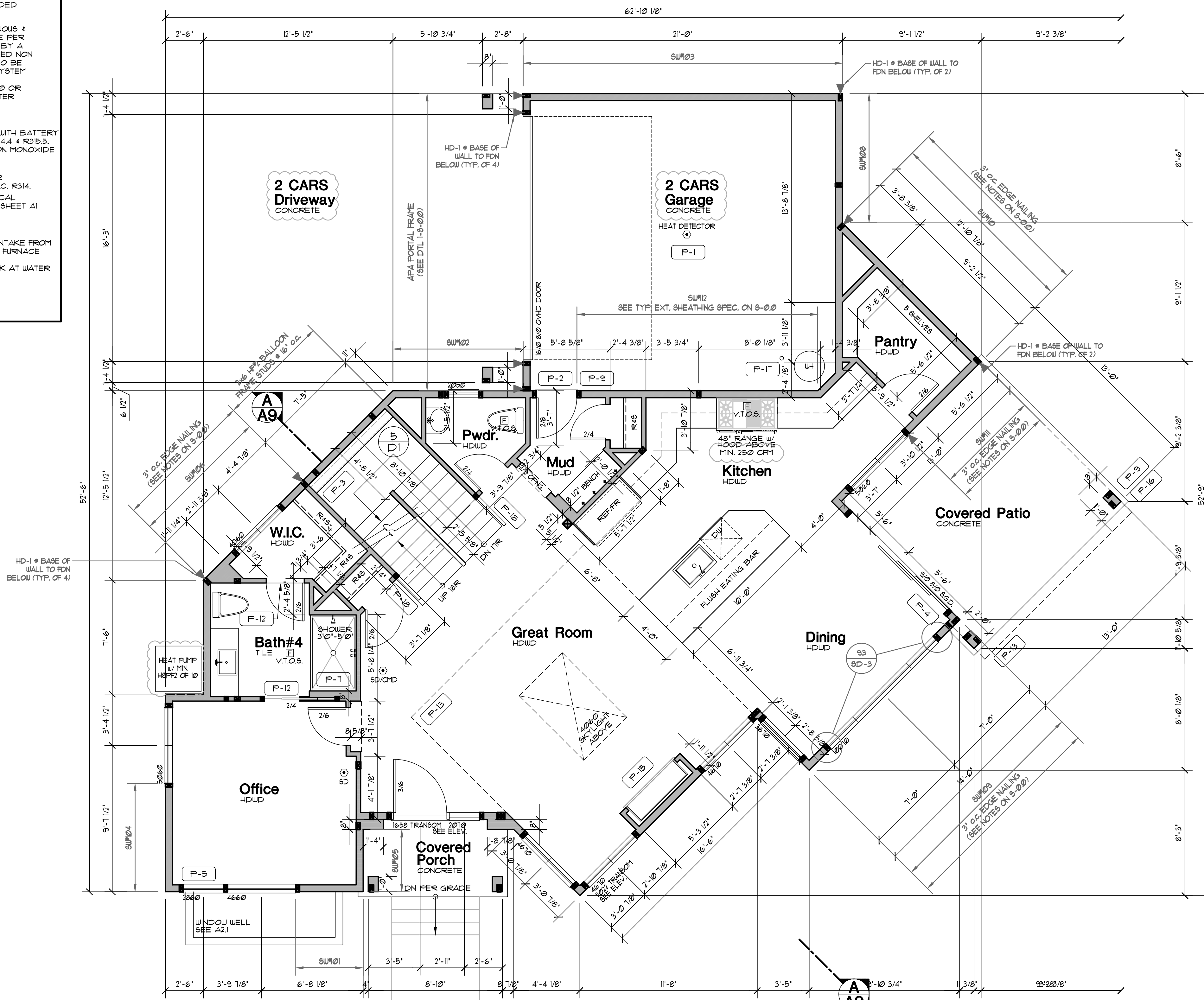
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TITLE
JOB NO.: 2102221
STARTING NO.: 2102205

SHEET
A2.2

SYMBOLS AND LEGEND	
	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 M1003.6.
	WHOLE-HOUSE FAN TO RUN CONTINUOUS 1 CONFORM TO IRC M1005.4. FAN SIZE PER PLAN. FAN RATE TO BE ADJUSTED BY A FACTOR OF 15 FOR A NON-BALANCED NON-DISTRIBUTED SYSTEM. FRESH AIR TO BE PROVIDED BY THE FORCED AIR SYSTEM DUCTS PER SECTION M1005.4.1. FAN TO HAVE A BONE RATING OF 10 OR LESS MEASURED AT 0.1 INCHES WATER GAUGE.
	THERMOSTAT @ 50" ABOVE FLOOR
	100V SMOKE ALARM PER IRC R314 WITH BATTERY BACKUP INTERCONNECTED PER R314.4 & R315.5. USE A COMBINATION SMOKE/CARBON MONOXIDE ALARM WHEN NOTED.
	HEAT DETECTOR OR HEAT ALARM RATED FOR THE AMBIENT OUTDOOR TEMPERATURES & HUMIDITY PER IRC R314.
	MECHANICAL, PLUMBING, AND ELECTRICAL SYSTEMS FOR UNITS, PER DIV. 15.16 SEE SHEET A1
	FURN
	WH
	A. PROVIDE 6" DIAMETER FRESH AIR INTAKE FROM OUTSIDE TO RETURN AIR FLENUM 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.



GENERAL PLAN NOTES

- SEE SHEET A-1 FOR ALL GENERAL NOTES AND REQUIREMENTS.
- ENERGY AND AIR QUALITY INFORMATION SEE DIV. 11 SHEET A-1
- SEE BUILDING ELEVATION FOR WINDOW OPERATION SEE DIV. 8 SHEET A-1
- SEE TYP. MATERIALS LIST ON SECTION SHEET
- 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 1/2" G.I.B. TO GARAGE SIDE OF RESIDENCE, ATTIC SPACES, AND TO ALL BEAMS AND POSTS SUPPORTING A FLOOR-CEILING ASSEMBLY. APPLY (1) LAYER OF 3/4" TYPE 'X' G.I.B. 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 1/4" 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 IRC SECTION R311.1 A. HEADROOM MIN. 6'-8" WIDTH MIN. 3'-0". B. TREADS 10" MIN. DEPTH AND MIN. WIDTH OF 36" ABOVE HANDRAIL HEIGHT. RISERS 7 1/4" 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 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 IRC TABLE R301.5 D. INSTALL FIRE BLOCKING BETWEEN STRINGERS AT THE TOP AND BOTTOM OF EACH RUN PER IRC SECTION R302.11. E. COVER USABLE SPACE UNDER STAIR W/ 1/2" G.I.B. PER IRC SECTION R302.1. F. INTERMEDIATE BALUSTERS SHALL BE SPACED W/ LESS THAN 4" BETWEEN BALUSTERS. G. PROVIDE STAIRWAY ILLUMINATION PER IRC SECTION R302.1. SEE DIV. 01002.1 SHEET A-1.
- P-4 SAFETY GLAZING PER IRC 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, 4 BOT. EDGE OF GLAZING IS LESS THAN 36" ABOVE LANDING/WALKING SURFACE SEE DIV. 01002.0 SHEET A-1
- P-5 EGRESS WINDOW PER IRC SECTION R310 SEE DIV. 01002.0 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 1/2" ABOVE DRAIN INLETS PER IRC SECTION 501.2. SEE DIV. 01002.1 SHEET A-1
- P-8 (2) LAYERS OF FLOOR SHEATHING OVER FRAMING.
- P-9 3/4" MAX. RISER WITH 10" MIN. RUN, IF MORE THAN (2) RISERS, HANDRAIL REQUIRED PER IRC SECTION R311.8. SEE DIV. 01002.1 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 IRC REQUIREMENTS. SEE DIV. 01002.12 SHEET A-1 B. ZERO CLEARANCE FIREPLACES SHALL CONFORM TO IRC REQUIREMENTS. SEE DIV. 01002.12 SHEET A-1 C. HEARTH SHALL CONFORM TO IRC REQUIREMENT SEE DIV. 01002.12 D. FIREBLOCK OPENINGS AROUND PENETRATIONS * EACH FLOOR PER IRC SECTION R1003.13. 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 IRC 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 1" VENT FOR MECHANICAL. 1" CLEARANCE ALL SIDES PER IRC 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.

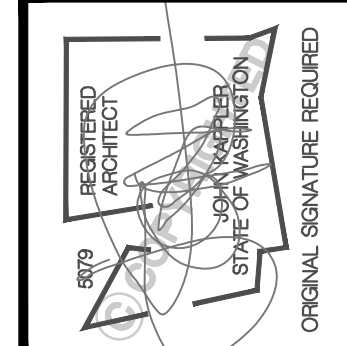
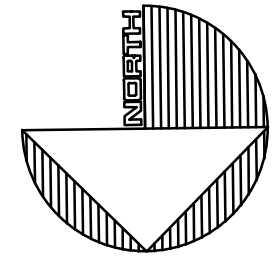
SQUARE FOOTAGE

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.

MAIN FLOOR PLAN

Scale 1/4"=1'-0"



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

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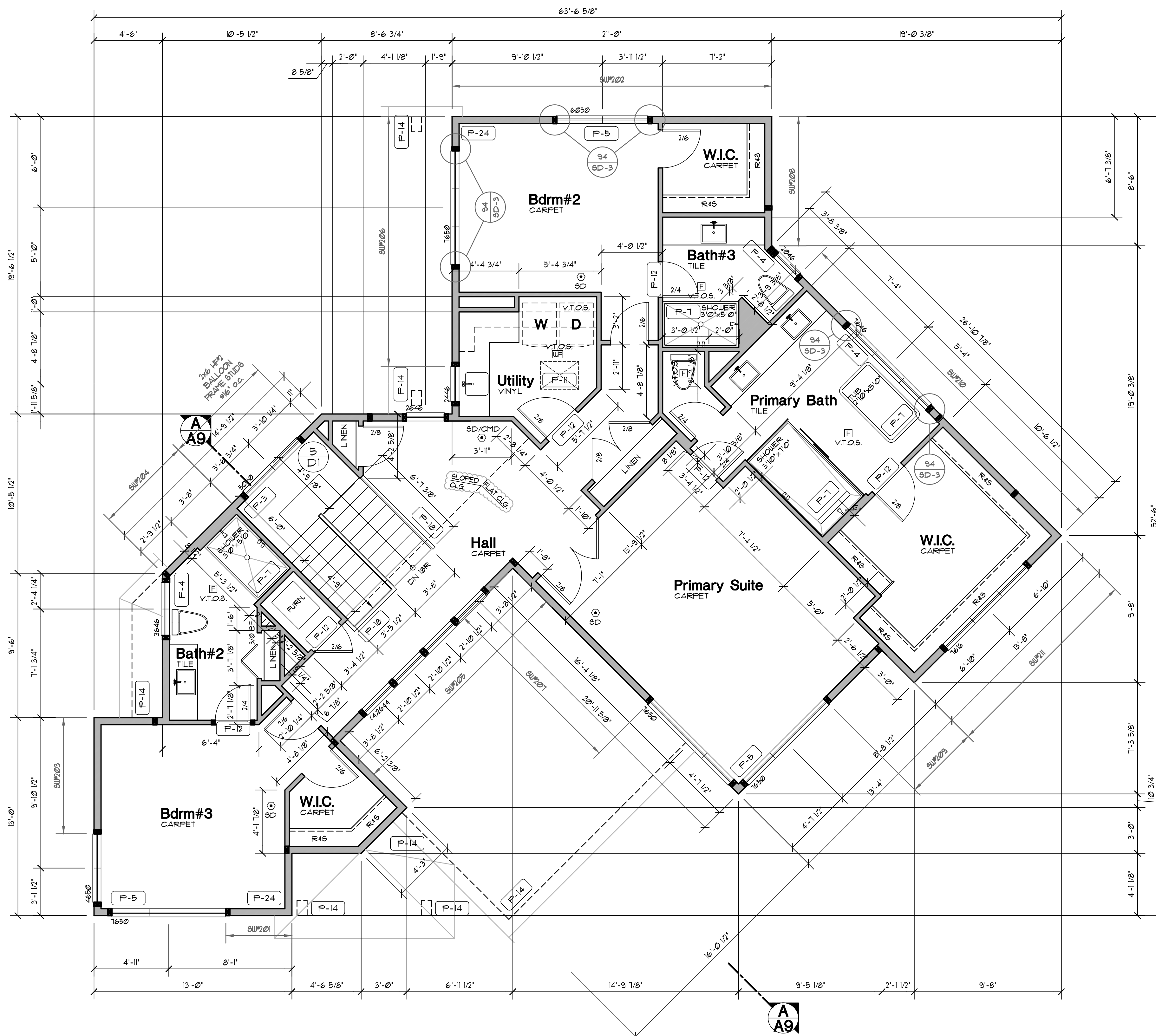
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TITLE	
JOB NO.:	2102221
STARTING NO.:	2102205

SHEET
A3

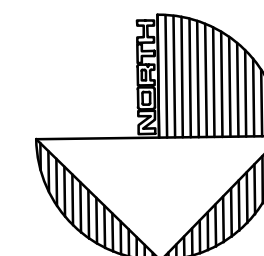
SYMBOLS AND LEGEND

- 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 M1003.6.
 - WHOLE-HOUSE FAN TO RUN CONTINUOUS 4 CONFORM TO IRC, M1005.4. FAN SIZE PER PLAN. FAN RATE TO BE ADJUSTED BY A FACTOR OF 15 FOR A NON-BALANCED NON-DISTRIBUTED SYSTEM. FRESH AIR TO BE PROVIDED BY THE FORCED AIR SYSTEM DUCTS PER SECTION M1005.4.1. FAN TO HAVE A SONE RATING OF 10 OR LESS MEASURED AT 61 INCHES WATER GAUGE.
 - THERMOSTAT @ 50" ABOVE FLOOR
 - 10V SMOKE ALARM PER IRC, R314 WITH BATTERY BACKUP INTERCONNECTED PER R314.4 & R315.5. USE A COMBINATION SMOKE/CARBON MONOXIDE ALARM WHEN NOTED
 - HEAT DETECTOR OR HEAT ALARM RATED FOR THE AMBIENT OUTDOOR TEMPERATURES & HUMIDITY PER IRC, 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 FLENUM 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.



UPPER FLOOR PLAN

Scale 1/4"=1'-0"

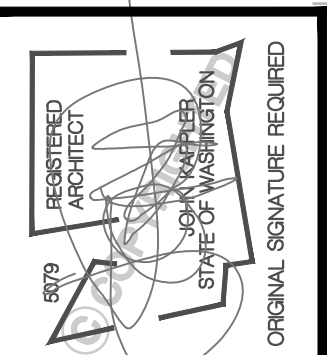


GENERAL PLAN NOTES

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

FLOOR PLAN KEY NOTES

- P-1 OCCUPANCY SEPARATION: APPLY (1) LAYER OF 1/2" G.I.B. TO GARAGE SIDE OF RESIDENCE, ATTIC SPACES, AND TO ALL BEAMS AND ROOSTS SUPPORTING A FLOOR-CEILING ASSEMBLY. APPLY (1) LAYER OF 3/4" TYPE 'X' G.I.B. 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 1 1/2" 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 IRC, SECTION R311.1. A. HEADROOM MIN. 6'-8" WIDTH MIN. 3'-0". B. TREADS 10" MIN. DEPTH AND MIN. WIDTH OF 36" ABOVE HANDRAIL HEIGHT. RISERS 7 1/4" 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 1 1/2" MIN. TO 2" MAX. CROSS SECTION DIMENSION AND 1 1/2" MIN. CLEAR FROM WALL. RETURN RAIL ENDS. HANDRAILS SHALL BE SPACED W/ LESS THAN 4" BETWEEN BALUSTERS. G. PROVIDE STAIRWAY ILLUMINATION PER IRC, SECTION R302.1. SEE DIV. 01002.1 SHEET A-1.
- P-4 SAFETY GLAZING PER IRC, 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, 4 BOT. EDGE OF GLAZING IS LESS THAN 36" ABV. LANDING/WALKING SURFACE SEE DIV. 02002 SHEET A-1.
- P-5 EGRESS WINDOW PER IRC, SECTION R310 SEE DIV. 02002 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 1/2" ABOVE DRAIN INLETS PER IRC, SECTION 5012. SEE DIV. 02002 SHEET A-1
- P-8 (2) LAYERS OF FLOOR SHEATHING OVER FRAMING.
- P-9 3/4" MAX. RISER WITH 10" MIN. RUN, IF MORE THAN (2) RISERS, HANDRAIL REQUIRED PER IRC, SECTION R311.8. SEE DIV. 01002.1 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 IRC REQUIREMENTS. SEE DIV. 01002.12 SHEET A-1. B. ZERO CLEARANCE FIREPLACES SHALL CONFORM TO IRC REQUIREMENTS. SEE DIV. 01002.12 SHEET A-1. C. HEARTH SHALL CONFORM TO IRC REQUIREMENT SEE DIV. 01002.12. D. FIREBLOCK OPENINGS AROUND PENETRATIONS. E. FIREPLACE MUST COMPLY WITH UL 121 TESTING. SEE SITE PLAN FOR EXTENT OF WALKS & DRIVEWAYS
- P-16 3" DIAMETER STEEL POST
- P-18 36" GUARDRAIL PER IRC, SECTION R312 & TABLE R3015. CONTRACTOR TO VERIFY TO INSPECTOR THAT ALL GUARDS & RAILINGS ARE CAPABLE OF RESISTING 200LB LOAD ON TOP RAIL ACTING IN ANY DIRECTION.
- P-19 1" VENT FOR MECHANICAL, 1" CLEARANCE ALL SIDES PER IRC, 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.



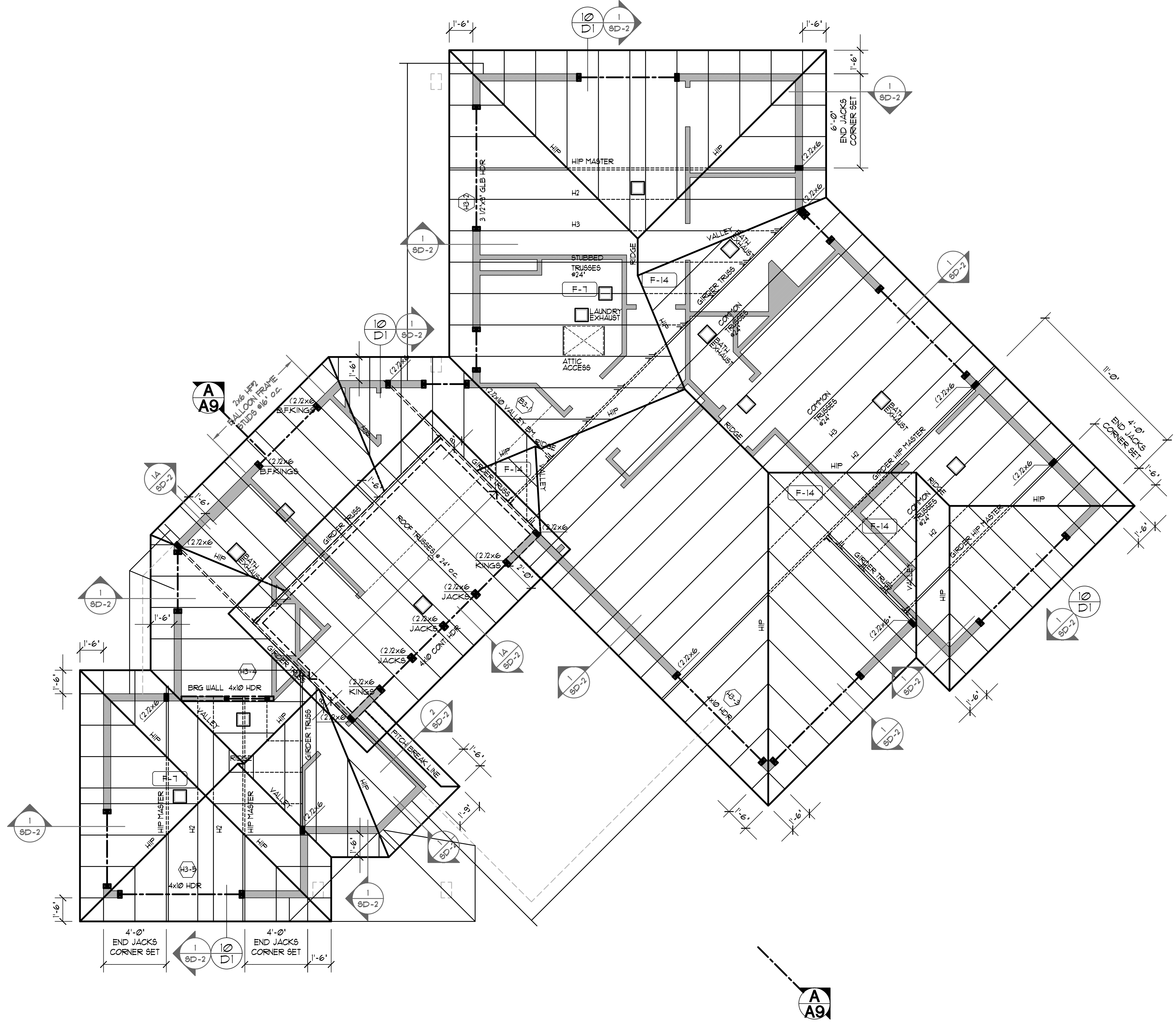
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TITLE
JOB NO.: 2102221
STARTING NO.: 2102205

SHEET
A5



UPPER ROOF FRAMING PLAN

SCALE 1/4"=1'-0"

GENERAL FRAMING NOTES

- SEE TYPICAL MATERIALS LIST ON SECTION SHEET
- SEE SHEET A-1 FOR ALL GENERAL NOTES AND FOR ALL REQUIREMENTS CONCERNING MECHANICAL, PLUMBING, AND ELECTRICAL.
- TRUSS DESIGN BY MFG. TRUSS PLAN SHOWN IS FOR GENERAL LAYOUT ONLY. SEE DIV. 6/20 SHEET A-1
 - TRUSS LOADING. SEE DIV. 0/20/10A SHEET A-1
 - TRUSS SPAN PER FLOOR PLAN
 - TRUSS TYPE PER ROOF FRAMING PLAN
- ROOF FRAMING SPACING, 24" O.C. UNO.
- ROOF PITCH- EXTERIOR PER ELEVATION INTERIOR PER SECTION.
- RAFTER TAIL 2x4. VERIFY.
- ROOF TAIL AND RAKE OVERHANG PER ROOF PLAN.
- ALL HEADERS ARE 4x10 DF #2 UNO. PROVIDE (1) TRIMMER STUD UP TO 4'-0" SPAN (B3) AND (2) TRIMMER STUDS OVER 4'-0" UNO. SEE DIV. 06/100 SHEET A-1. HEADERS TO BE INSULATED W/ MIN. R-10 INSULATION
- 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. 0/20/3.B SHEET A-1
- F-8 FLOOR JOIST - SEE SCHEDULE DWG. SEE DIV. 06/100 SHEET A-1
- F-9 SEE ELEVATIONS AND SECTIONS FOR PLATE HEIGHT
- F-10 PRESSURE BLOCKING SEE DIV. 06/100 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" O.C. PROVIDE 2x6 STRONGBACK FURLING AND 2x KICKERS AT 6'-0" O.C TO TRUSSES BELOW.
- F-15 2x6 CEILING JOISTS @ 24" O.C

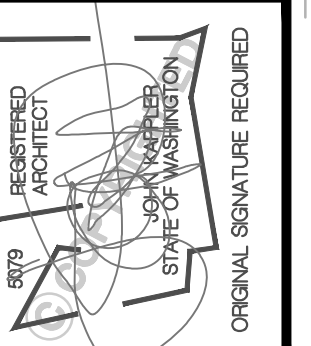
ROOF VENT CALCULATION

TOTAL ROOF AREA	822	SF/300	=54	SF OF VENT AREA REQ
40% MIN. AT 36" MAX BELOW RIDGE	= 216	SF MIN.		
50% MAX. AT 36" MAX BELOW RIDGE	= 270	SF MAX.		
7	ROOF JACKS AT 50 SQ. IN. EACH	= 350	SQ. IN. = 243	SF
237	L.F. OF EAVE VENTS AT 3.3 SQ. IN./L.F.	= 7821	SQ. IN. = 543	SF
TOTAL SF OF VENTILATION PROVIDED		= 788		

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 TRANSFERRED 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.



Date	By	Description
12/22/24	AG	PERMIT SET
3/10/25		JURISDICTIONAL COMMENTS

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TITLE	
JOB NO.:	2102221
STARTING NO.:	2102205

SHEET
A6

TYPICAL BUILDING MATERIALS

ROOF CONSTRUCTION

ROOFING: (DIV. 7)
 BUILDING PAPER: (DIV. 7)
 SHEATHING: (DIV. 6)

SHINGLES (DIV. 01000.5)
 30# BUILDING PAPER
 7/16" O.S.B. OR EQUAL

FRAMING: (DIV. 6)
 INSULATION: (DIV. 7)
 SOFFIT: (DIV. 7)
 GWB: (DIV. 9)

PER PLAN
 R-60 BLOWN-IN
 PER SPEC.
 5/8" GWB

EXTERIOR WALL CONSTRUCTION

SIDING MATERIAL: (DIV. 7)
 BUILDING WRAP: (DIV. 7)
 SHEATHING: (DIV. 6)
 FRAMING: (DIV. 6)
 INSULATION: (DIV. 7)

WOOD SIDING (DIV. 0100.5)
 15# BUILDING PAPER
 1/2" CDX PLYWOOD OR EQUAL
 2 X 6 STUDS AT 16" OC
 R-25 BLOWN BLANKET
 PROVIDE CLASS II VAPOR RETARDER
 IN MARINE ZONE 4
 1/2" GWB

FLOOR CONSTRUCTION

FLOORING: (DIV. 9)
 SUBFLOOR: (DIV. 6)
 FRAMING: (DIV. 6)
 INSULATION: (DIV. 7)
 SOFFIT: (DIV. 7)

FINISH PER PLANS (DIV. 0100.5)
 3/4" T&G PLYWD, COMPLY, OR EQ.
 PER PLANS
 R-38 BATT
 PER SPEC.

TRIM: (DIV. 6)

WINDOW:
 (WITH NO BRICK MOLD)

CORNER BOARDS:

FASCIA:

HEAD: METAL FLASHING
 JAMB: METAL FLASHING
 SILL: METAL FLASHING
 INSIDE: METAL CORNER
 OUTSIDE: METAL CORNER
 2x8 UNO



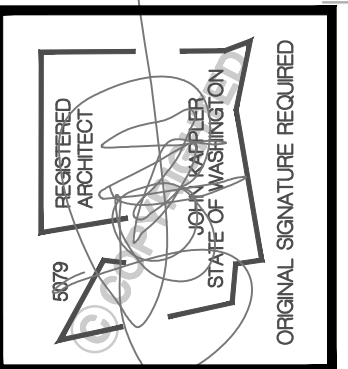
WEST ELEVATION

Scale 1/4"=1'-0"



NORTH ELEVATION

Scale 1/4"=1'-0"



Date	By	Description
2/2/24	AG	PERMIT SET
3/17/25	JR	JURISDICTIONAL COMMENTS

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TITLE
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" OSB OR EQUAL
 FRAMING: (DIV. 6) PER PLAN
 INSULATION: (DIV. 7) R-50 BLOW-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. 9) 3/4" T&G (PLYWD, COMPLY, OR EQ)
 FRAMING: (DIV. 6) PER PLANS
 INSULATION: (DIV. 7) R-38 BATT
 SOFFIT: (DIV. 7) PER SPEC.

