

# HU RESIDENCE

## 30XX 69TH AVE SE, MERCER ISLAND, 98040

### PROPERTY INFO

PROPERTY ADDRESS 30XX 69TH AVE SE,  
MERCER ISLAND WA  
98040

JURISDICTION CITY OF MERCER  
ISLAND

PARCEL NUMBER 5093301316

ZONING R-8.4  
LOT AREA 8,403 SF

LEGAL DESCRIPTION MAPLE GROVE PARK  
SUBDIV E SEATTLE  
PARCEL "B" MERCER  
ISLAND LLA #SUB17-005  
REC #20171019900001  
SD LLA BEING POR OF  
LOTS 1-3 & 8-9 OF BLK 9  
OF SD ADD  
PLat Block: 9  
Plat Lot: 1-3

### PROJECT DIRECTORY

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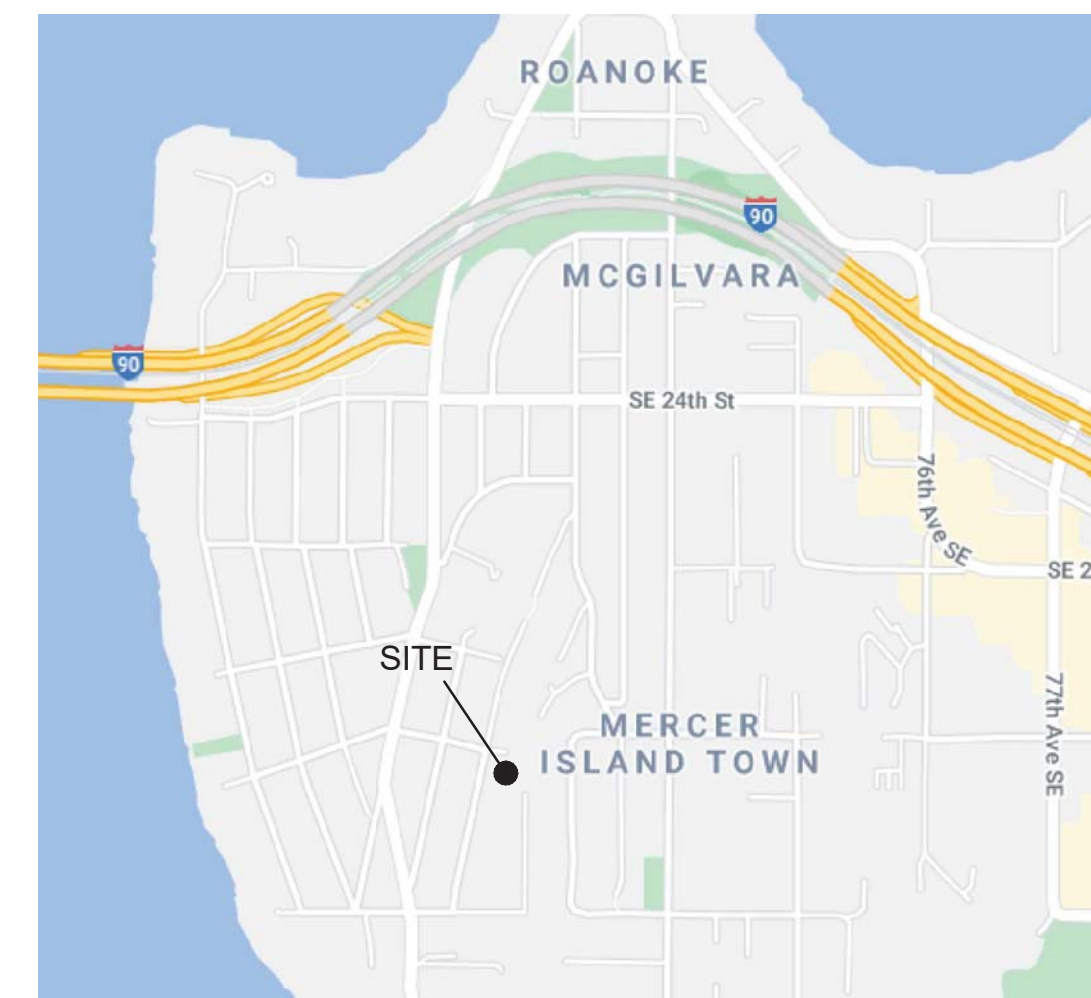
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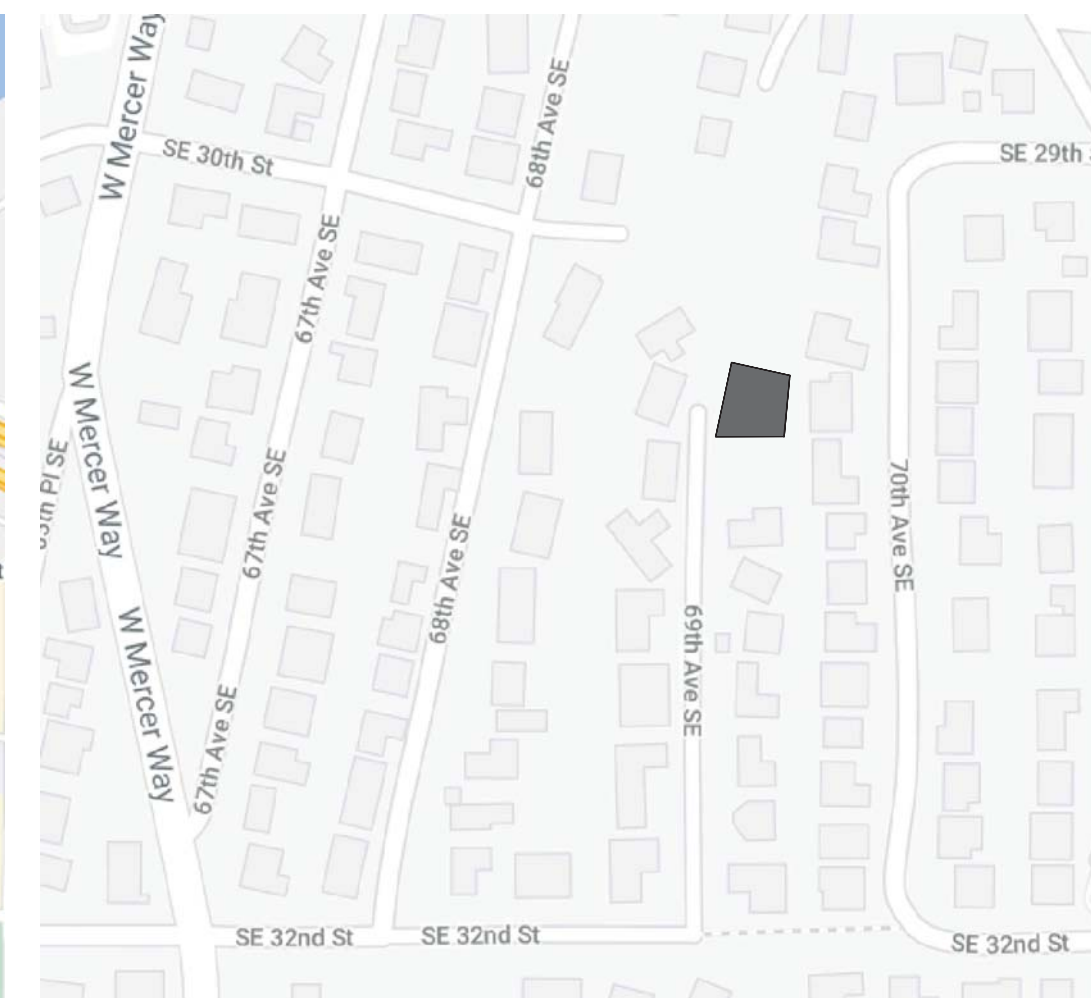
### ABBREVIATIONS AND SYMBOLS

ABBREVIATIONS		SYMBOLS	
AB	ANCHOR BOLTS	@	AT
ABV.	ABOVE	-	DEGREES
ARCH	ARCHITECT	Ø	DIAMETER
ASD	ALLOWABLE STRESS DESIGN	±	PLUS OR MINUS
BLKG	BLOCKING	w/	WITH
B & BOT	BOTTOM	w/o	WITHOUT
BM	BEAM	o/	OVER
CB	CATCH BASIN		
CONC	CONCRETE		
CONT	CONTINUOUS		
COVD	COVERED		
CRPT	CARPET		
CSMT	CASEMENT		
CL	CENTER LINE		
DBL	DOUBLE		
DN	DOWN		
EA	EACH		
EG	EXISTING GRADE		
ELEV. EL.	ELEVATION		
EXISTG. (E)	EXISTING		
FF	FINISHED FLOOR		
FG	FINISHED GRADE		
F.Y.S.B.	FRONT YARD SETBACK		
GALV	GALVANIZED		
HW	HARDWOOD		
HORZ	HORIZONTAL		
ITOW	INSIDE TOP OF WALL		
		LONG	LONGITUDINAL
		MFR	MANUFACTURER
		MSTR	MASTER
		MK	MARK
		o/c. c.c.	ON CENTER
		OVHG	OVERHANG
		PERM	PERMEABLE
		PERP.	PERPENDICULAR
		P.L.	PROPERTY LINE
		PL	PLATE
		PW	PLYWOOD
		QTY	QUANTITY
		RENF	REINFORCING
		REQMT	REQUIREMENT
		RBC	ROOF BOUNDARY CLIP
		RO	ROUGH OPENING
		RW	RETAINING WALL
		R.Y.S.B.	REAR YARD SETBACK
		SG.	SAFETY GLAZING
		SHTG	SHEATHING
		SCHD	SCHEDULE
		STRUCT	STRUCTURAL (ENGINEER)
		S.Y.S.B.	SIDE YARD SETBACK
		T	TOP
		T.B.	THERMAL BREAK
		T.B.D	TO BE DETERMINED
		TOF	TOP OF FOOTING
		TW	TOP OF WALL
		TRANS	TRANSVERSE
		UNO	UNLESS NOTED OTHERWISE
		UNCOVD	UNCOVERED
		VERT	VERTICAL
		WRB	WATER RESISTIVE BARRIER
		WW	WINDOW WELL
		WIC	WALK-IN CLOSET



VICINITY MAP

FULL SIZE SCALE 1" = 40'



LOCATION MAP

FULL SIZE SCALE 1" = 40'

#### REVISIONS

#	DATE	DESCRIPTION OF REVISION
1	09.05.22	COMMENT RESPONSE 1

DRAWN BY:

CHECKED BY:

JOB #:



Project Name:  
**HU RESIDENCE**  
30XX 69TH AVE SE  
MERCER ISLAND, WA 98040

APPROVAL STAMP

DRAWING TITLE:  
**COVERSHEET**

SHEET:  
**C00**

# TOPOGRAPHIC & BOUNDARY SURVEY

## LEGAL DESCRIPTION

PARCEL B, CITY OF MERCER ISLAND LOT LINE REVISION NO. SUB17-005, RECORDED UNDER RECORDING NUMBER 20171019900001, RECORDS OF KING COUNTY, WASHINGTON.

## BASIS OF BEARINGS

CENTERLINE OF SE 32ND STREET BEARS N 88°49'28" W BETWEEN FOUND MONUMENTS PER REFERENCE 3.

## REFERENCES

- R1. SURVEY BOOK 72, PG. 15, RECORDS OF KING COUNTY.
- R2. SURVEY BOOK 216, PG. 145, RECORDS OF KING COUNTY.
- R3. SURVEY BOOK 248, PG. 12, RECORDS OF KING COUNTY.
- R4. SURVEY BOOK 71, PG. 9, RECORDS OF KING COUNTY.
- R5. MAPLE GROVE PARK SUBDIVISION, VOL. 8 OF PLATS, PG. 37, RECORDS OF KING COUNTY.
- R6. CITY OF MERCER ISLAND LOT LINE REVISION SUB17-005, BOOK 372, PG. 200-201, RECORDS OF KING COUNTY.

## VERTICAL DATUM

NAVD 88 PER CITY OF MERCER ISLAND BENCHMARK #502 BRASS CAP IN CONC MON AT INTX SE 32ND ST & 68TH AVE SE, ELEVATION = 112.57'

## SURVEYOR'S NOTES

1. THE TOPOGRAPHIC SURVEY SHOWN HEREON WAS PERFORMED IN NOVEMBER OF 2019. 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. 509330-1316
5. SUBJECT PROPERTY AREA PER THIS SURVEY IS 8,403 S.F. (0.19 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. FIELD DATA FOR THIS SURVEY WAS OBTAINED BY DIRECT FIELD MEASUREMENTS WITH A CALIBRATED ELECTRONIC 5-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

	BRASS DISC (FOUND)		C.C. CENTER CHANNEL
	ASPHALT SURFACE		CALC'D CALCULATED
	BUILDING		CB CATCH BASIN
	CENTERLINE ROW		CONC CONCRETE
	CULVERT PIPE		COR CORNER
	CONCRETE SURFACE		DEC DECIDUOUS
	DECK		EVG EVERGREEN
	FENCE LINE (CHAIN LINK)		FF FINISH FLOOR
	FENCE LINE (WOOD)		LS# LAND SURVEY NUMBER
	FIRE HYDRANT		MEAS MEASURED
	GAS LINE		MON MONUMENT
	GUY ANCHOR		PROP PROPERTY
	INLET (TYPE 1)		(R) RECORD DATA
	MONUMENT IN CASE (FOUND)		SSMH SANITARY SEWER MANHOLE
	POST		SSS SANITARY SIDE SEWER
	POWER METER		
	POWER (OVERHEAD)		
	POWER POLE		
	REBAR AS NOTED (FOUND)		
	SEWER LINE		
	SEWER MANHOLE		
	STEEP SLOPE AREA		
	STORM DRAIN LINE		
	TREE (AS NOTED)		
	WATER LINE		
	WATER METER		
	WATER VALVE		

## VICINITY MAP

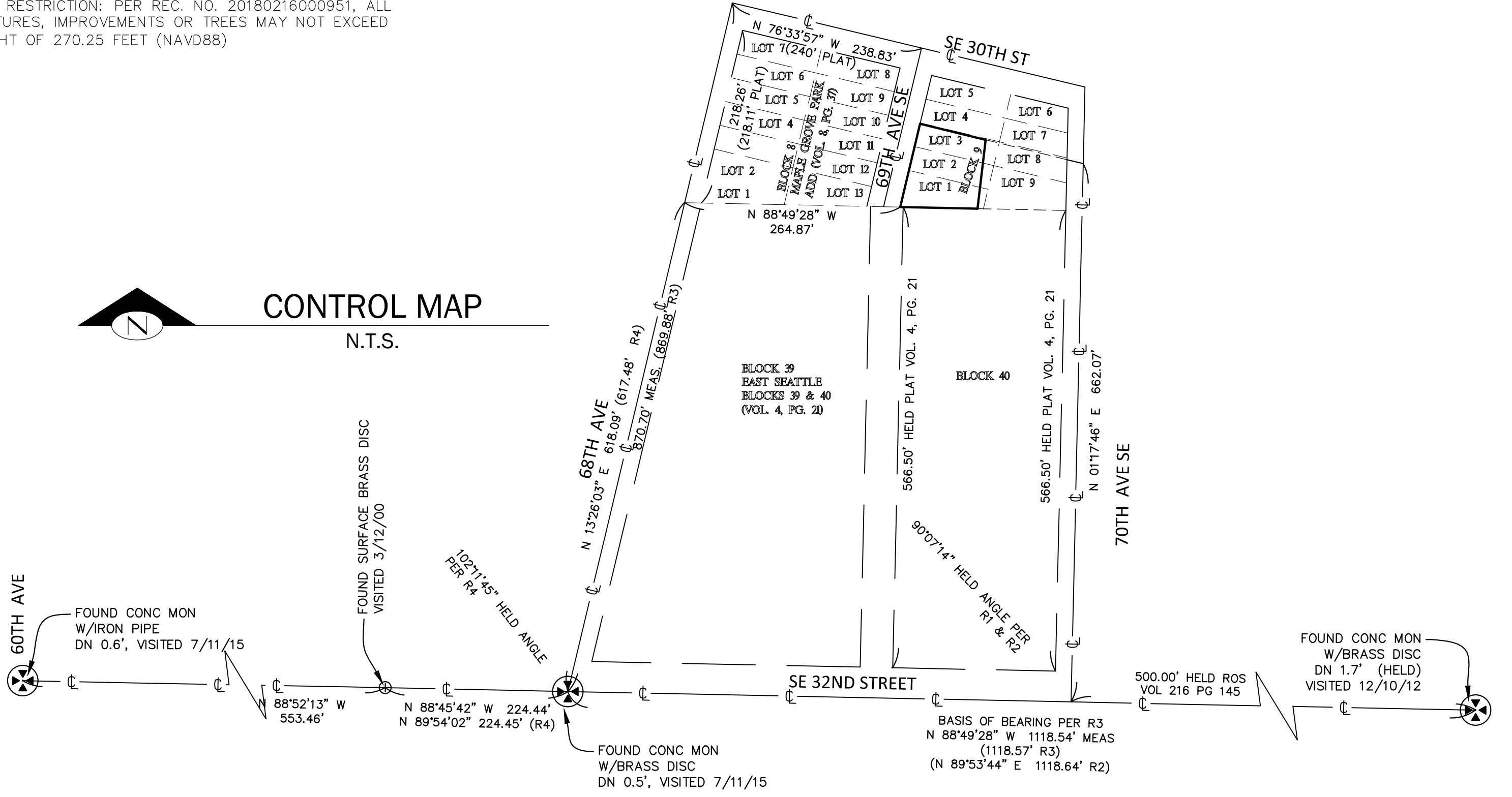
N.T.S.



HEIGHT RESTRICTION: PER REC. NO. 20180216000951, ALL STRUCTURES, IMPROVEMENTS OR TREES MAY NOT EXCEED A HEIGHT OF 270.25 FEET (NAVD88)

## CONTROL MAP

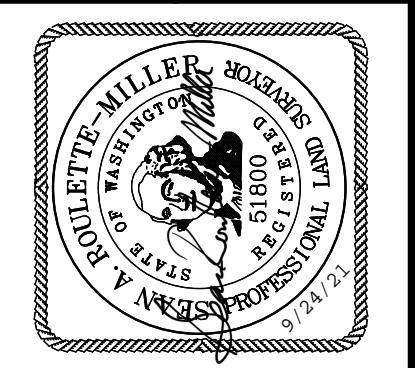
N.T.S.



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

TOPOGRAPHIC & BOUNDARY SURVEY  
S/W 1/4 OF NW 1/4 SEC 12, TWP. 24N., RGE 04E., W.M.  
PARCEL NO. 509330-1316

HUI HOME, LLC  
XXXX 69TH AVE SE  
MERCER ISLAND, WA 98040



**Terrane**  
10801 Main Street, Suite 102, Bellevue, WA 98004  
phone 425.458.4498 support@terrane.net www.terrane.net

JOB NUMBER:	150893-C
DATE:	11/26/19
DRAFTED BY:	TLR
CHECKED BY:	SRM
SCALE:	1" = 10'
REVISION HISTORY	
SHEET NUMBER	
1 OF 1	

measure success

## CLEARING AND GRADING STANDARD NOTES

1. ALL CLEARING & GRADING CONSTRUCTION MUST BE IN ACCORDANCE WITH CITY OF MERCER ISLAND CLEARING & GRADING CODE; CLEARING & GRADING EROSION CONTROL STANDARD; LAND USE CODE; UNIFORM BUILDING CODE; PERMIT CONDITIONS; AND ALL OTHER APPLICABLE CODES, ORDINANCES, AND STANDARDS. THE DESIGN ELEMENTS WITHIN THESE PLANS HAVE BEEN REVIEWED ACCORDING TO THESE REQUIREMENT. ANY VARIANCE FROM ADOPTED EROSION STANDARDS IS NOT ALLOWED UNLESS SPECIFICALLY APPROVED BY THE CITY OF MERCER ISLAND PUBLIC WORKS AND COMMUNITY DEVELOPMENT (PCD) PRIOR TO CONSTRUCTION.

IT IS THE SOLE RESPONSIBILITY OF THE APPLICANT AND THE PROFESSIONAL CIVIL ENGINEER TO CORRECT ANY ERROR, OMISSION, OR VARIATION FROM THE ABOVE REQUIREMENTS FOUND IN THESE PLANS. ALL CORRECTIONS WILL BE AT NO ADDITIONAL COST OR LIABILITY TO THE COB. ALL DETAILS FOR STRUCTURAL WALLS, ROCKERIES OVER FOUR FEET IN HEIGHT, GEOGRID REINFORCED ROCKERIES, AND GEOGRID REINFORCED MODULAR BLOCK WALLS MUST BE STAMPED BY A PROFESSIONAL ENGINEER.

2. A COPY OF THE APPROVED PLANS MUST BE ON-SITE DURING CONSTRUCTION. THE APPLICANT IS RESPONSIBLE FOR OBTAINING ANY OTHER REQUIRED OR RELATED PERMITS PRIOR TO BEGINNING CONSTRUCTION.

3. ALL LOCATIONS OF EXISTING UTILITIES HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD, THEREFORE, BE CONSIDERED ONLY APPROXIMATE AND NOT NECESSARILY COMPLETE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS AND TO DISCOVER AND AVOID ANY OTHER UTILITIES NOT SHOWN WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN.

4. THE AREA TO BE CLEARED AND GRADED MUST FLAGGED BY THE CONTRACTOR AND APPROVED BY THE CLEARING & GRADING INSPECTOR PRIOR TO BEGINNING ANY WORK ON THE SITE.

5. A REINFORCED SILT FENCE MUST BE INSTALLED AS SHOWN ON THE APPROVED PLANS OR PER THE CLEARING & GRADING INSPECTOR, ALONG SLOPE CONTOURS AND DOWN SLOPE FROM THE BUILDING SITE.

6. A HARD-SURFACE CONSTRUCTION ACCESS PAD IS REQUIRED. THIS PAD MUST REMAIN IN THE PLACE UNTIL PAVING IS INSTALLED.

7. CLEARING WILL BE LIMITED TO THE AREAS WITHIN THE APPROVED DISTURBANCE LIMITS. EXPOSED SOILS MUST BE COVERED AT THE END OF EACH WORKING DAY WHEN WORKING FROM OCTOBER 1ST THROUGH APRIL 30. FROM MAY THROUGH SEPTEMBER 30, EXPOSED SOILS MUST BE COVERED AT THE END OF EACH CONSTRUCTION WEEK AND ALSO AT THE THREAT OF RAIN.

8. ANY EXCAVATED MATERIAL REMOVED FROM THE CONSTRUCTION SITE AND DEPOSITED ON THE PROPERTY WITHIN THE CITY LIMITS MUST BE DONE IN COMPLIANCE WITH VALID CLEARING & GRADING PERMIT. LOCATIONS FOR THE MOBILIZATION AREA AND STOCKPILED MATERIALS MUST APPROVED BY THE CLEARING & GRADING INSPECTOR AT LEAST 24 HOURS IN ADVANCE OF ANY STOCKPIILING.

9. TO REDUCE THE POTENTIAL FOR EROSION OF EXPOSED SOILS, OR WHEN RAINY SEASON CONSTRUCTION IS PERMITTED, THE FOLLOWING BEST MANAGEMENT PRACTICES (BMPs) ARE REQUIRED:

- \* PRESERVED NATURAL VEGETATION FOR AS LONG AS POSSIBLE OR AS REQUIRED BY THE CLEARING & GRADING INSPECTOR.
- \* PROTECT EXPOSED SOIL USING PLASTIC (EC-14), EROSION CONTROL BLANKETS, STRAW OR MULCH (COB GUIDE TO MULCH, RATES, AND USE CHART), OR AS DIRECTED BY THE CLEARING & GRADING INSPECTOR.
- \* INSTALL CATCH BASIN INSERTS AS REQUIRED BY THE CLEARING & GRADING INSPECTOR OR PERMIT CONDITIONS OF APPROVAL.
- \* INSTALL A TEMPORARY SEDIMENT POND, A SERIES OF SEDIMENTATION TANKS, TEMPORARY FILTER VAULTS, OR OTHER SEDIMENT CONTROL FACILITIES. INSTALLATION OF EXPOSED AGGREGATE SURFACES REQUIRES A SEPARATE EFFLUENT COLLECTION POND ON -SITE.

10. FINAL SITE GRADING MUST DIRECT DRAINAGE AWAY FROM ALL BUILDING STRUCTURES AT MINIMUM 2% SLOPE, PER UNIFORM BUILDING CODE.

11. THE CONTRACTOR MUST MAINTAIN A SWEEPER ON -SITE DURING EARTHWORK AND IMMEDIATELY REMOVE SOIL THAT HAS BEEN TRACKED ONTO PAVED AREAS AS RESULT OF CONSTRUCTION.

12. A PUBLIC INFORMATION SIGN LISTING 24-HOUR EMERGENCY NUMBER FOR THE CITY AND THE CONTRACTOR MAY BE PROVIDED TO THE APPLICANT AT THE TIME THE CLEARING & GRADING PERMIT IS ISSUED. THE APPLICANT MUST POST THE SIGN AT THE PROJECT SITE IN FULL VIEW OF THE PUBLIC AND THE CONTRACTORS, AND IT MUST REMAIN POSTED UNTIL FINAL SIGN -OFF BY THE CLEARING & GRADING INSPECTOR.

13. TURBIDITY MONITORING MAY BE REQUIRED AS A OF CLEARING & GRADING PERMIT APPROVAL. IF REQUIRED, MONITORING MUST BE PERFORMED IN ACCORDANCE WITH THE APPROVED TURBIDITY MONITORING PLAN AND AS DIRECTED BY THE CLEARING & GRADING INSPECTOR. MONITORING MUST DURING SITE (EARTHWORK) CONSTRUCTION UNTIL THE FINAL SIGN - OFF BY THE CLEARING & GRADING INSPECTOR.

14. ANY PROJECT THAT IS SUBJECTED TO RAINY SEASON RESTRICTIONS WILL NOT BE ALLOWED TO PERFORM CLEARING & GRADING ACTIVITIES WITHOUT WRITTEN APPROVAL FROM THE CITY ENGINEER. THE RAINY SEASON EXTENDS FROM NOVEMBER 1ST THROUGH APRIL 30.

## RESTORATION NOTES

- 1) Surface restoration of existing asphalt pavement shall be as required by the right-of-way use permit.
- 2) The Contractor shall restore the Right-of-Way and existing public storm drainage easement(s) after construction to a condition equal or better than condition prior to entry. The Contractor shall furnish a signed release from all affected property owners after restoration has been completed.

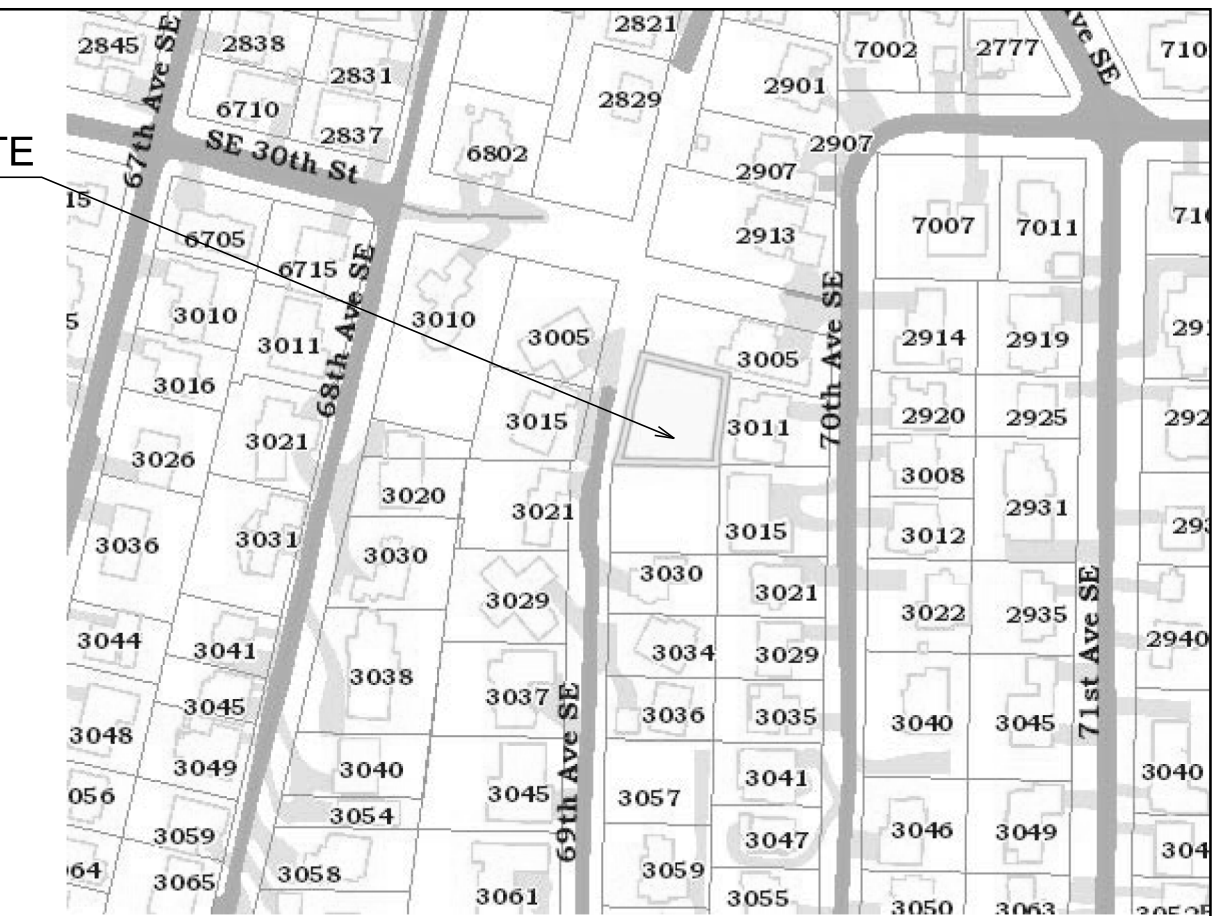
## UTILITY NOTES

- 1) The locations of all existing utilities shown hereon have been established by field survey or obtained from available records and should therefore be considered approximate only and not necessarily complete. It is the sole responsibility of the excavator to independently verify the accuracy of all utility locations shown, and to further discover and avoid any other utilities not shown here on which may be affected by the implementation of this plan. Immediately notify the responsible Professional Engineer if a conflict exists.
- 2) Call 1-800-424-5555, or 8-1-1, 72 hours before construction for utility locates.
- 3) The Contractor shall maintain a minimum of five feet (5) horizontal separation between all water and storm drainage lines. Any conflict shall be reported to the Utility and the Professional Engineer prior to construction.
- 4) Avoid crossing water or sewer mains at highly acute angles. The smallest angle measure between utilities should be 45 degrees.
- 5) It shall be the Contractors responsibility to ensure that no conflicts exist between storm drainage lines and proposed or existing utilities prior to construction.
- 6) At points where existing thrust blocking is found, minimum clearance between concrete blocking and other buried utilities or structures shall be 5 feet.
- 7) Where a new utility line crosses below an existing AC main, the AC pipe shall be replaced with DI pipe to 3 feet past each side of the trench as shown on Standard Detail W-8. Alternatively, where directed by the Utility, the trench shall be backfilled with controlled density fill (CDF, aka flowable fill) from bottom of trench to bottom of AC main.

## STORM DRAINAGE NOTES

- 1) Storm pipe shall be PVC conforming to ASTM D-3034 SDR35 or ASTM F-679. Bedding and backfill shall be as shown in the Standard Details.
- 2) The footing drainage system and the roof downspout system shall not be interconnected and shall separately convey collected flows to the conveyance system or to on-site storm water facilities.
- 3) Prior to final inspection and acceptance of storm drainage work, pipes and storm drain structures shall be cleaned and flushed. Any obstructions to flow within the storm drain system, (such as rubble, mortar and wedged debris), shall be removed at the nearest structure. Wash water of any sort shall not be discharged to the storm drain system or surface waters.
- 4) Ends of each storm drain stub at the property line shall be capped and located with an 8' long 2" x 4" board, embedded to the stub cap and extending at least 3 feet above grade, and marked permanently "STORM". A copper 12 ga. locate wire firmly attached. The stub depth shall be indicated on the marker.
- 5) All grates in roadways shall be ductile iron, bolt-locking, vane grates per the Standard Details. Structures in traffic lanes outside of the curb line which do not collect runoff shall be fitted with round, bolt-locking solid covers. Off-street structures which do not collect runoff shall be fitted with bolt-locking solid covers.
- 6) Vegetation/landscaping in the detention pond, bioretention facility, vegetated roof and/or drainage swale(s) are an integral part of the runoff treatment system for the project. Such drainage facilities will not be accepted until plantings are established.
- 7) All new manholes shall have a minimum inside diameter of 48" and shall conform to the Standard Details. All new catch basins shall conform to the Standard Details.
- 8) Side storm stations are referenced from nearest downstream manhole/ catch basin.
- 9) All testing and connections to existing mains shall be done in the presence of a representative of the City of Mercer Island Utilities Department.
- 10) All public storm drains shall be air tested and have a video inspection performed prior to acceptance (see #23 below). Storm main constructed with flexible pipe shall be deflection tested with a mandrel prior to acceptance.
- 11) Storm stubs shall be tested for acceptance at the same time the main storm is tested.
- 12) All manholes/ catch basins in unpaved areas shall include a concrete seal around adjustment rings per Standard Details.
- 13) All storm main extensions within the public right-of-way or in easements must be staked by a surveyor licensed in Washington State for line and grade and cut sheets provided to the Professional Engineer, prior to starting construction.
- 14) Storm drainage mainlines, stubs and fittings shall be constructed using the same pipe material and manufacturer. Connections between stubs and the mainline will be made with a tee fitting. Tee fitting shall be from same manufacturer as pipe. Cut-in connections are only allowed when connecting a new stub to an existing mainline.
- 15) Manholes, catch basins and vaults are considered to be permit-required confined spaces. Entry into these spaces shall be in accordance with Chapter 296-809 WAC.
- 16) Placement of surface appurtenances (MH lids, valve lids, etc.) in tire tracks of traffic lanes shall be avoided whenever possible.
- 17) The Contractor shall perform a video inspection and provide a DVD of the storm pipe interior for the City's review. The video shall provide a minimum of 14 lines per millimeter resolution and cover the entire length of the applicable pipe. The camera shall be moved through the pipe at a uniform rate (=30 ft/min), stopping when necessary to ensure proper documentation of the pipe condition. The video shall be taken after installation and cleaning to insure that no defects exist. The project will not be accepted until all defects have been repaired.
- 18) Clearly label public and private systems on the plans. Private systems shall be marked private and shall be maintained by the property owner(s).
- 19) All concrete structures (vaults, catch basins, manholes, oil/water separators, etc.) shall be vacuum tested.
- 20) Manholes, catch basins and inlets in easements shall be constructed to provide a stable, level grade for a minimum radius of 2.5 feet around the center of the access opening to accommodate confined space entry equipment.
- 21) Tops of manholes/ catch basins within public right-of-way shall not be adjusted to final grade until after paving.
- 22) Contractor shall adjust all manhole/ catch basin rims to flush with final finished grades, unless otherwise shown.
- 23) Contractor shall install, at all connections to existing downstream manholes/catch basins, screens or plugs to prevent foreign materials from entering existing storm drainage system. Screens or plugs shall remain in place throughout the duration of the construction and shall be removed along with collected debris at the time of final inspection and in the presence of a representative of the City of Bellevue Utilities Department.
- 24) Before commencement of trenching, the Contractor shall provide filter fabric for all downhill storm drain inlets and catch basins, which will receive runoff from the project site. The contractor shall periodically inspect the condition of all filter fabric and replace as necessary.
- 25) Minimum cover over storm drainage pipe shall be 2 feet, unless otherwise shown.
- 26) Redirect sheet flow, block drain inlets and/or curb openings in pavement and install flow diversion measures to prevent construction silt laden runoff and debris from entering excavations and finish surfaces for bioretention facilities and permeable pavements.
- 27) Where amended soils, bioretention facilities, and permeable pavements are installed, these areas shall be protected at all times from being over-compacted. If areas become compacted, remediate and till soil in accordance with the City's Project Representatives requirements at no additional cost in order to restore the systems ability to infiltrate.

PROPOSED PROJECT SITE



## VICINITY MAP

NTS

## LEGAL DESCRIPTION

MAPLE GROVE PARK SUBDIV E SEATTLE PARCEL "B"  
MERCER ISLAND LLA #SUB17-005 REC #20171019900001  
SD LLA BEING POR OF LOTS 1-3 & 8-9 OF BLK 9 OF SD ADD

PARCEL NUMBER: 509330-1316

PROPERTY OWNER: HUI HOME LLC  
30XX 69TH AVE SE  
MERCER ISLAND, WA 98040

PROJECT ENGINEER: STEVE WU  
8822 NE 178TH ST  
BOTHELL, WA 98011  
TEL:206-795-5674

FIELD BOOK: \_\_\_\_\_  
SURVEYED: \_\_\_\_\_  
SURVEY BASE MAP: \_\_\_\_\_  
DESIGN ENTERED: **J.W**  
DESIGNED: **S.W**  
CHECKED: **S.W**



**TANDEM ENGINEERING CONSULTANT INC**  
8822 NE 178TH ST  
BOTHELL, WA 98011  
(206) 795-5674

## GENERAL NOTES

HU'S RESIDENCE  
30XX 69TH AVE SE  
MERCER ISLAND WA 98040

SHEET  
**1**  
OF  
**4**  
SHEETS

**C-1.00**

**GENERAL TESC NOTES**

Temporary erosion and sedimentation control facilities (TESC) (including but not limited to temporary construction entrance, catch basin protection, silt fence installation, interceptor ditches, sedimentation ponds and straw bales) must be in place and inspected by the City of Mercer Island prior to demolition, clearing/grading, etc. Spoil piles shall be kept covered. All City streets shall be kept free of mud and construction debris. TESC facilities shall be maintained until final landscaping is completed. No sediment-laden water shall enter Lake Washington, the public storm drain system, water courses, sensitive areas or the adjacent properties. Not all of these facilities may be identified on this plan but may be required during construction. Contractor will adhere to additional requirements as conditions warrant and the project progresses, including cleaning of downstream catch basins and drainage facilities of sediment from this project.

**PLAN NOTES**

- Approval of this temporary erosion and sedimentation control (TESC) plan does not constitute an approval of permanent road or drainage design.
- The implementation of these TESC plans and the construction, maintenance, replacement, and upgrading of these TESC facilities is the responsibility of the owner/agent and/or their contractor until all construction is approved.
- The boundaries of the clearing limits shown on this plan shall be clearly flagged by a continuous length of survey tape (or fencing, if required) prior to construction. During the construction period, no disturbance beyond the clearing limits shall be permitted. The clearing limits shall be maintained by the owner/agent and/or their contractor for the duration of construction.
- The TESC facilities shown on this plan must be constructed prior to or in conjunction with all clearing and grading so as to ensure that the transport of sediment to surface waters, drainage systems, and adjacent properties is minimized.
- The TESC facilities shown on this plan are the minimum requirements for anticipated site conditions. During the construction period, these TESC facilities shall be upgraded as needed for unexpected storm events and modified to account for changing site conditions (e.g., additional sump pumps, relocation of ditches, hay bales and silt fences, etc.).
- The TESC facilities shall be inspected daily by the owner/agent and/or their contractor and maintained to ensure continued proper functioning. Written records shall be kept of weekly reviews of the TESC facilities during the wet season (Oct. 1 to April 30) and of monthly reviews during the dry season (May 1 to Sept. 30).
- Any areas of exposed soils, including roadway embankments, that will not be disturbed for two days during the wet season (Oct. 1 to April 30) or seven days during the dry season (May 1 to Sept. 30), shall be immediately stabilized with approved TESC methods (e.g., seeding, mulching, plastic covering, etc.).
- Any area needing TESC measures that do not require immediate attention shall be addressed within fifteen (15) days.
- The TESC facilities on inactive sites shall be inspected and maintained a minimum of once a month or within forty-eight (48) hours following a storm event.
- At no time shall more than one (1) foot of sediment be allowed to accumulate within a catch basin. All catch basins and conveyance lines shall be cleaned prior to final grading and/or paving. The cleaning operation shall not flush sediment-laden water into the downstream system.
- Stabilized construction entrances and roads shall be installed at the beginning of construction and maintained for the duration of the project. Additional measures, such as wash pads and sediment traps, may be required to ensure that all paved areas are kept clean for the duration of the project.
- Any permanent flow control facility used as a temporary settling basin shall be modified with the necessary temporary erosion control measures and shall provide adequate storage capacity.
- Where straw mulch for temporary erosion control is required, it shall be applied at a minimum thickness of 2 to 3 inches.
- Prior to the beginning of the wet season (Oct. 1), all disturbed areas shall be reviewed to identify which ones can be seeded in preparation for the winter rains. Disturbed areas shall be seeded within one week of the beginning of the wet season. The City can require seeding of additional areas in order to protect surface waters, adjacent properties, or drainage facilities.

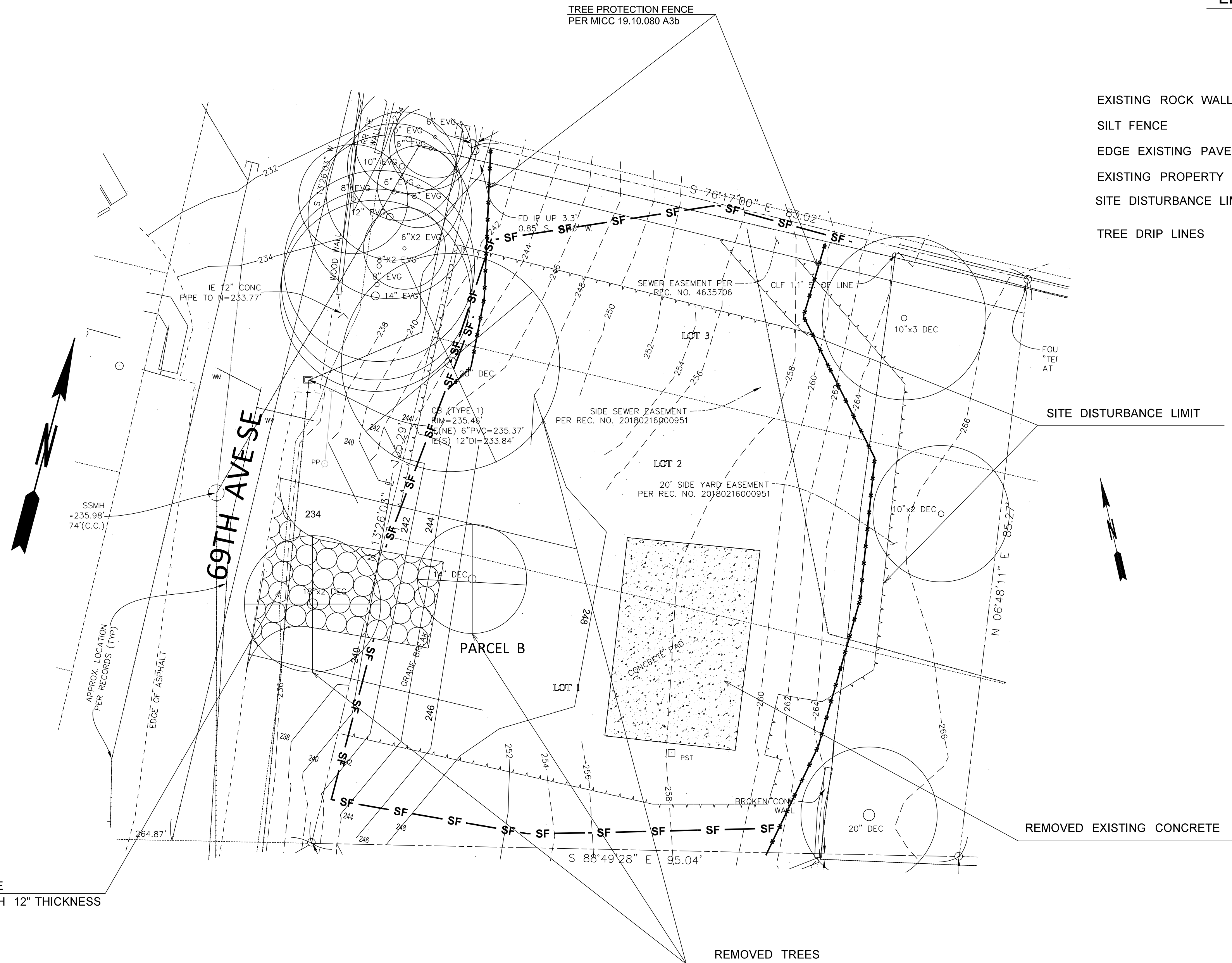
**Construction Sequence:**

- Hold an onsite pre-construction meeting.
- Flag or fence clearing limits.
- Install catch basin protection, if required.
- Grade and install construction entrance(s).
- Install perimeter protection (silt fence, brush barrier, etc.).
- Construct sediment pond(s) and/or trap(s).
- Construct surface water controls (interceptor dikes, pipe slope drains, etc.) simultaneously with clearing and grading for project development.
- Maintain TESC measures in accordance with City standards and manufacturer's recommendations.
- Relocate surface water controls or TESC measures, or install new measures so that as site conditions change, the TESC is always in accordance with the City of Mercer Island Temporary Erosion and Sedimentation Control Requirements.
- Cover all areas that will be un-worked for more than two days during the wet season (Oct. 1 to April 30) or seven days during the dry season (May 1 to Sept. 30) with straw, wood fiber mulch, compost, plastic sheeting, or equivalent.
- Stabilize all areas within seven days of reaching final grade.
- Seed or sod any areas to remain un-worked for more than 30 days.
- Upon completion of the project, stabilize all disturbed areas and remove TESC measures if appropriate.

Reference: King County Surface Water Design Manual Appendix D - 10.3

**LEGEND**

- EXISTING ROCK WALL
- SILT FENCE - SF
- EDGE EXISTING PAVEMENT
- EXISTING PROPERTY LINE
- SITE DISTURBANCE LIMIT
- TREE DRIP LINES

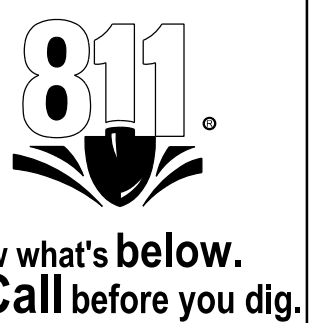


**EXPOSED & STOCKPILES SOIL BMP'S**

All exposed and unworked soils shall be stabilized per the following criteria:  
 From October 1 to April 30, no exposed and unworked soils shall remain unstabilized (exposed) for more than two days. Non-erodible, clean, granular base materials shall be applied to stabilize all trafficked areas.  
 From May 1 to September 30, no exposed and unworked soils on slopes shall remain unstabilized (exposed) for more than seven days.  
 Exposed and unworked soils will be stabilized with the application of effective BMPs to prevent erosion throughout the life of the project. The specific BMPs will be used on this project include:

- Preserving natural vegetation
- Sodding
- Topsoil
- Mulching
- Check dam
- Soil binding using polyacrylamide
- Wattles
- Biodegradable erosion control blanket
- Compost blanket
- Stabilized construction entrance
- Plastic covering
- Construction road stabilization
- Seeding and planting
- Dust Control
- Bonded Fiber Matrix
- Mechanically Bonded Fiber Matrix

Seeding and mulching will be used to stabilize soils throughout the project following excavation and grading as well as other disturbed areas. During dry weather construction periods, the contractor will provide project specific dust control measures, as needed. Cut and fill slopes will be stabilized as soon as possible and soil stockpiles will be temporarily covered with plastic sheeting to prevent short-term erosion. All stockpiled soils will be stabilized from erosion, protected with sediment trapping measures, and where possible, be located away from storm drain inlets, waterways, and drainage channels.



FIELD BOOK:	
SURVEYED:	
SURVEY BASE MAP:	
DESIGN ENTERED:	J.W
DESIGNED:	S.W
CHECKED:	S.W



**TANDEM ENGINEERING CONSULTANT INC**  
 8822 NE 178TH ST  
 BOTHELL, WA 98011  
 (206) 795-5674

**TESC PLAN**

**HU'S RESIDENCE**  
 30XX 69TH AVE SE  
 MERCER ISLAND WA 98040

SHEET  
**2**  
 OF  
**4**  
 SHEETS

**C-2.00**

**SIDE SEWER NOTES**

- ① CUT AND REMOVE THE EXISTING SIDE SEWER LINE, CONTRACTOR SHALL NOTIFY THE ADJACENT PROPERTIES OWNERS PRIOR TO CONDUCT THIS WORK.
2. CONTRACTOR SHALL FIELD VERIFY THE PIPE LOCATION AND INVERT ELEVATION.
3. CONTRACTOR SHALL MAINTAIN THE SIDESEWER IN FULL FUNCTION DURING THE CONSTRUCTION.
4. CONTRACTOR SHALL INSTALL THE RELOCATE SIDE SEWER LINE IN PLACE PRIOR REMOVING THE EXISTING SIDE SEWER LINE.
5. CONNECT RELOCATED SEWER LINE WITH EXISTING SIDE SEWER LINE. SEE CITY OF MERCER ISLAND STD. S-17 FOR DETAILS
- ② REMOVE EXISTING SIDE SEWER LINE. THIS WORK SHALL NOT COMMENCE PRIOR THE NEW SIDE SEWER LINE IN PLACE.
- ③ INSTALL APPROVED MECHANICAL PLUG WITH NON-SHRINK GROUT AT THE END OF THE PIPE. SEE CITY OF MERCER ISLAND STD. S-22, STD. S-22A FOR DETAILS.
- ④ INSTALL 4" PVC SIDE SEWER. SEE CITY OF MERCER ISLAND STD. S-3, S-4, S-17 FOR DETAILS 3" MINIMUM PIPE COVER IS REQUIRED.
- ⑤ 6" PVC SEWER, L=45.0', S=21.7.0%, (ASTM D-3034 PVC), SEE CITY OF MERCER ISLAND STD.S-3, STD.S-4, STD. S-17, STD. S-18.

**LEGEND**

- PROPOSED SIDE SEWER - s - - - s - - - s - - -
- EXISTING SEWER LINE - S - - - S - - -
- EXISTING EDGE OF PAVEMENT - - - - -
- SPOT ELEVATION +236
- EXISTING STORM LINE - ST - - - ST - - -
- EXISTING WATER LINE - w - - - w - - - w - - - w - - -
- PROPOSED WATER IINE - w - - - w - - - w - - - w - - -
- PROPOSED WATER METER ⊕
- WALL UNDERDRAIN - - - - -
- TREE DRIP LINES ○
- PROPOSED FOOTING DRAIN ← - - - ←
- EXISTING LOT LINE - - - - -

**4" PERFORATED FOOTING DRAIN**

POINT	INVERT	LENGTH	S
A	237.0	49.5	1%
B	236.51	31.5	1%
C	236.19	31	1%
D	235.88	13.5	11.5%
E	234.33		
A	237.0	35	1%
F	236.65	24	1%
D	235.88	49	1.6%

**4" PVC ROOF DRAIN**

POINT	INVERT	LENGTH	S
D-5	244	53	15.4%
D-3	235.84	16	11.5%
CB	234.00		
D4	258.00	34	2.94%
D1	257.00	53.5	35.00%
D2	238.28	4	61.38%
D-3	235.82		

**STORM DRAIN NOTES**

- ① 4" FOOTING DRAIN MIN 2% GRADE (ASTM D-3034 PVC)
- ② 4" ROOF DRAIN MIN 2% GRADE (ASTM D-3034 PVC)
- ③ 4" STORM DRAIN, PVC, L=11.0', S=15.5%, (ASTM D-3034 PVC)
- ④ 6" STORM DRAIN, L=11, S=4.1% ((ASTM D-3034 PVC)
- ⑤ 4" PVC STORM DRAIN, L=19.0, S=3.6%, (ASTM D-3034 PVC)
- ⑥ 4" PVC STORM DRAIN, L=10.5 S=40%, (ASTM D-3034 PVC)
- ⑦ 4" PVC STORM DRAIN, MIN 2% SLOPE (ASTM D-3034 PVC)

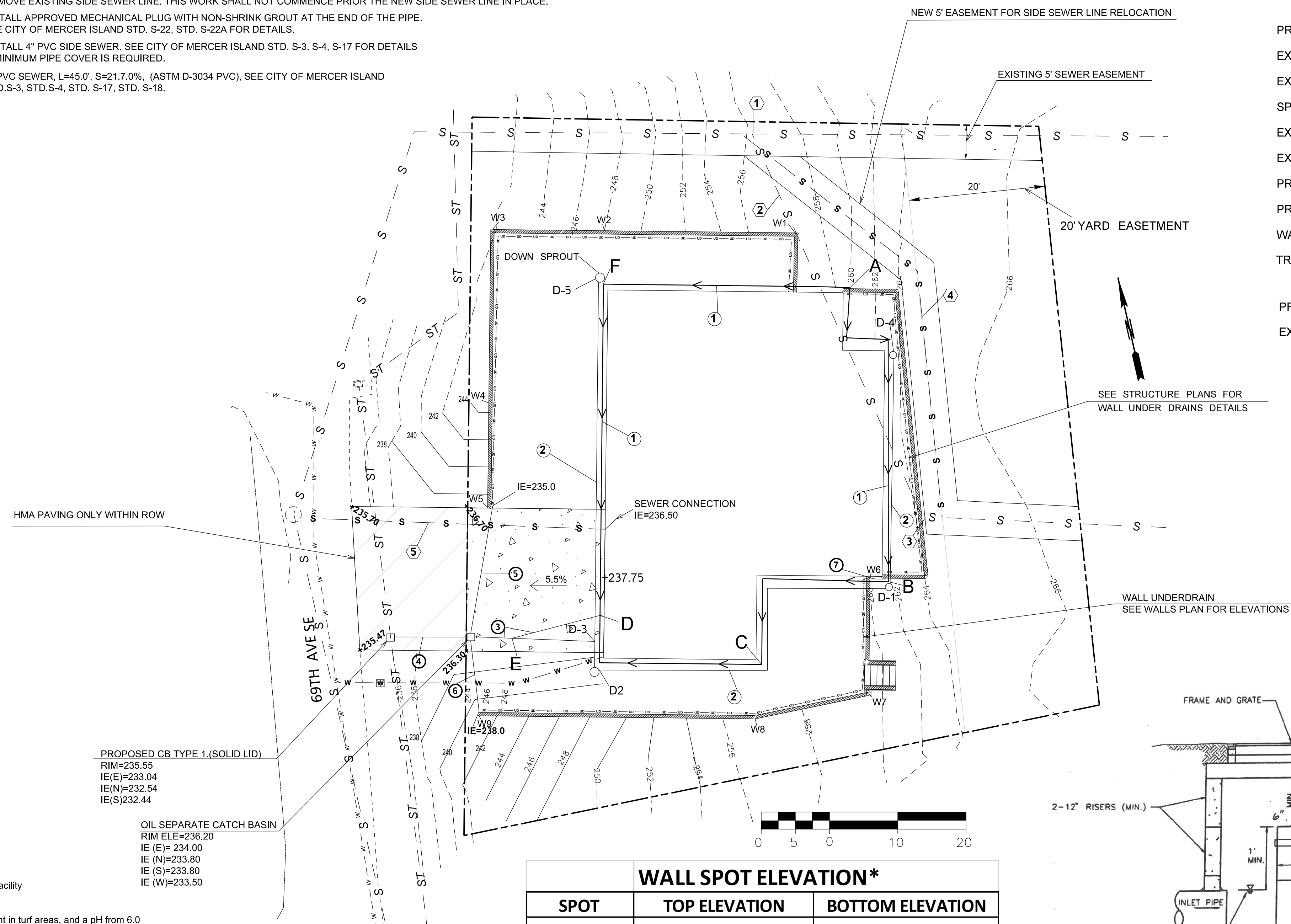
**Post Construction Soil Quality**

All areas subject to clearing and grading that have not been covered by impervious surface, incorporated into a drainage facility or engineered as structure fill or slope shall, at project completion, demonstrate the following:

1. A topsoil layer with a minimum organic matter content of 10% dry weight in planting beds, and 5% organic matter content in turf areas, and a pH from 6.0 to 8.0 or matching the pH of the undisturbed soil. The topsoil layer shall have a minimum depth of eight inches except where tree roots limit the depth of incorporation of amendments needed to meet the criteria. Subsoils below the topsoil layer should be scarified at least 4 inches with some incorporation of the upper material to avoid stratified layers, where feasible.
2. Mulch planting beds with 2 inches of organic material
3. Use compost and other materials that meet these organic content requirements:
  - a. The organic content for "pre-approved" amendment rates can be met only using compost meeting the compost specification for BMP T7.30: Bioretention Cells, Swales, and Planter Boxes (p.959), with the exception- that the compost may have up to 35% biosolids or manure. The compost must also have an organic matter content of 40% to 65%, and a carbon to nitrogen ratio below 25:1. The carbon to nitrogen ratio may be as high as 35:1 for plantings composed entirely of plants native to the Puget Sound Lowlands region.
  - b. Calculated amendment rates may be met through use of composted material meeting (a.) above; or other organic materials amended to meet the carbon to nitrogen ratio requirements, and not exceeding the contaminant limits identified in Table 220-B, Testing Parameters, in WAC 173-350-220.

**Maintenance**

1. Establish soil quality and depth toward the end of construction and once established, protect from compaction, such as from large machinery use, and from erosion.
2. Plant vegetation and mulch the amended soil area after installation.
3. Leave plant debris or its equivalent on the soil surface to replenish organic matter.
4. Reduce and adjust, where possible, the use of irrigation, fertilizers, herbicides and pesticides, rather than continuing to implement formerly established practices.



PROPOSED CB TYPE 1 (SOLID LID)  
 RIM ELE=236.20  
 IE (E)=234.00  
 IE (N)=233.80  
 IE (S)=233.80  
 IE (W)=233.50

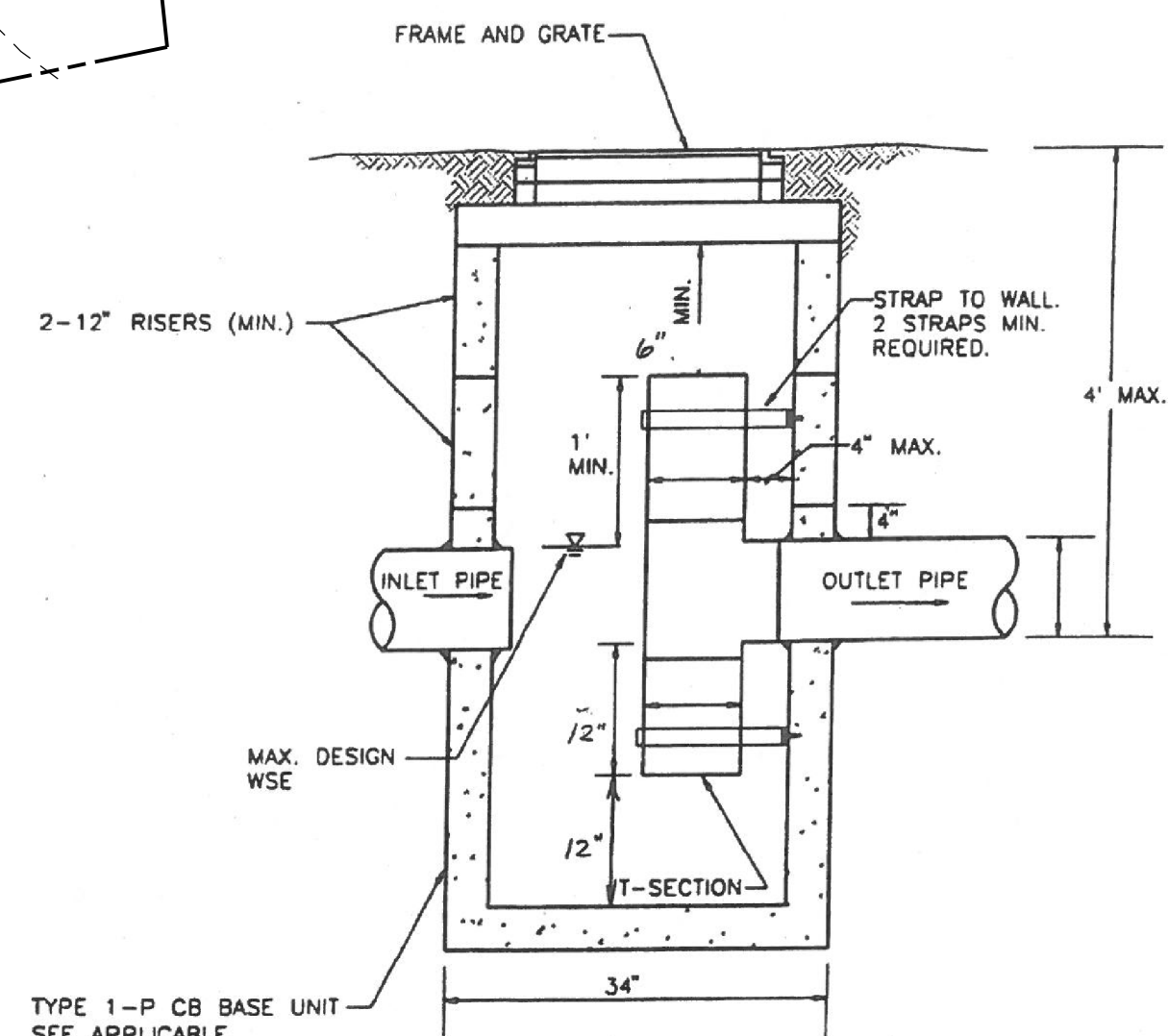
OIL SEPARATE CATCH BASIN  
 RIM ELE=236.20  
 IE (E)=234.00  
 IE (N)=233.80  
 IE (S)=233.80  
 IE (W)=233.50

**NOTE**  
 NO EXCAVATION ENCROACHMENT INTO TREE DRIP LINE

**WALL SPOT ELEVATION\***

SPOT	TOP ELEVATION	BOTTOM ELEVATION
W1	258.5	248.0
W2	248.0	244.0
W3	247.0	242.0
W4	244.0	240.0
W5	238.0	236.0
W6	260.5	257.0
W7	260.5	257.0
W8	257.0	252.0
W9	246.0	242.0

\* WALL SPOTS ELEVATION ARE FOR REFERENCED ONLY  
 SEE THE STRUCTURE PLANS FOR ELEVATION AND DETAILS.



TYPE 1-P CB BASE UNIT  
 SEE APPLICABLE  
 STANDARD DETAILS.  
 CONFORMS TO WASH.  
 STATE APWA/WSDOT  
 STANDARD SPECIFICATIONS  
 AND STANDARD PLAN.

CATCH BASIN TYPE I WITH OIL/WATER SEPARATED

NTS



Know what's below.  
 Call before you dig.

FIELD BOOK: \_\_\_\_\_  
 SURVEYED: \_\_\_\_\_  
 SURVEY BASE MAP: \_\_\_\_\_  
 DESIGN ENTERED: **J.W**  
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 CHECKED: **S.W**



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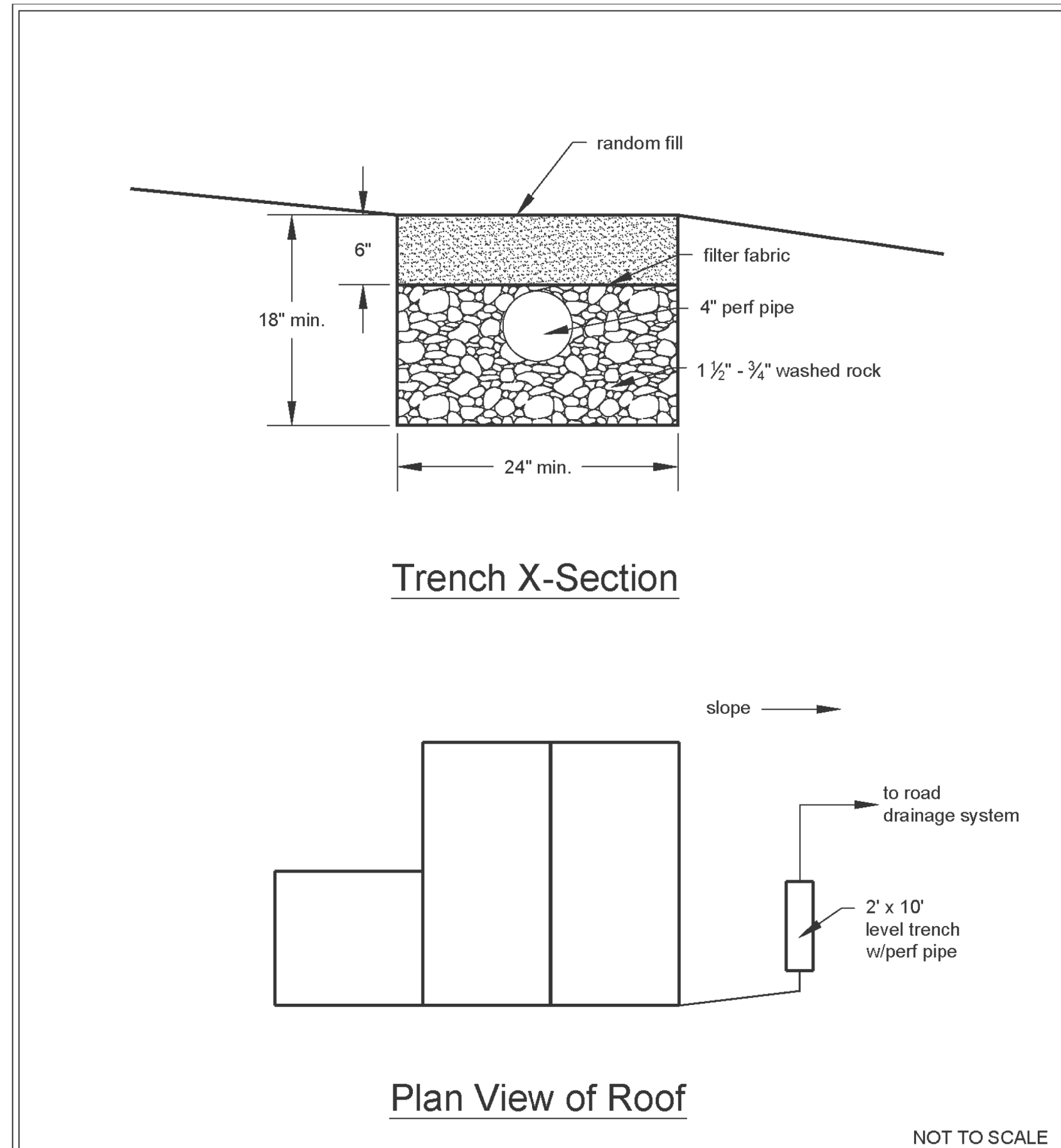
**DRAINAGE &  
 GRADATION PLAN**

**HU'S RESIDENCE**  
 30XX 69TH AVE SE  
 MERCER ISLAND WA 98040

SHEET  
**3**  
 OF  
**4**  
 SHEETS

**C-3.00**

**Figure V-4.7: Perforated Stub-Out Connection**

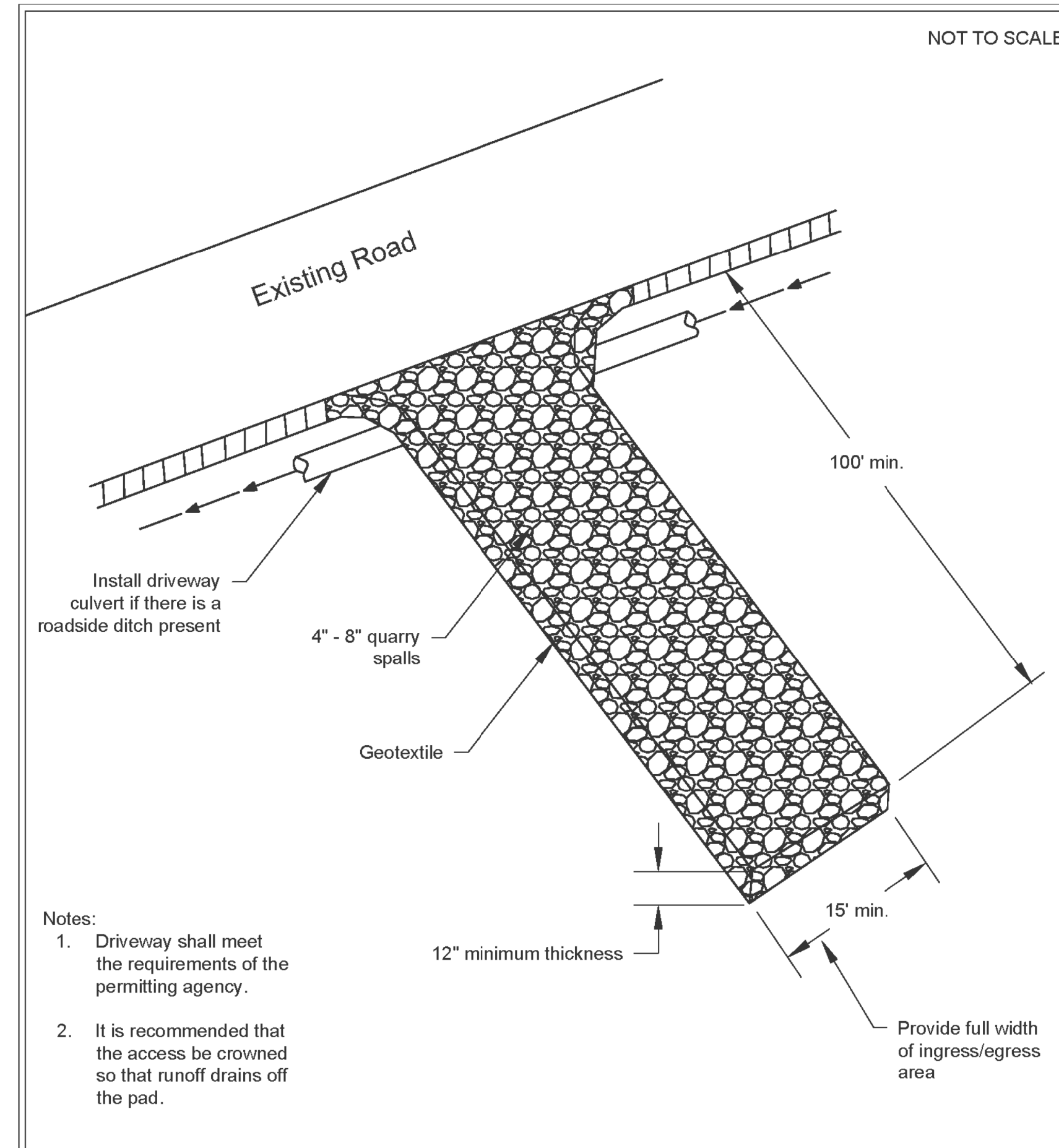


**Perforated Stub-Out Connection**  
Revised June 2016

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**Figure II-3.1: Stabilized Construction Access**

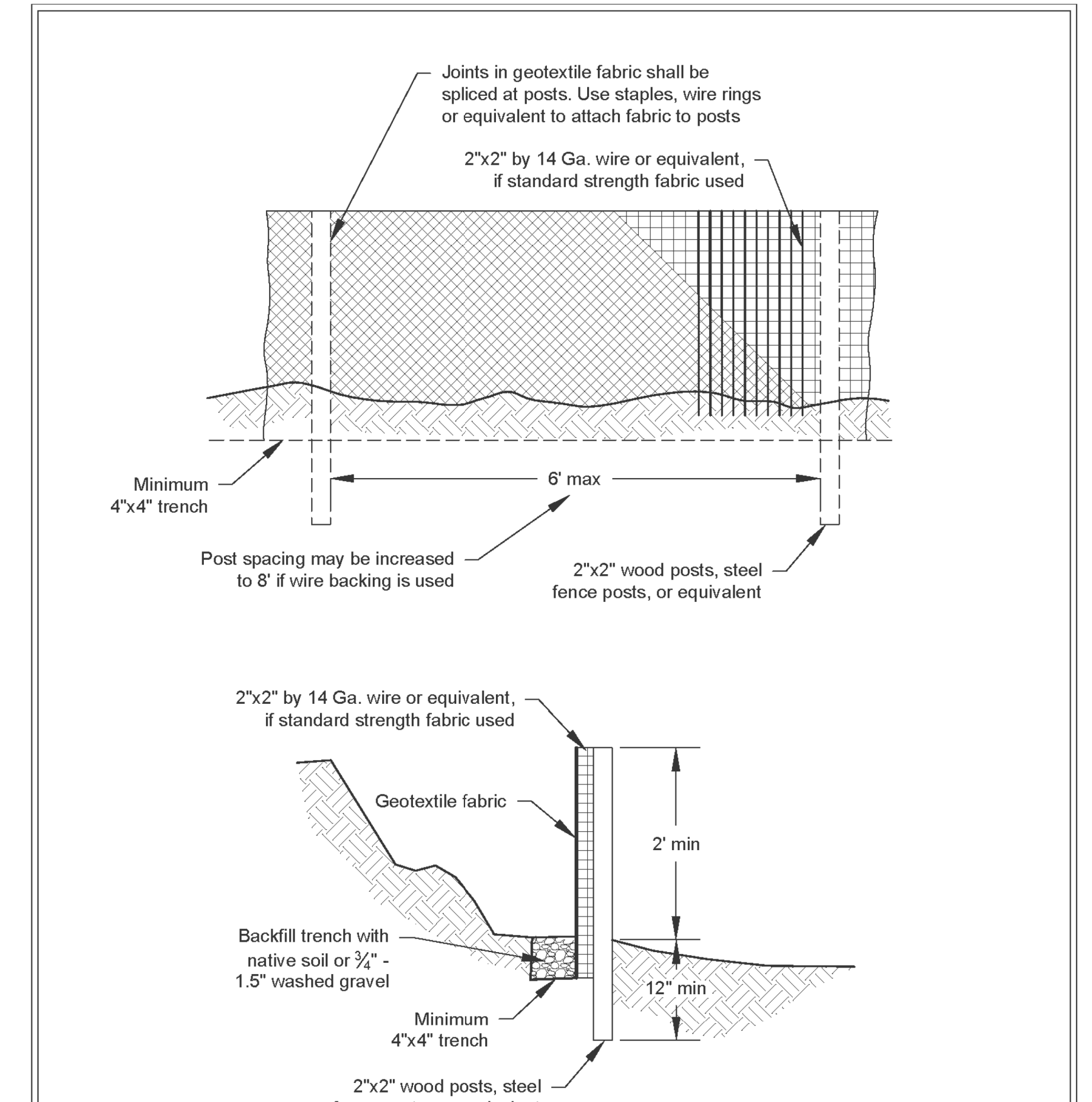


**Stabilized Construction Access**  
Revised June 2018

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**Figure II-3.22: Silt Fence**



**Silt Fence**  
Revised July 2017

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FIELD BOOK:	
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SURVEY BASE MAP:	
DESIGN ENTERED:	<b>J.W</b>
DESIGNED:	<b>S.W</b>
CHECKED:	<b>S.W</b>

**DETAILS**

**HU'S RESIDENCE**  
**30XX 69TH AVE SE**  
**MERCER ISLAND WA 98040**

SHEET  
**4**  
OF  
**4**  
SHEETS

**C-4.00**

# DHS ENGINEERS

# HU RESIDENCE

30xx 69<sup>TH</sup> AVENUE SE, MERCER ISLAND, WASHINGTON

# TEMPORARY SHORING AND PERMANENT RETAINING WALL PLANS



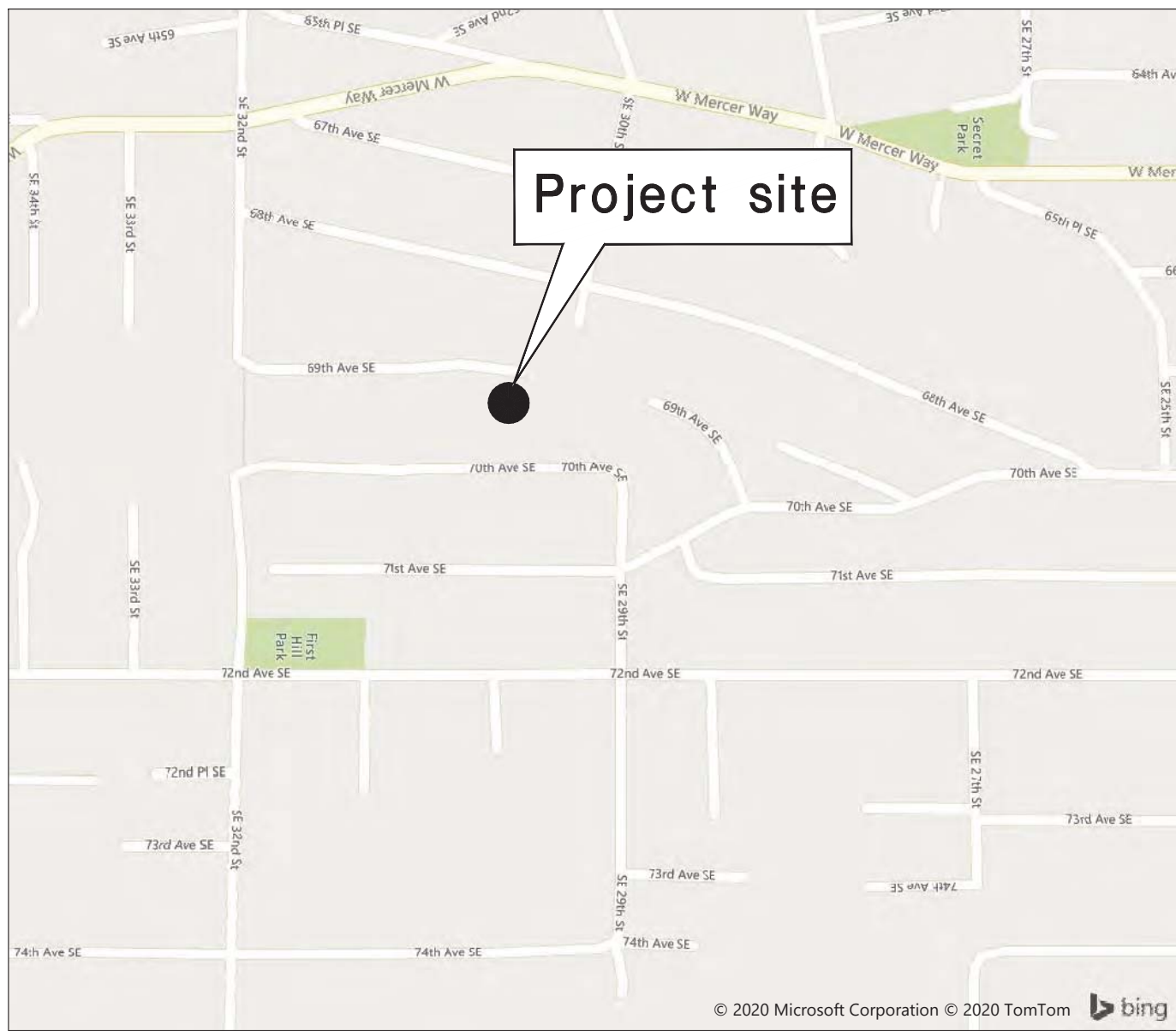
Hu RESIDENCE  
 TEMPORARY SHORING AND  
 PERMANENT RETAINING WALL  
 COVER & SHORING NOTES

PROJ. NO. 20-50  
SHEET NUMBER

SH1.0

REV	DATE	DESCRIPTION
0	01/18/2021	PERMIT ISSUE
1	06/22/2022	RESPOND TO COMMENTS

SHEET NUMBER	SHEET TITLE
SH1.0-1.1	COVER & SHORING NOTES
SH2.0	SHORING PLAN
SH3.0-3.4	SHORING ELEVATION
SH3.A	PILE AND ANCHOR SCHEDULE
SH4.0-4.1	CROSS-SECTIONS AND DESIGN DIAGRAMS
SH5.0-5.2	DETAILS



VICINITY MAP

**SHORING WALL NOTES:**

**GENERAL:**

THE GENERAL CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING DIMENSIONS AND SITE CONDITIONS. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THE PLANS AND THOSE UTILITIES OR UNDERGROUND OBSTRUCTIONS NOT SHOWN ON THE PLANS. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL ABANDONED UTILITIES, OTHER UNDERGROUND OBSTRUCTIONS THAT INTERFERE WITH THE NEW CONSTRUCTION.

