

LEGAL DESCRIPTION:	EAST SEATTLE ADD Plat Block: 24 Plat Lot: 32-33-34
PARCEL NUMBER:	217450-0400
ZONING:	R-8.4
JURISDICTION:	MERCER ISLAND
PROJECT ADDRESS:	2419 72ND AVE SE, MERCER ISLAND, WA 98040
OWNER INFORMATION:	NAME: 3H Development LLC MANAGER: Sisi Duan ADDRESS: 10023 NE 23rd St, Bellevue, WA 98004 EMAIL: sisi.d@neulandllc.com PHONE: 206-639-7206
ARCHITECT:	5FT2 STUDIO ARCHITECTS INFO@5FT2STUDIO.COM
GENERAL CONTRACTOR:	TBD
STRUCTURAL ENGINEER:	NAME: F.T. Engineering and Const. Mgmt LLC PHONE: 509 822 0489 ADDRESS: 19223 98th Pl S, Renton, WA 98055.
WORK DESCRIPTION:	CONSTRUCT ONE SINGLE-FAMILY HOME WITH 2 STORY ABOVE GRADE AND 1 STORY BELOW GRADE

GENERAL NOTES

- A. The drawings are intended to only partially describe the scope of work for the project, any work not shown here, but required by code, or the specifications, or to make the work complete, shall be provided as part of the work.
- B. Refer to the list of abbreviations for common abbreviations used in the drawings. If an abbreviation is not on the list, or not commonly used, refer to the architect for clarification.
- C. It is the intent of the documents that all work complies with all applicable local, state, and national codes and ordinances in effect at the date of permit submittal. Nothing in these drawings shall be construed to grant approval for any code violation. Any errors, omissions, or non-compliance with governing codes shall be brought to the attention of the architect immediately.
- D. Before starting each portion of the work, the contractor shall carefully study and compare the various drawings and other contract documents related to that portion of the work, as well as owner-provided information, shall take field measurements of any existing conditions related to that portion of the work and shall observe any conditions at the site affecting it. Any errors, inconsistencies or omissions shall be reported promptly to the architect.
- E. Do not scale the drawings. The contractor shall use dimensions shown on the drawings and verify actual field measurements. If discrepancies are found, the architect shall be notified at once.
- F. Dimensions are shown to the face of concrete, face of stud at exterior walls, face of finished wall at interior walls, face of finished wall at existing walls, and edge of openings, unless detailed or noted otherwise on drawings. Refer to the architect if clarification is needed.
- G. Repetitive features not indicated in the drawings everywhere they occur shall be provided as if drawn in full.
- H. The contract documents are complementary, and what is required by one shall be as binding as if required by all. In case of discrepancy, refer to the architect for clarification.
- I. The contractor shall verify the dimensions required for all equipment, appliances, fixtures, cabinets, ductwork, and openings before framing begins. the contractor shall coordinate with the subcontractors of all trades to verify the sizes and locations of openings through the floors, walls, ceilings and roofs for ducts, pipes, conduits, and equipment. The contractor shall coordinate the location and installation of wood backing, blocking, furring and stripping as required for the installation and attachment of work of all trades.
- J. The systems, including, but not limited to, mechanical, plumbing, and electrical work are bigger designed. The contractor shall be responsible for all work done on site (field). Work shown on the drawings is intended to illustrate the general design intent, scope, and location of work. All work not specifically drawn, but required for a complete, legal, and functioning system, shall be provided as part of the work.
- K. The contractor shall secure and pay for all permits and governmental fees, licenses and inspections necessary for proper execution and completion of the work, with the exception of the master use permit and the building permit.
- L. Prior to the commencement of any construction or site development activity, the contractor and/or architect shall schedule a pre-construction meeting with the project team members for the purpose of answering initial questions, clarifying areas of concern, and formalizing a construction administration process. The meeting(s) shall include the architect, general contractor, owner, landscape architect, structural engineer, civil engineer, geotechnical engineer, and water intrusion consultant
- M. All information contained in these documents represents a "basic limited architectural service" that requires the contractor to be knowledgeable and experienced with all aspects of construction including all building codes and regulations imposed by the city or county and any other agency having jurisdiction over the project.
- N. It is the responsibility of the contractor to provide all construction necessary for the complete installation of all operating systems, materials and finishes in accordance with mfr.'s recommendation or written specifications. It is the responsibility of the contractor to ensure construction means and method and final construction technique. Contractor shall thoroughly review drawings, specifications and owner's requirements.
- O. Safety, care of adjacent properties during construction, compliance with local, state, federal regulations regarding safety on site shall be the contractors responsibility
- P. No deviation from these documents shall be made without written approval from the owner and architect. Any changes can affect the structural integrity and code related issues of the structure.
- Q. All information contained in these documents is for the purpose of construction permit acquisition and construction only. The information provided is not intended for any other purpose and no other use is intended or implied, e.g. plan information is not intended to be used as a base for sale or transfer of real estate
- R. The architect may assist in coordination with consultants (such as soils, structural, civil engineers etc) but under the terms of basic limited service, receives no compensation for, and assumes no responsibility or liability for the area of their (consultants) work and expertise.
- S. This set of drawings shall not be copied in whole or in part without prior written consent from the owner. this document is considered as one unit and shall not be considered complete or whole if documents are separated in any manner. documents shall not be separated for the purpose of submitting proposals or for separate phases of construction.
- T. These documents are prepared for use by the contractor and shall not, either in whole or in part constitute any direction or instruction to any contractor with regard to construction methods, means or techniques.
- U. The contractor shall be responsible for demolition work including, but not limited to, sequence & temporary shoring of all existing structures & verification of existing utilities & services.
- V. Construction Barricades: Provide construction barricade as required to keep public and employees safe, following all applicable federal, state and city codes and regulations.
- Acceptance of these plans for construction constitutes an understanding of above mentioned terms and basic limited architectural service as described in agreement between owner/architect.

SITE NOTES

1. The contractor shall verify dimensions of existing site conditions, distances, and topographic contours. Site conditions shown are from owner-provided information, surveys by others, and public records. The architect is not responsible for the accuracy of the survey or existing site information.
2. The contractor shall verify dimensions of existing site conditions, distances, and topographic contours. Site conditions shown are from owner-provided information, surveys by others, and public records. The architect is not responsible for the accuracy of the survey or existing site information.
3. The Contractor shall order necessary site boundary and setback survey prior to commencement of all work.
4. The contractor shall execute and complete all work on adjacent properties and public rights-of-way that is required by construction easement agreements with neighboring property owners, private contract documents with the city department of transportation, street use permits, or any other agreement or contract. all improvements and repairs to sidewalks, alleys, streets and neighboring properties shall be coordinated to minimize the impact on the public and to maintain access to neighboring properties. the contractor shall make arrangements and secure necessary permits when construction requires street or sidewalk closures.
5. If any hazardous material, including but not limited to asbestos or polychlorinated biphenyl (pcb), is encountered on the site by the contractor, the contractor shall immediately notify the owner.
6. Prior to beginning any demolition work, the owner or contractor shall submit a "notice of intent" to the Puget Sound clean air agency (pscaa) and fulfill their requirements.
7. New water mains, fire hydrants, and temporary fire department access shall be installed, inspected, and approved by the fire department prior to the commencement of combustible construction.

STRUCTURAL/FRAMING (SITE-SPECIFIC STRUCTURAL ENGINEERING SHALL GOVERN)

- A. All structural matter refer to structural drawings provided by project structural drawings
- B. All materials and workmanship shall conform to the requirements of the drawings, notes, specifications, and all applicable codes and ordinances.
- C. All wood frame construction shall conform to the minimum standards of IRC/IBC, unless specified in the Structural Drawings, Structural Notes and Specifications.
- D. Columns and posts located on concrete or masonry floors or decks exposed to the weather or to water splash or in basements and which support permanent structures shall be supported by concrete piers or metal pedestals projecting above floors unless approved wood of natural resistance to decay or treated wood is used. The pedestals shall project at least 6 inches above exposed earth and at least 1 inch above such floors.
- E. Where installation includes manufactured products, comply with the manufacturer's applicable instructions and recommendations for installation. Verify rough in dimensions for equipment and provide buck-outs, backing and jacks as required.
- F. All wood exposed to the weather, such as wood used for deck framing including, decking railings, joists, beams and posts shall be pressure treated or of wood with natural resistance to decay per IRC/IBC
- Girder ends within 1/2" of exterior wall surface and below grade.
- Wood joists in crawl space closer than 18" to ground or girders closer than 12" to ground.
- Wood framing resting on the foundation within 8" of exposed earth.
- Wood framing or furring attached directly to below grade concrete.
- Sleeper or Sills on concrete slab on grade concrete.
- Wood siding within 6" of exterior ground.
- G. Verify all rough-in dimensions for equipment, provide all buck-out, blocking, backing and jacks required for installation.

BUILDING ENVELOPE

- A. Asphalt-saturated felt free from holes or breaks, weighing not less than 14 pounds per 100 square feet and complying with ASTM D 226 or other approved weather resistant material shall be applied over sheathing of all exterior walls. approved alternative weatherproof membranes shall be used for open joint rain screen siding. weather resistant materials shall be applied horizontally per manufacturers recommendations, with the upper layer lapped over the lower layer not less than 2 inches and not less than 6 inches where joints occur.
- B. Approved corrosion-resistive flashing shall be provided in the exterior wall envelope in such a manner as to prevent entry of water into the wall cavity or penetration of water to the buildings structural framing components the flashing shall extend to the surface of the exterior wall surface and shall be installed to prevent water from reentering the exterior wall envelope, flashing shall be installed at, but not limited to the following locations:
- the top of all exterior window & door openings
 - intersections of frame walls and masonry or stucco
 - under masonry, wood or metal copings and sills
 - continuously above all projecting wood trim
 - where exterior porches, decks or stairs attach to a wall
 - at wall and roof or soffit intersections
 - at built-in gutters

FIREBLOCKING AND DRAFTSTOPPING

- A. Floor Assemblies Fireblocking and Draftstopping shall be in stalled in accordance with IRC/IBC.
- B. Wall Assemblies: Fireblocking shall be installed per IRC/IBC
- C. Chimneys and fireplaces: All spaces between chimneys and floors and ceilings through which chimneys pass shall be reblocked with noncombustible material securely fastened in place. The fireblocking of spaced between chimneys and wood joists beams, or headers shall be self supporting or be placed on strips of metal or metal lath laid across the spaces between combustible material and the chimney.

DRYWALL FINISH

- A. Provide 1/2" gypsum wall board for non-rated assemblies and 5/8" type x gypsum wall board for 1-hr rated assemblies with all exposed joints and fastener heads smooth and flush with the surface of the board, joints taped and prepared for a plication of finish, use water-resistant board at all wet areas to 4'-0" aff.
- B. When gypsum board is used as a base for tile or wall panels far tub, shower or water closet compartment walls, water resistant gypsum backing board shall be used.
- C. All gypsum board partitions shall be taped and sanded smooth with no visible joints or lines. all screws or other attachment devices shall be patched and not visible. patch and repair surfaces to match adjacent or adjoining surfaces where required. all surfaces shall be aligned and sanded smooth.

REFLECTED CEILING PLAN NOTES

- A. Coordinate the work of all trades involved in the ceiling work to insure clearances for fixtures, ducts, piping, ceiling suspension system, etc., necessary to maintain the finished ceiling heights. see reflected ceiling plans for finished ceiling heights. verify in field.
- B. Perimeter ceiling angle, where occurs, shall be installed tight to vertical surfaces, free from curves, breaks, or other irregularities, and painted to match ceiling finish.
- C. Furnish and install all fixtures, associated trim, fixture lamps, and seismic bracing as required.
- D. Light fixtures, exit signs, sprinklers, and other ceiling elements shall be located in center of individual ceiling tile, unless otherwise noted. all switches and dimmers shall be located 48" above finished floor to center of switch, unless otherwise noted. Multiple switches at one location shall be ganged together and finished with one cover plate, unless otherwise noted.
- E. Provide ceiling access as required for equipment and system maintenance, and match adjacent ceiling finish, unless otherwise noted.
- F. The reflected ceiling plan indicates the location of ceiling heights, light types, light fixtures, switch locations, and associated items. refer to engineering drawing (lighting plan) for circuiting, wiring layout, and additional information.
- G. In the event of discrepancies between the architect's reflected ceiling plan and the engineer's lighting plan, immediately notify the architect in writing before ordering materials or proceeding with work.
- H. All specific information concerning installation of various above-ceiling elements are to be found in the hvac, plumbing, fire protection, electrical, and lighting drawings.
- I. Notify architect of any conflicts of light fixture locations with main runners, ducts, structures, hvac, and/or (e) conduit, prior to framing for lights. any discrepancies between architect's ceiling grid location and actual field conditions are to be clarified with the architect prior to framing.
- J. Submit grille, sprinkler, thermostat, and other fixture and element layouts to the architect for review at least 2 weeks prior to installation.
- K. Verify field conditions and locations of all plumbing, mechanical ducts, structural elements, and any and all other applicable items; install applicable new plumbing, mechanical fans, ducts, conduits, and other related and appurtenant items so as to not conflict with luminaires and any and all field conditions.
- L. Furnish and install underwriters laboratories inc. (ul) labelled devices throughout.
- M. Install light fixtures with protective film or similar cover over louver, lens, baffle, and the like, to avoid fixture soiling or damage; fixtures shall be maintained clean and as new; lamps shall be new at project completion.
- N. Refer to engineering drawings for all life safety devices required by code and all emergency light fixtures. architectural drawings shall govern location of these devices.

ELECTRICAL

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

DOOR NOTES

- A. Refer to door schedule for all door/hardware specifications.
- B. Field measure floor to ceiling doors for proper fit.
- C. Exterior level landing may slope up to 1/4" per foot max. in any direction for surface drainage.
- D. The floor or landing shall not be more than 1/2" lower than the threshold of the doorway. bevel (1.2 max. slope) where the threshold exceeds 1/4" in height.
- E. Door openings in partitions not dimensioned are to be located within 4" of adjoining partition, unless otherwise noted.
- F. All glass in doors shall be tempered safety glass, unless otherwise noted.
- G. Hollow metal doors shall be finished with semi-gloss paint. refer to finish schedule for additional information.
- H. Doors opening into required exit corridors do not restrict the required width when opened in any position.
- I. All doors required as exits shall swing in the direction of travel.
- J. Provide doors made with adhesives and composite wood products where possible that do not contain urea formaldehyde.

MILLWORK NOTES

- A. All blocking required shall be ascribed to wall or ceiling, general contractor to check job progress and coordinate with other trades involved, general contractor is responsible for all blocking required; under no circumstances will "extra" work be authorized for extra blocking.
- B. The general contractor shall submit shop drawings and samples to the architect for review.
- C. Field conditions prior to the start of fabrication, the general contractor shall check and verify all dimensions and conditions at job site and shall be responsible for the same.
- D. Joinery, where members are mitered or butted, they shall be joined and secured in a manner to insure against the joint opening.
- E. Fabrication, all of the work shall be fabricated, assembled, finished, and erected in the best method known to the cabinet trade. surfaces shall be true, straight, and free from all machine and tools markings, bruises, indentations, chips, or abrasions.
- F. Field verification, it shall be the general contractor 's responsibility to have examined the job site in conjunction with the project documents so as to be satisfied as to the conditions under which the work will be performed, including such matters as unloading facilities, locations and sizes of elevators, equipment, or facilities needed preliminary to and during the work, and other conditions which may affect the work.
- G. Protection, the general contractor shall maintain reasonable protection to safeguard his work from damage and to protect building owner's property from injury or loss arising in connection with all project work.
- H. The general contractor shall guarantee that all materials and workmanship shall be of the quality specified and shown and that any defect due to improper workmanship or materials discovered and made known within one year from the date of substantial completion of the installation shall be repaired or replaced with reasonable promptness without additional cost. architect will give notice of such observed defects with reasonable promptness.
- I. Installation, general contractor will shim and level countertops above files after files are installed by others. files in operations area to be shimmed and secured to millwork after they are set in place. general contractor to level floor under files in all areas where files are ganged or installed below fixed cabinetry. (plastic laminated shims as required at file cabinet area).
- J. All millwork shall receive final finish at the shop or factory prior to delivery. general contractor shall protect all finished and installed millwork from damage by other trades. damaged or defective millwork shall be replaced by the general contractor. at his expense.
- K. Millwork contractor to coordinate location of electrical, telephone, and communications outlets and install grommets in countertop surfaces as required to conceal cables.
- L. Shelving, no unbraced length of shelving and or counterwork shall exceed 3'-0" without additional supports and or blocking. all end conditions shall be properly blocked and or supported.
- M. Overhead cabinets, all blocking and wood cleats for overhead cabinets to be screwed and secured to full height or braced ceiling height metal studs and wood grounds.

MECHANICAL

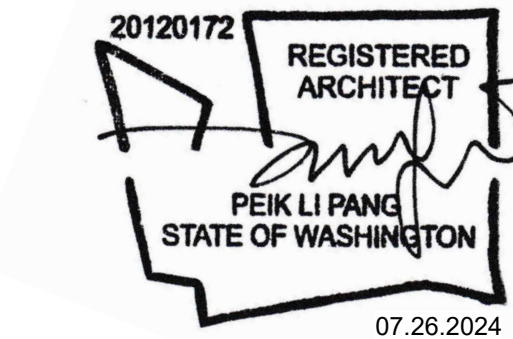
- A. HVAC and Plumbing work shall be performed in a "Bidder Design manner. The contractor shall submit such systems separately for permit.
- B. It is the contractor's responsibility to design systems that meet all requirements and codes. Contractor shall submit drawings, pay and obtain permit and perform work in a manner that meets or exceeds the recognized workmanship standards for the industry.
- C. All drawings are to be submitted for review and approval to the Owner before performing work.
- D. Heating equipment shall be listed and labeled by an approved agency and installed to listed specifications.
- E. Appliances installed in garages or other areas where they may be subject to mechanical damage shall be suitably guarded against such damage by being installed behind protective barriers or by being elevated or located out of the normal path of vehicles.
- F. Equipment located in a garage and capable of igniting flammable vapors shall be installed with the pilots or burners or heating elements and switches at least 18 inches above the floor level.
- G. Appliances designed to be in fixed positions shall be fastened or anchored in an approved manner Water heater shall be anchored or strapped to resist horizontal displacement caused by earthquake motion. Strapping shall be at points within the upper one-third and lower one-third of the appliance's vertical dimensions. At the lower point, the strapping shall maintain a minimum distance of 4 inches above controls.
- H. Verify types, manufacture, and locations of a plumbing, faucets with Owner prior to purchasing and/or installing
- I. Vent outlet for gas appliances shall be 3' minimum away from operable windows, and 10' minimum away from fresh air intakes per WA VIAQ 303.4.1.5.
- J. Protection of structure: the building or structure shall not be weakened by the installation of mechanical systems. Penetrations of floor/ceiling assemblies and assemblies required to have fire resistance rating shall be protected in accordance with IRC/IBC
- K. The cutting, notching and boring of wood framing members shall comply with IRC/IBC
- Joist notching shall be per IRC 502.8: Notches on the ends of members shall not exceed one-fourth the member depth. Holes bored in joists shall not be within 2 inches of the top or bottom of the joist, and the diameter of any such hole shall not exceed one-third the depth of the joist. Notches in the top or bottom of members shall not exceed one-sixth the depth, shall not be longer than one third of the depth of the member and shall not be located in the middle third of the span.
- L. Stud cutting and notching shall be per IRC/IBC. In exterior walls and bearing partitions, any wood stud is permitted to be cut or notched not to exceed 25 percent of its depth Cutting or notching of studs not greater than 40 percent of a single stud depth is permitted in nonbearing partitions supporting no loads other than the weight of the partition. A hole not greater in diameter than 60 percent of the stud depth is permitted to be bored in any wood stud, provided that the resulting hole no more than 5/8 to the edge of the stud, and the hole is not located in the same section as a cut or notch. Studs located in exterior walls or bearing partitions drilled over 40% and up to 60% shall also be doubled with no more than two successive doubled studs bored.
- M. Engineered wood products shall be cut and notched in accordance with IRC/IBC
- Cuts, notches and holes bored in trusses, structural composite lumber, structural glue laminated members and l-joists are prohibited except where permitted by the manufacturer's recommendations or where the effects of such alterations are specifically considered n the design of the member by a registered design professional.
- N. Contractor shall submit shop drawings of ductwork and registers, including access panels if required; cuts of all fixtures, fittings, and accessories, to architect for review and action prior to proceeding with fabrication and/or installation or relocation.
- O. Air balancing- air conditioning system throughout entire space is to be properly balanced after move in. air balance shall be performed by an independent air balance contractor who shall certify that the report is accurate. submit 2 copies to building owner.
- P. Heat producing equipment- hvac contractor to refer to reflected ceiling and furniture drawings for occupancy figures and heat producing equipment.
- Q. Ceiling diffusers - installation shall be coordinated with all trades as required for proper assembly. ceiling diffusers to be relocated to maintain new fixture patterns as required.
- R. All peripheral shut-off valves shall be accessible at all times.
- S. The contractor shall coordinate his plumbing work with manufacturer's specifications. the contractor shall coordinate plumbing work with that of all other trades.
- T. The contractor shall plan installation of new plumbing work and connections to existing work to insure minimum interference with regular operations of existing facilities. submit to the building manager a date schedule for approval of necessary temporary shutdowns of existing services. all shutdowns shall be made at such time as will not interfere with regular operations of existing facilities and only after written approval of the building manager.
- U. Penetrations - sleeves are to be provided for each pipe passing through walls, partitions, floors, and slabs. all penetrations of rated assemblies shall be fire stopped per code.
- V. Testing - before being covered up or built-in, all piping shall be tested as required by the authorities having jurisdiction.
- W. Contractor should fulfill mechanical ventilation requirement per IRC/IBC

5ft2

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Mercer Firshill

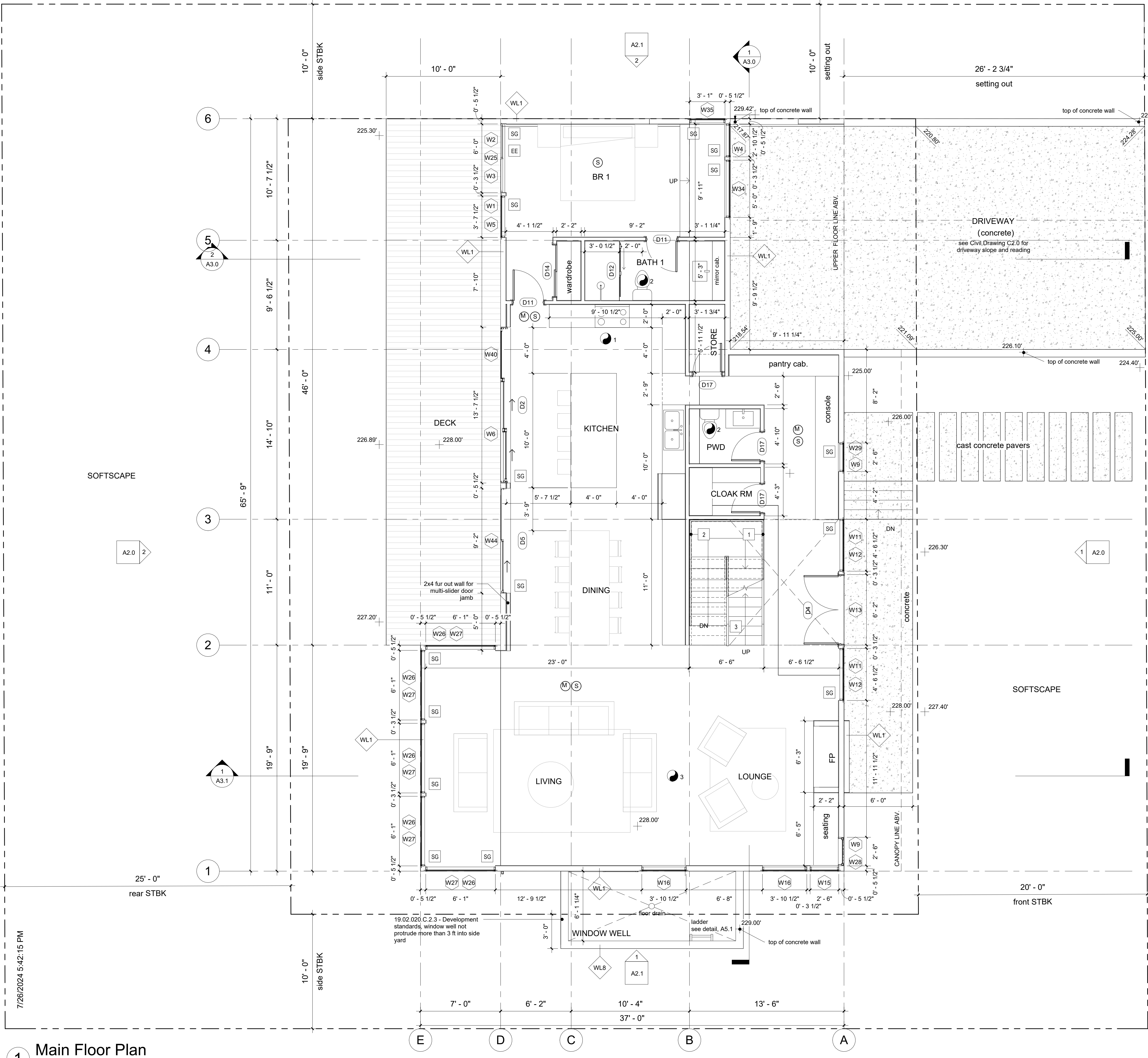
2419

2419 72nd Ave
SE, Mercer Island,
WA 98040

Building Permit		
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NO.	DESCRIPTION	DATE
DATE: 07.26.24		

General Notes

.G1.1



PLAN NOTES (IRC)

SG SAFETY GLAZING REQUIREMENT (S.G.) : (IRC R308)
SAFETY GLAZING PER IRC R308 IN WINDOWS AND DOORS

EE EMERGENCY ESCAPE AND RESCUE OPENING (E.E.) : (IRC R310)

IRC R310.1. All sleeping rooms must have an emergency egress window or door that leads directly to a yard or public way

Emergency egress windows must provide a minimum clear openable area of 5.7 square feet, 24 inches high and 20 inches wide.

IRC R310.2.2 Where a window is provided as the emergency escape and rescue opening, it shall have a sill height of not more than 44 inches above the floor; where the sill height is below grade, it shall be provided with a window well in accordance with Section R310.2.3

GUARDRAILS, HANDRAILS AND STAIRS

1 All guardrails to be 36" high minimum above finished floor (a.f.f.) openings in railing assemblies are not to exceed 4 in one direction, guardrails to withstand a uniform load of 50 lbs/ft or a concentrated load of 200 lbs placed at the top of the handrail or guard, infill areas must be able to withstand a load of 50 lbs / square foot

2 Handrails to be between 1 1/4" diameter to 2" diameter, with clearance of 1.5" between rail and wall surface, mount between 34" and 38" above stair nosing or @ 36" a.f.f., typ

3 Riser: max 7 3/4", tread: min.10"

FG FROSTED GLASS

MECHANICAL VENTILATION (IRC M1505)

SEE SHEET A6.3 FOR COMPLIANCE - ALARMS AND VENTILATION AND WHOLE HOUSE MECHANICAL VENTILATION

- 1 100 CFM ON SWITCH
- 2 50 CFM ON SWITCH
- 3 90 CFM per TABLE M1505.4.3(1)

S SMOKE DETECTORS (IRC R314.3)

SEE SHEET A6.3 FOR COMPLIANCE - ALARMS AND VENTILATION

M CARBON MONOXIDE ALARM (IRC R 315.1)

SEE SHEET A6.3 FOR COMPLIANCE - ALARMS AND VENTILATION

HD NEW ATTACHED GARAGES (IRC R 314.2.3)

SEE SHEET A6.3 FOR COMPLIANCE - ALARMS AND VENTILATION

DWELLING-GARAGE OPENING AND PENETRATION PROTECTION (IRC R302.5.1)

Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with solid wood doors not less than 13/8 inches (35 mm) in thickness, solid or honeycomb-core steel doors not less than 13/8 inches (35 mm) thick, or 20-minute fire-rated doors. Doors shall be self-latching and equipped with a self-closing or automatic-closing device.

DWELLING-GARAGE SEPARATION: (IRC R302.6)

R302.6 Dwelling-garage fire separation

The garage shall be separated as required by Table R302.6. Opening in garage walls shall comply with Section R302.5. Attachment of gypsum board shall comply with Table R702.3.5. The wall separation provisions of Table R302.6 shall not apply to garage walls that are perpendicular to the adjacent dwelling unit wall.

TABLE R302.6 DWELLING-GARAGE SEPARATION	
SEPARATION	MATERIAL
From the residence and attic	Not less than 1/2-inch gypsum board or equivalent applied to the garage side
From habitable rooms above the garage	Not less than 1/2-inch Type X gypsum board or equivalent
Structurally supporting floor/ceiling assemblies used for separation required for this section	Not less than 1/2-inch gypsum board or equivalent
Garages located less than 3 feet from a dwelling unit on the same lot	Not less than 1/2-inch gypsum board or equivalent applied to the interior side of exterior walls that are within this area

For 1/2 inch X 5/8 inch, 1 inch X 5/8 inch

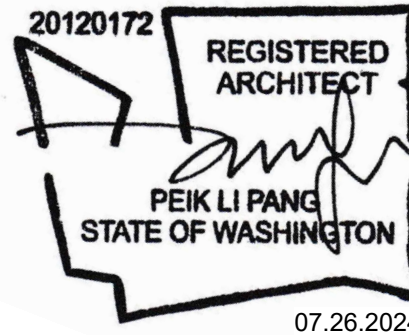
NFPA 13d fire sprinkler system

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Mercer Firshill
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Building Permit

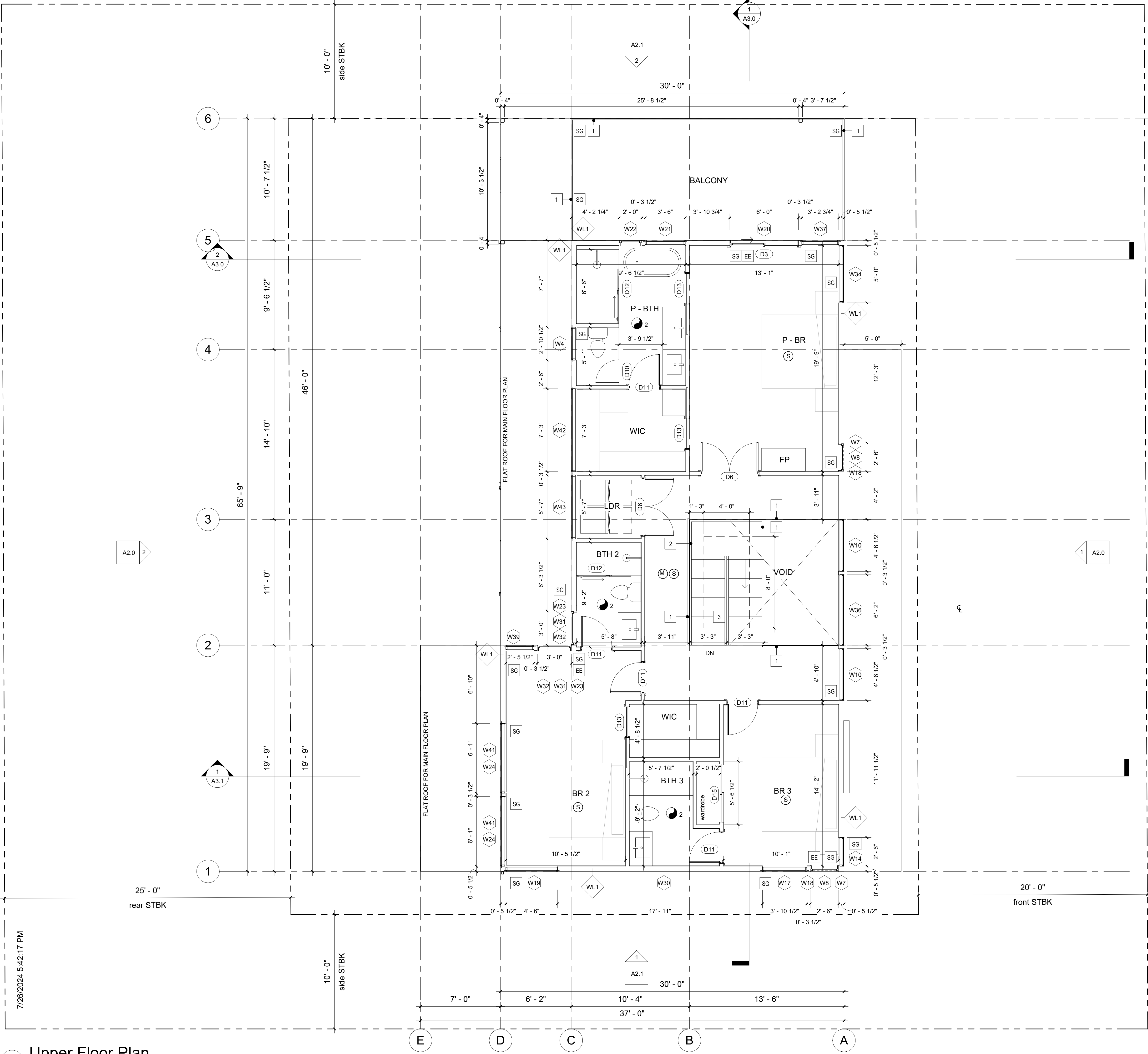
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NO. DESCRIPTION DATE

DATE: 07.26.24

Main
Floor
Plan

A1.1



PLAN NOTES (IRC)

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SAFETY GLAZING PER IRC R308 IN WINDOWS AND DOORS

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IRC R310.1. All sleeping rooms must have an emergency egress window or door that leads directly to a yard or public way
Emergency egress windows must provide a minimum clear openable area of 5.7 square feet, 24 inches high and 20 inches wide.

IRC R310.2.2 Where a window is provided as the emergency escape and rescue opening, it shall have a sill height of not more than 44 inches above the floor; where the sill height is below grade, it shall be provided with a window well in accordance with Section R310.2.3

GUARDRAILS, HANDRAILS AND STAIRS

1 All guardrails to be 36" high minimum above finished floor (a.f.f.) openings in railing assemblies are not to exceed 4 in one direction, guardrails to withstand a uniform load of 50 lbs/ft or a concentrated load of 200 lbs placed at the top of the handrail or guard, infill areas must be able to withstand a load of 50 lbs / square foot

2 Handrails to be between 1 1/4" diameter to 2" diameter, with clearance of 1.5" between rail and wall surface, mount between 34" and 38" above stair nosing or @ 36" a.f.f., typ

3 Riser: max 7 3/4", tread: min.10"

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M CARBON MONOXIDE ALARM (IRC R 315.1)

SEE SHEET A6.3 FOR COMPLIANCE - ALARMS AND VENTILATION

HD NEW ATTACHED GARAGES (IRC R 314.2.3)

SEE SHEET A6.3 FOR COMPLIANCE - ALARMS AND VENTILATION

DWELLING-GARAGE OPENING AND PENETRATION PROTECTION (IRC R302.5.1)

Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with solid wood doors not less than 13/8 inches (35 mm) in thickness, solid or honeycomb-core steel doors not less than 13/8 inches (35 mm) thick, or 20-minute fire-rated doors. Doors shall be self-latching and equipped with a self-closing or automatic-closing device.

DWELLING-GARAGE SEPARATION: (IRC R302.6)

R302.6 Dwelling-garage fire separation

The garage shall be separated as required by Table R302.6. Opening in garage walls shall comply with Section R302.5. Attachment of gypsum board shall comply with Table R702.3.5. The wall separation provisions of Table R302.6 shall not apply to garage walls that are perpendicular to the adjacent dwelling unit wall.

TABLE R302.6 DWELLING-GARAGE SEPARATION	
SEPARATION	MATERIAL
From the residence and attic	Not less than 1/2-inch gypsum board or equivalent applied to the garage side
From habitable rooms above the garage	Not less than 1/2-inch Type X gypsum board or equivalent
Structures supporting floor/ceiling assemblies used for separation required for this section	Not less than 1/2-inch gypsum board or equivalent
Garages located less than 3 feet from a dwelling unit on the same lot	Not less than 1/2-inch gypsum board or equivalent applied to the interior side of exterior walls that are within this area

For SI: 1 inch = 25.4 mm; 1 foot = 304.8 mm.

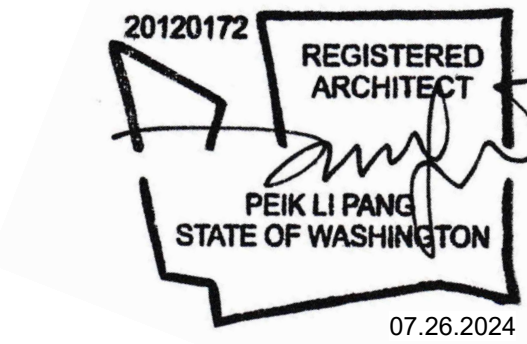
NFPA 13d fire sprinkler system

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www.5ft2studio.com



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Building Permit

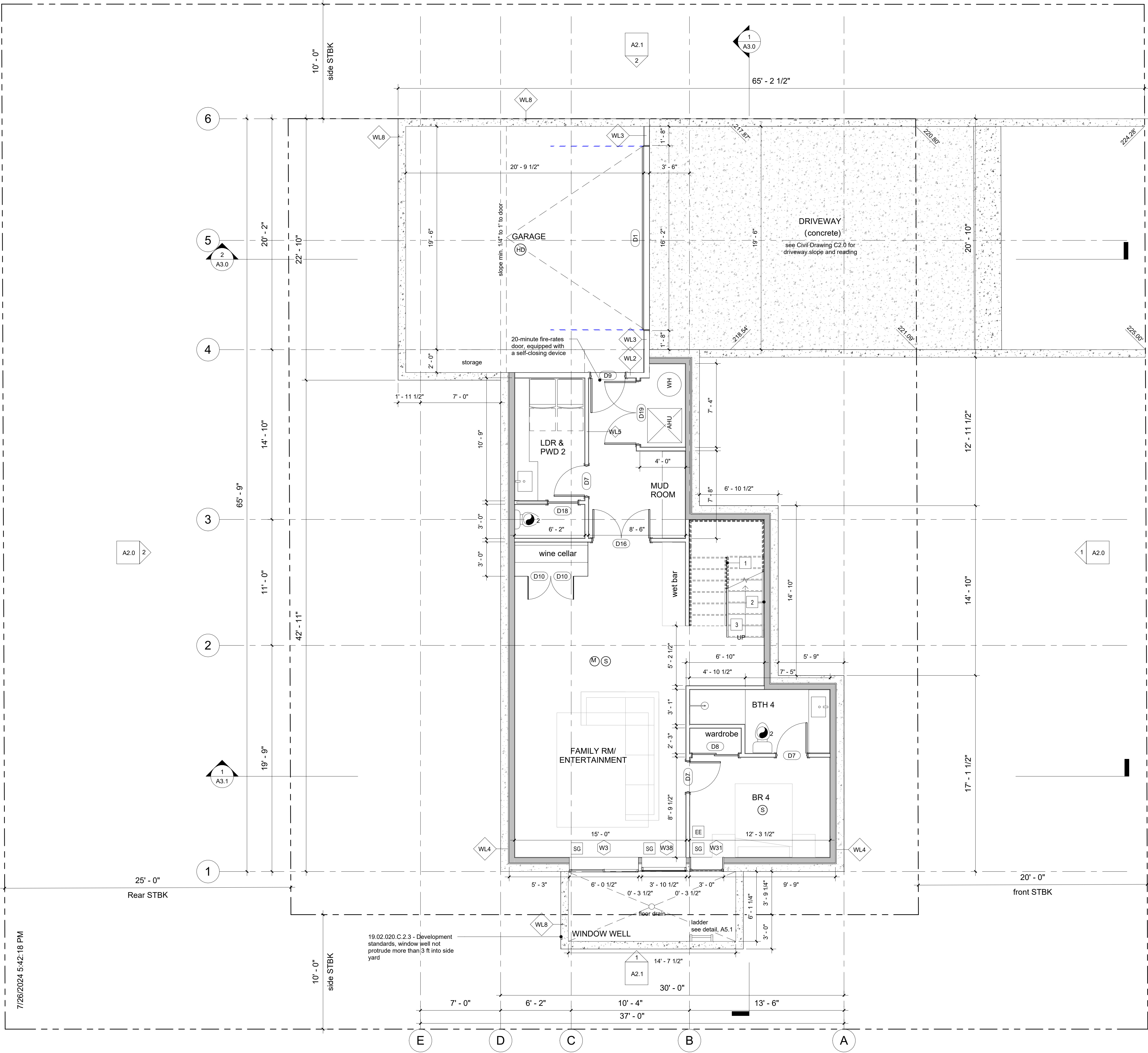
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NO. DESCRIPTION DATE

DATE: 07.26.24

Upper
Floor
Plan

A1.2



PLAN NOTES (IRC)

SG SAFETY GLAZING REQUIREMENT (S.G.) : (IRC R308)
SAFETY GLAZING PER IRC R308 IN WINDOWS AND DOORS

EE EMERGENCY ESCAPE AND RESCUE OPENING (E.E.) : (IRC R310)

IRC R310.1. All sleeping rooms must have an emergency egress window or door that leads directly to a yard or public way

Emergency egress windows must provide a minimum clear openable area of 5.7 square feet, 24 inches high and 20 inches wide.

IRC R310.2.2 Where a window is provided as the emergency escape and rescue opening, it shall have a sill height of not more than 44 inches above the floor; where the sill height is below grade, it shall be provided with a window well in accordance with Section R310.2.3

GUARDRAILS, HANDRAILS AND STAIRS

1 All guardrails to be 36" high minimum above finished floor (a.f.f.) openings in railing assemblies are not to exceed 4 in one direction. guardrails to withstand a uniform load of 50 lbs/ft or a concentrated load of 200 lbs placed at the top of the handrail or guard. infill areas must be able to withstand a load of 50 lbs / square foot

2 Handrails to be between 1 1/4" diameter to 2" diameter, with clearance of 1.5" between rail and wall surface. mount between 34" and 38" above stair nosing or @ 36" a.f.f., typ

3 Riser: max 7 3/4", tread: min.10"

FG FROSTED GLASS

MECHANICAL VENTILATION (IRC M1505)

SEE SHEET A6.3 FOR COMPLIANCE - ALARMS AND VENTILATION AND WHOLE HOUSE MECHANICAL VENTILATION

1 100 CFM ON SWITCH

2 50 CFM ON SWITCH

3 90 CFM per TABLE M1505.4.3(1)

S SMOKE DETECTORS (IRC R314.3)

SEE SHEET A6.3 FOR COMPLIANCE - ALARMS AND VENTILATION

M CARBON MONOXIDE ALARM (IRC R 315.1)

SEE SHEET A6.3 FOR COMPLIANCE - ALARMS AND VENTILATION

HD NEW ATTACHED GARAGES (IRC R 314.2.3)

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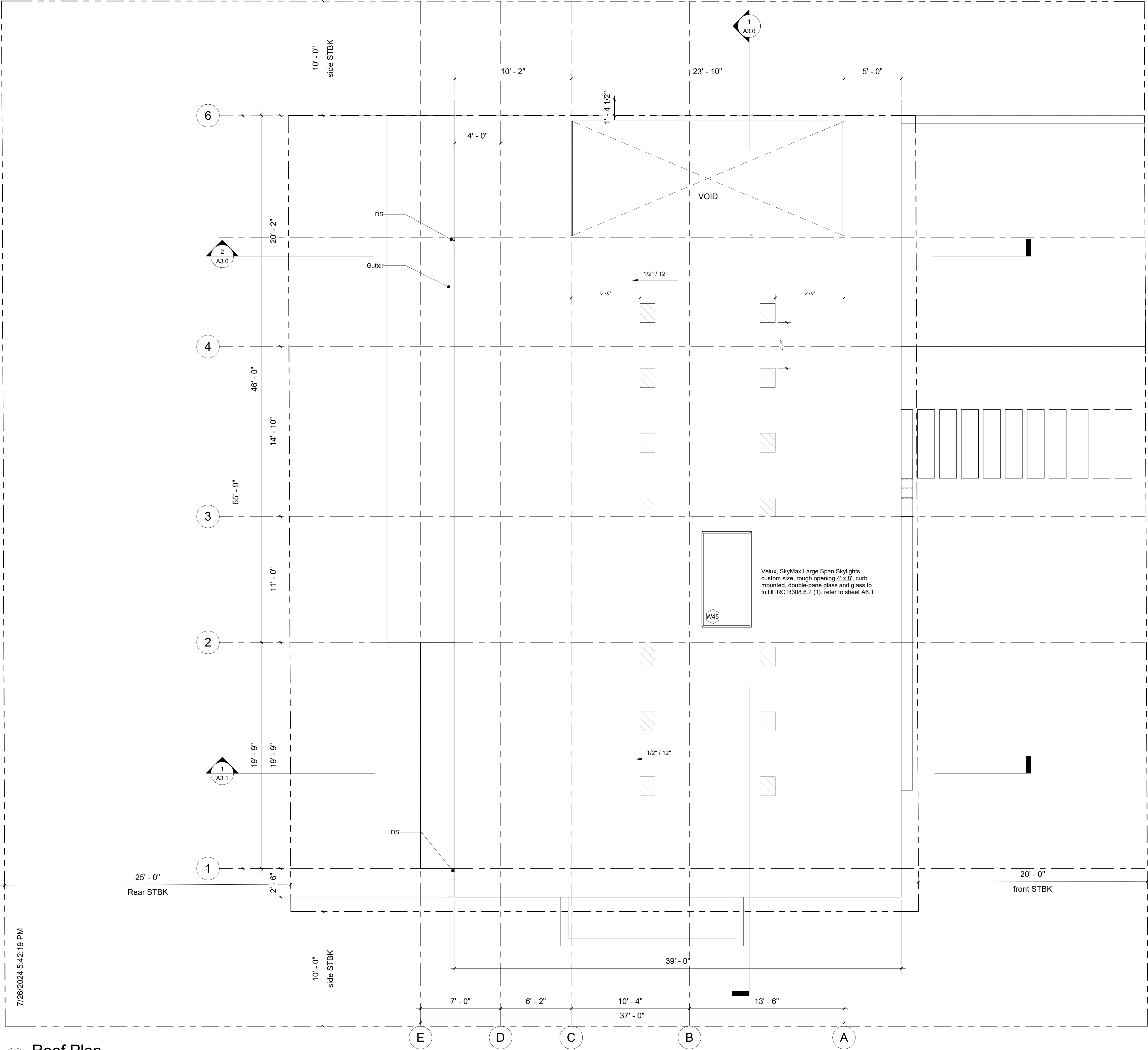
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NO. DESCRIPTION DATE

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Basement
Floor
Plan

A1.3



1 Roof Plan
1/4" = 1'-0"

PLAN NOTES (IRC)

SG SAFETY GLAZING REQUIREMENT (S.G.) : (IRC R308)
SAFETY GLAZING PER IRC R308 IN WINDOWS AND DOORS

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For 1/2 inch X 5/8 inch, 1 hour X 30 lb/min.

NFPA 13d fire sprinkler system

ROOF VENTILATION CALCULATION

Roof area over heated space : 1,436 sq. ft
Ventilation required:(1,436 sq/150)X 144 sq. in./sf = 1,378.6 sq.in.

Required exhaust = 689 sq. in.
Required intake = 689 sq. in.

PROPOSED EXHAUST NEAR RIDGE OF THE ROOF

Roof Vents providing 50 sq. in. of net free area, 689/50 = 14 pieces required.

PROPOSED INTAKE ON SOFFITS/UNDEREAVE

Provide 4" wide vent of 172 lineal inch (or 14 lineal feet) = 689 sq. in

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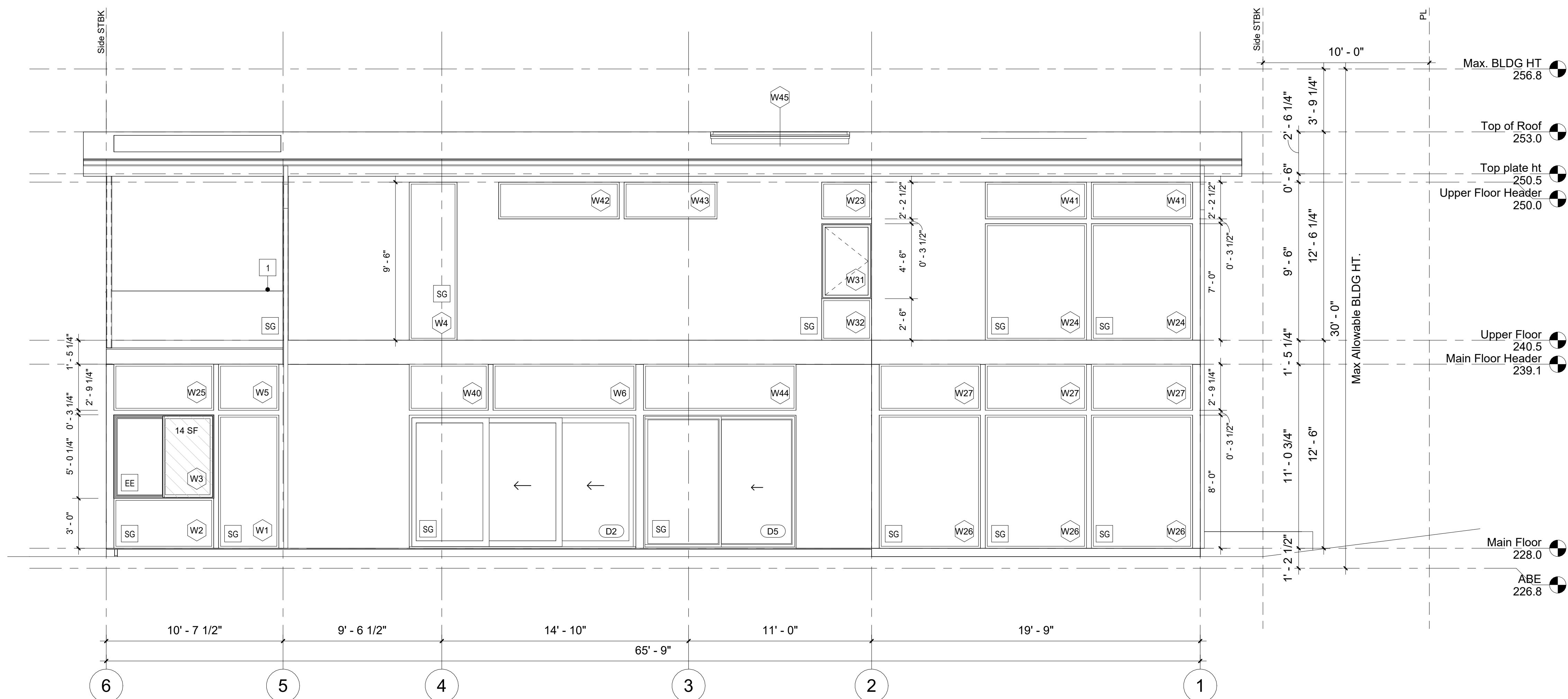
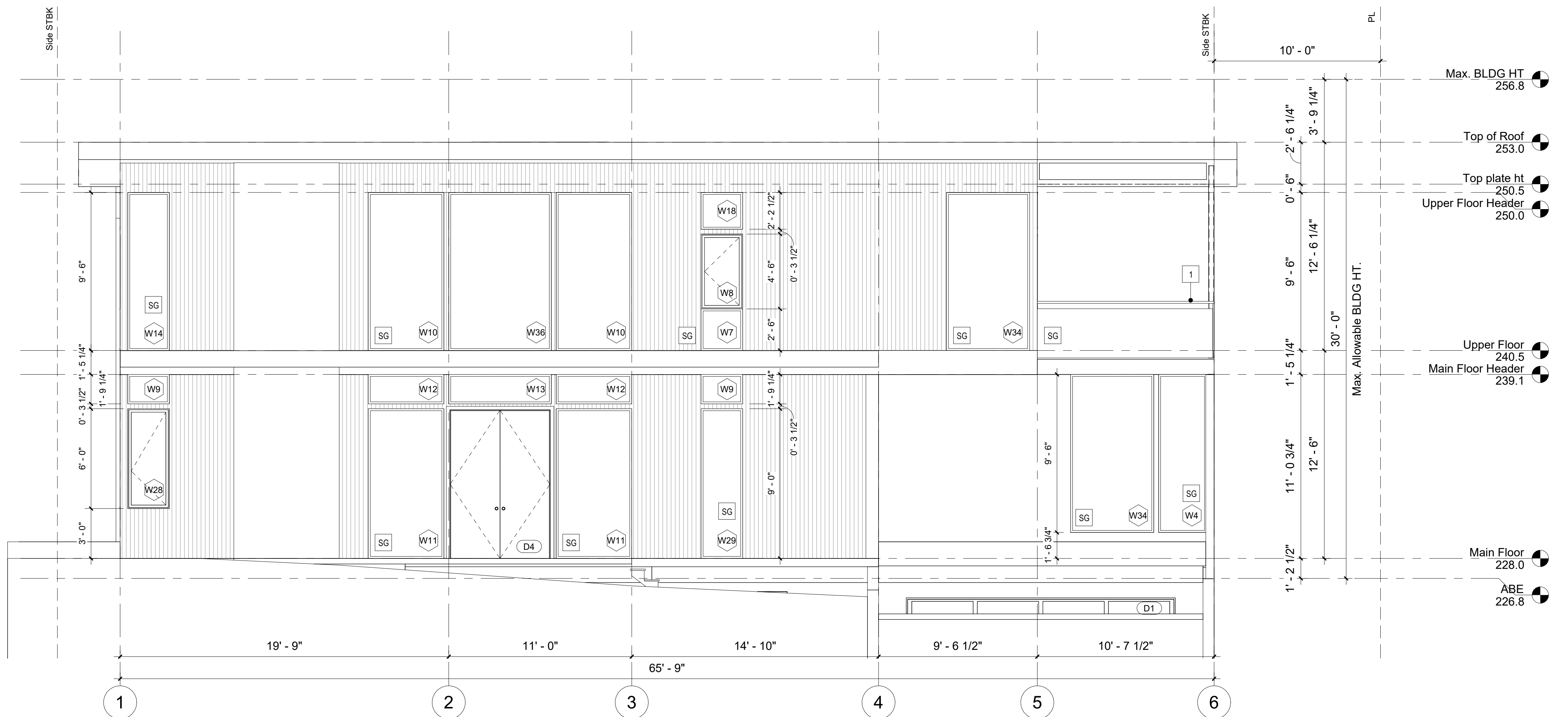
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NO.	DESCRIPTION	DATE
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DATE:	07.26.24
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Roof
Plan

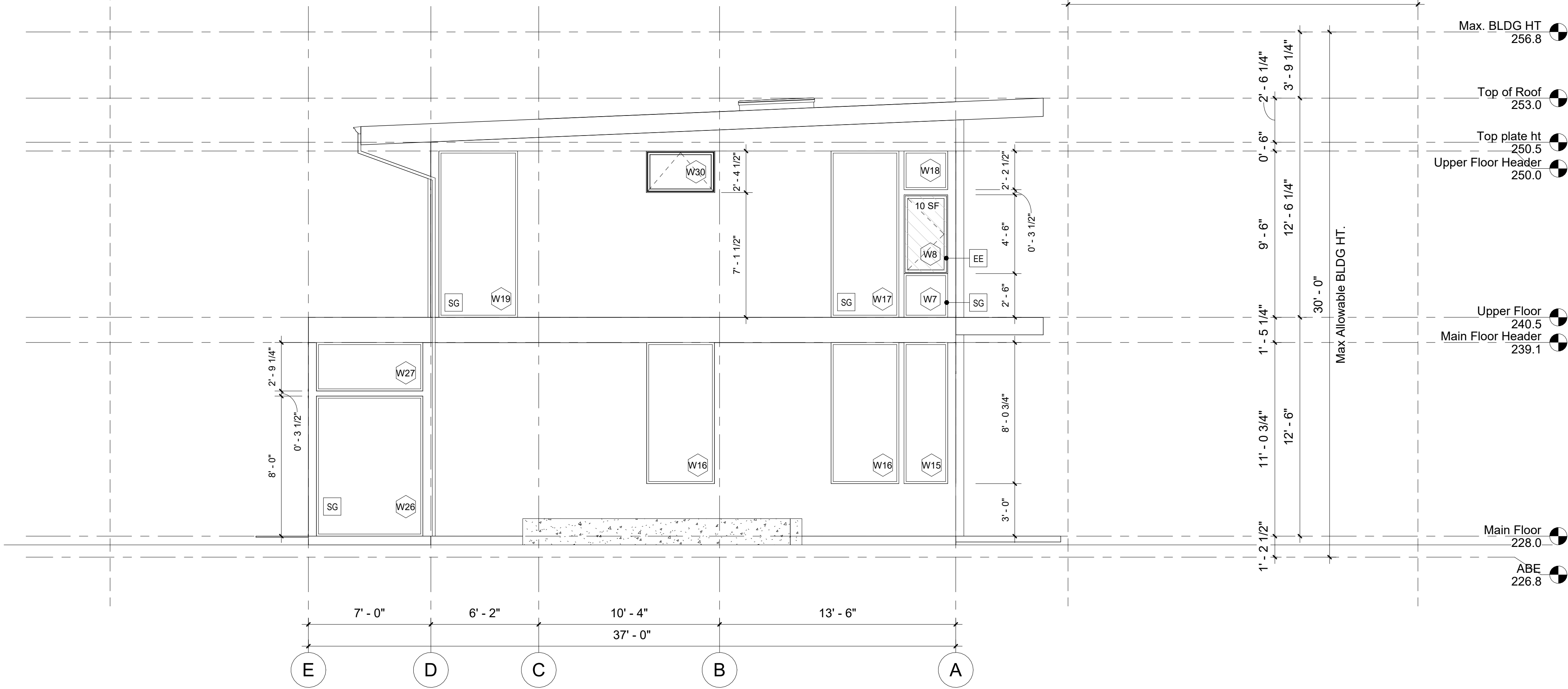
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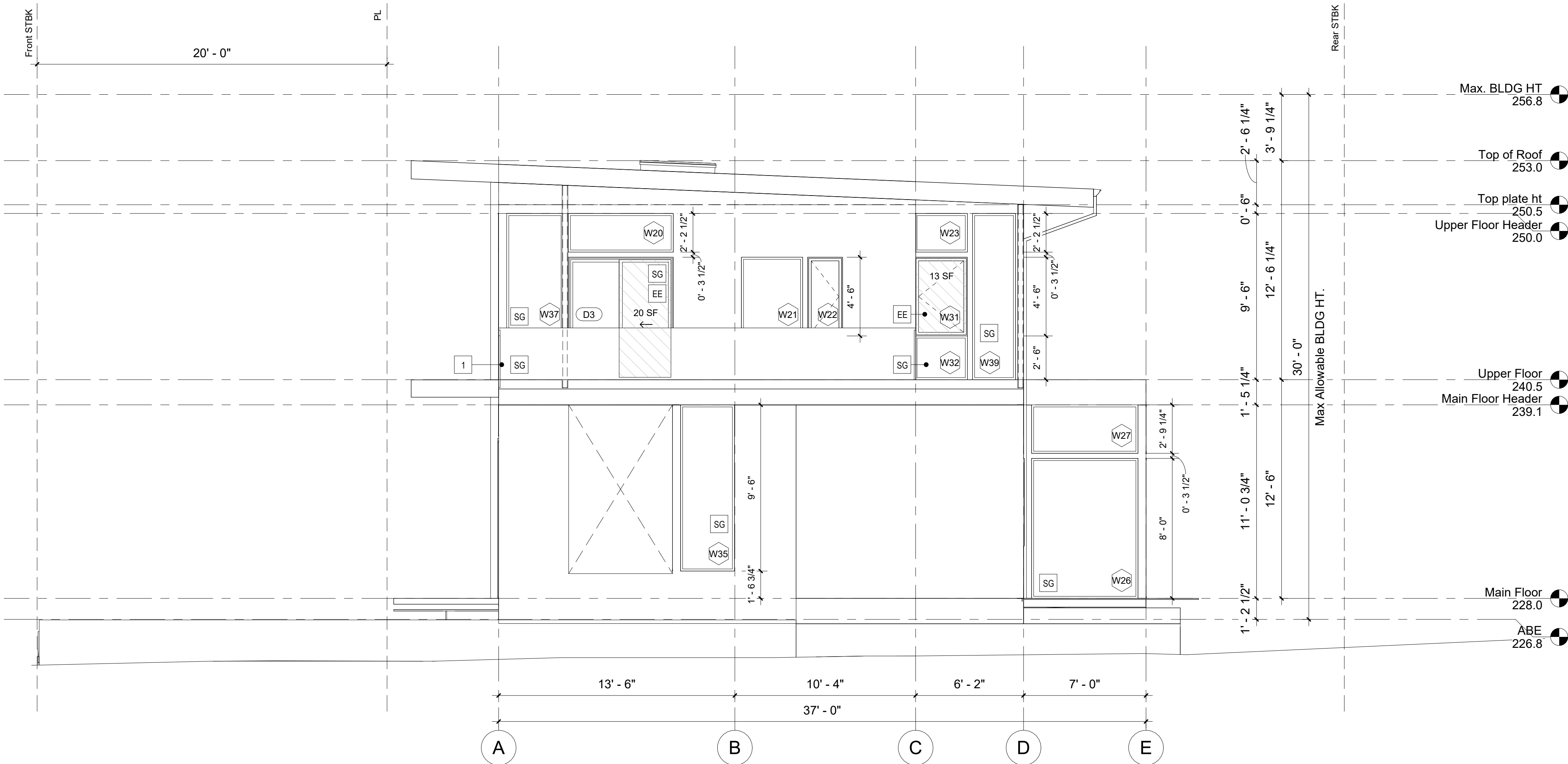
Rear STBK