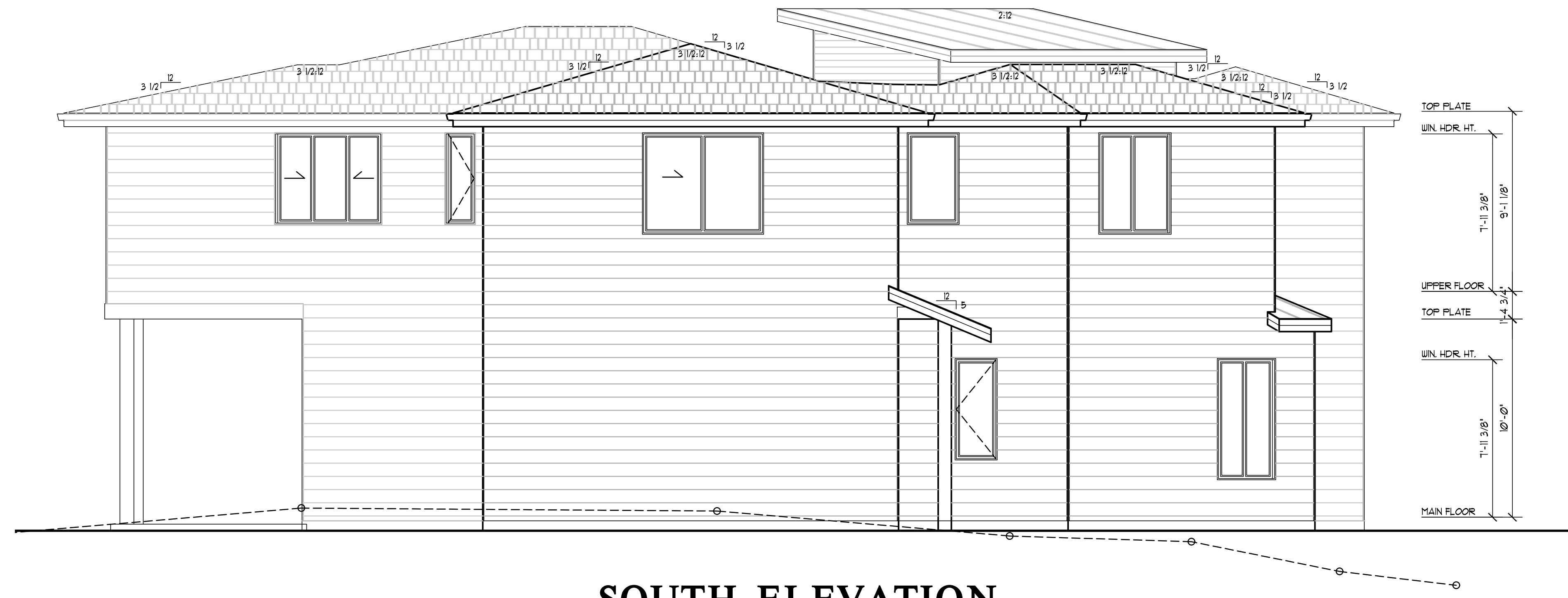
TRIM: (DIV. 6)

WINDOW:
 (WITH NO BRICK MOLD)

CORNER BOARDS:

FASCIA:

HEAD: METAL FLASHING
 JAMB: METAL FLASHING
 SILL: METAL FLASHING
 INSIDE: METAL CORNER
 OUTSIDE: METAL CORNER
 2x3 UNO



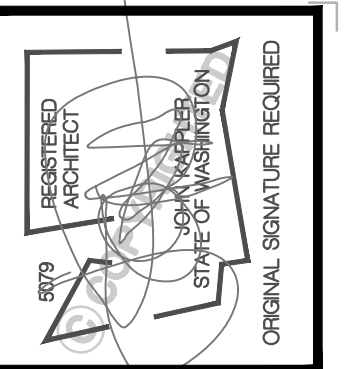
SOUTH ELEVATION

Scale 1/4"=1'-0"



EAST ELEVATION

Scale 1/4"=1'-0"



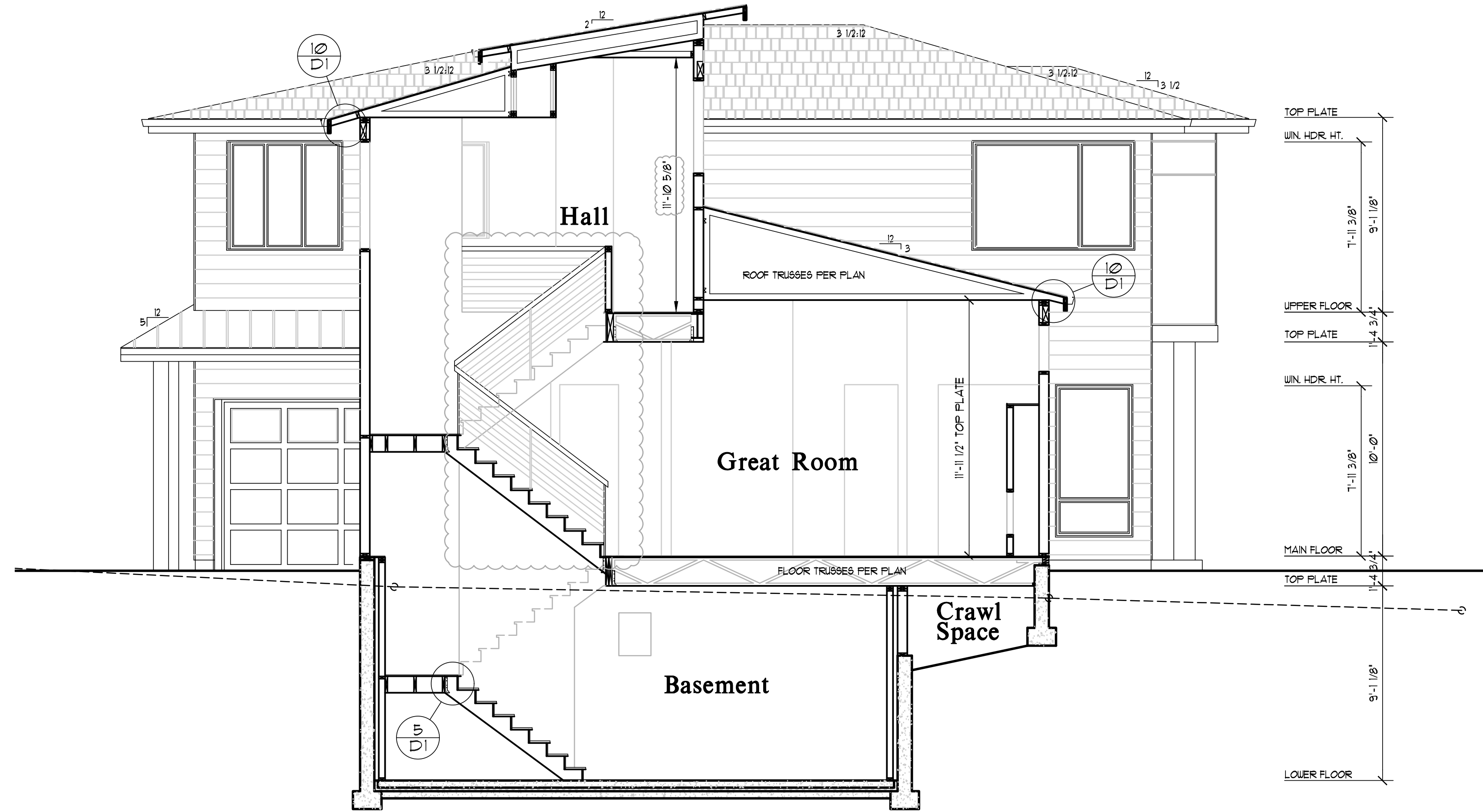
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TITLE	
JOB NO.:	21022.21
STARTING NO.:	21022.05

SHEET
A8



BUILDING SECTION A-A

Scale 1/4"=1'-0"

TYPICAL BUILDING MATERIALS

ROOF CONSTRUCTION

ROOFING: (DIV. 7) SHINGLES (DIV. 010005)
 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.
 GWE: (DIV. 9) 5/8" GWE

EXTERIOR WALL CONSTRUCTION

SIDING MATERIAL: (DIV. 7) WOOD SIDING (DIV. 01005)
 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-25 BLOWN-IN BLANKET
 PROVIDE CLASS II VAPOR RETARDER
 IN MARINE ZONE 4
 1/2" GWE

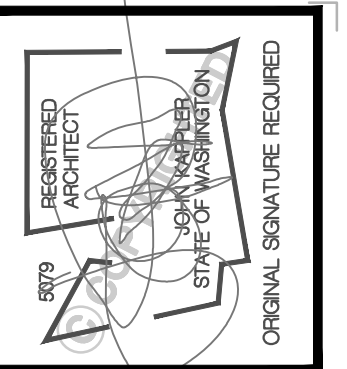
GWE: (DIV. 9)

FLOOR CONSTRUCTION

FLOORING: (DIV. 9) FINISH PER PLANS (DIV. 01005)
 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: MBATT, CORNER
 OUTSIDE: METAL CORNER
 FASCIA: 2x8 UNO



Date	By	Description
2/2/24	AG	PERMIT SET
3/17/25		JURISDICTIONAL COMMENTS

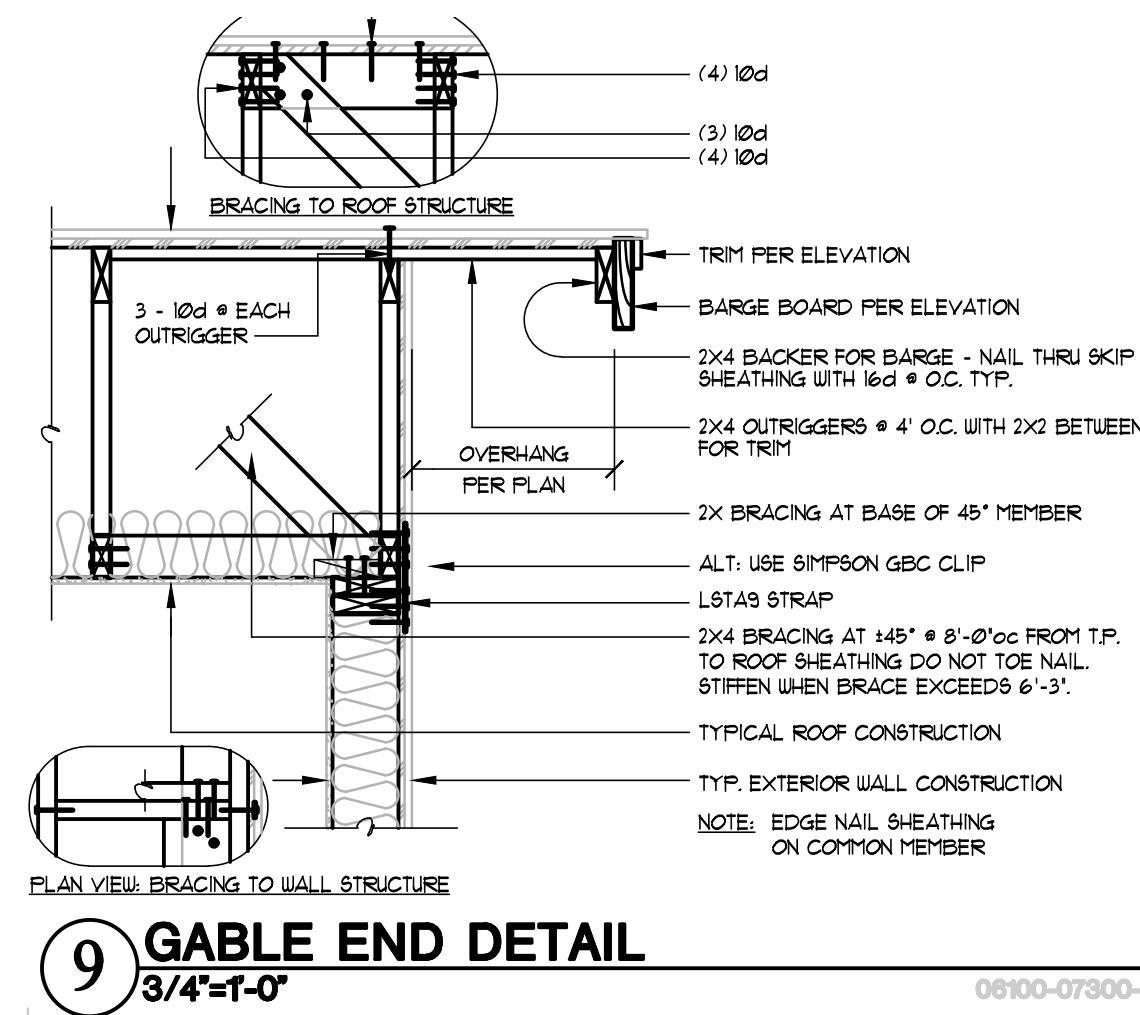
Milestone NW
Mercer Island Lot 1
 7621 SE 22nd ST. Mercer Island, WA 98040
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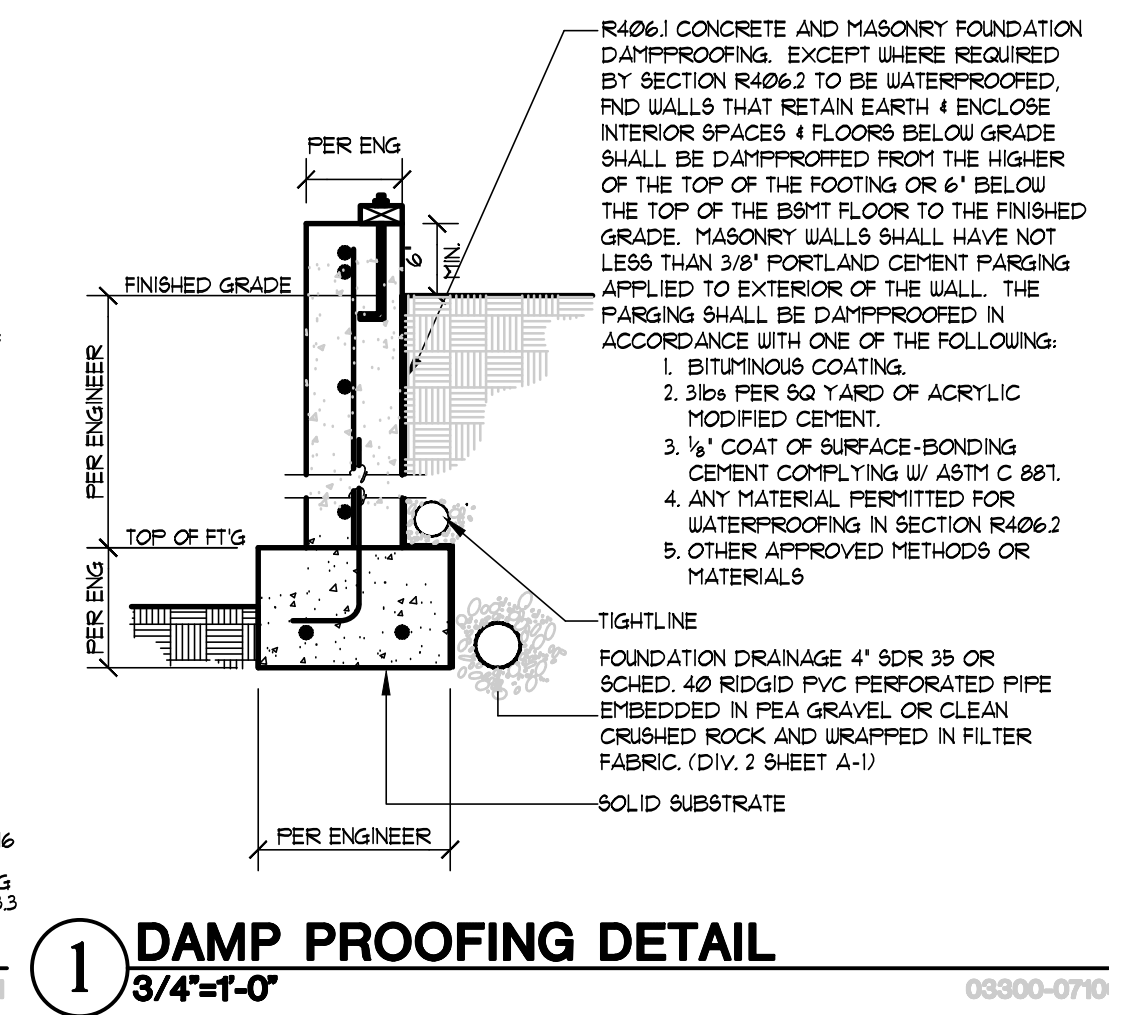
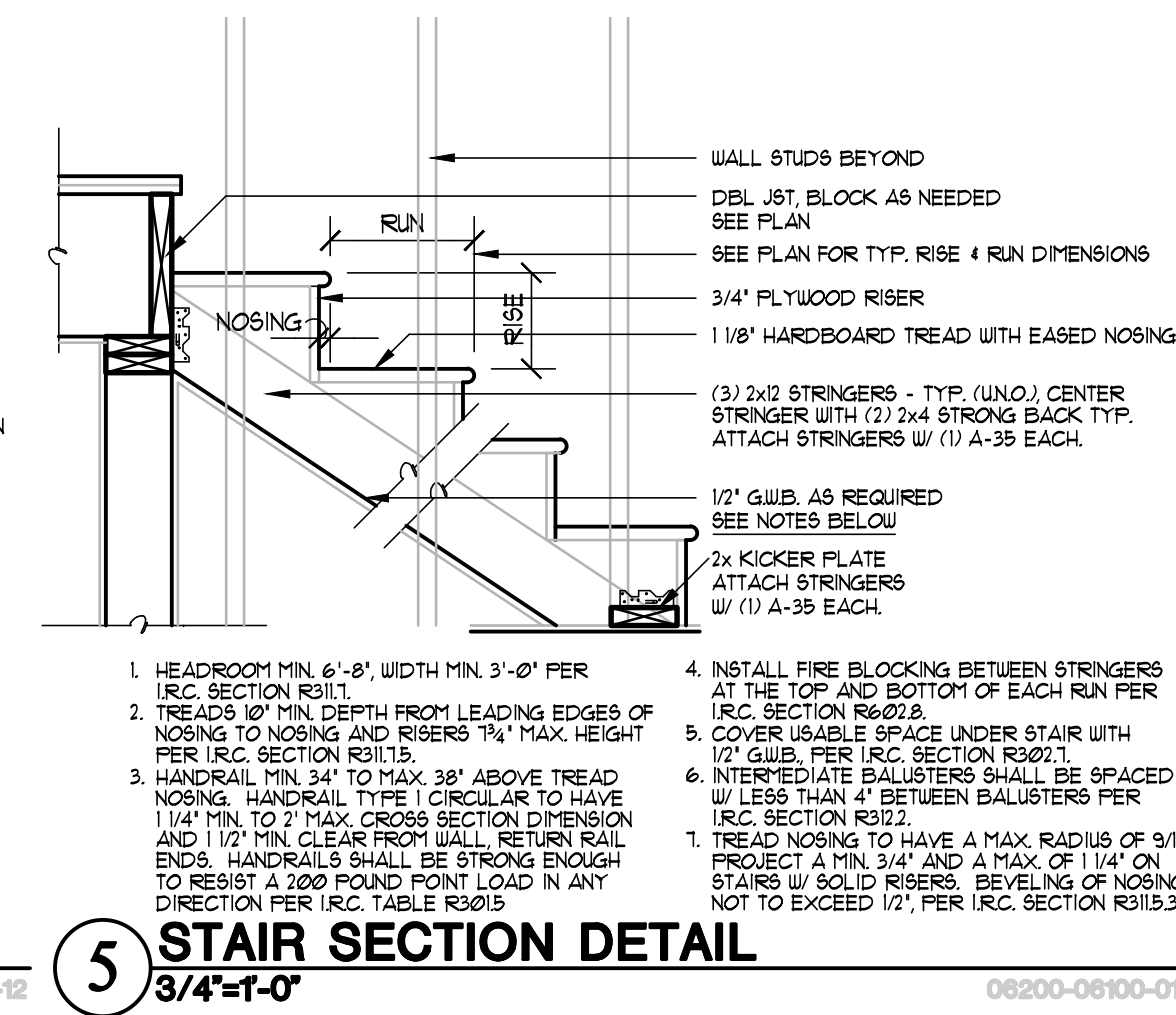
TITLE
JOB NO.: 2102221
STARTING NO.: 2102205

