

HU RESIDENCE

30XX 69TH AVE SE, MERCER ISLAND, 98040

PROPERTY INFO

PROPERTY ADDRESS	30XX 69TH AVE SE, MERCER ISLAND WA
89040	
JURISDICTION ISLAND	CITY OF MERCER
PARCEL NUMBER	5093301316
ZONING LOT AREA	R-8.4 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

OWNER HUI HOME LLC 2112 22nd Ave S Seattle, WA 98144 206.910.1989 wenhu338@gmail.com Applicant/Contact: Zhanpeng Ma 509.491.7299 jamesmark2001@gmail.com	ARCHITECT ATLAS ARCHITECTS 5280 Highland Drive Bellevue, WA 98006 Contact: Geng Tan, RA, LEED AP, NCARB 206.488.3688 gengtan@gmail.com	STRUCTURAL ENGINEER DHS Engineering 1601 5th Ave., Suite 1100 Seattle, WA 98101 Contact: Dihong Shao, S.E. 206.906.9669 dihong.shao@dhsengineers.com	CIVIL ENGINEER TANDEM ENGINEERING 8822 NE 178th St Bothell, WA 98001 Contact: Steve Wu 206.795.5674 tandemengineering@outlook.com	GEOTECHNICAL ENGINEER NELSON GEOTECHNICAL ASSOCIATES, INC 17311-135th Ave, NE Suite A-500 Woodinville, WA 98072 Khaled M. Shawish, PE Contact: Katelyn Brower 425.486.1669 katelynb@nelsongeotech.com	SURVEYOR TERRANE 10801 Main St, Suite 102 Bellevue, WA 98004 425.458.4488 support@terrane.net	ARBORIST Root Down Consultants, LLC C.N. Floreani, PLA 360.399.6041 cfloreani@gmail.com
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ABBREVIATIONS AND SYMBOLS

ABBREVIATIONS		SYMBOLS	
AB	ANCHOR BOLTS	@	AT
ABV	ABOVE	°	DEGREES
ARCH	ARCHITECT	∅	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		
CCNC	CONCRETE		
CONT	CONTINUOUS		
COVD	COVERED		
CRPT	CARPET		
CSMT	CASEMENT		
CL	CENTER LINE		
DBL	DOUBLE		
DN	DOWN		
EA	EACH		
EG	EXISTING GRADE		
ELEV. EL.	ELEVATION		
EXSTG. (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	UNO	UNLESS NOTED OTHERWISE
MFR	MANUFACTURER	UNCOVD	UNCOVERED
MSTR	MASTER	VERT	VERTICAL
MK	MARK	WRB	WATER RESISTIVE BARRIER
o/c, o.c.	ON CENTER	WW	WINDOW WELL
OVHG	OVERHANG	WIC	WALK-IN CLOSET
PERM.	PERMEABLE		
PERP.	PERPENDICULAR		
P.L.	PROPERTY LINE		
PL	PLATE		
PW	PLYWOOD		
QTY	QUANTITY		
REINF	REINFORCING		
REQMT	REQUIREMENT		
RBC	ROOF BOUNDARY CLIP		
RO	ROUGH OPENING		
RW	RETAINING WALL		
R.Y.S.B.	REAR WALL SETBACK		
SG.	SAFETY GLAZING		
SHTG	SHIELDING		
SCHD	SCHEDULE		
STRUCT	STRUCTURAL (ENGINEER)		
S.Y.S.B.	SIDE YARD SETBACK		
T	TOP		
T.B.	THERMAL BREAK		
T.B.D.	TO BE DETERMINED		
TOP	TOP OF FOOTING		
TW	TOP OF WALL		
TRANS	TRANSVERSE		



REVISIONS

#	DATE	DESCRIPTION OF REVISION
-	---	---

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

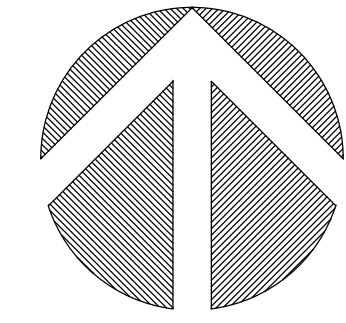
1. THE TOPOGRAPHIC SURVEY SHOWN HEREON WAS PERFORMED IN NOVEMBER OF 2019. THE FIELD DATA WAS COLLECTED AND RECORDED ON MAGNETIC MEDIA THROUGH AN ELECTRONIC THEODOLITE. THE DATA FILE IS ARCHIVED ON DISC OR CD. WRITTEN FIELD NOTES MAY NOT EXIST. CONTOURS ARE SHOWN FOR CONVENIENCE ONLY. DESIGN SHOULD RELY 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.



(IN FEET)
1 INCH = 10 FT.

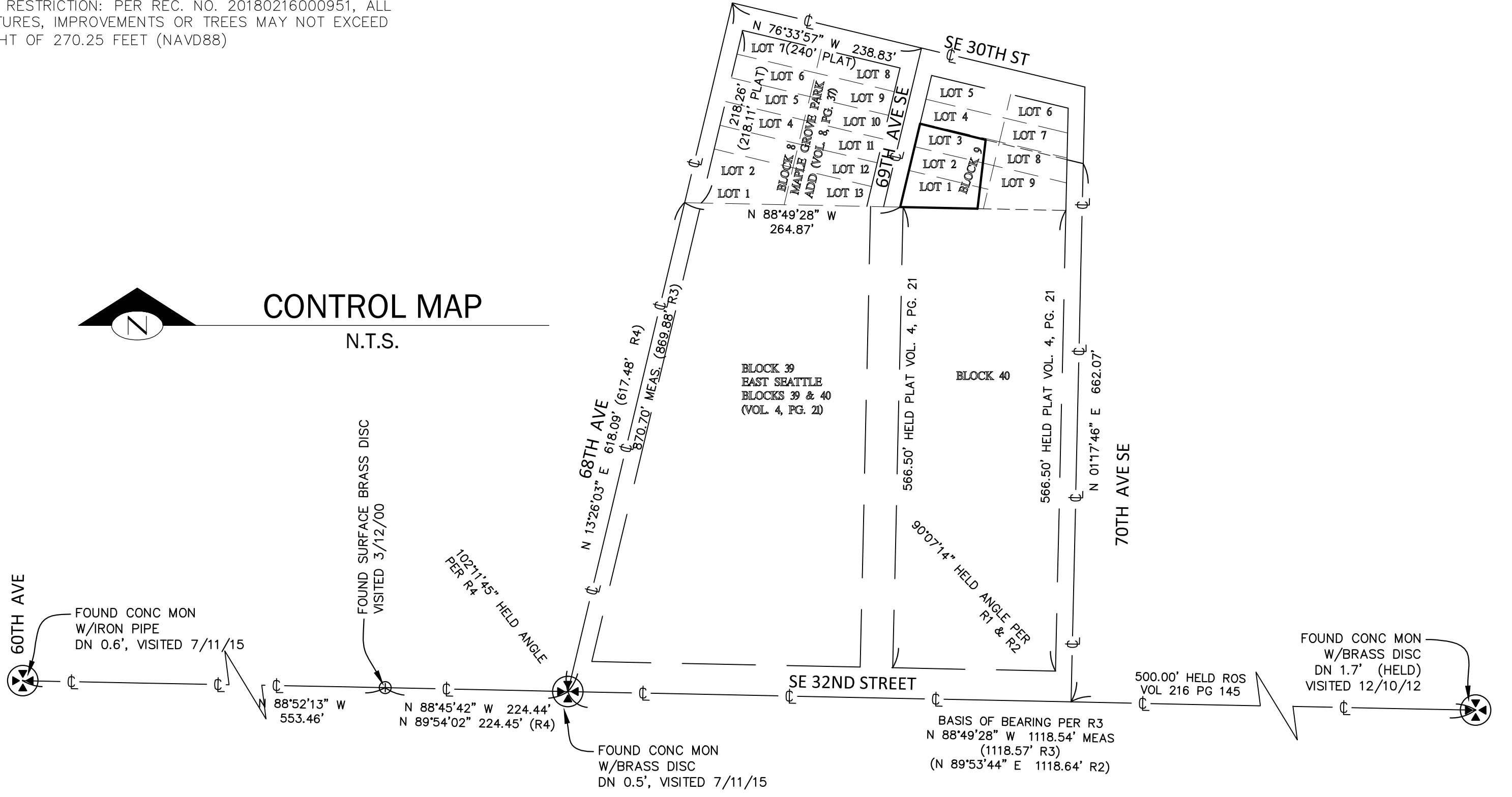
STEEP SLOPE/BUFFER DISCLAIMER:
THE LOCATION AND EXTENT OF STEEP SLOPES SHOWN ON THIS DRAWING ARE FOR INFORMATIONAL PURPOSES ONLY AND CANNOT BE RELIED ON FOR DESIGN AND/OR CONSTRUCTION. THE PITCH, LOCATION, AND EXTENT ARE BASED SOLELY ON OUR GENERAL OBSERVATIONS ON SITE AND OUR CURSORY REVIEW OF READILY 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.



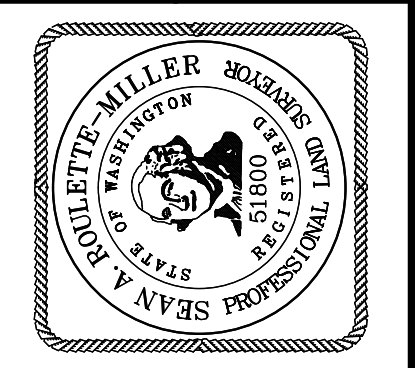
HEIGHT RESTRICTION: PER REC. NO. 20180216000951, ALL STRUCTURES, IMPROVEMENTS OR TREES MAY NOT EXCEED A HEIGHT OF 270.25 FEET (NAVD88)

CONTROL MAP

N.T.S.



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



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

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

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 REQUIREMENTS. 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.

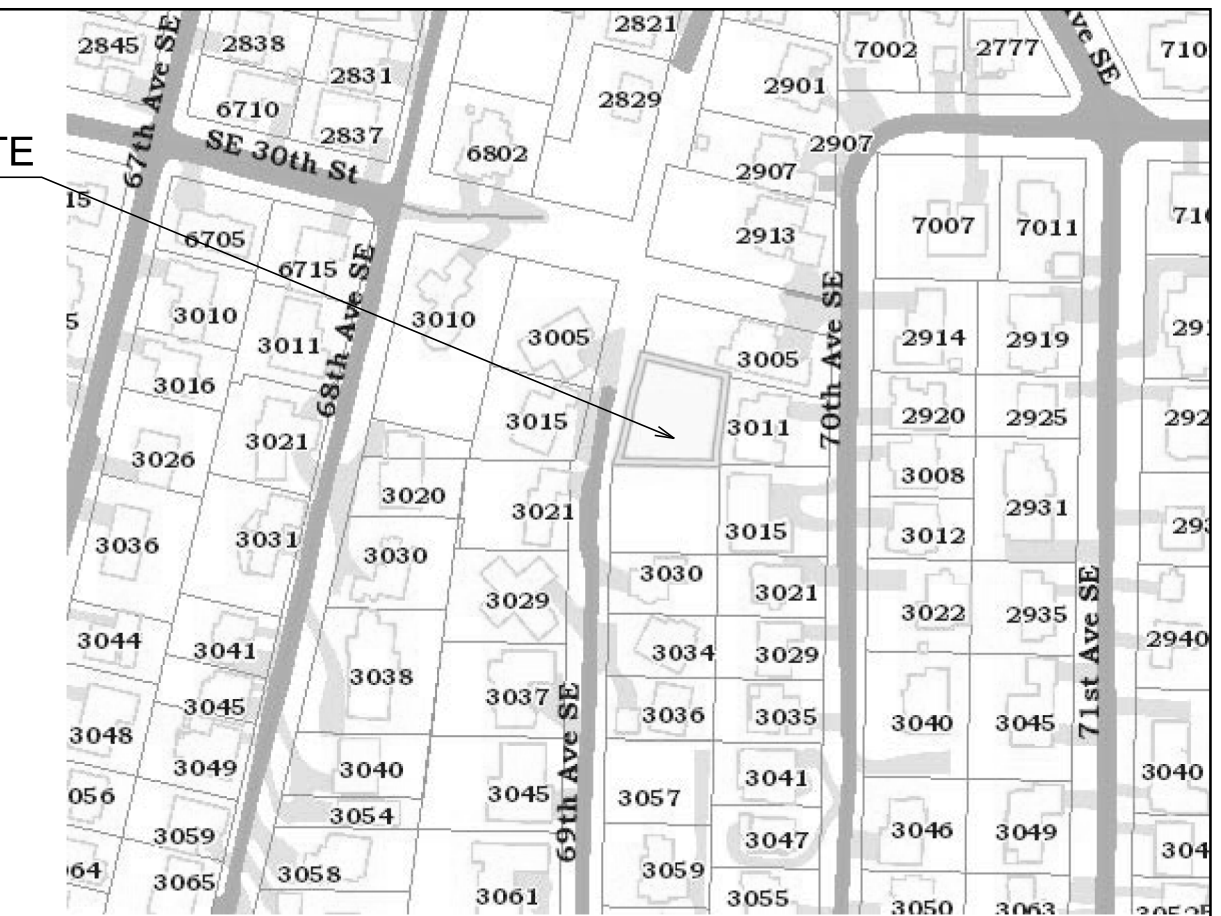
UTILITY NOTES

- 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.



Know what's below. Call before you dig.

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

4" PVC ROOF DRAIN

POINT	INVERT	LENGTH	S
A	237.0	48	1%
B	236.52	41	1%
C	236.11	12	1%
F	235.99		
G	235.20	20	2%
H	234.8	16	2%
EXISTING CB	234.48		
A	237.0	30	1%
D	236.7	24	1%
E	236.46	50	0.7%
C	236.11		

4" PERFORATED FOOTING DRAIN

POINT	INVERT	LENGTH	S
D-4	237.00	48	2%
D-3	236.04		
D1	250.00	44	30.00%
D2	236.80	38	2.00%
D-3	236.04		
D-4	235.20		
D-5	235.00	10	2.00%
H	234.80		

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:

- 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.
- Mulch planting beds with 2 inches of organic material
- Use compost and other materials that meet these organic content requirements:
 - 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.
 - 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

- 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.
- Plant vegetation and mulch the amended soil area after installation.
- Leave plant debris or its equivalent on the soil surface to replenish organic matter.
- Reduce and adjust, where possible, the use of irrigation, fertilizers, herbicides and pesticides, rather than continuing to implement formerly established practices.

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



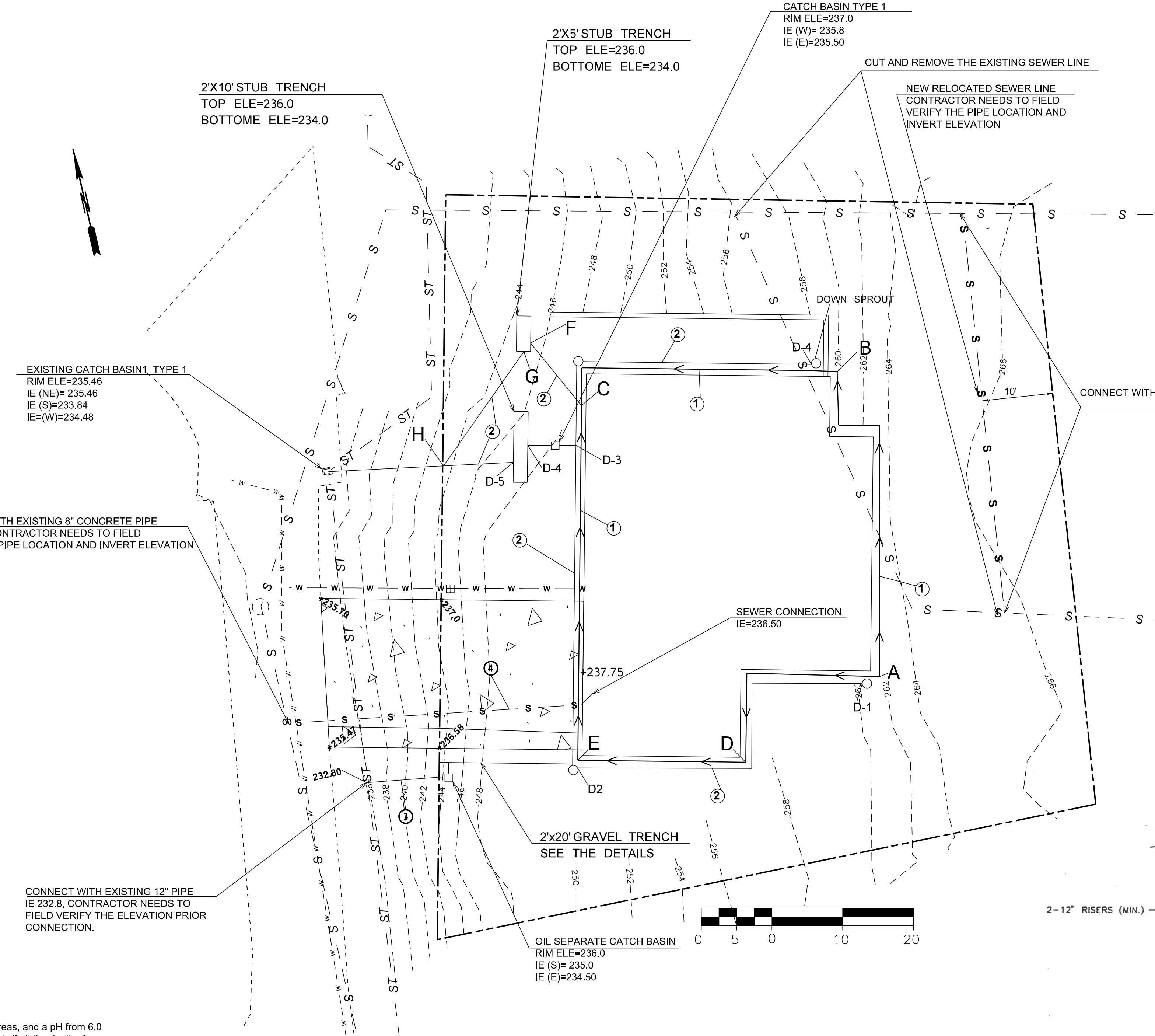
TANDEM ENGINEERING CONSULTANT INC
 8822 NE 178TH ST
 BOTHELL, WA 98011
 (206) 795-5674

DRAINAGE & GRADATION PLAN

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

SHEET
3
 OF
4
 SHEETS

C-3.00

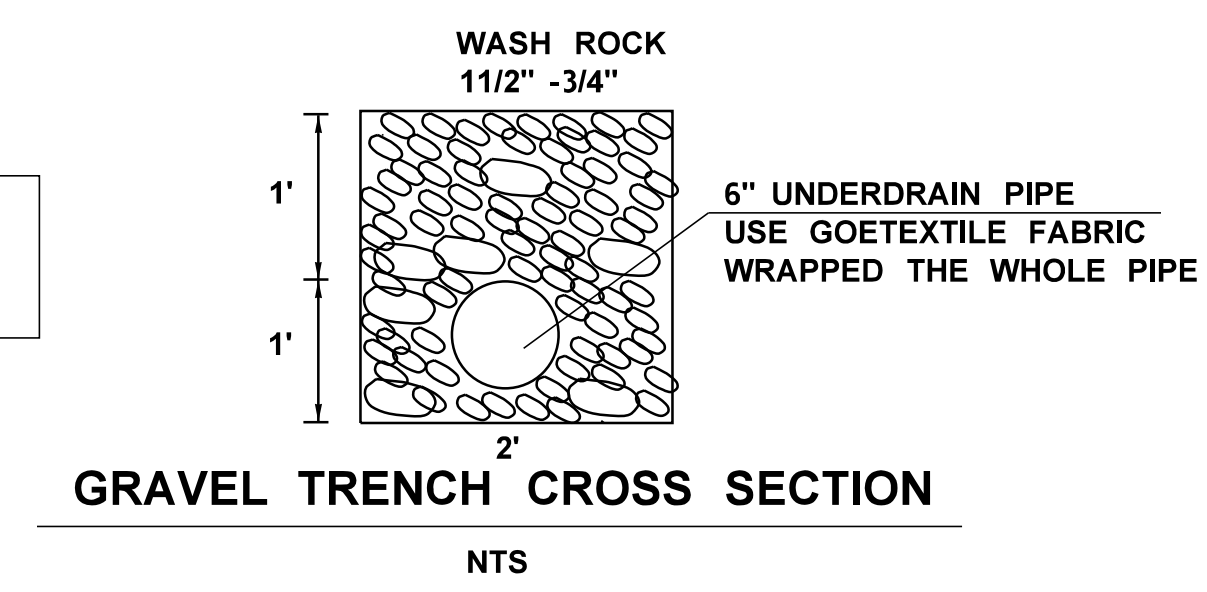
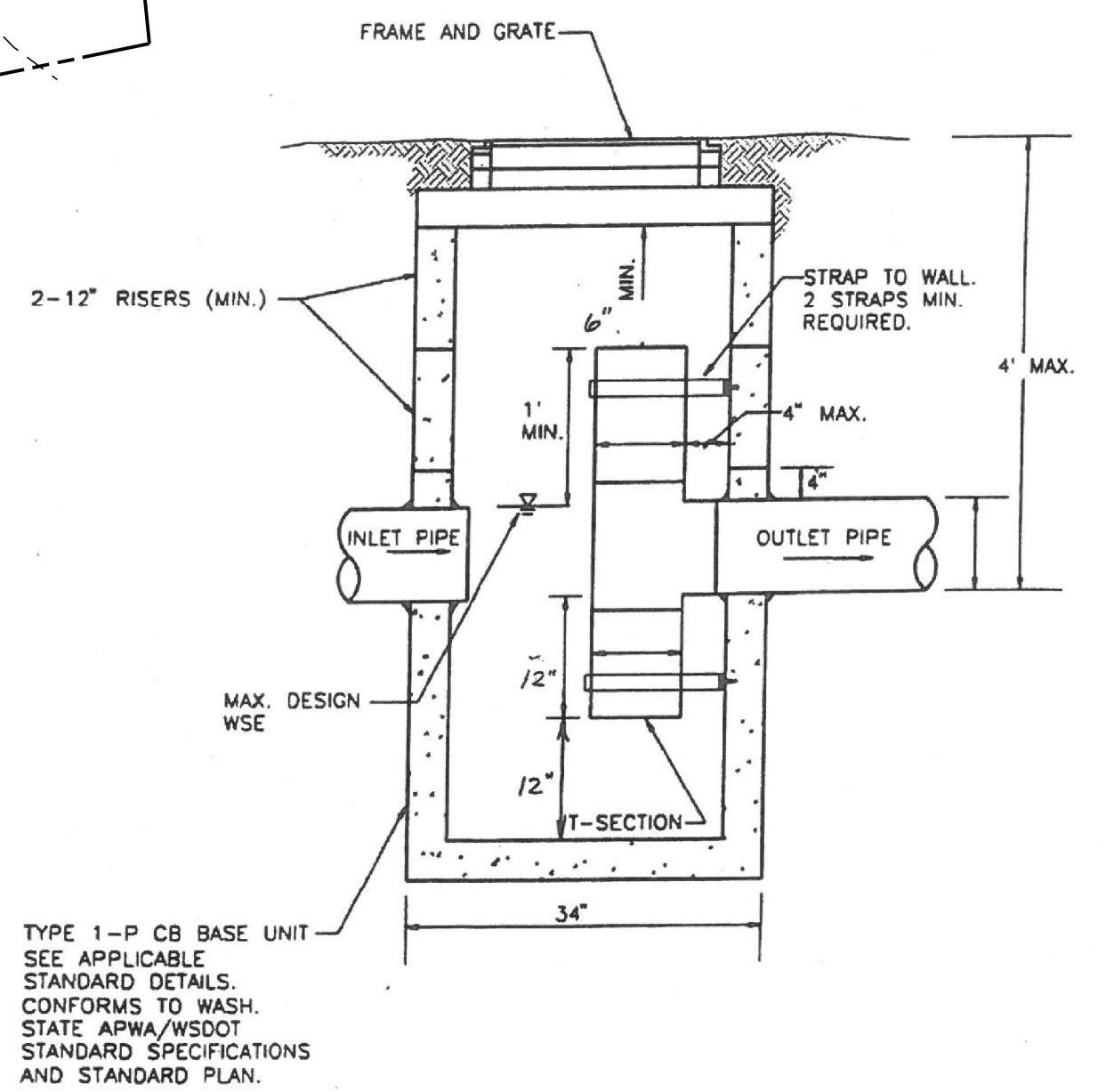


LEGEND

- 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 LINE - w - w - w - w - w - w - w - w - w - w -
- PROPOSED WATER METER [Symbol]
- TREE FENCE [Symbol]
- EXISTING TREES [Symbol]
- TREE DRIP LINES [Symbol]
- PROPOSED FOOTING DRAIN [Symbol]
- EXISTING LOT LINE - - - - -

STORM DRAIN AND SIDE SEWER NOTES

- 4" FOOTING DRAIN MIN 2% GRADE (ASTM D-3034 PVC)
- 4" ROOF DRAIN MIN 2% GRADE (ASTM D-3034 PVC)
- 4" PVC, L=11.0', S=15.5%, (ASTM D-3034 PVC)
- 6" PVC SEWER, L=42.0', S=21.7.0%, (ASTM D-3034 PVC)

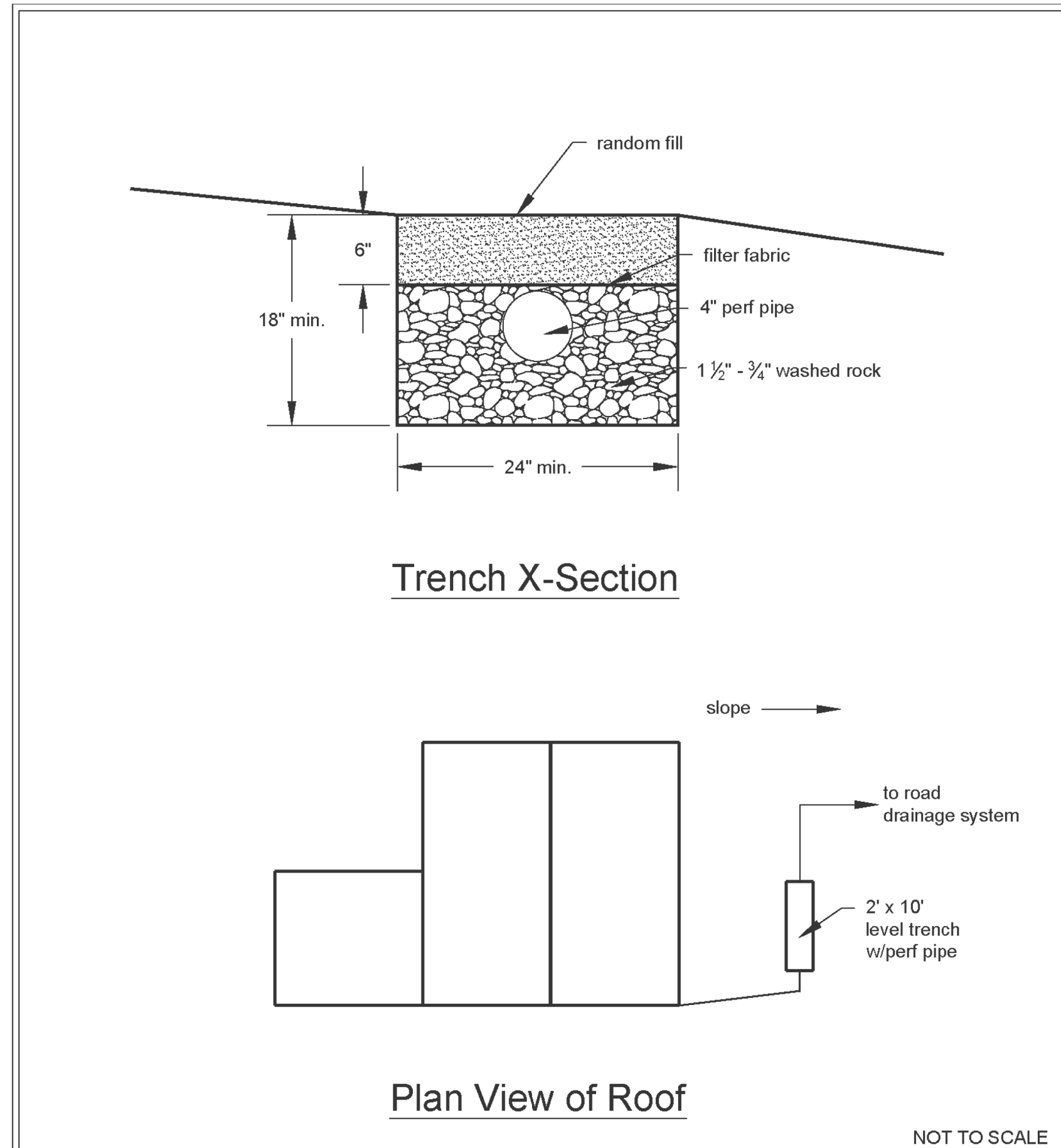


NOTE
 NO EXCAVATION ENCROACHMENT INTO TREE DRIP LINE

CATCH BASIN TYPE 1 WITH OIL/WATER SEPARATED
 NTS



Figure V-4.7: Perforated Stub-Out Connection

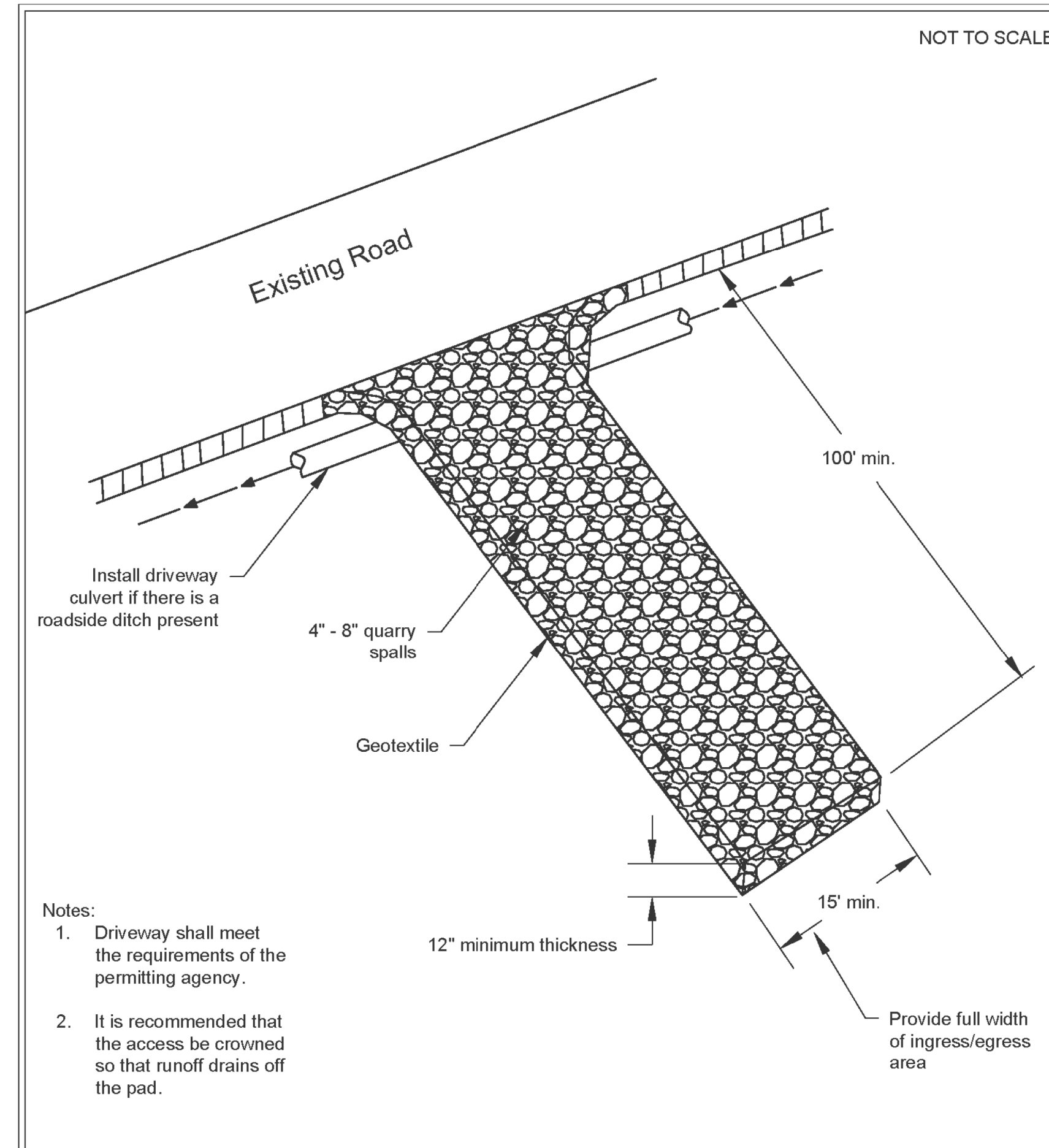


Perforated Stub-Out Connection
Revised June 2016

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Figure II-3.1: Stabilized Construction Access

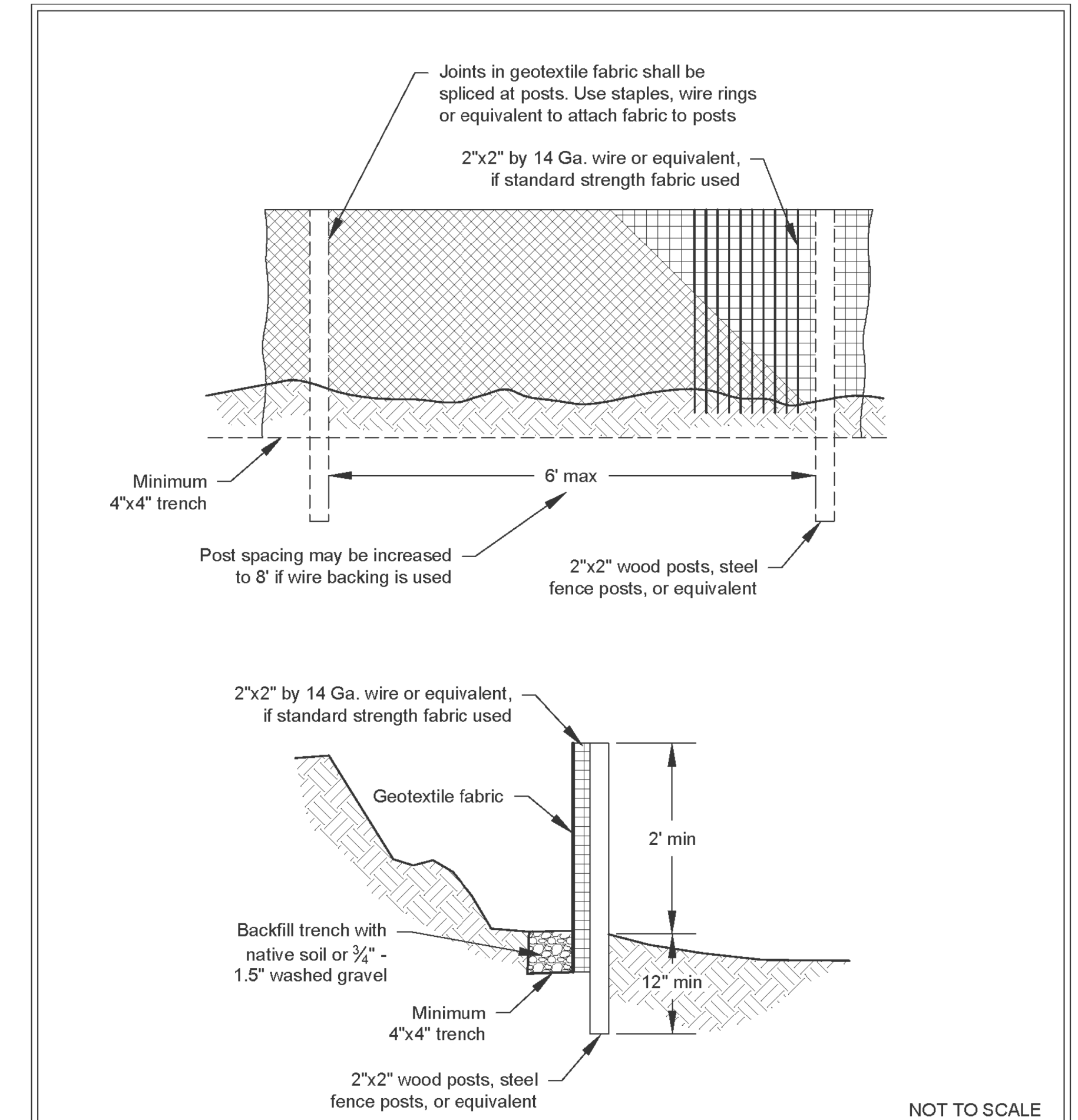


Stabilized Construction Access
Revised June 2018

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State of Washington

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Figure II-3.22: Silt Fence



Silt Fence
Revised July 2017

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

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 69TH AVENUE SE, MERCER ISLAND, WASHINGTON

PERMANENT RETAINING WALL PLANS



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

Hu RESIDENCE
**TEMPORARY SHORING WALL
 COVER & SHORING NOTES**

PROJ. NO. 20-50

SHEET NUMBER

SH1.0

REV	DATE	DESCRIPTION
0	01/18/2021	PERMIT ISSUE

SHEET NUMBER	SHEET TITLE
SH1.0-1.1	COVER & SHORING NOTES
SH2.0	SHORING PLAN
SH3.0-3.3	SHORING ELEVATION
SH3.A	PILE AND ANCHOR SCHEDULE
SH4.0	CROSS-SECTIONS AND DESIGN DIAGRAMS
SH5.0-5.2	DETAILS

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, OR 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, THE SPOT REPRESENTATIVE, AND THE SDCI SITE INSPECTOR. 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.