Front STBK

PL



1 Elevation 3
1/4" = 1'-0"



2 Elevation 4
1/4" = 1'-0"

ELEVATION & SECTION NOTES (IRC)

SG SAFETY GLAZING REQUIREMENT (S.G.) : (IRC R308)
SAFETY GLAZING PER IRC R308 IN WINDOWS AND DOORS

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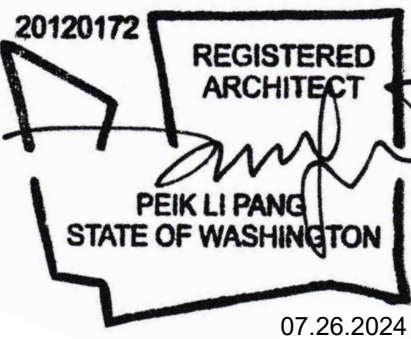
3 Riser: max 7 3/4", tread: min.10"

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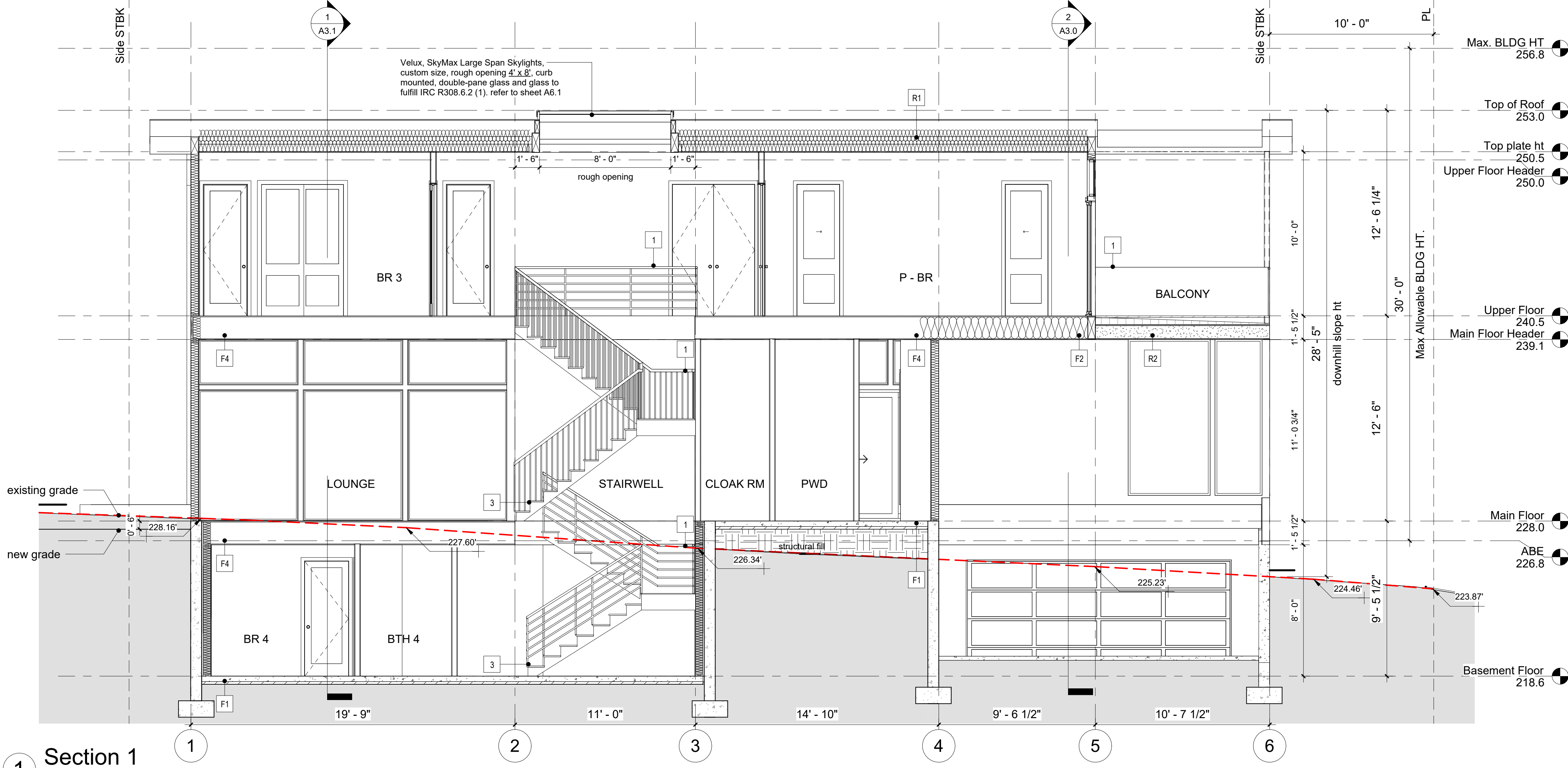
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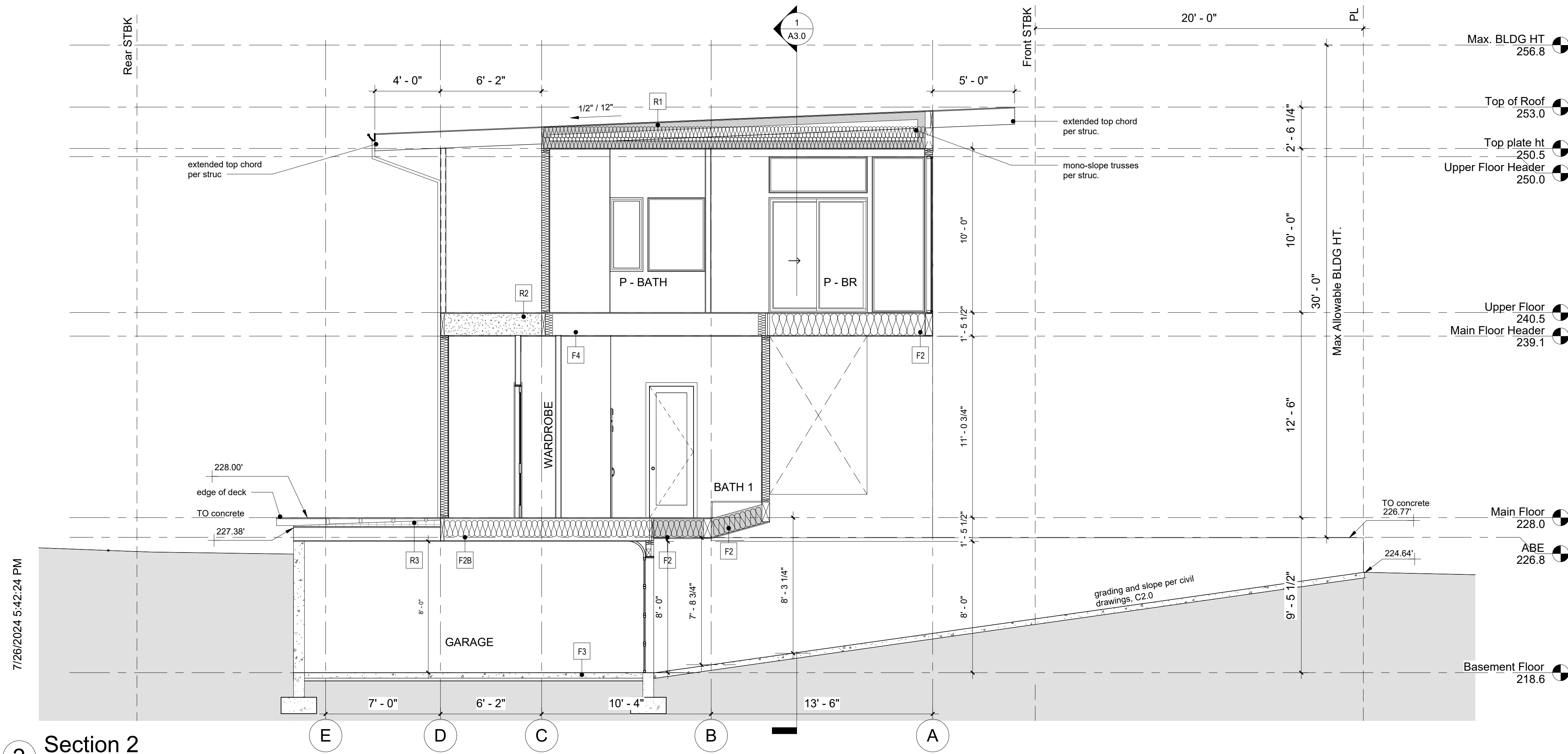
Elevation
2

A2.1

7/26/2024 5:42:22 PM



1 Section 1
1/4" = 1'-0"



2 Section 2
1/4" = 1'-0"

ELEVATION & SECTION NOTES (IRC)

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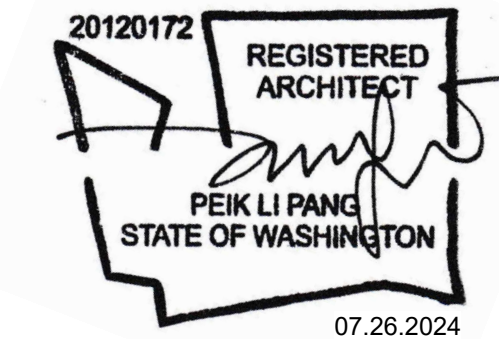
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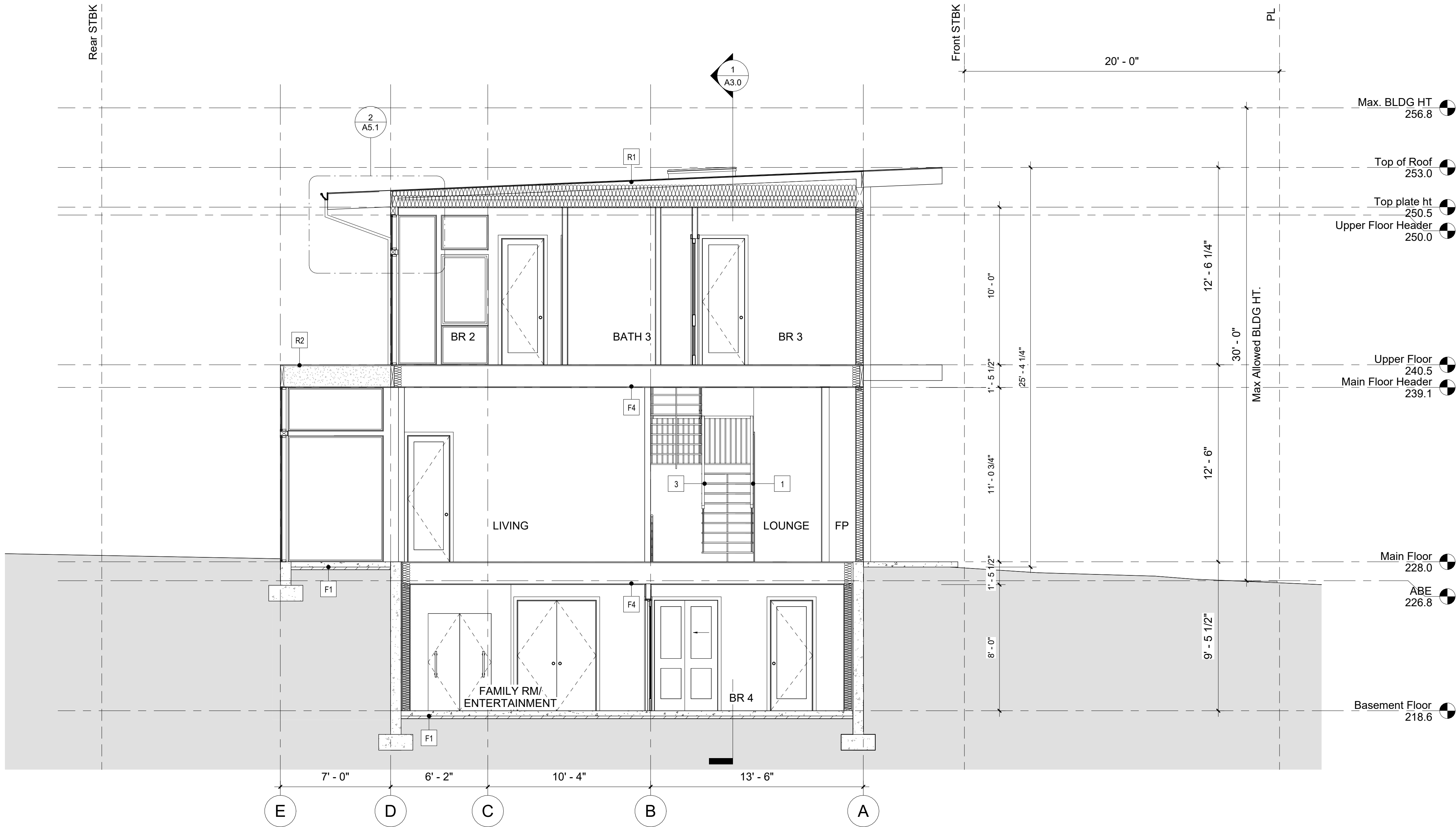
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Section 1

A3.0

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1 Section 3
1/4" = 1'-0"

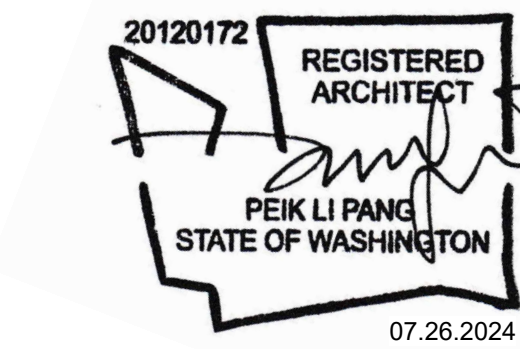


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DATE: 07.26.24

Section
2

A3.1

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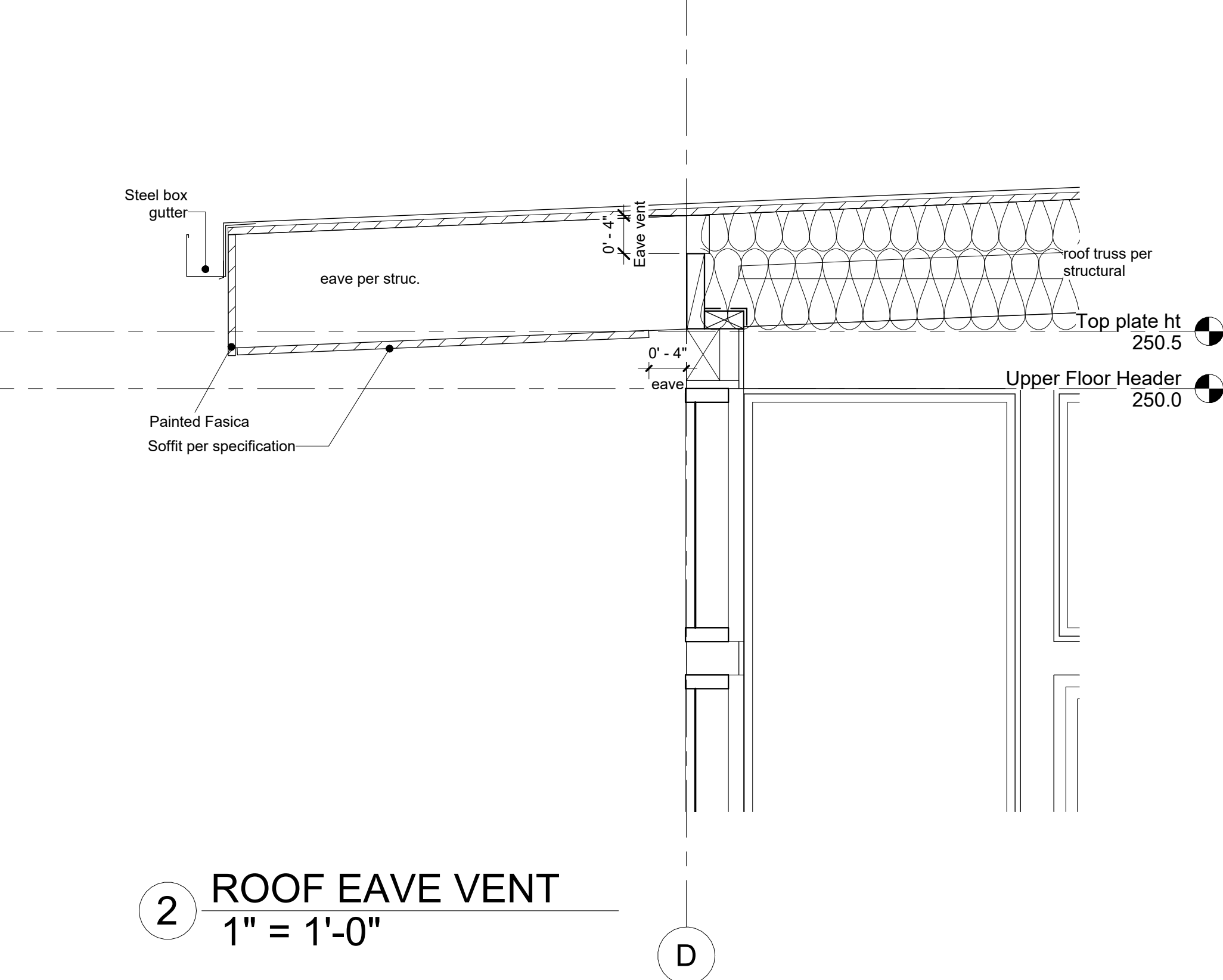
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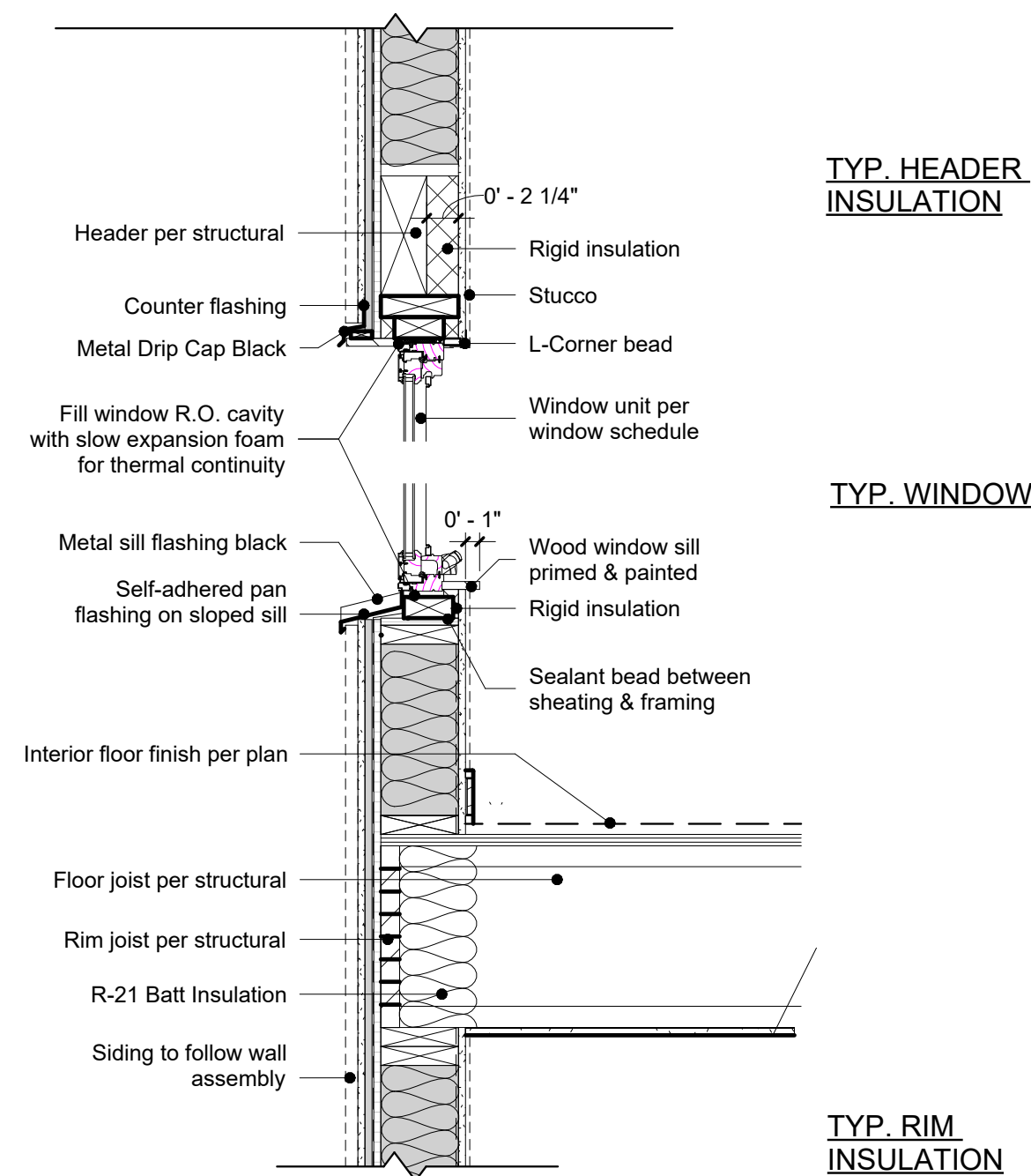
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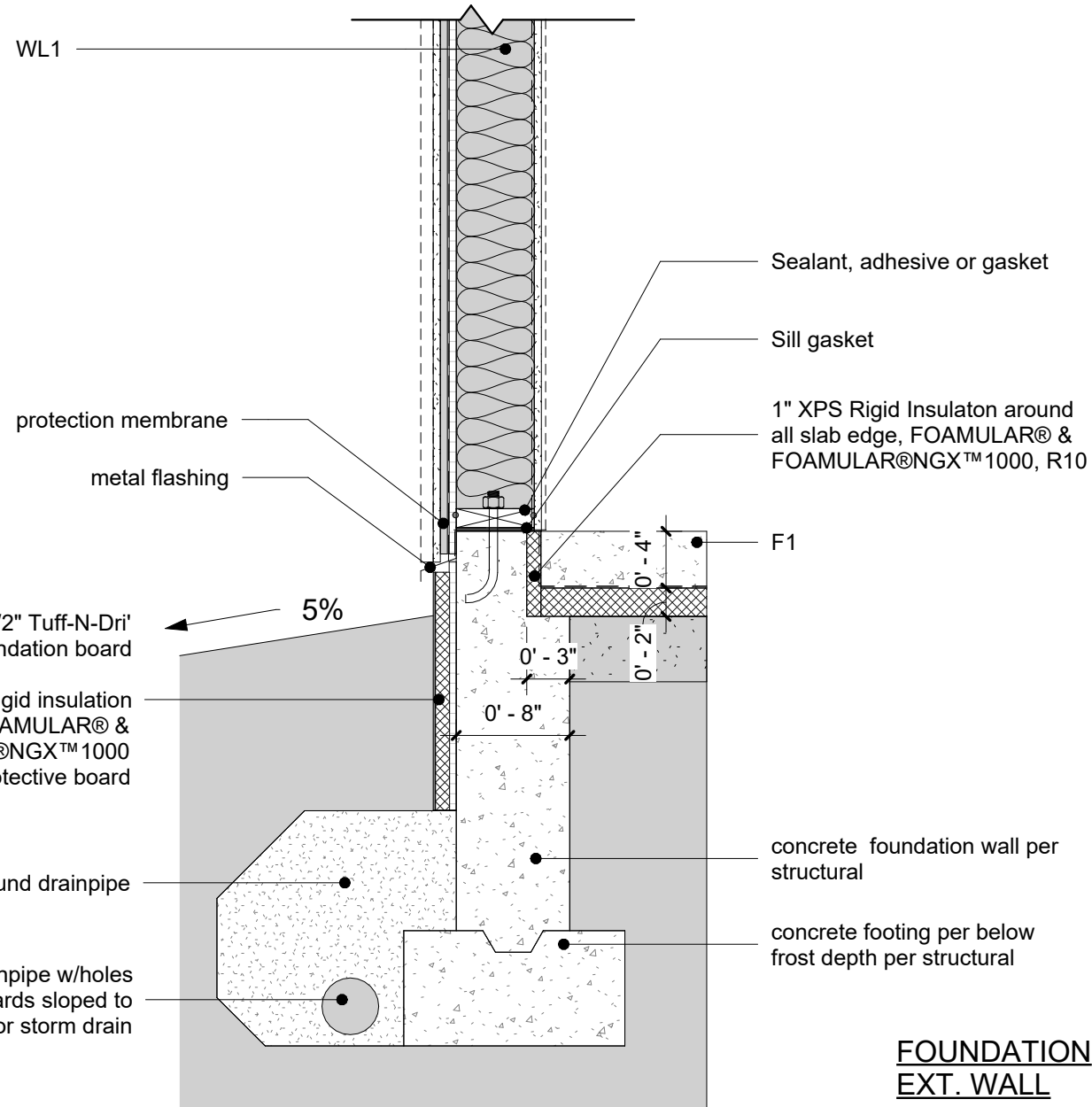
A5.1

2 ROOF EAVE VENT
1" = 1'-0"

D

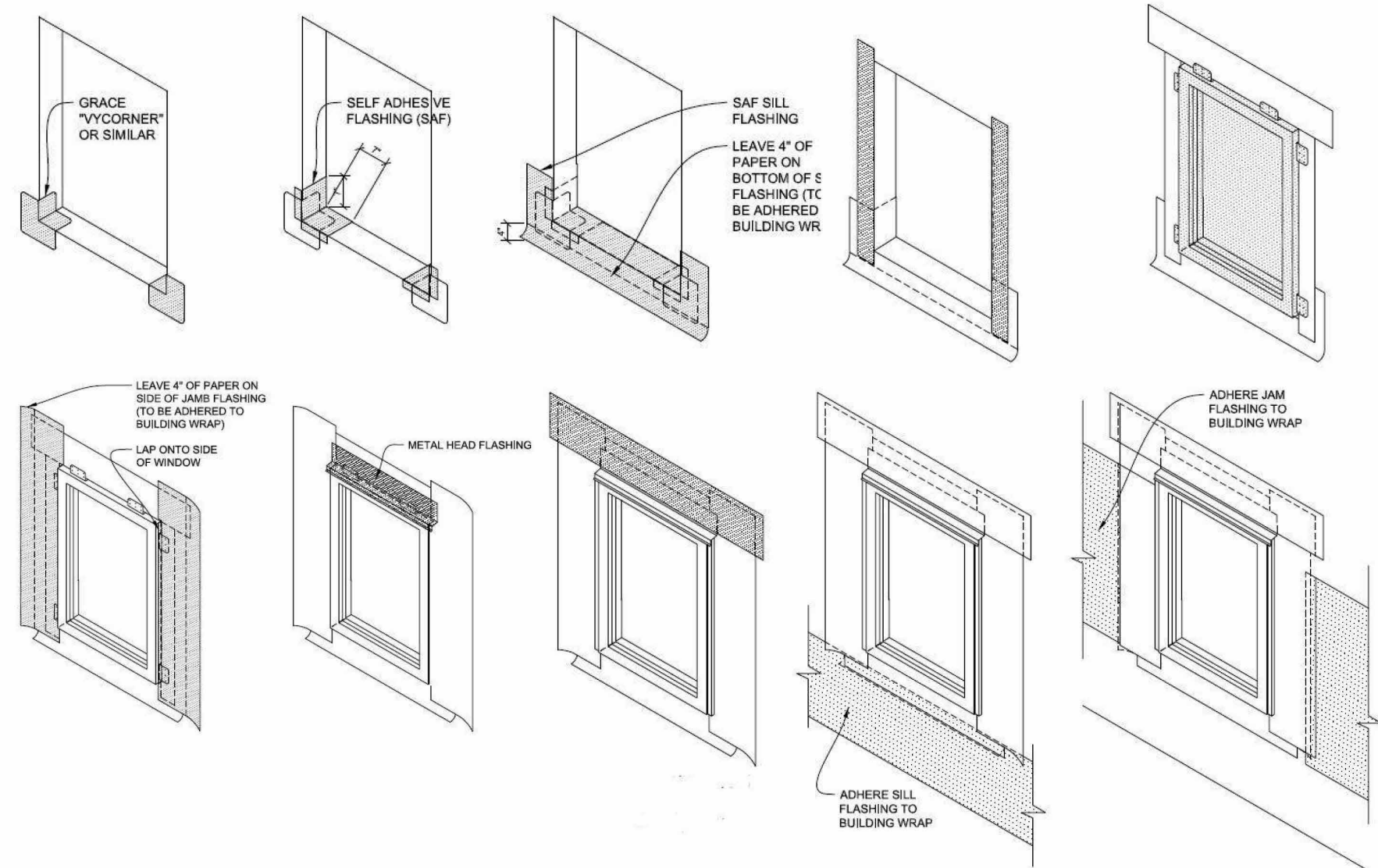
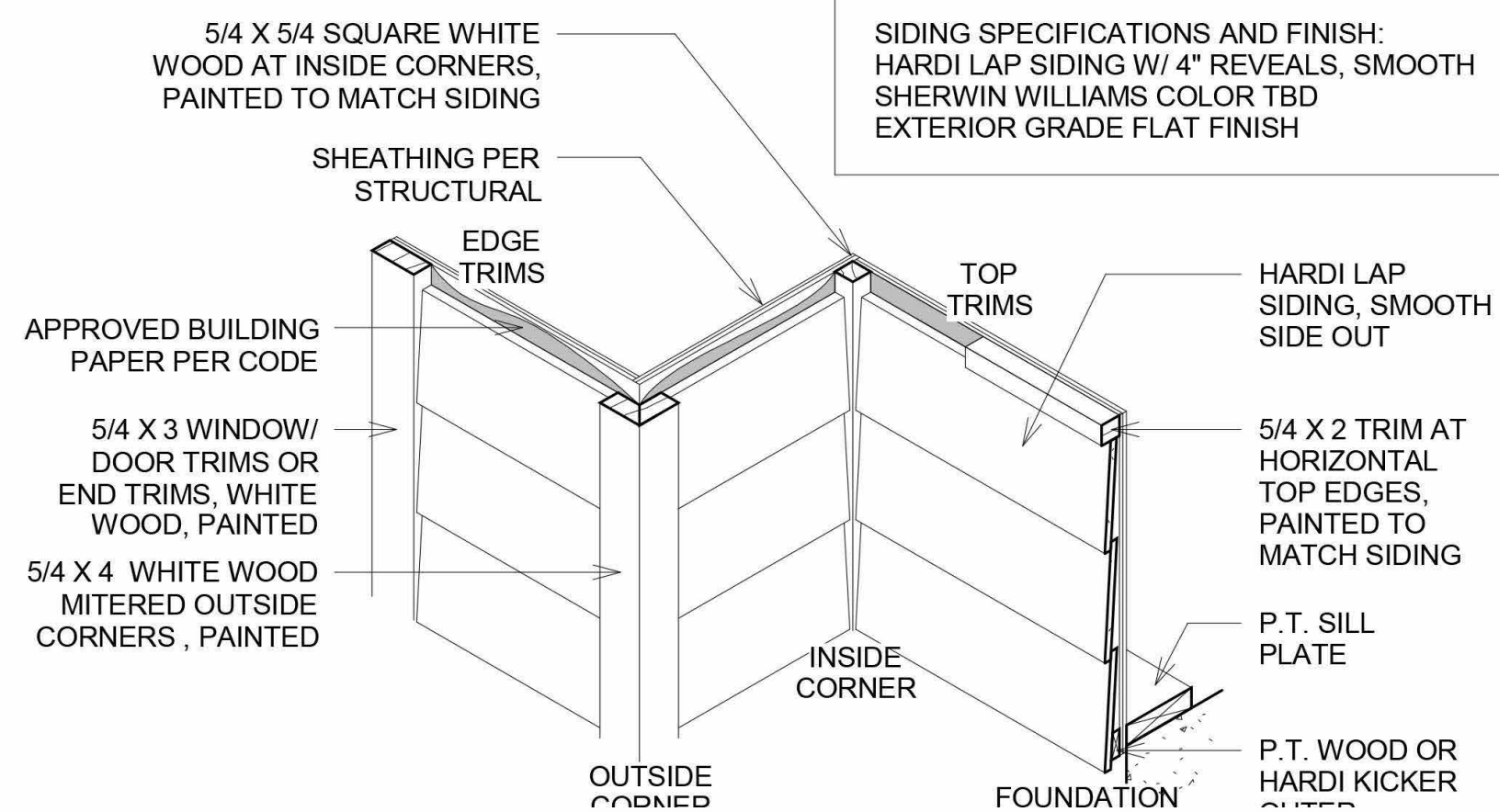
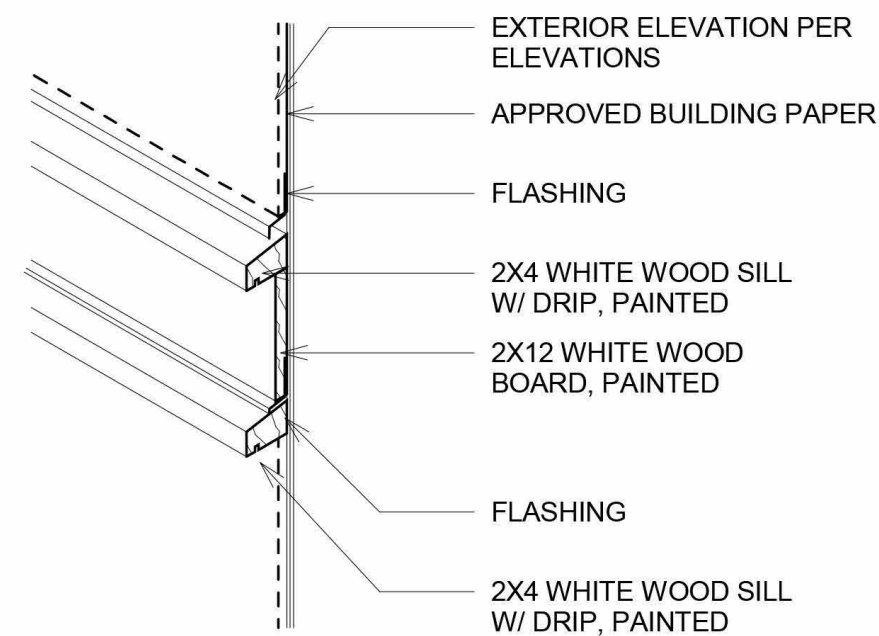
TYP. HEADER
INSULATION

TYP. WINDOW

TYP. RIM
INSULATION4 TYPICAL WALL SECTION
1" = 1'-0"

EXTERIOR TRIMS INCLUDE:
- FASCIAS
- BARGES
- WINDOW AND DOOR TRIMS, LINERS AND JAMBS
- BELLY BANDS
- OUTSIDE CORNER TRIMS (BUT NOT INSIDE)

EXTERIOR TRIMS FINISH:
WHITE WOOD PAINTED
SHERWIN WILLIAMS SW7504 "KEYSTONE GREY"
EXTERIOR GRADE FLAT FINISH

1 DETAIL-EXTERIOR FINISH
NOT-TO-SCALE

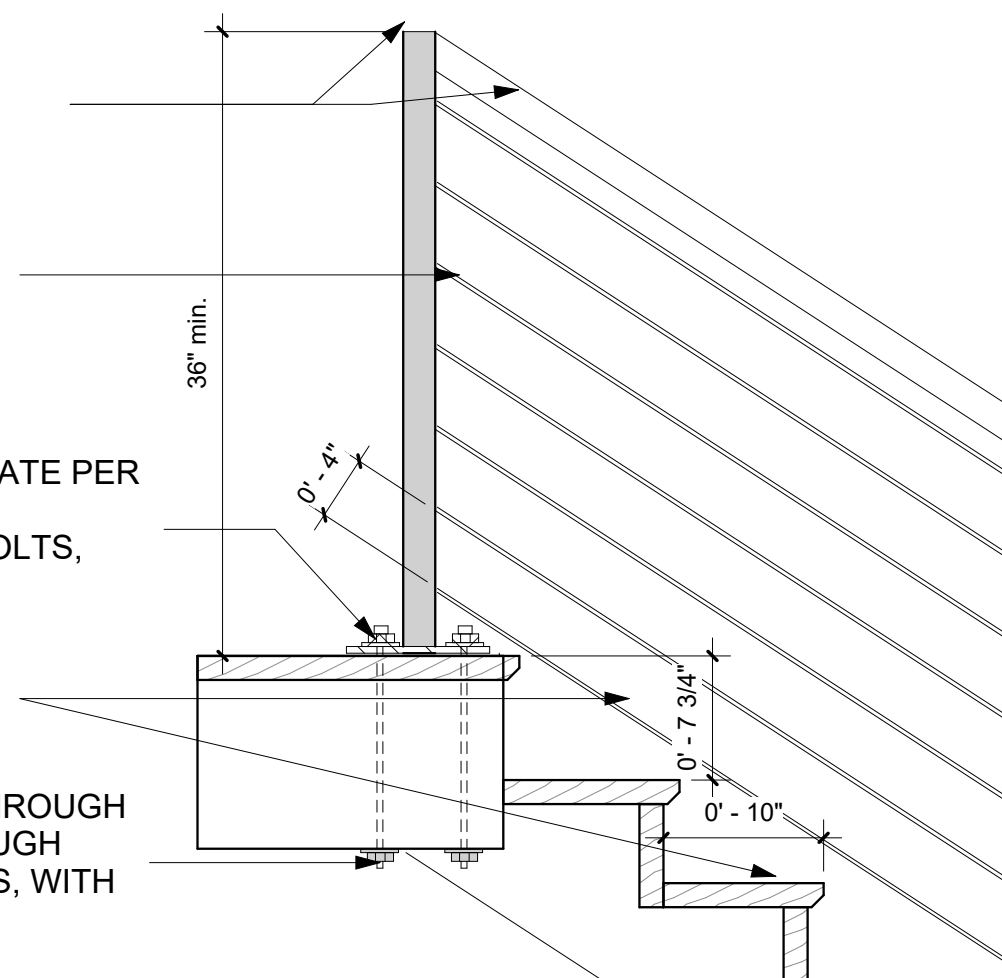
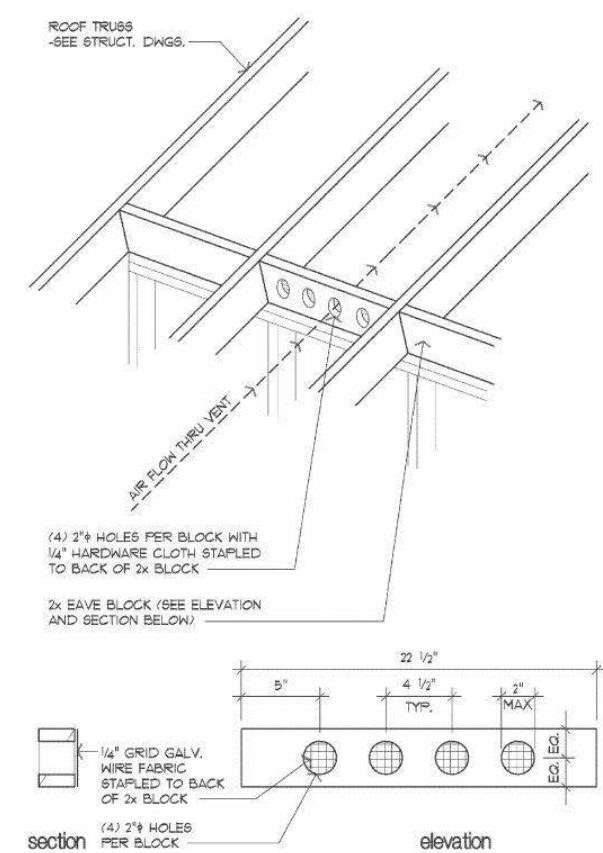
POST AND TOP RAIL
PER MFR. SEE MFR
DRAWING

OPENING SHALL NOT
ALLOW PASSAGE OF
4" DIAMETER
SPHERE

BOLT-SIZE, STEEL PLATE PER
MFR
(4x) 1/4" THROUGH-BOLTS,
SEE MFR DRAWING

PER IRC
TREAD MIN. 10"
RISER MAX. 7 3/4"

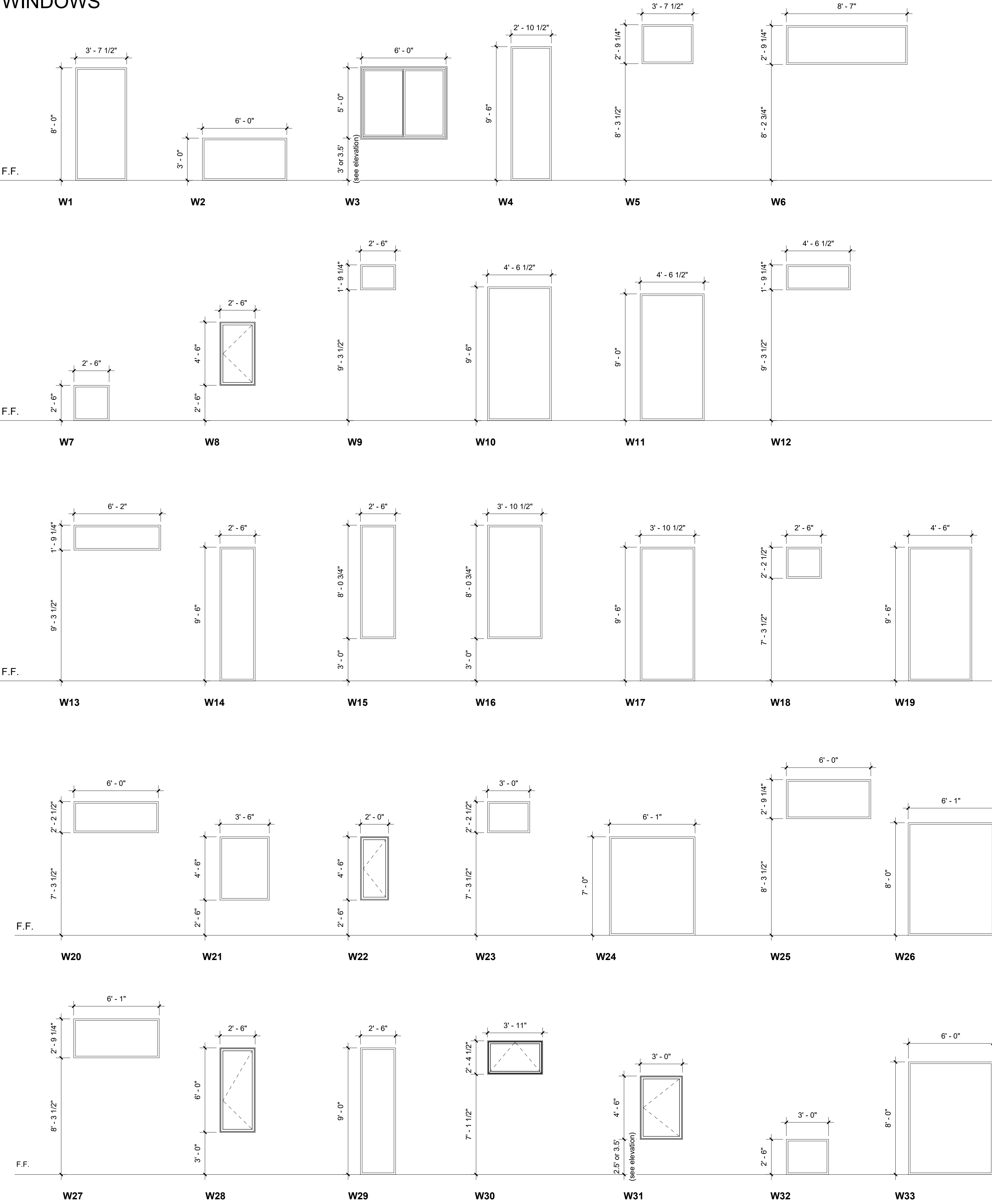
THROUGH-BOLTS, THROUGH
ON FLOOR OR THROUGH
STRINGER ON STAIRS, WITH
NUTS AND WASHERS

5 TYP. STAIR GUARDRAIL
1" = 1'-0"

NOTES:
1. SEE GENERAL NOTES AND PLAN SPECIFICATIONS FOR VENTILATION REQUIREMENTS
2. SEE STRUCTURAL DRAWING FOR BLOCKING DETAIL
3. EACH BLOCK PROVIDES APPROXIMATELY 0.9 SQ. INCHES OF VENTILATION
4. HANSHALL BLOCK SIZE: 24" x 48" x 11"
5. TYPICAL ATTIC: 1 VENT BLOCK AT EVERY THIRD BAY
6. SEE ROOF PLAN FOR VENT AREA REQUIREMENTS
7. SLOPING CEILING: 1 VENT BLOCK AT EACH BAY

3 EAVE VENT BLOCK
NOT-TO-SCALE

WINDOWS



Window Schedule										
Type Mark	Level	Count	Width	Height	Sill Height	U-Value	Type Comments	Glazing Material	Frame	Manufacturer
W1	Main Floor	1	3' - 7 1/2"	8' - 0"	0' - 0"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W2	Main Floor	1	6' - 0"	3' - 0"	0' - 0"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W3	<varies>	2	6' - 0"	5' - 0"	<varies>	0.25	Sliding Window			Marvin Windows and Doors
W4	<varies>	2	2' - 10 1/2"	9' - 6"	<varies>	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W5	Main Floor	1	3' - 7 1/2"	2' - 9 1/4"	8' - 3 1/2"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W6	Main Floor	1	8' - 7"	2' - 9 1/4"	8' - 3 1/2"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W7	Upper Floor	2	2' - 6"	2' - 6"	0' - 0"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W8	Upper Floor	2	2' - 6"	4' - 6"	2' - 6"	0.25	Casement Window			Marvin Windows and Doors
W9	Main Floor	2	2' - 6"	1' - 9 1/4"	9' - 3 1/2"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W10	Upper Floor	2	4' - 6 1/2"	9' - 6"	0' - 0"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W11	Main Floor	2	4' - 6 1/2"	9' - 0"	0' - 0"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W12	Main Floor	2	4' - 6 1/2"	1' - 9 1/4"	9' - 3 1/2"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W13	Main Floor	1	6' - 2"	1' - 9 1/4"	9' - 3 1/2"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W14	Upper Floor	1	2' - 6"	9' - 6"	0' - 0"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W15	Main Floor	1	2' - 6"	8' - 0 3/4"	3' - 0"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W16	Main Floor	2	3' - 10 1/2"	8' - 0 3/4"	3' - 0"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W17	Upper Floor	1	3' - 10 1/2"	9' - 6"	0' - 0"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W18	Upper Floor	2	2' - 6"	2' - 2 1/2"	7' - 3 1/2"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W19	Upper Floor	1	4' - 6"	9' - 6"	0' - 0"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W20	Upper Floor	1	6' - 0"	2' - 2 1/2"	7' - 3 1/2"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W21	Upper Floor	1	3' - 6"	4' - 6"	2' - 6"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W22	Upper Floor	1	2' - 0"	4' - 6"	2' - 6"	0.25	Casement Window			Marvin Windows and Doors
W23	Upper Floor	2	3' - 0"	2' - 2 1/2"	7' - 3 1/2"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W24	Upper Floor	2	6' - 1"	7' - 0"	0' - 0"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W25	Main Floor	1	6' - 0"	2' - 9 1/4"	8' - 3 1/2"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W26	Main Floor	5	6' - 1"	8' - 0"	0' - 0"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W27	Main Floor	5	6' - 1"	2' - 9 1/4"	8' - 3 1/2"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W28	Main Floor	1	2' - 6"	6' - 0"	3' - 0"	0.25	Casement Window			Marvin Windows and Doors
W29	Main Floor	1	2' - 6"	9' - 0"	0' - 0"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W30	Upper Floor	1	3' - 11"	2' - 4 1/2"	7' - 1 1/2"	0.25	Awning Window	Glass-Marvin-IG Low E II with Argon	Wood Ultrex	Marvin Windows and Doors
W31	<varies>	3	3' - 0"	4' - 6"	<varies>	0.25	Casement Window			Marvin Windows and Doors
W32	Upper Floor	2	3' - 0"	2' - 6"	0' - 0"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W34	<varies>	2	5' - 0"	9' - 6"	<varies>	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W35	Main Floor	1	3' - 1"	9' - 6"	1' - 6 3/4"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W36	Upper Floor	1	6' - 2"	9' - 6"	0' - 0"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W37	Upper Floor	1	3' - 2 3/4"	9' - 6"	0' - 0"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W38	Basement Floor	1	3' - 10 1/2"	4' - 6"	3' - 6"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W39	Upper Floor	1	2' - 5 1/2"	9' - 6"	0' - 0"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W40	Main Floor	1	4' - 9"	2' - 9 1/4"	8' - 3 1/2"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W41	Upper Floor	2	6' - 1"	2' - 2 1/2"	7' - 3 1/2"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W42	Upper Floor	1	7' - 3"	2' - 2 1/2"	7' - 3 1/2"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W43	Upper Floor	1	5' - 7"	2' - 2 1/2"	7' - 3 1/2"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W44	Main Floor	1	9' - 2"	2' - 9 1/4"	8' - 3 1/2"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W45	Top plate ht	1	4' - 0"	8' - 0"		0.25	Skylight			VELUX

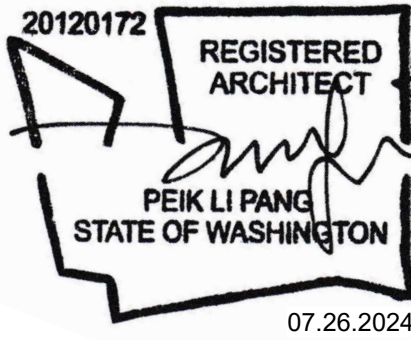
ALL WINDOWS DIMENSIONS ARE REPESENTING
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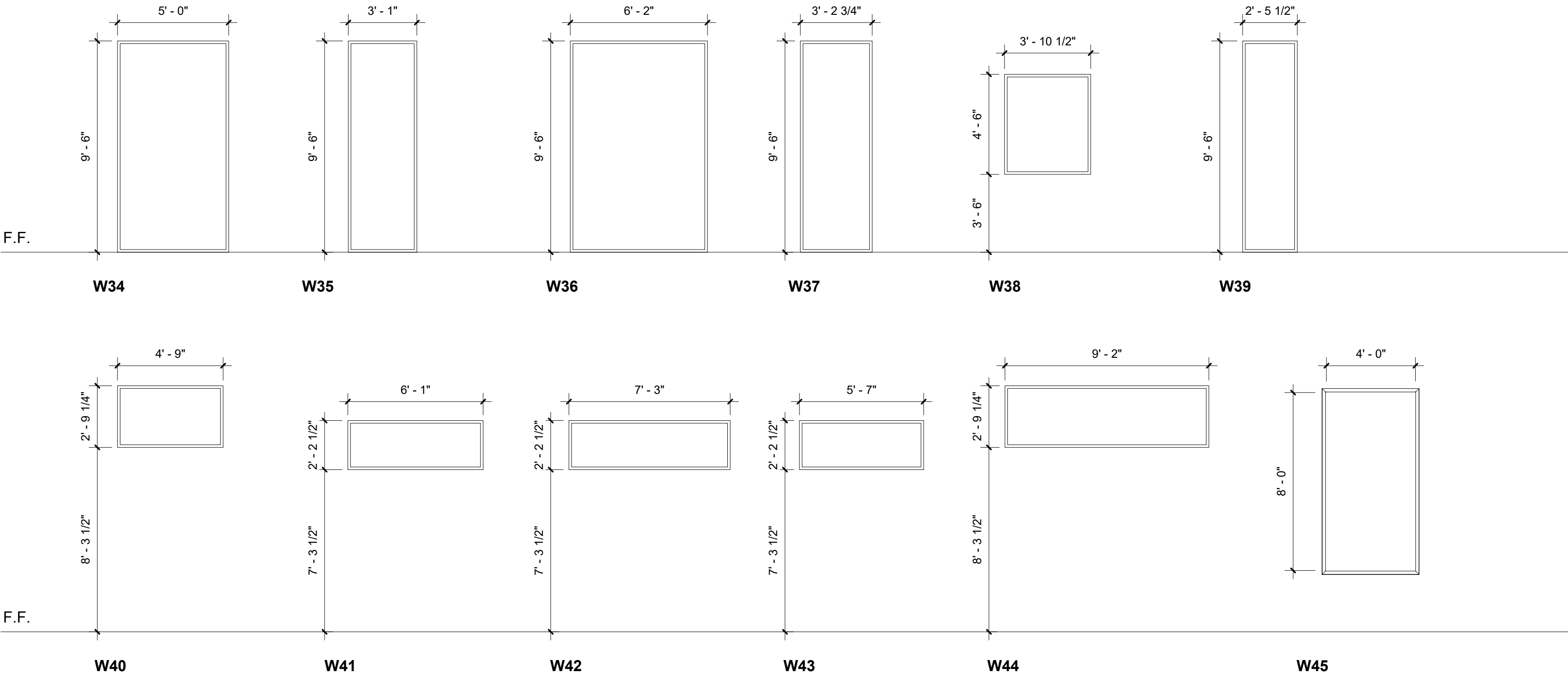
NO. DESCRIPTION DATE

DATE: 07.26.24

Window
Schedule

A6.0

WINDOWS



U VALUE: MAX 0.28
TYPE: VELUX, SKYMAX LARGE SPAN SKYLIGHTS, Skylights, custom size, rough opening 4' x 8', curb mounted, double-pane glass and glass to fulfill SRC R308.6.2 (1).

- the glazing material is laminated glass with the interlayer thickness of at least 0.030 inch

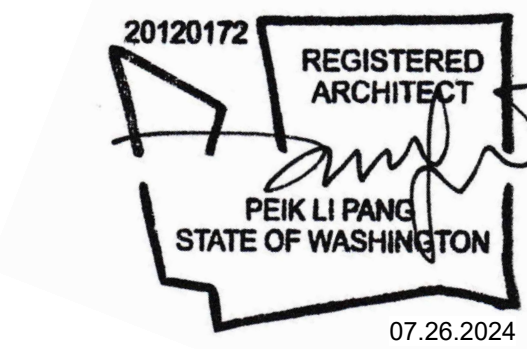
FRAME: ALUMINUM FRAME
MANUFACTURER: VELUX, SKYMAX

Window Schedule										
Type Mark	Level	Count	Width	Height	Sill Height	U-Value	Type Comments	Glazing Material	Frame	Manufacturer
W1	Main Floor	1	3' - 7 1/2"	8' - 0"	0' - 0"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W2	Main Floor	1	6' - 0"	3' - 0"	0' - 0"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W3	<varies>	2	6' - 0"	5' - 0"	<varies>	0.25	Sliding Window			Marvin Windows and Doors
W4	<varies>	2	2' - 10 1/2"	9' - 6"	<varies>	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W5	Main Floor	1	3' - 7 1/2"	2' - 9 1/4"	8' - 3 1/2"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W6	Main Floor	1	8' - 7"	2' - 9 1/4"	8' - 3 1/2"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W7	Upper Floor	2	2' - 6"	2' - 6"	0' - 0"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W8	Upper Floor	2	2' - 6"	4' - 6"	2' - 6"	0.25	Casement Window			Marvin Windows and Doors
W9	Main Floor	2	2' - 6"	1' - 9 1/4"	9' - 3 1/2"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W10	Upper Floor	2	4' - 6 1/2"	9' - 6"	0' - 0"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W11	Main Floor	2	4' - 6 1/2"	9' - 0"	0' - 0"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W12	Main Floor	2	4' - 6 1/2"	1' - 9 1/4"	9' - 3 1/2"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W13	Main Floor	1	6' - 2"	1' - 9 1/4"	9' - 3 1/2"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W14	Upper Floor	1	2' - 6"	9' - 6"	0' - 0"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W15	Main Floor	1	2' - 6"	8' - 0 3/4"	3' - 0"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W16	Main Floor	2	3' - 10 1/2"	8' - 0 3/4"	3' - 0"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W17	Upper Floor	1	3' - 10 1/2"	9' - 6"	0' - 0"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W18	Upper Floor	2	2' - 6"	2' - 2 1/2"	7' - 3 1/2"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W19	Upper Floor	1	4' - 6"	9' - 6"	0' - 0"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W20	Upper Floor	1	6' - 0"	2' - 2 1/2"	7' - 3 1/2"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W21	Upper Floor	1	3' - 6"	4' - 6"	2' - 6"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W22	Upper Floor	1	2' - 0"	4' - 6"	2' - 6"	0.25	Casement Window			Marvin Windows and Doors
W23	Upper Floor	2	3' - 0"	2' - 2 1/2"	7' - 3 1/2"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W24	Upper Floor	2	6' - 1"	7' - 0"	0' - 0"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W25	Main Floor	1	6' - 0"	2' - 9 1/4"	8' - 3 1/2"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W26	Main Floor	5	6' - 1"	8' - 0"	0' - 0"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W27	Main Floor	5	6' - 1"	2' - 9 1/4"	8' - 3 1/2"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W28	Main Floor	1	2' - 6"	6' - 0"	3' - 0"	0.25	Casement Window			Marvin Windows and Doors
W29	Main Floor	1	2' - 6"	9' - 0"	0' - 0"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W30	Upper Floor	1	3' - 11"	2' - 4 1/2"	7' - 1 1/2"	0.25	Awning Window	Glass-Marvin-IG Low E II with Argon	Wood Ultrex	Marvin Windows and Doors
W31	<varies>	3	3' - 0"	4' - 6"	<varies>	0.25	Casement Window			Marvin Windows and Doors
W32	Upper Floor	2	3' - 0"	2' - 6"	0' - 0"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W34	<varies>	2	5' - 0"	9' - 6"	<varies>	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W35	Main Floor	1	3' - 1"	9' - 6"	1' - 6 3/4"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W36	Upper Floor	1	6' - 2"	9' - 6"	0' - 0"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W37	Upper Floor	1	3' - 2 3/4"	9' - 6"	0' - 0"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W38	Basement Floor	1	3' - 10 1/2"	4' - 6"	3' - 6"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W39	Upper Floor	1	2' - 5 1/2"	9' - 6"	0' - 0"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W40	Main Floor	1	4' - 9"	2' - 9 1/4"	8' - 3 1/2"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W41	Upper Floor	2	6' - 1"	2' - 2 1/2"	7' - 3 1/2"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W42	Upper Floor	1	7' - 3"	2' - 2 1/2"	7' - 3 1/2"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W43	Upper Floor	1	5' - 7"	2' - 2 1/2"	7' - 3 1/2"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W44	Main Floor	1	9' - 2"	2' - 9 1/4"	8' - 3 1/2"	0.25	Direct Glaze Rectangle	Glass-Marvin-IG Low E II with Argon	High Density Fiberglass	Marvin Windows and Doors
W45	Top plate ht	1	4' - 0"	8' - 0"		0.25	Skylight			VELUX

ALL WINDOWS DIMENSIONS ARE REPRESENTING
ROUGH OPENING (RO)



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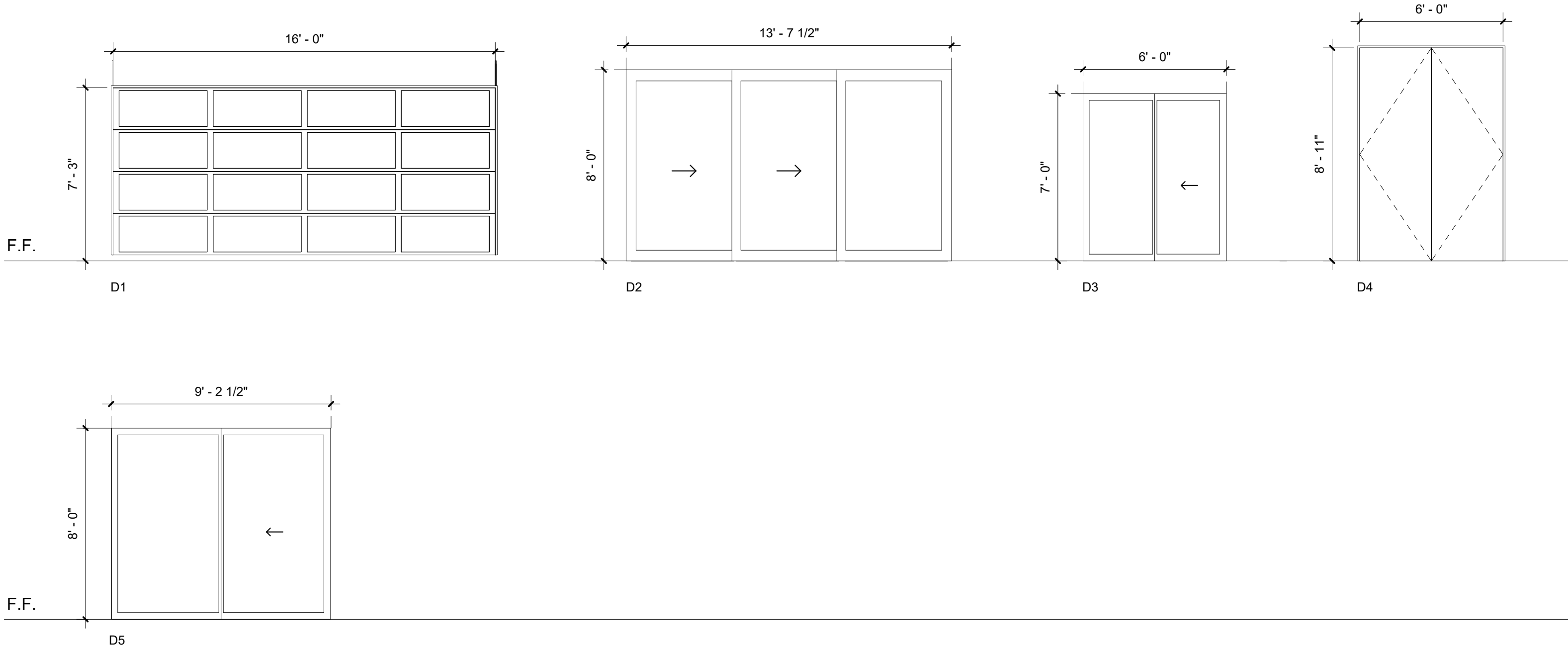
NO.	DESCRIPTION	DATE
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DATE: 07.26.24

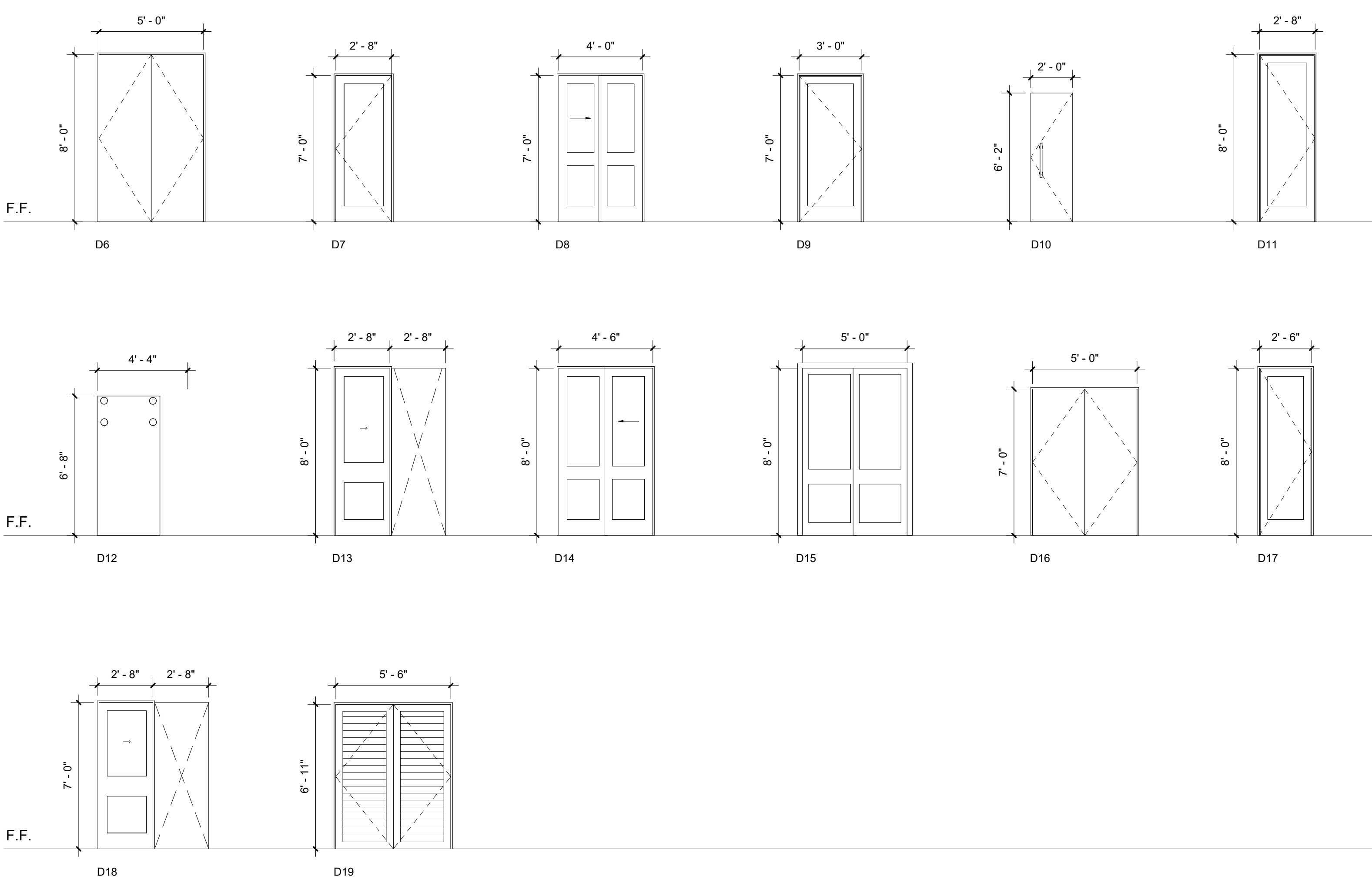
Window
Schedule
2

A6.1

EXTERIOR



INTERIOR



Door Schedule						
Door Type	Count	Width	Height	U-Values	Type Comments	Panel Material
D1	1	16' - 0"	7' - 0"		Sectional Garage Door	
D2	1	13' - 7 1/2"	8' - 0"	0.25	Triple Panel Sliding Door	Glass
D3	1	6' - 0"	7' - 0"	0.25	Exterior Double Slider	Glass
D4	1	6' - 0"	8' - 11"	0.25	Double Flush Door	Solid Core Wood
D5	1	9' - 2"	8' - 0"	0.25	Exterior Double Slider	Glass
D6	2	5' - 0"	8' - 0"		Double Flush Door	Solid Core Wood
D7	3	2' - 8"	7' - 0"		Single Flush Door	Solid Core Wood
D8	1	4' - 0"	7' - 0"		Double Pocket Sliding Door	Solid Core Wood
D9	1	3' - 0"	7' - 0"		Single Flush Door	Solid Core Wood
D10	3	2' - 0"	6' - 2"		Shower Glass Door	Glass
D11	7	2' - 8"	8' - 0"		Single Flush Door	Solid Core Wood
D12	3	4' - 4"	6' - 8"		Shower Glass Sliding Door	Glass
D13	3	2' - 8"	8' - 0"		Single Pocket Sliding Door	Solid Core Wood
D14	1	4' - 6"	8' - 0"		Double Pocket Sliding Door	Solid Core Wood
D15	1	5' - 0"	8' - 0"		Double Pocket Sliding Door	Solid Core Wood
D16	1	5' - 0"	7' - 0"		Double Flush Door	Solid Core Wood
D17	3	2' - 6"	8' - 0"		Single Flush Door	Solid Core Wood
D18	1	2' - 8"	7' - 0"		Single Pocket Sliding Door	Solid Core Wood
D19	1	5' - 6"	6' - 11"		Double Louvred Flush Door	Solid Core Wood

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NO.	DESCRIPTION	DATE
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DATE: 07.26.24

Door
Schedule

A6.2

7/26/2024 5:42:30 PM
Schedule - Door
1/4" = 1'-0"

2021 WSEC CODE PATH

ENERGY CODE TO COMPLY WITH CHAPTER 51-11C WAC WASHINGTON STATE ENERGY CODE - RESIDENTIAL 2021 EDITION, SECTIONS R401 THROUGH R404 AND ADDITION OF SECTION R406

R401.2 Compliance. Projects shall comply with one of the following:

- Sections R401 through R404. In addition, dwelling units and sleeping units in a residential building shall comply with Section R406.
- Section R405.
- Section R407.

