

8602 N MERCER WAY - DECK REPLACEMENT

8602 N MERCER WAY, MERCER ISLAND, WA 98040

DATE	
PERMIT SET NO.	

PROJECT INFORMATION

SITE PERSPECTIVE

APPLICABLE CODES

CITY OF MERCER ISLAND CODES AND ORDINANCES
2021 IRC AND LOCAL AMENDMENTS
WASHINGTON STATE CODES, AS ADOPTED

SCOPE OF WORK

WINDOWS & DOOR RENEWAL.
NO OTHER MODIFICATIONS.

PARCEL DATA

PARCEL: 545260-0020
SITE ADDRESS: 8602 N MERCER WAY, MERCER ISLAND, WA 98040
RESIDENTIAL AREA: 097-001 (SE APPRAISAL DISTRICT)
JURISDICTION: MERCER ISLAND
QUARTER-SECTION-TOWNSHIP-RANGE: NW-7 -24-5
LEGAL DESCRIPTION: MERCER PARK LANE NEW LOT B TGW UND INT TRS A-B-C & POR LOT 5 MERCER ISLAND LOT LINE REV NO SUB06-013 REC NO 20070308900005 BEING POR OF SW 1/4 OF NW 1/4 STR 07-24-05
PLAT BLOCK:
PLAT LOT: 2 & 12



ATVAGA DESIGN LLC
Everett, WA 98208
atvaga.com

SHEET LIST

SHEET NUMBER	SHEET NAME
01 - GENERAL	
A0.00	COVER
02 - ARCHITECTURAL	
A1.01	SITE PLAN
A2.01	EXISTING & DEMO LOWER FLOOR PLAN
A2.02	EXISTING & DEMO UPPER FLOOR PLAN
A2.03	PROPOSED LOWER FLOOR PLAN
A2.04	PROPOSED UPPER FLOOR PLAN
A2.05	SECTIONS & 3D VIEWS
A2.06	ELEVATIONS & 3D VIEWS

LAND DATA

PRESENT USE: SINGLE FAMILY(RES USE/ZONE)
LAND SQFT (ACRE): 22,748 (0.52)
ZONING: R-15
STREET SURFACE: PAVED

YARD REQUIREMENT

- FRONT: TWENTY FEET
- REAR: TWENTY FIVE FEET
- SIDE: SUM TO FIFTEEN FEET

BUILDING HEIGHT OF STRUCTURE

ALLOWABLE MAX HEIGHT OF STRUCTURE: NO CHANGE

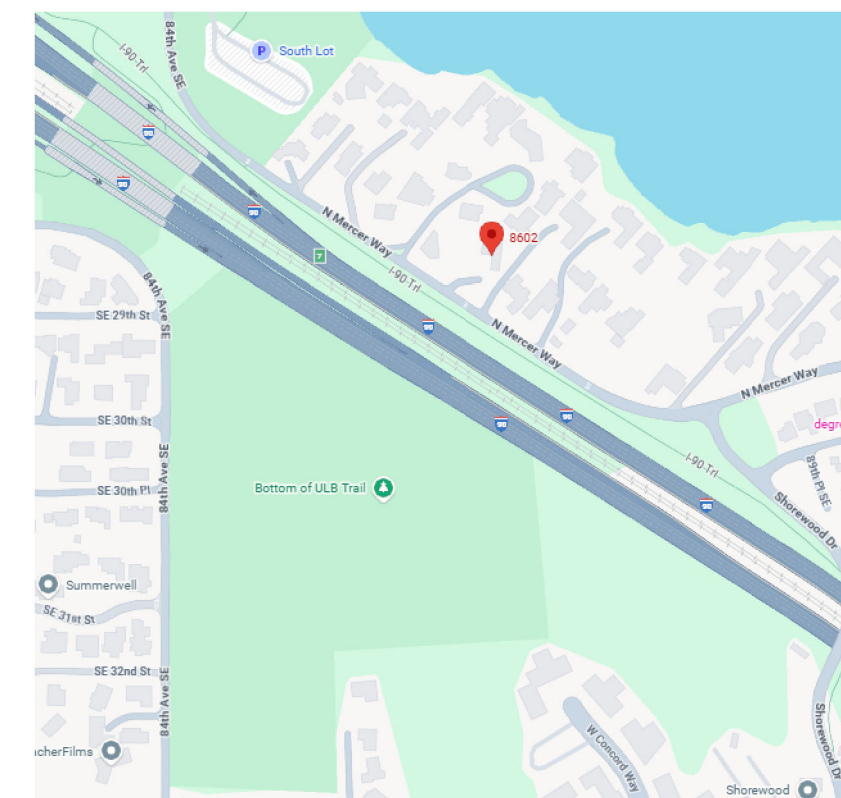
TREE

NO TREES TO BE CUT DOWN
WORK NOT IN DRIP LINES

ABBREVIATIONS

A.F.F.	ABOVE FINISHED FLOOR	FT.	FEET	L.P.	LOW POINT	SEC.	SECTION
ADJ.	ADJUSTABLE	FIN.	FINISH			SIM.	SIMILAR
A.B.	ANCHOR BOLT	FLR.	FLOOR	MAT.	MATERIAL	SHT.	SHEET
APPROX.	APPROXIMATELY	FTG.	FOOTING	MAX.	MAXIMUM	SM	SHEET METAL
ARCH.	ARCHITECT	FNDN.	FOUNDATION	MECH.	MECHANICAL	SPECS.	SPECIFICATIONS
				MIN.	MINIMUM	S.S.	STAINLESS STEEL
						STD.	STANDARD
BTWN.	BETWEEN	GL.	GLASS	(N)	NEW	STL.	STEEL
BLK.	BLOCK, BLOCKING	GYP.	GYPSUM	NOM.	NOMINAL	STRUCT.	STRUCTURAL
BD.	BOARD			NO.	NUMBER	SQ.	SQUARE
BLDG.	BUILDING	HVAC	HEATING / VENTILATION AIR CONDITIONING	O.C.	ON CENTER	THK.	THICK, THICKNESS
						TYP.	TYPICAL
CLG.	CEILING	HT.	HEIGHT				
CL.	CENTER LINE	HORIZ.	HORIZONTAL	PT.	PAINT	VENT.	VENTILATION
CLR.	CLEAR	HR.	HOUR	PL.	PLATE	VER.	VERIFY
COL.	COLUMN			PLYWD.	PLYWOOD	V.I.F.	VERIFY IN FIELD
CONC.	CONCRETE	IN.	INCHES			VERT.	VERTICAL
		INFO.	INFORMATION	R	RADIUS	V.C.T.	VINYL COMPOSITION TILE
		I.D.	INSIDE DIMENSION	REC.	RECOMMENDATION		
DET.	DETAIL	INSUL.	INSULATION	REQ'D.	REQUIRED	W.P.	WATER PROOF
DIA.	DIAMETER	INT.	INTERIOR	REV.	REVISION	WWF	WELDED WIRE FABRIC
DIM.	DIMENSION	JT.	JOINT	R.D.	ROOF DRAIN	W/	WITH
DWG.	DRAWING	JST.	JOINT	RM	ROOM	W/O	WITHOUT
				R.O.	ROUGH OPENING	WD.	WOOD
EQ.	EQUAL						
EQUIP.	EQUIPMENT						
EXIST./E)	EXISTING						
EXT.	EXTERIOR						

VICINITY MAP



COVER

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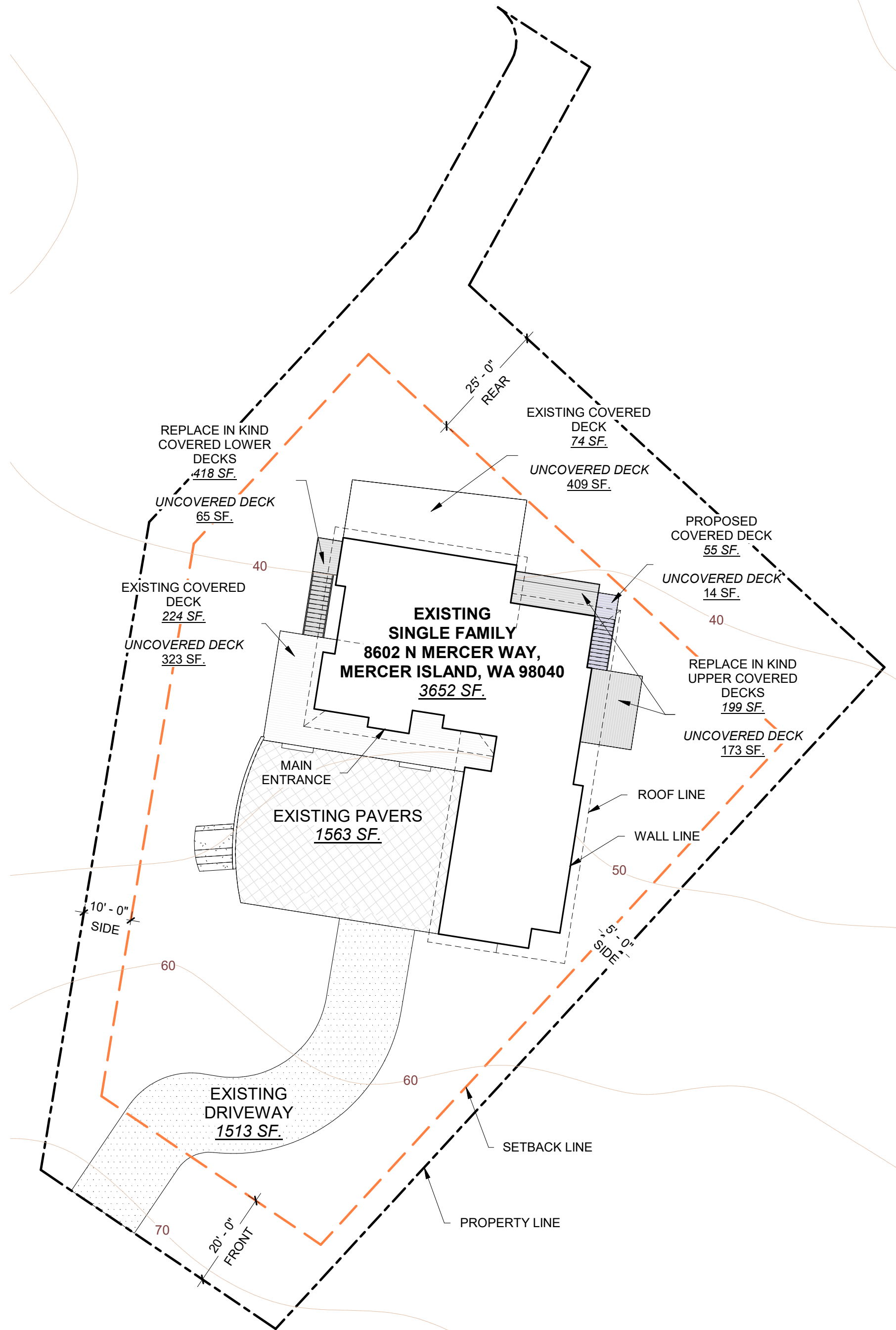
DISCLAIMER

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DATE: 03/05/2026

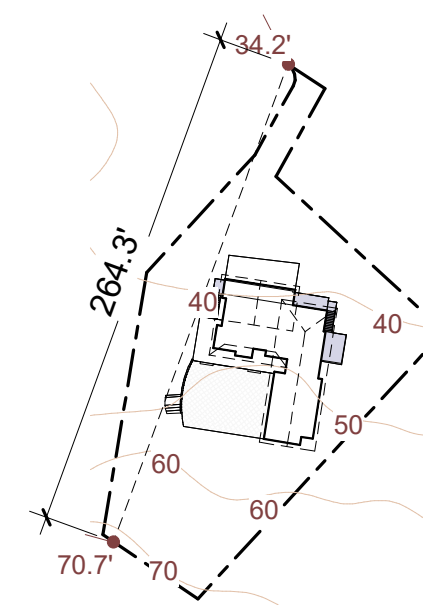
PROJECT NO: MY

SHEET NAME: **A0.00**



1. SITE PLAN

A1.01 SCALE: 1" = 20'-0"



2. LOT SLOPE DIAGRAM

A1.01 SCALE: 1" = 100'-0"

ZONING INFORMATION

19.02: ZONE- R-15

LOT COVERAGE

LOT AREA	22748 SF
LOT SLOPE - LESS THAN 15%	70.7-34.2= 36.5/264.3= 0.14
MAX LOT COVERAGE ALLOWED (40%)	9099.2 SF
LOT COVERAGE CALCULATION	
SINGLE-FAMILY RESIDENCE FOOTPRINT	3652 SF
EXISTING COVERED DECK	298 SF
REPLACE IN KIND COVERED DECK	617 SF
PROPOSED COVERED DECK	55 SF
VEHICULAR USE	3076 SF
TOTAL LOT COVERAGE AREA (%), SF	(34 %), 7698
MAX HARDSCAPE ALLOWED (9%) + AREA BORROWED FROM LOT...	2047.32 SF

HARDSCAPE CALCULATION

EXISTING UNCOVERED DECK	732 SF
REPLACE IN KIND UNCOVERED DECK	238 SF
PROPOSED UNCOVERED DECK	14 SF
TOTAL	(4%) 984

SETBACKS

FRONT SETBACK	20 FT
REAR SETBACK	25 FT
SIDE SETBACK	10 FT & 5 FT
PUBLIC RIGHTS OF WAYS AND VEHICULAR ACCESS EASEMENTS	10 FT

HEIGHTS

MAXIMUM BUILDING HEIGHT	30 FT
GROSS FLOOR AREA 40% OF NET LOT AREA	NO CHANGE

CALCULATION NOTE

AREAS LOCATED BENEATH ROOF OVERHANGS OR OTHER IMPERMEABLE COVERS ARE NOT INCLUDED IN THE LOT COVERAGE OR IMPERVIOUS SURFACE CALCULATIONS

GENERAL SITE PLAN NOTES

- UNO ALL EXISTING STRUCTURES INCLUDING TREES SHALL BE RETAINED.
- UTILITIES SHOWN ON THIS SITE PLAN ARE BASED UPON ABOVE GROUND OBSERVATIONS AND AS-BUILT PLANS WHERE AVAILABLE. ACTUAL LOCATIONS OF UNDERGROUND UTILITIES MAY VARY AND UTILITIES NOT SHOWN ON THIS PLAN MAY EXIST ON THIS SITE.
- TREE PROTECTION / DEVELOPMENT IMPACT AREA REQUIREMENTS: RETENTION OF ALL TREES 6 INCHES OR GREATER IS REQUIRED. NO TREE REMOVAL OR DAMAGE IS AUTHORIZED. CONSTRUCTION-RELATED ACTIVITIES, INCLUDING EXCAVATION AND GROUND DISTURBANCE, SITE ACCESS, HEAVY EQUIPMENT USE, STORAGE, OR STOCKPILING IS PROHIBITED OUTSIDE OF THE DEVELOPMENT IMPACT AREA UNLESS LOCATED ON EXISTING HARD SURFACES.