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 ANPA 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:

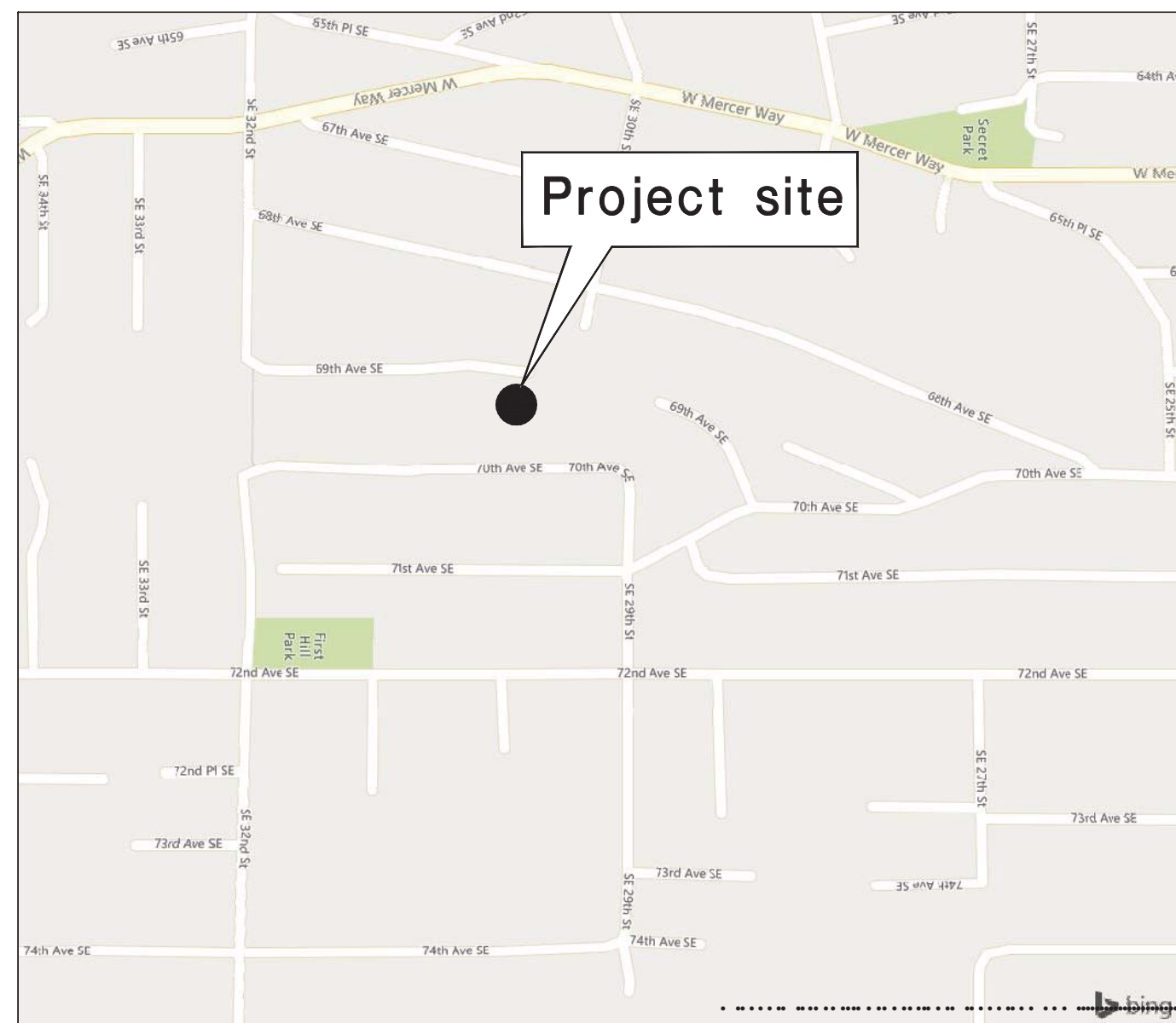
ALL STRUCTURAL STEEL SHAPES SHALL CONFORM TO ASTM A992 (F_y=50 KSI (MIN)), AND PLATES SHALL CONFORM TO ASTM A36, UNLESS SHOWN OTHERWISE ON THE PLANS, OR APPROVED OTHERWISE BY THE ENGINEER.

STRUCTURAL WELDING:

MINIMUM WELD SIZE 1/4 INCH CONTINUOUS FILLET. MINIMUM WELD LENGTH 2 INCHES. ALL WELDING TO CONFORM TO AWS D1.1. 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.