TABLE R402.1.2 INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT*

CLIMATE ZONE 5 AND MARINE 4	
Fenestration U-Factor ^a	0.30
Skylight U-Factor	0.50
Ceiling U-Factor	0.024
Above-Grade Wall U-Factor	0.056
Floor U-Factor	0.029
Slab on Grade F-Factor	0.54
Below Grade 2' Depth	
Wall U-Factor	0.042
Slab F-Factor	0.59
Below Grade 3' Depth	
Wall U-Factor	0.040
Slab F-Factor	0.56
Below Grade 7' Depth	
Wall U-Factor	0.035
Slab F-Factor	0.50

For Sl: 1 foot = 304.8 mm, ci = continuous insulation, int = intermediate framing.

- U-factors or F-factors shall be obtained from measurement, calculation or an approved source, or as specified in Section R402.1.5.
- A maximum U-factor of 0.32 shall apply to vertical fenestration products installed in buildings located above 4000 feet in elevation above sea level, or in windborne debris regions where protection of openings is required under Section R301.2.1.2 of the International Residential Code.

R406 ADDITIONAL ENERGY EFFICIENCY REQUIREMENTS COMPLIANCE

2021 Washington State Energy Code - Residential
Prescriptive Energy Code Compliance for All Climate Zones in Washington
Single Family - New & Additions (effective March 15, 2024)



Permit	Address or Lot & Block
City	Zip

These requirements apply to all IRC building types, including detached one- and two-family dwellings and multiple single-family dwellings (townhouses).

Instructions: This single-family project uses the requirements of the Prescriptive Path below to incorporate the minimum values listed. Based on the conditioned floor area of the structure, the number of required additional credits must be selected by the permit applicant.

Provide all information from the following table in a building permit drawing: Table R402.1.2 - Insulation and Fenestration Requirements by Component, Table R406.2 - Fuel Normalization Credits and R406.3 Energy Credits.

Authorized Representative	Signature	Date
All Climate Zones Table R402.1.3		U-Factor ^a
Fenestration U-Factor ^a	R-Value	
Single U-Factor	5	0.30
Double U-Factor	10	0.18
Triple U-Factor	15	0.12
Wood Frame Wall ^b	20/5 or 13/10	n/a
Floor	10	0.024
Below Grade Wall ^b	10/15/21 int + 5/18	n/a
Slab 2' (Value & Depth)	20	0.54

- Revises or removes, U-factors and R-values are maximums. When insulation is installed in a cavity which is less than the listed or design thickness of the insulation, the component R-value of the insulation from Appendix Table A1.0.1.1 shall be less than the R-value specified in the table.
- The fenestration U-factor values include single glazing.
- 10/15/21+5/18 means R-10 continuous insulation on the exterior of the wall, or R-15 continuous insulation on the interior of the wall, or R-21 cavity insulation plus thermal break between the interior and exterior of the wall, or R-10 continuous insulation on the exterior of the wall, or R-15 cavity insulation plus thermal break between the interior and exterior of the wall. 20/5 means R-20 thermal break between the slab and basement wall.
- R-10 continuous insulation is required under heated slab on grade floors. See Section R402.2.3.
- For single other or joint-resilient ceiling, the insulation may be reduced to 5.0 R for the full insulation depth installed on the top surface of the exterior wall.
- R-15 continuous insulation installed over an existing slab is deemed to be equivalent to the required perimeter slab insulation when applied to existing slab complying with Section R402.1.3. If floor joists are used, it shall meet the requirements for thermal barrier protecting floor joists.
- For flat structures designed with insulated R-400, kg, kg shall meet the requirements for climate zone 5 of R-400.
- For Intermediate Fenestration Glazing and Insulation as described in Section R302.2, including standard fenestration 30 inches or more, 78 percent of the wall assembly and headboard insulation with a minimum of 5 R of insulation.
- The first value is cavity insulation, the second value is continuous insulation. Therefore, for example, "10/15/21" means R-10 cavity insulation plus R-15 continuous insulation.
- A maximum U-factor of 0.32 shall apply to vertical fenestration products installed in buildings located above 4000 feet in elevation above sea level, or in windborne debris regions where protection of openings is required under Section R301.2.1.2 of the International Residential Code.

Prescriptive Path - Single Family WSEC-R-2021 Edition EPCA C103 (1/21/2024)

2021 Washington State Energy Code - Residential
Prescriptive Energy Code Compliance for All Climate Zones in Washington
Single Family - New & Additions (effective March 15, 2024)

Each dwelling unit in a residential building shall comply with sufficient credits from Table R406.2 (fuel normalization credits) and Table R406.3 (energy credits) to achieve the following minimum number of credits. To claim this credit, the building permit drawings shall specify the option selected and the maximum tested building air leakage, and show the qualifying ventilation system and its control sequence of operation.

- Small dwelling unit:
Dwelling units less than 1500 square feet in conditioned floor area with less than 300 square feet of fenestration area. Additions to existing building greater than 500 square feet of heated floor area but less than 1500 square feet.
- Medium dwelling unit:
all dwelling units that are not included in 1, 4, 5, or 6.
- Large dwelling unit:
Dwelling units exceeding 5000 square feet of conditioned floor area.
- Dwelling units serving Group B occupancies.
- Section R401.1 and residential building Section R202 for Group B.
- Additions: 150 square feet to 500 square feet.

The drawings, included with the building permit application, shall identify which options have been selected and the point value of each option, regardless of whether separate mechanical, plumbing, electrical, or other permits are utilized for the project.

Before selecting your credits on this Summary table, review the details in Table R406.2 (Single Family), on page 4.

System Type	Description of Primary Heating Source	Credits - select ONE system type
1	For combustion heating equipment meeting minimum federal efficiency standards for the equipment listed in Table C402.2.2(1) or C402.2.2(2).	0
2	For an initial heating system using a heat pump that meets federal standards for the equipment listed in Table C402.2.2(3) and supplemental heating provided by electric resistance or a combination furnace meeting minimum standards listed in Table C402.2.2(3B) found in the 2021 WSEC-COMMERCIAL ENERGY CODE.	1.5
3	For heating system based on electric resistance only (either forced air or zonal).	0.5
4	For heating system using a heat pump that meets federal standards for the equipment listed in Table C402.2.2(3) or C402.2.2(3B) or for water heat pump and boiler are configured to provide both heating and cooling and are rated in accordance with ASHRAE 90.1-2009.	3.0
5	For heating system based on electric resistance with: 1. Inverter-driven ductless mini-split heat pump system installed in the largest zone in the dwelling. 2. With 2kW or less total installed heating capacity per dwelling.	2.0

a. See Section R401.1 and residential building Section R202 for Group B occupancies.
b. The hot-back-up furnace will operate as a fan-only when the heat pump is operating. The heat pump shall operate at all temperatures above 38°F (3°C) (or lower), below that "changeover" temperature, the heat pump would not operate to provide space heating. The gas furnace provides heating below 38°F (3°C) (or lower).
c. Additional points for the HVAC system are included in Table R406.3.

Prescriptive Path - Single Family WSEC-R-2021 Edition EPCA C103 (1/21/2024)

2021 Washington State Energy Code - Residential
Prescriptive Energy Code Compliance for All Climate Zones in Washington
Single Family - New & Additions (effective March 15, 2024)

Options	Energy Credit Option Descriptions	Credits - refer to one energy option ^a	Comments:
1.1	Efficient Building Envelope	1.0	
1.2	Efficient Building Envelope	1.5	
1.3	Efficient Building Envelope	2.0	
2.1	Air Leakage Control and Efficient Ventilation	1.0	
2.2	Air Leakage Control and Efficient Ventilation	1.5	
2.3	Air Leakage Control and Efficient Ventilation	2.0	
3.1	High Efficiency HVAC	0.5	
3.2	High Efficiency HVAC	0.5	
3.3	High Efficiency HVAC	0.5	
3.4	High Efficiency HVAC	0.5	
3.5	High Efficiency HVAC	0.5	
3.6	High Efficiency HVAC	0.5	
3.7	High Efficiency HVAC	0.5	
3.8	High Efficiency HVAC	0.5	
3.9	High Efficiency HVAC	0.5	
3.10	High Efficiency HVAC	0.5	
3.11	High Efficiency HVAC	0.5	
4.1	High Efficiency HVAC Distribution System	0.5	
5.1	Efficient Water Heating	0.5	
5.2	Efficient Water Heating	0.5	
5.3	Efficient Water Heating	0.5	
5.4	Efficient Water Heating	0.5	
5.5	Efficient Water Heating	0.5	
5.6	Efficient Water Heating	0.5	
5.7	Efficient Water Heating	0.5	
5.8	Efficient Water Heating	0.5	
6.1	Renewable Electric Energy (4.5 credits max)	0.5-4.5	
7.1	Appliance Package	0.5	
Including energy equalization credits		Total Credits	8.0

a. A whole-house heating source rated at a maximum of 5.0 Watts/90 sq ft of conditioned floor area or 500 Watts, whichever is higher, may be included in the heating unit.
b. Section R401.1 and residential building Section R202 for Group B occupancies.
c. Option 3.1 may only be taken with Option 3.1 and 3.2. To qualify for Option 3.1, the system shall be a 2-speed heat pump system. Variable capacity heat pumps are eligible from claiming this option.
d. The option may only be claimed for systems that meet the requirements of Section R402.2.3.
e. Option 3.1 may only be taken with Efficient Water Heating Option 5.1 or 5.2. Equipment used for space heating shall be calculated as provided in Section R401.1. To claim credit for Option 3.1, the system shall be a 2-speed heat pump system. Variable capacity heat pumps are eligible from claiming this option.
f. Option 3.1 may only be taken with Efficient Water Heating Option 5.1 or 5.2. Equipment used for space heating shall be calculated as provided in Section R401.1. To claim credit for Option 3.1, the system shall be a 2-speed heat pump system. Variable capacity heat pumps are eligible from claiming this option.
g. Approved manufacturers specifications or approvals. Insulation shall be installed in accordance with Section R402.1.3.

Prescriptive Path - Single Family WSEC-R-2021 Edition EPCA C103 (1/21/2024)

2021 Washington State Energy Code – Residential			2021 Washington State Energy Code – Residential		
Prescriptive Energy Code Compliance for All Climate Zones in Washington Single Family – New & Additions (Effective March 15, 2024)			Prescriptive Energy Code Compliance for All Climate Zones in Washington Single Family – New & Additions (Effective March 15, 2024)		
Option	Description	Credits-SE	Option	Description	Credits-SE
Table R402.3 – Energy Credits (Single Family)					
RELEVANT BUILDING ENVELOPE OPTIONS (only one option from items 1 through 4 may be selected in this category). Compliance with the conductive UA targets is demonstrated using R402.1.5.5, Total UA alternative, unless it is proposed that the building envelope be upgraded (beyond Table R402.1.5.5).					
1.1	Prescriptive compliance is based on Table R402.1.3 with the following modifications: Vertical fenestration U-Factor: Floor 1.1: 0.22 Floor 2.1: 0.22 Floor 3.1: 0.22 Floor 4.1: 0.22 Floor 5.1: 0.22 Floor 6.1: 0.22 Floor 7.1: 0.22 Floor 8.1: 0.22 Floor 9.1: 0.22 Floor 10.1: 0.22 Floor 11.1: 0.22 Floor 12.1: 0.22 Floor 13.1: 0.22 Floor 14.1: 0.22 Floor 15.1: 0.22 Floor 16.1: 0.22 Floor 17.1: 0.22 Floor 18.1: 0.22 Floor 19.1: 0.22 Floor 20.1: 0.22 Floor 21.1: 0.22 Floor 22.1: 0.22 Floor 23.1: 0.22 Floor 24.1: 0.22 Floor 25.1: 0.22 Floor 26.1: 0.22 Floor 27.1: 0.22 Floor 28.1: 0.22 Floor 29.1: 0.22 Floor 30.1: 0.22 Floor 31.1: 0.22 Floor 32.1: 0.22 Floor 33.1: 0.22 Floor 34.1: 0.22 Floor 35.1: 0.22 Floor 36.1: 0.22 Floor 37.1: 0.22 Floor 38.1: 0.22 Floor 39.1: 0.22 Floor 40.1: 0.22 Floor 41.1: 0.22 Floor 42.1: 0.22 Floor 43.1: 0.22 Floor 44.1: 0.22 Floor 45.1: 0.22 Floor 46.1: 0.22 Floor 47.1: 0.22 Floor 48.1: 0.22 Floor 49.1: 0.22 Floor 50.1: 0.22 Floor 51.1: 0.22 Floor 52.1: 0.22 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ALARMS IRC 2018:

Ⓢ SMOKE DETECTORS (IRC R314.3)

R314.1.1 Listings. Smoke alarms shall be listed in accordance with UL 217. Heat detectors and heat alarms shall be listed for the intended application. Combination smoke and carbon monoxide alarms shall be listed in accordance with UL 217 and UL 2034.

R314.2 Where required. For new construction, Smoke alarms shall be provided in dwelling units. A heat detector or hear alarm shall be provided in new attached garages.

R314.3 Location. Smoke alarms shall be installed in the following locations:
1. In each sleeping room or sleeping loft
2. Outside each separate sleeping area in the immediate vicinity of the bedrooms.
3. On each additinal story of the dwelling, including basements and habitabe attics and not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one ful story below the upper level.
4. Smoke alarms shall be installed not less than 3 feet horizontally from the door or opening of a bathroom that contains a bathtub or shower unless this would prevent placement of a smoke alarm required by this section.

R314.4 Interconnectivity. Where more than one smoke alarm is required to be installed within an individual dwelling unit in accordance with Section R 314.2, the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual dwelling unit. Physical interconnection of smoke alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm.

R314.5 Combination alarms. Combination smoke and carbon monoxide alarms shall be permitted to be used in lieu of carbon monoxide alarms.

Ⓜ CARBON MONOXIDE ALARM (IRC R 315.1)

R315.1.1 Listings, Carbon monoxide alarms shall be listed in accordance with UL 2034. Combination carbon monoxide and smoke alarms shall be listed in accordance with UL 2034 and UL 217.

R315.2 Where required. For new construction, an approved carbon monoxide alarm shall be installed outside of each separate sleeping area in the immediate vicinity of the bedroom in dwelling units and each level of the dwelling in accordance with manufacturer's recommendation.

R315.3 Location. Carbon monoxide alarms in dwelling units shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms and each level of the dwelling with the manufacturer's recommendations. Where a fuel-burning appliance is located within a bedroom or its attached bathroom, a carbon monoxide alarm shall be installed within the bedroom.

R315.4 Combination alarms. Combination carbon monoxide and smoke alarms shall be permitted to be used in lieu of carbon monoxide alarms.

R315.5 Interconnectivity. Where more than one carbon monoxide alarm is required to be installed within an individual dwelling unit in accordance with Section R 315.3, the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual dwelling unit. Physical interconnection of carbon monoxide alarms shall not be required wehre listed wireless alarms are installed and all alarms sound upon activation of one alarm.

ⓂⓈ NEW ATTACHED GARAGES (IRC R314.2.3)

R314.2.3 New Attached Garages
A heat detector or heat alarm rated for the ambient outdoor temperatures and humidity shall be installed in new garages that are attached to or located under new and existing dwellings. Heat detectors and heat alarms shall be installed in a central location and in accordance with the manufacturer's instructions.

MECHANICAL VENTILATION IRC 2018:

LOCAL EXHAUST RATES

- 1

100 CFM ON SWITCH
- 2

50 CFM ON SWITCH

TABLE M1505.4.4 MINIMUM REQUIRED LOCAL EXHAUST RATES FOR ONE- AND TWO-FAMILY DWELLINGS

AREA TO BE EXHAUSTED	EXHAUST RATES
Kitchens	100 cfm intermittent or 25 cfm continuous
Bathrooms-Toilet Rooms	Mechanical exhaust capacity of 50 cfm intermittent or 30 cfm continuous

For 50: 1 cubic foot per minute = 0.000473 m³/s

M1505 MECHANICAL VENTILATION
Whole-House Mechanical Ventilation System Selected - Exhaust Ventilation System

THE WHOLE HOUSE VENTILATION SYSTEM SHALL PROVIDE OUTDOOR AIR TO EACH HABITABLE SPACE AT A CONTINUOUS RATE OF NOT LESS THAN DETERMINED IN ACCORDANCE WITH IRC 2018 TABLE M1505.4.3(1).

TABLE M1505.4.3(1): <4,501-6,000 SF DWELLING UNIT AREA WITH 4-5 BEDROOMS 150 CFM AIRFLOW REQUIRED

- 3

90 CFM per TABLE M1505.4.3(1)

SECTION M1505
MECHANICAL VENTILATION

M1505.1 General.

Where local exhaust or whole-house mechanical ventilation is provided, the equipment shall be designed in accordance with this section.

M1505.2 Recirculation of air.

Exhaust air from bathrooms and toilet rooms shall not be recirculated within a residence or circulated to another dwelling unit and shall be exhausted directly to the outdoors. Exhaust air from bathrooms, toilet rooms and kitchens shall not discharge into an attic, crawl space or other areas inside the building. This section shall not prohibit the installation of ductless range hoods in accordance with the exception to Section M1503.3.

M1505.3 Exhaust equipment.

Exhaust equipment serving single dwelling units shall be listed and labeled as providing the minimum required airflow in accordance with ANSI/AMCA 210-ANSI/ASHRAE 51.

M1505.4 Whole-house mechanical ventilation system.

Whole-house mechanical ventilation systems shall be designed in accordance with Sections M1505.4.1 through M1505.4.4.

M1505.4.1 System design.

The whole-house ventilation system shall consist of one or more supply or exhaust fans, or a combination of such, and associated ducts and controls. Local exhaust or supply fans are permitted to serve as such a system. Outdoor air ducts connected to the return side of an air handler shall be considered as providing supply ventilation.

M1505.4.2 System controls.

The whole-house mechanical ventilation system shall be provided with controls that enable manual override.

M1505.4.3 Mechanical ventilation rate.

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

Ventilation rate in cubic feet per minute = 0.01 × total square foot area of house) + 17.5 × (number of bedrooms + 1)

(Equation 15-1)

Exception: The whole-house mechanical ventilation system is permitted to operate intermittently where the system has controls that enable operation for not less than 25 percent of each 4-hour segment and the ventilation rate prescribed in Table M1505.4.3(1) is multiplied by the factor determined in accordance with Table M1505.4.3(2).

TABLE M1505.4.3(1) CONTINUOUS WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM AIRFLOW RATE REQUIREMENTS

DWELLING UNIT FLOOR AREA (square feet)	NUMBER OF BEDROOMS				
	0 – 1	2 – 3	4 – 5	6 – 7	> 7
			Airflow in CFM		
< 1,500	30	45	60	75	90
1,501 – 3,000	45	60	75	90	105
3,001 – 4,500	60	75	90	105	120
4,501 – 6,000	75	90	105	120	135
6,001 – 7,500	90	105	120	135	150
> 7,500	105	120	135	150	165

For 50: 1 square foot = 0.0029 m², 1 cubic foot per minute = 0.000473 m³/s

TABLE M1505.4.3(2) INTERMITTENT WHOLE-HOUSE MECHANICAL VENTILATION RATE FACTORS^{a, b}

RUN-TIME PERCENTAGE IN EACH 4-HOUR SEGMENT	25%	33%	50%	66%	75%	100%
Factor ^a	4	3	2	1.5	1.3	1.0

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

M1504.3 EXHAUST OPENINGS

Exhaust openings shall terminate as follows:
1. Not less than 3 feet (914mm) from property lines
2. Not less than 3 feet (914mm) from gravity air intake openings, operabe windows and doors.
3. Not less than 10 feet (3048 mm) from mechanical air intake openings except where the exhaust opening is located not less than 3 feet (914mm) above the air intake opening shall comply with Section R303.5.2 and R303.6.



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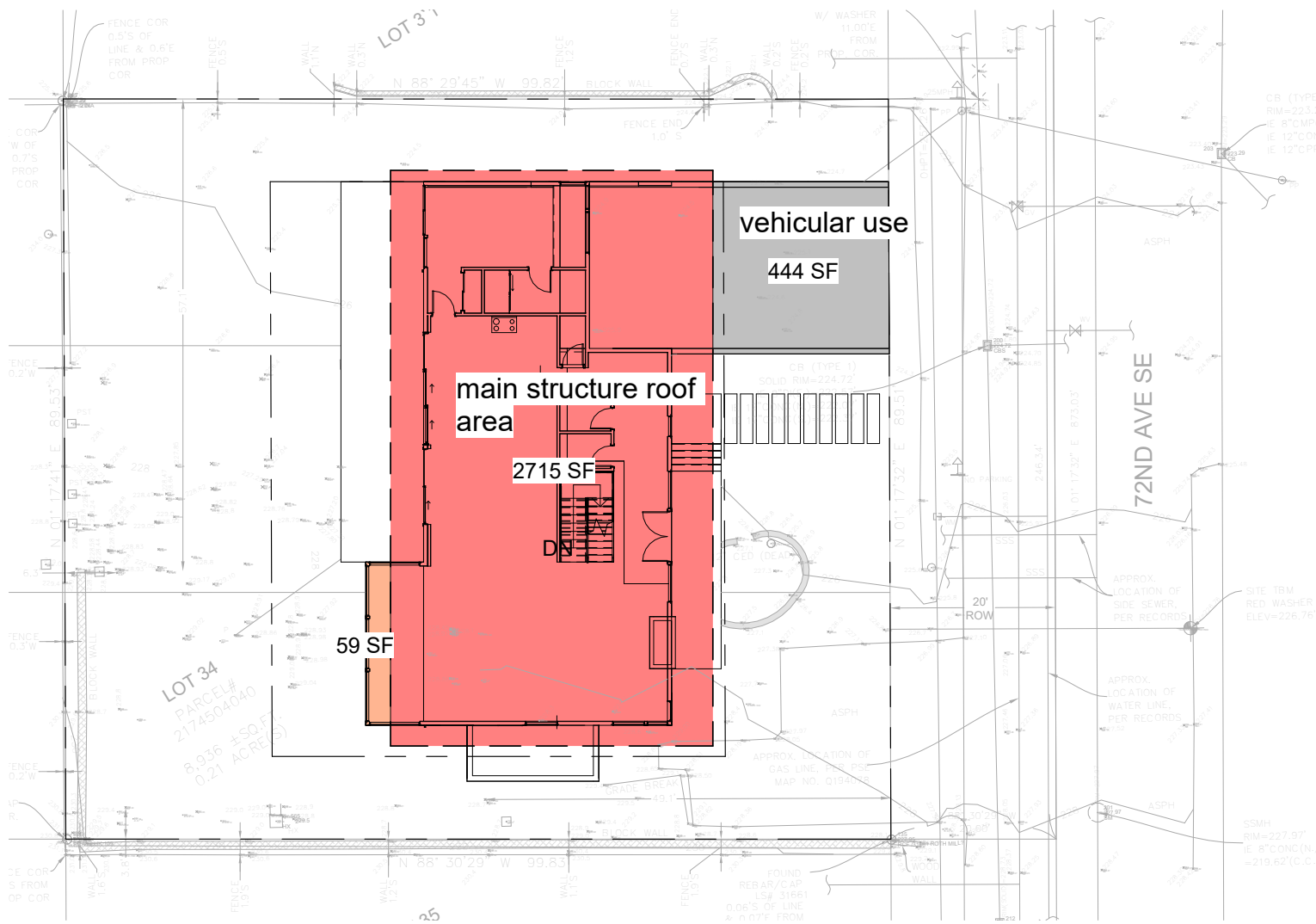
DATE: 07.26.24

Compliance
- Alarms
and
Ventilation
(IRC)

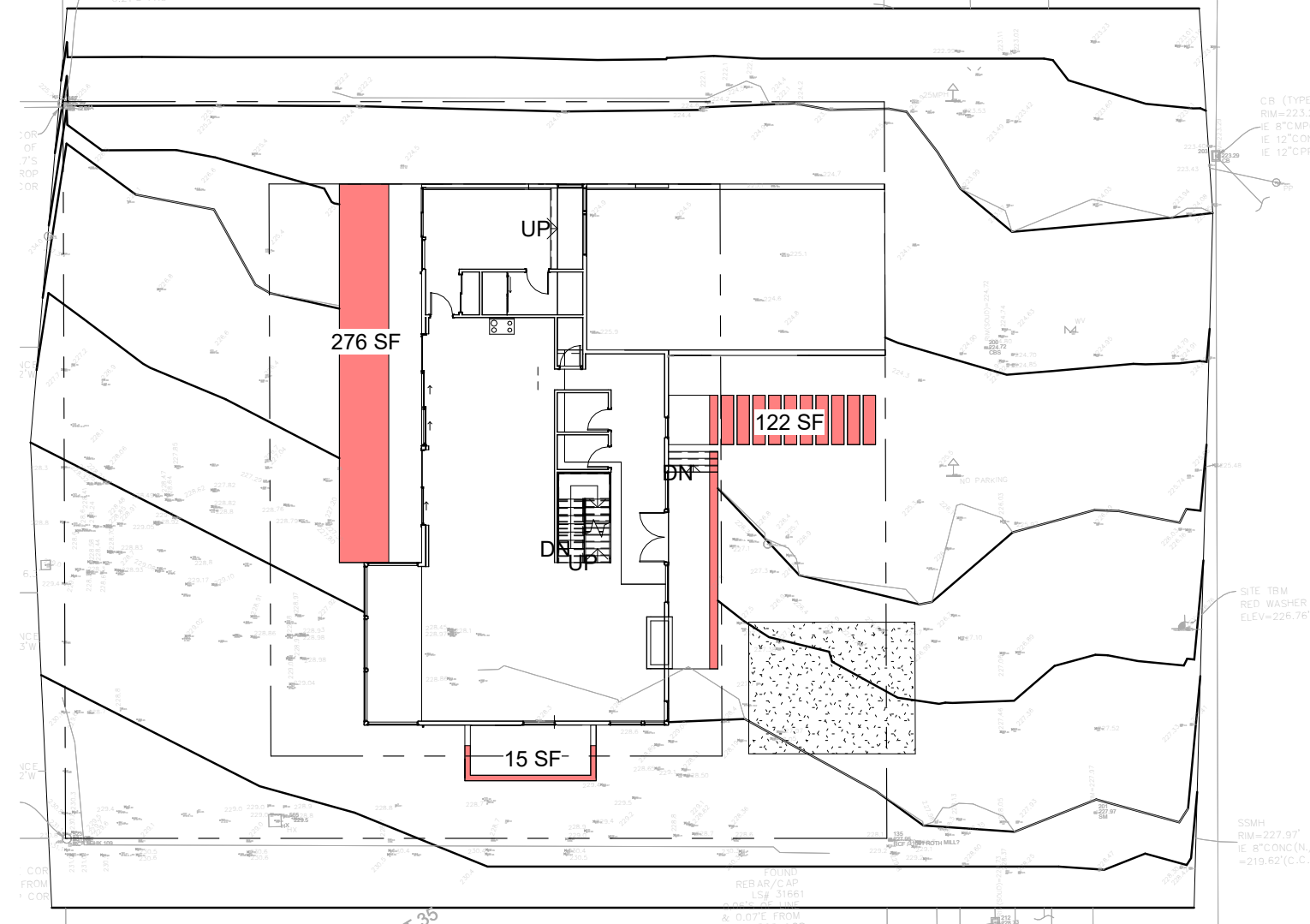
A7.1

SITE DATA AND ZONING

ZONING	R-8.4		
LOT AREA	8,936 SF		
SETBACK REQUIREMENT	FRONT SETBACK	20 FT	
	REAR SETBACK	25 FT	
	SIDE SETBACK	10 FT	
	For lots with a lot width of 90 feet or less, the sum of the side yards' width shall be at least 15 feet. Site width is 89.51'		
	Variable side yard depth requirement (a) Single-family dwellings shall provide a minimum side yard depth of seven and one-half feet if the building: (1)For nongabled roof end buildings, the height is more than 15 feet measured from existing or finished grade, whichever is lower, to the top of the exterior wall facade adjoining the side yard; or (2)For gabled roof end buildings, the height is more than 18 feet measured from existing or finished grade, whichever is lower, to the top of the gabled roof end adjoining the side yard. (b) Single-family dwellings with a height of more than 25 feet measured from the existing or finished grade, whichever is lower, to the top of the exterior wall facade adjoining the side yard shall provide a minimum side yard depth of ten feet. The building more than height is 25 feet, hence the minimum side yard depth is 10 feet		



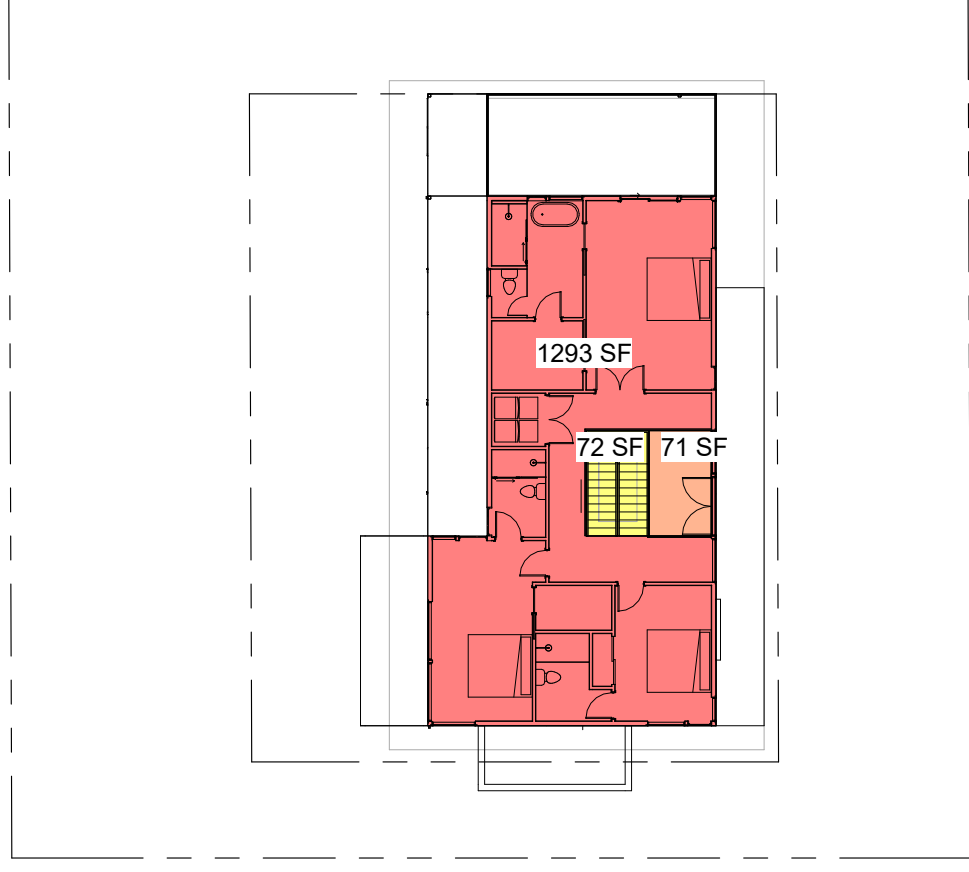
3 D- Lot Coverage
1" = 20'-0"



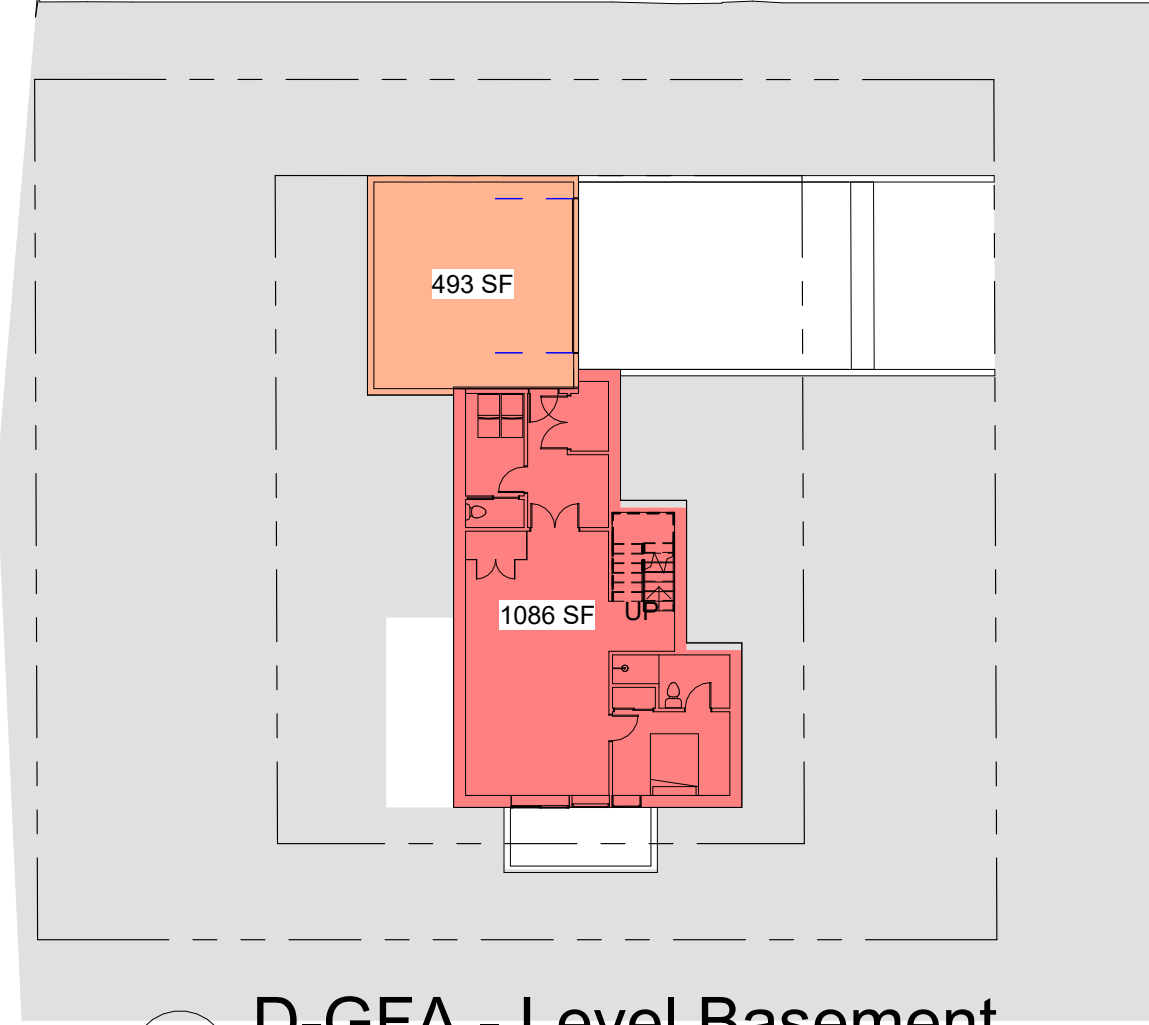
4 D- Hardscape
1" = 20'-0"



5 D-GFA - Level 1
1" = 20'-0"



6 D-GFA - Level 2
1" = 20'-0"



7 D-GFA - Level Basement
1" = 20'-0"

LOT COVERAGE CALCULATIONS			
A.	Gross Lot Area	8,936 Square Feet	
B.	Net Lot Area	8,936 Square Feet	
C.	Allowed Lot Coverage Area	3574.4 Square Feet	
D.	Allowed Lot Coverage	40 % of Lot	
E.	Existing Lot Coverage:		
	1 Main Structure Roof Area	NA Square Feet	
	2 Accessory Building Roof Area	NA Square Feet	
	3 Vehicular Use (driveway, paved access,easements [portion used by the lot for access],parking		
		NA Square Feet	
	4 Covered Patios and Covered Decks	NA Square Feet	
	5 Total Existing Lot Coverage Area (E1+E2+E3+E4)	NA Square Feet	
F.	(Total Lot Coverage Area Removed)	NA Square Feet	
G.	Proposed Adjustment for Single Story (Area)	NA Square Feet	
H.	Proposed Adjustment for Flag Lot	NA Square Feet	
I.	Total New Lot Coverage Area:		
	1 Main Structure Roof Area	2,715 Square Feet	
	2 Accessory Structure Roof Area	0 Square Feet	
	Vehicular Use (driveway, paved access,easement [portion used by		
	3 the lot for access],parking)	444 Square Feet	
	4 Covered Patios and Covered Decks	59 Square Feet	
	5 Total New Lot Coverage Area (I1 + I2 + I3 + I4)	3,218 Square Feet	
J.	Total Project Lot Coverage Area = (E5 - F) + I5	3,218 Square Feet	
K.	Proposed Lot Coverage Area = (I/J) x 100	36.0% % of Lot	
Lot Coverage calculations shown on Plan Sheet #		A7.2: Compliance - Zoning 1	

HARDSCAPE CALCULATIONS			
A.	Gross Lot Area	8936 Square Feet	
B.	Net Lot Area	8936 Square Feet	
C.	Area Borrowed from Lot Coverage	356 Square Feet	
D.	Allowed Hardscape Area = 9% of lot area + C	13.0 % of Lot	
E.	Allowed Hardscape Area	1160.6 Square Feet	
F.	Total Existing Hardscape Area		
	1 Uncovered Decks	NA Square Feet	
	2 Uncovered Patios	NA Square Feet	
	3 Walkways	NA Square Feet	
	4 Stairs	NA Square Feet	
	5 Rockeries and Retaining Walls	NA Square Feet	
	6 Other [INSERT TEXT HERE]	NA Square Feet	
	7 Total Existing Hardscape Area (F1 + F2 + F3 + F4 + F5 + F6)	0 Square Feet	
G.	(Total Hardscape Area Removed)	0 Square Feet	
H.	Total New Hardscape Area		
	1 Uncovered Decks	276 Square Feet	
	2 Uncovered Patios	0 Square Feet	
	3 Walkways	122 Square Feet	
	4 Stairs	0 Square Feet	
	5 Rockeries and Retaining Walls	15 Square Feet	
	6 Other [INSERT TEXT HERE]	0 Square Feet	
	7 Total New Hardscape Area (H1 +H2 +H3 +H4 + H5 + H6)	413 Square Feet	
I.	Total Project Hardscape Area = (F7-G) + H7	413 Square Feet	
J.	Total Project Hardscape Area = (I/J) x 100	4.6 % of Lot	
Hardscape calculations shown on Plan Sheet #		A7.2: Compliance - Zoning 1	

GROSS FLOOR AREA CALCULATIONS					
Building Area		Existing Area (Sq. Ft.)	Removed Area (Sq. Ft.)	New/Addition Area (Sq. Ft.)	Total (Sq. Ft.)
Upper Floor		0	0	1,293	
Main Floor		0	0	1,769	
Gross Basement Area (including 1x staircase)		0	0	1,086	
Garage / Carport		0	0	493	
Total Floor Area		0	0	4,641	4,641
Accessory Buildings		0	0	0	
Accessory Dwelling Unit		0	0	0	
2nd and 3rd Story Roof Decks		0	0	0	
Basement Area Excluded		0	0	1291.5	-1291.5
150% GFA Modifier* (main and upper floor x2)		0	0	0	0
200% GFA Modifier* (main and upper floor x2)		0	0	70.8	141.5
Staircase GFA Modifier* (x2 for a three story staircase, x3 for a four story stericase)		0	0	71.7	71.7
TOTAL Building Area					3,562.7
					*1 x included in basement
A.	Lot Area				8,936 Square Feet
B.	Zone R-8.4 (x)	R-9.6 ()	R-12 ()	R-15 ()	
C.	Allowed Gross Floor Area (refer to "allowed GFA")				3574.4 Square Feet
D.	Allowed Gross Floor Area				40 % of Lot
E.	Proposed Gross Floor Area				3562.7 Square Feet
F.	Proposed Gross Floor Area				39.87% % of Lot

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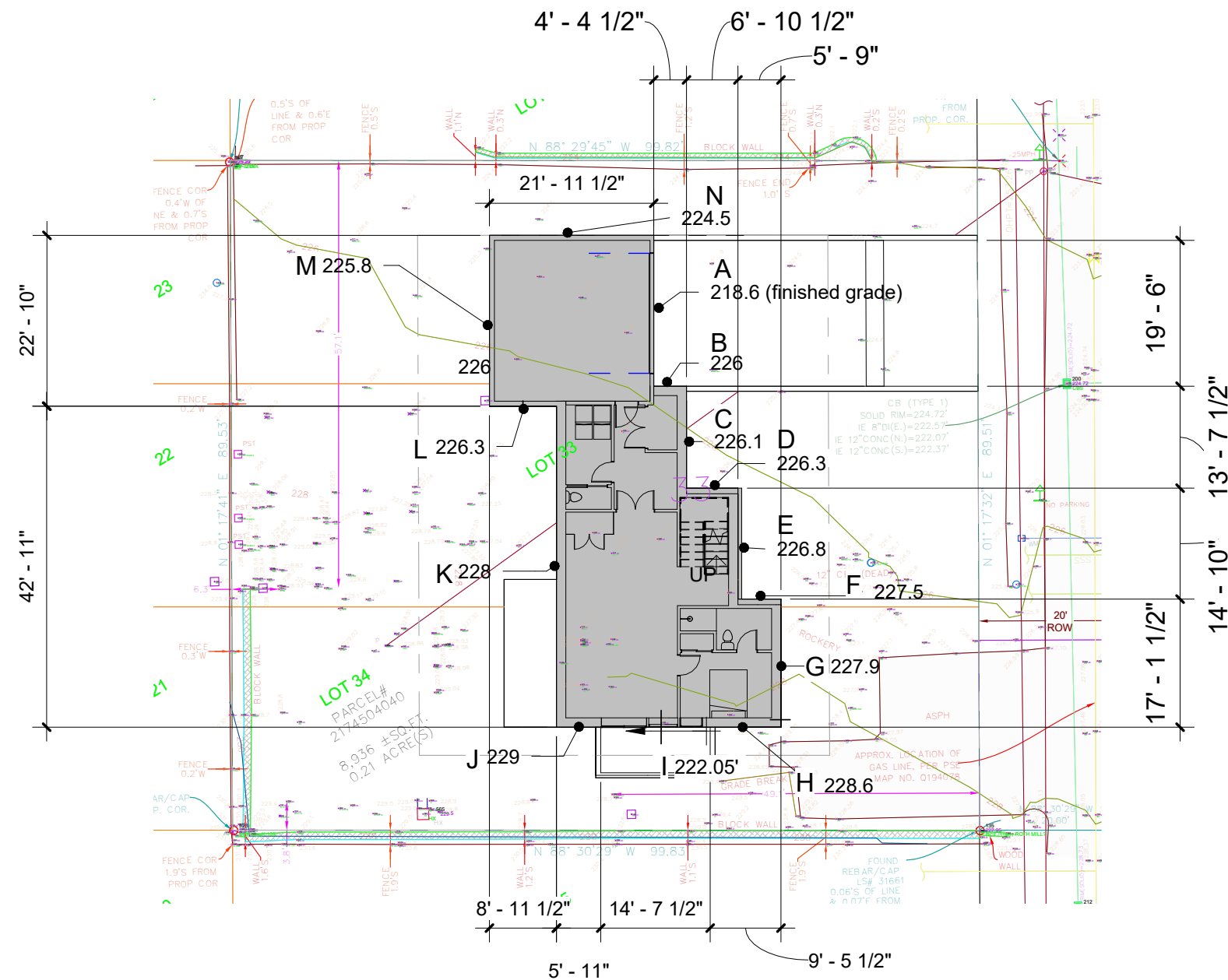
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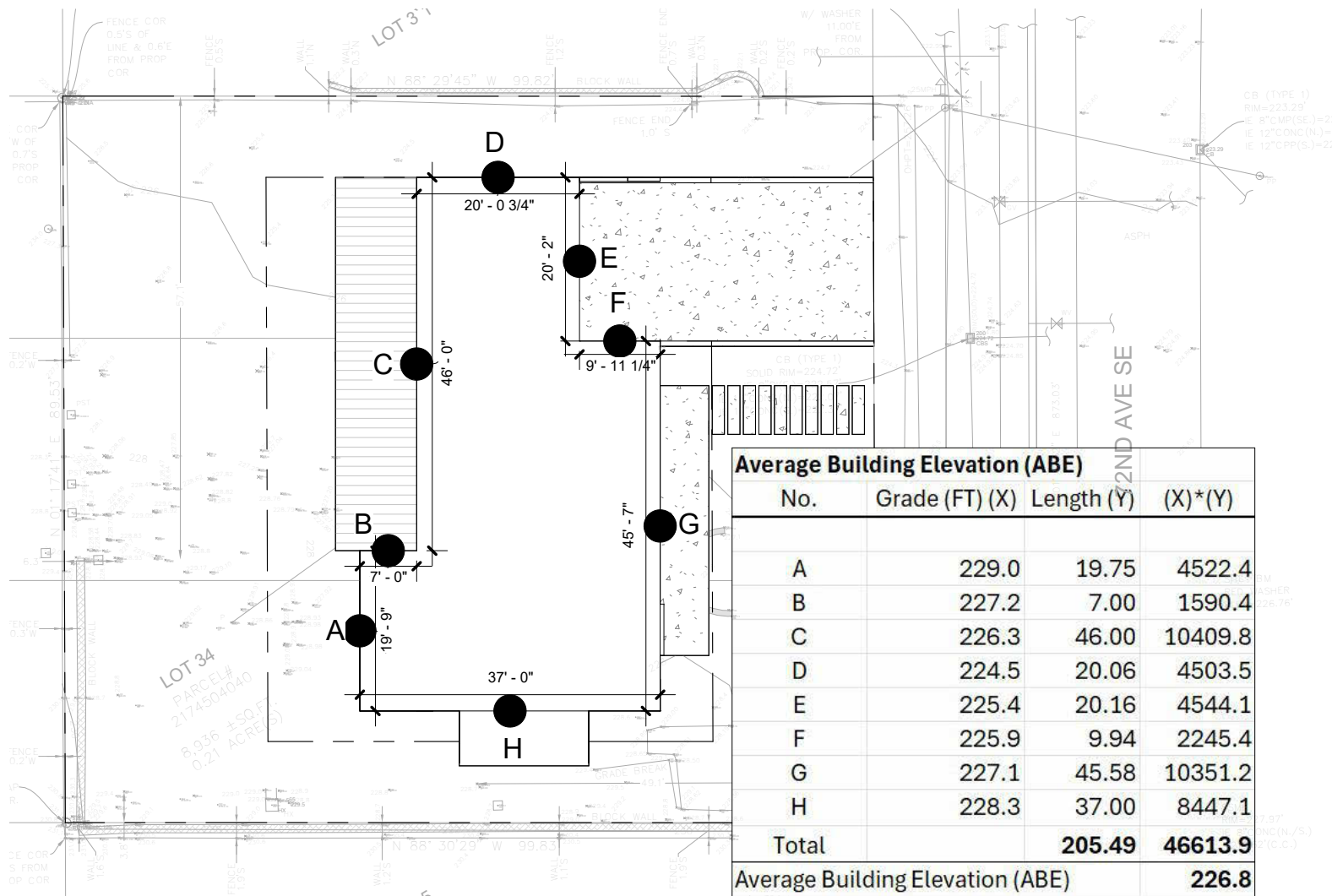
Compliance
-Zoning
1

A7.2

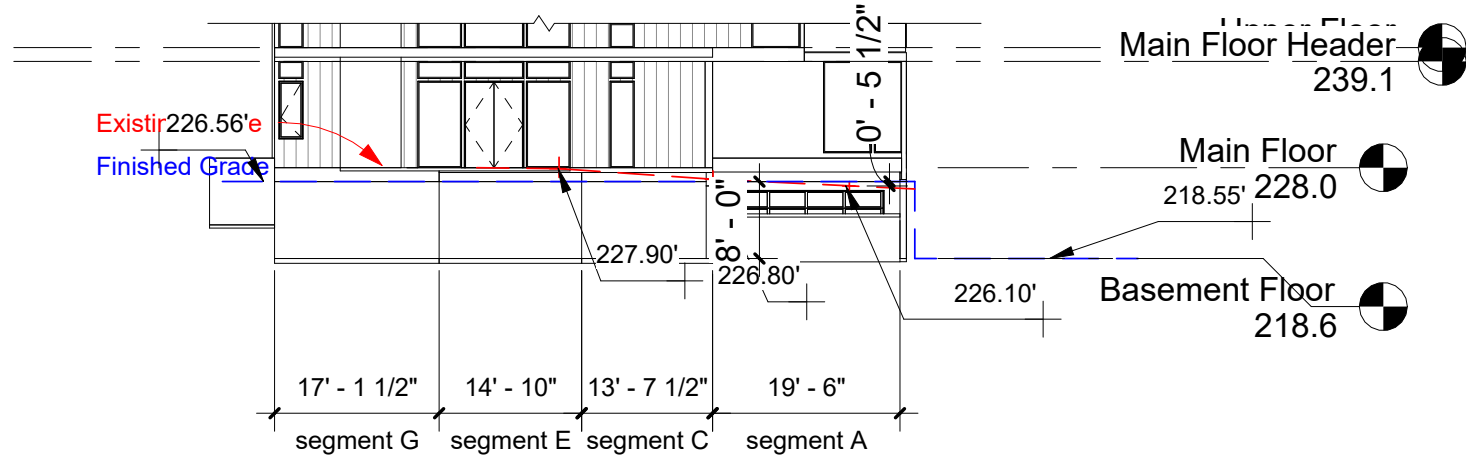


2 D-GFA exemption Basement
1" = 20'-0"

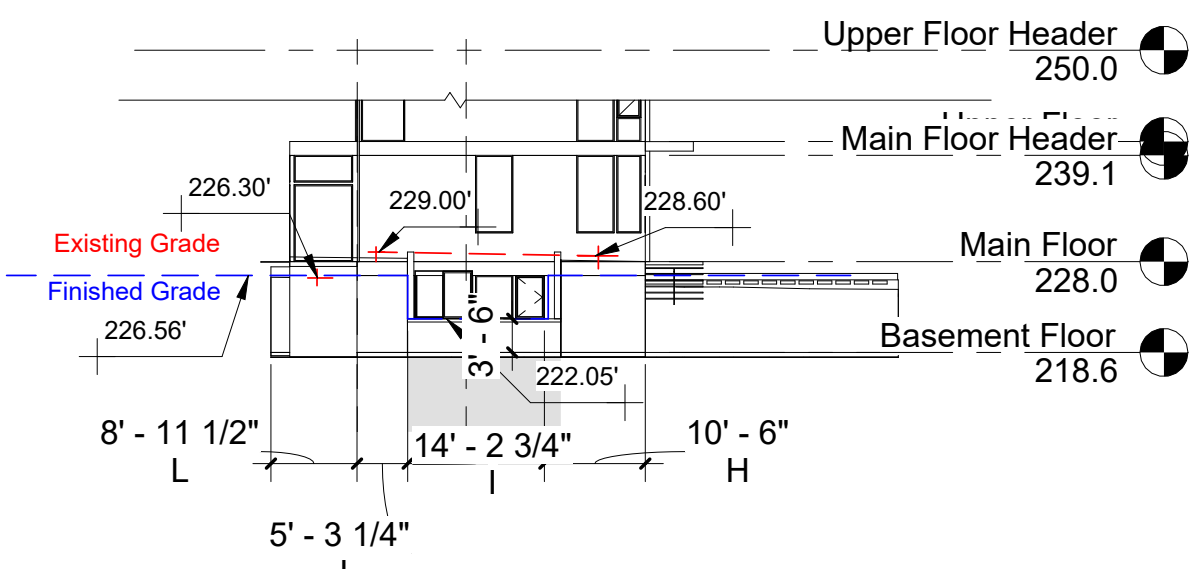
	WALL SEG LENGTH (FT)		celing ht	COVERAGE	RESULT
1 A	19.5	0	8.02	0%	0.0%
2 B	4.375	7.39	8.02	92%	4.0%
3 C	13.625	7.57	8.02	94%	12.9%
4 D	7.375	7.59	8.02	95%	7.0%
5 E	14.83	8.02	8.02	100%	14.8%
6 F	5.25	8.02	8.02	100%	5.3%
7 G	17.125	8.02	8.02	100%	17.1%
8 H	9.45	8.02	8.02	100%	9.5%
9 I	14.6	3	8.02	37%	5.5%
10 J	5.9	8.02	8.02	100%	5.9%
11 K	42.9	8.02	8.02	100%	42.9%
12 L	8.96	8.02	8.02	100%	9.0%
13 M	22.85	7.25	8.02	90%	20.7%
14 N	21.85	5.95	8.02	74%	16.2%
(X)	208.59	na			170.6% (Y)
				Y/X	81.79% excluded



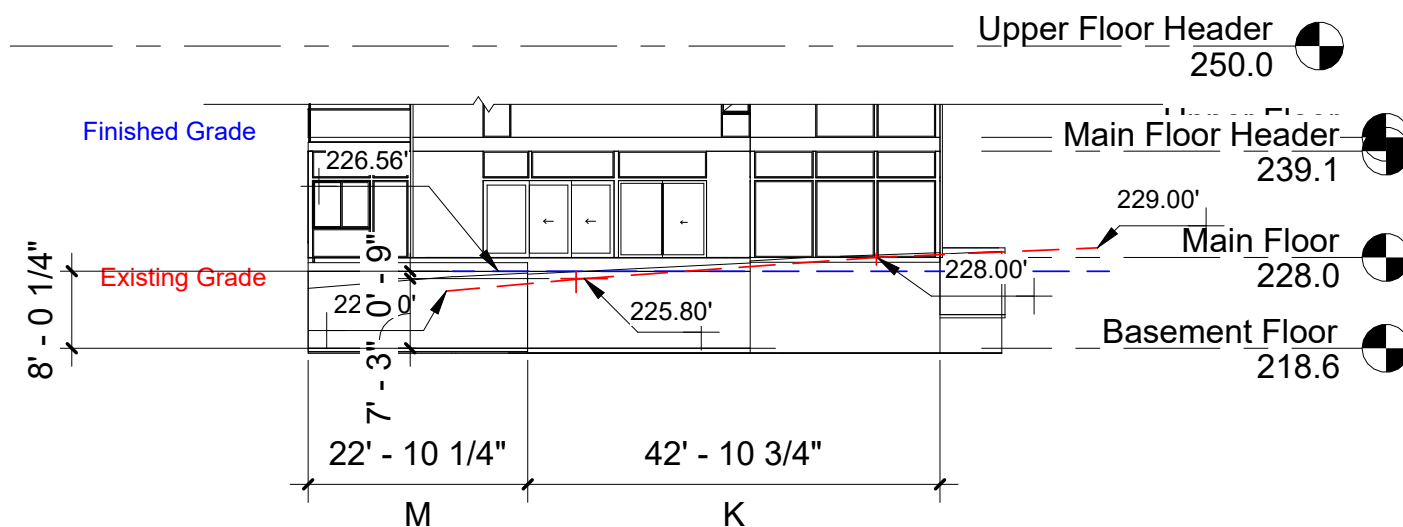
1 D- Average Grade
1" = 20'-0"