SHEET
A9

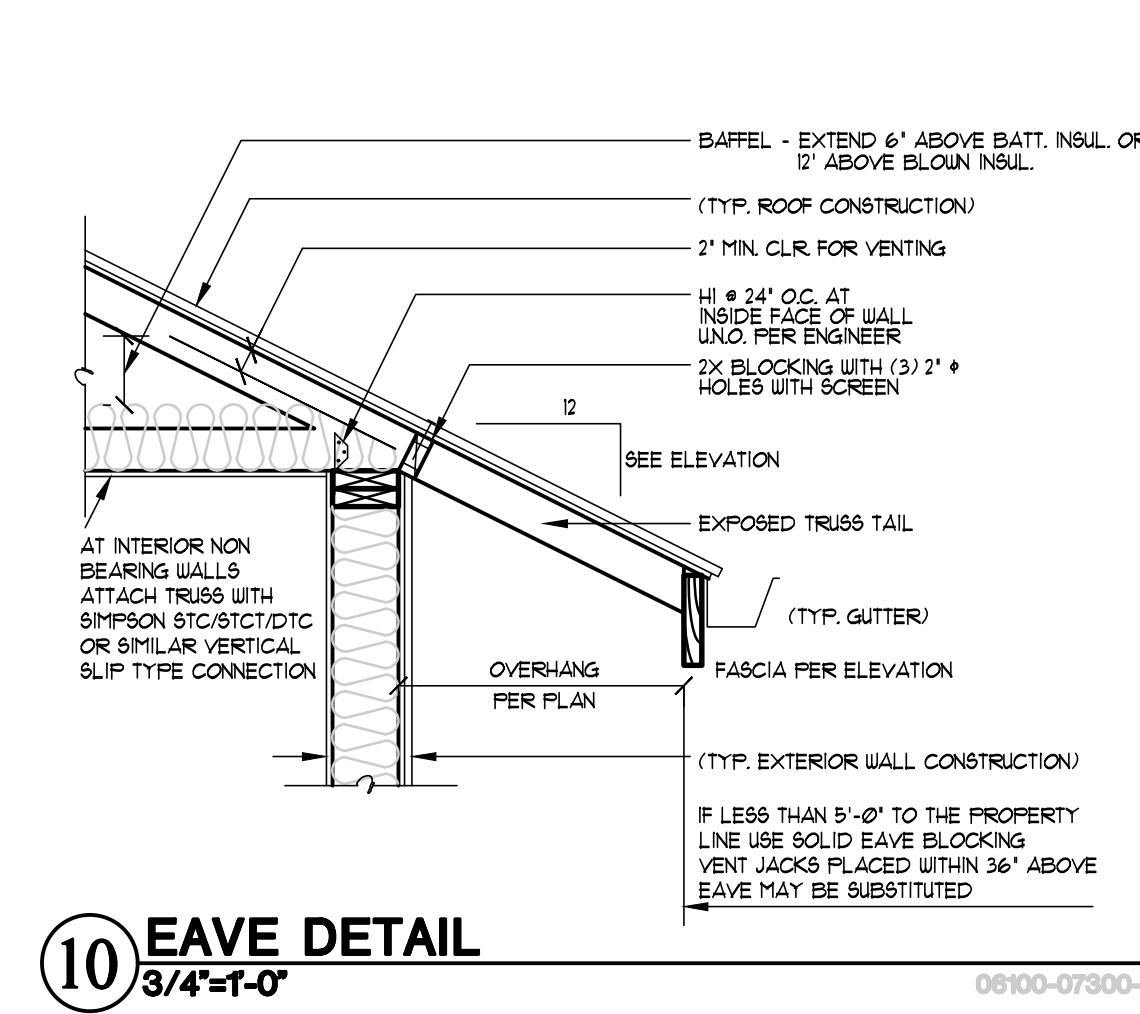
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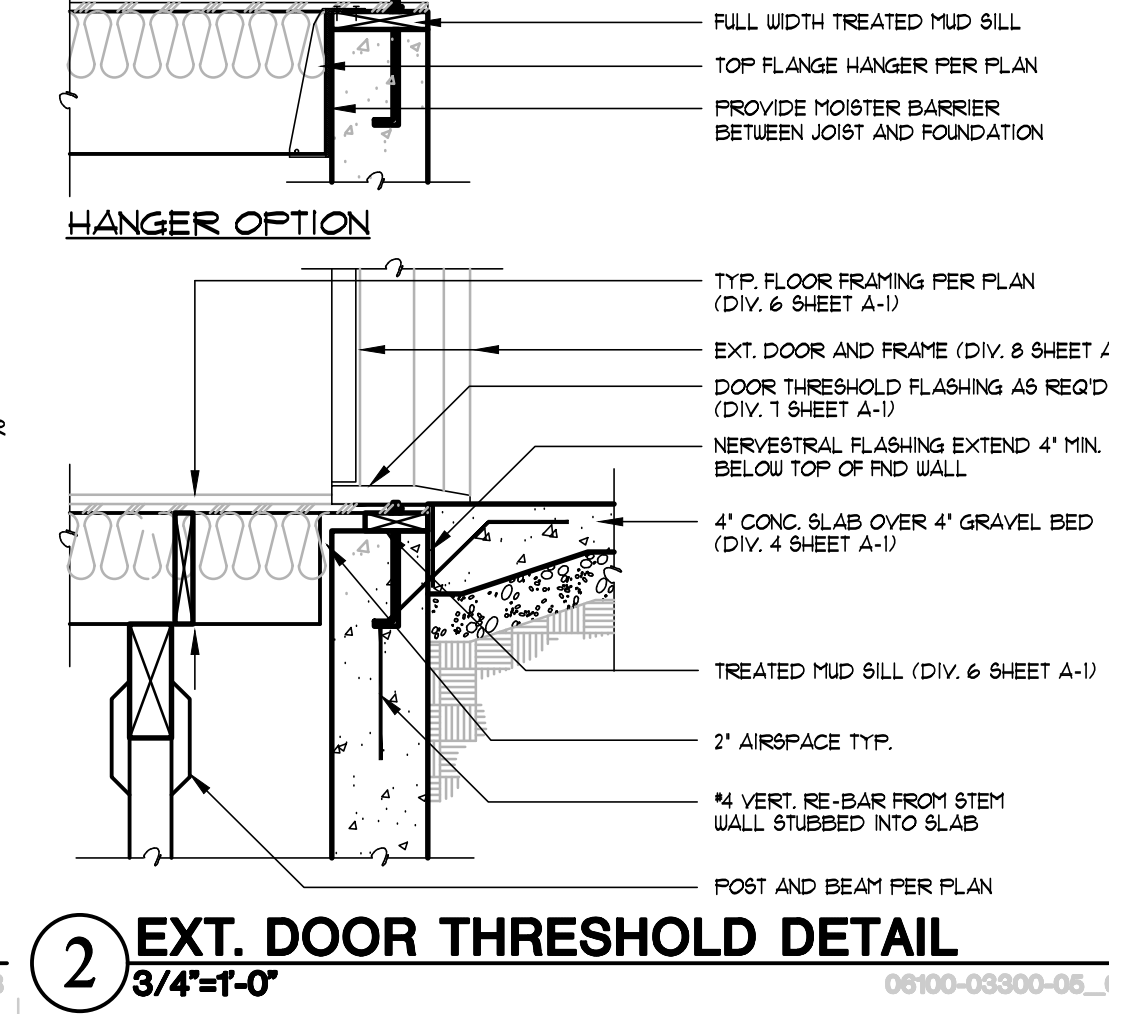
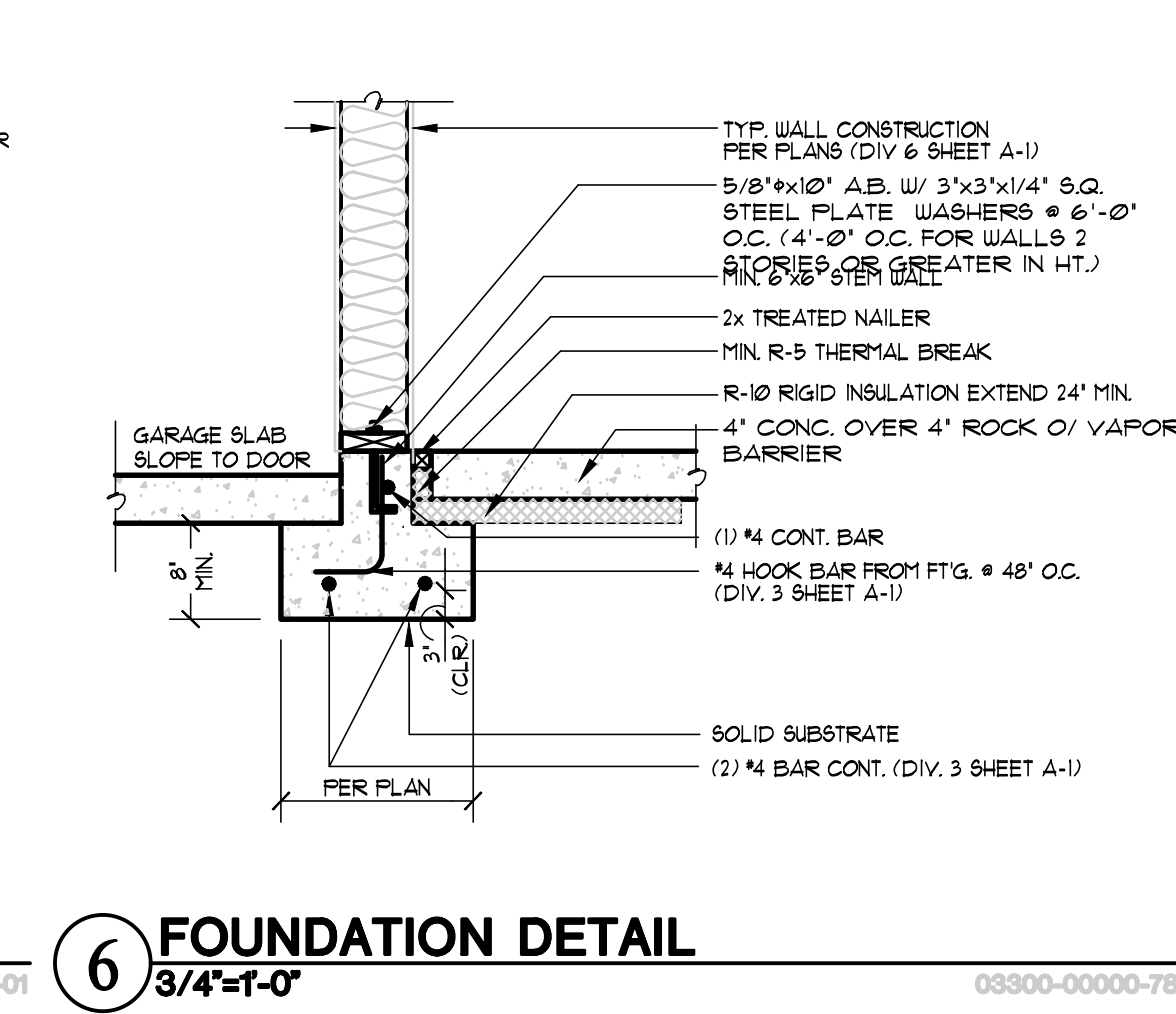
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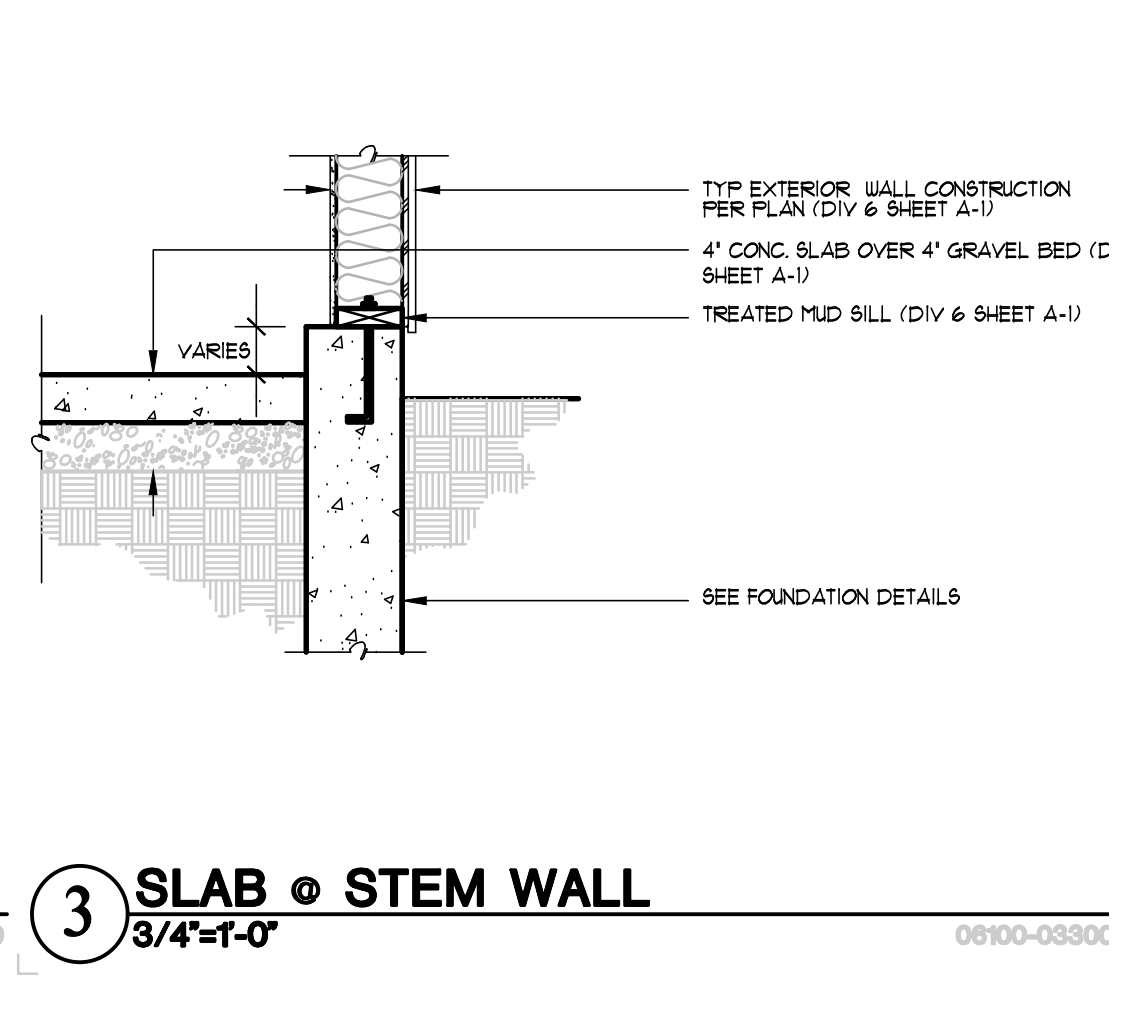
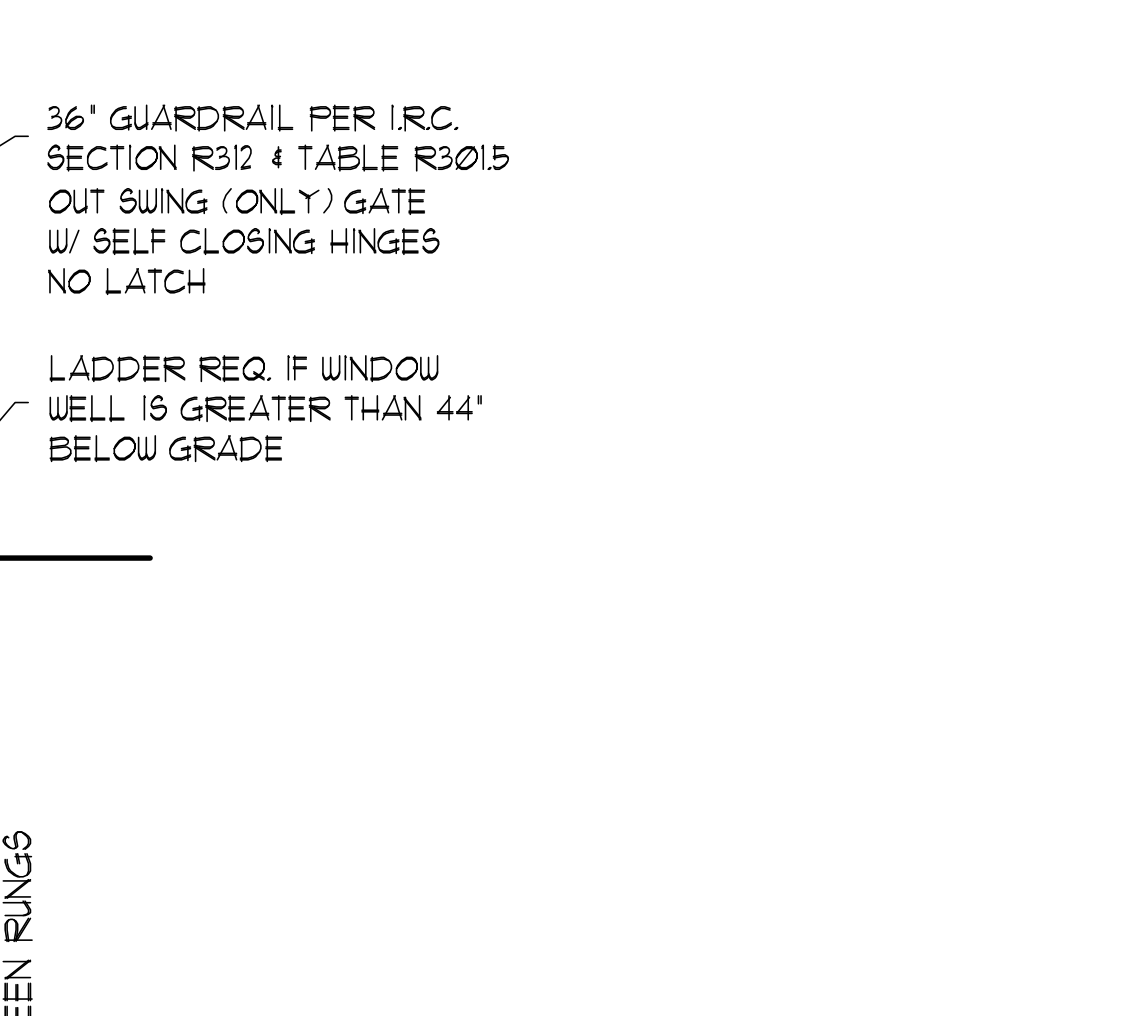
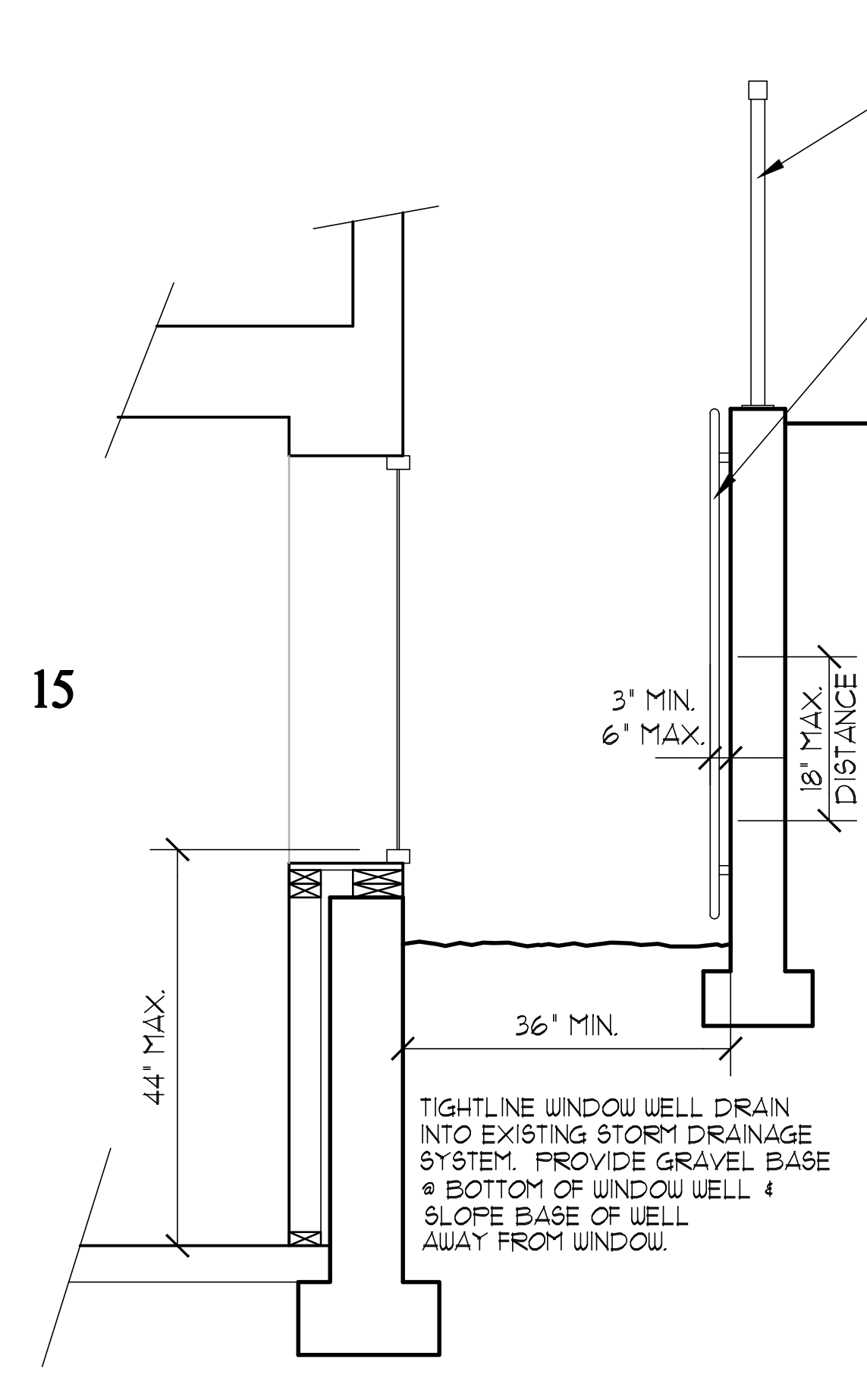
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14



19



20

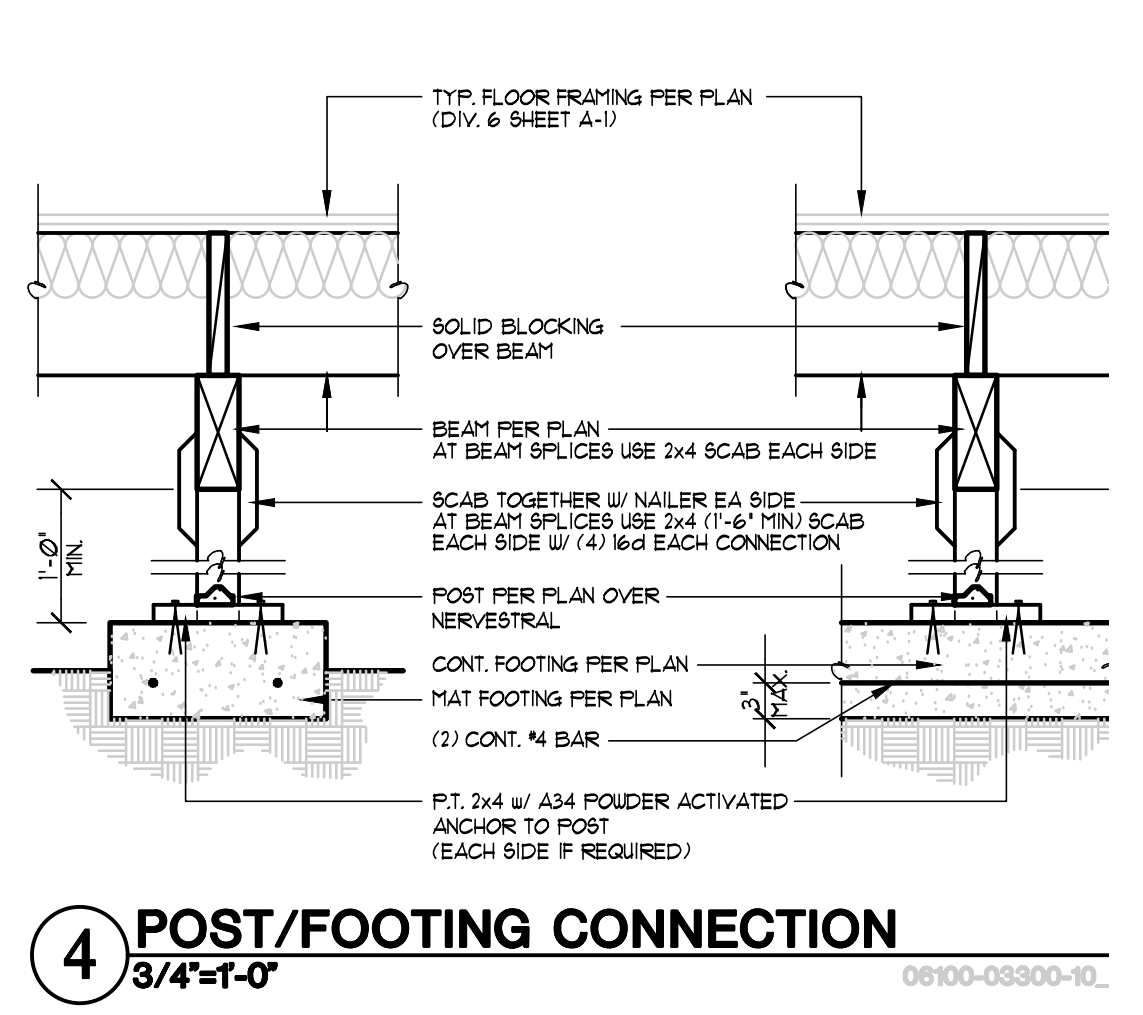


WINDOW WELL

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.



APPROVED	DATE	DESCRIPTION
APPROVED	12/22/24	AG PERMIT SET
APPROVED	3/10/25	JURISDICTIONAL COMMENTS

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Mercer Island, WA 98040
7621 SE 22nd ST.
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TITLE
JOB NO. : 2102221
STARTING NO. : 2102205

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 Distributed
Minimum 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**

RESULTS - Comparison of Baseline and Proposed Design

Component Performance, R occupancies	Baseline		Proposed Design	
	U	Area	U	Area
Doors U =	0.300	49	0.160	49
Overhead Glazing U =	0.500	0	0.00	0.00
Vertical Glazing U =	0.300	517	0.240	858
Fat/Vaulted Ceilings U =	0.024	1,998	0.025	1,998
Wall (above grade) U =	0.056	3,357	0.049	3,011
Floors over Crawlspace U =	0.029	1,226	0.025	1,226
Slab on Grade F =	0.540	0	0.00	0.00
Below Grade Wall U =	0.040	923	0.064	923
Below Grade Slab F =	0.500	105	0.324	105

U-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
		UA Percent Reduction	0.3%
		UA Reduction	1.7

If the Proposed UA is 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	Prescriptive 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) D.ACH50 / For R-2, 0.25 cm per ft ² at 50 Pa / HRV with min SHR eff of 0.65 per R/C 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 Rtg 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 2018 Table R406.2 for complete option descriptions and requirements

THERMAL ENVELOPE DETAIL 8 - Proposed Design

Conditioned Floor Area, Proposed Design: **3,446** sq. ft.

Classification: **Medium Dwelling Unit**

Notes:

Exterior Doors

Plan ID	Component Description	Ref.	Door		Width		Height		Area	UA	
			U	Qt.	Feet	Inch	Feet	Inch			
Mud	Insulated Steel, Wood Edge (Steel/WE)	10-6C	0.18	1	2	8	21	3.4			
Entry	Insulated Steel, Wood Edge (Steel/WE)	10-6C	0.18	1	3	8	28	4.4			
Sum of Area and UA										49	7.8
Exterior Doors Area Weighted U										0.160	

Overhead Glazing

Plan ID	Component Description	Ref.	Glazing		Width		Height		Area	UA	
			U	Qt.	Feet	Inch	Feet	Inch			
Sum of Area and UA										0.0	0
Overhead Glazing Area Weighted U										0.00	

Vertical Glazing Schedule

Plan ID	Component Description	Ref.	Glazing		Width		Height		Area	UA	
			U	Qt.	Feet	Inch	Feet	Inch			
1	Basement	U=0.24 (2018 1.1)	0.24	1	0	0	0	27.0	6.48		
2	Entry	U=0.24 (2018 1.1)	0.24	1	2.00	0	7	14.0	3.36		
3	Entry	U=0.24 (2018 1.1)	0.24	1	1	0	5	8.5	2.04		
4	Office	U=0.24 (2018 1.1)	0.24	1	4	0	8	27.0	6.48		
5	Office	U=0.24 (2018 1.1)	0.24	1	3	0	8	19.0	3.84		
6	Office	U=0.24 (2018 1.1)	0.24	1	5	0	8	30.0	7.20		
7	W.C.	U=0.24 (2018 1.1)	0.24	1	4	0	8	24.0	5.76		
8	Powder	U=0.24 (2018 1.1)	0.24	1	2	0	5	10.0	2.40		
9	Bathrm	U=0.24 (2018 1.1)	0.24	1	5	0	8	30.0	7.20		
10	Entry	U=0.24 (2018 1.1)	0.24	1	9	0	8	72.0	17.28		
11	Dining	U=0.24 (2018 1.1)	0.24	1	10	0	7	70.0	16.80		
12	Dining	U=0.24 (2018 1.1)	0.24	1	3	0	7	24.5	5.88		
13	Great Rm	U=0.24 (2018 1.1)	0.24	3	4	0	7	94.5	22.68		
14	Great Rm	U=0.24 (2018 1.1)	0.24	1	11	0	2	22.8	5.72		
15	Great Rm	U=0.24 (2018 1.1)	0.24	1	4	0	6	24.0	5.76		
16	Hall	U=0.24 (2018 1.1)	0.24	4	2	0	4	43.3	10.40		
17	Barm#3	U=0.24 (2018 1.1)	0.24	1	7	0	5	37.5	9.00		
18	Barm#3	U=0.24 (2018 1.1)	0.24	1	4	0	5	22.5	5.40		
19	Barm#2	U=0.24 (2018 1.1)	0.24	1	3	0	4	15.8	3.78		
20	Barm#1	U=0.24 (2018 1.1)	0.24	1	5	0	5	25.0	6.00		
21	Hall	U=0.24 (2018 1.1)	0.24	1	2	0	4	11.3	2.70		
22	Utility	U=0.24 (2018 1.1)	0.24	1	2	0	4	10.5	2.52		
23	Barm#3	U=0.24 (2018 1.1)	0.24	1	7	0	5	37.5	9.00		
24	Barm#2	U=0.24 (2018 1.1)	0.24	1	6	0	5	30.0	7.20		
25	Barm#1	U=0.24 (2018 1.1)	0.24	1	3	0	4	12.0	2.88		
26	P Bath	U=0.24 (2018 1.1)	0.24	1	7	0	4	33.8	8.10		
27	W.C.	U=0.24 (2018 1.1)	0.24	1	7	0	1	11.3	2.70		
28	P Suite	U=0.24 (2018 1.1)	0.24	2	7	0	5	75.0	18.00		
Sum of Area and UA										887.7	205.8
Vertical Glazing Area Weighted U										0.240	
Vertical Glazing and Doors Area Weighted U										0.238	

Flat/Vaulted Ceilings

Plan ID	Component Description	Ref.	Attic		Area	UA	
			U	Qt.			
	880 blown Attic STD baffled	10-7	0.025		1,998	50.0	
Sum of Area and UA						1,998	50.0

Walls (Above Grade)

Plan ID	Component Description	Ref.	Wall		Net Area	UA	
			U	Qt.			
	R23 cavity+RD foam INT 2X6W Lap	App. A	0.049		3,011	143	
Sum of Area and UA						3,011	148

Floor (over crawl or exterior)

Plan ID	Component Description	Ref.	Floor U	Area	UA	
	R38 vented Joist (2021 1.2, 1.3; 2018 1.3.4.5)	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		Slab F	Slab Perim	Slab UA		
				U	Area					
	R10 Foam Ext w/TB, R10 Full Underlslab	3.5' depth	Baylon & Ker	0.08	923	59.1	0.324	105		
Sum of Area, Length and UA									923	69.1
									105	34

Links to Download Forms, Checklists and Other Resources

Compliance Certificate [Compliance Certificate](#) [Instructions](#)

Insulation Certificate for Residential New Construction [Insulation Certificate](#)

Duct Testing Affidavits [Existing Construction Affidavit](#) [New Construction Affidavit](#)

Prescriptive Checklist for 2018 WSEC [Prescriptive Checklist](#)

Alterations (Remodel) Worksheet [Worksheet](#)

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 Ducted? **Not Distributed**

Ventilation Code Section: **R/C, Chapter 15**

Whole House Mechanical Ventilation Airflow Rate: **113** CFM

HVAC Thermal Distribution System

Download RS-33 (2018) <http://www.enr.com/DocumentDownload.aspx?docid=20180333>

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: **0.08** CFM25 per sq. ft. (Maximum allowable total measured duct leakage)

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.

Heating System Sizing - Proposed Design

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: **27,683** 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: **5.31**

Envelope Heat Load (Sum of UA x ΔT): **24,066** Btu / Hour

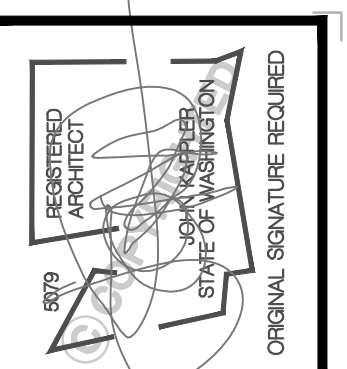
Air Leakage Heat Load (Envelope U x A x ΔT x 0.18): **13,390** Btu / Hour

Building Design Heat Load (Air Leakage + Envelope Heat Load): **37,456** Btu / Hour

Building and Duct Heat Load (For ducts located in conditioned space: Sum of Building Heat Loss X 1.1): **46,830** Btu / Hour

Maximum Heat Equipment Output (For ducts located in conditioned space or ductless: Sum of Building Heat Loss X 1.1): **46,830** Btu / Hour

Building and Duct Heat Loss X 1.40 for all other systems: **137** kW



Date By Description

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

Milestone NW

Mercer Island Lot 1

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TITLE

JOB NO.: **21022.21**

STARTING NO.: **21022.05**

SHEET

E1

BASEMENT SLAB
4" CONC. SLAB ON 10 MIL VAPOR BARRIER ON 4" MIN. GRANULAR FILL ON 45% COMPACTED FILL/VIRGIN SOIL

GARAGE SLAB
4" CONC. SLAB ON 4" MIN. GRANULAR FILL ON 45% COMPACTED FILL/VIRGIN SOIL

PORCH SLAB
4" CONC. SLAB ON GRADE ON 10 MIL VAPOR BARRIER ON 4" MIN. GRANULAR FILL ON 45% 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, UNO.:
 FC = 3000 psi - FOUNDATION WALLS
 3000 psi - FOOTINGS
 2500 psi - INTERIOR SLABS ON GRADE
 3500 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 & 7TH 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 45% 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 3/8" DIA. ANCHOR BOLTS W/ MIN. 3"x3"x1/2" PLATE WASHERS (EDGE OF WASHER TO BE LOCATED WITHIN 1/2" OF EXTERIOR EDGE OF SILL PLATE) PROVIDE A MINIMUM OF 2 ANCHORS PER PLATE, 12" MAXIMUM FROM PLATE ENDS UNO. (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 (Ps) (PSF): 25
 FLAT ROOF SNOW LOAD (Ps) (PSF): 25
 SNOW EXPOSURE FACTOR (Ce): 0.9
 SNOW LOAD IMPORTANCE FACTOR (I): 1.0
 THERMAL FACTOR (Ct): 1.2

LATERAL DESIGN LOADS:

WIND LOAD: (IBC 1609)
 SPEED (Vw) (MPH): 100
 WIND RISK CATEGORY: II
 IMPORTANCE FACTOR (Iw): 1.0
 EXPOSURE CATEGORY: C
 INTERNAL PRESSURE COEFF. (Gci): 0.18
 TOPOGRAPHIC FACTOR (Kzt): 1.00

SEISMIC LOAD: (IBC 1601)
 SEISMIC RISK CATEGORY: II
 SEISMIC IMPORTANCE FACTOR (Iw): 1.0
 MAPPED SPECTRAL RESPONSE: Sa 1.285
 Sa 0.483
 SITE CLASS: D
 SPECTRAL RESPONSE COEFF.: Ss 1.028
 Ss 0.585
 SEISMIC DESIGN CATEGORY: D
 BASIC SEISMIC-FORCE-RESISTING SYS.: LIGHT FRAMED WALLS
 WOOD STRUCTURAL PANELS
 ULTIMATE BRAG. SHEAR: TRANS: 14 k LONG: 14 k
 SEISMIC RESPONSE COEFF. (Cw): TRANS: 0.170 LONG: 0.170
 RESPONSE MODIFICATION FACTOR (R): TRANS: 6.5 LONG: 6.5
 ANALYSIS PROCEDURE USED: EQUIVALENT LATERAL FORCE

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 R301.3 OF THE 2021 IRC. ACCORDINGLY, THIS ADDITION, AS DOCUMENTED AND DETAILED HEREIN, 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

- 3/8" OSB OR 1/2" PLYWOOD.

FASTEN SHEATHING W/ 2 1/2"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 UNO. ON PLANS.