THE GENERAL CONTRACTOR AND SUBCONTRACTORS ARE RESPONSIBLE FOR THE CONSTRUCTION PROCESS AND THE SAFETY OF THE WORKERS. THIS INCLUDES BUT IS NOT LIMITED TO, THE CONSTRUCTION SEQUENCE, TEMPORARY HANDRAILS, EXCAVATION ACCESS, AND BARRIERS. IT ALSO INCLUDES LIFTING OF MATERIALS AND CONSTRUCTION EQUIPMENT INTO AND OUT OF THE EXCAVATION, TEMPORARY BRACING OF SINGLE-SIDED FORMWORK, TEMPORARY SHORING OF EXCAVATIONS, AND STABILITY OF ALL TEMPORARY CUT SLOPES.

A PRE-CONSTRUCTION MEETING SHALL BE HELD PRIOR TO THE START OF THE WORK AND SHALL BE ATTENDED BY THE OWNER'S REPRESENTATIVES, THE ENGINEER, THE GENERAL CONTRACTOR, THE EXCAVATION SUBCONTRACTOR, THE SHORING SPECIALTY SUBCONTRACTOR, THE GEOTECHNICAL SPECIAL INSPECTOR, AND THE CITY REPRESENTATIVE. THE PRE-CONSTRUCTION MEETING SHALL BE CONDUCTED TO CLARIFY THE REQUIREMENTS FOR THE WORK, TO COORDINATE THE CONSTRUCTION ACTIVITIES, AND TO IDENTIFY CONTRACTUAL RELATIONSHIPS AND RESPONSIBILITIES.

**PRE-CONSTRUCTION REVIEW:**

SIX WEEKS PRIOR TO ORDERING SHORING SYSTEM MATERIALS, NOTIFY GROUND SUPPORT PLLC SO THAT THE EXCAVATION PLAN CAN BE CHECKED FOR CHANGES.

**REFERENCE DATA:**

ALL EXISTING SITE DATA, EXISTING AND PROPOSED TOPOGRAPHICAL DATA, AND EXISTING AND PROPOSED UTILITY DATA; AND PROPOSED SHORING WALL LOCATIONS ARE BASED ON:

- THE PLAN SET TITLED "HU\_20201228\_TO\_DH.DWG" DECEMBER 28, 2020.
- THE ELECTRONIC DRAWING FILE NAMED "HU RESIDENCE DHS104218W-A.PDF", PERMIT SET FILED DATED JANUARY 8, 2021, FILE PROVIDED TO GROUND SUPPORT PLLC BY DHS ENGINEERS.

**BUILDING CODES, DESIGN MANUALS, AND SPECIFICATIONS:**

2015 INTERNATIONAL BUILDING CODE, AS AMENDED BY THE CITY OF MERCER ISLAND.  
1998 FHWA SUMMARY REPORT OF RESEARCH ON PERMANENT GROUND ANCHOR WALLS.  
GEOTECHNICAL ENGINEERING CIRCULAR NO. 4, "GROUND ANCHORS AND ANCHORED SYSTEMS", FHWA, DATED JUNE 1999.

**DESIGN LIVE LOADS:**

TRAFFIC/CONSTRUCTION SURCHARGE = SEE SH4.0

**DESIGN CALCULATIONS:**

THE SOLDIER PILE SHORING WALL DESIGN CALCULATIONS ARE CONTAINED IN THE REPORT TITLED: "DESIGN MEMORANDUM, HU RESIDENCE (PROJECT NO. 20-50), 30xx 69th AVENUE SE, MERCER ISLAND, WASHINGTON", PREPARED BY GROUND SUPPORT PLLC FOR DHS ENGINEERS, Dihong Shao, DATED JANUARY 5, 2021, REVISED JULY 31, 2022.

**SUBSURFACE DESIGN:**

ALL SUBSURFACE DESIGN PARAMETERS USED IN THE SHORING DESIGN ARE BASED ON THE SUBSURFACE CHARACTERIZATION PRESENTED IN THE REPORT "GEOTECHNICAL ENGINEERING EVALUATION, HU RESIDENCE DEVELOPMENT, 30xx 69th AVENUE SE, MERCER ISLAND, WASHINGTON", PREPARED BY NELSON GEOTECHNICAL ASSOCIATES, INC., DATED JULY 10TH, 2020. THE SHORING DESIGN PARAMETERS AND EARTH PRESSURE DIAGRAM ARE PRESENTED ON THE PLANS.

**SEISMIC DESIGN PARAMETERS:**

SEE SH4.0

**CONCRETE / CONTROLLED-DENSITY-FILL (CDF):**

ALL STRUCTURAL CONCRETE SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF 3,000 PSI.

ALL CONTROLLED-DENSITY-FILL (CDF) SHALL HAVE A MINIMUM OF 1.5 SACKS (141 LB) OF CEMENT PER CUBIC YARD OF CONCRETE.

TYPE I, II, OR III PORTLAND CEMENT CONFORMING TO ASTM C150 / AASHTO M85 SHALL BE USED FOR CDF.

SLUMP FOR ALL CONCRETE SHALL NOT BE LESS THAN 5 INCHES AND NO GREATER THAN 9 INCHES.

ADMIXTURES SHALL CONFORM TO THE REQUIREMENTS OF ASTM C494 / AASHTO M194, SHALL BE USED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, AND SHALL BE APPROVED BY THE ENGINEER.

AGGREGATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM C33 / AASHTO M6 FOR FINE AGGREGATES AND AASHTO M80, CLASS B FOR COARSE AGGREGATES.

**TIMBER LAGGING:**

ALL LAGGING BOARDS SHALL BE PRESSURE-TREATED, IN GOOD CONDITION, AND SHALL BE HEM-FIR NO. 1 OR BETTER HEM-FIR NO. 2 OR BETTER, WITH AN ALLOWABLE FLEXURAL STRESS FB=1020 PSI (4-INCH LAGGING) AND FB=1050 PSI (6-INCH LAGGING) (WHICH INCLUDES ALL APPLICABLE FLAT-USE AND SIZE FACTORS).

ALL LAGGING BOARDS SHALL BE PRESSURE-TREATED IN ACCORDANCE WITH AWPA STANDARD U1-05 (FOR END USE CLASSIFICATION UC4), TO A MINIMUM RETENTION OF 0.40 PCF, USING THE CGA PROCESS (COMMERCIAL PRODUCT NAME OSMOSE OR APPROVED EQUAL). ALTERNATIVE TREATMENT PROCESSES MAY BE SUBMITTED TO GROUND SUPPORT PLLC FOR APPROVAL.

**STRUCTURAL STEEL:**

ALL STRUCTURAL STEEL SHAPES SHALL CONFORM TO ASTM A992 (F<sub>y</sub>=50 KSI (MIN)), AND PLATES SHALL CONFORM TO ASTM A572 (50KSI), UNLESS SHOWN OTHERWISE ON THE PLANS, OR APPROVED OTHERWISE BY THE ENGINEER.

**STRUCTURAL WELDING:**

MINIMUM WELD SIZE 1/4 INCH CONTINUOUS FILLET. MINIMUM WELD LENGTH 2 INCHES. ALL WELDING TO CONFORM TO AWS D11. USE E70XX ELECTRODES.

**SHORING ELEMENT LAYOUT:**

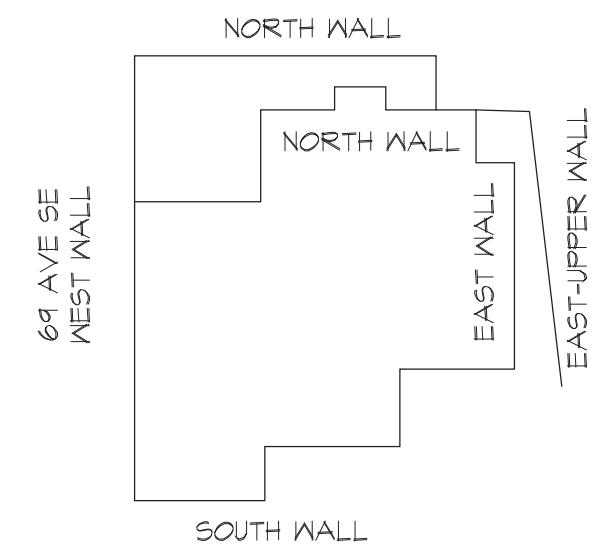
LAYOUT OF SHORING ELEMENTS PERPENDICULAR TO THE BUILDING WALLS SHALL BE BASED ON THE ARCHITECTURAL PLANS TAKING INTO ACCOUNT PERTINENT BUILDING ELEMENTS (E.G., WATERPROOFING) NOT SHOWN ON THESE PLANS.

F:\GROUND SUPPORT PLLC\2020\20-50 (HU RESIDENCE-WA)\SHORING\PERMITTING\2020\2050SHO101.DWG <SH1.D> - Plotted: 11/25/2022 10:17 AM



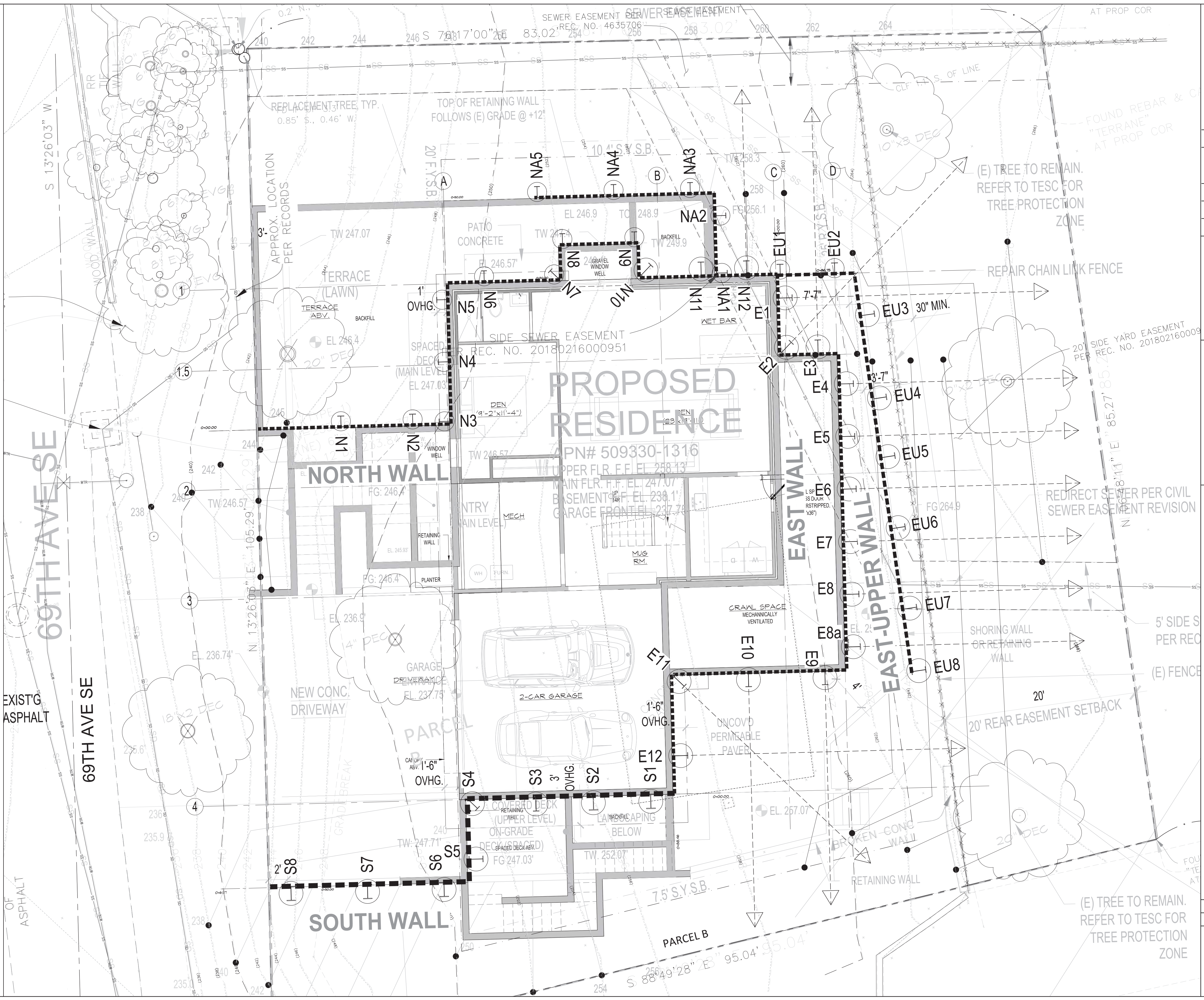
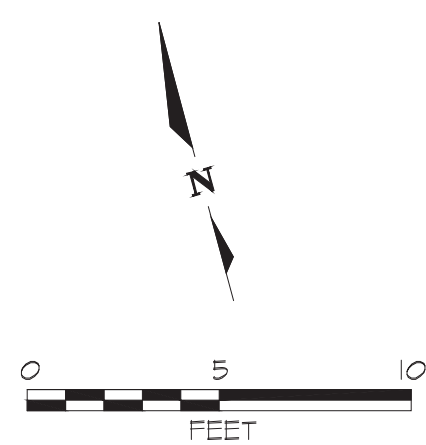


**WALL KEY PLAN**



**LEGEND**

- P1** SOLDIER PILE
- I** SOIL ANCHOR
- B** BUILDING GRID LOCATION
- FACE OF SOLDIER PILE WALL
- - -** EXISTING GRADE CONTOUR
- PROPOSED BUILDING WALL



FIGROUND SUPPORT PLLC(2020)20-50 (HU RESIDENCE-WA)(SHORING)(PERMITTING)R2(11252022)2050SH02ART.DWG -SH2.0- Plotted: 11/25/2022 10:16 AM

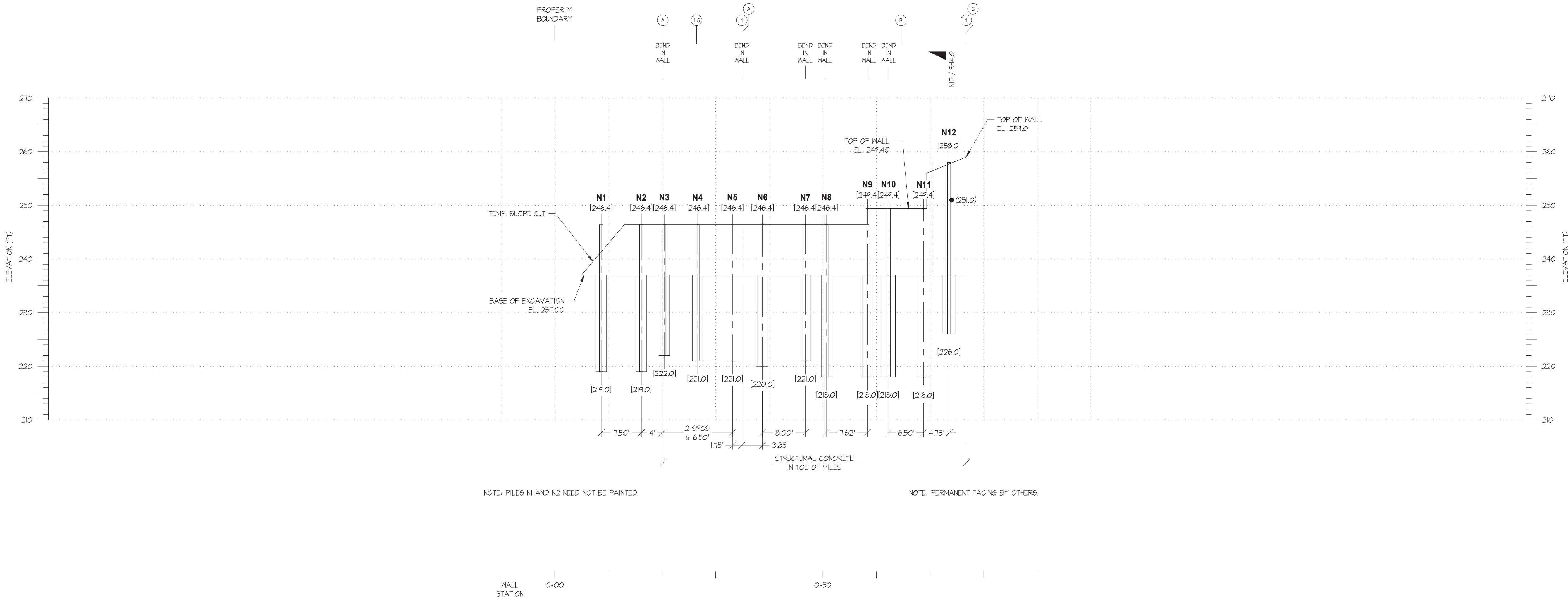
	DESCRIPTION	REV	DATE	PERMIT ISSUE	RESPOND TO COMMENTS
		0	01/18/2021		
		1	08/22/2022		

**Ground Support PLLC**  
 16932 Woodinville Richmond Rd NE, #210  
 Woodinville, WA 98072  
 Ph: (425) 488-1143 Fax: (425) 605-4057

**Hu RESIDENCE**  
**TEMPORARY SHORING AND**  
**PERMANENT RETAINING WALL**  
**SHORING PLAN**

PROJ. NO.	20-50
SHEET NUMBER	SH2.0

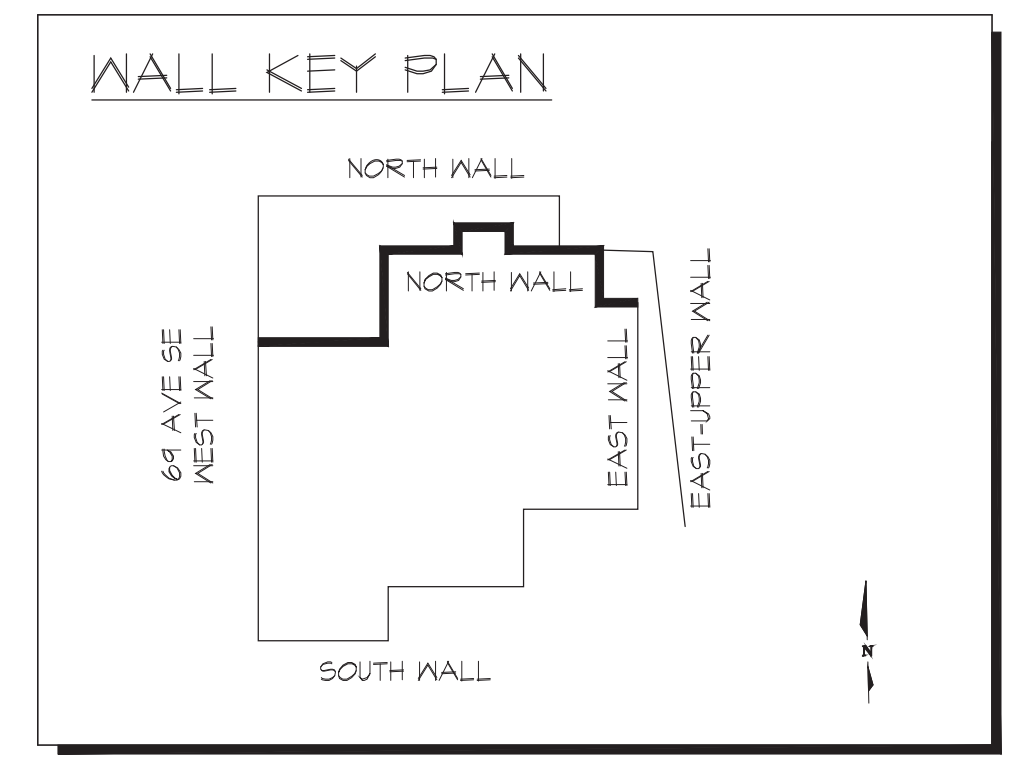
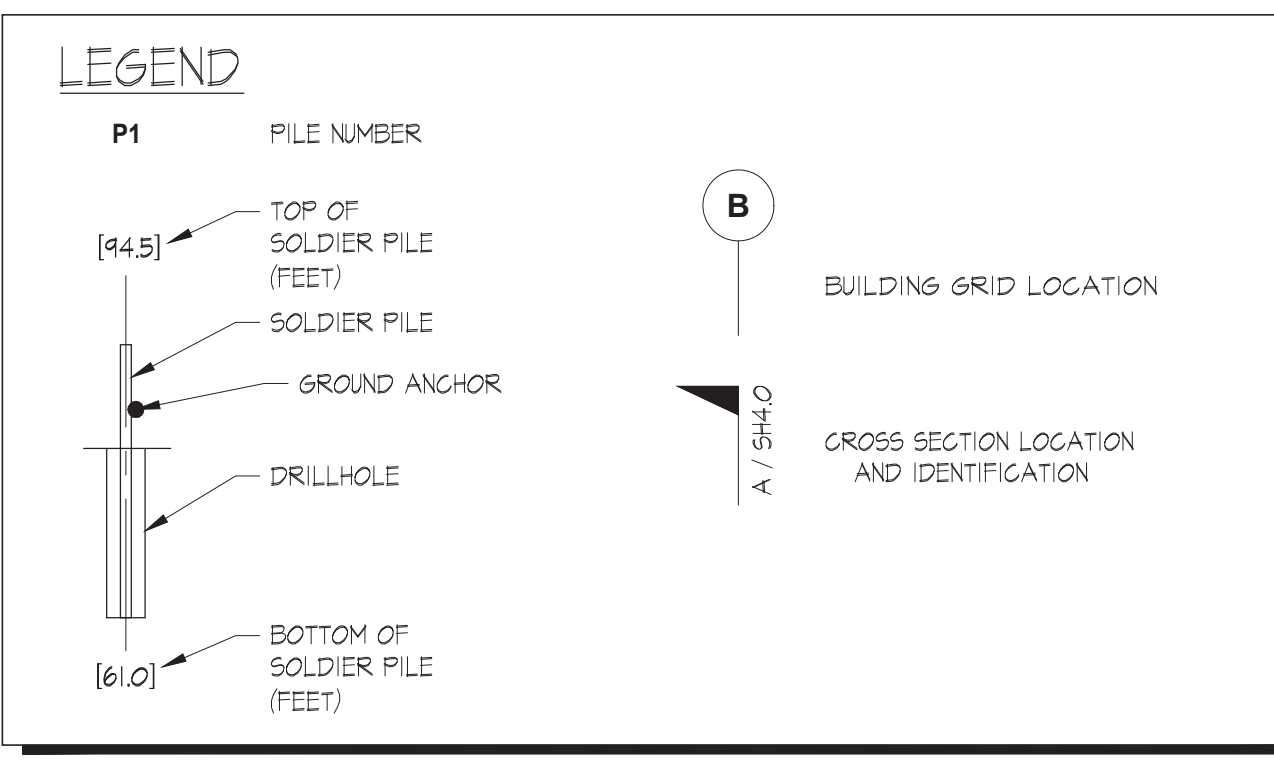
FIGROUND SUPPORT PLLC(2020)20-50 (HU RESIDENCE-WA)(SHORING)(PERMITTING)R2(11252022)2056SH03ART1.DWG -SH3.0- Plotted: 11/25/2022 10:14 AM



NOTE: PILES N1 AND N2 NEED NOT BE PAINTED.

NOTE: PERMANENT FACING BY OTHERS.

NOTE: INFORMATION SUPPLIED TO GROUND SUPPORT PLLC AT TIME OF SHORING DESIGN INSUFFICIENT TO CHECK FOR ALL POTENTIAL CONFLICTS BETWEEN SHORING ELEMENTS AND UTILITIES. CONTRACTOR IS RESPONSIBLE FOR LOCATION OF ALL UTILITIES WITHIN ZONE OF SHORING ELEMENTS AND FOR CHECKING THAT NO SUCH CONFLICTS EXIST.



PSN	PRN	CHK	DATE	REV	DESCRIPTION
R.B.	BPM	C.J.K	01/18/2021	0	PERMIT ISSUE
R.B.	BPM	C.J.K	08/22/2022	1	RESPOND TO COMMENTS



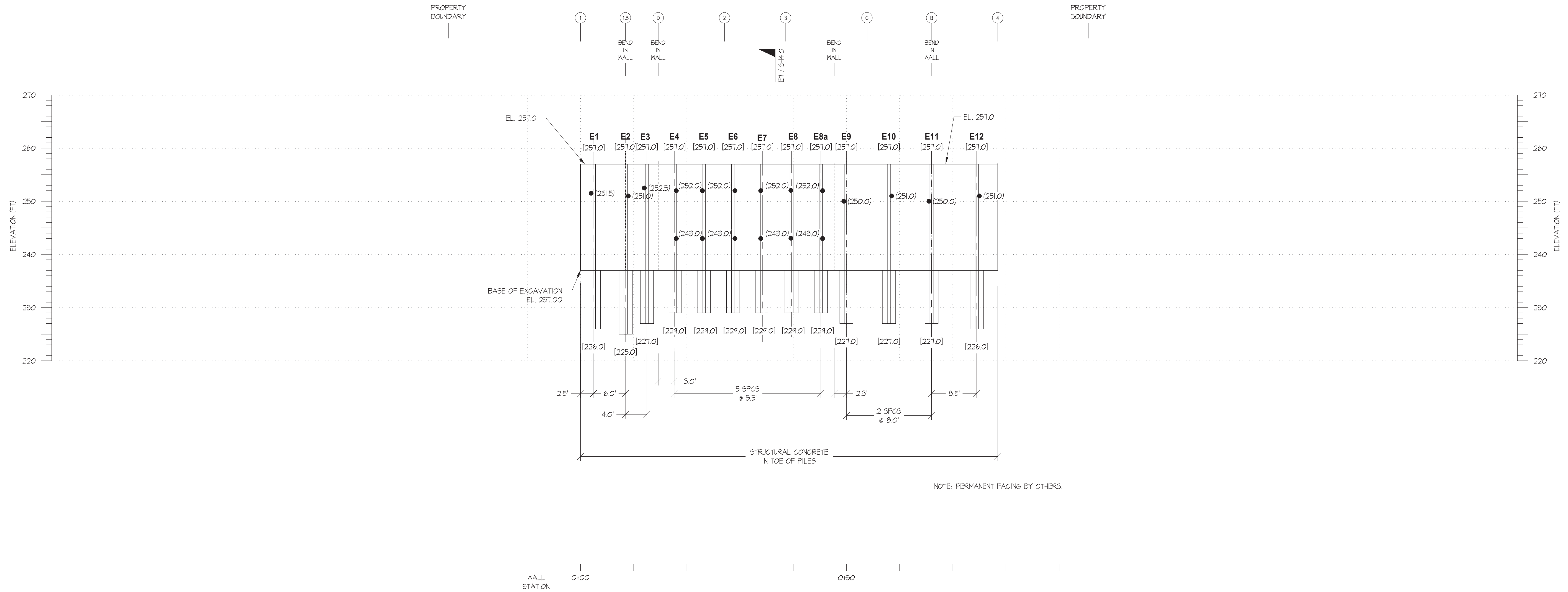
**Ground Support PLLC**  
 16932 Woodinville Richmond Rd NE, #210  
 Woodinville, WA 98072  
 Ph: (425) 488-1143 Fax: (425) 605-4057

Hu RESIDENCE  
 TEMPORARY SHORING AND  
 PERMANENT RETAINING WALL  
 NORTH ELEVATION

PROJ. NO. 20-50  
 SHEET NUMBER

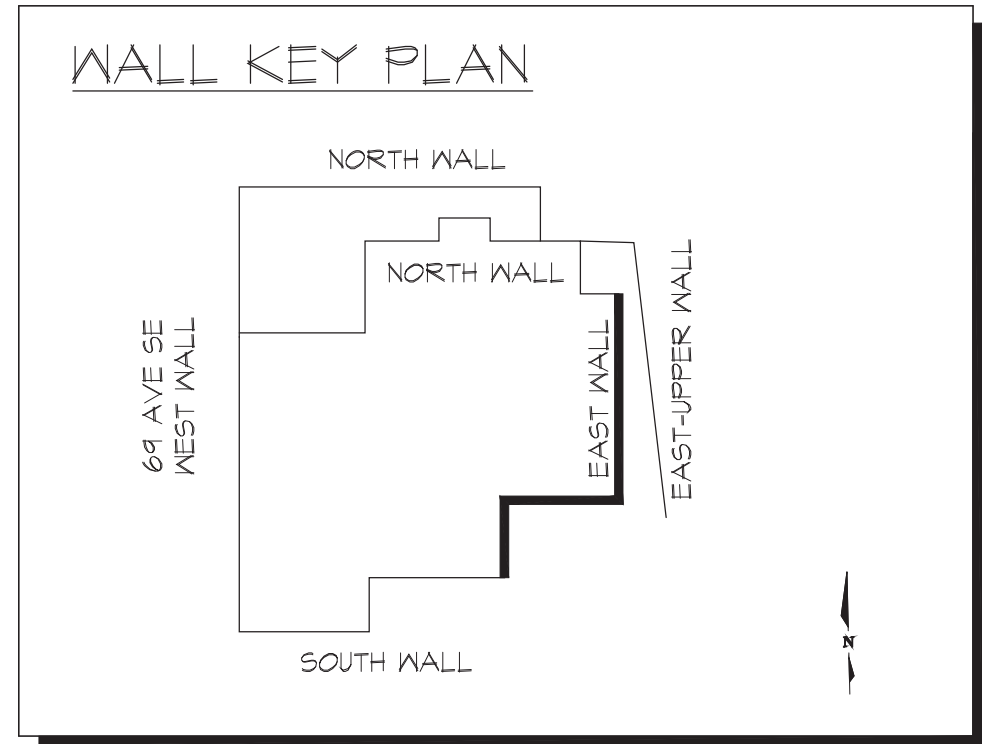
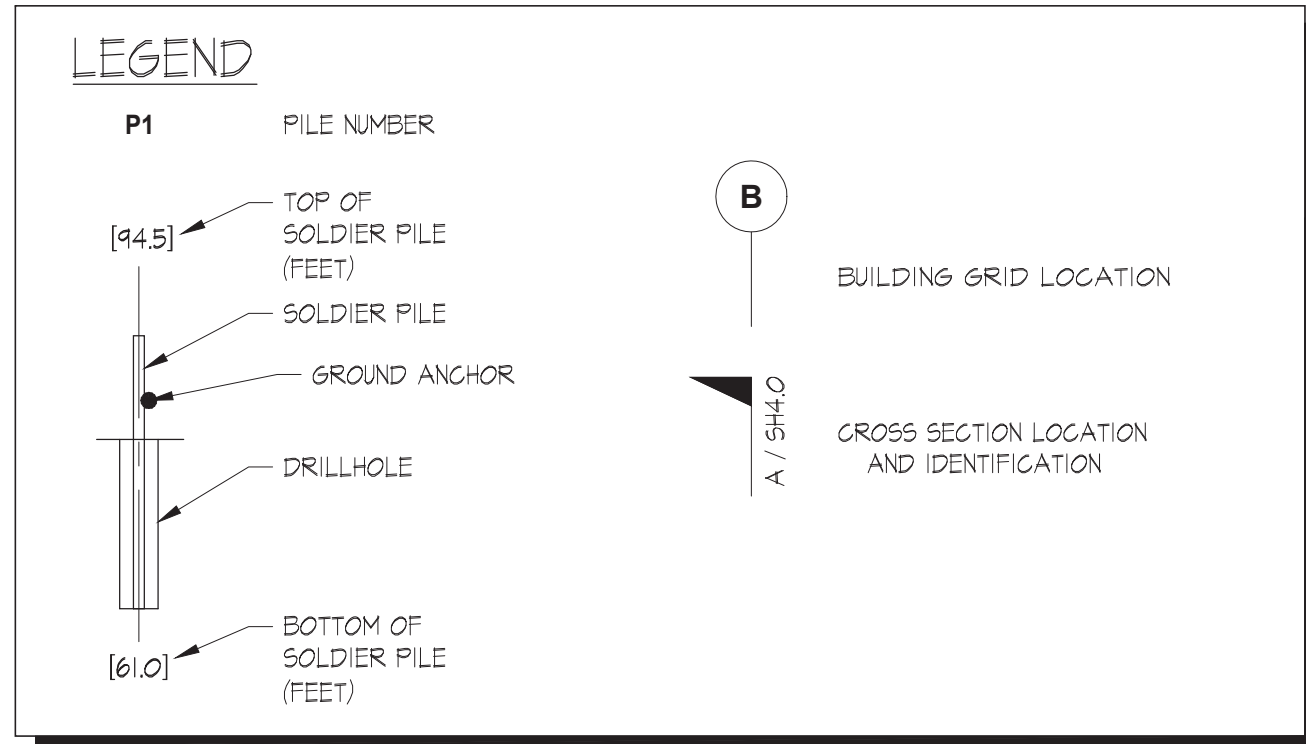
**SH3.0**

FIGROUND SUPPORT PLLC 2020-50 (HU RESIDENCE-WA) (SHORING) (PERMITTING) R2 (1/25/2022) 2056SH0303ART1.DWG -dshs.1- Plotfile: 1/25/2022 10:15 AM



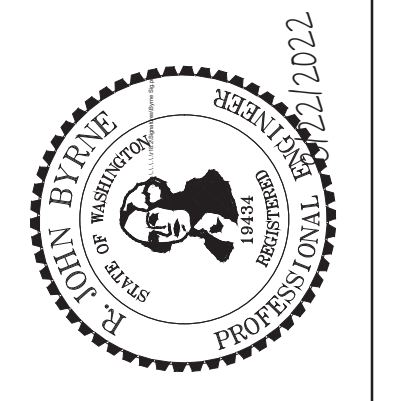
NOTE: PERMANENT FACING BY OTHERS.

NOTE: INFORMATION SUPPLIED TO GROUND SUPPORT PLLC AT TIME OF SHORING DESIGN INSUFFICIENT TO CHECK FOR ALL POTENTIAL CONFLICTS BETWEEN SHORING ELEMENTS AND UTILITIES. CONTRACTOR IS RESPONSIBLE FOR LOCATION OF ALL UTILITIES WITHIN ZONE OF SHORING ELEMENTS AND FOR CHECKING THAT NO SUCH CONFLICTS EXIST.



REV	DATE	DESCRIPTION
0	01/18/2021	PERMIT ISSUE
1	08/22/2022	RESPOND TO COMMENTS

PSN	PRN	CHK	DATE
R.B.	B.P.M.	C.J.K.	01/18/2021
R.B.	B.P.M.	C.J.K.	08/22/2022



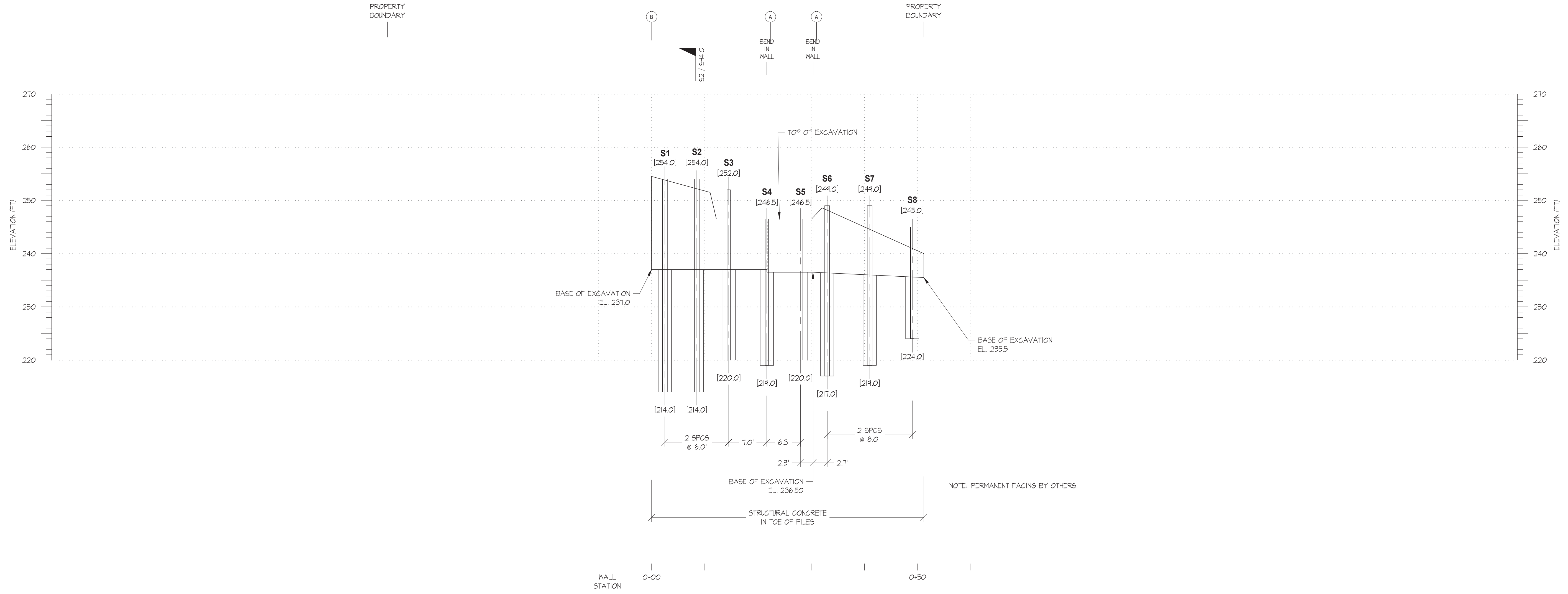
**Ground Support PLLC**  
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**Hu RESIDENCE  
 TEMPORARY SHORING AND  
 PERMANENT RETAINING WALL  
 EAST ELEVATION**

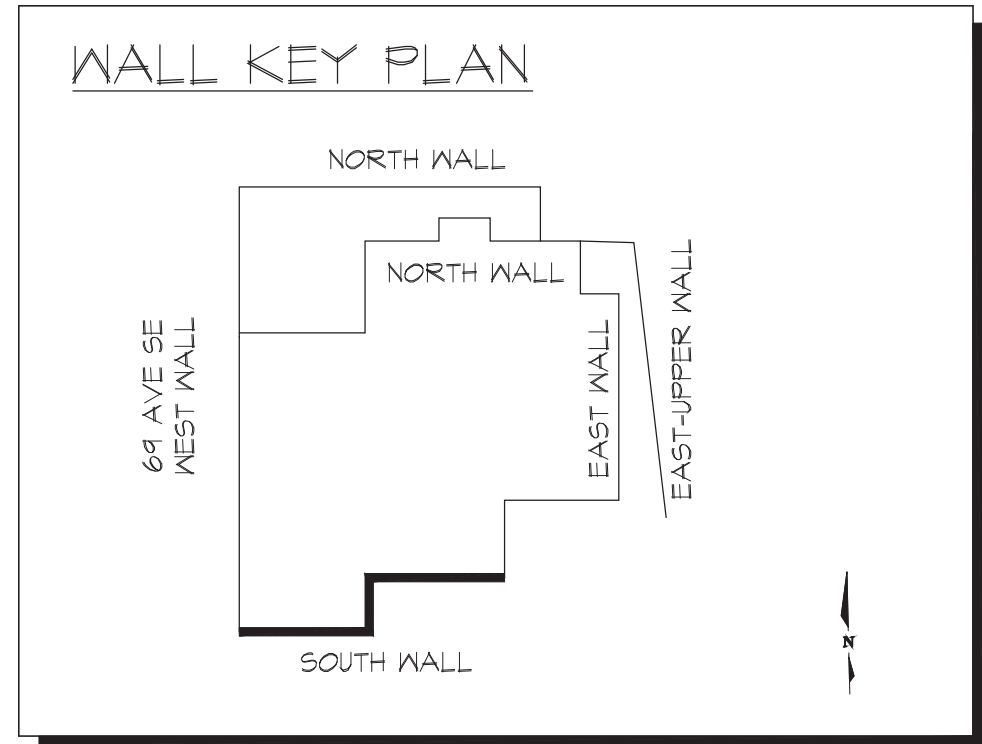
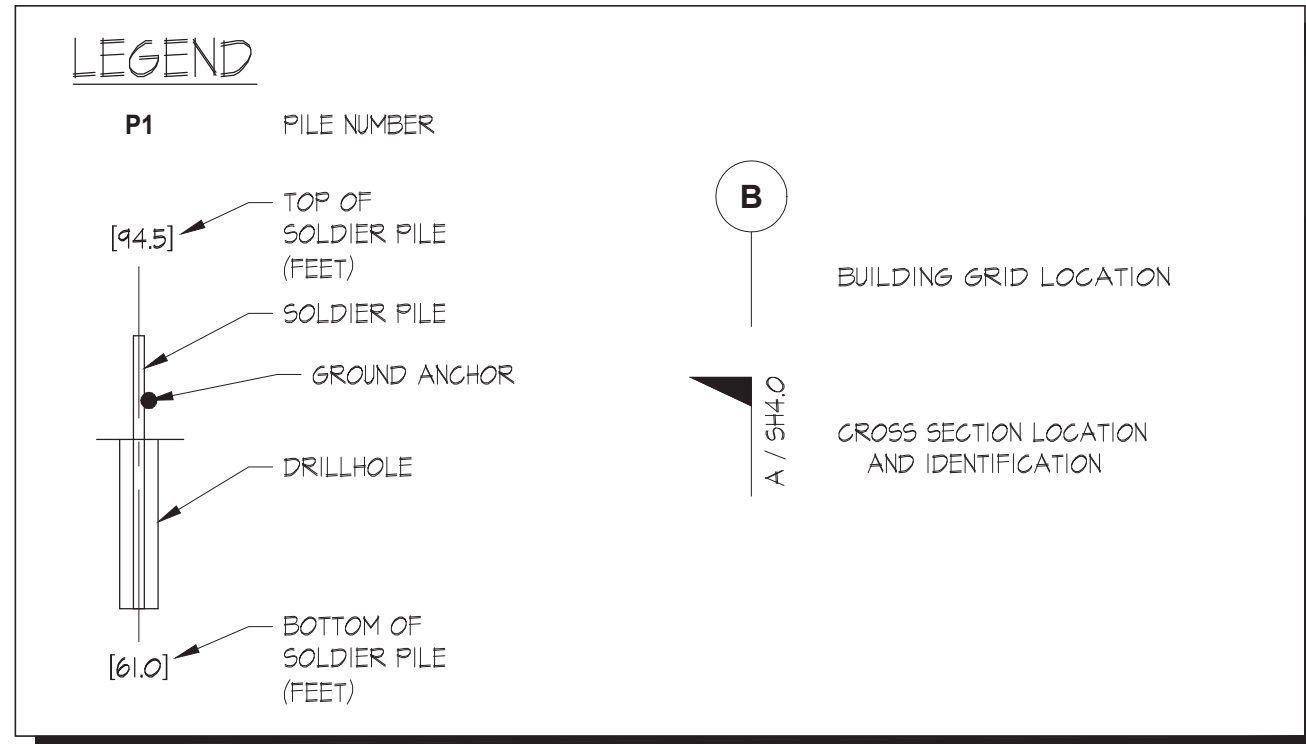
PROJ. NO. 20-50  
 SHEET NUMBER

**SH3.1**

FIGROUND SUPPORT PLLC 2020-20-50 (HU RESIDENCE-WA) (SHORING) (PERMITTING) R2 (11/25/2022) 2056SH03ART1.DWG 6SH3.2- Plotted: 11/25/2022 10:15 AM



**NOTE: INFORMATION SUPPLIED TO GROUND SUPPORT PLLC AT TIME OF SHORING DESIGN INSUFFICIENT TO CHECK FOR ALL POTENTIAL CONFLICTS BETWEEN SHORING ELEMENTS AND UTILITIES. CONTRACTOR IS RESPONSIBLE FOR LOCATION OF ALL UTILITIES WITHIN ZONE OF SHORING ELEMENTS AND FOR CHECKING THAT NO SUCH CONFLICTS EXIST.**



PSN	PRN	CHK	DATE	REV	DESCRIPTION
RJB	BPM	CJA	01/18/2021	0	PERMIT ISSUE
RJB	BPM	CJA	08/22/2022	1	RESPOND TO COMMENTS



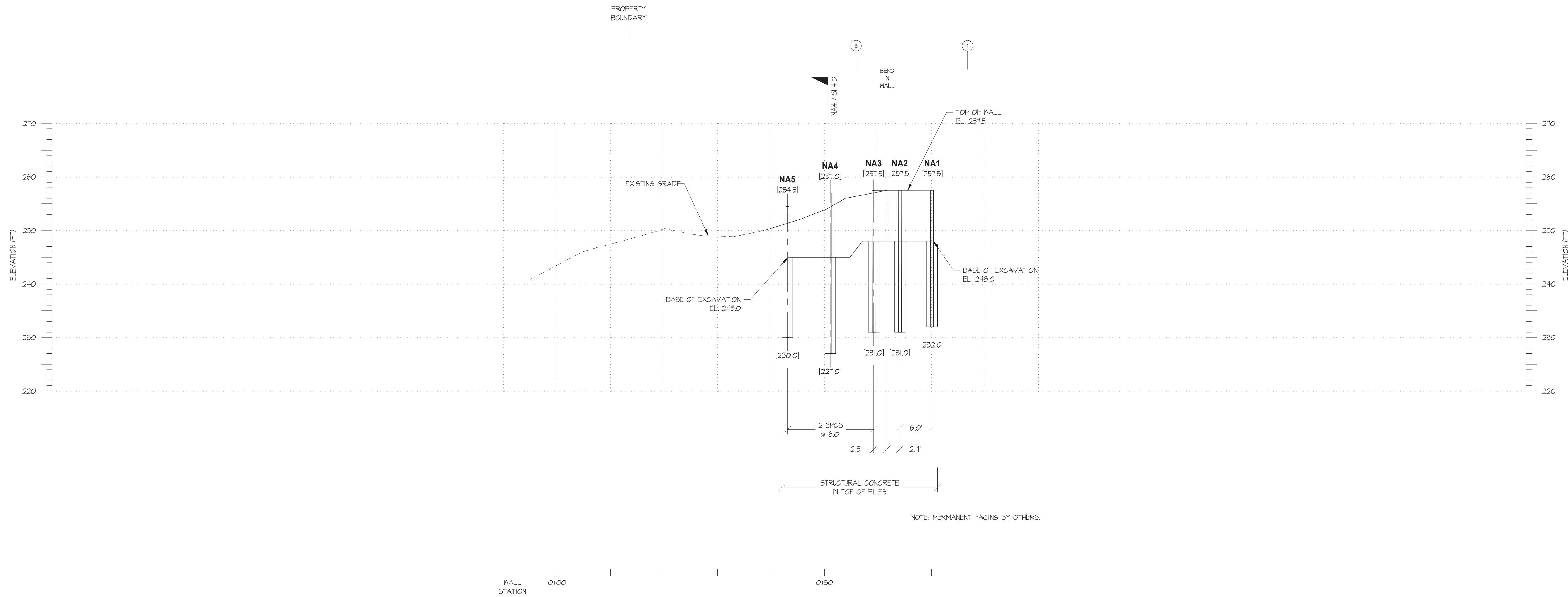
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**Hu RESIDENCE  
 TEMPORARY SHORING AND  
 PERMANENT RETAINING WALL  
 SOUTH ELEVATION**

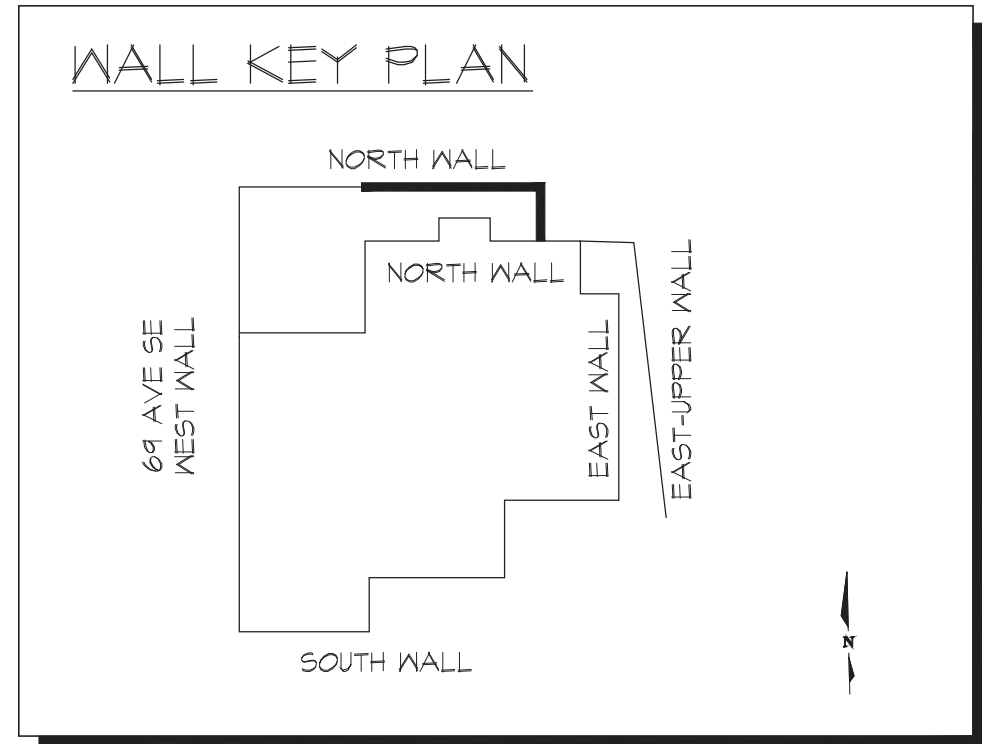
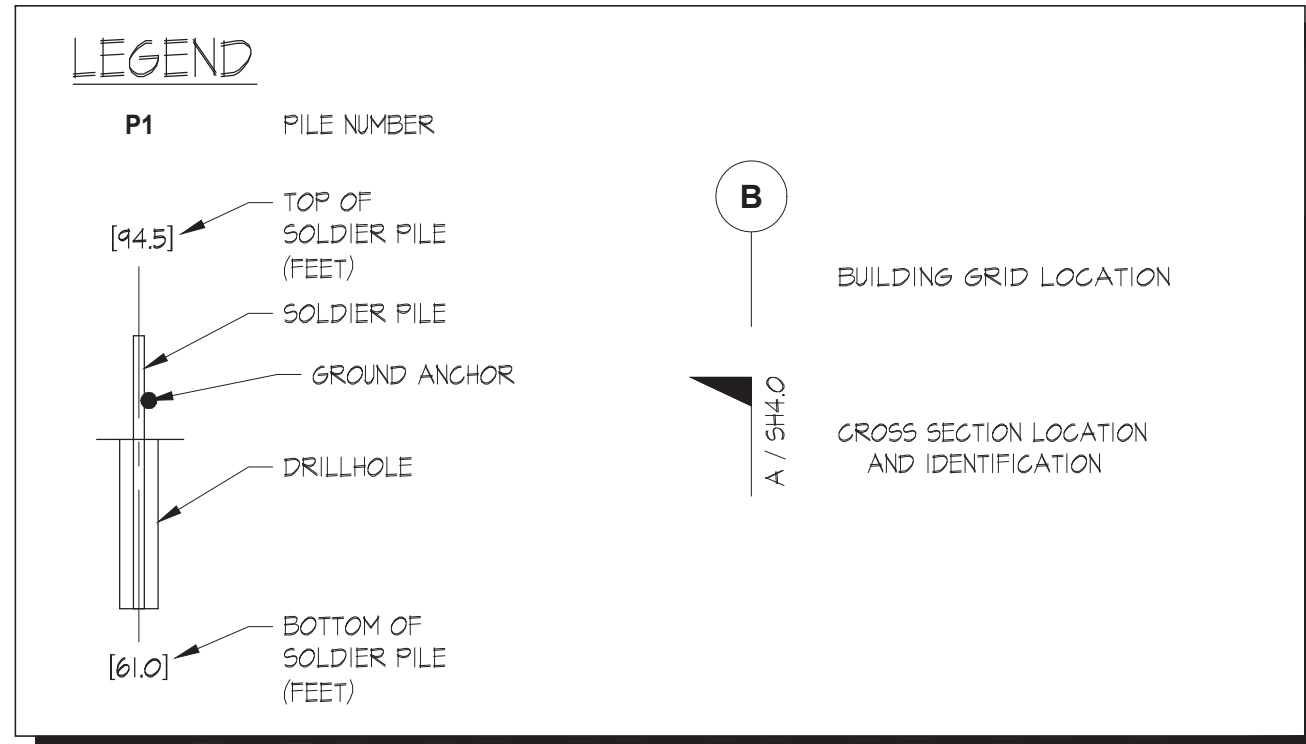
PROJ. NO. 20-50  
 SHEET NUMBER

SH3.2

F:\GROUND SUPPORT PLLC\2020\20-50 (HU RESIDENCE-WA)\(SHORING)\(PERMITTING)\R2(11252022)\2056SH03ART1.DWG -dSH3.3- Plotted: 11/25/2022 10:14 AM



NOTE: INFORMATION SUPPLIED TO GROUND SUPPORT PLLC AT TIME OF SHORING DESIGN INSUFFICIENT TO CHECK FOR ALL POTENTIAL CONFLICTS BETWEEN SHORING ELEMENTS AND UTILITIES. CONTRACTOR IS RESPONSIBLE FOR LOCATION OF ALL UTILITIES WITHIN ZONE OF SHORING ELEMENTS AND FOR CHECKING THAT NO SUCH CONFLICTS EXIST.



PSN	PRN	CHK	DATE	DESCRIPTION
R.B	BPM	CJK	01/18/2021	PERMIT ISSUE
R.B	BPM	CJK	08/22/2022	RESPOND TO COMMENTS



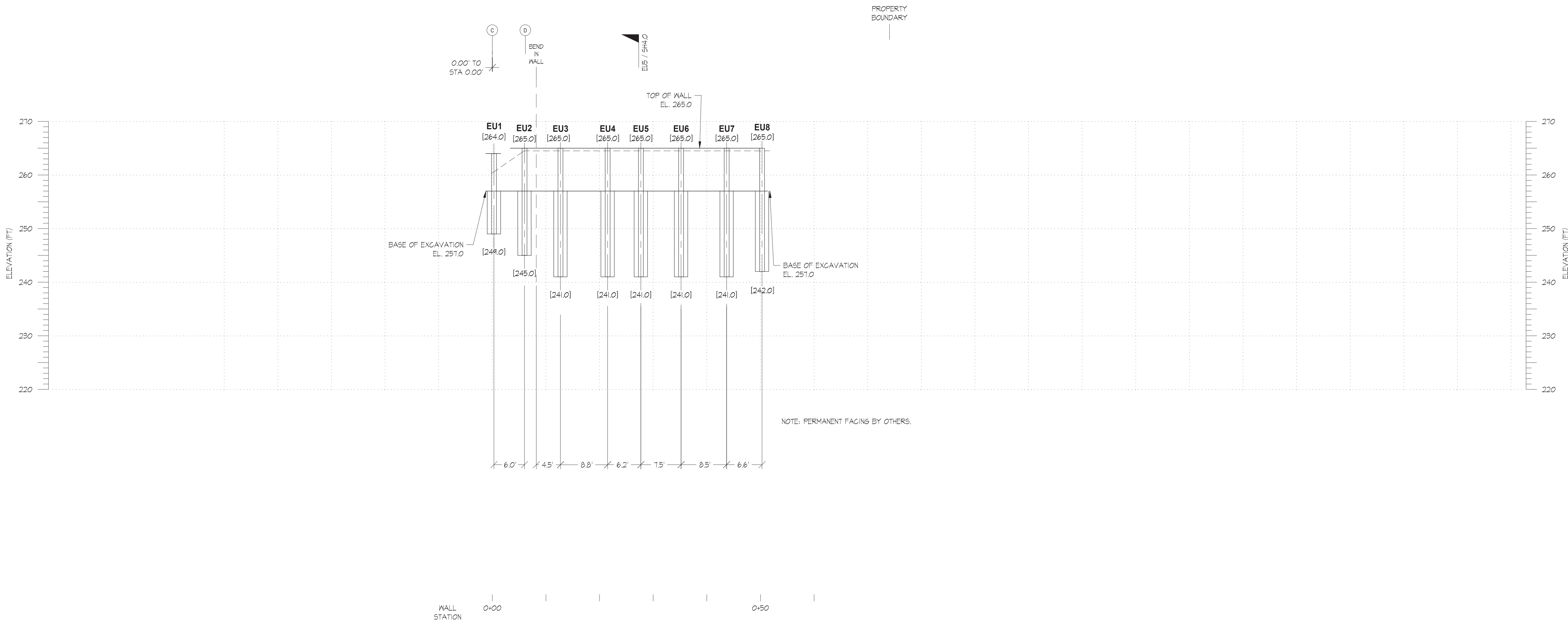
**Ground Support PLLC**  
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 Woodinville, WA 98072  
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HU RESIDENCE  
 TEMPORARY SHORING AND  
 PERMANENT RETAINING WALL  
 NORTH ELEVATION (PERIMETER)

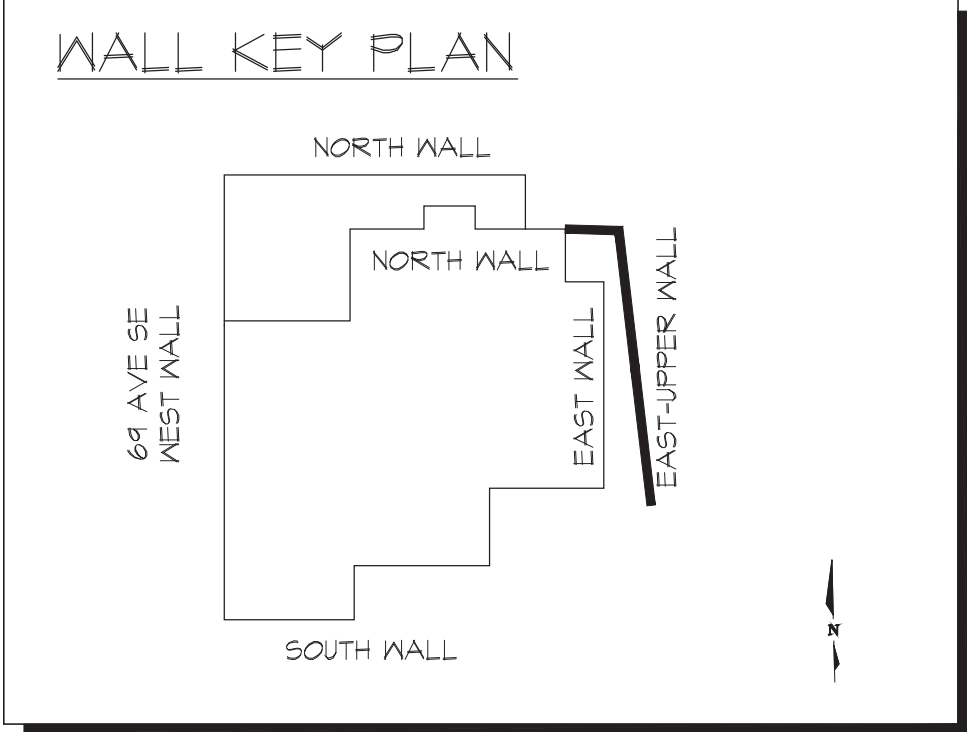
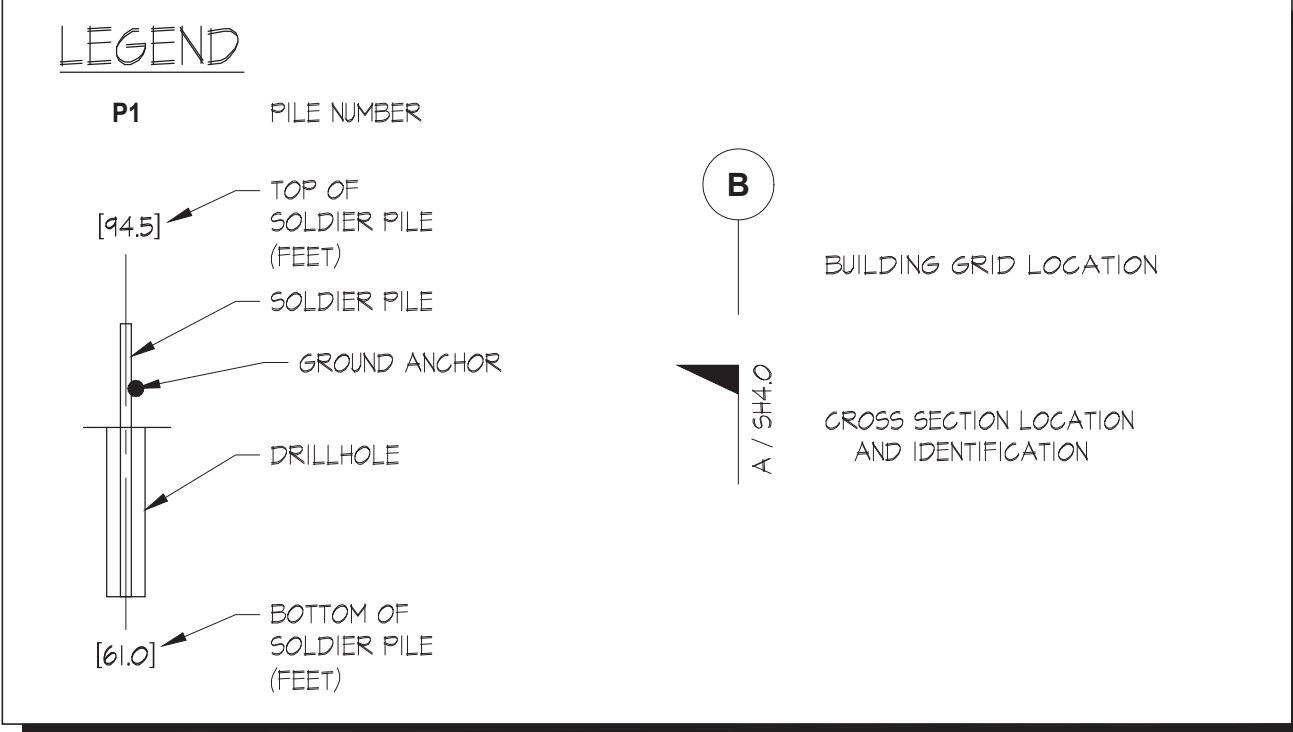
PROJ. NO. 20-50  
 SHEET NUMBER

**SH3.3**

FIGROUND SUPPORT PLLC(2020-20-50 (HU RESIDENCE-WA))(SHORING)(PERMITTING)R2(11252022)2056SH03ART1.DWG JSH4.4- Plotted: 11/25/2022 10:14 AM



NOTE: INFORMATION SUPPLIED TO GROUND SUPPORT PLLC AT TIME OF SHORING DESIGN INSUFFICIENT TO CHECK FOR ALL POTENTIAL CONFLICTS BETWEEN SHORING ELEMENTS AND UTILITIES. CONTRACTOR IS RESPONSIBLE FOR LOCATION OF ALL UTILITIES WITHIN ZONE OF SHORING ELEMENTS AND FOR CHECKING THAT NO SUCH CONFLICTS EXIST.