VICINITY MAP



<p>WATERPROOFING:</p> <p>THE RETAINING WALL SYSTEM, IS CONSTRUCTED EXTERNAL TO THE BUILDING ENVELOPE OF THE PERMANENT STRUCTURE. DRAINAGE/WATER-PROOFING OF THE PERMANENT BASEMENT WALLS IS PROVIDED BY OTHERS.</p> <p>DRILLED SOLDIER PILES:</p> <p>THE MINIMUM REQUIRED STRUCTURAL STEEL SHAPES FOR THE SOLDIER PILES ARE INDICATED IN THE SCHEDULES. ALTERNATIVE STEEL SECTIONS MAY BE USED PROVIDED THAT THE CROSS-SECTIONAL AREA AND SECTION MODULUS OF EACH ALTERNATIVE STEEL SECTION ARE EQUAL TO OR GREATER THAN THE CROSS-SECTIONAL AREA AND SECTION MODULUS OF THE CORRESPONDING STEEL SECTION SHOWN ON THE PLANS.</p> <p>SHAFTS SHALL BE CONSTRUCTED SO THAT THE CENTER AT THE TOP OF THE SHAFT IS WITHIN +/- 3 INCHES OF THE PLAN LOCATION. SHAFT PLUMBNESS MAY VARY UP TO 1 PERCENT OF PILE LENGTH.</p> <p>THE STEEL SOLDIER PILES SHALL BE PLACED SO THAT THE CENTER LINE OF THE PILE IS WITHIN +/- 1 INCH OF THE PLAN LOCATION. THE STEEL SOLDIER PILE SHALL BE PLUMB CONSISTENT WITH MAXIMUM DEVIATION INTO/OUT-OF THE EXCAVATION AS DEFINED BY THE STRUCTURAL ENGINEER AND GENERAL CONTRACTOR. THE TOP ELEVATION OF THE STEEL SOLDIER PILE SHALL BE WITHIN +/- 3 INCHES OF THE PLAN ELEVATION.</p> <p>SHAFTS SHALL BE EXCAVATED TO THE REQUIRED DEPTH AS SHOWN ON THE PLANS. THE EXCAVATION SHALL BE COMPLETED IN A CONTINUOUS OPERATION USING EQUIPMENT CAPABLE OF EXCAVATING THROUGH THE TYPE OF MATERIAL EXPECTED TO BE ENCOUNTERED.</p> <p>IF THE SHAFT EXCAVATION IS STOPPED WITH THE APPROVAL OF THE ENGINEER, THE SHAFT SHALL BE SECURED BY INSTALLATION OF A SAFETY COVER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THE SAFETY OF THE SHAFT AND SURROUNDING SOIL AND THE STABILITY OF THE SIDE WALLS. A TEMPORARY CASING SHALL BE USED IF NECESSARY TO ENSURE SUCH SAFETY AND STABILITY.</p> <p>WHERE CAVING CONDITIONS ARE ENCOUNTERED, THE CONTRACTOR SHALL SELECT A METHOD TO PREVENT GROUND MOVEMENT. THE CONTRACTOR MAY ELECT TO PLACE A TEMPORARY CASING.</p> <p>THE CONTRACTOR SHALL USE APPROPRIATE MEANS (SUCH AS A CLEANOUT BUCKET), TO CLEAN THE BOTTOM OF THE EXCAVATION SUCH THAT NO MORE THAN 2 INCHES OF LOOSE OR DISTURBED MATERIAL IS PRESENT.</p> <p>UNLESS SHOWN OTHERWISE ON THE PLANS, EXCAVATION OF SHAFTS SHALL NOT COMMENCE UNTIL A MINIMUM OF 12 HOURS AFTER THE GDF FOR THE ADJACENT SHAFTS HAS BEEN PLACED.</p> <p>TEMPORARY CASINGS FOR THE SHAFTS SHALL BE REMOVED. A MINIMUM 5 FOOT HEAD OF CONCRETE MUST BE MAINTAINED TO BALANCE THE SOIL AND WATER PRESSURE AT THE BOTTOM OF THE CASING DURING REMOVAL. THE CASING SHALL BE SMOOTH.</p> <p>SHAFT CONCRETE / GDF SHALL BE PLACED AS SHOWN ON THE PLANS.</p> <p>THE CONCRETE / GDF SHALL BE DEPOSITED BY REMIE PLACEMENT METHODS.</p> <p>SUBMITTALS:</p> <p>THE FOLLOWING SUBMITTALS SHALL BE PROVIDED BY THE CONTRACTOR, AT LEAST 15 DAYS PRIOR TO INITIATING THE WORK, FOR THE ENGINEER'S REVIEW AND APPROVAL:</p> <ol style="list-style-type: none"> WORKING DRAWINGS INDICATING STEEL PILE FABRICATION DETAILS AND MATERIALS. CONCRETE MIX DESIGNS AND PLACEMENT PROCEDURES. PAINT SYSTEM AND APPLICATION PROCEDURES. SHAFT INSTALLATION PLAN, PROVIDING AT LEAST THE FOLLOWING INFORMATION: <ul style="list-style-type: none"> A. LIST AND DESCRIPTION OF PROPOSED EQUIPMENT TO BE USED, INCLUDING BUT NOT LIMITED TO, CRANES, DRILLS, AUGERS, BAILING BUCKETS, FINAL CLEANING EQUIPMENT, TREMIES, PUMPS, ETC. B. THE CONSTRUCTION SEQUENCE. C. DETAILS OF SHAFT EXCAVATION METHODS INCLUDING METHODS TO CLEAN THE SHAFT EXCAVATION. D. DETAILS OF THE SHAFTS AND CASING. E. DETAILS OF SOLDIER PILE PLACEMENT METHODS. <p>PAINTING OF SOLDIER PILES:</p> <p>THE STEEL SOLDIER PILES AND ATTACHMENTS SHALL BE PAINTED AFTER FABRICATION TO THE LIMITS SHOWN ON THE PLANS WITH ONE COAT INORGANIC ZINC-RICH PRIMER CONFORMING TO EITHER AASHTO M 300 OR SSPC PAINT 20 TYPE 1.</p> <p>PAINTING SHALL BE IN ACCORDANCE WITH SECTION 6-07 OF THE 2012 WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, AS AMENDED BY THE CONTRACT PROVISIONS.</p> <p>EACH COAT SHALL HAVE A MINIMUM DRY FILM THICKNESS OF 2.5 MILS.</p> <p>EXCAVATION, LAGGING, BACKFILL, AND ANCHOR STRESSING:</p> <p>THE CONTRACTOR SHALL EXCAVATE THE WALL FACE AND INSTALL LAGGING IN SUCH A MANNER AS TO MAINTAIN A SAFE WORK PLACE AND AVOID EXCESSIVE SLOUGHING AND OVERBREAK, AS A MINIMUM PRIOR TO PLACING THE SUBSEQUENT SET OF TIMBER LAGGING, DO NOT EXCAVATE MORE THAN 4 FEET BELOW THE CURRENT DEPTH OF LAGGED WALL FACE. IF FACE STABILITY CONDITIONS REQUIRE, THIS HEIGHT MUST BE REDUCED.</p> <p>DO NOT EXCAVATE TO A DEPTH GREATER THAN 2 FEET BELOW A LEVEL OF ANCHORS PRIOR TO INSTALLATION, TESTING, AND LOCKOFF (AS APPLICABLE) OF THOSE ANCHORS.</p> <p>LAGGING SHALL BE INSTALLED FROM THE TOP OF THE PILE PROCEEDING DOWNWARD. THE TIMBER LAGGING SHALL MAKE DIRECT CONTACT WITH THE SOIL. VOIDS BEHIND THE LAGGING SHALL BE FILLED WITH FREE-DRAINING BACKFILL. LEAVE GAPS (1/4-INCH TYP) BETWEEN LAGGING FOR DRAINAGE. GDF MAY BE USED AS BACKFILL IN LOCALIZED AREAS.</p> <p>PERMANENT GROUND ANCHORS:</p> <ol style="list-style-type: none"> GENERAL: <p>1A. THE CONTRACTOR SHALL SELECT THE INSTALLATION METHOD, THE ANCHOR DIAMETER, AND THE METHOD OF GROUTING, IN ORDER TO DEVELOP THE DESIGN LOADS INDICATED ON THE PLANS, AS VERIFIED IN ACCORDANCE WITH THE ANCHOR TESTING PROGRAM.</p> <p>1B. THE CONTRACTOR SHALL PREPARE AND SUBMIT TO THE ENGINEER FOR REVIEW AND APPROVAL WORKING DRAWINGS AND A DESIGN SUBMISSION DESCRIBING THE GROUND ANCHOR SYSTEM OR SYSTEMS INTENDED FOR USE. THE WORKING DRAWINGS AND DESIGN SUBMISSION SHALL BE SUBMITTED 15 DAYS PRIOR TO THE COMMENCEMENT OF THE GROUND ANCHOR WORK. THE WORKING DRAWING AND DESIGN SUBMISSION SHALL INCLUDE THE FOLLOWING: <ol style="list-style-type: none"> CERTIFIED MILL TEST RESULTS AND TYPICAL STRESS-STRAIN CURVES FOR THE PRESTRESSING STEEL. THE TYPICAL STRESS-STRAIN CURVE SHALL BE OBTAINED BY APPROVED STANDARD PRACTICES. THE GUARANTEED ULTIMATE STRENGTH, YIELD STRENGTH, ELONGATION, AND COMPOSITION SHALL BE SPECIFIED. GROUT MIX DESIGN AND THE PROCEDURES FOR GROUT PLACEMENT. CALIBRATION DATA FOR EACH TEST JACK, PRESSURE GAUGE AND REFERENCE PRESSURE GAUGE TO BE USED. THE CALIBRATION TESTS SHALL HAVE BEEN PERFORMED BY AN INDEPENDENT TESTING LABORATORY AND TESTS SHALL HAVE BEEN PERFORMED WITHIN 60 DAYS OF THE DATE SUBMITTED. </p> GROUND ANCHOR INSTALLATION: <p>2A. AT THE GROUND SURFACE, THE DRILLHOLE SHALL BE LOCATED WITHIN 4 INCHES OF THE LOCATION SHOWN ON THE PLANS. THE DRILLHOLE SHALL BE LOCATED SO THE LONGITUDINAL AXIS OF THE DRILLHOLE AND THE LONGITUDINAL AXIS OF THE TENDON ARE PARALLEL. THE GROUND ANCHOR SHALL NOT BE DRILLED IN A LOCATION THAT REQUIRES THE TENDON TO BE BENT IN ORDER TO CONNECT THE BEARING PLATE TO THE SUPPORTED STRUCTURE.</p> <p>2B. AT THE POINT OF ENTRY, THE GROUND ANCHOR SHALL BE INSTALLED WITHIN +/- 3 DEGREES OF THE INCLINATION FROM HORIZONTAL SHOWN IN THE PLANS. AT THE POINT OF ENTRY, THE HORIZONTAL ANGLE MADE BY THE GROUND ANCHOR AND THE STRUCTURE SHALL BE WITHIN +/- 3 DEGREES OF A LINE DRAWN PERPENDICULAR TO THE PLANE OF THE STRUCTURE, UNLESS SHOWN OTHERWISE ON THE PLANS. AT ALL ANCHOR LOCATIONS WHERE TIEBACKS CROSS, THE INCLINATION AND ORIENTATION OF THE ANCHORS SHALL BE +/- 1 DEGREE.</p> <p>2C. WHEN CAVING CONDITIONS ARE ENCOUNTERED, NO FURTHER DRILLING WILL BE ALLOWED UNTIL THE CONTRACTOR SELECTS A METHOD TO PREVENT GROUND MOVEMENT. THE CONTRACTOR MAY USE TEMPORARY CASING. THE CONTRACTOR'S METHOD TO PREVENT GROUND MOVEMENT SHALL BE APPROVED BY THE ENGINEER.</p> <p>2D. THE TENDON SHALL BE INSERTED INTO THE DRILLHOLE TO THE DESIRED DEPTH WITHOUT DIFFICULTY. WHEN THE TENDON CANNOT BE COMPLETELY INSERTED, THE CONTRACTOR SHALL REMOVE THE TENDON FROM THE DRILLHOLE AND CLEAN OR REDRILL THE HOLE TO PERMIT INSERTION. PARTIALLY INSERTED TENDONS SHALL NOT BE DRIVEN OR FORCED INTO THE HOLE.</p> <p>2E. THE CONTRACTOR SHALL USE A NEAT-CEMENT OR A SAND-CEMENT GROUT. THE CEMENT SHALL NOT CONTAIN LUMPS OR OTHER INDICATIONS OF HYDRATION. ADMIXTURES, IF USED, SHALL BE MIXED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.</p> <p>2F. THE GROUT EQUIPMENT SHALL PRODUCE A GROUT FREE OF LUMPS AND UNDISPERSED CEMENT. A POSITIVE DISPLACEMENT GROUT PUMP SHALL BE USED. THE PUMP SHALL BE EQUIPPED WITH A PRESSURE GAUGE TO MONITOR GROUT PRESSURES AND A STROKE COUNTER. THE PRESSURE GAUGE SHALL BE CAPABLE OF MEASURING PRESSURES OF AT LEAST 150 PSI OR TWICE THE ACTUAL GROUT PRESSURES USED BY THE CONTRACTOR, WHICHEVER IS GREATER. THE GROUTING EQUIPMENT SHALL BE SIZED TO ENABLE THE GROUT TO BE PUMPED IN ONE CONTINUOUS OPERATION. THE MIXER SHALL BE CAPABLE OF CONTINUOUSLY AGITATING THE GROUT.</p> <p>2G. THE GROUT EQUIPMENT SHALL PRODUCE A GROUT FREE OF LUMPS AND UNDISPERSED CEMENT. A POSITIVE DISPLACEMENT GROUT PUMP SHALL BE USED. THE PUMP SHALL BE EQUIPPED WITH A PRESSURE GAUGE TO MONITOR GROUT PRESSURES AND A STROKE COUNTER. THE PRESSURE GAUGE SHALL BE CAPABLE OF MEASURING PRESSURES OF AT LEAST 150 PSI OR TWICE THE ACTUAL GROUT PRESSURES USED BY THE CONTRACTOR, WHICHEVER IS GREATER. THE GROUTING EQUIPMENT SHALL BE SIZED TO ENABLE THE GROUT TO BE PUMPED IN ONE CONTINUOUS OPERATION. THE MIXER SHALL BE CAPABLE OF CONTINUOUSLY AGITATING THE GROUT.</p> <p>2H. NO GROUT SHALL BE PLACED UNDER PRESSURE ABOVE THE BOND LENGTH DURING INITIAL GROUTING OF THE ANCHOR BOND LENGTH. THE GROUT AT THE TOP OF THE DRILLHOLE SHALL NOT CONTACT THE BACK OF THE STRUCTURE OR THE BOTTOM OF THE TRUMPET.</p> <p>2I. AFTER GROUTING, THE TENDON SHALL NOT BE LOADED UNTIL THE GROUT HAS ATTAINED SUFFICIENT STRENGTH TO CARRY THE TEST LOAD.</p> <p>2J. THE CORROSION PROTECTION SURROUNDING THE UNBONDED LENGTH OF THE TENDON SHALL EXTEND UP BEYOND THE BOTTOM SEAL OF THE TRUMPET OR 1 FOOT INTO THE TRUMPET IF NO TRUMPET SEAL IS PROVIDED. THE CORROSION PROTECTION SURROUNDING THE NO-LOAD ZONE LENGTH SHALL NOT CONTACT THE BEARING PLATE OR ANCHOR HEAD DURING STRESSING. TRUMPET GROUT SHALL BE PLACED AFTER THE GROUND ANCHOR HAS BEEN TESTED AND LOCKED OFF.</p> ANCHOR GROUT: <p>3A. THE GROUT SHALL BE A NEAT OR SAND/CEMENT MIXTURE WITH A MINIMUM 3-DAY COMPRESSIVE STRENGTH OF 1500 PSI AND A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI PER ASTM C109 / AASHTO T106.</p> <p>3B. TYPE II CEMENT CONFORMING TO THE REQUIREMENTS OF ASTM C150 / AASHTO M85 SHALL BE USED.</p> <p>3C. FINE AGGREGATES SHALL CONSIST OF CLEAN, NATURAL SAND, CONFORMING TO THE REQUIREMENTS OF ASTM C33 / AASHTO M6. MANUFACTURED SAND IS ACCEPTABLE PROVIDED IT IS SUITABLE FOR PUMPING IN ACCORDANCE WITH ACI 304, SECTION 4.2.2.</p> <p>3D. ADMIXTURES SHALL BE IN ACCORDANCE WITH ASTM C494 / AASHTO M194. ADMIXTURES WHICH CONTROL BLEED, IMPROVE FLOW, REDUCE WATER CONTENT, AND RETARD SET MAY BE USED IN THE GROUT SUBJECT TO THE APPROVAL OF THE ENGINEER. EXPANSIVE ADMIXTURES SHALL ONLY BE ADDED TO THE GROUT USED FOR FILLING SEALED ENCAPSULATIONS, TRUMPETS AND ANCHORAGE COVERS. ACCELERATORS WILL NOT BE PERMITTED. ADMIXTURES SHALL BE COMPATIBLE WITH PRESTRESSING STEELS AND MIXED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION.</p> ANCHOR TENDONS: <p>4A. THE BAR GROUND ANCHORS TENDONS SHALL CONSIST OF THE FOLLOWING: <ol style="list-style-type: none"> THREADD BARS CONFORMING TO ASTM A615 / AASHTO M31, GRADE 60 OR T5 OR ASTM A722 / AASHTO M275, GRADE 150. EPOXY COATING, WHERE REQUIRED ON THE PLANS, SHALL CONFORM TO AASHTO M284, MINIMUM 12 MIL ELECTROSTATICALLY APPLIED, BEND TEST REQUIREMENTS </p> ANCHOR TESTING: <p>4B. EACH GROUND ANCHOR SHALL BE TESTED. THE MAXIMUM TEST LOAD SHALL NOT EXCEED 80% OF THE MINIMUM GUARANTEED ULTIMATE TENSILE STRENGTH (GUTS) OF THE TENDON. THE TEST LOAD SHALL BE SIMULTANEOUSLY APPLIED TO THE ENTIRE TENDON. STRESSING OF SINGLE ELEMENTS OF MULTI-ELEMENT TENDONS WILL NOT BE PERMITTED.</p> <p>4B. THE TESTING EQUIPMENT SHALL CONSIST OF: <ol style="list-style-type: none"> A DIAL GAUGE OR VERNIER SCALE CAPABLE OF MEASURING TO 0.001 INCHES SHALL BE USED TO MEASURE THE GROUND ANCHOR MOVEMENT. THE MOVEMENT-MEASURING DEVICE SHALL HAVE A MINIMUM TRAVEL EQUAL TO THE THEORETICAL ELASTIC ELONGATION OF THE TOTAL ANCHOR LENGTH AT THE MAXIMUM TEST LOAD PLUS 1 INCH. THE DIAL GAUGE OR VERNIER SCALE SHALL BE SUPPORTED INDEPENDENT OF THE JACKING SYSTEM AND RETAINED STRUCTURE AND SHALL BE ALIGNED SO THAT ITS AXIS IS WITHIN 5 DEGREES FROM THE AXIS OF THE GROUND ANCHOR. A HYDRAULIC JACK AND PUMP SHALL BE USED TO APPLY THE TEST LOAD. THE JACK AND PRESSURE GAUGE SHALL BE CALIBRATED BY AN INDEPENDENT TESTING LABORATORY AS A UNIT. THE PRESSURE GAUGE SHALL BE GRADUATED IN 100 PSI INCREMENTS OR LESS. THE PRESSURE GAUGE WILL BE USED TO MEASURE THE APPLIED LOAD. THE RAM TRAVEL OF THE JACK SHALL NOT BE LESS THAN THE THEORETICAL ELASTIC ELONGATION OF THE TOTAL ANCHOR LENGTH AT THE MAXIMUM TEST LOAD PLUS ONE INCH. THE JACK SHALL BE INDEPENDENTLY SUPPORTED AND CENTERED OVER THE TENDON SO THAT THE TENDON DOES NOT CARRY THE WEIGHT OF THE JACK. </p> <p>PERMANENT GROUND ANCHORS (CONT.):</p> <p>7C. PERFORMANCE TESTING SHALL BE PERFORMED ON 5 PERCENT OF THE GROUND ANCHORS OR A MINIMUM OF 3 ANCHORS, WHICHEVER IS GREATER. THE PERFORMANCE TEST SHALL BE MADE BY LOADING AND UNLOADING THE GROUND ANCHOR IN ACCORDANCE WITH THE FOLLOWING SCHEDULE. AT LOAD INCREMENTS OTHER THAN THE MAXIMUM TEST LOAD, THE LOAD SHALL BE HELD LONG ENOUGH TO OBTAIN A STABLE READING.</p> <table border="1" data-bbox="1538 1370 1911 1542"> <thead> <tr> <th>LOAD</th> <th>HOLD TIME</th> <th>LOAD</th> <th>HOLD TIME</th> </tr> </thead> <tbody> <tr> <td>AL</td> <td>1 MINUTE</td> <td>1.75DL</td> <td>UNTIL STABLE</td> </tr> <tr> <td>0.25DL</td> <td>10 MINUTES</td> <td>1.50DL</td> <td>UNTIL STABLE</td> </tr> <tr> <td>0.50DL</td> <td>10 MINUTES</td> <td>1.25DL</td> <td>UNTIL STABLE</td> </tr> <tr> <td>0.75DL</td> <td>10 MINUTES</td> <td>1.00DL</td> <td>UNTIL STABLE</td> </tr> <tr> <td>1.00DL</td> <td>10 MINUTES</td> <td>0.75DL</td> <td>UNTIL STABLE</td> </tr> <tr> <td>1.25DL</td> <td>10 MINUTES</td> <td>0.50DL</td> <td>UNTIL STABLE</td> </tr> <tr> <td>1.50DL</td> <td>60 MINUTES</td> <td>0.25DL</td> <td>UNTIL STABLE</td> </tr> <tr> <td>1.75DL</td> <td>10 MINUTES</td> <td>AL</td> <td>UNTIL STABLE</td> </tr> <tr> <td>2.00DL</td> <td>10 MINUTES</td> <td></td> <td></td> </tr> </tbody> </table> <p>AL = ALIGNMENT LOAD DL = DESIGN LOAD</p> <p>THE ALIGNMENT LOAD (AL) SHALL BE THE MINIMUM LOAD REQUIRED TO ALIGN THE TESTING APPARATUS AND SHALL NOT EXCEED 0.05DL. DIAL GAUGES SHALL BE SET AT "ZERO" AFTER THE ALIGNMENT LOAD HAS BEEN APPLIED.</p> <p>THE MAXIMUM TEST LOAD SHALL BE HELD FOR 10 MINUTES. THE LOAD-HOLD PERIOD SHALL START AS SOON AS THE MAXIMUM TEST LOAD IS APPLIED AND THE ANCHOR MOVEMENT SHALL BE MEASURED AND RECORDED AT 1, 2, 3, 5, 6, AND 10 MINUTES. IF THE ANCHOR MOVEMENT BETWEEN 1 AND 10 MINUTES EXCEEDS 0.04 INCHES, THE MAXIMUM TEST LOAD SHALL BE HELD AN ADDITIONAL 50 MINUTES. IF THE LOAD HOLD IS EXTENDED, THE ANCHOR MOVEMENTS SHALL BE RECORDED AT 20, 30, 50, AND 60 MINUTES. IF AN ANCHOR FAILS IN CREEP, RETESTING WILL NOT BE ALLOWED.</p> <p>TD. PROOF TESTS SHALL BE PERFORMED ON ALL PRODUCTION ANCHORS BY INCREMENTALLY LOADING THE GROUND ANCHOR IN ACCORDANCE WITH THE FOLLOWING SCHEDULE. AT LOAD INCREMENTS OTHER THAN MAXIMUM TEST LOAD, THE LOAD SHALL BE HELD LONG ENOUGH TO OBTAIN A STABLE READING.</p> <table border="1" data-bbox="1538 1824 1662 1905"> <thead> <tr> <th>LOAD</th> <th>LOAD</th> </tr> </thead> <tbody> <tr> <td>AL</td> <td>0.75DL</td> </tr> <tr> <td>0.25DL</td> <td>1.00DL</td> </tr> <tr> <td>0.50DL</td> <td>1.33DL</td> </tr> </tbody> </table> <p>SHALL BE WAIVED.</p> <p>3. FOR DAMAGED EPOXY COATED NAILS, THE COATING SHALL BE REPAIRED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS USING AN EPOXY FIELD REPAIR KIT APPROVED BY THE EPOXY MANUFACTURER.</p> <p>4B. BAR COUPLERS ARE ALLOWED.</p> <p>5. CORROSION PROTECTION:</p> <p>5A. THE BONDBREAKER SHALL BE FABRICATED FROM A SMOOTH PLASTIC TUBE OR PIPE HAVING THE FOLLOWING PROPERTIES: <ol style="list-style-type: none"> RESISTANCE TO CHEMICAL ATTACK FROM AGGRESSIVE ENVIRONMENTS, GROUT OR GREASE. RESISTANCE TO AGING BY ULTRAVIOLET LIGHT. FABRICATED FROM MATERIAL NON-DETRIMENTAL TO THE TENDON. CAPABLE OF WITHSTANDING ABRASION, IMPACT, AND BENDING DURING HANDLING AND INSTALLATION. ENABLE THE TENDON TO ELONGATE DURING TESTING AND STRESSING. ALLOW THE TENDON TO REMAIN UNBONDED AFTER LOCKOFF. </p> <p>5B. CORROSION PROTECTION SHALL BE EPOXY COATING. EPOXY COATING SHALL CONFORM TO AASHTO M284, MINIMUM 12 MIL ELECTROSTATICALLY APPLIED, BEND TEST REQUIREMENTS SHALL BE WAIVED.</p> <p>6. SPACERS AND CENTRALIZERS: <p>6A. SPACERS SHALL BE USED ALONG THE TENDON BOND LENGTH OF MULTI-ELEMENT TENDONS TO SEPARATE EACH OF THE INDIVIDUAL ELEMENTS OF THE TENDON SO THE PRESTRESSING STEEL WILL BOND TO THE GROUT. SPACERS SHALL BE POSITIONED SO THEIR CENTER-TO-CENTER SPACING DOES NOT EXCEED 10 FEET. IN ADDITION, THE UPPER SPACER SHALL BE LOCATED A MAXIMUM OF 3 FEET FROM THE TOP OF THE TENDON BOND LENGTH AND THE LOWER SPACER SHALL BE LOCATED A MAXIMUM OF 3 FEET FROM THE BOTTOM OF THE TENDON BOND LENGTH. SPACERS SHALL PERMIT GROUT TO FREELY FLOW UP THE DRILLHOLE OR BOND LENGTH ENCAPSULATION. SPACERS SHALL BE FABRICATED FROM PLASTIC.</p> <p>6B. CENTRALIZERS SHALL PERMIT FREE GROUT FLOW AND SHALL PROVIDE A MINIMUM OF 0.5 INCHES OF COVER OVER THE TENDON BOND LENGTH ENCAPSULATION. CENTRALIZERS SHALL BE SECURELY ATTACHED TO THE ENCAPSULATION AND THE CENTER TO CENTER SPACING SHALL NOT EXCEED 10 FEET. THE UPPER CENTRALIZER SHALL BE LOCATED A MAXIMUM OF 3 FEET FROM THE TOP OF THE TENDON BOND LENGTH AND THE LOWER CENTRALIZER SHALL BE LOCATED A MAXIMUM OF 3 FEET FROM THE BOTTOM OF THE TENDON BOND LENGTH. CENTRALIZERS SHALL BE FABRICATED FROM PLASTIC.</p> <p>7. ANCHOR TESTING:</p> <p>7A. EACH GROUND ANCHOR SHALL BE TESTED. THE MAXIMUM TEST LOAD SHALL NOT EXCEED 80% OF THE MINIMUM GUARANTEED ULTIMATE TENSILE STRENGTH (GUTS) OF THE TENDON. THE TEST LOAD SHALL BE SIMULTANEOUSLY APPLIED TO THE ENTIRE TENDON. STRESSING OF SINGLE ELEMENTS OF MULTI-ELEMENT TENDONS WILL NOT BE PERMITTED.</p> <p>7B. THE TESTING EQUIPMENT SHALL CONSIST OF: <ol style="list-style-type: none"> A DIAL GAUGE OR VERNIER SCALE CAPABLE OF MEASURING TO 0.001 INCHES SHALL BE USED TO MEASURE THE GROUND ANCHOR MOVEMENT. THE MOVEMENT-MEASURING DEVICE SHALL HAVE A MINIMUM TRAVEL EQUAL TO THE THEORETICAL ELASTIC ELONGATION OF THE TOTAL ANCHOR LENGTH AT THE MAXIMUM TEST LOAD PLUS 1 INCH. THE DIAL GAUGE OR VERNIER SCALE SHALL BE SUPPORTED INDEPENDENT OF THE JACKING SYSTEM AND RETAINED STRUCTURE AND SHALL BE ALIGNED SO THAT ITS AXIS IS WITHIN 5 DEGREES FROM THE AXIS OF THE GROUND ANCHOR. A HYDRAULIC JACK AND PUMP SHALL BE USED TO APPLY THE TEST LOAD. THE JACK AND PRESSURE GAUGE SHALL BE CALIBRATED BY AN INDEPENDENT TESTING LABORATORY AS A UNIT. THE PRESSURE GAUGE SHALL BE GRADUATED IN 100 PSI INCREMENTS OR LESS. THE PRESSURE GAUGE WILL BE USED TO MEASURE THE APPLIED LOAD. 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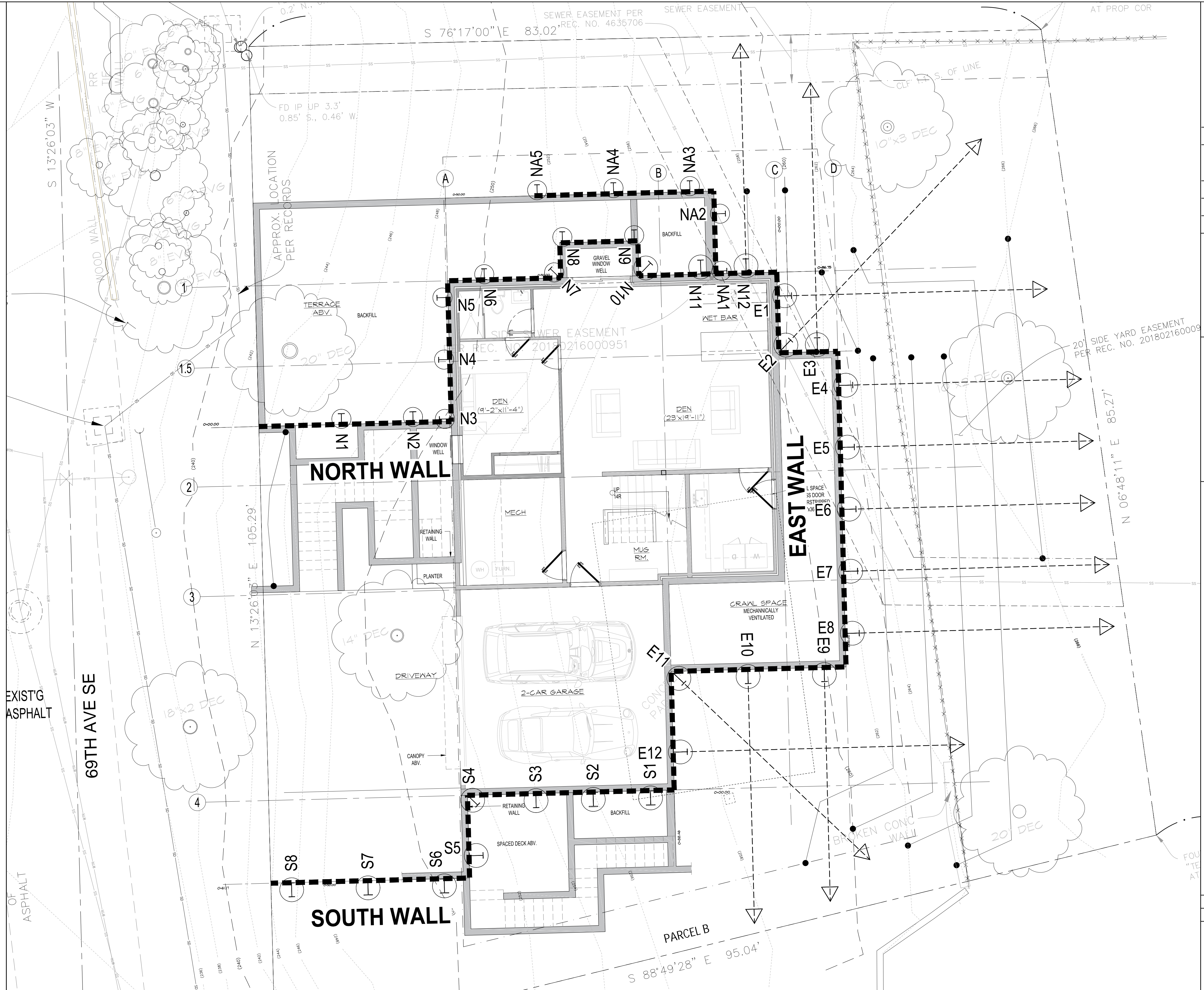
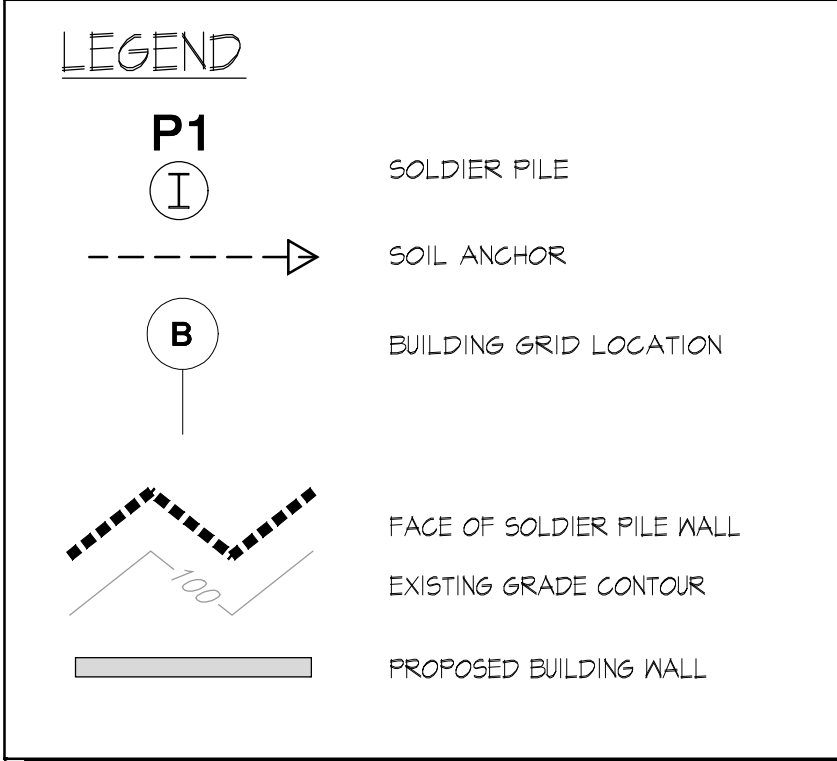
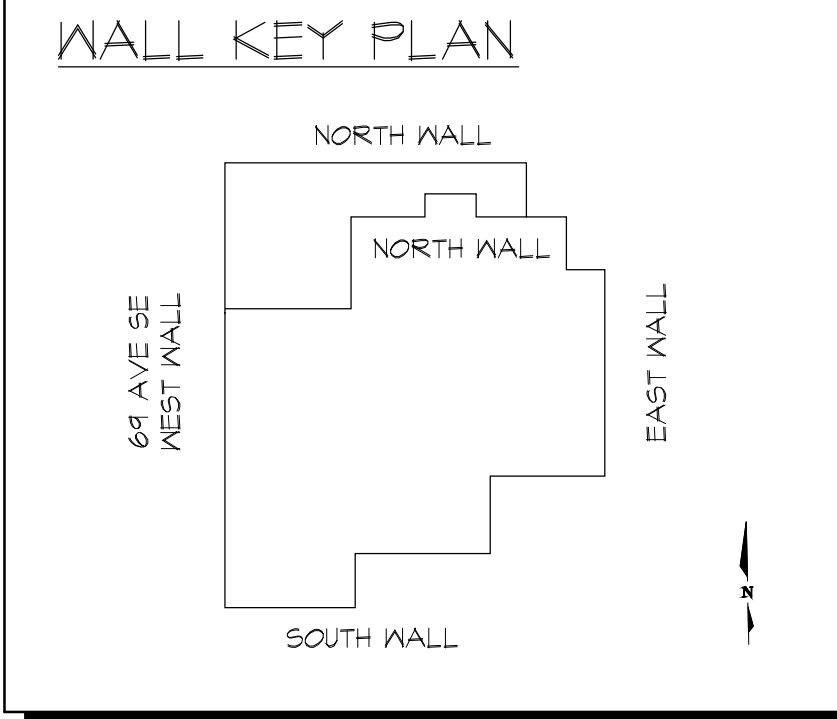
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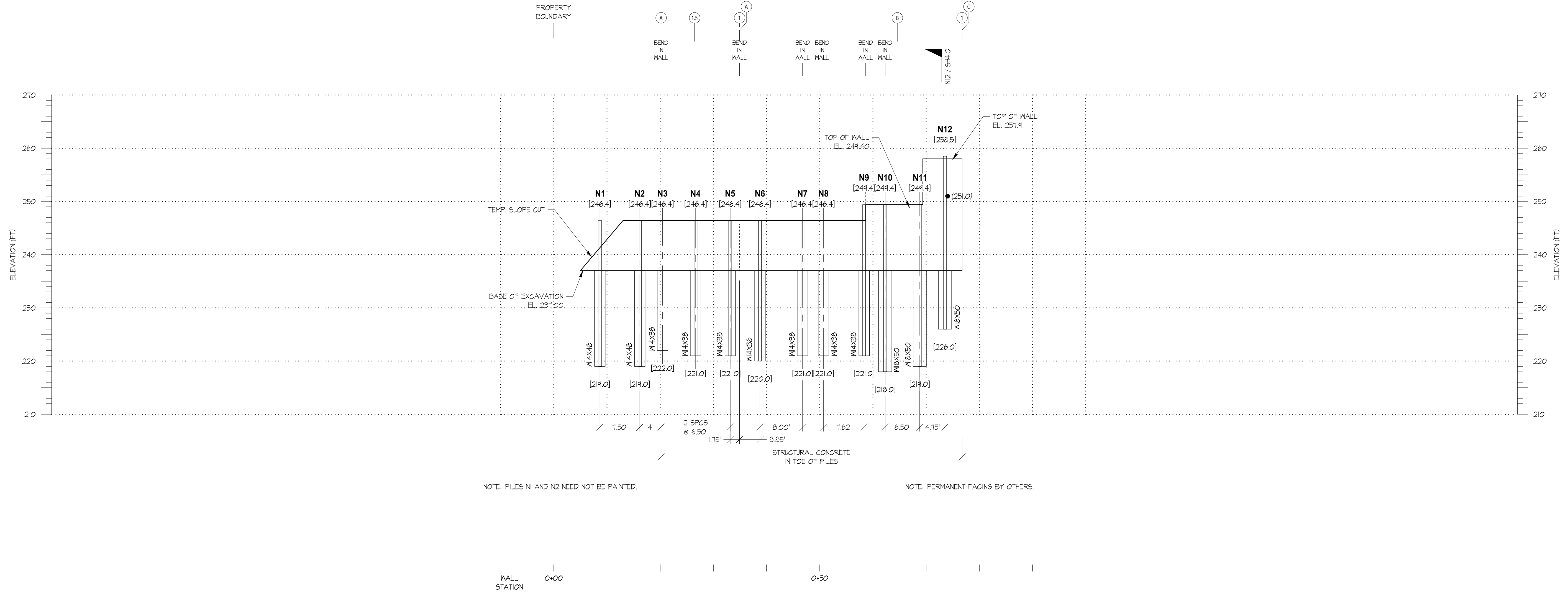
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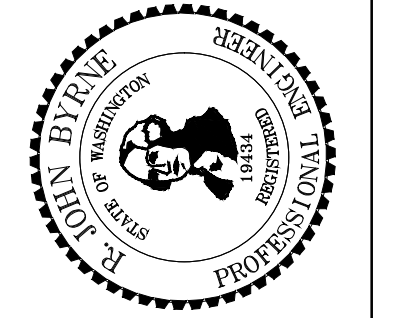
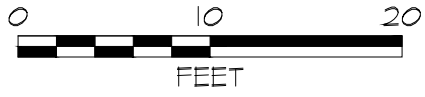
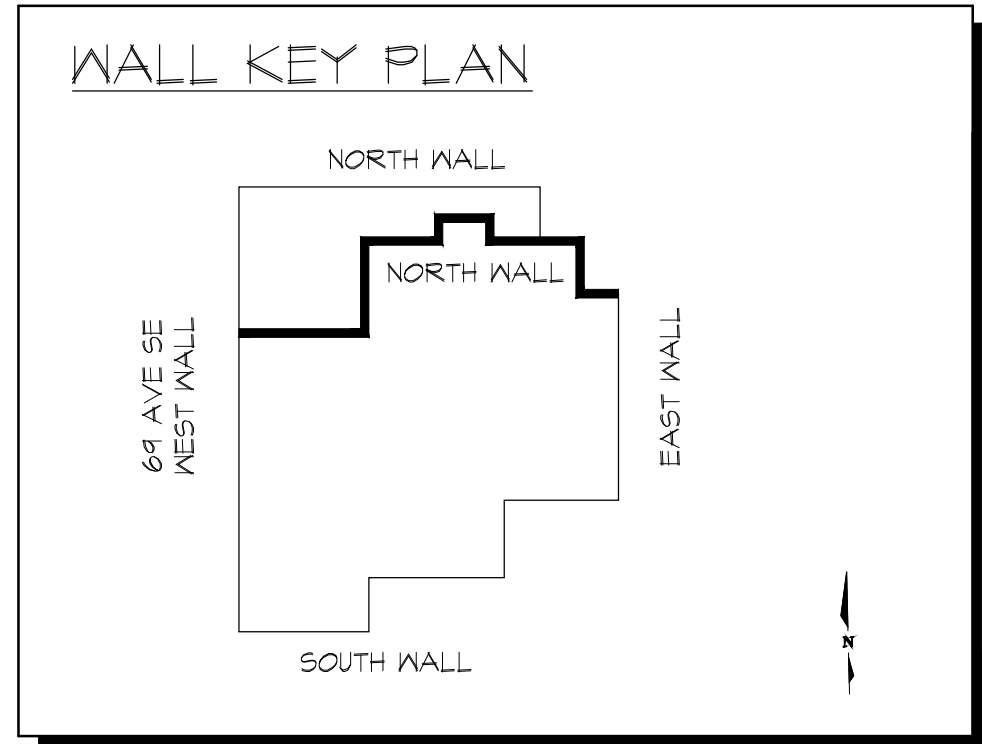
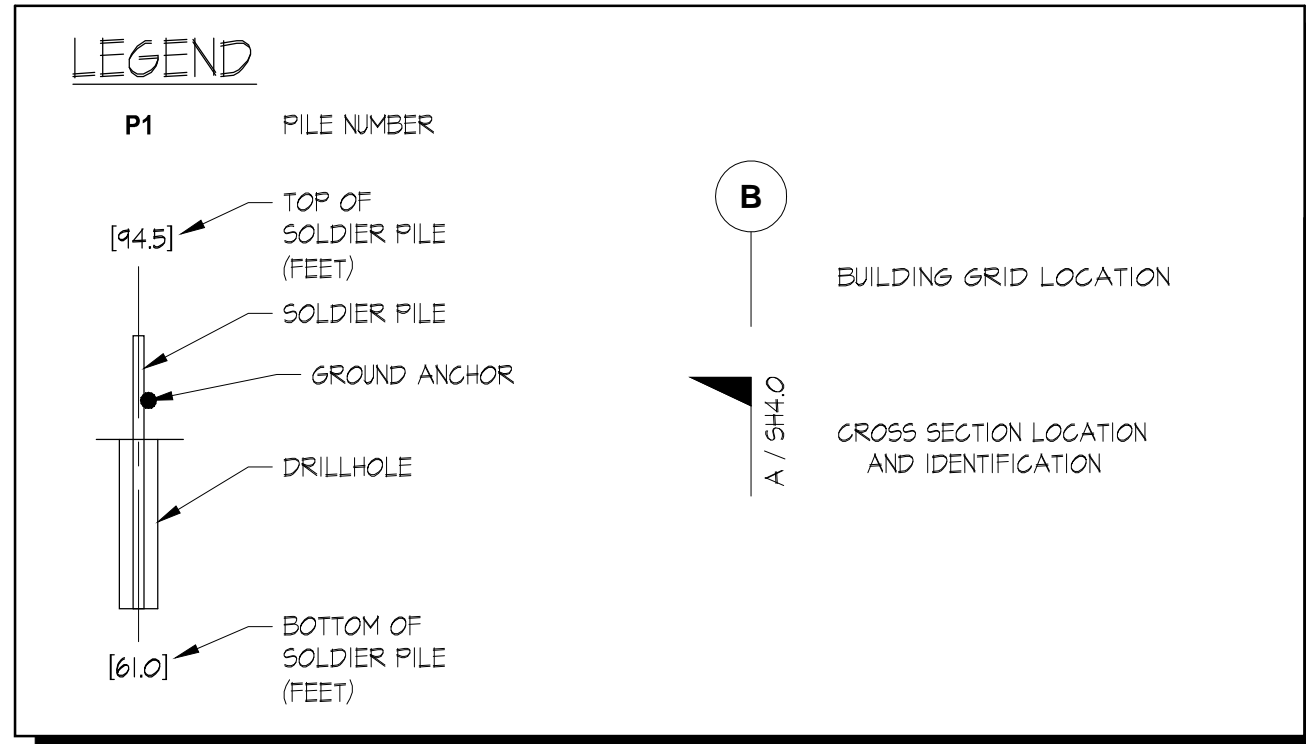
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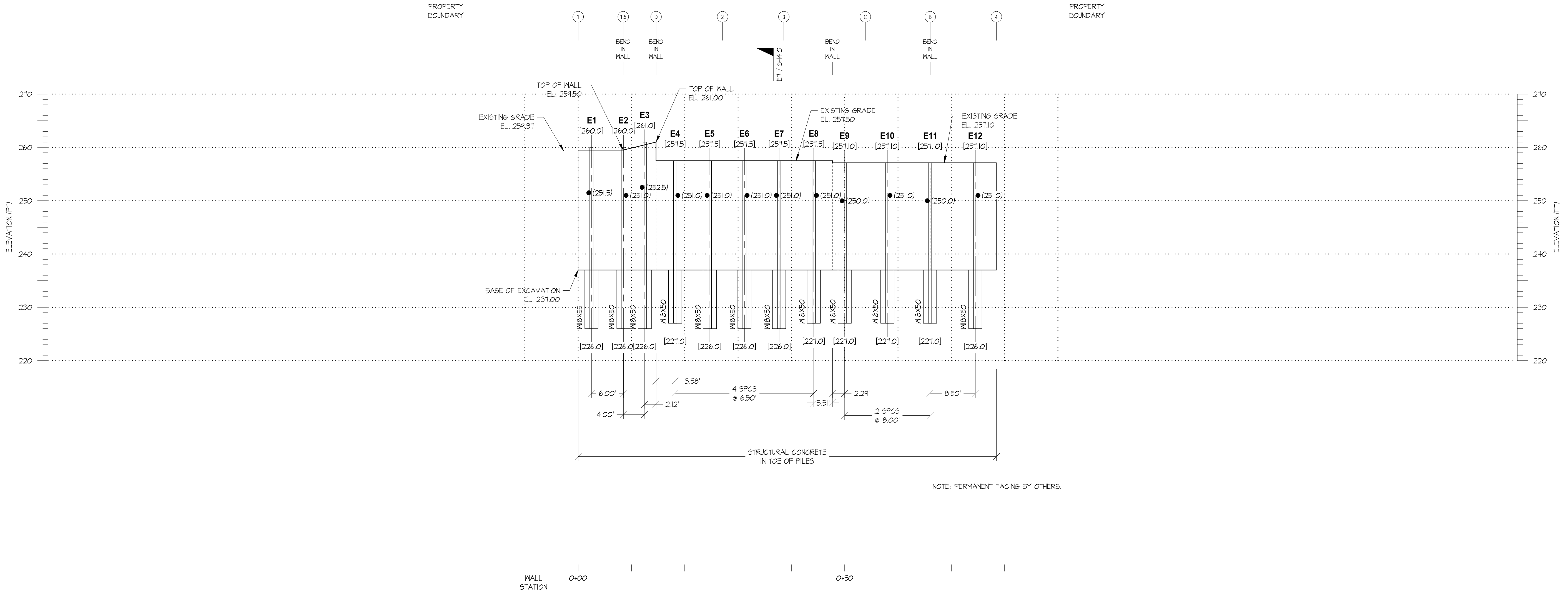
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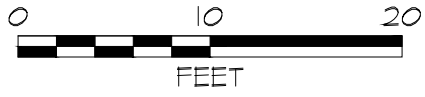
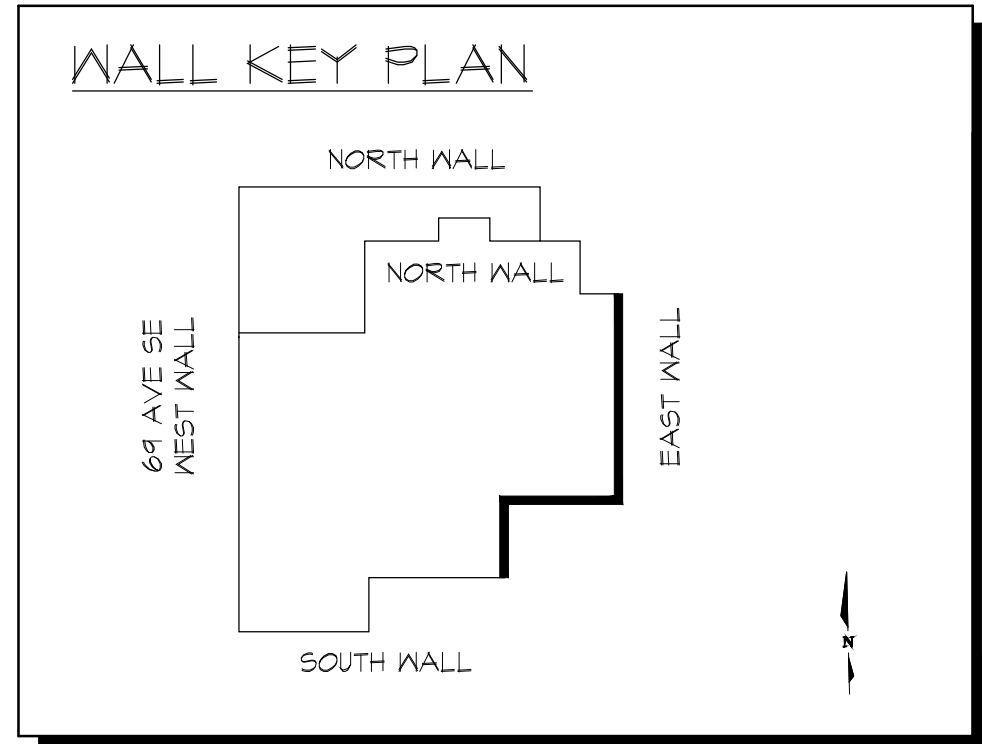
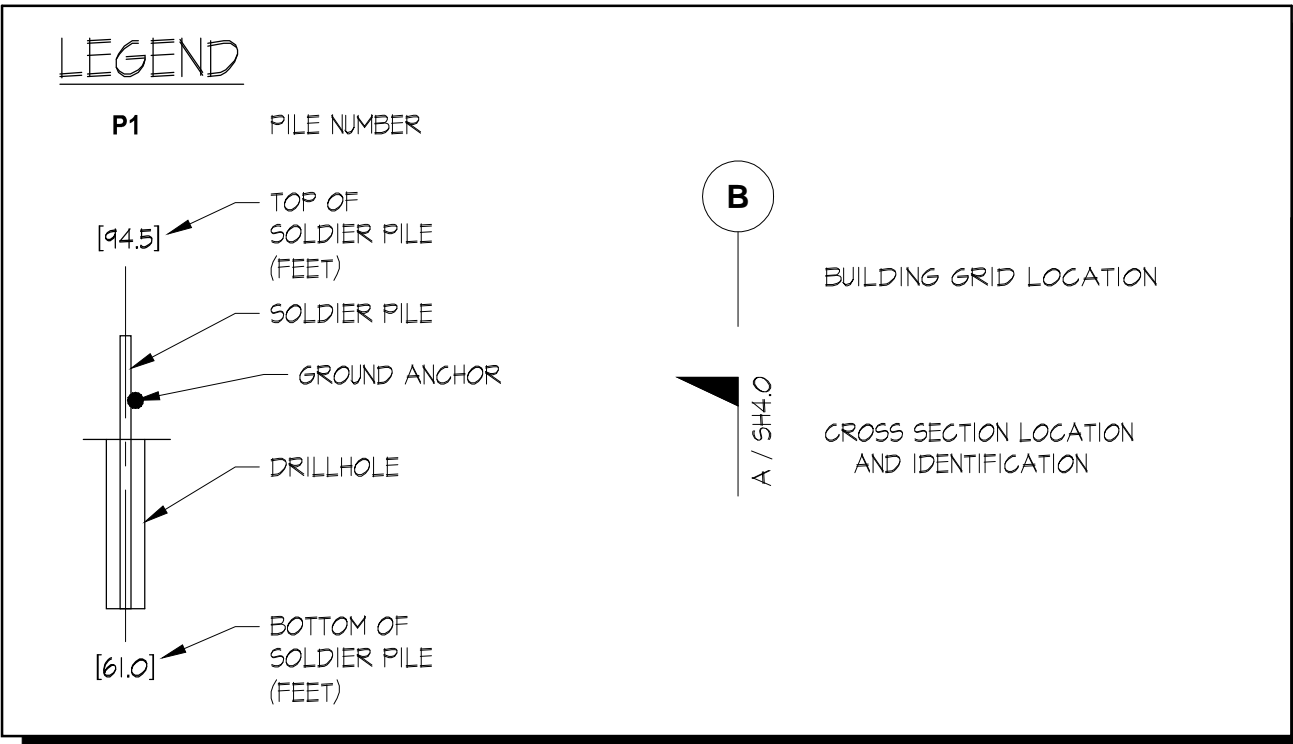
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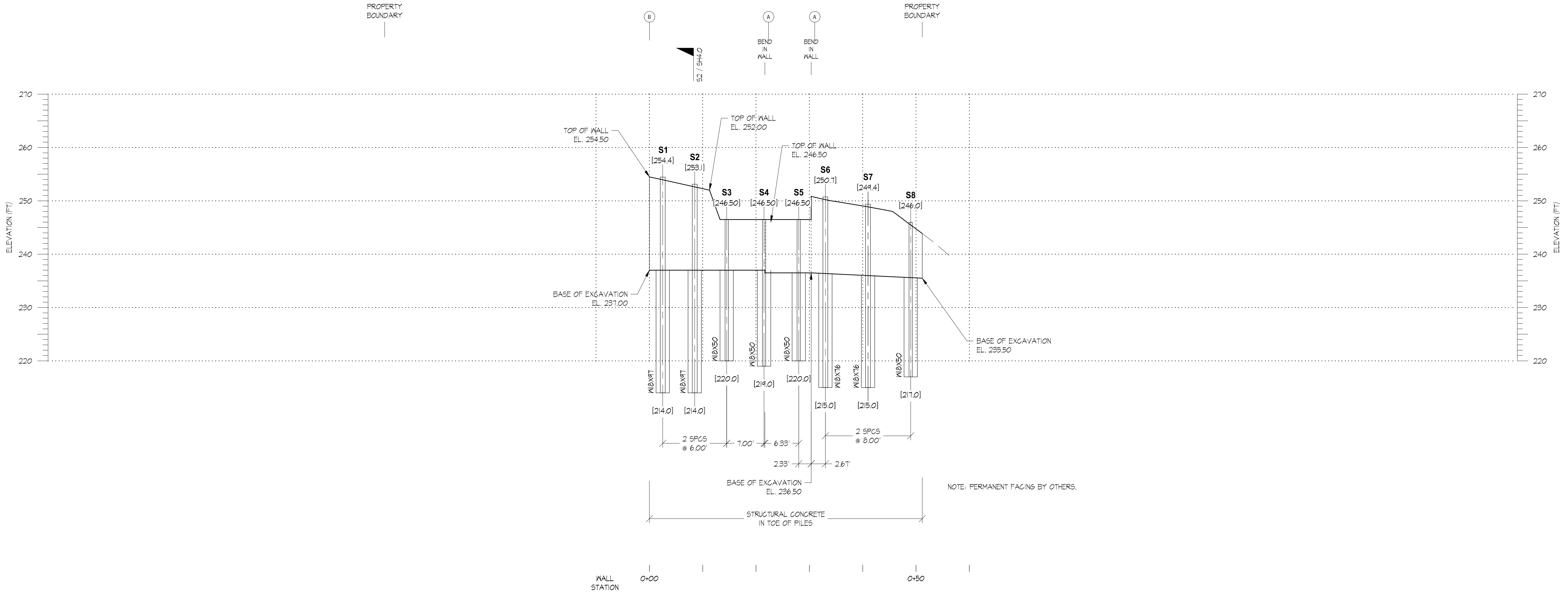
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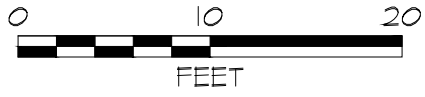
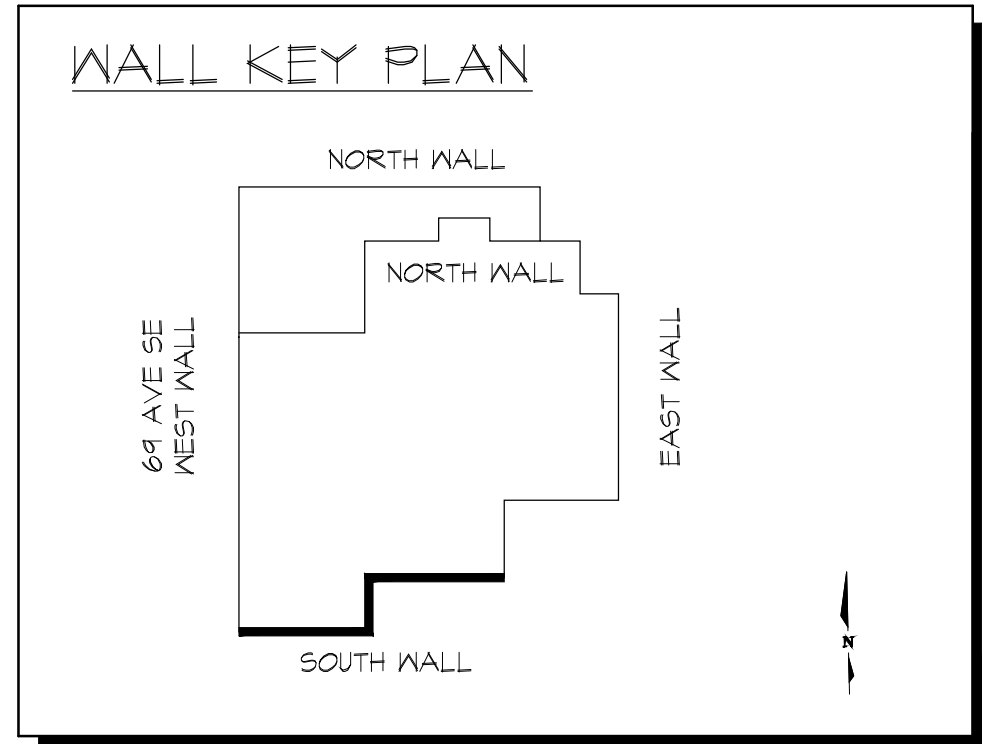
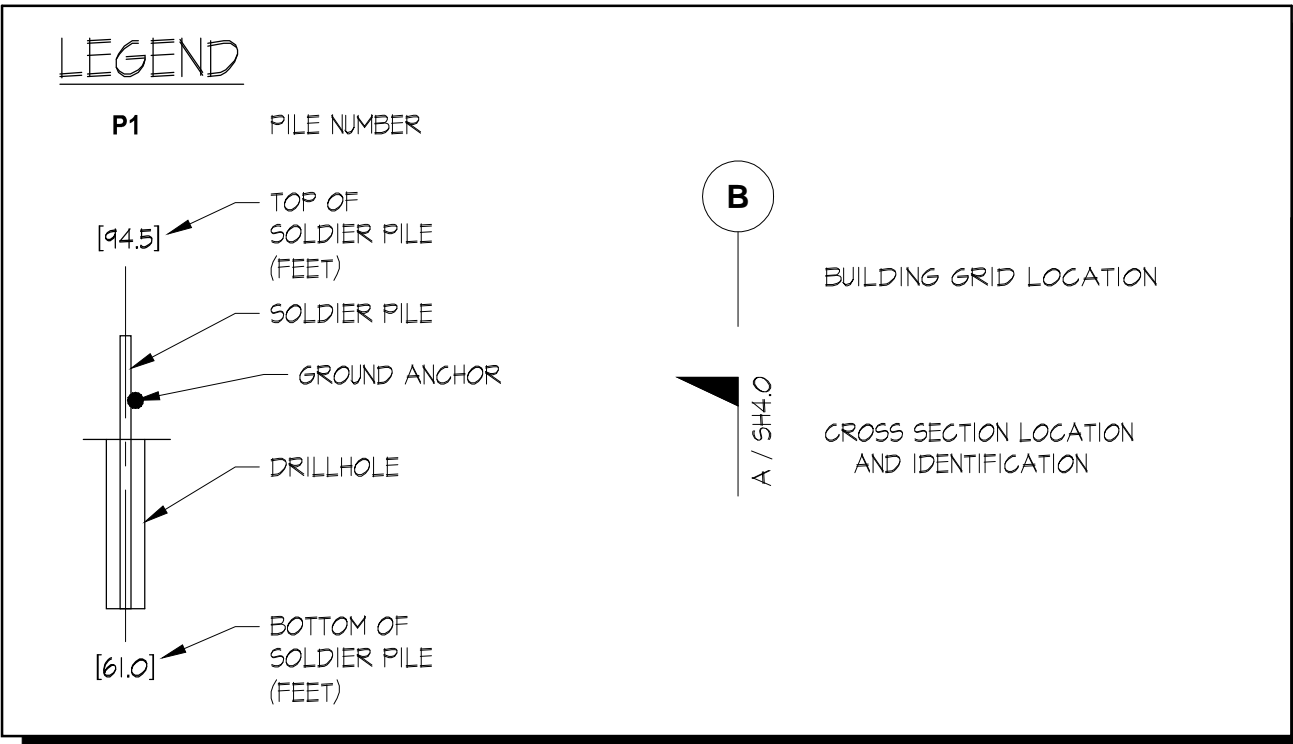
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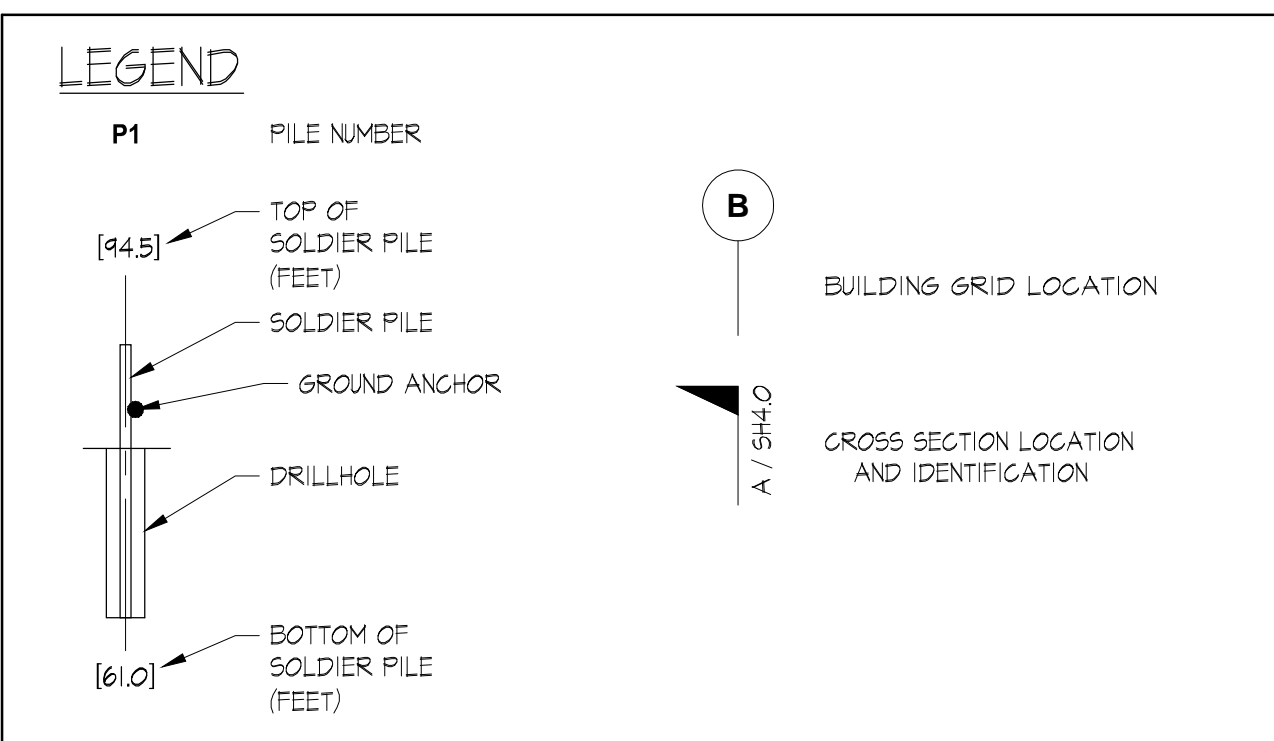
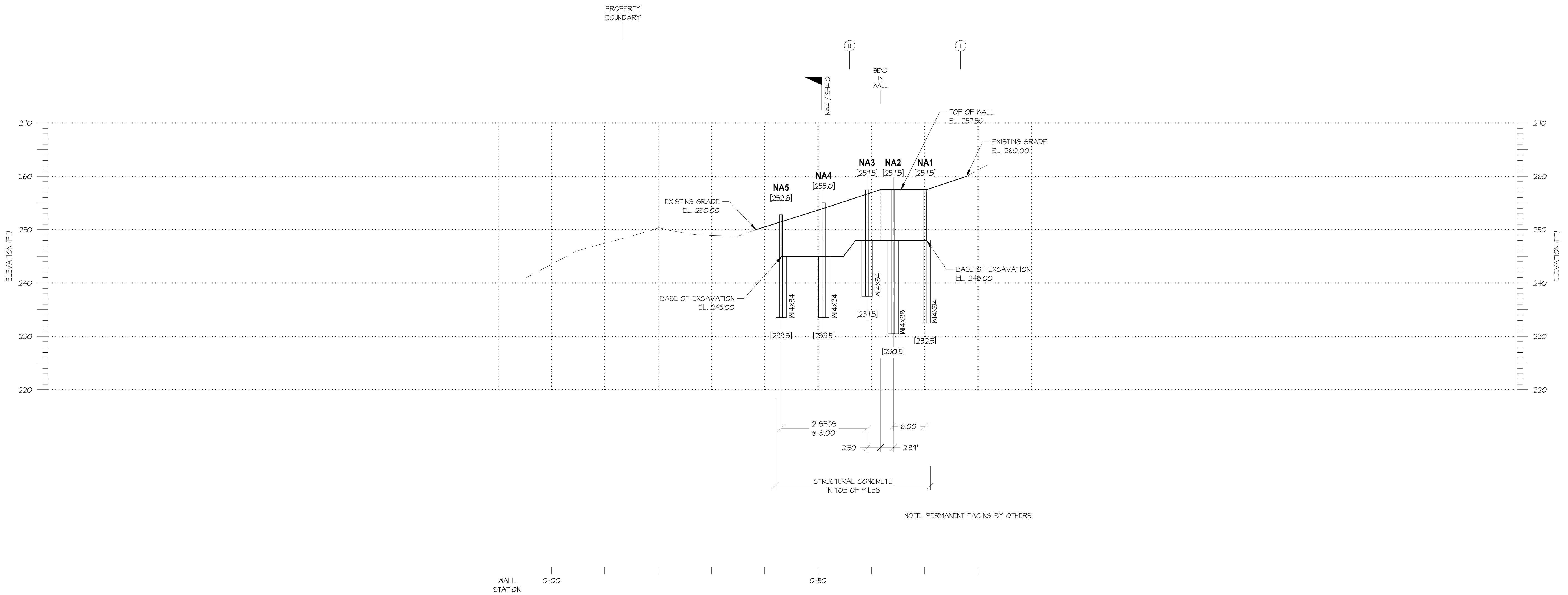
Hu RESIDENCE
 TEMPORARY SHORING WALL
 SOUTH ELEVATION