LEGEND

- EXISTING CONSTRUCTION
- PROPOSED CONSTRUCTION
- PROPERTY LINE
- SETBACK LINE
- ROOF LINE

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SITE PLAN

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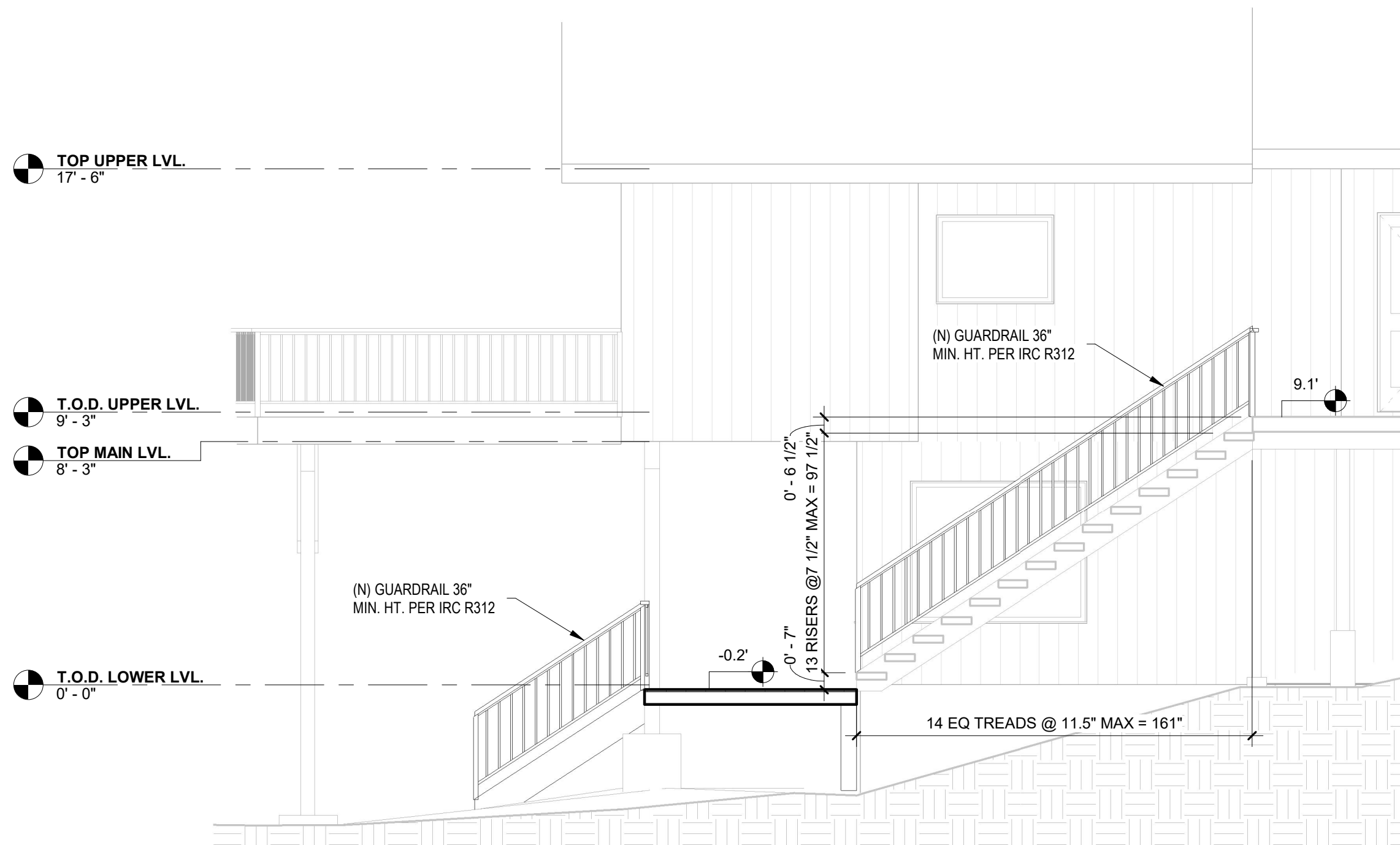
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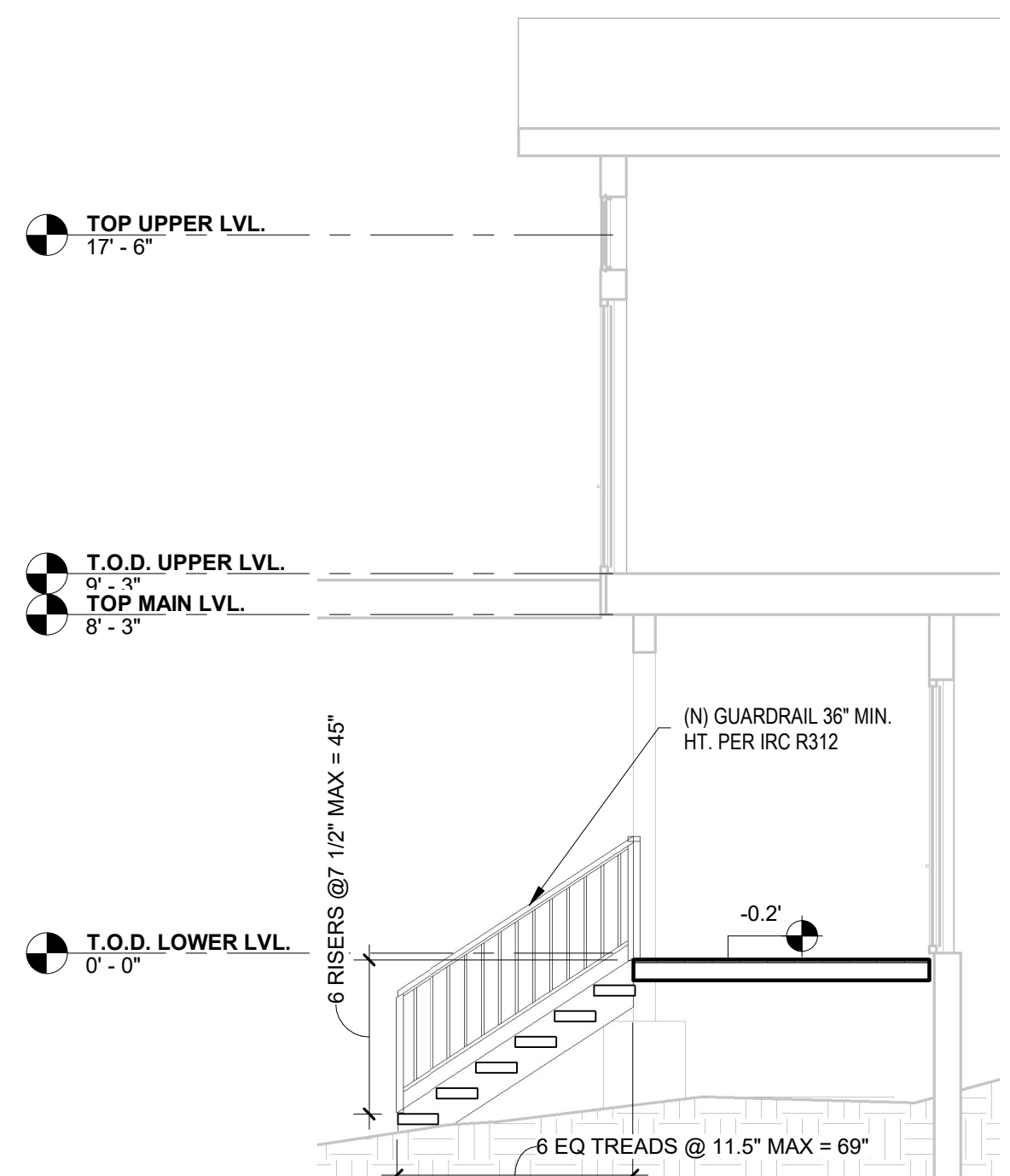
PROJECT NO: MY

SHEET NAME: **A1.01**



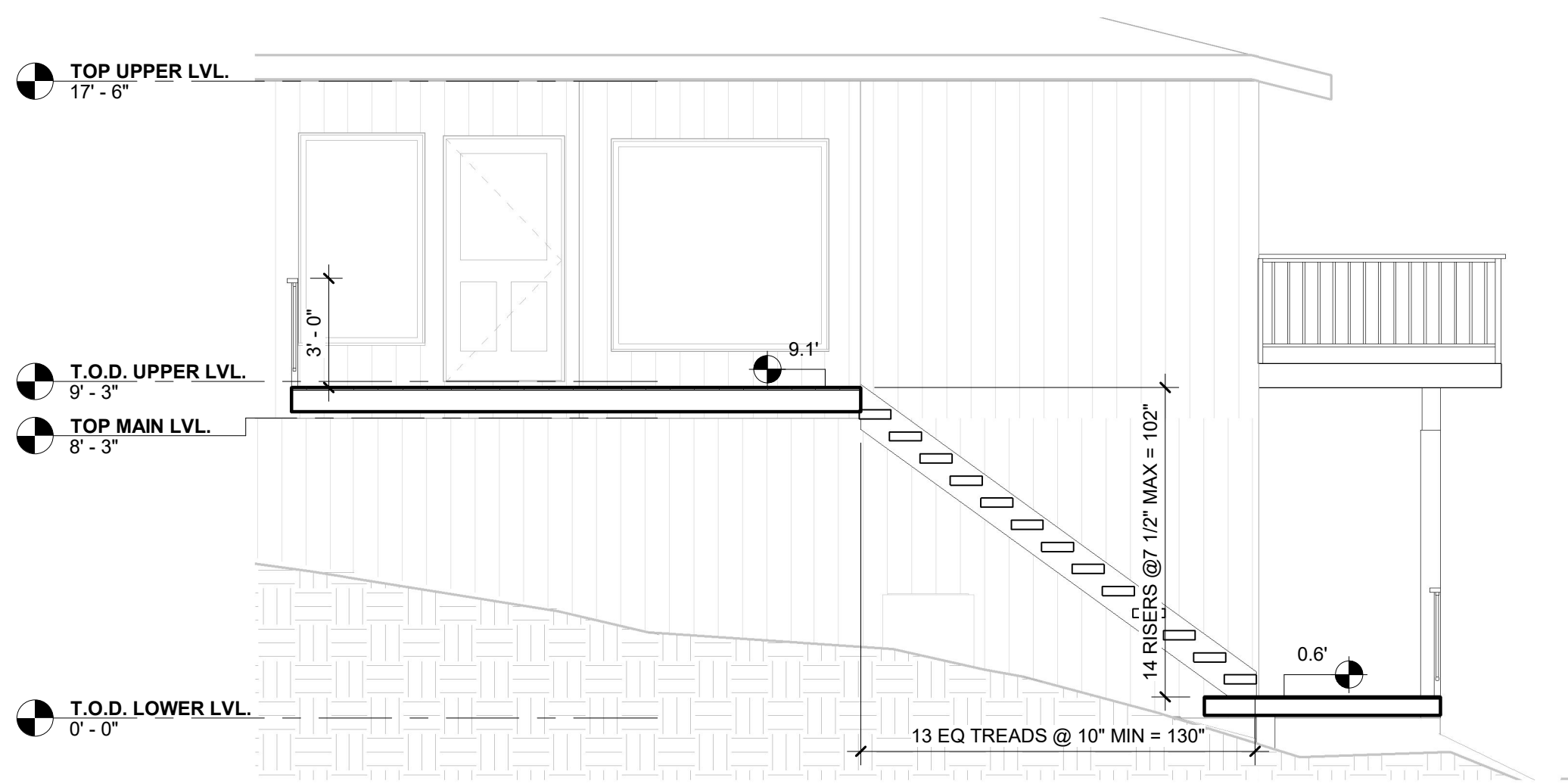
1. SECTION 1

A2.05 SCALE: 1/4" = 1'-0"



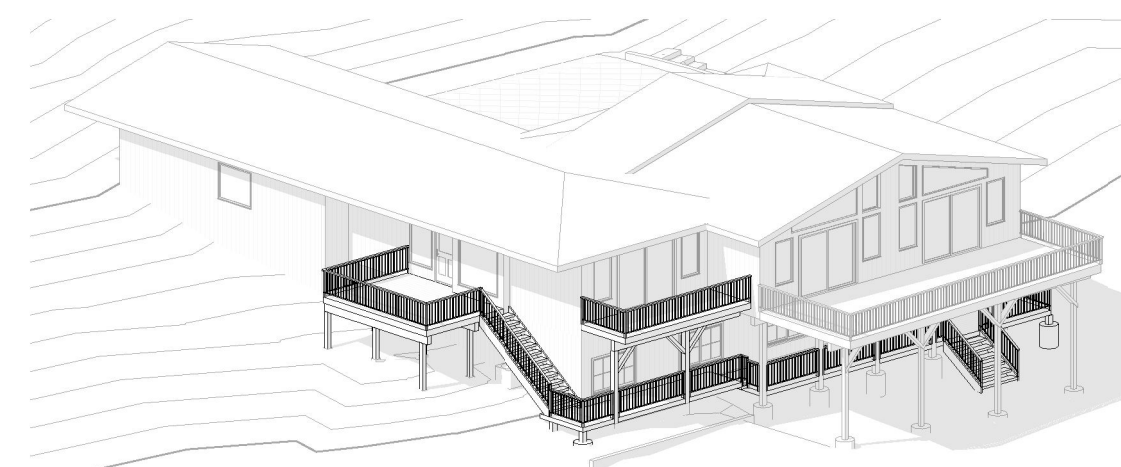
2. SECTION 2

A2.05 SCALE: 1/4" = 1'-0"

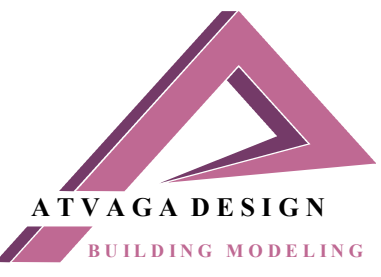


3. SECTION 3

A2.05 SCALE: 1/4" = 1'-0"



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SECTIONS & 3D VIEWS

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DATE: 03/05/2026

PROJECT NO: MY

SHEET NAME: **A2.05**

STRUCTURAL NOTES

GENERAL REQUIREMENTS

BUILDING CODE & REFERENCE STANDARDS: The "International Building Code" (IBC), 2021 Edition, as adopted and modified by the City of Mercer Island, governs the design and construction of this project. Reference to a specific section in the Code does not relieve the contractor from compliance with the entire materials reference standards noted below. The latest edition of the materials reference standards shall be used.