NOTES:

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

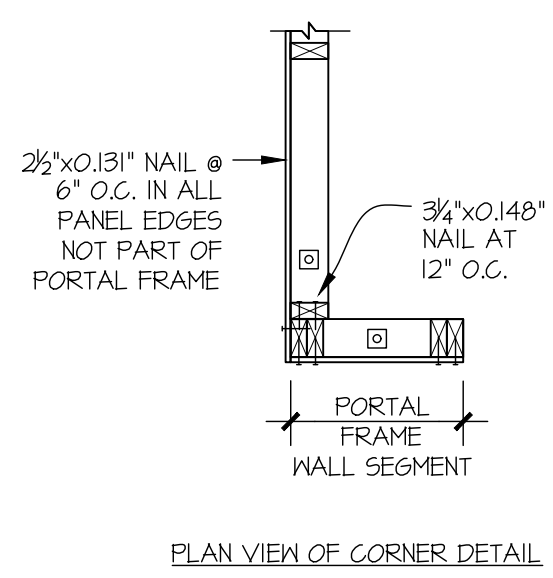
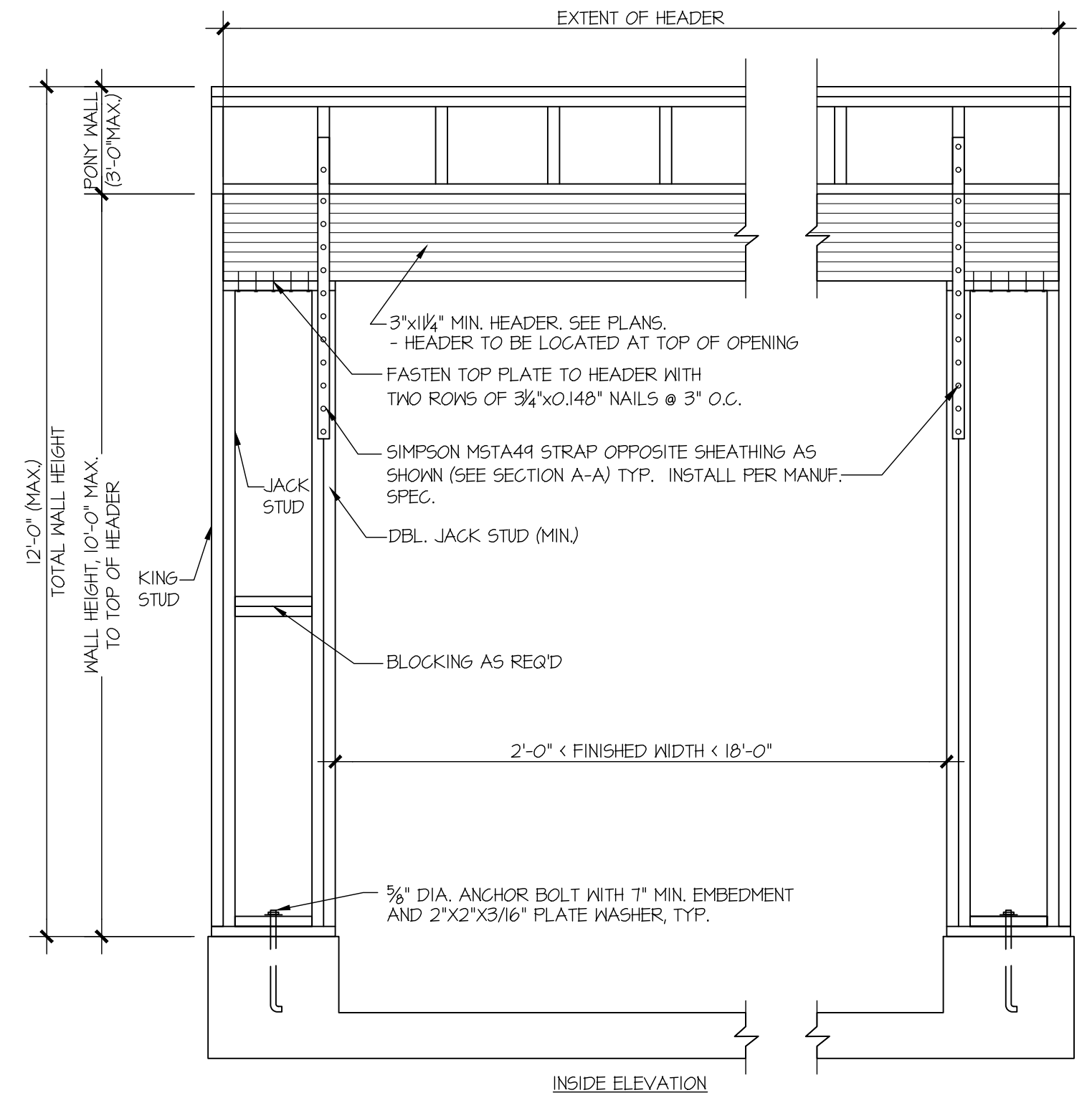
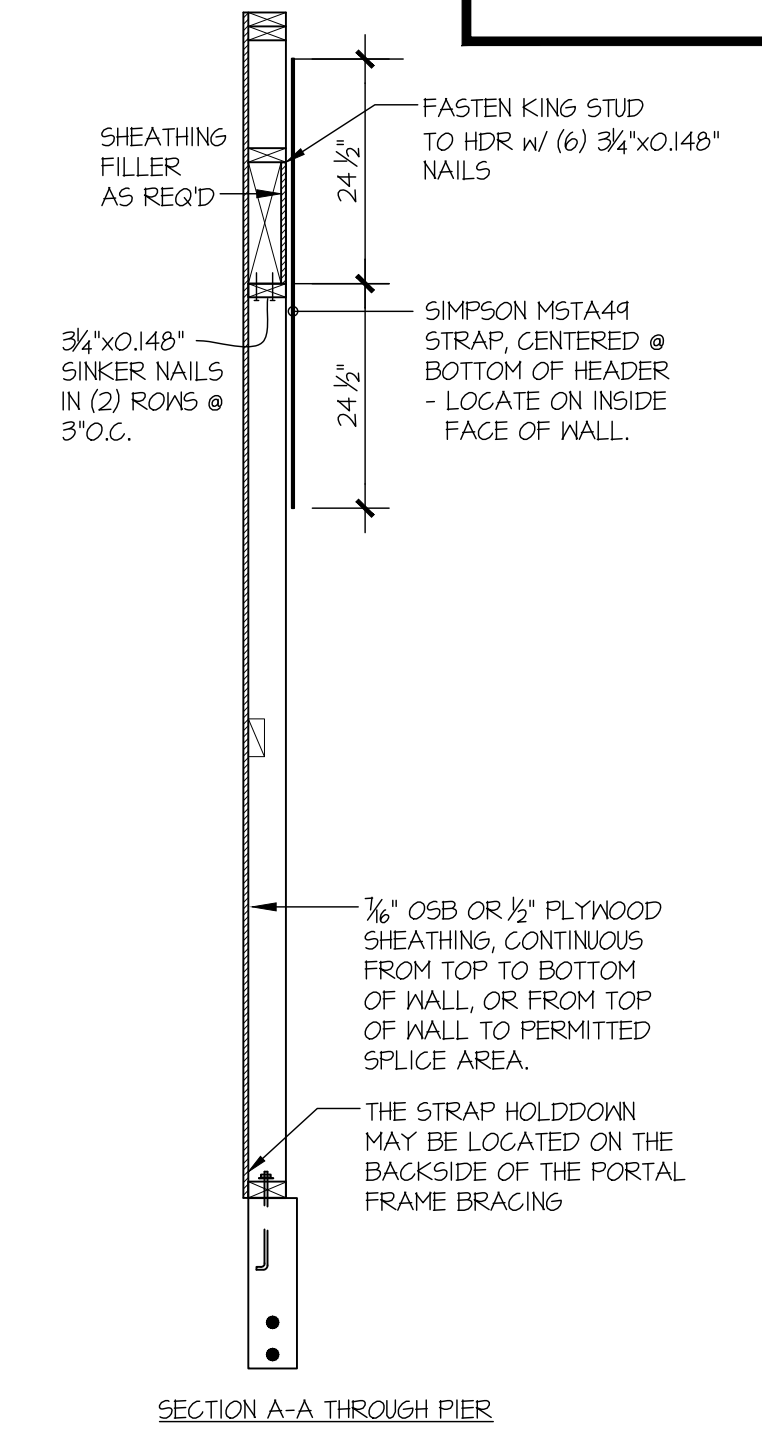
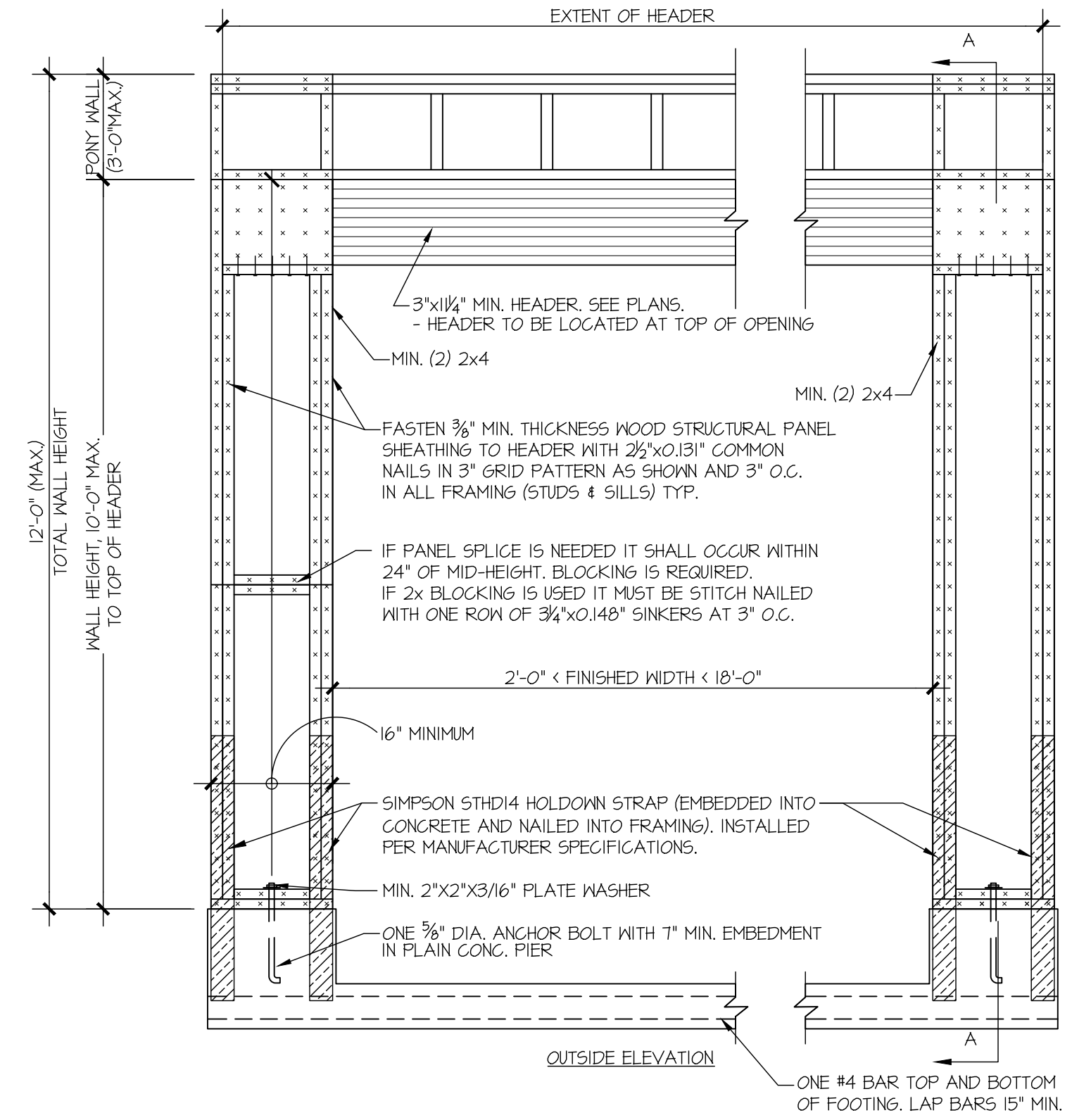
GENERAL STRUCTURAL NOTES

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) #2 GRADE LUMBER, OR BETTER, UNO.
- INTERIOR BEARING WALLS SHALL BE 2x4 OR 2x6 (AS SHOWN ON PLANS) @ 16" O.C. W/ DOUBLE TOP PLATE HEM FIR (HF) #2 GRADE LUMBER, OR BETTER, UNO.
- ALL NON-BEARING INTERIOR STUD WALLS SHALL BE CONSTRUCTED WITH 2x4 STUDS GRADE MEMBERS SPACED @ 24" O.C. (MAX.)
- ALL WALLS TALLER THAN 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, UNO.
- 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, UNO.
- BUILT-UP POSTS SHALL BE 2x4 OR 2x6 HEM FIR (HF) #2 GRADE LUMBER, OR BETTER, UNO. & SOLID WOOD COLUMNS SHALL BE SPRUCE PINE FIR (SPF) #2 GRADE LUMBER, OR BETTER, UNO.
- 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 19% 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. UNO.
- PROVIDE SOLID BLOCKING IN FLOOR SYSTEM UNDER ALL POSTS & HOLD-DOWNS CONTINUOUS TO FOUNDATION/FLOORING. BLOCKING TO MATCH POST ABOVE.
- ENGINEERED LUMBER TO MEET OR EXCEED THE FOLLOWING:
 • LVL MEMBERS - Fv=2250 PSI; Fv=910 PSI; E=1.55x10⁶ PSI
 • LVL MEMBERS - Fv=2600 PSI; Fv=285 PSI; E=2.0x10⁶ PSI
 • GLB MEMBERS - Fv=2400 PSI; Fv=11850 PSI; Fv=285 PSI; E=1.8x10⁶ PSI; DF/DF; 24F-V4 (UNO.)
 • ENGINEERED LUMBER POSTS TO MEET OR EXCEED THE FOLLOWING:
 • LVL MEMBERS - Fv=2400 PSI; Fv=12500 PSI; E=1.8x10⁶ 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 DRWG'S 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. UNO.
- 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 COORD. IN THE ABSENCE OF MANUFACTURER'S RECOMMENDATIONS, NOT LESS THAN ASTM A653, TYPE G95 ZINC-COATED GALVANIZED STEEL, OR EQUIVALENT, SHALL BE USED.



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

TRUSSES SHALL BE DESIGNED SO THAT DIFFERENTIAL DEFLECTION BETWEEN ADJACENT PARALLEL TRUSSES OR GIRDER TRUSSES DOES NOT EXCEED THE FOLLOWING:

- ROOF TRUSSES: 1/4" DEAD LOAD
- FLOOR TRUSSES, ATTIC TRUSSES, & I-JOISTS: 18" DEAD LOAD
- FLOOR TRUSSES & ATTIC TRUSSES ADJACENT TO FLOOR FRAMING BY OTHERS: LIMIT ABSOLUTE TRUSS DEFLECTION TO 3/16" DEAD LOAD, (NOT DIFFERENTIAL DEFLECTION)

HOLD-DOWN SCHEDULE

SYMBOL	SPECIFICATION
▶ HD-1	SIMPSON STDH14 (R/L) HOLD-DOWN
▶ HD-5	SIMPSON CS16 STRAP TIE (14" END LENGTH)
▶ HD-6	SIMPSON MSTC40 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM UNO.)
▶ HD-7	SIMPSON MSTC66 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM UNO.)

FLOOR FRAMING

- 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, UNO. EXCLUDES STONE/MARBLE OR NET BED CONSTRUCTED FLOORS - CONTACT MK FOR EXCLUDED DESIGN.
- 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 (UNO. ON PLANS): SINGLE PLY: SIMPSON LUS20 DOUBLES: SIMPSON LUS20-2
- FLOOR SHEATHING SHALL BE 23/32" A.P.A. RATED 5/16" I-FLOOR 24" O.C. EXPOSURE 1 (OR APPROVED EQUAL) WITH TONGUE AND GROOVE EDGES. FASTEN TO FRAMING MEMBERS W/ GLUE AND 2 1/2" 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, UNO.
- FASTEN HANGERS TO SINGLE PLY FLUSH BEAMS W/ 1/2" LONG NAILS.

ROOF FRAMING

- FASTEN EACH ROOF TRUSS TO TOP PLATE W/ (4) 3"x0.131" TOENAILS (MIN) & (1) SIMPSON H25T CLIP @ ALL BEARING POINTS. PROVIDE (2) SIMPSON H25T CLIPS AT 2-PLY GIRDER TRUSSES, (2) SIMPSON H25T CLIPS AT 3-PLY GIRDER TRUSSES AT ALL BEARING POINTS.
- FASTEN EACH ROOF RAFTER TO TOP PLATE WITH (1) SIMPSON H25T CLIP. PROVIDE (2) SIMPSON H25T CLIPS AT FLUSH BEAMS IN THE ROOF - AT ALL BEARING POINTS.
- ROOF SHEATHING SHALL BE 7/8" A.P.A. RATED SHEATHING 24/8 EXPOSURE 1 (OR APPROVED EQUAL). FASTEN TO FRAMING MEMBERS W/ 2 1/2" x 0.131" NAILS @ 6" O.C. AT PANEL EDGES & @ 6" O.C. AT INTER-MEDIATE 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

APA PORTAL FRAME DETAIL WITH HOLD-DOWNS
SCALE: N.T.S.

seal:

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M&K project number: 203-24019