DESCRIPTION	REV	DATE
PERMIT ISSUE	0	01/18/2021
RESPOND TO COMMENTS	1	08/22/2022



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**Hu RESIDENCE  
 TEMPORARY SHORING AND  
 PERMANENT RETAINING WALL  
 EAST - UPPER ELEVATION**

PROJ. NO. 20-50  
 SHEET NUMBER

**SH3.4**

FIGROUND SUPPORT PLLC(2020)20-50 (HU RESIDENCE-WA-1)(SHORING)(PERMITTING)R2(11252022)2050SH3.A> Plotted: 11/29/2022 10:20 AM

NORTH WALL - PILE AND ANCHOR SCHEDULE																						
PILE NUMBER	WALL STA	STEEL SECTION	PILE TOP ELEV (FT)	PILE BOT ELEV (FT)	PILE LENGTH (FT)	MIN. DRILL-HOLE DIA (FT)	ANCHOR 1															
							ANCHOR ELEV (FT)	DECLINATION (DEG)	TOTAL LENGTH (FT)	UNBOND LENGTH (FT)	BOND LENGTH (FT)	BAR SIZE	DESIGN LOAD (K)	LOCKOFF LOAD (K)								
N1	0+07.5	W4X48	246.4	219.0	27.4	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N2	0+15.5	W4X48	246.4	219.0	27.4	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N3	0+19.5	W4X38	246.4	222.0	24.4	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N4	0+26.0	W4X38	246.4	221.0	25.4	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N5	0+32.5	W4X38	246.4	221.0	25.4	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N6	0+38.1	W4X38	246.4	220.0	26.4	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N7	0+46.1	W4X38	246.4	221.0	25.4	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N8	0+50.0	W4X48	246.4	218.0	28.4	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N9	0+57.6	W4X48	244.4	218.0	31.4	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N10	0+61.5	W8X50	244.4	218.0	31.4	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N11	0+68.0	W8X55	244.4	218.0	31.4	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N12	0+72.8	W8X50	258.0	226.0	32.0	2.5	251.0	45.0	27.5	11.5	16	#10	55.0	55.0	-	-	-	-	-	-	-	-

SOUTH WALL - PILE SCHEDULE						
PILE NUMBER	WALL STA	STEEL SECTION	PILE TOP ELEV (FT)	PILE BOT ELEV (FT)	PILE LENGTH (FT)	MIN. DRILL-HOLE DIA (FT)
S1	0+02.5	W8X97	254.0	214.0	40.0	2.5
S2	0+08.5	W8X86	254.0	214.0	40.0	2.5
S3	0+14.5	W8X50	252.0	220.0	32.0	2.5
S4	0+21.5	W8X50	246.5	219.0	27.5	2.5
S5	0+28.0	W8X50	246.5	220.0	26.5	2.5
S6	0+33.0	W8X65	249.0	217.0	32.0	2.5
S7	0+41.0	W4X43	249.0	219.0	30.0	2.5
S8	0+49.0	W4X34	245.0	224.0	21.0	2.5

EAST UPPER WALL - PILE SCHEDULE						
PILE NUMBER	WALL STA	STEEL SECTION	PILE TOP ELEV (FT)	PILE BOT ELEV (FT)	PILE LENGTH (FT)	MIN. DRILL-HOLE DIA (FT)
EU1	0+00.3	W4X34	264.0	249.0	15.0	2.0
EU2	0+06.0	W4X34	265.0	245.0	20.0	2.0
EU3	0+12.3	W4X34	265.0	241.0	24.0	2.0
EU4	0+21.1	W4X34	265.0	241.0	24.0	2.0
EU5	0+27.3	W4X34	265.0	241.0	24.0	2.0
EU6	0+34.8	W4X34	265.0	241.0	24.0	2.0
EU7	0+43.3	W4X34	265.0	241.0	24.0	2.0
EU8	0+49.9	W4X34	265.0	242.0	23.0	2.0

EAST WALL - PILE AND ANCHOR SCHEDULE																							
PILE NUMBER	WALL STA	STEEL SECTION	PILE TOP ELEV (FT)	PILE BOT ELEV (FT)	PILE LENGTH (FT)	MIN. DRILL-HOLE DIA (FT)	ANCHOR 1								ANCHOR 2								
							ANCHOR ELEV (FT)	DECLINATION (DEG)	TOTAL LENGTH (FT)	UNBOND LENGTH (FT)	BOND LENGTH (FT)	BAR SIZE	DESIGN LOAD (K)	LOCKOFF LOAD (K)	ANCHOR ELEV (FT)	DECLINATION (DEG)	TOTAL LENGTH (FT)	UNBOND LENGTH (FT)	BOND LENGTH (FT)	BAR SIZE	DESIGN LOAD (K)	LOCKOFF LOAD (K)	
E1	0+02.5	W8X65	257.0	226.0	31.0	2.5	251.5	45.0	40.0	12.5	27.5	1-1/4-inch	80.0	80.0	-	-	-	-	-	-	-	-	-
E2	0+08.5	W8X55	257.0	225.0	32.0	2.5	251.0	20.0	30.0	12.5	17.5	No. 10	50.0	50.0	-	-	-	-	-	-	-	-	-
E3	0+12.5	W4X43	257.0	227.0	30.0	2.5	252.5	20.0	27.5	13.0	15.0	No. 9	40.0	40.0	-	-	-	-	-	-	-	-	-
E4	0+17.1	W4X34	257.0	224.0	28.0	2.5	252.0	25.0	27.5	12.5	15.0	No. 9	40.0	40.0	243.0	25.0	27.5	10.0	17.5	No. 10	50.0	50.0	
E5	0+23.2	W4X34	257.0	224.0	28.0	2.5	252.0	25.0	27.5	12.5	15.0	No. 9	40.0	40.0	243.0	25.0	27.5	10.0	17.5	No. 10	50.0	50.0	
E6	0+28.7	W4X34	257.0	224.0	28.0	2.5	252.0	25.0	27.5	12.5	15.0	No. 9	40.0	40.0	243.0	25.0	27.5	10.0	17.5	No. 10	50.0	50.0	
E7	0+34.2	W4X34	257.0	224.0	28.0	2.5	252.0	25.0	27.5	12.5	15.0	No. 9	40.0	40.0	243.0	25.0	27.5	10.0	17.5	No. 10	50.0	50.0	
E8	0+39.7	W4X34	257.0	224.0	28.0	2.5	252.0	25.0	27.5	12.5	15.0	No. 9	40.0	40.0	243.0	25.0	27.5	10.0	17.5	No. 10	50.0	50.0	
E8a	0+45.2	W4X34	257.0	224.0	28.0	2.5	252.0	25.0	27.5	12.5	15.0	No. 9	40.0	40.0	243.0	25.0	27.5	10.0	17.5	No. 10	50.0	50.0	
E9	0+50.0	W8X50	257.0	221.0	30.0	2.5	250.0	40.0	32.5	10.0	20.0	1-inch	60.0	60.0	-	-	-	-	-	-	-	-	
E10	0+58.0	W8X50	257.0	221.0	30.0	2.5	251.0	35.0	32.5	10.5	22.0	1-inch	65.0	65.0	-	-	-	-	-	-	-	-	
E11	0+66.0	W8X50	257.0	221.0	30.0	2.5	250.0	40.0	37.0	10.5	26.5	1-1/4-inch	80.0	80.0	-	-	-	-	-	-	-	-	
E12	0+74.5	W8X50	257.0	226.0	31.0	2.5	251.0	20.0	32.5	12.5	20.0	1-inch	60.0	60.0	-	-	-	-	-	-	-	-	

NORTH (OUTSIDE WALL) - PILE SCHEDULE						
PILE NUMBER	WALL STA	STEEL SECTION	PILE TOP ELEV (FT)	PILE BOT ELEV (FT)	PILE LENGTH (FT)	MIN. DRILL-HOLE DIA (FT)
NA1	0+70.1	W4X34	257.5	232.0	25.5	2.0
NA2	0+64.1	W4X38	257.5	231.0	26.5	2.0
NA3	0+59.2	W4X38	257.5	231.0	26.5	2.0
NA4	0+51.1	W8X50	257.0	227.0	30.0	2.0
NA5	0+43.1	W4X34	254.5	230.0	24.5	2.0

REV	DATE	DESCRIPTION
0	01/18/2021	PERMIT ISSUE
1	08/22/2022	RESPOND TO COMMENTS

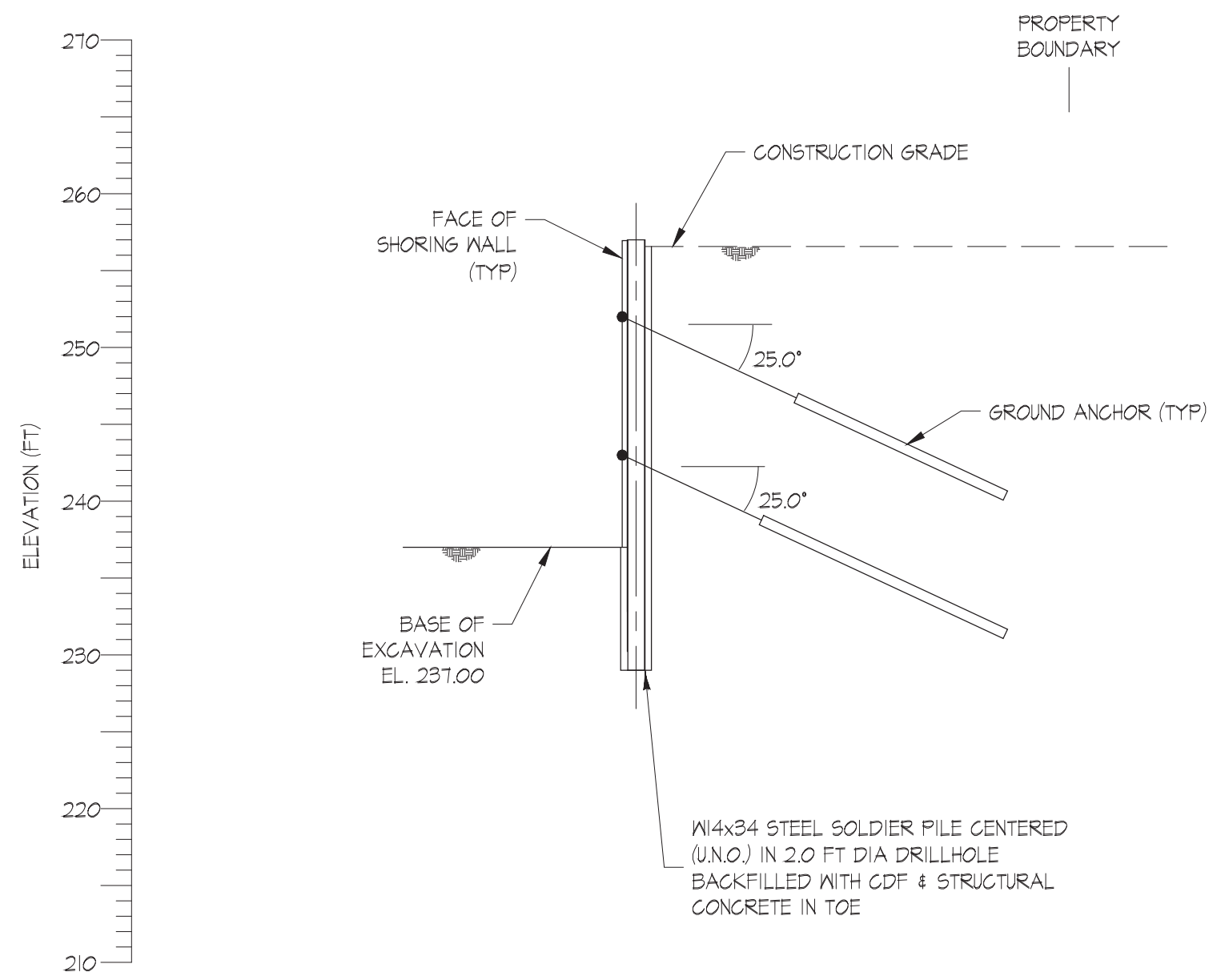


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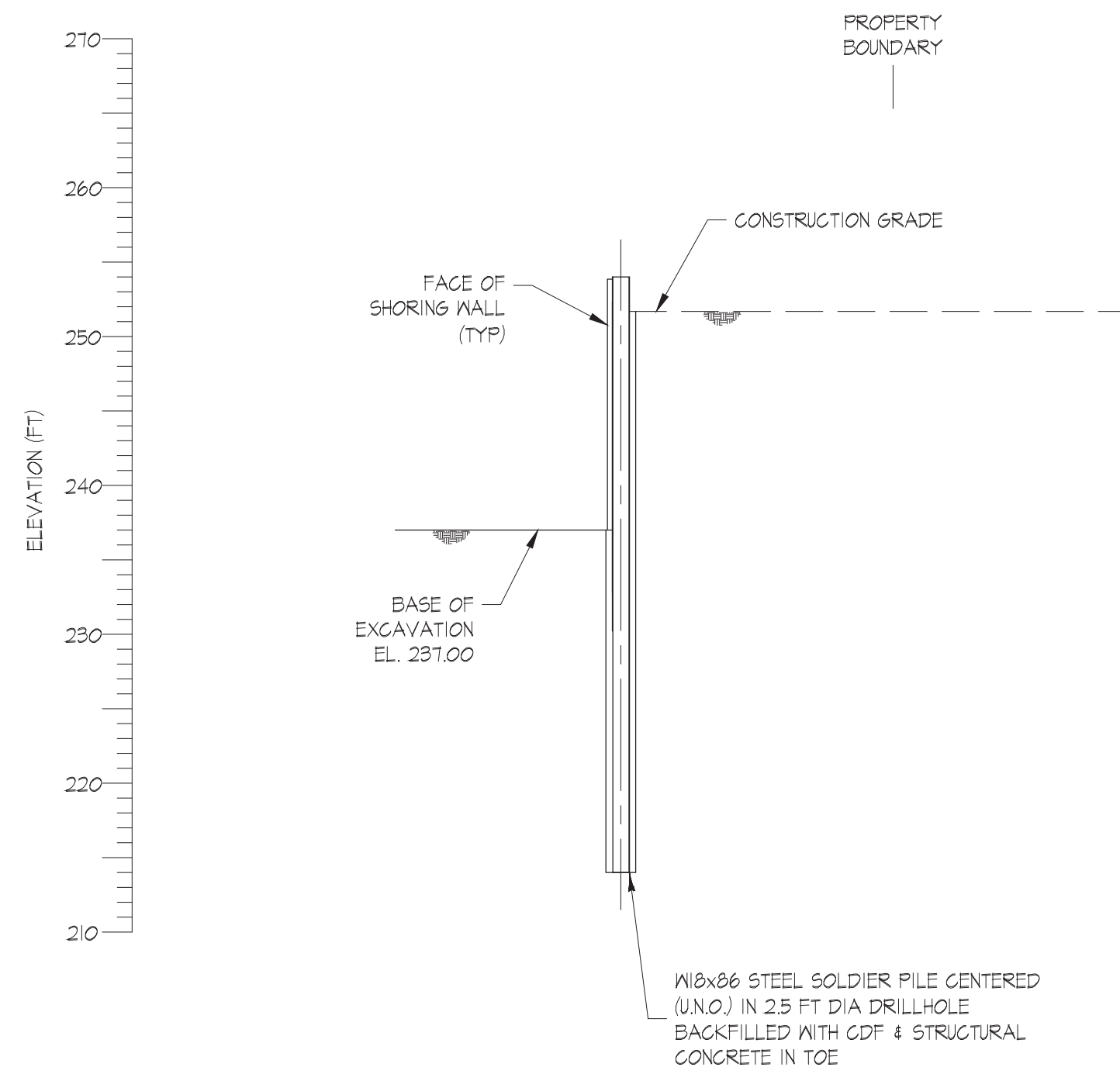
**HU RESIDENCE  
 TEMPORARY SHORING AND  
 PERMANENT RETAINING WALL  
 PILE AND ANCHOR SCHEDULES**

PROJ. NO. 20-50  
 SHEET NUMBER

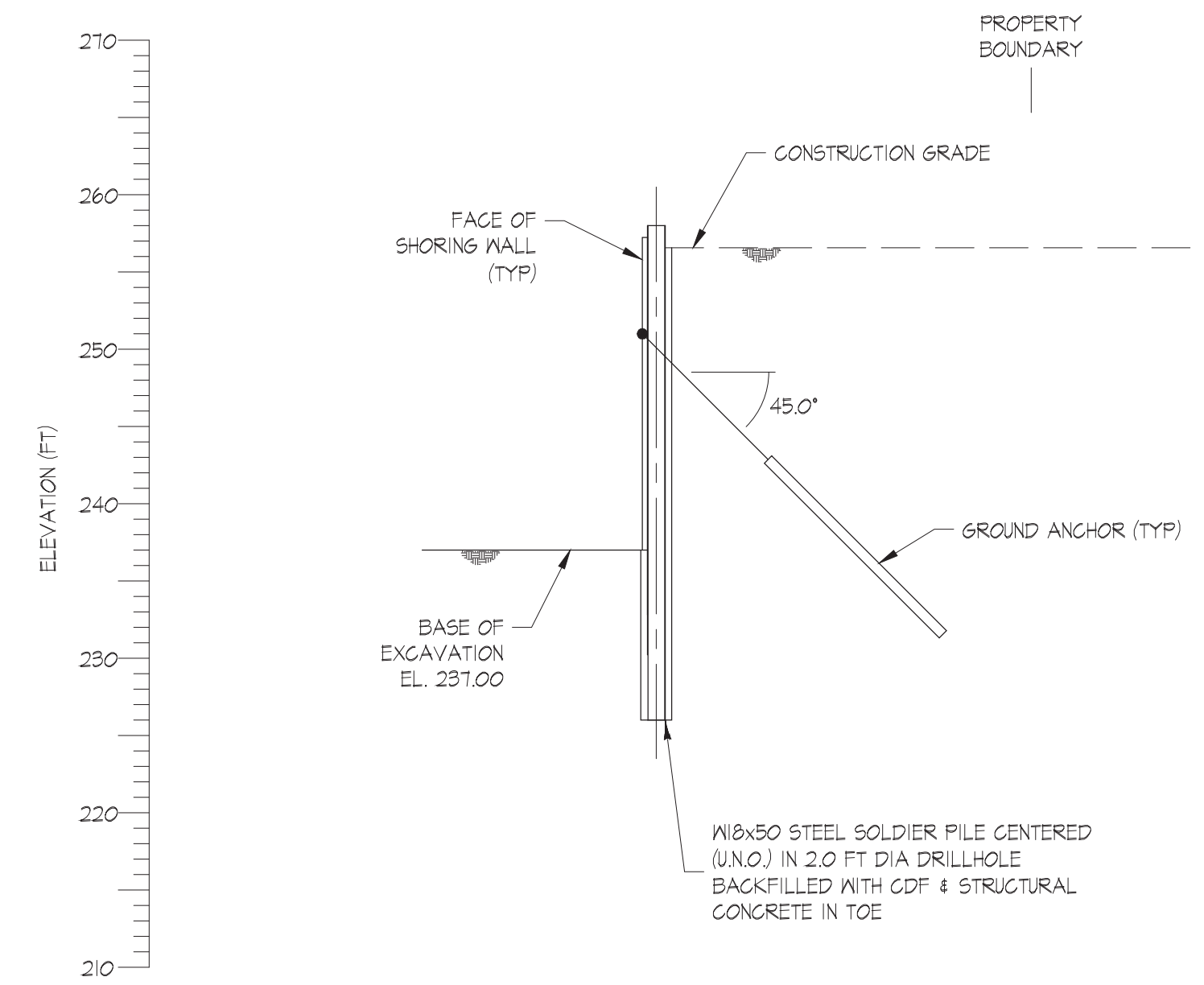
SH3.A



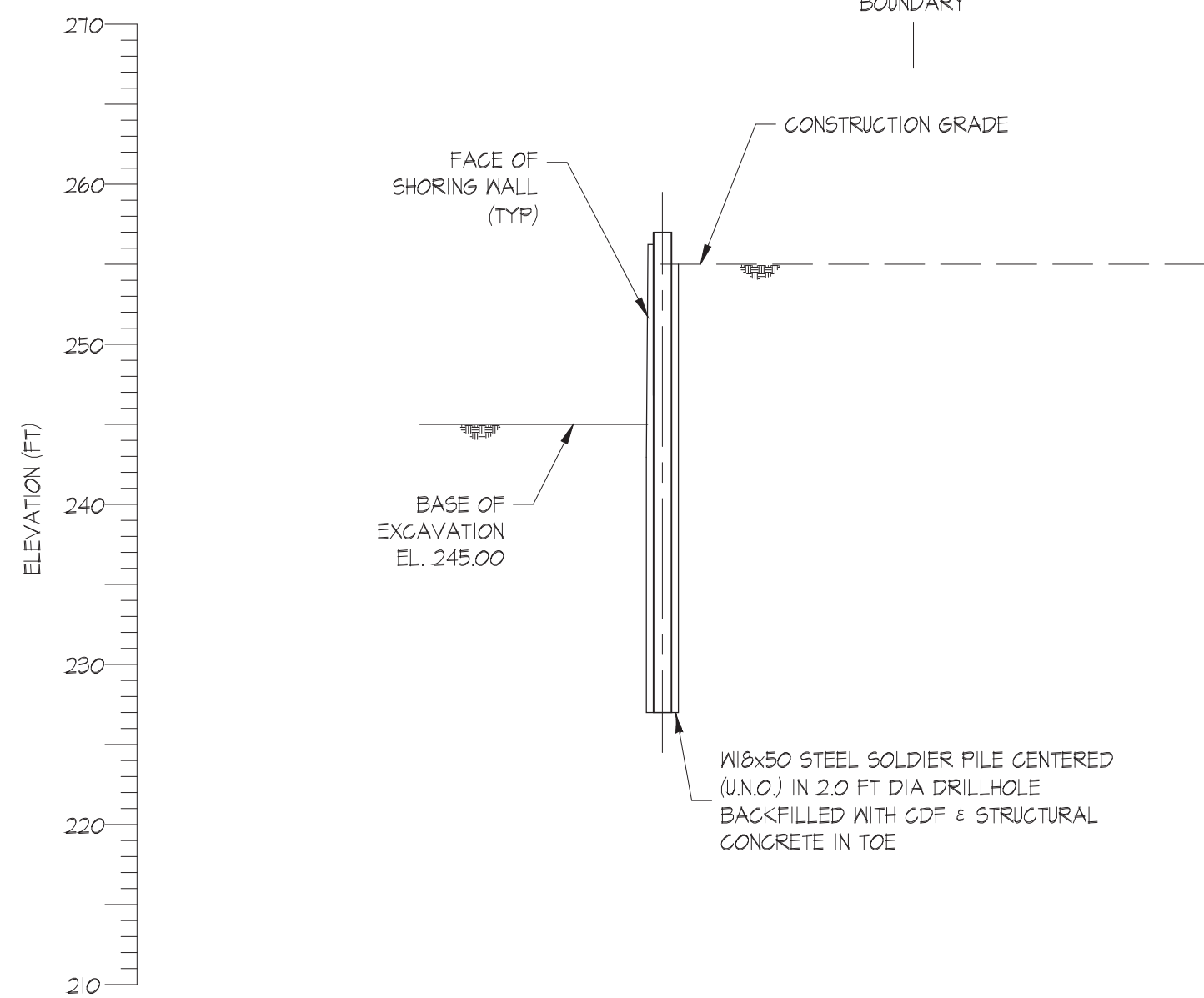
E7  
SH4.0  
NORTH WALL CROSS-SECTION  
AT PILE E7  
0 10  
FEET



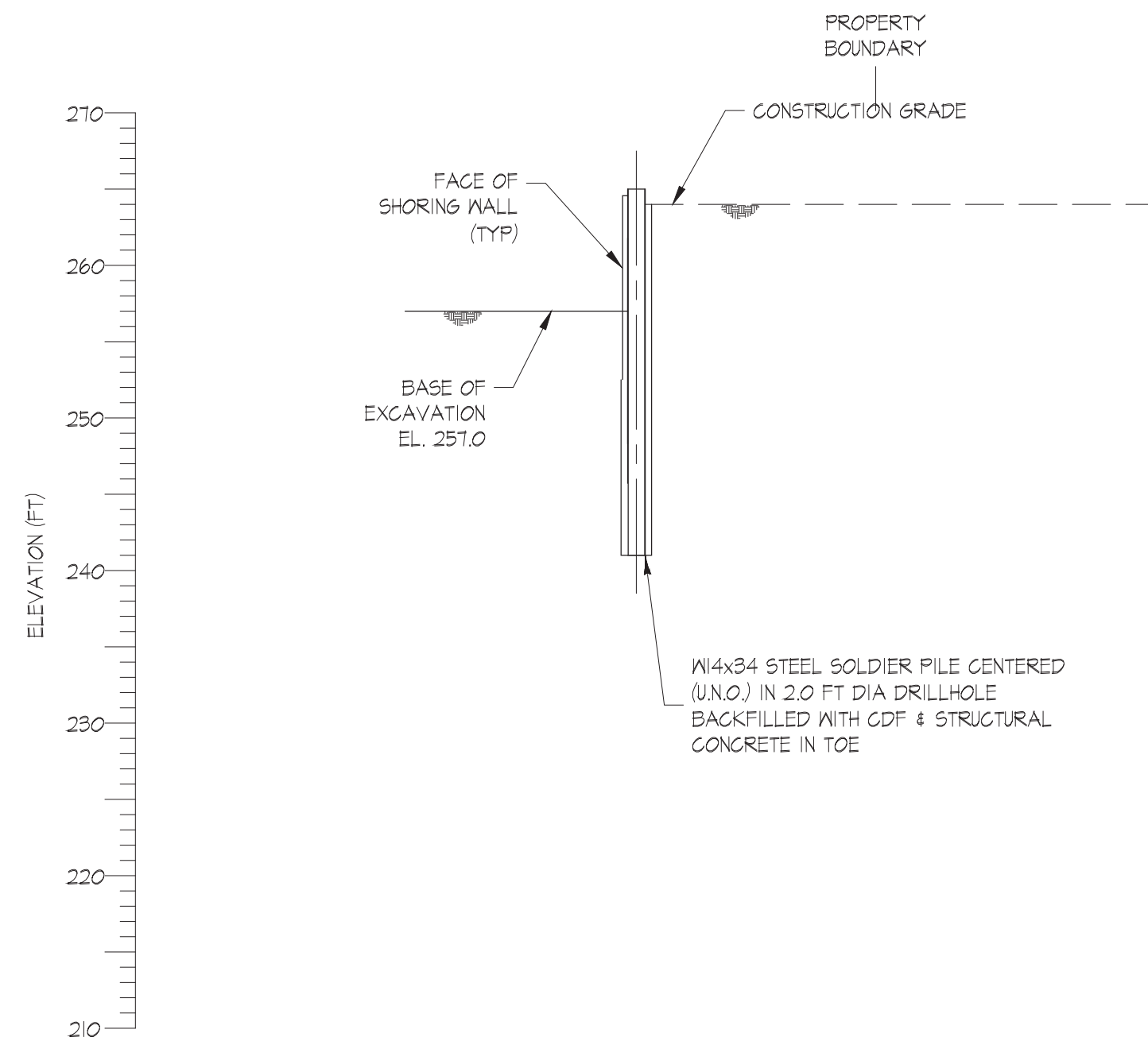
S2  
SH4.0  
NORTH WALL CROSS-SECTION  
AT PILE S2  
0 10  
FEET



N12  
SH4.0  
NORTH WALL CROSS-SECTION  
AT PILE N12  
0 10  
FEET

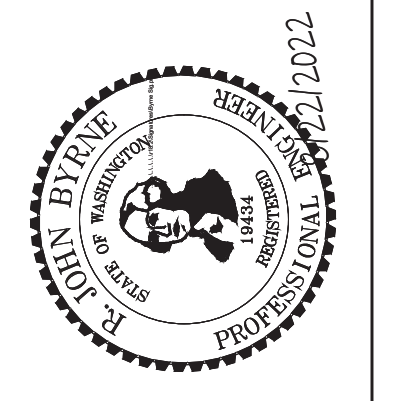


NA4  
SH4.0  
NORTH WALL CROSS-SECTION  
AT PILE NA4  
0 10  
FEET



EU5  
SH4.0  
NORTH WALL CROSS-SECTION  
AT PILE EU5  
0 10  
FEET

REV	DATE	DESCRIPTION
0	01/18/2021	PERMIT ISSUE
1	08/22/2022	RESPOND TO COMMENTS



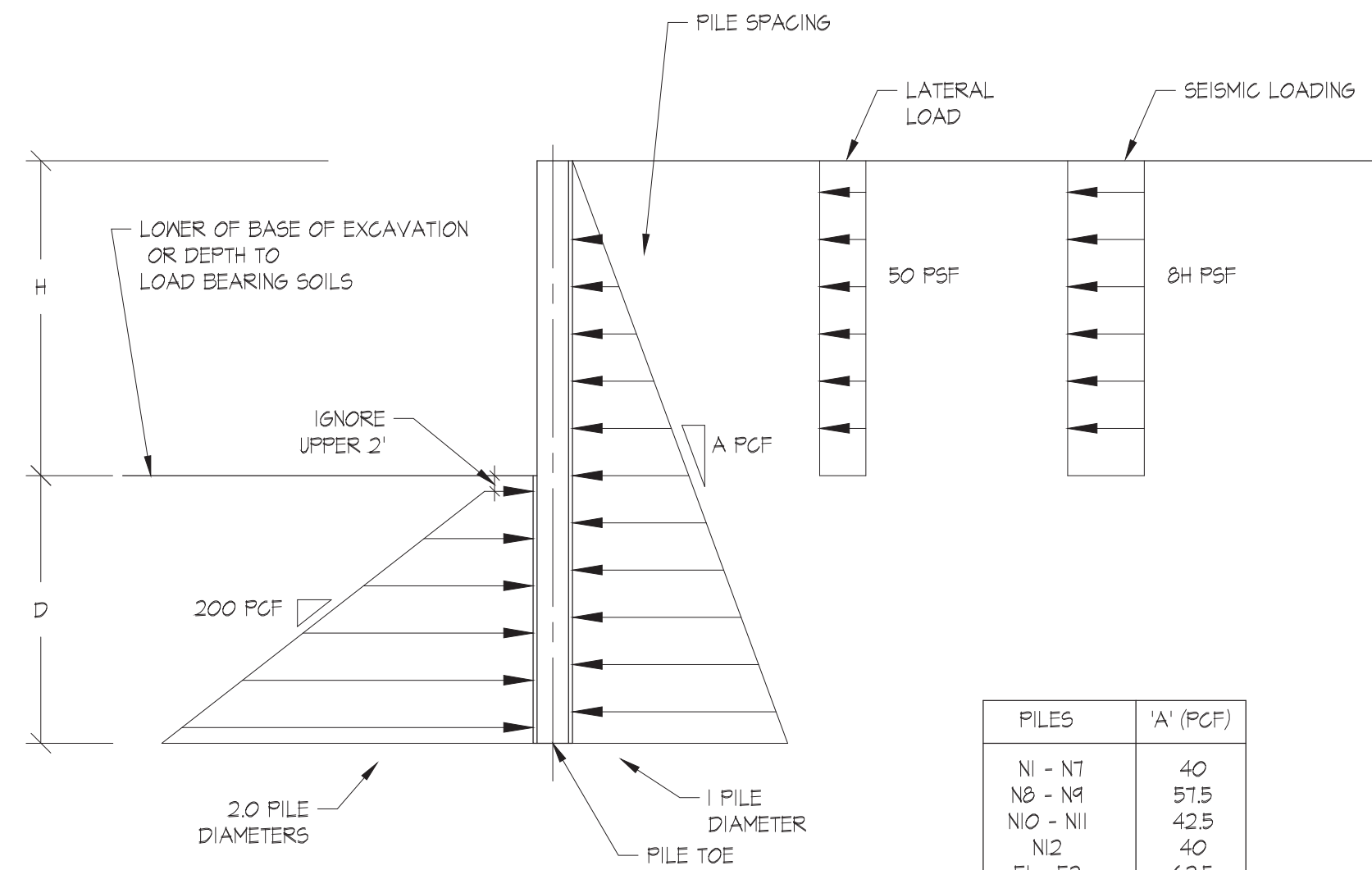
**Ground Support** PLLC  
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Woodinville, WA 98072  
Ph: (425) 488-1143 Fax: (425) 605-4057

Hu RESIDENCE  
TEMPORARY SHORING AND  
PERMANENT RETAINING WALL  
CROSS-SECTIONS

PROJ. NO. 20-50  
SHEET NUMBER

SH4.0





PILES	'A' (PCF)
N1 - N1	40
N8 - N9	57.5
N10 - N11	42.5
N12	40
E1 - E2	62.5
E3	42.5
E4 - E12	40
S1 - S8	40
NA1 - NA2	50
NA3 - NA5	40
EU1 - EU2	40
EU3 - EU8	45

NOTE:

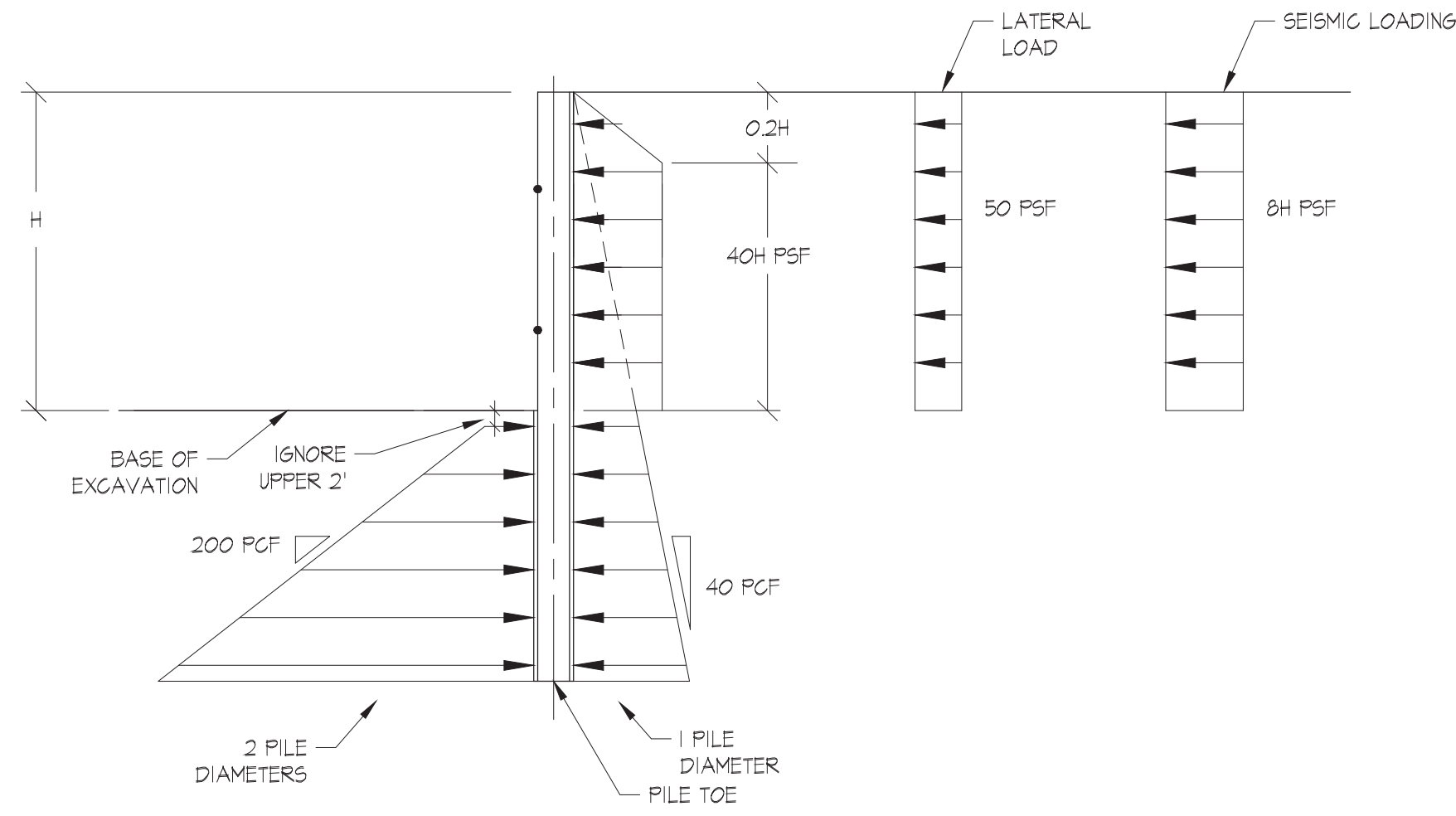
TOE EMBEDMENT DETERMINED BY ACHIEVING FORCE AND MOMENT BALANCE AT TOE OF PILE

PILE TOE  
ALLOWABLE END BEARING,  $q_a = 20$  KSF;  
ALLOWABLE SKIN FRICTION,  $f_a = 1.0$  KSF

1  
SH4.1

WALL PRESSURE DIAGRAM  
SOLDIER PILE WALLS

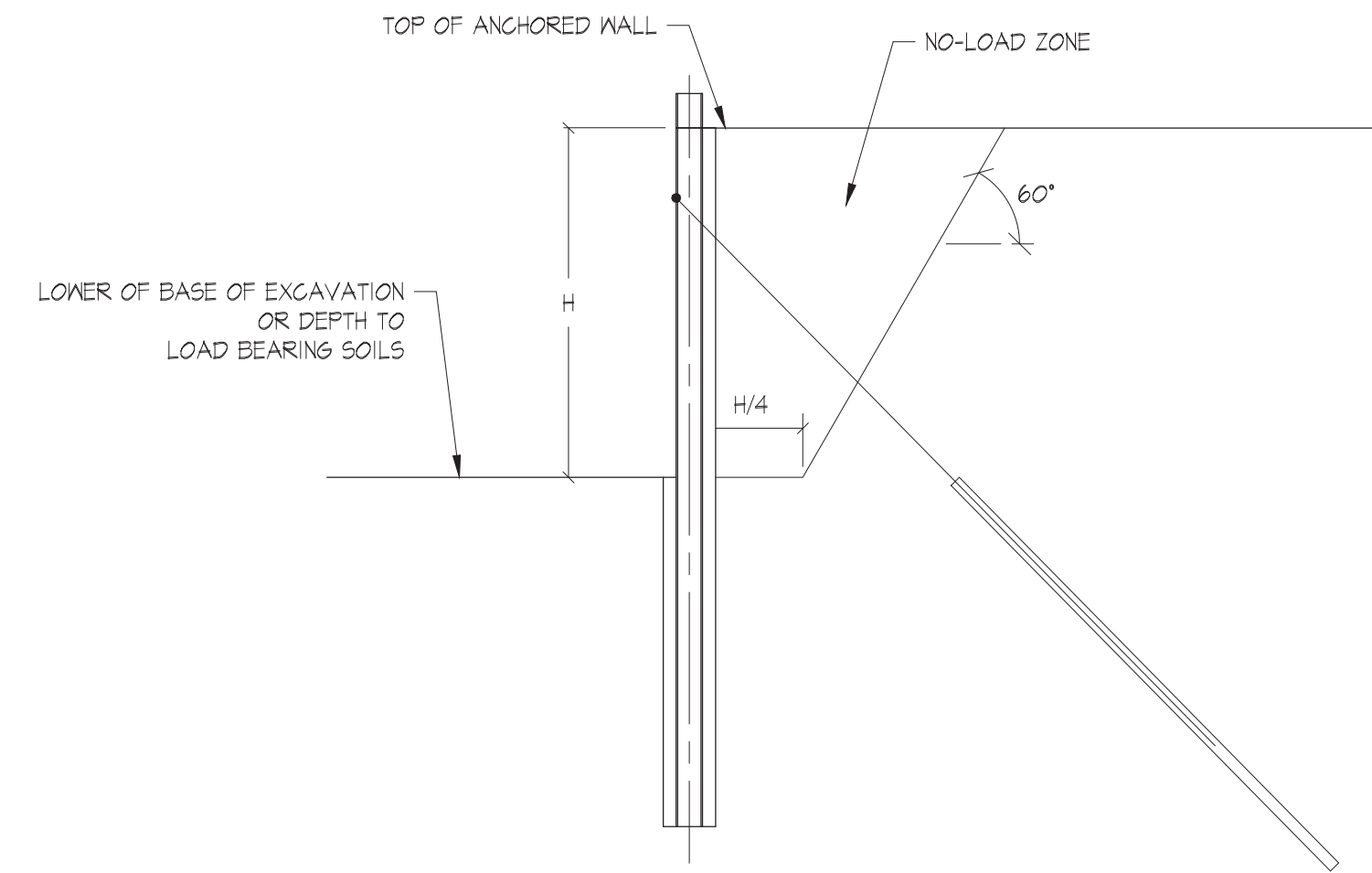
NOT TO SCALE



2  
SH4.1

DESIGN EARTH PRESSURES  
ANCHORED SOLDIER PILES E4 - E8a

NOT TO SCALE



3  
SH4.1

NO-LOAD ZONE

NOT TO SCALE

PSN	PRN	CHK	DATE	REV	DESCRIPTION
R_1B	BPM	CJK	01/18/2021	0	PERMIT ISSUE
R_1B	BPM	CJK	08/22/2022	1	RESPOND TO COMMENTS



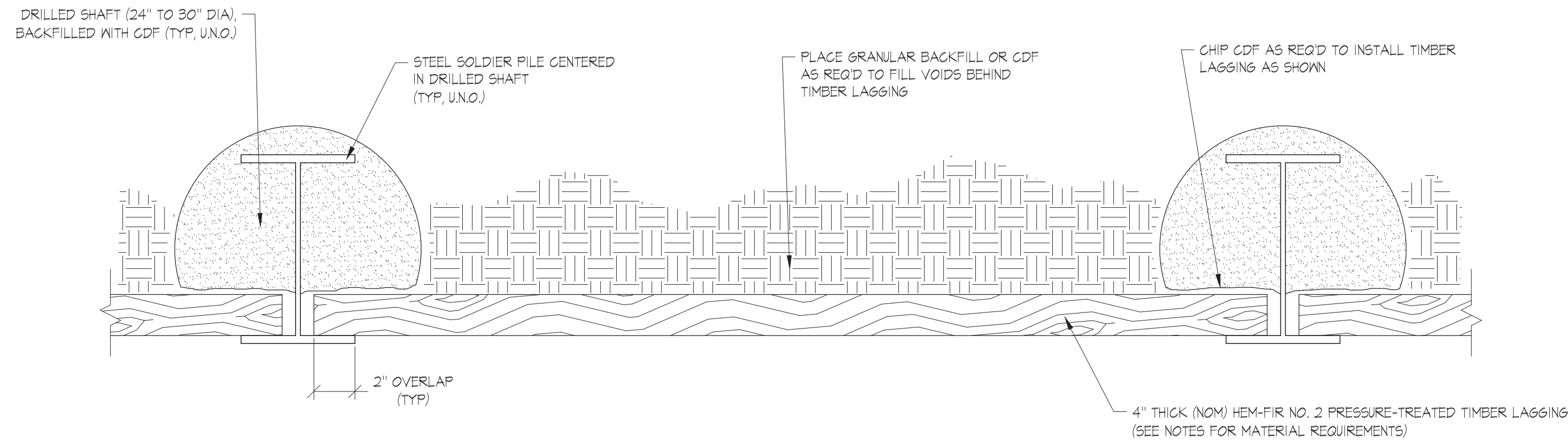
**Ground Support PLLC**  
16932 Woodinville Richmond Rd NE, #210  
Woodinville, WA 98072  
Ph: (425) 488-1143 Fax: (425) 605-4057

Hu RESIDENCE  
TEMPORARY SHORING AND  
PERMANENT RETAINING WALL  
DESIGN DIAGRAMS

PROJ. NO. 20-50

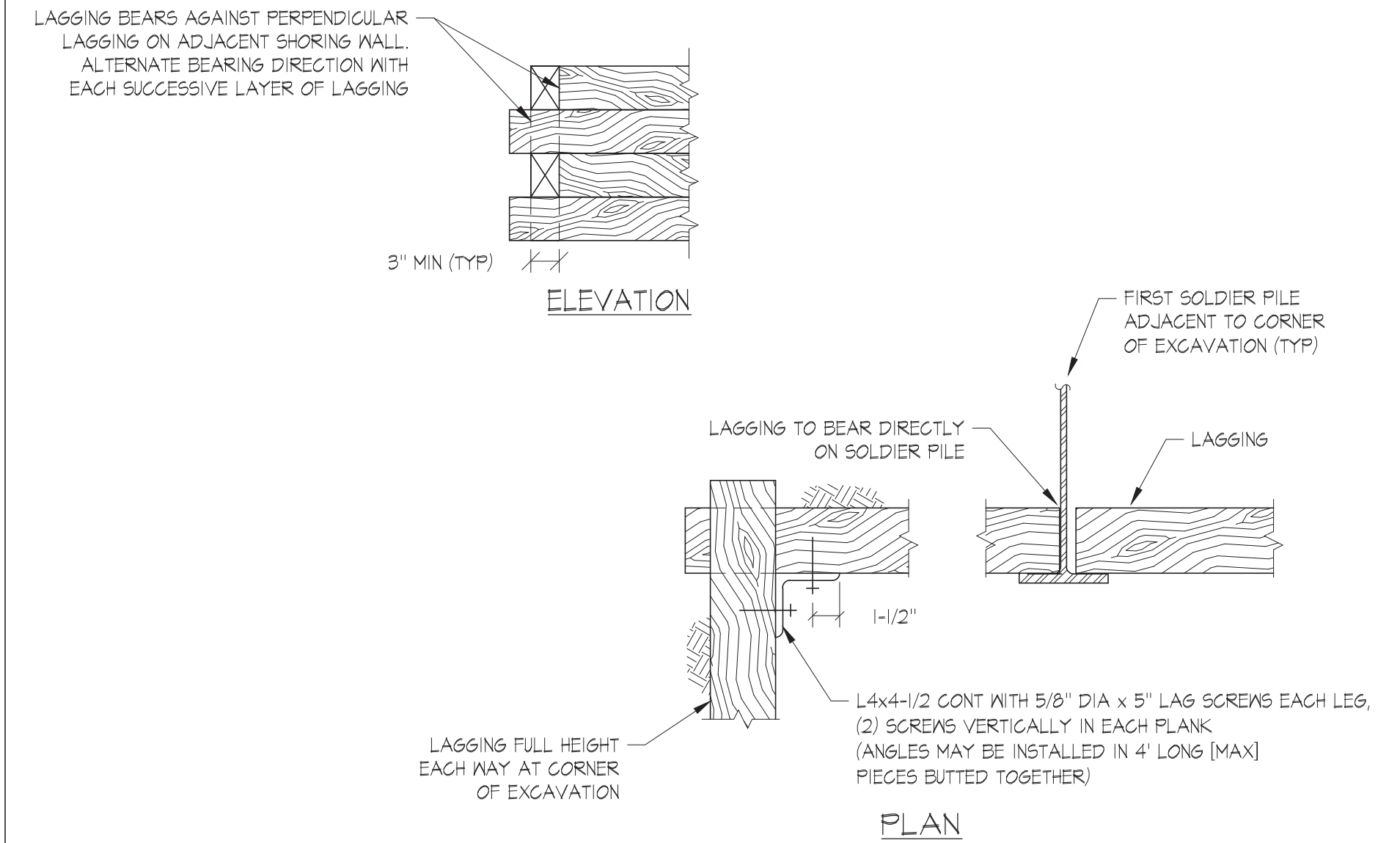
SHEET NUMBER

SH4.1



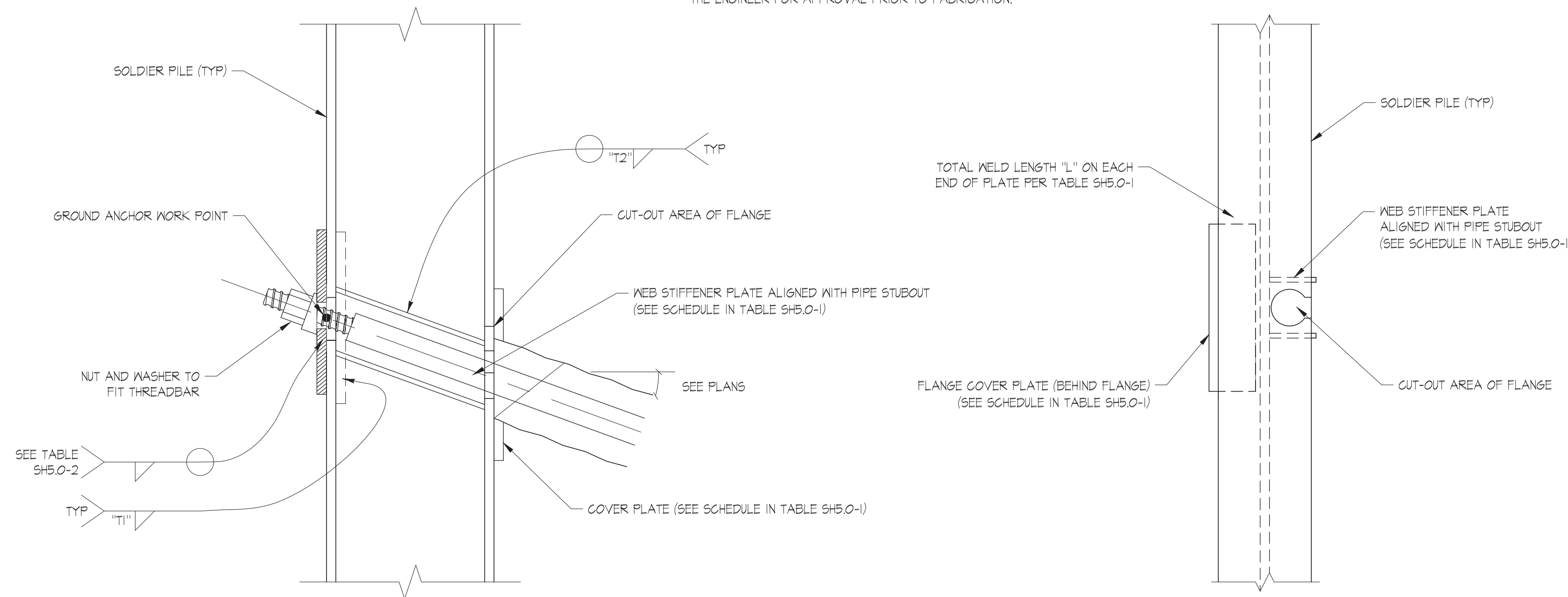
1 PILE / SHAFT / LAGGING DETAIL  
SH5.0 NOT TO SCALE

NOTE: THIS METHOD ONLY APPLIES TO INTERIOR CORNERS WITH INCLUDED ANGLE OF 90°±10°.



4 TYPICAL INTERIOR CORNER LAGGING SUPPORT DETAIL  
SH5.0 NOT TO SCALE

NOTE:  
CONTRACTOR SHALL SUBMIT DETAILS OF PROPOSED ANCHOR HEAD, PIPE STUB-OUT, FLANGE CUT-OUT, AND CORRESPONDING WELD CONNECTIONS TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION.



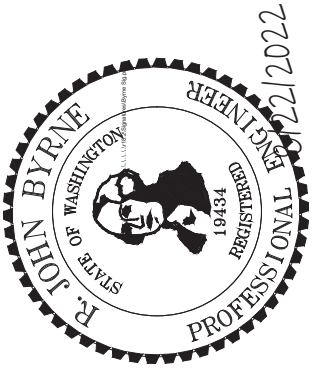
2 ANCHOR TO PILE CONNECTION DETAIL (SIDE VIEW)  
SH5.0 NOT TO SCALE

3 ANCHOR TO PILE CONNECTION DETAIL (FRONT VIEW)  
SH5.0 NOT TO SCALE

TABLE SH5.0-1  
ANCHOR TO PILE CONNECTION SCHEDULE

ANCHOR LOAD (KIPS)	PILE SECTION	COVER PLATE DIMENSIONS (IN)	COVER PLATE WELD LENGTH L (IN)	COVER PLATE WELD SIZE T1 (IN)	WEB STIFFENER PLATE DIMENSIONS (IN)	WEB STIFFENER PLATE WELD SIZE T2 (IN)
50	W4x34	1/2 x 3 x 24	11 1/2	5/16	1/2 x 4 x 12	1/4
50	W4x43	1/2 x 4 x 30	14 1/2	5/16	1/2 x 4 x 12	1/4
80	W6x50	1/2 x 4 x 30	14 1/2	5/16	1/2 x 4 x 16	1/4
80	W6x55	3/4 x 3 x 33	16	5/16	1/2 x 4 x 16	1/4
80	W6x65	3/4 x 4 x 34	19	5/16	1/2 x 4 x 16	1/4

NOTE: WEB STIFFENER PLATES ARE FULL DEPTH, ARE FLUSH AT BEARING ENDS, AND WELDED FULL LENGTH AND ALONG BEARING ENDS ON ONE SIDE ONLY.



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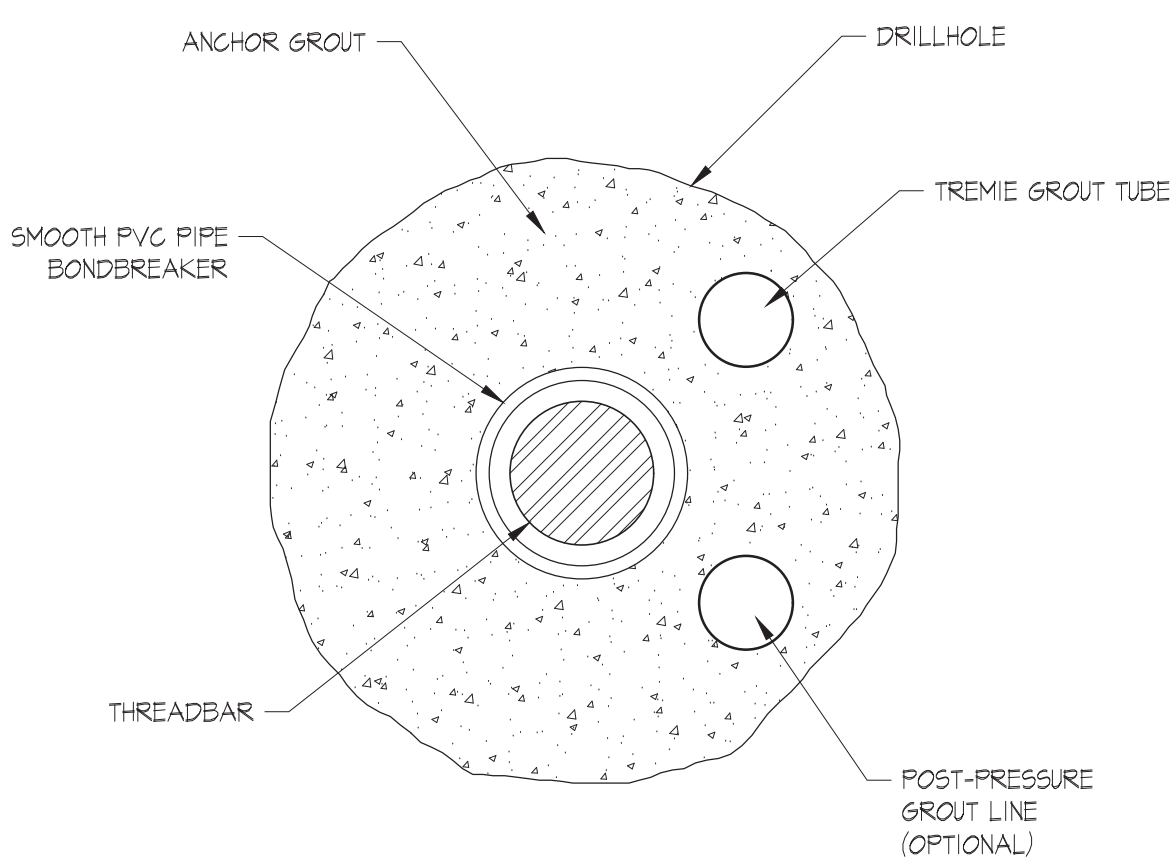
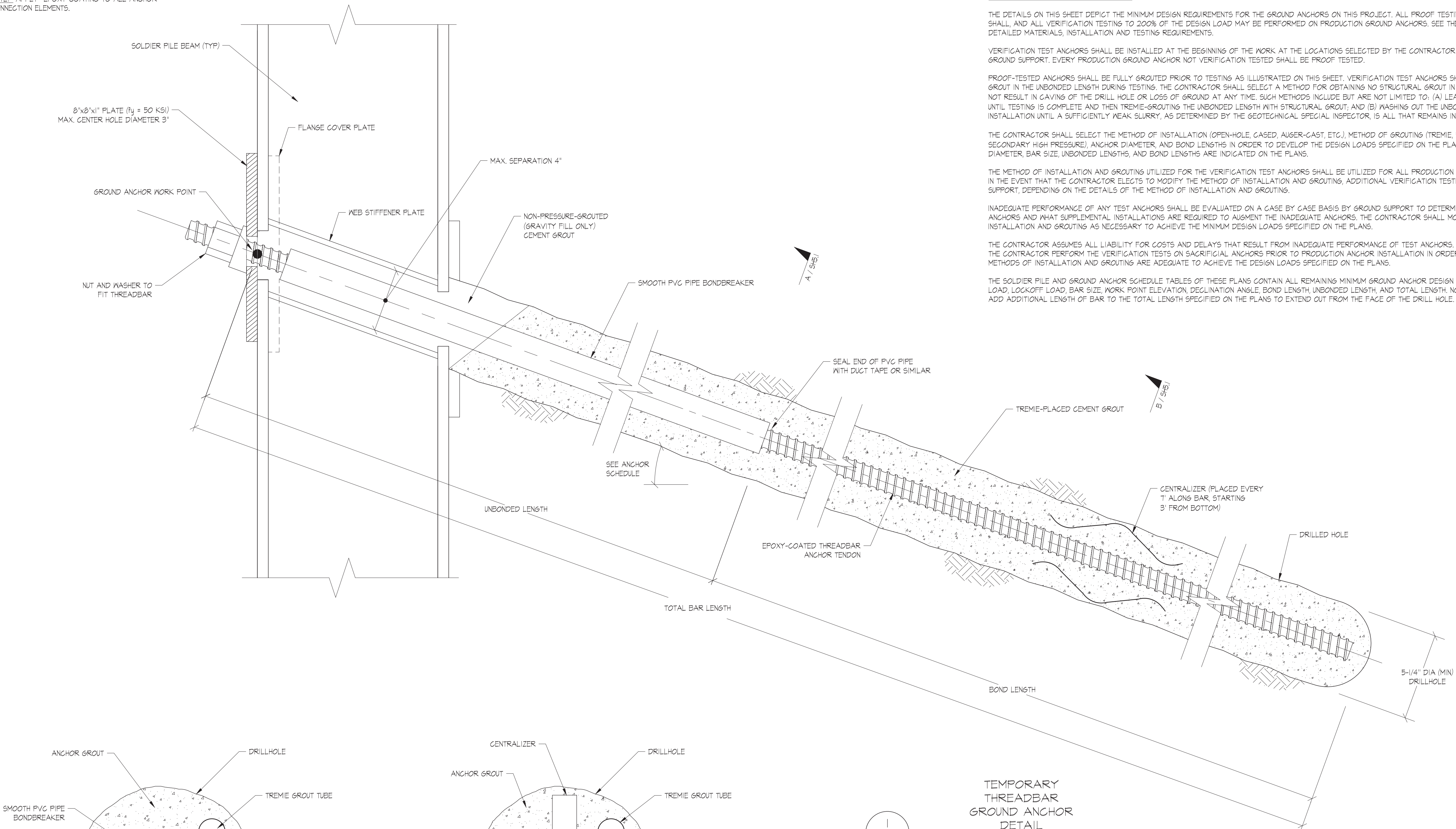
Hu RESIDENCE  
TEMPORARY SHORING AND  
PERMANENT RETAINING WALL  
DETAILS

PROJ. NO. 20-50

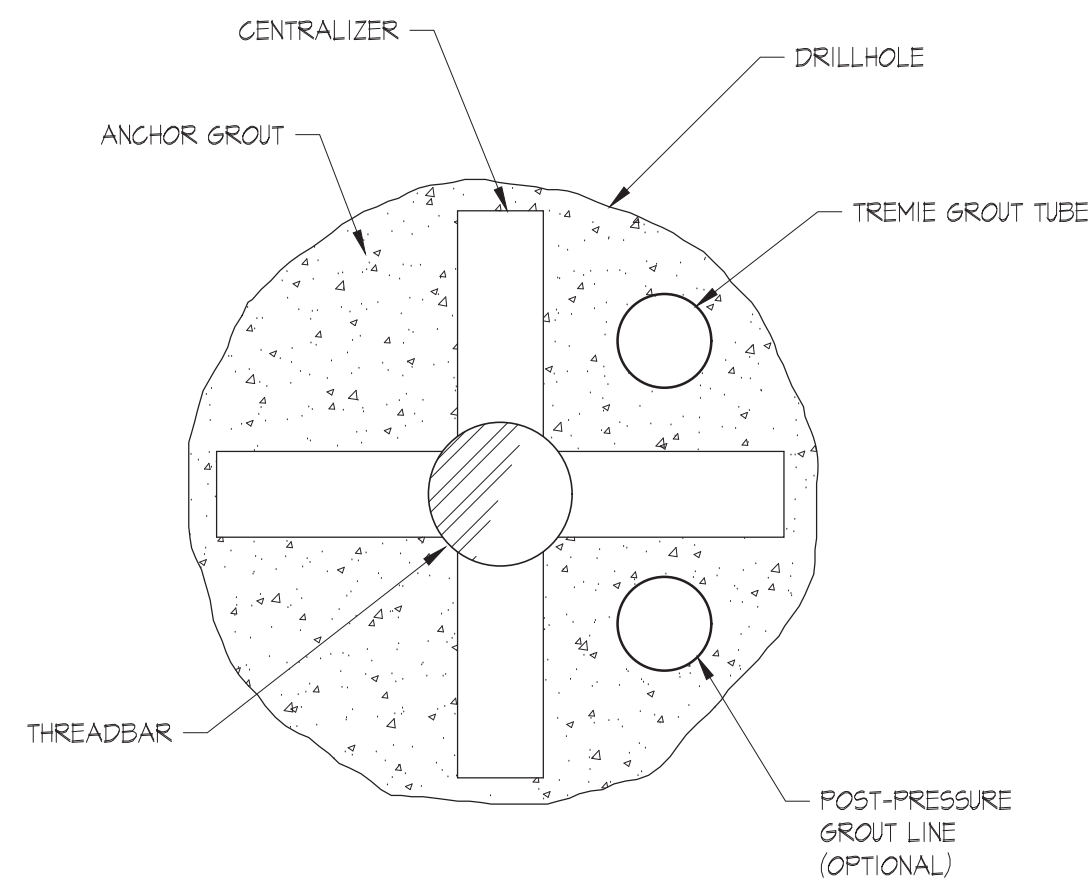
SHEET NUMBER

**SH5.0**

NOTE: APPLY EPOXY COATING TO ALL ANCHOR CONNECTION ELEMENTS.



**A**  
SH5.2  
UNBONDED ZONE  
TYPICAL SECTION  
NOT TO SCALE



**B**  
SH5.2  
BONDED ZONE  
TYPICAL SECTION  
NOT TO SCALE

**1**  
SH5.2  
TEMPORARY  
THREADBAR  
GROUND ANCHOR  
DETAIL  
NOT TO SCALE

**PERMANENT BAR GROUND ANCHOR NOTES:**

THE DETAILS ON THIS SHEET DEPICT THE MINIMUM DESIGN REQUIREMENTS FOR THE GROUND ANCHORS ON THIS PROJECT. ALL PROOF TESTING TO 133% OF THE DESIGN LOAD SHALL, AND ALL VERIFICATION TESTING TO 200% OF THE DESIGN LOAD MAY BE PERFORMED ON PRODUCTION GROUND ANCHORS. SEE THE NOTES ON SHEET SH.1 FOR DETAILED MATERIALS, INSTALLATION AND TESTING REQUIREMENTS.

VERIFICATION TEST ANCHORS SHALL BE INSTALLED AT THE BEGINNING OF THE WORK AT THE LOCATIONS SELECTED BY THE CONTRACTOR AND APPROVED IN WRITING BY GROUND SUPPORT. EVERY PRODUCTION GROUND ANCHOR NOT VERIFICATION TESTED SHALL BE PROOF TESTED.

PROOF-TESTED ANCHORS SHALL BE FULLY GROUTED PRIOR TO TESTING AS ILLUSTRATED ON THIS SHEET. VERIFICATION TEST ANCHORS SHALL NOT HAVE STRUCTURAL GROUT IN THE UNBONDED LENGTH DURING TESTING. THE CONTRACTOR SHALL SELECT A METHOD FOR OBTAINING NO STRUCTURAL GROUT IN THE UNBONDED LENGTH THAT DOES NOT RESULT IN CAVING OF THE DRILL HOLE OR LOSS OF GROUND AT ANY TIME. SUCH METHODS INCLUDE BUT ARE NOT LIMITED TO: (A) LEAVING THE UNBONDED LENGTH OPEN UNTIL TESTING IS COMPLETE AND THEN TREMIE-GROUTING THE UNBONDED LENGTH WITH STRUCTURAL GROUT; AND (B) WASHING OUT THE UNBONDED LENGTH AFTER INSTALLATION UNTIL A SUFFICIENTLY WEAK SLURRY, AS DETERMINED BY THE GEOTECHNICAL SPECIAL INSPECTOR, IS ALL THAT REMAINS IN THE UNBONDED LENGTH.

THE CONTRACTOR SHALL SELECT THE METHOD OF INSTALLATION (OPEN-HOLE, CASED, AUGER-CAST, ETC.), METHOD OF GROUTING (TREMIE, PRIMARY LOW-PRESSURE, SECONDARY HIGH PRESSURE), ANCHOR DIAMETER, AND BOND LENGTHS IN ORDER TO DEVELOP THE DESIGN LOADS SPECIFIED ON THE PLANS. THE MINIMUM REQUIRED ANCHOR DIAMETER, BAR SIZE, UNBONDED LENGTHS, AND BOND LENGTHS ARE INDICATED ON THE PLANS.

THE METHOD OF INSTALLATION AND GROUTING UTILIZED FOR THE VERIFICATION TEST ANCHORS SHALL BE UTILIZED FOR ALL PRODUCTION ANCHORS INSTALLED THEREAFTER. IN THE EVENT THAT THE CONTRACTOR ELECTS TO MODIFY THE METHOD OF INSTALLATION AND GROUTING, ADDITIONAL VERIFICATION TESTING MAY BE REQUIRED BY GROUND SUPPORT, DEPENDING ON THE DETAILS OF THE METHOD OF INSTALLATION AND GROUTING.

INADEQUATE PERFORMANCE OF ANY TEST ANCHORS SHALL BE EVALUATED ON A CASE BY CASE BASIS BY GROUND SUPPORT TO DETERMINE THE REMAINING VALUE OF THE ANCHORS AND WHAT SUPPLEMENTAL INSTALLATIONS ARE REQUIRED TO AUGMENT THE INADEQUATE ANCHORS. THE CONTRACTOR SHALL MODIFY THE METHOD OF INSTALLATION AND GROUTING AS NECESSARY TO ACHIEVE THE MINIMUM DESIGN LOADS SPECIFIED ON THE PLANS.

THE CONTRACTOR ASSUMES ALL LIABILITY FOR COSTS AND DELAYS THAT RESULT FROM INADEQUATE PERFORMANCE OF TEST ANCHORS. IT IS HIGHLY RECOMMENDED THAT THE CONTRACTOR PERFORM THE VERIFICATION TESTS ON SACRIFICIAL ANCHORS PRIOR TO PRODUCTION ANCHOR INSTALLATION IN ORDER TO CONFIRM THAT THE CHOSEN METHODS OF INSTALLATION AND GROUTING ARE ADEQUATE TO ACHIEVE THE DESIGN LOADS SPECIFIED ON THE PLANS.

THE SOLDIER PILE AND GROUND ANCHOR SCHEDULE TABLES OF THESE PLANS CONTAIN ALL REMAINING MINIMUM GROUND ANCHOR DESIGN PARAMETERS INCLUDING: DESIGN LOAD, LOCKOFF LOAD, BAR SIZE, WORK POINT ELEVATION, DECLINATION ANGLE, BOND LENGTH, UNBONDED LENGTH, AND TOTAL LENGTH. NOTE THAT THE CONTRACTOR MUST ADD ADDITIONAL LENGTH OF BAR TO THE TOTAL LENGTH SPECIFIED ON THE PLANS TO EXTEND OUT FROM THE FACE OF THE DRILL HOLE.

FIGROUND SUPPORT PLLC 2020-20-50 (HU RESIDENCE-WA) (SHORING) (PERMITTING) (R2) (1/25/2022) (20505H050ART.DWG) (SH5.1) (P) (1/25/2022, 10:18 AM)

REV	DATE	DESCRIPTION
0	01/18/2021	PERMIT ISSUE
1	08/22/2022	RESPOND TO COMMENTS

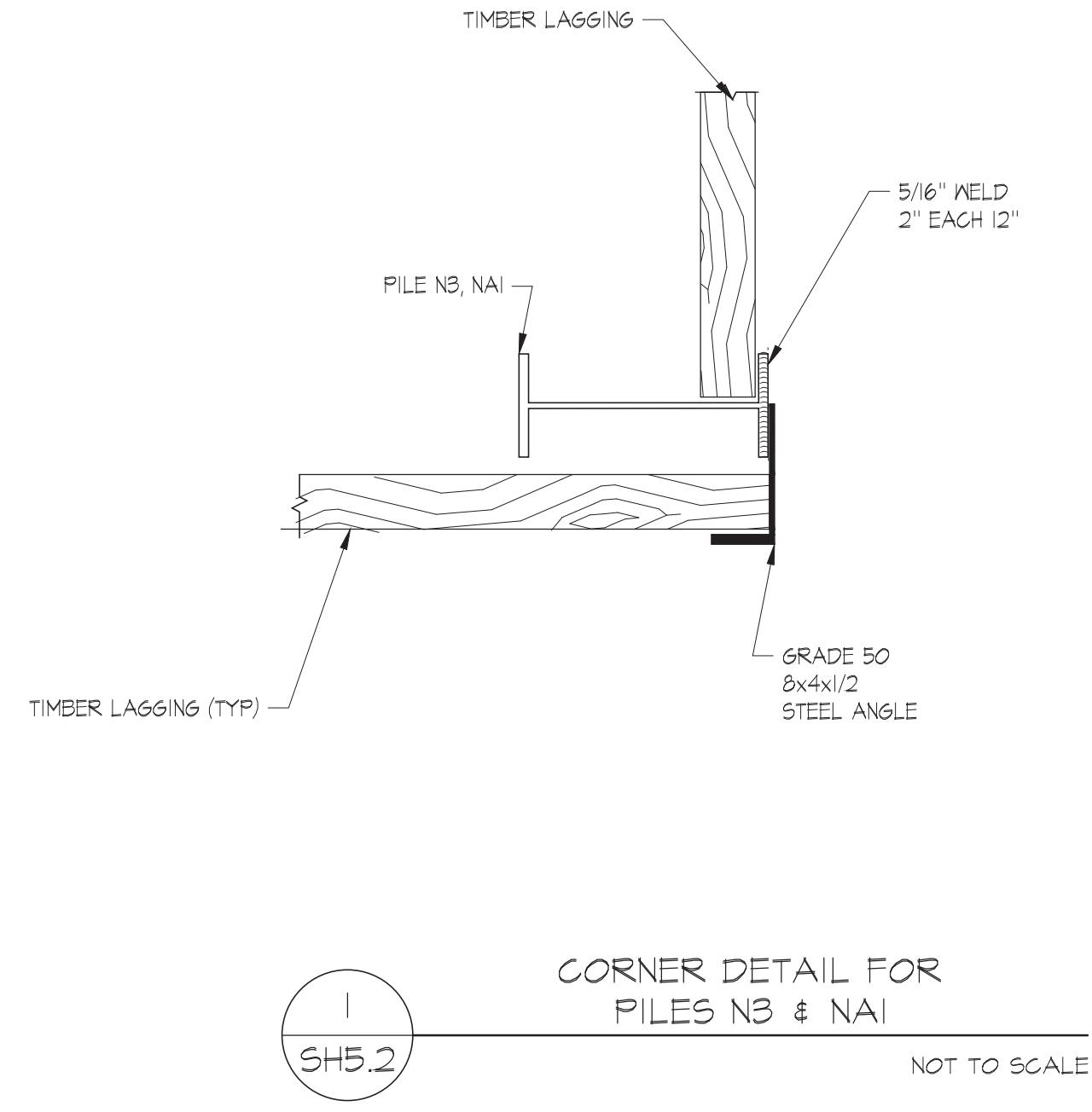
**Ground Support PLLC**  
16932 Woodinville Redmond Rd NE, #210  
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Ph: (425) 488-1143 Fax: (425) 605-4057

HU RESIDENCE  
TEMPORARY SHORING AND  
PERMANENT RETAINING WALL  
DETAILS

PROJ. NO. 20-50  
SHEET NUMBER

**SH5.1**

F:\GROUND SUPPORT PLLC\2020\20-50 (HU RESIDENCE-WA)\(SHORING)\(PERMITTING)\R2(11252022)\2050SH050ART1.DWG -> SHE.2-> Plotted: 11/25/2022 10:18 AM

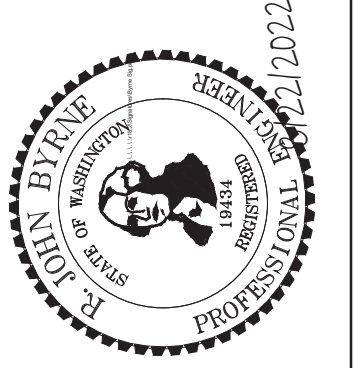


Hu RESIDENCE  
 TEMPORARY SHORING AND  
 PERMANENT RETAINING WALL  
 DETAILS

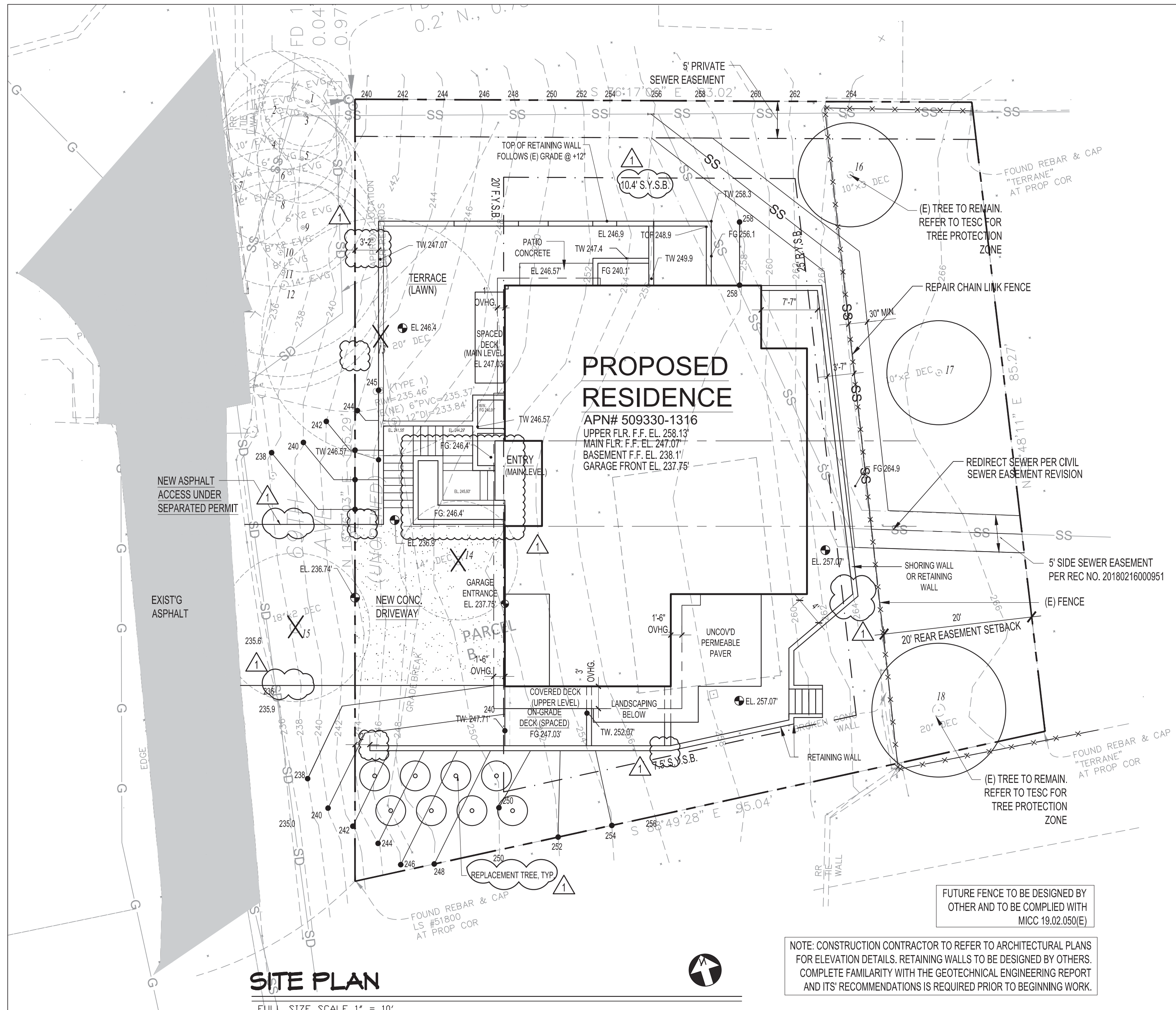
PROJ. NO. 20-50  
 SHEET NUMBER

SH5.2

**GS**  
**Ground Support** PLLC  
 16932 Woodinville Redmond Rd NE, #210  
 Woodinville, WA 98072  
 Ph: (425) 488-1143 Fax: (425) 605-4057



PSN	PRN	CHK	DATE	REV	DESCRIPTION
RJB	BFM	CJA	01/18/2021	0	PERMIT ISSUE
RJB	BFM	CJA	08/22/2022	1	RESPOND TO COMMENTS



SETBACKS  
 FRONT YARD SETBACK: 20 FT  
 REAR YARD SETBACKS: 25 FT

SIDE YARD SETBACKS:  
 105.29 \* 17% = 17.9 FEET TOTAL

PER 19.02.020(C)(1)(c)(iii)(a) & (b)  
 SOUTH EXTERIOR WALL FACADE HEIGHT IS 23'-6", SEE SOUTH ELEVATION ON A3.00 FOR HEIGHT MEASUREMENT.