SCOPE OF STRUCTURAL WORK: Rebuild of existing exterior decks at an existing single-family residence.

DEFINITIONS: The following definitions apply to these general notes:

- "Structural Engineer of Record" (EOR) - The Structural Engineer who is legally responsible for stamping & signing the structural documents for the project. The EOR is responsible for the design of the Primary Structural System.

NOTE PRIORITIES: Notes on the individual drawings shall govern over these general notes.

SPECIFICATIONS: Refer to these notes, structural drawings, and architectural drawings which serve as specifications for this project.

STRUCTURAL DETAILS: The structural drawings are intended to show the general character and extent of the project and are not intended to show all details of the work.

ARCHITECTURAL DRAWINGS: Refer to the Architectural drawings for information including, but not limited to: dimensions, elevations, slopes, doors and window openings, non-bearing walls, stairs, curbs, drains, depressions, railings, waterproofing, finishes and other nonstructural items.

STRUCTURAL RESPONSIBILITIES: The EOR is responsible for the strength and stability of the Primary Structure in its completed state.

CONTRACTOR RESPONSIBILITIES: The contractor is responsible for the means and methods of construction and all job-related safety standards such as OSHA and WISHA. The contractor is responsible for the strength and stability of the structure during construction and shall provide temporary shoring, bracing and other elements required to maintain stability until the structure is completed. It is the contractor's responsibility to be familiar with the work required in the construction documents and the requirements for executing it properly.

DISCREPANCIES: In case of discrepancies between these general notes, the contract drawings, and specifications, and/or reference standards, the EOR shall determine which shall govern. Discrepancies shall be brought to the attention of the EOR before proceeding with the work. Accordingly, any conflict in or between the Contract Documents shall not be a basis for adjustment in the Contract Price.

SITE VERIFICATION: The contractor shall verify all dimensions and conditions at the site prior to fabrication and/or construction. Conflicts between the drawings and actual site conditions shall be brought to the attention of the EOR before proceeding with the work. All underground utilities shall be determined by the Contractor prior to excavation or drilling.

ADJACENT UTILITIES: The contractor shall determine the locations of all adjacent underground utilities prior to excavation or pile placement. Any utility information shown on the drawings and details is approximate and not necessarily complete.

DESIGN CRITERIA

CONSTRUCTION LOADS: Loads on the structure during construction shall not exceed the design loads or the capacity of the partially completed construction.

DEAD LOAD:

Wood Deck = 10 psf

SNOW LOAD: The roof snow load is determined by using Chapter 7 of ASCE 7-16 in accordance with IBC Section 1608 and with the following factors:

Ground Snow Load, $P_g = 20$ psf
Snow Exposure Factor, $C_e = 0.9$
Importance Factor, $I_s = 1.0$
Thermal Factor, $C_t = 1.0$
Slope Factor, $C_s = 1.0$

SEISMIC DESIGN: Earthquake design is determined using Chapter 12 ASCE 7-16 in accordance with IBC Section 1613 with the following factors:
Importance Factor $I_e = 1.0$

Risk Category = II
 $S_s = 1.391$ g
 $S_1 = 0.484$ g
Site Class = D
Redundancy Factor, $\rho = 1.3$

Site = 0.927 g
 $S_{d1} = 0.586$ g
Seismic Design Category = D

Wood Structure (Exterior Deck)

- Basic Seismic Force Resisting System: G-06 (Cantilevered Column Systems) Timber Frames
- Analysis Procedure: Equivalent lateral force procedure, per ASCE 7-16, Section 12.8
- $R = 1.5$
- $C_s = 0.618$
- $C_d = 1.5$
- $\Omega = 1.5$

DESIGN BASE SHEAR: Upper Northeast Deck Design Base Shear (Seismic Governed) (Ultimate), $V = 1.17$ K, Upper East Deck Design Base Shear (Seismic Governed) (Ultimate), $V = 1.7$ K, Lower Northeast Deck Design Base Shear (Seismic Governed) (Ultimate), $V = 1.06$ K, Lower Northwest Deck Design Base Shear (Seismic Governed) (Ultimate), $V = 1.83$ K

DEFLECTIONS:

Floor Total Load Deflection Limit: L/360
Floor Live load Deflection Limit: L/480

LIVE LOADS:

Decks: 60 psf
Residential Stairs & Landings: 40 PSF OR 300# (2"x2" SOR)
Deck Railing & Guardrails (Residential): 200# (TOP RAIL)

SUBMITTALS

SUBMITTALS: Shop Drawings shall be submitted to the Architect/EOR prior to any fabrication or construction for all structural items as noted below. The contractor shall review and place a shop drawings stamp on the submittal before forwarding to the EOR. Submittals shall be made in time to provide a minimum of one week for review by the EOR. Additional submittals required for this project are specified in the specific sections below. Reference the individual material section for specific information to be included in the submittal.

If the shop drawings differ from or add to the design of the Structural drawings, they shall bear the seal and signature of the Washington State Registered Professional Engineer who is responsible for the design..

Concrete reinforcing
Concrete mix designs
Structural steel

ALTERNATES: Product or manufacturer components specified in these drawings are used as the basis of design for this project. Alternates for specified items may be submitted to the EOR for review. However, contractor shall submit a current ICC-ES/IRAPMO-ER report identifying that an alternative component has the same or greater load capacity than the specified item.

SHOP DRAWING REVIEW: Review by the Architect/EOR is for general compliance with the design concept and the contract documents. Dimensions and quantities are not reviewed by the EOR, and therefore, must be verified by the General Contractor. Markings or comments shall not be construed as relieving the contractor from compliance with the project plans and specifications, nor departs therefrom. The contractor remains responsible for details and accuracy, for confirming and correlating all quantities and dimensions; for selecting fabrication processes; for techniques of assembly, and for performing work in a secure manner. When shop drawings (component design drawings) differ from or add to the requirements of the Structural drawings they shall be designed and stamped by the responsible SSE. Allow one week for EOR review time.

NON-STRUCTURAL COMPONENTS: Design, detailing and anchorage of all nonstructural components shall be in accordance with ASCE 7-16, Chapter 13 and the product specifications. Nonstructural components designed by others shall not induce torsional loading into supporting steel structural members without additional bracing of those members to eliminate torsional forces. Torsional bracing shall be designed by the nonstructural component designer and approved by the EOR. Anchorage to the primary structure is per the bidder-design contractor or supplier.

TESTS & INSPECTIONS

INSPECTIONS: All construction is subject to inspection by the Building Official in accordance with IBC Section 110. The contractor shall coordinate all required inspections with the Building Official. Submit copies of all inspection reports to the Architect/EOR for review. The Building Official may accept inspection of and reports by approved inspection agencies in lieu of Building Official's inspections. The contractor shall obtain approval of Building Official to use the third-party inspection agency and contractor shall alert the Architect/EOR as such.

SPECIAL INSPECTIONS: In addition to the inspections required by IBC Section 110, a Special Inspector shall be hired by the Owner as an independent third-party inspector to perform the special inspections per IBC Chapter 17. Special inspections shall be performed by an approved testing agency as outlined in the Special Inspection Schedule, the contract documents, and/or the project specification. Special Inspections shall meet the requirements outlined in the specific materials sections of IBC Section 1705. The contractor is responsible for scheduling the inspections, per the city/Building Official requirements. The EOR shall be independent of the special inspection process. All questions regarding Special Inspections shall be directed to the Building Department or an approved special inspection agency.

Special Inspections shall be performed for the following:

Steel
Periodic inspection of field welds < 5/16-inch
Soils & Foundations
Continuous inspection during driving and testing of piles.

SOILS AND FOUNDATIONS

REFERENCE STANDARDS: Conform to IBC Chapter 18 "Soils and Foundations."

GEOTECHNICAL REPORT: Recommendations contained in "Geotechnical and Critical Area Report" by Geotech Consultants, Inc., dated January 19, 2026, and were used for design.

GEOTECHNICAL ENGINEERS STATEMENT OF RISK:

Construction practices are proposed for the alteration that would render the development as safe as if it were not located in a geologically hazardous area and do not adversely impact adjacent properties.

PIN PILES

REFERENCE STANDARDS: Conform to:

(1) IBC Section 1810.3.3.4.

MATERIALS: Conform to notes for STRUCTURAL STEEL, this sheet.

SIZE: Pile size shall be as noted on the foundation drawings. Test piles are required for this project to verify pile capacities. Pile lengths shall be determined and verified at the site by the Geotechnical Engineer during the test pile procedure.

CAPACITY: Pile capacities shall be as noted on the foundation drawings and per the Geotechnical report. As indicated in the Geotechnical report, allowable loads need not be verified by load tests. Pile installation must be observed by the Geotechnical Engineer to verify that the design bearing capacity of the piles has been attained and that construction conforms to the geotechnical engineer's recommendations.

CAST-IN-PLACE CONCRETE

REFERENCE STANDARDS: Conforms to the latest editions of the following:

- ACI 318 "Building Code Requirements for Structural Concrete and Commentary".
- IBC Chapter 19.

FIELD REFERENCE: The contractor shall keep a copy of ACI Field Reference manual, SP-15, "Standard Specifications for Structural Concrete (ACI 301) with Selected ACI and ASTM References."

CONCRETE MIXTURES: Conform to ACI 318 Chapter 19 "Concrete: Design and Durability Requirements."

MATERIALS: Conform to ACI 318 Chapters 19 & 20.

SUBMITTALS: Provide all submittals required by ACI 301 Sec 4.1.2. Submit mix designs for each mix in the table below.

Member Type/Location	TABLE OF MIX DESIGN REQUIREMENTS					
	Strength (psi)	Test Age (days)	Maximum Aggregate	Exposure Classification	Max W/C Ratio	Minimum Air Content
Foundations	2500	28	1"	F1, C0	0.45	4.5%

MIX DESIGN NOTES:

- W/C Ratio: Water-cementitious material ratios shall be based on the total weight of cementitious materials. Ratios not shown in the table above are controlled by strength requirements.
- Cementitious Content: The use of fly ash, other pozzolans, silica fume, or slag shall conform to ACI 301 Sec 4.2.1 "Materials". Maximum amount of fly ash shall be 20% of total cementitious content unless reviewed and approved otherwise by EOR.
- Air Content: Conform to ACI 301 Sec 4.2.2.4. Horizontal exterior surfaces in contact with the soil require entrained air. Use Exposure Category F0, S0, W0, and C0 unless noted otherwise. Tolerance is +/- 1.5%. Air content shall be measured at point of placement.
- Exposure Classification: The mix design provided shall meet the requirements of ACI 318 Chapter 19, based on the exposure classification indicated in the table above.
- Slump: Unless otherwise specified or permitted, concrete shall have at the point of delivery, a slump of 4" +/- 1". For additional criteria, reference ACI 301 Sec 4.2.2.2.

FORMWORK: Conform to ACI 301 Sec 2 "Formwork and Form Accessories." Removal of Forms shall conform to Sec 2.3.2 except strength indicated in Sec 2.3.2.5 shall be 0.75 fc.

MEASURING, MIXING, AND DELIVERY: Conform to ACI 301 Sec 4.3.

HANDLING, PLACING, CONSTRUCTING, AND CURING: Conform to ACI 301 Sec 5.

CONCRETE CURING: Provide curing compounds for concrete as follows:

- All concrete must achieve 2500 PSI compressive strength before being subjected to freezing and thawing cycles.

EMBEDDED ITEMS: Position and secure in place expansion joint material, anchors and other structural and non-structural embedded items before placing concrete. Contractor shall refer to mechanical, electrical, plumbing, and architectural drawings and coordinate all other embedded items.

TESTING AND ACCEPTANCE

Testing: Obtain samples and conduct tests in accordance with ACI 301 Sec 1.6.3.2. Additional samples may be required to obtain concrete strengths at alternate intervals than shown below.

- Cure 4 cylinders for 28-day test age. Test 1 cylinder at 7 days, test 2 cylinders at 28 days, and hold 1 cylinder in reserve for use as the EOR directs. After 56 days, unless notified by the EOR to the contrary, the reserve cylinder may be discarded without being tested for specimens meeting 28-day strength requirements.
- Acceptance: Strength is satisfactory when:
- The averages of all sets of 3 consecutive tests equal or exceed the specified strength. No individual test falls below the specified strength by more than 500 psi. A "test" for acceptance is the average strength of the two cylinders tested at the specified test age.