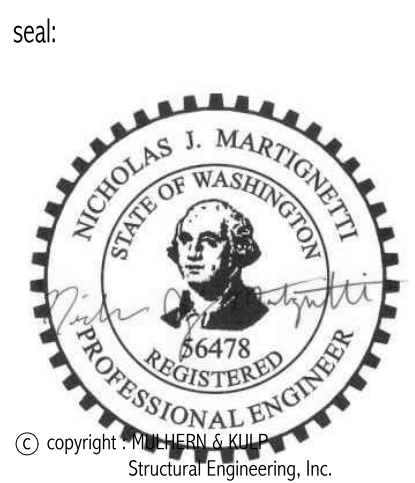
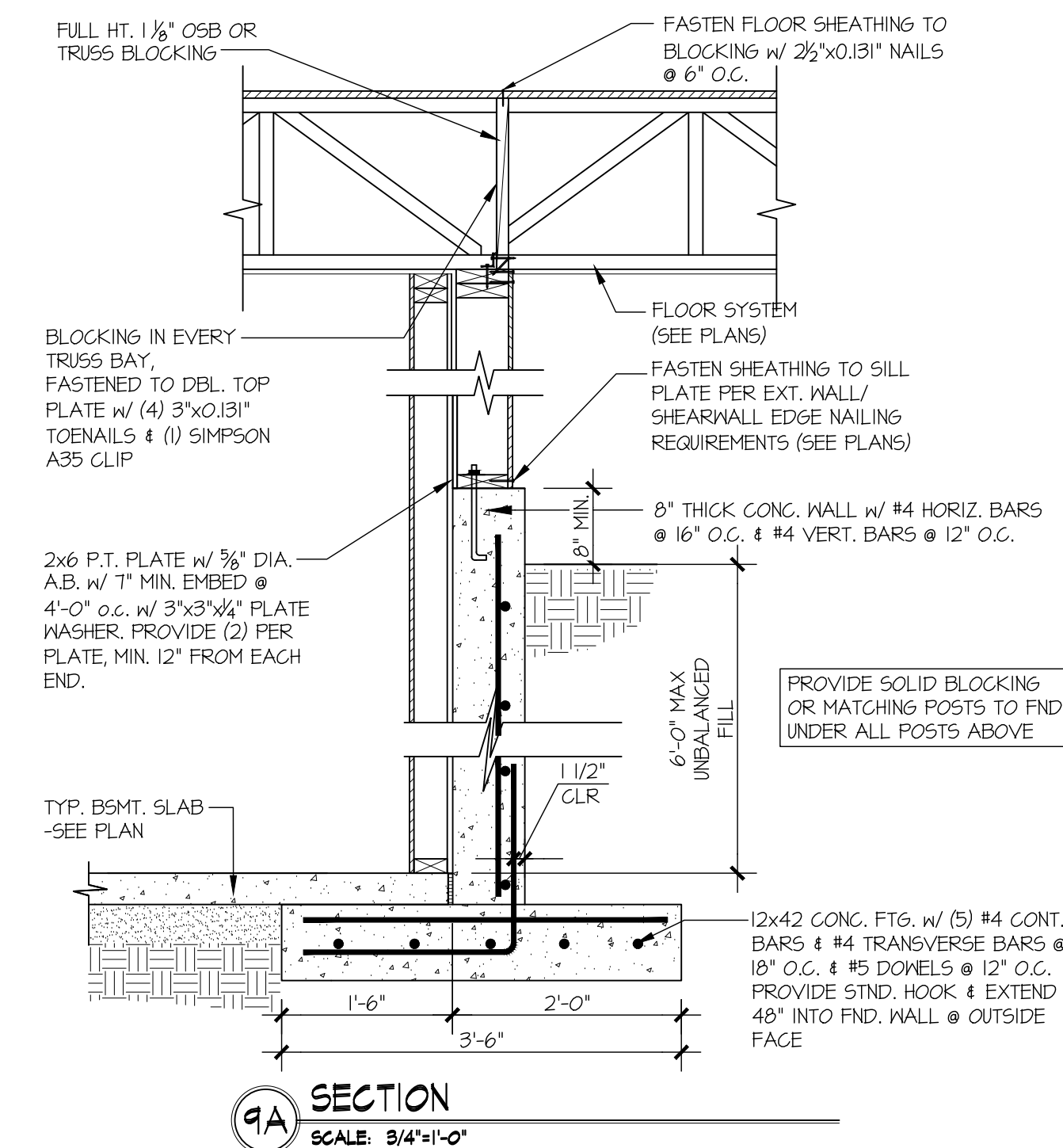
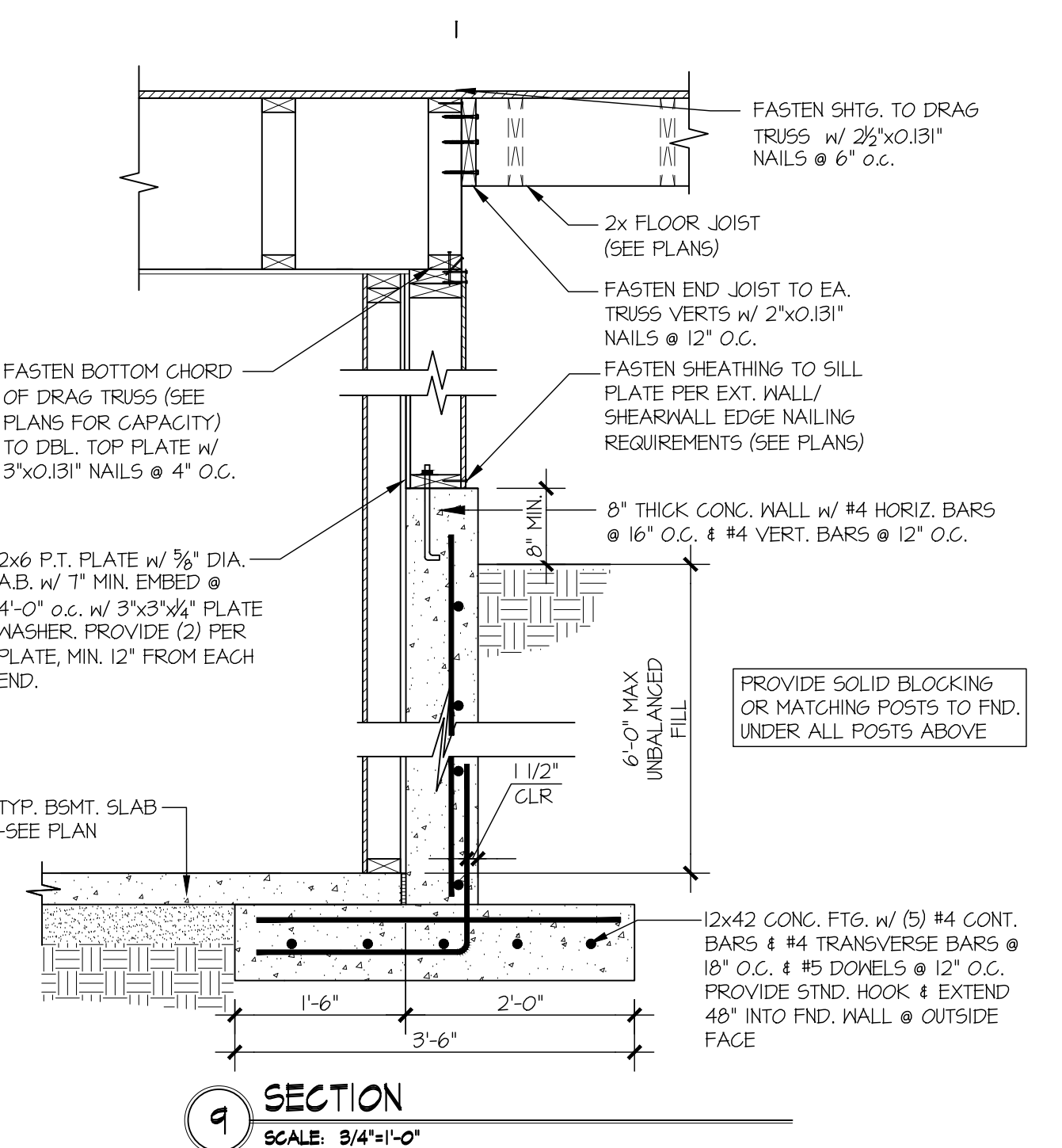
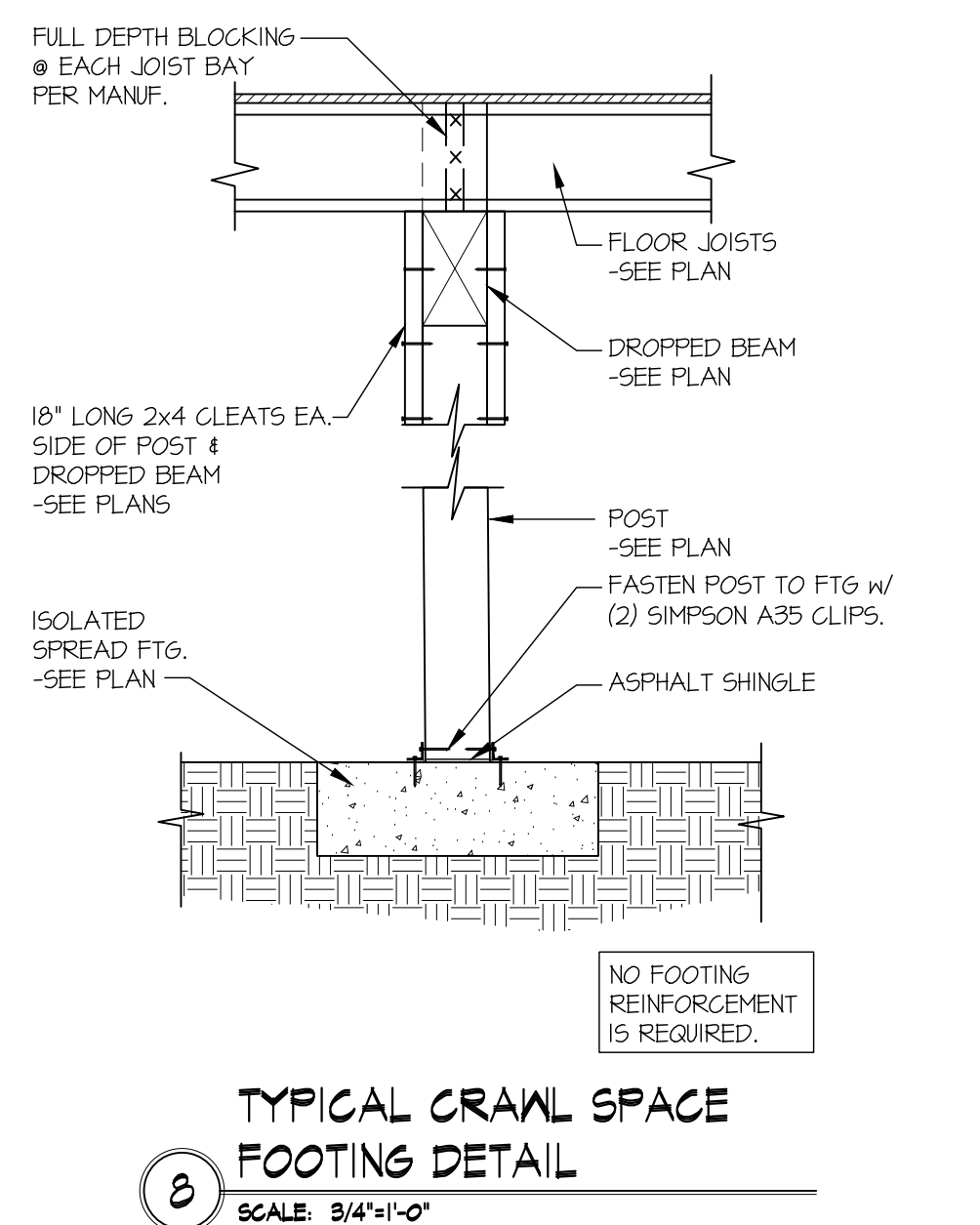
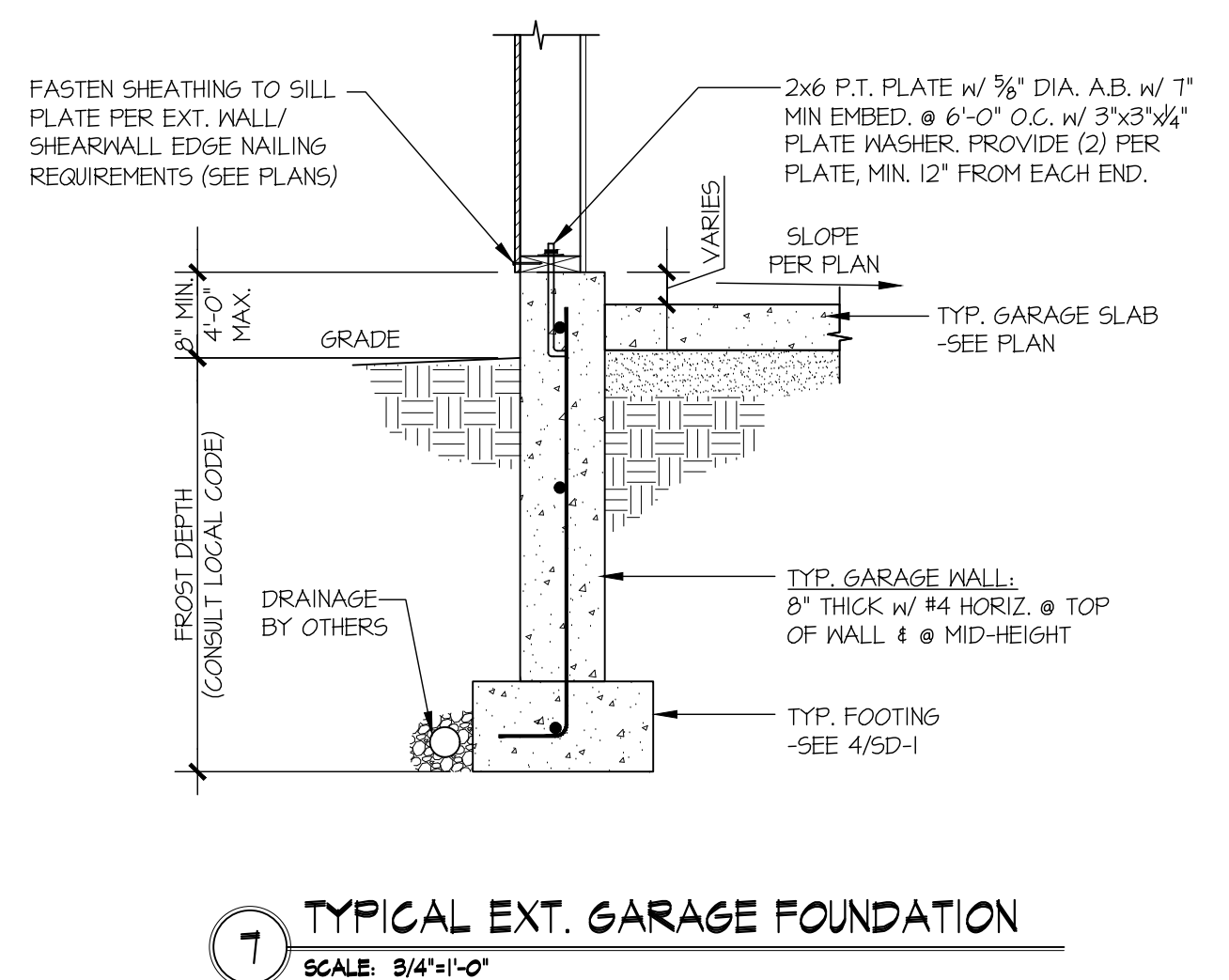
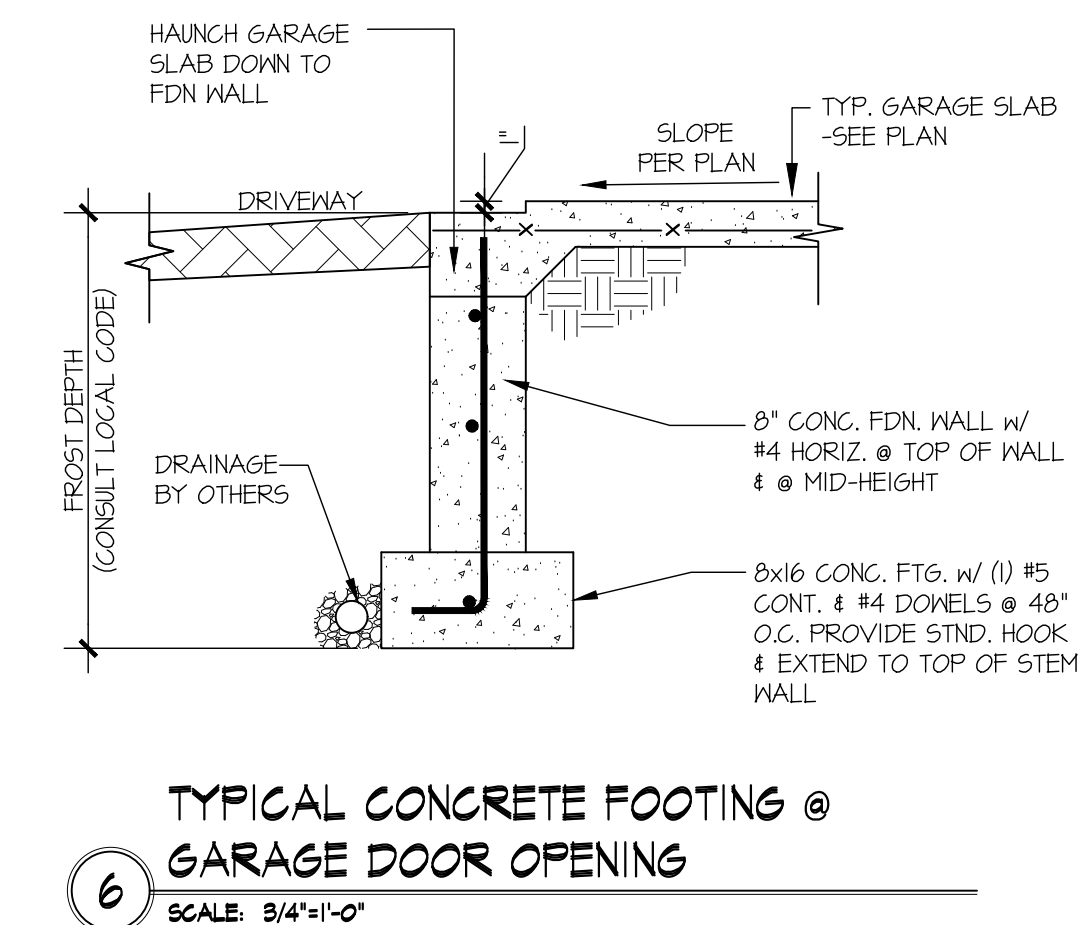
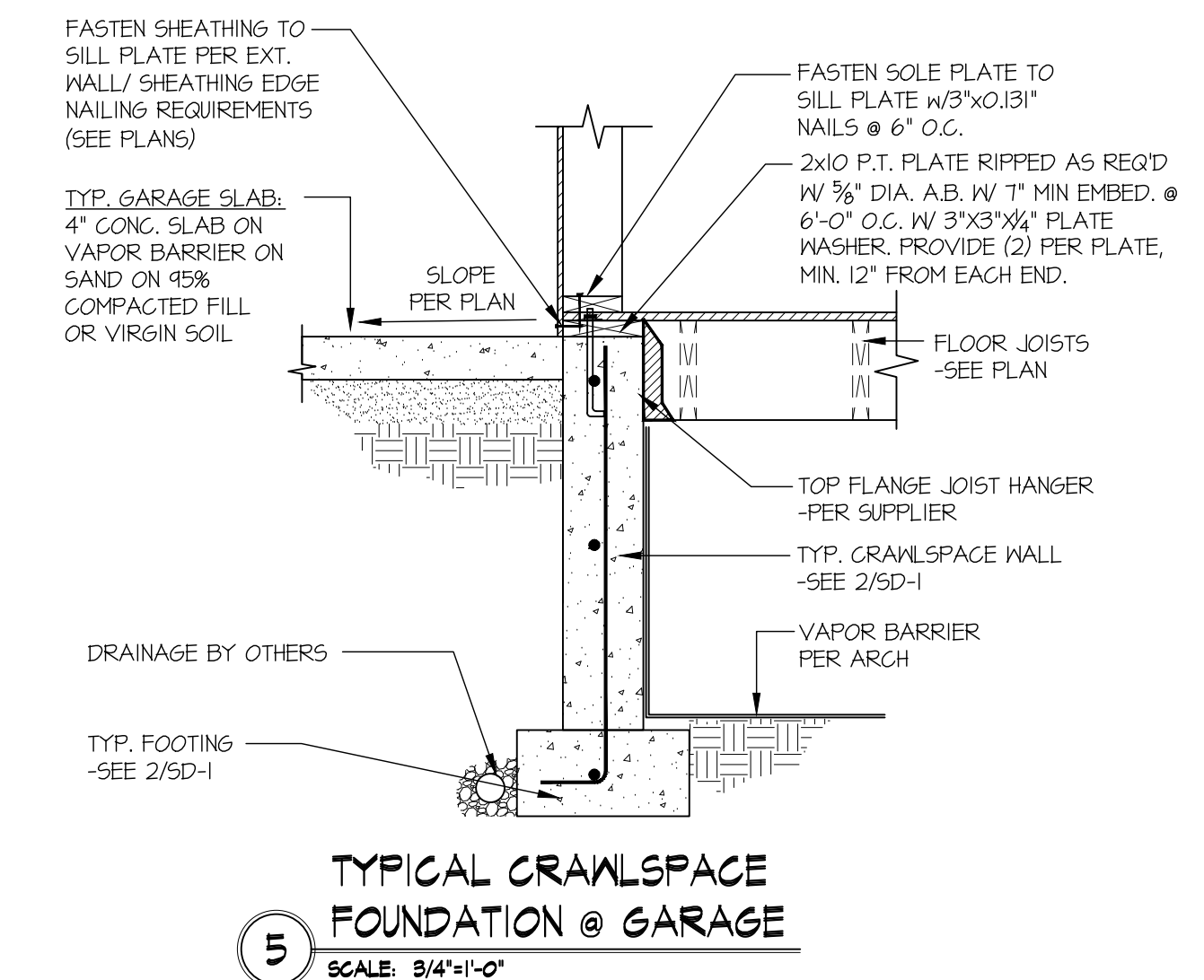
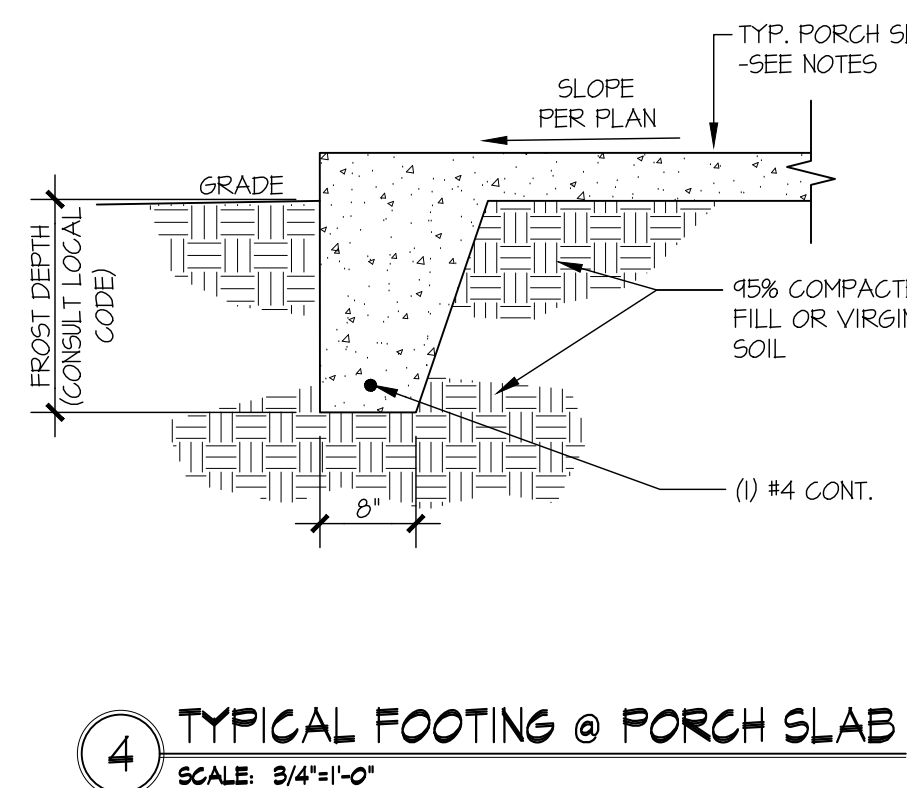
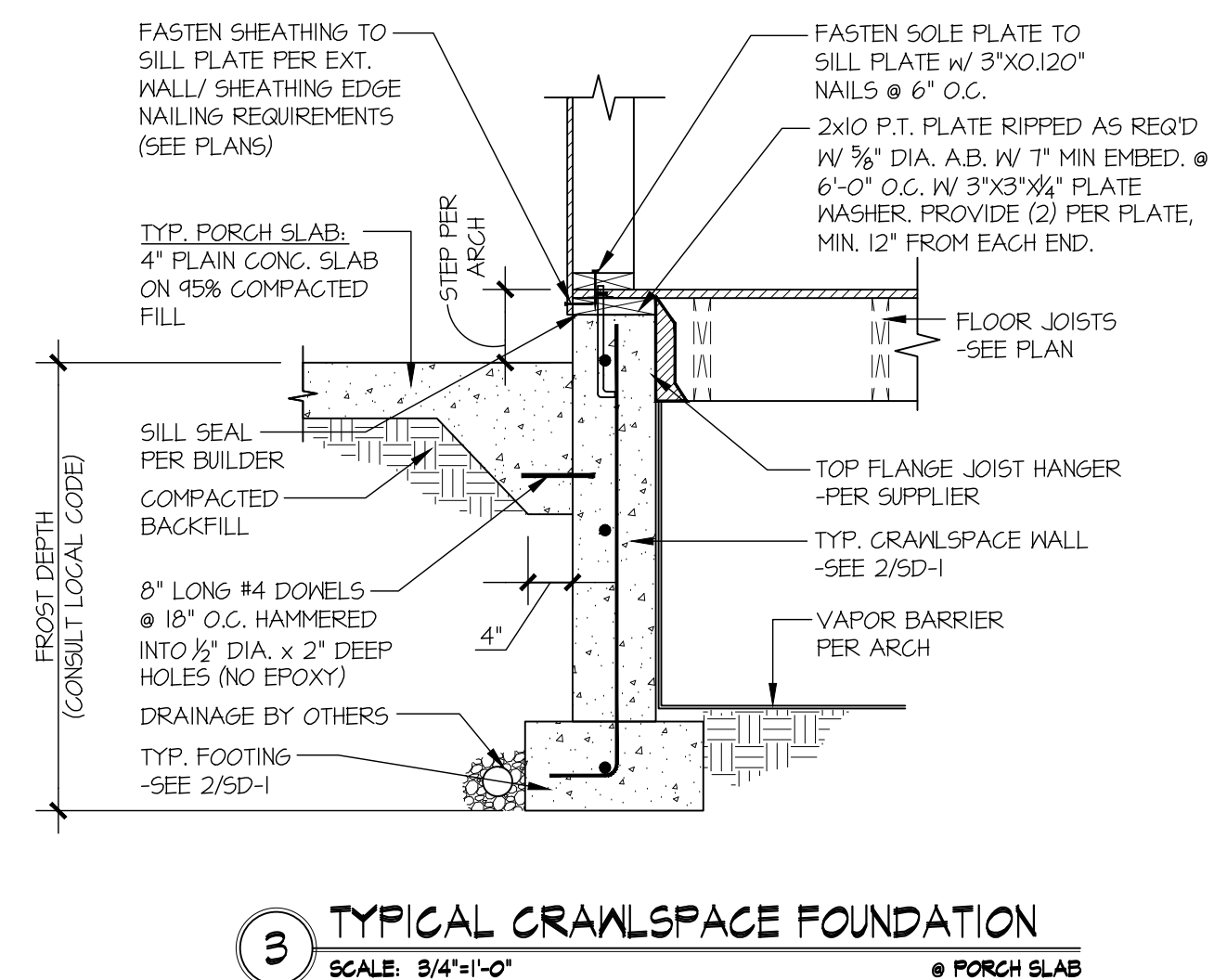
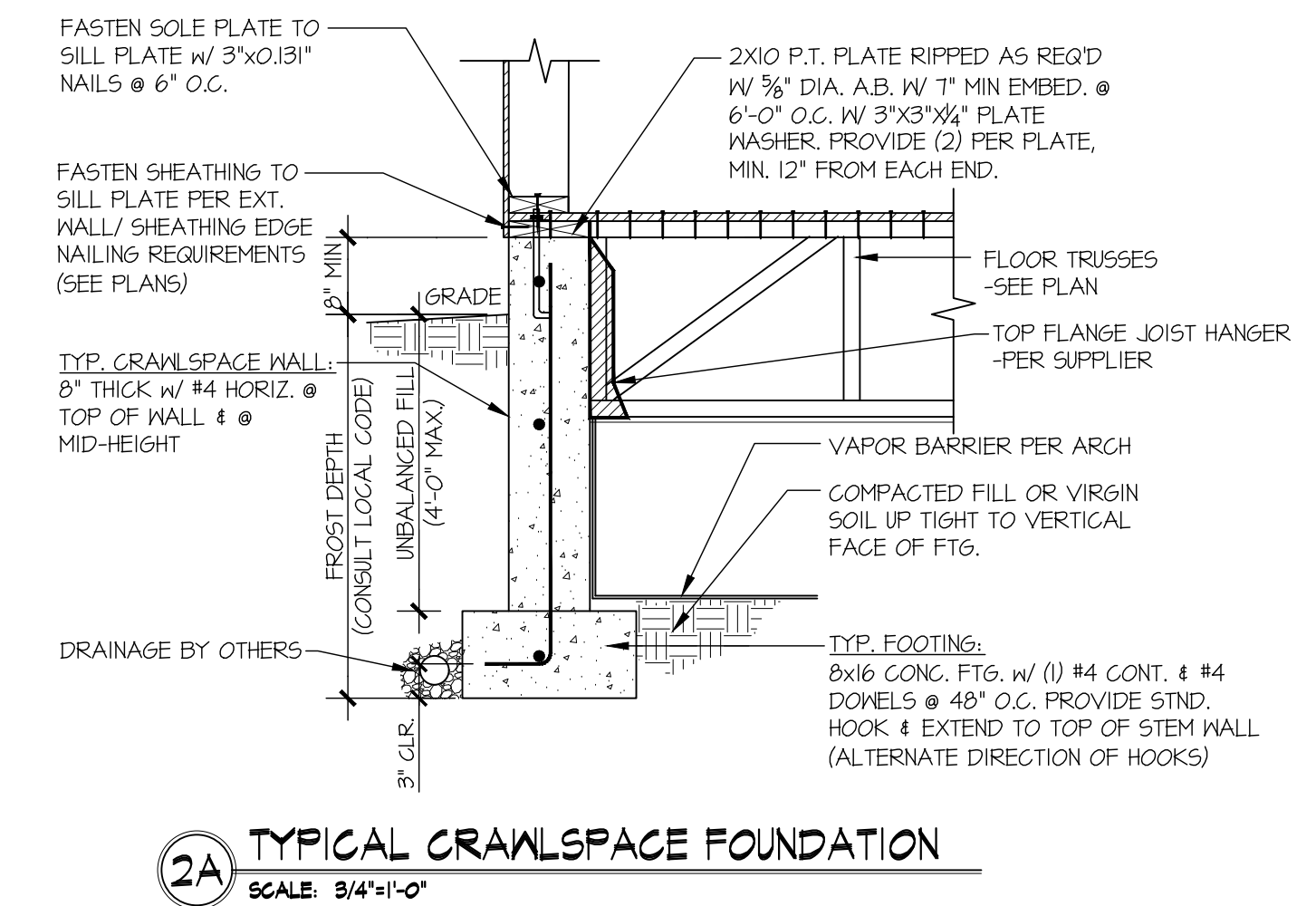
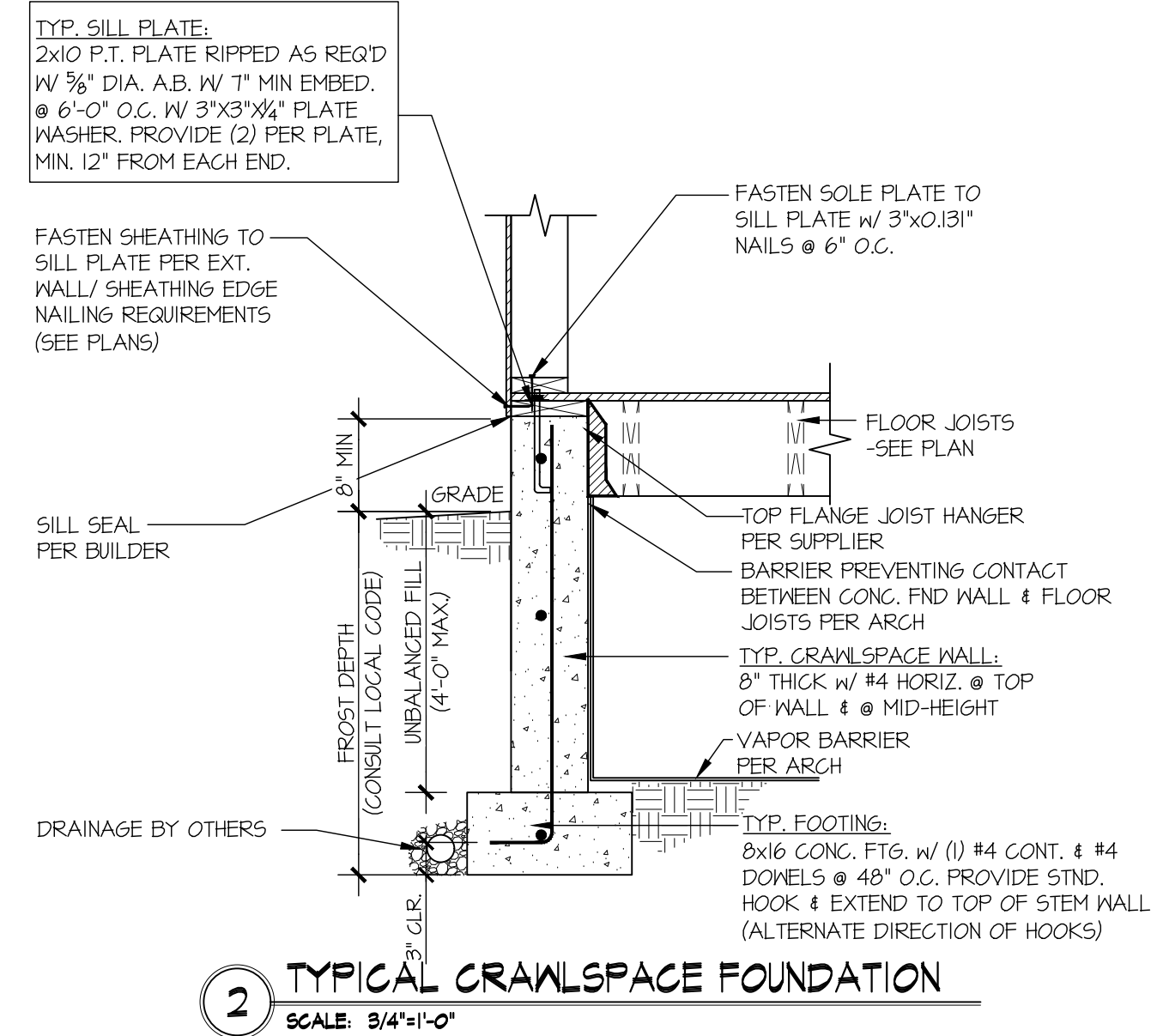
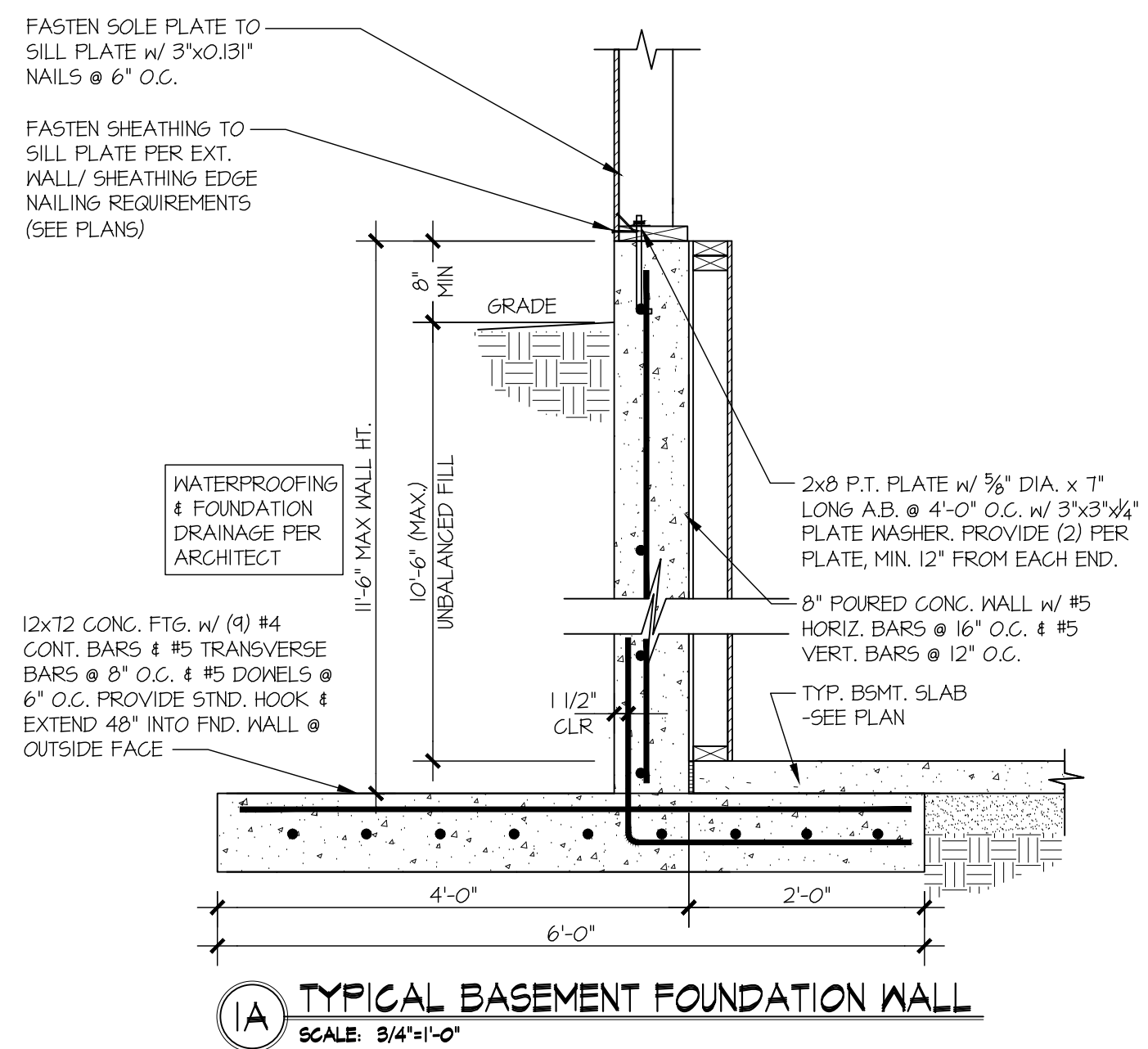
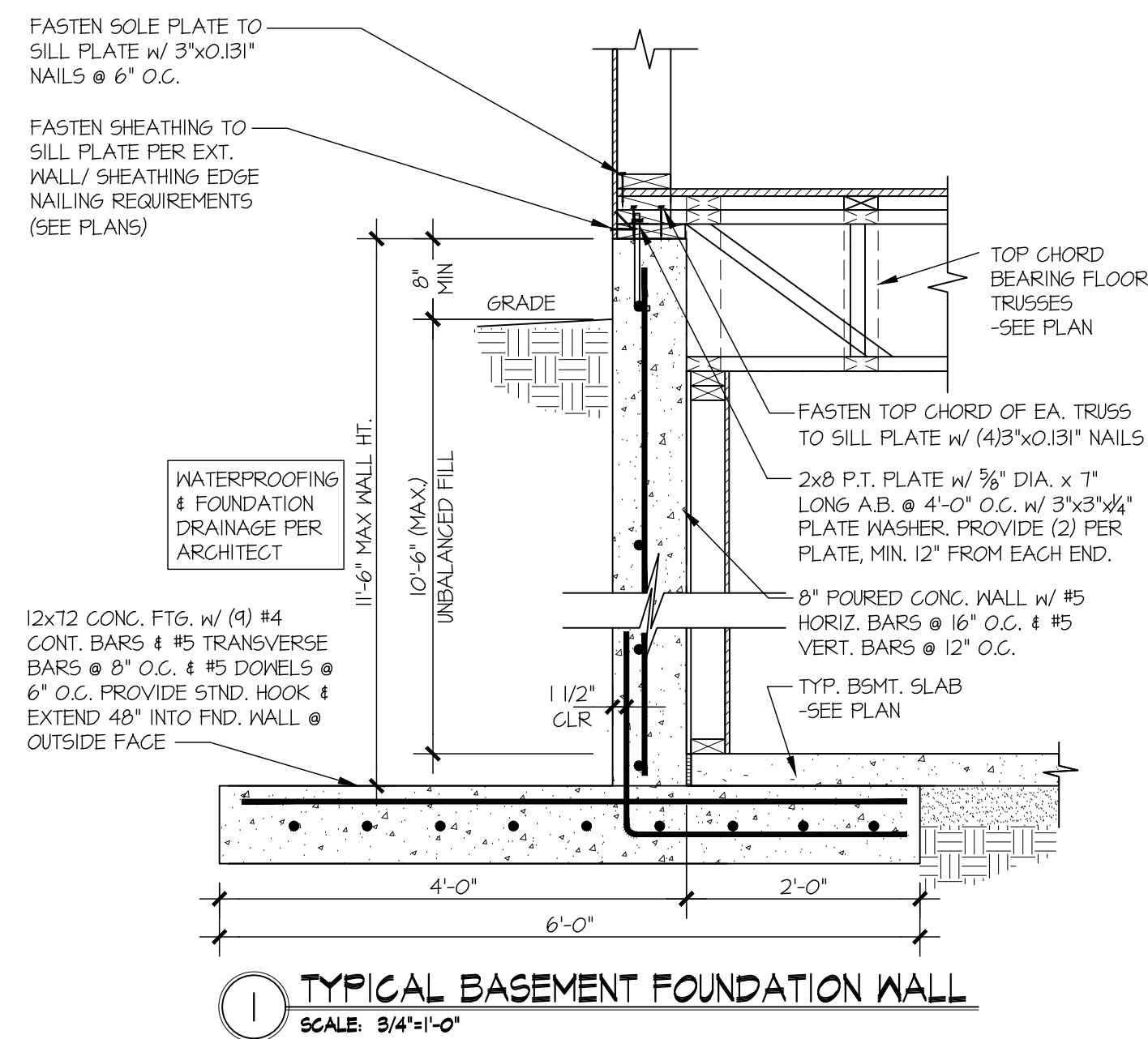
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drawn by: RSC
issue date: 10-24-24