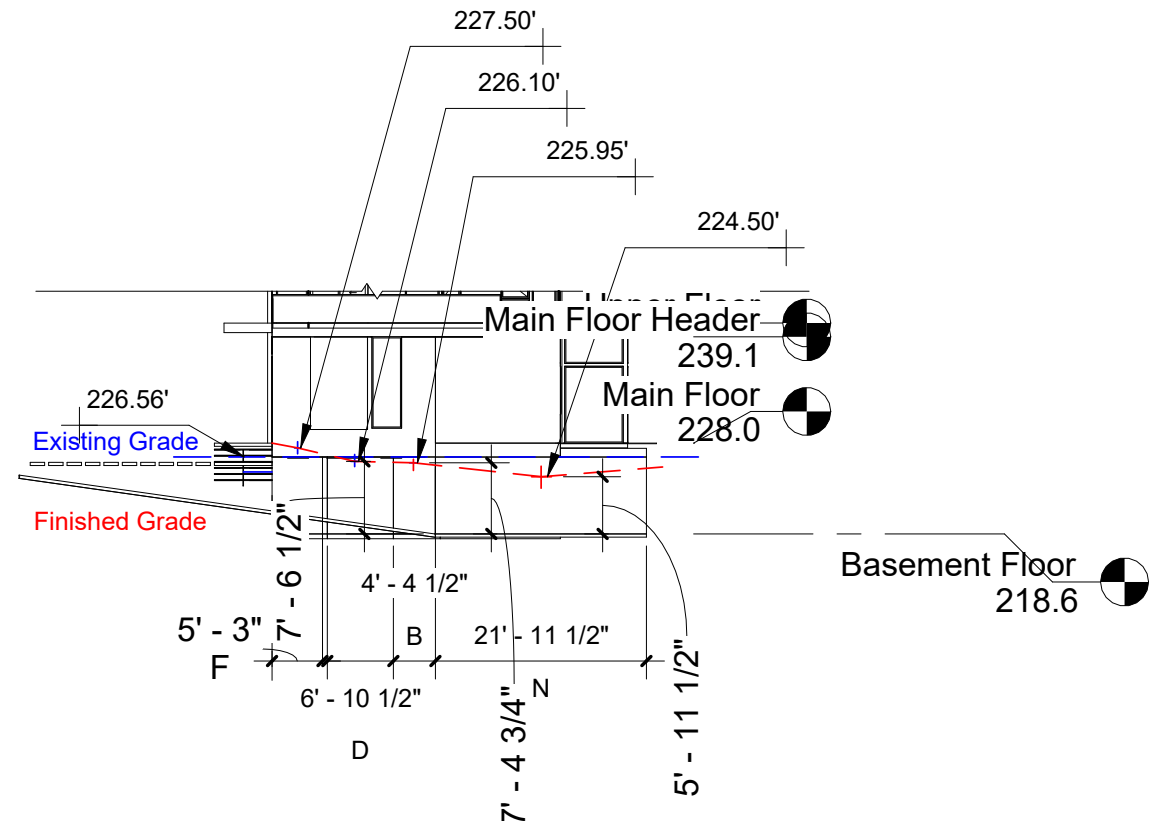
3 D. Elev Wall Segment A ,C, E, G
1" = 20'-0"



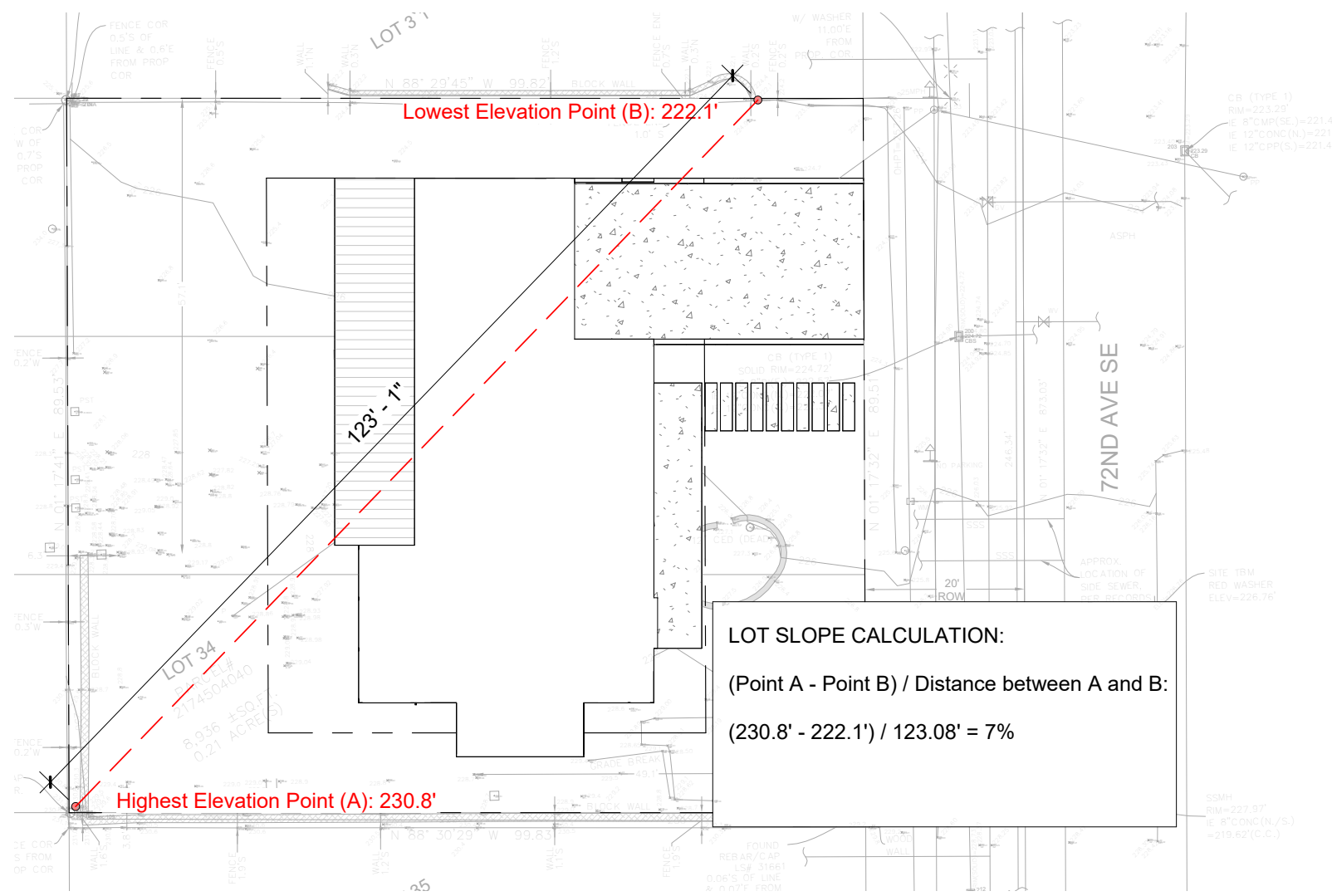
X D. Elev Wall Segment H,I,J,L
1" = 20'-0"



4 D. Elev Wall Segment M,K
1" = 20'-0"

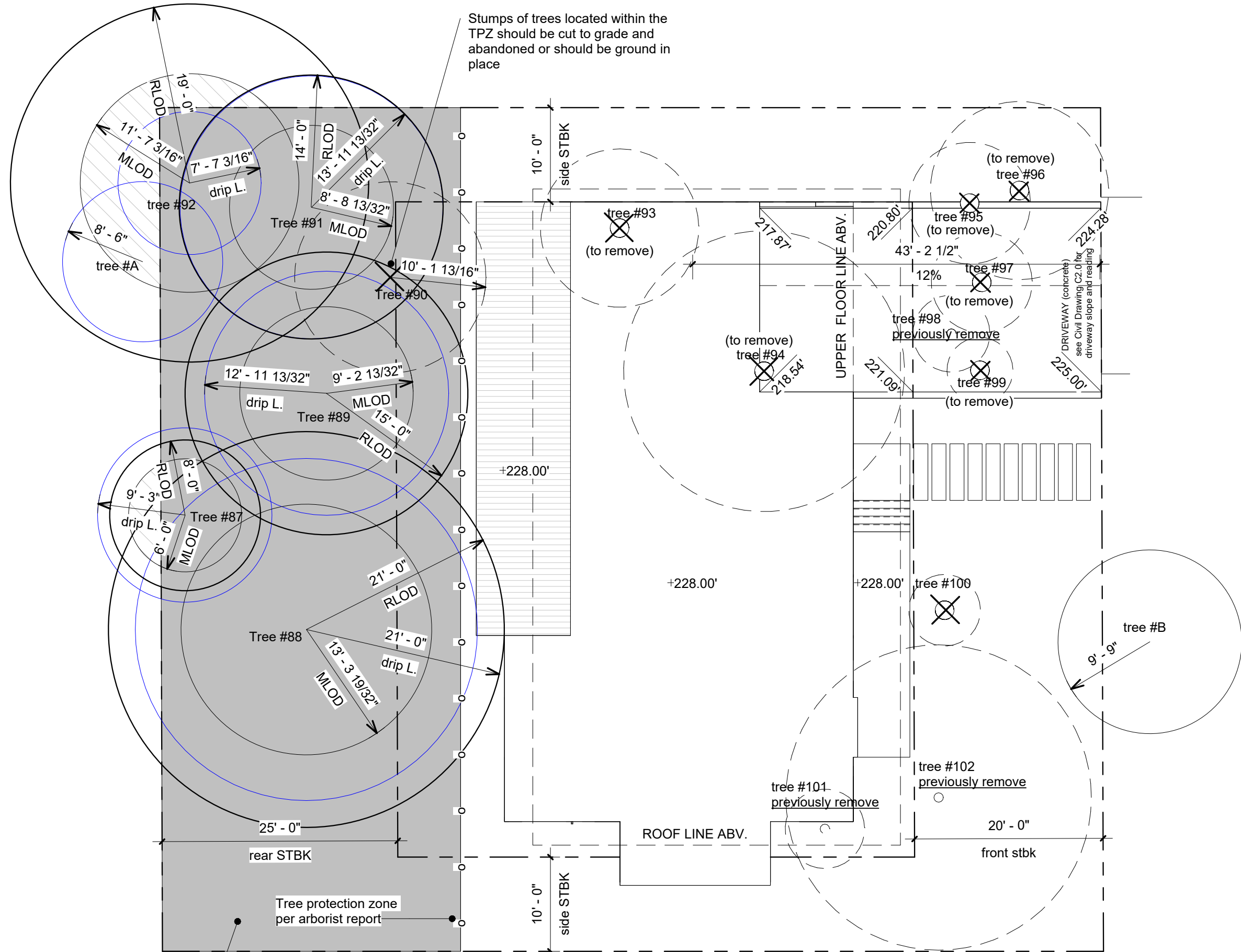


5 D. Elev Wall Segment N, B, D, F
1" = 20'-0"



6 D- Lot Slope
1" = 20'-0"

LOT SLOPE CALCULATIONS			
A.	Highest Elevation Point of Lot:	230.8 Feet	
B.	Lowest Elevation Point of Lot:	222.1 Feet	
C.	Elevation Difference	8.7 Feet	
D.	Horizontal Distance Between High and Low Points	123.1 Feet	
E.	Lot Slope*	7.1 %	
* Lot slope is the elevation difference divided by horizontal distance multiplied by 100. *			
Lot Slope calculations shown on Plan Sheet #		A7.3: Compliance - Zoning 2	



Tree Protection Area (TPZ): to be fenced off prior to demolition. All work in area to be monitored by project arborist. 4-6 inches of wood-chip mulch to be installed in TPZ post demolition.

7 Tree Retention Plan
3/32" = 1'-0"

SITE PLAN LEGEND

- (X) TREE REMOVAL (SEE TREE RETENTION PLAN)
- MLOD (MINIMUM LIMITS OF DISTURBANCE)
- RLOD (RECOMMENDED LIMITS OF DISTURBANCE)
- DECKING
- CONCRETE

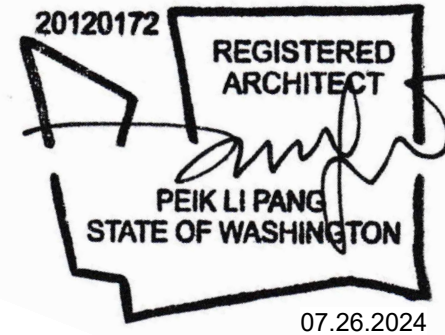
TREE PROTECTION FENCE

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NO. DESCRIPTION DATE

DATE: 07.26.24

Compliance
- Zoning
2 & Tree
Retention
Plan

A7.3

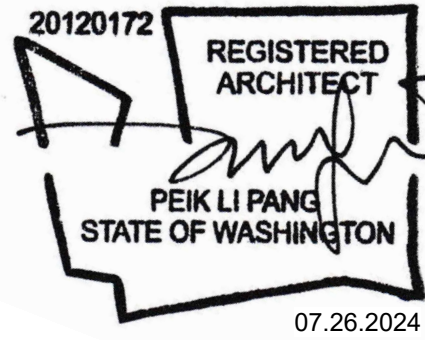
NOTE: ALL THE PERSPECTIVES SHOWN ARE FOR ILLUSTRATION PURPOSES ONLY AND NOT FOR CONSTRUCTION PURPOSES.

5ft2

5ft2 Studio Architects

2625 Northup Way, Ste 100,
Bellevue, WA 98004

info@5ft2studio.com
www.5ft2studio.com



Mercer Firsthill
2419

2419 72nd Ave
SE, Mercer Island,
WA 98040

Building Permit

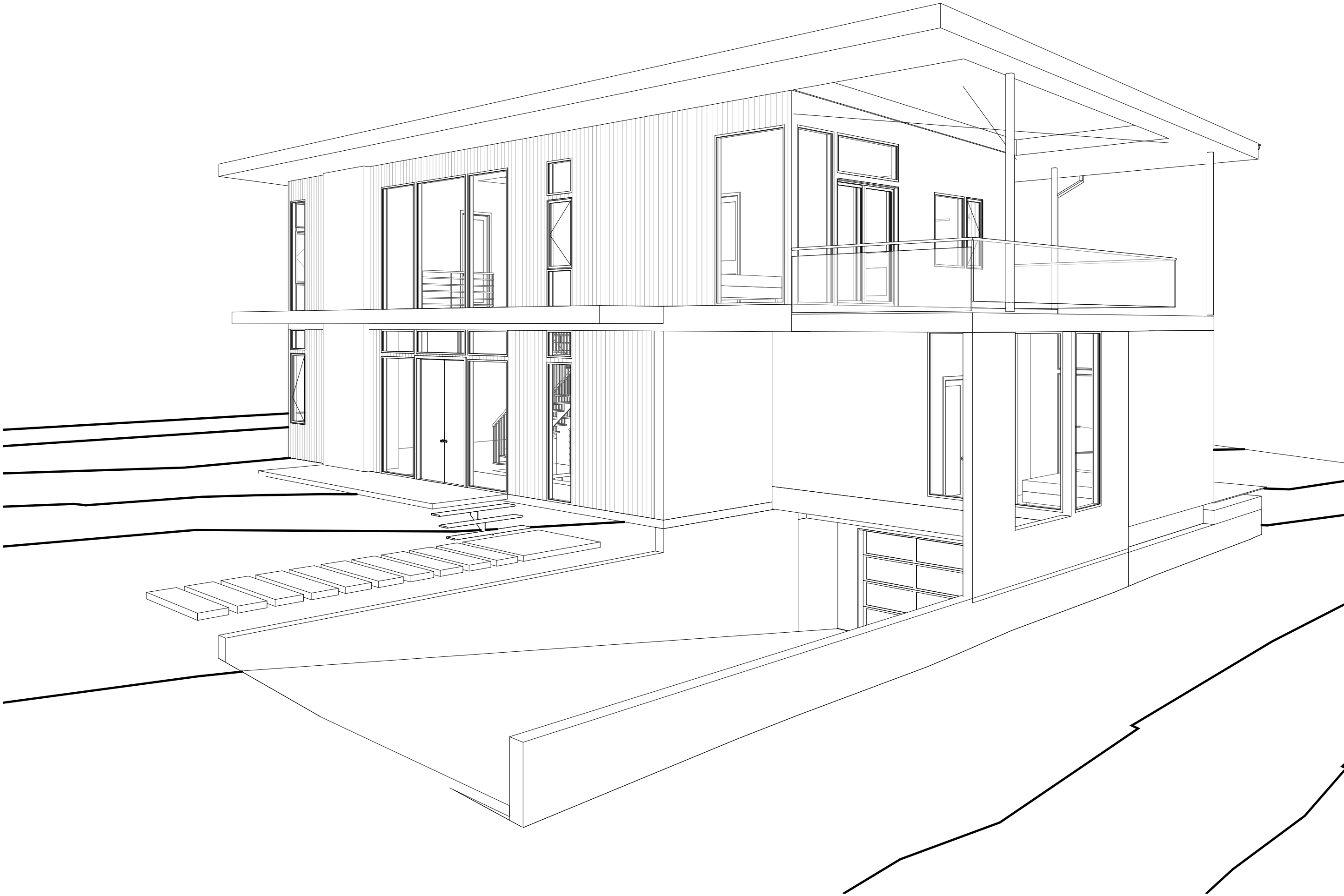
This drawing is the exclusive property of 5ft2 Studio Architects, and can be reproduced only with the permission of the architect. variations and modifications to work shown on this drawing shall not be carried out without written permission from the architect.

NO.	DESCRIPTION	DATE
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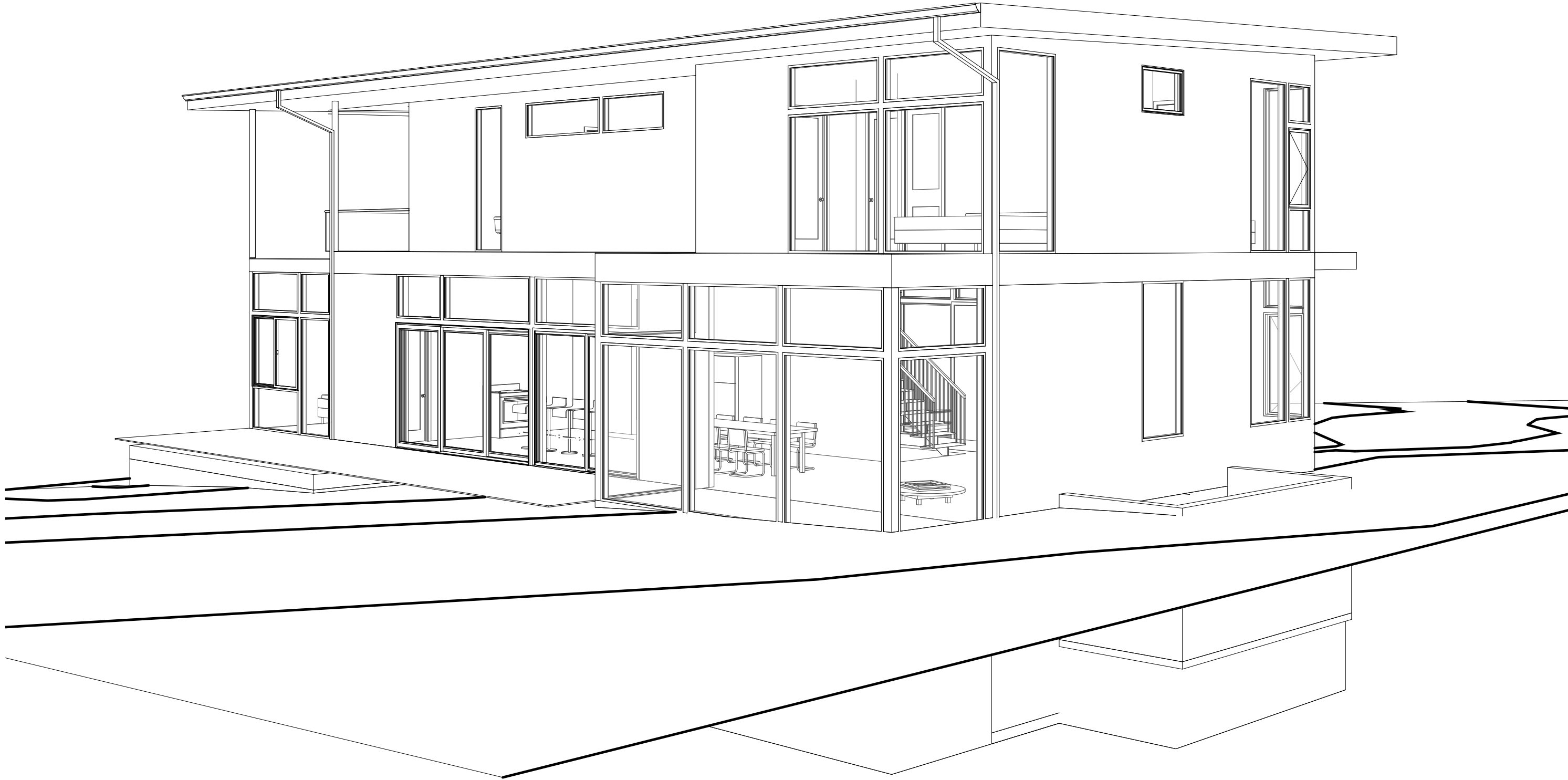
DATE:	07.26.24
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3D
Views

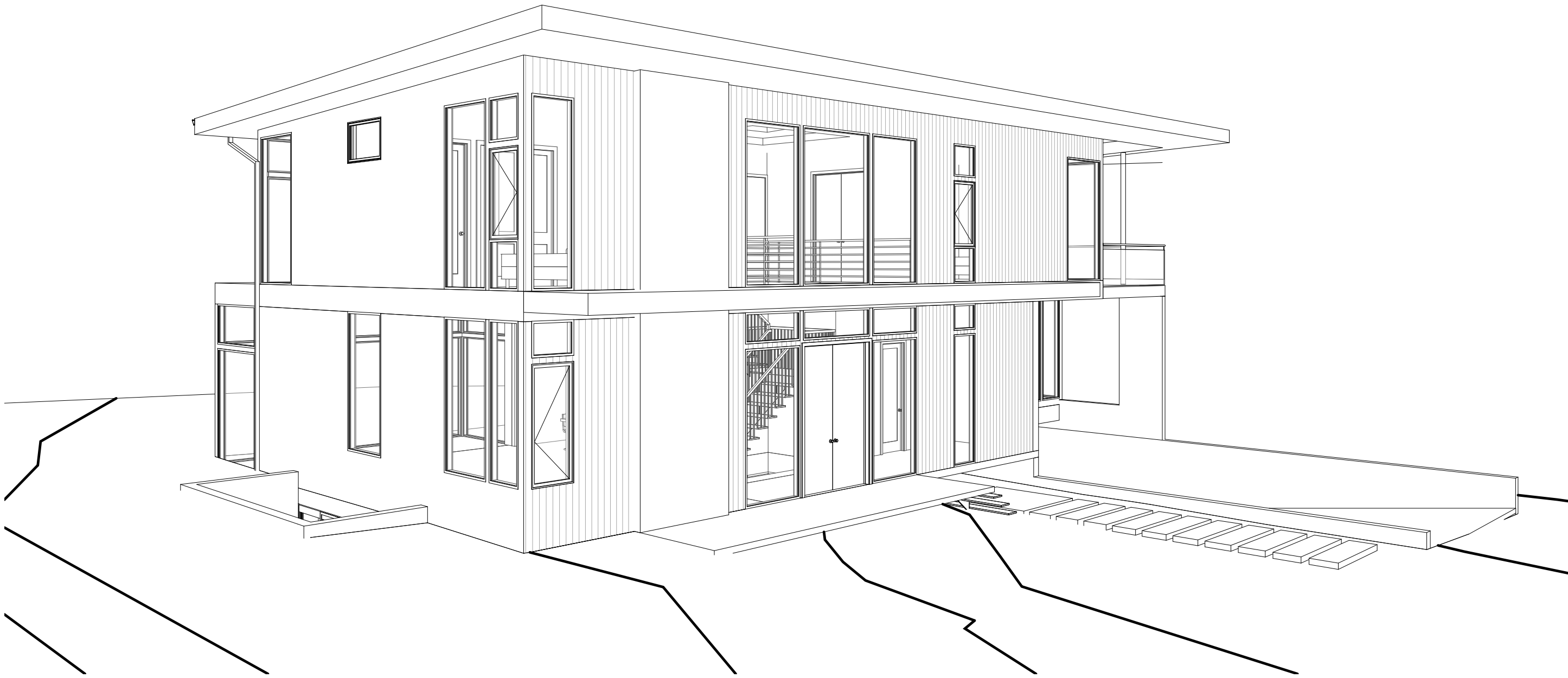
A9.0



1 Perspective View 1



2 Perspective View 2



3 Perspective View 3



4 Perspective View 4

LEGAL DESCRIPTION

(PER STATUTORY WARRANTY DEED RECORDING# 20230518000717)

LOTS 32, 33 AND 34, BLOCK 24, EAST SEATTLE, ACCORDING TO
THE PLAT THEREOF RECORDED IN VOLUME 3 OF PLATS, PAGE 22,
RECORDS OF KING COUNTY, WASHINGTON.

BASIS OF BEARINGS

HELD BEARING OF S 01°17'50" W ALONG CENTERLINE OF 71ST AVE.
S.E., AS CALCULATED FROM RECORD OF SURVEY FILED UNDER
K.C.R.N. 20061213900004, AND REFERENCED BY R1

REFERENCES

- R1. ALIGNMENT FOR 71ST AVE. S.E. PER R.O.S FILED UNDER
K.C.R.N. 20061213900004 IN KING COUNTY WA
- R2. ALIGNMENT FOR Stry LINE OF BLOCK PER R.O.S. FILED UNDER
K.C.R.N. 9001189001 IN KING COUNTY WA
- R3. PLAT OF EAST SEATTLE, VOL. 3 OF PLATS, PG. 22 &23

VERTICAL DATUM

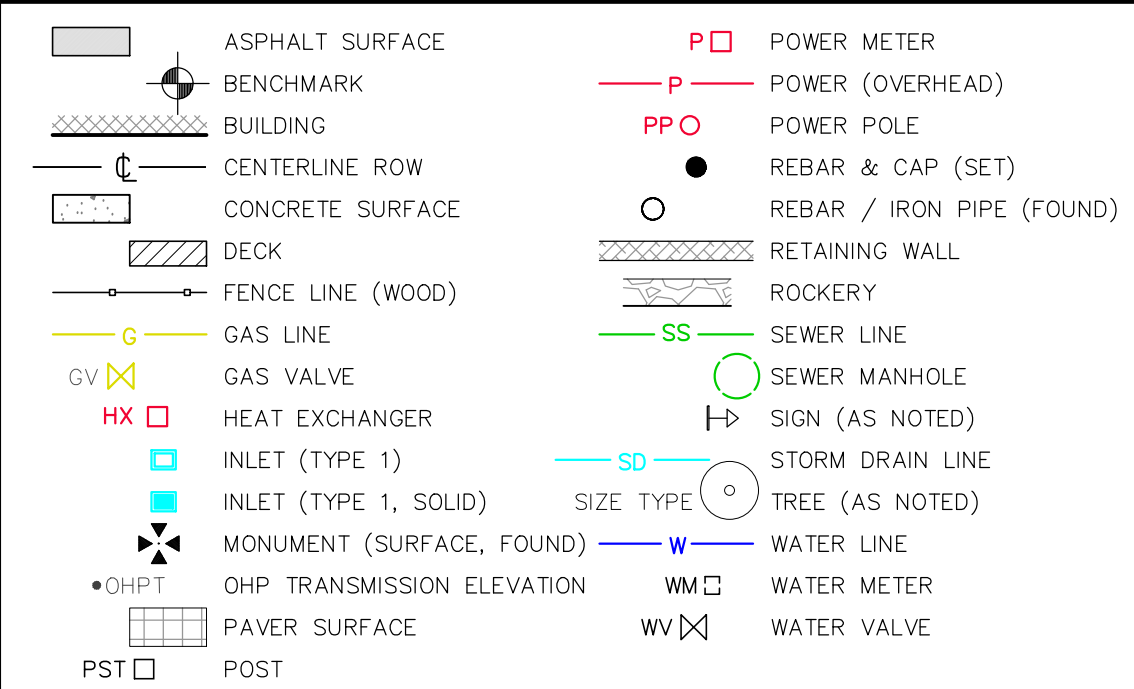
NAVD(88) PER WGS SURVEY DATA WAREHOUSE:
POINT DESIGNATION 7007, MON IN CASE @ INTX. 70TH AVE. S.E. &
S.E. 24TH ST.
EL: 208.21'

SITE TEMP. BENCHMARK
DESCRIPTION: PK NAIL W RED WASHER
LOCATION: 36.3'E & 25.4'N
ELEVATION: 226.76'

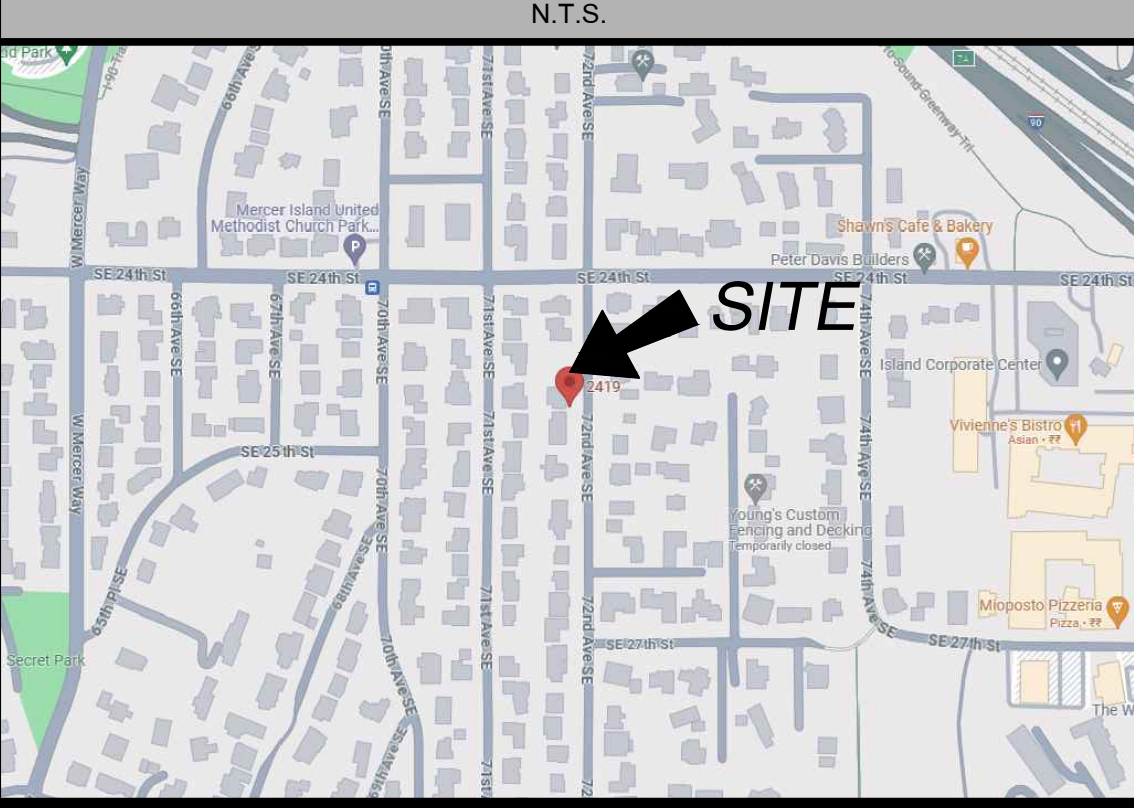
SURVEYOR'S NOTES

1. THE TOPOGRAPHIC SURVEY SHOWN HEREON WAS PERFORMED IN JANUARY OF 2024. THE FIELD DATA WAS COLLECTED AND RECORDED ON MAGNETIC MEDIA THROUGH AN ELECTRONIC THEODOLITE. THE DATA FILE IS ARCHIVED ON DISC OR CD. WRITTEN FIELD NOTES MAY NOT EXIST. CONTOURS ARE SHOWN FOR CONVENIENCE ONLY. DESIGN SHOULD RELY ON SPOT ELEVATIONS.
2. ALL MONUMENTS SHOWN HEREON WERE LOCATED DURING THE COURSE OF THIS SURVEY UNLESS OTHERWISE NOTED.
3. THE TYPES AND LOCATIONS OF ANY UTILITIES SHOWN ON THIS DRAWING ARE BASED ON INFORMATION PROVIDED TO US, BY OTHERS OR GENERAL INFORMATION READILY AVAILABLE IN THE PUBLIC DOMAIN INCLUDING, AS APPLICABLE, IDENTIFYING MARKINGS PLACED BY UTILITY LOCATE SERVICES AND OBSERVED BY TERRANE IN THE FIELD. AS SUCH, THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS ARE FOR INFORMATIONAL PURPOSES ONLY AND SHOULD NOT BE RELIED ON FOR DESIGN OR CONSTRUCTION PURPOSES; TERRANE IS NOT RESPONSIBLE OR LIABLE FOR THE ACCURACY OR COMPLETENESS OF THIS UTILITY INFORMATION. FOR THE ACCURATE LOCATION AND TYPE OF UTILITIES NECESSARY FOR DESIGN AND CONSTRUCTION, PLEASE CONTACT THE SITE OWNER AND THE LOCAL UTILITY LOCATE SERVICE (800-424-5555).
4. SUBJECT PROPERTY TAX PARCEL NO. 217450-4040
5. SUBJECT PROPERTY AREA PER THIS SURVEY IS 8,936 ±S.F. (0.21 ACRES)
6. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT. EASEMENTS AND OTHER ENCUMBRANCES MAY EXIST THAT ARE NOT SHOWN HEREON.
7. EXISTING STRUCTURE(S) LOCATION AND DIMENSIONS ARE MEASURED FROM THE FACE OF THE SIDING UNLESS OTHERWISE NOTED.
8. FIELD DATA FOR THIS SURVEY WAS OBTAINED BY DIRECT FIELD MEASUREMENTS WITH A CALIBRATED ELECTRONIC 3-SECOND TOTAL STATION AND/OR SURVEY GRADE GPS OBSERVATIONS. ALL ANGULAR AND LINEAR RELATIONSHIPS ARE ACCURATE AND MEET THE STANDARDS SET BY WAC 332-130-090.

LEGEND



VICINITY MAP

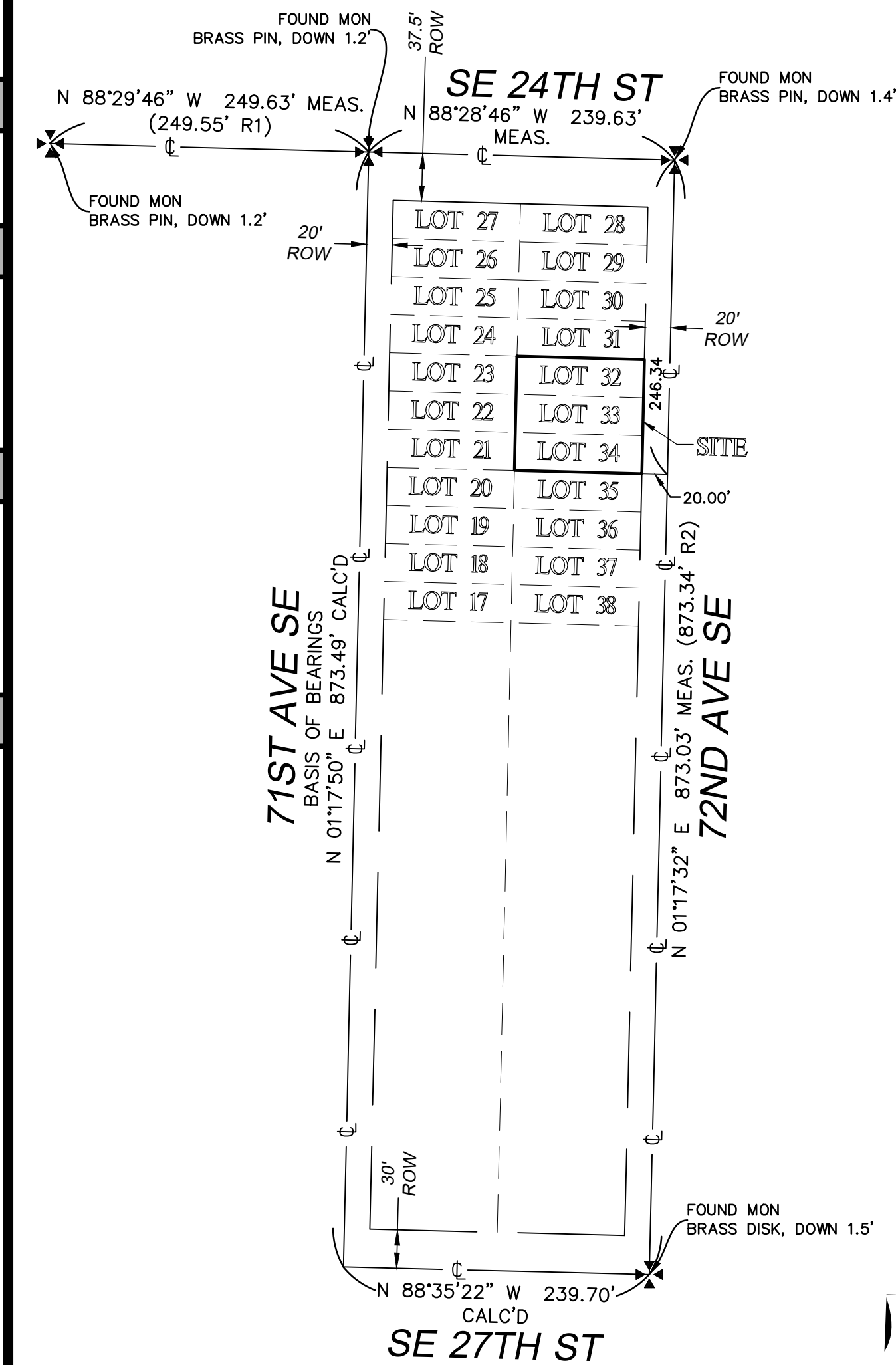


TOPOGRAPHIC & BOUNDARY SURVEY

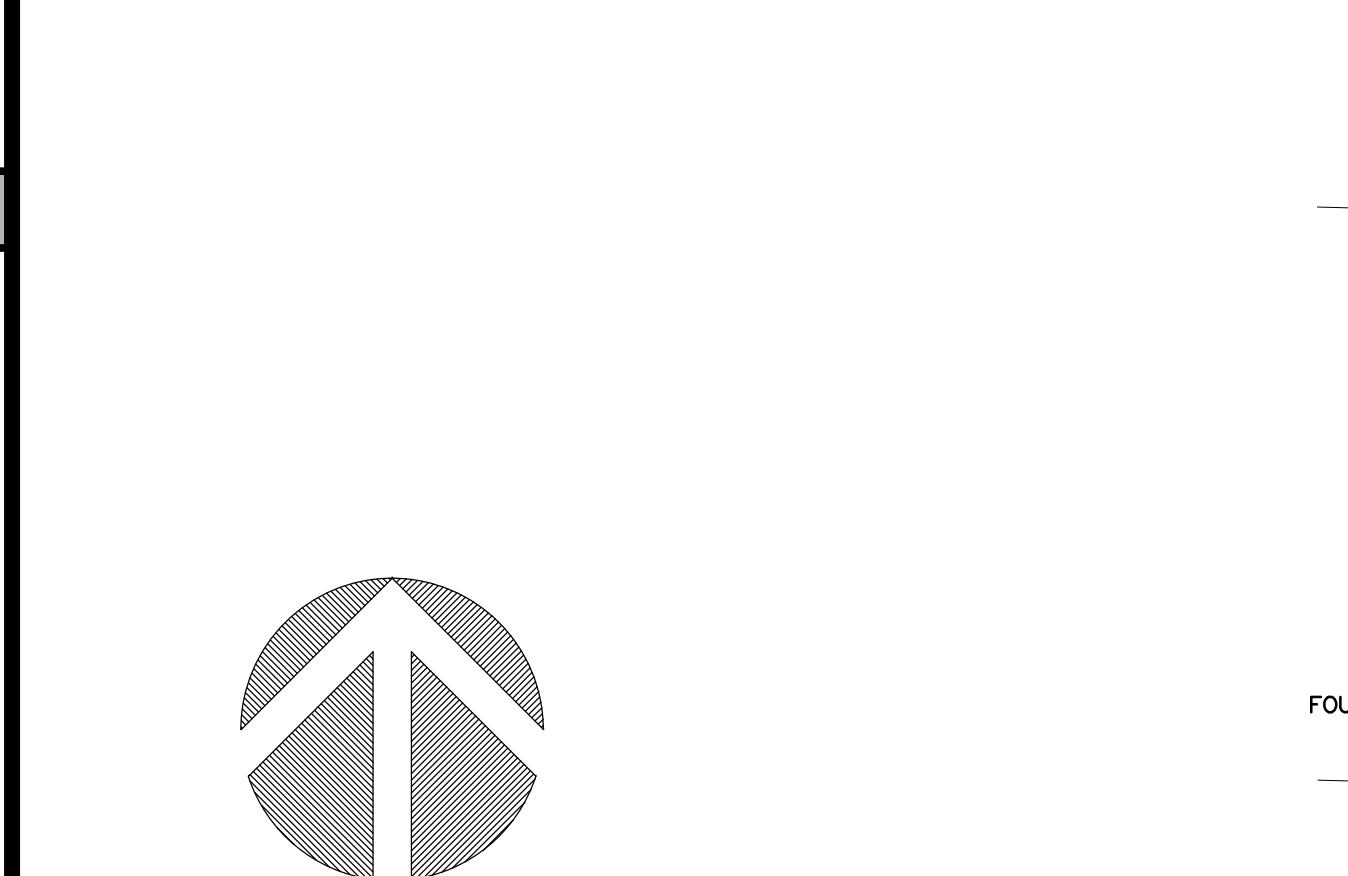
TREE INVENTORY

NUMBER	DIAMETER	TYPE NAME
T-87	25.7" DBH	ACER PLATANOIDES, NORWAY MAPLE
T-88	32.0" DBH	ACER MACROPHYLLUM, BIGLEAF MAPLE
T-89	22.1" DBH	ACER MACROPHYLLUM, BIGLEAF MAPLE
T-90	19.2" DBH	ACER MACROPHYLLUM, BIGLEAF MAPLE
T-91	22.4" DBH	THUJA PLICATA, WESTERN REDCEDAR
T-92	27.8" DBH	THUJA PLICATA, WESTERN REDCEDAR
T-93	18.8" DBH	ACER MACROPHYLLUM, BIGLEAF MAPLE
T-94	19.6" DBH	ACER MACROPHYLLUM, BIGLEAF MAPLE
T-95	22.4" DBH	THUJA PLICATA, WESTERN REDCEDAR
T-96	17.7" DBH	THUJA PLICATA, WESTERN REDCEDAR
T-97	17.7" DBH	THUJA PLICATA, WESTERN REDCEDAR
T-98	21.5" DBH	ACER MACROPHYLLUM, BIGLEAF MAPLE
T-99	23.9" DBH	THUJA PLICATA, WESTERN REDCEDAR
T-100	22.4" DBH	THUJA PLICATA, WESTERN REDCEDAR
T-101	28.4" DBH	ACER MACROPHYLLUM, BIGLEAF MAPLE
T-102	34.5" DBH	PSEUDOTSUGA MENZIESII, DOUGLAS-FIR

OFF-SITE TREES		
T-A	26.0" DBH	THUJA PLICATA, WESTERN REDCEDAR
T-B	13.1" DBH	PINUS CONTORTA, LODGEPOLE PINE



— N.T.S.

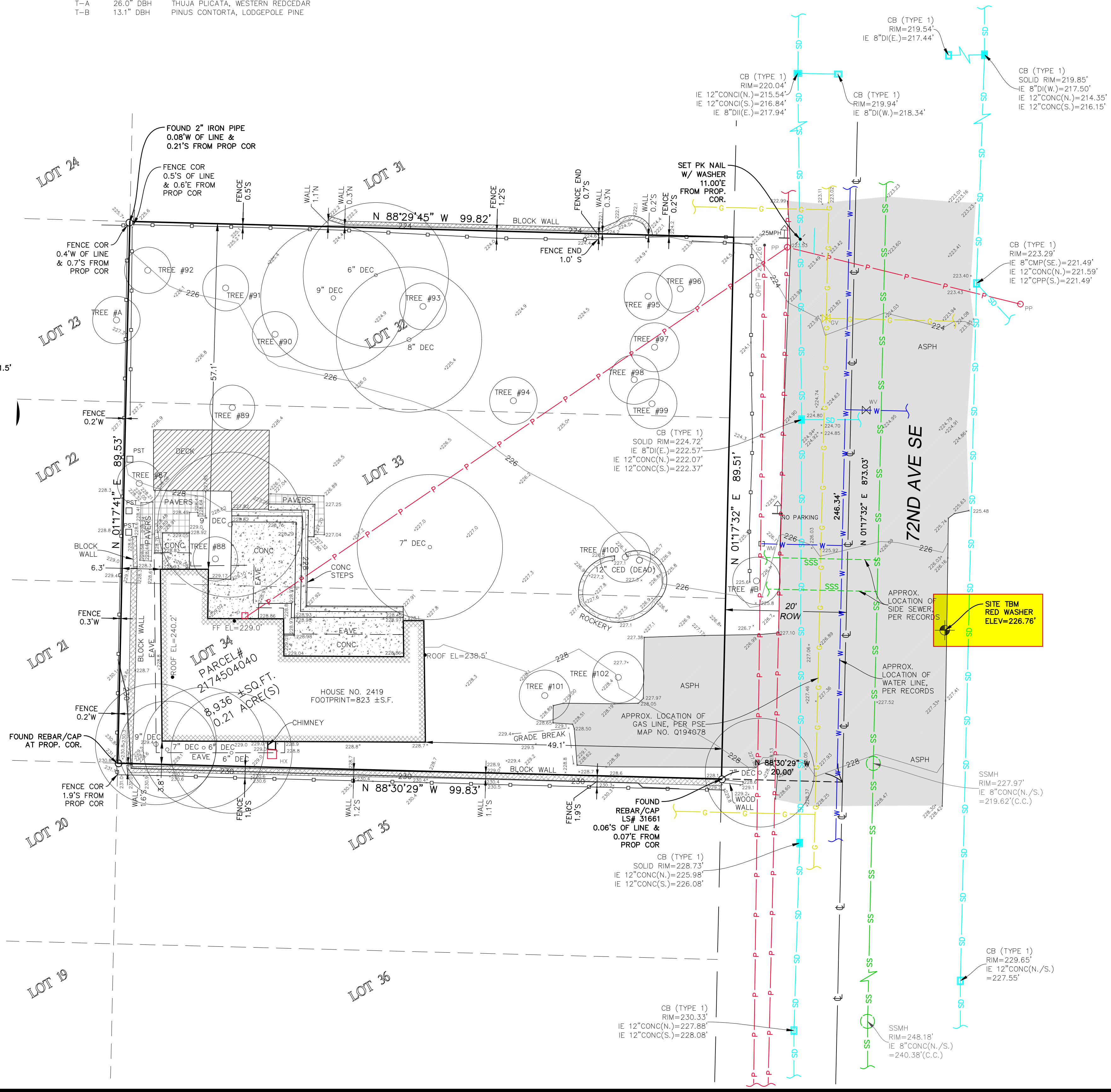


10 0 5 10
(IN FEET)
1 INCH = 10 FT.

INDEXING INFORMATION	
	<u>NW</u> 1/4 <u>NW</u> 1/4 SECTION: <u>12</u> TOWNSHIP: <u>24N</u> RANGE: <u>04E, W.M.</u> COUNTY: <u>KING</u>

STEEP SLOPE/BUFFER DISCLAIMER:

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



TOPOGRAPHIC & BOUNDARY SURVEY
PARCEL NO. 2174504040

3H DEVELOPMENT LLC

24119 72ND AVE SE
MERCER ISLAND, WA 98040

HIC & BOUNDARY
PARCEL NO. 2174504040

GRAPHIC & BOUNDARY S
PARCEL NO. 2174504040
3H DEVELOPMENT LLC

GRAPHIC & BOUNDARY S
PARCEL NO. 2174504040
H DEVELOPMENT LLO
2419 72ND AVE SE



TERRANE

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

TERP
10801 Main Street, Suite 102
Bellevue, WA 98004
p: 425-458-4488 | e: info@terp.com

JOB NUMBER: 232094

DATE: 01/19/24

DRAFTED BY: IDV / RPM

CHECKED BY: EJJ/TMM/WMS

SCALE: $1'' = 10'$

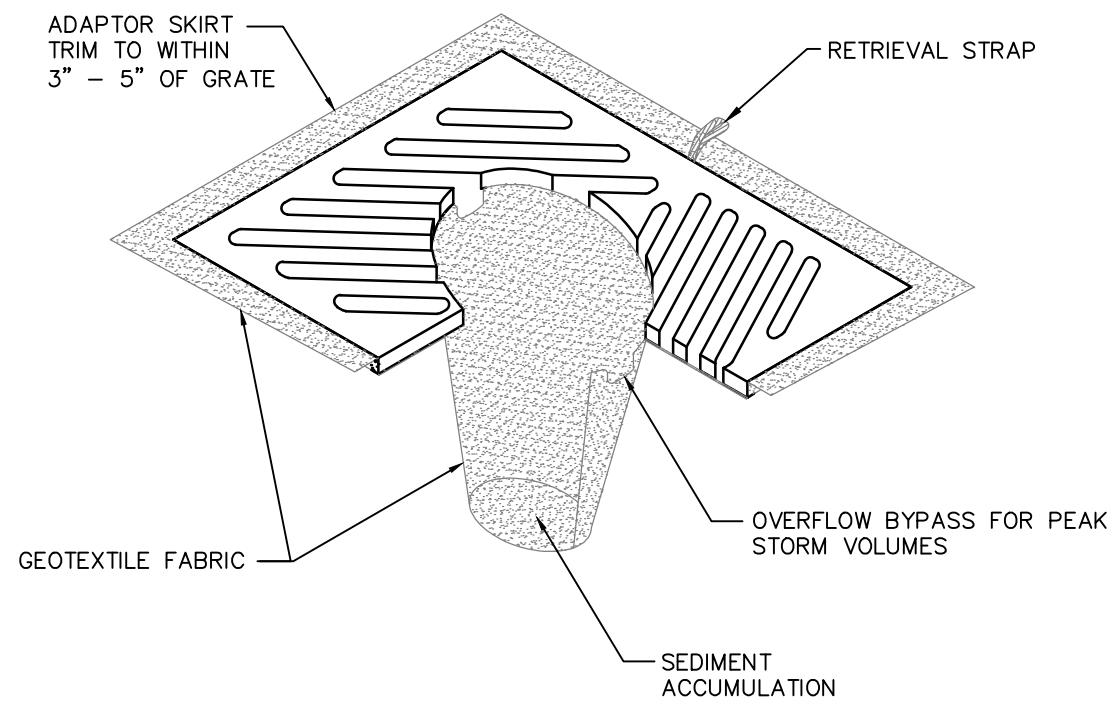
REVISION HISTORY	
1	Initial release

QUEST NUMBER

SHEET NUMBER

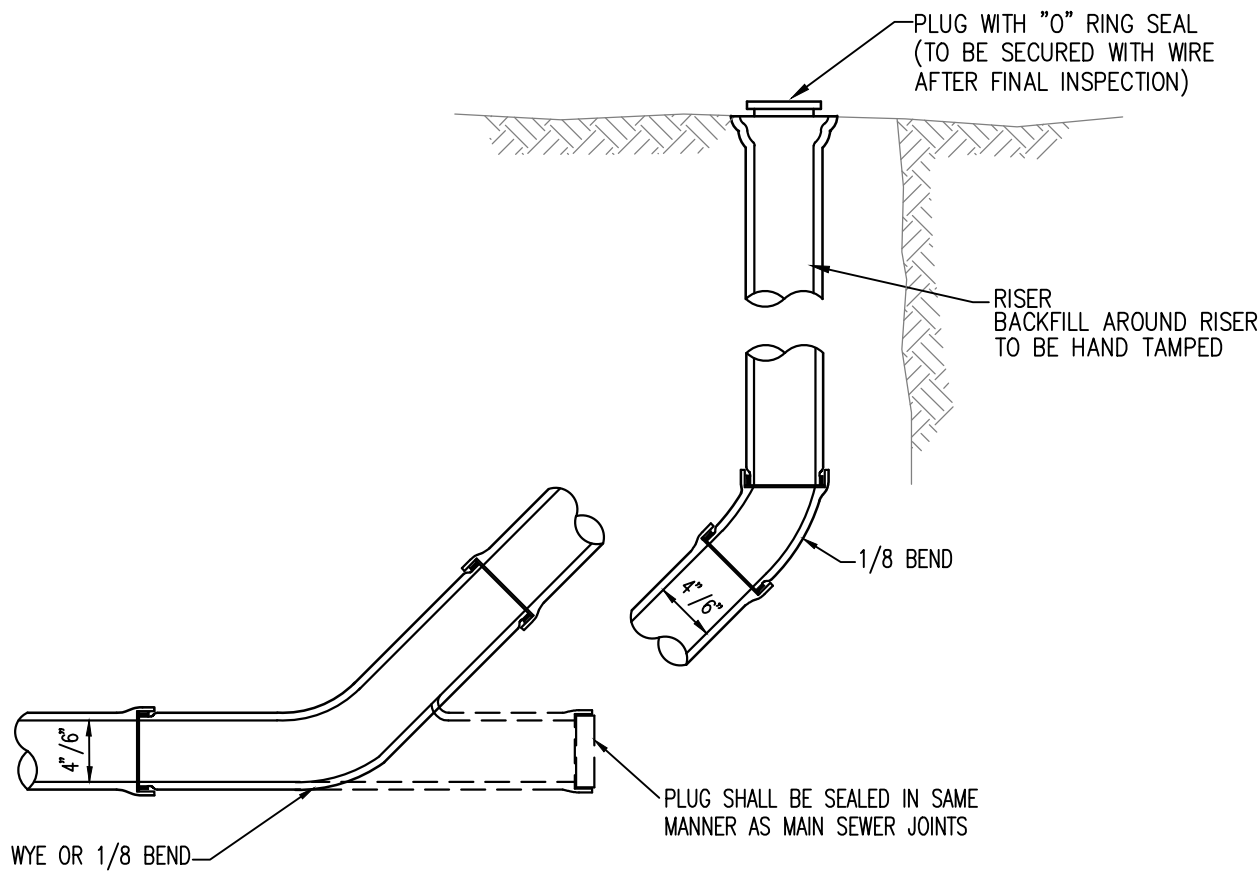
1 OF 1

NW ¼, NW ¼, SEC 12, TWP. 24N., RGE 4E., W.M.



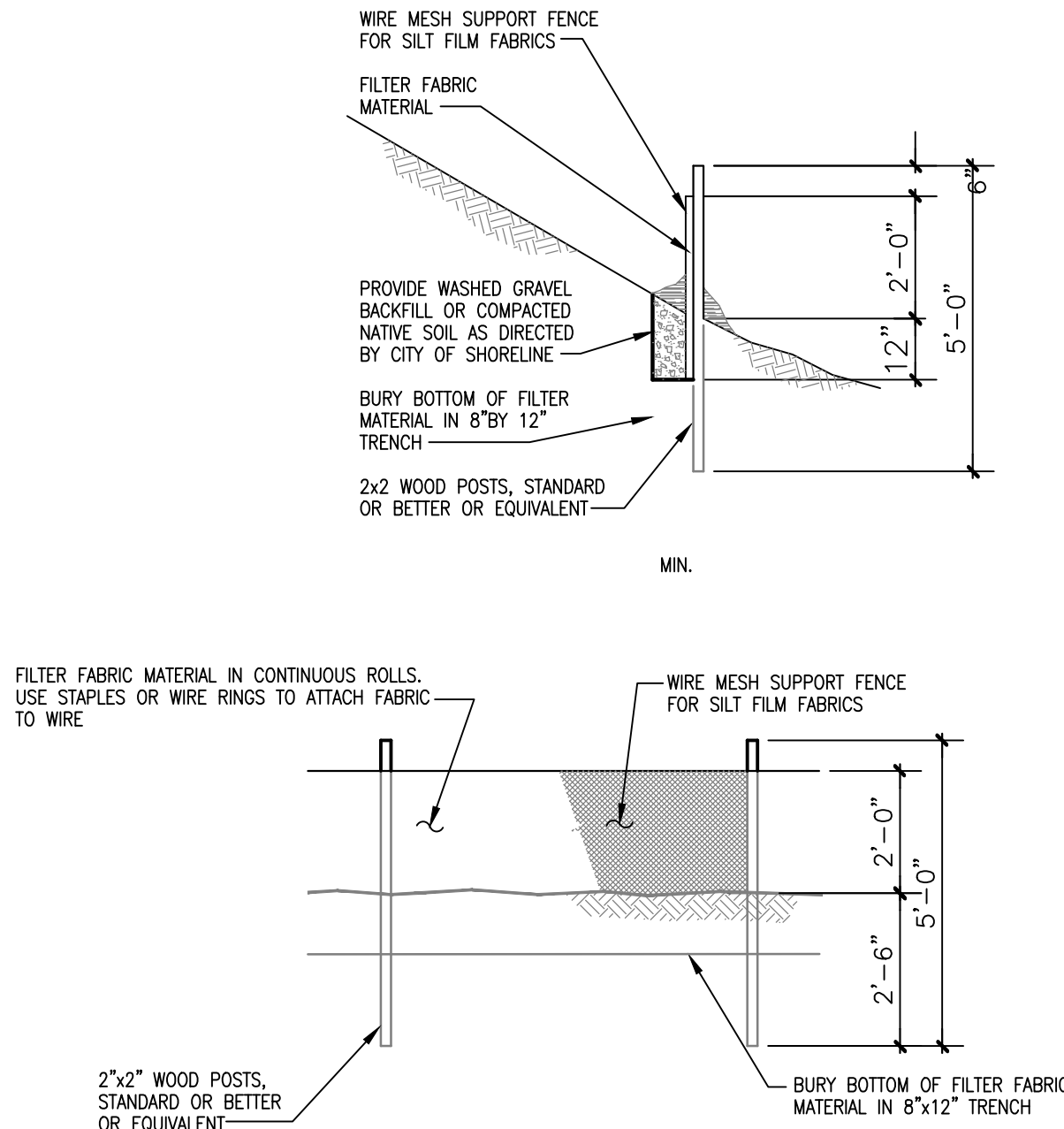
- NOTES
1. INSERT SHALL BE INSTALLED PRIOR TO CLEARING AND GRADING ACTIVITY, OR UPON PLACEMENT OF A NEW CATCH BASIN.
 2. SEDIMENT SHALL BE REMOVED FROM THE UNIT WHEN IT BECOMES HALF FULL .
 3. SEDIMENT REMOVAL SHALL BE ACCOMPLISHED BY REMOVING THE INSERT, EMPTYING, AND RE-INSERTING IT INTO THE CATCH BASIN.

**CATCH BASIN INLET
PROTECTION INSERT**
NTS

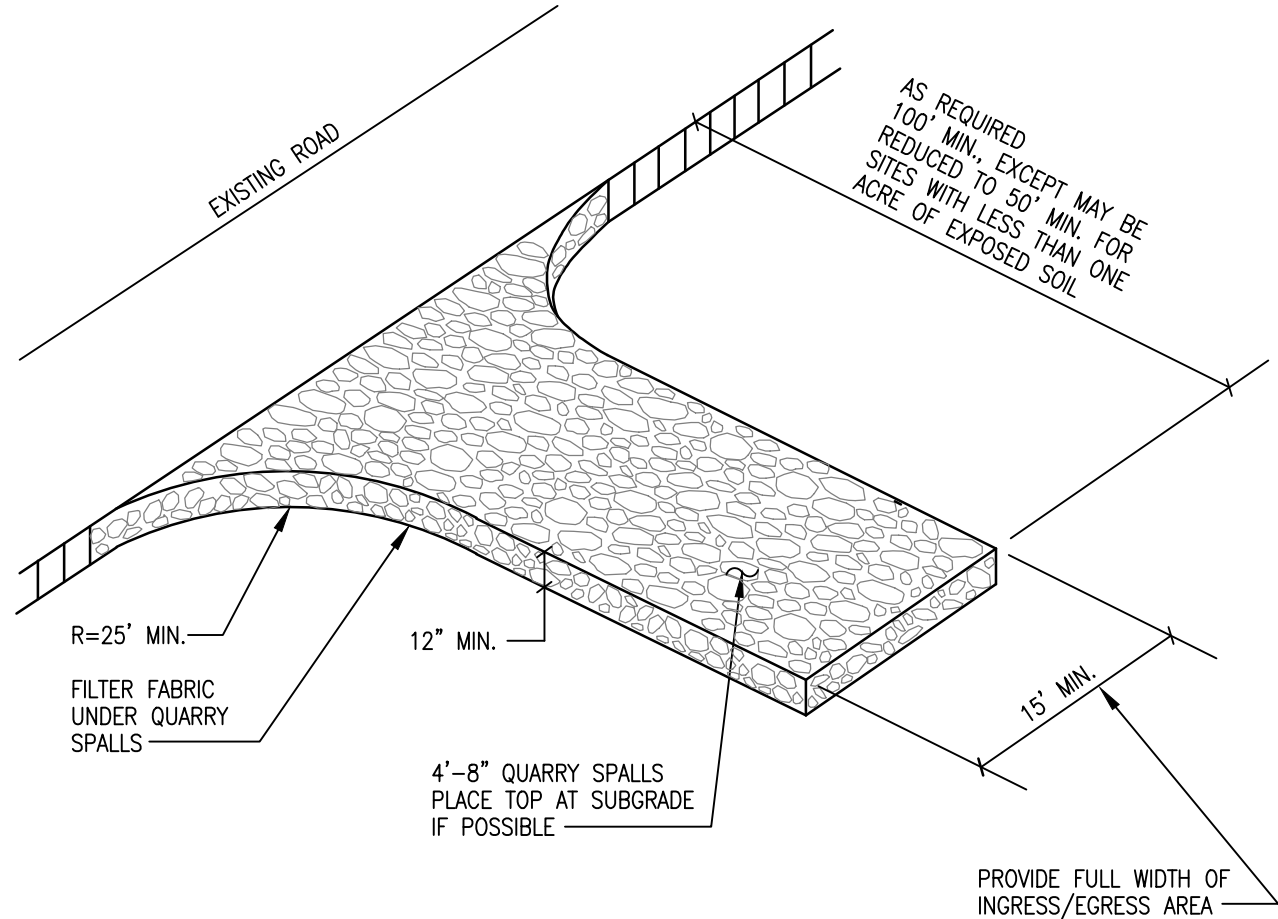


- NOTE:
1. FOR SIDE SEWER AND SERVICE DRAINS ON UNPAVED AREA.