SOUTH MIN. SIDE YARD S.B. = 7.5 FT  
 NORTH MIN. SIDE YARD S.B. = 10.4 FT

**SITE PLAN**

FULL SIZE SCALE 1" = 10'

NOTE: CONSTRUCTION CONTRACTOR TO REFER TO ARCHITECTURAL PLANS FOR ELEVATION DETAILS. RETAINING WALLS TO BE DESIGNED BY OTHERS. COMPLETE FAMILIARITY WITH THE GEOTECHNICAL ENGINEERING REPORT AND ITS RECOMMENDATIONS IS REQUIRED PRIOR TO BEGINNING WORK.

FUTURE FENCE TO BE DESIGNED BY OTHER AND TO BE COMPLIED WITH MICC 19.02.050(E)

**TREE TABLE**

TREE #	COMMON NAME	DBH (INCHES)	TREE CLASSIFICATION: LARGE (MIN. 10") EXCEPTIONAL (24" OR BY SPECIES)	RETAIN/REMOVE	CONDITION	CRZ/DRIP LINE (FEET)	NOTES	
1	WESTERN RED CEDAR	THUJA PLICATA	6	GROVE-EXCEPTIONAL	RETAIN	FAIR-POOR	8	LEADER TOPPED
2	WESTERN RED CEDAR	THUJA PLICATA	10	GROVE-EXCEPTIONAL	RETAIN	FAIR-POOR	10	HEAVY LEANING
3	WESTERN RED CEDAR	THUJA PLICATA	8	GROVE-EXCEPTIONAL	RETAIN	FAIR-POOR	8	LEADER TOPPED
4	WESTERN RED CEDAR	THUJA PLICATA	10	GROVE-EXCEPTIONAL	RETAIN	FAIR-POOR	10	LEADER TOPPED
5	WESTERN RED CEDAR	THUJA PLICATA	7	GROVE-EXCEPTIONAL	RETAIN	FAIR-POOR	7	LEADER TOPPED
6	WESTERN RED CEDAR	THUJA PLICATA	10	GROVE-EXCEPTIONAL	RETAIN	FAIR-POOR	10	LEADER TOPPED, HEAVY IVY
7	WESTERN RED CEDAR	THUJA PLICATA	11	GROVE-EXCEPTIONAL	RETAIN	FAIR-POOR	11	LEADER TOPPED
8	WESTERN RED CEDAR	THUJA PLICATA	9	GROVE-EXCEPTIONAL	RETAIN	FAIR-POOR	9	LEADER TOPPED
9	WESTERN RED CEDAR	THUJA PLICATA	10	GROVE-EXCEPTIONAL	RETAIN	FAIR-POOR	10	LEADER TOPPED
10	WESTERN RED CEDAR	THUJA PLICATA	9	GROVE-EXCEPTIONAL	RETAIN	FAIR-POOR	9	LEADER TOPPED
11	WESTERN RED CEDAR	THUJA PLICATA	8	GROVE-EXCEPTIONAL	RETAIN	FAIR-POOR	8	LEADER TOPPED, HEAVY IVY
12	WESTERN RED CEDAR	THUJA PLICATA	14	GROVE-EXCEPTIONAL	RETAIN	FAIR-POOR	20	LEADER TOPPED
13	SHORE PINE	PINUS CONTORTA VAR. CONTORTA	17	EXCEPTIONAL	REMOVE	FAIR-POOR	16	LEADER TOPPED, HEAVY IVY
14	BIGLEAF MAPLE	ACER MACROPHYLLUM	35	EXCEPTIONAL	REMOVE	POOR	35	LEADER TOPPED, HEAVY IVY, SUCKERING
15	RED ALDER	ALNUS RUBRA	27	EXCEPTIONAL	REMOVE	GOOD	27	
16	JAPANESE MAPLE	ACER PALMATUM	17	EXCEPTIONAL	RETAIN	FAIR	14	CROWN TOPPING
17	PAPER BIRCH	BETULA PAPPYRIFERA	14	LARGE	RETAIN	FAIR-POOR	14	CROWN TOPPING
18	JAPANESE MAPLE 'ATROPURPUREUM'	ACER PAPMATUM VAR. ATROPURPUREUM	20	EXCEPTIONAL	RETAIN	FAIR	18	CROWN TOPPING

**TREE REPLACEMENT CALCULATION**

(3) EXCEPTIONAL TREES ARE TO BE REMOVED. TREE REPLACEMENT RATE:  
 LARGE TREE: (1) TREES  
 EXCEPTIONAL TREE: (2) TREES  
 TOTAL TREE REPLACEMENTS:  
 (2) TREES x 1 + (3) TREES x 2 = 8 TREES REPLACEMENT

REVISIONS

#	DATE	DESCRIPTION OF REVISION
1	09.05.22	COMMENT RESPONSE 1

DRAWN BY:  
 CHECKED BY:  
 JOB #:



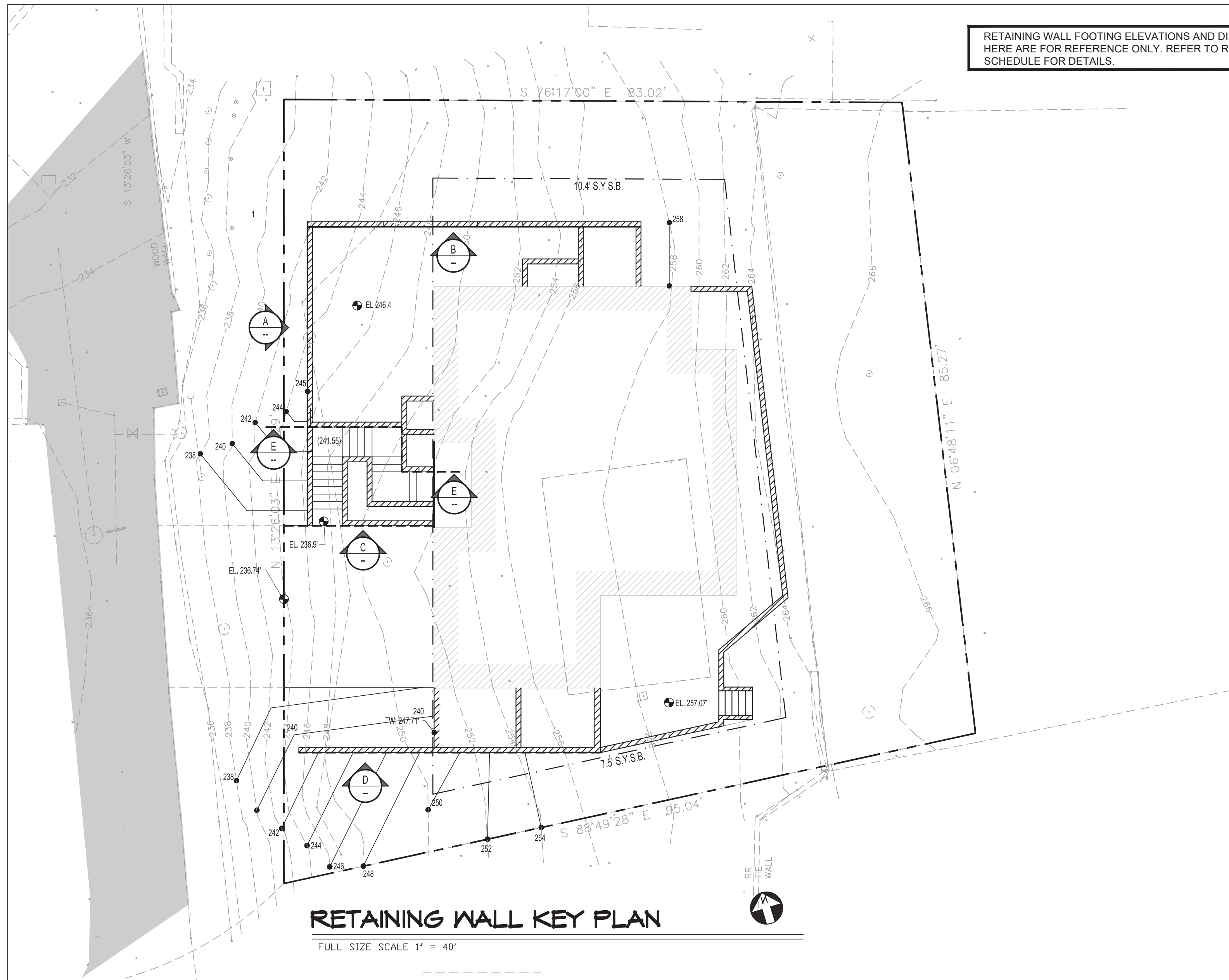
Project Name: **HU RESIDENCE**  
 30XX 69TH AVE SE  
 MERCER ISLAND, WA 98040

APPROVAL STAMP

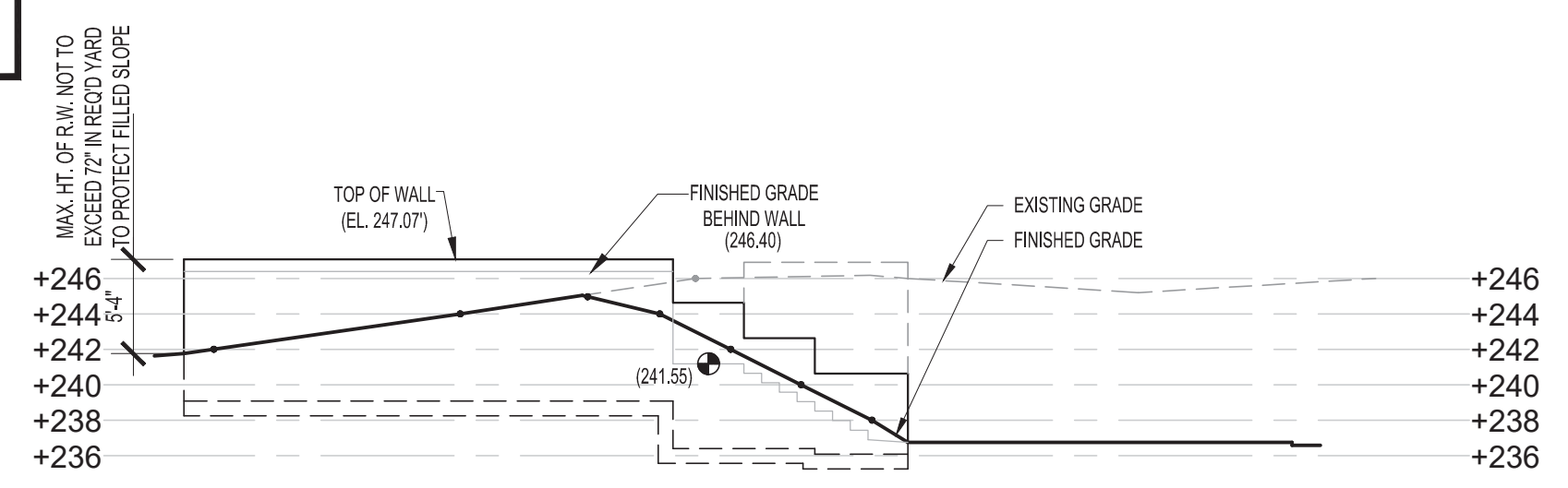
DRAWING TITLE:  
**SITE PLAN**

SHEET:  
**A-1.00**

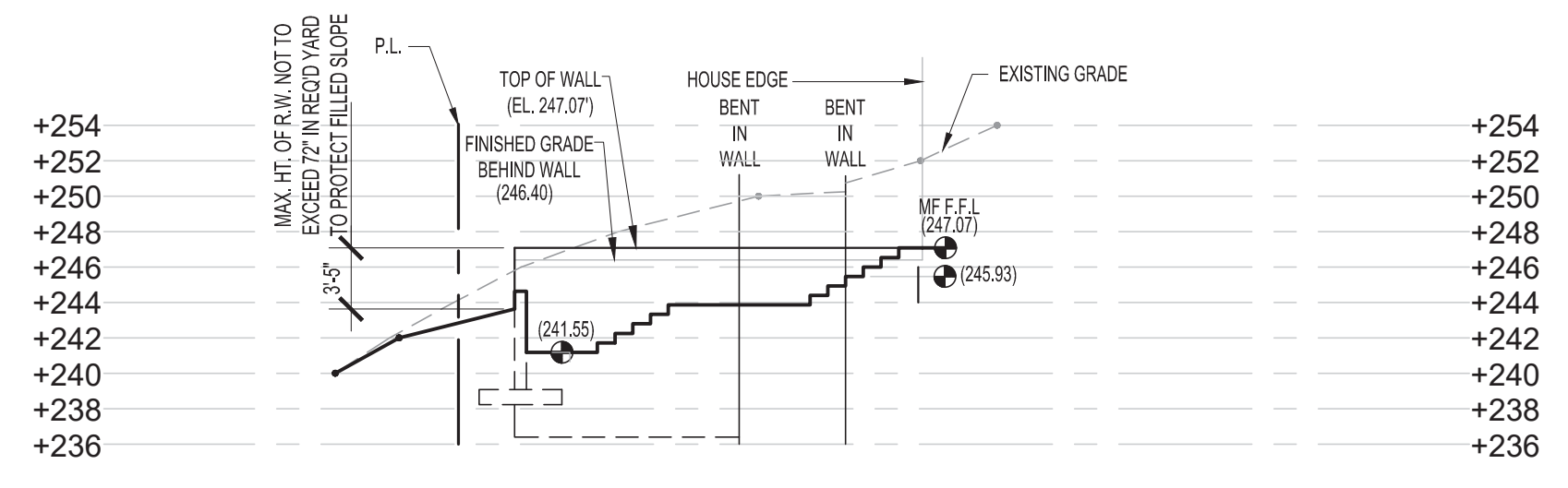
RETAINING WALL FOOTING ELEVATIONS AND DIMENSIONS SHOWN HERE ARE FOR REFERENCE ONLY. REFER TO RETAINING WALL SCHEDULE FOR DETAILS.



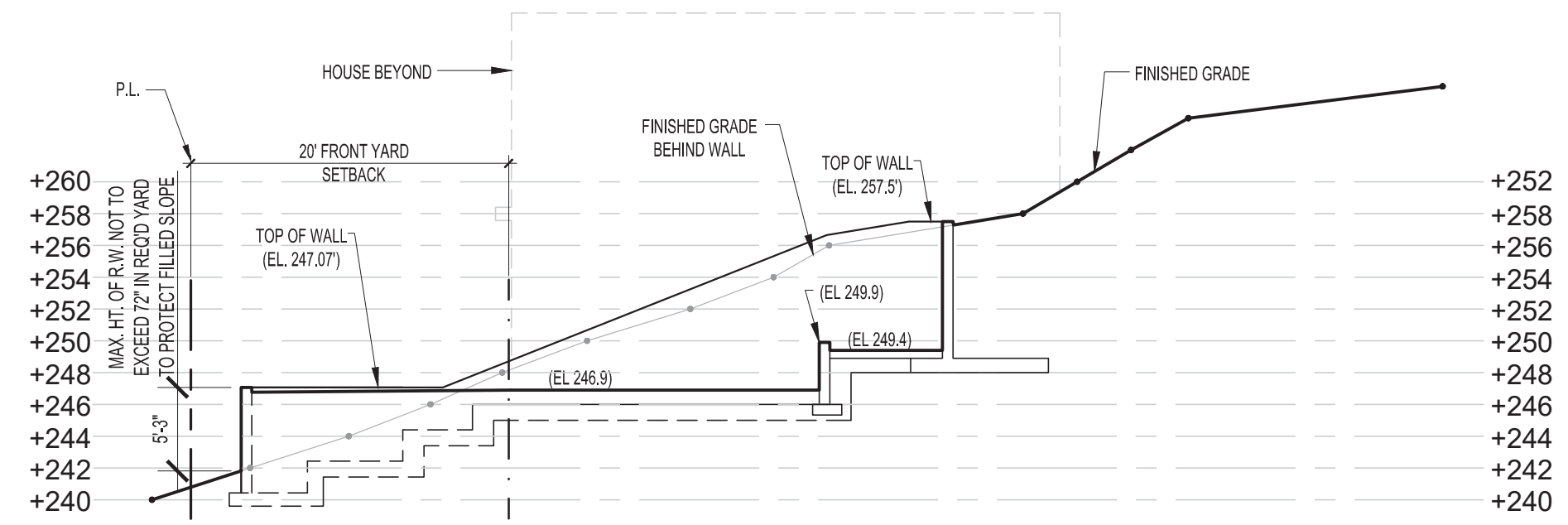
**RETAINING WALL KEY PLAN**  
FULL SIZE SCALE 1" = 40'



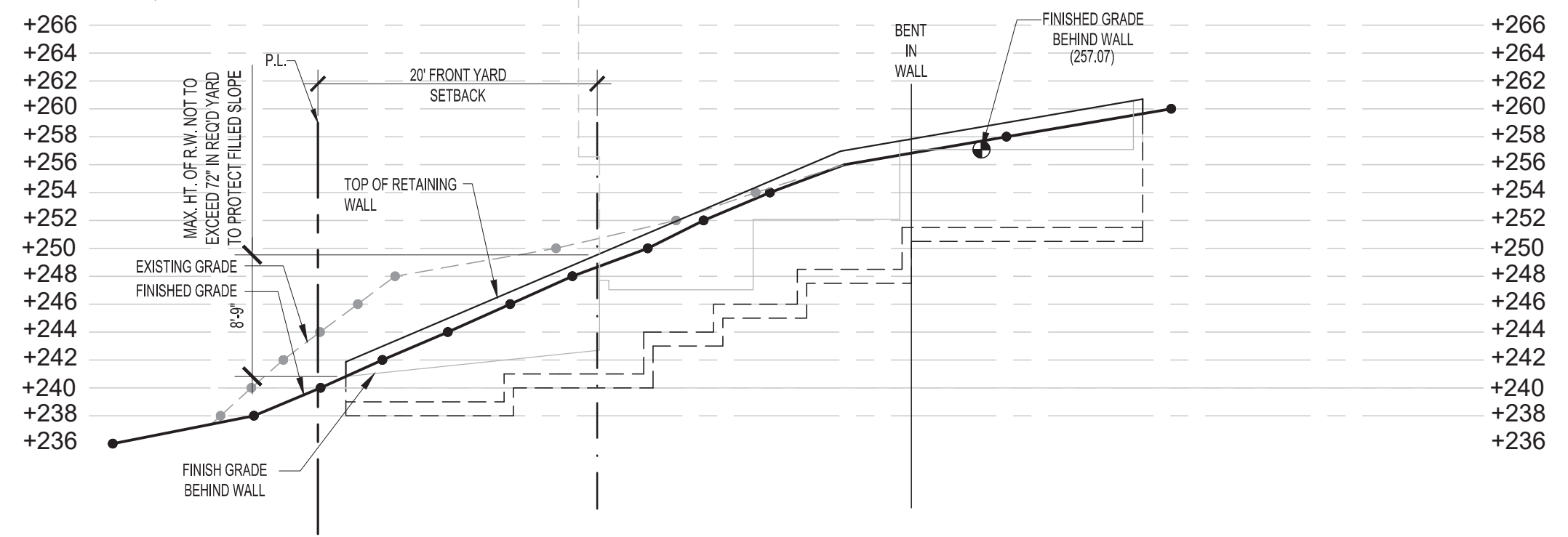
**RETAINING WALL ELEVATION 'A'**  
FULL SIZE SCALE 1" = 10'



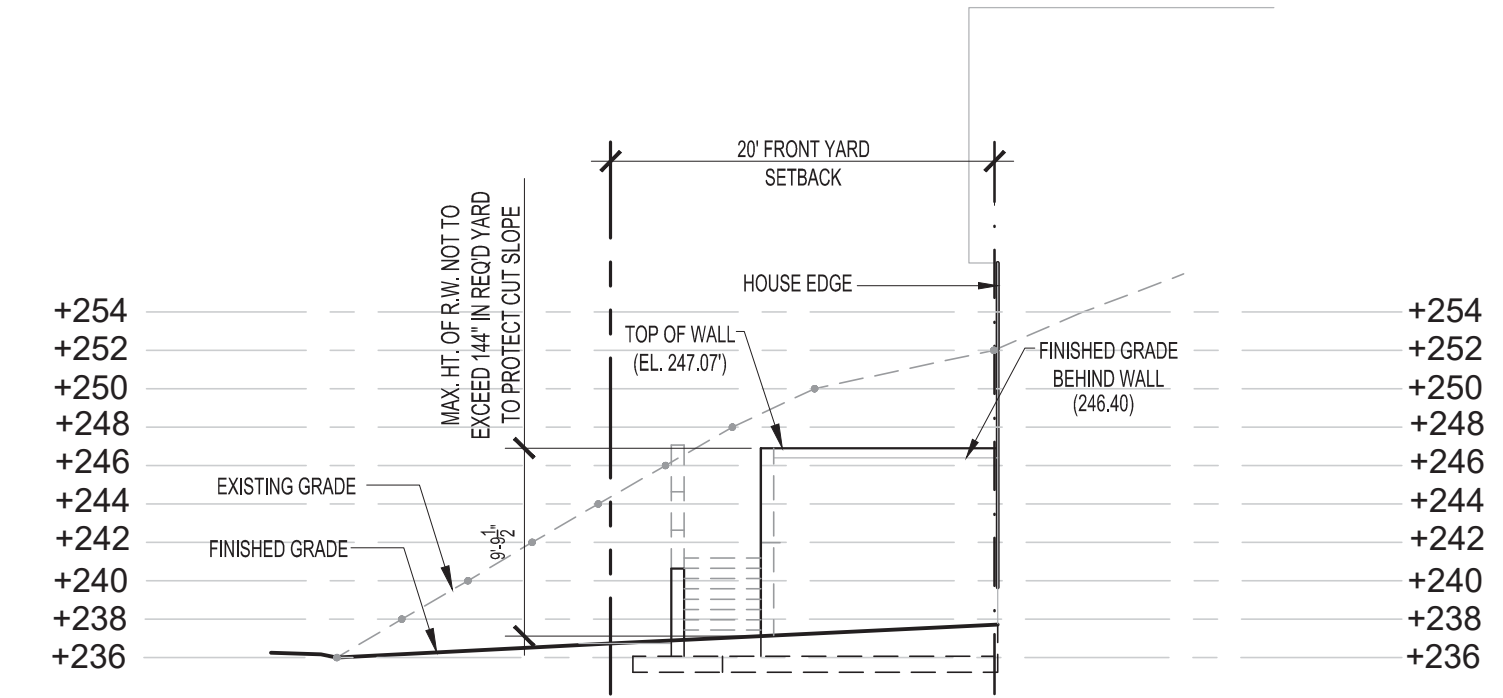
**RETAINING WALL ELEVATION 'E'**  
FULL SIZE SCALE 1" = 10'



**RETAINING WALL ELEVATION 'B'**  
FULL SIZE SCALE 1" = 10'



**RETAINING WALL ELEVATION 'D'**  
FULL SIZE SCALE 1" = 10'



**RETAINING WALL ELEVATION 'C'**  
FULL SIZE SCALE 1" = 10'

#	DATE	DESCRIPTION OF REVISION
1	09.05.22	COMMENT RESPONSE 1

DRAWN BY:  
CHECKED BY:  
JOB #:



Project Name:  
**HU RESIDENCE**  
30XX 69TH AVE SE  
MERCER ISLAND, WA 98040

APPROVAL STAMP

DRAWING TITLE:  
**RETAINING WALL  
KEY PLAN &  
ELEVATIONS**

SHEET:  
**A-1.00a**

### LOT SLOPE

HIGHEST ELEV POINT OF LOT: 266.50 (NW P.L.)  
 LOWEST ELEV POINT OF LOT: 239.50 (NE P.L.)  
 ELEVATION DIFFERENCE: 27.00'  
 HORIZONTAL DISTANCE BTWN. POINTS: 83.00'  
 $266.5 - 239.5 = 27, \frac{27}{83} = 32.6\%$  SLOPE  
 --> 30% LOT COVERAGE ALLOWED

### LOT COVERAGE

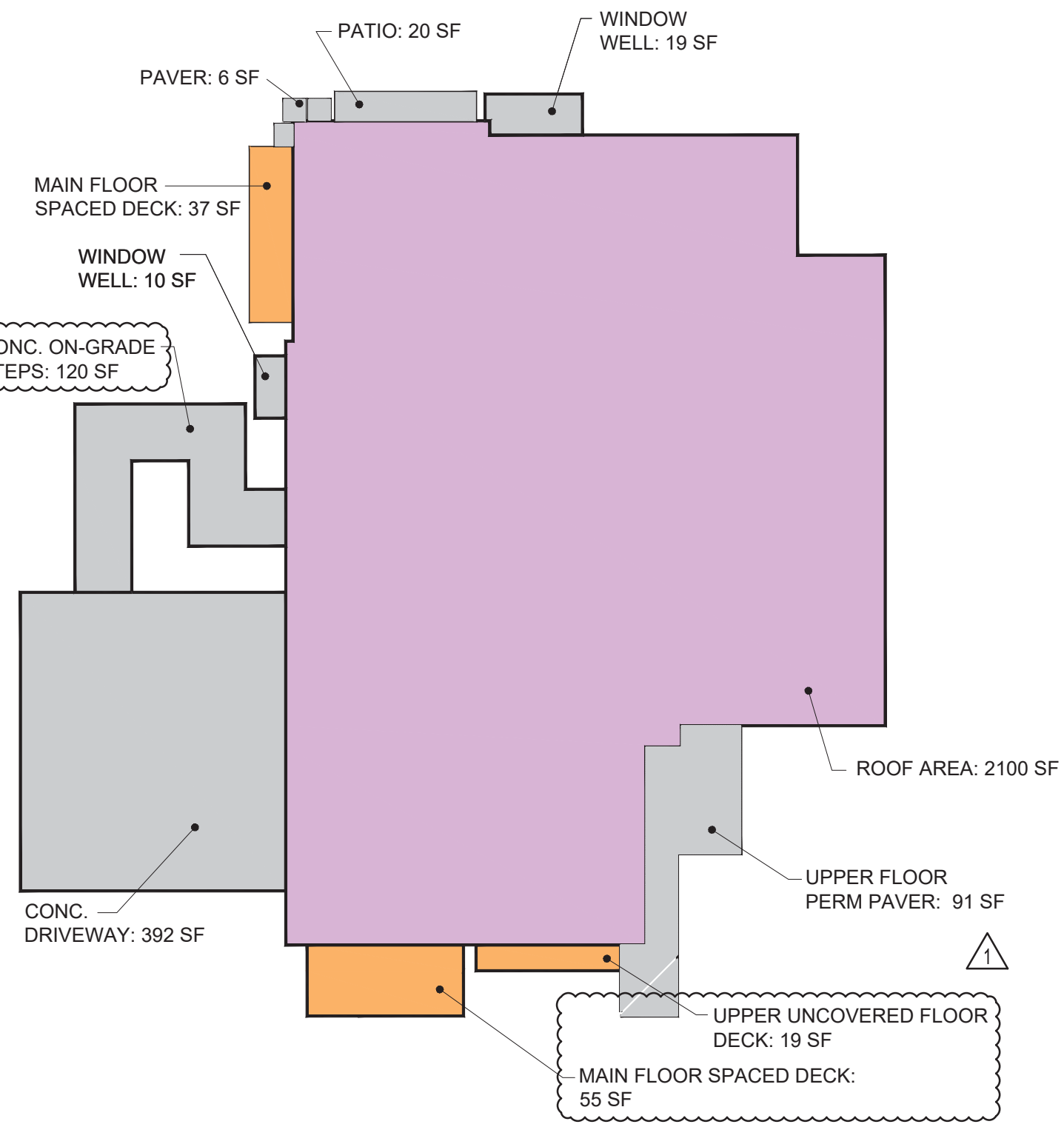
LOT AREA: 8403 SF  
 NET LOT AREA: 8403 SF  
 ROOF AREA (w/ GUTTERS): 2100 SF  
 UNCOV'D DRIVEWAY AREA: 392 SF  
 TOTAL AREA: 2492 SF  
 $\frac{2492}{8403} = 29.66\%$   
 < 30.00% (O.K.)

### HARDSCAPE SURFACE

MAX. HARDSCAPE (9%):  $8403 * 0.9 = 756$  SF  
 WINDOW WELL: 19 SF  
 PATIO: 20 SF  
 PAVER: 6 SF  
 MF SPACED DECK 1: 37 SF  
 WINDOW WELL: 10 SF  
 CONC. ON-GRADE STEPS: 120 SF  
 MF SPACED DECK 2: 55 SF  
 UF UCOV'D DECK: 19 SF  
 UF PERM PAVER: 91 SF  
 TOTAL PROPOSED HARDSCAPE: 377 SF

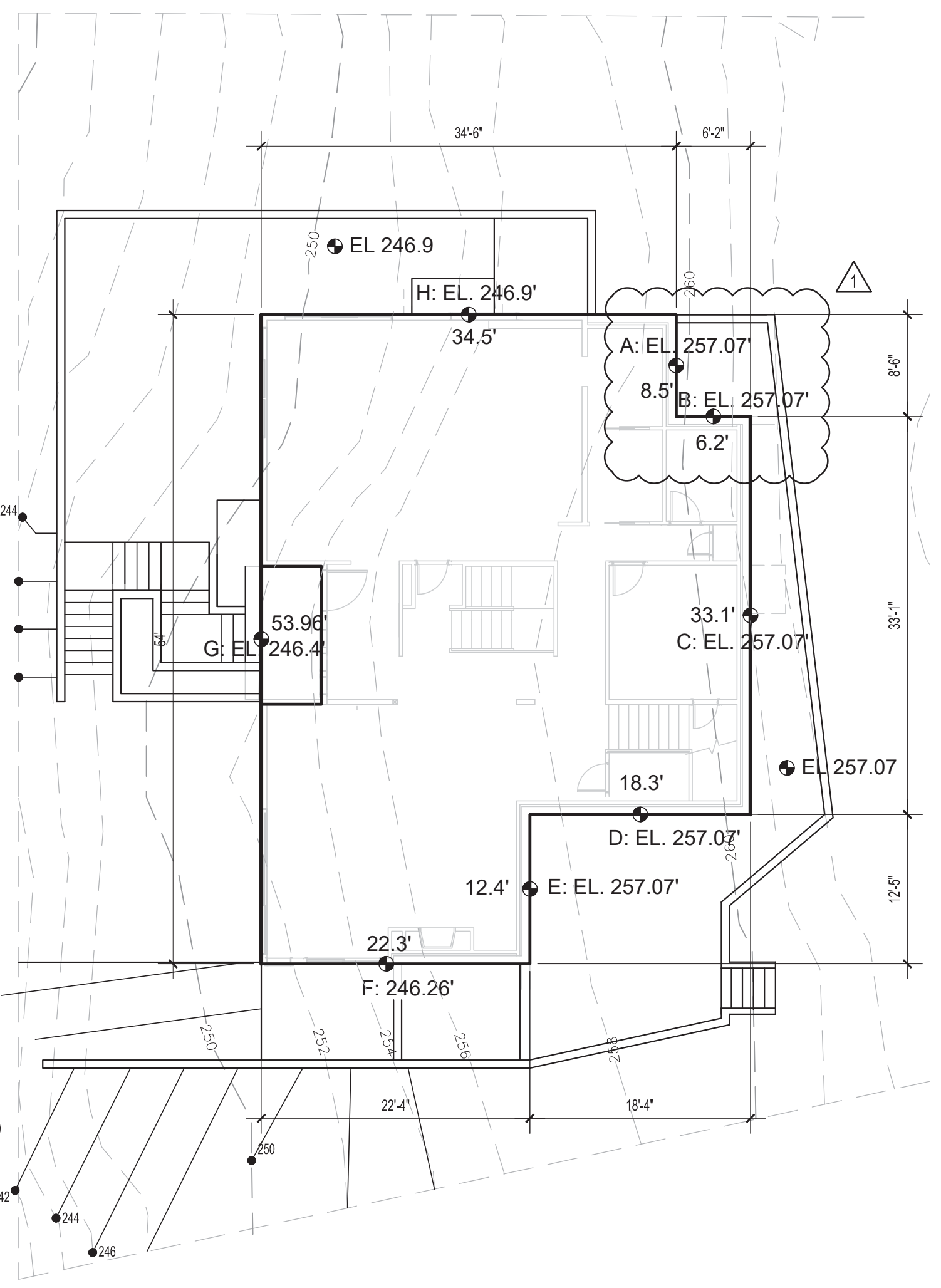
### GROSS FLOOR AREA

LOT AREA: 8403 SF  
 NET LOT AREA: 8403 SF  
 BASEMENT GARAGE: 572 SF  
 BASEMENT FLOOR: 1034 SF  
 (BASEMENT STAIRCASE): -57 SF  
 MAIN FLOOR: 1859 SF  
 (MAIN FLOOR STAIRCASE): -87 SF  
 UPPER FLOOR: 1755 SF  
 UPPER FLOOR COV'D DECK: 142 SF  
 UPPER FLOOR COV'D BALCONY: 73 SF  
 TOTAL GROSS FLOOR AREA: 5291 SF  
 (TOTAL CONDITIONED FLOOR AREA: 4504 SF)  
 EXEMPT BASEMENT FLOOR: -1139 SF  
 EXEMPT MAIN FLOOR: -833 SF  
 TOTAL NET GROSS FLOOR AREA: 3319 SF  
 % OF GFA/LOT AREA: 39.50%  
 ALLOWED % OF GFA/LOT AREA: 40.00%



### IMPERVIOUS ANALYSIS

FULL SIZE SCALE 1" = 40'



### Average Building Elevation

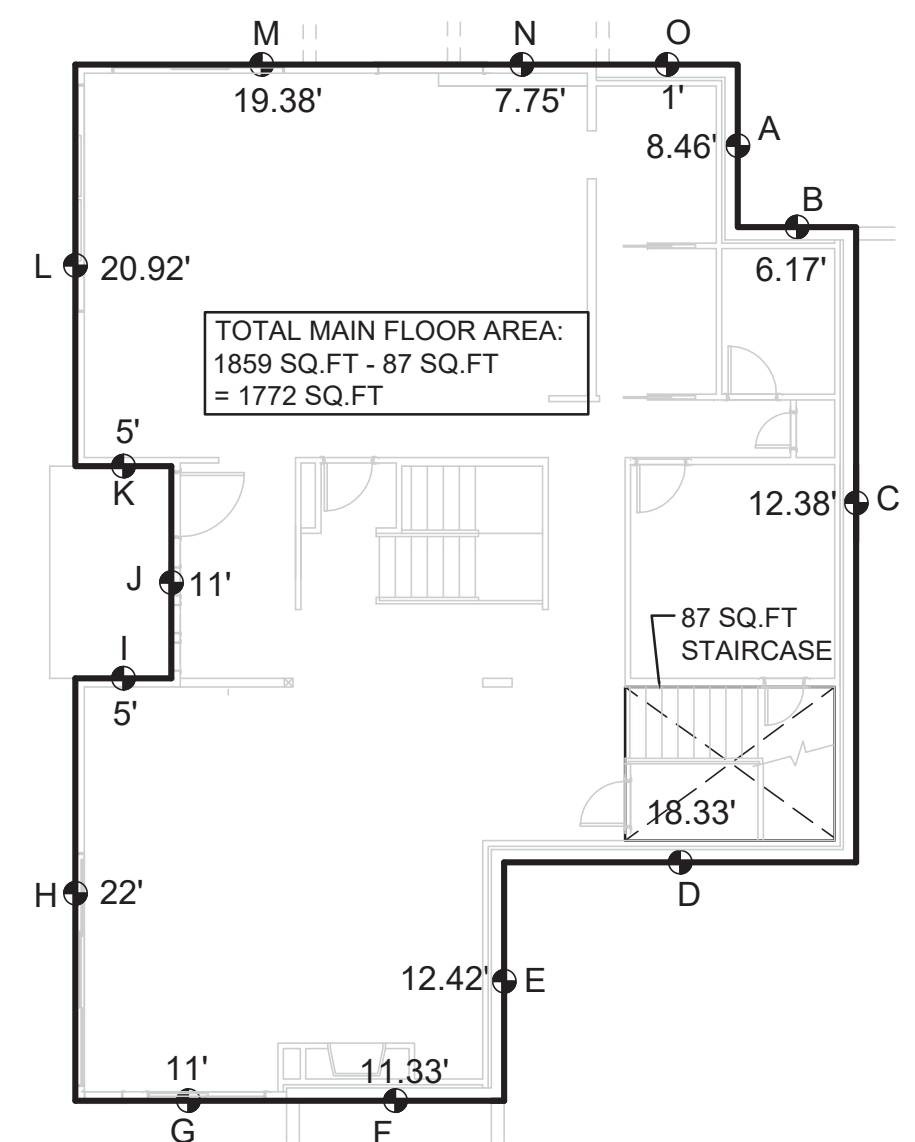
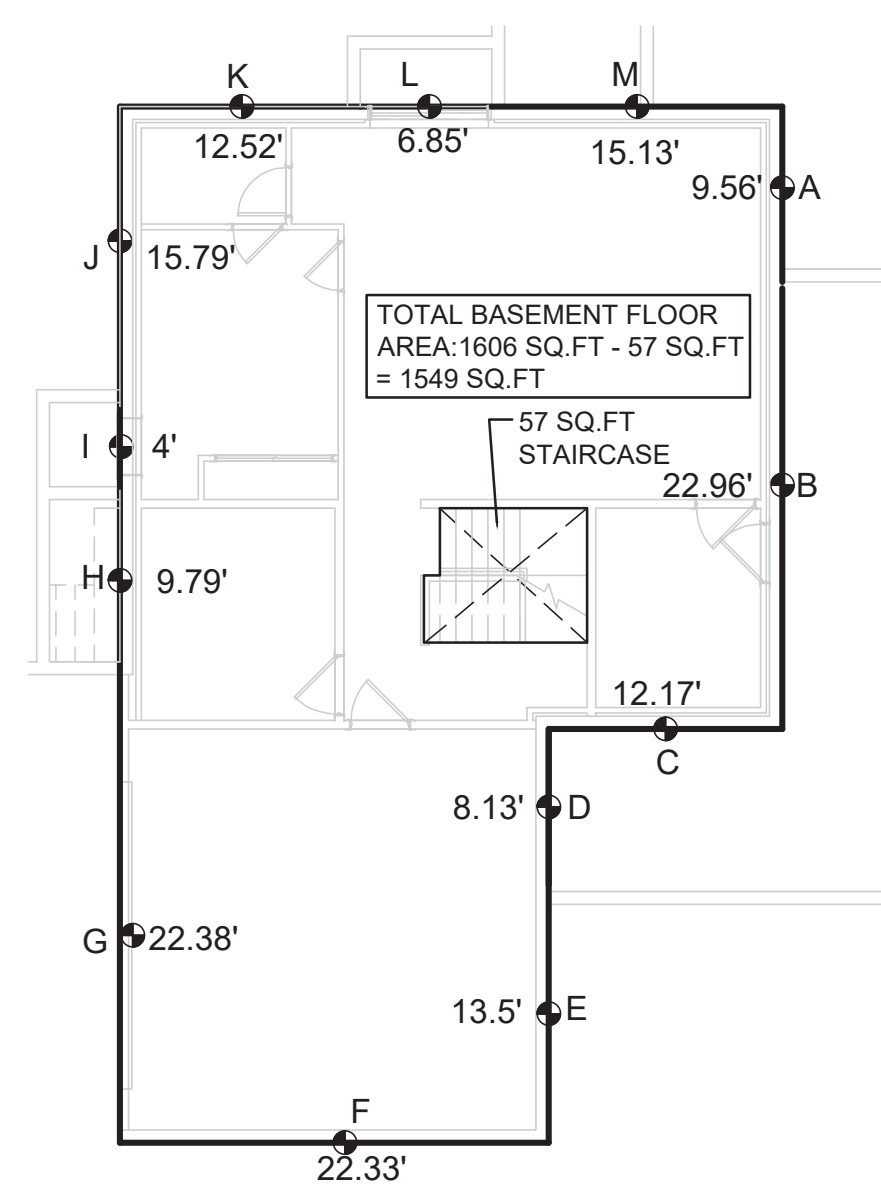
Wall Segment	Midpoint Elevation(FT)	Wall Seg. Length(FT)	Product (SF)
A	257.07	8.5	2185.095
B	257.07	6.2	1593.834
C	257.07	33.1	8509.017
D	257.07	18.3	4704.381
E	257.07	12.4	3187.668
F	246.26	22.3	5491.598
G	246.4	53.96	13295.74
H	246.9	34.5	8518.05
<b>TOTAL</b>		<b>189.26</b>	<b>47485.39</b>

AVERAGE BUILDING EL. (ABE) 250.90

JURISDICTION ALLOWABLE HEIGHT: 30 FT  
 JURISDICTION ALLOWABLE BUILDING ELEVATION: EL. 281.16'  
 ACTUAL BUILDING HEIGHT: 19.43 FT  
 ACTUAL BUILDING ELEVATION: EL. 270.13'  
 EASEMENT HEIGHT LIMIT: EL. 270.25'

### ABE ANALYSIS

FULL SIZE SCALE 1" = 40'



### BASEMENT FLOOR EXEMPTION

Wall Seg	Wall Ht.	Cov. Ht. (x)	Length x	Coverage	= Result
A	7.92	7.92	9.56	100%	9.56
B	7.92	4.92	22.96	62%	14.26
C	7.92	4.92	12.17	62%	7.56
D	8.25	5.25	8.13	64%	5.17
E	8.25	8.25	13.5	100%	13.50
F	8.25	8.25	22.33	100%	22.33
G	8.25	0.00	22.38	0%	0.00
H	7.92	7.92	9.79	100%	9.79
I	7.92	2.81	4	35%	1.42
J	7.92	7.92	15.79	100%	15.79
K	7.92	7.92	12.52	100%	12.52
L	7.92	2.00	6.85	25%	1.73
M	7.92	7.92	15.13	100%	15.13
<b>Total</b>			<b>175.11</b>		<b>128.77</b>

Portion of Excluded Basement Floor Area = 1549 x 0.73534 = 1139.05 sq.ft  
 Excluded from the GFA

### MAIN FLOOR EXEMPTION

Wall Seg	Wall Ht.	Cov. Ht. (x)	Length x	Coverage	= Result
A	10	10	8.46	100%	8.46
B	10	10	6.17	100%	6.17
C	10	10	33.08	100%	33.08
D	10	10	18.33	100%	18.33
E	10	10	12.42	100%	12.42
F	10	5	11.33	50%	5.67
G	10	0	11	0%	0.00
H	10	0	22	0%	0.00
I	10	0	5	0%	0.00
J	10	0	11	0%	0.00
K	10	0	5	0%	0.00
L	10	0	20.92	0%	0.00
M	10	0	19.38	0%	0.00
N	10	2.5	7.75	25%	1.94
O	10	10	7.75	100%	7.75
<b>Total</b>			<b>199.59</b>		<b>93.81</b>

Portion of Excluded Basement Floor Area = 1772 x 0.47003 = 832.89 sq.ft  
 Excluded from the GFA

### REVISIONS

#	DATE	DESCRIPTION OF REVISION
1	09.05.22	COMMENT RESPONSE 1

DRAWN BY:  
 CHECKED BY:  
 JOB #:



Project Name: **HU RESIDENCE**  
 30XX 69TH AVE SE  
 MERCER ISLAND, WA 98040

APPROVAL STAMP

DRAWING TITLE:  
**LAND USE CALCULATIONS**

SHEET:

**A1.01**

## GENERAL NOTES

**CODES:**  
WORK SHALL COMPLY WITH THE FOLLOWING CODES:  
2018 WASHINGTON STATE RESIDENTIAL CODE  
2018 WASHINGTON ENERGY CODE, RESIDENTIAL PROVISIONS (WSEC), WAC 51-11R  
2018 UNIFORM PLUMBING CODE (UPC) WITH WASHINGTON STATE AMENDMENTS, WAC 51-56  
2018 INTERNATIONAL FIRE CODE WITH WASHINGTON STATE AMENDMENTS, WAC 51-54A.  
OTHER CODES APPLICABLE BY JURISDICTION.

- All applicable codes, ordinances and minimum structural requirements take precedence over all drawings, notes and specifications.
- Do not scale drawings. Use printed dimensions only. Notify architect of any omissions or discrepancies before proceeding with work in question. Dimensions take precedence over scaled drawings.
- Contractor shall visit site and familiarize himself with all aspects of the work prior to contracting with the owner to perform the work.
- Before commencing work, the contractor shall verify all dimensions and notes shown on drawings, verify dimensions with existing conditions by taking field measurements as required, and report grades and existing conditions prior proceeding with work. It is the contractor's responsibility to identify all the discrepancies to the architect at the time they are noted. Any work done by the contractor after discovery of such discrepancy shall be done at the contractor's risk.
- Contractor shall verify conformance of actual soil conditions with soils report and design assumptions.
- Contractor shall be responsible for acquiring all necessary permits for the work, except for the building permit which is the responsibility of the architect.
- Dimensions are to face of concrete, face of stud, or centerline of columns, U.N.O.
- Repetitive notes may be called out only once and indicated as typical. Repetitive features may be drawn only once, but shall be provided as if drawn in full.
- Separate mechanical, electrical, and plumbing permits are required in addition to the basic building permit, u.n.o.
- The contractor is responsible for coordinating mechanical, electrical and plumbing contractors and notifying the architect of any discrepancies in framing prior to proceeding with work.

## SITE SAFETY

- Contractor shall be responsible for all required safety precautions and the methods, techniques, sequences, or procedures required to perform the work.
- The architect has not been retained or compensated to provide design and/or construction review services relating to the contractor's safety precautions.
- Periodic site visits performed by the architect shall not be construed as supervision of actual construction safety precautions.
- The architect is not responsible for providing a safe place for the performance of work by the contractor or the contractor's employees or employees of suppliers or subcontractors, or for access, visits, use, work, travel or occupancy by any person.
- Contractor shall maintain a trash bin in an area designated by the owner's representative for the collection of all construction debris. Contractor shall dispose of all debris and remove trash bin prior to occupancy. All surfaces shall be cleaned prior to occupancy.

## TREE PROTECTION

- Preconstruction.** Trees in the protection areas should be pruned, fertilized watered and bedded as recommended by the arborist or landscape architect before construction starts.
- Fencing.** Construction fencing either orange fiberglass or chain link shall be placed according to the Approved Plan Signage. Signage shall indicate that no material storage, grade disturbance, or construction traffic shall occur within the tree protection areas.
- Inspection.** Trees should be inspected by the general contractor at least monthly during construction to ensure that they are being properly preserved.
- Tree damage.** Damage or stress noticed to a tree or trees in the protection areas should be referred to the project arborist or landscape architect for recommended action.

## MOISTURE PROTECTION

- Provide pressure treated plates between concrete and framing.
- Provide a minimum of 12" clear between wood girders and earth.
- Provide a minimum of 18" clear between wood joists and earth.
- Provide a minimum of 8" clear between wood posts and earth.
- Provide a minimum of 1" clear between wood posts and concrete floors.
- Caulk all openings thoroughly.
- Flash all openings with a minimum of 26 gauge galvanized steel to acceptable industry standards.
- Metal coping at parapet to be a minimum of 22 gauge galvanized steel.

## EGRESS & SECURITY

- Stairways to meet the following requirements: (occupancies less than 10)  
STAIR WIDTH 36" MIN.  
TREAD WIDTH 10" MIN., 6" MIN. FOR WINDERS  
RISER HEIGHT 7-3/4" MAX.  
HEADROOM 80" MIN.  
HANDRAIL HEIGHT 34" TO 38" ABOVE NOSING  
HANDRAIL GRASP 1-1/4" MIN. TO 2" MAX.
- Egress Openings. Emergency escape and rescue openings shall have a minimum net clear opening for emergency escape and rescue grade-floor openings shall be 5 sq.ft. Where provided, they shall have a sill no greater than 44" above the adjacent floor. The minimum net clear opening height shall be 24". The minimum net clear opening width shall be 20". (R310.1)
- Handrail intermediate members shall be configured as to passing a 4" diameter sphere through any opening.
- Guardrails shall be a minimum of 36" above finish floor.
- Guardrail intermediate members shall be configured as to passing a 4" diameter sphere through any opening.
- Deadbolts with a minimum throw of 1/2" and a view port are required at all exterior doors

## GLASS AND GLAZING

**Safety Glazing.** Install in areas subject to human impact (R308.4). Such hazardous locations include:

- Glazing in fixed and operable panels of winging, sliding and bifold doors.
- Glazing in a fixed or operable panel adjacent to a door where the nearest vertical edge is within a 24 inch arc of the door in a closed position and whose bottom edge is less than 60 inches above the floor or walking surface except for:
  - decorative glazing;
  - where there is an intervening wall;
  - glazing in the wall perpendicular to the latch side of the door;
  - adjacent to a closet door less than 3 feet deep (must comply with R308.4.3)
  - adjacent to the fixed panel of patio doors.
- Glazing in an individual or fixed panel that meets all of the following conditions:
  - Exposed area of an individual pane greater than 9 square feet.
  - Bottom edge less than 18 inches above the floor.
  - Top edge greater than 36 inches above the floor.
  - One or more walking surfaces within 36 inches horizontally of the glazing.
- All glazing in railings, regardless of an area or height above walking surface. Included are structural baluster panels and nonstructural in-fill panels.
- Glazing in walls, enclosures, or fences for hot tubs, spas, whirlpools, saunas, steam rooms, bathtubs, showers, and indoor or outdoor pools where the bottom exposed edge of the glazing is less than 60 inches above any standing or walking surface and within 60 inches horizontally of the water's edge.
- Glazing adjacent to stairways, landings, and ramps within 36 inches horizontally of a walking surface when the bottom exposed edge of the glass is less than 36 inches above the adjacent walking surface. Except when a rail is installed on the accessible side of the glazing 34" to 38" above the walking surface.
- Glazing adjacent to the landing at the bottom of a stairway within 60 inches horizontally of the bottom tread when the exposed surface of the glazing is less than 36 inches above the nose of the tread. Except when the glazing is protected by a guard complying with section R312 and the glass is more than 18" from the guard.

## ENERGY NOTES

TABLE R402.1.1 INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT (a)	
CLIMATE ZONE	5 AND MARINE-4
FENESTRATION U-FACTOR (b)	0.30
SKYLIGHT U-FACTOR (b)	0.50
GLAZED FENESTRATION SHGC	NR
CEILING R-VALUE (e)	49
WOOD FRAME WALL R-VALUE (g,h)	21 INT
MASS WALL R-VALUE (i)	21/21
FLOOR R-VALUE	30
BELOW-GRADE WALL R-VALUE (c,h)	10/15/21 INT + TB
SLAB R-VALUE & DEPTH (d,f)	10, 2FT

**TABLE R402.1.1 FOOTNOTES**  
FOR SI: 1 FOOT = 304.8 MM, CI = CONTINUOUS INSULATION, INT = INTERMEDIATE FRAMING.  
R-VALUES ARE MINIMUMS. U-FACTORS AND SHGC ARE MAXIMUMS. WHEN INSULATION IS INSTALLED IN A CAVITY WHICH IS LESS THAN THE LABEL OR DESIGN THICKNESS OF THE INSULATION, THE COMPRESSED R-VALUE OF THE INSULATION FROM APPENDIX TABLE A101.4 SHALL NOT BE LESS THAN THE R-VALUE SPECIFIED IN THE TABLE.  
THE FENESTRATION U-FACTOR COLUMN EXCLUDES SKYLIGHTS.  
"10/15/21 +TB" 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 A THERMAL BREAK BETWEEN THE SLAB AND THE BASEMENT WALL AT THE INTERIOR OF THE BASEMENT WALL. "10/15/21 +TB" SHALL BE PERMITTED TO BE MET WITH R-13 CAVITY INSULATION ON THE INTERIOR OF THE BASEMENT WALL PLUS R-5 CONTINUOUS INSULATION ON THE INTERIOR OR EXTERIOR OF THE WALL. "5TB" MEANS R-5 THERMAL BREAK BETWEEN FLOOR SLAB AND BASEMENT WALL.  
R-10 CONTINUOUS INSULATION IS REQUIRED UNDER HEATED SLAB ON GRADE FLOORS. SEE SECTION R402.2.9.1.  
FOR SINGLE RAFTER- OR JOIST-VAULTED CEILINGS, THE INSULATION MAY BE REDUCED TO R-38 IF THE FULL INSULATION DEPTH EXTENDS OVER THE TOP PLATE OF THE EXTERIOR. R-7.5 CONTINUOUS INSULATION INSTALLED OVER AN EXISTING SLAB IS DEEMED TO BE EQUIVALENT OF THE REQUIRED PERIMETER SLAB INSULATION WHEN APPLIED TO EXISTING SLABS COMPLYING WITH SECTION R603.1.1. IF FOAM PLASTIC IS USED, IT SHALL MEET THE REQUIREMENTS FOR THERMAL BARRIERS PROTECTING FOAM PLASTICS.  
FOR LOG STRUCTURES DEVELOPED IN COMPLIANCE WITH STANDARD ICC 400, LOG WALLS SHALL MEET THE REQUIREMENTS FOR CLIMATE ZONE 5 OF ICC 400.  
INT. (INTERMEDIATE FRAMING) DENOTES FRAMING AND INSULATION AS DESCRIBED IN SECTION A103.2.2 INCLUDING STANDARD FRAMING 16 INCHES ON CENTER, 78 PERCENT OF THE WALL CAVITY INSULATED AND HEADERS INSULATED WITH A MINIMUM OF R-10 INSULATION.

- A certificate complying with 2015 WSEC R401.3 is required to be completed by the design professional or builder and permanently posted within 3' of the electrical panel prior to final inspection.
- The building shall be tested and verified as having an air leakage rate not exceeding 5 air changes per hour. Testing shall be conducted with a blower door at a pressure of 0.2 inches w.g.
- Each dwelling unit is required to be provided with at least one programmable thermostat for the regulation of temperature.
- Ducts shall be leak tested in accordance with WSU RS-33 using the max. duct leakage rates specified.
- A minimum of 75% of permanently installed lamps in lighting fixtures shall be high-efficacy lamps.
- Caulk all joints around exterior opening
- Seal all tears and joints in insulation with approved tape.
- All crawlspaces shall have a minimum of 6 Mil black Visqueen ground cover extended over the top of the footings. Lap all joints 12" minimum.
- Fireplaces shall have tight fitting dampers and shall be provided with a minimum of 6 square inches of outside combustible air supply.
- Metal ducts outside the conditioned space shall be insulated to R-8 minimum per the 2015 WSEC, Section R403.2.1. Provide weather barrier if located on the exterior of the building.
- Hot water shall meet 1987 National Appliance Energy Conservation Act.

## ALARM SCHEDULE

2015 WRC SECTION R314 & R315		
SYMBOL	DESCRIPTION	REQUIREMENTS
SA	SMOKE ALARM	*110 V INTERCONNECTED W/ BATTERY BACKUP *INSTALLED ON EACH FLOOR, IN EACH SLEEPING AREA, AND OUTSIDE EACH SEPARATE SLEEPING AREA LISTED IN ACCORDANCE WITH UL 217 AND INSTALLED PER THE HOUSEHOLD FIRE WARNING EQUIPMENT PROVISIONS OF NFPA 72
CD/SA	COMBINATION SMOKE ALARM & CARBON MONOXIDE ALARM	*INSTALLED ON EACH FLOOR AND OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS *SMOKE ALARM REQUIREMENTS PER ABOVE *CARBON MONOXIDE ALARMS LISTED AS COMPLYING WITH UL 2075 AND INSTALLED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS

## VENTILATION

- Source specific fans shall be located in all kitchens, bathrooms, water closets, and laundry facilities in compliance with the 2015 WRC, Section M1507.4. Ventilation capacity shall be at least 50 cfm for bathrooms. Water closets, and laundry rooms (Intermittent use) and 100 cfm for kitchens (Intermittent use). Range hoods shall be exhausted in accordance with Section M1503.
- Whole House Ventilation System shall comply with the 2015 WRC, Section M1507.3.
  - Per 2015 WRC Table M1507.3.3(1) continuous whole house mechanical ventilation system airflow rate requirements: Provide 120 CFM airflow (4,501-6,000 SF dwelling unit with 6 bedrooms = 120 CFM airflow)
  - System components include whole-house ventilation using exhaust fans and integrated with a forced-air system. Timer, intake grill & ducting (exterior), motorized damper, intake blower, electric air tampering, exhaust ducting & port with back draft damper. Distribution ducting & grills (habitable rooms shall be provided with outdoor air), electric exhaust fan.
  - The whole house ventilation fan shall meet the requirements of Section M1507.3.2 and M1507.3.2.1 Manufacturer's installation, operating instructions, and a whole house ventilation system operation description shall be provided by installer.
  - Controls for all ventilation systems shall be readily accessible by the occupant. Local exhaust systems shall be controlled by manual switches, dehumidistats, timers, or other approved means. Continuous whole house ventilation system shall comply with the following:
    - Continuous whole house ventilation system shall operate continuously and be equipped with an override control. A "Fan On" switch shall be permitted as an override control.
    - Controls shall be capable of operating the ventilation system exhaust fans, forced-air system fans, or supply fans without energizing other energy consuming appliances.
    - A label shall be affixed to the control that reads "Whole House Ventilation (See operating instructions)"
  - Intermittent ventilation shall occur at least 25% of each 4-Hour segment. Ventilation rate shall be not less than as specified by Table M1507.3.3(1), multiplied by the rate factor indicated on Table M1507.3.3(2). Fan shall have a sone rating of 1.0 or less measured at 0.1 inches W.G.
- Clothes dryers shall be exhausted in accordance with the 2015 WRC, Section M1502. Duct length shall not exceed 35 feet, plus the length of the transition duct, less the equivalent length of fittings per Table M1502.4.4.1.
- Exhaust duct work shall conform to 2015 WRC, Chapter 16. Exhaust ducting terminations shall be outside the building, shall be located in compliance with Section M1506.2. And shall be equipped with backdraft dampers.
- Supply ducts within conditioned space shall be insulated to a minimum of R-4.
- Provide a minimum net area of 1 square foot of ventilation area for each 300 square feet of crawlspace area. Place openings as near as to corners as practicable and shall provide cross ventilation.
- All crawlspace vents shall be provided with 1/4" non-corrosive wire mesh.
- Provided a minimum net area of 1 square foot of ventilation area for every 150 square feet of attic area. Provide a continuous 1 inch minimum air space above insulation for cross ventilation.
- All attic vents shall be provided with 1/4" non-corrosive wire mesh or approved soffit vents.

## VENTILATION SCHEDULE

2015 WRC SECTION M1507		
SYMBOL	LOCATION(S)	MINIMUM FAN REQUIREMENTS
A	BATH/TOILET, POWDER, LAUNDRY	MIN. 50 CFM @ 0.25" WG
B	KITCHEN	MIN. 100 CFM @ 0.25" WG (RANGE HOOD OR DOWN DRAFT EXHAUST FAN RATED AT MIN. 100 CFM @ 0.10" WG MAY BE USED FOR EXHAUST FAN REQUIREMENTS.)
C	WHOLE HOUSE FAN	MIN. CFM = 120 @ 0.25" WG (WRC TABLE M1507.3.3(1)) (BASED ON 5291 S.F. FLOOR AREA & 6 BEDROOMS) (DAILY FRACTIONAL OPERATION TIME = 75 %) *WHOLE HOUSE FANS LOCATED 4 FT. OR LESS FROM INTERIOR GRILLE TO HAVE A SONE RATING OF 1.0 OR LESS MEASURED @ 0.1" WG

## FIRE PROTECTION

- The garage shall be separated from the residence and its attic by no less than the following:
  - 5/8" gypsum wallboard required at all walls separating garage and dwelling. Not less than (1)layer of 5/8" Type "X" gypsum wallboard at ceilings.
  - 1-3/8" minimum thick, solid core, or honeycomb core steel door, or a 20-min. fire-rated door.
  - Ducts in the garage and ducts penetrating the separation assemblies shall be min. 26 gauge sheet steel and shall have no openings into the garage.
- Fire separation to be horizontal and vertical including all structural members supporting the fire separation.
- All enclosed useable space under stairways shall be (1) layer of 5/8" Type 'X' Gypsum wallboard on enclosed side.
- Smoke alarms shall meet 2015 IFC 907.2.11.2. Smoke alarms shall be hardwired, provided a battery backup, and interconnected within each dwelling unit. In order to reduce the chances of nuisance activations, smoke alarms should not be located near kitchen appliances.
- Smoke detectors shall be audible in all sleeping rooms, and outside each sleeping area in the immediate vicinity of the bedrooms.
- A minimum of (1) smoke detector shall be installed on each floor including the garage.
- Firestopping and draftstopping shall consist of 2"nominal lumber.
- Firestopping and draftstopping is required in the following places:
  - Concealed spaces at all floor and ceiling levels and at 10 feet intervals along the length of the wall.
  - Interconnections between concealed vertical and horizontal spaces(i.e. Soffits)
  - Concealed spaces between stair stringers at top and bottom of the run.
- Rock wool around all openings for vents, pipes, ducts, etc.
- Emergency egress windows shall meet the following requirements

REVISIONS		
#	DATE	DESCRIPTION OF REVISION
1	09.05.22	COMMENT RESPONSE 1
DRAWN BY:		
CHECKED BY:		
JOB #:		



Project Name:  
**HU RESIDENCE**  
30XX 69TH AVE SE  
MERCER ISLAND, WA 98040

APPROVAL STAMP

DRAWING TITLE:  
**GENERAL NOTES & REQUIREMENTS**

SHEET:

**A1.02**



# WSEC ENERGY CREDIT OPTIONS

△

WASHINGTON STATE ENERGY CREDIT CALCULATION:  
4504 SF OF NEW ENCLOSED FLOOR AREA FOR EACH UNIT.  
6.0 CREDITS REQ'D. 6.0 CREDITS PROVIDED

FUEL NORMALIZATION CREDITS (TABLE R406.2)  
SYSTEM TYPE 2 1.0 CREDIT  
HEAT PUMP

OPTION 1.3: EFFICIENT BUILDING ENVELOPE OPTION:  
0.5 CREDITS  
VERTICAL FENESTRATION U = 0.28, FLOOR R-38, SLAB  
ON GRADE R-10 PERIMETER AND UNDER ENTIRE SLAB BELOW  
GRADE SLAB R-10 PERIMETER AND UNDER ENTIRE SLAB.

OPTION 2.1 - AIR LEAKAGE CONTROL AND EFFICIENT  
VENTILATION: 0.5 CREDITS  
COMPLIANCE BASED ON R402.4.1.2:  
REDUCE THE TESTED AIR LEAKAGE TO 3.0 AIR CHANGES PER  
HOUR MAXIMUM AND ALL WHOLE HOUSE VENTILATION  
REQUIREMENTS AS DETERMINED BY SECTION M1507.3 OF THE  
INTERNATIONAL RESIDENTIAL CODE SHALL BE MET WITH A  
HIGH EFFICIENCY FAN (MAXIMUM 0.35 WATTS/CFM), NOT  
INTERLOCKED WITH THE FURNACE FAN. VENTILATION  
SYSTEMS USING A FURNACE INCLUDING AN ECM MOTOR ARE  
ALLOWED, PROVIDED THAT THEY ARE CONTROLLED TO  
OPERATE AT LOW SPEED IN VENTILATION ONLY MODE.

OPTION 3.5: HIGH EFFICIENCY HVAC: 1.5 CREDITS  
AIR-SOURCE, CENTRALLY DUCTED HEAT PUMP WITH  
MINIMUM HSPF OF 11.0.

OPTION 4.1: HIGH EFFICIENCY HVAC DISTRIBUTION SYSTEM  
OPTIONS: 0.5 CREDITS  
ALL SUPPLY AND RETURN DUCTS LOCATED IN AN  
UNCONDITIONED ATTIC SHALL BE DEEPLY BURIED IN  
CEILING INSULATION IN ACCORDANCE WITH SECTION  
R403.3.7.  
FOR MECHANICAL EQUIPMENT LOCATED OUTSIDE THE  
CONDITIONED SPAEC, A MAXIMUM OF 10 LINEAR FEET  
OF RETURN DUCT AND 5 LINEAR FEET OF SUPPLY DUCT  
CONNECTIONS TO THE EQUIPMENT MAY BE OUTSIDE  
THE DEEPLY BURIED INSULATION. ALL METALLIC DUCTS  
LOCATED OUTSIDE THE CONDITIONED SPACE MUST  
HAVE BOTH TRANSVERSE AND LONGITUDINAL JOINTS  
SEALED WITH MASTIC. IF FLEX DUCTS ARE USED, THEY  
CANNOT CONTAIN SPLICES.  
DUCT LEAKAGE SHALL BE LIMITED TO 3 CFM PER 100  
SQUARE FEET OF CONDITIONED FLOOR AREA. AIR  
HANDLER(S) SHALL BE LOCATED WITHIN THE  
CONDITIONED SPACE.

OPTION 5.5: EFFICIENT WATER HEATING: 2.0 CREDITS  
ELECTRIC HEAT PUMP WATER HEATER MEETING THE  
STANDARDS FOR TIER III OF NEEA'S ADVANCED WATER  
HEATING SPECIFICATION

## REVISIONS

#	DATE	DESCRIPTION OF REVISION
1	09.05.22	COMMENT RESPONSE 1

DRAWN BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_  
JOB #: \_\_\_\_\_

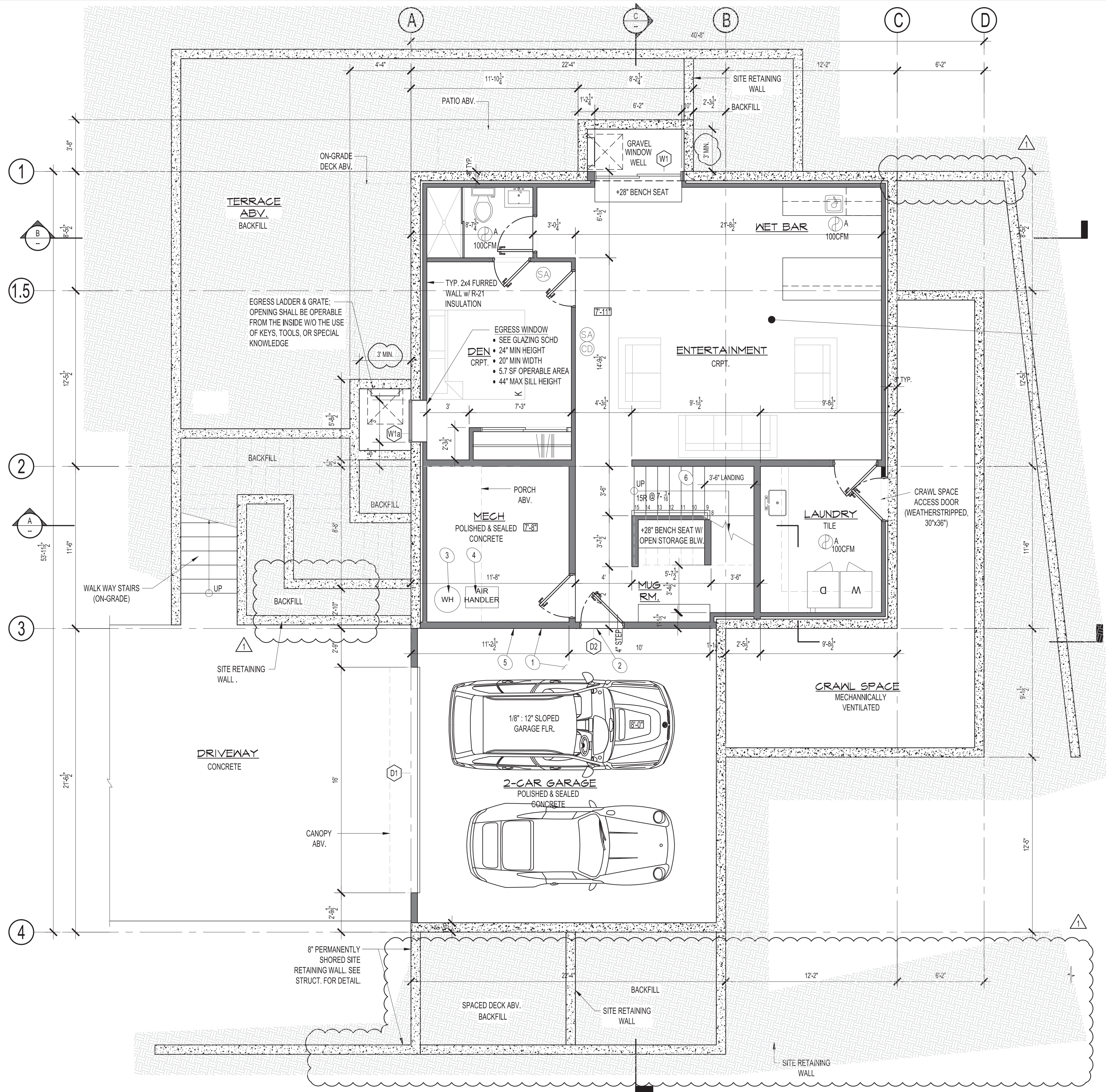


Project Name:  
**HU RESIDENCE**  
30XX 69TH AVE SE  
MERCER ISLAND, WA 98040

APPROVAL STAMP

DRAWING TITLE:  
**ENERGY  
CREDITS &  
FORMS**

SHEET:  
**A1.03**



**FLOOR PLAN LEGEND**

	WOOD STUD WALL
	CONCRETE WALL
	CARBON MONOXIDE ALARM/DETECTOR
	SMOKE ALARM/DETECTOR
	EXHAUST FAN LOCATION AND TYPE. REFER TO VENTILATION SCHEDULE ON A1.01 FOR REQUIREMENT DETAILS AND MIN. FLOW RATE, UNO
	INDICATES NEW EXTERIOR DOOR/WINDOW. SEE DOOR/WINDOW SCHEDULE ON SHEET A1.0
	INDICATES PLAN KEYNOTES. SEE THIS SHEET.
	WALL TYPE. REFER TO WALL ASSEMBLY SCHEDULE ON SHEET

**PLAN KEYNOTE**

1. PROVIDE 5/8" GYPSUM WALLBOARD AT ALL WALLS SEPARATING GARAGE AND DWELLING. NOT LESS THAN (1) LAYER OF 5/8" TYPE "X" GYPSUM WALLBOARD AT CEILINGS.
2. PROVIDE TIGHT FITTING, 20-MIN. FIRE-RATED DOOR WITH SELF CLOSING DEVICE.
3. WATER HEATER, SHALL MEET EFFICIENCY REQUIREMENT PER WSEC ENERGY CREDIT OPTIONS ON SHEET A1.03. AND PROVIDE 26 GA. STRAP AROUND WATER HEATER TO WALL @ TOP & BOTTOM.
4. HVAC EQUIPMENT, SHALL MEET EFFICIENCY REQUIREMENT PER WSEC ENERGY CREDIT OPTIONS ON SHEET A1.03
5. 2x6 STUDS W/ R-21 INSULATION MIN.
6. SEE A4.03 & A4.04 FOR STAIR DETAILS

**PLAN NOTES**

1. CONTRACTOR SHALL VERIFY ALL NOTES, DIMENSIONS & CONDITIONS PRIOR TO CONSTRUCTION.
2. ALL DIMENSIONS ARE TO FACE OF FRAMING, CENTER OF COLUMN, OR FACE OF CONCRETE, UNO.
3. FIRE BLOCK ALL PLUMBING PENETRATIONS. FIRE BLOCK AT 10'-0" o.c. HORIZONTALLY AND VERTICALLY IN ALL FRAMED WALLS. FIRE BLOCK ALL WALL TO FLOOR, WALL TO CEILING, AND FLOOR TO FIREPLACE ASSEMBLIES.
4. PROVIDE ACOUSTICAL BATT INSULATION AT ALL INTERIOR BATHROOM AND POWDER ROOM WALLS, BEDROOM WALLS, AND IN THE FLOOR AND CEILINGS WHEN THESE ROOMS OCCUR ABOVE OR BELOW A HABITABLE SPACE.
5. ALL EXTERIOR WALLS TO BE 2x6 STUDS @ 16" o.c. UNO.
6. PROVIDE A VENTED WINDOW IN EACH HABITABLE ROOM. THE FOLLOWING ARE NOT CONSIDERED HABITABLE ROOMS: BATHROOMS, TOILET ROOMS, CLOSETS, HALLS, STORAGE OR UTILITY SPACES AND SIMILAR.
7. SEE SHEET A1.01 FOR ADDITIONAL GENERAL NOTES APPLICABLE TO THIS PLAN SHEET
8. SEE SHEET A1.01 FOR VENTILATION AND ALARM SCHEDULES.