REVISIONS:
date: initial:

ARCHITECTURAL INNOVATIONS

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

sheet: S-O-O



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REVISIONS:

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ARCHITECTURAL INNOVATIONS

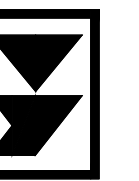
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MERCER ISLAND - LOT 1
7621 SE 22ND ST
MERCER ISLAND, WA

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seal:



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M&K project number:

203-24019

project mgr:

NJM

drawn by:

RSC

issue date:

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REVISIONS:

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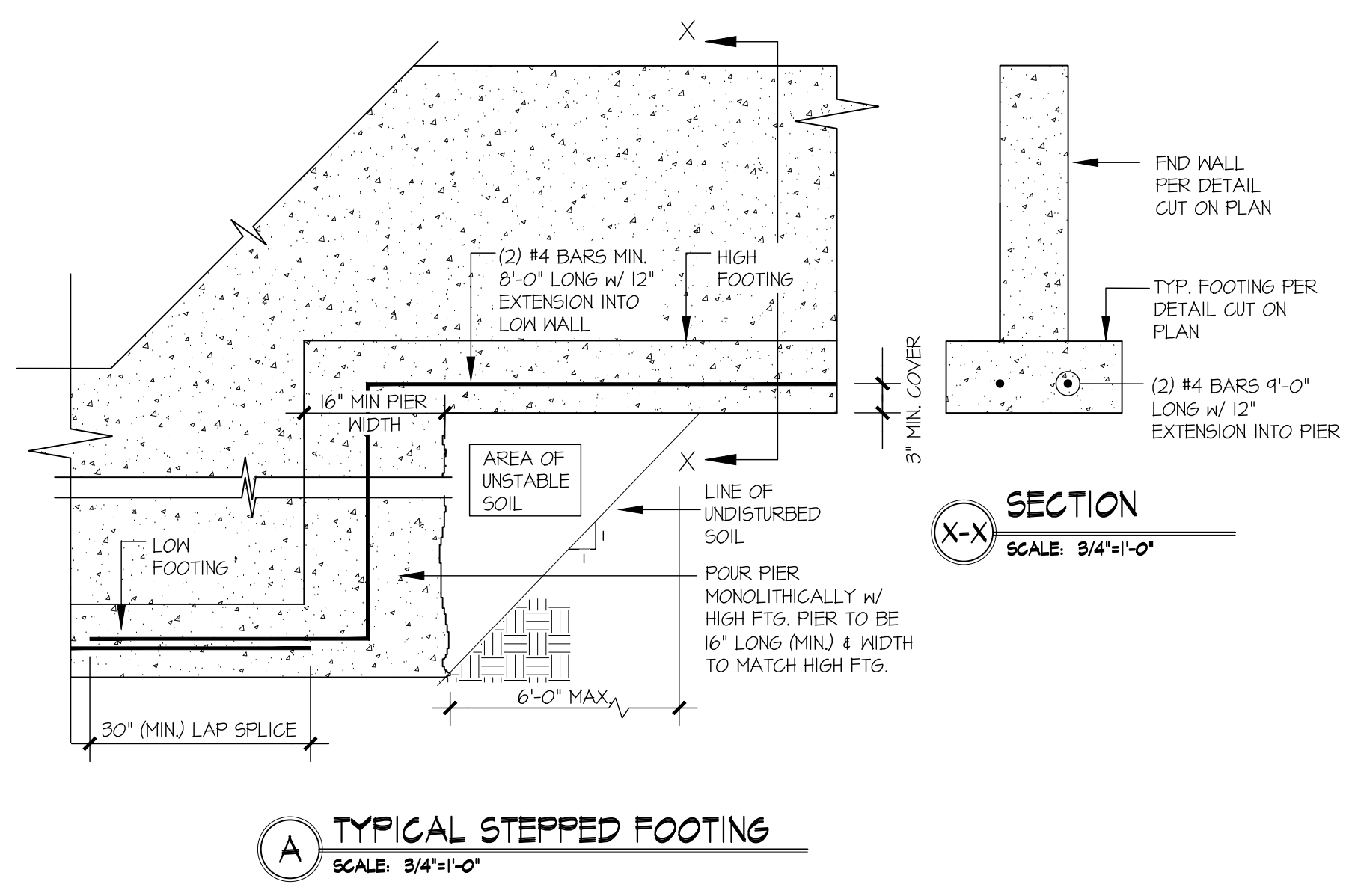
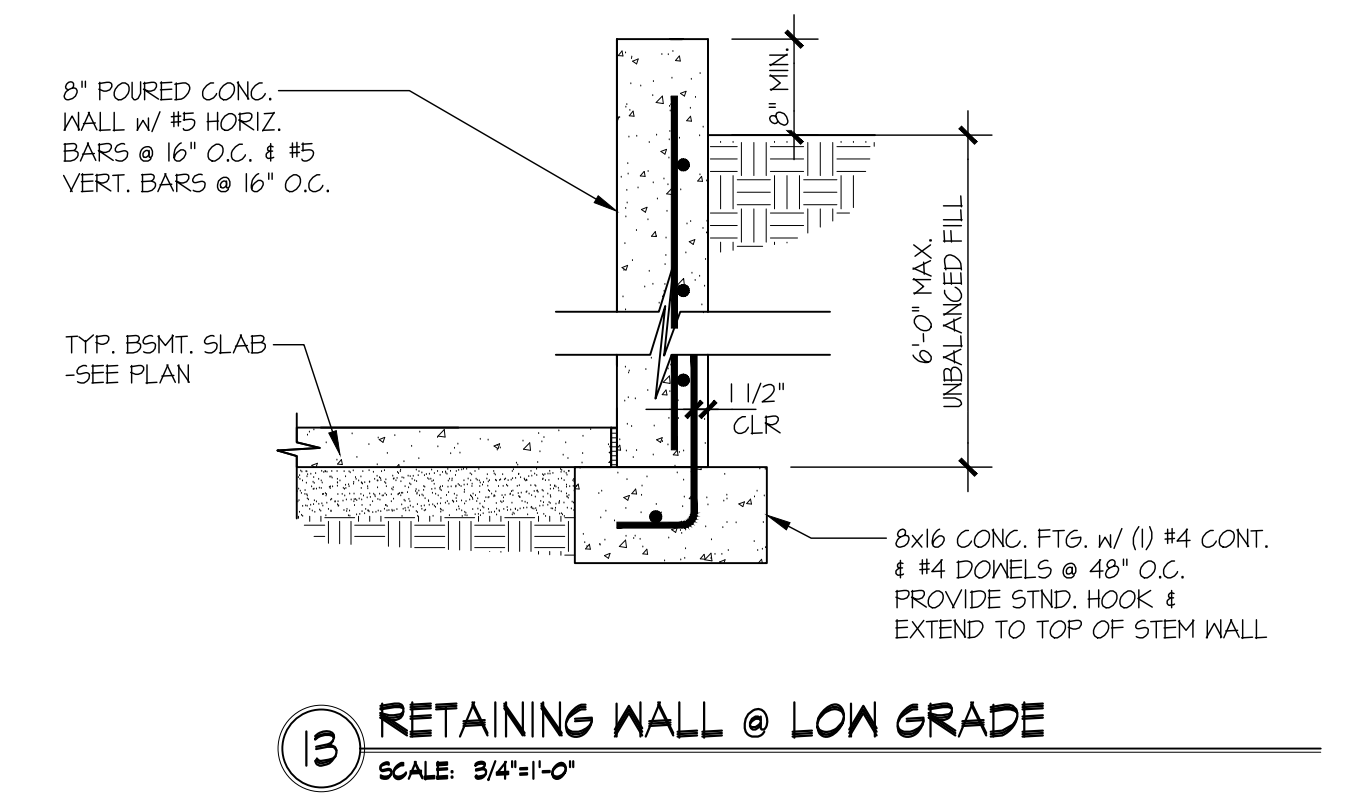
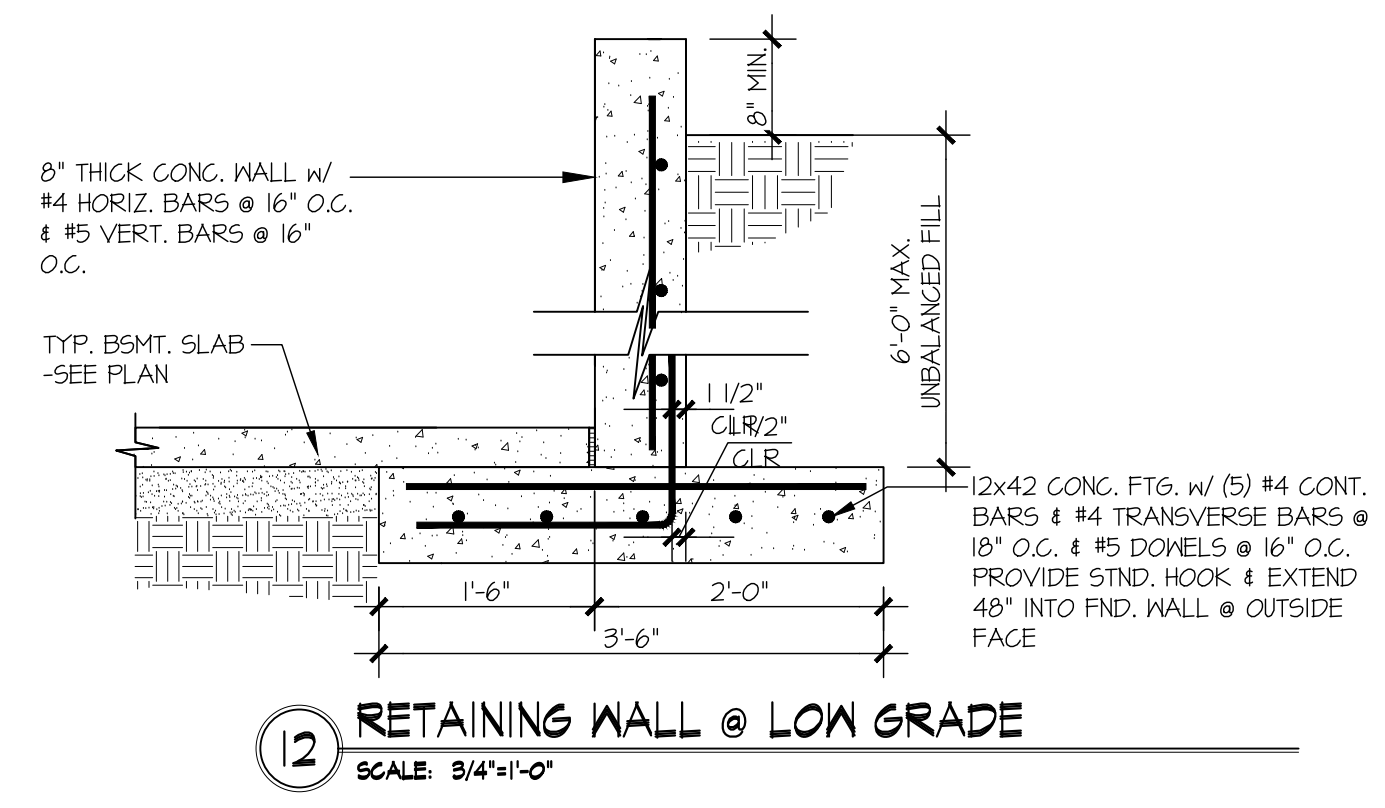
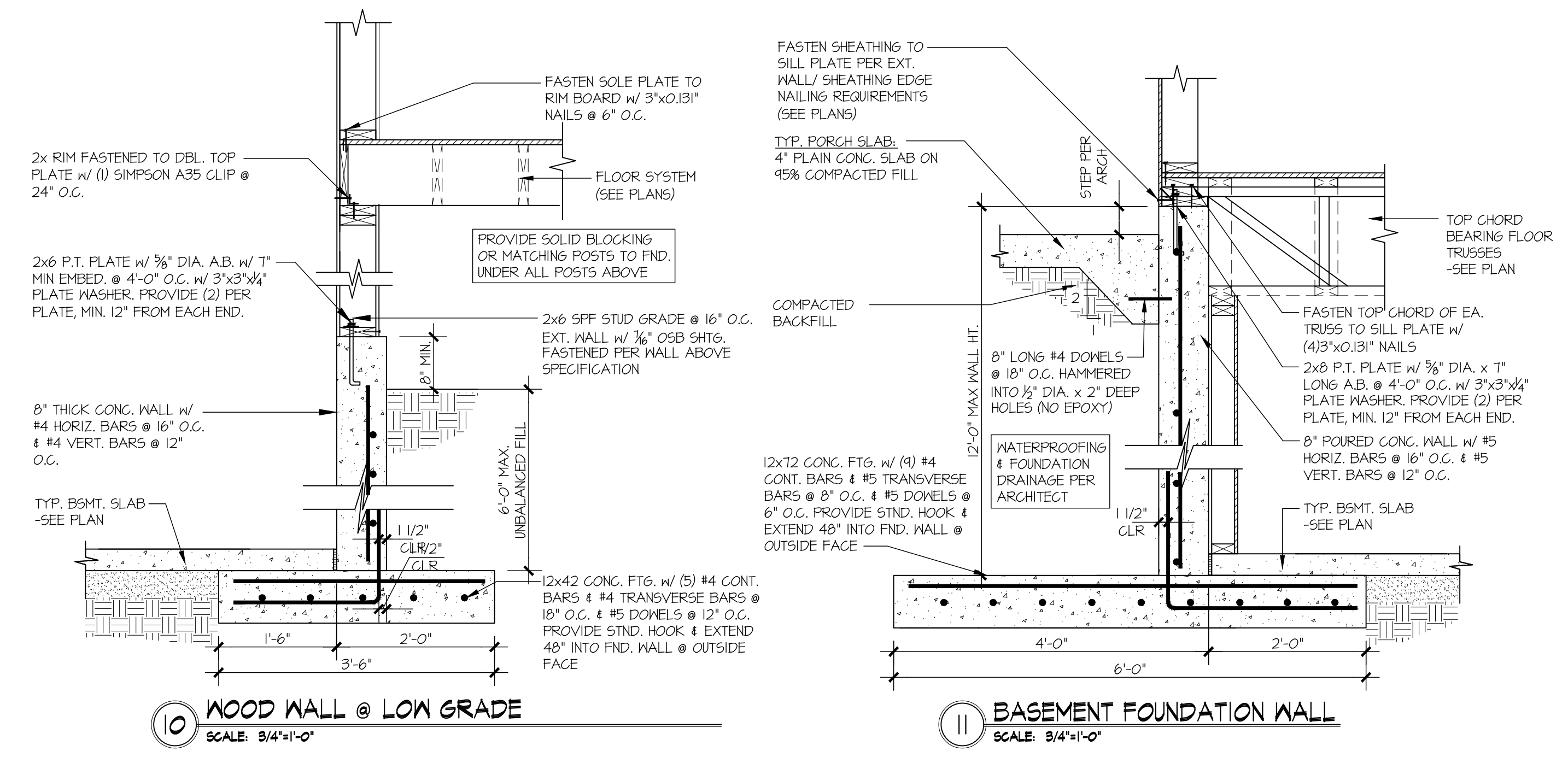
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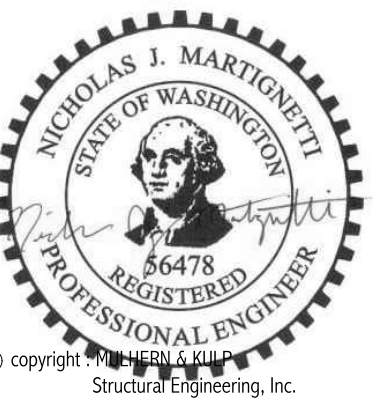
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MERCER ISLAND, WA

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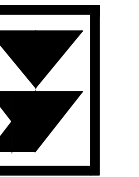
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project mgr: NJM
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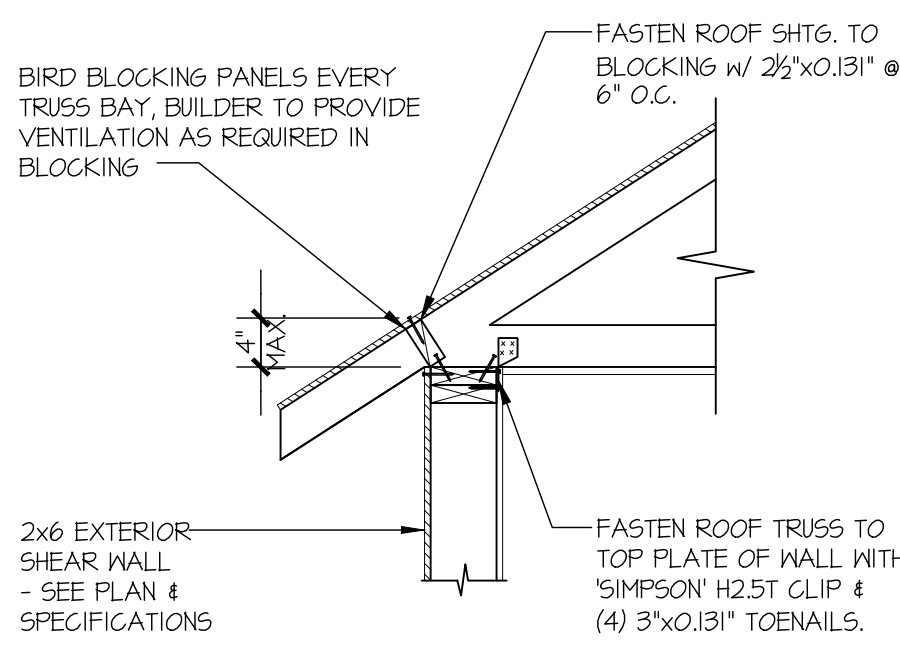
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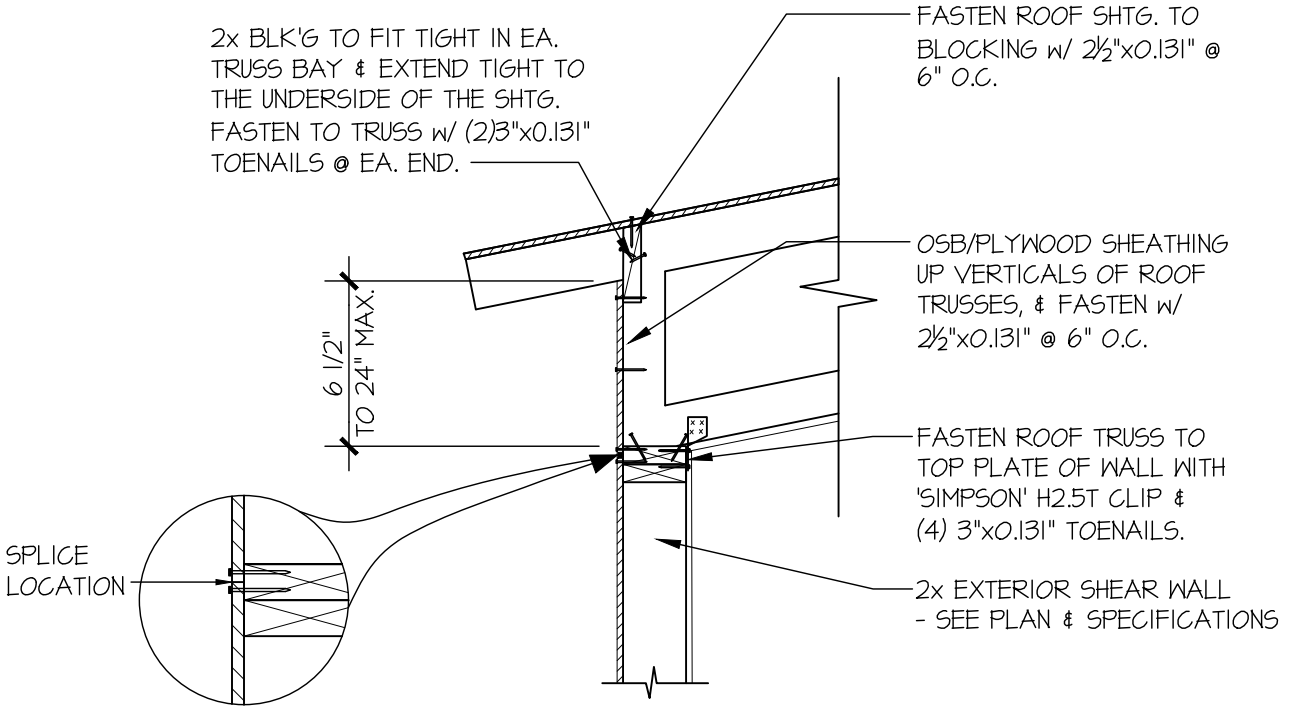
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MERCER ISLAND - LOT 1
7621 SE 22ND ST
MERCER ISLAND, WA

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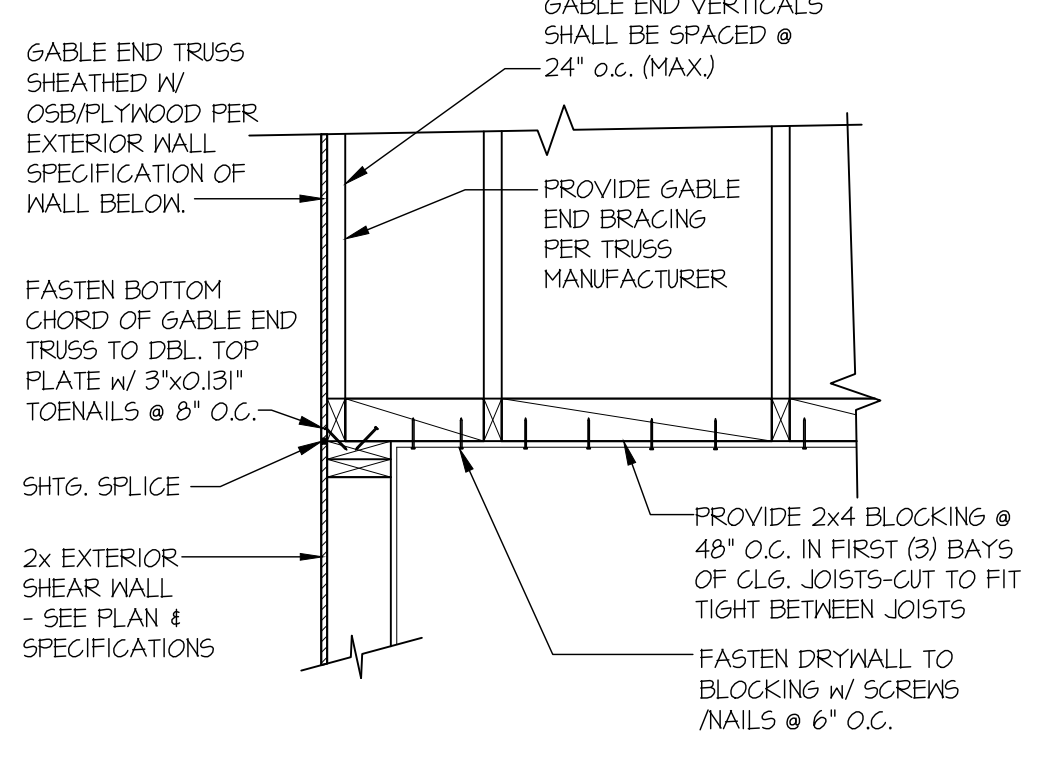
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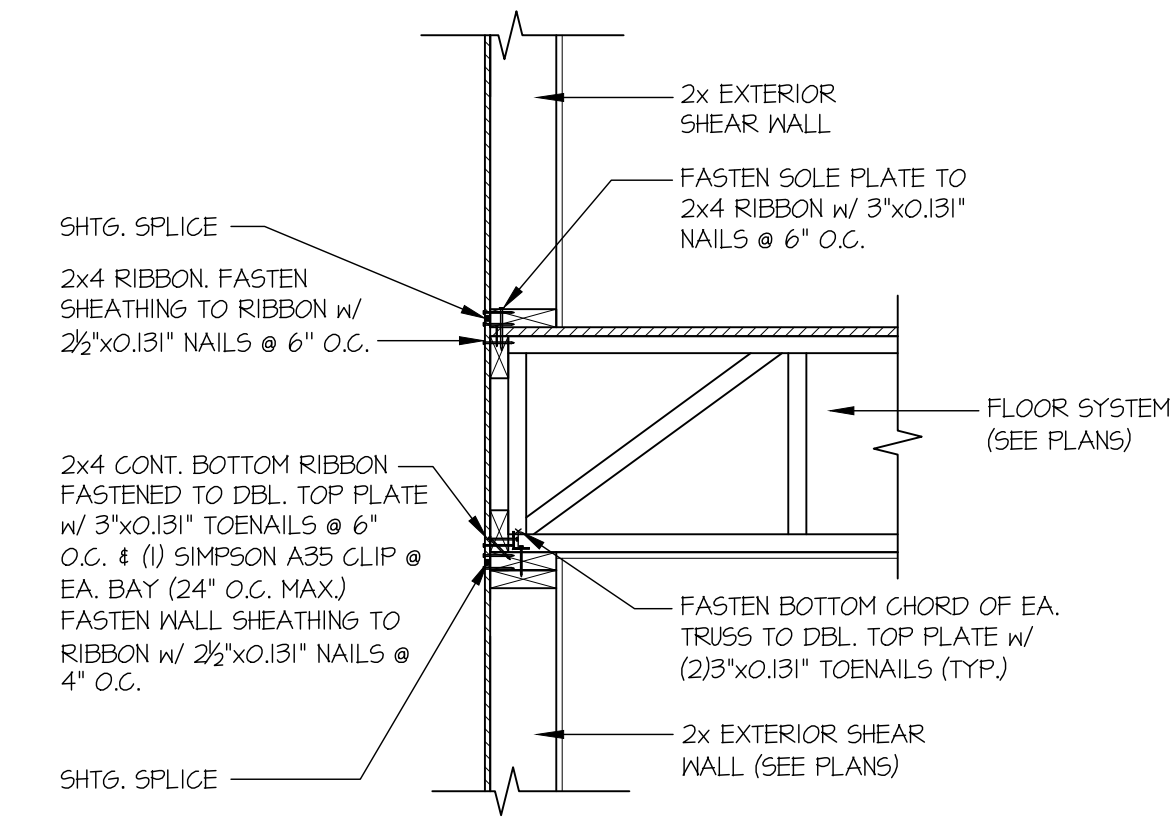
1 TYPICAL SHEAR TRANSFER DETAIL @ ROOF
SCALE: 3/4"=1'-0" HEEL HEIGHT LESS THAN 6 1/2"