CLEANOUT DETAILS
NTS



SILT FENCE
NO SCALE



STABILIZED CONSTRUCTION ENTRANCE
NO SCALE

- NOTES:
1. STONE SIZE - USE 4" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
 2. LENGTH - AS REQUIRED, BUT NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
 3. THICKNESS - NOT LESS THAN 12"
 4. WIDTH - 15 FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
 5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. FILTER WILL NOT BE REQUIRED ON A SINGLE FAMILY RESIDENCE LOT.
 6. SURFACE WATER - ALL SURFACE WATER FLOWING OR OVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
 7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.
 8. WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
 9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

REVISION

NO.

DATE

C2MY ENGINEERS, LLC
PO BOX 52883
BELLEVUE, WA 98015
(206) 922-9376
cmchin.c2my@gmail.com

PROJECT:

MERCER FIRSHILL 2419 - 6FR
2419 12ND AVENUE SE
MERCER ISLAND, WA 98040

DATE:

05-17-24

TESC AND DRAINAGE DETAILS

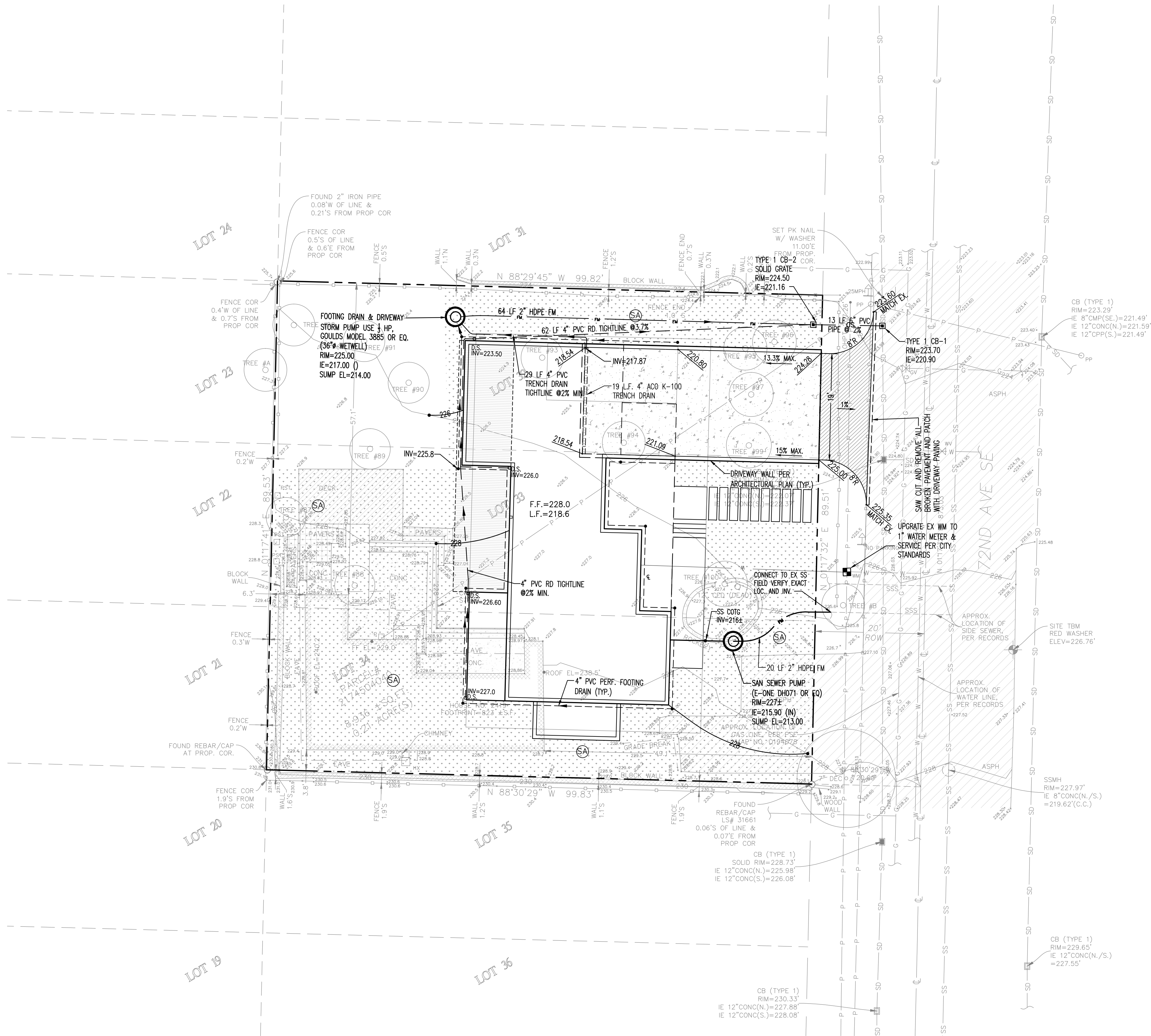
FILE NO:

2406
DWG

SHEET

C1.1

NW 1/4, NW 1/4, SEC 12, TWP. 24N., RGE 4E., W.M.



SITE IMPERVIOUS AREA SUMMARY:

EXISTING LOT AREA = 8,836 S.F.
EXISTING BUILDING ROOF: 1,947 S.F.
EXISTING DRIVEWAY: 414 S.F.
EXISTING PATIO: 210 S.F.
EXISTING PATIO: 391 S.F.
TOTAL EXISTING HARD SURFACES AREA = 2,062 S.F.
EXISTING IMPERVIOUS IS 23.07% < 35% (NEW DEVELOPMENT FLOW CHART)

PROPOSED DRIVEWAY WITHIN ROW: 205 S.F.
PROPOSED DRIVEWAY WITHIN PROPERTY: 396 S.F.
PROPOSED WALKWAY: 122 S.F.
PROPOSED BUILDING ROOF: 3,101 S.F.
PROPOSED DECK: 45 S.F. (OUTSIDE OF ROOF AREA)
TOTAL NEW HARD SURFACES AREA: 3,664 S.F. < 5000 S.F.

PER FIGURE I-3.1 FLOW CHART FOR DETERMINING REQUIREMENT FOR NEW DEVELOPMENT:
MINIMUM #1 TO #5 APPLIED TO NEW AND REPLACED HARD SURFACES AND THE LAND DISTURBED.

NET DECREASE IN IMPERVIOUS AREA ON-SITE= 1,602 S.F.

LEGEND

EX. SANITARY SEWER — SS —
EX. WATER LINE — W —
EX. STORM DRAIN — SD —
CONCRETE DRIVEWAY [Pattern]
SOIL AMENDMENT-SA (FOR ALL DISTURBED UNPAVED AREA) [Pattern]
SAW CUT LINE - - -
ROOF DRAIN TIGHTLINE WITH C.O.T.G.(4" PVC) [Pattern]
FOOTING DRAIN W/ CLEANOUT TO GRADE (C.O.T.G.) [Pattern]

NOTES:

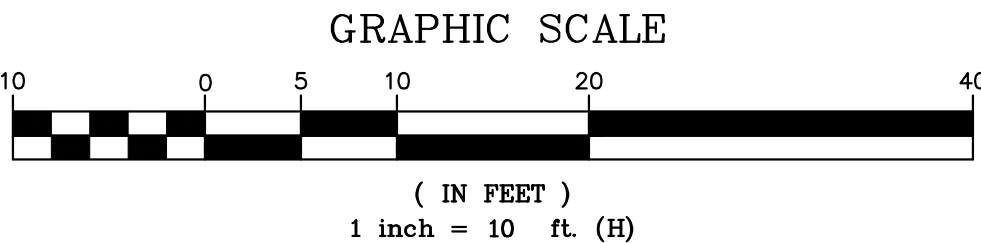
- SEE ARCHITECTURE SITE PLAN FOR OTHER PROPOSED INFORMATION NOT SHOWN ON THIS SHEET.

DRAINAGE GENERAL NOTES:

- DOWNSPOUTS SHALL BE TIED INTO A NON-PERFORATED, RIGID, SMOOTH-BORE PIPE WHICH DRAINS TO AN APPROVED STORM SYSTEM
- PROVIDE CLEANOUTS AT THE UPPER END OF THE SYSTEM AND AT EACH CUMULATIVE CHANGE OF DIRECTION IN EXCESS OF 135 DEGREES.
- ALL PIPE FITTINGS SHALL BE MADE OF THE SAME MATERIAL AS THE STRAIGHT PIPE. GLEED JOINTS SHALL USE A BONDING AGENT RECOMMENDED BY THE PIPE MANUFACTURER.
- FOOTING DRAINS SHALL BE INSTALLED AROUND ALL NEW FOUNDATIONS AND SHALL BE TIGHTLINED TO DISCHARGE TO THE SPLASH BLOCK. FOOTING DRAINS SHALL BE CONSTRUCTED OF PERFORATED PIPE AT THE BASE OF THE FOOTING, AND SHALL MEET MATERIAL STANDARDS OF D2729 FOR PVC PIPE, WITH THE PERFORATIONS DIRECTED DOWNWARD. PLACE GRANULAR BACKFILL AROUND AND ABOVE THE FOOTING DRAIN TO A DEPTH OF 2/3 OF THE WALL HEIGHT. PROVIDE FILTER FABRIC WRAP AROUND BETWEEN THE GRANULAR BACKFILL AND THE NATIVE SOIL.



Know what's below.
Call before you dig.



REVISION

NO. DATE

C2MY ENGINEERS, LLC
PO BOX 52883
BELLEVUE, WA 98015
(206) 922-9376
cmchnc2my@gmail.com

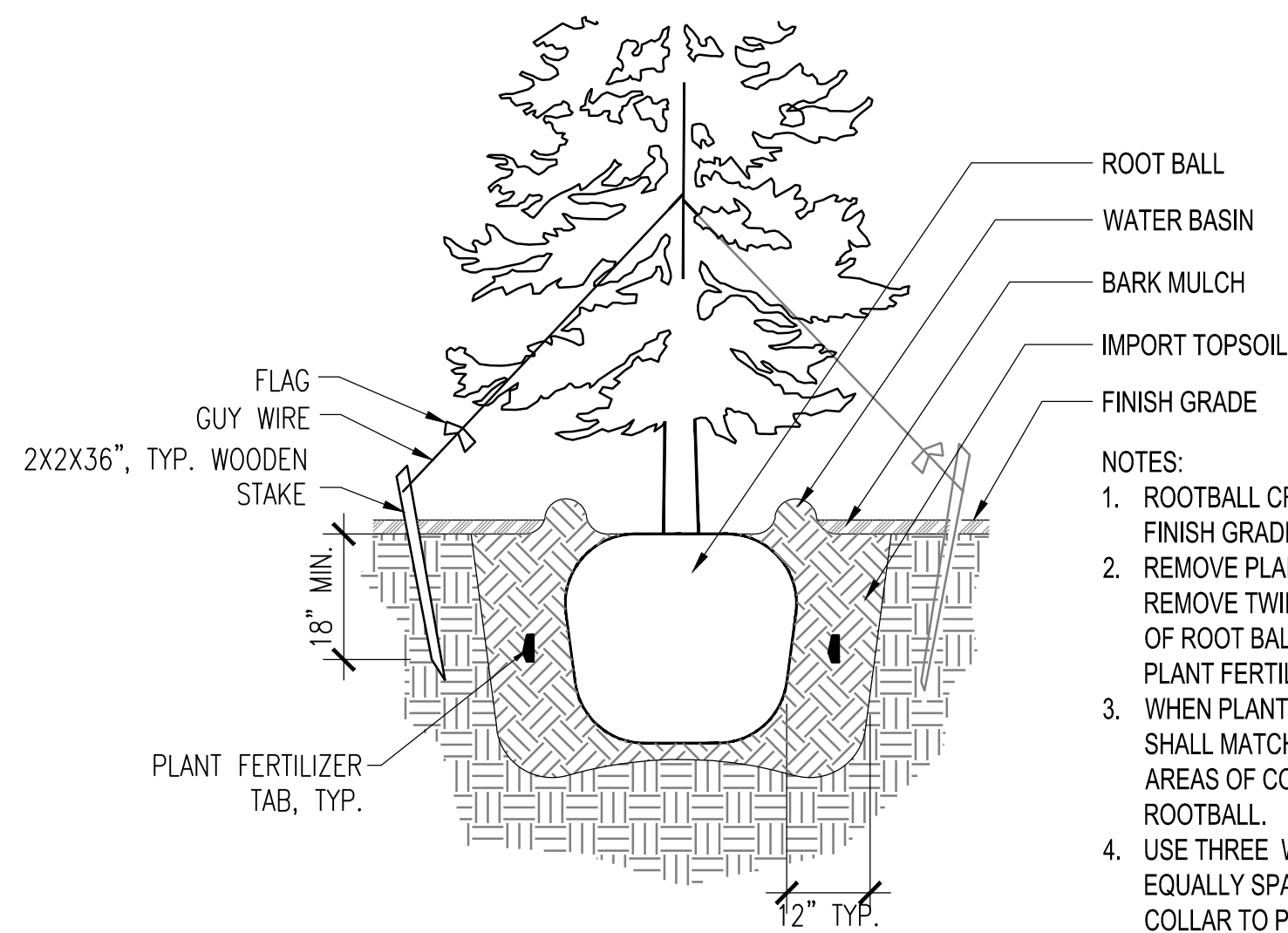
PROJECT: MERCER FIRSHILL 2419 - 6FR
2419 72ND AVENUE SE
MERCER ISLAND, WA 98040
Paving, Grading, Drainage Plan

DATE: 05-17-24

FILE NO:
2406
DWS

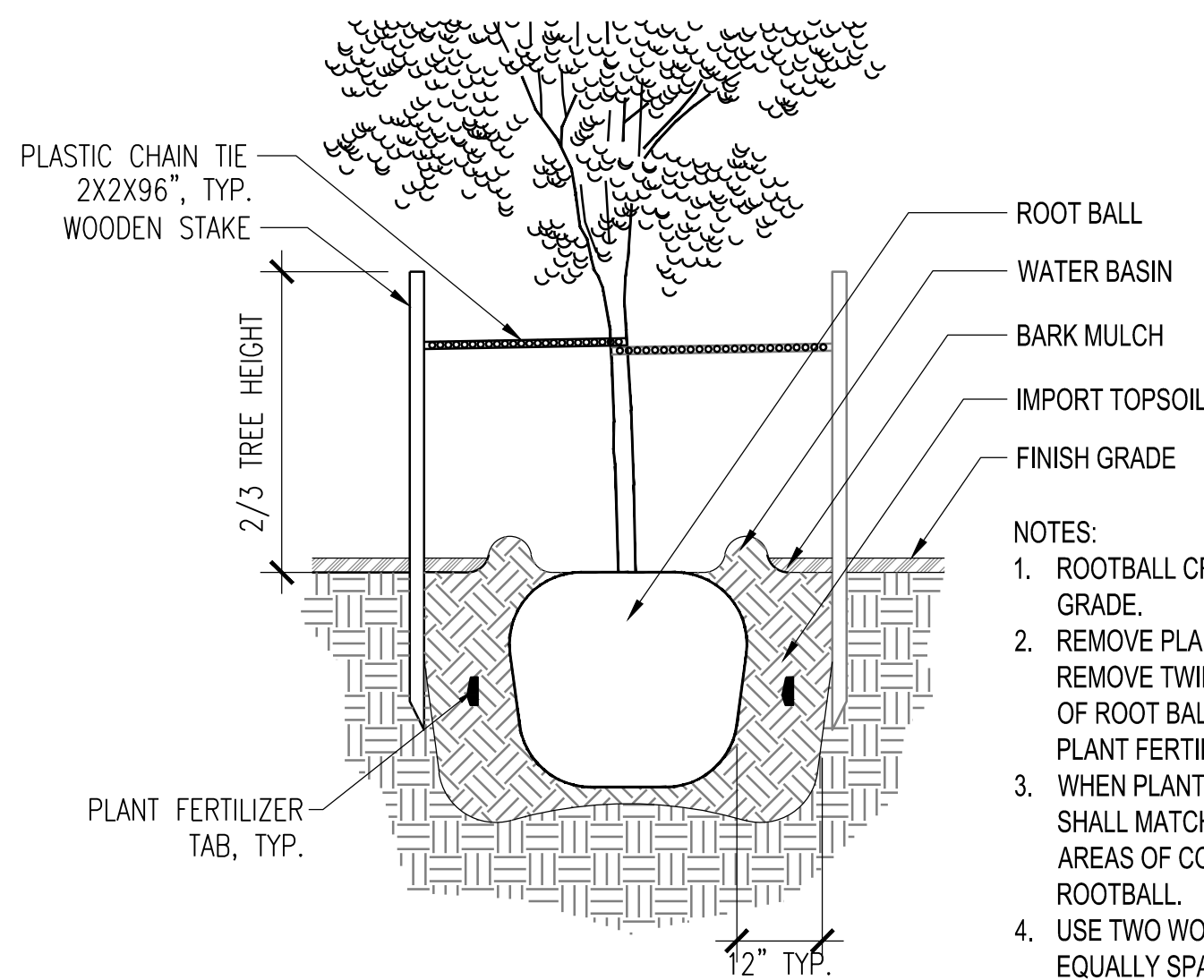
SHEET
C2.0

Scale 1/2" = 1'-0"



1. ROOTBALL CROWN TO BE FLUSH WITH FINISH GRADE.
2. REMOVE PLANT FROM CONTAINER OR REMOVE TWINE AND BURLAP FROM TOP 1/2 OF ROOT BALL. SEE SPECIFICATION FOR PLANT FERTILIZER TAB REQUIREMENTS.
3. WHEN PLANTING ON A SLOPE FINISH GRADE SHALL MATCH PREVIOUS GRADE EXCEPT IN AREAS OF COMPACTED FILL AND TOP OF ROOTBALL.
4. USE THREE WOODEN STAKES PER TREE, EQUALLY SPACED. PROVIDE RUBBER COLLAR TO PREVENT INJURY TO THE BARK OF TREE. REMOVE ALL SUPPORTS WITHIN 1 YEAR FROM PLANTING.

Scale 1/2" = 1'-0"



1. ROOTBALL CROWN TO BE FLUSH WITH FINISH GRADE.
2. REMOVE PLANT FROM CONTAINER OR REMOVE TWINE ADEN BURLAP FROM TOP 1/2 OF ROOT BALL. SEE SPECIFICATIONS FOR PLANT FERTILIZER TAB REQUIREMENTS.
3. WHEN PLANTING ON A SLOPE FINISH GRADE SHALL MATCH PREVIOUS GRADE EXCEPT IN AREAS OF COMPACTED FILL AND TOP OF ROOTBALL.
4. USE TWO WOODEN STAKES PER TREE, EQUALLY SPACED. REMOVE ALL SUPPORTS WITH IN 1 YEAR FROM PLANTING.

% AREA	BOTANICAL NAME	COMMON NAME	SPACING	SIZE/CONT.
TREES:				
44%	ACER CIRCINATUM	VINE MAPLE	AS SHOWN	1.5" CAL.
56%	PINUS CONTORTA	SHORE PINE	AS SHOWN	6' MIN. HT.
NOTE: BOTH TREES SPECIES ARE PNW NATIVE TREES.				

REQUIRED REPLACEMENT TREES PER INVENTORY AND REPLACEMENT FORM: 26 EA
TOTAL REPLACEMENT TREES PROVIDED: 17 EA
FREE IN LIEU: TO PRESERVE KEY TERRITORIAL VIEWS, THE PROJECT OWNER REQUESTS TO PAY A 'FREE IN LIEU' OF FOR (9) REPLACEMENT TREES ON THE PROJECT (MIMC SECTION 19.10.070.C).
PLANTING TIMING: REPLACEMENT TREES SHALL BE PLANTED IN THE WET SEASON (OCTOBER 1 THROUGH APRIL 1) WHERE POSSIBLE OR AS CITY ARBORIST APPROVES.
MAINTENANCE OF REPLACEMENT TREES: THE PARCEL OWNER SHALL MAINTAIN ALL REPLACEMENT TREES IN A HEALTHY CONDITION FOR A PERIOD OF FIVE YEARS AFTER PLANTING. THE APPLICANT SHALL BE OBLIGATED TO REPLANT ANY REPLACEMENT TREE THAT DIES, BECOMES DISEASED, OR IS REMOVED DURING THIS FIVE-YEAR TIME PERIOD.
IMPORT TOPSOIL: CONTRACTOR TO REMOVE COMPACTED NATIVE SOILS AROUND TREE ROOTBALLS AND INSTALL WINTERMIX TOPSOIL OR COMPOST/TOPSOIL BLEND FOR IMPORT TOPSOIL AREAS SHOWN IN THE PROJECT DETAILS. SEE DETAILS #1 AND #2 BELOW TYPICAL.
TREE PROTECTION/RETENTION: SEE TREE FENCING AND PROTECTION DETAIL SHEET G1.0 FOR TREE FENCING AND PROTECTION REQUIREMENTS FOR TREES TO REMAIN, TYPICAL.



2419 72ND AVENUE SE
MERCER ISLAND, WA 98040

PERMIT
SUBMITTAL

L-1.0

GENERAL NOTES

ALL DESIGN AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE 2018 EDITION.

CONTRACTOR SHALL VERIFY ALL LEVELS, DIMENSIONS AND EXISTING CONDITIONS IN FIELD BEFORE PROCEEDING WITH ANY CONSTRUCTION OR DEMOLITION. CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES OR FIELD CHANGES.

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE WORK.

CONTRACTOR SHALL PROVIDE ADEQUATE SHORING AND BRACING OF ALL STRUCTURAL MEMBERS, EXISTING CONSTRUCTION AND SOIL EXCAVATIONS AS REQUIRED, IN A MANNER SUITABLE TO THE WORK SEQUENCE. TEMPORARY SHORING AND BRACING SHALL NOT BE REMOVED UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE DRAWINGS AND MATERIALS HAVE ACHIEVED DESIGN STRENGTH. FOUNDATIONS WALLS GREATER THAN 4 FEET SHALL NOT BE BACKFILLED UNTIL THE FLOOR FRAMING AND ALL CONNECTIONS TO THE FLOOR FRAMING PER THESE DETAILS ARE COMPLETE.

CHANGES: NO CHANGES TO THESE STRUCTURAL DRAWINGS ARE PERMITTED WITHOUT WRITTEN CONSENT OF THE ENGINEER. CHANGES WILL BE BILLED TO THE CLIENT, OWNER OR CONTRACTOR AT THE ENGINEER'S HOURLY RATE.

SUBMITTALS: SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO ANY FABRICATION OR CONSTRUCTION FOR ALL THE FOLLOWING: STRUCTURAL STEEL, STEEL CANOPIES, GLUED-LAMINATED MEMBERS AND PRE-MANUFACTURED WOOD MEMBERS.

DESIGN DRAWINGS AND CALCULATIONS, FOR PRE-MANUFACTURED WOOD TRUSSES AND JOISTS SHALL BEAR THE SEAL AND SIGNATURE OF THE WASHINGTON STATE REGISTERED PROFESSIONAL ENGINEER WHO IS RESPONSIBLE FOR THE DESIGN, AND SHALL BE SUBMITTED TO THE ARCHITECT AND BUILDING OFFICIAL FOR REVIEW PRIOR TO FABRICATION.

DESIGN LOADS

LIVE LOADS: LIVE LOADS ARE DETERMINED IN ACCORDANCE WITH ASCE CH. 7

L = 40 PSF (RESIDENTIAL)

SNOW LOADS: SNOW LOADS ARE DETERMINED IN ACCORDANCE WITH ASCE CH. 7 WITH THE FOLLOWING FACTORS:

GROUND SNOW LOAD PG	= 25 PSF	CT = 1.0	CE = 1.0
ROOF SNOW LOAD PS	= 25 PSF	IS = 1.0	

WIND LOADS: WIND LOADS ARE BASED ON ASCE 7-16 CH. 28 (ENVELOPE PROCEDURE) WITH THE FOLLOWING FACTORS:

EXPOSURE CATEGORY	= B	IW = 1.0
VELOCITY (3 SEC)	= 110 MPH (ULT)	KZT = 1.60

DESIGN WIND PRESSURED FOR DETERMINING FORCES ON COMPONENTS AND CLADDING ARE DETERMINED IN ACCORDANCE WITH ASCE 7-16 CHAPTER 30.

SEISMIC LOADS: SEISMIC LOADS ARE BASED ON THE EQUIVALENT LATERAL FORCE PROCEDURE IN ASCE 7-16 SECTION 12.8 WITH THE FOLLOWING FACTORS:

RISK CATEGORY = II	SS = 1.393
SITE CLASS = D	S1 = 0.485
DESIGN CATEGORY = D	SDS = 0.929
IE = 1.0	
R = 6.5 (WOOD SHEAR WALL)	CS = 0.143 (ULT.)

FOUNDATIONS

CONCRETE FOUNDATIONS SHALL BEAR ON STIFF, COMPETENT, UNDISTURBED NATIVE SOIL. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN CONFIRMATION FROM THE BUILDING OFFICIAL THAT THE NATIVE SOIL AT THIS PROJECT IS ADEQUATE TO SUPPORT THE FOLLOWING BEARING PRESSURE: PER GEO REPORT BY NGA, INC (NOT1502724), ALLOWABLE BEARING PRESSURE USED FOR STRUCTURAL DESIGN = 2500 PSF.

WHERE FOOTINGS MUST BEAR ON STRUCTURAL FILL DUE TO INADEQUATE SOIL CONDITIONS, THE FILL SHALL BE MIXED AND COMPACTED IN ACCORDANCE WITH SPECIFICATIONS PROVIDED BY A GEOTECHNICAL ENGINEER LICENSED IN THE STATE OF WASHINGTON.

BOTTOM OF FOOTING ELEVATION SHALL BE LOCATED AT MINIMUM FROST DEPTH 18" BELOW TOP OF FINISHED GRADE UNLESS REQUIRED OTHERWISE BY THE BUILDING OFFICIAL. THE CONTRACTOR SHALL CONFIRM THE MINIMUM FROST DEPTH WITH THE BUILDING OFFICIAL PRIOR TO EXCAVATION.

CONCRETE

CONCRETE WORK SHALL COMPLY, IN GENERAL, WITH ACI 301 (LATEST EDITION) "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS.

CONCRETE MIXES: CONCRETE MIXES SHALL CONFORM ACI 318 CH. 5. MINIMUM CONCRETE STRENGTH F'C AT 28 DAYS SHALL BE AS FOLLOWS:

SLAB-ON-GRADE, CURBS AND PADS	= 2500 PSI
FOOTINGS	= 5000 PSI
WALLS, STEMS	= 5000 PSI

WATER/CEMENT RATIO SHALL BE MEASURED BY WEIGHT AND SHALL BE BASED ON THE TOTAL CEMENTITIOUS MATERIAL. WATER/CEMENT RATIO SHALL BE DETERMINED BY THE SUPPLIER BASED ON STRENGTH REQUIREMENTS AND SHALL NOT EXCEED 0.55. WATER-REDUCING ADMIXTURES MAY BE INCORPORATED IN CONCRETE MIX DESIGNS, BUT SHALL CONFORM TO ASTM C 464 AND BE USED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. CAEL AND OTHER WATER-SOLUBLE CHLORIDE ADMIXTURES SHALL NOT BE USED.

REINFORCING STEEL: ALL REINFORCING SHALL BE DEFORMED BAR (REBAR) WITH BAR DIAMETERS SPECIFIED IN THESE DRAWINGS AND PROPERTIES BELOW:

ALL REINFORCING UNLESS NOTED OTHERWISE	= ASTM A615, GRADE 60
#3 STIRRUPS AND TIES	= ASTM A615, GRADE 40
WELDED REBAR	= ASTM A706, GRADE 60
GALVANIZED WELDED WIRE FABRIC	= ASTM A165

REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH ACI 315 "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES."

REINFORCING STEEL SHALL BE LAPPED AS NOTED ON THE DRAWINGS. WHERE LAP LENGTH IS NOT SHOWN, REINFORCING BARS SHALL BE LAPPED AS FOLLOWS:

#5 AND SMALLER	= 48 BAR DIAMETERS
#6 AND LARGER	= 60 BAR DIAMETERS

MINIMUM CONCRETE COVER OVER REINFORCING SHALL BE AS FOLLOWS:

NONSTRUCTURAL SLAB-ON-GRADE	= MID-DEPTH
WALL BARS: INTERIOR FACE	= 3/4"
EXPOSED TO EARTH/WEATHER	= 1-1/2" (#5 AND SMALLER), 2" (#6 AND LARGER)
FOOTINGS: BOTTOM BARS	= 3" (CAST AGAINST EARTH)
TOP BARS	= 1-1/2"
SIDE BARS	= 2"

PROVIDE SUPPORTS AS REQUIRED FOR PROPER ALIGNMENT AND CONCRETE COVER AROUND THE REINFORCEMENT. CONSULT THE CRSI MANUAL OF STANDARD PRACTICE MSP-1 FOR SPECIFIC INFORMATION.

DRYPACK

DRYPACK SHALL BE 5,000 PSI NON-SHRINK GROUT, FIVE STAR OR EQUIVALENT. INSTALL DRYPACK UNDER BEARING PLATES BEFORE FRAMING MEMBER IS INSTALLED.

ANCHORS

USE OF DRILLED CONCRETE ANCHORS, INCLUDING EXPANSION BOLTS AND ADHESIVE ANCHORS, WHERE NOT SPECIFIED IN THESE DOCUMENTS SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER, ARCHITECT AND THE BUILDING INSPECTOR

EXPANSION BOLTS: EXPANSION BOLTS IN SOLID CONCRETE SHALL BE WEDGE-TYPE ANCHORS MADE OF CARBON STEEL. BOLT SIZE, SPACING AND EMBEDMENT LENGTH SHALL BE AS DESIGNATED IN THESE DRAWINGS. BOLTS SHALL BE INSTALLED PER THE MANUFACTURER'S INSTRUCTIONS WITH INSPECTION PER SCHEDULE. EXPANSION BOLTS SHALL BE SIMPSON STRONG BOLT 2 OR APPROVED EQUAL. A CURRENT ICBO OR ICC REPORT SHALL BE SUBMITTED FOR ALTERNATES.

ADHESIVE ANCHORS: ADHESIVE OR EPOXY TYPE ANCHORS IN SOLID CONCRETE SHALL BE INSTALLED PER THE MANUFACTURER'S INSTRUCTIONS. ANCHOR SIZE, SPACING AND EMBEDMENT LENGTH SHALL BE AS DESIGNATED IN THESE DRAWINGS. ADHESIVE SHALL BE SIMPSON SET 3G. A CURRENT ICBO OR ICC REPORT SHALL BE SUBMITTED FOR ALTERNATES.

THREADED RODS SHALL BE CONFORM WITH F1554, GRADE 55. DOWELS SHALL CONFORM WITH ASTM A615, GRADE 60. ALL ADHESIVE (EPOXY) BOLTS SHALL HAVE I.C.C. RATING FOR MATERIAL INTO WHICH INSTALLATION TAKES PLACE. ANCHORS AT EXTERIOR LOCATIONS SHALL BE HOT DIPPED GALVANIZED.

WOOD

SAWN LUMBER: STRUCTURAL SAWN LUMBER SHALL BE KILN DRIED AND BE OF THE SPECIES AND GRADE NOTED BELOW OR BETTER:

USE	GRADE	FB (PSI)
WALL STUDS	HEM FIR STUD	675
PLATES	HEM FIR #2	850
4X BEAMS	HEM FIR #2	850
6X BEAMS	HEM FIR #2	675
6X COLUMNS	DOUGLAS FIR #1	1200
4X COLUMNS	DOUGLAS FIR #1	1000

ALL WOOD CONNECTORS SHALL BE MANUFACTURED BY SIMPSON STRONG TIE COMPANY (OR APPROVED EQUAL), AND OF THE SIZE AND TYPE SHOWN ON THE DRAWINGS. ALL WOOD CONNECTORS IN CONTACT WITH PRESERVATIVE-TREATED WOOD SHALL BE TRIPLE ZINC G-185 GALVANIZED (1.85 OZ/SQ FT COATING).

MINIMUM WOOD NAILING REQUIREMENTS: UNLESS OTHERWISE NOTED ON THE DRAWINGS, TYPICAL WOOD FRAMING SHALL BE FASTENED PER IBC 2018 TABLE 2304.10.1.

RATED SHEATHING: STRUCTURAL PANELS SHALL BEAR THE APA TRADEMARK OF THE AMERICAN PLYWOOD ASSOCIATION. SHEATHING SHALL BE AS FOLLOWS:

SHEAR WALL SHTG MIN. 7/16" 32/16 MIN. C-D INT APA WITH EXTERIOR GLUE (CDX)

ROOF SHTG MIN. 15/32" 32/16 MIN. C-D INT APA WITH EXTERIOR GLUE (CDX)

SUB FLOOR SHTG MIN. 3/4" 48/24 T&G MIN. C-D INT APA WITH EXTERIOR GLUE (CDX)

SHEATHING SHALL BE ORIENTATED OVER THE SUPPORTS AS SHOWN ON THE DRAWINGS. SHEAR WALL SHEATHING SHALL BE BLOCKED AT ALL PANEL EDGES AS SHOWN IN THE SHEAR WALL SCHEDULE.

PREMANUFACTURED OPEN WEB WOOD TRUSSES: TRUSSES SHALL BE DESIGN BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF WASHINGTON, WHO IS REGULARLY ENGAGED IN THE DESIGN OF PLATE-CONNECTED WOOD TRUSSES. TRUSS DESIGN SHALL BE ACCORDANCE WITH IBC SECTION 2303.4.

TRUSSES SHALL BE DESIGN FOR THE FOLLOWING DEAD LOADS:

	TOP CHORD	BOTTOM CHORD	TOTAL
ROOF TRUSSES	15 PSF	5 PSF	20 PSF

IN ADDITION TO DEAD LOADS, THE DESIGN SHALL INCLUDE THE LIVE, WIND, SNOW AND SNOW DRIFT LOADS AS IDENTIFIED IN THE "DESIGN LOADS" SECTION OF THESE DRAWINGS. IN ADDITION, THE TRUSS DESIGN SHALL INCLUDE CONCENTRATED AND AXIAL LOADS SHOWN ON FRAMING PLANS AND HANGER SCHEDULES IN THESE DRAWINGS. ROOF TRUSSES SHALL BE DESIGNED FOR WIND NET UPLIFT OF 10 PSF UNLESS OTHERWISE NOTED ON THE DRAWINGS. FLOOR TRUSSES SHALL BE DESIGN FOR MAXIMUM LIVE LOAD DEFLECTION = 1/2" AND MINIMUM LIVE LOAD DEFLECTION RATIO = L/480.

TRUSSES SHALL BE FABRICATED BY A MANUFACTURER WHO IS A MEMBER OF THE TRUSS PLATE INSTITUTE. TRUSSES SHALL BE SUPPLIED WITH THE PROPER HANGERS, END CONNECTIONS, BRIDGING, BRACING TO PROVIDE LATERAL STABILITY OF ALL TRUSS MEMBERS, AND TIE-DOWN CONNECTIONS TO BEAMS AND TOPS OF WALLS. TRUSSES SHALL BE SUPPLIED WITH TAPERED HARDWOOD SHIMMING SO THAT EVERY CHORD BEARS ON THE FULL WIDTH OF EVERY SUPPORT. WITHOUT NOTCHING THE TRUSS MEMBERS, THE TRUSS MANUFACTURER IS RESPONSIBLE FOR ENSURING THE BEARING SEAT DOES NOT EXCEED THE SILL PLATE CAPACITY OF THE SUPPORTING ELEMENT.

BUILDING OFFICIAL INSPECTIONS

THE FOLLOWING RECOMMENDED MINIMUM ITEMS SHALL BE INSPECTED BY A QUALIFIED INDIVIDUAL PROVIDED BY THE BUILDING OFFICIAL:

- FOOTINGS BEAR ON COMPETENT NATIVE SOIL PER THE "FOUNDATIONS" SECTION ABOVE
- FOOTING REINFORCEMENT
- SHEAR WALL SILL PLATE ANCHORS AND WASHERS PER SCHEDULE
- SHEAR WALL NAILING AND SHEAR CLIPS PER SCHEDULE
- SHEAR WALL HOLD-DOWNS
- VERIFY TYPE, SIZE AND GRADE OF STRUCTURAL STEEL MEMBERS AND BOLTS

SHEET INDEX

S1.0 STRUCTURAL NOTES

S2.0 FOUNDATION PLANS

S2.1 MAIN FLOOR FRAMING PLANS

S2.1 UPPER FLOOR FRAMING PLANS

S2.2 ROOF FRAMING PLANS

S3.0 TYPICAL STRUCTURAL DETAILS

S3.1 TYPICAL STRUCTURAL DETAILS

S3.2 TYPICAL STRUCTURAL DETAILS

S3.3 SHEAR WALL DETAILS

S3.4 TYPICAL STRUCTURAL DETAILS

ROOF			
	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION
1.	Blocking between ceiling joists, rafters or trusses to top plate or other framing below	3-8d common (2 5/8" x 0.131"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 1 1/4" crown	Each end, toenail
	Blocking between rafters or truss not at the wall top plate, to rafter or truss	2-8d common (2 5/8" x 0.131") 2-3" x 0.131" nails 2-3/14 gage staples	Each end, toenail
		2-16 d common (3 5/8" x 0.162") 3-3" x 0.131" nails 3-3" 14 gage staples	End nail
	Flat blocking to truss and web filler	16d common (3 5/8" x 0.162") @ 6" o.c. 3" x 0.131" nails @ 6" o.c. 3" x 14 gage staples @ 6" o.c.	Face nail
2.	Ceiling joists to top plate	3-8d common (2 5/8" x 0.131"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 1 1/4" crown	Each joist, toenail
3.	Ceiling joist not attached to parallel rafter, laps over partitions (no thrust) (see Section 2308.7.3.1, Table 2308.7.3.1)	3-16d common (3 5/8" x 0.162"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 1 1/4" crown	Face nail
4.	Ceiling joist attached to parallel rafter (heel joint) (see Section 2308.7.3.1, Table 2308.7.3.1)	Per Table 2308.7.3.1	Face nail
5.	Collar tie to rafter	3-10d common (3" x 0.148"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 1 1/4" crown	Face nail
6.	Rafter or roof truss to top plate (See Section 2308.7.5, Table 2308.7.5)	3-10 common (3" x 0.148"); or 3-16d box (3 5/8" x 0.135"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131 nails; or 4-3" 14 gage staples, 1 1/4" crown	Toenail ^C
7.	Roof rafters to ridge valley or hip rafters; or roof rafter to 2-inch ridge beam	2-16d common (3 5/8" x 0.162"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 1 1/4" crown; or	End nail
		3-10d common (3 5/8" x 0.148"); or 3-16d box (3 5/8" x 0.135"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 1 1/4" crown	Toenail
WALL			
8.	Stud to stud (not at braced wall panels)	16d common (3 5/8" x 0.162")	24" o.c. face nail
		10d box (3" x 0.128"); or 3" x 0.131" nails; or 3-3" 14 gage staples, 1 1/4" crown	16" o.c. face nail
9.	Stud to stud and abutting studs at intersecting wall corners (at braced wall panels)	16d common (3 5/8" x 0.162"); or	16" o.c. face nail
		16d box (3 5/8" x 0.135"); or 3" x 0.131" nails; or 3-3" 14 gage staples, 1 1/4" crown	12" o.c. face nail
10.	Build-up header (2" to 2" header)	16d common (3 5/8" x 0.162"); or	16" o.c. each edge, face nail
		16d box (3 5/8" x 0.135")	16" o.c. each edge, face nail
11.	Continuous header to stud	4-8d common (2 5/8" x 0.131"); or 4-10d box (3" x 0.128")	Toenail
12.	Top plate to top plate	16d common (3 5/8" x 0.162"); or 10d box (3" x 0.128"); or 3" x 0.131" nails; or 3" 14 gage staples, 1 1/4" crown	16" o.c. face nail 12" o.c. face nail
13.	Top plate to top plate, at end joints	8-16d common (3 5/8" x 0.162"); or 12-10d box (3" x 0.128"); or 12-3" x 0.131" nails; or 12-3" 14 gage staples, 1 1/4" crown	Each side of end joint, face nail (minimum 24" lap splice length each side of end joint)
		16d common (3 5/8" x 0.162"); or	16" o.c. face nail
14.	Bottom plate to joist, rim joist, band joist or blocking (not at braced wall panels)	16d box (3 5/8" x 0.135"); or 3" x 0.131" nails; or 3" 14 gage staples, 1 1/4" crown	12" o.c. face nail
15.	Bottom plate to joist, rim joist, band joist or blocking at braced wall panels	2-16d common (3 5/8" x 0.162"); or 3-16d box (3 5/8" x 0.135"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 1 1/4" crown	16" o.c. face nail
16.	Stud to top or bottom plate	4-8d common (2 1/2" x 0.131"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 1 1/4" crown; or	Toenail
		2-16d common (3 1/2" x 0.162"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 1 1/4" crown	End nail
17.	Top plates, laps at corners and intersections	2-16d common (3 5/8" x 0.162"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 1 1/4" crown	Face nail
18.	1" brace to each stud and plate	2-8d common (2 5/8" x 0.131"); or 2-10d box (3" x 0.128"); or 2-3" x 0.131" nails; or 2-3" 14 gage staples, 1 1/4" crown	Face nail
19.	1" x 6" sheathing to each bearing	2-8d common (2 1/2" x 0.131"); or 2-10d box (3" x 0.128")	Face nail
20.	1" x 8" and wider sheathing to each bearing	2-8d common (2 1/2" x 0.131"); or 3-10d box (3" x 0.128")	Face nail

WOOD STRUCTURAL PANELS (WSP), SUBFLOOR, ROOF AND INTERIOR WALL SHEATHING TO FRAMING AND PARTICLEBOARD WALL SHEATHING TO FRAMING ^a				
			Edges (inches)	Intermediate supports (inches)
30.	$\frac{3}{8}$ " - $\frac{1}{2}$ "	6d common or deformed ($2 \frac{1}{2}$ " x 0.113") (subfloor and wall)	6	12
		8d box or deformed ($2 \frac{5}{8}$ " x 0.113") (roof)	6	12
		$2 \frac{5}{8}$ " x 0.113" nail (subfloor and wall)	6	12
		$1 \frac{1}{4}$ " 16 gage staple, $\frac{1}{4}$ " crown (subfloor and wall)	4	8
		$2 \frac{5}{8}$ " x 0.113" nail (roof)	4	8
		$1 \frac{1}{4}$ " 16 gage staple, $\frac{1}{4}$ " crown (roof)	3	6
31.	$\frac{19}{32}$ " - $\frac{3}{4}$ "	8d common ($2 \frac{5}{8}$ " x 0.131"); or 6d deformed ($2 \frac{1}{2}$ " x 0.113")	6	12
		$2 \frac{5}{8}$ " x 0.113" nail; or 2" 16 gage staple, $\frac{1}{4}$ " crown	4	8
32.	$\frac{7}{8}$ " - $1 \frac{1}{4}$ "	10d common ($3 \frac{1}{2}$ " x 0.148"); or 8d deformed ($2 \frac{5}{8}$ " x 0.131")	6	12
OTHER EXTERIOR WALL SHEATHING				
33.	$\frac{1}{2}$ " fiberboard sheathing ^b	$1 \frac{1}{4}$ " galvanized roofing nail ($\frac{1}{4}$ " head diameter); or $1 \frac{1}{4}$ " 16 gage staple with $\frac{1}{4}$ " or 1" crown	3	6
34.	$\frac{25}{32}$ " fiberboard sheathing ^b	$1 \frac{1}{4}$ " galvanized roofing nail ($\frac{1}{4}$ " diameter head); or $1 \frac{1}{4}$ " 16 gage staple with $\frac{1}{4}$ " or 1" crown	3	6
WOOD STRUCTURAL PANELS, COMBINATION SUBFLOOR UNDERLAYMENT TO FRAMING				
			Edges (inches)	Intermediate supports (inches)
35.	$\frac{3}{4}$ " and less	8d common ($2 \frac{5}{8}$ " x 0.131"); or 6d deformed ($2 \frac{1}{2}$ " x 0.113")	6	12
36.	$\frac{7}{8}$ " - 1"	8d common ($2 \frac{5}{8}$ " x 0.131"); or 6d deformed ($2 \frac{5}{8}$ " x 0.131")	6	12
37.	$\frac{3}{4}$ " and less	8d common ($2 \frac{5}{8}$ " x 0.131"); or 6d deformed ($2 \frac{1}{2}$ " x 0.113")	6	12
PANEL SIDING TO FRAMING				
38.	$\frac{1}{2}$ " or less	6d corrosion-resistant siding ($1 \frac{1}{2}$ " x 0.106"); or 6d corrosion-resistant casing ($2 \frac{1}{2}$ " x 0.099")	6	12
39.	$\frac{5}{8}$ "	8d corrosion-resistant siding ($2 \frac{1}{2}$ " x 0.128"); or 8d corrosion-resistant casing ($2 \frac{1}{2}$ " x 0.113")	6	12
INTERIOR PANELING				
40.	$\frac{1}{4}$ "	4d casing ($1 \frac{1}{2}$ " x 0.080"); or 4d finish ($1 \frac{1}{2}$ " x 0.072")	6	12
41.	$\frac{3}{8}$ "	6d casing ($2 \frac{1}{2}$ " x 0.099"); or 6d finish (Panel supports at 24 inches)	6	12
For SI: 1 inch = 25.4 mm.				
a. Nails spaced at 6 inches at intermediate supports where spans are 48 inches or more. For nailing of wood structural panel and particleboard diaphragms and shear walls, refer to Section 2305. Nails for wall sheathing are permitted to be common, box or casing.				
b. Spacing shall be 6 inches on center on the edges and 12 inches on center at intermediate supports for nonstructural applications. Panel supports at 16 inches (20 inches if strength axis in the long direction of the panel, unless otherwise marked).				
c. Where a rafter is fastened to an adjacent parallel ceiling joist in accordance with this schedule and the ceiling joist is fastened to the top plate in accordance with this schedule, the number of toenails in the rafter shall be permitted to be reduced by one nail.				

5/29/2024

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JOB # 2024020

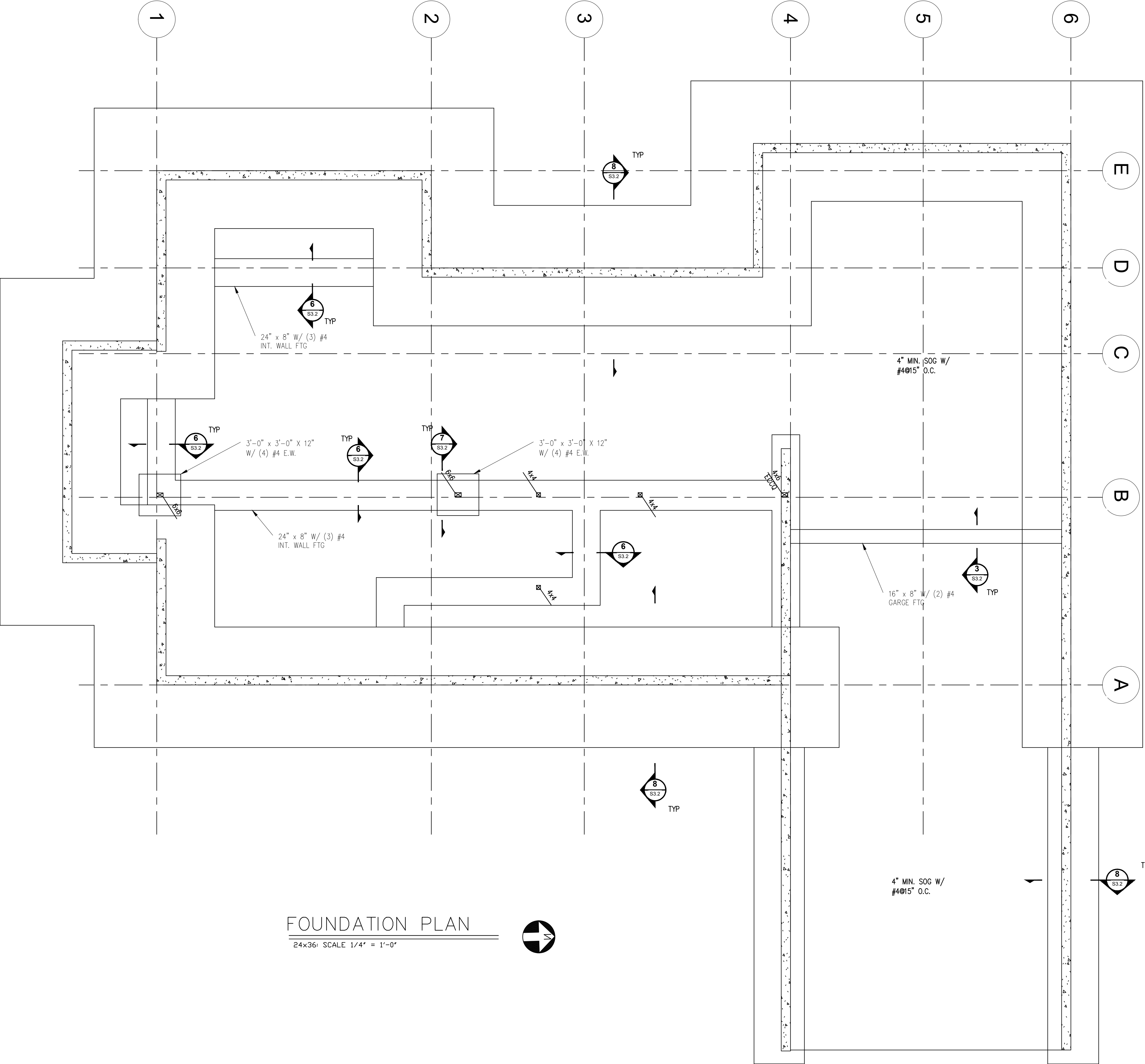
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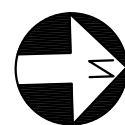
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S1.0



FOUNDATION PLAN

24x36 SCALE 1/4" = 1'-0"



FLOOR PLAN LEGEND	
	LOAD BEARING WALL
	BEAM/HEADER, U.N.O
	POST
	HOLD-DOWN LOCATION
	HANGER
	INDICATES SHEAR WALL AND HOLD-DOWN TYPE. SEE SCHEDULE ON SHEET S3.3
	FORCE TRANSFER SHEAR WALL SEE DETAIL S6/3.3

- PLAN NOTES:
- SEE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN. ALL DIMENSIONS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. STRUCTURAL DRAWINGS ARE SCHEMATIC. DO NOT SCALE. CONTRACTOR TO PROVIDE TEMPORARY SUPPORT FOR THE DEMOLITION.
 - DIMENSIONS AND LOCATION OF EXISTING FOUNDATION SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
 - ALL LOAD BEARING WALL WITH OUT SHEAR WALL TYPE SHOULD BE TYPE A.
 - ALL 4" LOAD BEARING WALL SHOULD BE 2X4 HF#2 @ 16" O.C.
 - ALL 6" LOAD BEARING WALL SHOULD BE 2X6 HF#2 @ 16" O.C.
 - ALL POST SHALL BE DF#1 U.N.O.
 - ALL BEAM AND HEADER SHOULD BE HF#2 U. N. O.
 - ALL SHEAR WALL DOES NOT LINE UP ABOVE, HOLDDOWN SHOULD BE CONTINUOUS AND CONNECTED TO BEAM OR FOUNDATION .
 - ALL BEAM AT TOP PLATE/WALL CONNECTION SEE DETAIL 5/S3.3.
 - TYPICAL STAIR AND STAIR LANDING DETAIL SEE DWG 10/S3.1 - 15/S3.1

REV	DESCRIPTION	DATE

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Drawing Title: _____
FOUNDATION PLAN
Sheet S2.0

2419 MERCER FIRSITHILL
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2419 72ND AVE SE
MERCER ISLAND, WA 98040

JOB # 2024020

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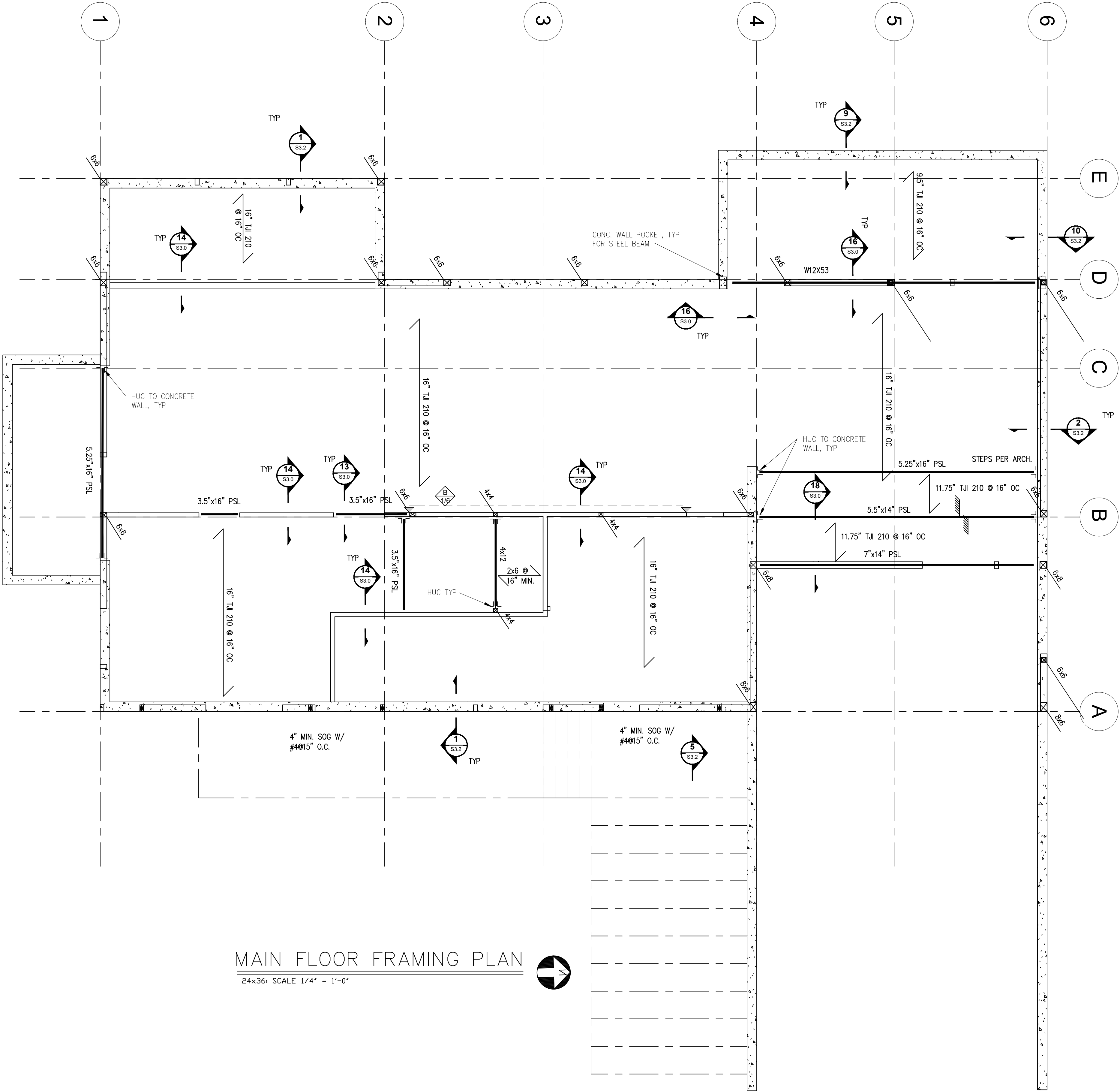
MAIN FLOOR FRAMING PLAN
Sheet
S2.1

FLOOR PLAN LEGEND

	LOAD BEARING WALL
	BEAM/HEADER, U.N.O.
	POST
	HOLD-DOWN LOCATION
	HANGER
	INDICATES SHEAR WALL AND HOLD-DOWN TYPE. SEE SCHEDULE ON SHEET S3.3
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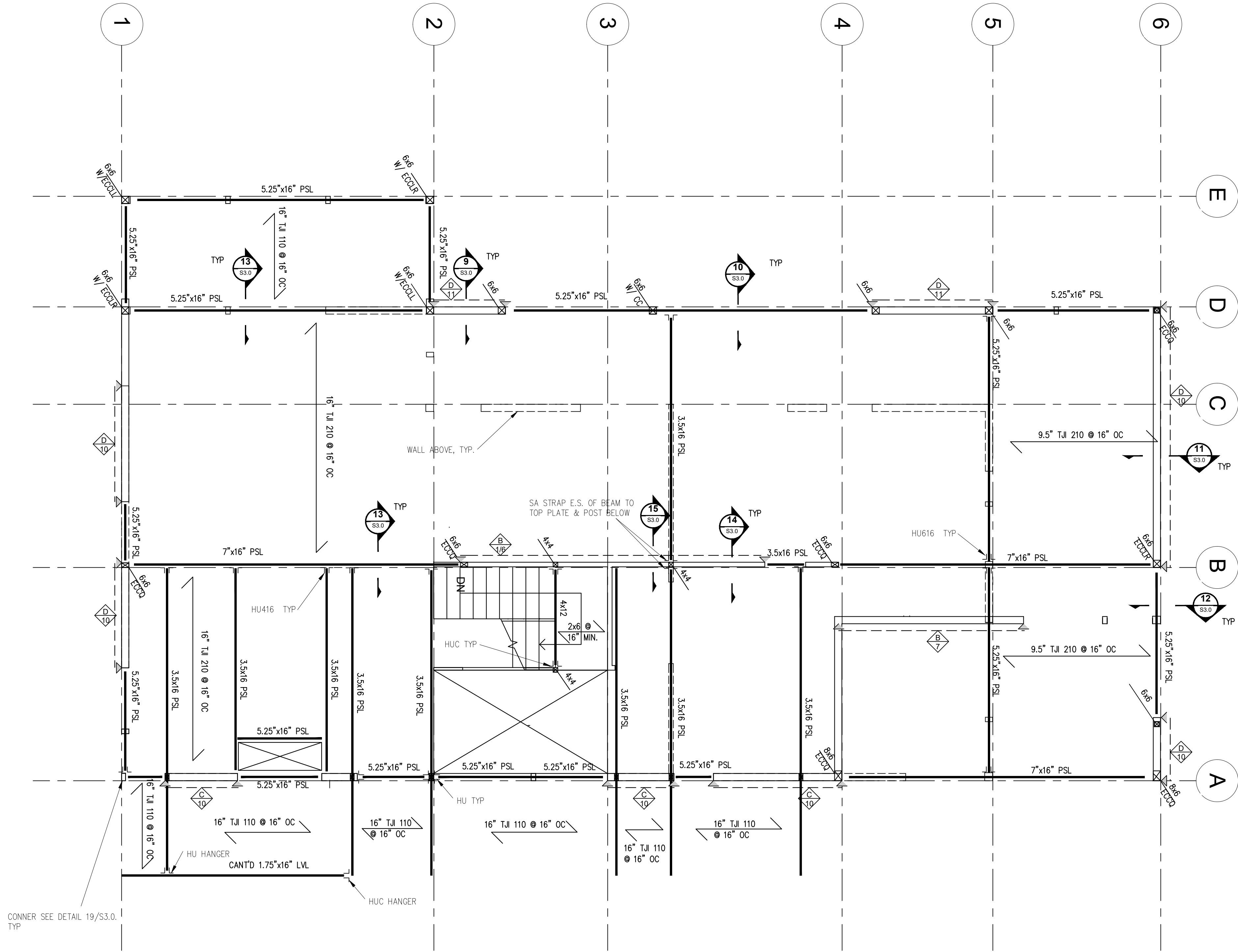
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10. TYPICAL STAIR AND STAIR LANDING DETAIL SEE DWG 10/S3.1 - 15/S3.1



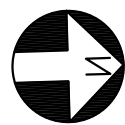
MAIN FLOOR FRAMING PLAN
24x36' SCALE 1/4" = 1'-0"





CONNER SEE DETAIL 19/S3.0.
TYP

UPPER FLOOR FRAMING PLAN
24x36 SCALE 1/4" = 1'-0"



FLOOR PLAN LEGEND	
	LOAD BEARING WALL
	BEAM/HEADER, U.N.O
	POST
	HOLD-DOWN LOCATION
	HANGER
	INDICATES SHEAR WALL AND HOLD-DOWN TYPE. SEE SCHEDULE ON SHEET S3.3
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 10. TYPICAL STAIR AND STAIR LANDING DETAIL SEE DWG 10/S3.1 - 15/S3.1