CONCRETE REINFORCEMENT

REFERENCE STANDARDS: Conform to:

- ACI 301 "Standard Specifications for Structural Concrete, Sec 3 "Reinforcement, and Reinforcement Supports."
- IBC Chapter 19, Concrete.
- ACI 318 and ACI 318R.
- ACI SP-66 "ACI Detailing Manual" including ACI 315 "Details and Detailing of Concrete Reinforcement."
- CRSI MSP-2 "Manual of Standard Practice."
- ANSI/AWS D1.4 "Structural Welding Code - Reinforcing Steel."

SUBMITTALS: Conform to ACI 301 Sec 3.1.1 "Submittals, data, and drawings." Submit placing drawings showing fabrication dimensions and locations for placement of reinforcement and reinforcement supports.

MATERIALS:
Reinforcing Bars: ASTM A615, Grade 60, deformed bars.
Bar Supports: CRSI MSP-2, Chapter 3 "Bar Supports."
Tie Wire: 16.5 gage or heavier, black annealed.

FABRICATION: Conform to ACI 301, Sec 3.2.2 "Fabrication," and ACI SP-66 "ACI Detailing Manual."

WELDING: Bars shall not be welded unless authorized. When authorized, conform to ACI 301, Sec 3.2.2.2. "Welding" and provide ASTM A706, Grade 60 reinforcement.

PLACING: Conform to ACI 301, Sec 3.3.2 "Placement." Placing tolerances shall conform to Sec 3.3.2.1 "Tolerances."

CONCRETE COVER: Conform to the following cover requirements for ACI 301, Table 3.3.2.3.
Concrete cast against earth: 3"
Concrete exposed to earth or weather (#5 & smaller): 1-1/2"

SPICES & DEVELOPMENT LENGTH: Conform to ACI 301, Sec 3.3.2.7. Refer to "Lap Splice & Development Schedule" on plans for typical splices. Lap all continuous reinforcement and corner bars per Schedule. The splices and development lengths indicated on individual sheets control over the schedule. Use Class B splices unless otherwise noted. Mechanical connections may be used when approved by the EOR.

FIELD BENDING: Conform to ACI 301 Sec 3.3.2.8. "Field Bending or Straightening." Bar sizes #3 through #5 may be field bent cold the first time. Other bars require preheating. Do not twist bars.

CORNERS BARS: Provide matching-sized "L" corner bars for all horizontal wall and footing bars with the appropriate splice length, UNO.

STRUCTURAL STEEL

DESIGN STANDARDS: Structural steel for this project is designed in accordance with the latest edition of the AISC Steel Construction Manual.

REFERENCE STANDARDS: Conform to:

- ANSI/AISC 360 "Specification for Structural Steel Buildings" - Referred to as "AISC Specification"
- ASTM 303 "Code of Standard Practice for Steel Buildings & Bridges"
- RCSC "Specification for Structural Joints using ASTM A325 or A490 Bolts."
- AWS D1.1 "Structural Welding Code - Steel."
- AWS D1.8 "Structural Welding Code - Seismic Supplement."
- AISC 341 "Seismic Provisions for Structural Steel Buildings."

SUBMITTALS:

- Submit shop drawings in accordance with AISC Specification Sec M1 "Shop and Erection Drawings."

MATERIALS:

Bars & Plates: ASTM A36, $F_y = 36$ ksi
Steel Pipe: ASTM A53, Grade B, $F_y = 35$ ksi
Anchor Bolts & Bolts in Wood: ASTM A307
Nuts: ASTM A563 or ASTM A194, Grade 2H
Washers (flat or beveled): ASTM F436
Welded Headed/Threaded Studs (WHS, WTS): ASTM A108

WELDING: Conform to AWS D1.1, D1.3 & D1.8. Welders shall be certified in accordance with AWS and WABO requirements. Use E70 electrodes of type required for materials to be welded.

FABRICATION/ERECTION: Conform to AISC Specification Sec M2 "Fabrication," AISC Code Sec 6 "Fabrication and Delivery" and AISC Code Sec 8 "Quality Control." The fabricator and erector shall maintain a quality control program to the extent deemed necessary so that all of the work is performed in accordance with this Code, the AISC Specification, contract documents, and project specifications.

SHOP PAINTING: Conform to AISC 360, AISC Specification Sec M3, and AISC Code Sec 6.5. Do not paint steel to be embedded in concrete, fireproofed, or concealed by the interior building finish. Do not paint surfaces to be field welded or where slip-critical bolts are specified. All other exterior steel shall be painted with one coat of grey shop primer. All exposed exterior steel shall be painted with an exterior multi-coat system as per the Architect or project specifications or galvanized per section below. Field touch-up painting shall be with primer for exposed interior surfaces and as per the Architect or project specifications for exposed exterior surfaces.

GALVANIZING: Where required, all exposed steel outside the building envelope shall be hot-dipped galvanized. Apply field touch-ups per project specifications.

WOOD FRAMING

REFERENCE STANDARDS: Conform to:

- IBC Chapter 23 "WOOD."
- NDS and NDS Supplement - "National Design Specification for Wood Construction."
- BCSI 2013 "Building Component Safety Information."

ALTERNATES: Alternates for specified item may be submitted to the EOR for review. Contractor shall submit a current ICC-ES/IRAPMO-ER report identifying that an alternative component has the same or greater load capacity than the specified item.

IDENTIFICATION: All sawn lumber and pre-manufactured wood products shall be identified by the grade mark or a certificate of inspection issued by the certifying agency.

MATERIALS:

Sawn Lumber: Conform to grading rules of WWPA, WCLIB, or NLGA. Finger jointed studs acceptable all interior non-structural walls only.

Member Use	Size	Species	Grade
Studs & Plates	2x, 3x	HF	No. 2
Posts	4x	HF	No. 2
Joists	2x	HF	No. 2
Beams	4x	HF	No. 2
Beams	6x	DF	No. 1
Posts	6x	DF	No. 1

Joist Hangers and Connectors: Simpson Strong-Tie Company Inc. as specified in their latest catalogs was used as the basis of design for this project. Alternate connectors by other manufacturers may be substituted provided they have current ICC-ES/IRAPMO-ER approval for equivalent or greater load capacities and are reviewed and approved by the EOR prior to ordering. Connectors shall be installed per the manufacturer's instructions. Where connector straps connect two members, place 1/2 of the nails or bolts in each member. Unless noted otherwise all nails shall be full length common. Nail straps to wood framing as late as possible in the framing process to allow the wood to shrink and the building to settle.

Nails and Staples: Conform to IBC Sec 2303.6 "Nails and Staples." Unless noted on plans, nail per IBC Table 2304.10.2. Unless noted otherwise all nails shall be common. Nail sizes specified on the drawings are based on the following specifications:

COMMON NAILS	Size	Length	Diameter
8d	2-1/2"	0.131"	
10d	3"	0.148"	
16d	3-1/2"	0.162"	
16d Sinker	3-1/4"	0.148"	

Lag Bolts/Thru-Bolts/Anchor Bolts: Conform to ASTM A307. Provide plate washers/BPS washers under the heads and nuts of all bolts and lag screws bearing on wood.

NAILING REQUIREMENTS: Provide minimum nailing in accordance with IBC Table 2304.10.2 "Fastening Schedule" except as noted on the drawings. Nailing for roof/floor diaphragms/shear walls shall be per drawings. Nails shall be driven flush and shall not fracture the surface of sheathing.

MOISTURE CONTENT: Wood material used for this project shall have maximum moisture content of 19% except for the pressure-treated wood sill plate.

PRESERVATIVE TREATMENT: Wood materials are required to be "treated wood" under certain conditions in accordance with IBC Sec 2304.12 "Protection against decay and termites." Conform to the appropriate standards of the American Wood-Preservers Association (AWPA) for sawn lumber, glued laminated timber, round poles, wood piles, and marine piles. Follow American Lumber Standards Committee (ALSC) quality assurance procedures. Products shall bear the appropriate mark. Coat all ends of cut pressure treated framing with treatment complying with AWPA U1.

METAL CONNECTORS/PT WOOD: All metal hardware and fasteners in contact with pressure treated lumber shall be stainless steel Type 316L. At the Owner's risk and discretion, hot-dipped galvanized metal hardware and fasteners may be investigated for use in lieu of stainless steel provided that the finish has a minimum zinc content of at least 1.85 oz./SF and its use is coordinated by the Contractor and Wood Supplier for the expected environment and moisture exposure for appropriate use based on the method of preservative treatment of the wood.

RENOVATION

DEMOLITION: Contractor shall verify all existing conditions before commencing any demolition. Shoring shall be installed to support existing construction as required and, in a manner, suitable to the work sequences. Existing reinforcing shall be saved where and as noted on the plans. Saw cutting, if and where used, shall not cut existing reinforcing that is to be saved. Demolition debris shall not be allowed to damage or overload the existing structure. Limit construction loading (including demolition debris) on existing floor systems to 40 psf.

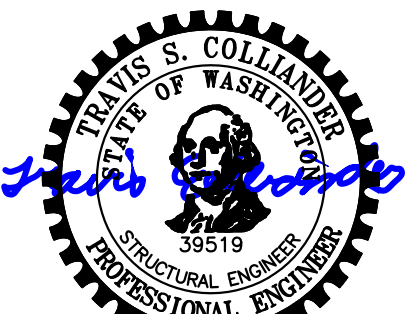
- All new openings through existing walls, slabs, and beams shall be accomplished by saw cutting wherever possible.
- Contractor shall verify all existing conditions and location of members prior to cutting any openings.
- Small round openings shall be accomplished by core drilling, if possible.

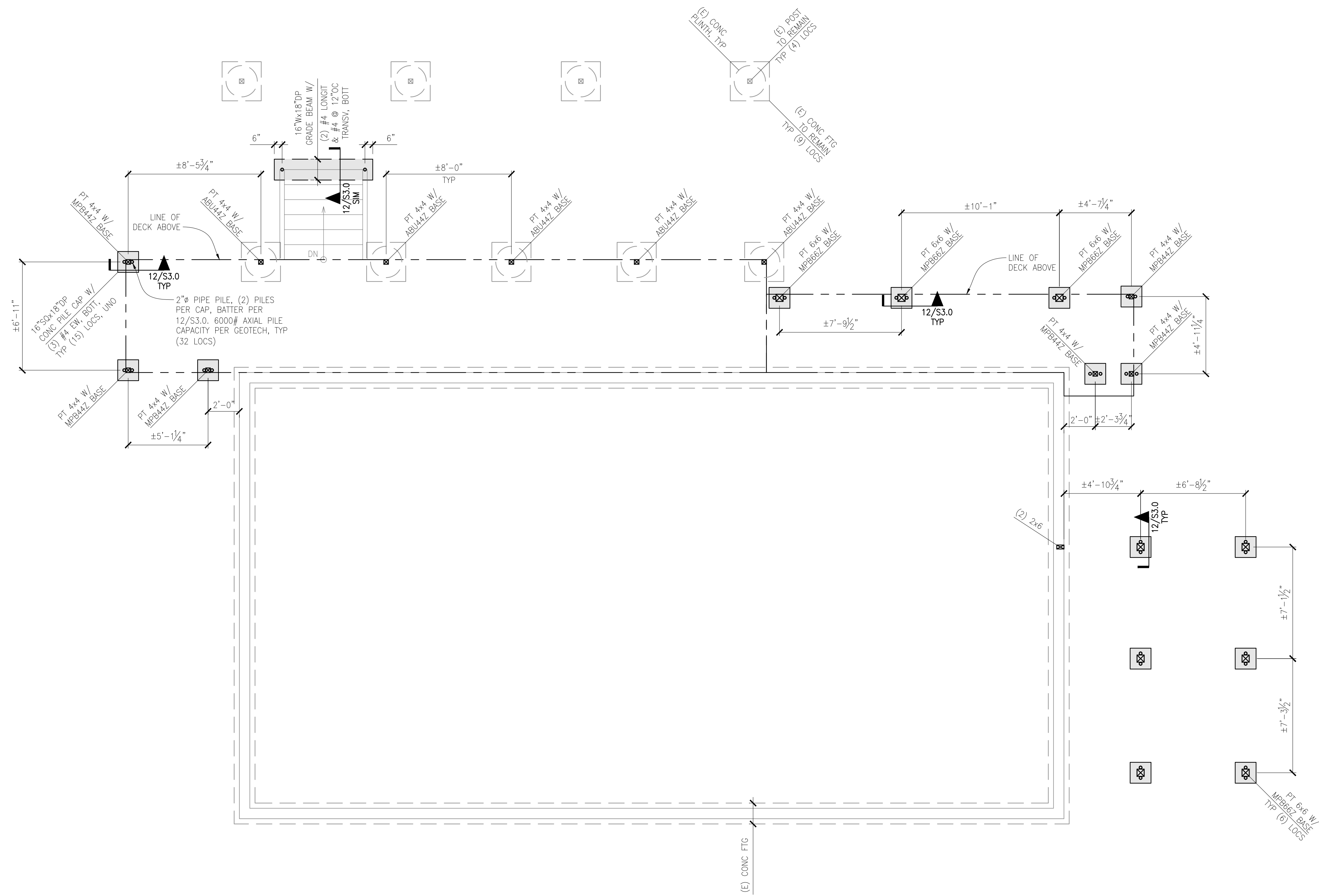
STRUCTURAL ABBREVIATIONS			
AB	ANCHOR BOLT	LLH	LONG LEG HORIZONTAL
ADD'L	ADDITIONAL	LLV	LONG LEG VERTICAL
ALT	ALTERNATE	LONGIT	LONGITUDINAL
ARCH	ARCHITECT(URAL)	Ls	SPLICE LENGTH
ATR	ALL-THREADED ROD	LSL	LAMINATED LUMBER
B/	BOTTOM OF	LVL	LAMINATED VENEER LUMBER
BN	BOUNDARY NAILING	MAT'L	MATERIAL
BLDG	BUILDING	MAX	MAXIMUM
BLKG	BLOCKING	MECH	MECHANICAL
BOTT	BOTTOM	MFR	MANUFACTURER
BRG	BEARING	MIN	MINIMUM
BTWN	BETWEEN	MISC	MISCELLANEOUS
C	CENTERLINE	(N)	NEW
CJ	CONSTRUCTION or CONTROL JOINT	NIC	NOT IN CONTRACT
CLR	CLEAR(ANCE)	NOM	NOMINAL
CONC	CONCRETE	NTS	NOT TO SCALE
CONN	CONNECTION	OC	ON CENTER
CONST	CONSTRUCTION	OPNG	OPENING
CONT	CONTINUOUS	OPP	OPPOSITE
CTRD	CENTERED	OSB	ORIENTED STRAND BOARD
CTSK	COUNTERSINK	OWHU	OPEN WEB WOOD JOIST
DBL	DOUBLE(R)	P	PLATE
DET	DETAIL	PC	PRECAST
DF	DIAGLAS FIR	PERM	PERMETER
DIAG	DIAGONAL	PERP	PERPENDICULAR
DWG	DOWN	PLY	PLYWOOD
DP	DEPTH	PRE-MFR	PRE-MANUFACTURED
DWL	DOWEL	PSL	PARALLEL STRAND LUMBER
DWG	DRAWING	P-T	POST-TENSIONED
EA	EACH	PT	PRESERVATIVE/PRESSURE-TREATED
EAC	EACH FACE	REF	REFERENCE
EN	EDGE NAILING	REINF	REINFORCING
EL	ELEVATION	REQ'D	REQUIRED
EMBED	EMBEDMENT	RET	RETAINING
ENGR	ENGINEER	SCHED	SCHEDULE
EQ	EQUAL	SECT	SECTION
ES	EACH SIDE	SHTG	SHEATHING
EW	EACH WAY	SIM	SIMILAR
(E)	EXISTING	SMS	SHEET METAL SCREW
EXP	EXPANSION	SOG	SLAB-ON-GRADE
EXT	EXTERIOR	SPEC	SPECIFICATION
F/	FACE OF	SQ	SQUARE
FLR	FLOOR	SS	STAINLESS STEEL
FNDN	FOUNDATION	STAGG	STAGGERED
FRT	FIRE RETARDANT TREATED	STD	STANDARD
FTAO	FORCED TRANSFER AROUND OPENING	STIFF	STIFFENER
FTG	FOOTING	STRUCT	STRUCTURAL
GA	GAUGE	SUPPL	SUPPLEMENT
GALV	GALVANIZED	SW	SHEAR WALL
GEN	GENERAL	SYM	SYMMETRICAL
GLB	GLUE LAMINATED BEAM	T/	TOP OF
GR	GRADE	T&B	TOP & BOTTOM
GT	GIRDER TRUSS	T&G	TONGUE & GROOVE
GWB	GYPSUM WALL BOARD	THK, TH'KN	THICK, THICKENED
HD	HOLDOWN	THRU	THROUGH
HDR	HEADER	TRANSV	TRANSVERSE
HF	HEM-FIR	TYP	TYPICAL
HGR	HANGER	UNO	UNLESS NOTED OTHERWISE
HORIZ	HORIZONTAL	VERT	VERTICAL
HSS	HOLLOW STRUCTURAL SECTION	VIF	VERIFY IN FIELD
HT	HEIGHT	WHS	WELDED HEADED STUD
INT	INTERIOR	WTS	WELDED THREADED STUD
Ld	DEVELOPMENT LENGTH	WWF	WELDED WIRE FABRIC