PROJ. NO. 20-50
 SHEET NUMBER

SH3.2

REV	DATE	DESCRIPTION
0	01/18/2021	PERMIT ISSUE

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	DESCRIPTION	REV	DATE	PERMIT ISSUE
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Hu RESIDENCE

TEMPORARY SHORING WALL NORTH ELEVATION (PERIMETER)

PROJ. NO.	20-50
SHEET NUMBER	

SH3.3

F:\GROUND SUPPORT PLLC\2020\20-50 (HU RESIDENCE-WA)\SHORING\PERMITTING\02050\SH3\SH3.A-SH3.A.dwg - SH3.A.dwg - Printed: 1/18/2021 4:23 PM

NORTH - 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 I							
							ANCHOR ELEV (FT)	DECLINATION (DEG)	TOTAL LENGTH (FT)	UNBOND LENGTH (FT)	BOND LENGTH (FT)	NO. STRANDS OR 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	W4X36	246.4	222.0	24.4	2.0	-	-	-	-	-	-	-	-
N4	0+26.0	W4X36	246.4	221.0	25.4	2.0	-	-	-	-	-	-	-	-
N5	0+32.5	W4X36	246.4	221.0	25.4	2.0	-	-	-	-	-	-	-	-
N6	0+38.1	W4X36	246.4	220.0	26.4	2.0	-	-	-	-	-	-	-	-
N7	0+46.1	W4X36	246.4	221.0	25.4	2.0	-	-	-	-	-	-	-	-
N8	0+50.7	W4X36	246.4	221.0	25.4	2.0	-	-	-	-	-	-	-	-
N9	0+58.3	W4X36	244.4	221.0	23.4	2.0	-	-	-	-	-	-	-	-
N10	0+61.5	W8X50	244.4	218.0	31.4	2.5	-	-	-	-	-	-	-	-
N11	0+68.0	W8X50	244.4	219.0	30.4	2.5	-	-	-	-	-	-	-	-
N12	0+72.8	W8X50	258.5	226.0	32.5	2.5	251.0	45.0	34.0	11.0	23.0	1-inch	70.0	70.0

EAST - PILE AND ANCHOR SCHEDULE

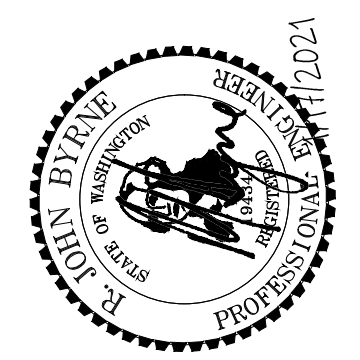
PILE NUMBER	WALL STA	STEEL SECTION	PILE TOP ELEV (FT)	PILE BOT ELEV (FT)	PILE LENGTH (FT)	MIN. DRILL-HOLE DIA (FT)	ANCHOR I							
							ANCHOR ELEV (FT)	DECLINATION (DEG)	TOTAL LENGTH (FT)	UNBOND LENGTH (FT)	BOND LENGTH (FT)	NO. STRANDS OR BAR SIZE	DESIGN LOAD (K)	LOCKOFF LOAD (K)
E1	0+02.5	W8X55	260.0	226.0	34.0	2.5	251.5	45.0	40.0	12.5	27.5	1-1/4-inch	80.0	80.0
E2	0+08.5	W8X50	260.0	226.0	34.0	2.5	251.0	20.0	32.5	12.5	20.0	1-inch	60.0	60.0
E3	0+12.5	W8X50	261.0	226.0	35.0	2.5	252.5	20.0	30.0	13.0	17.0	No. 10	50.0	50.0
E4	0+18.2	W8X50	258.0	221.0	31.0	2.5	251.0	45.0	36.0	11.0	25.0	1-inch	75.0	75.0
E5	0+24.7	W8X50	258.0	226.0	32.0	2.5	251.0	45.0	37.5	11.0	26.5	1-1/4-inch	80.0	80.0
E6	0+31.2	W8X50	258.0	226.0	32.0	2.5	251.0	45.0	37.5	11.0	26.5	1-1/4-inch	80.0	80.0
E7	0+37.7	W8X50	258.0	226.0	32.0	2.5	251.0	35.0	34.0	11.0	23.0	1-inch	70.0	70.0
E8	0+44.2	W8X50	258.0	221.0	31.0	2.5	251.0	20.0	30.0	11.5	18.5	No. 10	55.0	55.0
E9	0+50.0	W8X50	257.1	221.0	31.0	2.5	250.0	40.0	32.0	10.0	22.0	1-inch	65.0	65.0
E10	0+58.0	W8X50	257.1	221.0	31.0	2.5	251.0	35.0	32.5	10.5	22.0	1-inch	65.0	65.0
E11	0+66.0	W8X50	257.1	221.0	31.0	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	257.1	226.0	32.0	2.5	251.0	20.0	32.5	12.5	20.0	1-inch	60.0	60.0

SOUTH - 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	W8X47	254.4	214.0	40.4	2.5
S2	0+08.5	W8X47	253.1	214.0	39.1	2.5
S3	0+14.5	W8X50	246.5	220.0	27.0	2.5
S4	0+21.5	W8X50	246.5	219.0	28.0	2.5
S5	0+28.0	W8X50	246.5	220.0	27.0	2.5
S6	0+33.0	W8X16	250.7	215.0	35.7	2.5
S7	0+41.0	W8X16	244.4	215.0	34.4	2.5
S8	0+49.0	W8X50	246.0	217.0	29.0	2.5

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	232.5	25.0	2.0
NA2	0+64.1	W4X36	257.5	230.5	27.0	2.0
NA3	0+59.2	W4X34	257.5	237.5	20.0	2.0
NA4	0+51.1	W4X34	255.0	233.5	21.5	2.0
NA5	0+43.1	W4X34	252.8	233.5	19.3	2.0



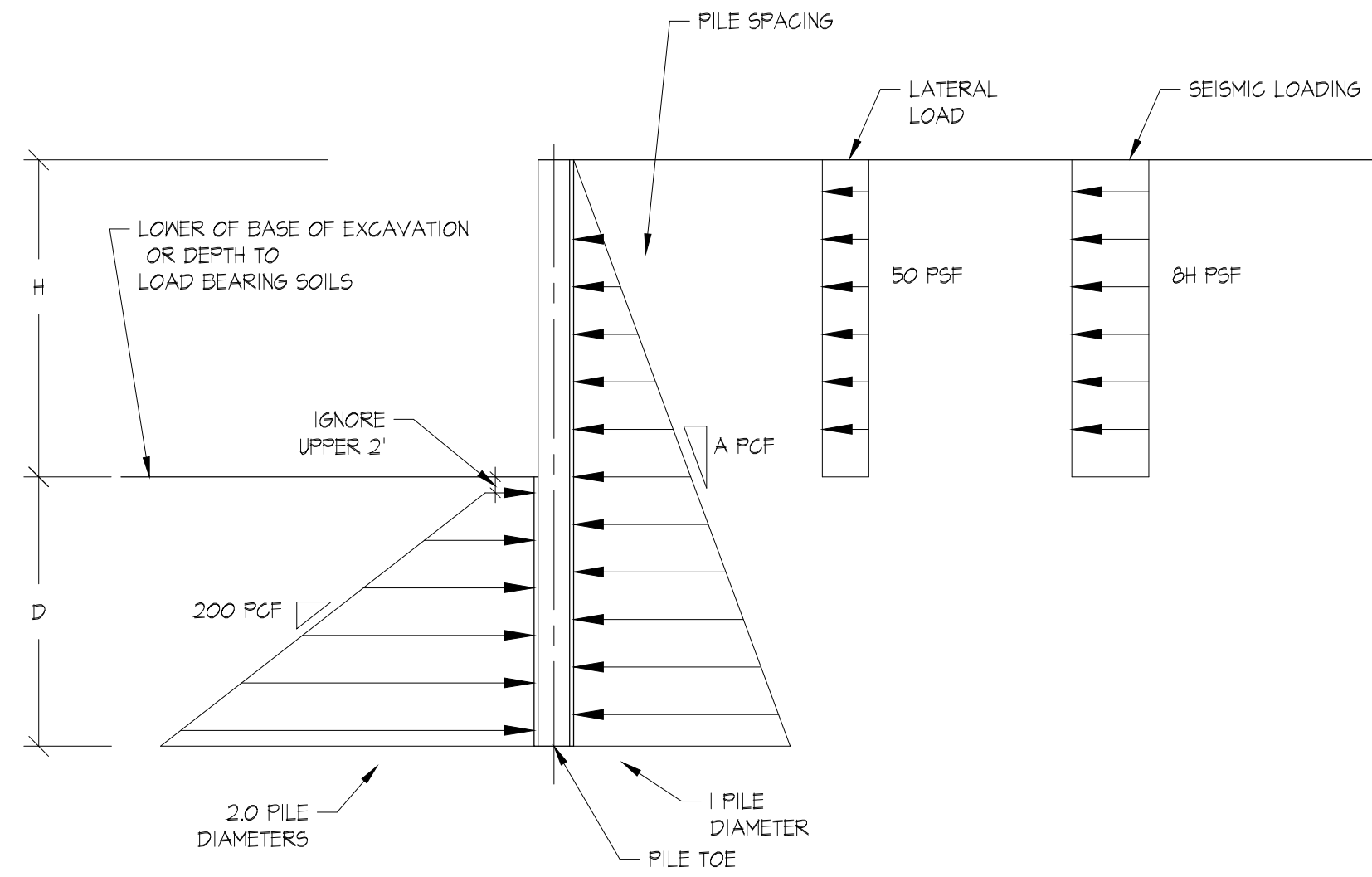
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Hu RESIDENCE
 TEMPORARY SHORING WALL
 PILE AND ANCHOR SCHEDULE

PROJ. NO. 20-50
 SHEET NUMBER

SH3.A

REV	DATE	DESCRIPTION
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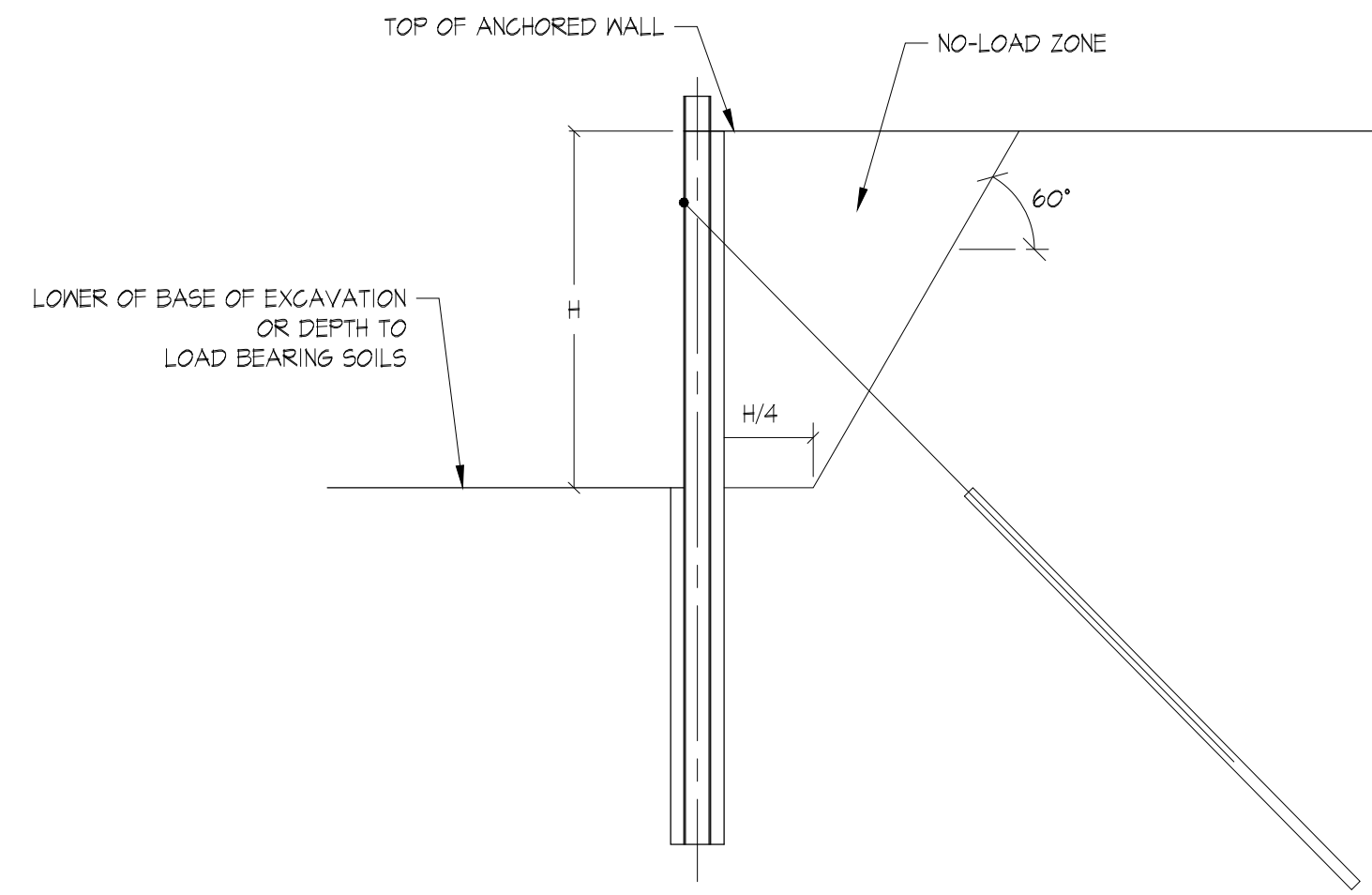


NOTE:

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

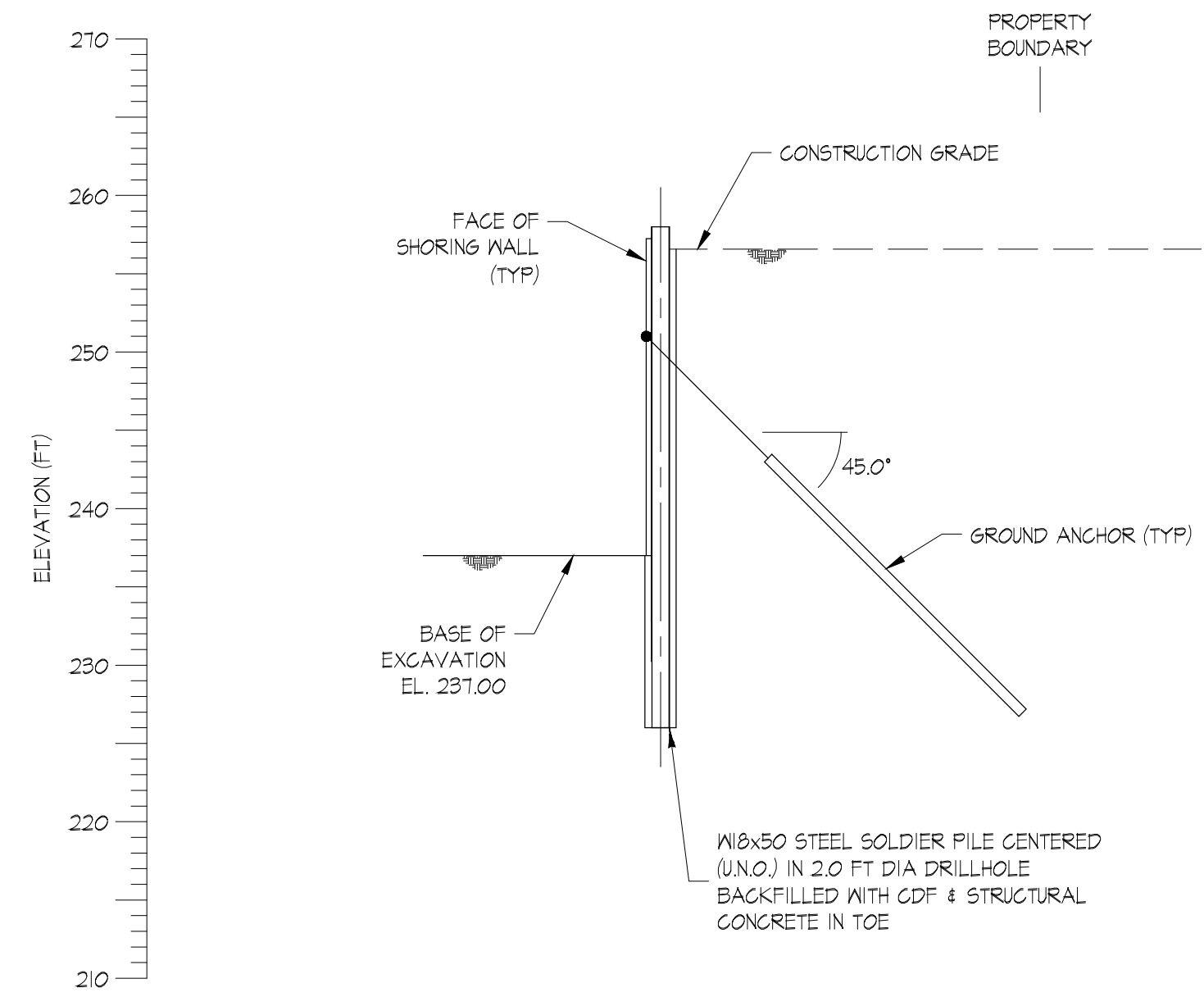
PILE TOE
 ALLOWABLE END BEARING, $q_p = 20 \text{ KSF}$;
 ALLOWABLE SKIN FRICTION, $f_a = 1.0 \text{ KSF}$

PILES	'A' (PCF)
E1, E2, E4-E8	50
NA1, NA2	50
ALL OTHERS	40

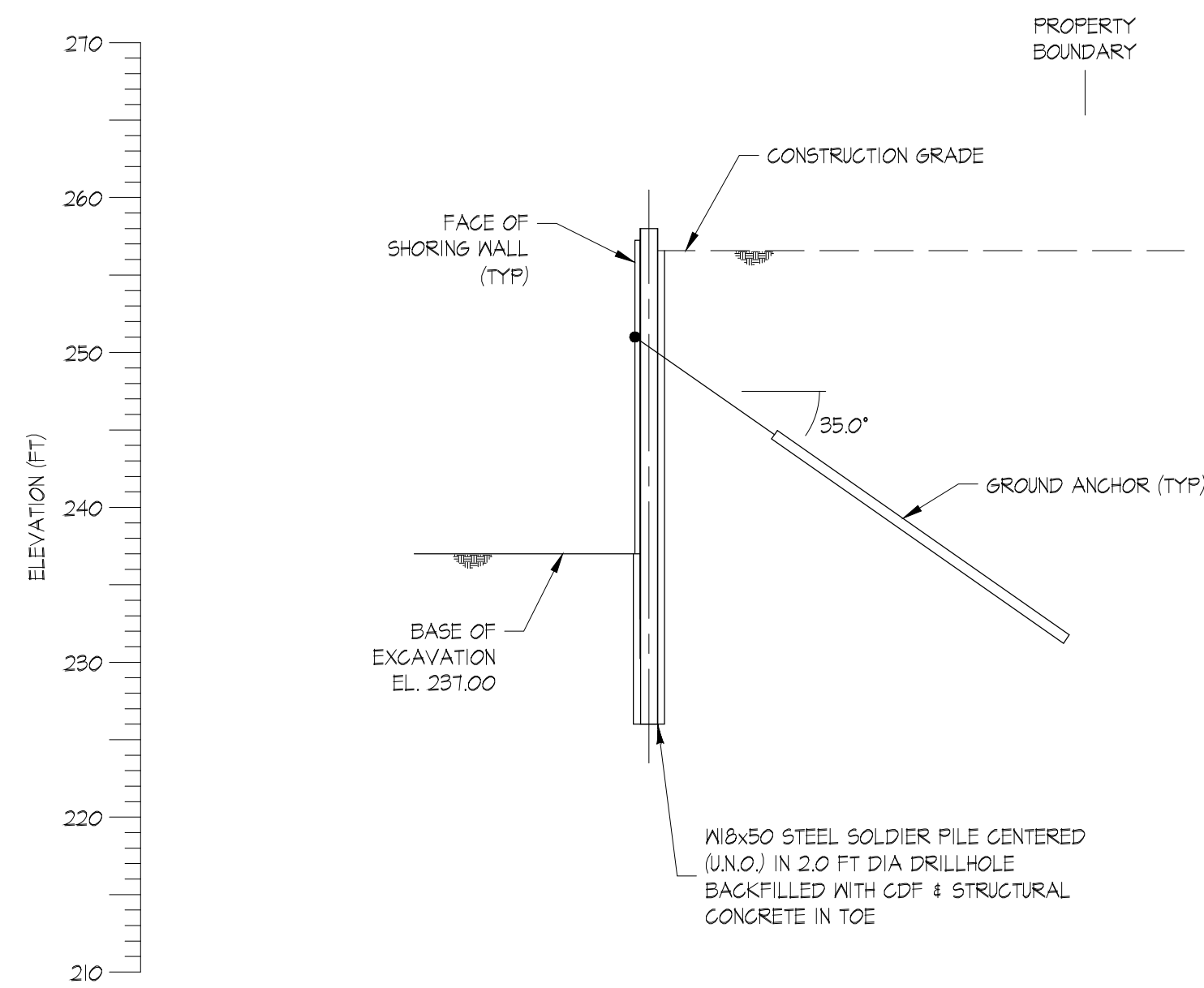


1 WALL PRESSURE DIAGRAM
 SOLDIER PILE WALLS
 SH4.0 NOT TO SCALE

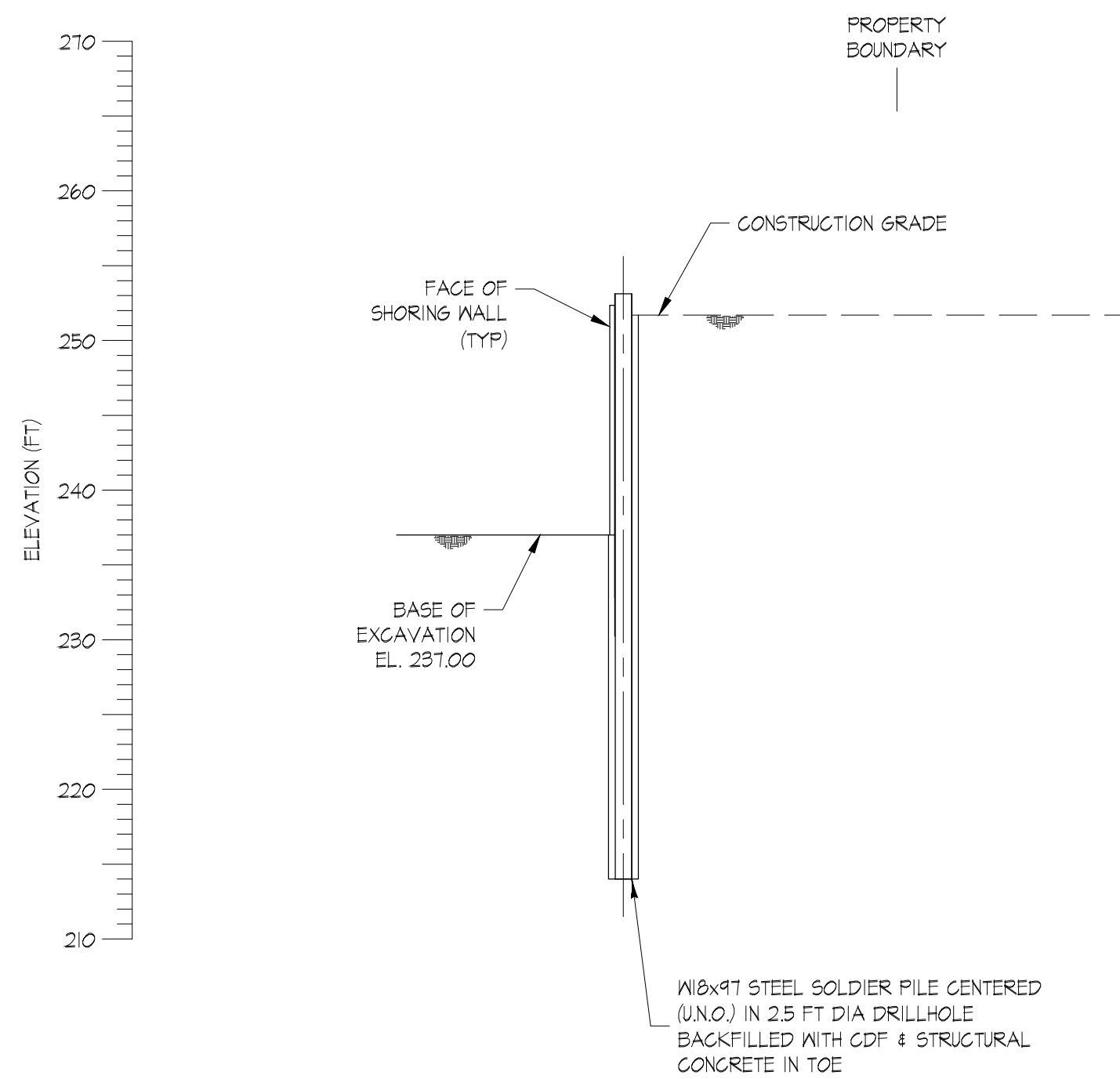
2 NO-LOAD ZONE
 SH4.0 NOT TO SCALE



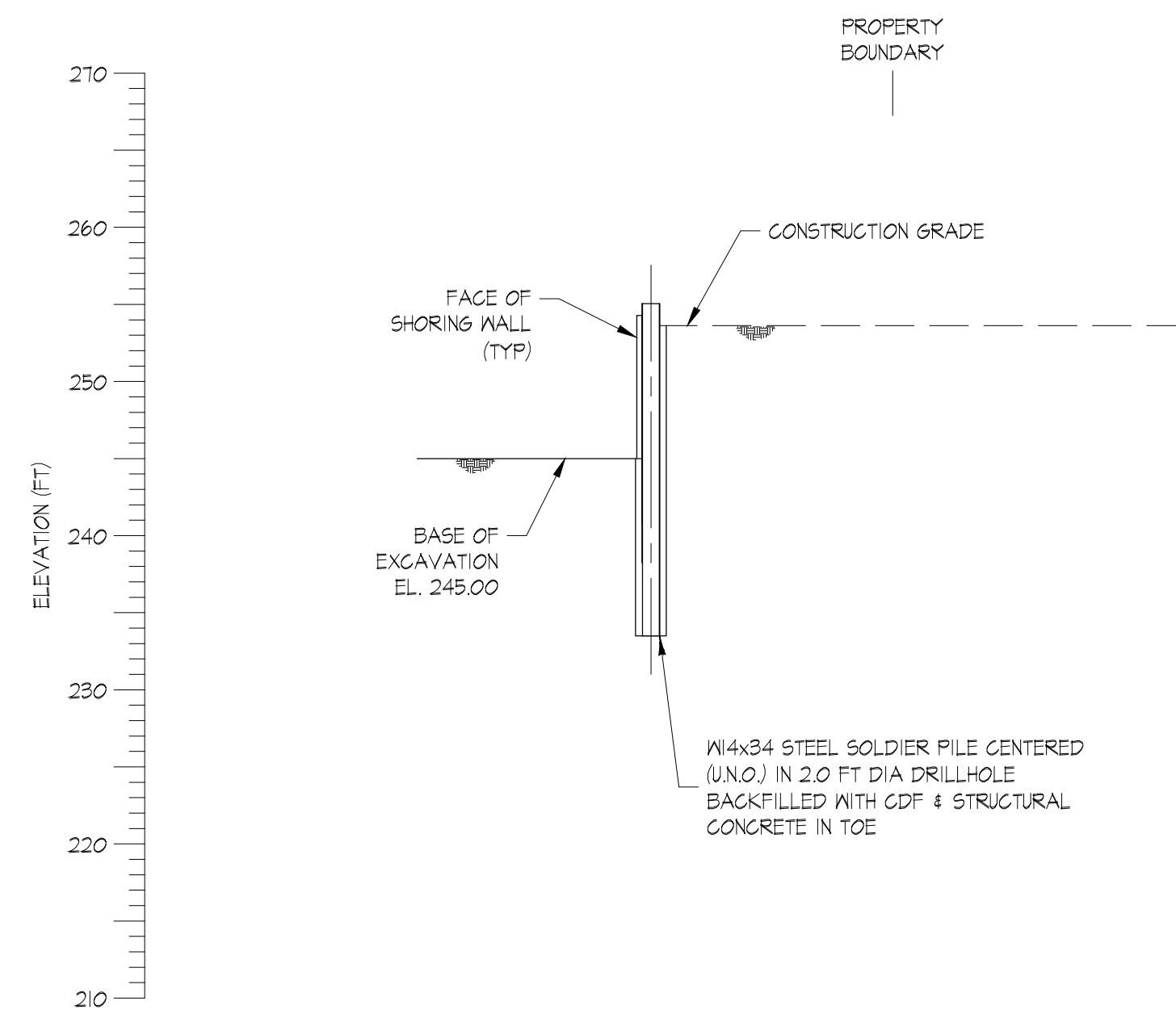
N12 NORTH WALL CROSS-SECTION
 AT PILE N12
 SH4.0
 0 10 FEET



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



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



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

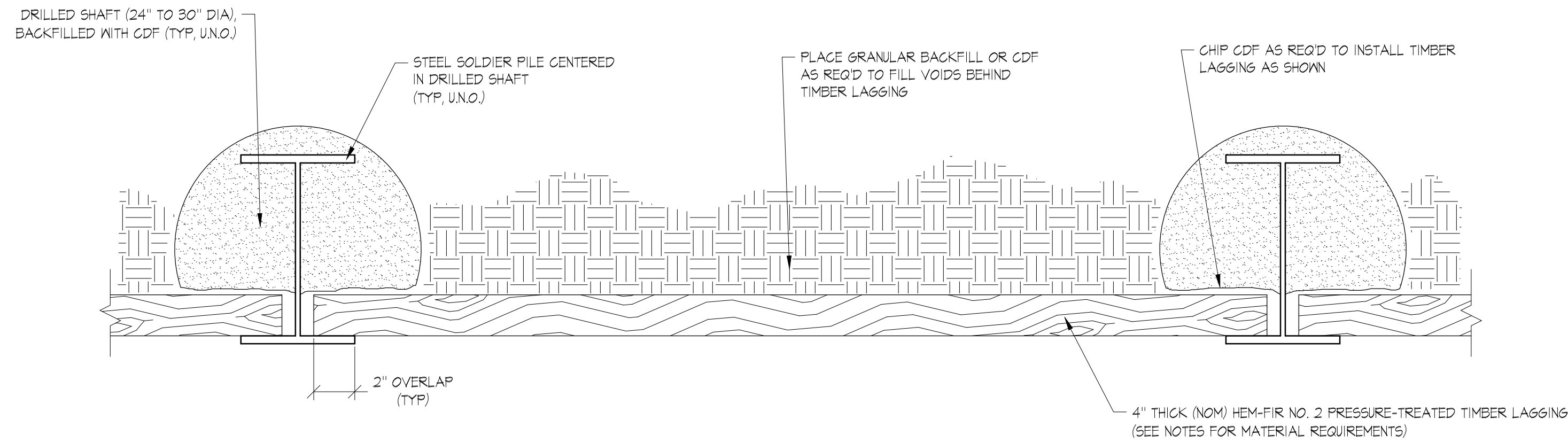
FIGROUND SUPPORT PLLC 2020-20-50 (HU RESIDENCE-WA)(SHORING)(PERMITTING)R01202050SH04A0.DWG -SH4.0- Printed: 1/18/2021 4:30 PM