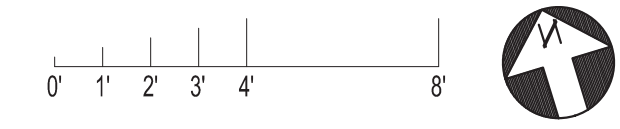
6 ENERGY CREDITS ARE REQUIRED AND 6 ENERGY CREDITS HAVE BEEN SELECTED. SEE A1.03 FOR ALL CHOSEN ENERGY CREDITS.

MAXIMUM HEAT EQUIPMENT OUTPUT FOR THIS HOME IS 48360 BTU/HR PER THE WSEC HEATING SYSTEM SIZING WORKSHEET

ALL VERTICAL FENESTRATION U-FACTOR = 0.28 U.N.O.

**BASEMENT FLOOR PLAN**

22x34 SCALE 1/4" = 1'-0"



**REVISIONS**

#	DATE	DESCRIPTION OF REVISION
1	09.05.22	COMMENT RESPONSE 1

DRAWN BY:  
CHECKED BY:  
JOB #:



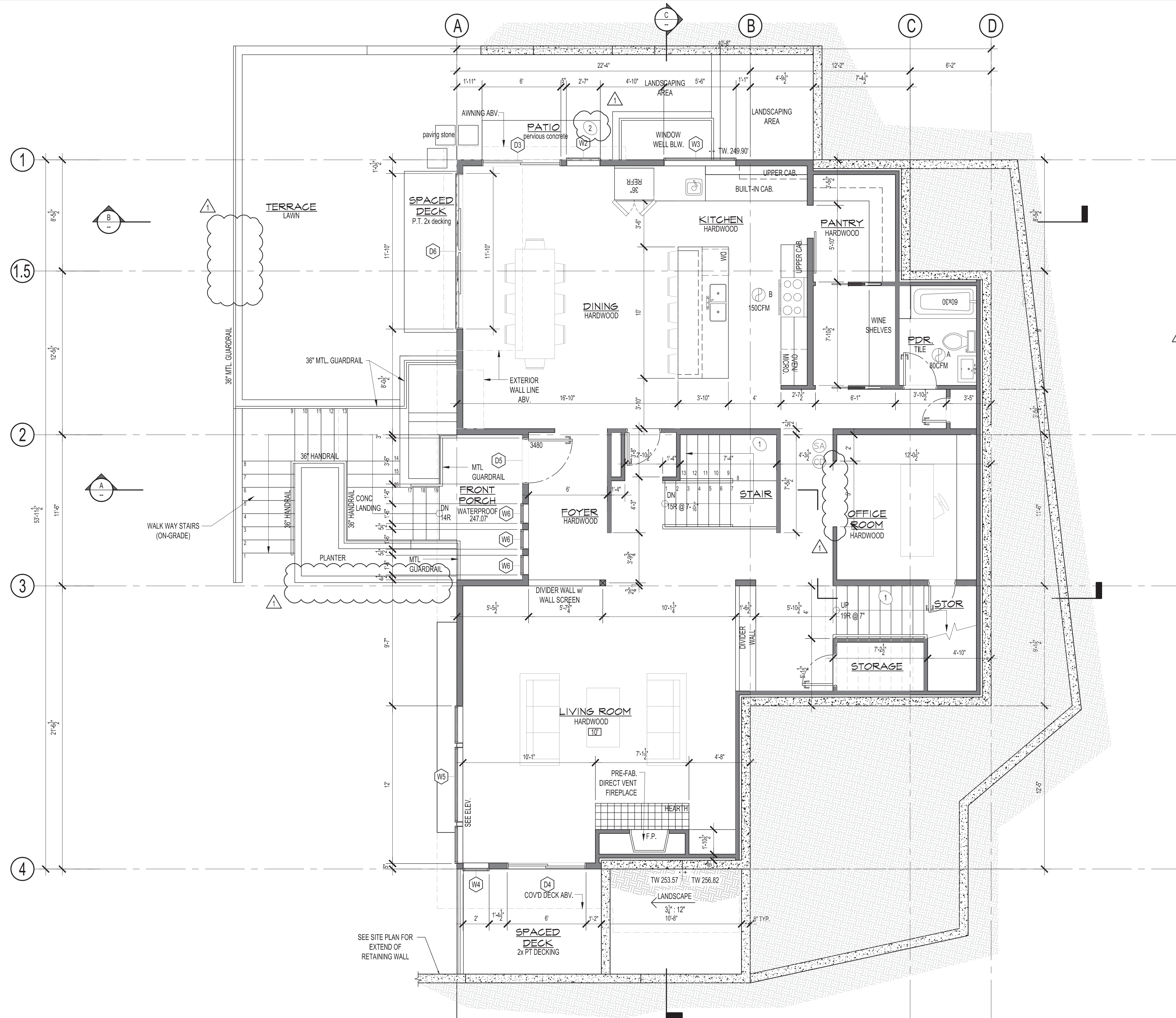
Project Name:  
**HU RESIDENCE**  
30XX 69TH AVE SE  
MERCER ISLAND, WA 98040

APPROVAL STAMP

DRAWING TITLE:  
**BASEMENT FLOOR PLAN**

SHEET:

**A2.00**



**FLOOR PLAN LEGEND**

	WOOD STUD WALL
	CONCRETE WALL
	CARBON MONOXIDE ALARM/DETECTOR
	SMOKE ALARM/DETECTOR
	EXHAUST FAN LOCATION AND TYPE. REFER TO VENTILATION SCHEDULE ON A1.01 FOR REQUIREMENT DETAILS AND MIN. FLOW RATE, UNO
	INDICATES NEW EXTERIOR DOOR/WINDOW. SEE DOOR/WINDOW SCHEDULE ON SHEET A1.0
	INDICATES PLAN KEYNOTES. SEE THIS SHEET.
	WALL TYPE. REFER TO WALL ASSEMBLY SCHEDULE ON SHEET

**PLAN KEYNOTE**

- SEE A4.03 & A4.04 FOR STAIR DETAILS
- DESIGNATED CONDENSER LOCATION

**PLAN NOTES**

- CONTRACTOR SHALL VERIFY ALL NOTES, DIMENSIONS & CONDITIONS PRIOR TO CONSTRUCTION.
- ALL DIMENSIONS ARE TO FACE OF FRAMING, CENTER OF COLUMN, OR FACE OF CONCRETE, UNO.
- FIRE BLOCK ALL PLUMBING PENETRATIONS. FIRE BLOCK AT 10'-0" o.c. HORIZONTALLY AND VERTICALLY IN ALL FRAMED WALLS. FIRE BLOCK ALL WALL TO FLOOR, WALL TO CEILING, AND FLOOR TO FIREPLACE ASSEMBLIES.
- PROVIDE ACOUSTICAL BATT INSULATION AT ALL INTERIOR BATHROOM AND POWDER ROOM WALLS, BEDROOM WALLS, AND IN THE FLOOR AND CEILINGS WHEN THESE ROOMS OCCUR ABOVE OR BELOW A HABITABLE SPACE.
- ALL EXTERIOR WALLS TO BE 2x6 STUDS @ 16" o.c. UNO.
- PROVIDE A VENTED WINDOW IN EACH HABITABLE ROOM. THE FOLLOWING ARE NOT CONSIDERED HABITABLE ROOMS: BATHROOMS, TOILET ROOMS, CLOSETS, HALLS, STORAGE OR UTILITY SPACES AND SIMILAR.
- SEE SHEET A1.01 FOR ADDITIONAL GENERAL NOTES APPLICABLE TO THIS PLAN SHEET
- SEE SHEET A1.01 FOR VENTILATION AND ALARM SCHEDULES.

**REVISIONS**

#	DATE	DESCRIPTION OF REVISION
1	09.05.22	COMMENT RESPONSE 1

DRAWN BY:  
CHECKED BY:  
JOB #:



Project Name: **HU RESIDENCE**  
30XX 69TH AVE SE  
MERCER ISLAND, WA 98040

APPROVAL STAMP

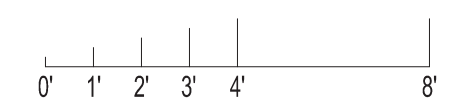
DRAWING TITLE:  
**MAIN FLOOR PLAN**

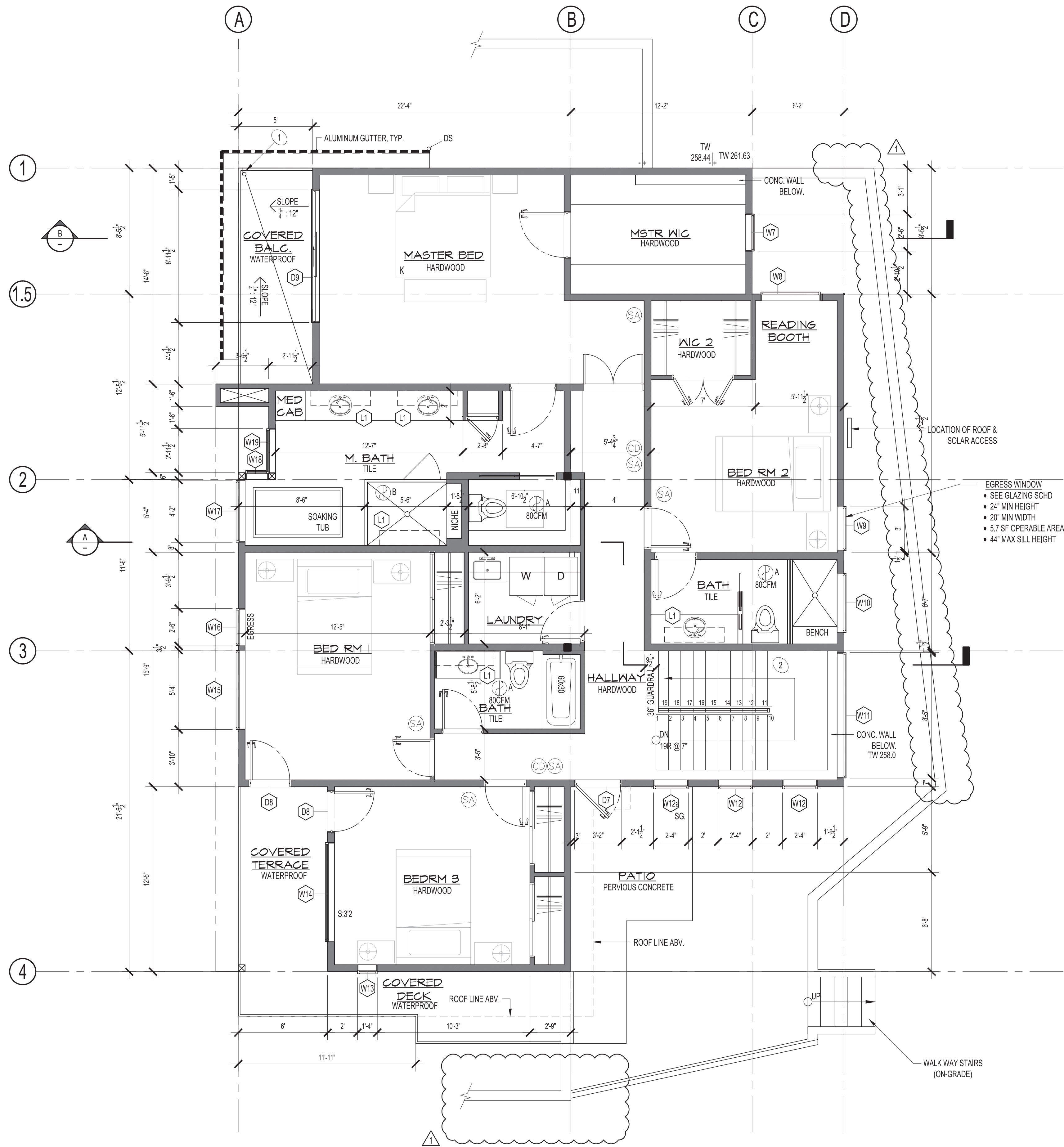
SHEET:

**A2.01**

**MAIN FLOOR PLAN**

22x34 SCALE 1/4" = 1'-0"





**FLOOR PLAN LEGEND**

	WOOD STUD WALL
	CONCRETE WALL
	INDICATES GUTTER w/ DOWNSPOUT LOCATION
	CARBON MONOXIDE ALARM/DETECTOR
	SMOKE ALARM/DETECTOR
	EXHAUST FAN LOCATION AND TYPE. REFER TO VENTILATION SCHEDULE ON A1.01 FOR REQUIREMENT DETAILS AND MIN. FLOW RATE, UNO
	INDICATES NEW EXTERIOR DOOR/WINDOW. SEE DOOR/WINDOW SCHEDULE ON SHEET A1.0
	INDICATES PLAN KEYNOTES. SEE THIS SHEET.
	WALL TYPE. REFER TO WALL ASSEMBLY SCHEDULE ON SHEET

**PLAN KEYNOTE**

- PROVIDE INTERNAL DRAIN AT LOW POINT w/ 3" DIA. ALUMINUM DOWNSPOUT, TIGHTLINE TO STORMWATER SYSTEM, TYP.
- SEE A4.03 & A4.04 FOR STAIR DETAILS

**PLAN NOTES**

- CONTRACTOR SHALL VERIFY ALL NOTES, DIMENSIONS & CONDITIONS PRIOR TO CONSTRUCTION.
- ALL DIMENSIONS ARE TO FACE OF FRAMING, CENTER OF COLUMN, OR FACE OF CONCRETE, UNO.
- FIRE BLOCK ALL PLUMBING PENETRATIONS. FIRE BLOCK AT 10'-0" o.c. HORIZONTALLY AND VERTICALLY IN ALL FRAMED WALLS. FIRE BLOCK ALL WALL TO FLOOR, WALL TO CEILING, AND FLOOR TO FIREPLACE ASSEMBLIES.
- PROVIDE ACOUSTICAL BATT INSULATION AT ALL INTERIOR BATHROOM AND POWDER ROOM WALLS, BEDROOM WALLS, AND IN THE FLOOR AND CEILINGS WHEN THESE ROOMS OCCUR ABOVE OR BELOW A HABITABLE SPACE.
- ALL EXTERIOR WALLS TO BE 2x6 STUDS @ 16" o.c. UNO.
- PROVIDE A VENTED WINDOW IN EACH HABITABLE ROOM. THE FOLLOWING ARE NOT CONSIDERED HABITABLE ROOMS: BATHROOMS, TOILET ROOMS, CLOSETS, HALLS, STORAGE OR UTILITY SPACES AND SIMILAR.
- SEE SHEET A1.01 FOR ADDITIONAL GENERAL NOTES APPLICABLE TO THIS PLAN SHEET
- SEE SHEET A1.01 FOR VENTILATION AND ALARM SCHEDULES.
- SEE ROOF VENTILATION CALCULATIONS ON A2.03 FOR REQUIRED ROOF VENTILATION (WHERE APPLICABLE)

**REVISIONS**

#	DATE	DESCRIPTION OF REVISION
1	09.05.22	COMMENT RESPONSE 1

DRAWN BY:  
CHECKED BY:  
JOB #:



Project Name:  
**HU RESIDENCE**  
30XX 69TH AVE SE  
MERCER ISLAND, WA 98040

APPROVAL STAMP

DRAWING TITLE:  
**UPPER FLOOR PLAN**

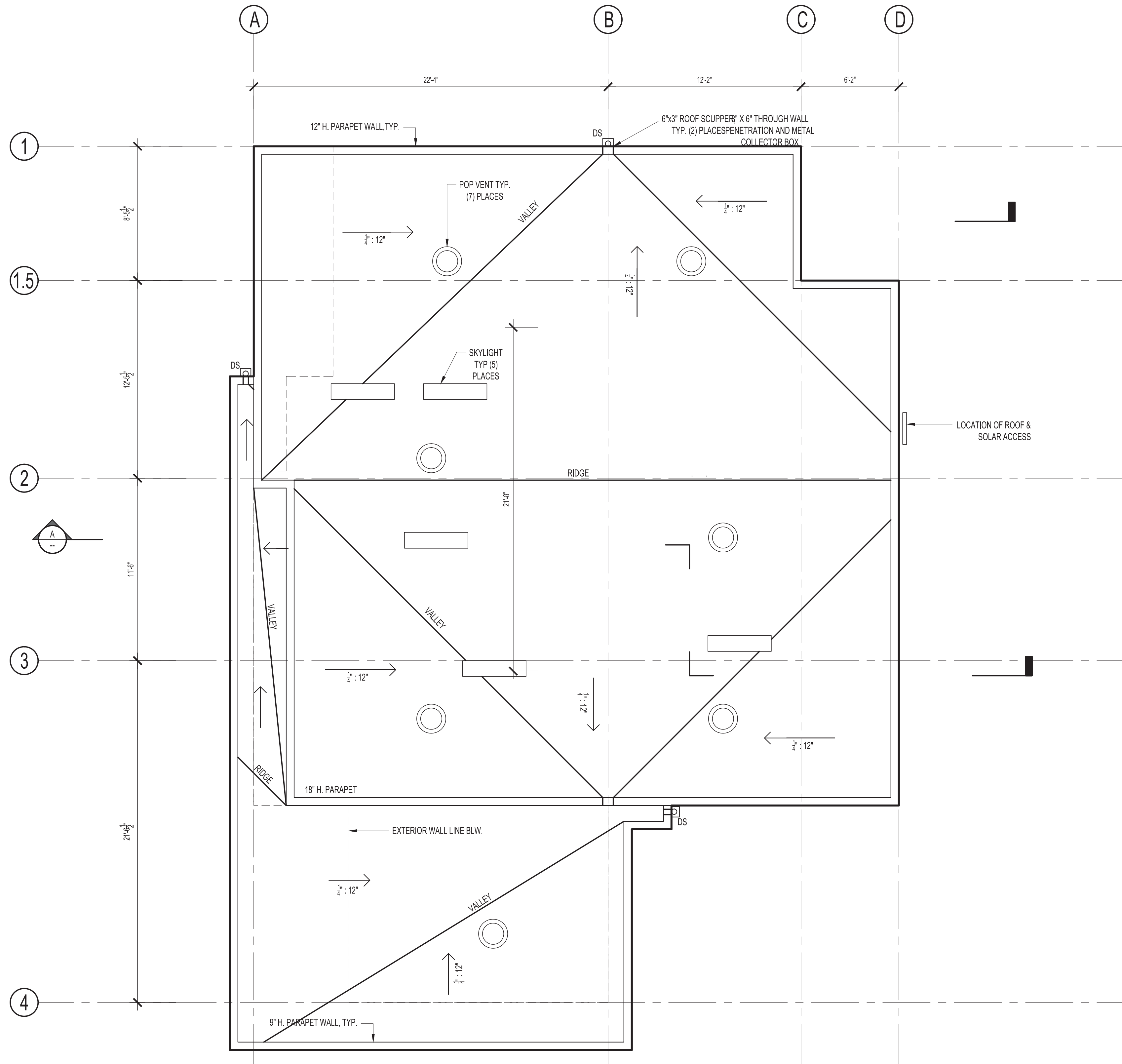
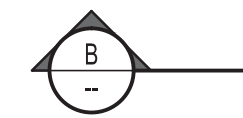
SHEET:

**A2.02**

**UPPER FLOOR PLAN**

22x34: SCALE 1/4" = 1'-0"



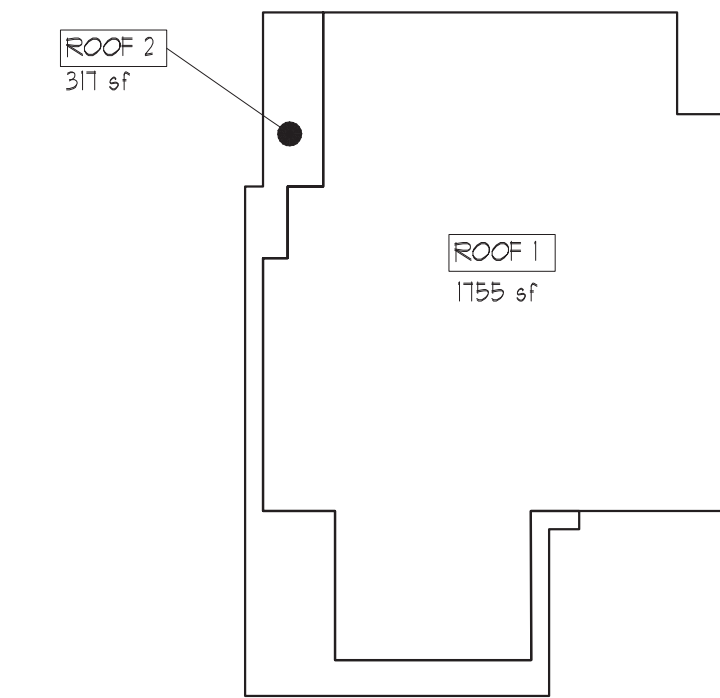


**PLAN NOTES**

- CONTRACTOR SHALL VERIFY ALL NOTES, DIMENSIONS & CONDITIONS PRIOR TO CONSTRUCTION.
- ROOF SLOPE SHALL IN NO CASE BE LESS THAN 1/4":12" AT ANY LOCATION.
- PLUMBING RISERS AND VENTS NOT SHOWN ON PLANS FOR CLARITY. PLUMBING PENETRATIONS TO BE KEPT TO A MINIMUM AND LOCATED ON ROOF SLOPES NOT VISIBLE FROM THE ENTRY ACCESS.
- FLASH AND COUNTERFLASH ALL ROOF PENETRATIONS.
- SEE ROOF VENTILATION CALCULATIONS ON THIS SHEET FOR REQUIRED ROOF VENTILATION (WHERE APPLICABLE).
- PROVIDE BALANCED ROOF VENTILATION. IT IS RECOMMENDED THAT THE CONTRACTOR COORDINATE WITH VENTING PRODUCT SUPPLIERS TO PREVENT IMBALANCED VENTILATION UNDER SEVERE WEATHER CONDITIONS WHERE INFILTRATION COULD OCCUR. WEATHER SHIELD FLASHING MAY BE REQUIRED AT THESE CONDITIONS.
- DOWNSPOUTS TO BE LOCATED IN EXTERIOR WALLS, UNO.

ROOF VENTING CALCULATION					
VENT AREA	SQ.FT AREA	SQ.IN VENTING REQ'D	PROPOSED POP VENTS, UNITS	PROPOSED SOFFIT VENTS, LF	TOTAL VENTING PROVIDED
ROOF 1	1755	1685	7	0	1788
ROOF 2	317	304	0	40	400

NOTE:  
 1. Vent types:  
 soffit vent = AirVent Inc, continuous soffit vent, 10 sq.in. per linear ft.  
 pop vent = Active Ventilation Products Inc, Pop Vent, PV-18, 25.4 sq.in per unit.  
 2. All roof venting area below Roof Level to provide soffit vent, uno.



**REVISIONS**

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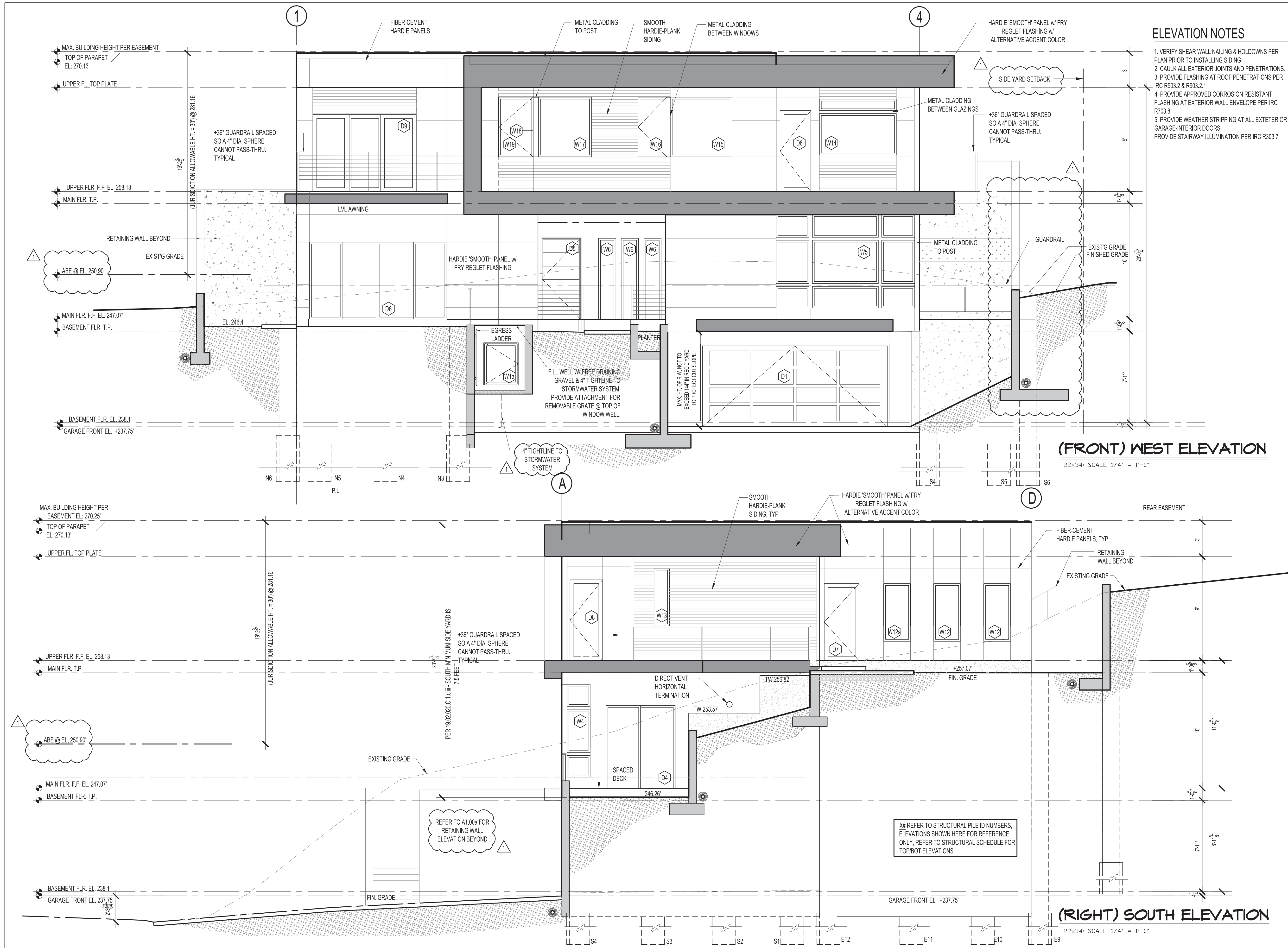
APPROVAL STAMP

DRAWING TITLE:  
**ROOF PLAN**

SHEET:  
**A2.03**

**ROOF PLAN**  
 22x34: SCALE 1/4" = 1'-0"





- ### ELEVATION NOTES
1. VERIFY SHEAR WALL NAILING & HOLD-DOWNS PER PLAN PRIOR TO INSTALLING SIDING
  2. CAULK ALL EXTERIOR JOINTS AND PENETRATIONS.
  3. PROVIDE FLASHING AT ROOF PENETRATIONS PER IRC R903.2 & R903.2.1
  4. PROVIDE APPROVED CORROSION RESISTANT FLASHING AT EXTERIOR WALL ENVELOPE PER IRC R703.8
  5. PROVIDE WEATHER STRIPPING AT ALL EXTERIOR & GARAGE-INTERIOR DOORS. PROVIDE STAIRWAY ILLUMINATION PER IRC R303.7

**(FRONT) WEST ELEVATION**  
22x34 SCALE 1/4" = 1'-0"

**(RIGHT) SOUTH ELEVATION**  
22x34 SCALE 1/4" = 1'-0"

#	DATE	DESCRIPTION OF REVISION
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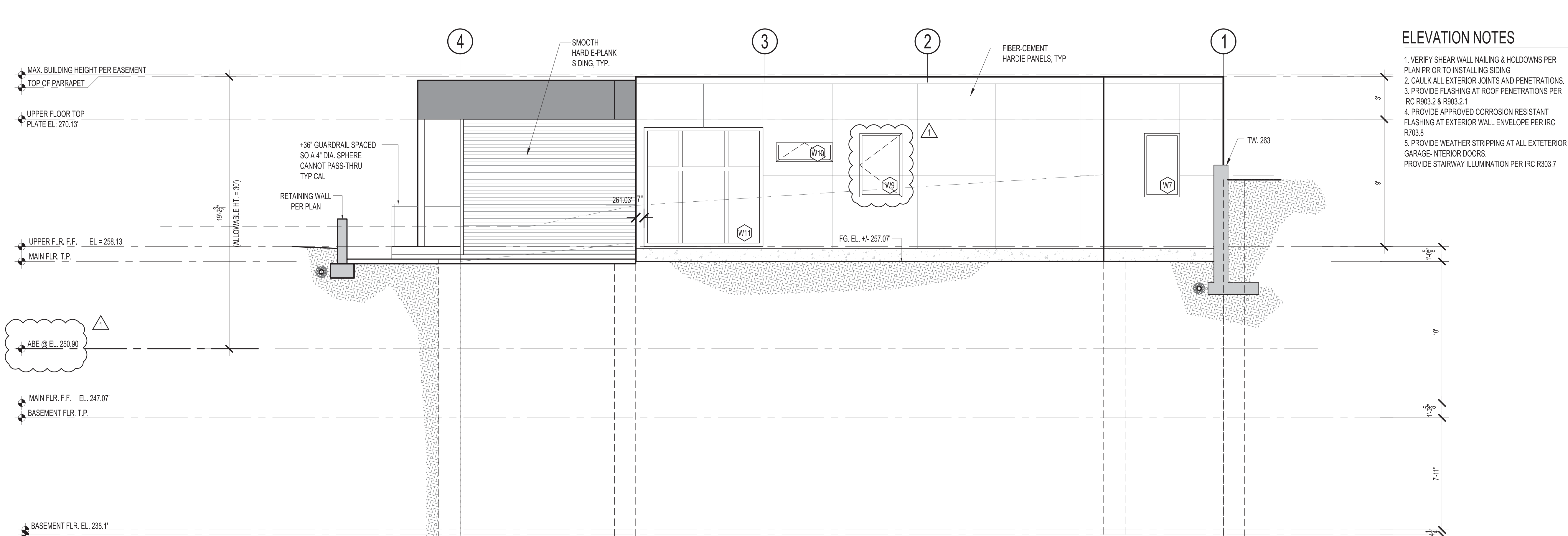


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APPROVAL STAMP

DRAWING TITLE:  
**ELEVATIONS**

SHEET:  
**A3.00**



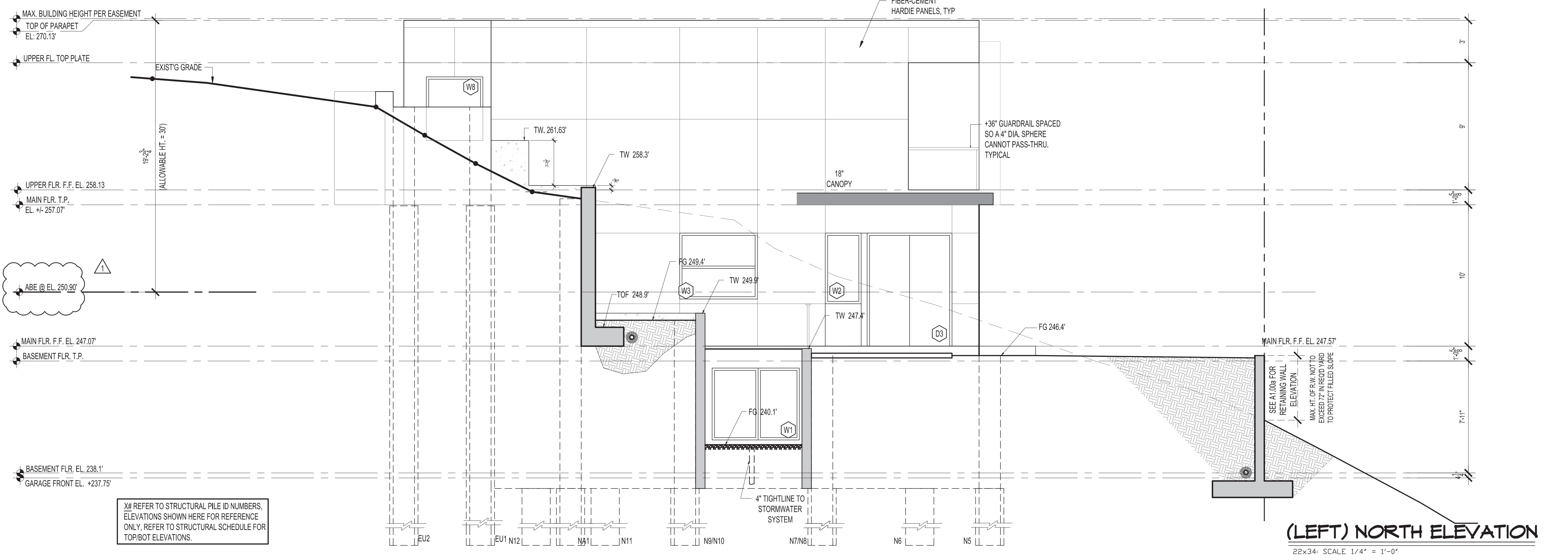
- ### ELEVATION NOTES
1. VERIFY SHEAR WALL NAILING & HOLD-DOWNS PER PLAN PRIOR TO INSTALLING SIDING
  2. CAULK ALL EXTERIOR JOINTS AND PENETRATIONS.
  3. PROVIDE FLASHING AT ROOF PENETRATIONS PER IRC R903.2 & R903.2.1
  4. PROVIDE APPROVED CORROSION RESISTANT FLASHING AT EXTERIOR WALL ENVELOPE PER IRC R703.8
  5. PROVIDE WEATHER STRIPPING AT ALL EXTERIOR & GARAGE-INTERIOR DOORS.  
PROVIDE STAIRWAY ILLUMINATION PER IRC R303.7

#	DATE	DESCRIPTION OF REVISION
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**(REAR) EAST ELEVATION**  
22x34; SCALE 1/4" = 1'-0"



**(LEFT) NORTH ELEVATION**  
22x34; SCALE 1/4" = 1'-0"

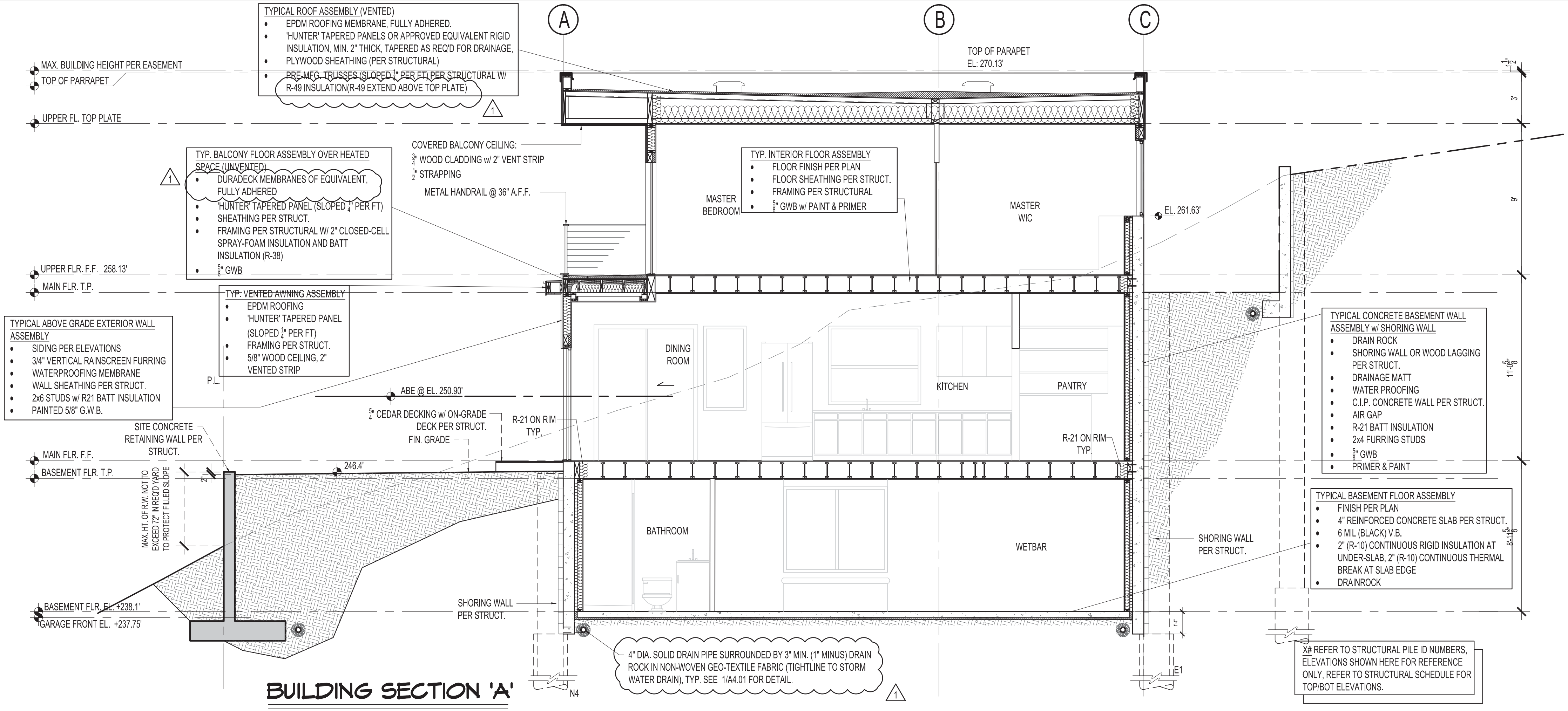
X# REFER TO STRUCTURAL PILE ID NUMBERS. ELEVATIONS SHOWN HERE FOR REFERENCE ONLY. REFER TO STRUCTURAL SCHEDULE FOR TOP/BOT ELEVATIONS.

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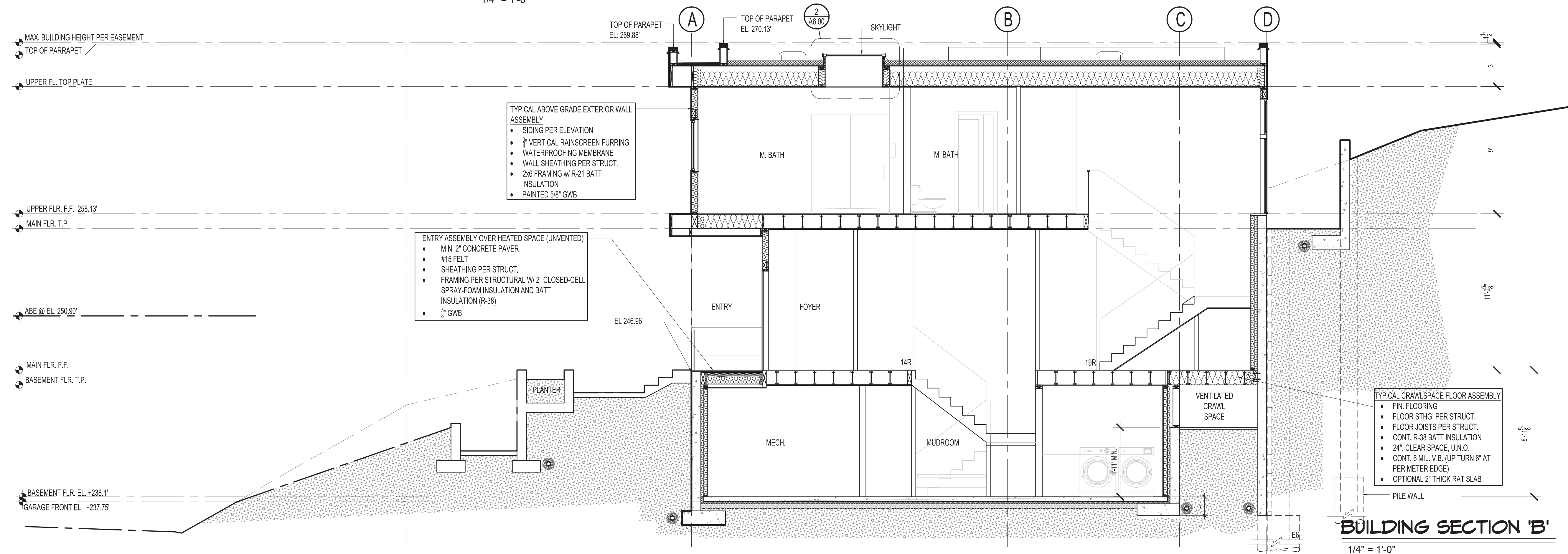
APPROVAL STAMP

DRAWING TITLE:  
**ELEVATIONS**

SHEET:  
**A3.01**



**BUILDING SECTION 'A'**  
1/4" = 1'-0"



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

REVISIONS

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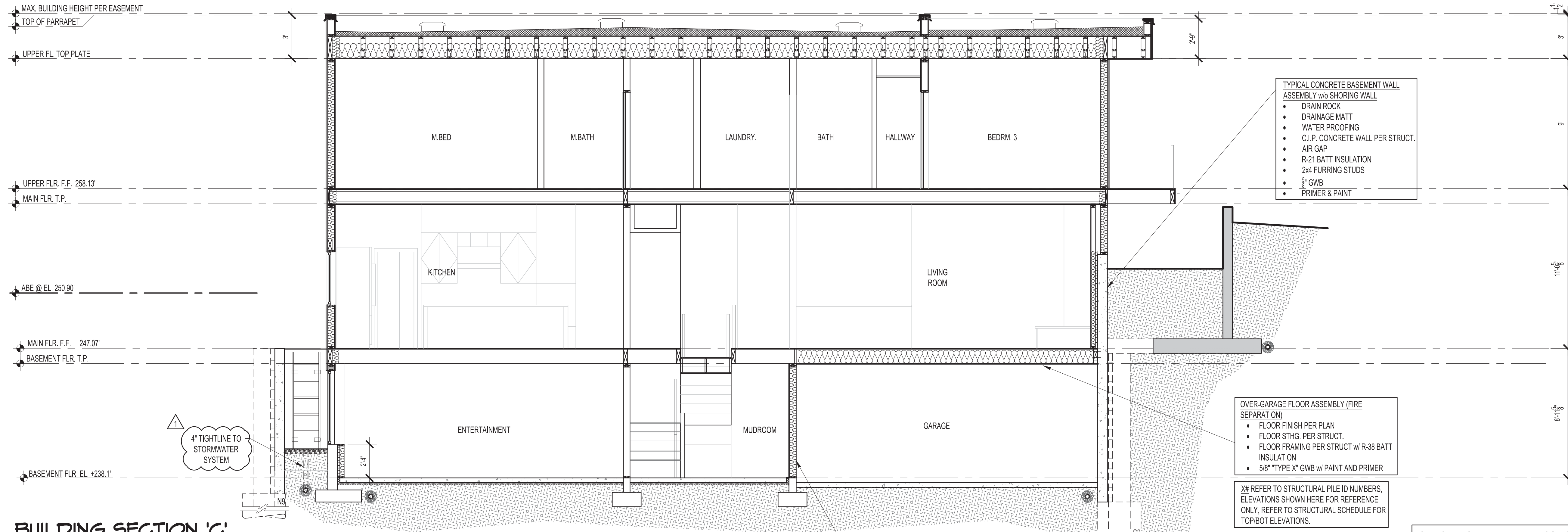
Project Name:  
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MERCER ISLAND, WA 98040

APPROVAL STAMP

DRAWING TITLE:  
**BUILDING SECTIONS**

SHEET:  
**A4.00**





**BUILDING SECTION 'C'**  
1/4" = 1'-0"

- TYPICAL CONCRETE BASEMENT WALL ASSEMBLY w/o SHORING WALL**
- DRAIN ROCK
  - DRAINAGE MATT
  - WATER PROOFING
  - C.I.P. CONCRETE WALL PER STRUCT.
  - AIR GAP
  - R-21 BATT INSULATION
  - 2x4 FURRING STUDS
  - 5/8" GWB
  - PRIMER & PAINT

- OVER-GARAGE FLOOR ASSEMBLY (FIRE SEPARATION)**
- FLOOR FINISH PER PLAN
  - FLOOR STHG. PER STRUCT.
  - FLOOR FRAMING PER STRUCT w/ R-38 BATT INSULATION
  - 5/8" "TYPE X" GWB w/ PAINT AND PRIMER

X# REFER TO STRUCTURAL PILE ID NUMBERS. ELEVATIONS SHOWN HERE FOR REFERENCE ONLY. REFER TO STRUCTURAL SCHEDULE FOR TOP/BOT ELEVATIONS.

- GARAGE SEPARATION WALL ASSEMBLY (FIRE SEPARATION)**
- FINISH COAT GARAGE SIDE OVER
  - 5/8" GWB "TYPE X" AT GARAGE SIDE
  - 2x6 WALL FRAMING PER STRUCT. w/ R-21 BATT INSULATION.
  - MIN. 1/2" GWB w/ PAINT AND PRIMER

SEE STRUCTURAL DRAWINGS FOR RETAINING WALL & BASEMENT WALL DETAILS  
SEE SHORING DRAWINGS FOR SOLDIER PILE DETAILS  
REFER TO GEOTECH REPORT FOR DRAINAGE RECOMMENDATION

PRESSURE TREATED TIMBER LAGGING PER SHORING w/ 1/4-INCH GAP BETWEEN BOARDS

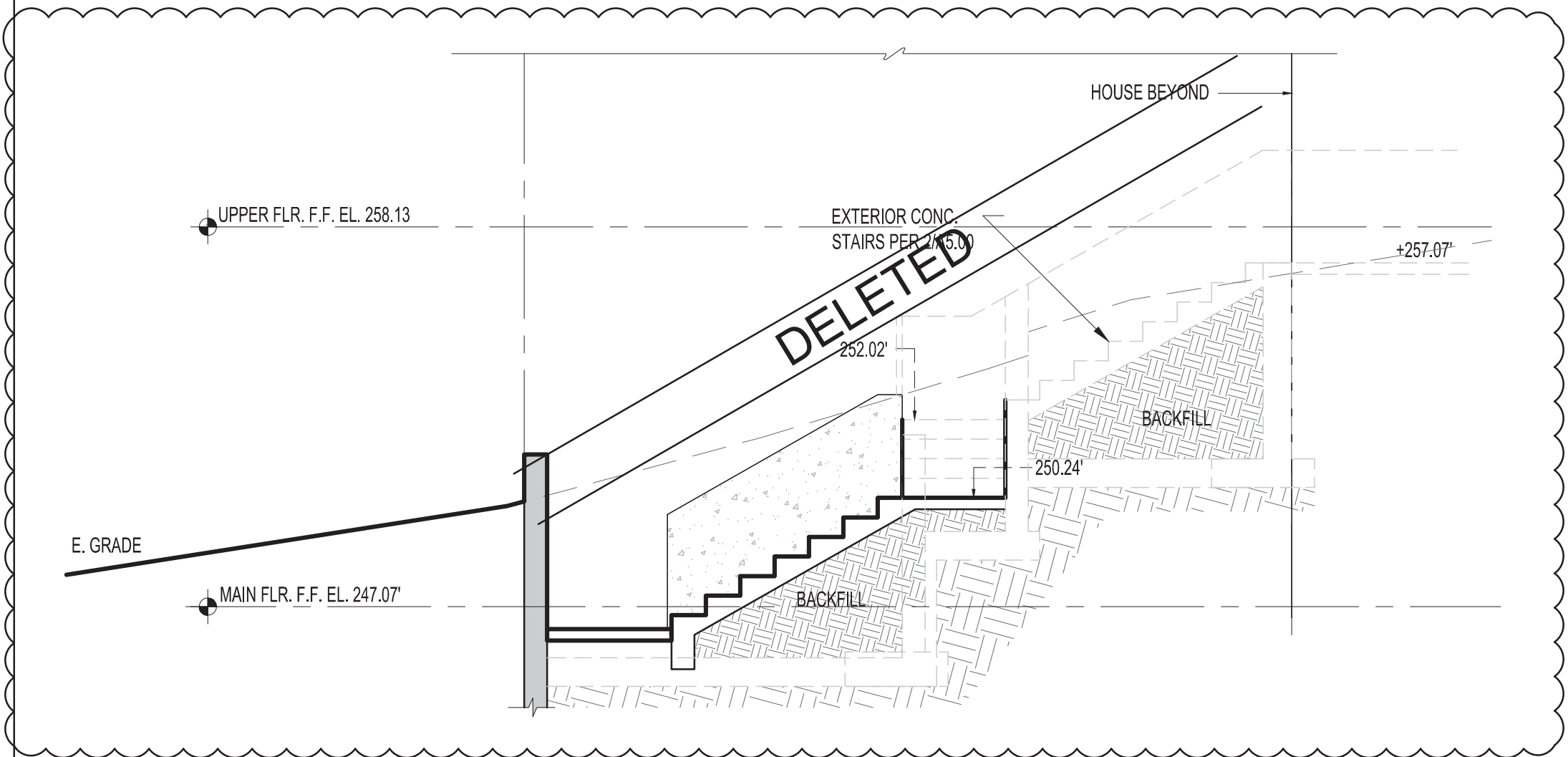
STL. SOLDIER PILE. SEE SHORING DRAWING  
LEAN CONCRETE ABOVE EXCAVATION LINE  
MULTIFLOW DRAINAGE COLLECTOR

MIRADRRAIN DRAINAGE MATTING FULL HEIGHT & WIDTH CENTERED BETWEEN PIELS, INSTALLED WITH FABRIC TO LAGGING  
WATERPROOFING MEMBRANE ALONG LENGTH OF WALL  
INTERIOR

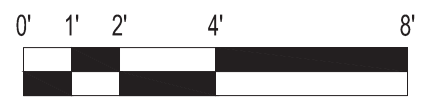
WELDED STUD PER STRUCT.  
SLAB PER PLAN  
4" DIA. PVC PIPE TIGHTLINED TO STORM DRAINAGE SYSTEM

4" DIA. WEEP HOLE W/ 8" O.C. MAX THROUGH SHORING & CONC. WALL AND CONNECT TO 4" PVC PIPE PER SOILS REPORT

**TYPICAL PERMANENT SHORING/SITE RETAINING/BASEMENT WALL DRAINAGE DETAIL**  
1  
A4.01 1/2" = 1'-0"



**SECTION D - SOUTH STAIR**  
22x34: SCALE 1/4" = 1'-0"  
11x17: SCALE 1/8" = 1'-0"



REVISIONS

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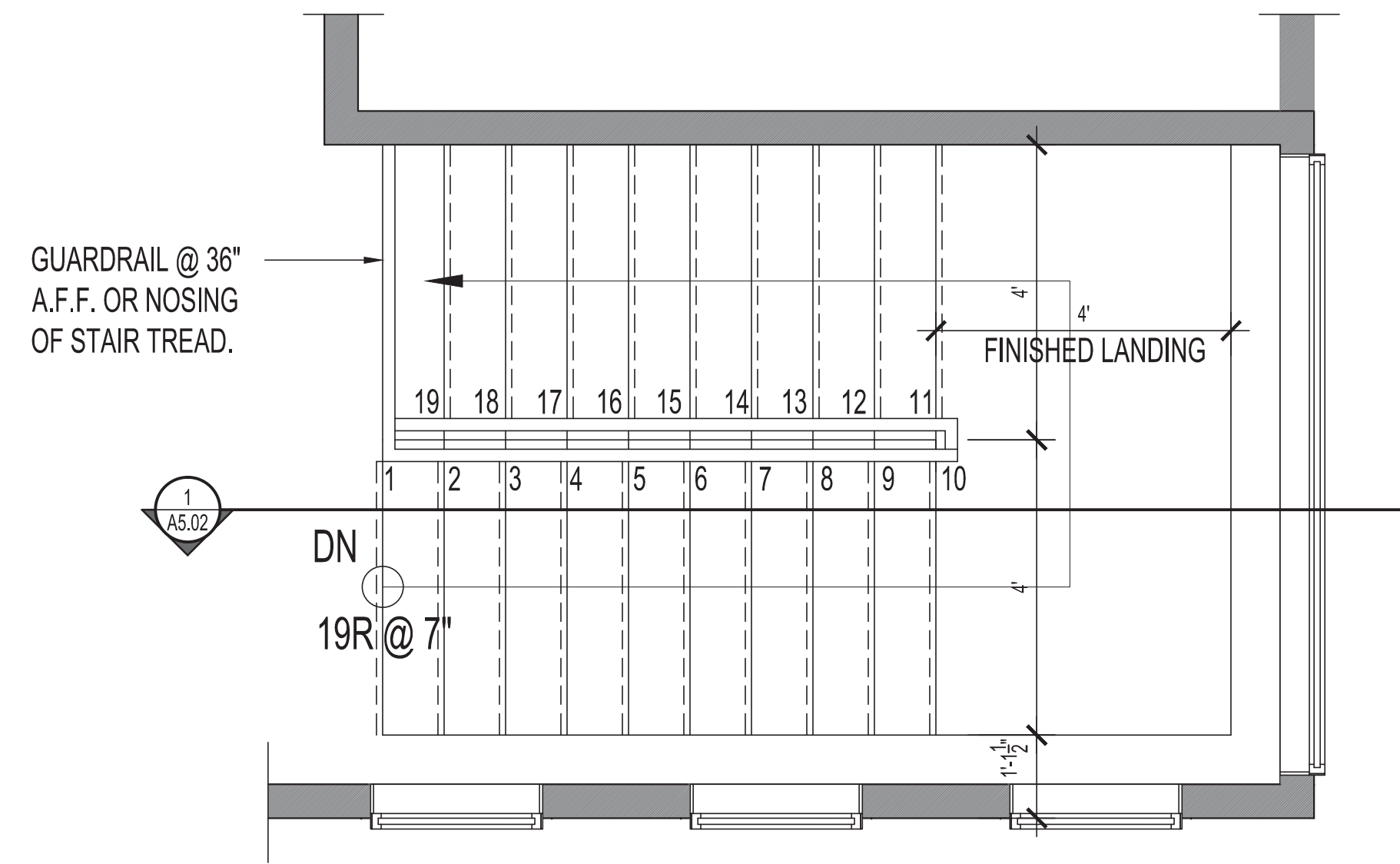


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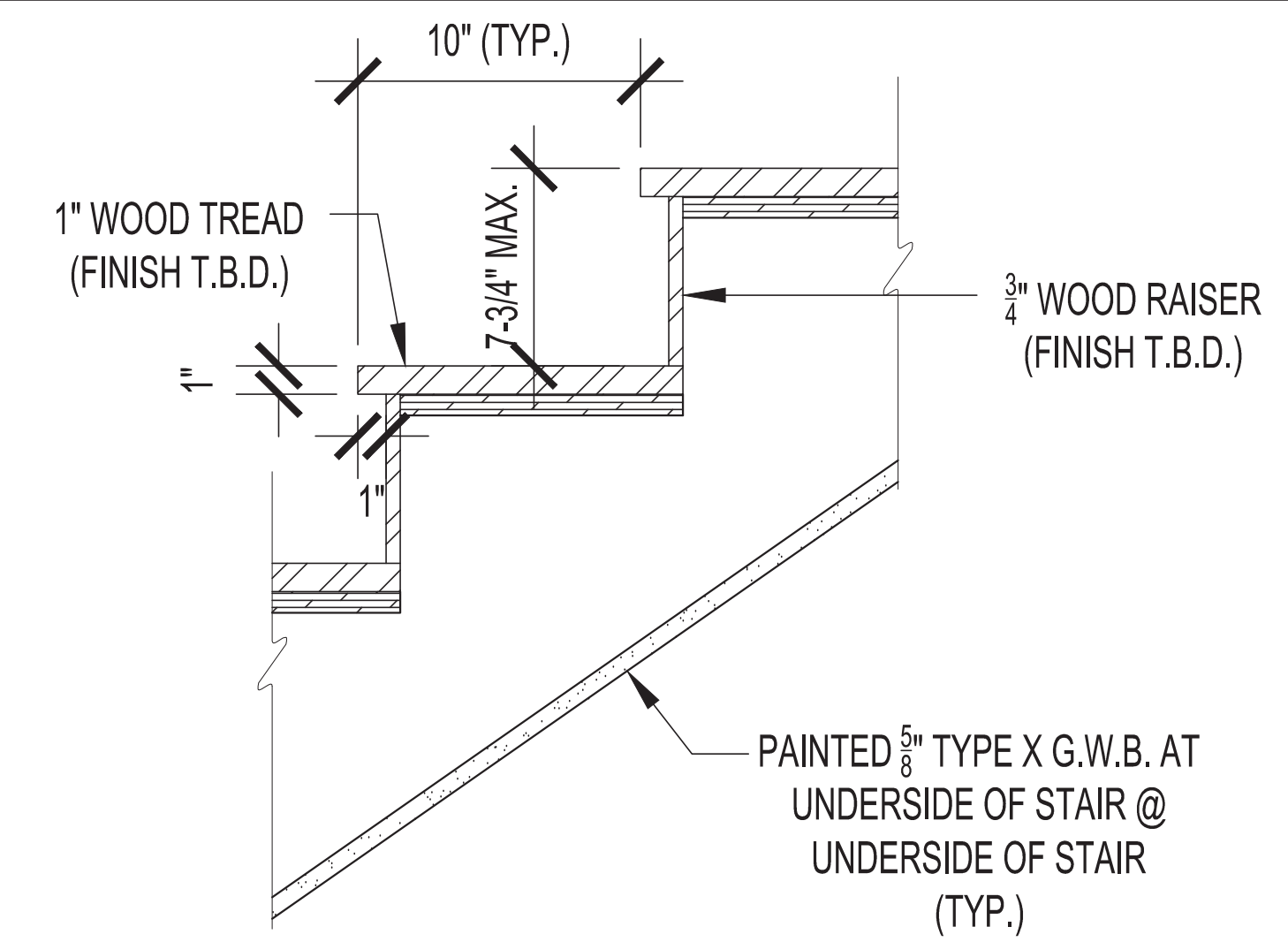
DRAWING TITLE:  
**BUILDING SECTIONS**

SHEET:  
**A4.01**



**U/F TO M/F STAIR PLAN VIEW**

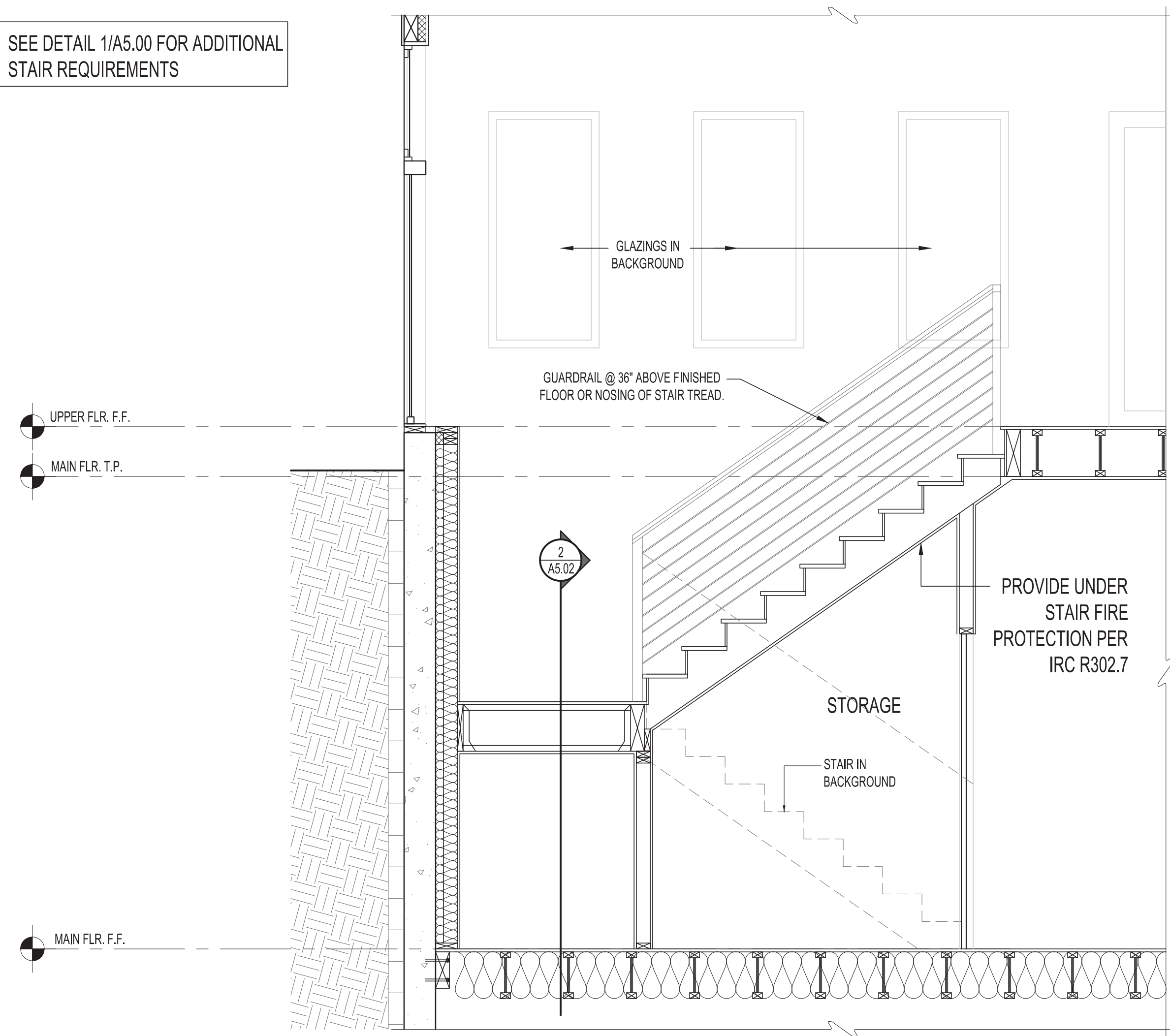
1/2" = 1'-0"



**TYP. STAIR TREAD DETAIL**

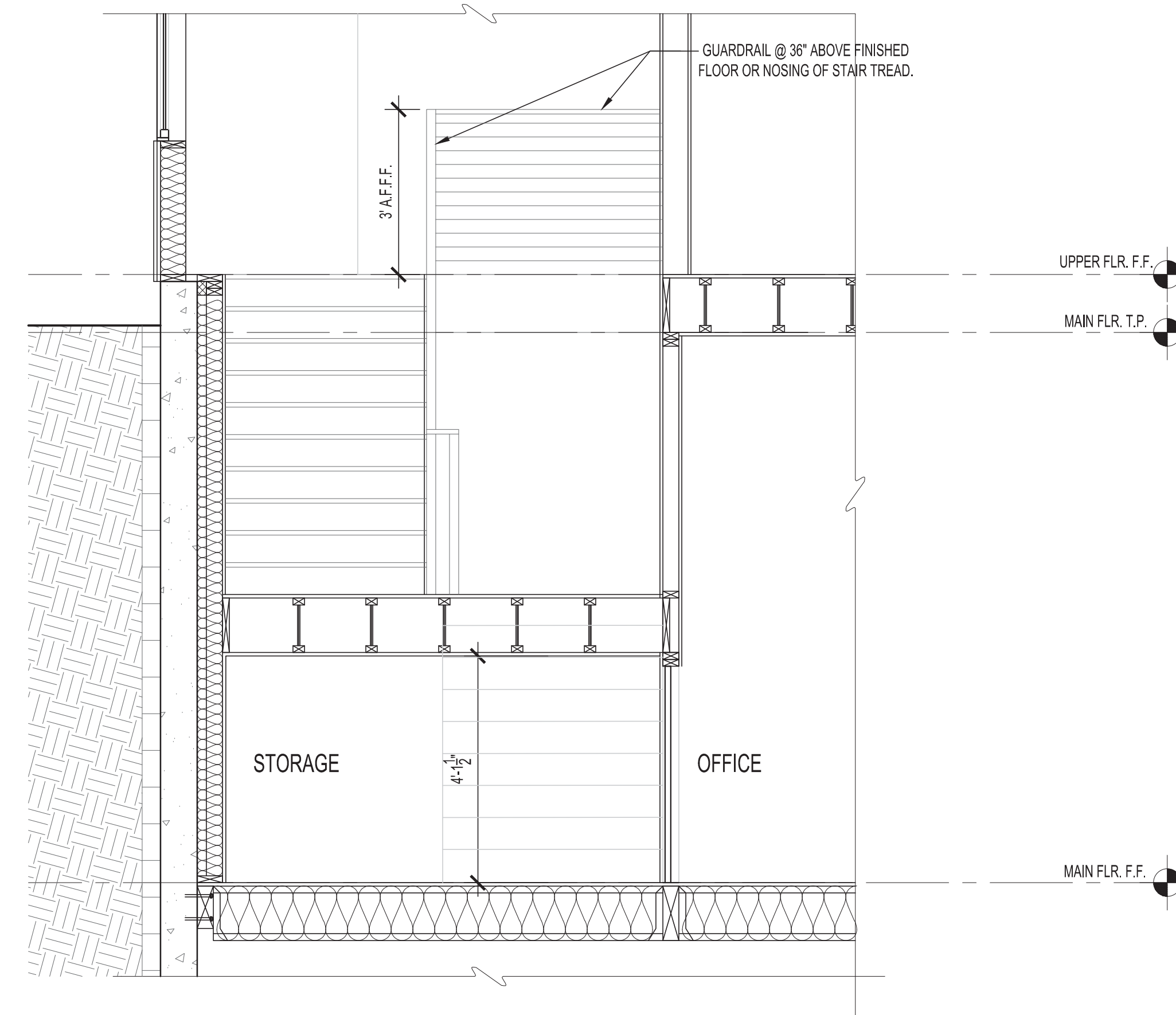
2" = 1'-0"

SEE DETAIL 1/A5.00 FOR ADDITIONAL STAIR REQUIREMENTS



**1 STAIR SECTION 1**

A5.02 1/2" = 1'-0"



**1 STAIR SECTION 2**

A5.02 1/2" = 1'-0"

REVISIONS		
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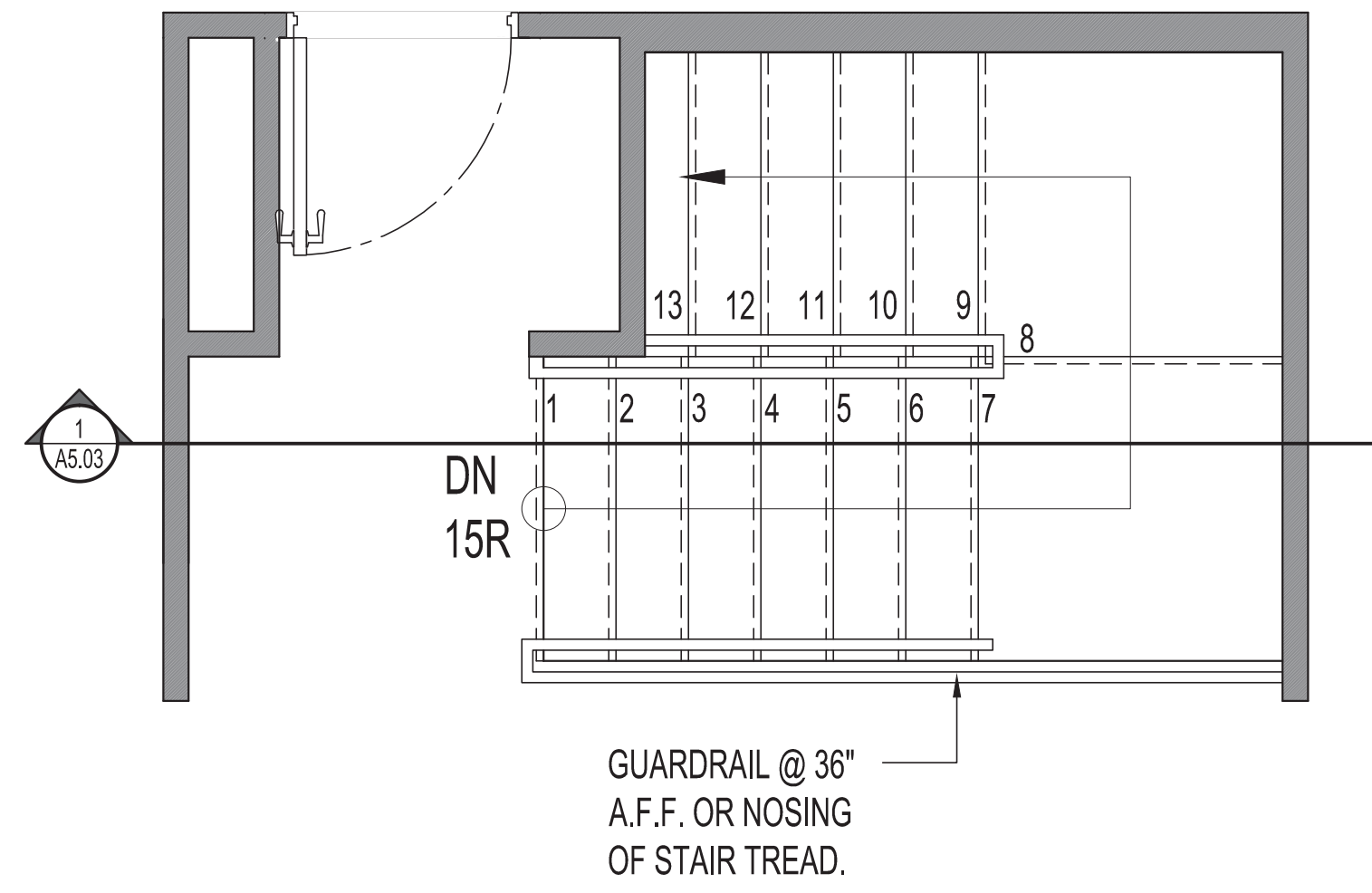
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DRAWING TITLE:  
**STAIR PLANS & SECTIONS**

SHEET:

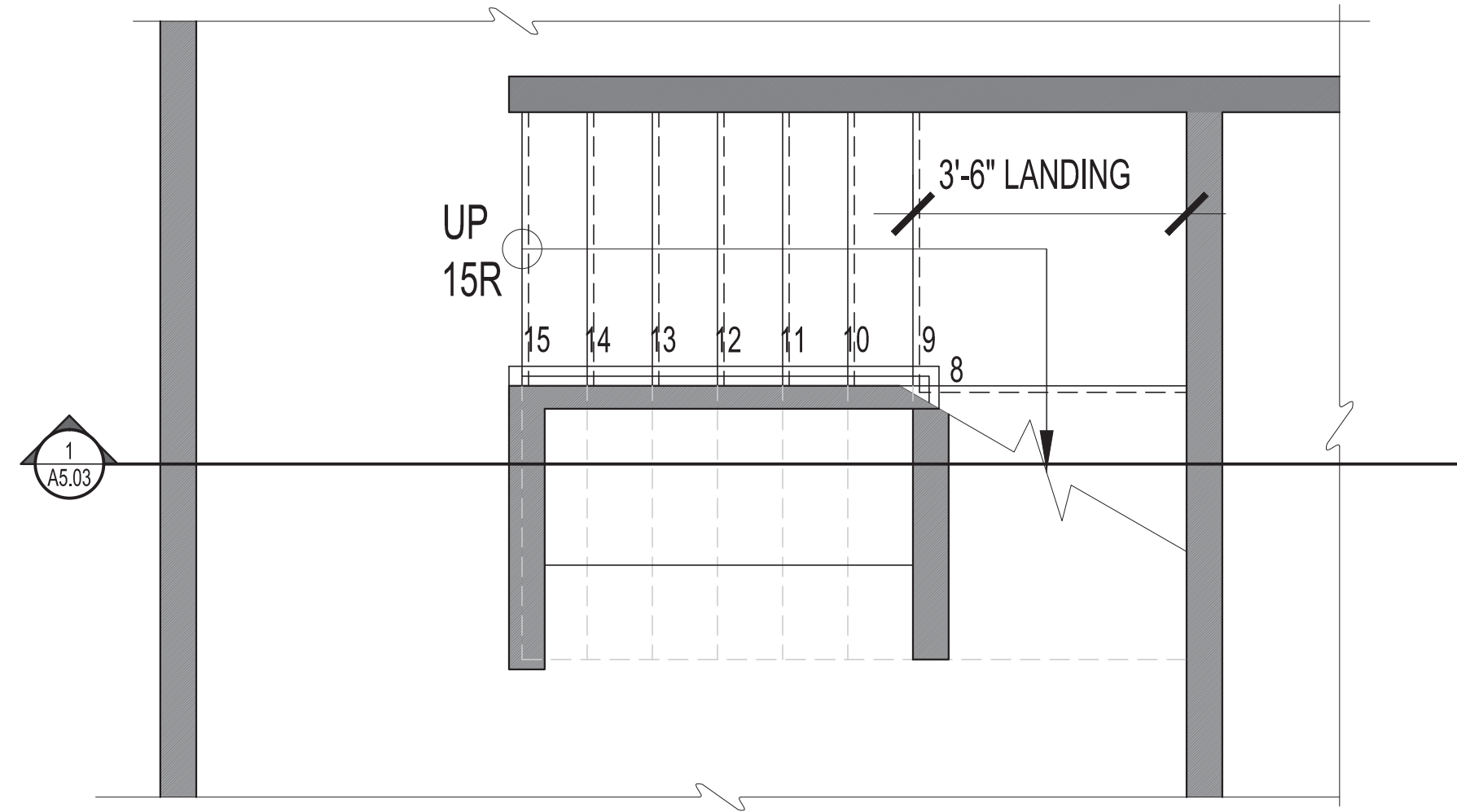
**A4.03**

SEE DETAIL 1/A5.00 FOR ADDITIONAL  
STAIR REQUIREMENTS



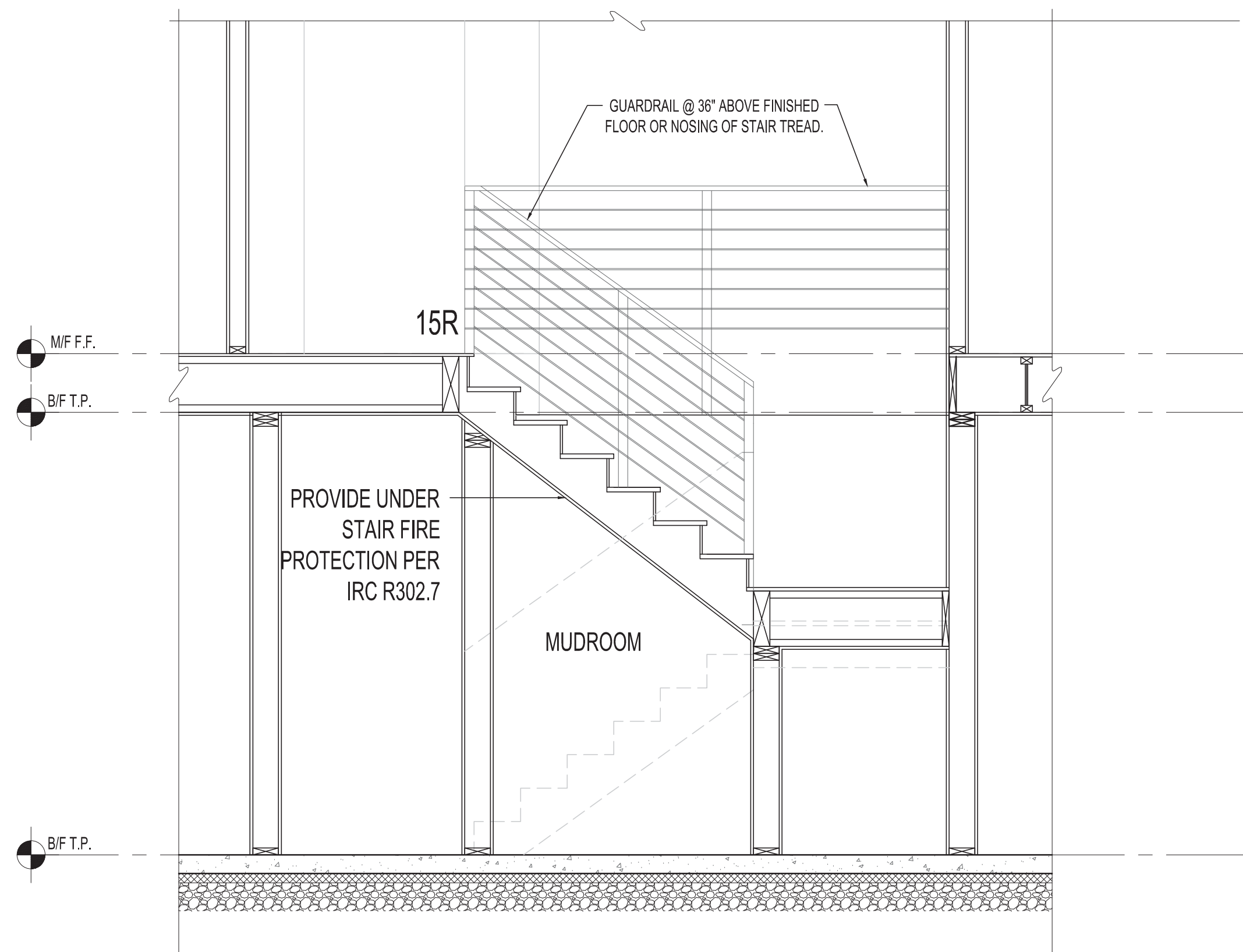
M/F TO B/F STAIR PLAN VIEW

1/2" = 1'-0"



B/F STAIR PLAN VIEW

1/2" = 1'-0"



1 STAIR SECTION 1

A5.03 1/2" = 1'-0"

REVISIONS

#	DATE	DESCRIPTION OF REVISION
1	09.05.22	COMMENT RESPONSE 1

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JOB #:



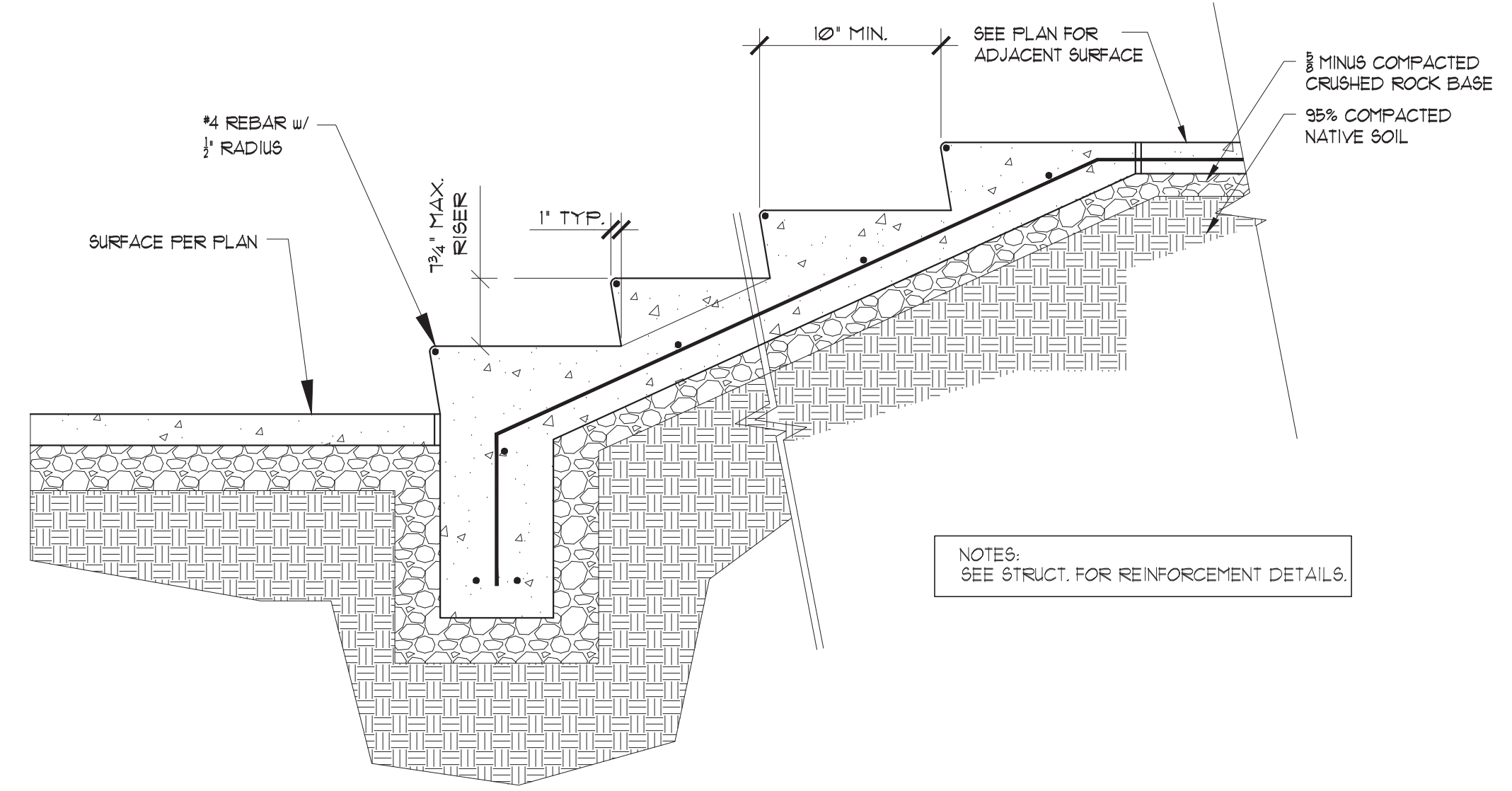
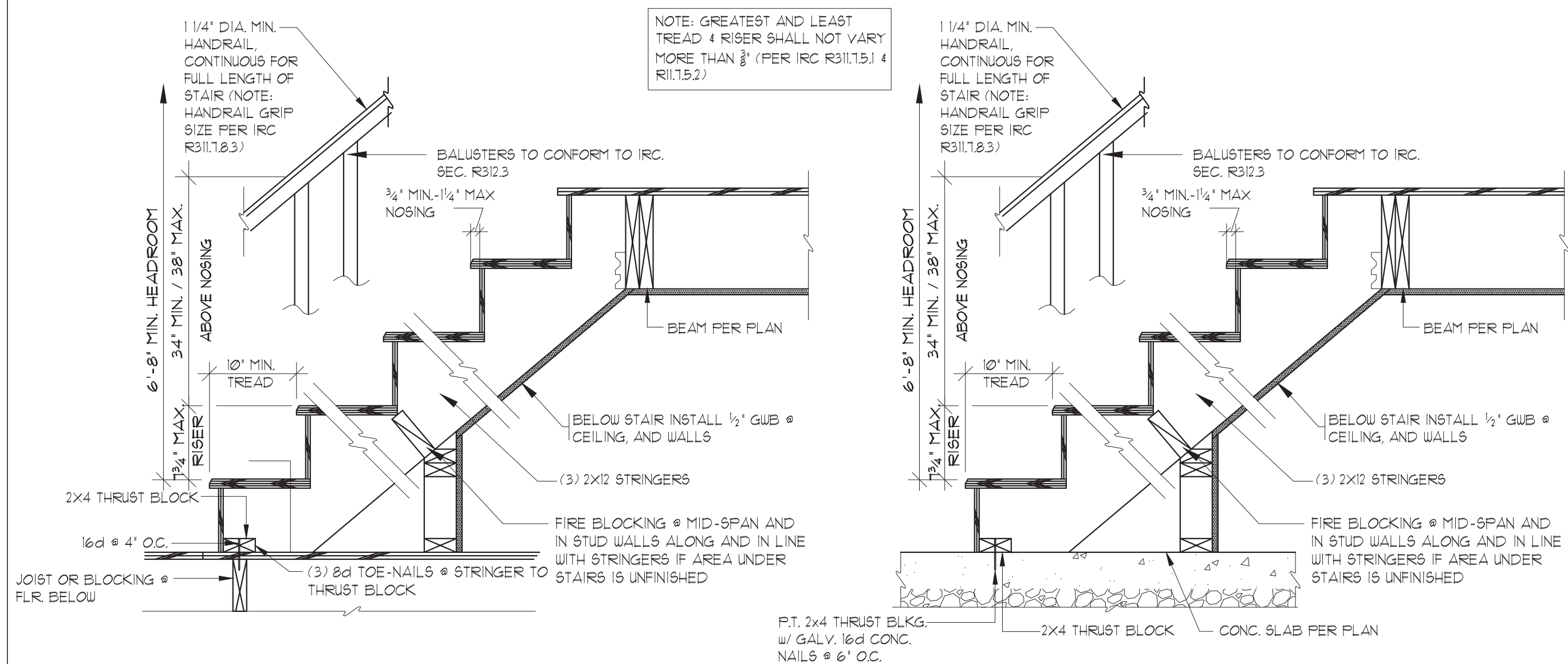
Project Name:  
**HU RESIDENCE**  
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DRAWING TITLE:  
**STAIR  
PLANS &  
SECTIONS**

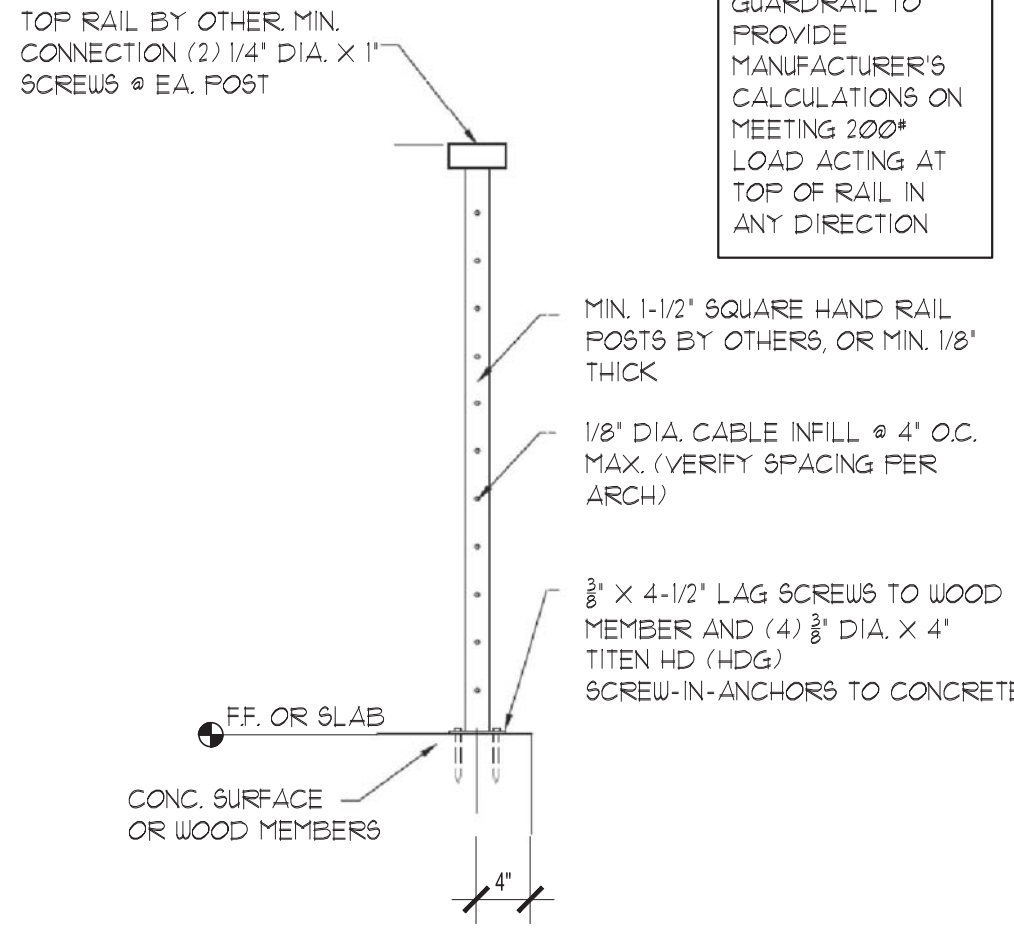
SHEET:

**A4.04**

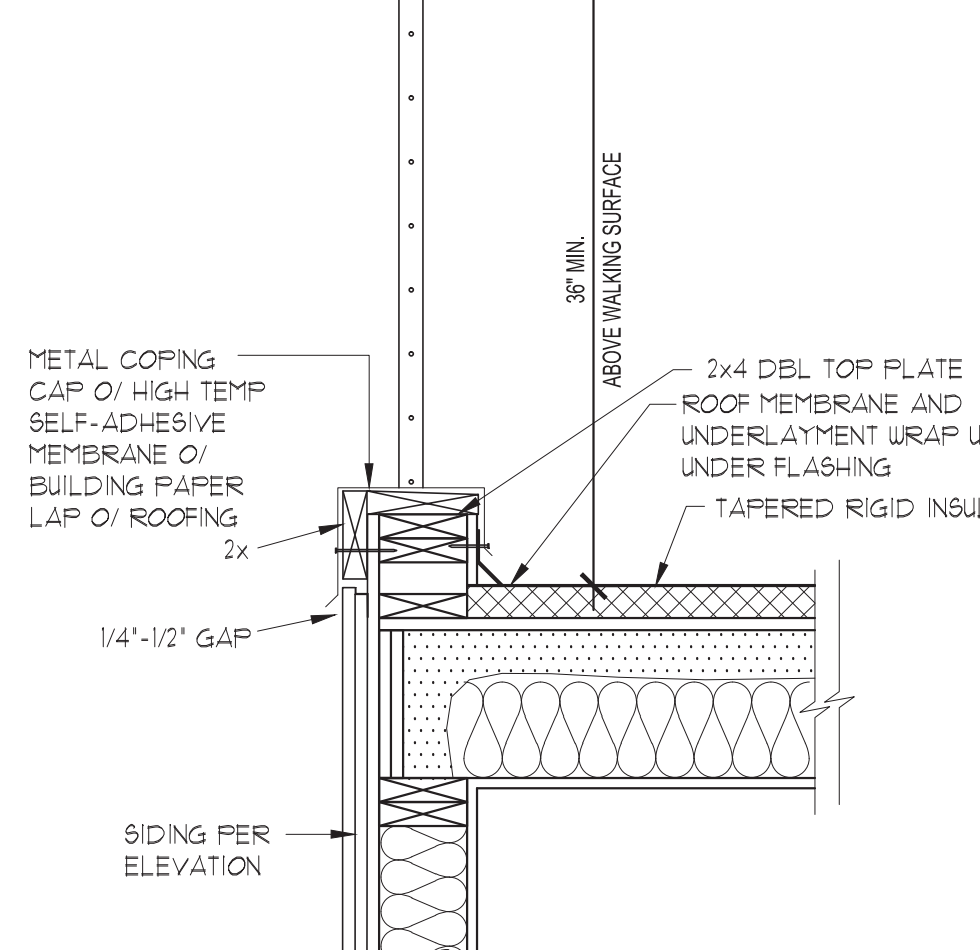


**1 INTERIOR STAIR DETAILS**  
A5.00 SCALE 1" = 1'-0"

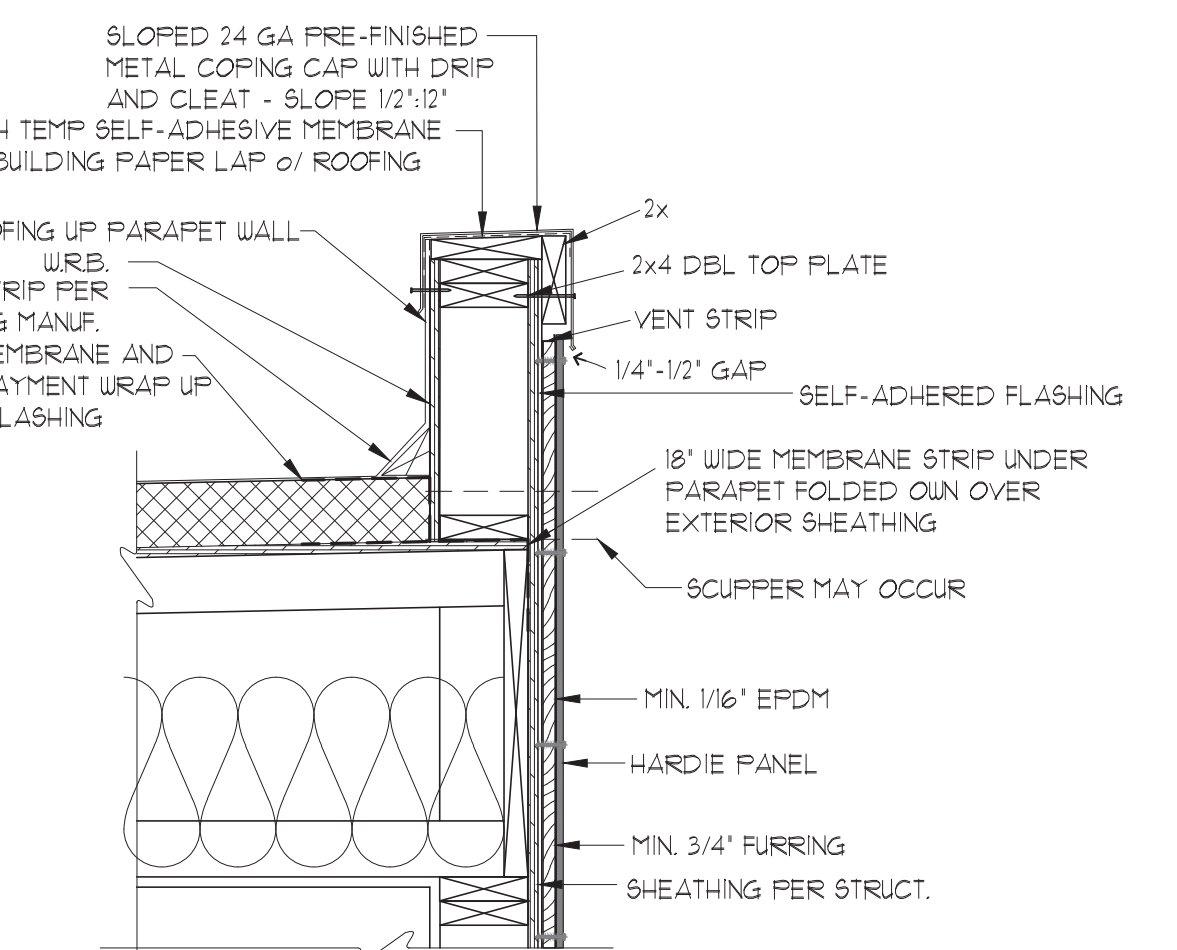
**2 EXTERIOR STAIR DETAIL**  
A5.00 SCALE 1" = 1'-0"



**3 TYP. RAILING ATTACHMENT - TOP MOUNTED**  
A5.00 SCALE 1" = 1'-0"



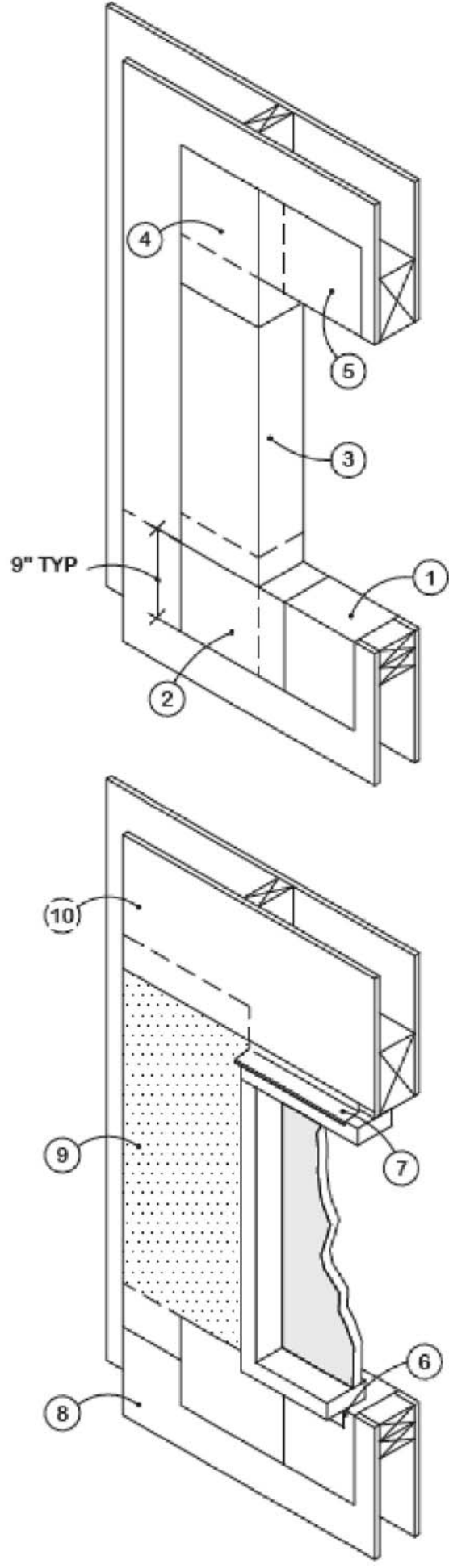
**3 TYP. RAILING ATTACHMENT - TOP MOUNTED**  
A5.00 SCALE 1" = 1'-0"



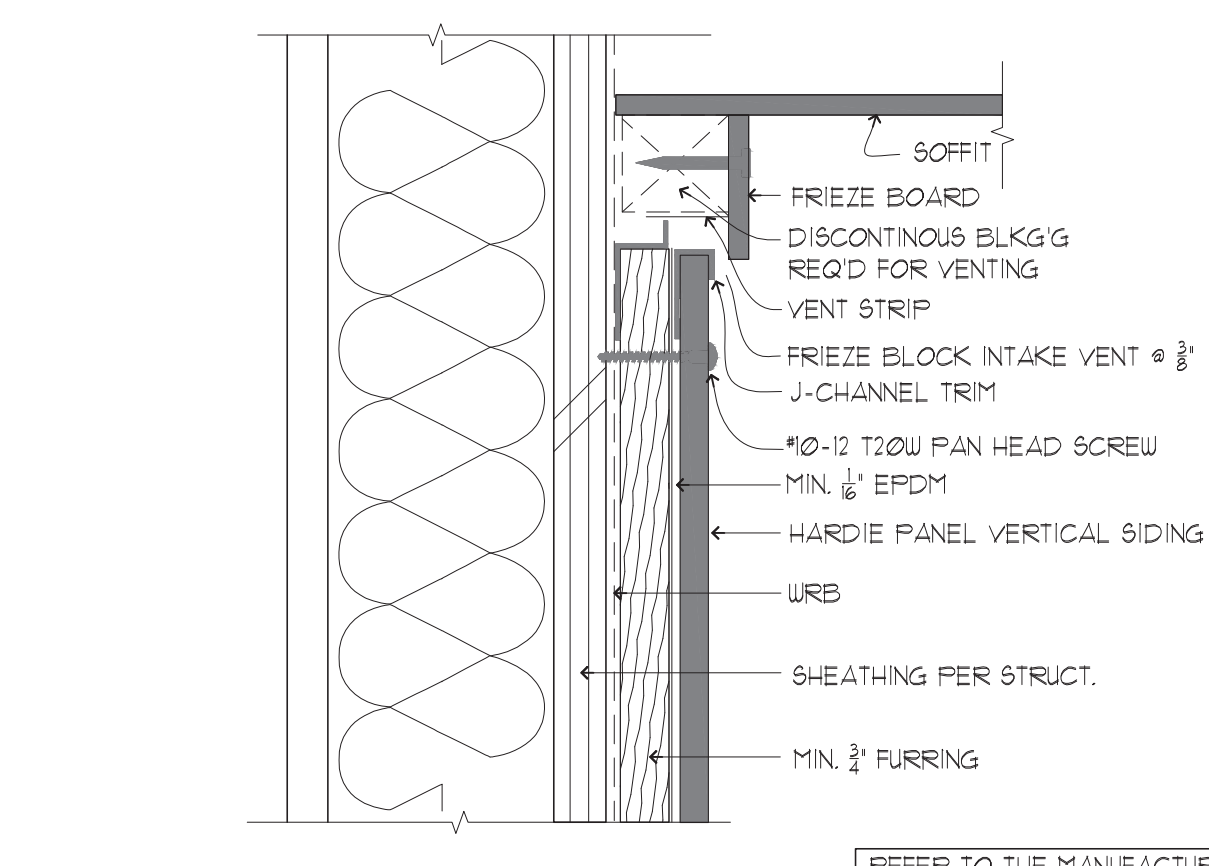
**4 TYP. PARAPET DETAIL**  
A5.00 SCALE 1" = 1'-0"

**GENERAL ROUGH OPENING FLASHING SEQUENCE KEYNOTES:**

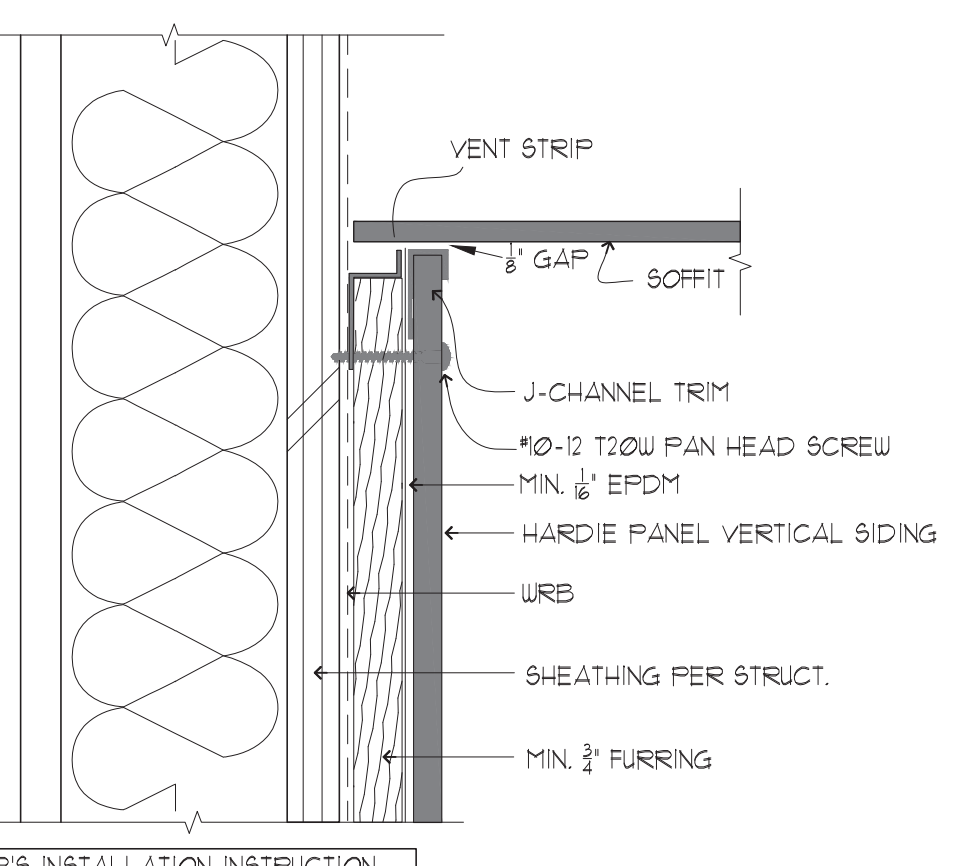
1. INSTALL FLASHING ALONG ENTIRE SILL, LEAVE BOTTOM LOOSE TO OVERLAP WRB LATER
2. INSTALL PRE-FORMED CORNER FLASHING @ LOWER CORNER EACH SIDE
3. INSTALL FLASHING ALONG ENTIRE LENGTH OF JAMB
4. INSTALL PRE-FORMED CORNER FLASHING @ UPPER CORNER EACH SIDE
5. INSTALL FLASHING ALONG ENTIRE LENGTH OF HEAD
6. PROVIDE CONTINUOUS BEAD OF SEALANT ON BACKSIDE OF NAILING FLANGE AND INSTALL WINDOW PER MANUFACTURER.
7. TYPICAL HEAD FLASHING PER DETAILS. EXTEND PAST WINDOW FRAME 1/2" EACH SIDE
8. TUCK WRB UNDER WINDOW FLASHING AT SILL
9. APPLY WRB IN A SINGLED FASHION, OVERLAPPING LAYERS BELOW
10. WRB SHALL OVERLAP HEAD FLASHING



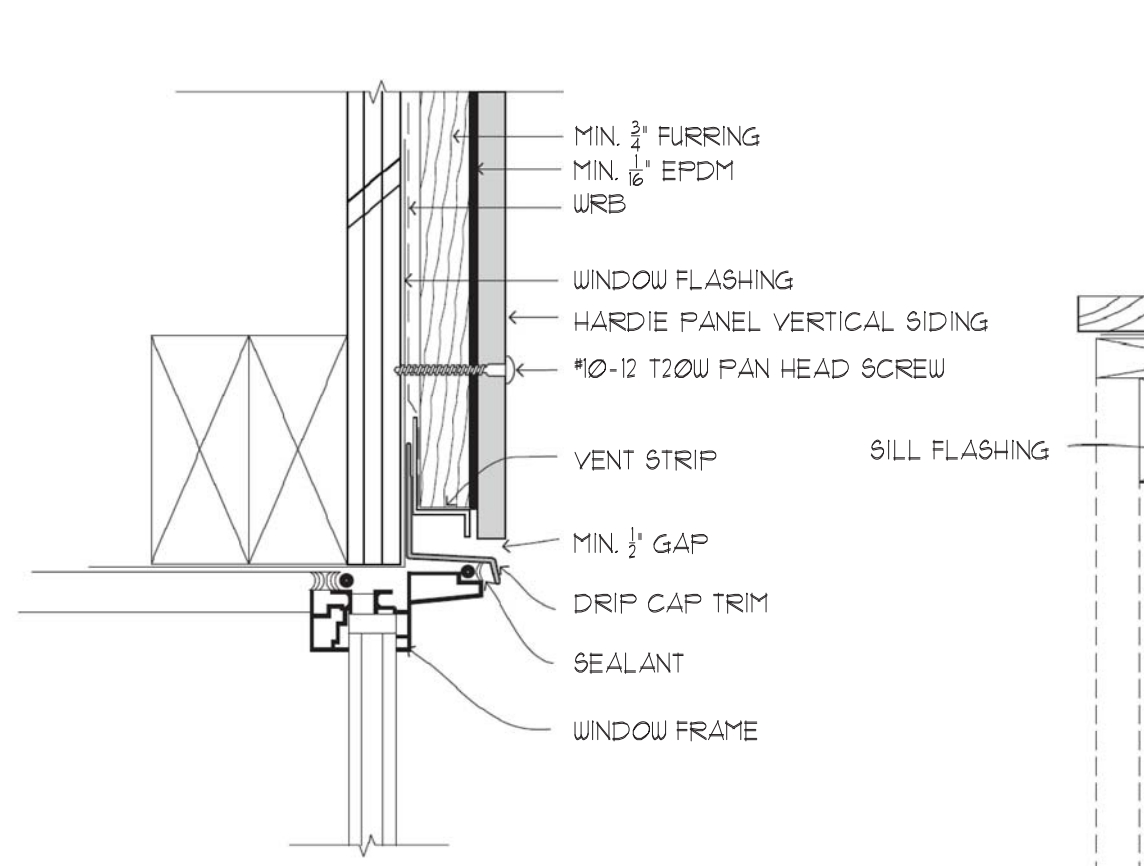
NOTE: MANUFACTURER'S TECHNICAL INSTALLATION SPECIFICATIONS TAKE PRECEDENCE



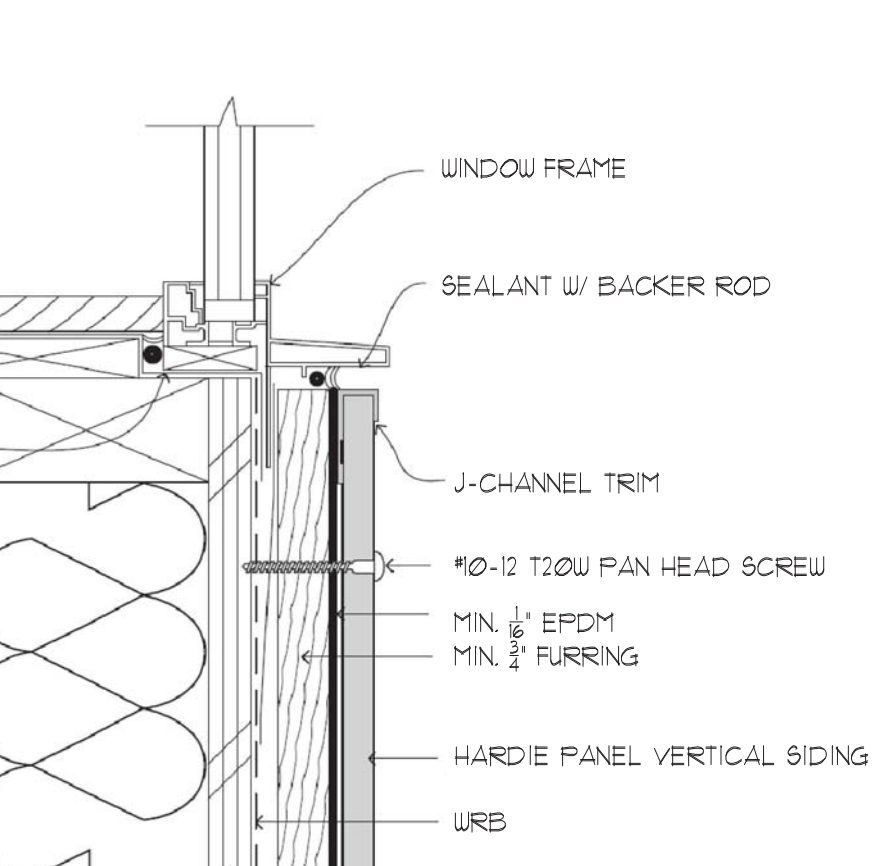
**5 HARDIE PANEL DETAIL @ WALL & SOFFIT**  
A5.00 1" = 4'-0"



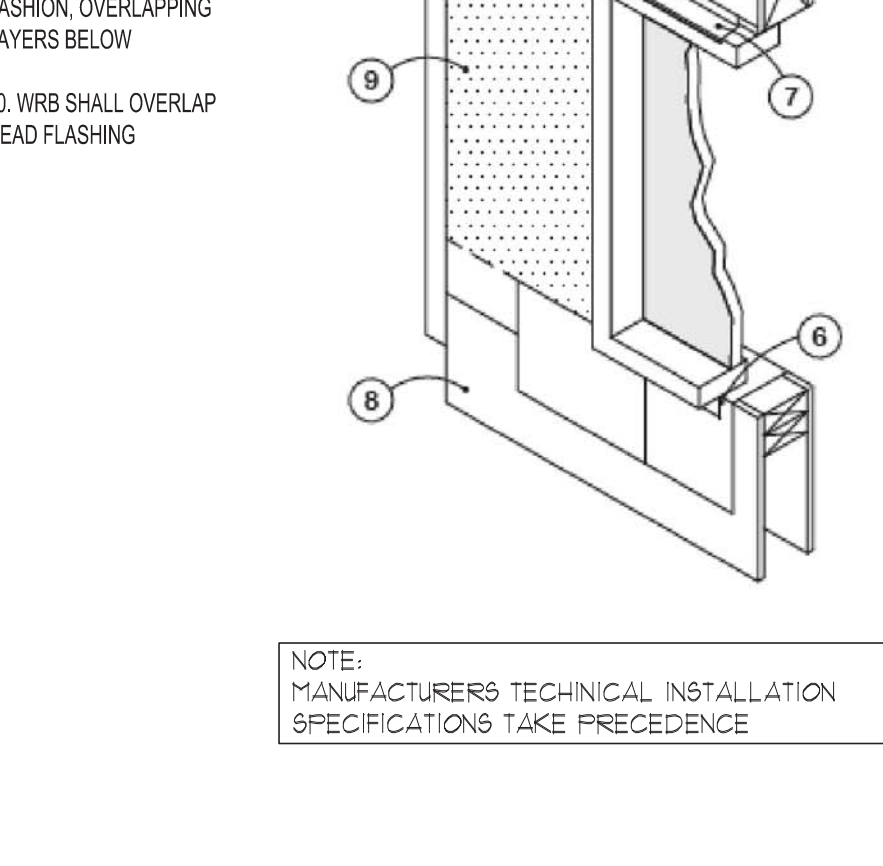
**6 HARDIE PANEL DETAIL @ WINDOW HEAD**  
A5.00 1" = 4'-0"



**6 HARDIE PANEL DETAIL @ WINDOW HEAD**  
A5.00 1" = 4'-0"



**7 HARDIE PANEL DETAIL @ WINDOW SILL**  
A5.00 1" = 4'-0"



**7 WINDOW FLASHING SEQUENCE**  
A5.00 NTS

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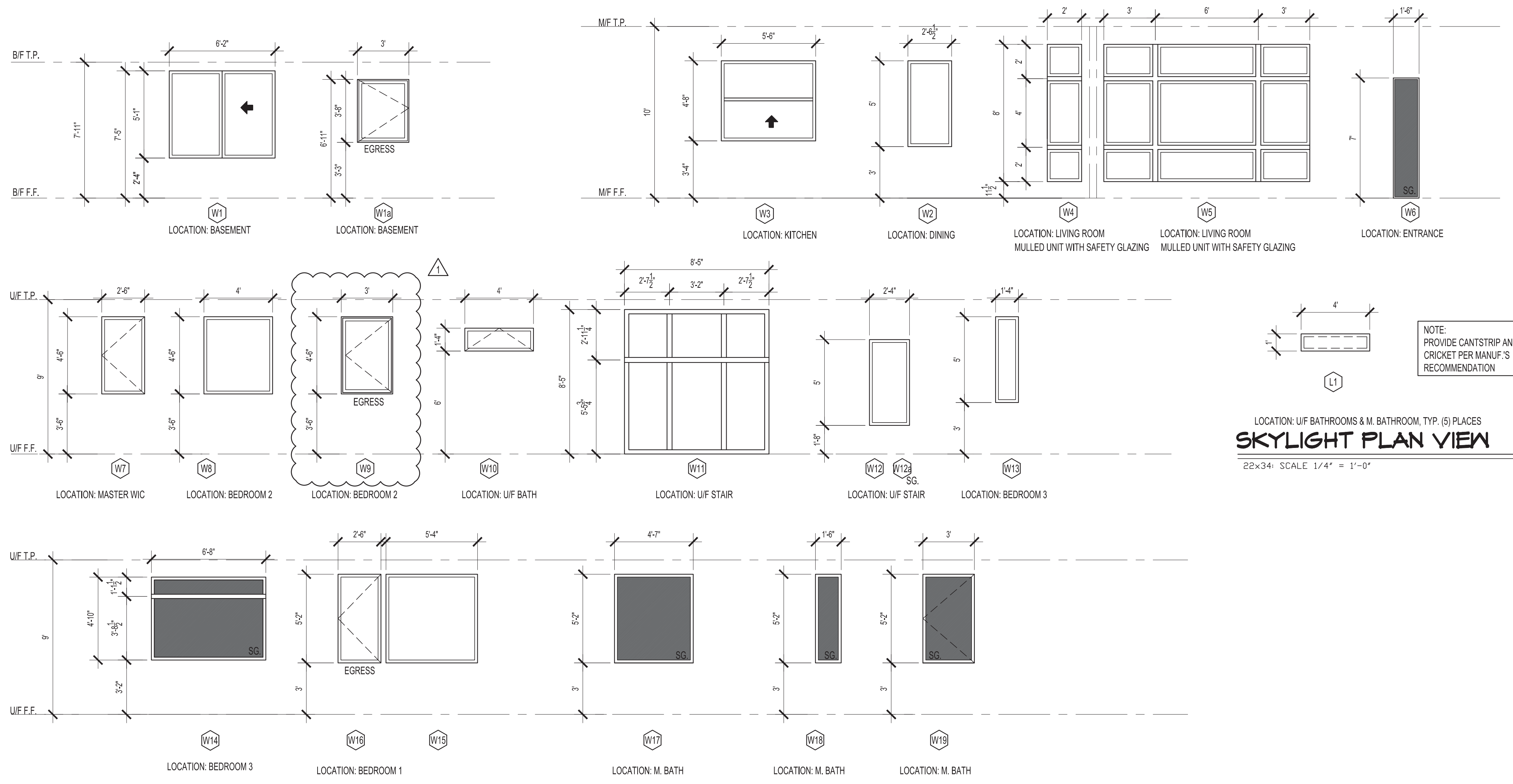


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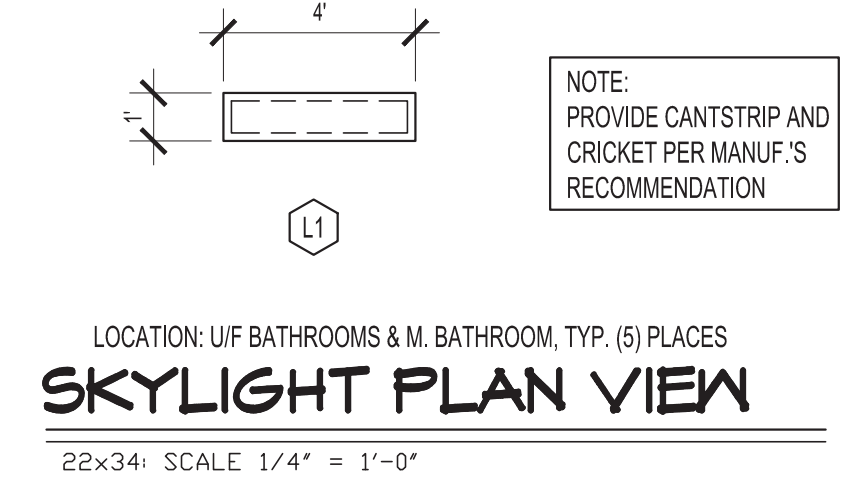
DRAWING TITLE:  
**ARCHITECTURAL DETAILS**

SHEET:  
**A5.00**



**GLAZING NOTES**

1. SAFETY GLAZING (SG.) TO BE PROVIDED WHERE REQUIRED BY IRC. REFER TO PLANS AND ELEVATIONS FOR SAFETY GLAZING LOCATIONS. EACH PANE OF SAFETY GLAZING SHALL BE IDENTIFIED BY A LABEL IN ACCORDANCE WITH IRC.
2. DIMENSIONS INDICATED ON GLAZING ELEVATIONS REFER TO PRELIMINARY RO DIMENSIONS.
3. ALL VERTICAL GLAZING TO HAVE AN AREA WEIGHTED AVERAGE U-FACTOR OF 0.30 PER WSEC. UNO.
4. PROVIDE EXTERIOR TRIM AND MULL COVERS AS SHOWN ON THE DIAGRAM.
5. CONTRACTOR TO FIELD VERIFY ALL WINDOW/DOOR ROUGH OPENINGS, DIMENSIONS AND CONDITIONS PRIOR TO PROCEEDING WITH WINDOW MANUFACTURER. NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES.
6. WINDOW SUPPLIER/MANUFACTURER TO FIELD VERIFY ALL ROUGH OPENINGS, WINDOW DIVISIONS, AND OPERATION PRIOR TO FABRICATION.
7. ALL WINDOW FINISHES PER ARCHITECT. WINDOW SUPPLIER TO SUBMIT COLOR SAMPLE FOR APPROVAL BY ARCHITECT/OWNER PRIOR TO FABRICATION.
8. ALL OPERABLE WINDOWS TO BE PROVIDED WITH SCREENS.
9. ALL WINDOWS TO BE NFRC CERTIFIED



REVISIONS

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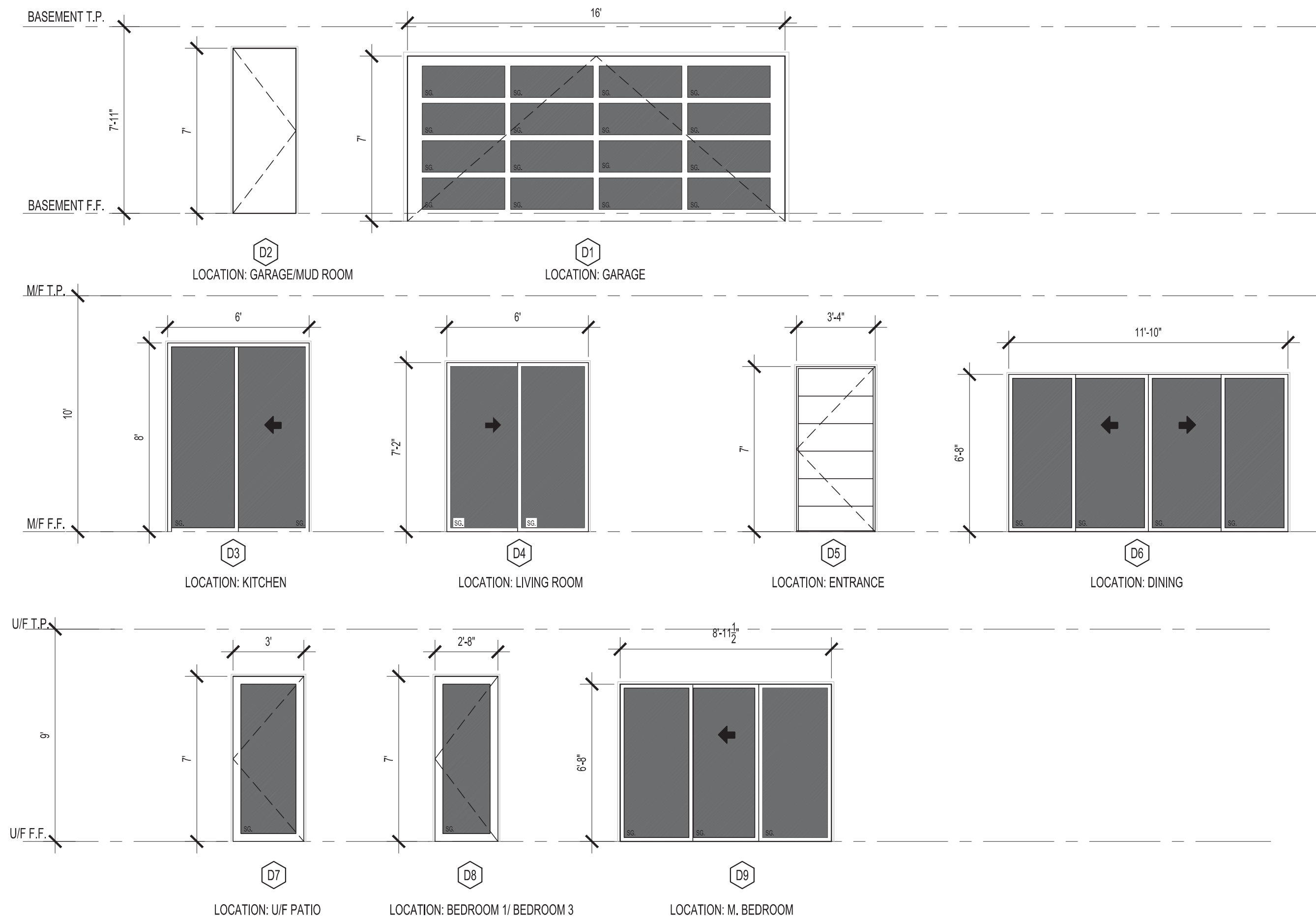


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DRAWING TITLE:  
**GLAZING ELEVATION**

SHEET:  
**A6.00**



1. ALL DIAGRAMS ARE SHOWN FROM THE EXTERIOR SIDE.
2. CONTRACTOR TO CONFIRM ALL REQUIRED ROUGH OPENING SIZES WITH MANUFACTURER PRIOR TO FRAMING.
3. SHOP DRAWING APPROVAL BY ARCHITECT REQUIRED PRIOR TO FABRICATION.
4. MANUFACTURER TO REVIEW INSTALLATION LOCATIONS AND DETERMINE WHICH LITES ARE REQUIRED TO BE SAFETY GLAZING.
5. MANUFACTURER TO REVIEW INSTALLATION LOCATIONS AND SIZES TO DETERMINE IF OPERABLE DOORS MEET EGRESS REQUIREMENTS.
6. ALL DOORS TO BE NFRC CERTIFIED.

#	DATE	DESCRIPTION OF REVISION
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 CHECKED BY: \_\_\_\_\_  
 JOB #: \_\_\_\_\_



GLAZING SCHEDULE	
CONDITIONED FLOOR AREA:	4504
SUM OF ALL GLAZING AREAS FROM BELOW:	837.3
GLAZING TO FLOOR AREA RATIO:	0.186
Sum of UA for Heating System Sizing:	251.27

TAG	ROOM	TYPE	Ref.	U-factor	Qt.	Width			Height			Glazing Door		Door UA
						Feet	Inch	Feet	Inch	Feet	Inch	Area	Area	
D1	Garage	Metal w/ Glass Panels			1	16	0	7	0	0	0	0	112.0	0.00
D2	Garage	20-Min./Single Solid	WSEC	0.28	1	3	0	7	0	0	0	0	21.0	5.88
D3	Kitchen	Double Glass Panels Slider	WSEC	0.28	1	6	0	8	0	0	0	48.0	48.0	13.44
D4	Kitchen	Double Glass Panels Slider	WSEC	0.28	1	6	0	7	2	0	0	43.0	43.0	12.04
D5	Entry	Single Solid	WSEC	0.28	1	3	4	7	0	0	0	0	23.3	6.53
D6	Dining	Four Panels Slider	WSEC	0.28	1	11	10	6	8	0	0	78.9	78.9	22.09
D7	U/F Patio	Single Swing Lite	WSEC	0.28	1	3	0	7	0	0	0	21.0	21.0	5.88
D8	Bed 1&3	Sing Swing Lite	WSEC	0.28	2	2	8	7	0	0	0	37.3	37.3	10.45
D9	M. BED	(3) Glass Panels Slider	WSEC	0.28	1	8	11.5	6	8	0	0	59.7	59.7	16.72
(1) Exempt Opaque Swinging Door (MAX 24 SF)														
<b>SUM OF GLAZING AREA, DOOR AREA, AND UA (does not include exempt door):</b>												287.9	332.3	93.04
<b>AREA WEIGHTED U = UA/AREA</b>														0.28
<b>SUM OF AREA AND UA FOR HEATING SYSTEM SIZE ONLY (include exempt door):</b>												444.3	93.04	

TAG	ROOM	TYPE	Ref.	U-factor	Qt.	Width			Height			Sill	Area	UA
						Feet	Inch	Feet	Inch	Feet	Inch			
W1	Wet Bar	OX		0.28	1	6	2	5	1	2	4		31.3	8.78
W1a	Guest	Casement	WSEC	0.28	1	3	0	3	8	3	3		11.0	3.08
W3	Kitchen	Fixed	WSEC	0.28	1	6	0	5	0	3	0		30.0	8.40
W2	Dining	Fixed	WSEC	0.28	2	4	0	4	2	2	6		33.3	9.33
W4	Living	Fixed. Mulled Unit. SG.	WSEC	0.28	1	2	0	8	0	0	11.5		16.0	4.48
W5	Living	Fixed. Mulled Unit. SG.	WSEC	0.28	1	12	0	8	0	0	11.5		96.0	26.88
W6	Entry	Fixed. SG.	WSEC	0.28	3	1	6	7	0	0	0		31.5	8.82
W7	MSTR WIC	Casement.	WSEC	0.28	1	2	6	4	6	3	6		11.3	3.15
W8	Bedroom2	Fixed.	WSEC	0.28	1	4	0	4	6	3	6		18.0	5.04
W9	Bedroom2	Casement	WSEC	0.28	1	3	0	4	6	3	6		13.5	3.78
W10	U/F Bath	Awning	WSEC	0.28	1	4	0	1	4	6	0		5.3	1.49
W11	U/F Stair	Fixed. Mulled Unit. SG.	WSEC	0.28	1	8	5	8	5	0	0		70.8	19.84
W12	U/F Stair	Fixed.	WSEC	0.28	3	2	4	5	0	1	8		35.0	9.80
W13	Bedroom3	Fixed.	WSEC	0.28	1	1	4	5	0	3	0		6.7	1.87
W14	Bedroom3	Fixed. Mulled Unit. SG.	WSEC	0.28	1	6	8	4	10	3	2		32.2	9.02
W15	Bedroom1	Fixed	WSEC	0.28	1	5	4	5	2	3	0		27.6	7.72
W16	Bedroom1	Casement. Egress	WSEC	0.28	1	2	6	5	2	3	0		12.9	3.62
W17	M Bath	Fixed. SG.	WSEC	0.28	1	4	7	5	2	3	0		23.7	6.63
W18	M Bath	Fixed. SG.	WSEC	0.28	1	1	6	5	2	3	0		7.8	2.17
W19	M Bath	Casement. SG.	WSEC	0.28	1	3	0	5	2	3	0		15.5	4.34
<b>SUM OF AREA AND UA:</b>												529.4	148.23	
<b>AREA WEIGHTED U = UA/AREA</b>													0.28	

TAG	ROOM	TYPE	Ref.	U-factor
SL1	U/F PLAN	Skylight	WSEC	0.50

Qt.	Feet	Inch	Feet	Inch	Feet	Inch	Area	UA	
5	1	0	4	0			20.0	10.00	
<b>SUM OF AREA AND UA:</b>								20.0	10.00
<b>AREA WEIGHTED U = UA/AREA</b>									0.50

Project Name: **HU RESIDENCE**  
 30XX 69TH AVE SE  
 MERCER ISLAND, WA 98040

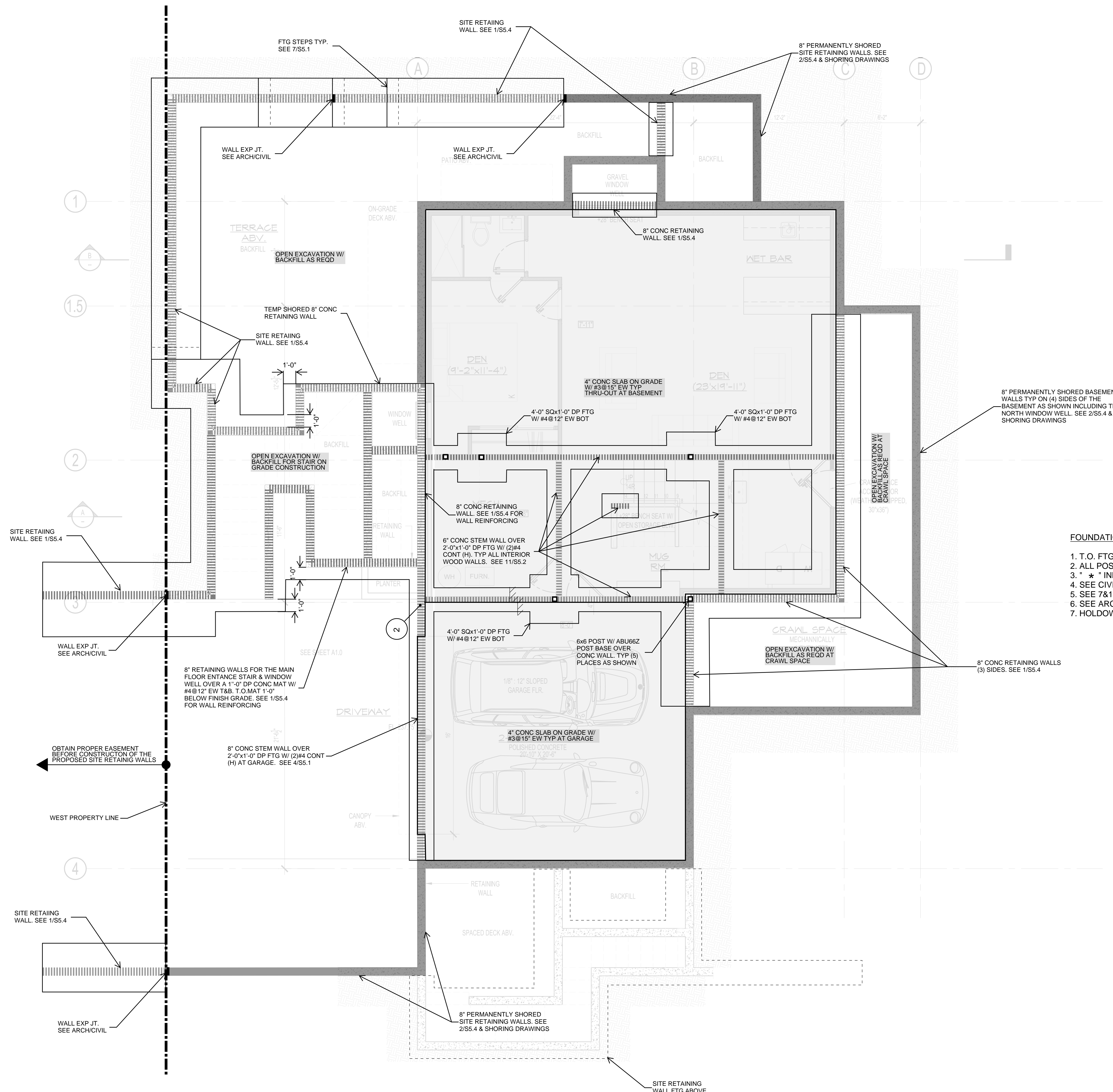
APPROVAL STAMP

DRAWING TITLE:  
**GLAZING ELEVATION**

SHEET:

**A6.01**





**FOUNDATION & BASEMENT PLAN NOTES:**

1. T.O. FTG IS TO BE 1'-0" BELOW FINISH FLOOR OR FINISH GRADE UNO.
2. ALL POSTS ARE 4X6 AND 6X6 IN 2X4 AND 2X6 STUD WALLS RESPECTIVELY UNO.
3. " \* " INDICATES SHARED HOLDOWN FOR SHEAR WALLS PERPENDICULAR TO EACH OTHER. SEE 4/S5.5.
4. SEE CIVIL FOR SITE GRADING
5. SEE 7&12/S5.3 FOR STAIR FRAMING DETAILS
6. SEE ARCH FOR TOP OF CONC WALL ELEVATIONS AND SITE RETAINING WALL PROFILES.
7. HOLDOWNS SHOWN IN CONC WALLS ARE A REPEAT OF WHAT ARE SHOWN ON THE ROOF/FLOOR PLAN ABOVE.

**LEGEND**

ALL BEARING/SHEAR WALLS SHOWN IN PLANS ARE FOR WALLS BELOW. TYPICAL UNO.

- X LINEAR FT OF TYPE Y SHEAR WALL; REFER TO 8/S5.5 FOR SCHEDULE AND DETAILS.
- TYPE Y PERFORATED SHEAR WALL; REFER TO 6/S5.5 FOR DETAIL.
- HOLDOWN STRAP TIES AT TOP (DASHED WHERE OCCURS) AND BOT OF SHEAR WALL PANEL BELOW; REFER TO 1/S5.2 FOR SCHEDULE. CENTER TOP AND BOT STRAPS TO BOT AND TOP OF RIM JOIST RESPECTIVELY & WRAP AROUND RIM JOIST AND/OR BM/HEADER ABOVE & BELOW WHEN TOO LONG
- HOLDOWN STRAP TIES AT TOP (DASHED WHERE OCCURS) AND HOLDOWN ANCHOR IN CONC AT BOT OF SHEAR WALL PANEL BELOW; REFER TO 1/S5.2 & 1/S5.5 FOR SCHEDULES; CENTER TOP STRAP TO BOT OF RIM JOIST & WRAP AROUND RIM JOIST AND/OR BM ABOVE WHEN TOO LONG
- STEP IN FLR OR SLAB
- \* HOLDOWN SHARED BY BOTH SHEAR WALLS. SEE 4/S5.5

**COLOR PRINT REQD**

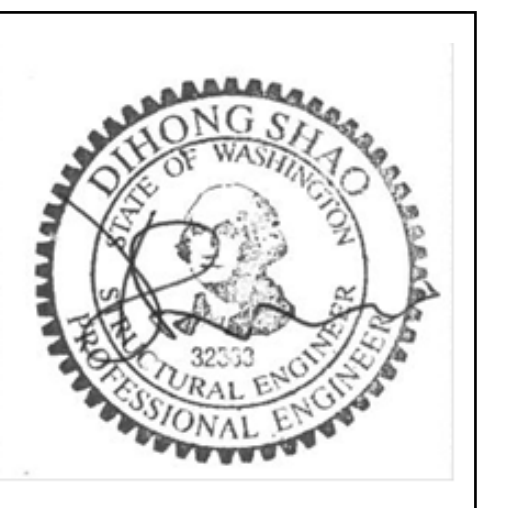
- PERMANENTLY SHORED CONC OR BASEMENT WALL
- CONC WALL
- WOOD BEARING & SHEAR WALL
- AS INDICATED ON PLANS & COLORS

**FOUNDATION & BASEMENT FLOOR PLAN**

1/4"=1'-0"



**DHS ENGINEERS**  
  
 1601 5th Avenue, 1100  
 Seattle, WA 98101, USA  
 (206) 734-5858



**HU RESIDENCE**  
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 MERCER ISLAND, WA 98040

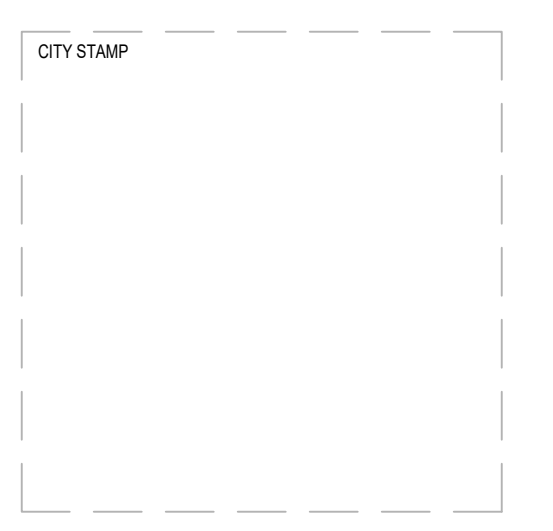
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SHEET TITLE  
**FOUNDATION & BASEMENT FLOOR PLAN**

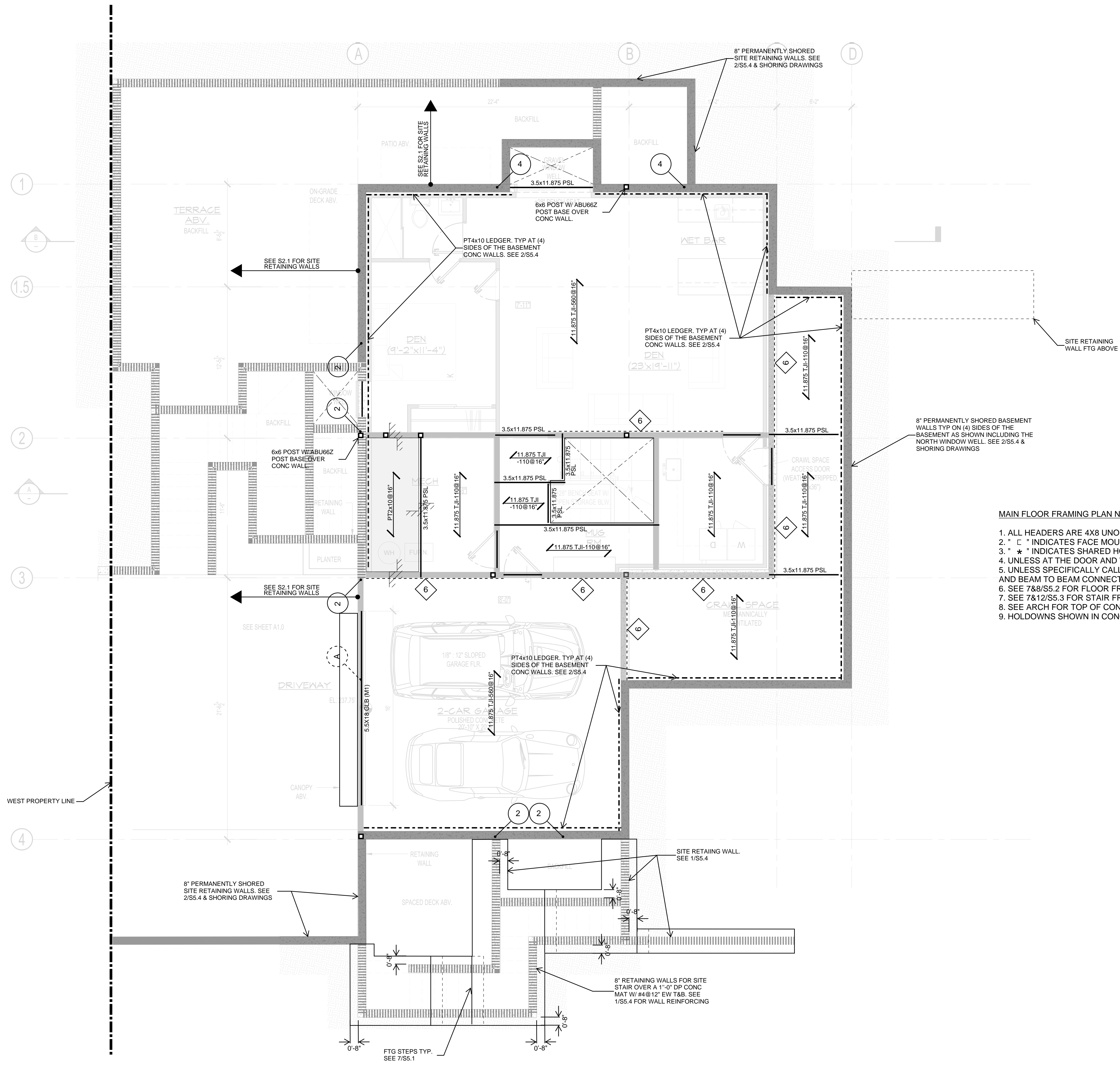
JOB NUMBER

SHEET NUMBER

**S2.1**







**MAIN FLOOR FRAMING PLAN NOTES:**

1. ALL HEADERS ARE 4X8 UNO; ALL POSTS ARE 4X6 AND 6X6 IN 2X4 AND 2X6 STUD WALLS RESPECTIVELY UNO.
2. " ◻ " INDICATES FACE MOUNTED BEAM HANGER WITH SDS FASTENERS UNO.
3. " \* " INDICATES SHARED HOLDOWN FOR SHEAR WALLS PERPENDICULATER TO EACH OTHER. SEE 4/S5.5.
4. UNLESS AT THE DOOR AND WINDOW HEADERS, ALL BEAMS ARE TOP FLUSH.
5. UNLESS SPECIFICALLY CALLED OUT ON THE PLAN, PROVIDE FACE MOUNTED HANGERS FOR THE JOIST TO BEAM AND BEAM TO BEAM CONNECTIONS WITH SIMPSON "IUS" AND "HU" SERIES HANGERS RESPECTIVELY.
6. SEE 7&8/S5.2 FOR FLOOR FRAMING DETAILS.
7. SEE 7&12/S5.3 FOR STAIR FRAMING DETAILS.
8. SEE ARCH FOR TOP OF CONC WALL ELEVATIONS AND SITE RETAINING WALL PROFILES.
9. HOLDOWNS SHOWN IN CONC WALLS ARE A REPEAT OF WHAT ARE SHOWN ON THE ROOF/FLOOR PLAN ABOVE.