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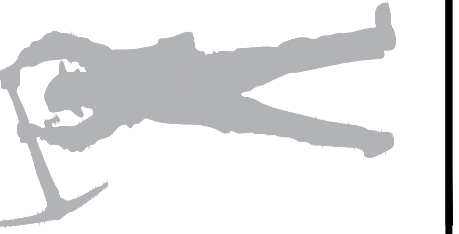




FOUNDATION PLAN NOTES

1. REFERENCE S1.0 FOR STRUCTURAL GENERAL NOTES, DRAWING LIST, & ABBREVIATIONS.
2. DIMENSIONS: VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS. COLUMNS AND FOOTINGS ARE CENTERED ON GRID, TYPICAL. ALL EXISTING DIMENSIONS SHALL BE FIELD VERIFIED. ALL DIMENSIONS ARE TO INSIDE FACE OF CONCRETE, OUTSIDE FACE OF CONCRETE OR CENTERLINE OF GRID. CONTINUOUS FOOTINGS ARE CENTERED UNDER WALLS/STRUCTURAL PANELS. POSTS, BUNDLED STUDS OR COLUMNS ARE TO BE CENTERED ON FOOTING OR WALL PIER, UNO.
3. THE BOTTOM OF ALL FOOTINGS SHALL BE 18" MINIMUM BELOW GRADE AND BEAR UPON FIRM, UNDISTURBED SOIL OR ENGINEERED COMPACTED BACK-FILL.
4. ALL WOOD IN CONTACT WITH WEATHER-EXPOSED CONCRETE OR WITHIN 8" OF FINISHED GRADE SHALL BE PRESSURE-TREATED.
5. USE HOT DIPPED GALVANIZED FASTENERS AND EITHER HOT DIPPED GALVANIZED OR ZMAX COATED HANGERS AT CONNECTORS TO PRESSURE TREATED LUMBER.
6. DIMENSIONS SHOWN ON PLAN ARE BASED ON EXISTING POST LOCATIONS. ALL DIMENSIONS SHOWN SHALL BE VERIFIED IN THE FIELD AND WITH ARCHITECTURAL DRAWINGS. DO NOT EXCEED SPAN DIMENSIONS SHOWN BY MORE THAN 1".

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DIBBLE ENGINEERS INC
 www.dibleengineers.com
 1029 Market Street, Suite 200
 Kirkland, WA 98033
 425.828.4200



SEAL:
 TRAVIS S. COLLANDER
 STATE OF WASHINGTON
 39519
 PROFESSIONAL ENGINEER
 3/11/26

BUTSON RESIDENCE
 DECK REMODEL
 8602 N MERCER WAY
 MERCER ISLAND, WA 98040

PROJECT #: 25-366
 DRAWN BY: KJO
 DESIGNED BY: SSH
 DATE: 03.11.2026
 DESCRIPTION: PERMIT

JURISDICTIONAL STAMP:

SHEET TITLE:

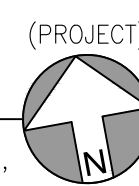
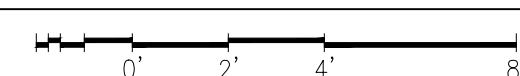
**STRUCTURAL
 FOUNDATION PLAN**

SHEET NUMBER:

S 2.0

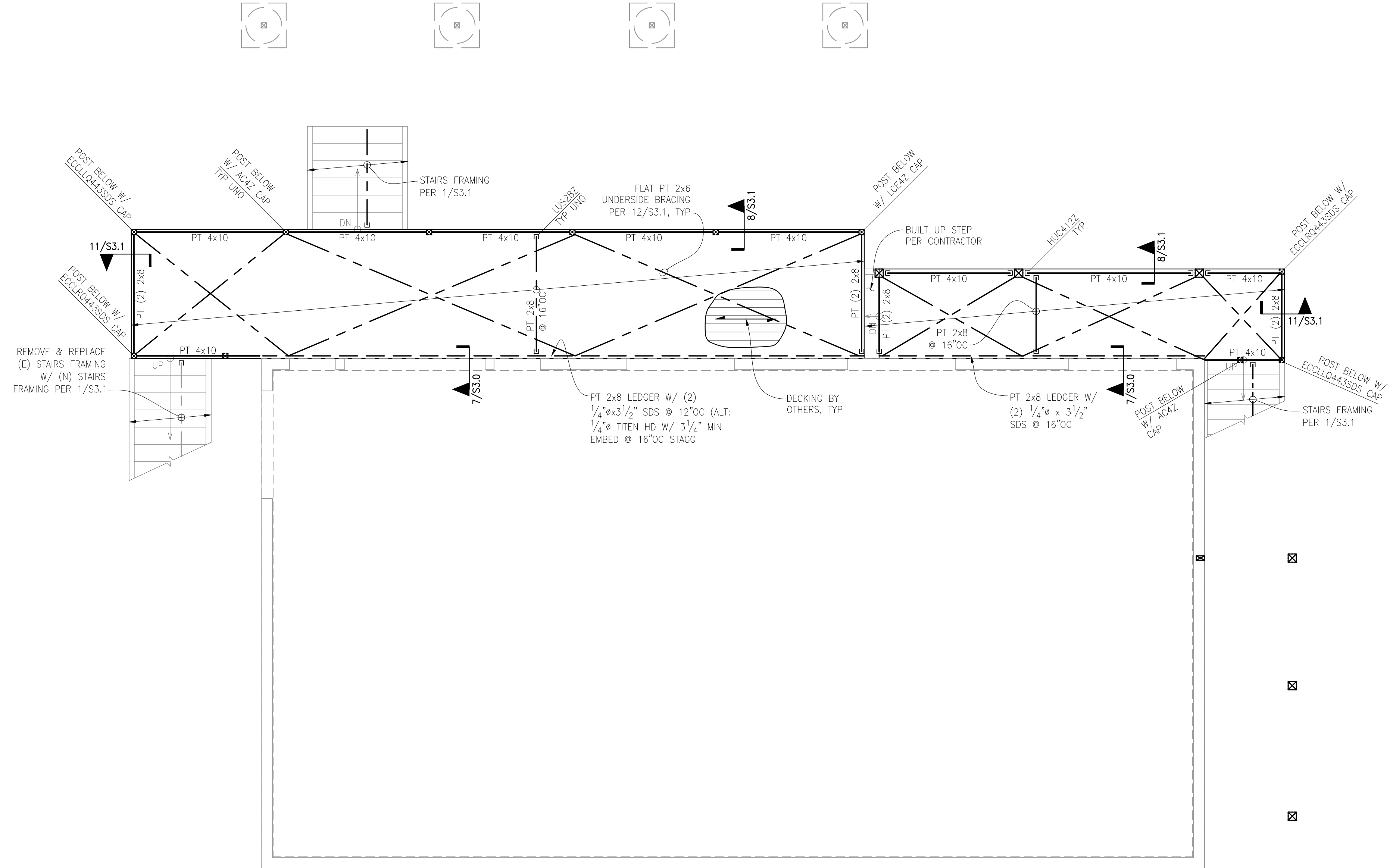
FOUNDATION PLAN

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



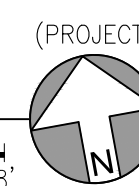
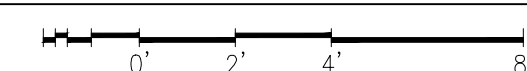
LOWER FLOOR DECK FRAMING PLAN NOTES

1. REFERENCE S1.0 FOR STRUCTURAL GENERAL NOTES, DRAWING LIST & ABBREVIATIONS.
2. DIMENSIONS: VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS. COLUMNS AND FOOTINGS ARE CENTERED ON GRID, TYPICAL. ALL EXISTING DIMENSIONS SHALL BE FIELD VERIFIED. ALL DIMENSIONS ARE TO INSIDE FACE OF CONCRETE, OUTSIDE FACE OF CONCRETE, OR CENTERLINE OF GRID. CONTINUOUS FOOTINGS ARE CENTERED UNDER WALLS/STRUCTURAL PANELS. POSTS, BUNDLED STUDS OR COLUMNS ARE TO BE CENTERED ON FOOTING OR WALL PIER, UNO.
3. CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY SHORING.
4. ALL BEAMS ARE FLUSH WITH JOISTS UNO AS "DROP" INDICATING A DROPPED BEAM.
5. ALL WOOD EXPOSED TO WEATHER OR IN DIRECT CONTACT WITH CONCRETE SHALL BE PRESSURE-TREATED PER STRUCTURAL GENERAL NOTES.
6. MATCH BUNDLED STUDS & POSTS FROM ABOVE & EXTEND TO FOUNDATION.
7. HANGERS: ALL 2x HANGERS TO BE SIMPSON LUSZ SERIES UNO ON PLAN.