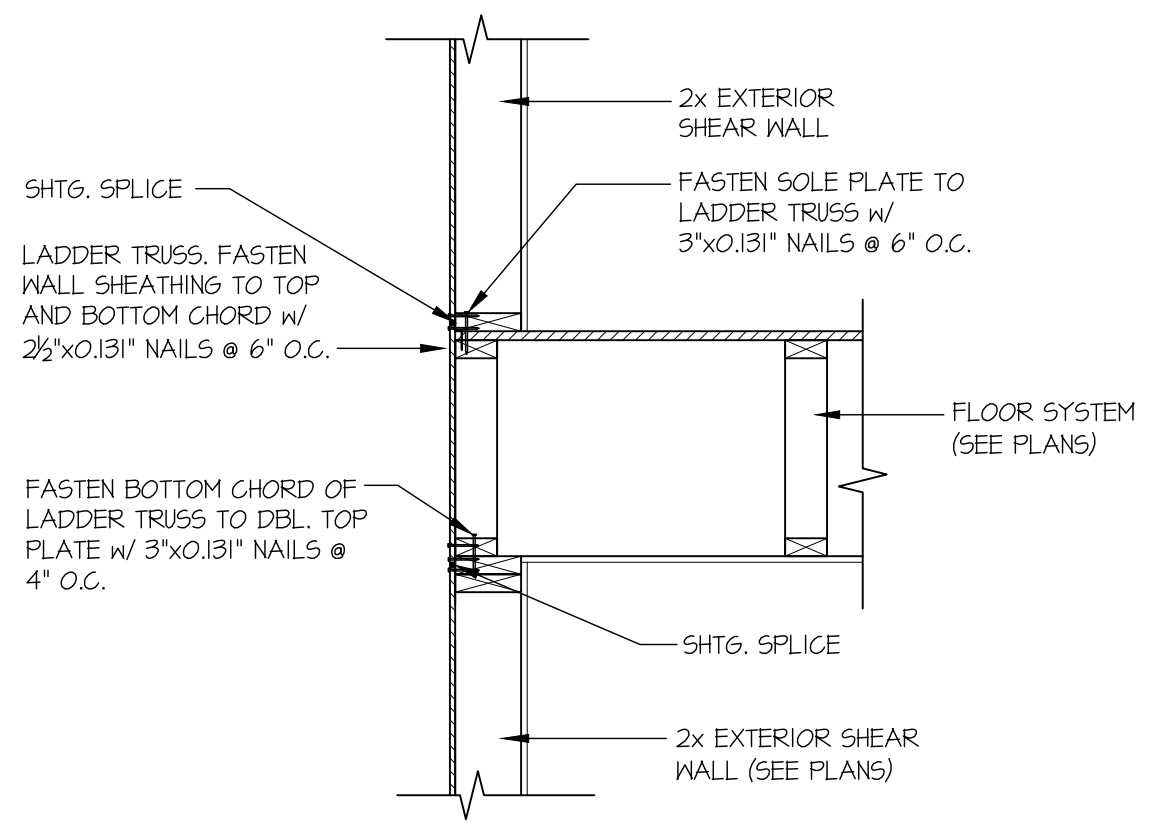
1A TYPICAL SHEAR TRANSFER DETAIL @ ROOF
SCALE: 3/4"=1'-0"



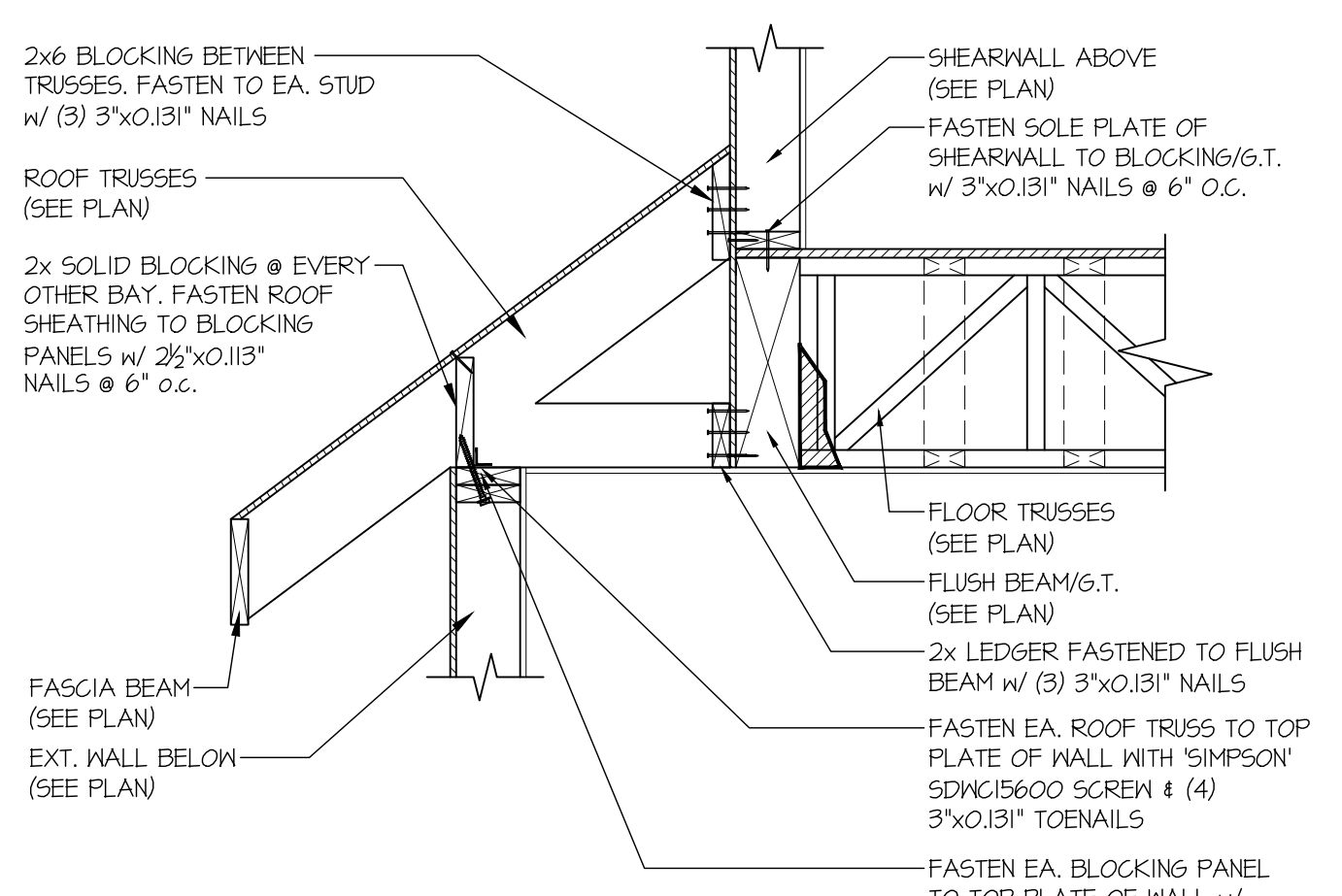
2 TYPICAL GABLE END DETAIL
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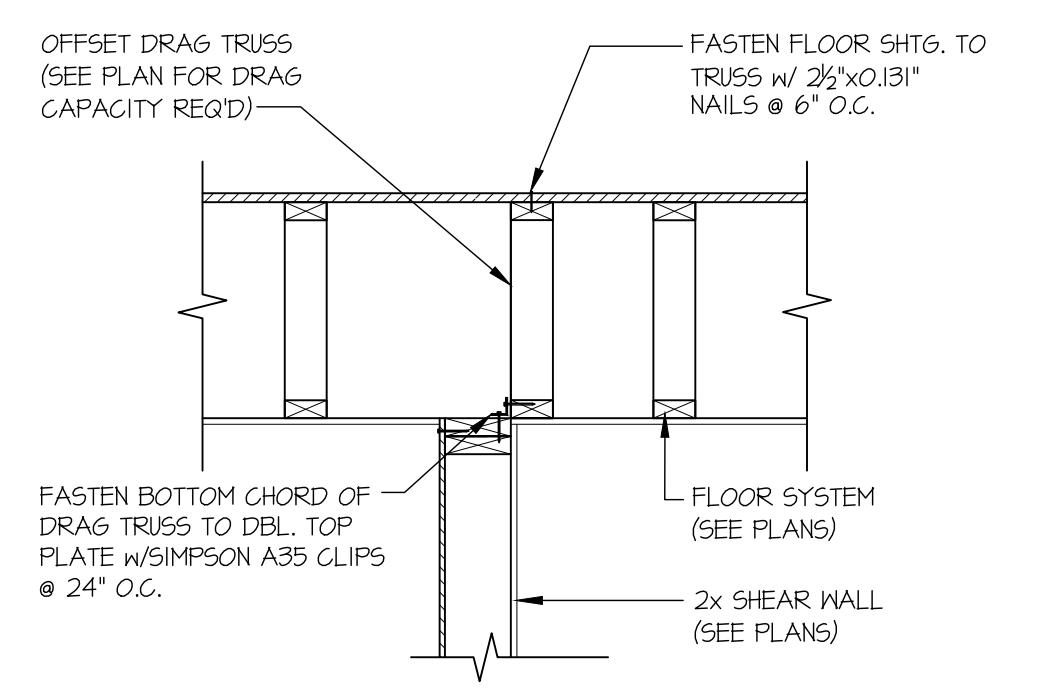
3 TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ EXTERIOR WALL
SCALE: 3/4"=1'-0" PERPENDICULAR FRAMING



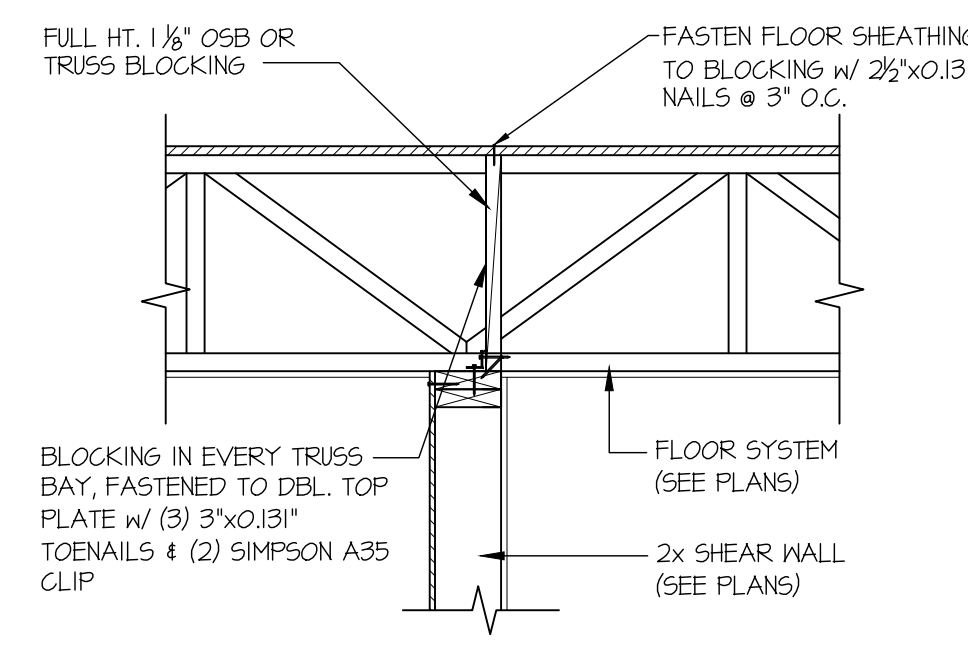
4 TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ EXTERIOR WALL
SCALE: 3/4"=1'-0" PARALLEL FRAMING



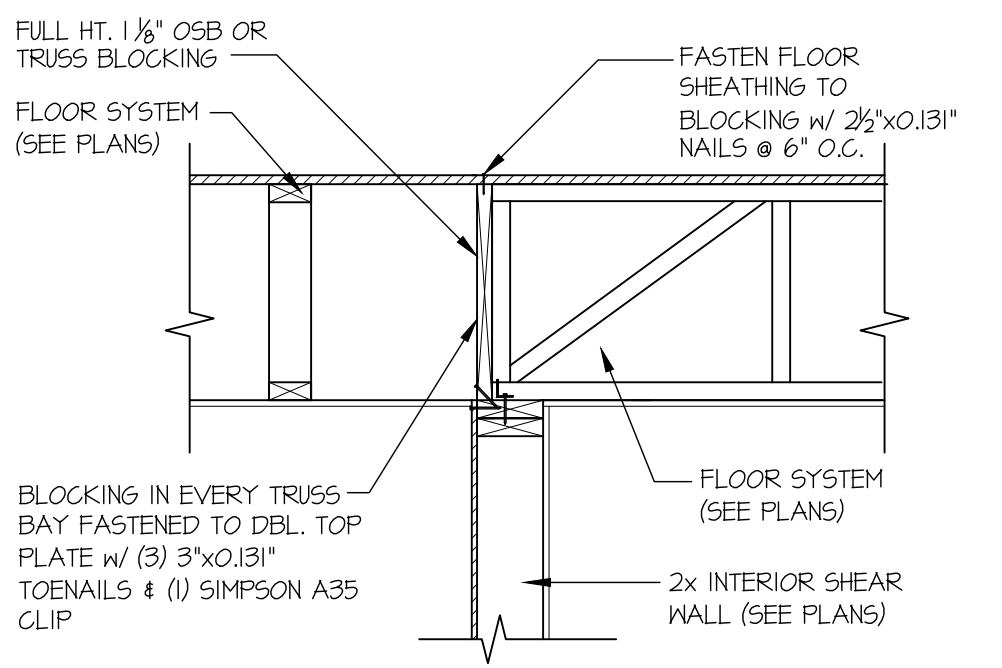
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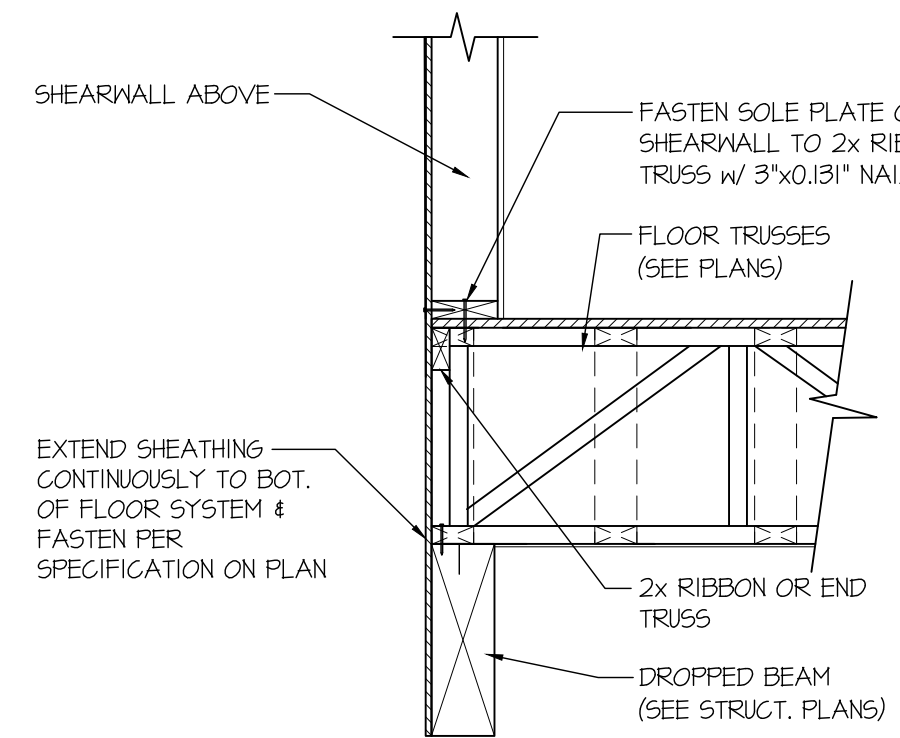
11 SHEAR TRANSFER DETAIL @ SHEAR WALL BELOW
SCALE: 3/4"=1'-0"



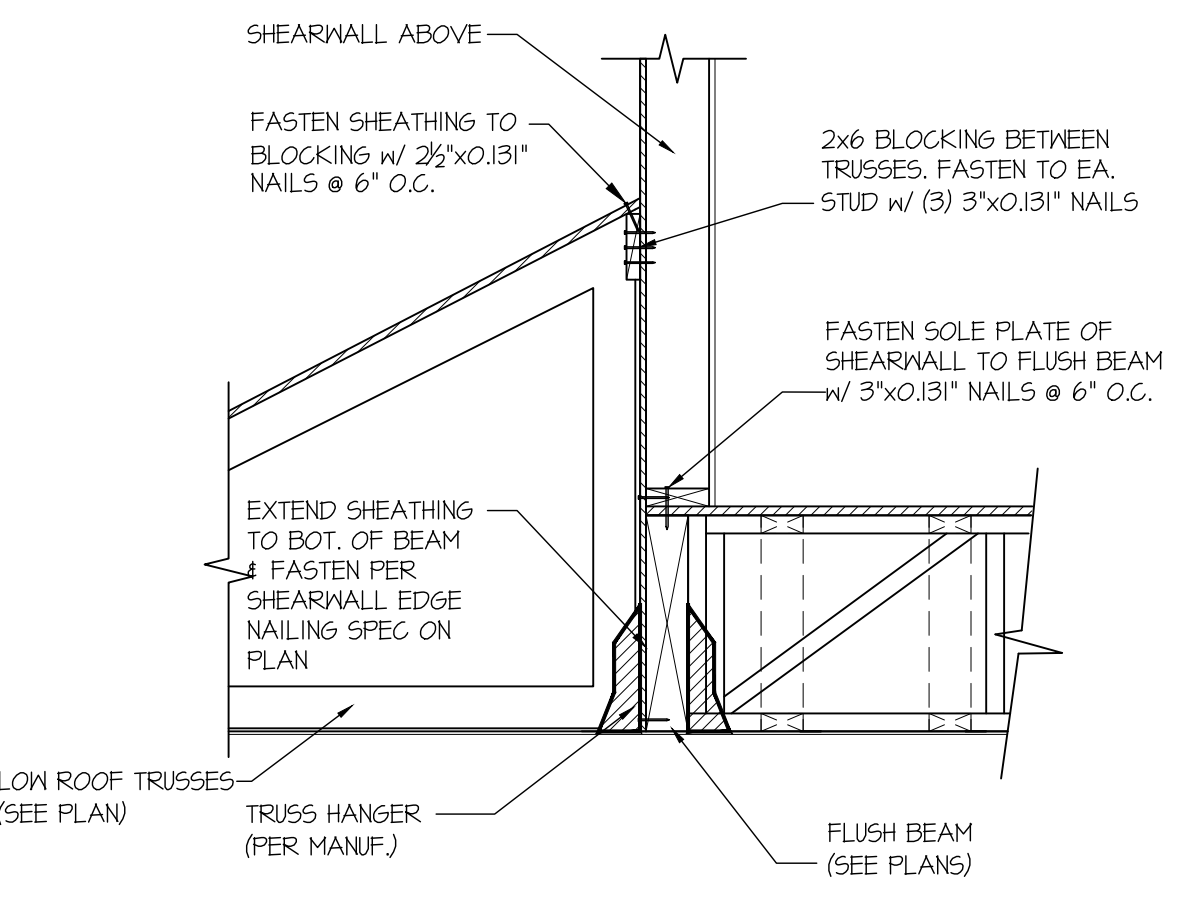
14 SHEAR TRANSFER DETAIL @ SHEAR WALL BELOW
SCALE: 3/4"=1'-0"



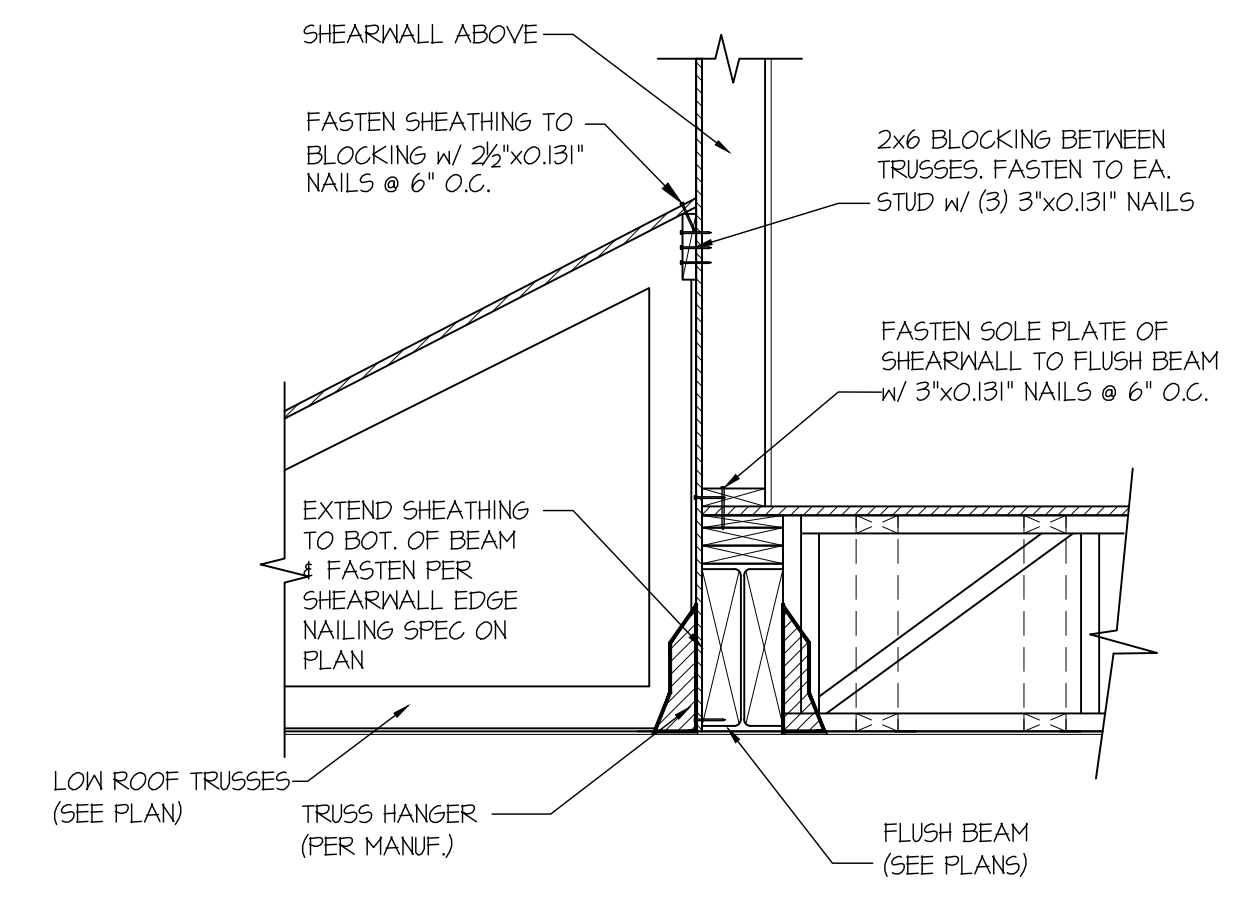
15 SHEAR TRANSFER DETAIL @ INTERIOR SHEAR WALL
SCALE: 3/4"=1'-0"



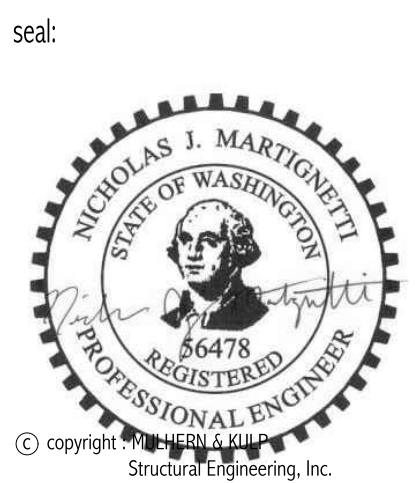
39 SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE
SCALE: 3/4"=1'-0"



50 SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE
SCALE: 3/4"=1'-0"



50A SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE
SCALE: 3/4"=1'-0"



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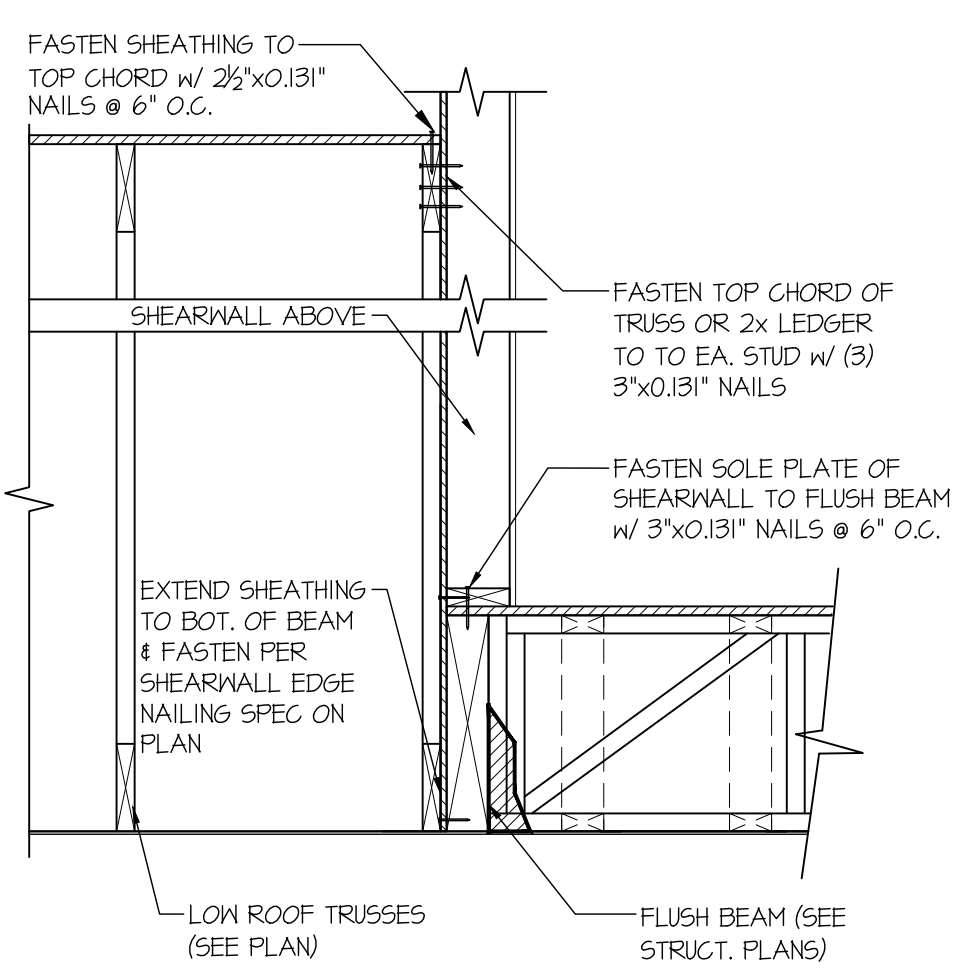
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203-24019