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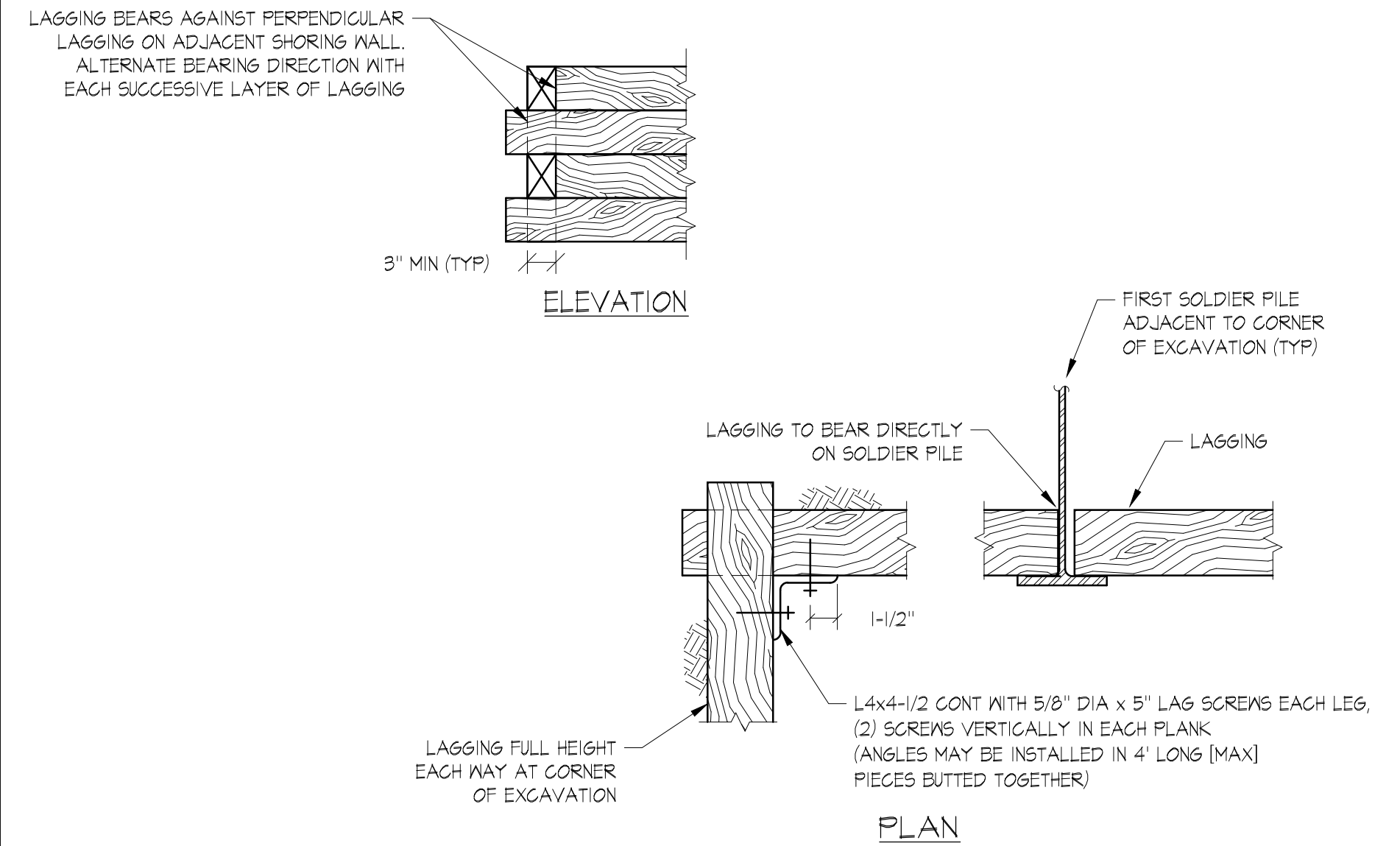
Hu RESIDENCE
TEMPORARY SHORING WALL
CROSS-SECTIONS

PROJ. NO. 20-50
 SHEET NUMBER
SH4.0



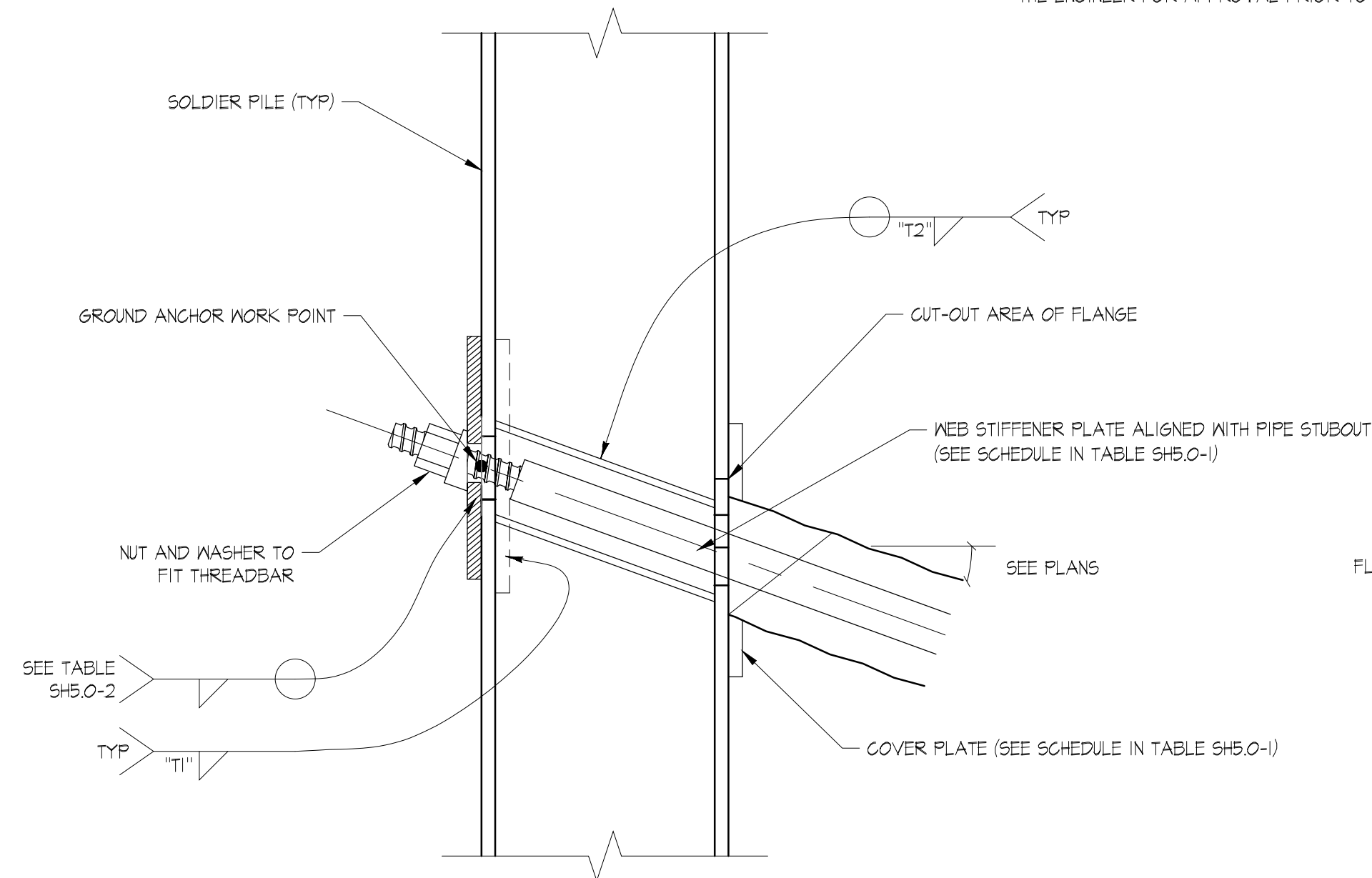
1 PILE / SHAFT / LAGGING DETAIL
SH5.0 NOT TO SCALE

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

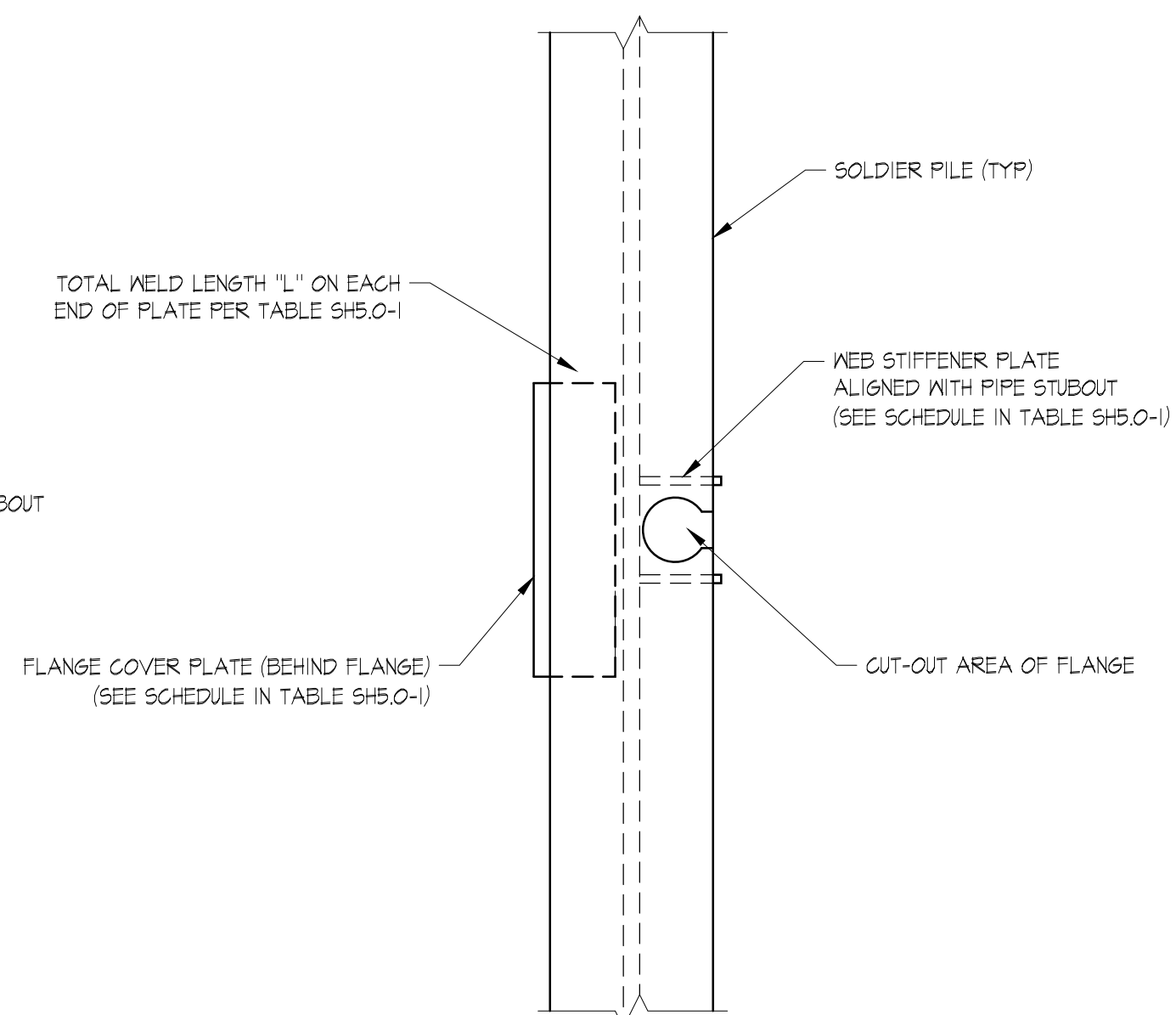


4 TYPICAL INTERIOR CORNER LAGGING SUPPORT DETAIL
SH5.0 NOT TO SCALE

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.



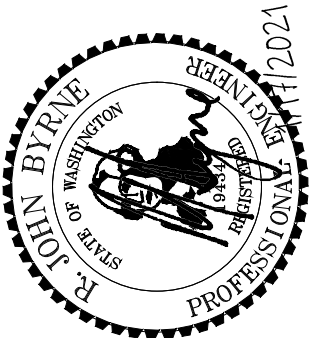
2 ANCHOR TO PILE CONNECTION DETAIL (SIDE VIEW)
SH5.0 NOT TO SCALE



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

ANCHOR LOAD (KIPS)	PILE SECTION	GRADE 36 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)
80	W18x50	3/4 x 4 x 30	14 1/2	5/16	1/2 x 4 x 16	1/4
80	W18x55	3/4 x 4 x 33	16	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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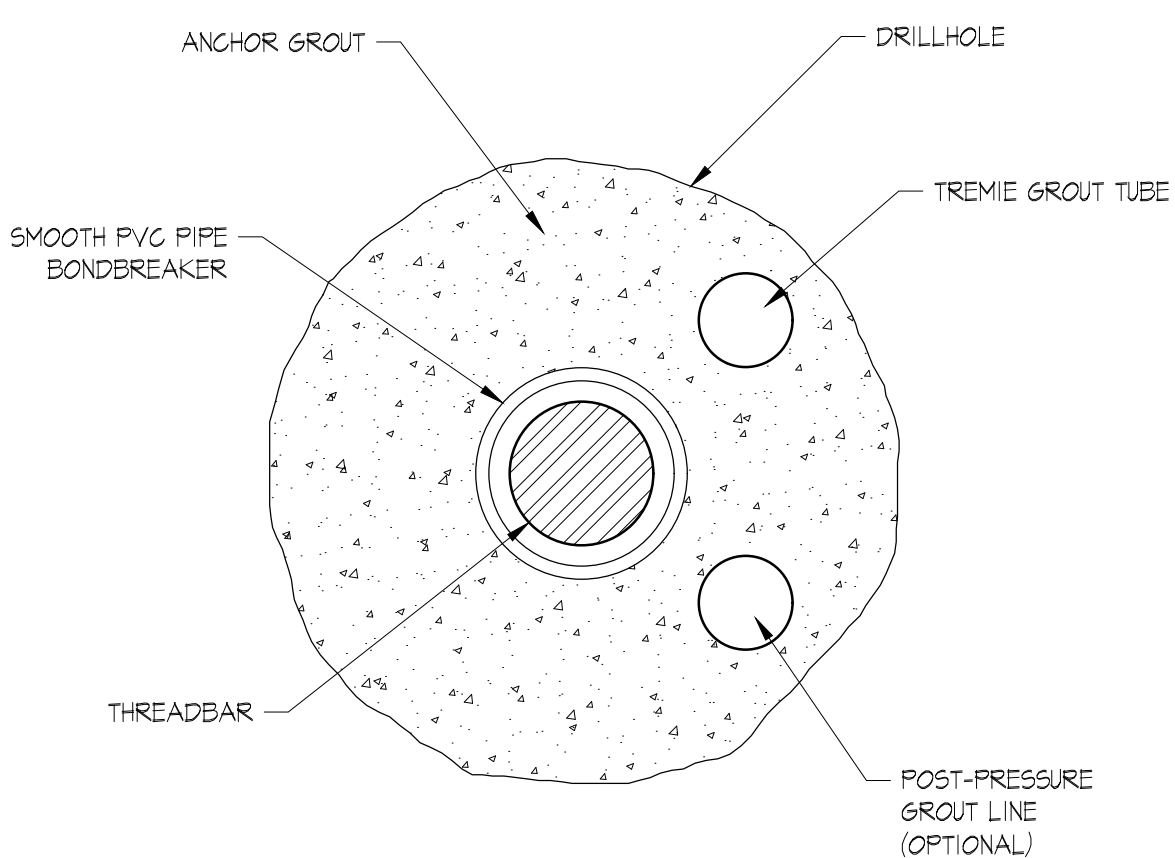
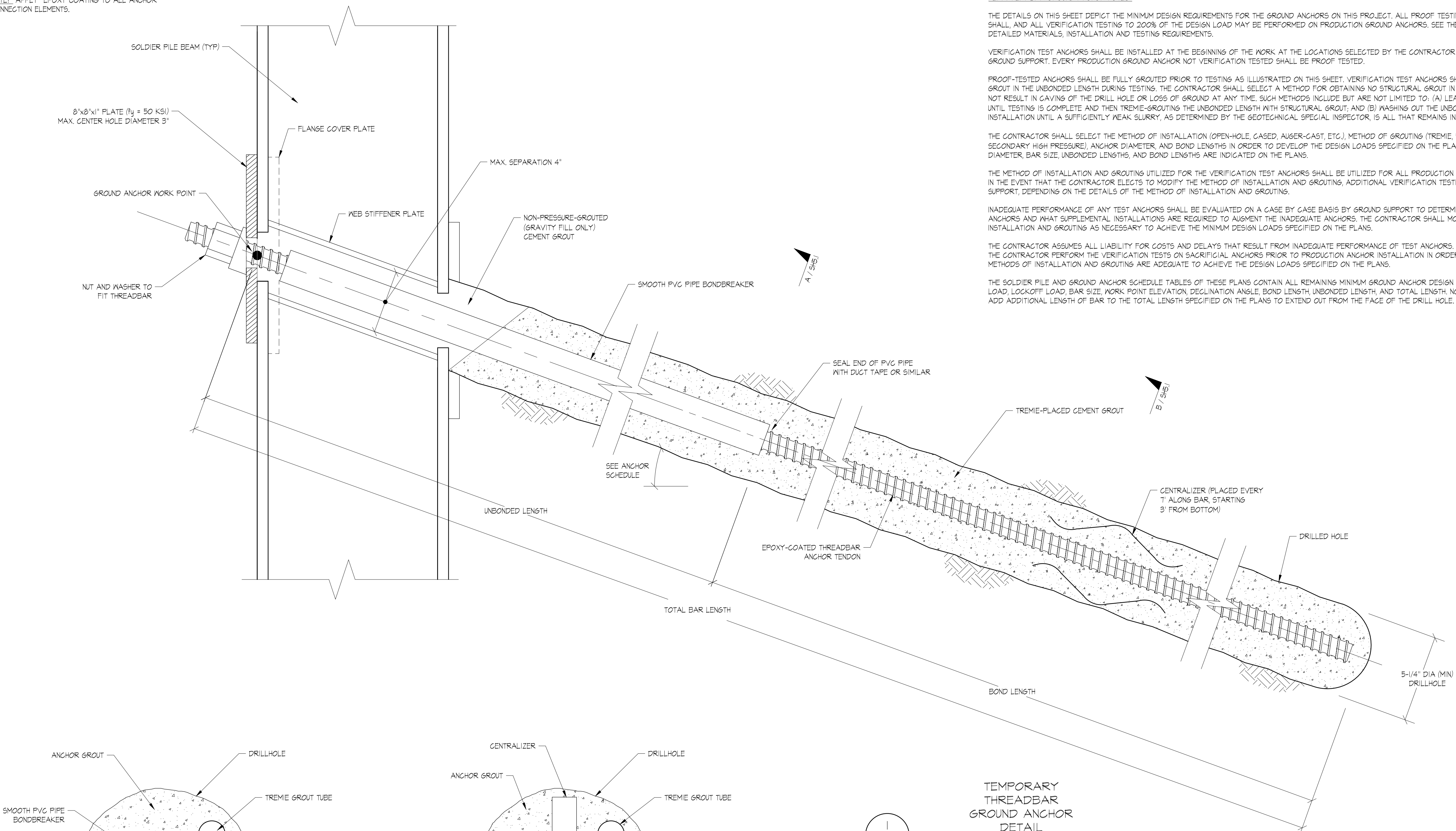
Hu RESIDENCE
**TEMPORARY SHORING WALL
DETAILS**

PROJ. NO. 20-50

SHEET NUMBER

SH5.0

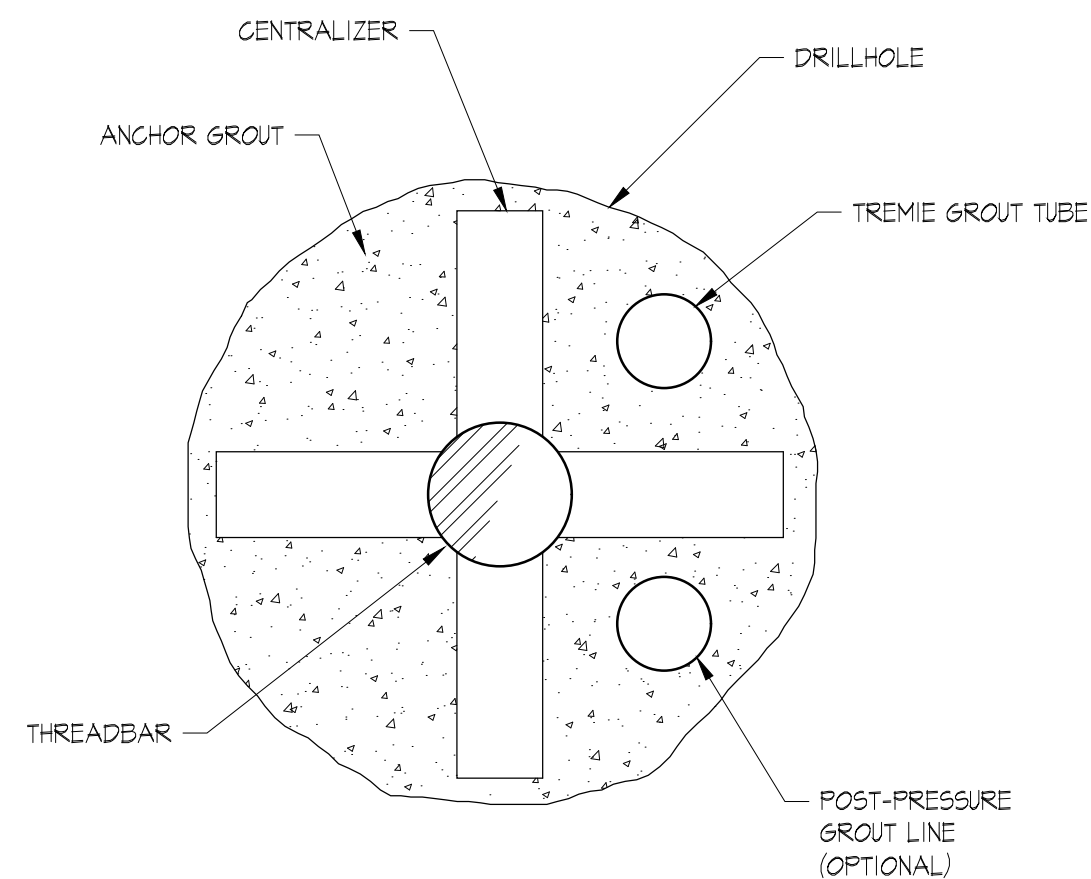
NOTE: APPLY EPOXY COATING TO ALL ANCHOR CONNECTION ELEMENTS.



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 SH1.1 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 GROUT 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.

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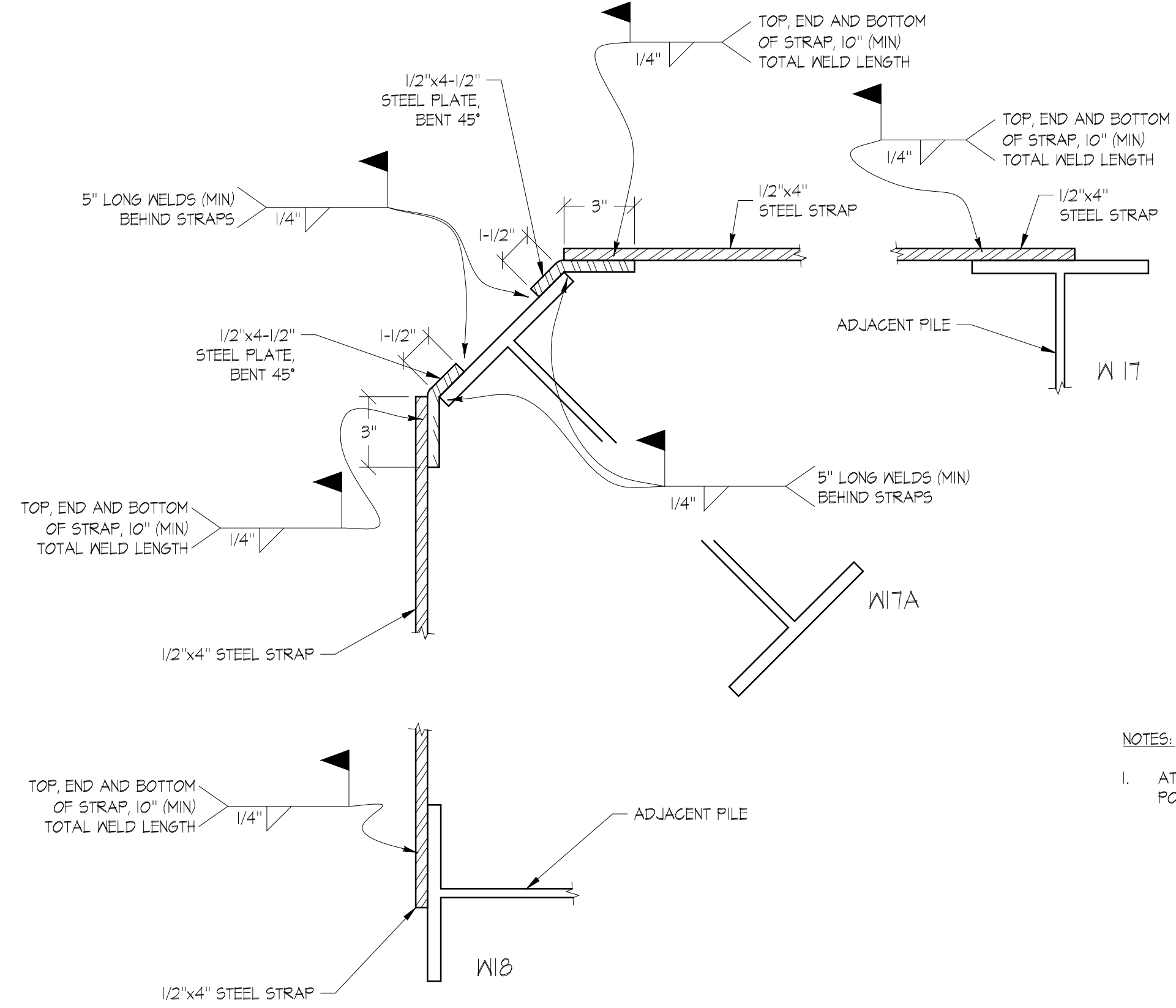
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Hu RESIDENCE
**TEMPORARY SHORING WALL
 DETAILS**

PROJ. NO. 20-50
 SHEET NUMBER

SH5.1

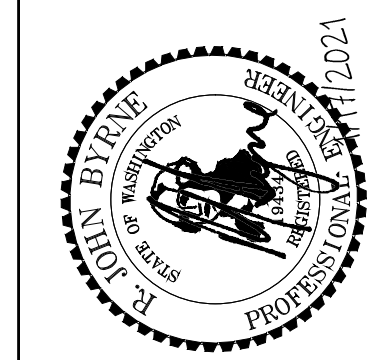
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NOTES:
 1. ATTACH STRAPS IN A LEVEL POSITION.

STRAP ATTACHMENT DETAIL
 AT PILE W17A
 SH5.2
 NOT TO SCALE

PSN	PRG	CHK	DATE	REV	DESCRIPTION
			01/18/2021	0	PERMIT ISSUE

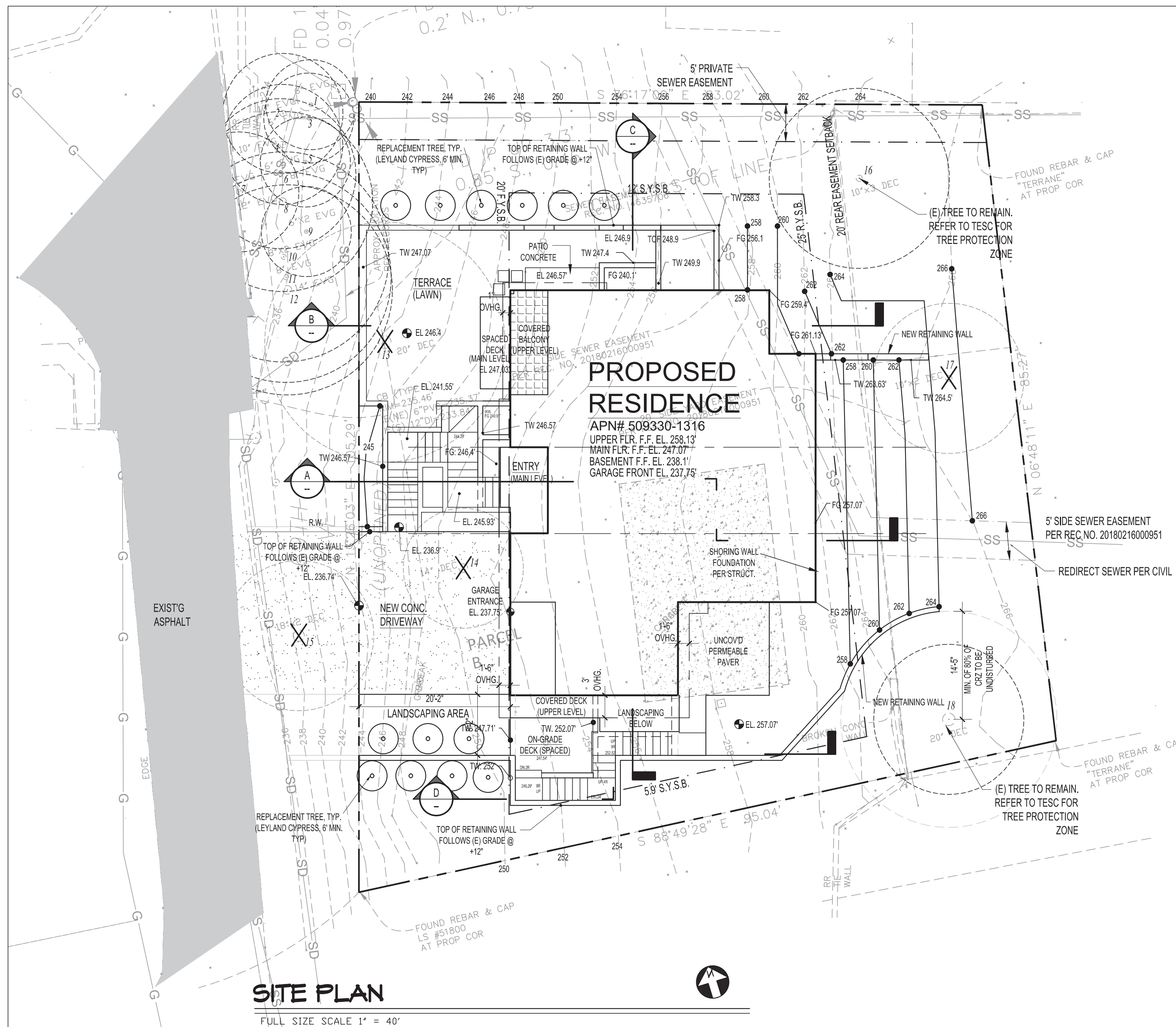


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Hu RESIDENCE
**TEMPORARY SHORING WALL
 DETAILS**

PROJ. NO. 20-50
 SHEET NUMBER

SH5.2



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

SIDE YARD SETBACKS:
 105.29 * 17% = 17.9 FEET TOTAL
 17.9' x 33% = 5.9' MIN. SIDE YARD S.B.

NORTH SIDE YARD S.B. = 12 FT
SOUTH SIDE YARD S.B. = 5.9 FT

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	6	GROVE-EXCEPTIONAL	RETAIN	FAIR-POOR	6	LEADER TOPPED
2	WESTERN RED CEDAR	10	GROVE-EXCEPTIONAL	RETAIN	FAIR-POOR	10	HEAVY LEANING
3	WESTERN RED CEDAR	8	GROVE-EXCEPTIONAL	RETAIN	FAIR-POOR	8	LEADER TOPPED
4	WESTERN RED CEDAR	10	GROVE-EXCEPTIONAL	RETAIN	FAIR-POOR	10	LEADER TOPPED
5	WESTERN RED CEDAR	7	GROVE-EXCEPTIONAL	RETAIN	FAIR-POOR	7	LEADER TOPPED
6	WESTERN RED CEDAR	10	GROVE-EXCEPTIONAL	RETAIN	FAIR-POOR	10	LEADER TOPPED, HEAVY IVY
7	WESTERN RED CEDAR	11	GROVE-EXCEPTIONAL	RETAIN	FAIR-POOR	11	LEADER TOPPED
8	WESTERN RED CEDAR	9	GROVE-EXCEPTIONAL	RETAIN	FAIR-POOR	9	LEADER TOPPED
9	WESTERN RED CEDAR	10	GROVE-EXCEPTIONAL	RETAIN	FAIR-POOR	10	LEADER TOPPED
10	WESTERN RED CEDAR	9	GROVE-EXCEPTIONAL	RETAIN	FAIR-POOR	9	LEADER TOPPED
11	WESTERN RED CEDAR	8	GROVE-EXCEPTIONAL	RETAIN	FAIR-POOR	8	LEADER TOPPED, HEAVY IVY
12	WESTERN RED CEDAR	14	GROVE-EXCEPTIONAL	RETAIN	FAIR-POOR	20	LEADER TOPPED
13	SHORE PINE	17	EXCEPTIONAL	REMOVE	FAIR-POOR	16	LEADER TOPPED, HEAVY IVY
14	BIGLEAF MAPLE	35	EXCEPTIONAL	REMOVE	POOR	35	LEADER TOPPED, HEAVY IVY, SUCKERING
15	RED ALDER	27	EXCEPTIONAL	REMOVE	GOOD	27	
16	JAPANESE MAPLE	17	EXCEPTIONAL	RETAIN	FAIR	14	CROWN TOPPING
17	PAPER BIRCH	14	LARGE	REMOVE	FAIR-POOR	14	CROWN TOPPING
18	JAPANESE MAPLE ATROPURPUREUM	20	EXCEPTIONAL	RETAIN	FAIR	18	CROWN TOPPING

TREE REPLACEMENT CALCULATION

(1) LARGE TREE & (3) EXCEPTIONAL TREES ARE TO BE REMOVED.
 TREE REPLACEMENT RATE:
 LARGE TREE: (2) TREES
 EXCEPTIONAL TREE: (3) TREES

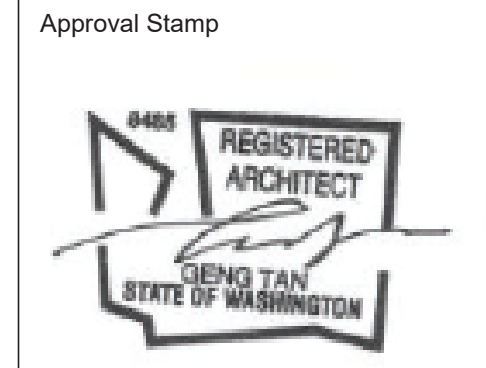
TOTAL TREE REPLACEMENTS:
 (2) TREES x 1 + (3) TREES x 4 = 13 TREES REPLACEMENT

REVISIONS

#	DATE	DESCRIPTION OF REVISION

Drawn By:
 Checked By:
 Job #:

Project Name:
HU RESIDENCE
 30XX 68TH AVE SE
 MERCER ISLAND, WA 98040



Drawing Title:
SITE PLAN

Sheet:
A-1.00

LOT SLOPE

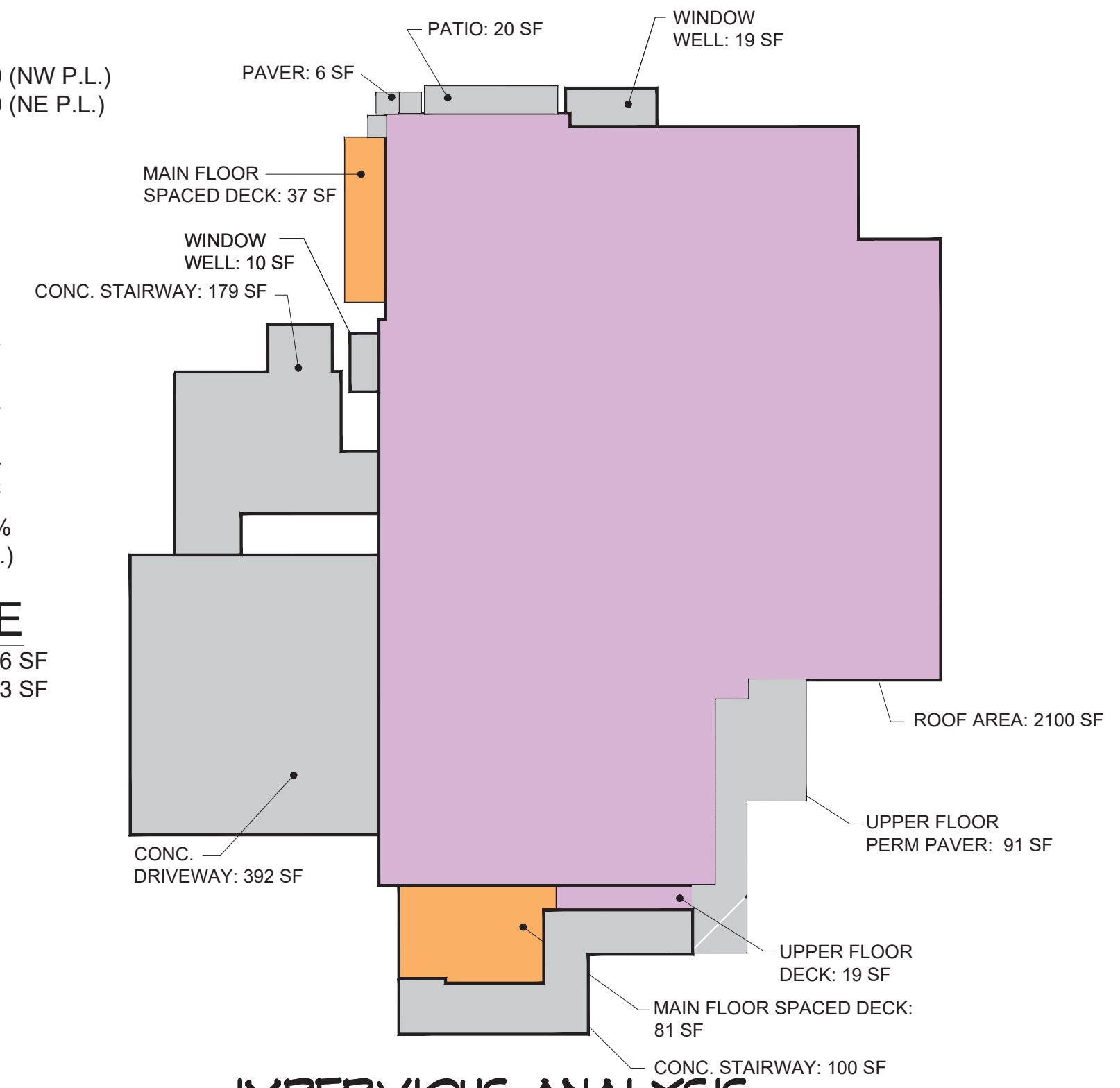
HIGHEST ELEV POINT OF LOT: 266.50 (NW P.L.)
 LOWEST ELEV POINT OF LOT: 239.50 (NE P.L.)
 ELEVATION DIFFERENCE: 27.00'
 HORIZONTAL DISTANCE BTWN. POINTS: 83.00'
 $266.5 - 239.5 = 27, \frac{27}{83} = 32.6\%$ SLOPE
 --> 30% LOT COVERAGE ALLOWED

LOT COVERAGE

LOT AREA: 8403 SF
 NET LOT AREA: 8403 SF
 ROOF AREA (w/ GUTTERS): 2100 SF
 UNCOV'D DECK: 19 SF
 UNCOV'D DRIVEWAY AREA: 392 SF
 TOTAL AREA: 2511 SF
 = 29.89%
 < 30.00% (O.K.)