LOWER FLOOR DECK FRAMING PLAN

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



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 www.dibbleengineers.com
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 Kirkland, WA 98033
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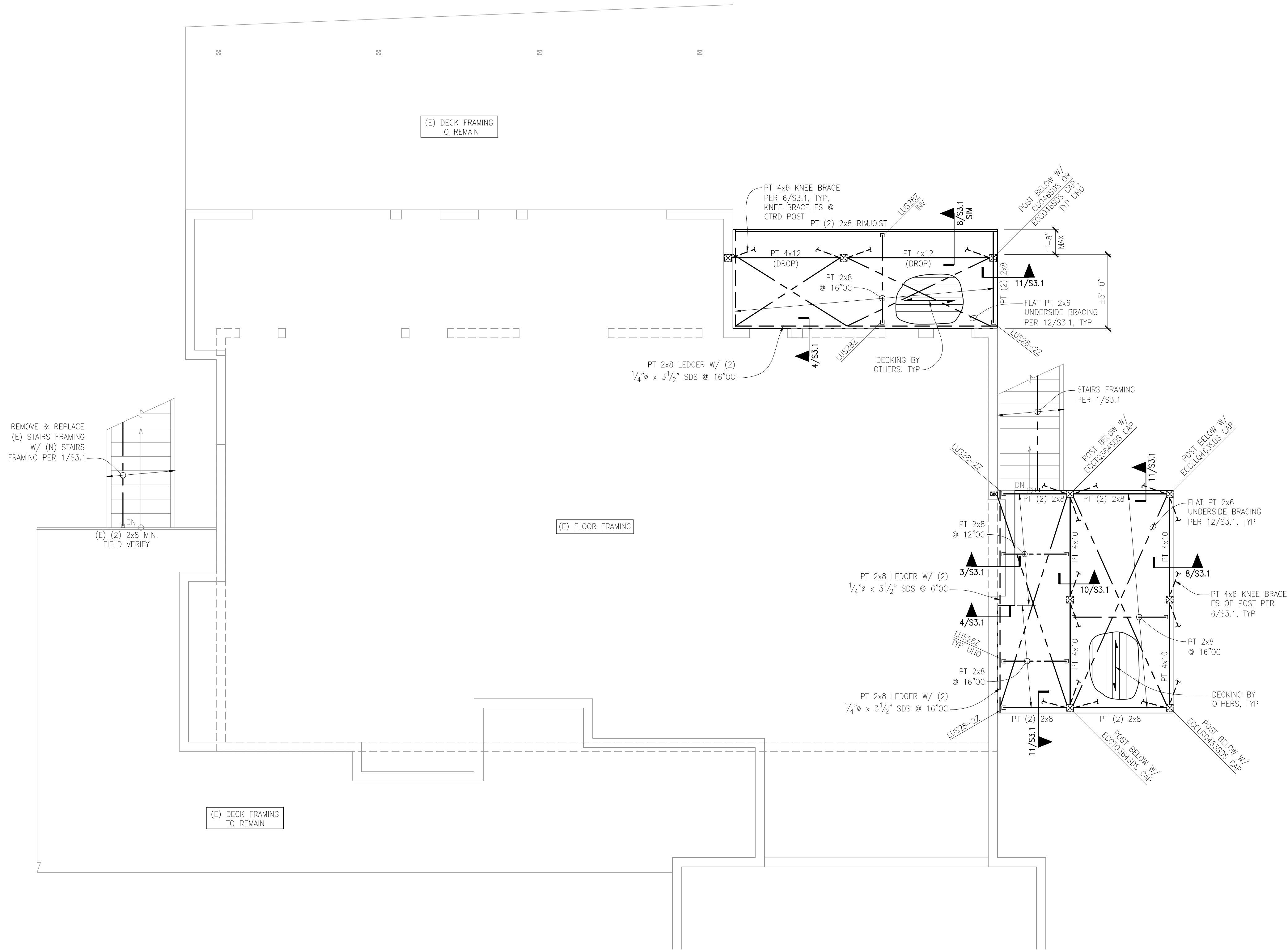
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SHEET TITLE:

**STRUCTURAL
 LOWER FLOOR
 DECK FRAMING
 PLAN**

SHEET NUMBER:

S 2.1



UPPER FLOOR DECK FRAMING PLAN NOTES

1. REFERENCE S1.0 FOR STRUCTURAL GENERAL NOTES, DRAWING LIST & ABBREVIATIONS.
2. DIMENSIONS: VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS. COLUMNS AND FOOTINGS ARE CENTERED ON GRID, TYPICAL. ALL EXISTING DIMENSIONS SHALL BE FIELD VERIFIED. ALL DIMENSIONS ARE TO INSIDE FACE OF CONCRETE, OUTSIDE FACE OF CONCRETE, OR CENTERLINE OF GRID/STEEL. CONTINUOUS FOOTINGS ARE CENTERED UNDER WALLS/STRUCTURAL PANELS. POSTS, BUNDLED STUDS OR COLUMNS ARE TO BE CENTERED ON FOOTING OR WALL PIER, UNO.
3. CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY SHORING.
4. ALL BEAMS ARE FLUSH WITH JOISTS UNO AS "DROP" INDICATING A DROPPED BEAM.
5. ALL WOOD EXPOSED TO WEATHER OR IN DIRECT CONTACT WITH CONCRETE SHALL BE PRESSURE-TREATED PER STRUCTURAL GENERAL NOTES.
6. HANGERS: ALL 2x HANGERS TO BE SIMPSON LUSZ SERIES UNO ON PLAN.
7. DIMENSIONS SHOWN ON PLAN ARE BASED ON EXISTING POST LOCATIONS. ALL DIMENSIONS SHOWN SHALL BE VERIFIED IN THE FIELD AND WITH ARCHITECTURAL DRAWINGS. DO NOT EXCEED SPAN DIMENSIONS SHOWN BY MORE THAN 1".

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 1029 Market Street, Suite 200
 Kirkland, WA 98033
 425.828.4200



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PROJECT #:	25-366
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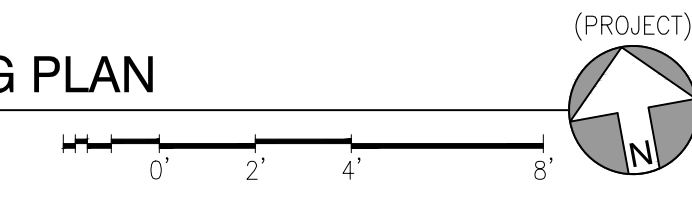
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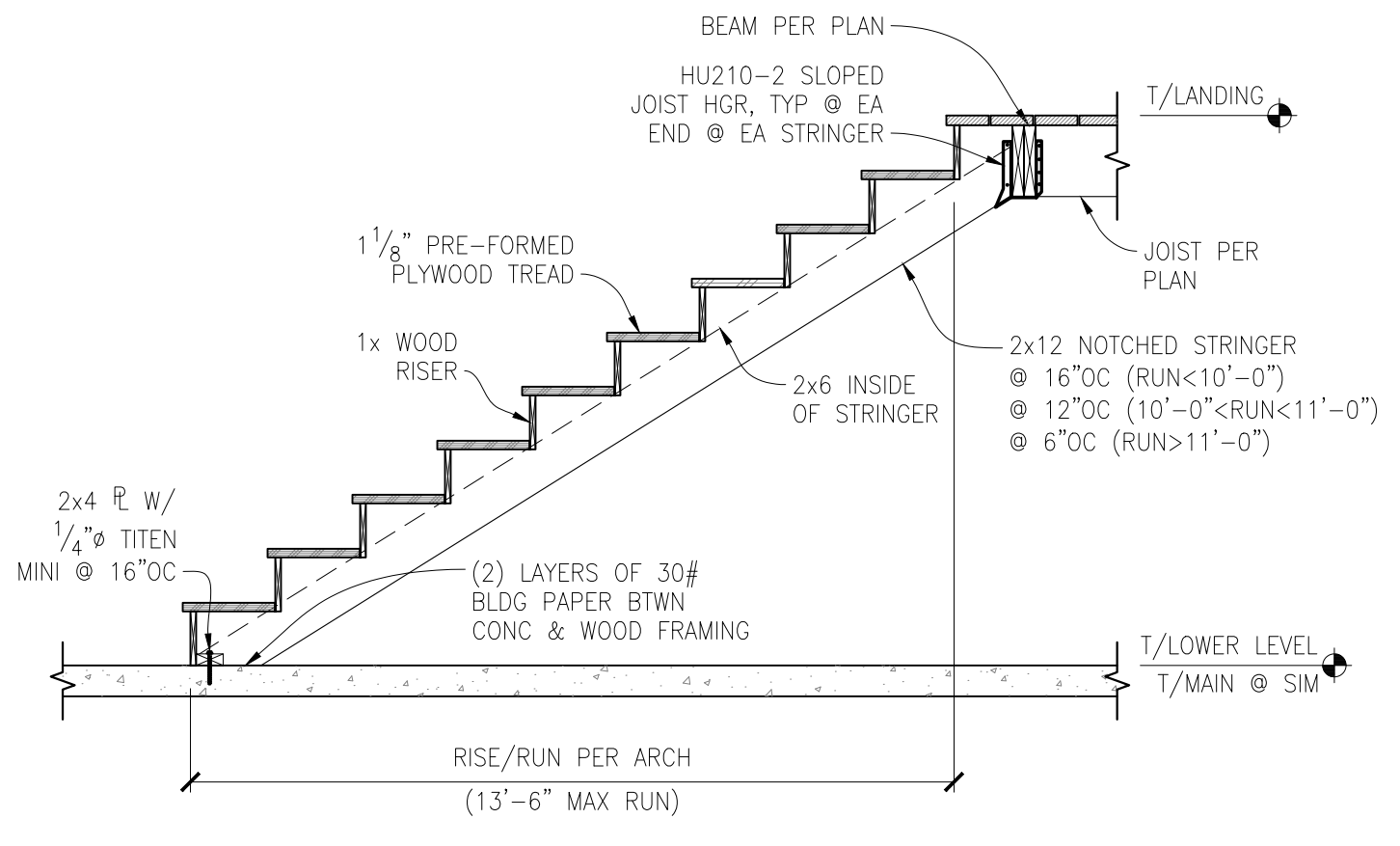
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**STRUCTURAL
 UPPER FLOOR
 DECK FRAMING
 PLAN**