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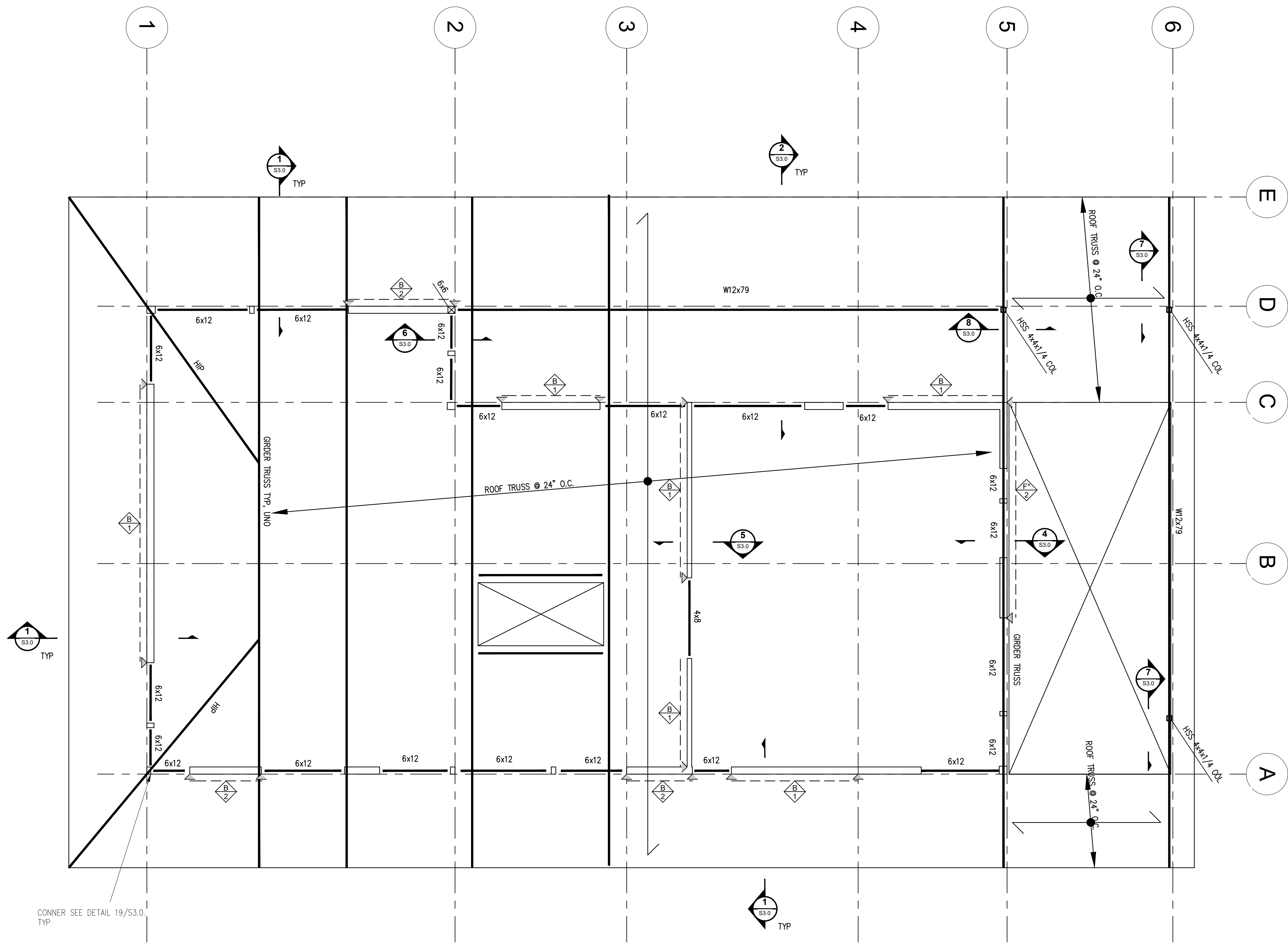
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UPPER FLOOR FRAMING PLAN
Sheet S2.2

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2419 72ND AVE SE
MERCER ISLAND, WA 98040

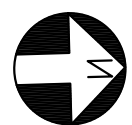


F.T. ENG. & CONST. MGMT., LLC
PHONE: 5098220489
EMAIL: F.T.ENG.CM@GMAIL.COM

5/29/2024



ROOF FRAMING PLAN
24x36 SCALE 1/4" = 1'-0"



FLOOR PLAN LEGEND	
	LOAD BEARING WALL
	BEAM/HEADER, U.N.O.
	POST
	HOLD-DOWN LOCATION
	HANGER
	INDICATES SHEAR WALL AND HOLD-DOWN TYPE. SEE SCHEDULE ON SHEET S3.3
	FORCE TRANSFER SHEAR WALL SEE DETAIL S6/3.3

- PLAN NOTES:
- SEE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN. ALL DIMENSIONS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. STRUCTURAL DRAWINGS ARE SCHEMATIC. DO NOT SCALE. CONTRACTOR TO PROVIDE TEMPORARY SUPPORT FOR THE DEMOLITION.
 - DIMENSIONS AND LOCATION OF EXISTING FOUNDATION SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
 - ALL LOAD BEARING WALL WITH OUT SHEAR WALL TYPE SHOULD BE TYPE A.
 - ALL 4" LOAD BEARING WALL SHOULD BE 2X4 HF#2 @ 16" OC.
 - ALL 6" LOAD BEARING WALL SHOULD BE 2X6 HF#2 @ 16" O.C.
 - ALL POST SHALL BE DF#1 U.N.O.
 - ALL BEAM AND HEADER SHOULD BE HF#2 U.N.O.
 - ALL SHEAR WALL DOES NOT LINE UP ABOVE. HOLDDOWN SHOULD BE CONTINUOUS AND CONNECTED TO BEAM OR FOUNDATION.
 - ALL BEAM AT TOP PLATE/WALL CONNECTION SEE DETAIL 5/S3.3.
 - TYPICAL STAIR AND STAIR LANDING DETAIL SEE DWG 10/S3.1 - 15/S3.1

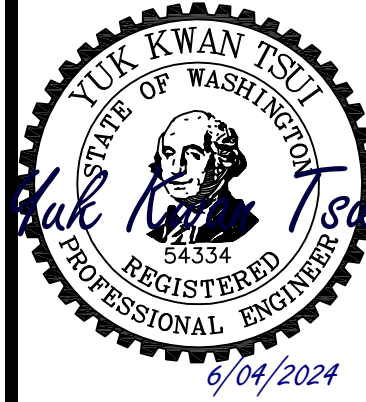
REV	DESCRIPTION	DATE

Drawn By: _____
Drawing Title: _____
ROOF FRAMING PLAN
Sheet S2.3

2419 MERCER FIRSTHILL
2419 72ND AVE SE
MERCER ISLAND, WA 98040



5/29/2024
F.T. ENG. & CONST. MGMT., LLC
PHONE: 5092220489
EMAIL: F.T.ENG.CM@GMAIL.COM

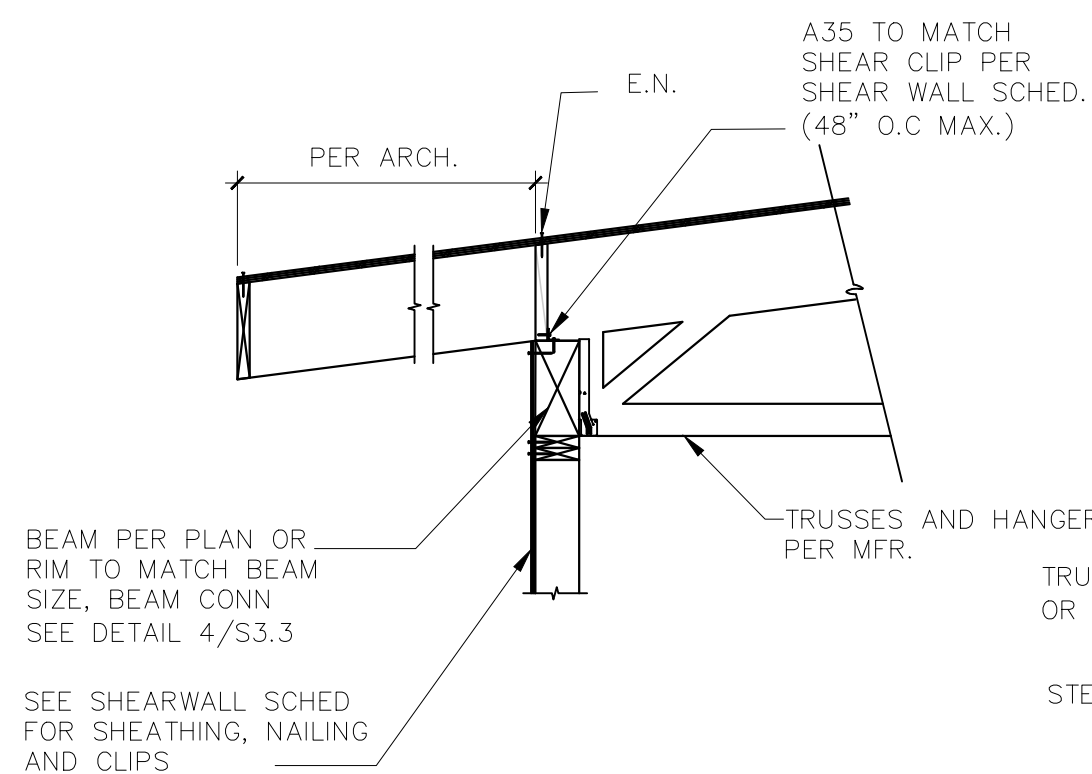
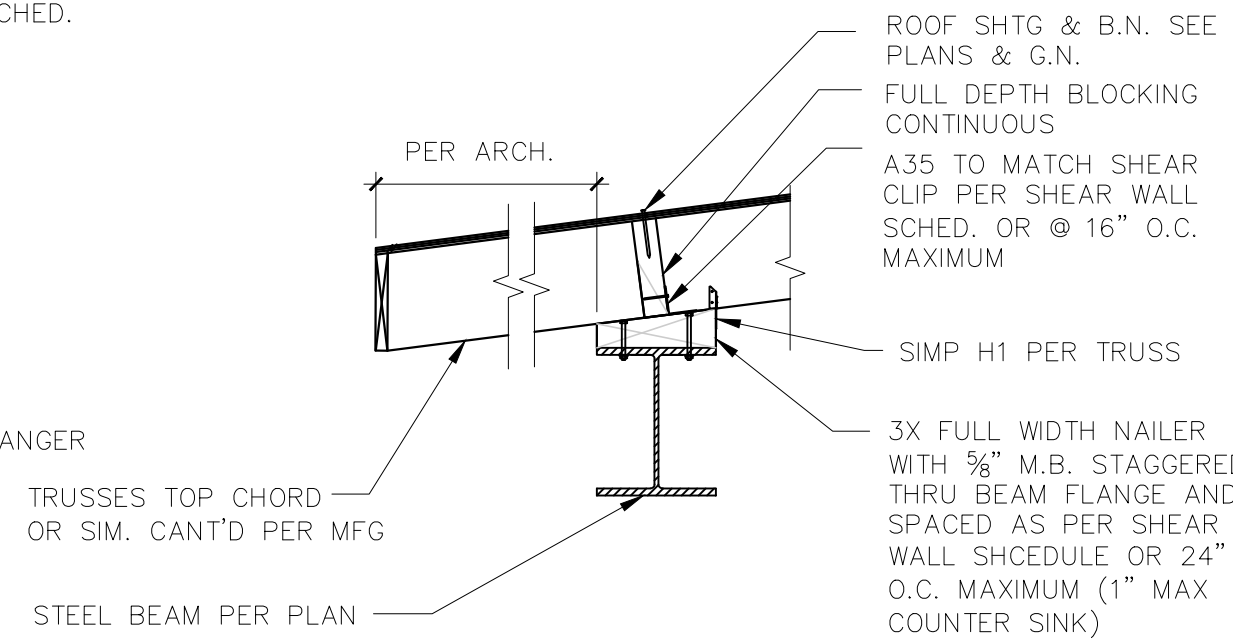
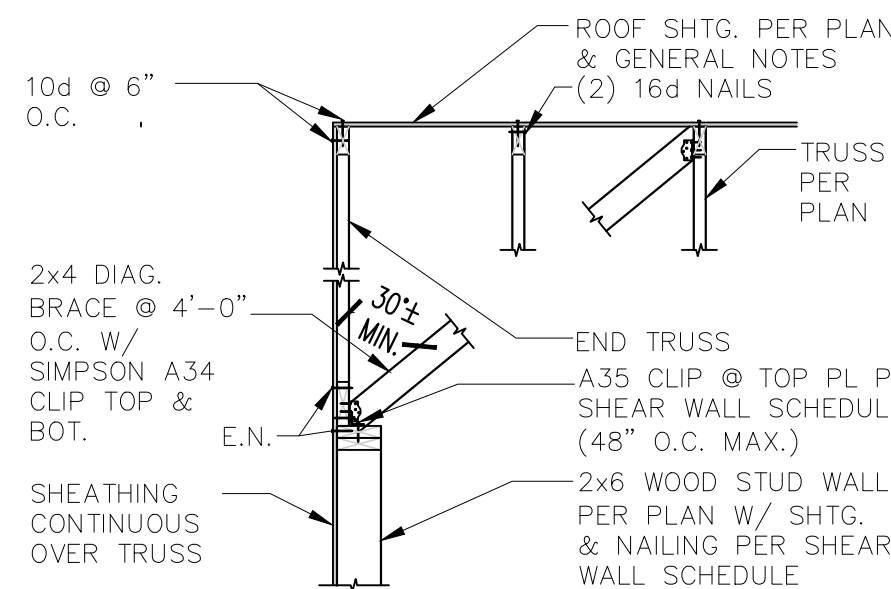
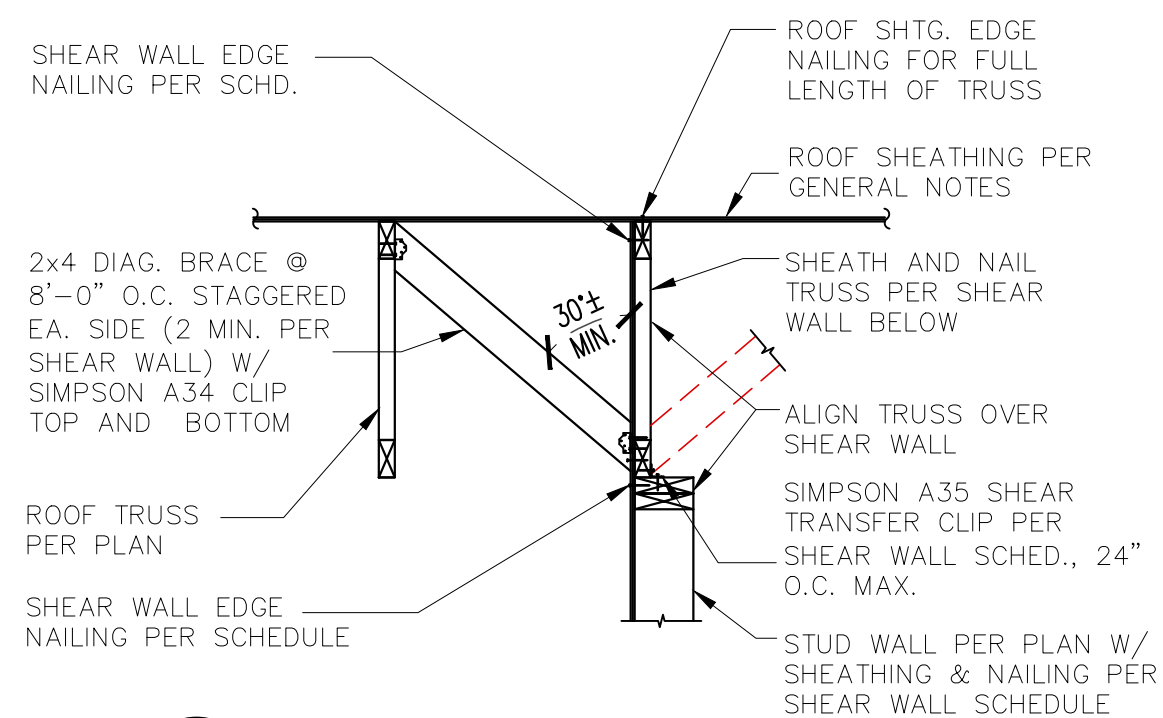
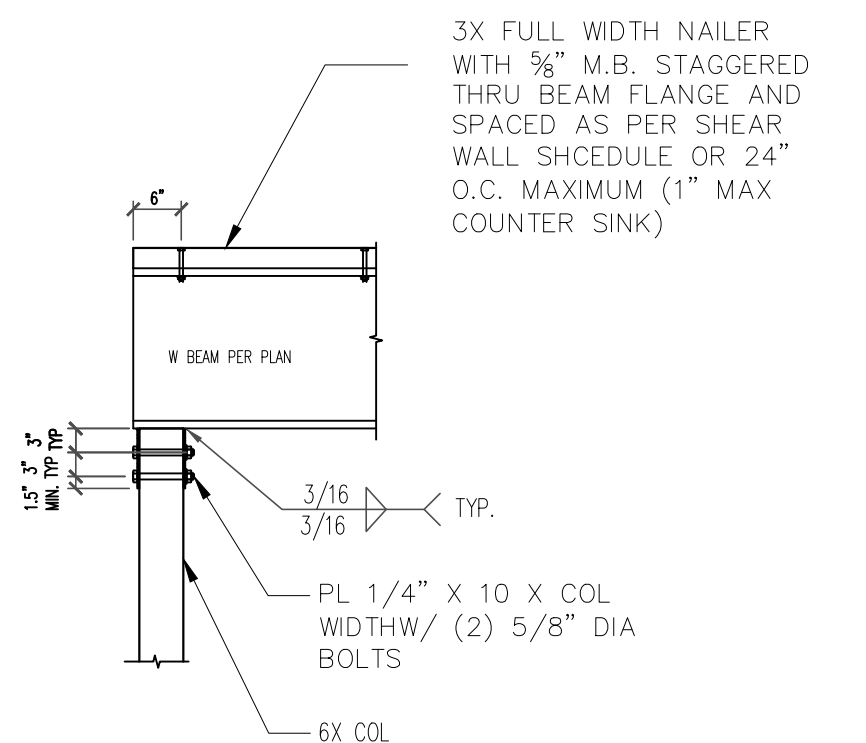
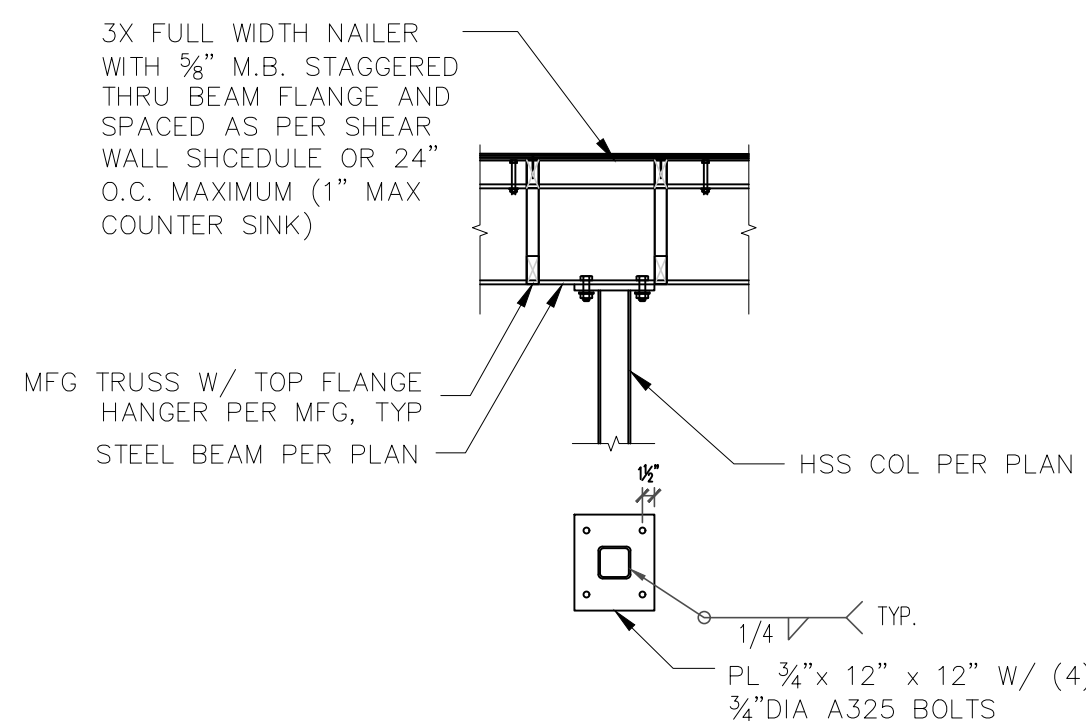
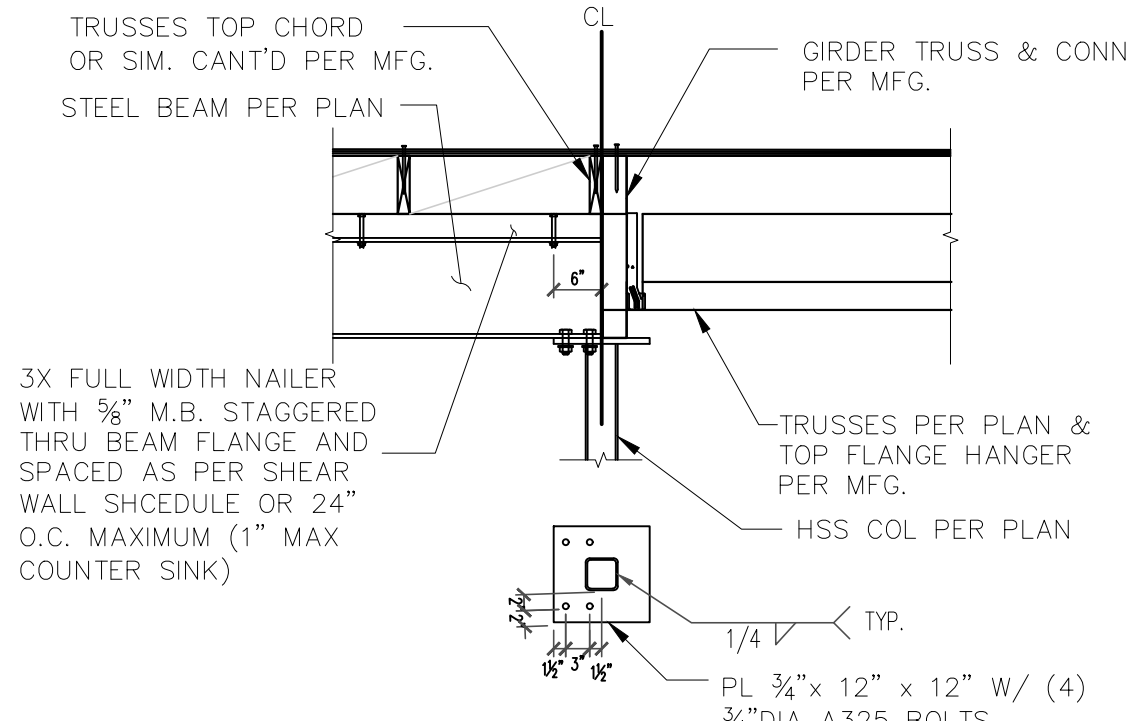
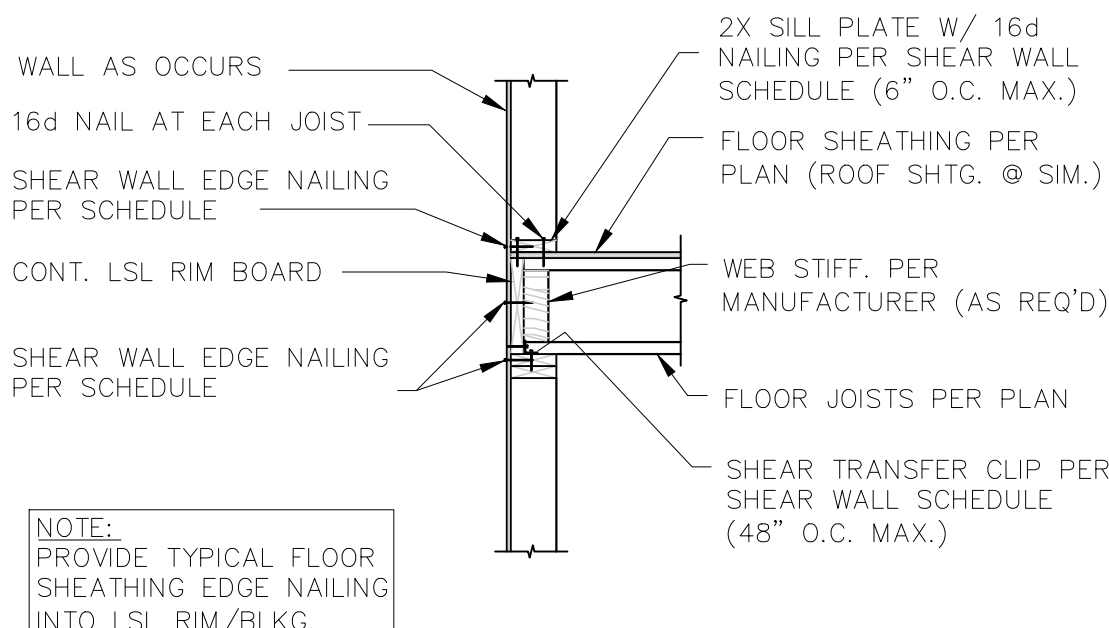
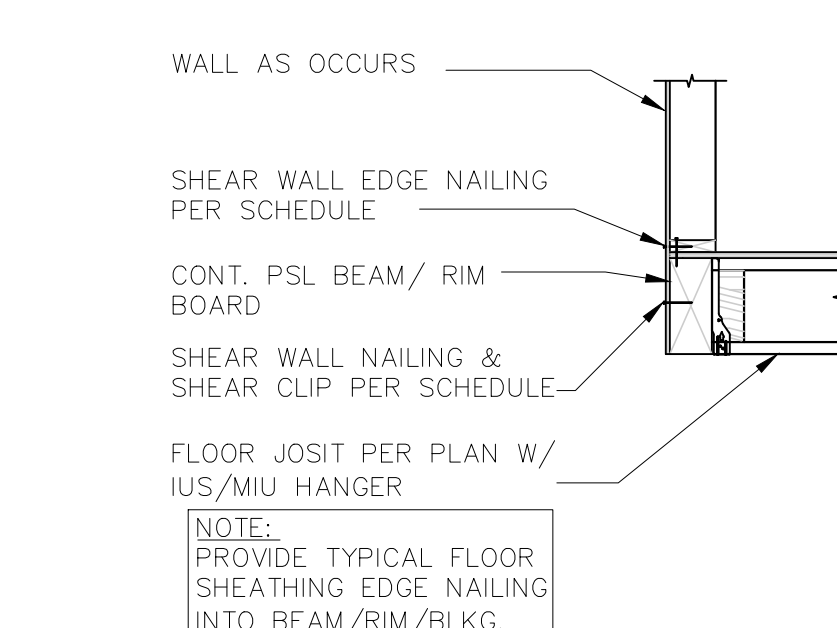
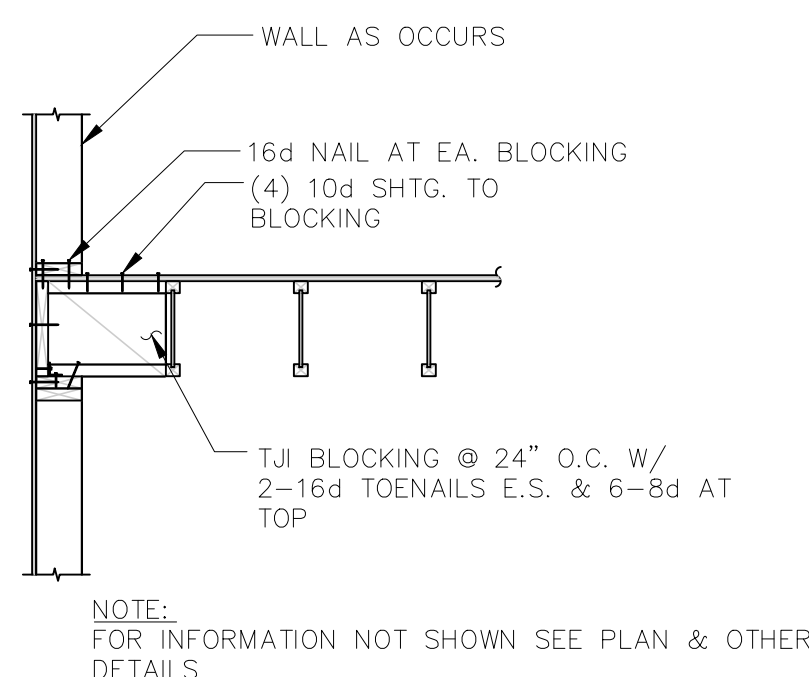
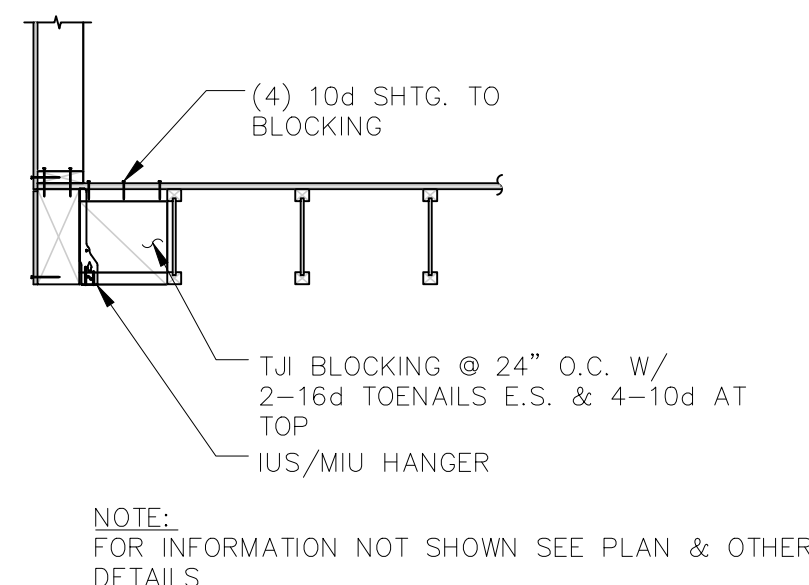
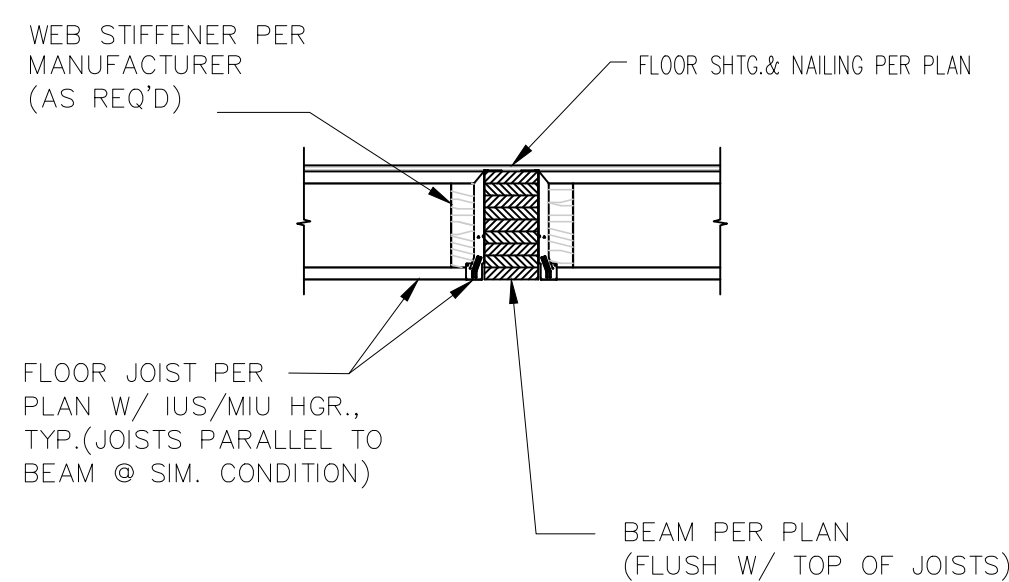
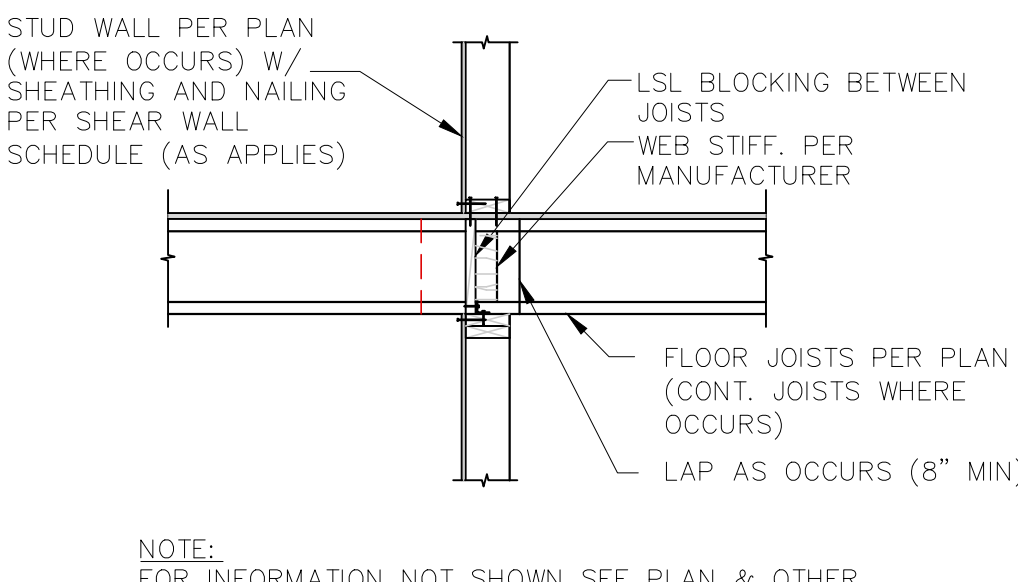
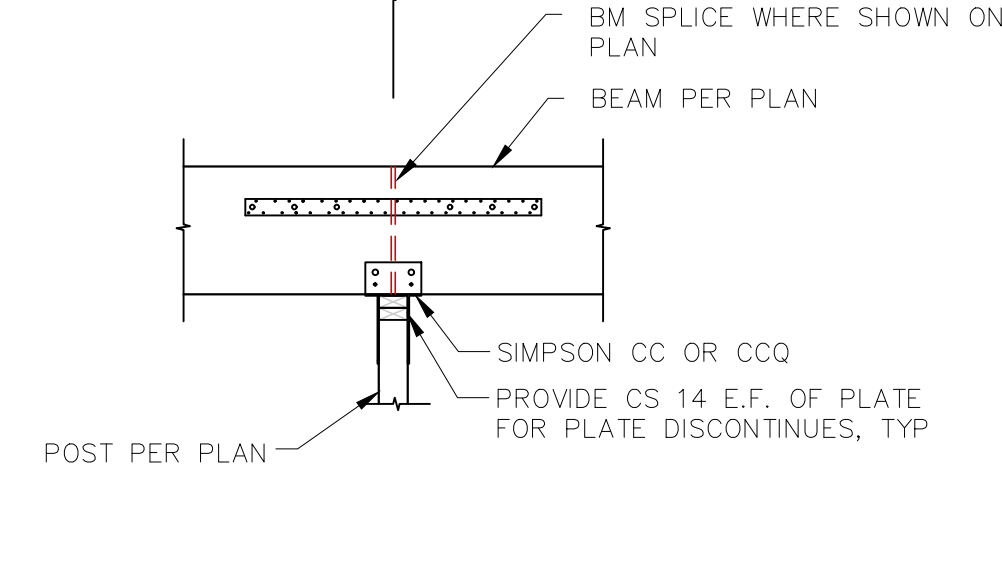
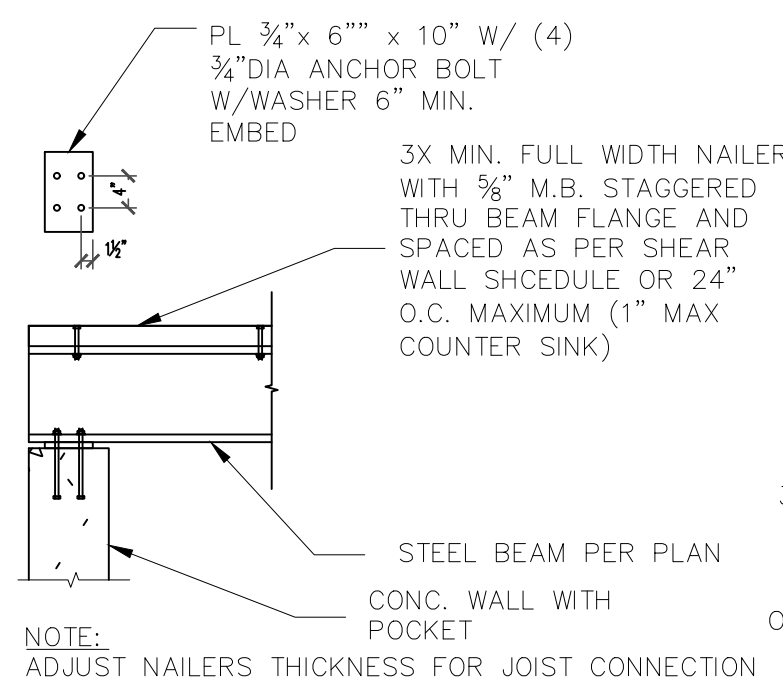
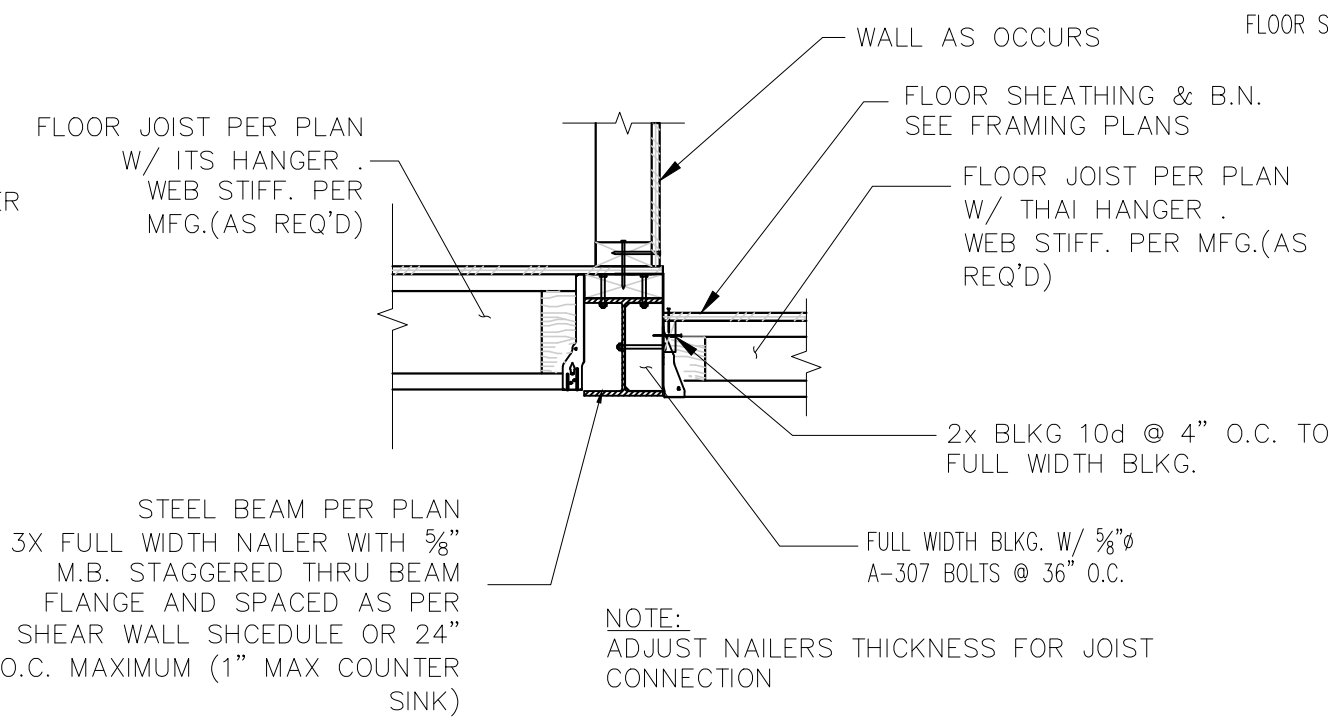
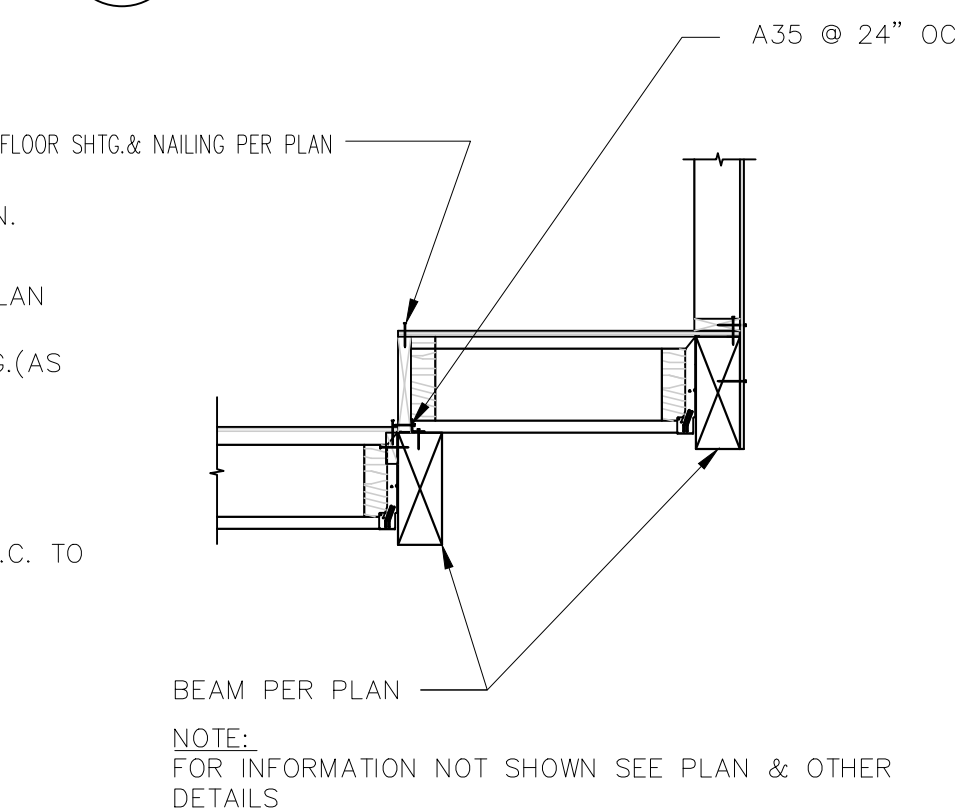
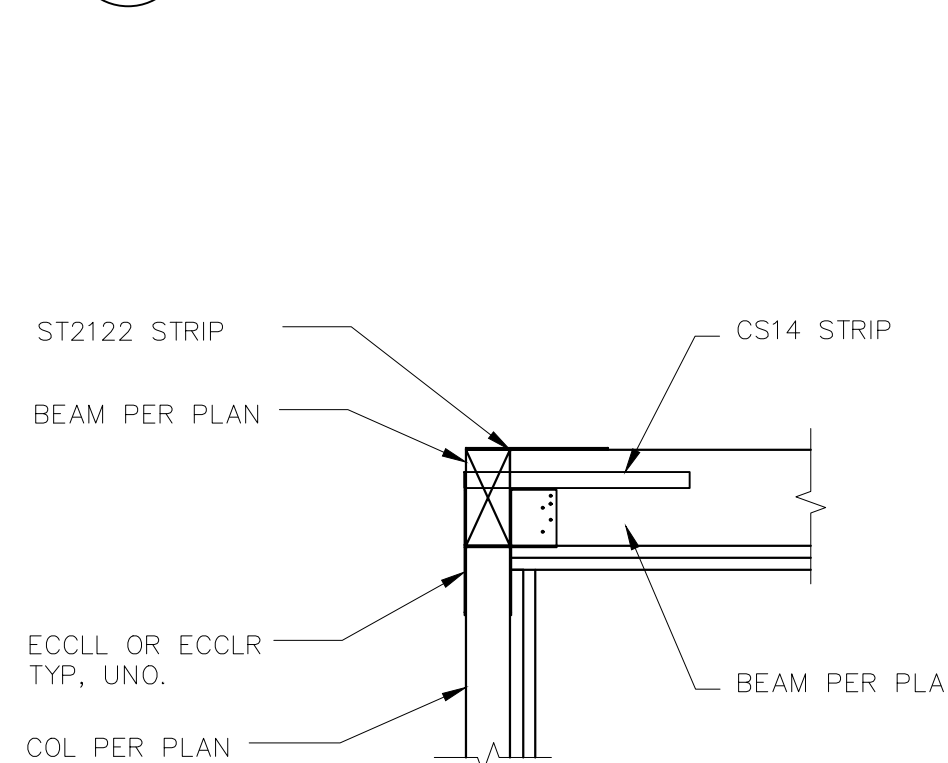
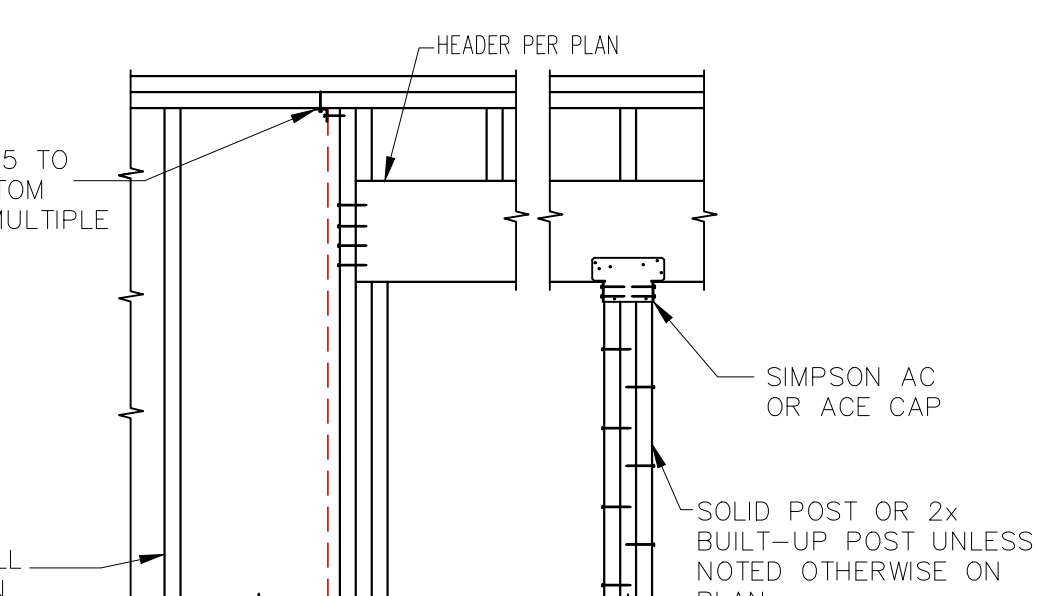