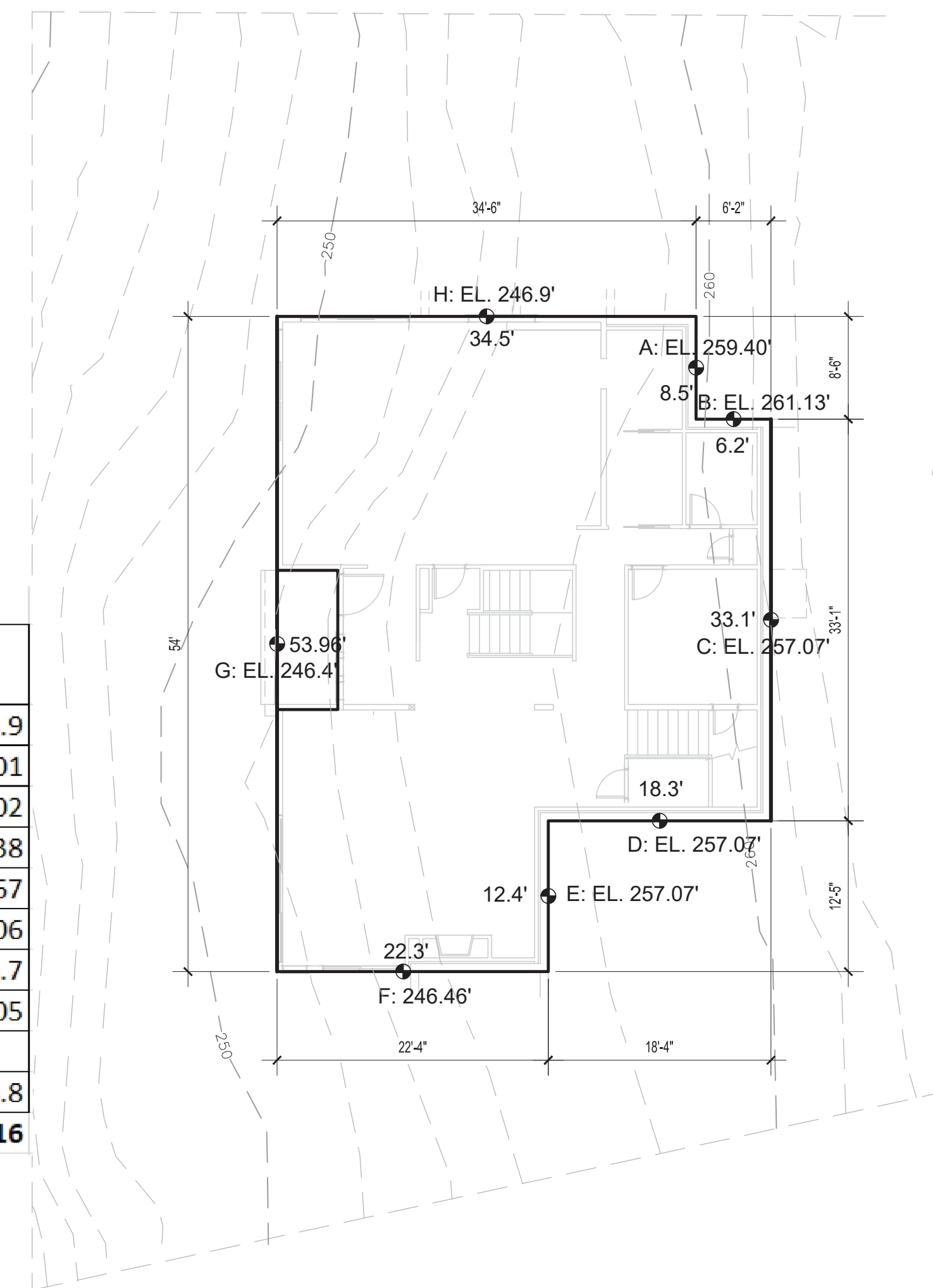
IMPERVIOUS SURFACE

MAX. HARDCAPE (9%): $8403 \times 0.9 = 756$ SF
 PROPOSED HARDCAPE: 543 SF



IMPERVIOUS ANALYSIS

FULL SIZE SCALE 1" = 40'



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%

Average Building Elevation

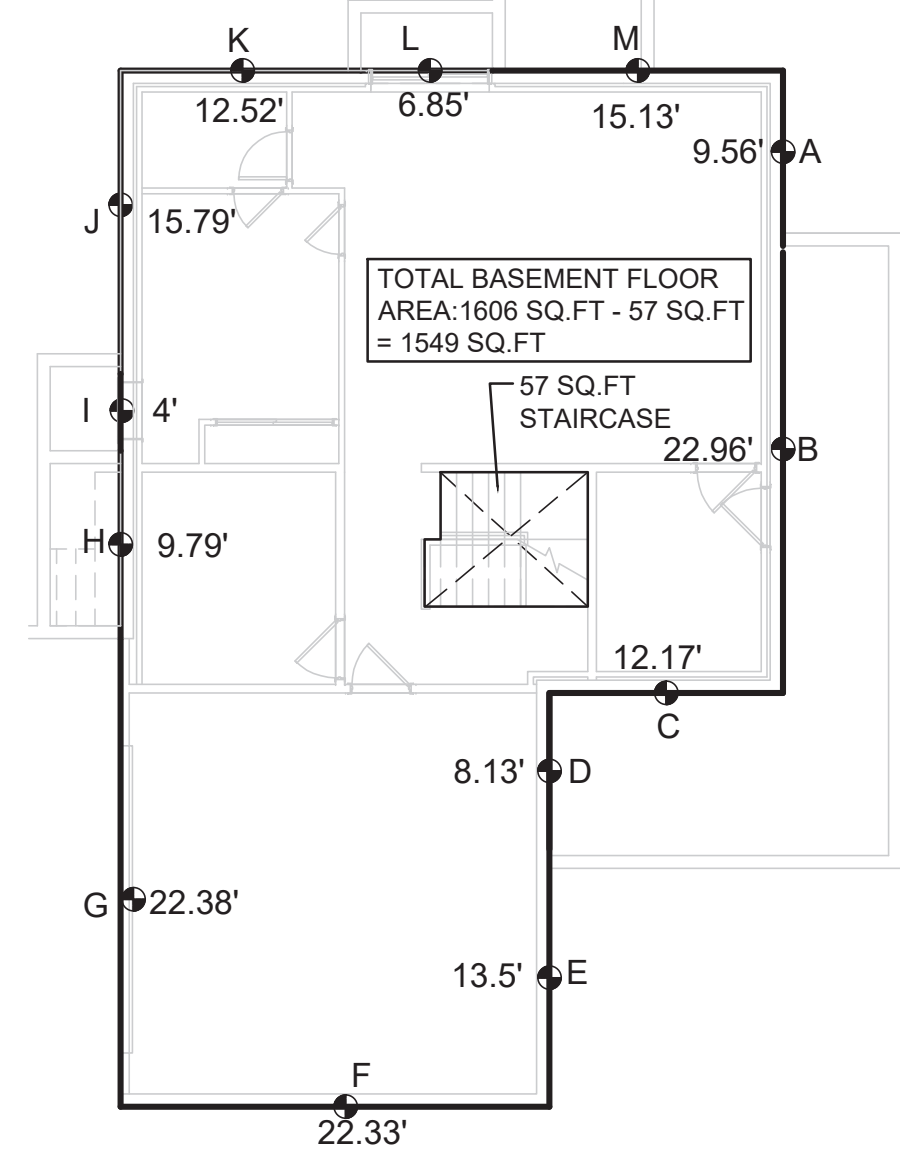
Wall Segment	Midpoint Elevation(FT)	Wall Seg. Length(FT)	Product (SF)
A	259.4	8.5	2204.9
B	261.13	6.2	1619.01
C	257.07	33.1	8509.02
D	257.07	12.4	4704.38
E	257.07	18.3	3187.67
F	246.46	22.3	5496.06
G	246.4	53.96	13295.7
H	246.9	34.5	8518.05
TOTAL		189.26	47534.8

AVERAGE BUILDING EL. (ABE) **251.16**

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

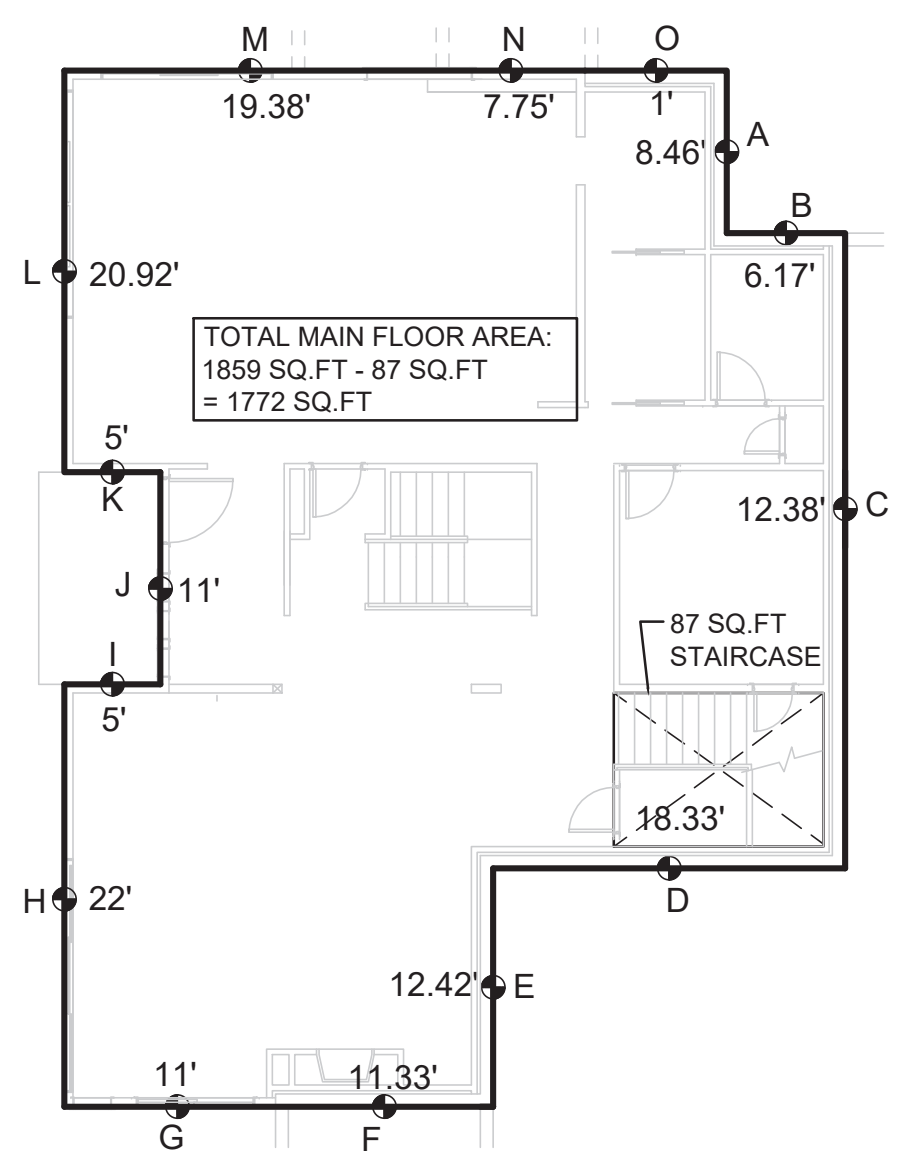
FULL SIZE SCALE 1" = 40'



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
Total			175.11		128.77

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
Total			199.59		93.81

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

REVISIONS

#	DATE	DESCRIPTION OF REVISION

Drawn By: _____
 Checked By: _____
 Job #: _____

Project Name: **HU RESIDENCE**
 30XX 68TH 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 $\frac{1}{2}$ " 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 S1: 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 R503.1.1. 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
(CDSA)	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 MANUFACTURERS 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 $\frac{1}{4}$ " 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 $\frac{1}{4}$ " non-corrosive wire mesh or approved soffit vents.

VENTILATION SCHEDULE

2015 WRC SECTION M1507

SYMBOL	LOCATION(S)	MINIMUM FAN REQUIREMENTS
(PA)	BATH/TOILET, POWDER, LAUNDRY	MIN. 50 CFM @ 0.25" WG
(PB)	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.)
(PC)	WHOLE HOUSE FAN	MIN. CFM = $\frac{120}{3} @ 0.25" WG$ (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:
 - Ce 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)
 - Ce 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
-	-	-

Drawn By:
Checked By:
Job #:

Project Name:
HU RESIDENCE
30XX 68TH AVE SE
MERCER ISLAND, WA 98040

Approval Stamp



Drawing Title:
GENERAL NOTES & REQUIREMENTS

Sheet:

A1.02

WSEC ENERGY CREDIT OPTIONS

<p>WASHINGTON STATE ENERGY CREDIT CALCULATION: 4504 SF OF NEW ENCLOSED FLOOR AREA FOR EACH UNIT. 6.0 CREDITS REQ'D.</p>	
<p>FUEL NORMALIZATION CREDITS (TABLE R406.2) SYSTEM TYPE 1 0.0 CREDIT Combustion heating equipment meeting minimum federal efficiency standards for the quipment listed in Table C403.3.2(4) or C403.3.2(5)</p>	
<p>ENERGY CREDITS (TABLE R403.3)</p>	
<p>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.</p>	
<p>OPTION 3.1 - HIGH EFFICIENT HVAC EQUIPMENT: 1.0 CREDITS Energy Star rated (U.S. North) Gas or propane furnace with minimum AFUE of 95%</p>	
<p>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 space, 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.</p>	
<p>OPTION 5.3 - EFFICIENT WATER HEATING OPTIONS: 1.0 CREDITS Water heating system shall include one of the following: Energy Star rated gas or propane water heater with a minimum UEF of 0.91 or Solar water heating supplementing a minimum standard water heater. Solar water heating will provide a rated minimum savings of 85 therms or 2000 kWh based on the Solar Rating and Certification Corporation (SRCC) Annual Performance of OG-300 Certified Solar Water Heating Systems.</p>	
<p>OPTION 6.1 - RENEWABLE ELECTRIC ENERGY OPTION: 3.0 CREDITS For each 1200 kWh of electrical generation per housing unit provided annually by on-site solar equipment a 1.0 credit shall be allowed, up to 3 credits. Generation shall be calculated as followings: For solar electric systems, the design shall be demonstrated to meet this requirement using the National Renewable Energy Laboratory calculator PVWATTS or approved alternate by the code official. Documentation noting solar access shall be included on the plans. Proposed minimum annual energy power production = 1200 kWh x 3 = 3600 kWh annually.</p>	

REVISIONS

#	DATE	DESCRIPTION OF REVISION
-	--	

Drawn By: _____
Checked By: _____
Job #: _____

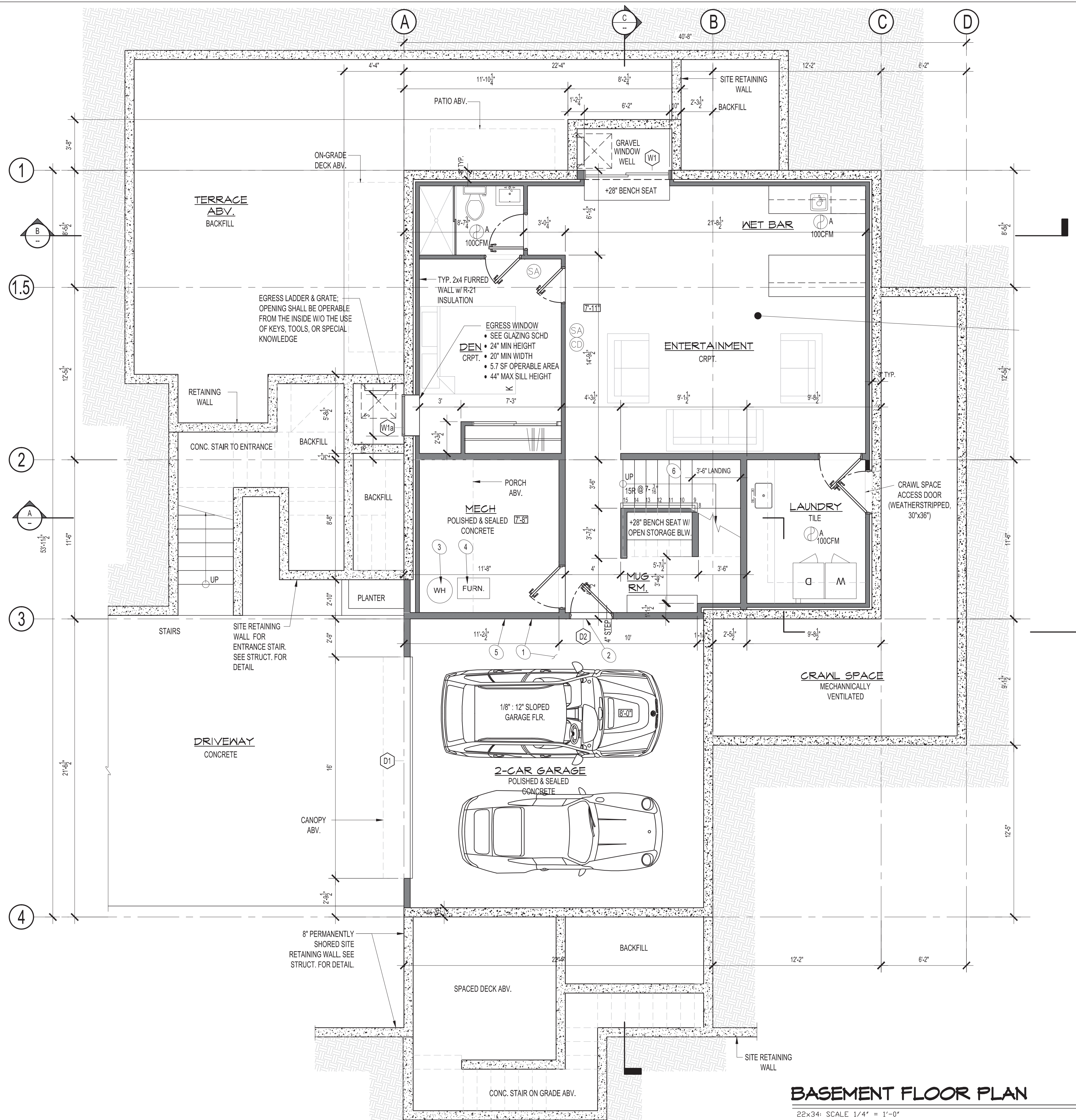
Project Name:
HU RESIDENCE
30XX 68TH AVE SE
MERCER ISLAND, WA 98040

Approval Stamp



Drawing Title:
ENERGY CREDITS & FORMS

Sheet:
A1.03



BASEMENT FLOOR PLAN
 22x34 SCALE 1/4" = 1'-0"

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

- 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 CEILING.
- PROVIDE TIGHT FITTING, 20-MIN. FIRE-RATED DOOR WITH SELF CLOSING DEVICE.
- WATER HEATER, SHALL MEET EFFICIENCY REQUIREMENT PER WSEC ENERGY CREDIT OPTIONS ON SHEET A1.01. AND PROVIDE 26 GA. STRAP AROUND WATER HEATER TO WALL @ TOP & BOTTOM.
- HVAC EQUIPMENT, SHALL MEET EFFICIENCY REQUIREMENT PER WSEC ENERGY CREDIT OPTIONS ON SHEET A1.01
- 2x6 STUDS W/ R-21 INSULATION MIN.
- SEE A4.03 & A4.04 FOR STAIR DETAILS

PLAN NOTES

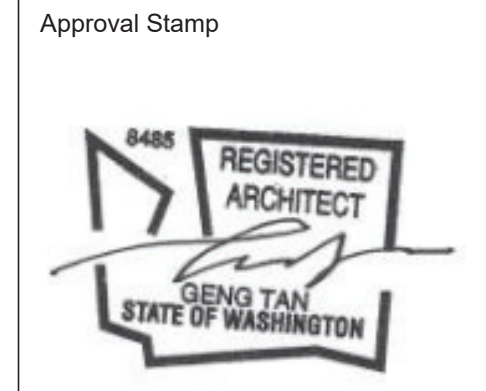
- CONTRACTOR SHALL VERIFY ALL NOTES, DIMENSIONS & CONDITIONS PRIOR TO CONSTRUCTION.
- ALL DIMENSIONS ARE TO FACE OF FRAMING, CENTER OF COLUMN, OR FACE OF CONCRETE, UNO.
- FIRE BLOCK ALL PLUMBING PENETRATIONS. FIRE BLOCK AT 10'-0" o.c. HORIZONTALLY AND VERTICALLY IN ALL FRAMED WALLS. FIRE BLOCK ALL WALL 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 CEILING 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

Drawn By: _____
 Checked By: _____
 Job #: _____

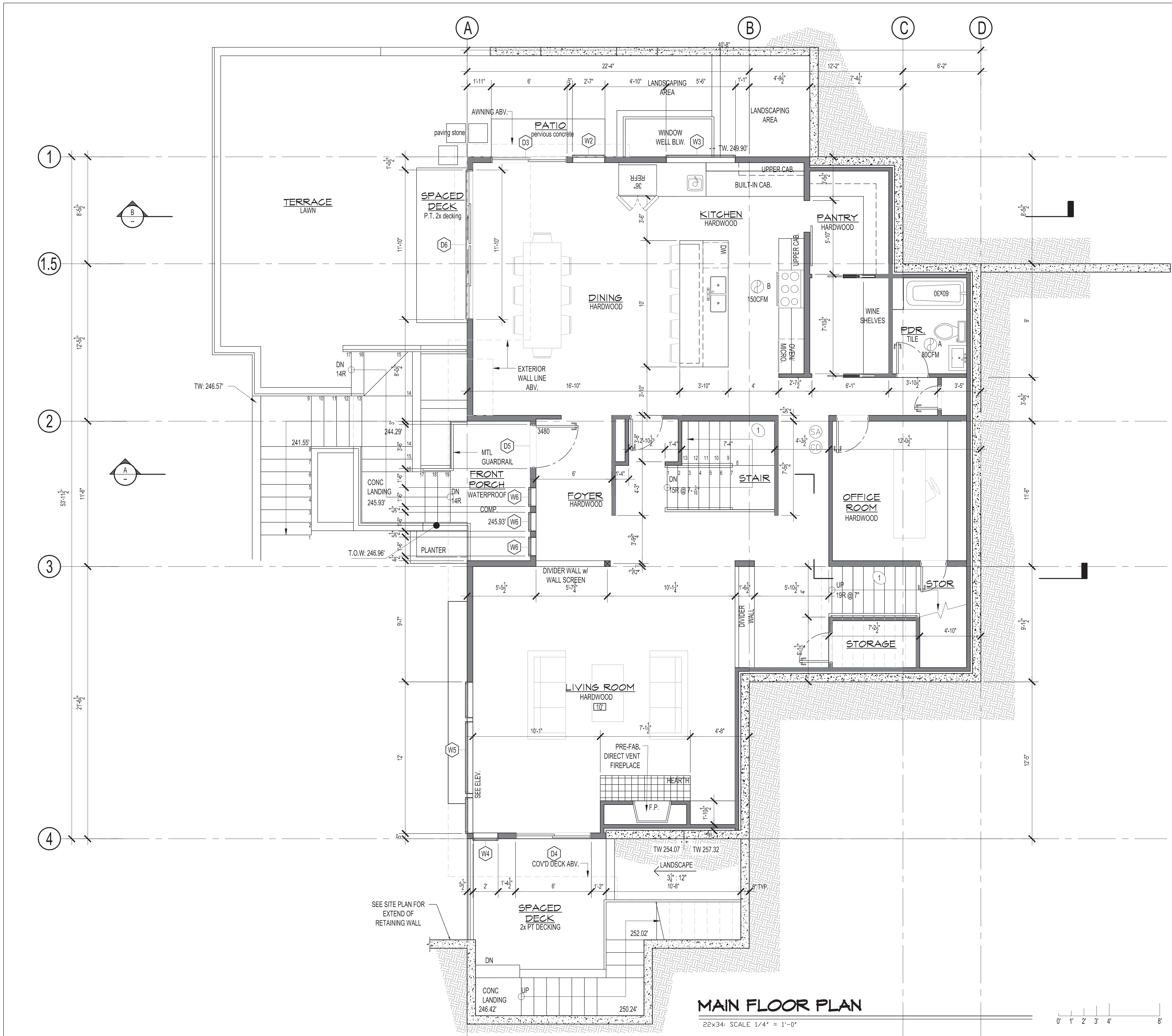
Project Name:
HU RESIDENCE
 30XX 68TH AVE SE
 MERCER ISLAND, WA 98040



Drawing Title:
BASEMENT FLOOR PLAN

Sheet:
A2.00





MAIN FLOOR PLAN
22x34 SCALE 1/4" = 1'-0"

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. 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.

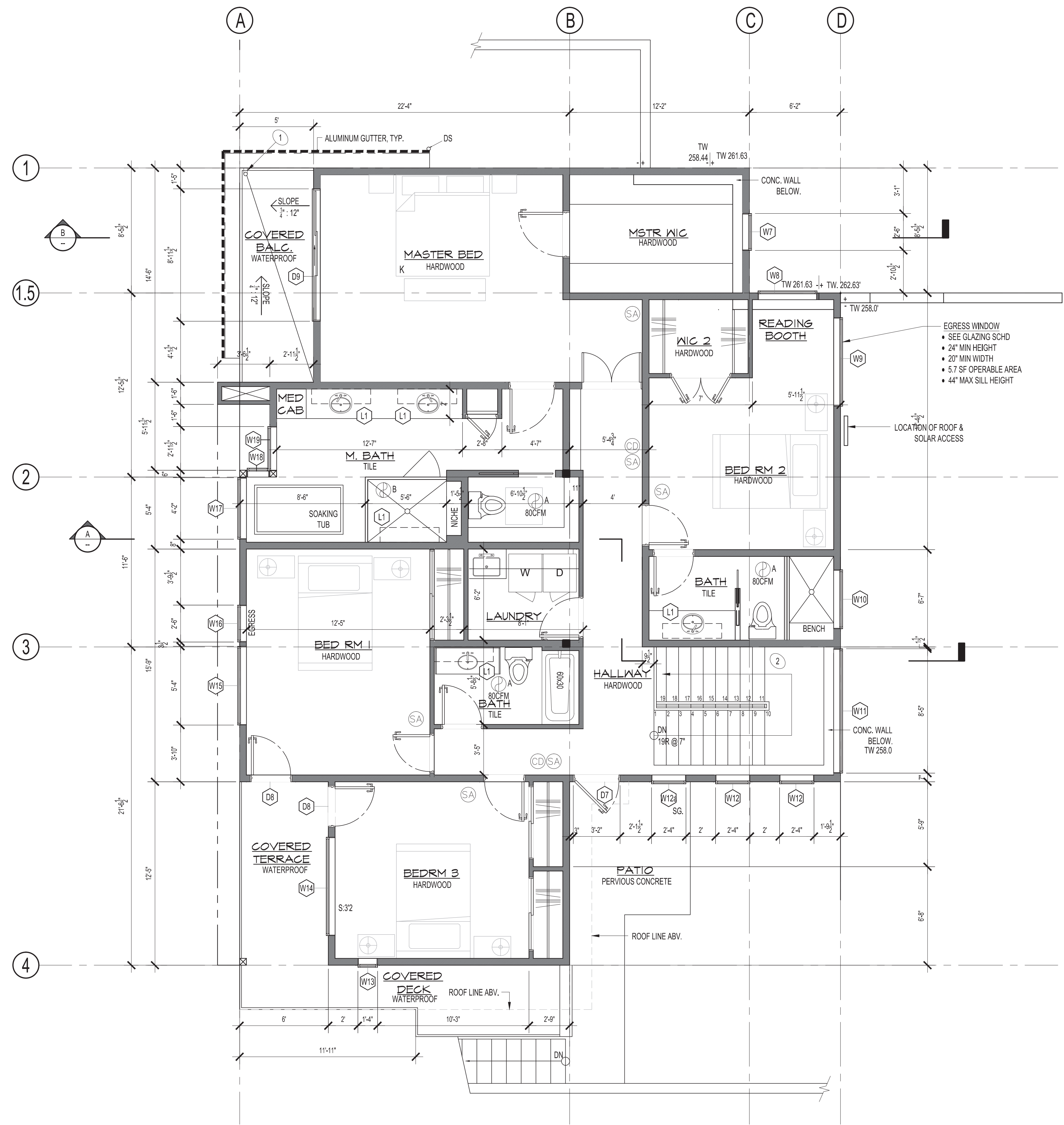
REVISIONS

#	DATE	DESCRIPTION OF REVISION

Drawn By: _____
Checked By: _____
Job #: _____

Project Name:
HU RESIDENCE
30XX 68TH AVE SE
MERCER ISLAND, WA 98040

Approval Stamp



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
-	-	-

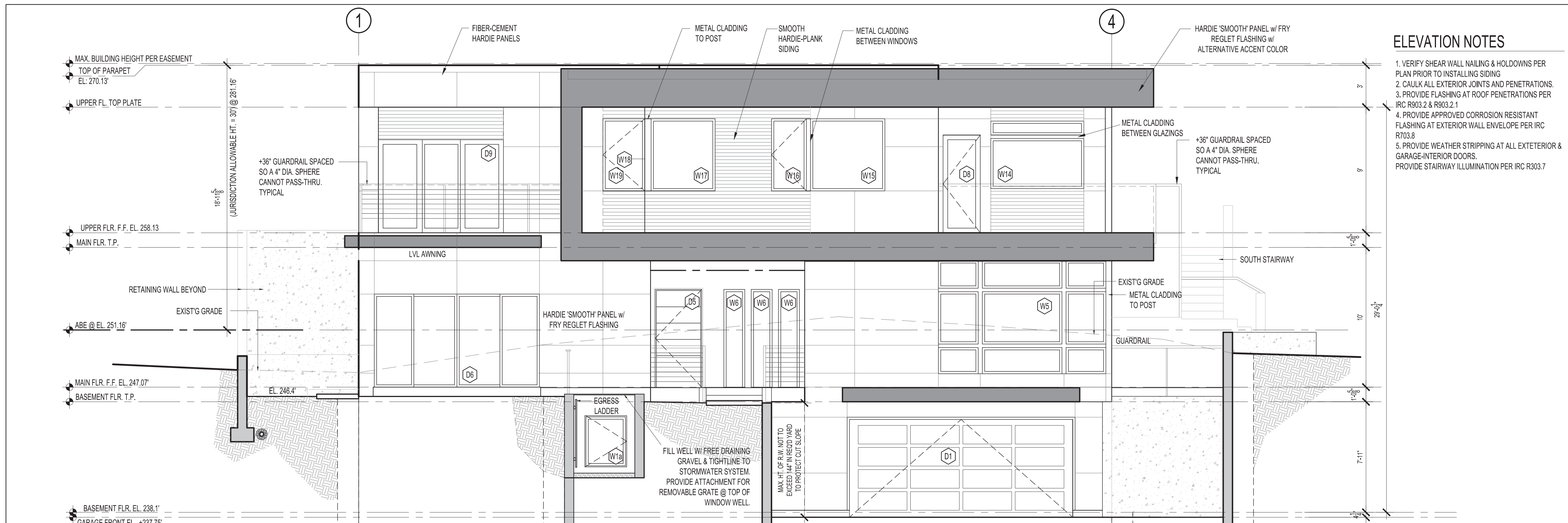
Drawn By: _____
 Checked By: _____
 Job #: _____