SHEET NUMBER:
S 2.2

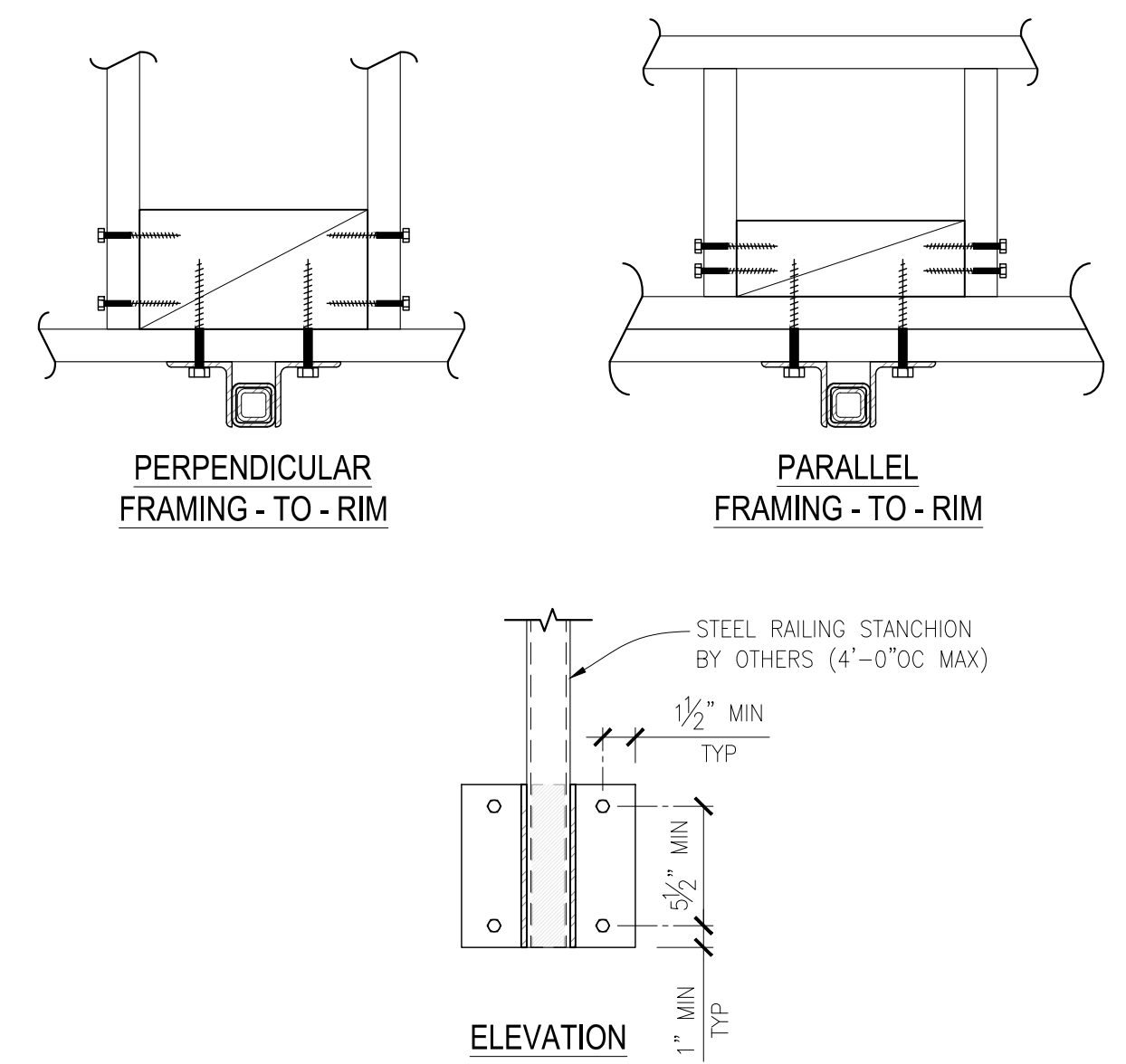
UPPER FLOOR DECK FRAMING PLAN

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

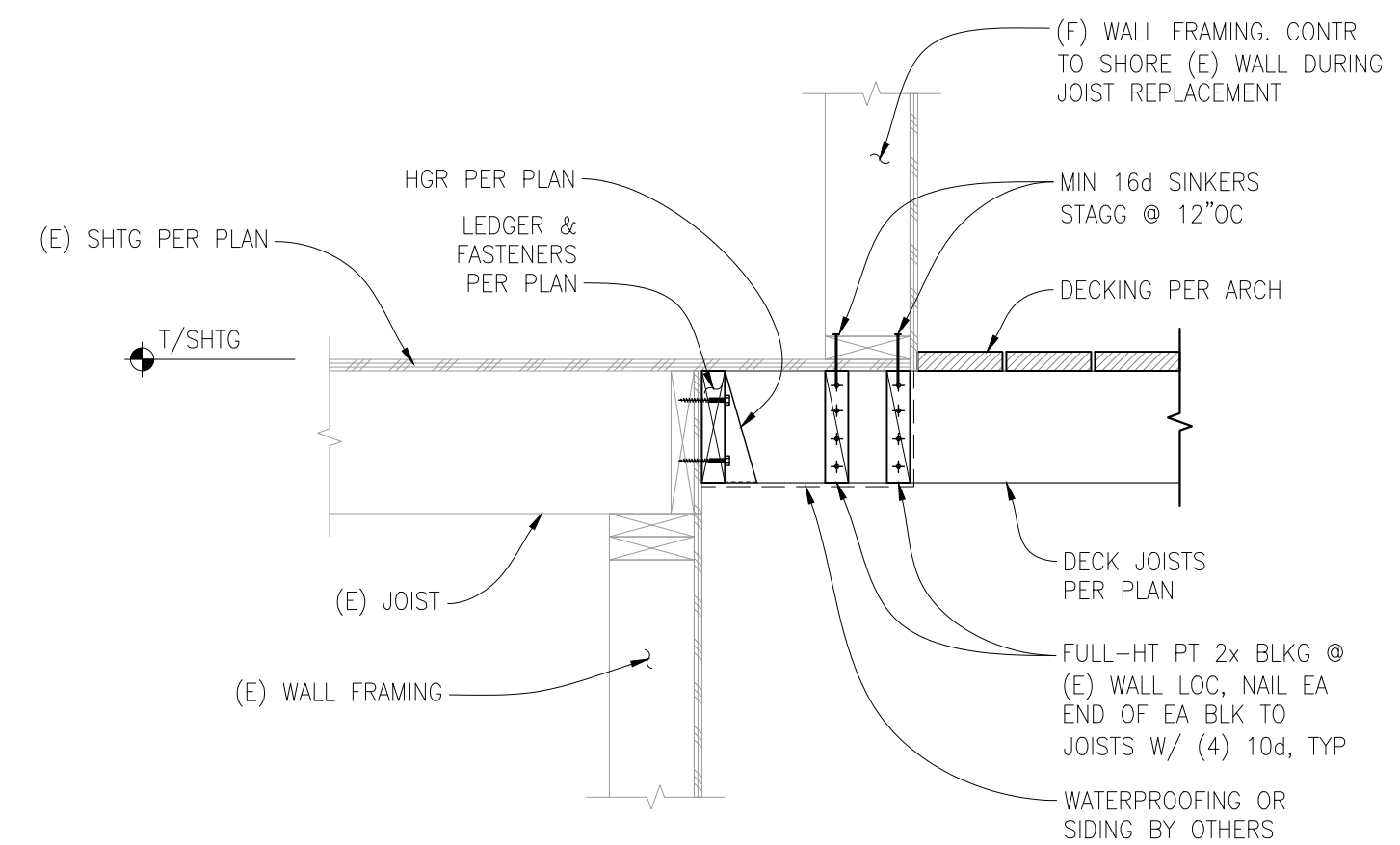




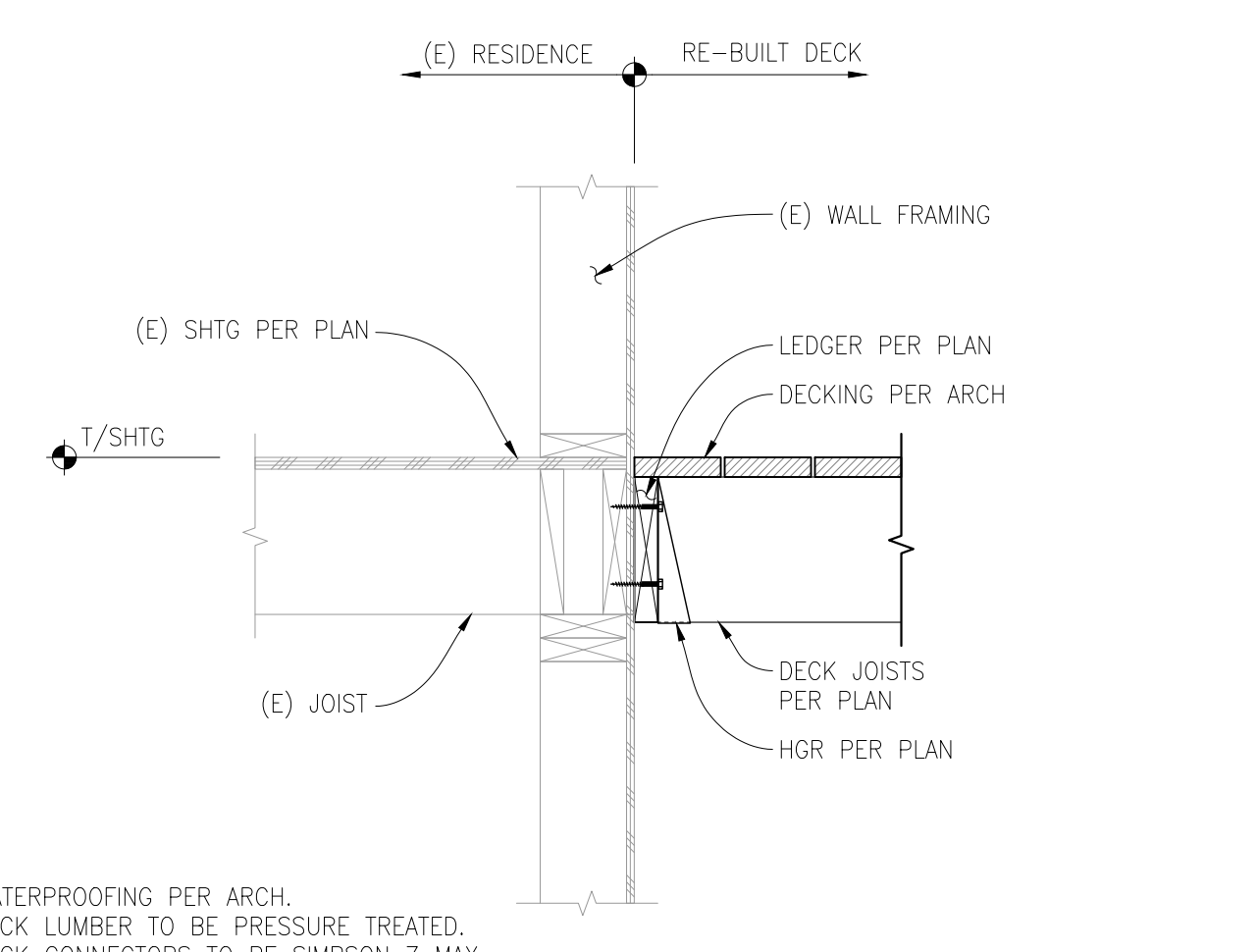
STAIR STRINGER ELEVATION
SCALE: NTS



RAILING FACE-MOUNT PLATE CONNECTION
SCALE: 1/2" = 1'-0"