**LEGEND**

- ALL BEARING/SHEAR WALLS SHOWN IN PLANS ARE FOR WALLS BELOW. TYPICAL UNO.
- X LINEAR FT OF TYPE Y SHEAR WALL; REFER TO 8/S5.5 FOR SCHEDULE AND DETAILS.
  - TYPE Y PERFORATED SHEAR WALL; REFER TO 6/S5.5 FOR DETAIL.
  - HOLDOWN STRAP TIES AT TOP (DASHED WHERE OCCURS) AND BOT OF SHEAR WALL PANEL BELOW; REFER TO 1/S5.2 FOR SCHEDULE. CENTER TOP AND BOT STRAPS TO BOT AND TOP OF RIM JOIST RESPECTIVELY & WRAP AROUND RIM JOIST AND/OR BM/HEADER ABOVE & BELOW WHEN TOO LONG
  - HOLDOWN STRAP TIES AT TOP (DASHED WHERE OCCURS) AND HOLDOWN ANCHOR IN CONC AT BOT OF SHEAR WALL PANEL BELOW; REFER TO 1/S5.2 & 1/S5.5 FOR SCHEDULES; CENTER TOP STRAP TO BOT OF RIM JOIST & WRAP AROUND RIM JOIST AND/OR BM ABOVE WHEN TOO LONG
  - STEP IN FLR OR SLAB
  - HOLDOWN SHARED BY BOTH SHEAR WALLS. SEE 4/S5.5

**COLOR PRINT REQD**

- PERMANENTLY SHORED CONC OR BASEMENT WALL
- CONC WALL
- WOOD BEARING & SHEAR WALL
- AS INDICATED ON PLANS & COLORS

**MAIN FLOOR FRAMING PLAN**

1/4"=1'-0"



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 (206) 734-6858



**HU RESIDENCE**  
 30XX 69TH AVENUE SE  
 MERCER ISLAND, WA 98040

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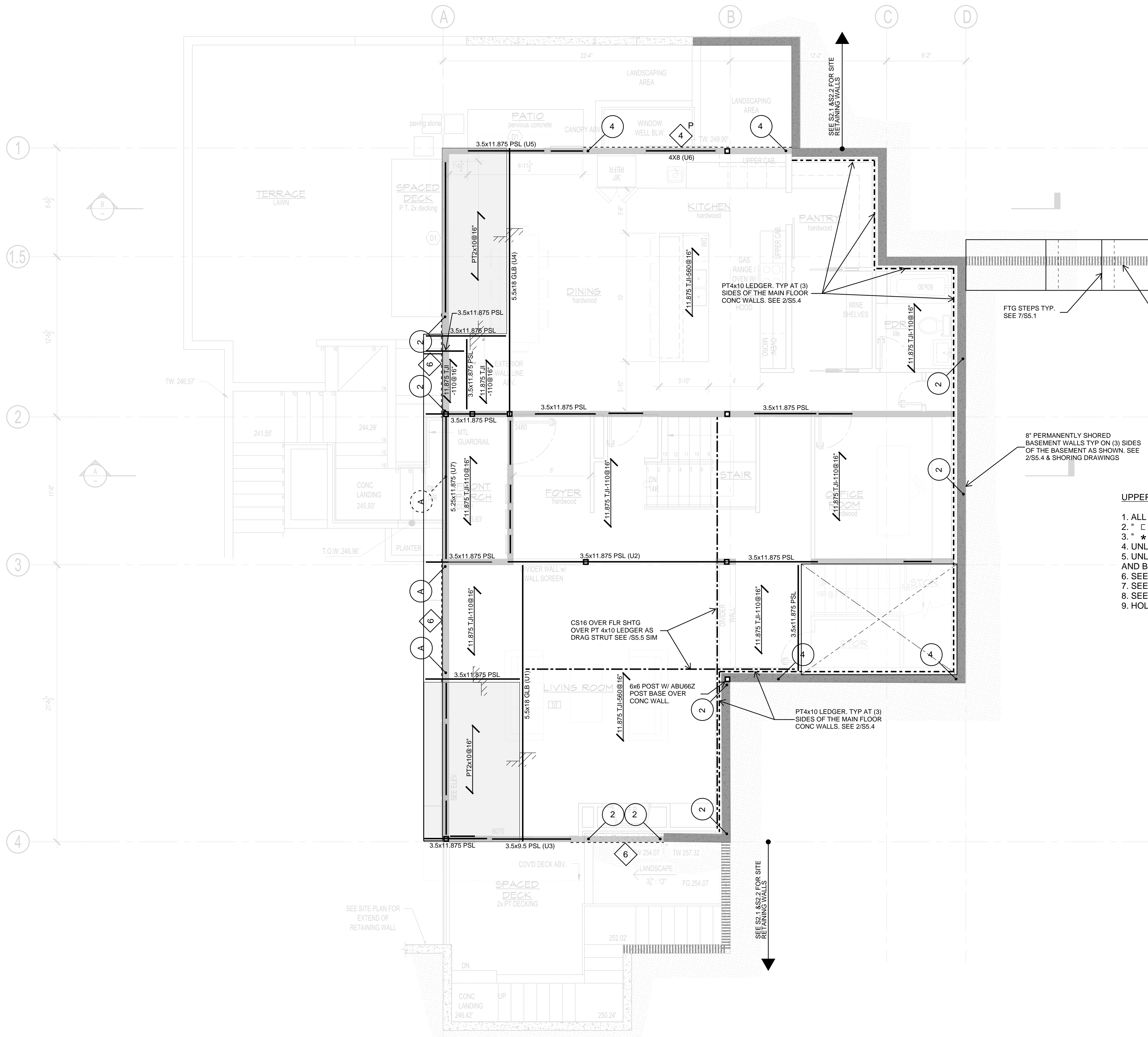
SHEET TITLE  
**MAIN FLOOR FRAMING PLAN**

JOB NUMBER

SHEET NUMBER

**S2.2**

CITY STAMP



**UPPER FLOOR FRAMING PLAN NOTES:**

1. ALL HEADERS ARE 4X8 UNO; ALL POSTS ARE 4X6 AND 6X6 IN 2X4 AND 2X6 STUD WALLS RESPECTIVELY UNO.
2. " C " INDICATES FACE MOUNTED BEAM HANGER WITH SDS FASTENERS UNO.
3. " \* " INDICATES SHARED HOLDOWN FOR SHEAR WALLS PERPENDICULATER TO EACH OTHER. SEE 4/S5.5.
4. UNLESS AT THE DOOR AND WINDOW HEADERS, ALL BEAMS ARE TOP FLUSH.
5. UNLESS SPECIFICALLY CALLED OUT ON THE PLAN, PROVIDE FACE MOUNTED HANGERS FOR THE JOIST TO BEAM AND BEAM TO BEAM CONNECTIONS WITH SIMPSON "IUS" AND "HU" SERIES HANGERS RESPECTIVELY.
6. SEE 7&8/S5.2 FOR FLOOR FRAMING DETAILS.
7. SEE 7&12/S5.3 FOR STAIR FRAMING DETAILS.
8. SEE ARCH FOR TOP OF CONC WALL ELEVATIONS AND SITE RETAINING WALL PROFILES.
9. HOLDOWNS SHOWN IN CONC WALLS ARE A REPEAT OF WHAT ARE SHOWN ON THE ROOF/FLOOR PLAN ABOVE.

**LEGEND**

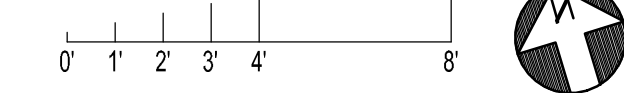
- ALL BEARING/SHEAR WALLS SHOWN IN PLANS ARE FOR WALLS BELOW. TYPICAL UNO.
- X LINEAR FT OF TYPE Y SHEAR WALL; REFER TO 8/S5.5 FOR SCHEDULE AND DETAILS.
  - TYPE Y PERFORATED SHEAR WALL; REFER TO 6/S5.5 FOR DETAIL.
  - HOLDOWN STRAP TIES AT TOP (DASHED WHERE OCCURS) AND BOT OF SHEAR WALL PANEL BELOW; REFER TO 1/S5.2 FOR SCHEDULE. CENTER TOP AND BOT STRAPS TO BOT AND TOP OF RIM JOIST RESPECTIVELY & WRAP AROUND RIM JOIST AND/OR BM/HEADER ABOVE & BELOW WHEN TOO LONG
  - HOLDOWN STRAP TIES AT TOP (DASHED WHERE OCCURS) AND HOLDOWN ANCHOR IN CONC AT BOT OF SHEAR WALL PANEL BELOW; REFER TO 1/S5.2 & 1/S5.5 FOR SCHEDULES; CENTER TOP STRAP TO BOT OF RIM JOIST & WRAP AROUND RIM JOIST AND/OR BM ABOVE WHEN TOO LONG
  - STEP IN FLR OR SLAB
  - HOLDOWN SHARED BY BOTH SHEAR WALLS. SEE 4/S5.5

**COLOR PRINT REQD**

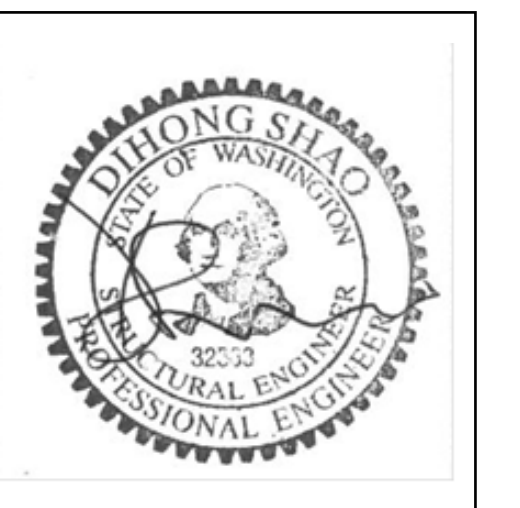
- PERMANENTLY SHORED CONC OR BASEMENT WALL
- CONC WALL
- WOOD BEARING & SHEAR WALL
- OTHER LINES & COLORS AS INDICATED ON PLANS

**UPPER FLOOR FRAMING PLAN**

1/4"=1'-0"



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 1601 5th Avenue, 1100  
 Seattle, WA 98101, USA  
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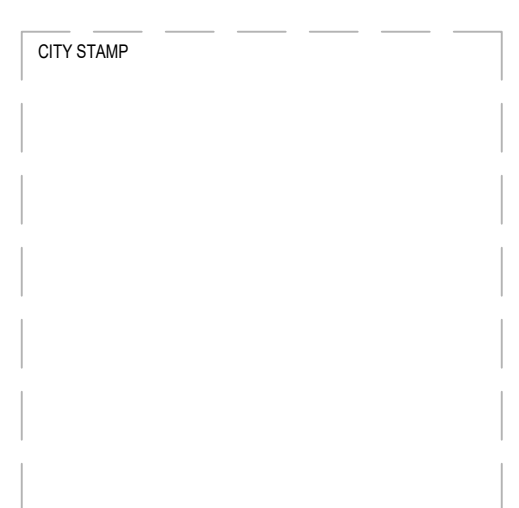
**HU RESIDENCE**  
 30XX 69TH AVENUE SE  
 MERCER ISLAND, WA 98040

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00	01/08/21	PERMIT SET

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**UPPER FLOOR FRAMING PLAN**

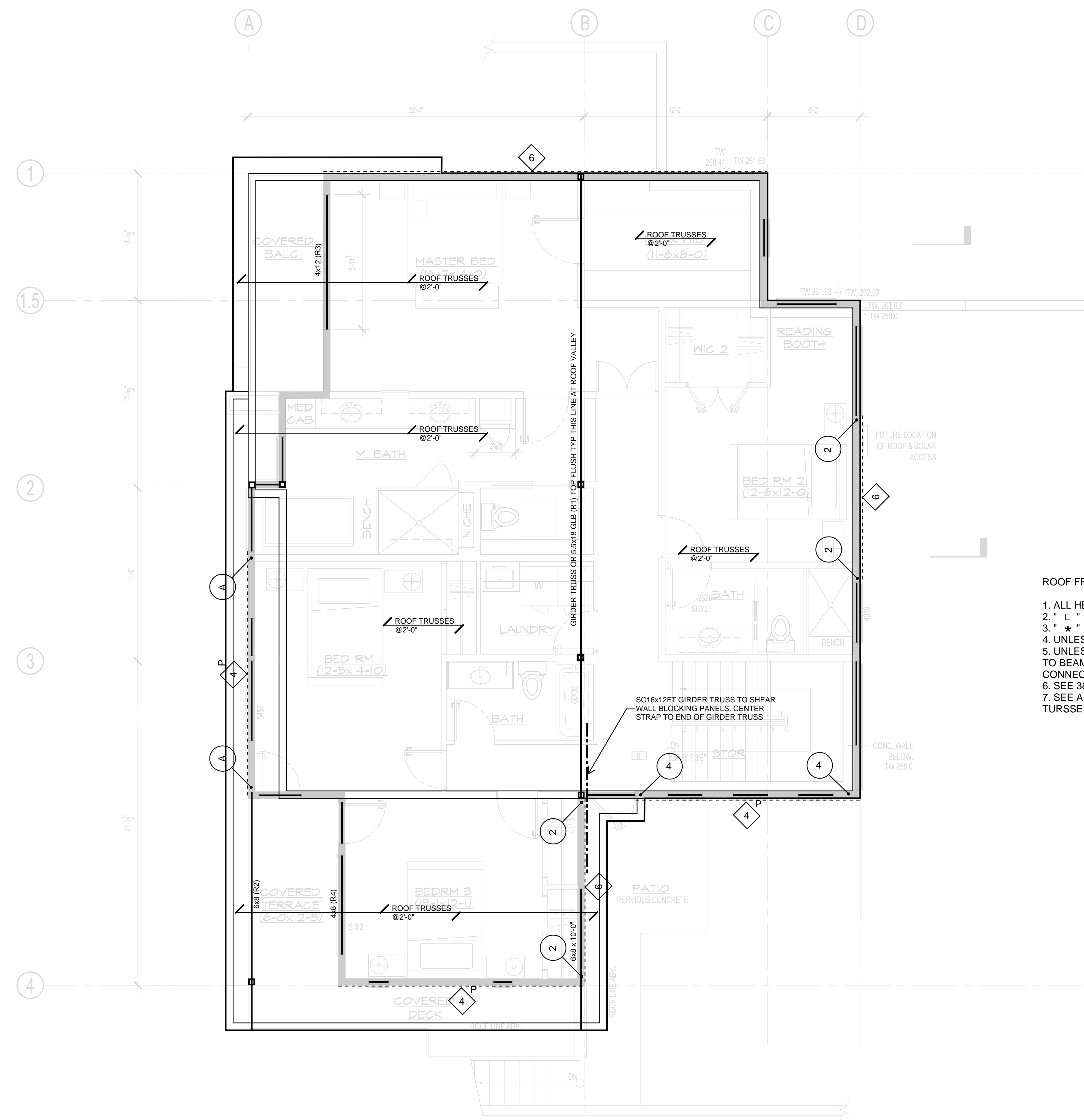
JOB NUMBER  
 SHEET NUMBER

**S2.3**





**HU RESIDENCE**  
30XX 69TH AVENUE SE  
MERCER ISLAND, WA 98040



- ROOF FRAMING PLAN NOTES:**
1. ALL HEADERS ARE 4X8 UNO; ALL POSTS ARE 4X6 AND 6X6 IN 2X4 AND 2X6 STUD WALLS RESPECTIVELY UNO.
  2. " □ " INDICATES FACE MOUNTED BEAM HANGER WITH SDS FASTENERS UNO.
  3. " \* " INDICATES SHARED HOLDOWN FOR SHEAR WALLS PERPENDICULATER TO EACH OTHER. SEE 4/S5.5.
  4. UNLESS AT THE DOOR AND WINDOW HEADERS, ALL BEAMS ARE TOP FLUSH.
  5. UNLESS SPECIFICALLY CALLED OUT ON THE PLAN, PROVIDE FACE MOUNTED HANGERS FOR THE ROOF TRUSS TO BEAM CONNECTIONS (BY TRUSS MANUFACTURER) AND "HU" SERIES HANGERS FOR BEAM TO BEAM CONNECTIONS.
  6. SEE 3&4/S5.2 FOR ROOF FRAMING DETAILS.
  7. SEE ARCH FOR TRUSS TOP SLOPES, TRUSS PROFILES, AND REQUIRED SHORT PARAPETS AS PART OF THE TURSSSES.

**LEGEND**

- ALL BEARING/SHEAR WALLS SHOWN IN PLANS ARE FOR WALLS BELOW. TYPICAL UNO.
- X LINEAR FT OF TYPE Y SHEAR WALL; REFER TO 8/S5.5 FOR SCHEDULE AND DETAILS.
  - TYPE Y PERFORATED SHEAR WALL; REFER TO 6/S5.5 FOR DETAIL.
  - HOLDOWN STRAP TIES AT TOP (DASHED WHERE OCCURS) AND BOT OF SHEAR WALL PANEL BELOW; REFER TO 1/S5.2 FOR SCHEDULE. CENTER TOP AND BOT STRAPS TO BOT AND TOP OF RIM JOIST RESPECTIVELY & WRAP AROUND RIM JOIST AND/OR BM/HEADER ABOVE & BELOW WHEN TOO LONG
  - HOLDOWN STRAP TIES AT TOP (DASHED WHERE OCCURS) AND HOLDOWN ANCHOR IN CONC AT BOT OF SHEAR WALL PANEL BELOW; REFER TO 1/S5.2 & 1/S5.5 FOR SCHEDULES; CENTER TOP STRAP TO BOT OF RIM JOIST & WRAP AROUND RIM JOIST AND/OR BM ABOVE WHEN TOO LONG
  - STEP IN FLR OR SLAB
  - HOLDOWN SHARED BY BOTH SHEAR WALLS. SEE 4/S5.5

**COLOR PRINT REQD**

- PERMANENTLY SHORED CONC OR BASEMENT WALL
- CONC WALL
- WOOD BEARING & SHEAR WALL
- AS INDICATED ON PLANS AND COLORS

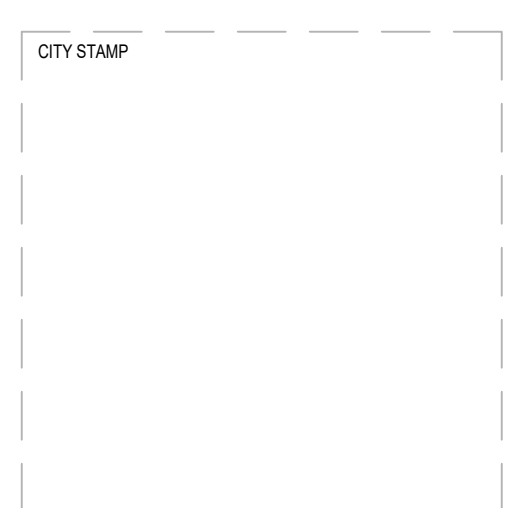
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00	01/08/21	PERMIT SET

SHEET TITLE  
**ROOF FRAMING PLAN**

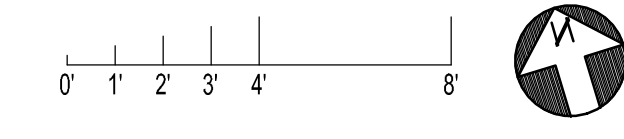
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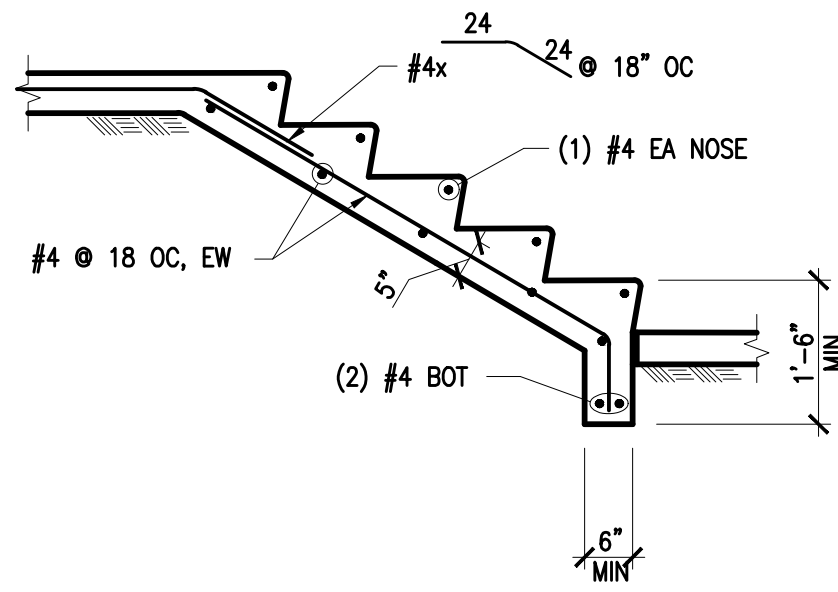
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**S2.4**



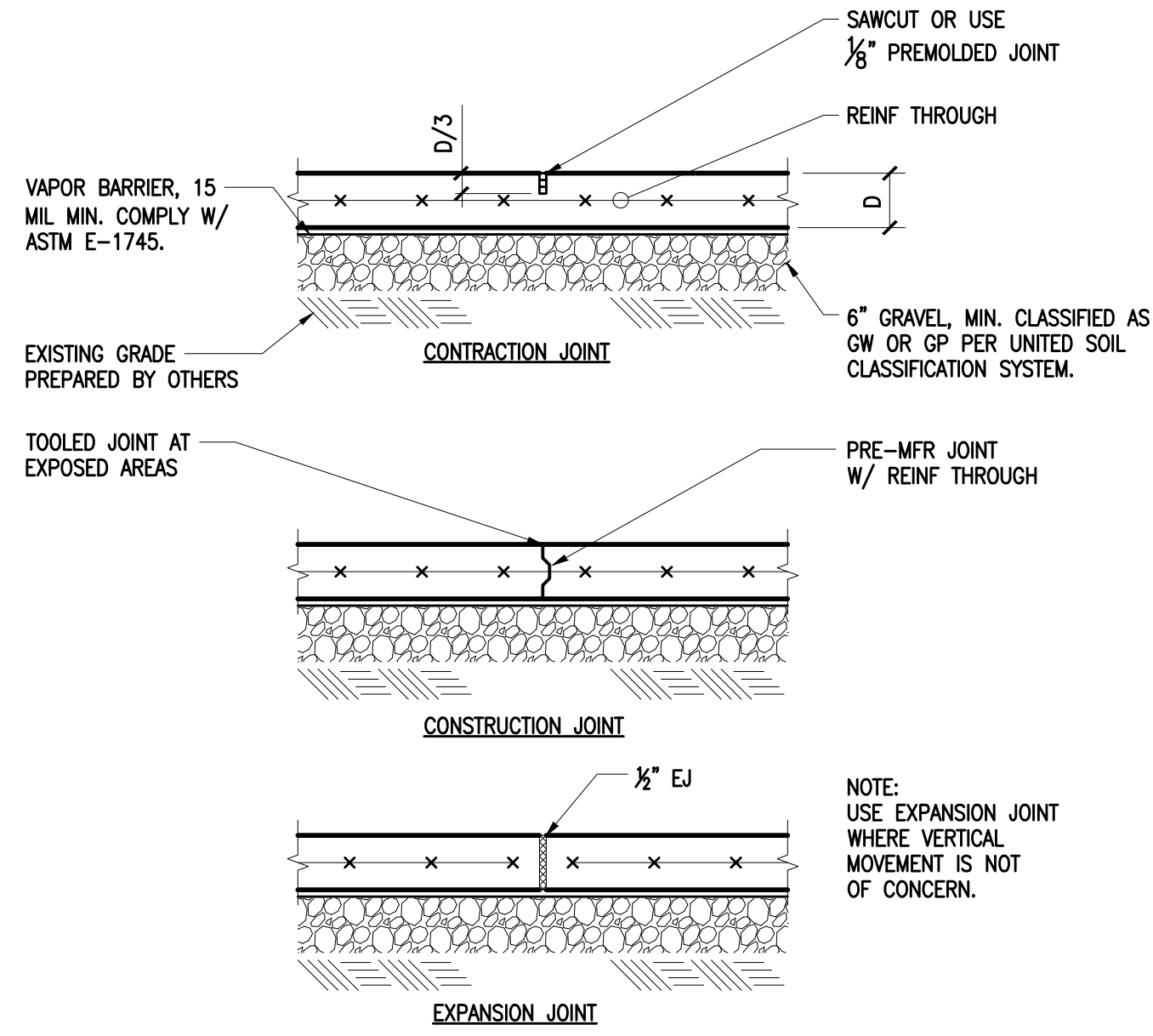
**ROOF FRAMING PLAN**  
1/4"=1'-0"





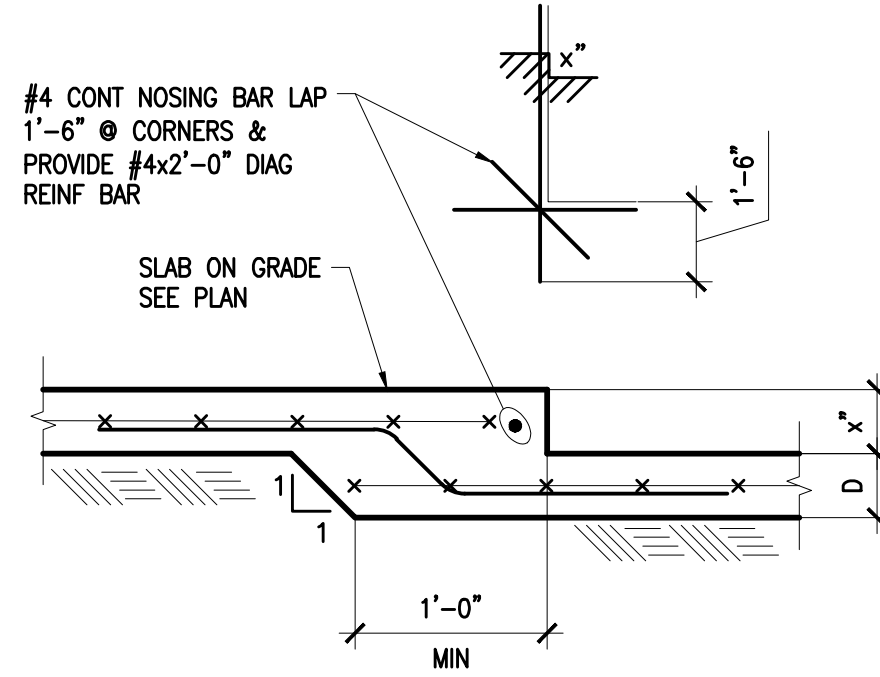
NOTES:  
1. SEE ARCH FOR STAIR DIMENSIONS AND CONFIGURATION.

1 STAIR ON GRADE  
1/2"=1'-0"

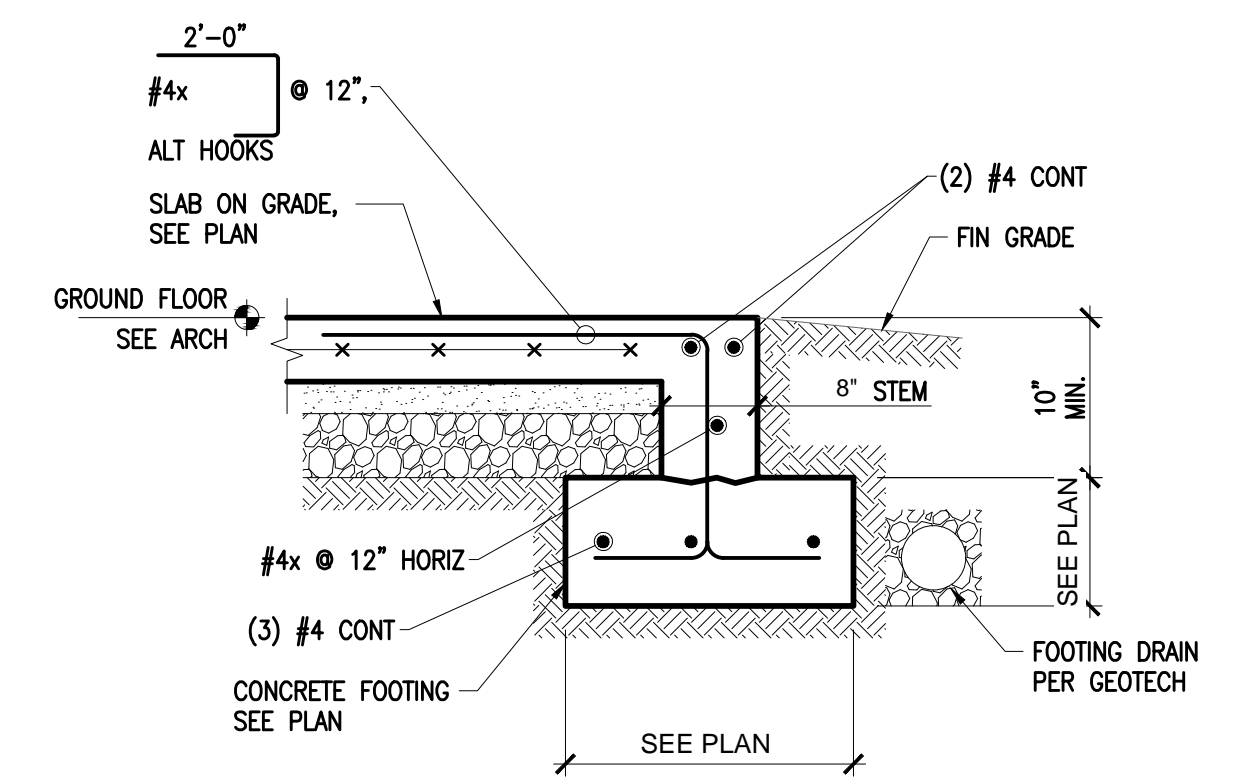


NOTE:  
USE EXPANSION JOINT WHERE VERTICAL MOVEMENT IS NOT OF CONCERN.

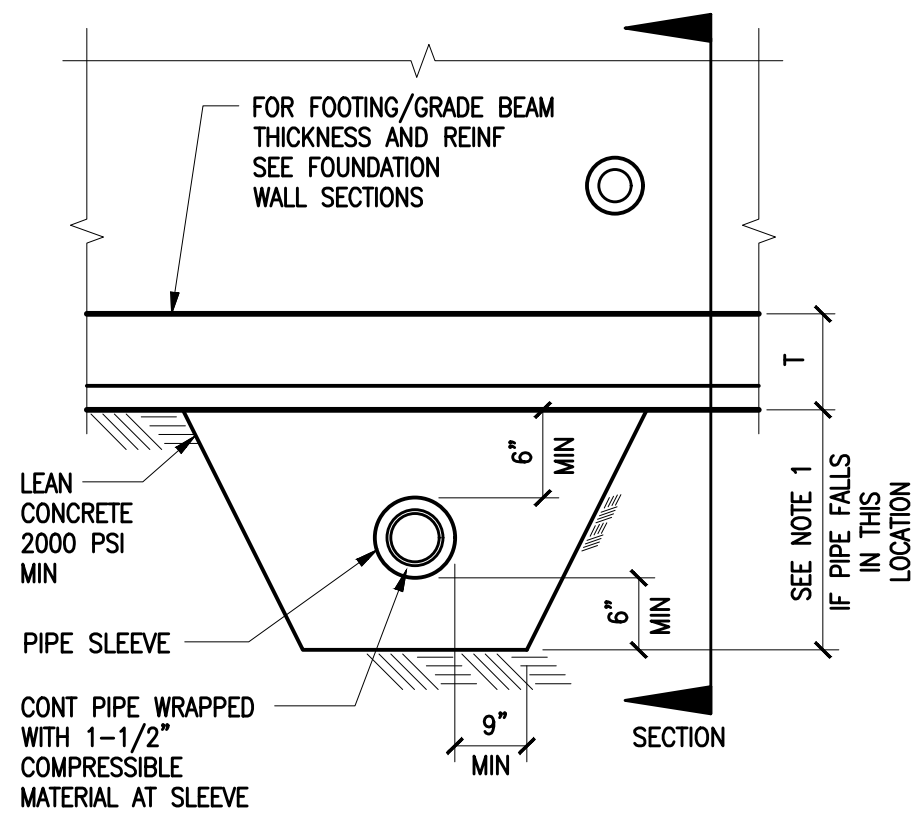
2 SLAB JOINT DETAILS  
1"=1'-0"



3 DEPRESSED SLAB ON GRADE  
1"=1'-0"

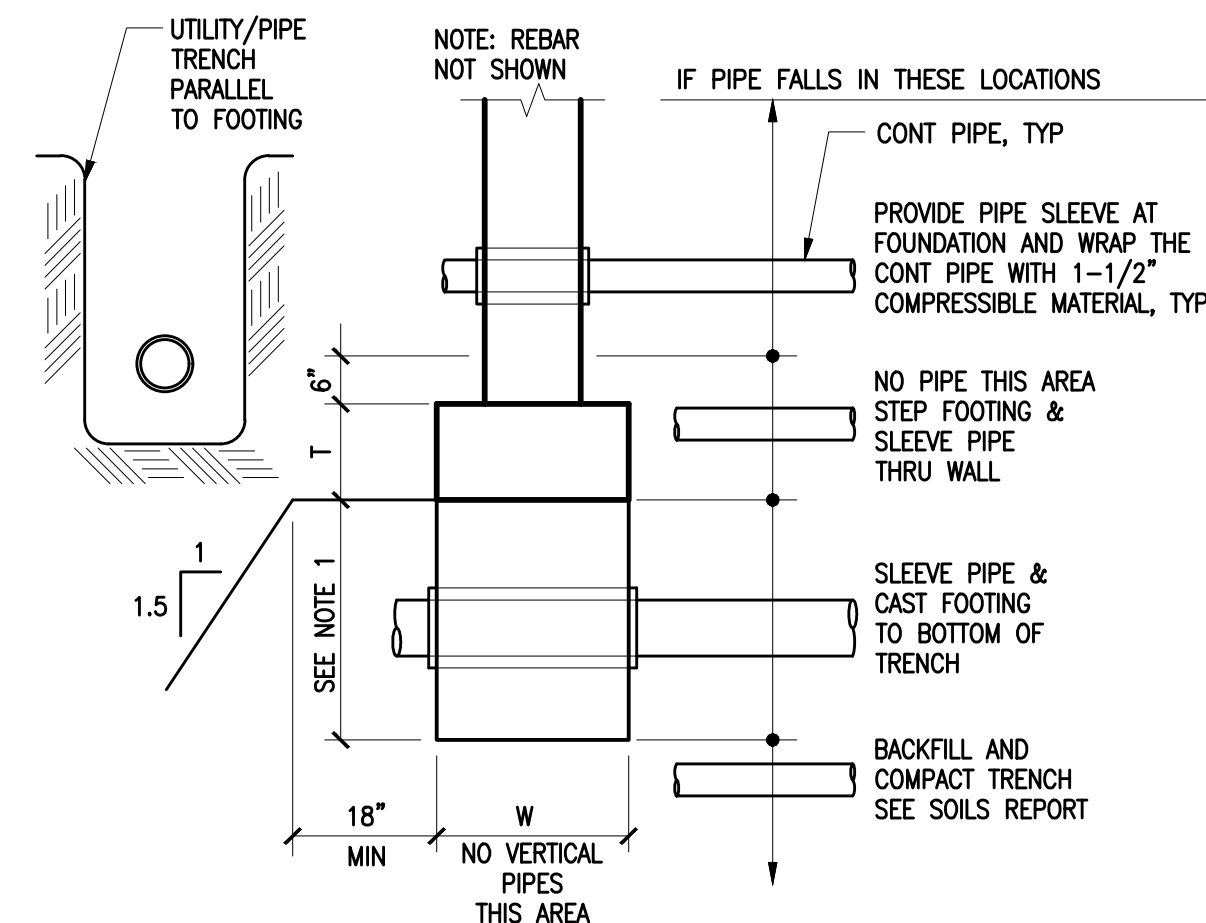


4 SLAB EDGE AT (GARAGE) DOOR  
1"=1'-0"

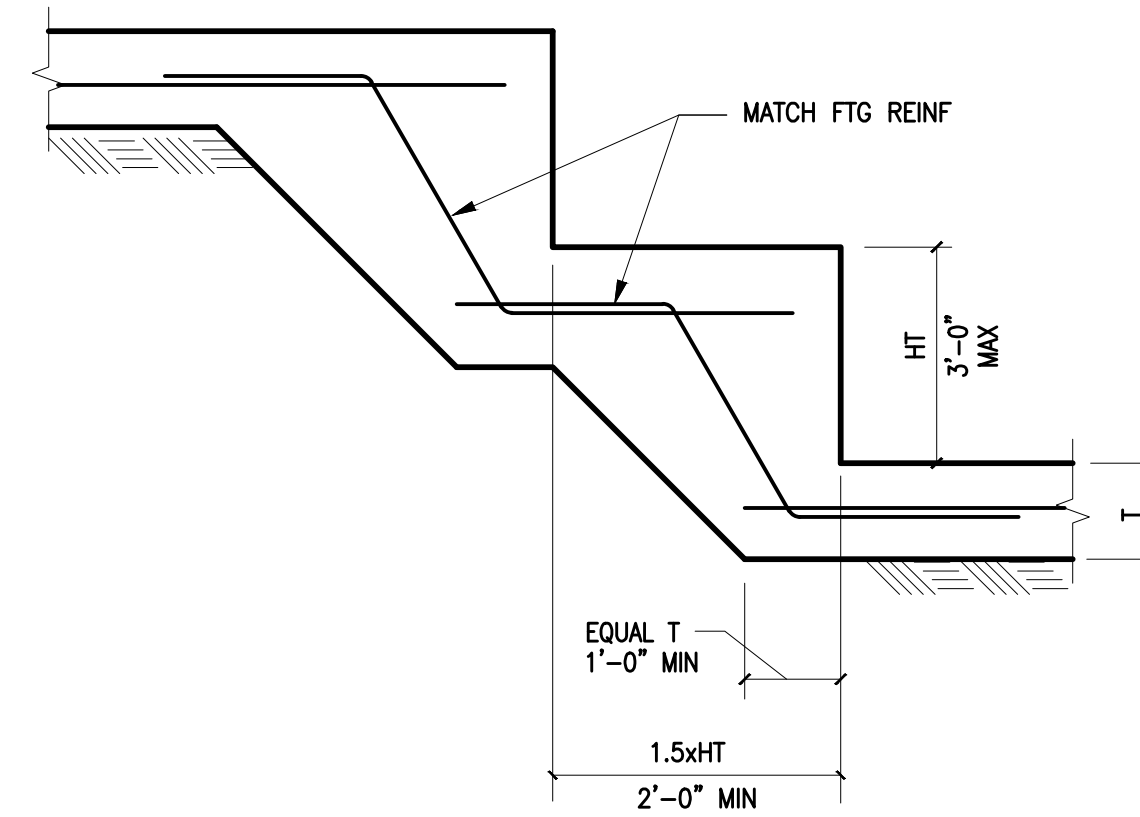


NOTES:  
1. SINGLE PIPES 8" OR LESS PERPENDICULAR TO AND GREATER THAN 24" CLEAR BELOW FOOTINGS DO NOT REQUIRE CONCRETE ENCASEMENT. (PIPE GROUPINGS BELOW 24" SHALL BE REVIEWED BY THE STRUCTURAL ENGINEER).  
2. PIPES LARGER THAN 8" SHALL BE REVIEWED BY THE STRUCTURAL ENGINEER.

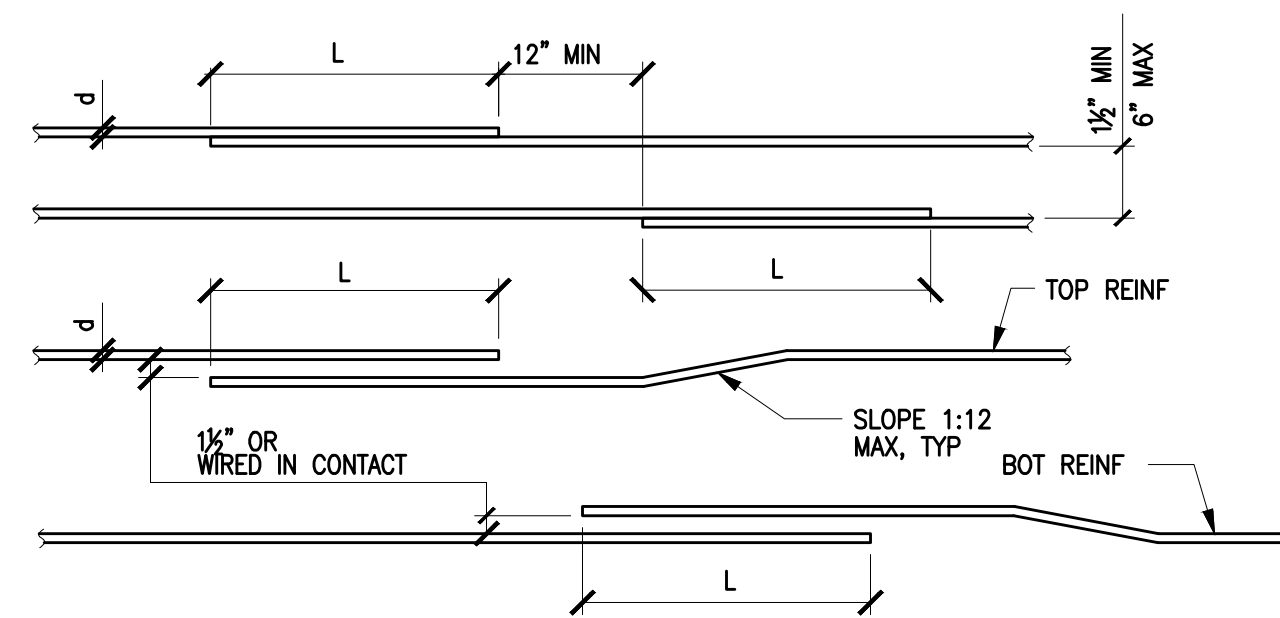
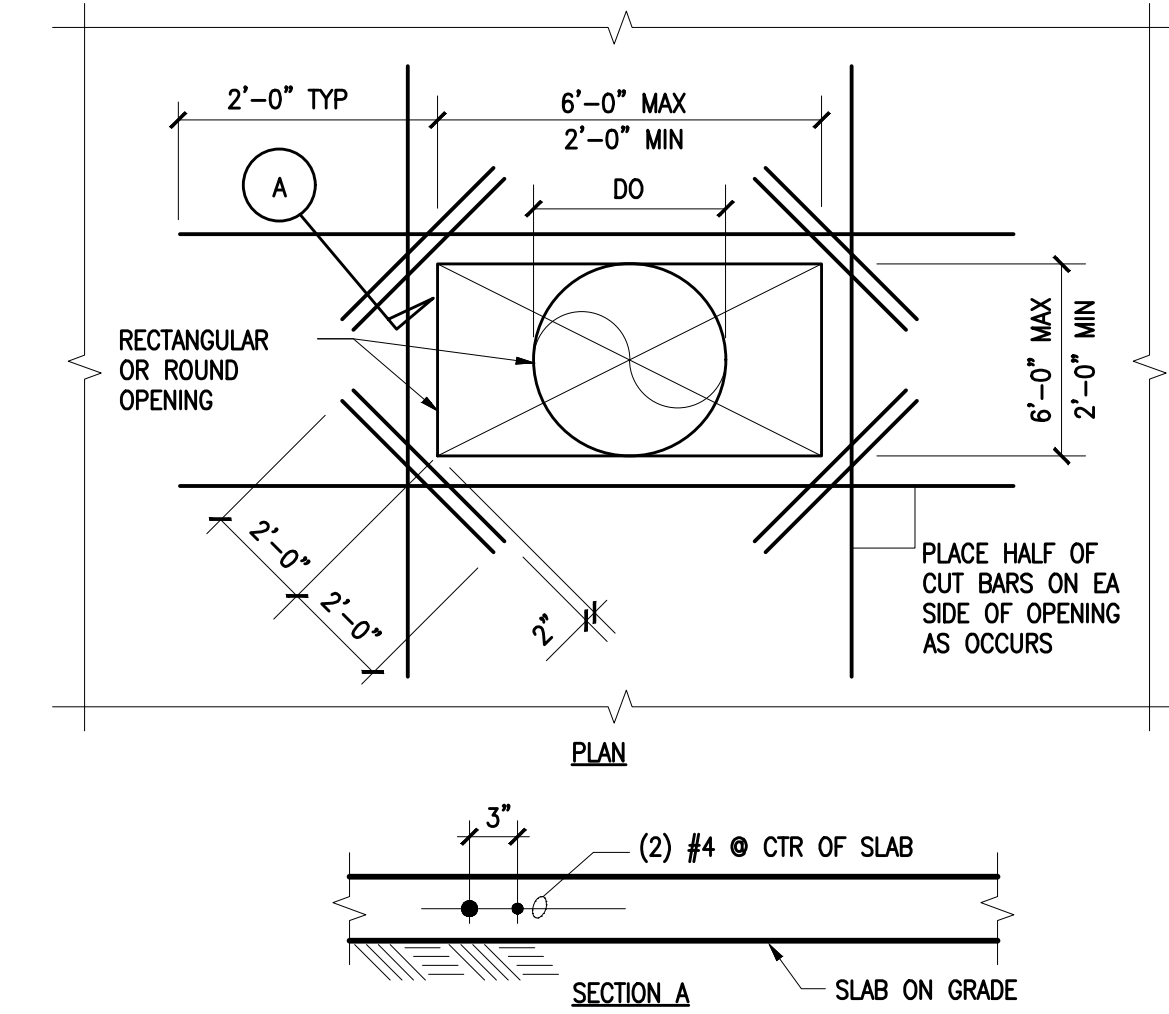
5 PIPE CLEARANCE AT STRIP FOOTING/GRADE BEAM  
1/2"=1'-0"



7 STEPPED FOOTING  
1/2"=1'-0"



8 OPENING IN CONCRETE SLAB  
1"=1'-0"



NOTES:  
1. SCHEDULE APPLIES TO UNCOATED GRADE 60 BARS IN NORMAL WEIGHT CONCRETE.  
2. FOR LIGHTWEIGHT CONCRETE MULTIPLY LENGTH IN SCHEDULE BY 1.3.  
3. ALL SPLICES SHALL BE CLASS B SPLICES UNLESS INDICATED OTHERWISE.  
4. TOP BARS (INDICATED WITH "T" IN SCHEDULE) ARE HORIZONTAL TOP BARS WITH MORE THAN 12" OF CONC CAST BLW THE BARS.  
5. BOTTOM BARS (INDICATED WITH "B" IN SCHEDULE) ARE ALL VERTICAL BARS AND HORIZONTAL BARS WITH LESS THAN 12" OF CONCRETE CAST BELOW HORIZONTAL BARS.  
6. ANY PORTION OF A STRAIGHT BAR EMBEDMENT LENGTH NOT WITHIN THE CONFINED CORE SHALL BE INCREASED BY A FACTOR OF 1.6.  
7. ALL HORIZONTAL SPLICES SHALL BE STAGGERED AS SHOWN. IF MORE THAN 50% OF VERTICAL REINFORCING IS LAP SPICED WITHIN THE REQUIRED LAP SPlice LENGTH, THE LAP SPlice LENGTH SHALL BE INCREASED BY 33%.  
8. LAP SPLICES LISTED IN THE SCHEDULE ARE CLASS B LAPS, FOR CLASS A LAPS REDUCE LENGTH BY 25%.  
9. FOR  $f_c=4500$ psi USE VALUES FOR 4000psi.

10 REINFORCING SPLICE SCHEDULE  
3/4"=1'-0"

		SPLICE OR DEVELOPMENT LENGTH (INCHES)																	
		"CLASS B" TENSION LAP SPLICE SCHEDULE																	
NORMAL WT. CONCRETE $f_c$ (psi)	0.375"		0.500"		0.625"		0.750"		0.875"		1.000"		1.128"		1.270"		1.410"		
	#3		#4		#5		#6		#7		#8		#9		#10		#11		
	T	B	T	B	T	B	T	B	T	B	T	B	T	B	T	B	T	B	
3000	28	22	38	29	47	36	56	43	81	63	93	72	105	81	116	90	128	98	
4000	25	19	33	25	41	31	49	37	71	54	81	62	91	70	101	78	111	85	
5000	22	17	29	23	36	28	44	34	63	49	72	56	81	63	90	69	99	76	
6000	20	16	27	21	33	26	40	31	58	45	66	51	74	57	82	63	90	70	
		DEVELOPMENT LENGTH "Ld" SCHEDULE																	
3000	22	17	29	22	36	28	43	33	63	48	72	55	81	62	90	69	98	76	
4000	19	15	25	19	31	24	37	29	54	42	62	48	70	54	78	60	85	66	
5000	17	13	23	17	28	22	34	26	49	38	56	43	63	48	69	54	76	59	
6000	16	12	21	16	26	20	31	24	45	34	51	39	57	44	63	49	70	54	

DHS ENGINEERS



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(206) 734-6858



**HU RESIDENCE**  
30XX 69TH AVENUE SE  
MERCER ISLAND, WA 98040

NUMBER	DATE	DESCRIPTION OF REVISIONS
00	01/08/21	PERMIT SET

SHEET TITLE  
**TYPICAL CONCRETE DETAIL**

JOB NUMBER

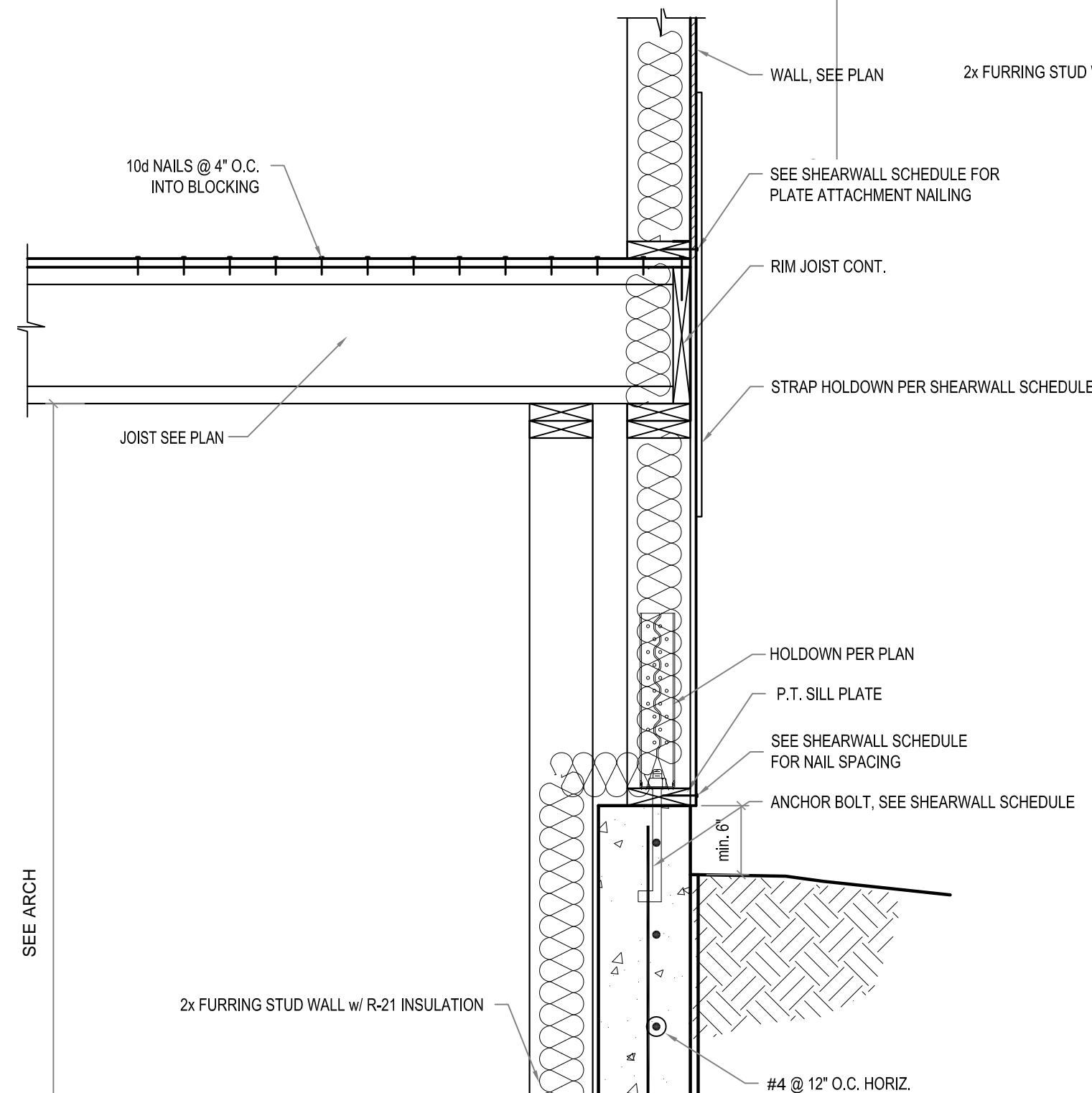
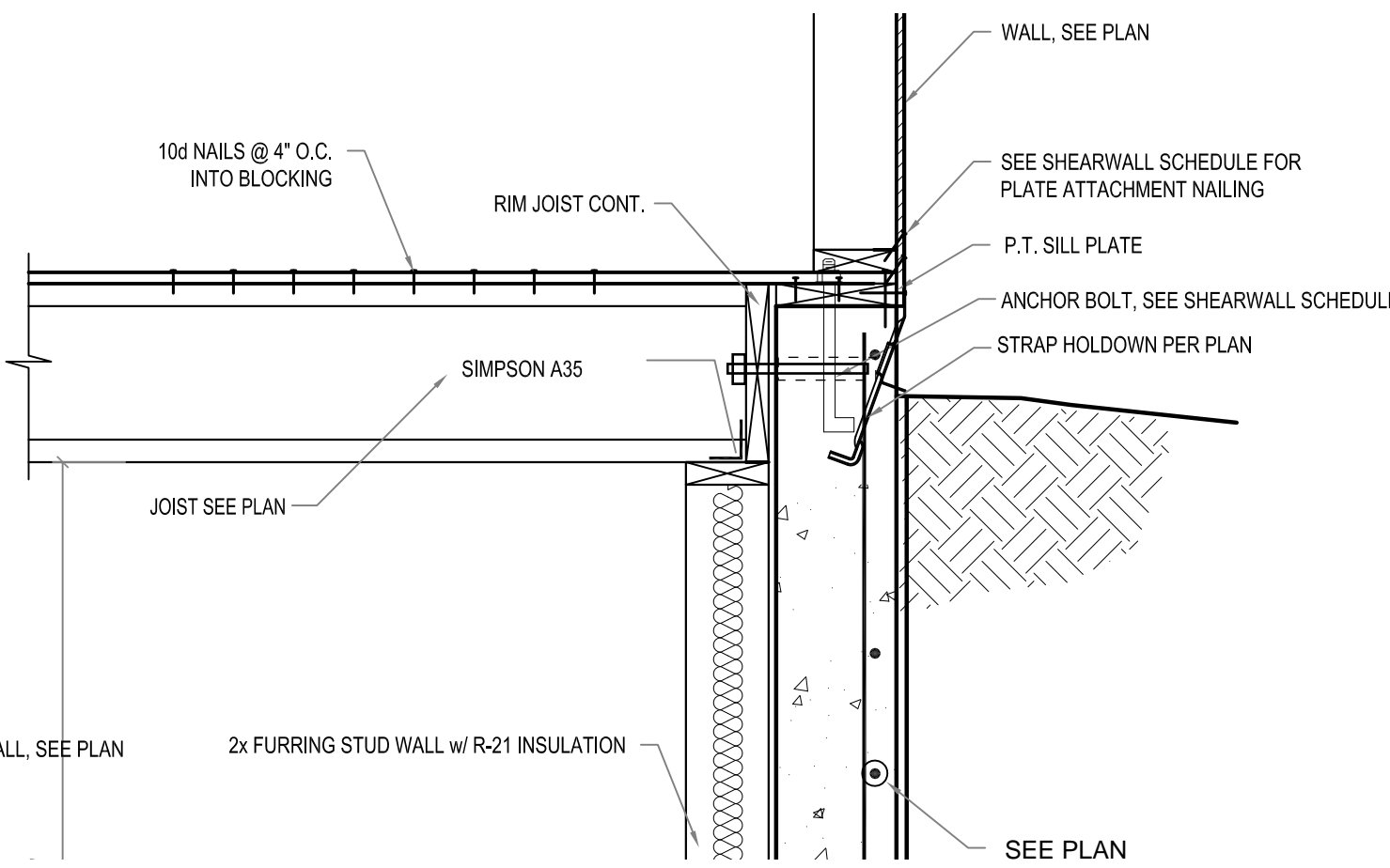
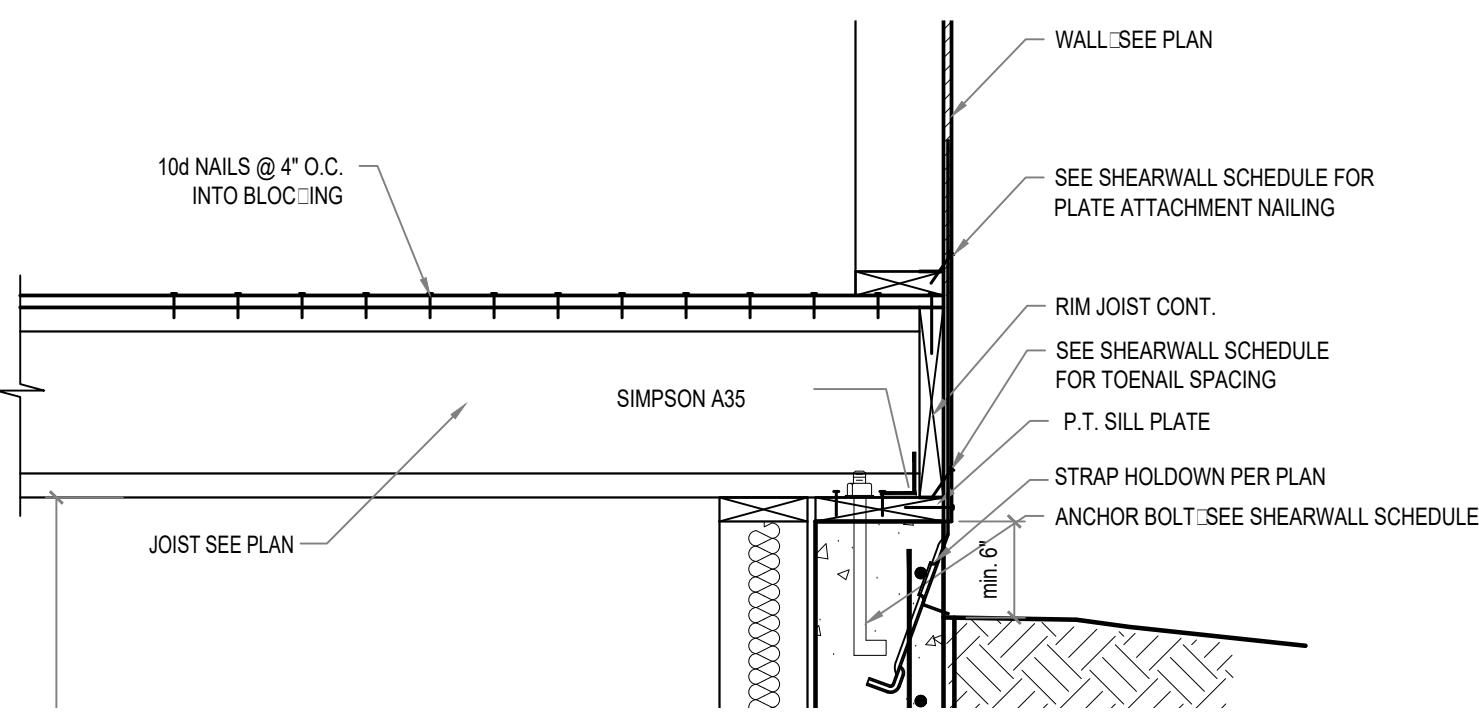
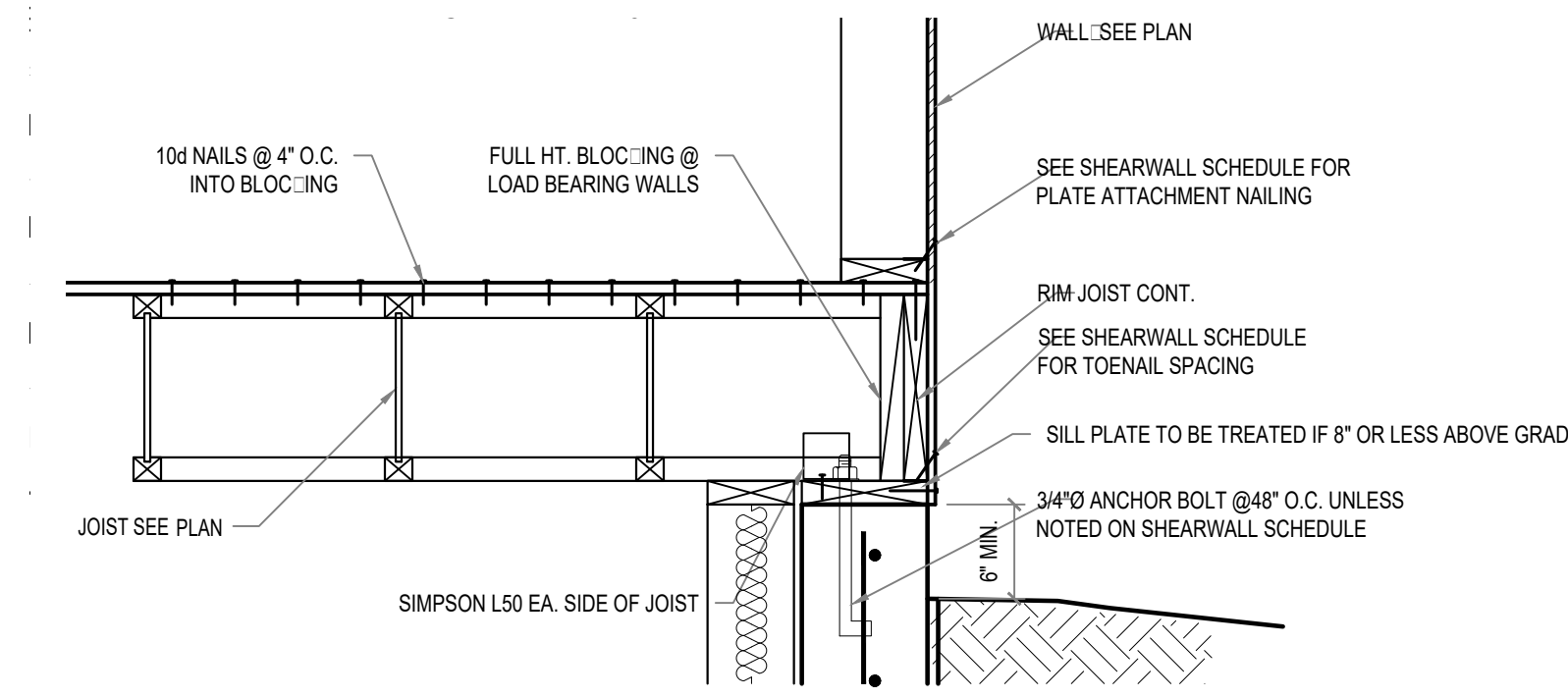
SHEET NUMBER

**S5.1**

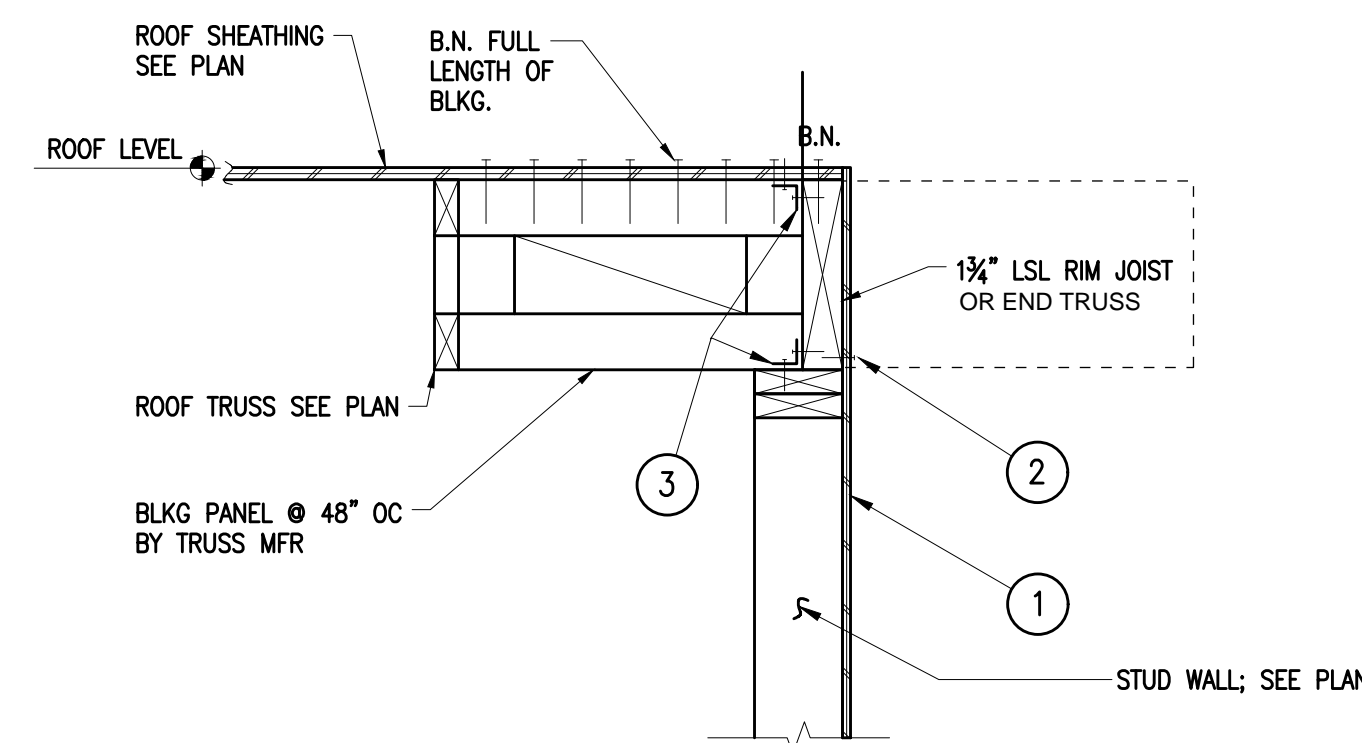
CITY STAMP

STRAP TIE SCHEDULE			
TYPE	MANUFACTURER	PRODUCT	NOTES
A	SIMPSON	ST6224 ON (2) 2X	2.54 KIPS
B	SIMPSON	MSTC28 ON (2) 2X	3.46 KIPS
C	SIMPSON	MSTC40 ON (2) 2X	4.75 KIPS
D	SIMPSON	MSTC66 ON (2) 2X	5.86 KIPS

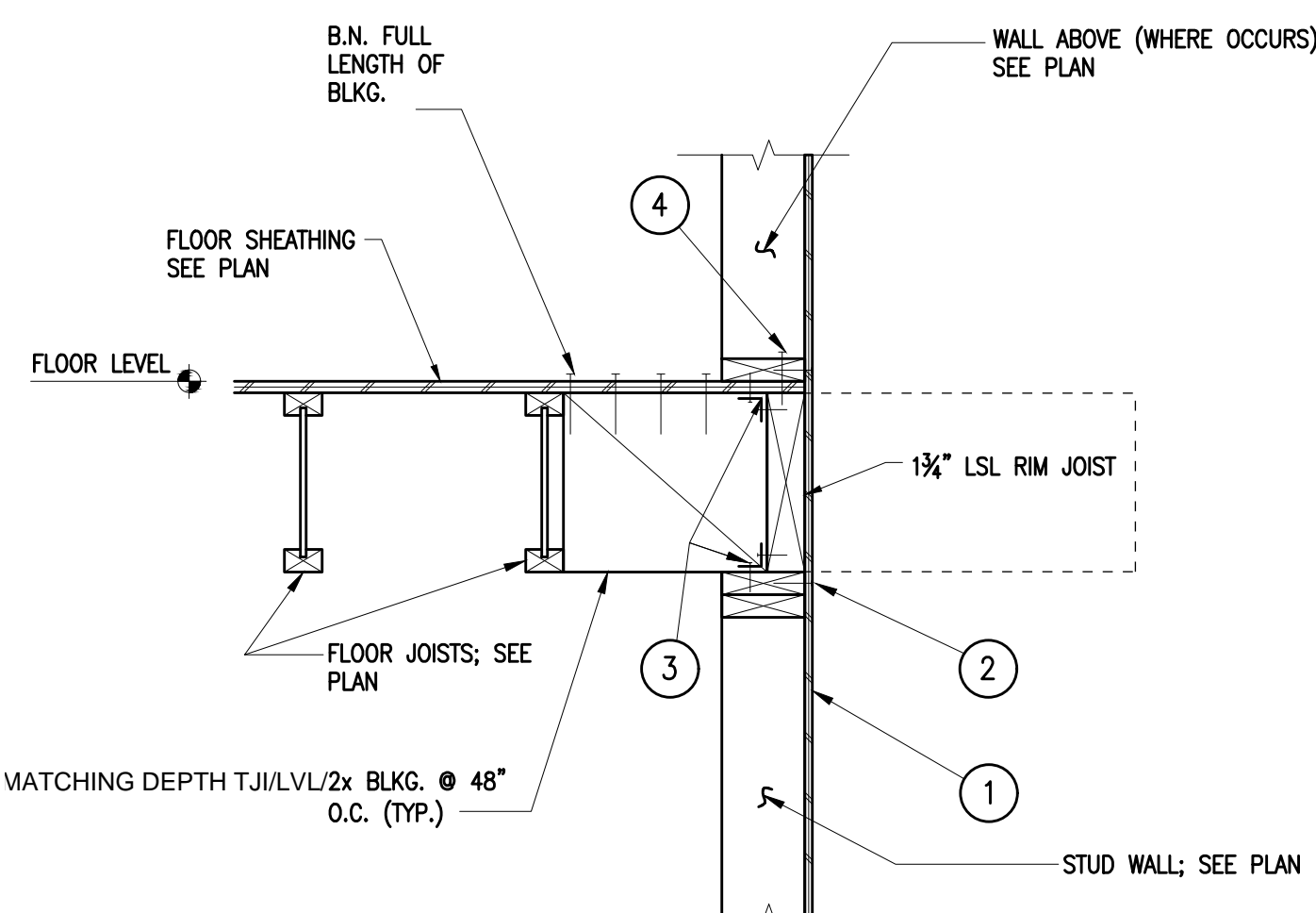
1 STRAP TIE SCHEDULE  
NTS



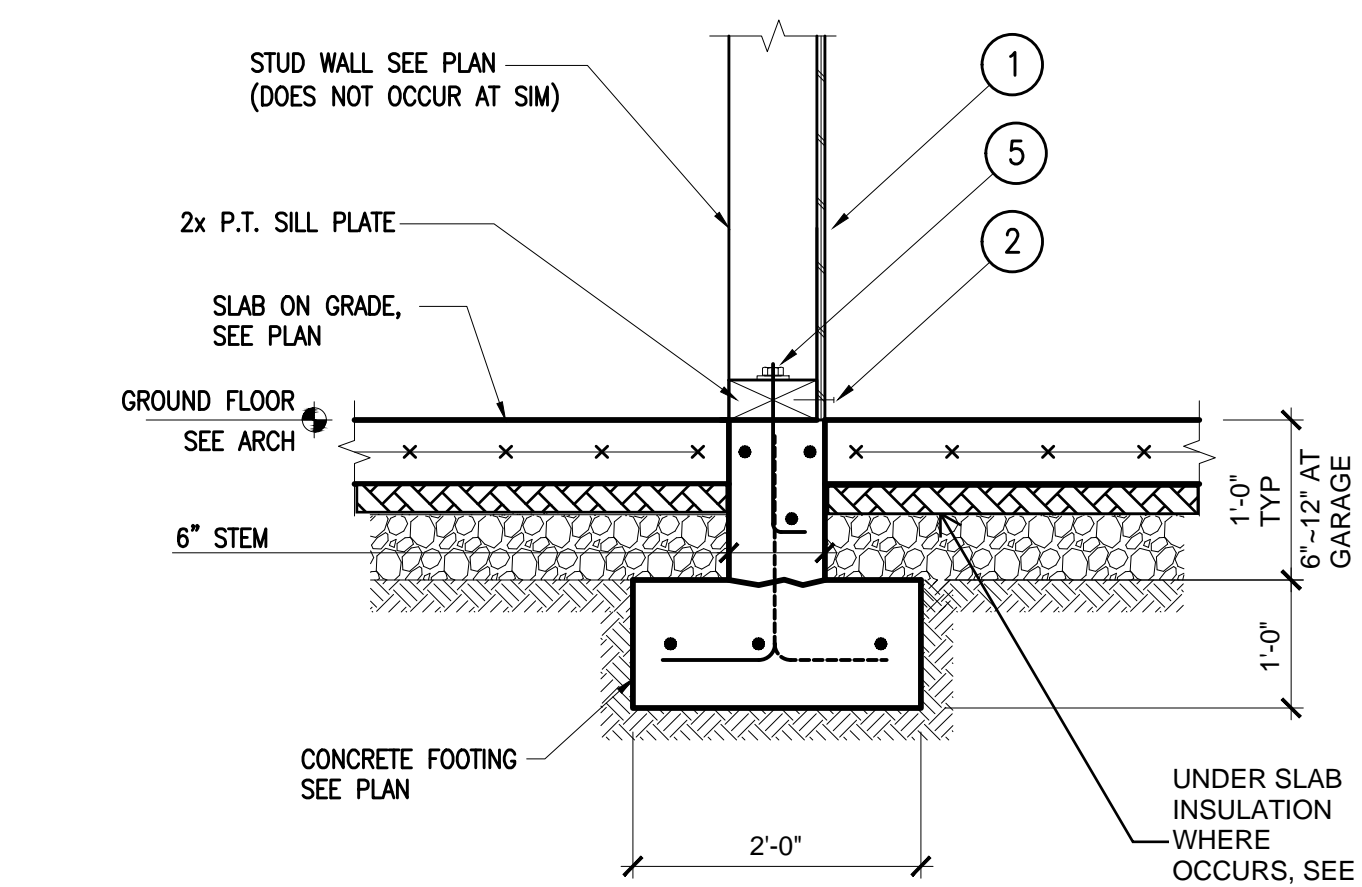
10 BASEMENT FOOTING AND FRAMING  
NTS



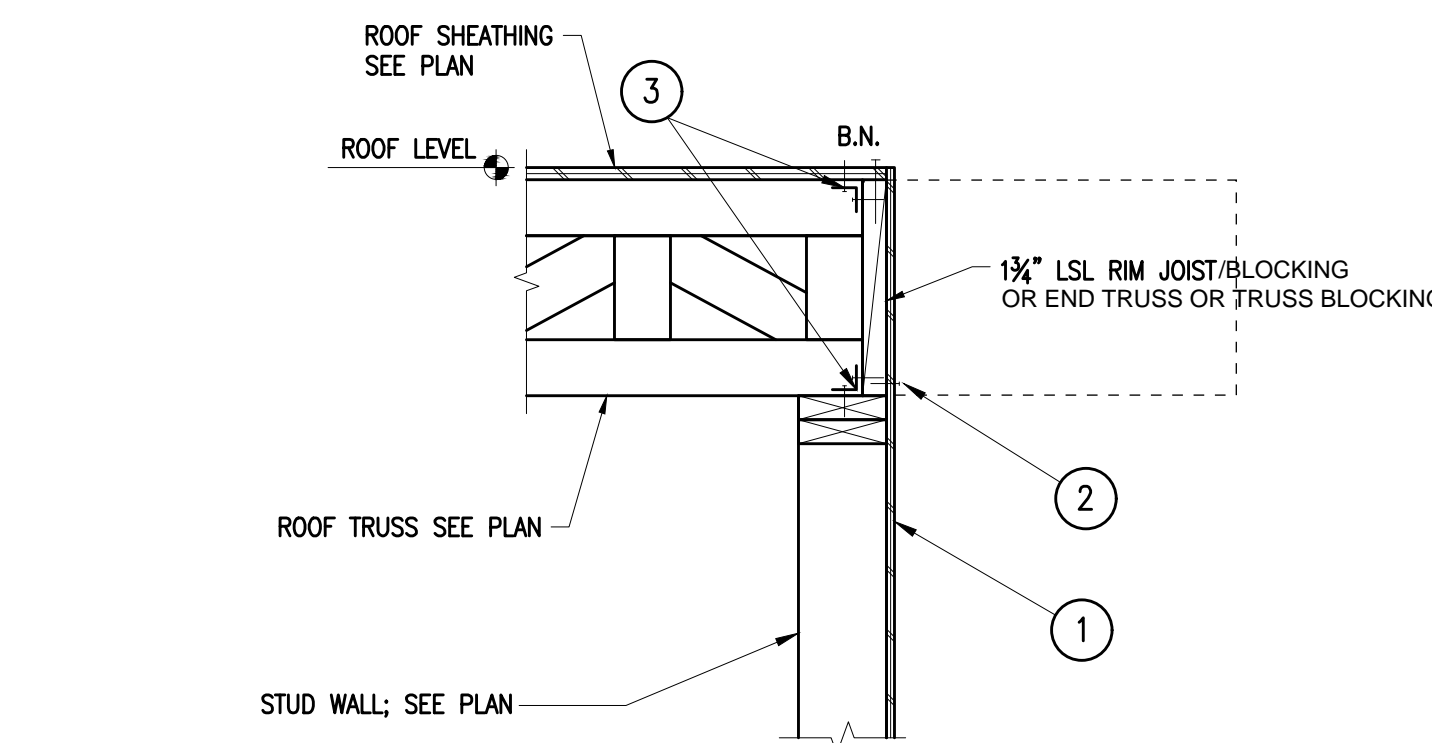
3 ROOF TRUSSES PARALLEL  
NTS



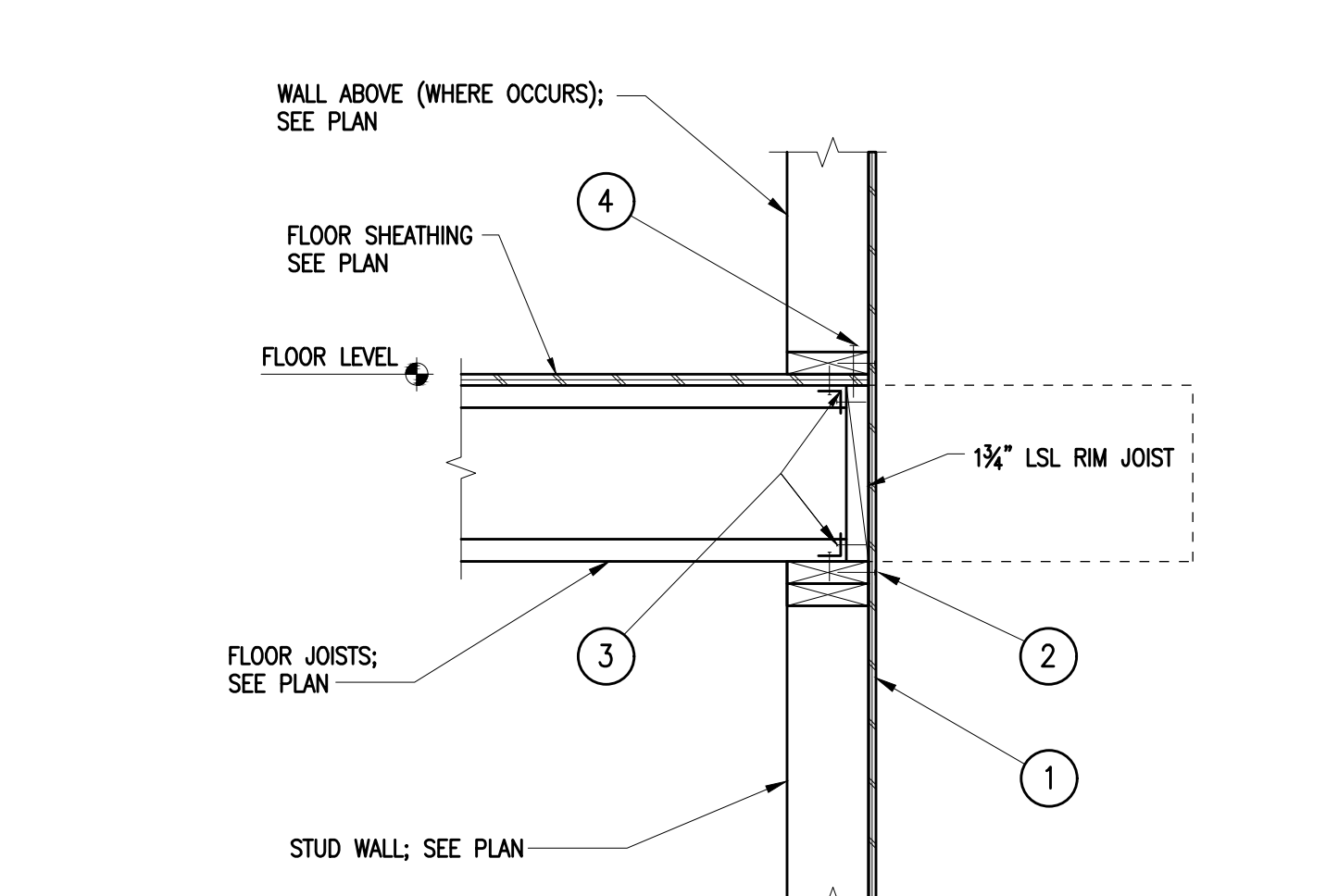
7 FLOOR JOISTS PARALLEL  
NTS



11 FOOTING AT INTERIOR WALL  
NTS



4 ROOF TRUSSES PERPENDICULAR  
NTS



8 FLOOR JOISTS PERPENDICULAR  
NTS

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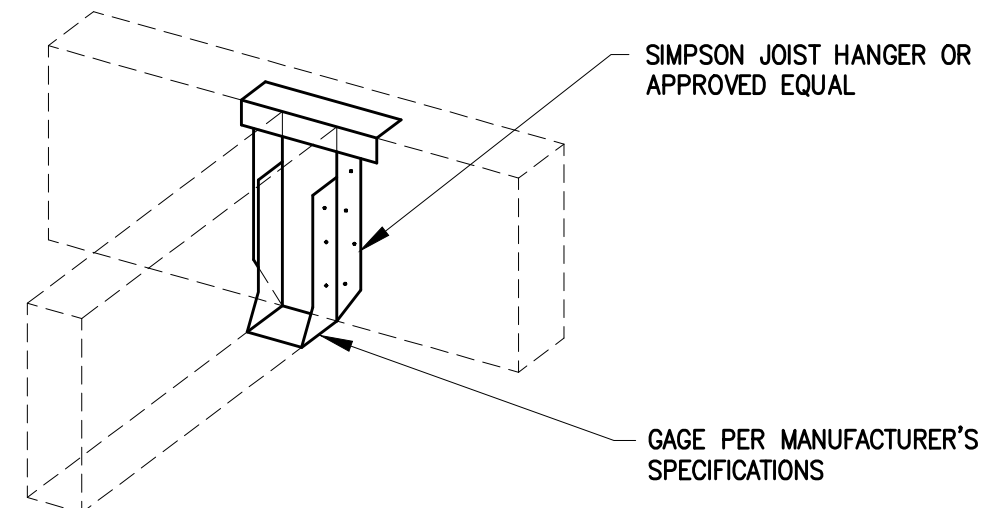
SHEET TITLE  
**TYPICAL FRAMING DETAIL**