2419 MERCER FIRSHILL

2419 72ND AVE SE
MERCER ISLAND, WA 98040

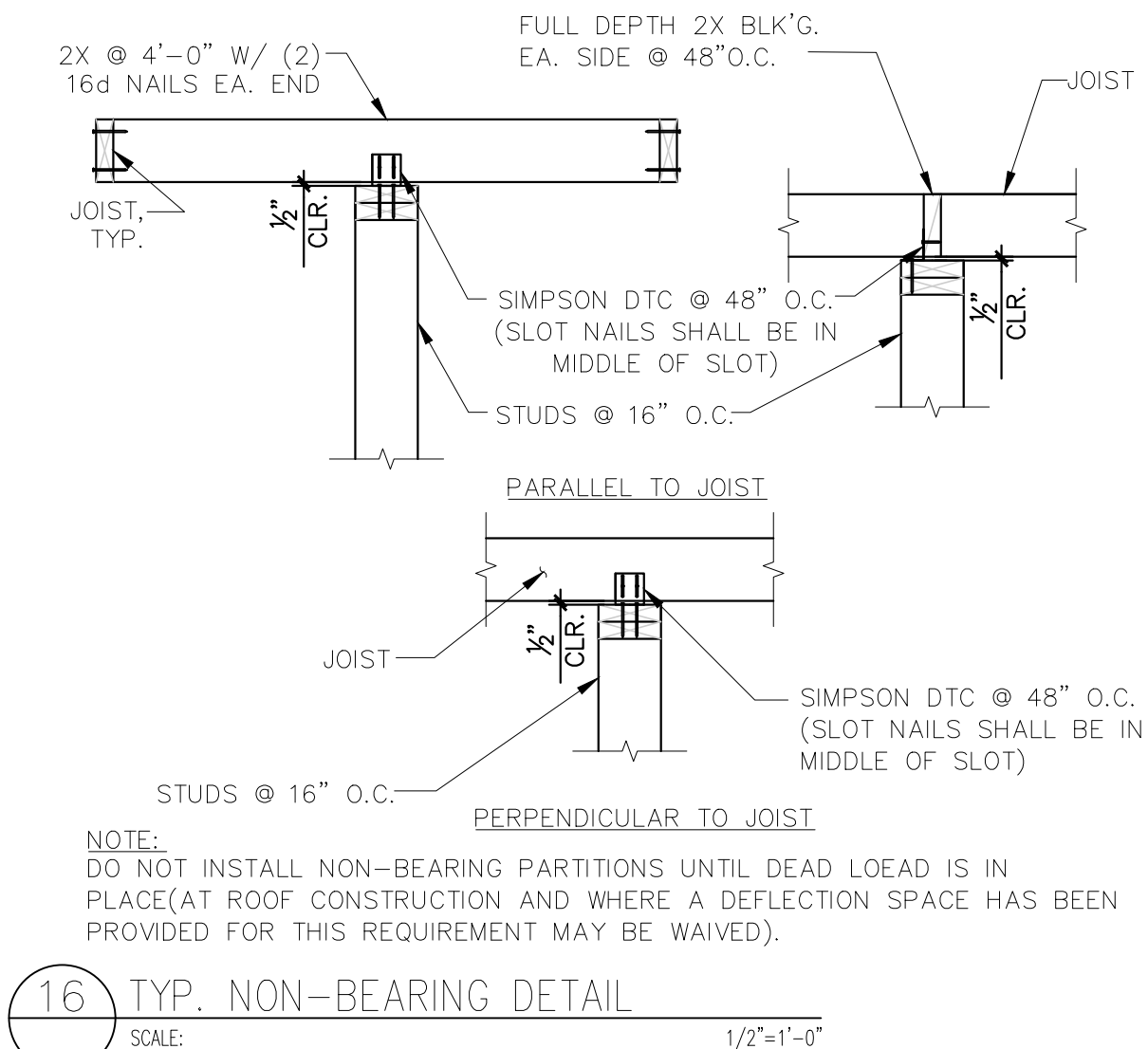
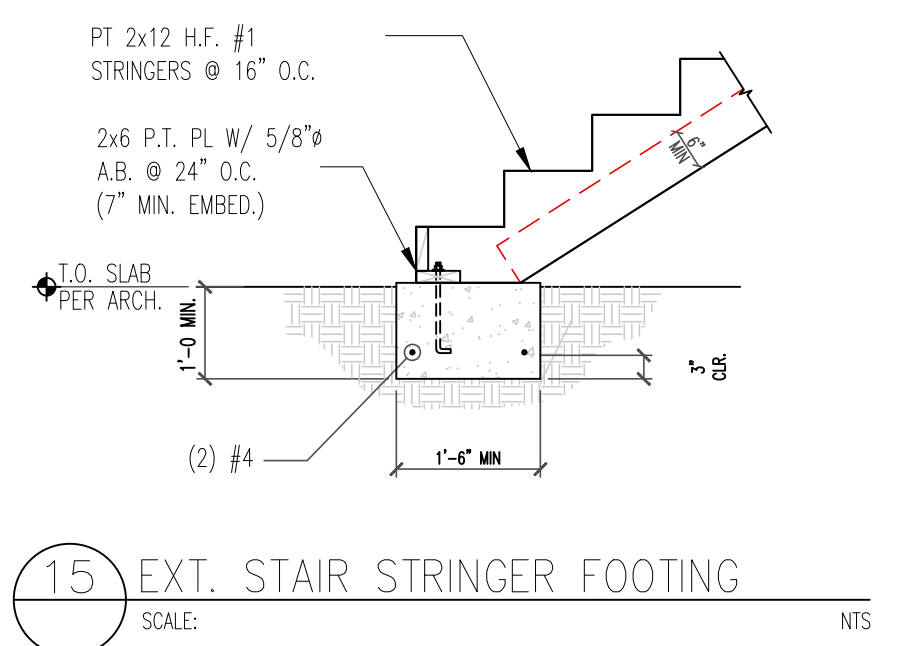
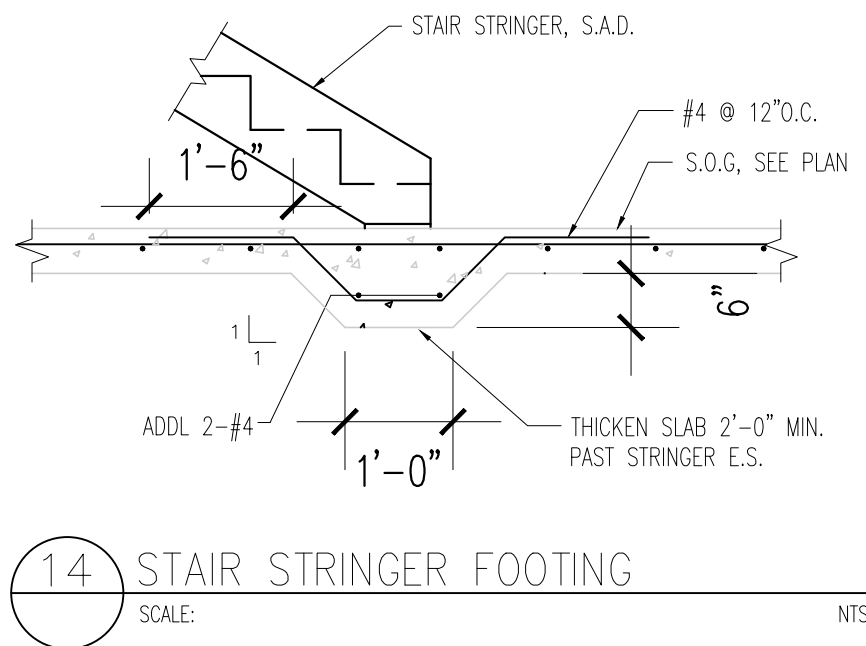
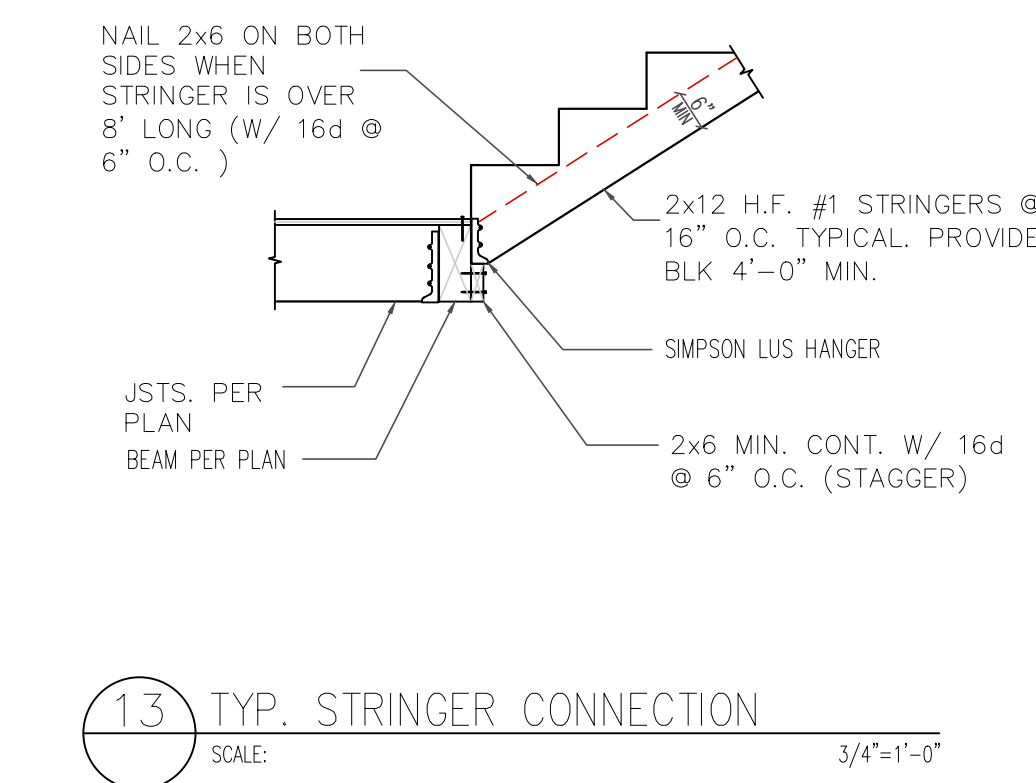
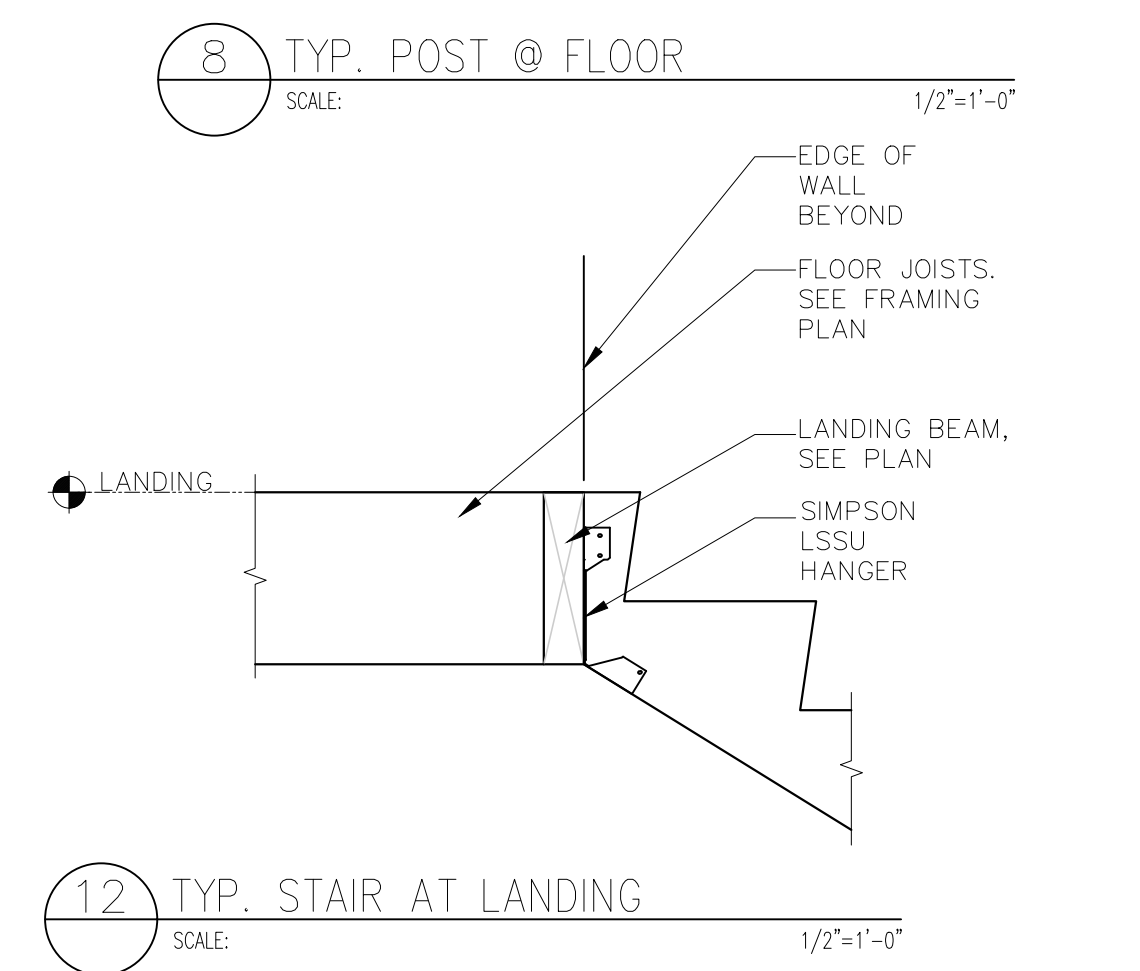
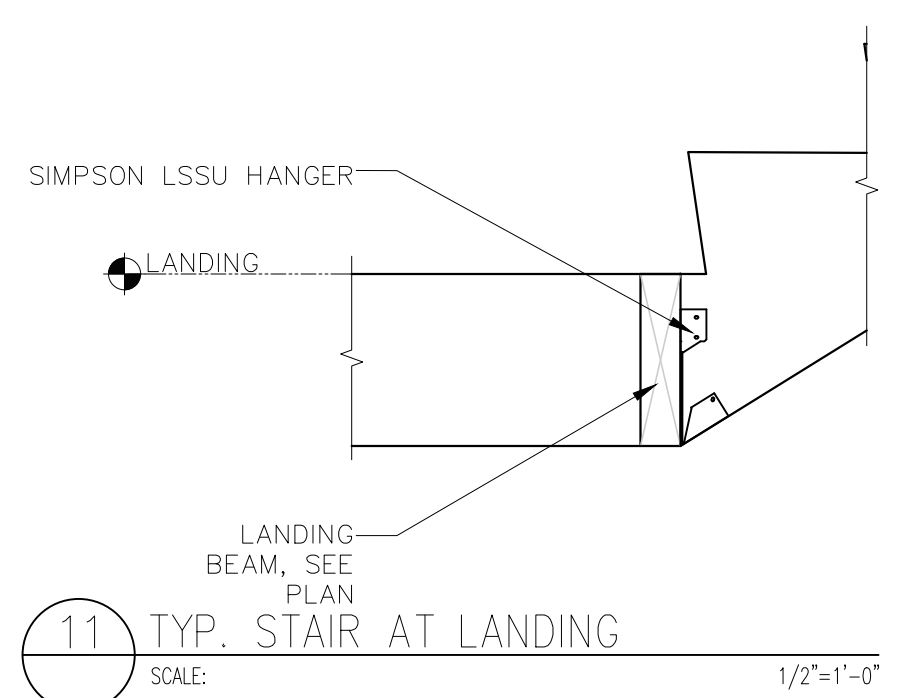
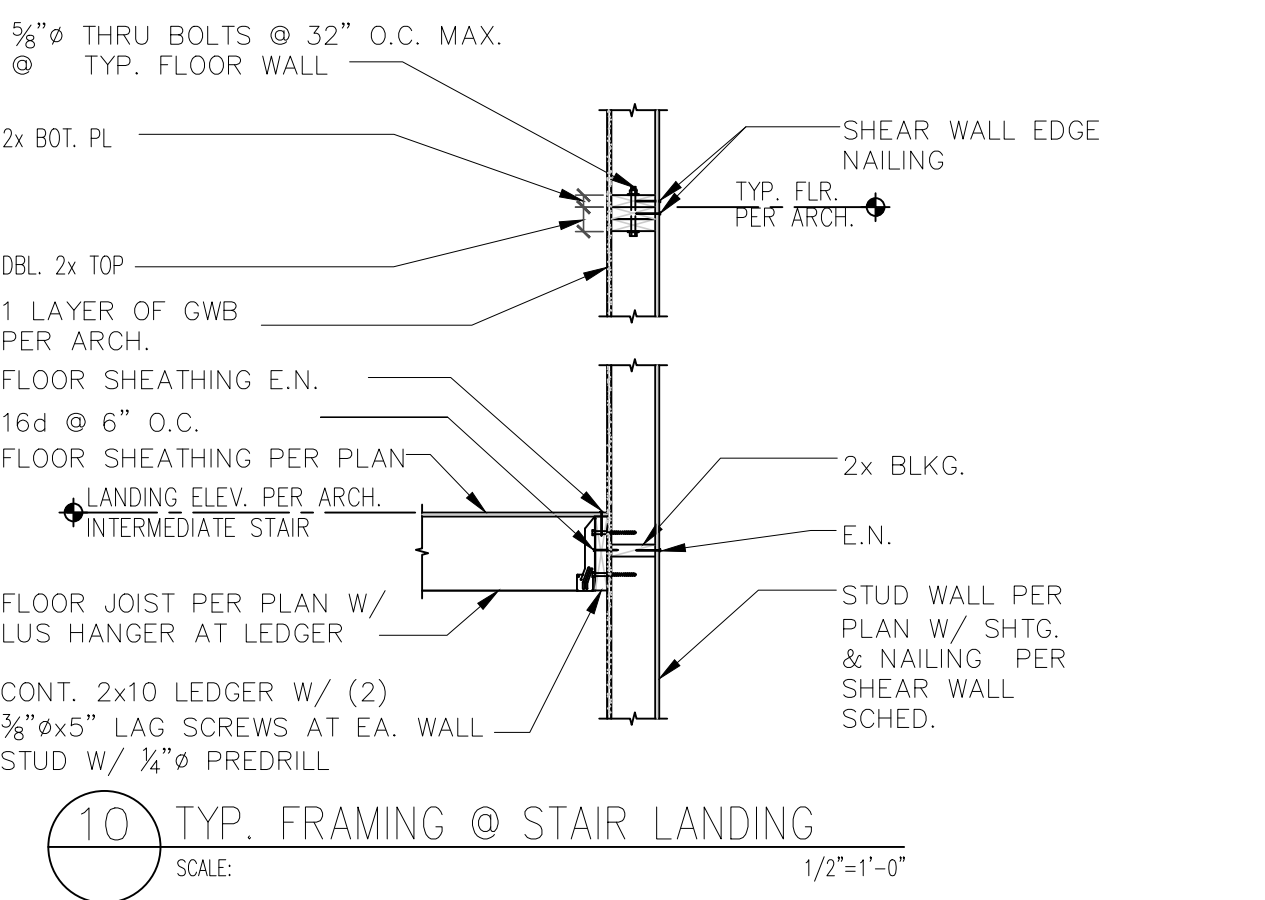
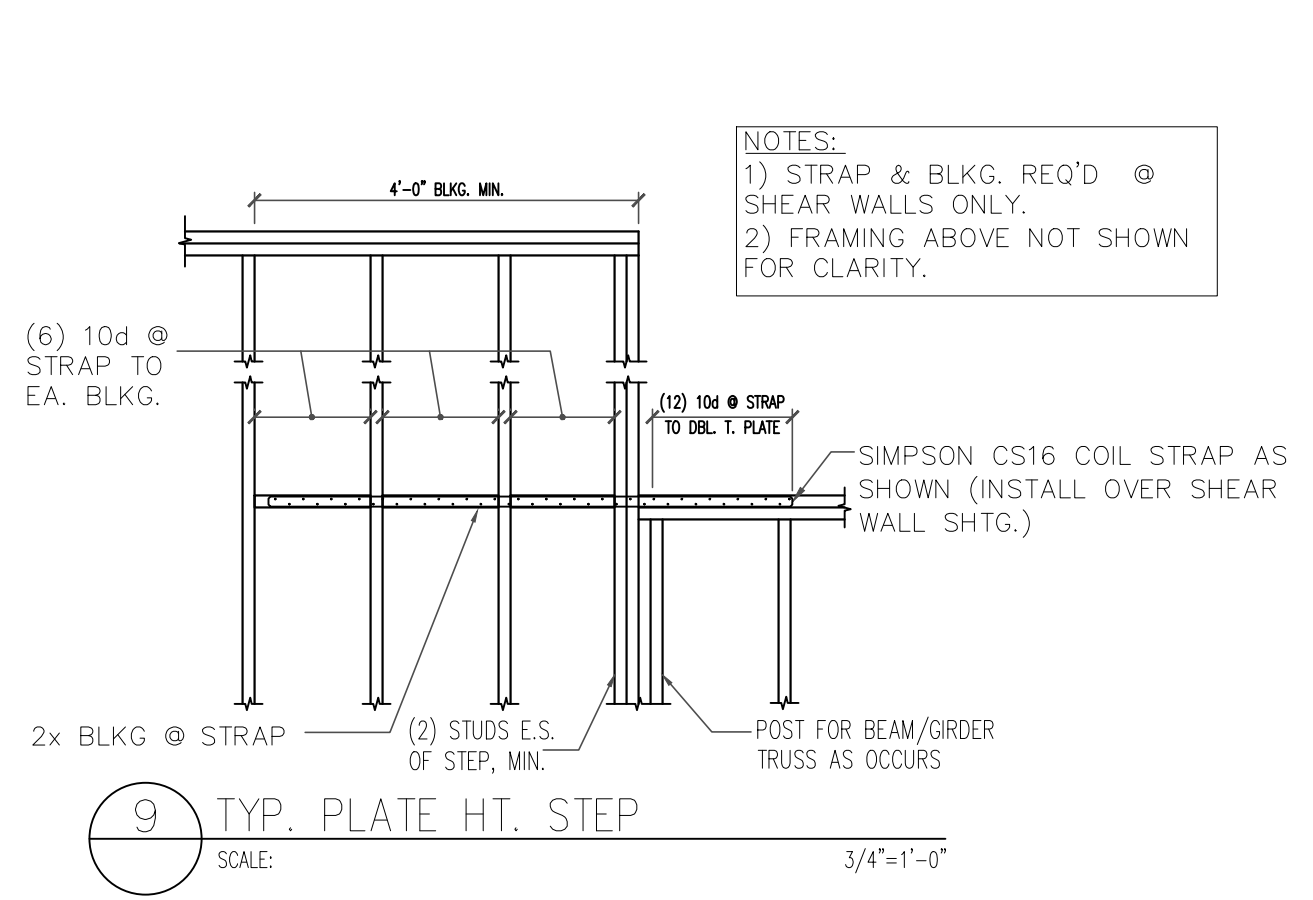
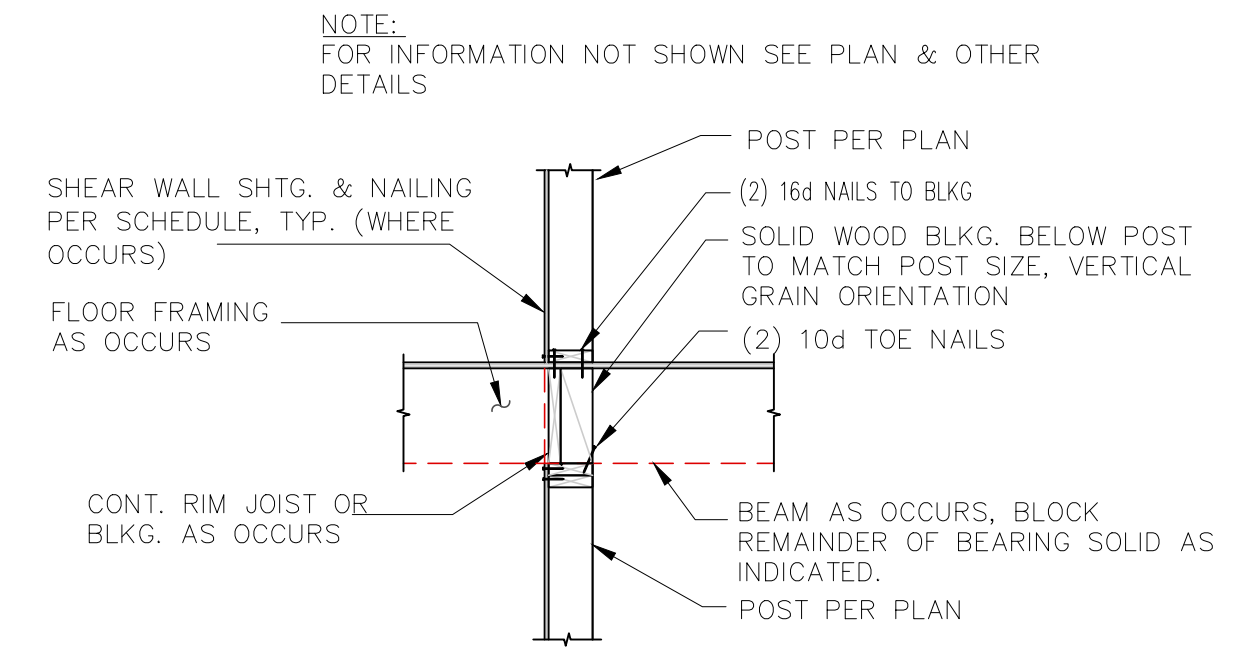
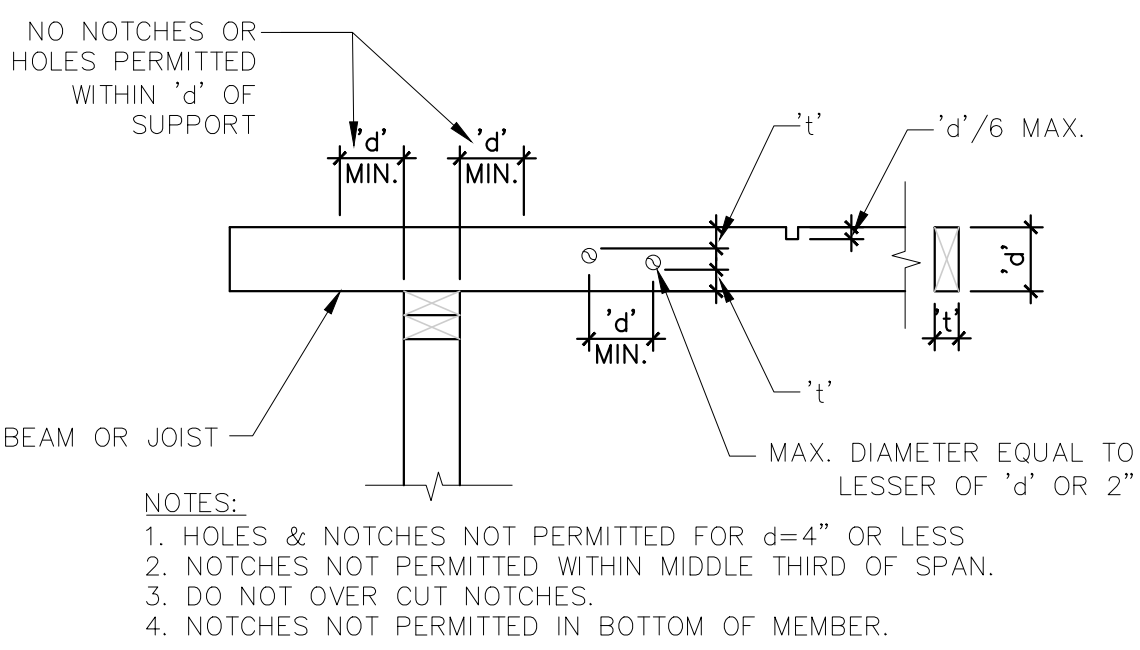
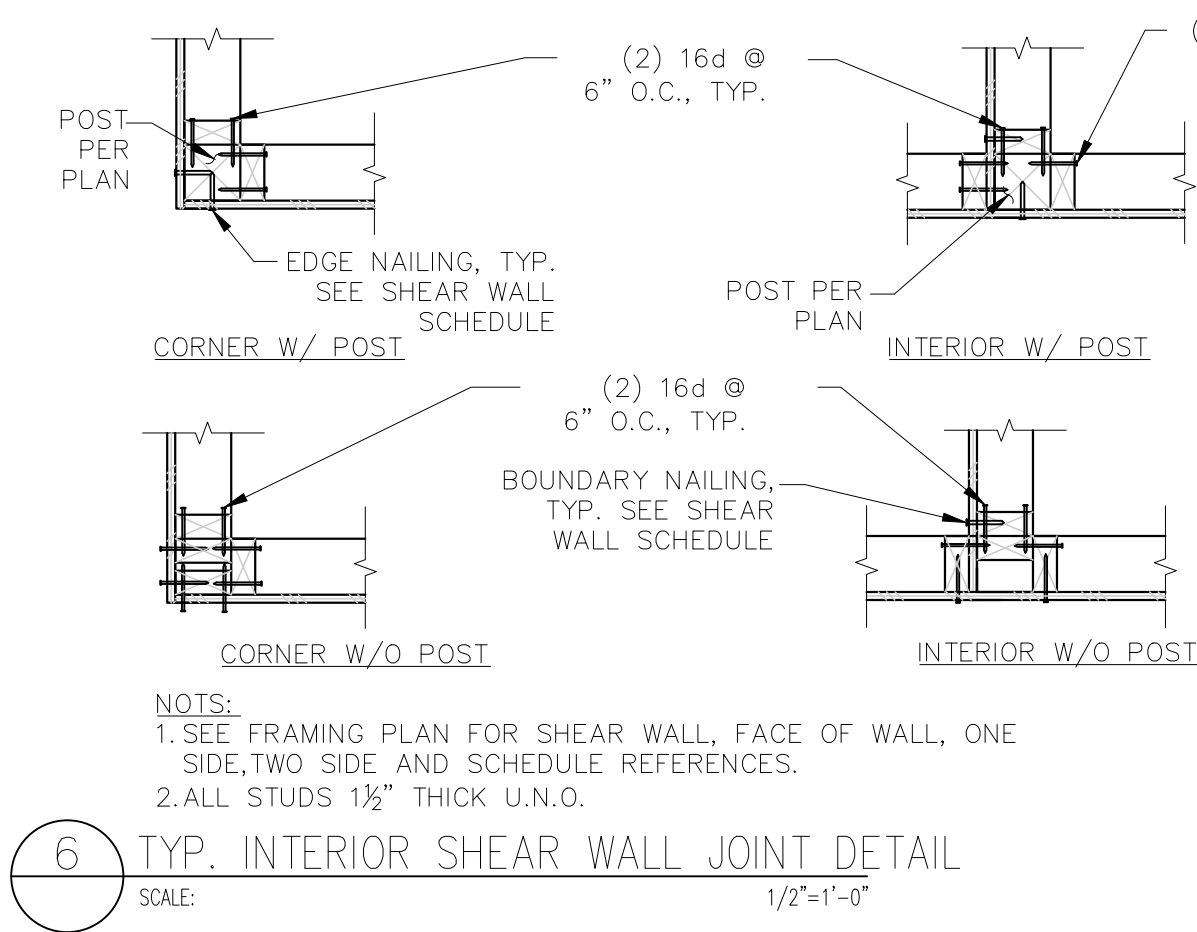
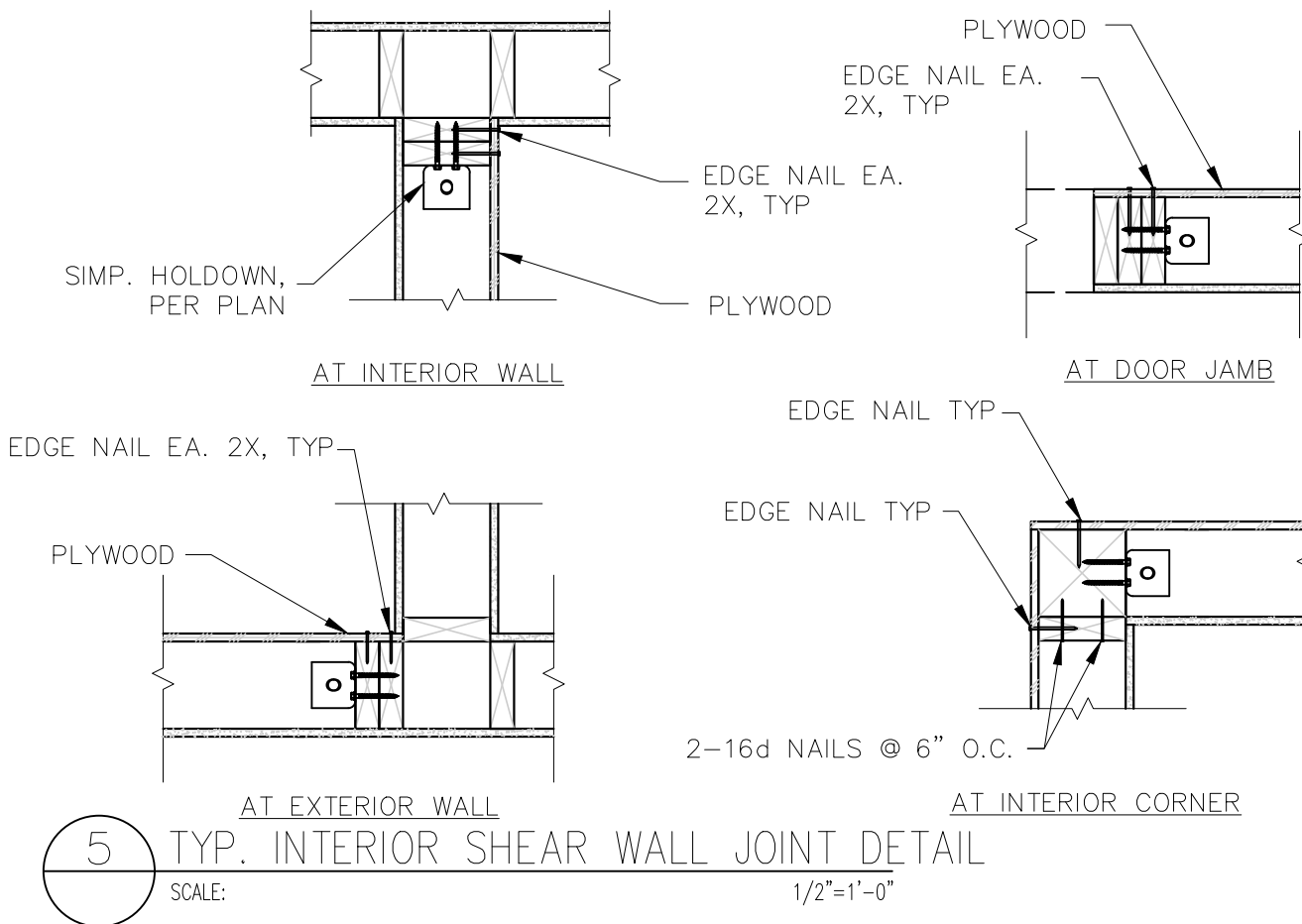
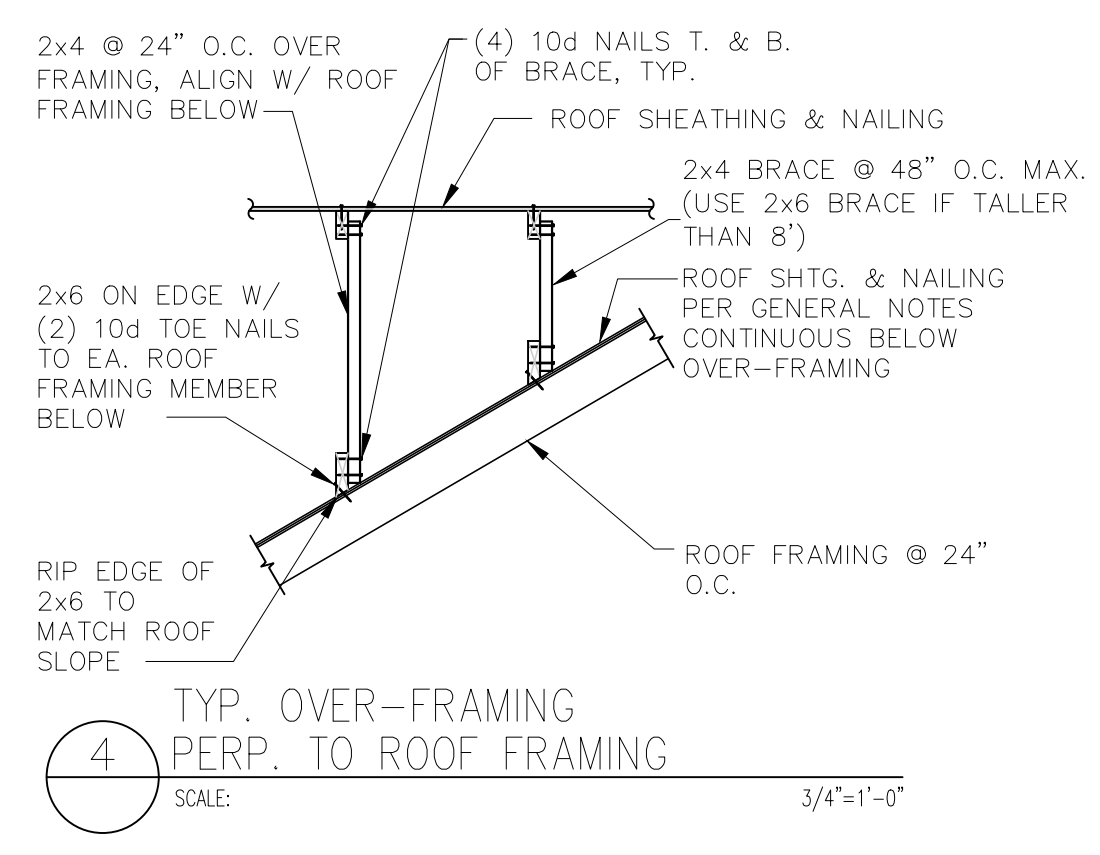
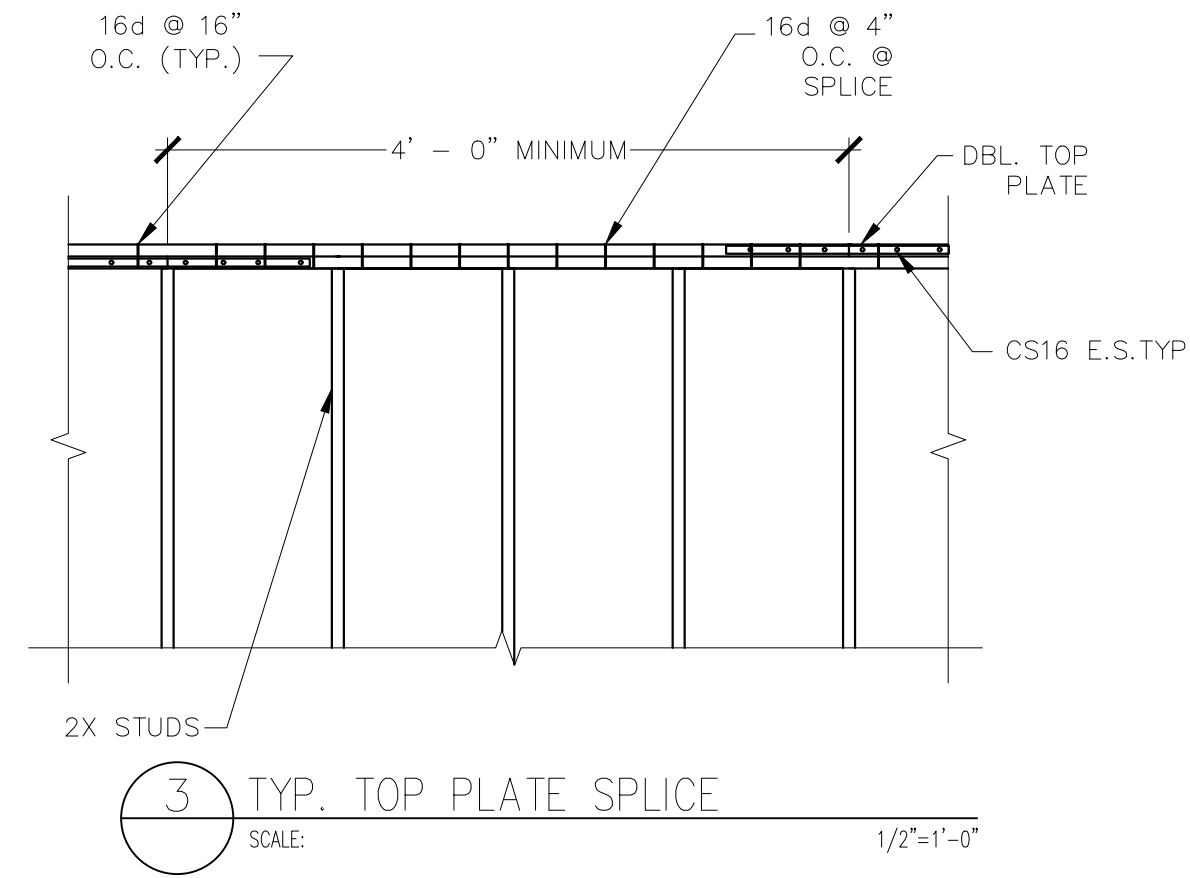
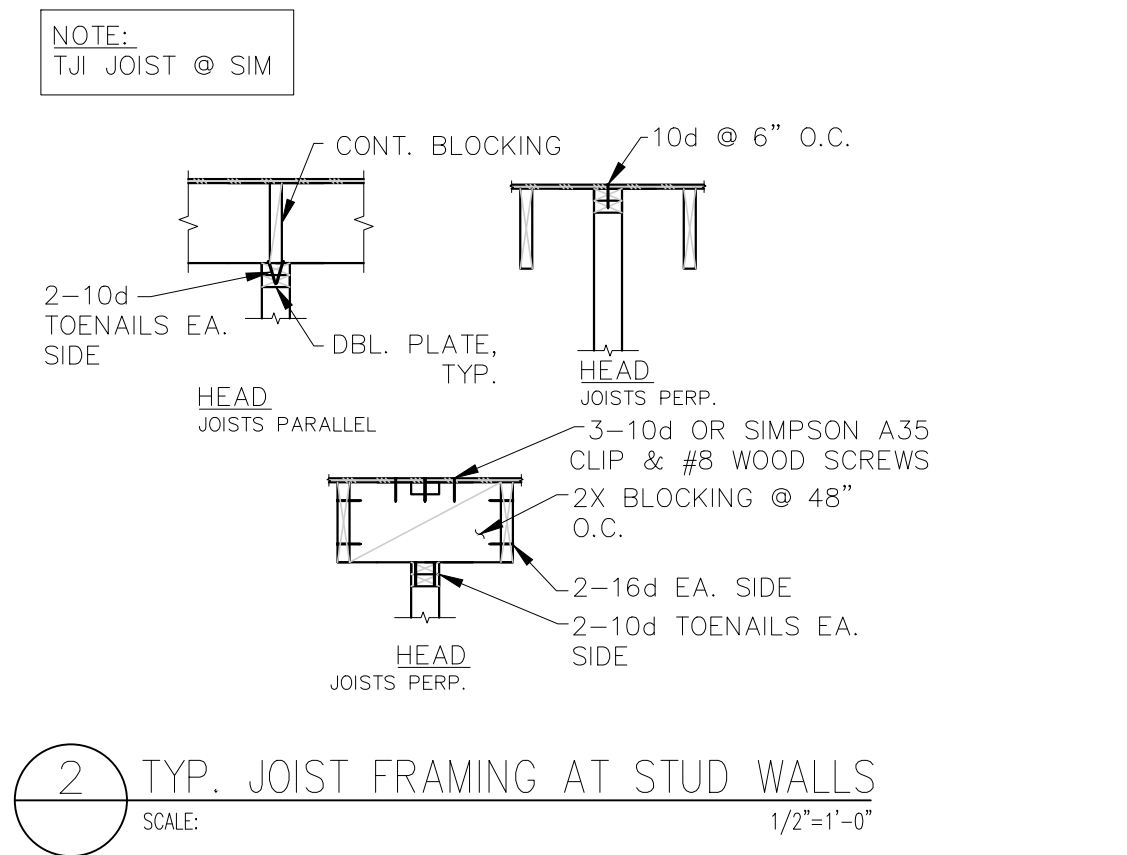
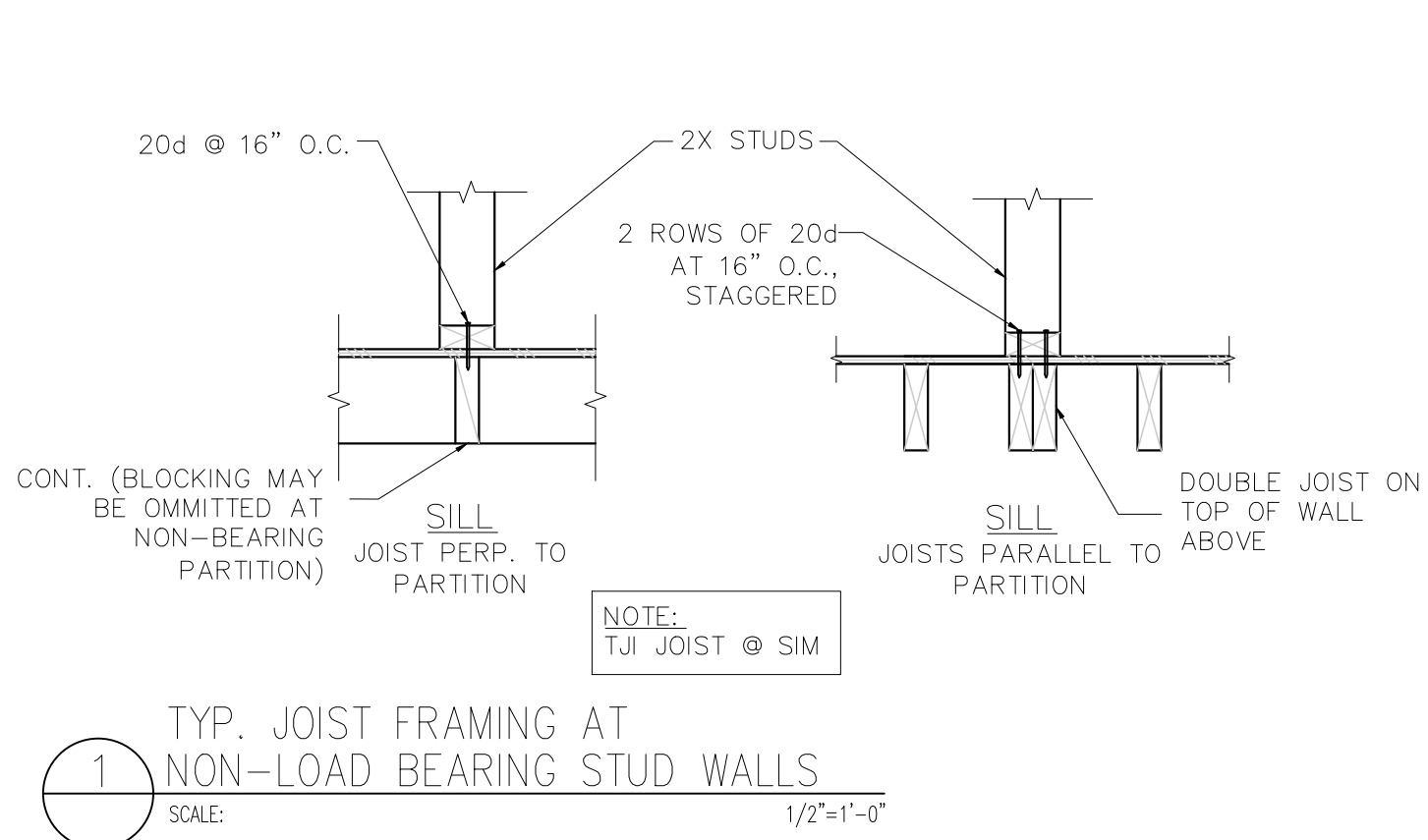
JOB # 2024020

DATE	DESCRIPTION	REV

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DETAILSSheet
S3.01 TYP. ROOF TRUSS // TO WALL
S3.0 SCALE: 1/2"=1'-0"2 TYP. ROOF TRUSS @ W BEAM
S3.0 SCALE: 1/2"=1'-0"4 GABLE END ROOF CONNECTION
S3.0 SCALE: 3/4"=1'-0"5 TYP. TRUSSES PAR. TO INT. SHEAR WALL
S3.0 SCALE: 3/4"=1'-0"6 W BEAM TO WOOD POST CONN
S3.0 SCALE: 3/4"=1'-0"7 CANT'D W BEAM TO HSS CONN.
S3.0 SCALE: 1/2"=1'-0"8 W BEAM TO HSS CONN @ END TRUSS
S3.0 SCALE: 1/2"=1'-0"9 TYP. EXT. WALL JSTS. PERP.
S3.0 SCALE: 1/2"=1'-0"10 TYP. EXT. BEAM JSTS. PERP.
S3.0 SCALE: 1/2"=1'-0"11 TYP. EXT. WALL JST. PARALLEL
S3.0 SCALE: 1/2"=1'-0"12 TYP. EXT. BEAM JST. PARALLEL
S3.0 SCALE: 1/2"=1'-0"13 TYP. FLOOR JOISTS TO WOOD BEAM
S3.0 SCALE: 1/2"=1'-0"14 TYP. INT. WALL, JSTS. PERP.
S3.0 SCALE: 1/2"=1'-0"15 TYP. COL TO BEAM CONN.
S3.0 SCALE: 1/2"=1'-0"16 W BEAM TO FTG WALL CONN
S3.0 SCALE: 1/2"=1'-0"17 JOIST TO W BEAM CONN.
S3.0 SCALE: 1/2"=1'-0"18 STEP @ LOWER FLOOR
S3.0 SCALE: 1/2"=1'-0"19 TYP. BEAM @ CONRNER
S3.0 SCALE: 1/2"=1'-0"20 TYP. HEADER DETAIL
S3.0 SCALE: 3/4"=1'-0"



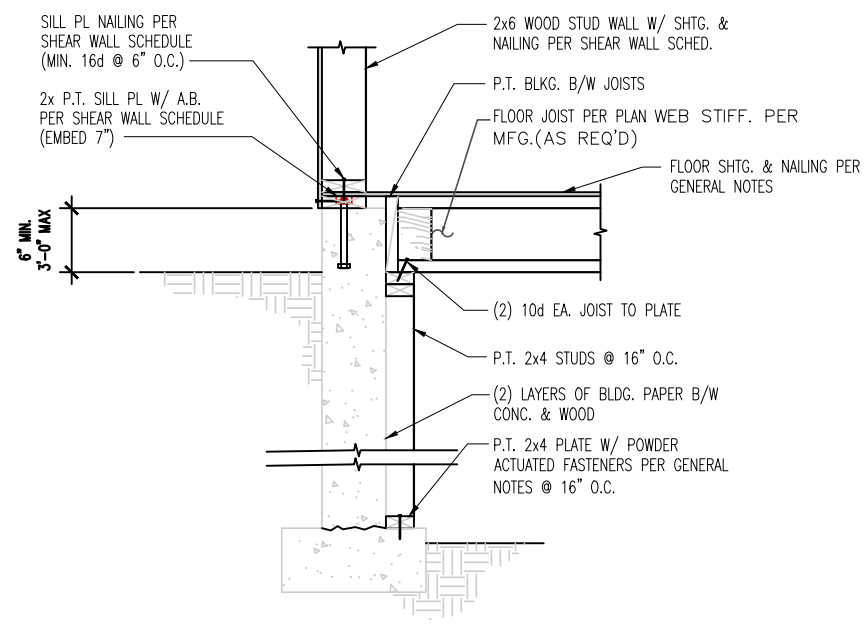
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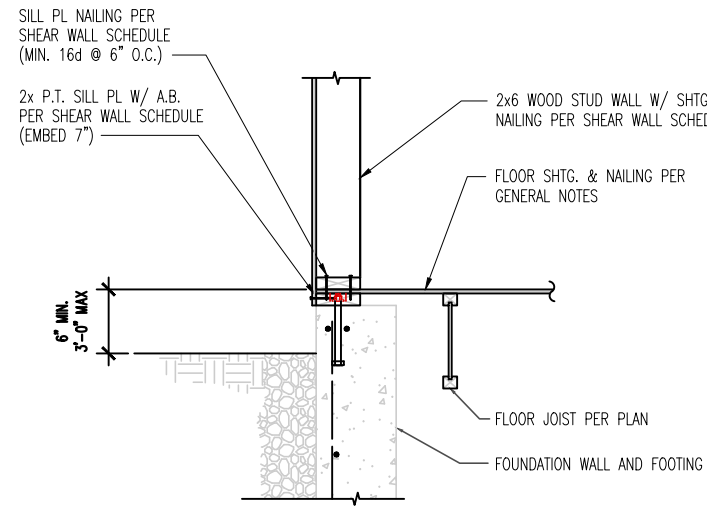
REV	DESCRIPTION	DATE

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Drawing Title:
TYPICAL STRUCTURAL
DETAILS
Sheet
S3.2

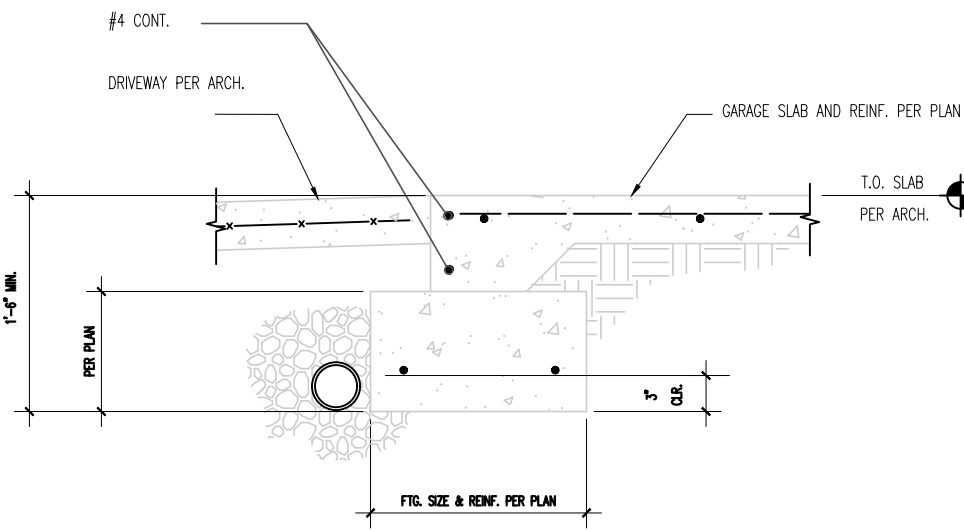


NOTE:
CONC. WALL AND FOUNDATION PER PLAN AND DETAIL

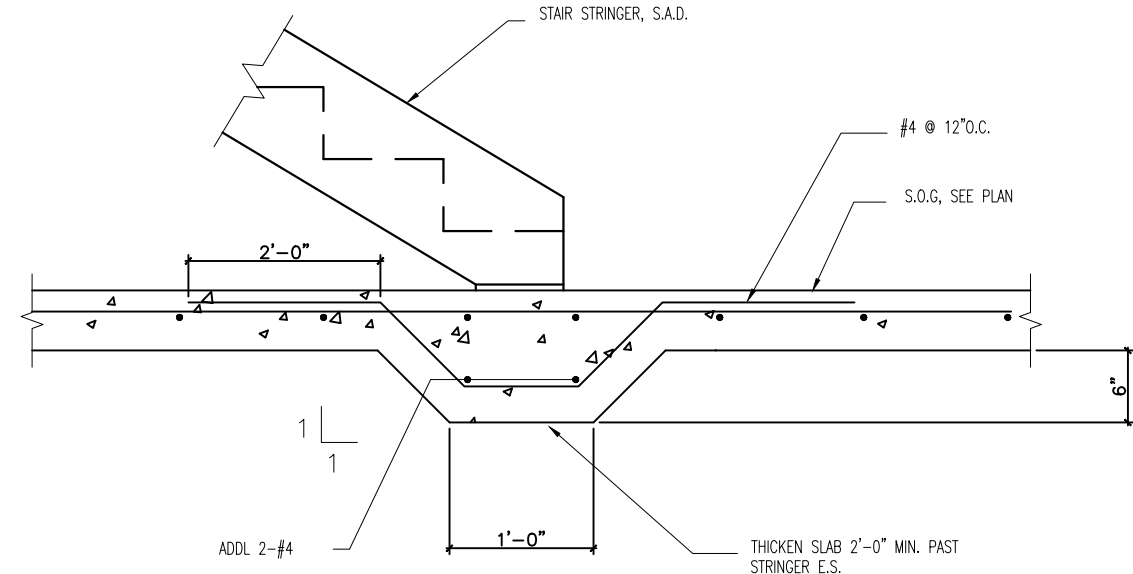
1 TYP. EXTERIOR FOUNDATION PERP. TO JOIST
S3.2 SCALE: 3/4\"=1'-0"



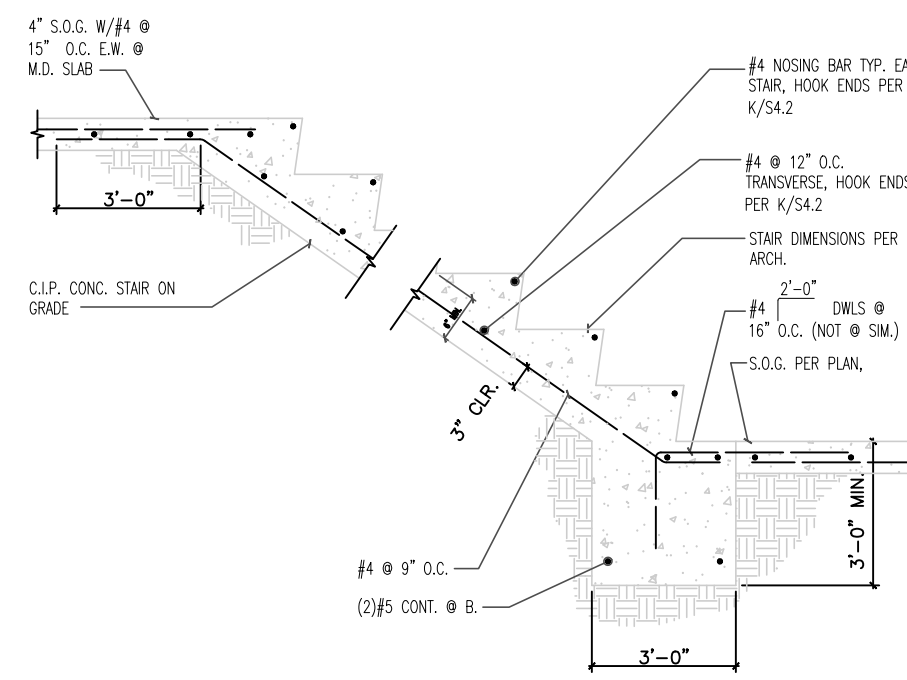
2 TYP. EXTERIOR FOUNDATION // TO JOIST
S3.2 SCALE: 3/4\"=1'-0"



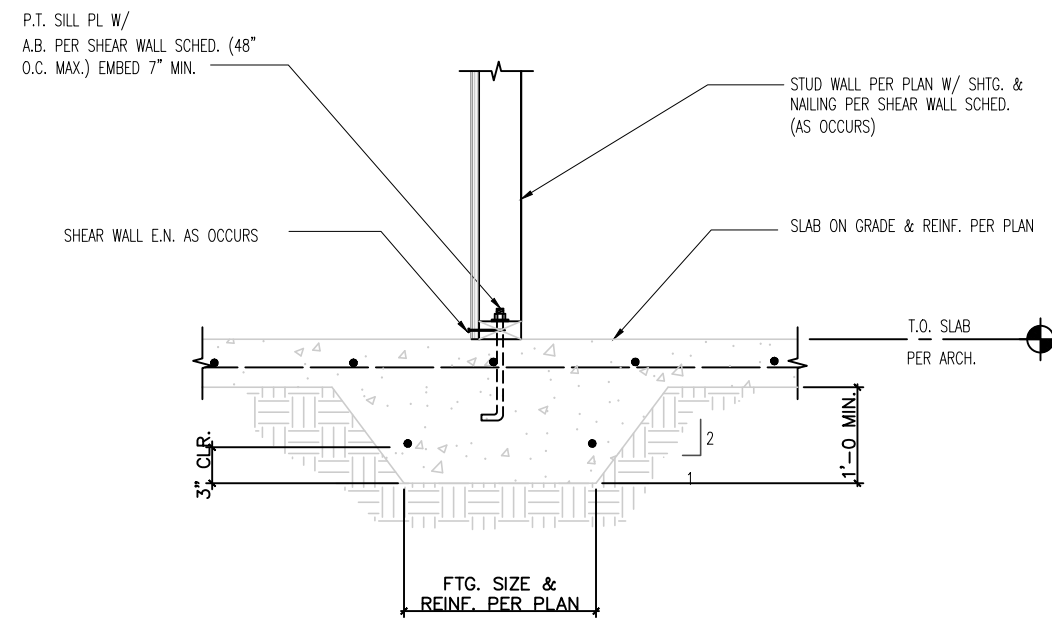
3 FOOTING @ GARAGE DOOR
S3.2 SCALE: 1/2\"=1'-0"



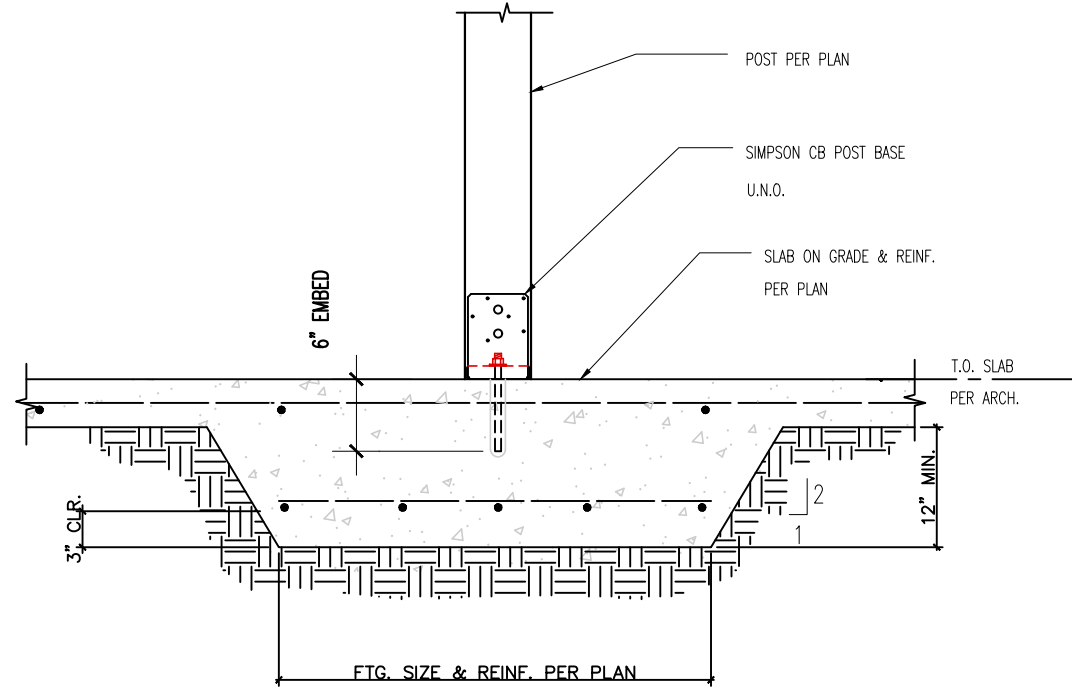
4 TYP. STAIR FOUNDATION
S3.2 SCALE: 3/4\"=1'-0"



5 TYP. STAIR SECTION @ FOUNDATION
S3.2 SCALE: 3/4\"=1'-0"



6 TYP. INT. STUD WALL FOOTING
S3.2 SCALE: 1/2\"=1'-0"

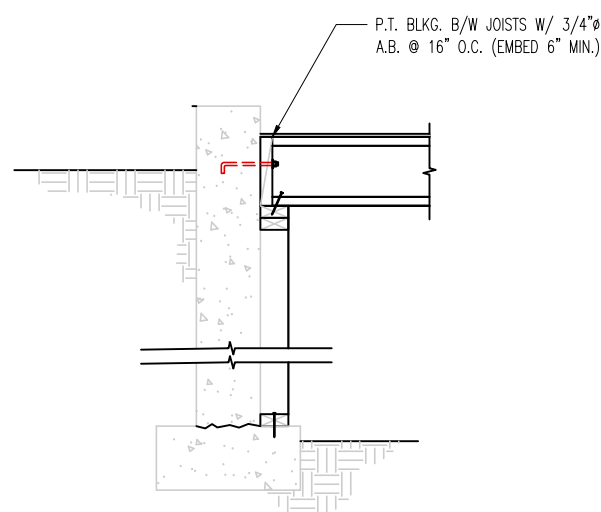
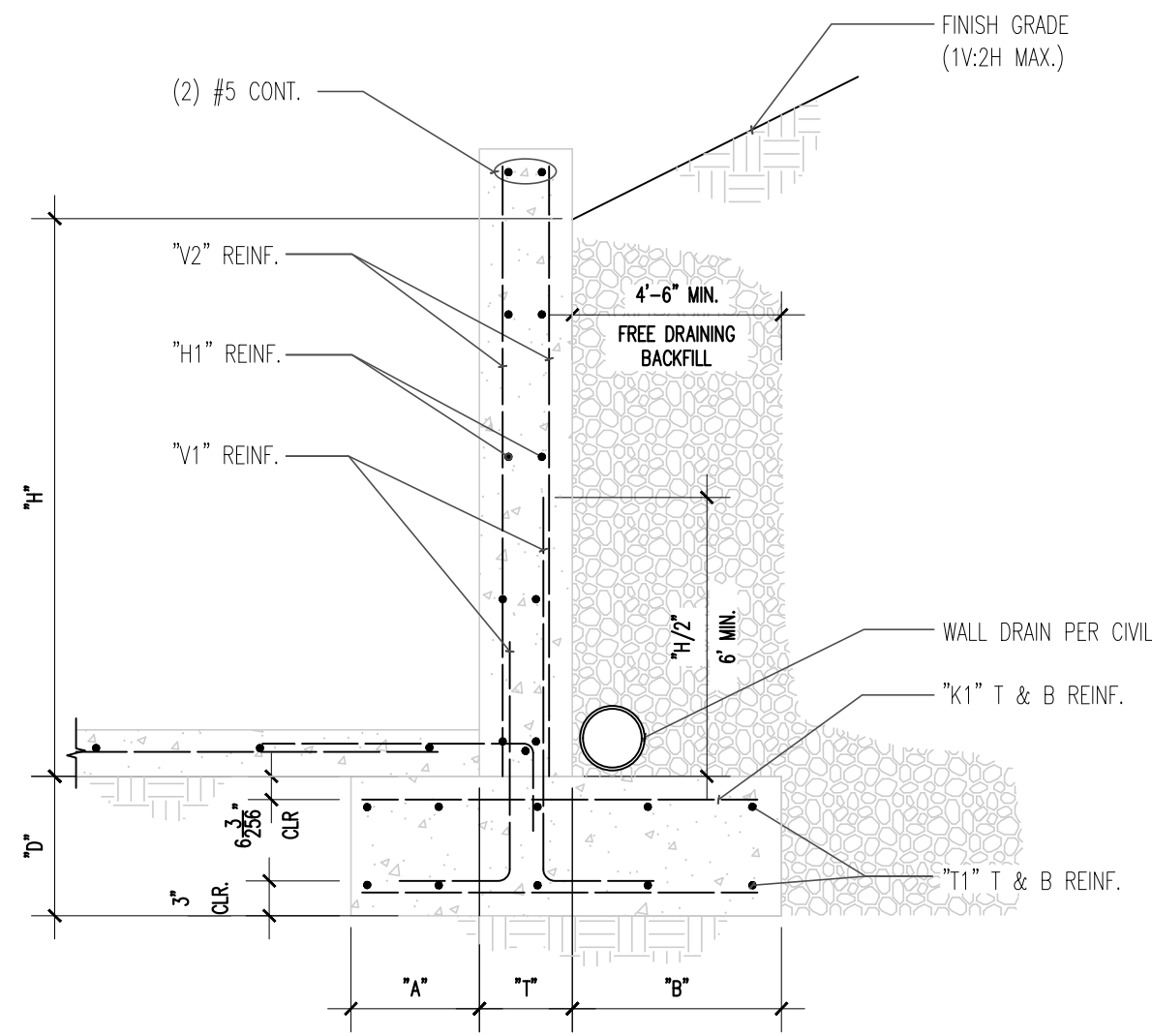


7 TYP. INTERIOR POST SPREAD FTG.
S3.2 SCALE: 1/2\"=1'-0"

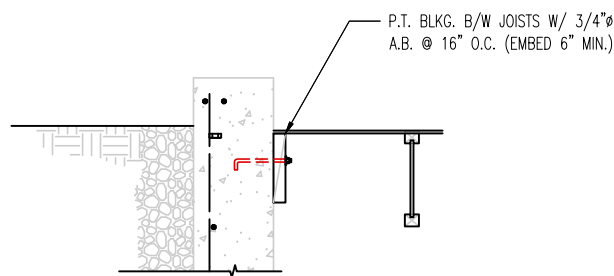
RETAINING WALL REINFORCING SCHEDULE									
DIMENSIONS					REINFORCING				
"H"	"A"	"B"	"T"	"D"	"H"	"V1"	"V2"	"K1"	"T1"
8'-6"	3'-6"	4'-6"	10"	20"	#5 @ 12" O.C.	#7 @ 6" O.C.	#7 @ 6" O.C.	#5 @ 12" O.C.	#5 @ 12" O.C.
4'-0"	1'-0"	2'-0"	10"	10"	#4 @ 16" O.C.	#4 @ 12" O.C.	#4 @ 12" O.C.	#4 @ 12" O.C.	#4 @ 12" O.C.