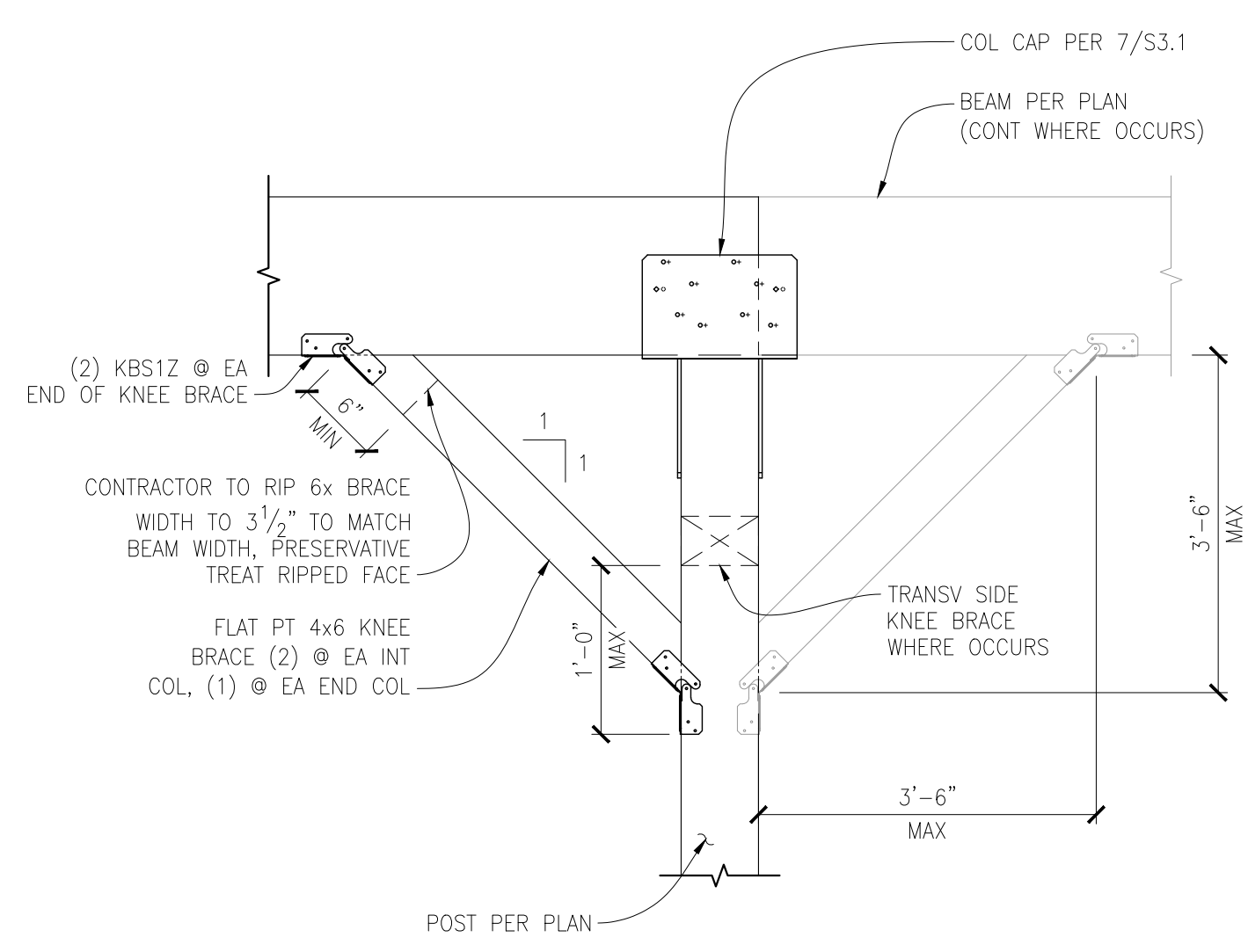


DECK LEDGER AT EXISTING WALL BUMP OUT
SCALE: NTS

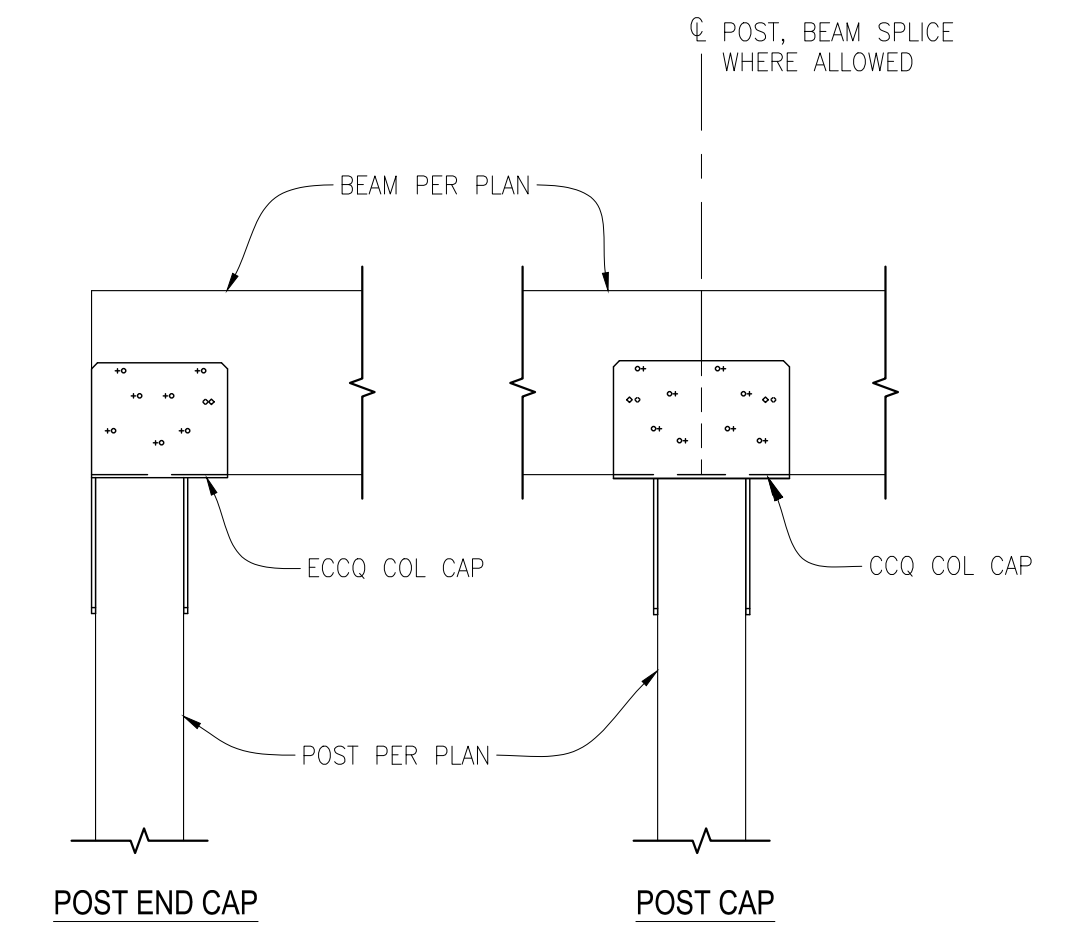


DECK TO WALL LEDGER
SCALE: NTS

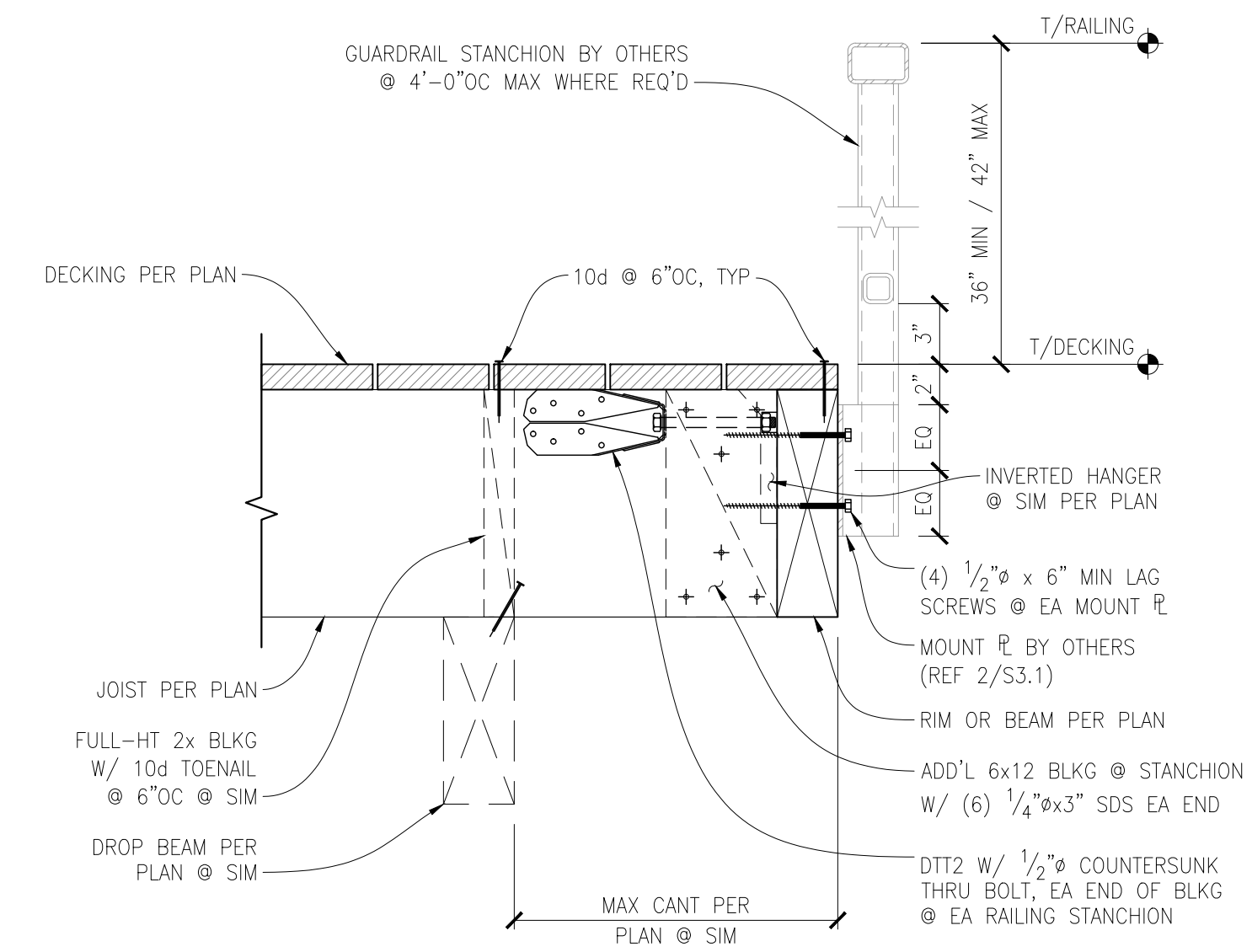
- NOTES:
1. WATERPROOFING PER ARCH.
2. DECK LUMBER TO BE PRESSURE-TREATED.
3. DECK CONNECTORS TO BE SIMPSON Z MAX.
4. AT CONC WALL, TITEN PER PLAN, MIN 3" EDGE DISTANCE FROM TOP OF CONCRETE.



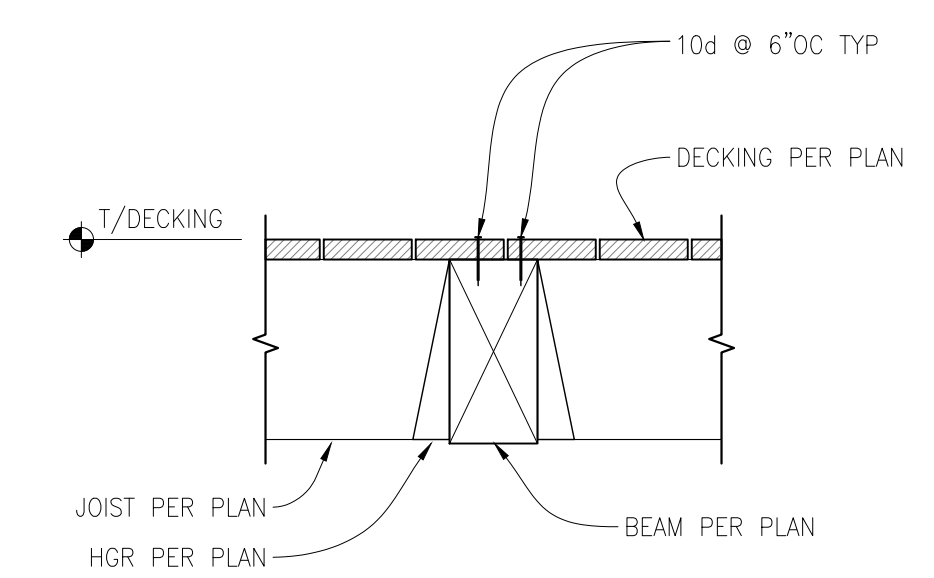
UPPER DECK KNEE BRACE CONNECTION
SCALE: NTS



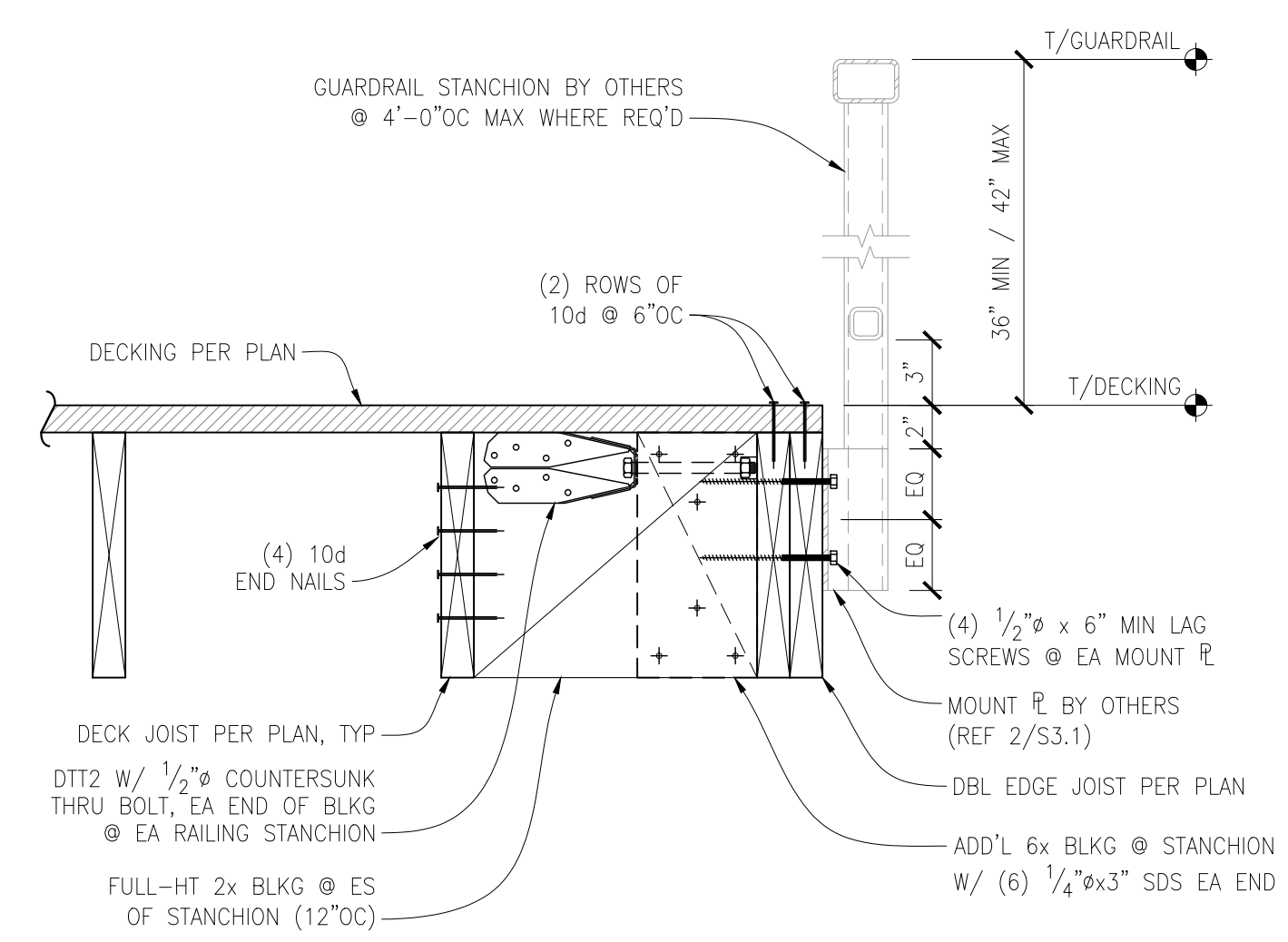
TYPICAL POST TO BEAM CONNECTION
SCALE: NTS



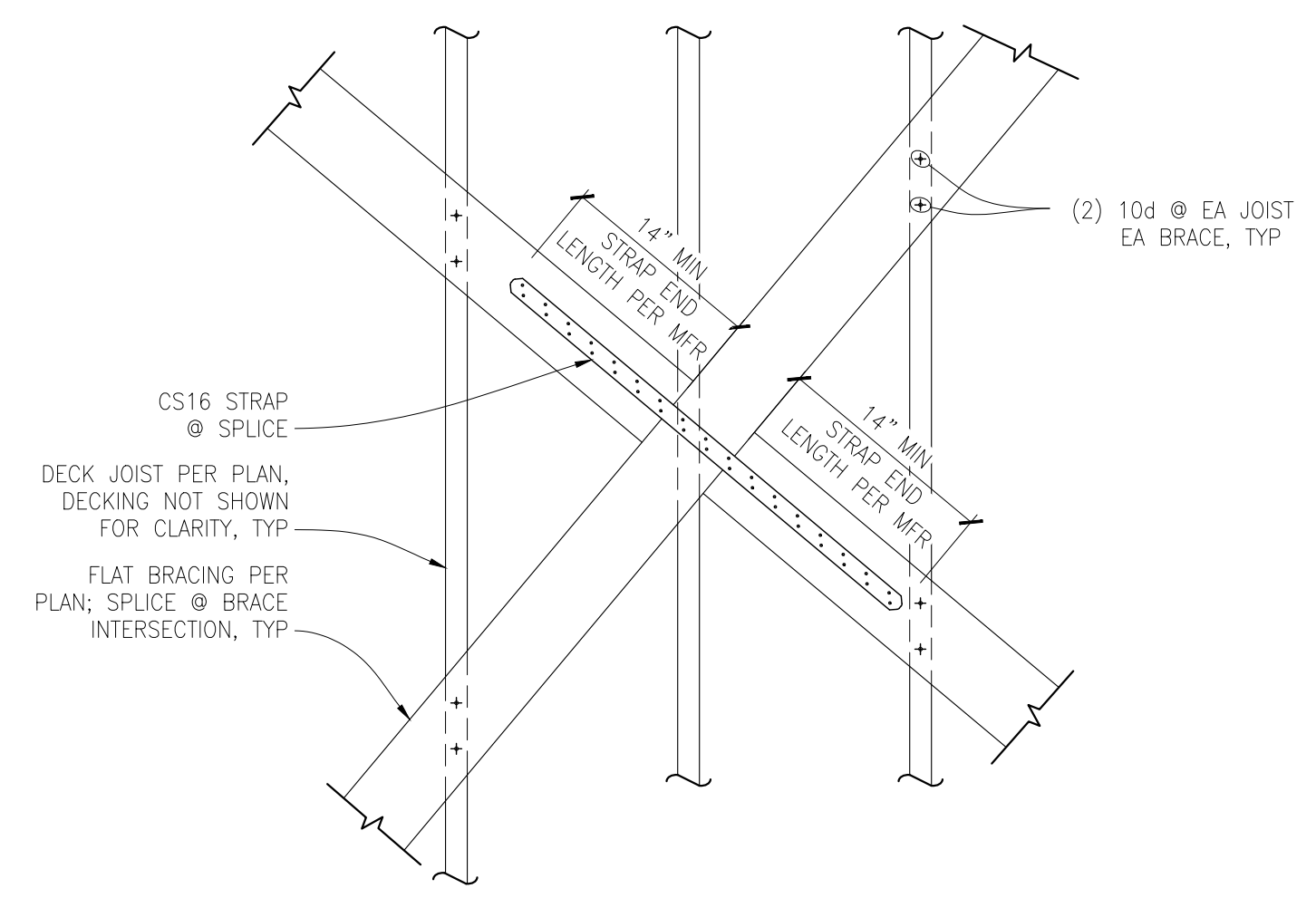
RAILING PERPENDICULAR TO DECK JOISTS
SCALE: 1/2" = 1'-0"



FLUSH BEAM WITH JOISTS PERPPENDICULAR
SCALE: NTS

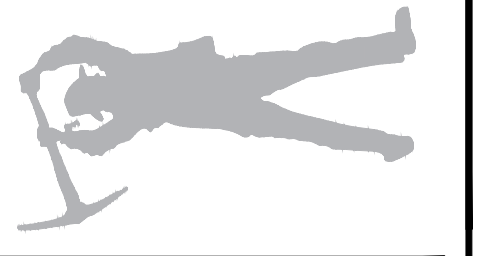


RAILING PARALLEL TO DECK JOISTS
SCALE: 1/2" = 1'-0"



CEILING PLAN VIEW - FLAT BRACING SPLICE CONNECTION
SCALE: N.T.S.

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SHEET TITLE:
STRUCTURAL SECTIONS & DETAILS

SHEET NUMBER:

S 3.1