Project Name:
HU RESIDENCE
 30XX 68TH AVE SE
 MERCER ISLAND, WA 98040

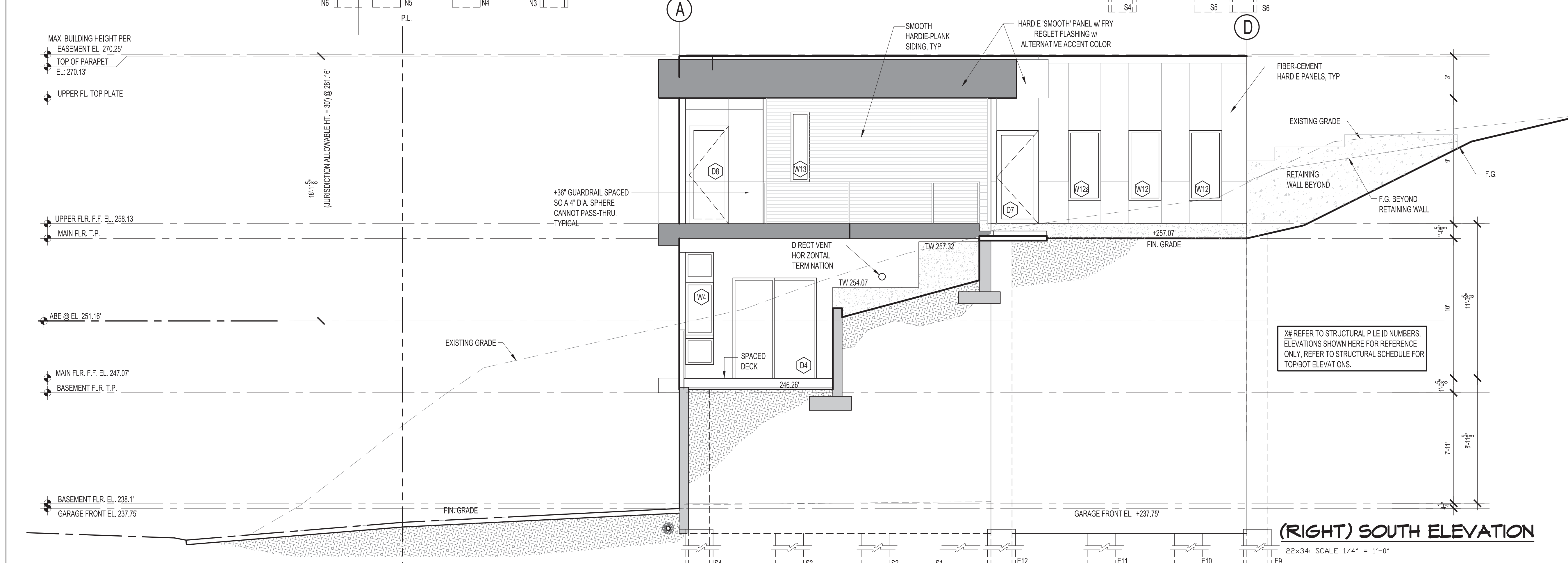


Drawing Title:
UPPER FLOOR PLAN

Sheet:
A2.02



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



(RIGHT) SOUTH ELEVATION
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

REVISIONS

#	DATE	DESCRIPTION OF REVISION

Drawn By:
Checked By:
Job #:

Project Name:
HU RESIDENCE
30XX 68TH AVE SE
MERCER ISLAND, WA 98040

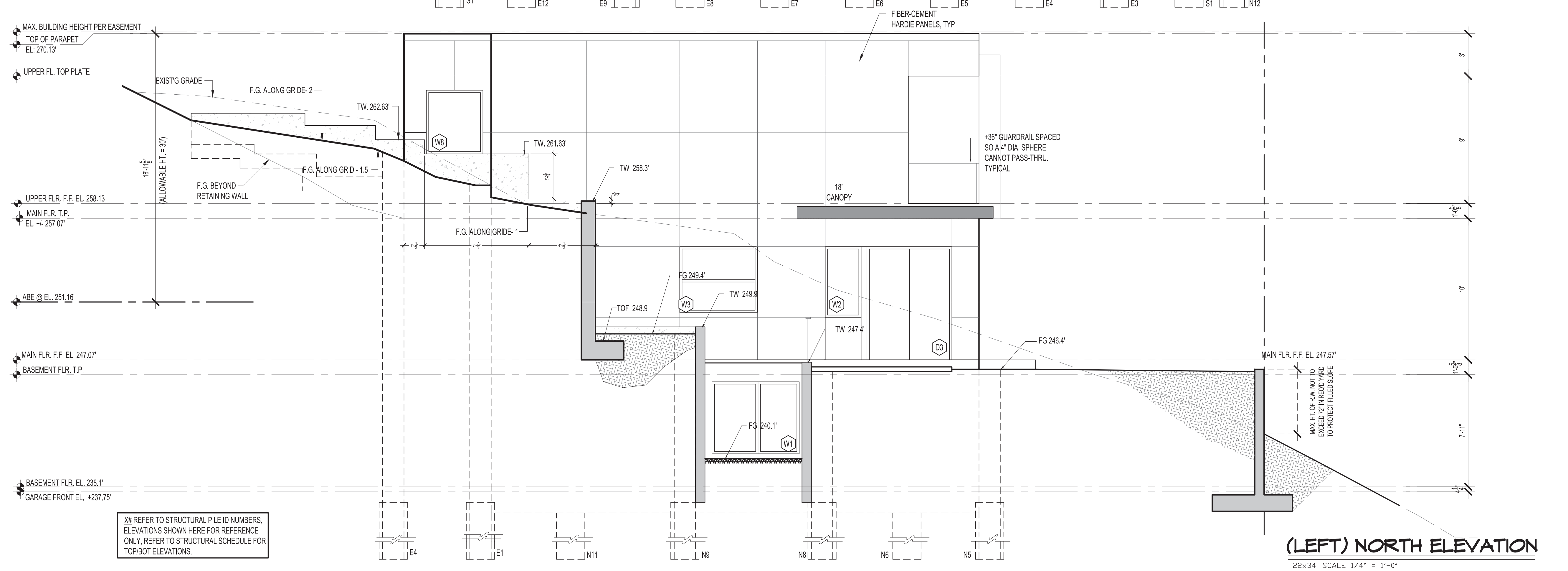
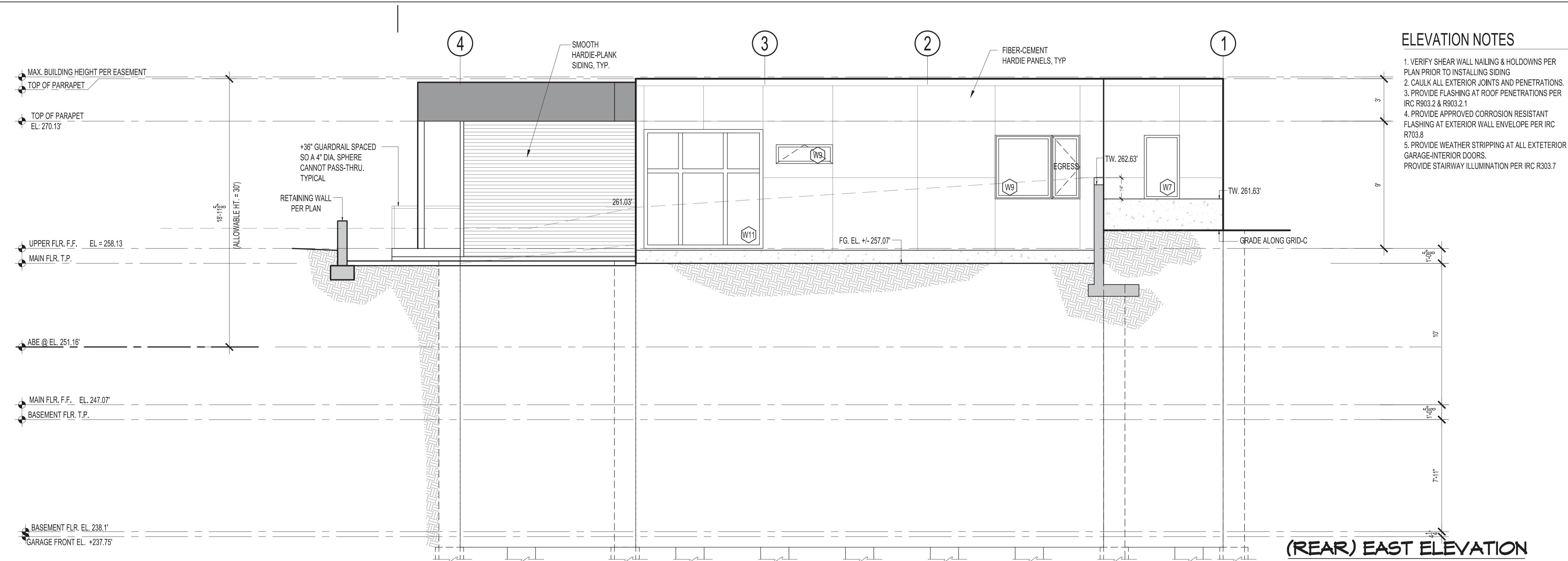
Approval Stamp



Drawing Title:
ELEVATIONS

Sheet:
A3.00

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



- ### 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

Drawn By:
Checked By:
Job #:

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

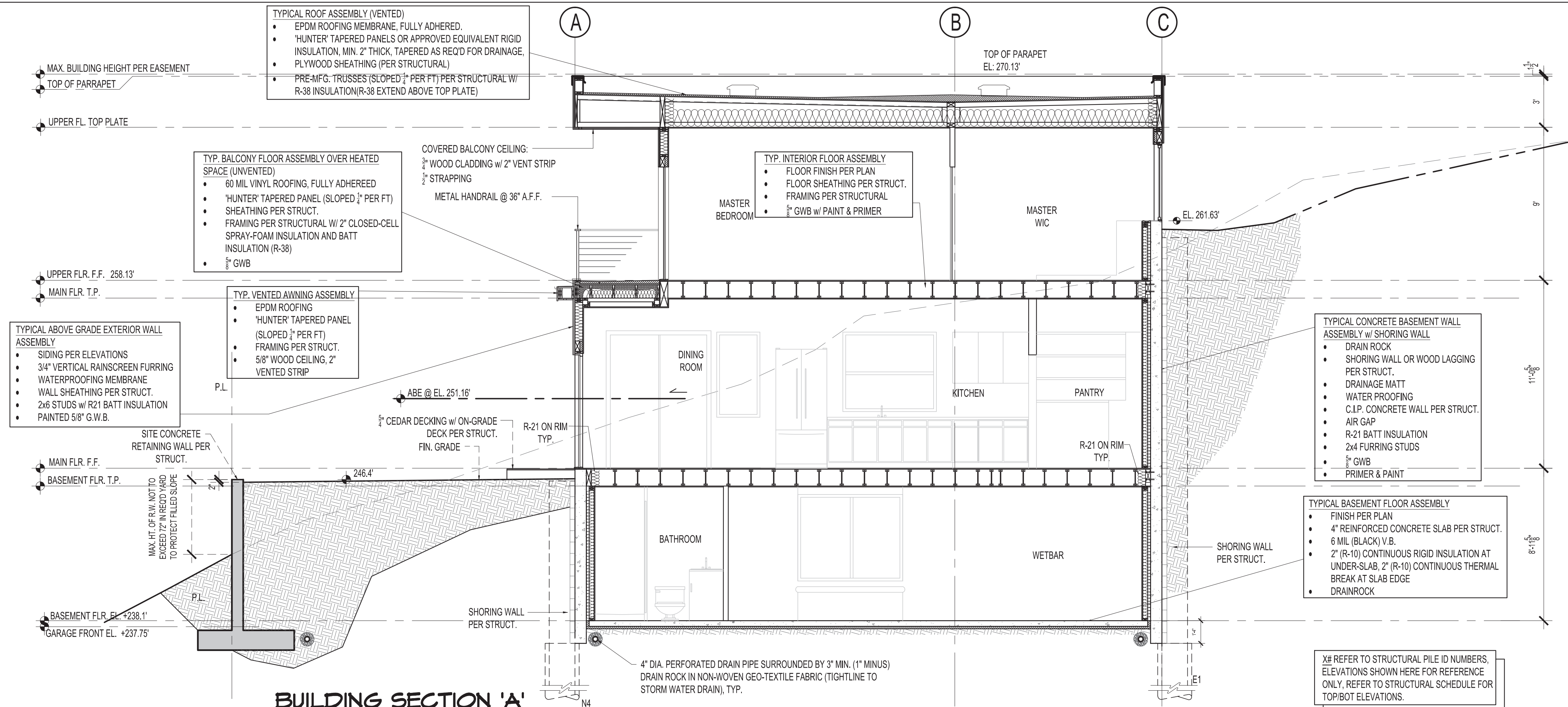
Approval Stamp



Drawing Title:
ELEVATIONS

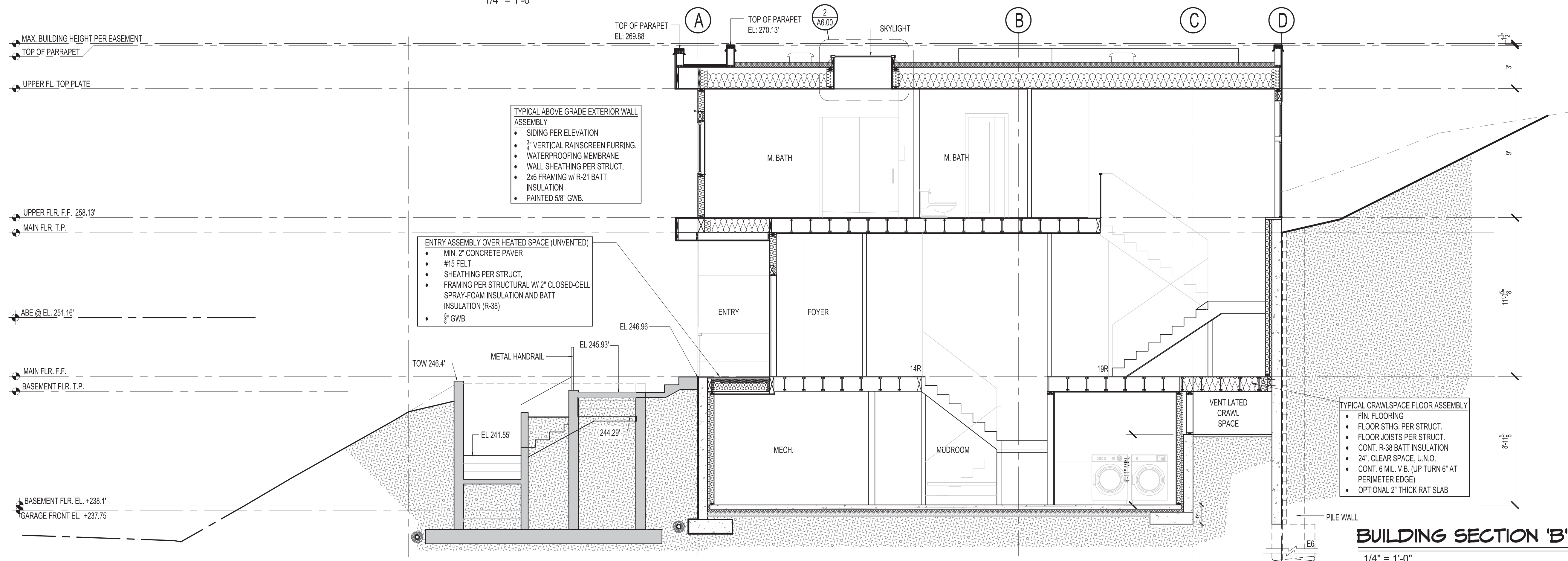
Sheet:
A3.01

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



BUILDING SECTION 'A'

1/4" = 1'-0"



BUILDING SECTION 'B'

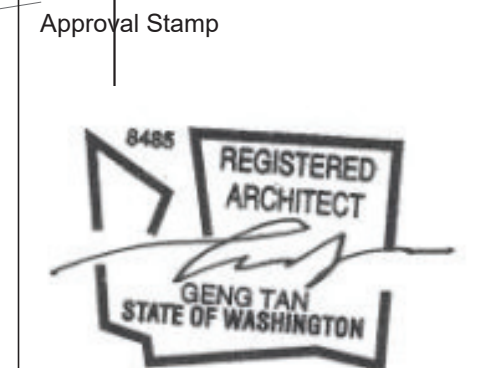
1/4" = 1'-0"

REVISIONS

#	DATE	DESCRIPTION OF REVISION

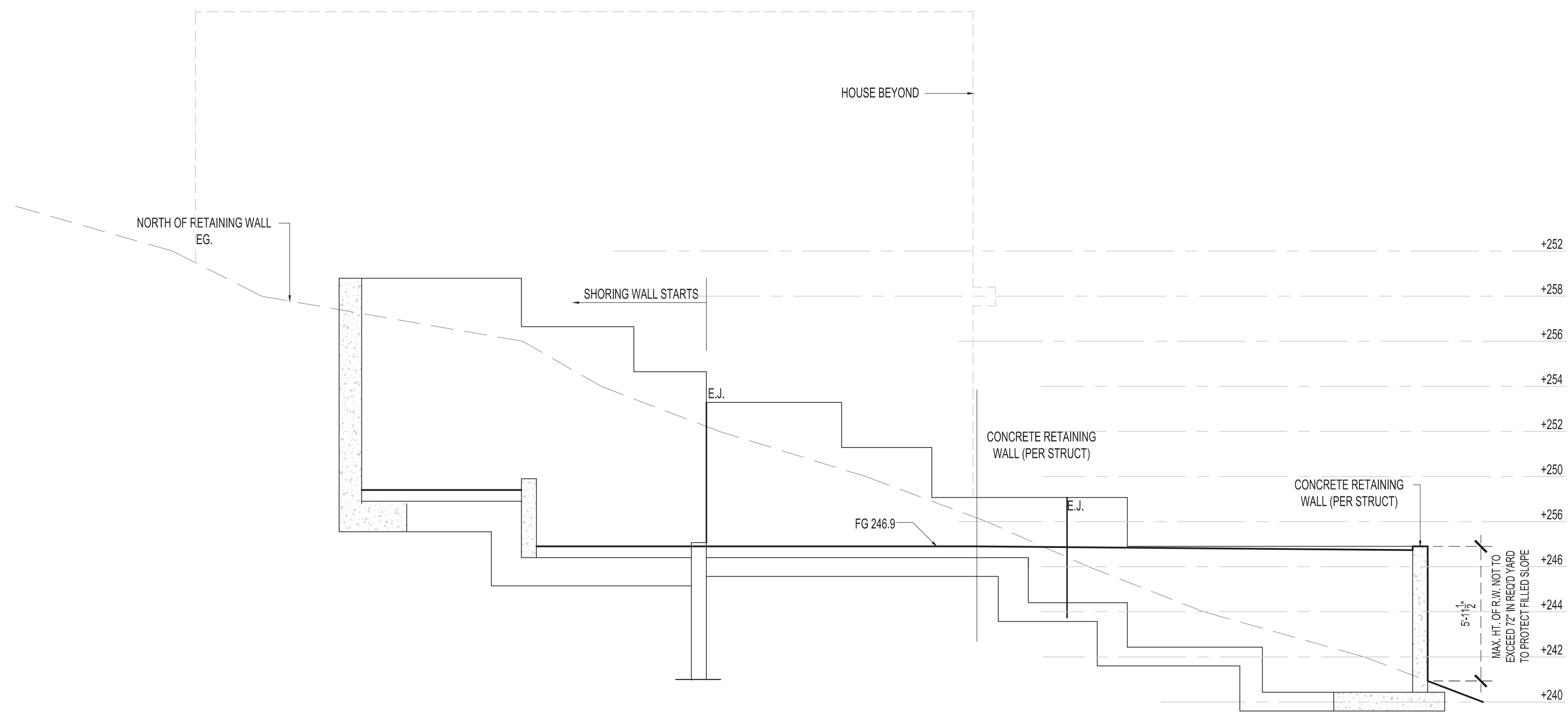
Drawn By: _____
 Checked By: _____
 Job # _____

Project Name:
HU RESIDENCE
 30XX 68TH AVE SE
 MERCER ISLAND, WA 98040



Drawing Title:
BUILDING SECTIONS

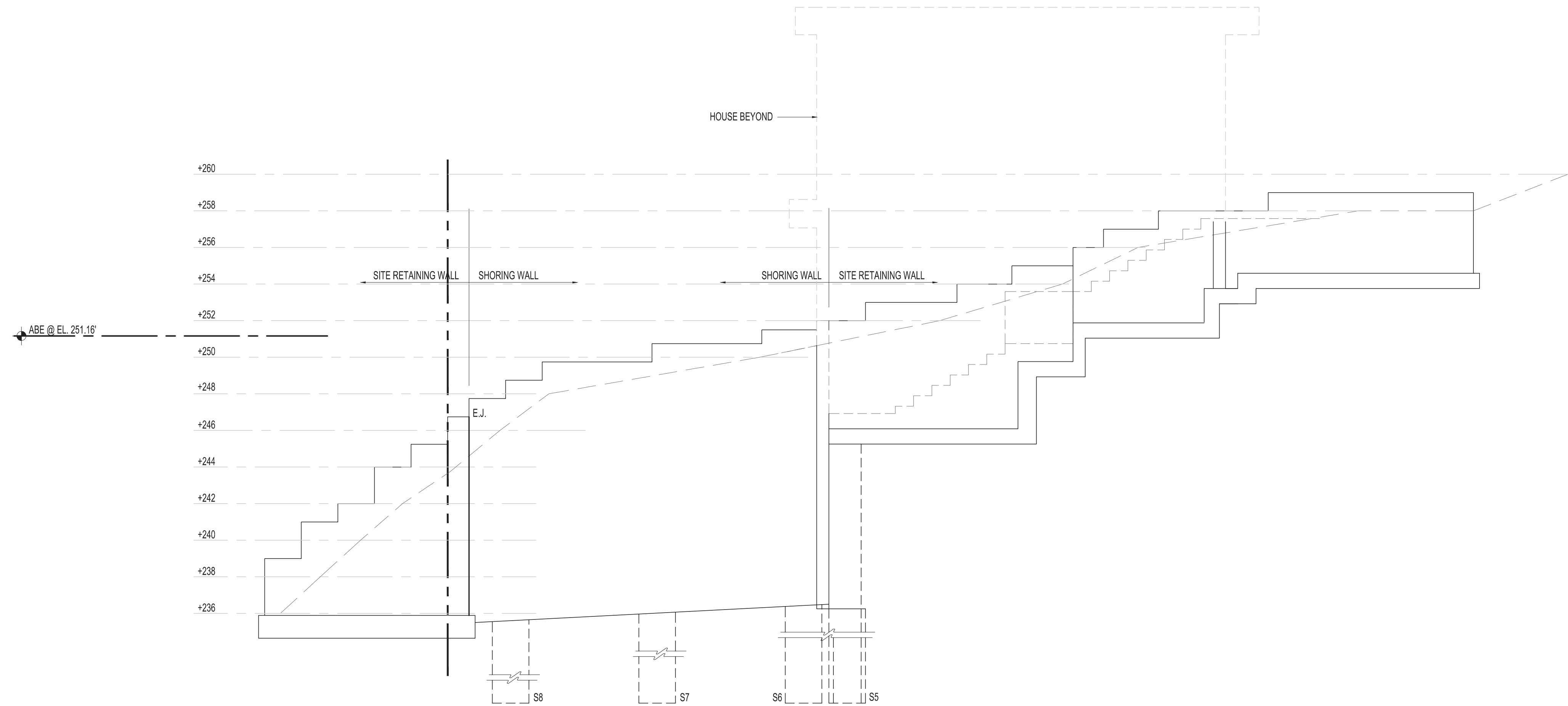
Sheet:
A4.00



NORTH RETAINING WALL ELEVATION

22x34: SCALE 1/4" = 1'-0"
 11x17: SCALE 1/8" = 1'-0"

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



SOUTH RETAINING WALL ELEVATION

22x34: SCALE 1/4" = 1'-0"
 11x17: SCALE 1/8" = 1'-0"

REVISIONS

#	DATE	DESCRIPTION OF REVISION
-	-	-

Drawn By:
 Checked By:
 Job #

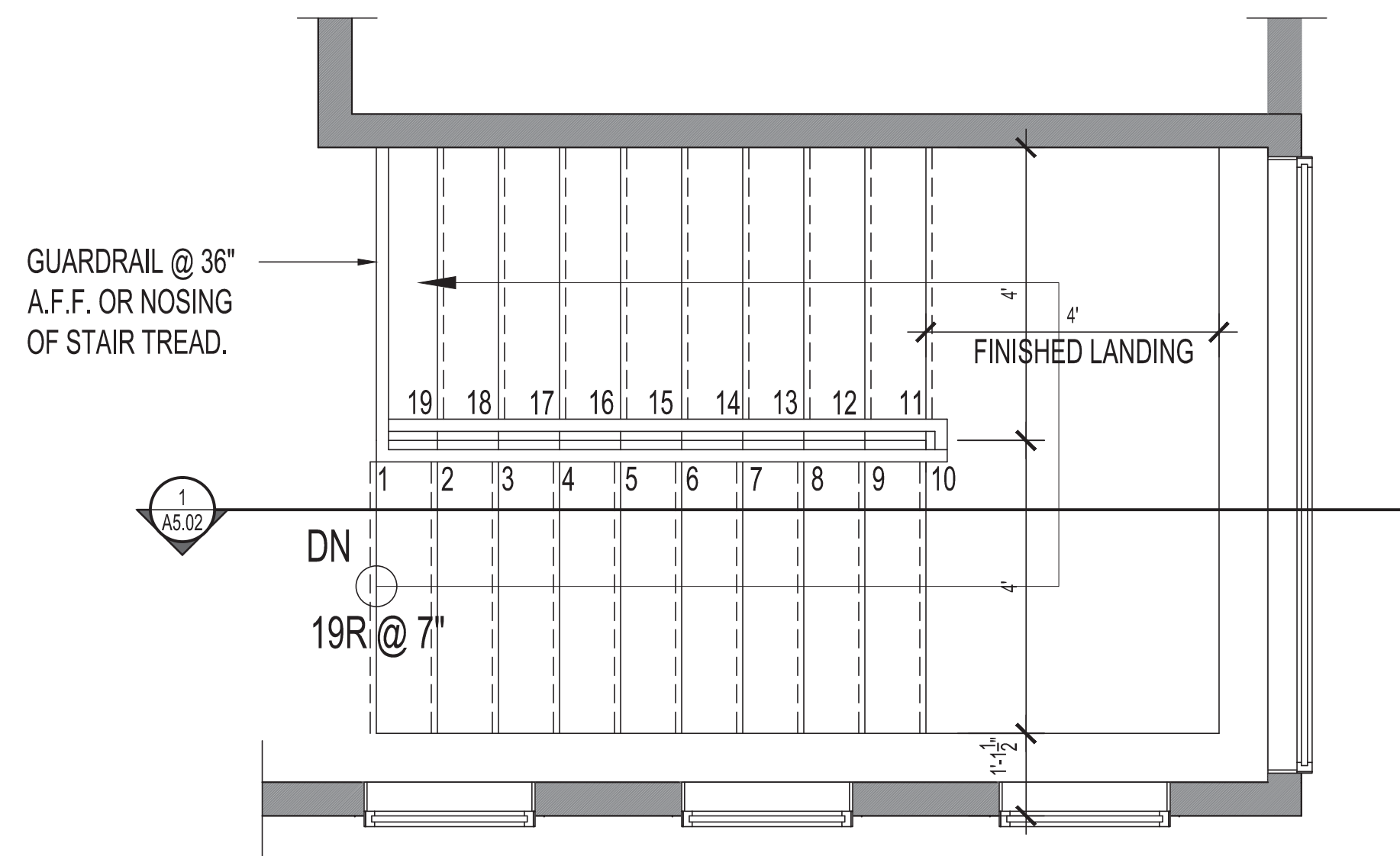
Project Name:
HU RESIDENCE
 30XX 69TH AVE SE
 MERCER ISLAND, WA 98040

Approval Stamp



Drawing Title:
RETAINING WALL ELEVATIONS

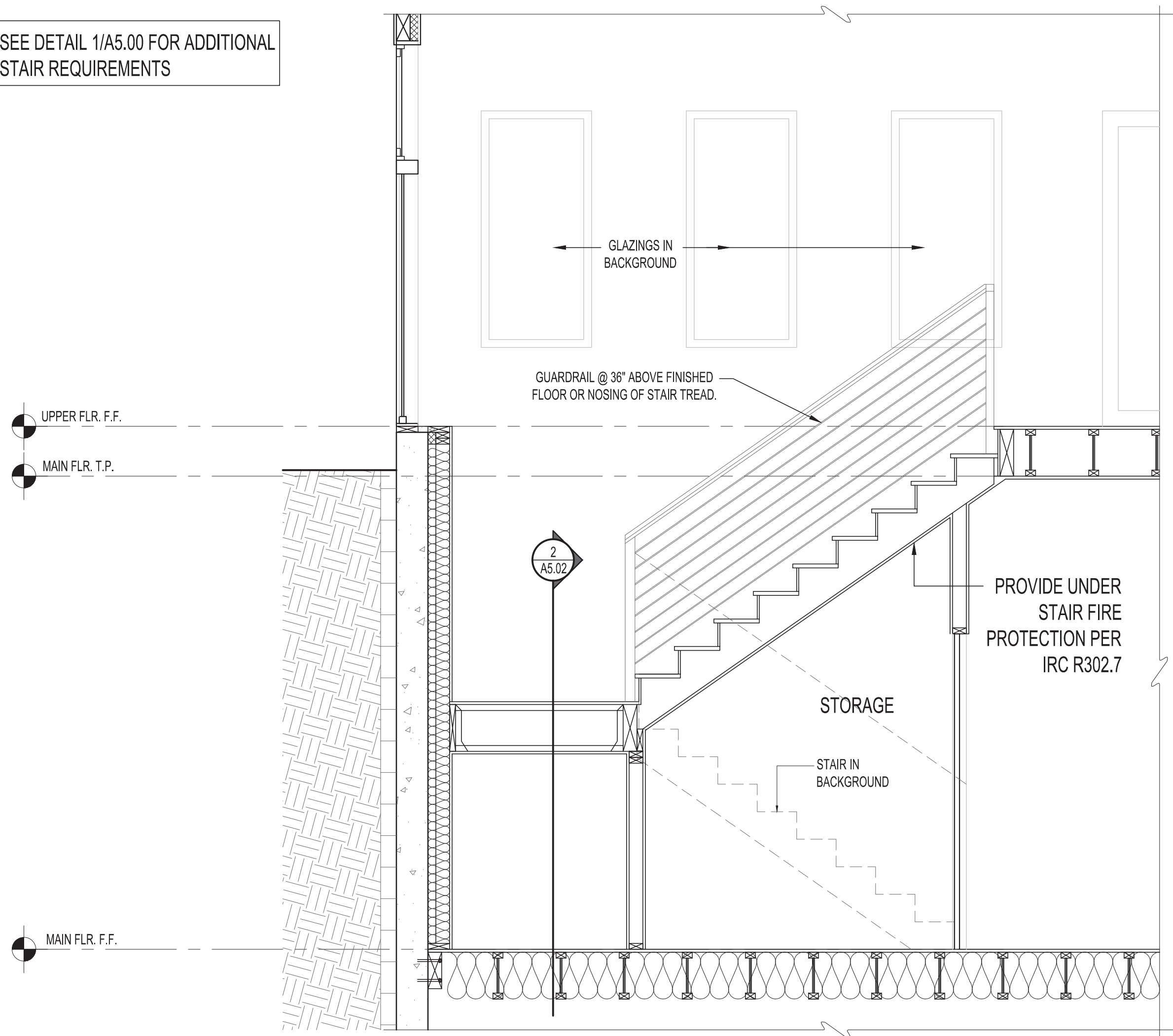
Sheet:
A4.02



U/F TO M/F STAIR PLAN VIEW

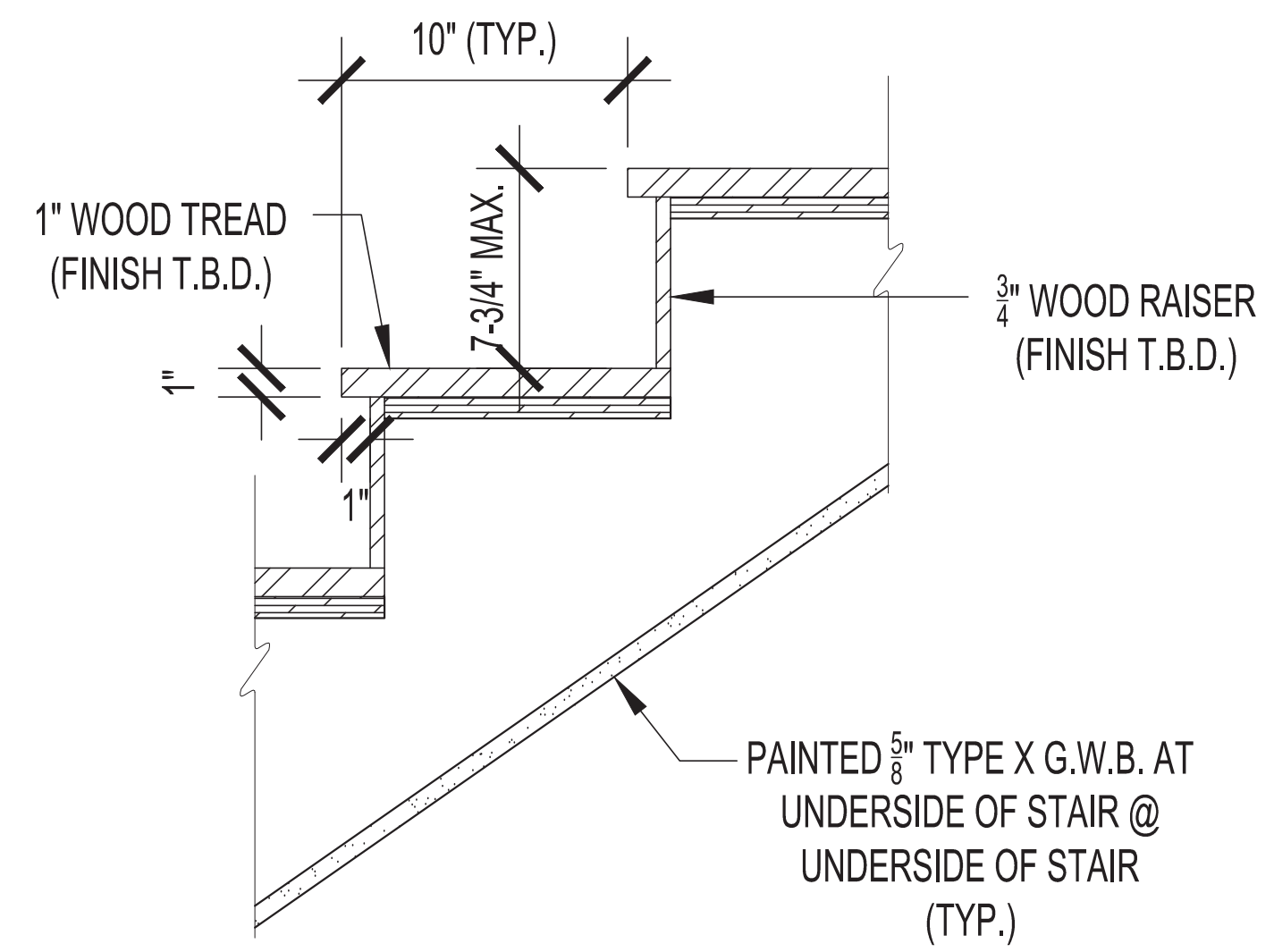
1/2" = 1'-0"