GEO. SOIL REPORT PROVIDED BY NGA, INC.(NO. 1502724):
ALLOWABLE SOIL BEARING = 2500 PSF
ACTIVE PRESSURE = 40 PCF
AT REST PRESSURE = 60 PCF
PASSIVE PRESSURE = 200 PCF
SEISMIC LOAD = 8H

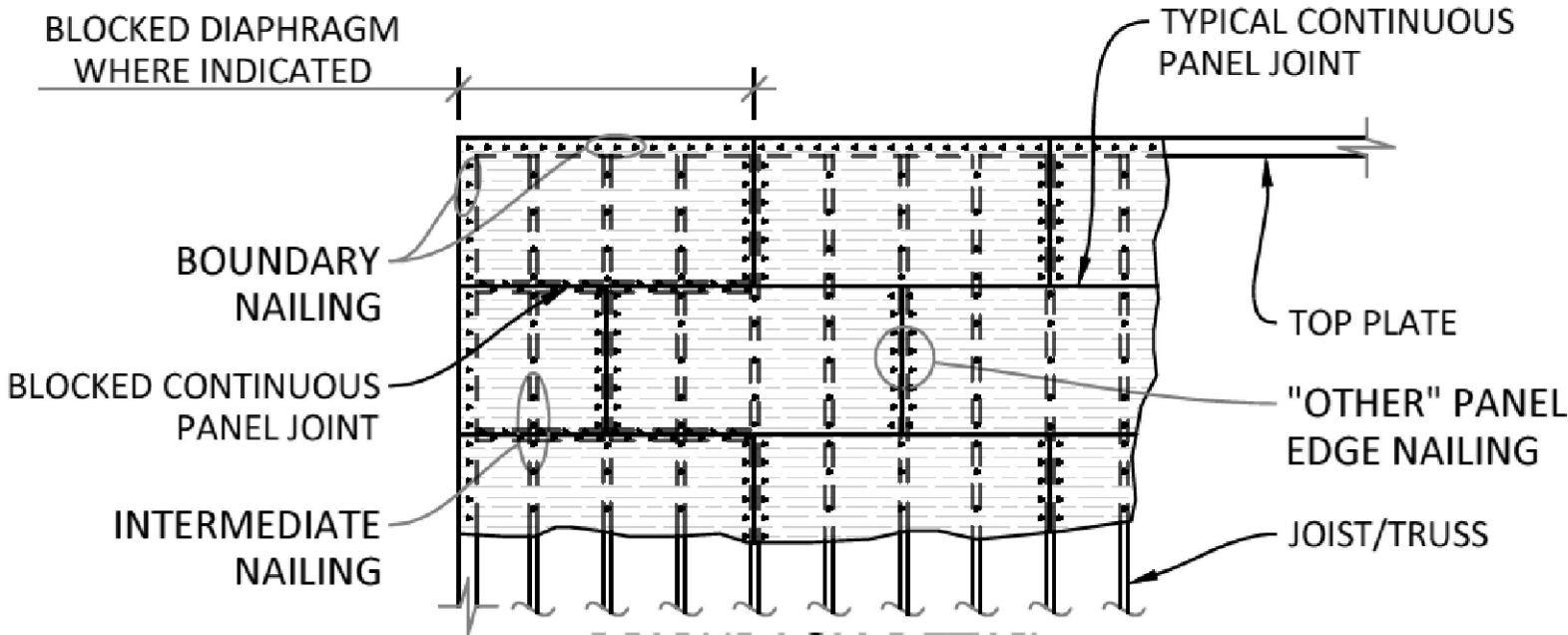
8 RETAINING WALL
S3.2 SCALE: NTS



9 TYP. EXTERIOR FOUNDATION PERP. TO JOIST
S3.2 SCALE: 3/4\"=1'-0"



10 TYP. EXTERIOR FOUNDATION // TO JOIST
S3.2 SCALE: 3/4\"=1'-0"



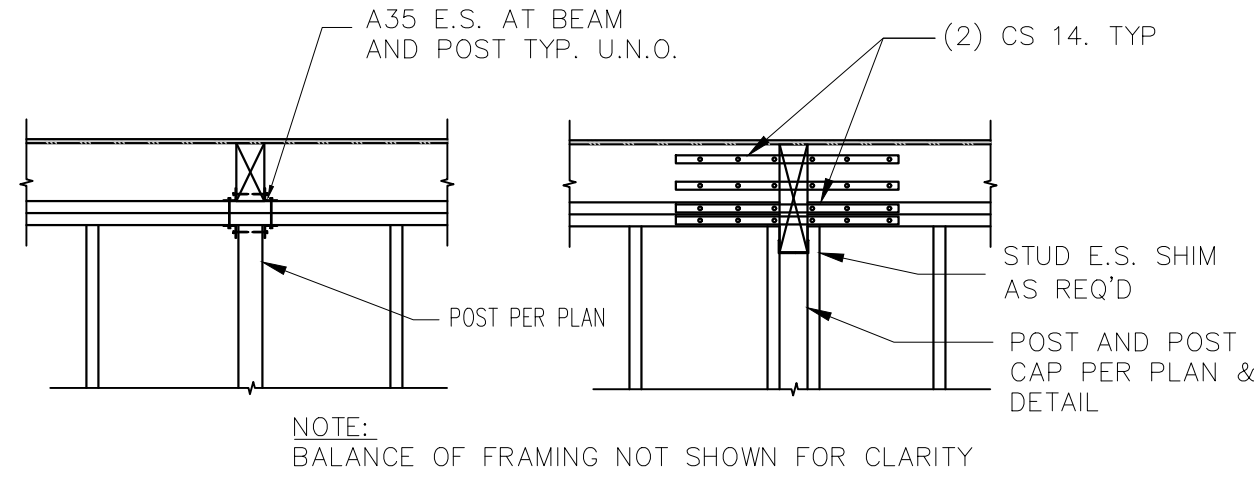
DIAPHRAGM NAILING SCHEDULE						
LOCATION	SHEATHING	BLKG REQD	SIZE OF NAIL	NAIL SPACING AT BOUNDARIES AND "OTHER" PANEL EDGES	NAIL SPACING AT INTERMEDIATE FRAMING MEMBERS	NAIL SPACING AT BLOCKED PANEL JOINTS
ROOF	SEE STRUCT	NO	10d	6" OC	12" OC	6" OC
SUB-FLR	NOTES	NO	10d & GLUE	4" OC	12" OC	4" OC

DIAPHRAGM NOTES

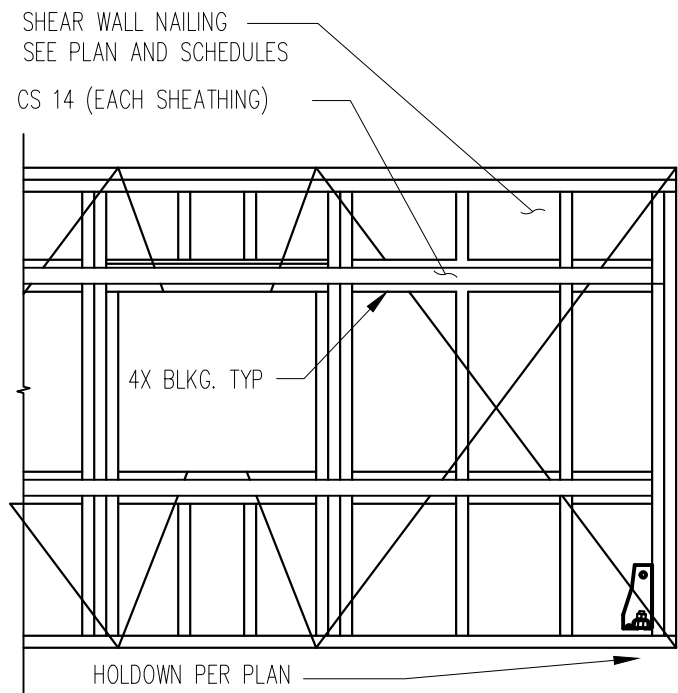
- ALL DIAPHRAGM SHEATHING IS TO BE STAGGERED IN THE DIRECTION OF THE PLYWOOD SPAN PER DIAPHRAGM DETAIL.
- PROVIDE BOUNDARY NAILING CONTINUOUS AROUND THE ENTIRE PERIMETER OF THE DIAPHRAGM
- NAILS SHALL BE COMMON OR GALVANIZED BOX
- ALL FRAMING MEMBERS SHALL BE 2x MINIMUM NOMINAL WIDTH

NOTE:
*PROVIDE 1/8" GAP @ TYP. PANEL JOINT

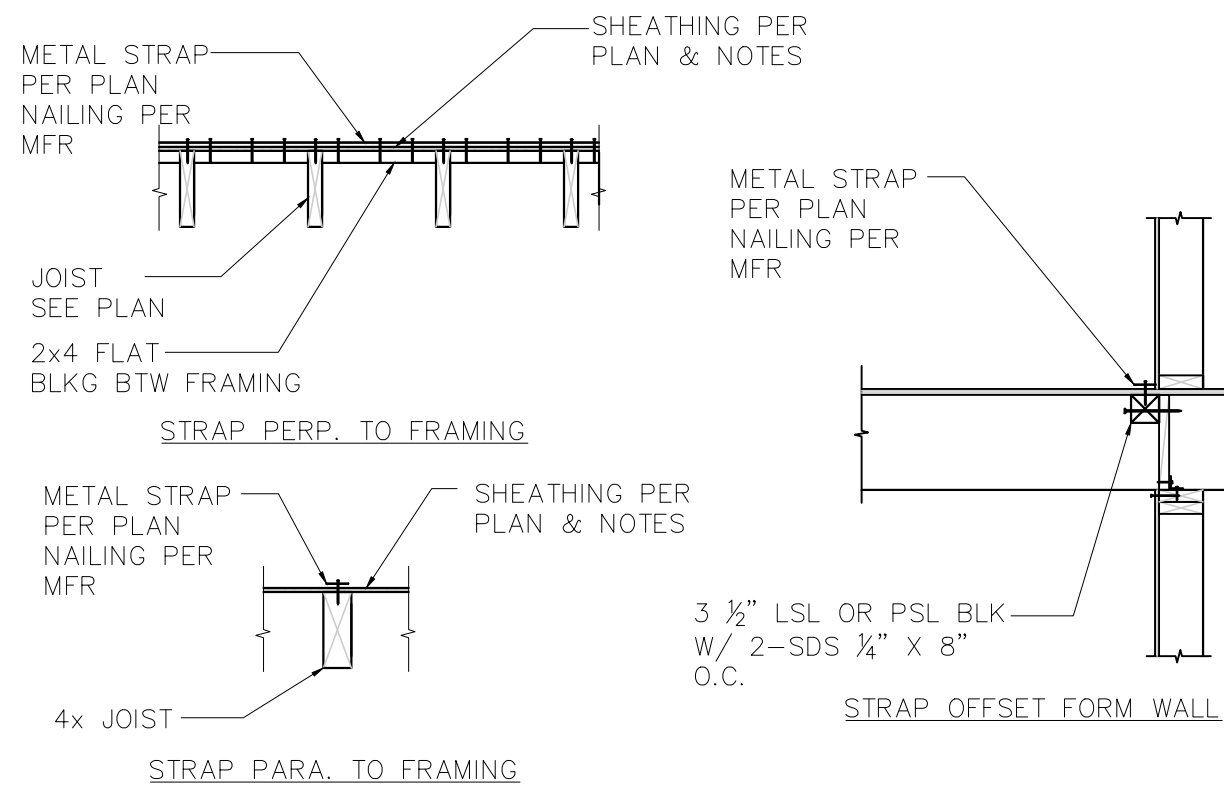
1 TYP. PLY. DIAPHRAGM NAILING
SCALE 1/4" = 1'-0"



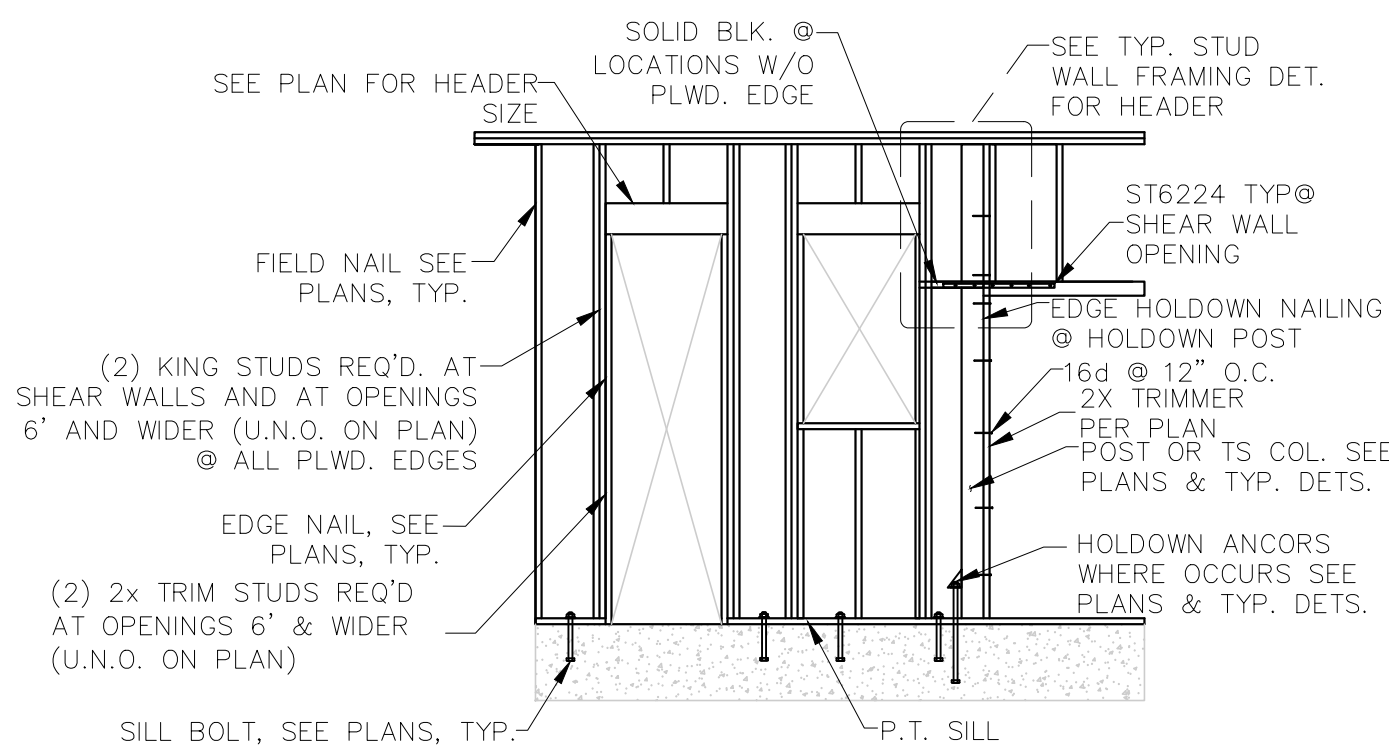
5 TYP. BEAM @ WALL CONNECTION
SCALE NTS



6 TYP. PERFORATED SHEAR WALL
SCALE NTS



7 TYP. COIL STRAP AT FRAMING
SCALE NTS



TYP MINIMUM KING STUD AND TRIM			
WIDTH OF OPENING	8'-0"	6'-0"	4'-0"
NUMBER OF TRIMMERS	3	2	1
NUMBER OF KING STUD	4	3	2

NOTES:

- USE 2x6 AT 16" O.C. AT ALL EXTERIOR WALLS.
- SEE PLANS FOR SPECIAL FRAMING REQUIREMENTS.
- HEADER SIZES SHOWN IN SCHEDULES ABOVE ARE MINIMUM HEADER SIZES, SEE PLANS FOR WHERE LARGER HEADER SIZES ARE REQUIRED.
- IF CALLED OUT STUD HEIGHTS AT ANY GIVEN FLOOR LEVEL EXCEED LIMITATIONS, CONTACT STRUCTURAL ENGINEER FOR CLARIFICATION.
- TRIMMERS AT 4x4 USE 1-4x4 AND 1-2x4 AND AT 3x4 USE 1-3x4 AND 1-2x4.
- NAIL TRIMMERS TOGETHER W/ 16d NAILS @ 12" O.C. STAGGERED EACH FACE.
- SEE PLANS FOR SHEAR WALL FRAMING REQUIREMENTS.

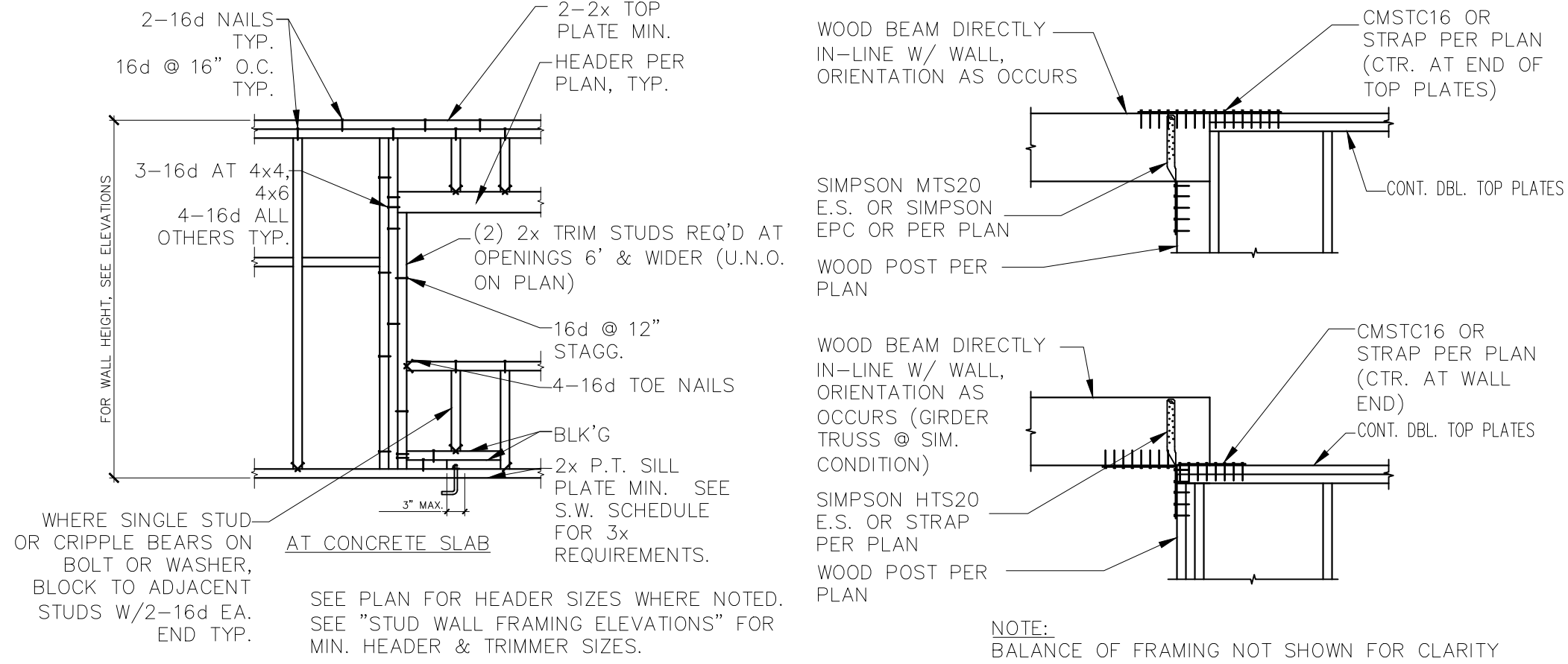
2 TYP. SHEAR WALL FRAMING
SCALE NTS

SHEAR WALL SCHEDULE									
MARK	SHEATHING	SIDE	PANEL NAILING		PANEL BLOCKING	SILL PLATE	ANCHOR BOLTS (MIN. 7" EMBED)	SHEAR CLIP	VALUE (PLF)
			SIZE	EDGE	FIELD				
A	7/16" APA RATED SHEATHING WITH STUDS @ 16" O.C.	ONE	8d	6" O.C.	12" O.C.	2x	2x 5/8" x 10" @ 48" O.C. OR UFP10-SDS3 @ 48" O.C.	SIMPSON LTP4/A35 @ 18" O.C.	230
B	7/16" APA RATED SHEATHING WITH STUDS @ 16" O.C.	ONE	8d	4" O.C.	12" O.C.	3x	3x 5/8" x 12" @ 42" O.C. OR (2) 2x UFP10-SDS3 @ 42" O.C.	SIMPSON LTP4/A35 @ 18" O.C.	380
C	7/16" APA RATED SHEATHING WITH STUDS @ 16" O.C.	ONE	8d	3" O.C.	12" O.C.	3x	3x 5/8" x 12" @ 36" O.C. OR (2) 2x UFP10-SDS3 @ 36" O.C.	SIMPSON LTP4/A35 @ 16" O.C.	420
D	7/16" APA RATED SHEATHING WITH STUDS @ 16" O.C.	ONE	10d	3" O.C.	12" O.C.	3x	3x 5/8" x 12" @ 24" O.C. OR (2) 2x UFP10-SDS3 @ 24" O.C.	SIMPSON LTP4/A35 @ 12" O.C.	560
E	7/16" APA RATED SHEATHING WITH STUDS @ 16" O.C.	TWO	8d	6" O.C.	12" O.C.	3x	3x 5/8" x 12" @ 32" O.C. OR (2) 2x UFP10-SDS3 @ 32" O.C.	SIMPSON LTP4 E.F. @ 24" O.C.	520
F	7/16" APA RATED SHEATHING WITH STUDS @ 16" O.C.	TWO	8d	4" O.C.	12" O.C.	3x	3x 5/8" x 12" @ 24" O.C. OR (2) 2x UFP10-SDS3 @ 24" O.C.	SIMPSON LTP4 E.F. @ 18" O.C.	760
G	7/16" APA RATED SHEATHING WITH STUDS @ 16" O.C.	TWO	8d	3" O.C.	12" O.C.	3x	3x 5/8" x 12" @ 16" O.C. OR (2) 2x UFP10-SDS3 @ 16" O.C.	SIMPSON LTP4 E.F. @ 12" O.C.	980
H	7/16" APA RATED SHEATHING WITH STUDS @ 16" O.C.	TWO	10d	3" O.C.	12" O.C.	3x	3x 5/8" x 12" @ 12" O.C. OR (2) 2x UFP10-SDS3 @ 12" O.C.	SIMPSON LTP4 E.F. @ 12" O.C.	1,200

NOTES:

- SOME SHEAR WALLS LISTED MAY NOT BE USED IN THIS PROJECT. REFER TO PLAN FOR TYPES USED.
- 8d NAIL = 2 1/2" x 0.131" COMMON OR 2 1/2" x 0.113" GALVANIZED BOX. 10d NAIL = 3" x 0.148" COMMON OR 3" x 0.128" GALVANIZED BOX.
- IF ANCHOR BOLT SPACING IS GREATER THAN SHEAR WALL LENGTH INSTALL (1) ANCHOR BOLT WITHIN 12" OF EACH END.
- NAIL SIZES SHOWN ARE FOR COMMON NAILS OR GALVANIZED BOX. POWER DRIVEN NAILS SHALL COMPLY WITH ESR 1539 FOR RECOMMENDED SPACING AND INSTALLATION TO COMPLY WITH THE ABOVE SHEAR WALL SCHEDULE.
- SILL PLATE ANCHORS SHALL INCLUDE A STEEL PLATE WASHER NOT LESS THAN 0.229"x3"x3" IN SIZE PER AF&PA SDPWS SECTION 4.3.6.4.3. THE HOLE IN THE PLATE WASHER SHALL BE PERMITTED TO BE DIAGONALLY SLOTTED WITH A WIDTH OF UP TO 3/16" LARGER THAN THE BOLT DIAMETER AND A SLOT LENGTH NOT TO EXCEED 1-3/4". PROVIDED A STANDARD CUT WASHER IS PLACED BETWEEN THE PLATE WASHER AND THE NUT. THE PLATE WASHER SHALL EXTEND TO WITHIN 1/2" OF THE EDGE OF THE BOTTOM PLATE ON THE SIDE(S) WITH SHEATHING.
- IN SEISMIC DESIGN CATEGORY D, E, OR F, WHERE SHEAR DESIGN VALUES EXCEED 700 POUNDS PER LINEAR FOOT (350 PLF ASD), ALL FRAMING MEMBERS RECEIVING EDGE NAILING FROM ABUTTING PANELS SHALL NOT BE LESS THAN A SINGLE 3-INCH NOMINAL MEMBER, OR TWO 2-INCH NOMINAL MEMBERS FASTENED TOGETHER IN ACCORDANCE WITH SECTION 2306.1 TO TRANSFER THE DESIGN SHEAR VALUES BETWEEN FRAMING MEMBERS. WOOD STRUCTURAL PANEL JOINT AND SILL PLATE NAILING SHALL BE STAGGERED IN ALL CASES.
- WHERE PANELS ARE APPLIED TO BOTH FACES OF A WALL AND NAIL SPACING IS LESS THAN 6" O.C. ON EITHER SIDE, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS. ALTERNATIVELY, THE WIDTH OF THE NAILED FACE OF FRAMING MEMBERS SHALL BE 3" NOMINAL OR GREATER AT ADJOINING PANEL EDGES AND NAILS AT ALL PANEL EDGES SHALL BE STAGGERED.
- SHEAR WALL NAILING MUST BE INSTALLED SUCH THAT THE NAIL HEAD OR CROWN IS FLUSH WITH THE SURFACE OF SHEATHING. OVERDRIVEN OR OVER PENETRATED NAILS WILL NOT BE ALLOWED OR COUNTED AS APPROPRIATE NAILING.

SHEAR WALL SCHEDULE
SCALE NTS



3 TYP. STUD WALL OPENING FRAMING
SCALE NTS

4 TYP. TIE STRAP CONN. DETAILS
SCALE NTS

HOLDOWN SCHEDULE							
MARK	HOLDOWN	WOOD MEMBER	WOOD FASTENER	ANCHOR BOLT	ANCHOR BOLT EMBEDMENT (IN)	COMMENTS SEE NOTES BELOW	VALUE (LBS)
0	NONE REQUIRED						
1	SIMPSON MST37	(2) 2x	(22) 16d NAILS 1/2 TOP & BOT.	N/A	N/A	WRAP & NAIL STRAP TO BEAM/HEADER BELOW AS REQUIRED	2,135
2	SIMPSON MST48	(2) 2x	(32) 16d NAILS 1/2 TOP & BOT.	N/A	N/A	WRAP & NAIL STRAP TO BEAM/HEADER BELOW AS REQUIRED	3,425
3	SIMPSON MST60	(2) 2x	(48) 16d NAILS 1/2 TOP & BOT.	N/A	N/A	WRAP & NAIL STRAP TO BEAM/HEADER BELOW AS REQUIRED	4,830
4	SIMPSON CMST12	(1) 4x	(86) 16d NAILS 1/2 TOP & BOT.	N/A	N/A	WRAP & NAIL STRAP TO BEAM/HEADER BELOW AS REQUIRED 39" END LENGTH	9,215
5	SIMPSON LSTHD8 OR LSTHDBRJ	(2) 2x SEE NOTES	(24) 16d SINKERS	N/A	8"	SEE NOTES 1, 2, 3, AND 4 USE (3) 2x AT CORNERS	1,220
6	SIMPSON HDU2-SDS2.5	(2) 2x	(6) SIMPSON SDS SCREWS	5/8" DIA. SIMP. SSTB16	12-5/8"	SEE NOTES 1, 2, 3, AND 4	2215
7	SIMPSON HDU4-SDS2.5	(2) 2x	(14) SIMPSON SDS SCREWS	5/8" DIA. SIMP. SSTB20	16-5/8"	SEE NOTES 1, 2, 3, AND 4	3285
8	SIMPSON HDU5-SDS2.5	(2) 2x	(14) SIMPSON SDS SCREWS	5/8" DIA. SIMP. SSTB24	20-5/8"	SEE NOTES 1, 2, 3, AND 4	4340
9	SIMPSON HDU8-SDS2.5	(1) 4x	(20) SIMPSON SDS SCREWS	7/8" DIA. SIMP. SB7/8x24	18"	SEE NOTES 1, 2, 3, AND 4	5820
10	SIMPSON HHDQ11-SDS2.5	(1) 6x	(24) SIMPSON SDS SCREWS	1" DIA. A307 THREADED ROD	de = 16" W = 48"	SEE NOTES 1, 2, 3, 4 AND 5	8030
11	SIMPSON HHDQ14-SDS2.5	(1) 6x	(30) SIMPSON SDS SCREWS	1" DIA. A307 THREADED ROD	de = 16" W = 48"	SEE NOTES 1, 2, 3, 4 AND 5	12375
12	SIMPSON HDU14-SDS2.5	(1) 6x	(36) SIMPSON SDS SCREWS	1" DIA. A307 THREADED ROD	de = 16" W = 48"	SEE NOTES 1, 2, 3, 4 AND 5	12425

NOTES:

- DOUBLE STUDS ARE REQUIRED AT HOLDOWNS UNLESS NOTED OTHERWISE. DOUBLE STUDS SHALL BE LAMINATED TOGETHER WITH 16d NAILS AT 6" O.C. FULL HEIGHT (TYPICAL).
- PROVIDE HOLDOWN NOTED WITHIN 6" FROM EACH END OF EACH SHEAR WALL SHOWN ON PLANS.
- ADD (2) EXTRA VERTICAL DOWEL WITH STANDARD HOOK IN FOOTING AT EACH ANCHOR BOLT LOCATION.
- ADJUST FOOTING AND STEM WALL HEIGHT TO ACCOMMODATE ANCHOR BOLT EMBEDMENT REQUIREMENTS.
- ADJUST FOOTING AND STEM WALL HEIGHT TO ACCOMMODATE ANCHOR BOLT EMBEDMENT REQUIREMENTS.
- SEE THREADED ROD ANCHOR DETAIL.
- FOR EXISTING STEM WALL, DRILL AND EPOXY ANCHOR. USE A307 THREADED ROD WITH SIMPSON SET-XP EPOXY. SEE PLANS AND DETAILS FOR REQUIRED EMBEDMENT.
- ALL HOLDOWN ANCHORS AND BOLTS SHALL BE INSTALLED IN THE CORRECT LOCATION IN THE TOP OF THE CONCRETE WALL AND SECURED TO THE FORMS PRIOR TO CONCRETE INSTALLATION. THERE IS NO PRACTICAL SOLUTION TO POST-INSTALLED HOLDOWN ANCHORS IN THE TOP OF THE 8" CONCRETE STEM WALL. NO EPOXY OR MECHANICAL ANCHOR BOLT ALTERNATIVES WILL BE OFFERED FOR MISSING OR MISPLACED EMBEDDED ANCHORS. CONCRETE FOOTINGS AND STEM WALLS MAY HAVE TO BE REMOVED AT CONTRACTOR'S EXPENSE TO MITIGATE MISPLACED, MISALIGNED, OR MISSING HOLDOWN ANCHORS OR BOLTS.

HOLDOWN SCHEDULE
SCALE NTS

5/29/2024

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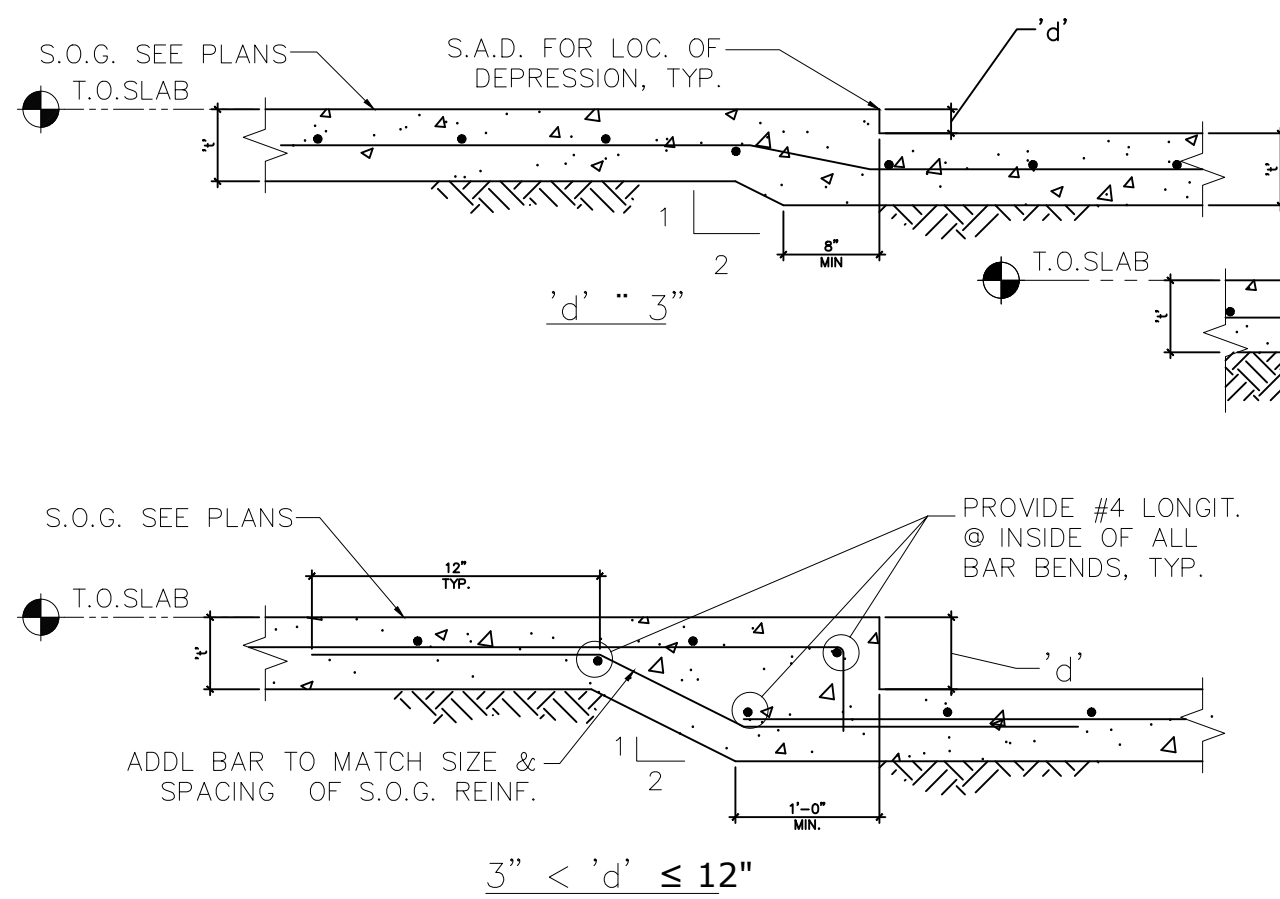
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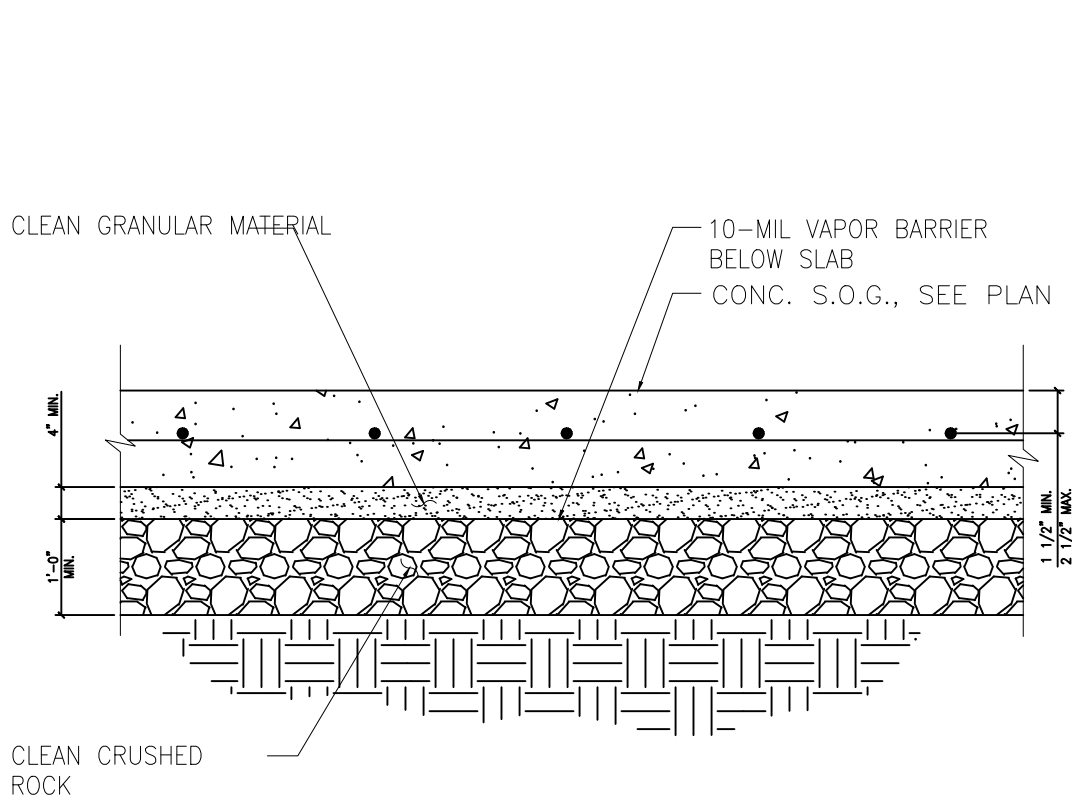
SHEAR WALL DETAILS

Sheet
S3.3



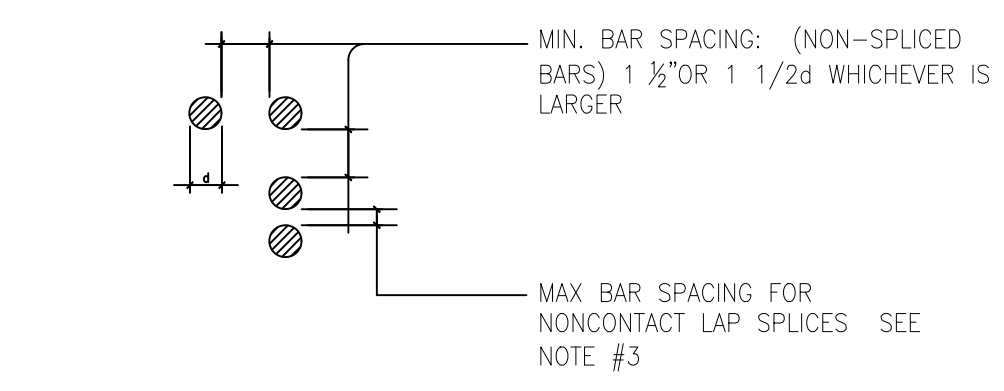
- NOTES:
- THIS DETAIL APPLIES TO ALL DEPRESSIONS AND TRENCHES IN SLAB ON GRADE OR SLAB ON SAND FILL.
 - PROVIDE 1-#5 DIAGONAL, 5'-0" LONG AT ALL INSIDE CORNERS OF DEPRESSION.
 - PIPE SLEEVES TO BE 2" LARGER THAN NOMINAL PIPE DIAMETER. MAXIMUM SLEEVE SIZE=12". MINIMUM=12" CLEAR SPACING BETWEEN ADJACENT PIPES. SEE MECHANICAL AND ELECTRICAL DRAWING FOR LOCATIONS.
 - COORDINATE LOCATION, DEPTH, EXTENT, AND EDGE EMBED CONDITIONS OF ALL DEPRESSIONS WITH ARCHITECTURAL DRAWINGS.

1 SLAB ON GRADE DEPRESSION
SCALE: 1/2"=1'-0"



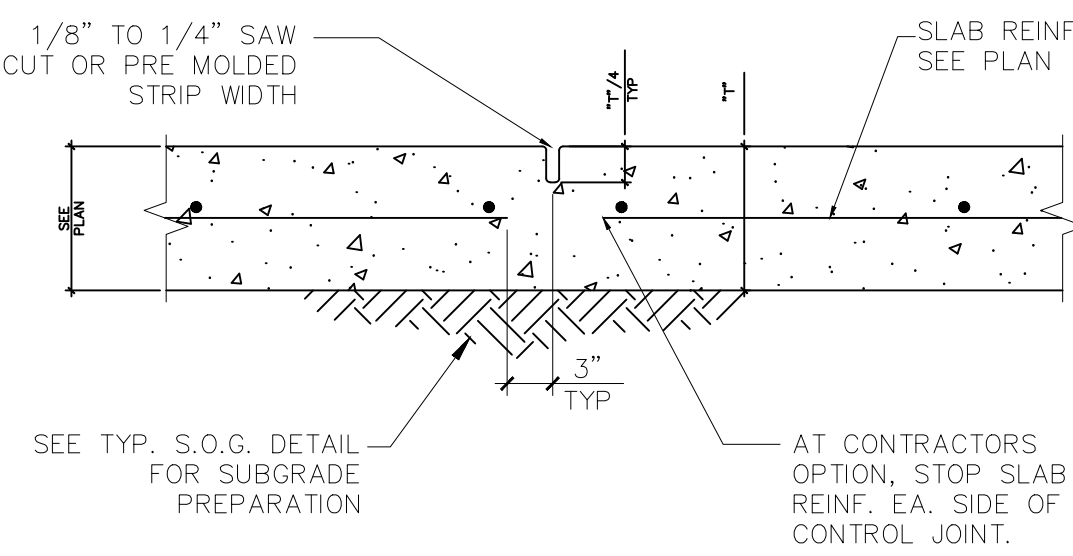
- NOTES:
- SEE GEOTECHNICAL REPORT.
 - SEE SPECIFICATIONS FOR GRANULAR MATERIAL & CRUSHED ROCK.
 - SEE PLANS FOR LOCATIONS OF COLUMN BLOCKOUTS, CONSTRUCTION JOINTS, CONTROL JOINTS AND SLAB DEPRESSIONS.

4 TYP. SUBGRADE PREP. & SLAB ON GRADE DETAIL
SCALE: 1/2"=1'-0"



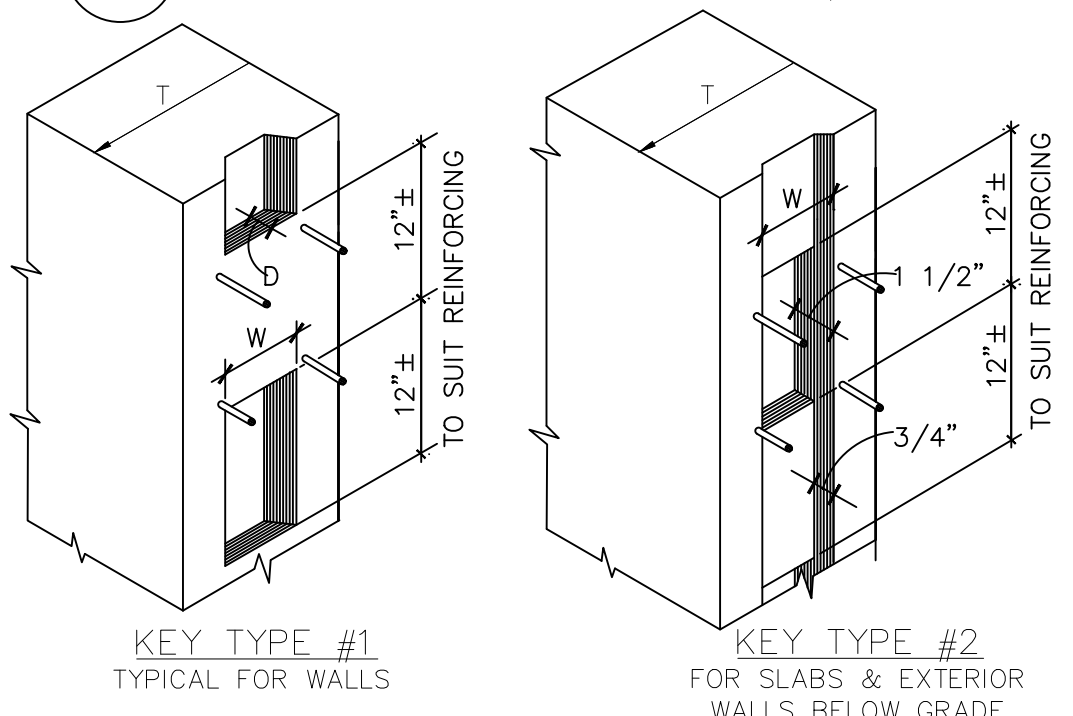
- NOTES:
- COLUMN DOWELS, TYPICAL HORIZONTAL WALL STEEL AND TYPICAL WALL STEEL DOWELS MAY BE WIRED TOGETHER INSTEAD OF SPACING AS SHOWN ABOVE.
 - CLEAR DISTANCE LIMITATION BETWEEN BARS SHALL APPLY ALSO TO THE CLEAR DISTANCE BETWEEN A CONTACT LAP SPICE AND ADJACENT SPLICES OF BARS.
 - BARS SPLICED BY NONCONTACT LAP SPLICES SHALL NOT BE SPLICED TRANSVERSELY FURTHER APART THAN ONE-FIFTH THE REQUIRED LAP SPICE LENGTH, NOR 6".

9 BAR SPACING & SLAB ON GRADE DETAIL
SCALE: NTS



- NOTES:
- WHEN USED, MAKE SAW CUT AS SOON AS SLAB CAN SUPPORT WEIGHT OF WORKERS & EQUIPMENT WITHOUT DAMAGE TO SLAB FINISH, & CUTS CAN BE MADE WITHOUT DAMAGE TO THE CONCRETE MAKE TRIAL CUTS AS REQUIRED.
 - JOINT TO BE THOROUGHLY CLEANED PRIOR TO FILLING. PROVIDE FILLER MATERIAL IN ACCORDANCE WITH THE SPECIFICATIONS & APPLY STRICTLY IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
 - FILLER MATERIAL SHALL BE APPLIED WHEN SLAB IS UNDER PERMANENT TEMPERATURE CONTROL, SUCH AS AT THE COMPLETION OF THE BUILDING SHELL, WHENEVER POSSIBLE. IF PERMANENT TEMPERATURE CONTROL IS NOT ESTABLISHED, A MINIMUM OF 90 DAYS AFTER THE COMPLETION OF SLAB CONSTRUCTION SHALL ELAPSE PRIOR TO APPLYING THE JOINT FILLER.

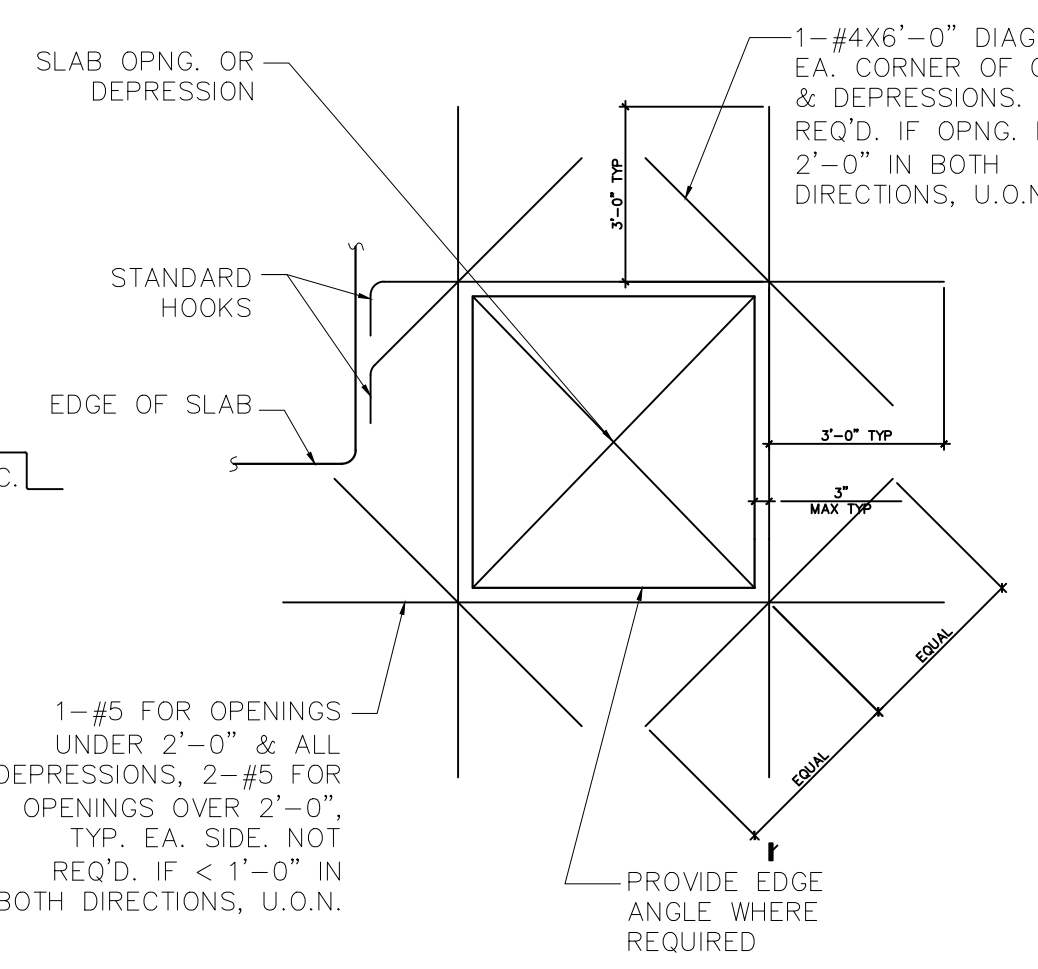
5 CONTROL JOINTS AT SLAB ON GRADE
SCALE: 1/2"=1'-0"



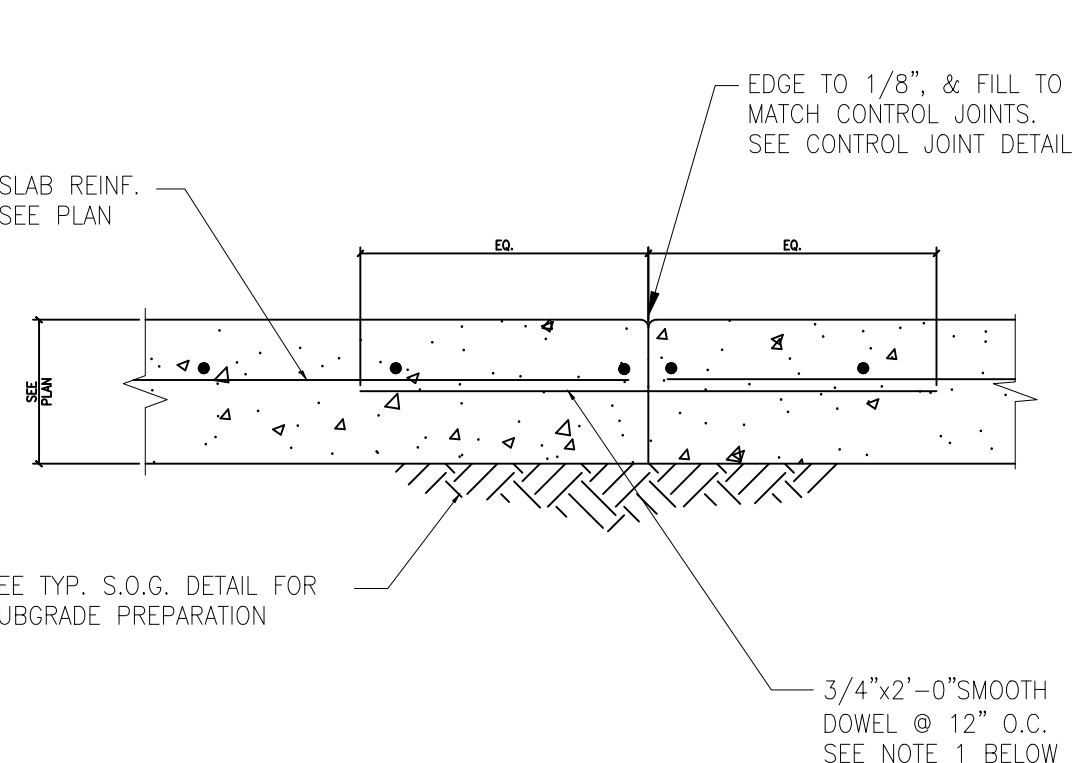
KEY SCHEDULE					
T	W	D	T	W	D
EQUAL LESS THAN 6" WALL OR SLAB	1"	1 1/2"	13"	7 1/4"	1 1/2"
7"	7"	1 1/2"	14" TO 16"	9 1/4"	2 1/2"
8" TO 12"	5 1/2"	1 1/2"	18" & OVER	11 1/4"	2 1/2"

- NOTES:
- BEFORE PLACING 2ND POUR, ALL SURFACES ARE TO BE ROUGHENED TO 1/4" AMPLITUDE & THOROUGHLY CLEANED, SEE SPECIFICATIONS.
 - DETAILS APPLY TO BOTH HORIZONTAL & VERTICAL CONSTRUCTION JOINTS.

10 CONSTRUCTION JOINTS IN WALLS & SLABS
SCALE: 1/2"=1'-0"

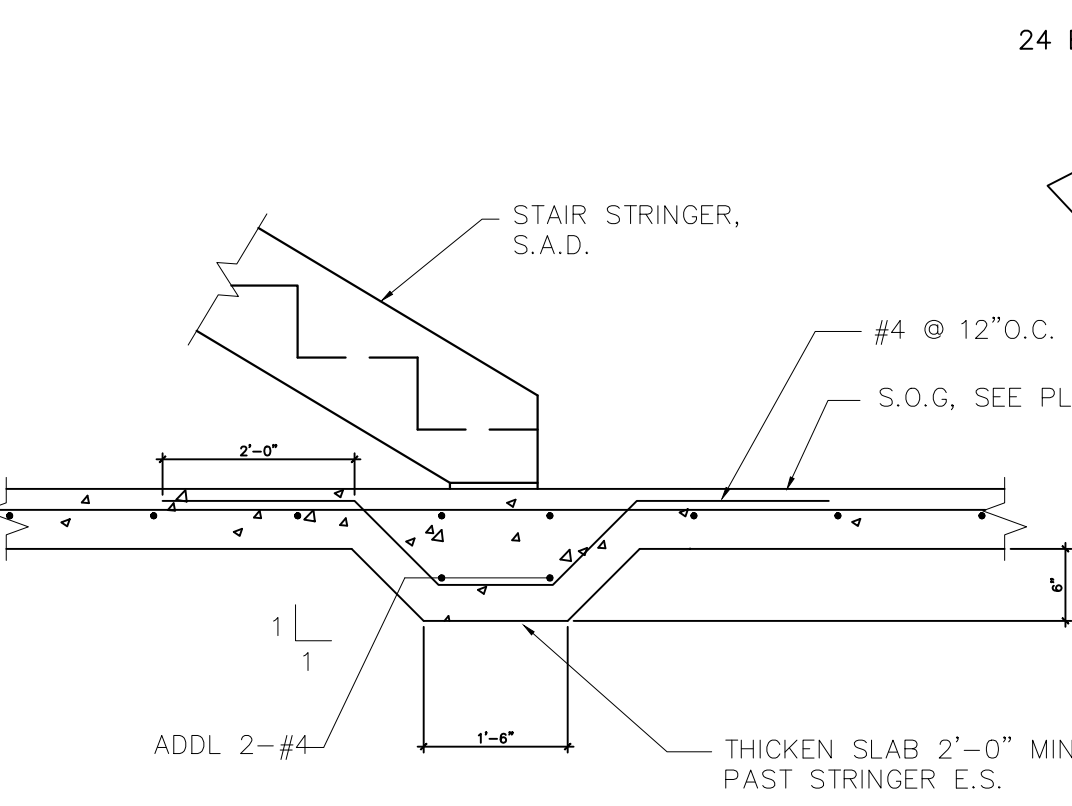


2 SLAB PENETRATION REINFORCING
SCALE: 1/2"=1'-0"

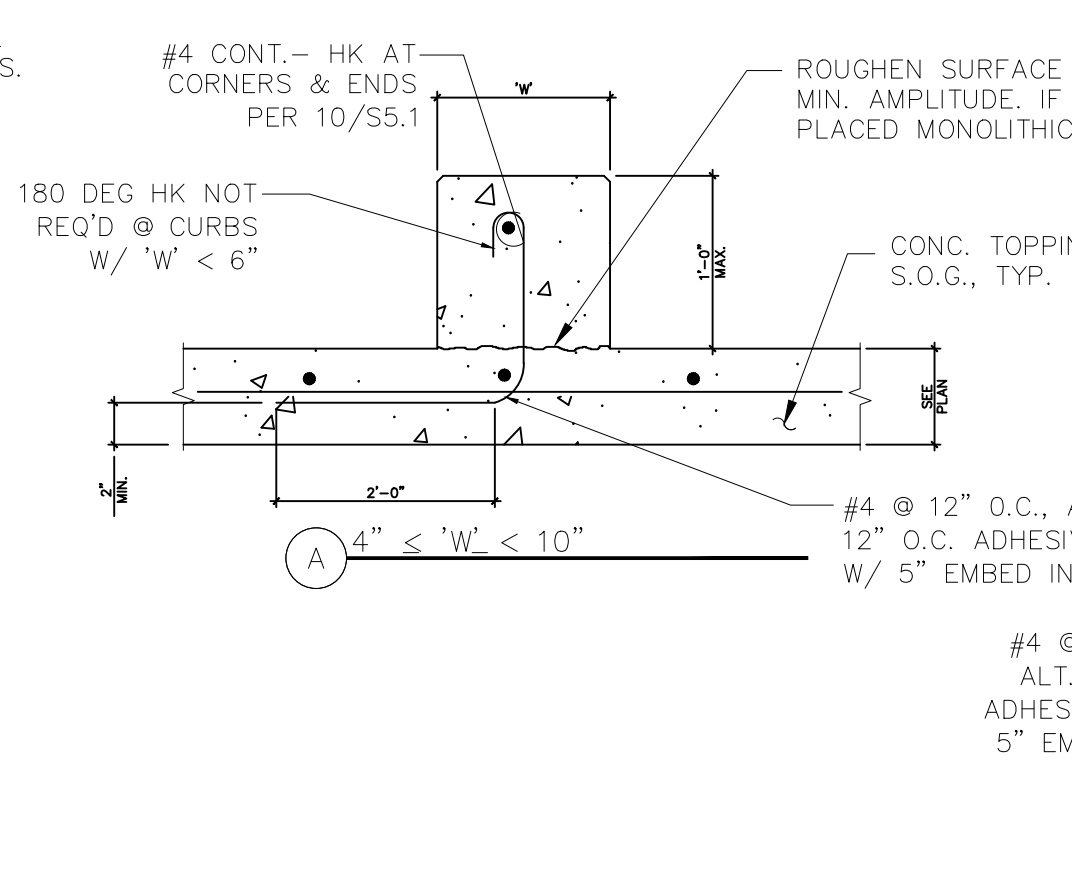


- NOTES:
- BREAK BOND BETWEEN NEW AND PREVIOUSLY POURED SLAB ON GRADE BY SPRAYING OR PAINTING EXPOSED SIDE OF KEY WITH CURING COMPOUND OR FORM OIL.
 - LONG STRIP CONSTRUCTION METHOD SHALL BE USED FOR ALL SLAB ON GRADE, UNLESS OTHERWISE APPROVED BY RESIDENT ENGINEER.
 - SUBGRADE SHALL BE FREE OF STANDING WATER AT TIME OF CONCRETE PLACEMENT.

6 CONSTRUCTION JOINTS AT SLAB ON GRADE
SCALE: 1/2"=1'-0"



11 STAIR STRINGER FOOTING
SCALE: 1/2"=1'-0"



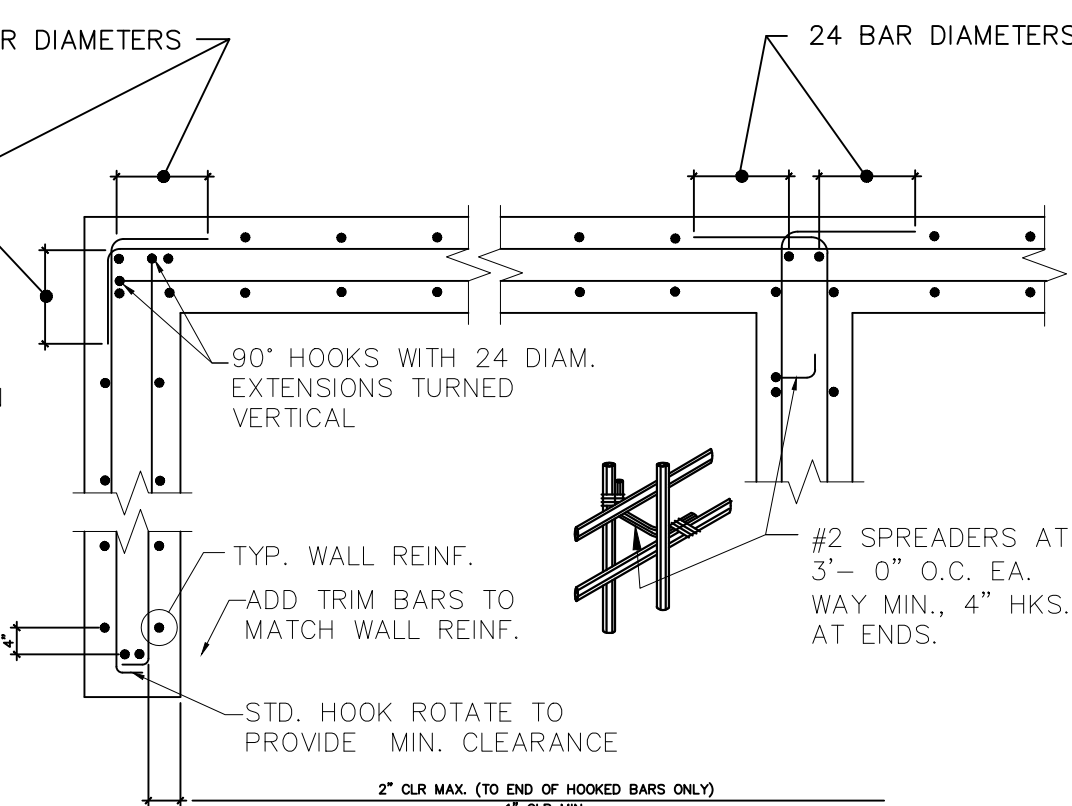
- NOTES:
- SEE ARCHITECTURAL & MECHANICAL DRAWINGS FOR CURB LOCATIONS, DIMENSIONS, CHAMFERS & INSERTS.
 - COORDINATE REINFORCEMENT LOCATIONS TO AVOID INTERFERENCE WITH INSTALLATION OF ADHESIVE DOWELS.
 - USE ALTERNATE IN DOWELS ARE NOT LOCATED IN PROPER LOCATION OF CURB IN CURB IS INSTALLED AT SLAB LOCATIONS WITHOUT DOWELS.

3 TYPICAL RAISED CURBS & PADS
SCALE: 1/2"=1'-0"

LAP SPLICE LENGTHS (INCHES)(1,2)											
BAR SIZE	#3	#4	#5	#6	#7	#8	#9	#10	#11		
fc' = 3000PSI											
TOP BAR (3)	21	28	35	46	62	82	104	132	162		
OTHER BAR	16	21	27	35	48	63	80	101	124		
fc' = 4000PSI											
TOP BAR (3)	20	24	30	40	54	71	90	114	140		
OTHER BAR	16	19	23	30	41	55	69	88	108		
fc' = 5000 PSI											
TOP BAR (3)	20	22	27	35	48	63	80	102	125		
OTHER BAR	16	17	21	27	37	49	62	79	96		

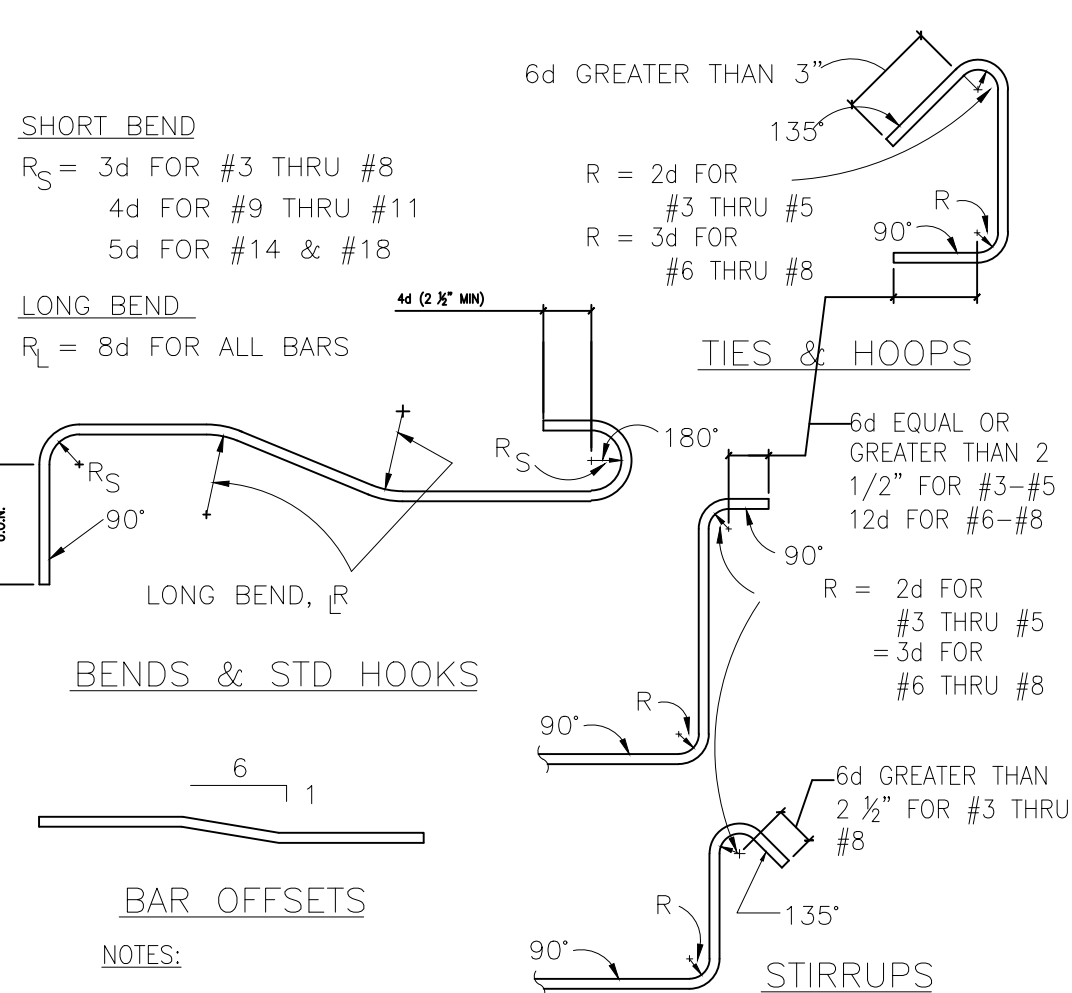
- NOTES:
- LAP SPLICE LENGTHS, WHERE PERMITTED, SHALL BE IN ACCORDANCE WITH THIS TABLE UNLESS SPECIFICALLY SHOWN OR NOTED OTHERWISE.
 - EMBEDMENT LENGTHS OF DOWELS SHALL BE EQUAL TO LENGTHS FOR "OTHER" BARS.
 - TOP BARS ARE HORIZONTAL BARS SO PLACED THAT MORE THAN 12 INCHES OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR.

7 REINFORCING LAP SPLICE TABLE
SCALE: NTS



- NOTES:
- WALLS WITH SINGLE CURTAIN OF STEEL SIMILAR TO ABOVE WITH HORIZONTAL HOOKS AT CORNERS ONLY.
 - SPLICES IN HORIZONTAL REINFORCEMENT SHALL BE STAGGERED.

12 WALL DETAIL REINF. @ CORNERS & INTER.
SCALE: NTS



- NOTES:
- 'd' IS NOMINAL BAR DIAMETER.
 - REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT, UNLESS SPECIFICALLY NOTED ON THE DRAWINGS.

8 HOOKS AND BENDS
SCALE: NTS

5/29/2024

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JOB # 2024020

DATE

DESCRIPTION

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TYPICAL STRUCTURAL DETAILS

Sheet

S3.4