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

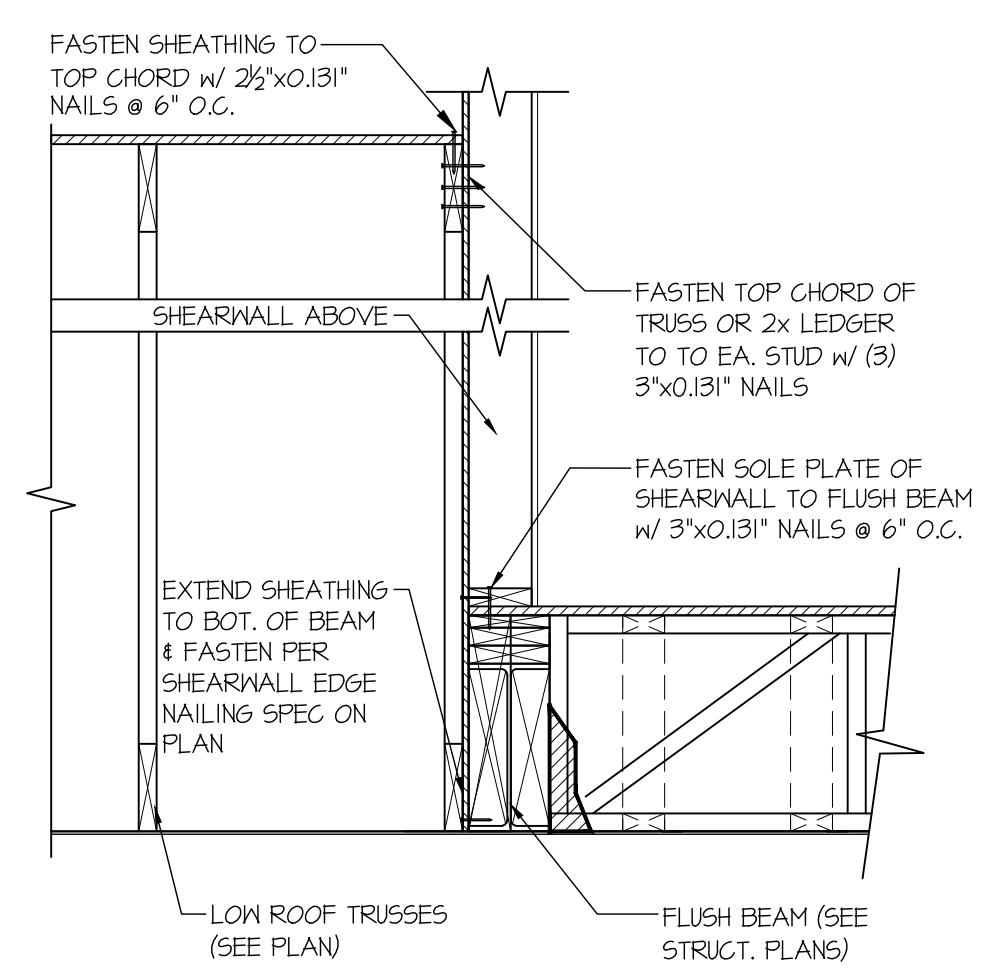
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STRUCTURAL DETAILS
MERCER ISLAND - LOT 1
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MERCER ISLAND, WA

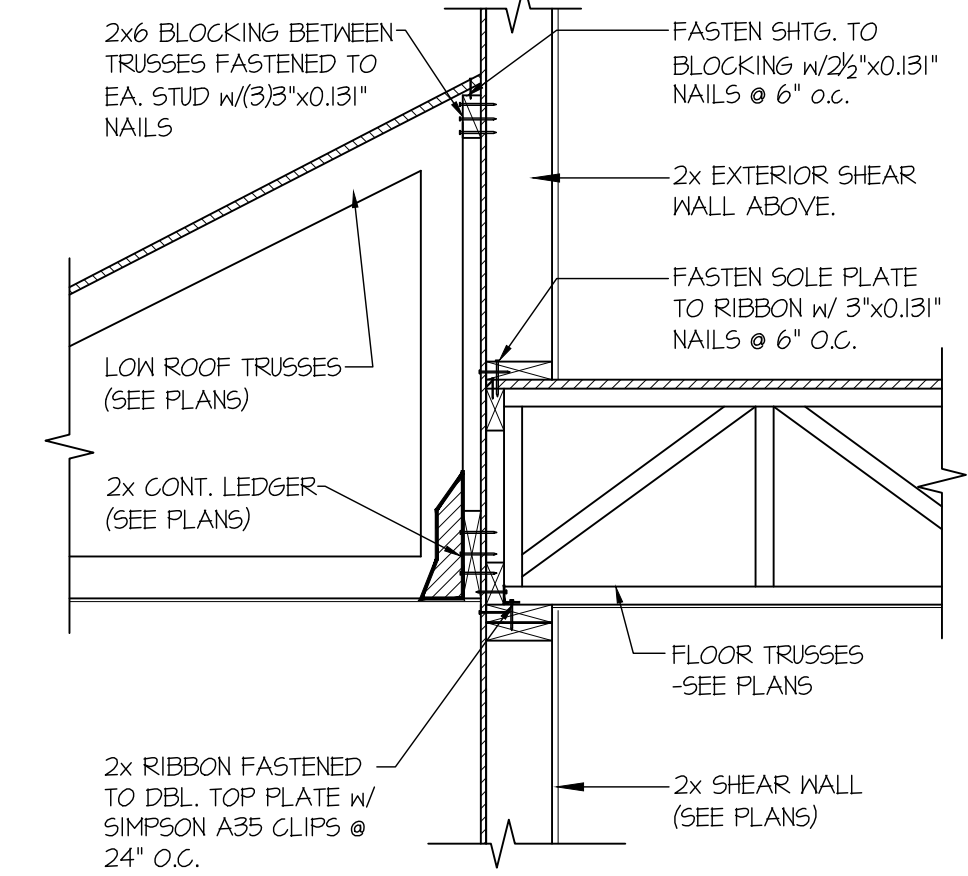
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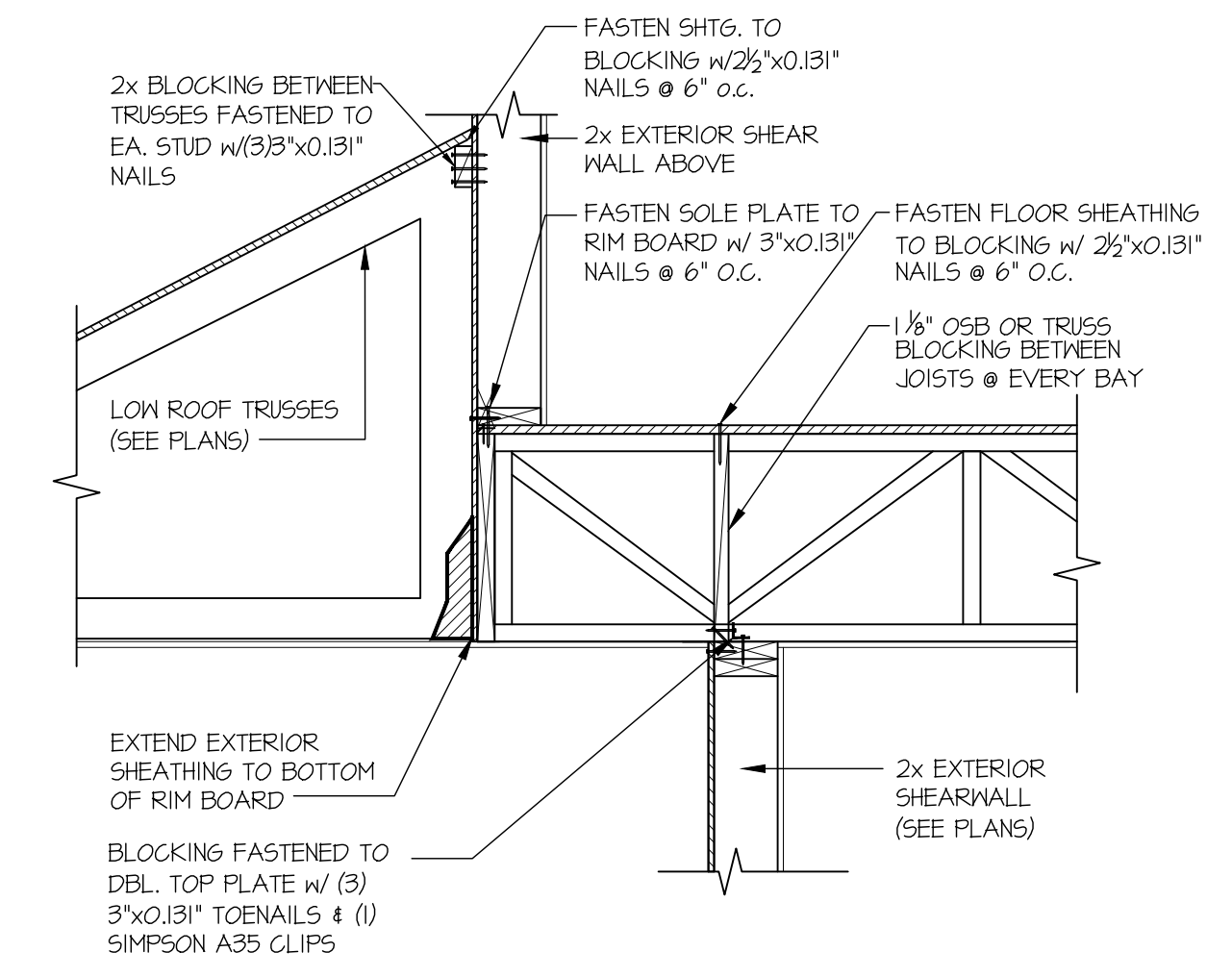
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SCALE: 3/4"=1'-0"



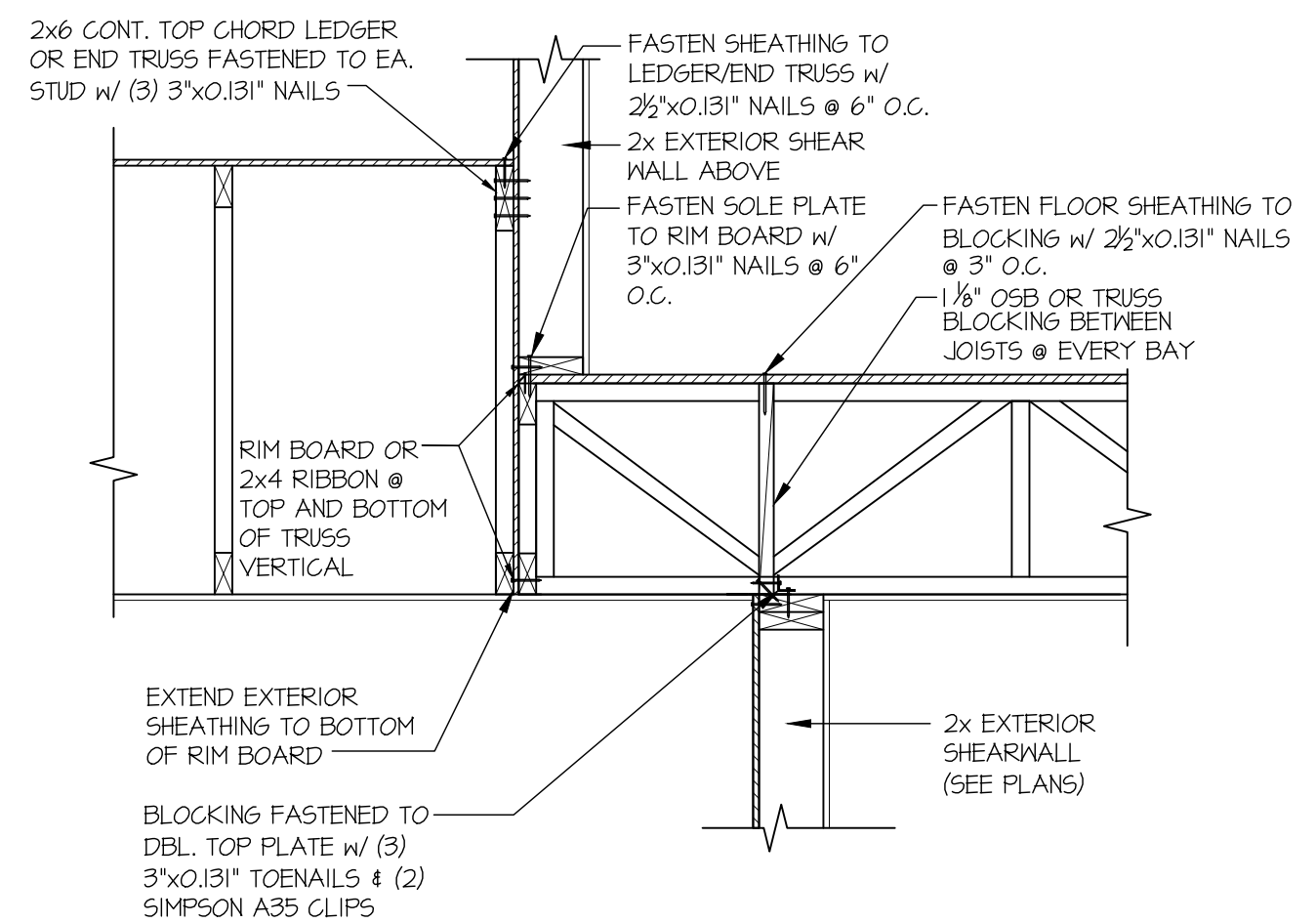
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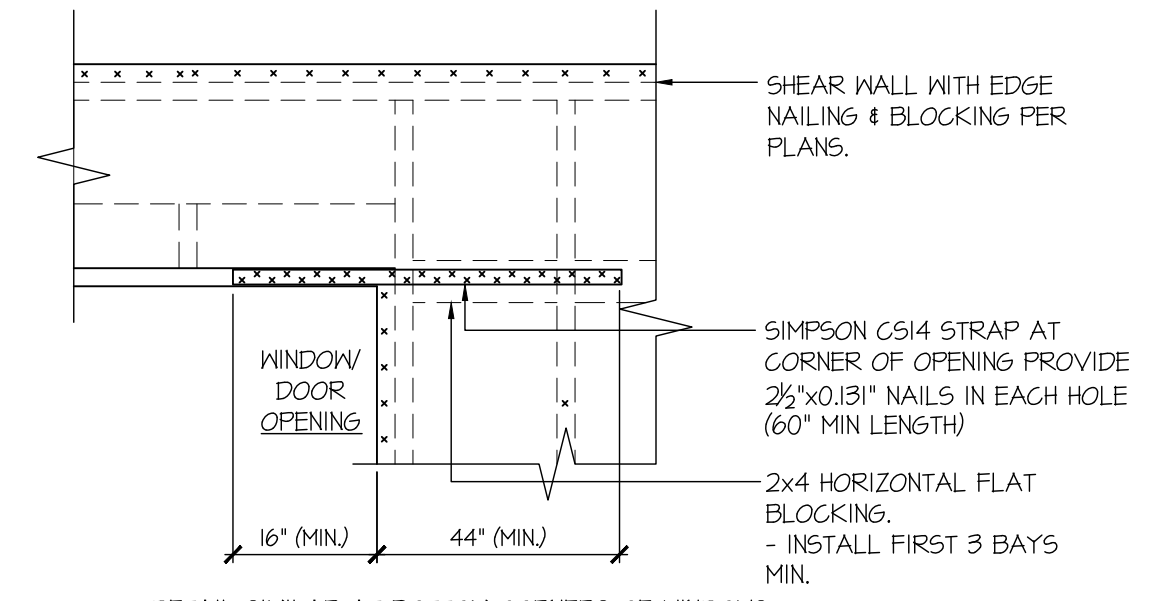
60 TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS
SCALE: 3/4"=1'-0" PERPENDICULAR FRAMING



63 TYPICAL SHEAR TRANSFER DETAIL @ EXTERIOR WALL ABOVE
SCALE: 3/4"=1'-0"

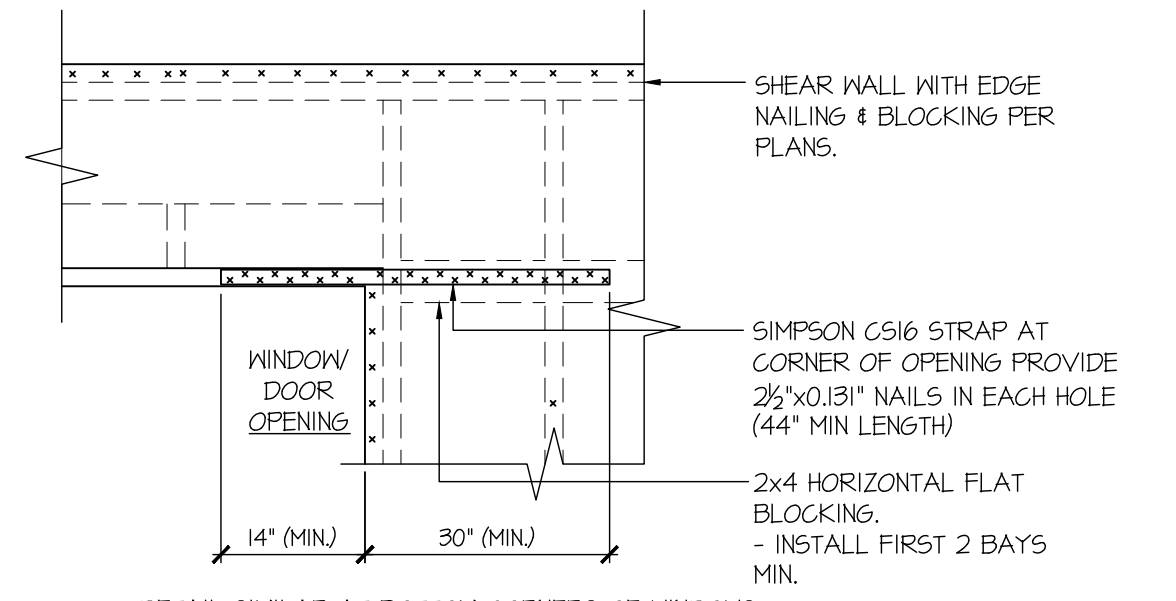


67 SHEAR TRANSFER DETAIL @ CANT'D EXTERIOR WALL ABOVE
SCALE: 3/4"=1'-0"



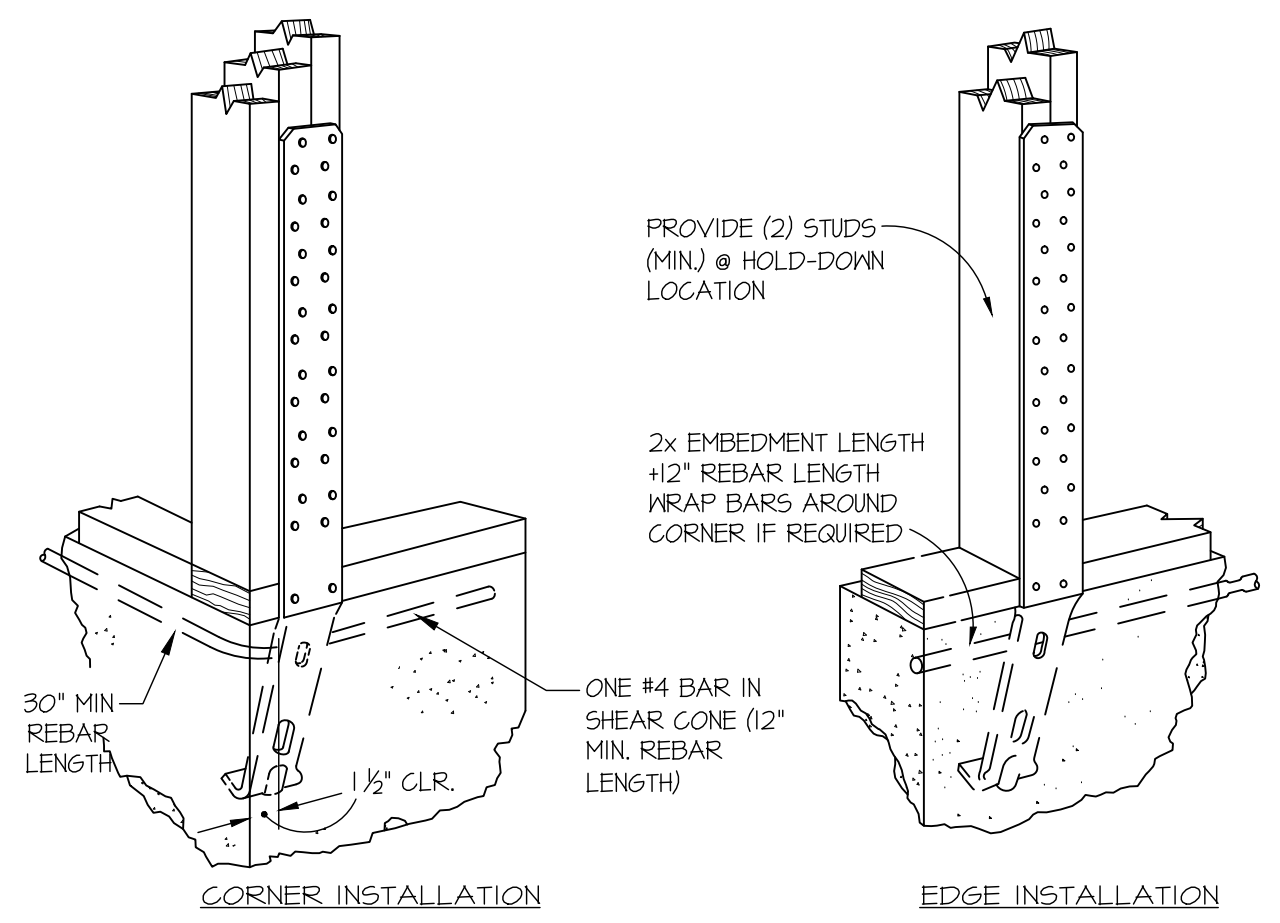
- DETAIL SIMILAR AT BOTTOM CORNERS OF WINDOWS.
- ONLY REQUIRED WHERE SPECIFIED ON STRUCTURAL PLANS
- IF MIN LENGTH IS NOT PROVIDED RUN STRAP TO END OF WALL

93 EXT. WALL & INT. SHEARWALL OPENING ELEVATION
SCALE: NTS

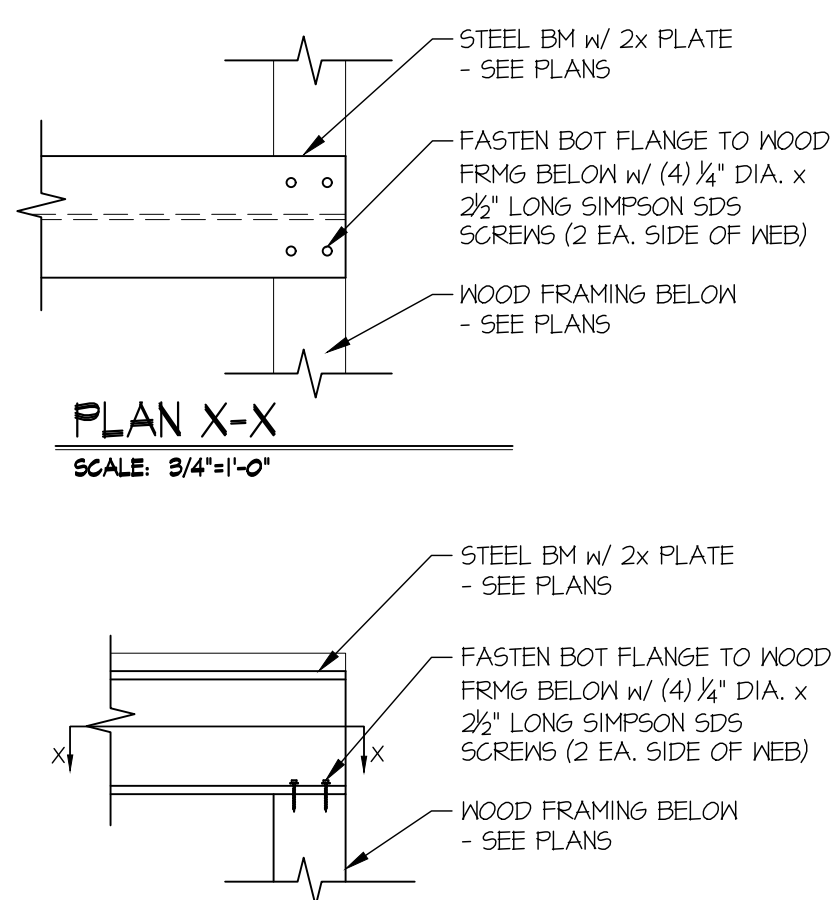


- DETAIL SIMILAR AT BOTTOM CORNERS OF WINDOWS.
- ONLY REQUIRED WHERE SPECIFIED ON STRUCTURAL PLANS
- IF MIN LENGTH IS NOT PROVIDED RUN STRAP TO END OF WALL

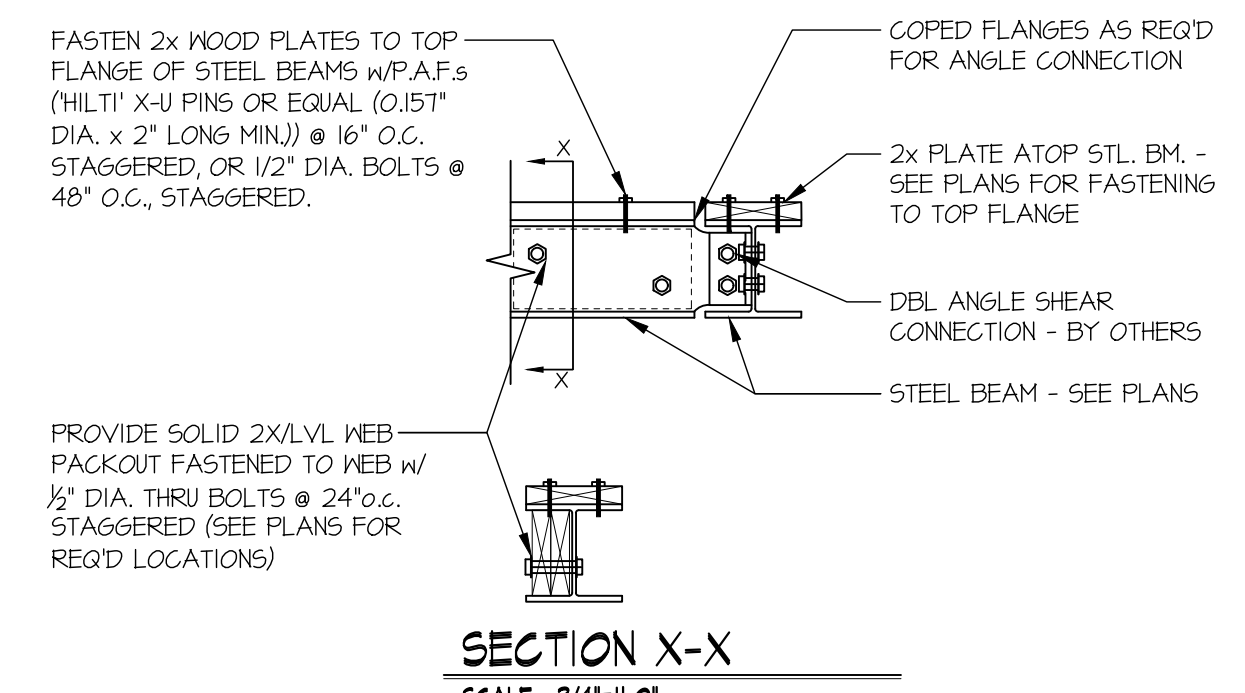
94 EXT. WALL & INT. SHEARWALL OPENING ELEVATION
SCALE: NTS



A TYPICAL HOLD-DOWN INSTALLATION
NOT TO SCALE SIMPSON 5THD HD @ FOUNDATION



B STL. BM TO WOOD FRMG CONNECTION
SCALE: 3/4"=1'-0"



C DOUBLE ANGLE STEEL CONNECTION
SCALE: 3/4"=1'-0"