JOB NUMBER

SHEET NUMBER  
**S5.2**

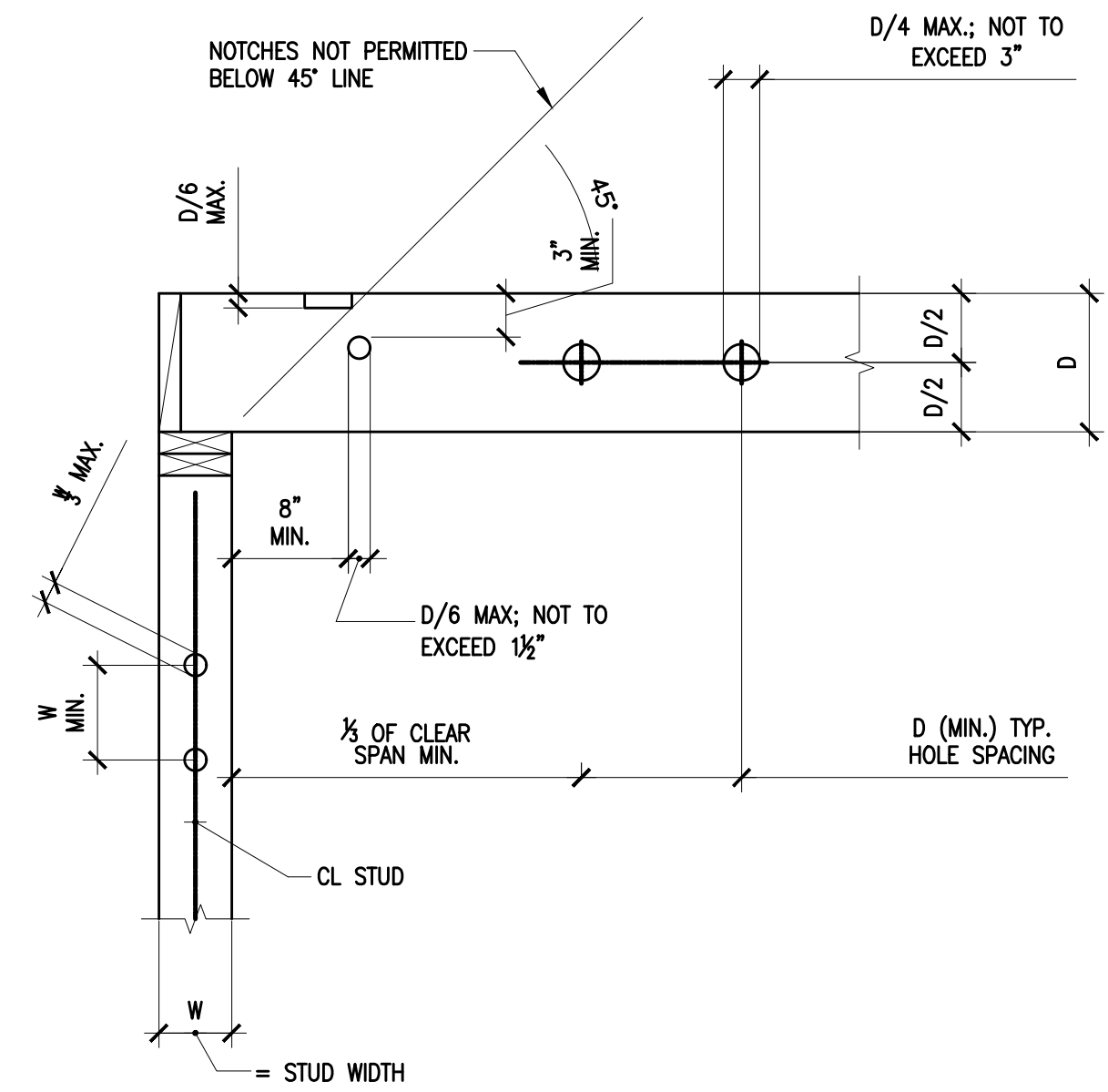
CITY STAMP

HANGER SCHEDULE	
JOIST/BEAM	TYP HANGER
2x12	JB212A
1 1/8" TJI210	ITS2.06/11.88
1 1/8" TJI360	ITS2.37/11.88
(2) 1 1/8" TJI210	MIT4.28/11.88
1 3/4"x1 1/2" LVL	BA1.81/11.88 (MIN)
3 3/4"x1 1/2" PSL	BA3.56/11.88 (MAX)
5 3/4"x1 1/2" PSL	HB5.50/11.88
5 3/4"x16 PSL	HGLTV5.516

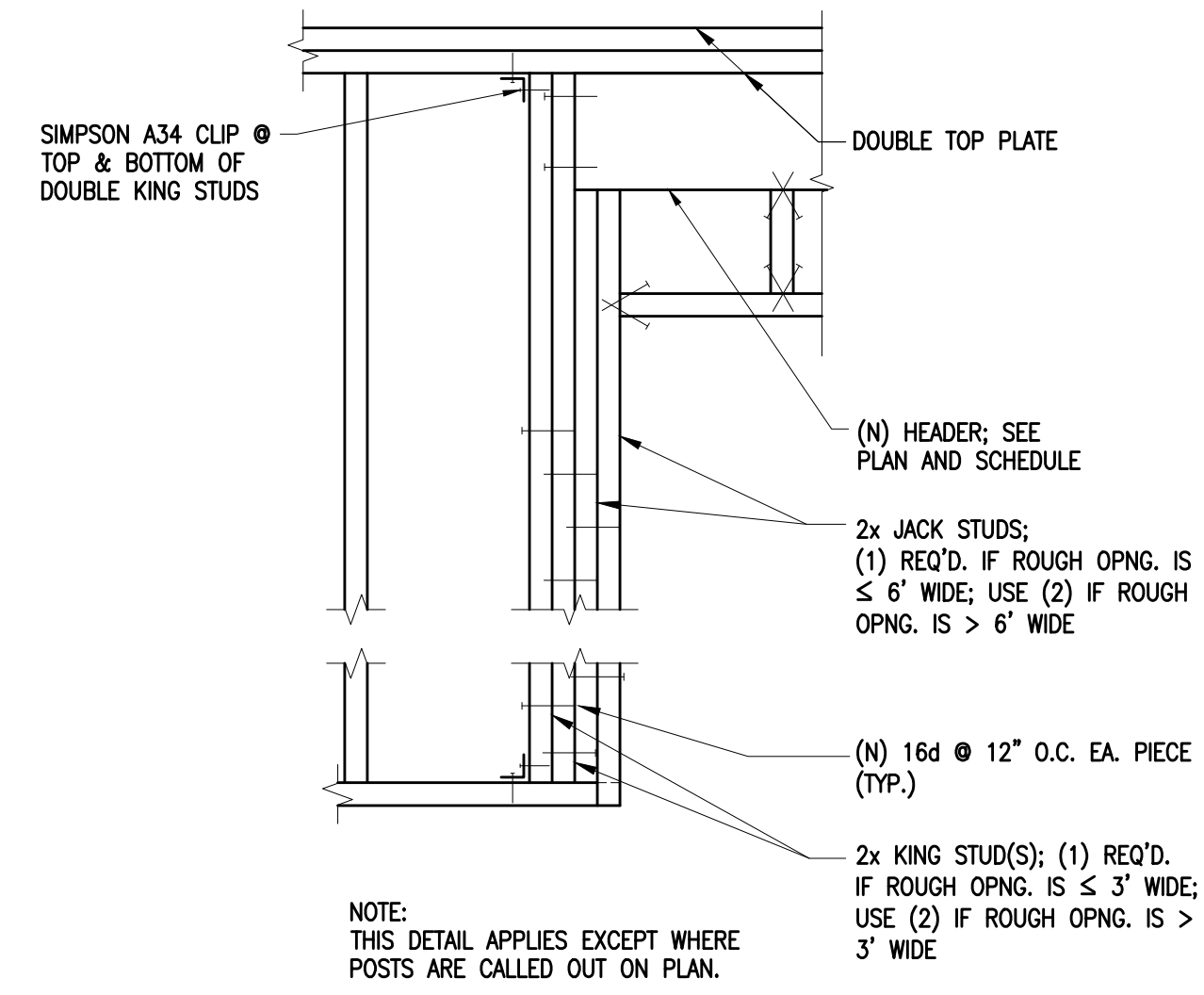


NOTE: THIS TYPE OF HANGER TO BE USED TYPICAL WHERE APPLICABLE UNLESS NOTED OR SHOWN OTHERWISE ON THE PLANS AND DETAILS. USE SIZE AND TYPE OF NAILS AS REQUIRED BY MANUFACTURER AND FULLY DRIVE IN ALL NAILS.

1 HANGER DETAIL AND SCHEDULE  
NTS



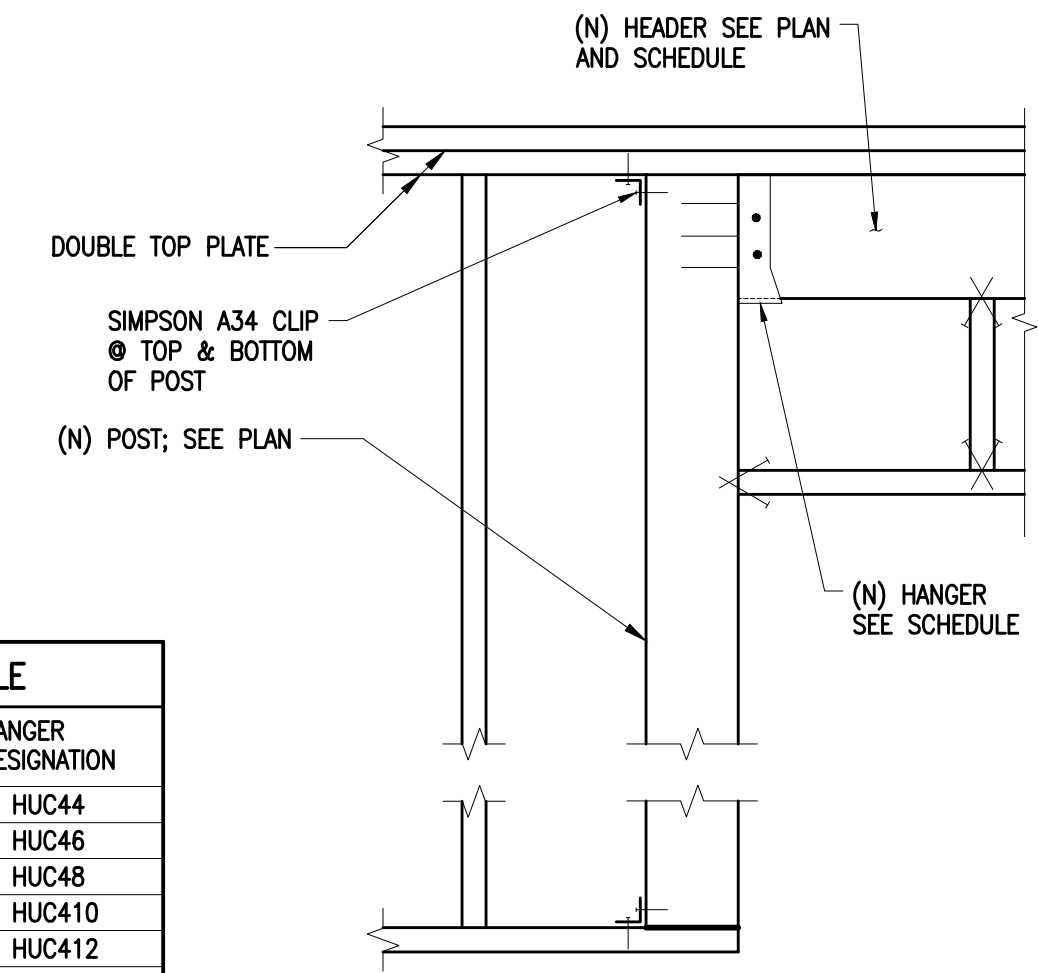
2 ALLOWABLE HOLES & NOTCHES IN JOISTS & STUDS  
1"=1'-0"



TRADITIONAL HEADER DETAILS

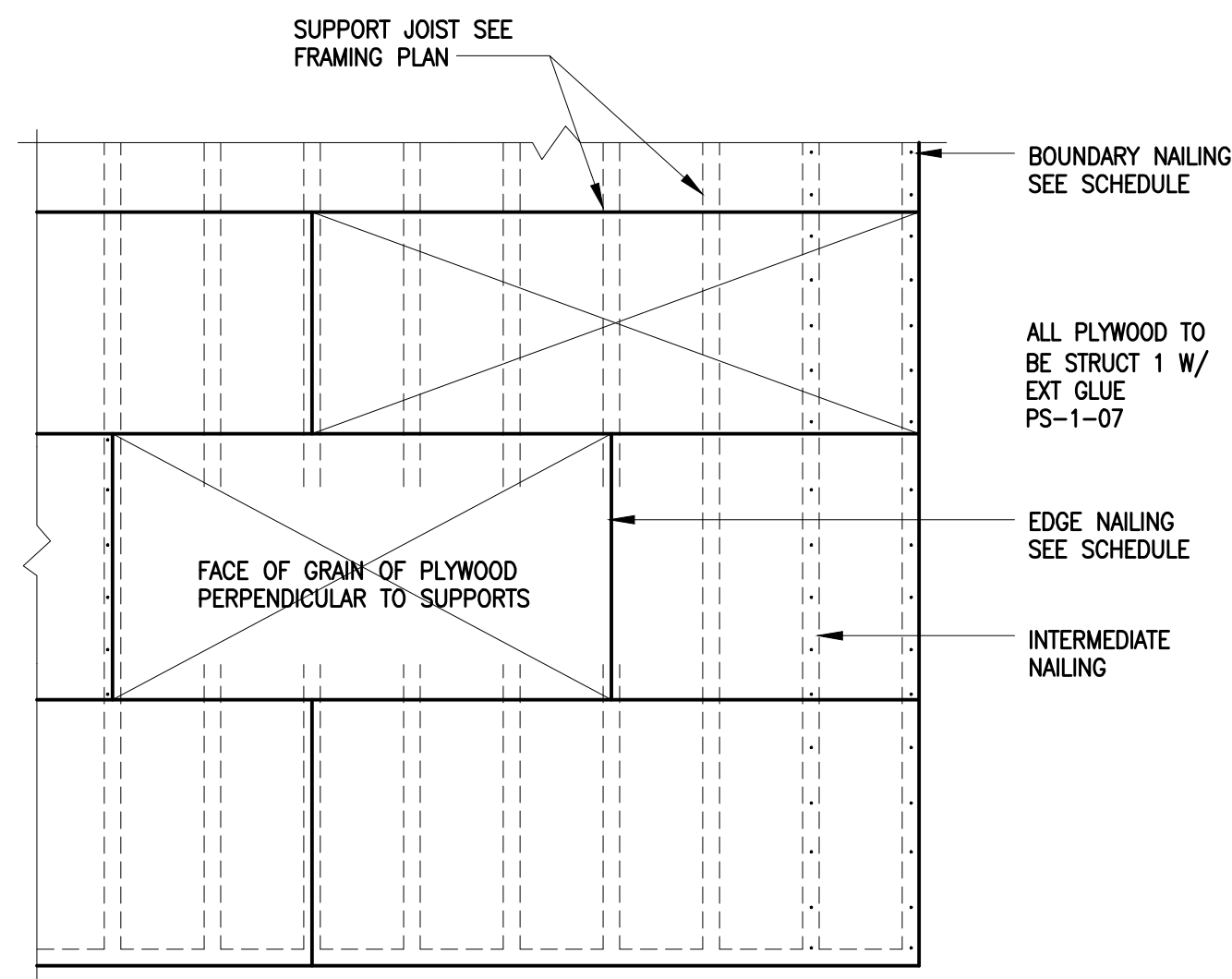
3 TYPICAL HEADER DETAILS  
1"=1'-0"

HEADER SCHEDULE		
PLAN DESIGNATION	HEADER SIZE	HANGER DESIGNATION
H44	4x4	HUC44
H46	4x6	HUC46
H48	4x8	HUC48
H410	4x10	HUC410
H412	4x12	HUC412
H414	3 3/4"x14 PSL	HUC414
H66	6x6	HUC66
H68	6x8	HUC68
H610	6x10	HUC610
H612	6x12	HUC612
H614	5 3/4"x14 PSL	HUC614



HEADER DETAILS AT POSTS

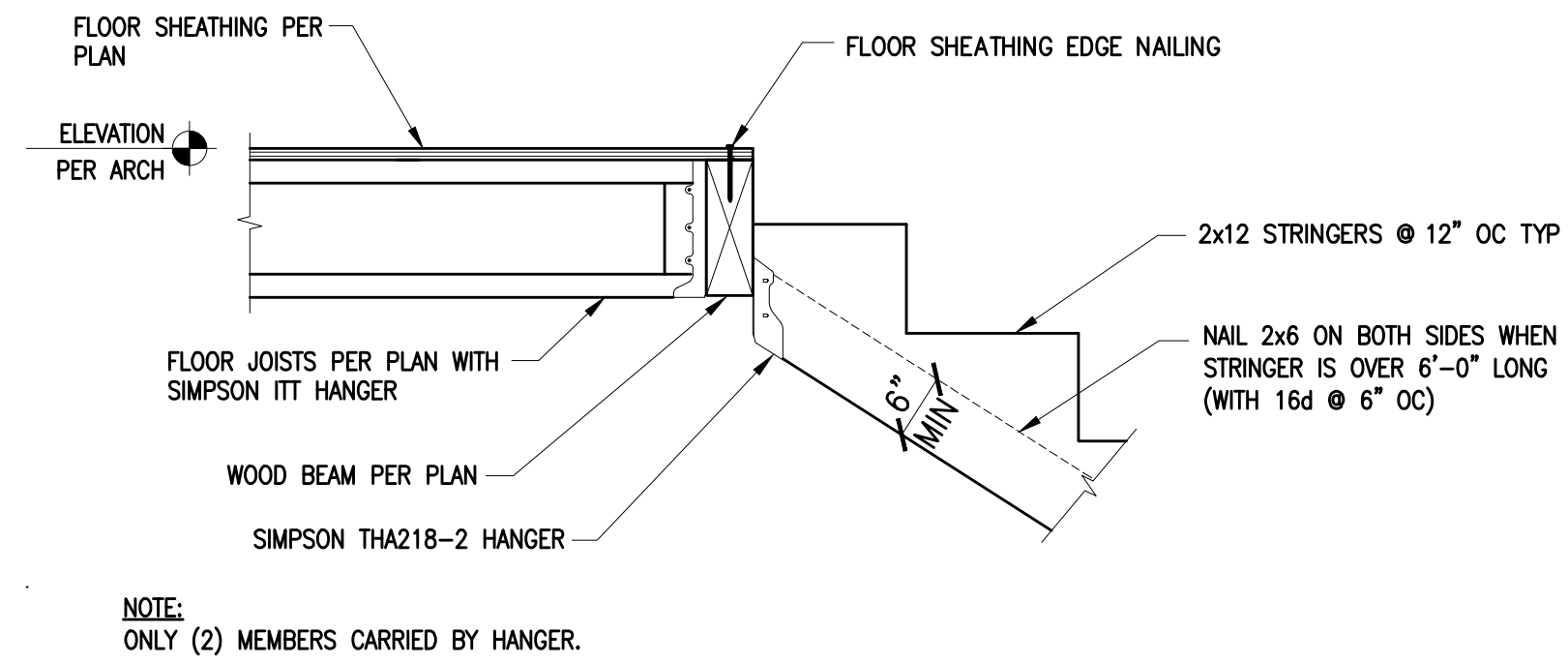
NOTE: THIS DETAIL APPLIES EXCEPT WHERE (N) POSTS ARE CALLED OUT ON PLAN AT HEADER LOCATIONS.



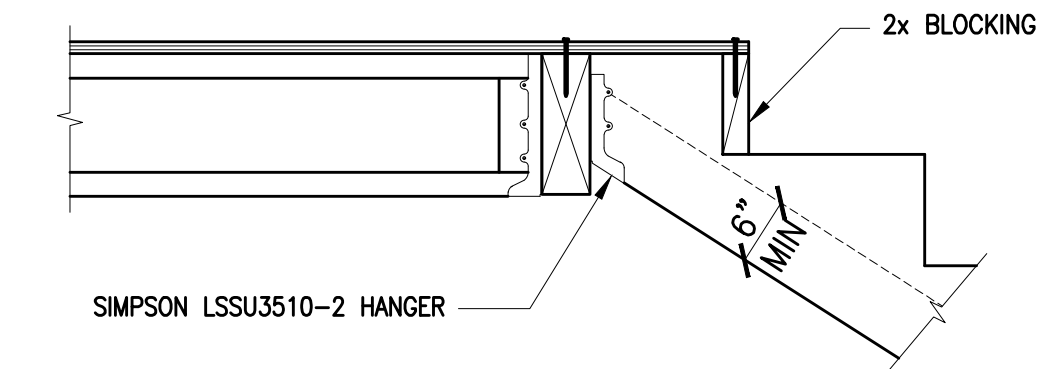
DIAPHRAGM SCHEDULE					
LOCATION	PLYWOOD	PANEL ID	BOUN. NAILS	EDGE NAILS	INTER. NAILS
FLAT ROOF DECK	3/2" STRUCT 1 T&G OSB	40/20	10d @ 4"	10d @ 6"	10d @ 12"
SLOPED ROOF	3/2" STRUCT 1 T&G OSB	40/20	10d @ 4"	10d @ 6"	10d @ 12"
FLOOR	3/2" STRUCT 1 T&G OSB	40/20	10d @ 4"	10d @ 6"	10d @ 12"

- NOTES:
- USE BOUNDARY NAILING AT ALL HIPPS, RIDGES, VALLEYS AND OPENINGS.
  - USE COMMON NAIL FOR ALL DIAPHRAGM NAILING.
  - PLYWOOD SHALL BE GLUED (SUB-FLOOR ADHESIVE) FOR FLOORS.
  - USE 3/2" PLYWOOD T & G AT FLAT ROOF.
  - MIN EDGE DISTANCE FOR NAILS SHALL BE 3/8".
  - MIN SHEATHING SHEET SIZE SHALL BE 2'-0"x4'-0".
  - NAILS SHALL NOT BE OVERDRIVEN. OPERATOR TO ADJUST AIR PRESSURE OF PNEUMATIC NAILER AS REQUIRED TO AVOID HEAD OF NAIL PENETRATING SKIN OF PLYWOOD SHEATHING.
  - NAILS SHALL BE COMMON WIRE TYPE.
  - SEE PLANS FOR AREAS OF BLOCKED DIAPHRAGMS.
  - USE BOUNDARY NAILING AT ALL CONNECTIONS TO SHEAR WALLS.

9 ROOF & FLOOR DIAPHRAGM  
NTS

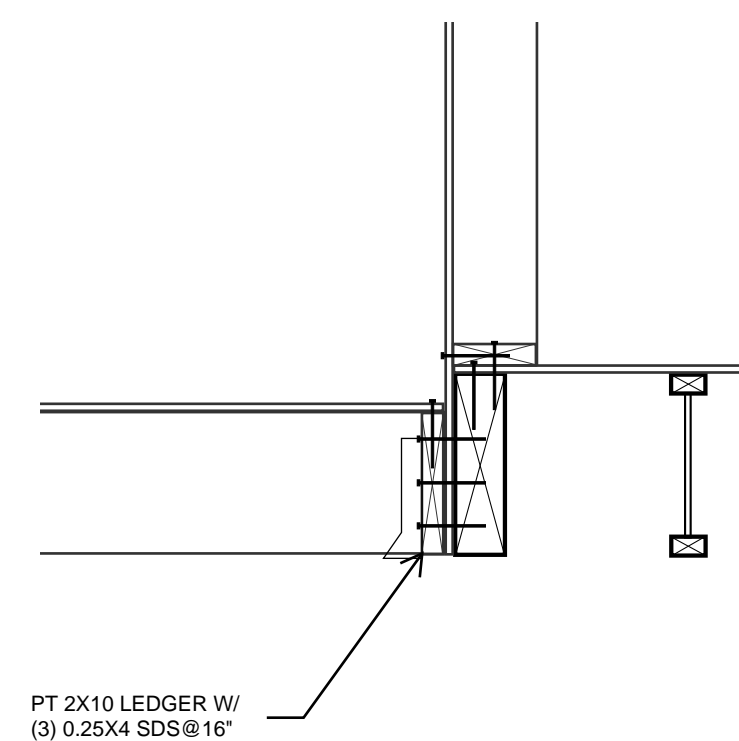


ALTERNATE 1



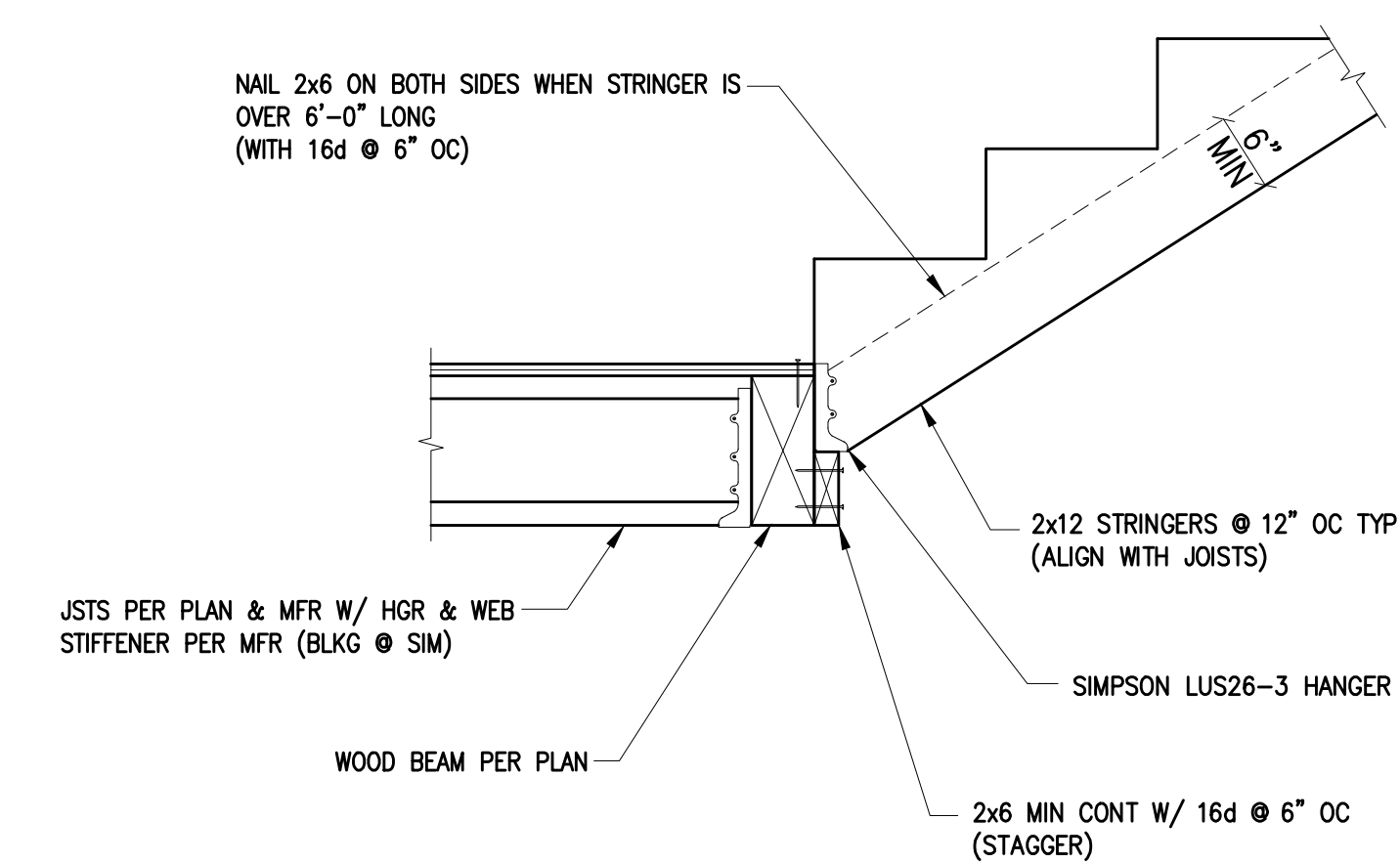
ALTERNATE 2

7 TYPICAL STAIR STRINGER CONN.  
SCALE: 1"=1'-0"



NOTE: SEE GN & TYPICAL FRAMING DETAILS FOR ALL OTHER FRAMING INFO

11 DECK FRAMING AT FLOOR & EXTERIOR WALL



12 TYPICAL STRINGER CONNECTION  
SCALE: 1"=1'-0"

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00	01/08/21	PERMIT SET

SHEET TITLE  
**TYPICAL FRAMING DETAIL**

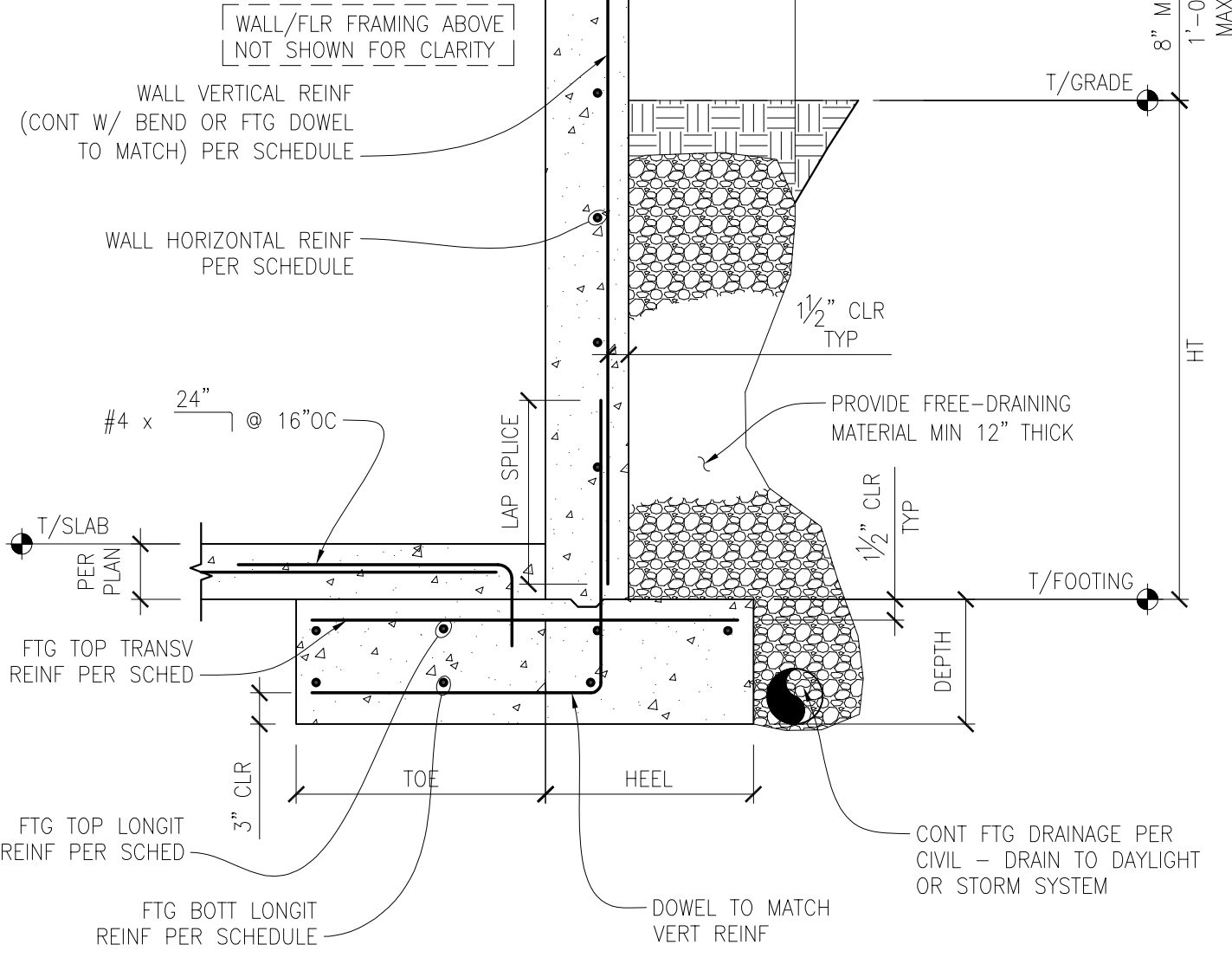
JOB NUMBER

SHEET NUMBER

**S5.3**

CITY STAMP

SPLICE LENGTH	
BAR	LENGTH
#4	28"
#5	36"

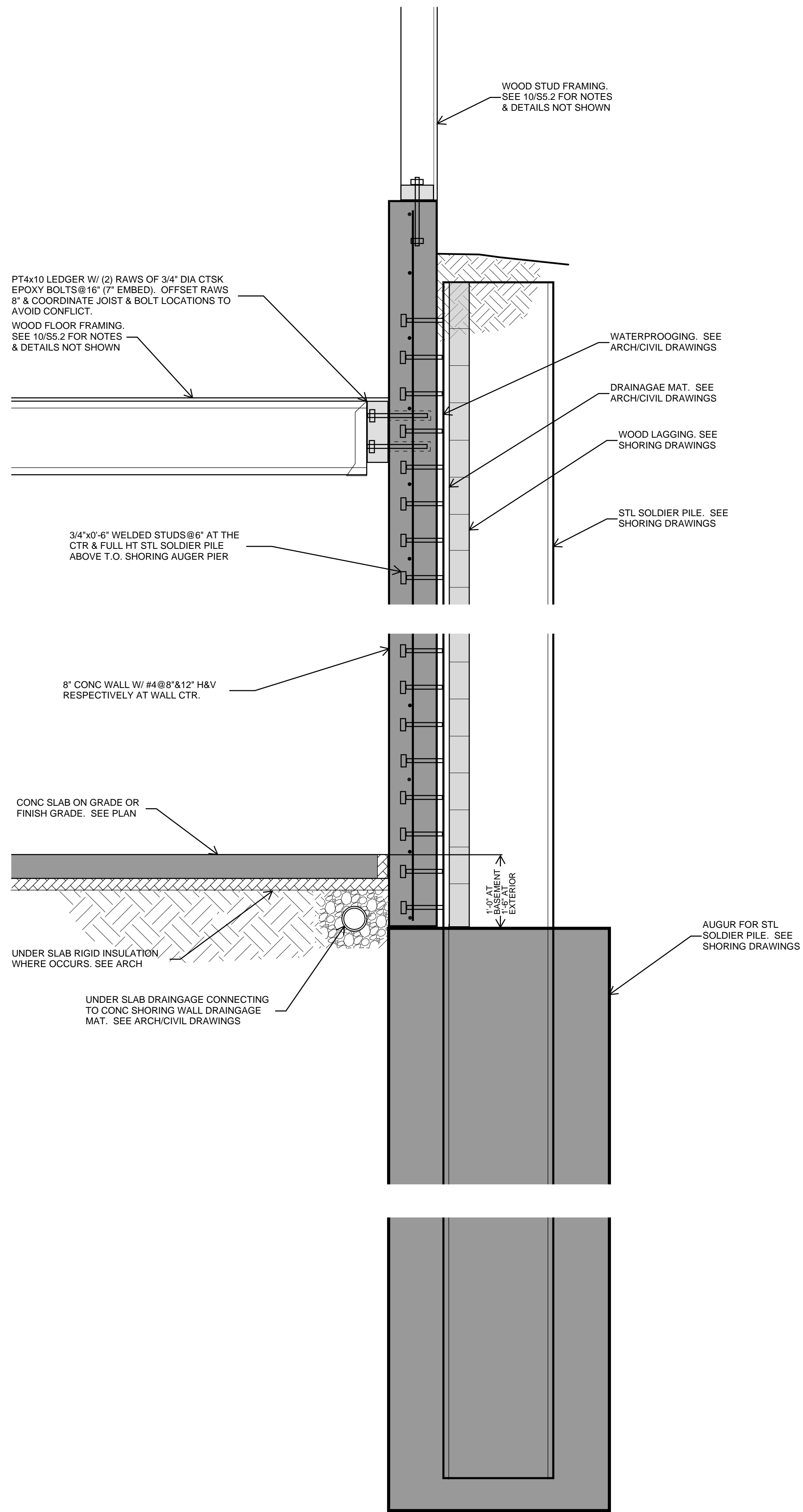


RETAINING WALL/FOOTING SCHEDULE									
WALL					FOOTING				
HT (MAX)	THK	VERTICAL	HORIZONTAL	TOE	HEEL	DEPTH	TOP/TRANSV	TOP/LONGIT	BOTTOM/LONGIT
4'-0"	8"	#4 @ 12" OC	#4 @ 12" OC	1'-6"	1'-0"	10"	#4 @ 16" OC	(3) #4	(2) #4
6'-0"	8"	#4 @ 12" OC	#4 @ 12" OC	2'-0"	1'-6"	10"	#4 @ 10" OC	(3) #4	(2) #4
8'-0"	8"	#5 @ 12" OC	#4 @ 12" OC	2'-6"	2'-0"	10"	#5 @ 16" OC	(3) #4	(3) #4
10'-0"	8"	#5 @ 7" OC	#4 @ 12" OC	3'-6"	2'-9"	14"	#5 @ 12" OC	(3) #4	(3) #4

RETAINING WALL AND SCHEDULE

SCALE: N.T.S.

1



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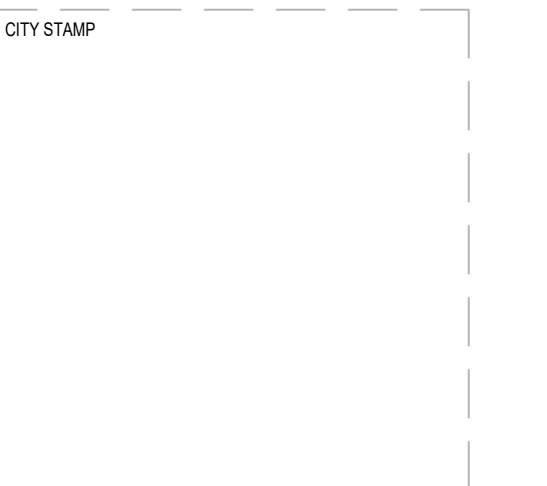
NUMBER	DATE	DESCRIPTION OF REVISIONS
00	01/08/21	PERMIT SET

SHEET TITLE  
**FOUNDATION DETAIL & SCHEDULE**

JOB NUMBER

SHEET NUMBER

**S5.4**



HOLDOWN SCHEDULE					
TYPE	SIMPSON HARDWARE	WALL STUD SIZE; SEE PLAN	STUD SIZE AT HOLDOWN	ANCHOR ROD	
				DIA.	EMBEDMENT (SEE 2/S5.5)
2	HDU2	4" STUDS 6" STUDS	4x4* 4x6*	5/8"	24"
4	HDU4	4" STUDS 6" STUDS	4x4* 4x6*	5/8"	24"
5	HDU5	4" STUDS 6" STUDS	4x4 4x6	5/8"	24"
8	HDU8	4" STUDS 6" STUDS	4x4 4x6	7/8"	24"
11	HDU11	4" STUDS 6" STUDS	4x4 4x6	1"	24"
14	HDU14	4" STUDS 6" STUDS	4x4 4x6	1"	24"

- NOTES:
- SEE PLAN FOR HODOWN TYPES AND LOCATIONS.
  - SEE PLAN FOR TYPICAL STUD SIZES IN SHEARWALLS.
  - REFER TO DETAIL 2/S5.5 FOR TYPICAL HOLDOWN INSTALLATION DETAILS.
  - ALT. USE (2) 2x STUDS.

### 1 HOLDOWN SCHEDULE

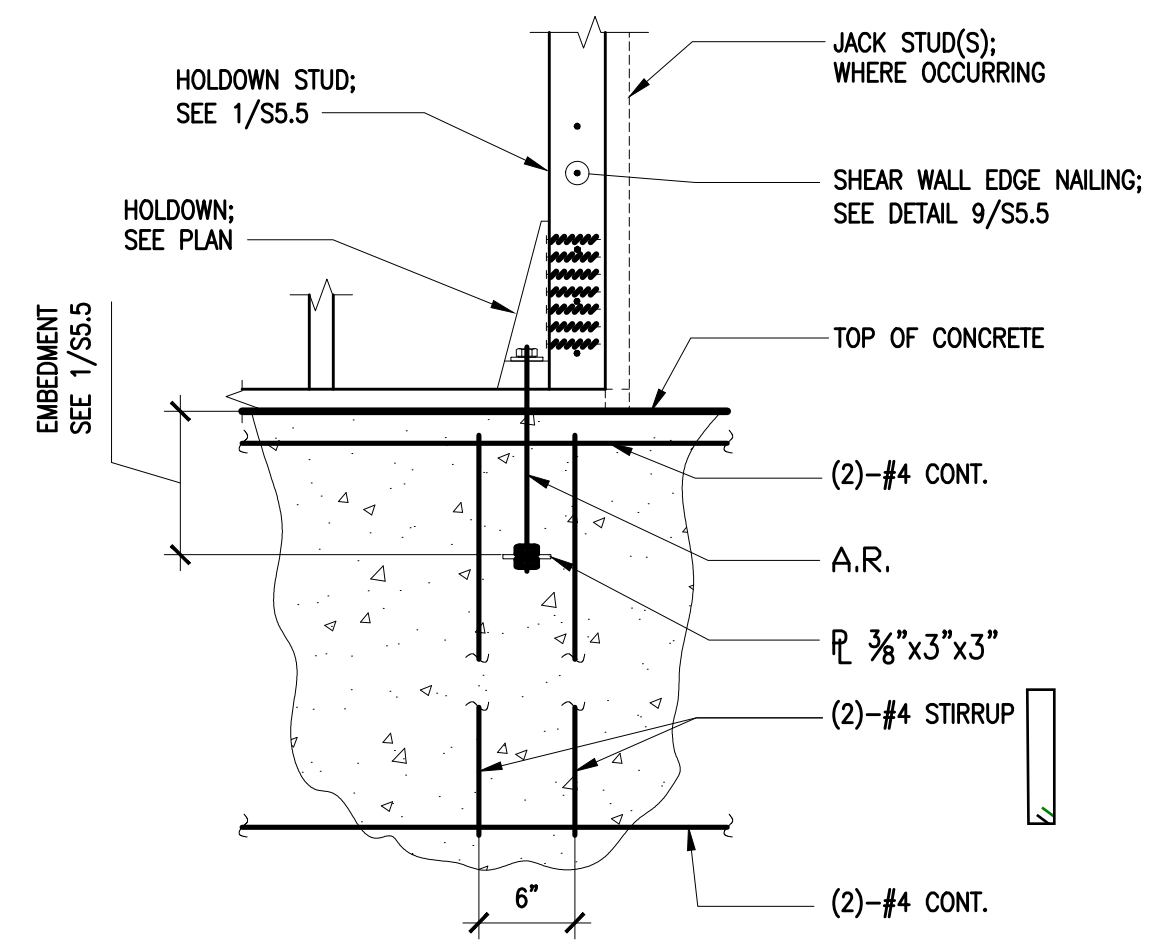
NTS PROVIDE FULL WIDTH AND DEPTH COMPRESSION BLKG WITH GRAIN ORIENTED VERTICALLY AT ALL FLOOR INTERSTITIAL SPACE AT ALL COLUMN (PER GN) AND HOLOWN LOCATIONS

SHEAR WALL SCHEDULE						
TYPE	STUD SIZE AND SPACING*	PLYWOOD SHEATHING <sup>1</sup>	EDGE NAILS FIELD NAILS <sup>2</sup>	FRAMING CLIPS <sup>3</sup>	SOLE PLATE NAILING <sup>4</sup>	SILL PLATE BOLTS <sup>5</sup>
2	2x STUDS @ 16" O.C. PER PLAN	1 1/2" PLYWOOD	10d @ 2" O.C. 10d @ 12" O.C.	(2)-A35 @ 12" O.C.	16d @ 2 1/2" O.C.	5/8" Ø BOLTS @ 16" O.C.
3	2x STUDS @ 16" O.C. PER PLAN	1 1/2" PLYWOOD	10d @ 3" O.C. 10d @ 12" O.C.	A35 @ 9" O.C.	16d @ 3" O.C.	5/8" Ø BOLTS @ 24" O.C.
4	2x STUDS @ 16" O.C. PER PLAN	1 1/2" PLYWOOD	10d @ 4" O.C. 10d @ 12" O.C.	A35 @ 12" O.C.	16d @ 4" O.C.	5/8" Ø BOLTS @ 32" O.C.
6	2x STUDS @ 16" O.C. PER PLAN	1 1/2" PLYWOOD	10d @ 6" O.C. 10d @ 12" O.C.	A35 @ 18" O.C.	16d @ 6" O.C.	5/8" Ø BOLTS @ 48" O.C.

- NOTES:
- SEE PLANS FOR SHEAR WALL TYPE, LOCATIONS, AND HOLDOWNS.
  - REFER TO SHEET S5.2 FOR TYPICAL SHEAR WALL CONSTRUCTION DETAILS.
  - REFER TO DETAIL 9/S5.5 FOR TYPICAL SHEAR WALL ELEVATION.
  - REFER TO DETAIL 2/S5.5 FOR TYPICAL HOLDOWN INSTALLATION DETAILS.
  - PLYWOOD SHALL BE PLACED ON THE SIDE OF THE WALL WHERE THE SYMBOL ◇ OCCURS ON THE PLAN.
  - ALL INFORMATION IN THE ABOVE SCHEDULE RELATES TO THE ITEMS SHOWN IN THE WALL SECTIONS ON SHEET S5.2. ALL COMPONENTS FOR EACH SHEAR WALL TYPE OCCUR IN THE WALLS BETWEEN THE LEVEL REPRESENTED BY THE FRAMING PLAN, WHERE THE SHEAR WALL TYPES AND LOCATIONS ARE SHOWN, AND THE LEVEL ABOVE.
  - EXAMPLE: A SHEAR WALL SHOWN ON THE GROUND FLOOR PLAN WITH A MARK ◇ NEXT TO IT SHALL HAVE ALL REQUIRED COMPONENTS FOR TYPE ◇ SHEAR WALL INSTALLED IN THE WALL BETWEEN THE GROUND FLOOR AND THE FIRST FLOOR.
  - AT CONCRETE FOOTINGS, USE 5/8" DIAMETER SILL PLATE BOLTS WITH MINIMUM 7" EMBEDMENT INTO THE CONCRETE. REFER TO THE SCHEDULE ABOVE FOR BOLT SPACING. SEE GENERAL NOTES FOR INFORMATION ABOUT ANCHOR RODS AND EPOXY BOLTS.
  - BLOCK ALL UNSUPPORTED PLYWOOD EDGES WITH MINIMUM 2x LAID FLAT BEHIND EDGES OF PLYWOOD.
  - SEE GENERAL NOTES FOR PLYWOOD GRADES AND SPECIFICATIONS.
  - AT WALLS WITH 2x STUDS, DOUBLE THE STUDS AT PLYWOOD JOINTS PER DETAIL 9/S5.5.

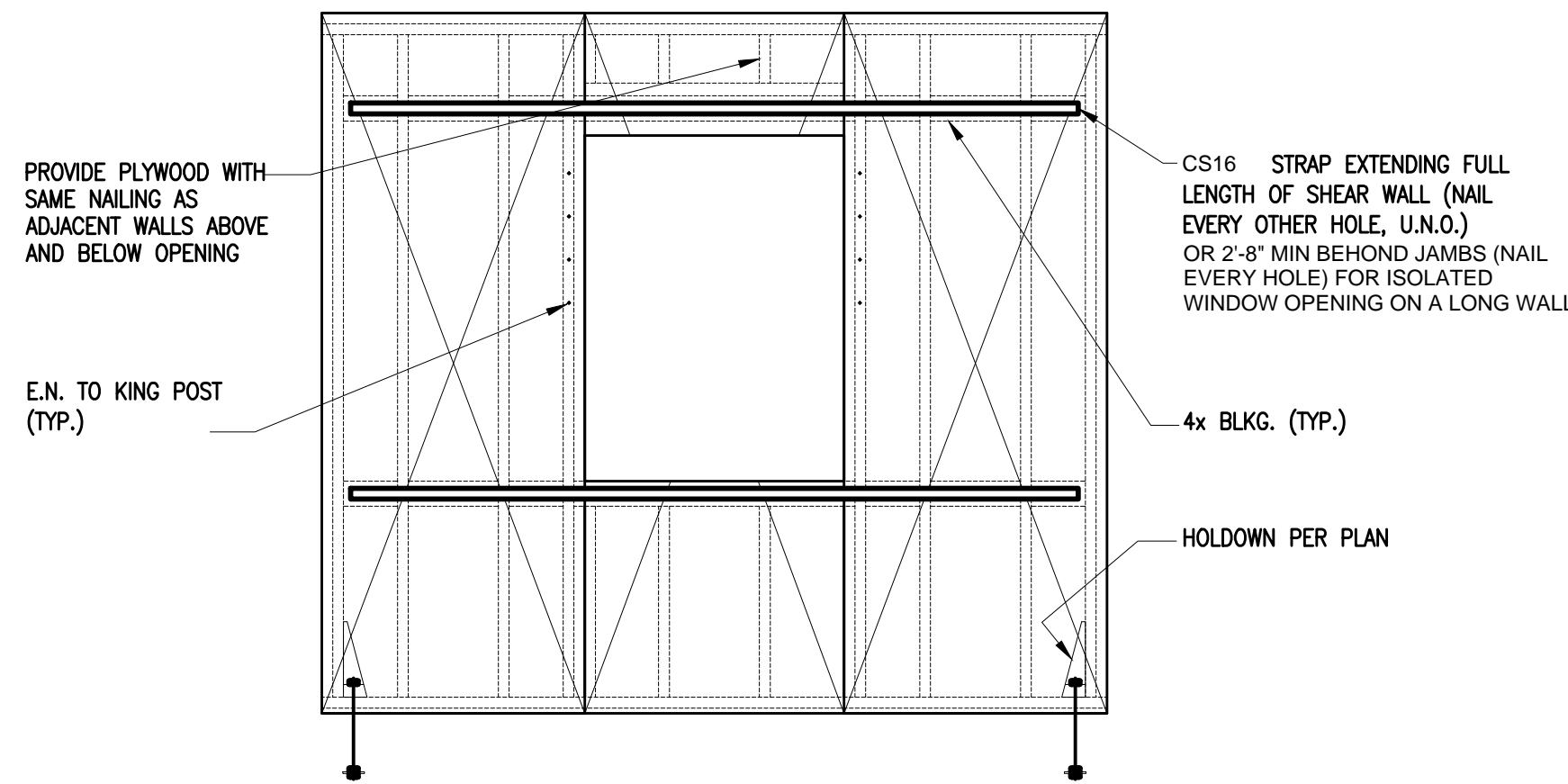
### 8 SHEARWALL SCHEDULE

NTS



### 2 TYPICAL HOLDOWN DETAIL

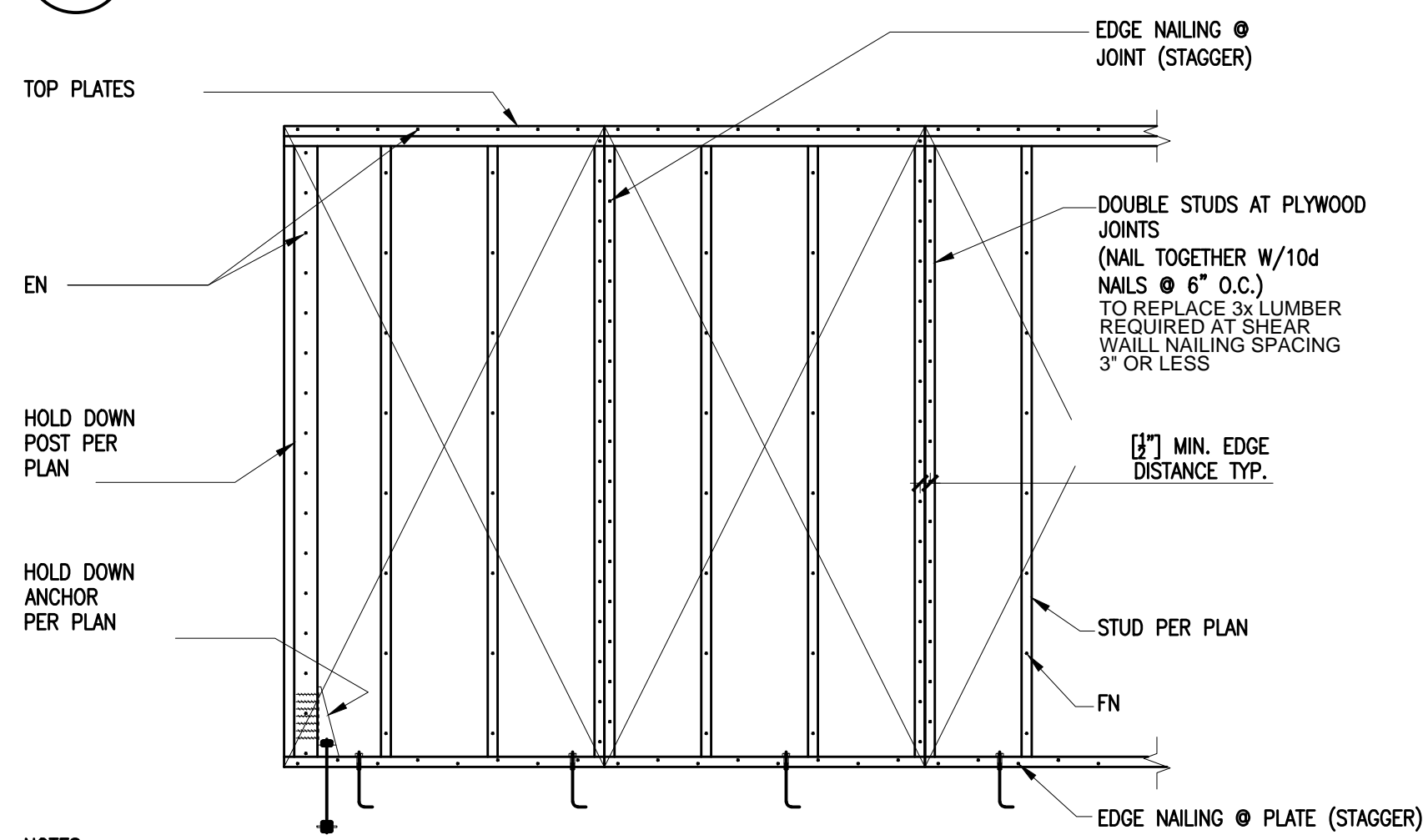
SCALE: 1"=1'-0"



NOTE: HOLDOWN LOCATIONS NOT SHOWN FOR CLARITY.

### 6 SHEARWALL ELEVATION

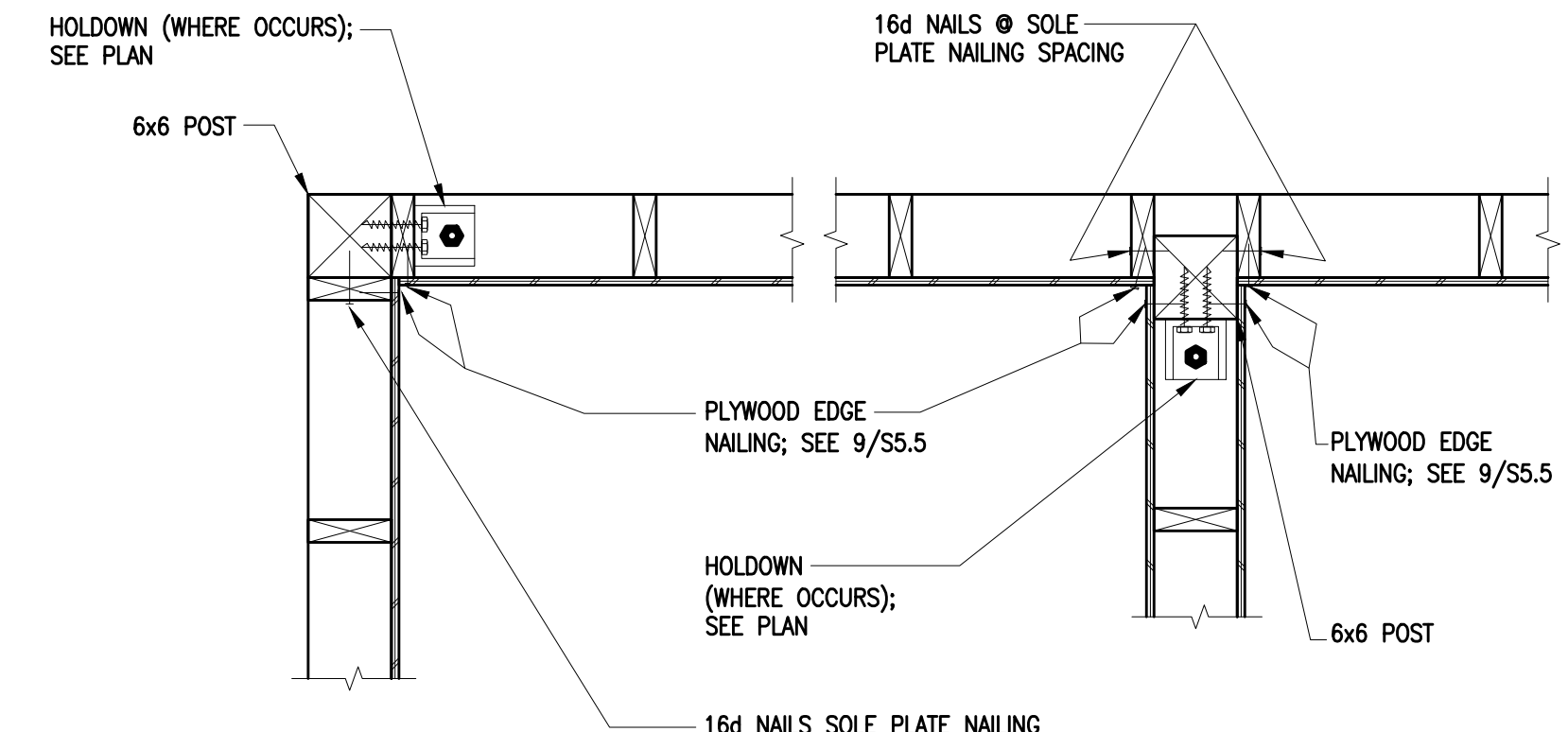
1/2"=1'-0"



- NOTES:
- FOR ITEMS NOT NOTED SEE PLAN & SHEAR WALL SCHED.
  - MINIMUM PANEL DIMENSION IS 1'-0".
  - USE FULL SIZE PANELS WHERE POSSIBLE.
  - FIELD NAILING (FN) @ 12" UON.
  - [2x] SOLID BLOCKING @ HORIZONTAL JOINTS.

### 9 TYPICAL SHEARWALL ELEVATION

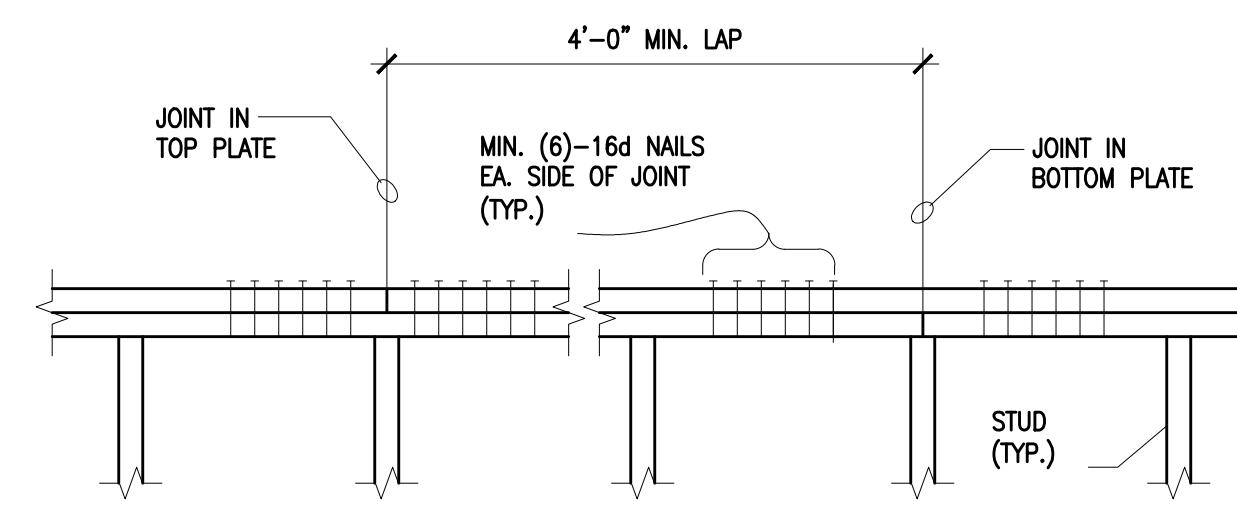
1/2"=1'-0"



### PLAN VIEW

### 4 SHEARWALL DETAILS AT WALL INTERSECTIONS

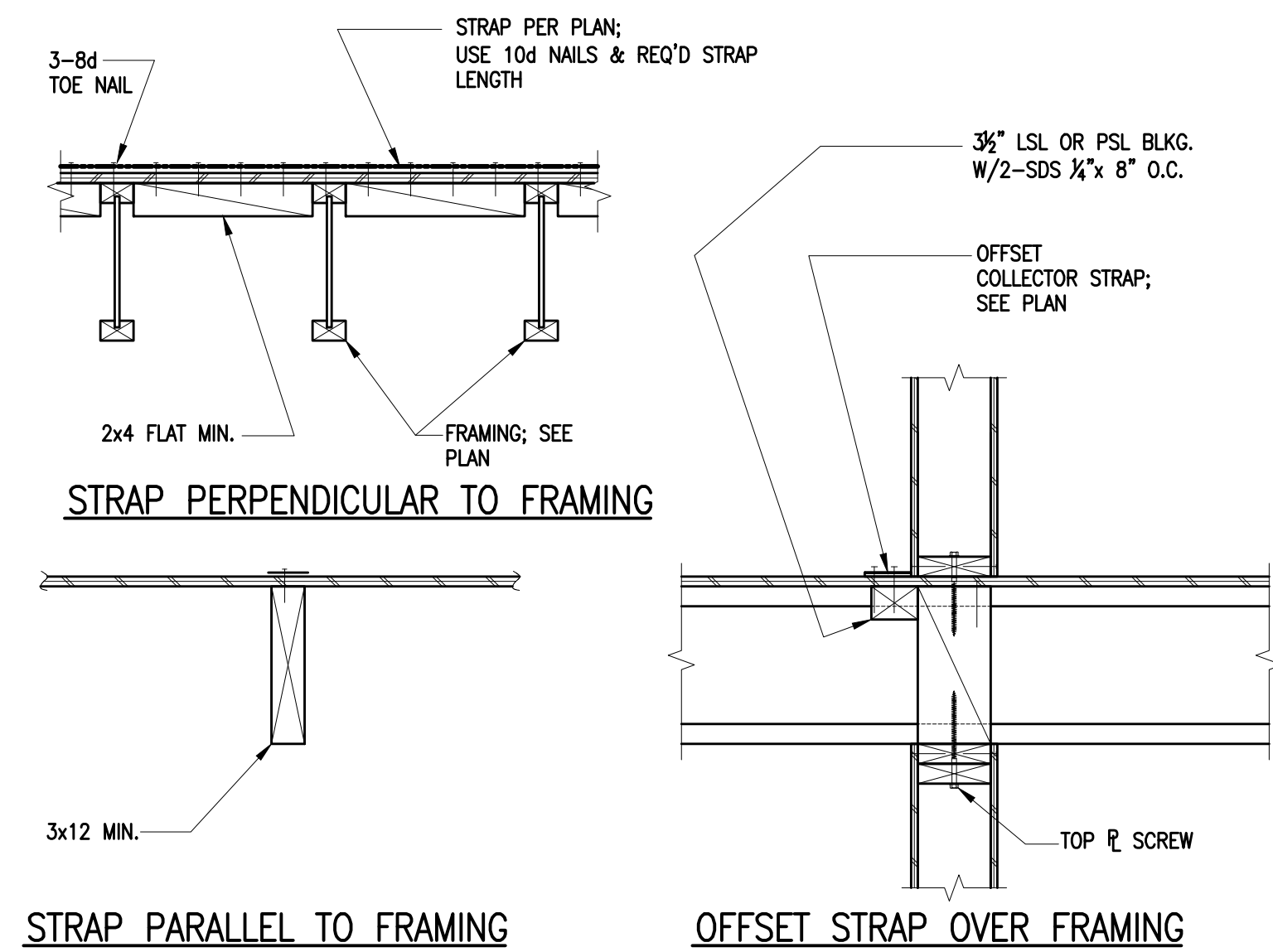
SCALE: 1"=1'-0"



NOTE: SEE PLAN AND DETAILS FOR SIZE OF STUDS AND DOUBLE TOP PLATE.

### 7 TYPICAL STUD WALL TOP PLATE SPLICE

1"=1'-0"



### 12 HORIZONTAL STRAP DETAIL

NTS

NUMBER	DATE	DESCRIPTION OF REVISIONS
00	01/08/21	PERMIT SET

SHEET TITLE  
**LATERAL DETAIL AND SCHEDULE**

JOB NUMBER

SHEET NUMBER

**S5.5**

CITY STAMP