SEE DETAIL 1/A5.00 FOR ADDITIONAL STAIR REQUIREMENTS



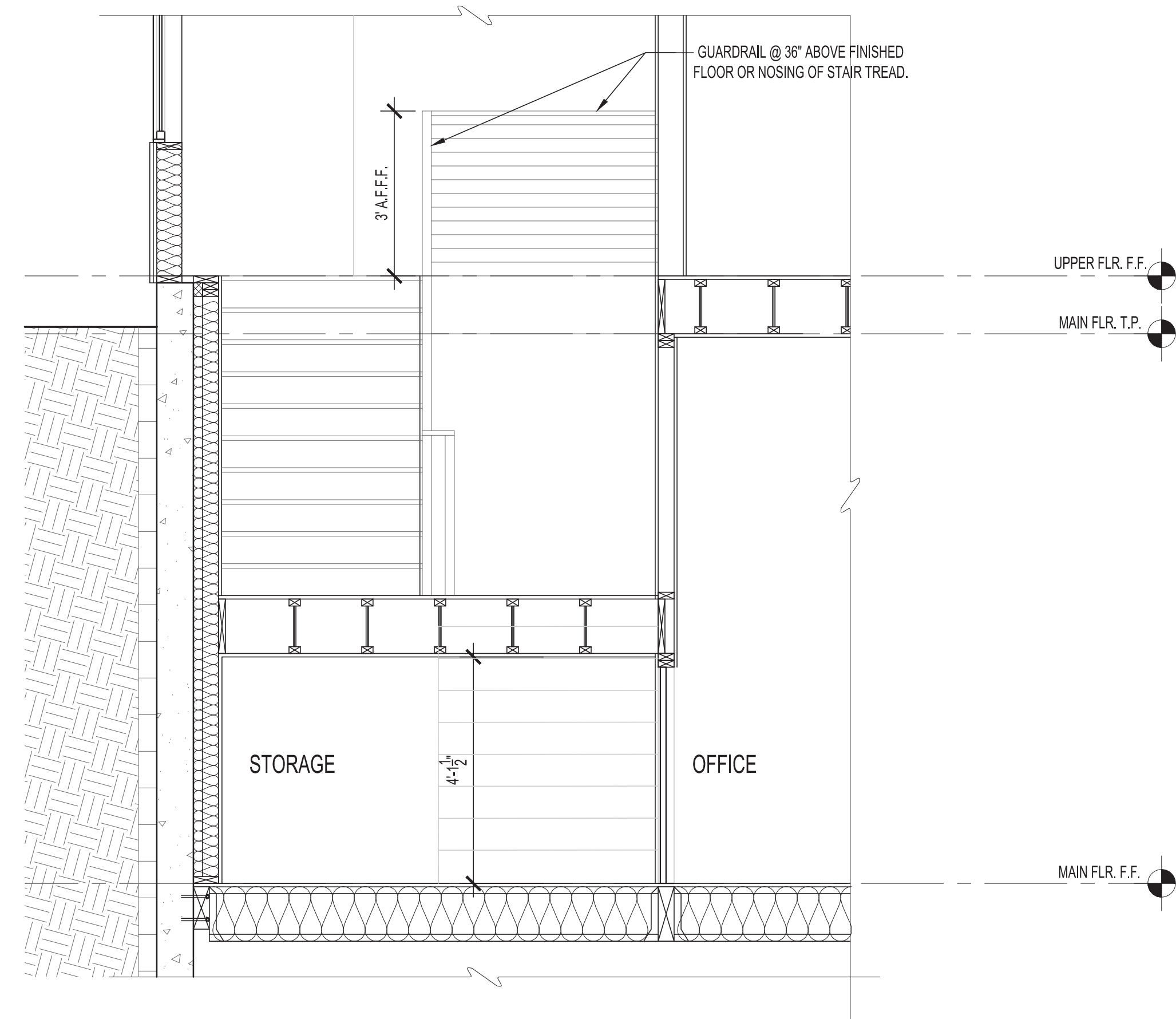
1 STAIR SECTION 1

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



TYP. STAIR TREAD DETAIL

2" = 1'-0"



1 STAIR SECTION 2

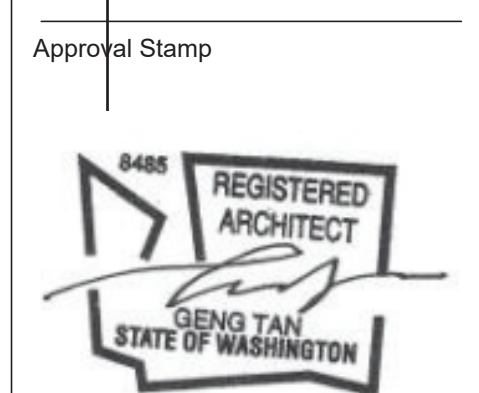
A5.02 1/2" = 1'-0"

REVISIONS

#	DATE	DESCRIPTION OF REVISION
-	-	-

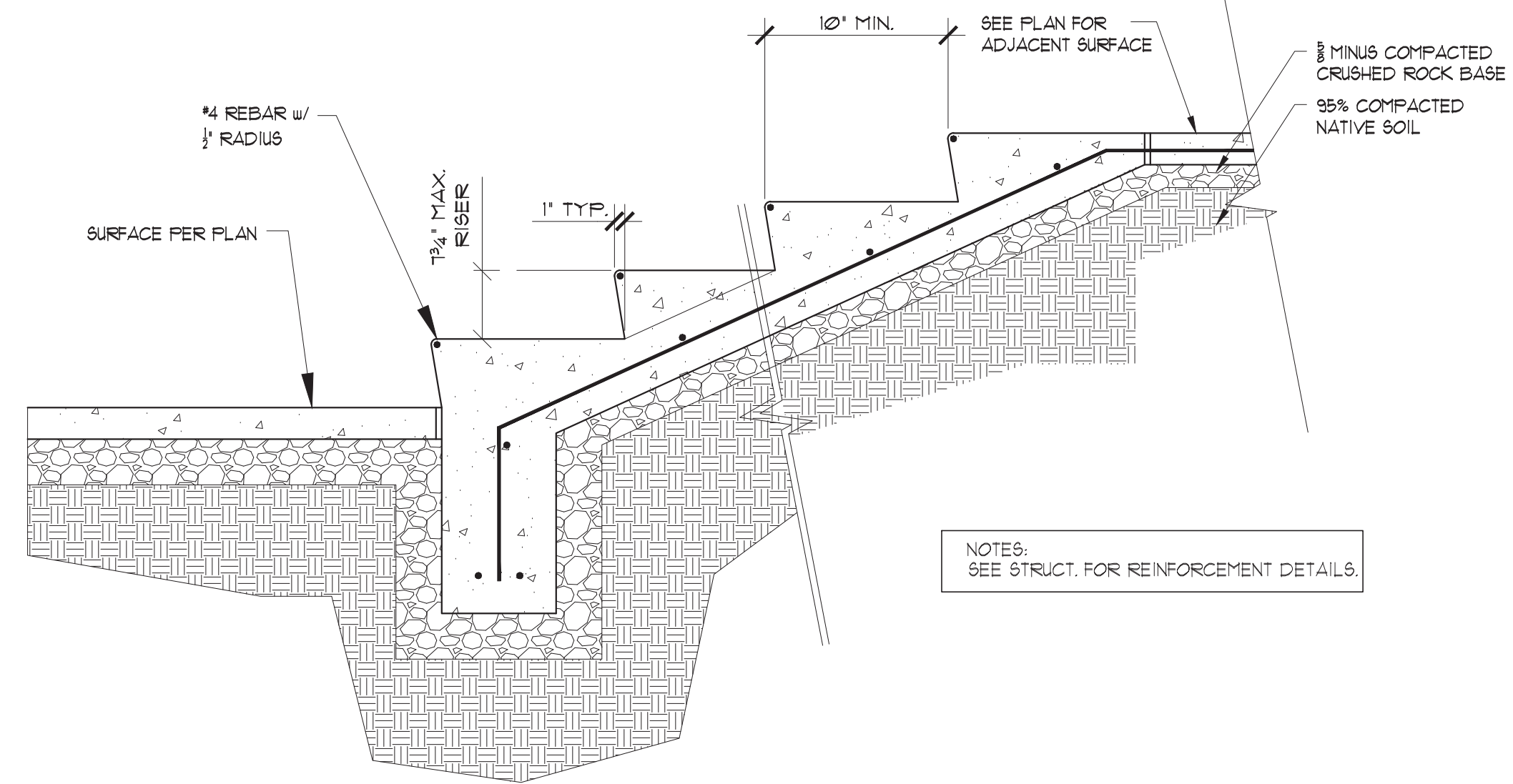
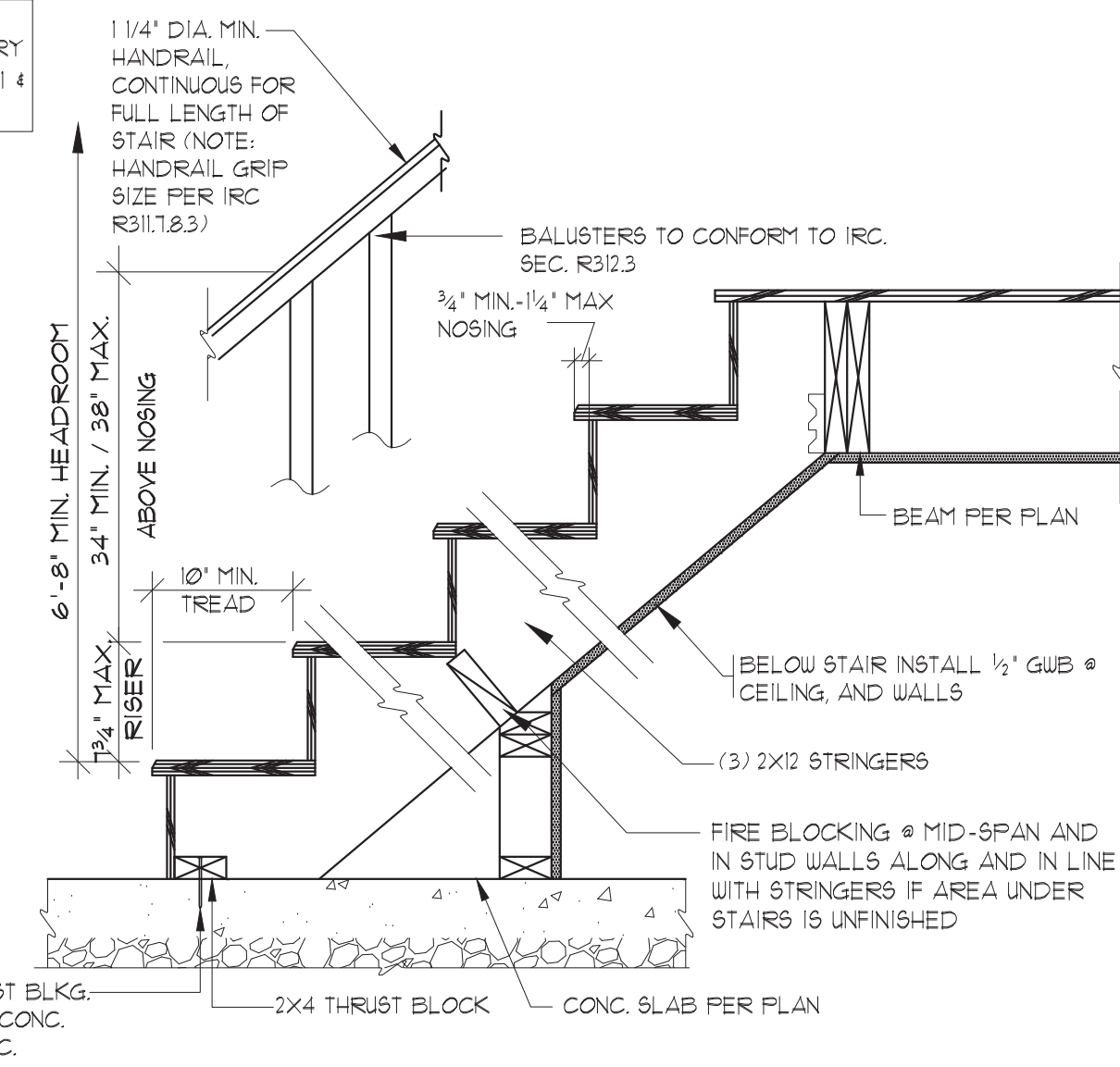
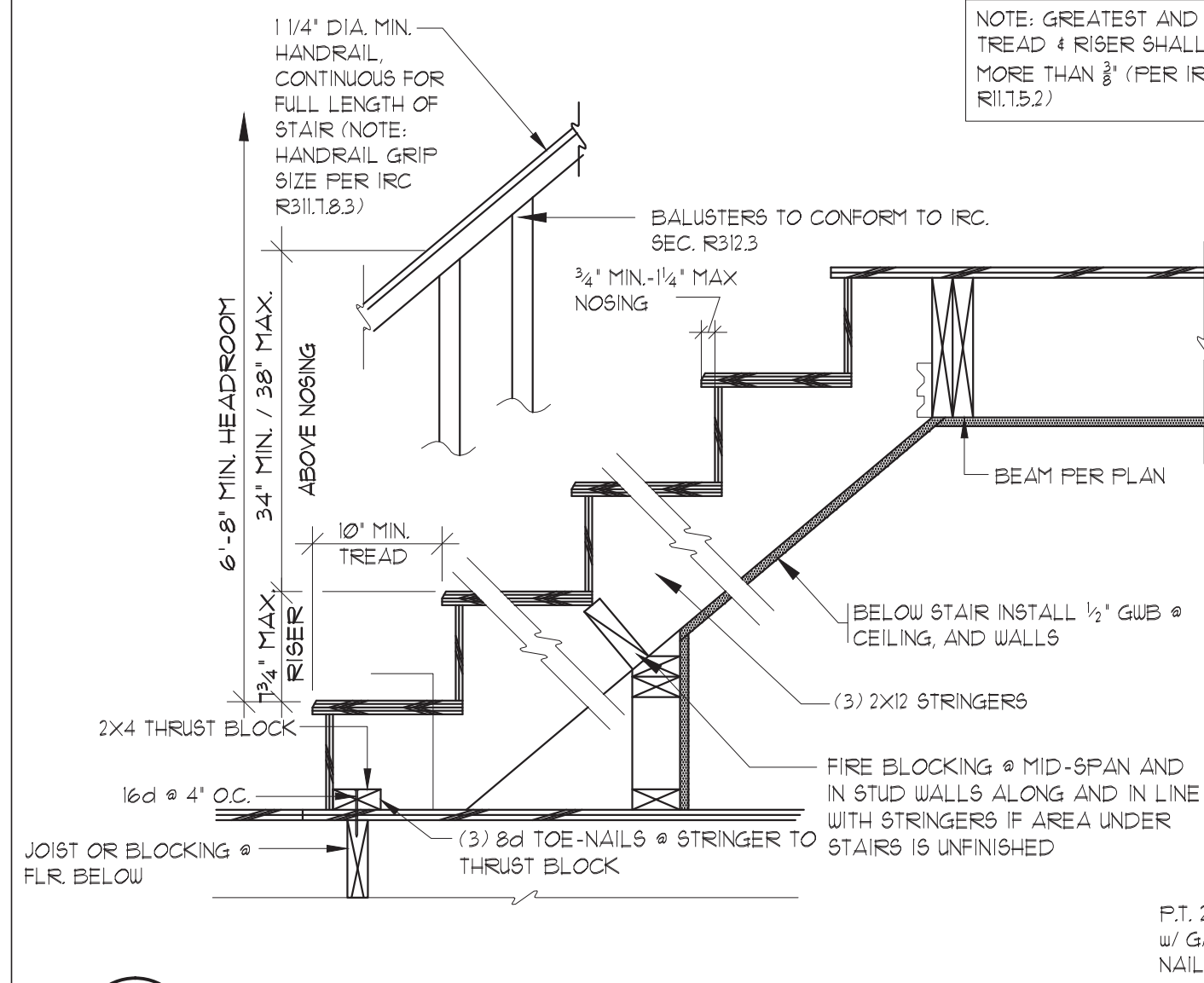
Drawn By:
Checked By:
Job #:

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



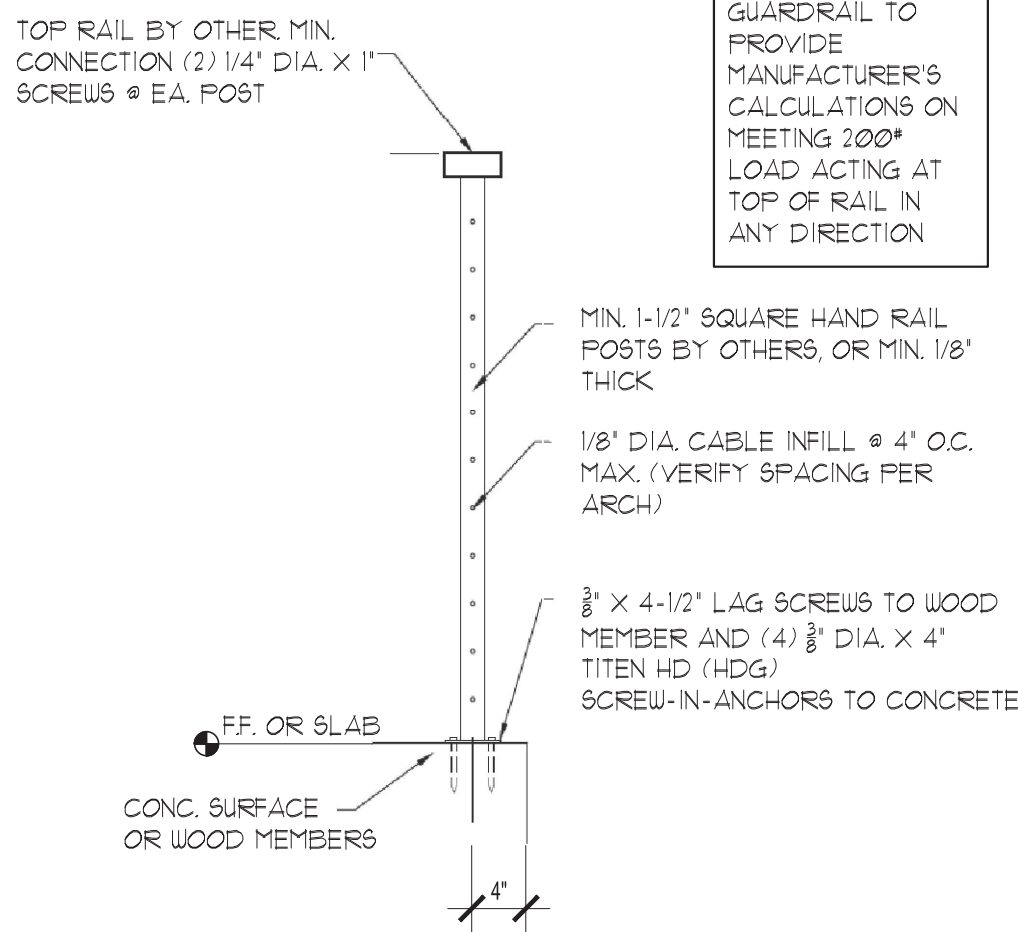
Drawing Title:
STAIR PLANS & SECTIONS

Sheet:
A4.03

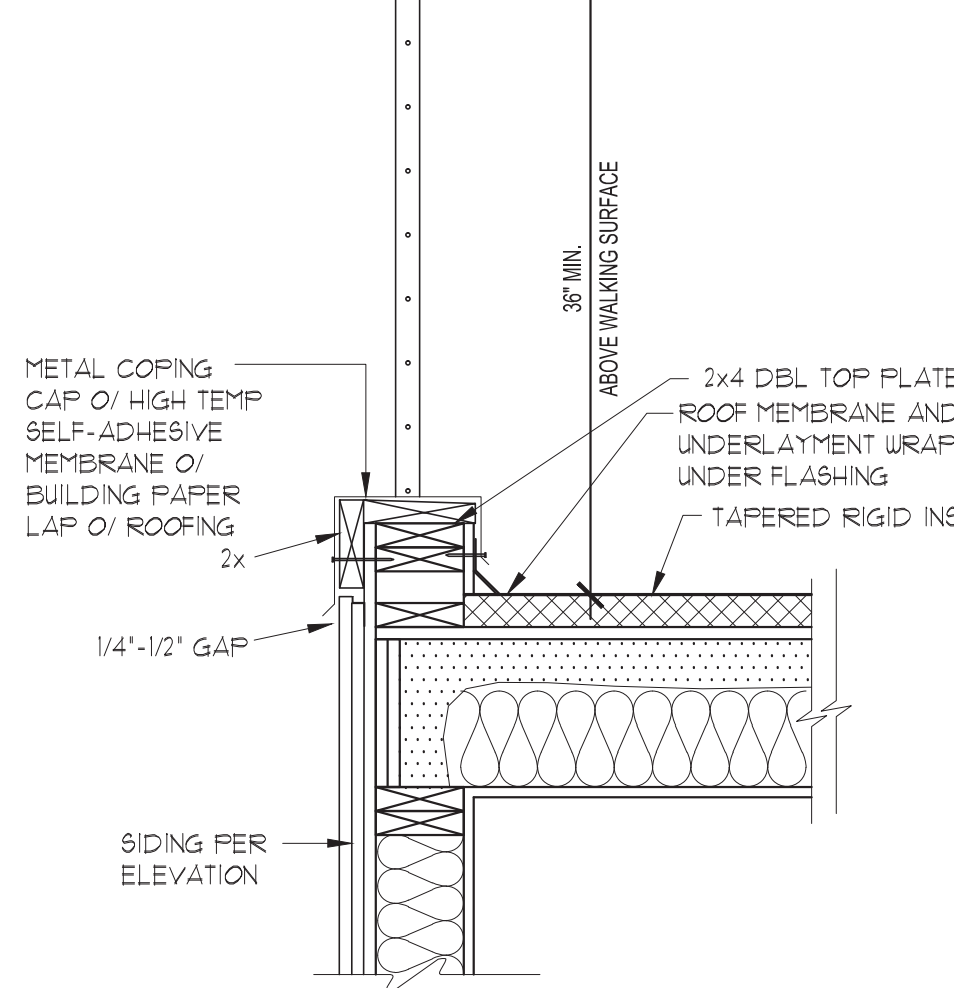


1 INTERIOR STAIR DETAILS
A5.00 SCALE 1" = 1'-0"

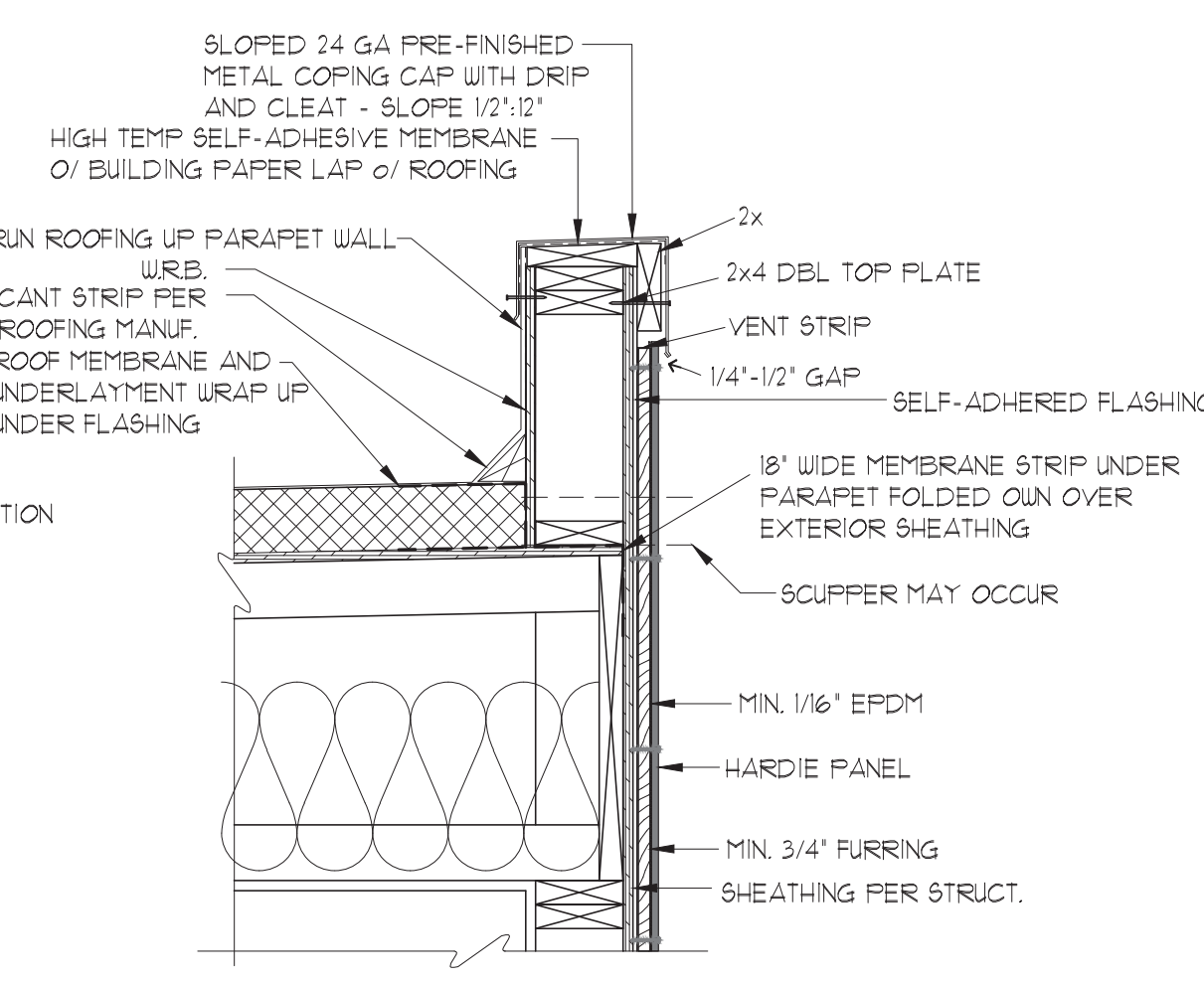
2 EXTERIOR STAIR DETAIL
A5.00 SCALE 1" = 1'-0"



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



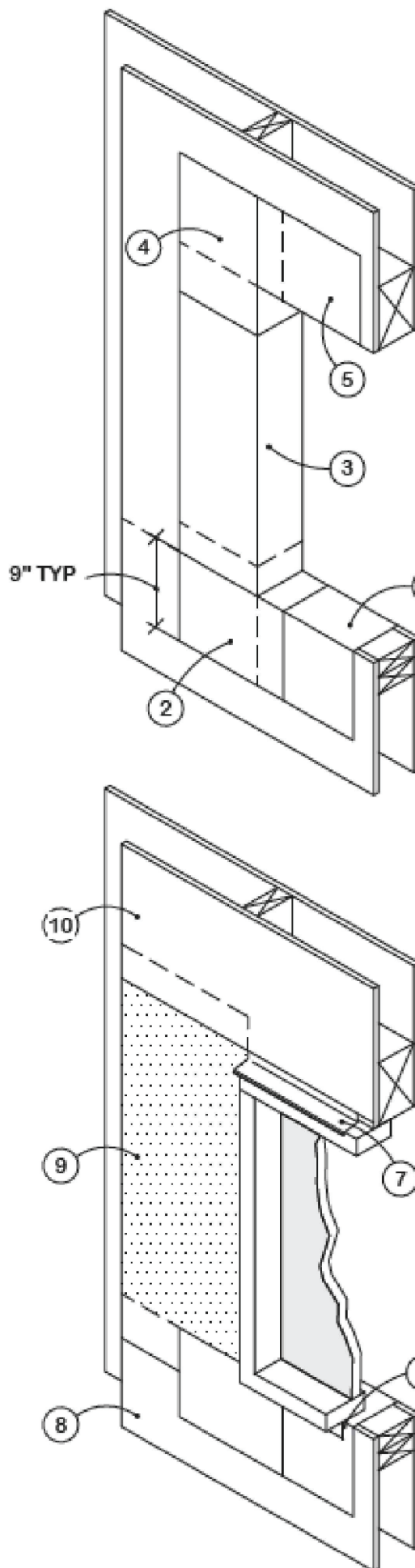
3 TYP. RAILING ATTACHMENT - TOP MOUNTED
A5.00 SCALE 1" = 1'-0"



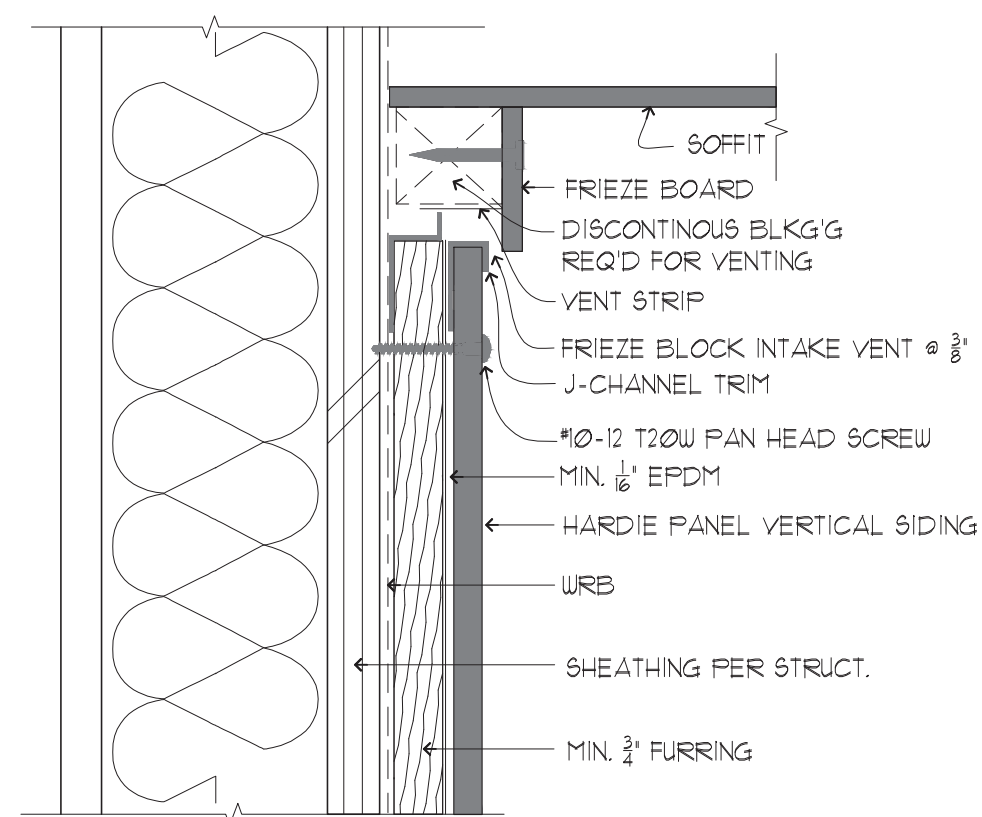
4 TYP. PARAPET DETAIL
A5.00 SCALE 1" = 1'-0"

GENERAL ROUGH OPENING FLASHING SEQUENCE KEYNOTES:

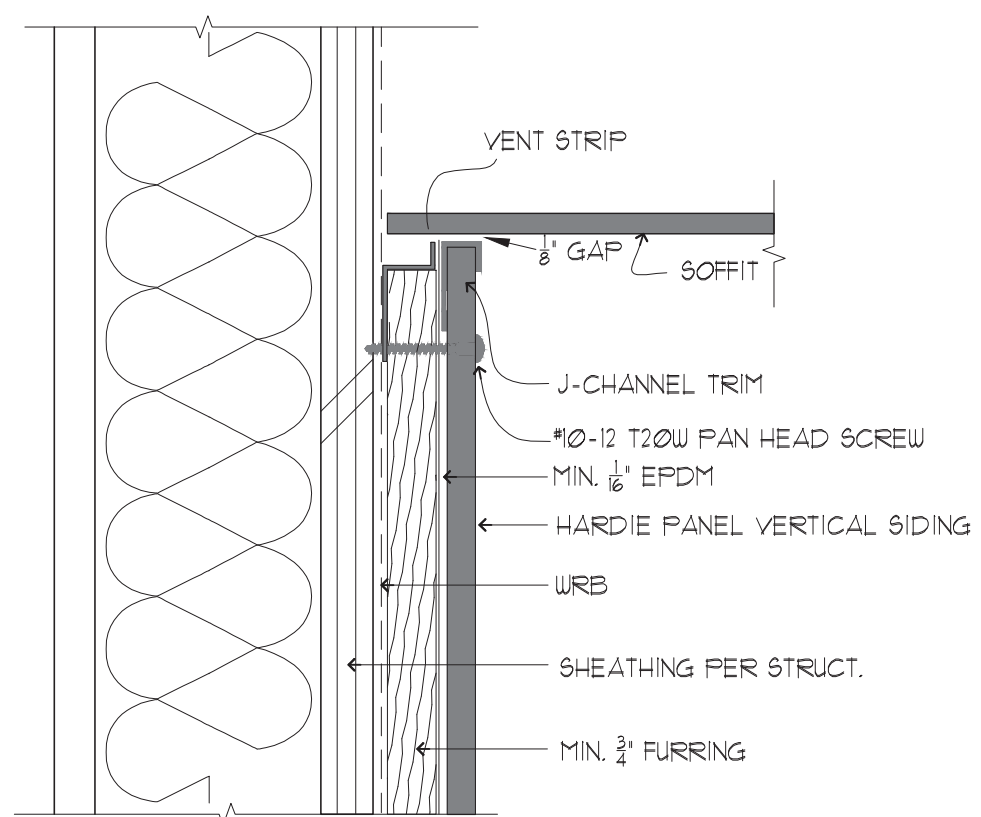
1. INSTALL FLASHING ALONG ENTIRE SILL, LEAVE BOTTOM LOOSE TO OVERLAP WRB LATER
2. INSTALL PRE-FORMED CORNER FLASHING @ LOWER CORNER EACH SIDE
3. INSTALL FLASHING ALONG ENTIRE LENGTH OF JAMB
4. INSTALL PRE-FORMED CORNER FLASHING @ UPPER CORNER EACH SIDE
5. INSTALL FLASHING ALONG ENTIRE LENGTH OF HEAD
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



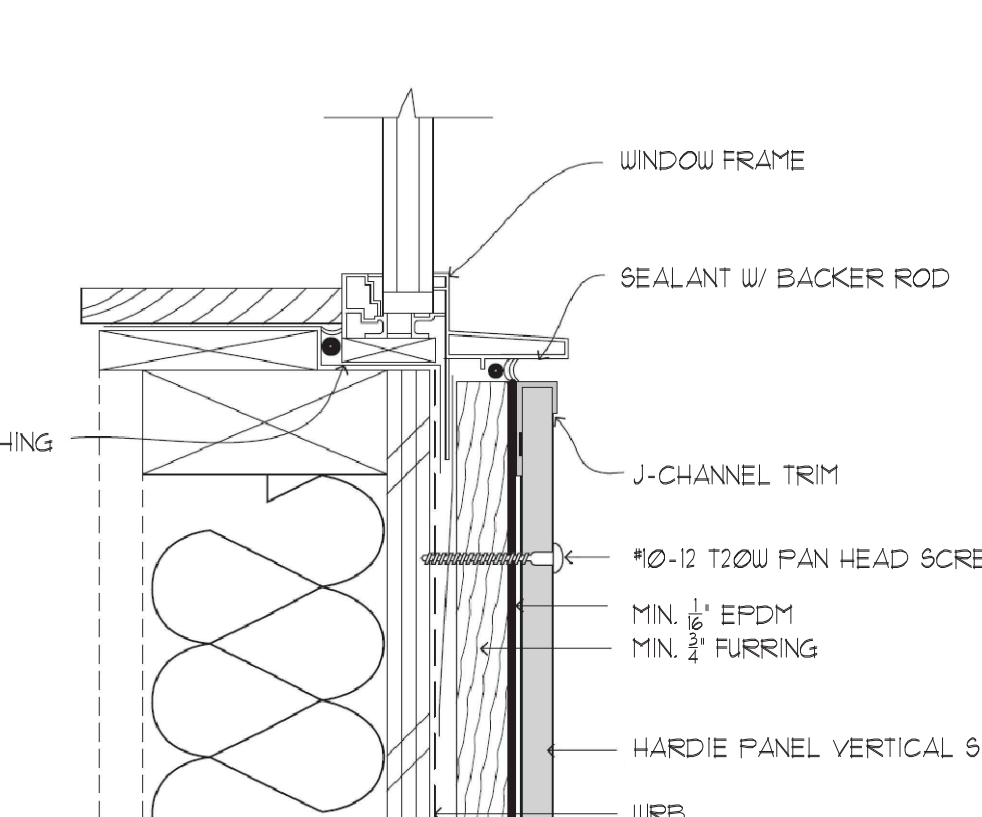
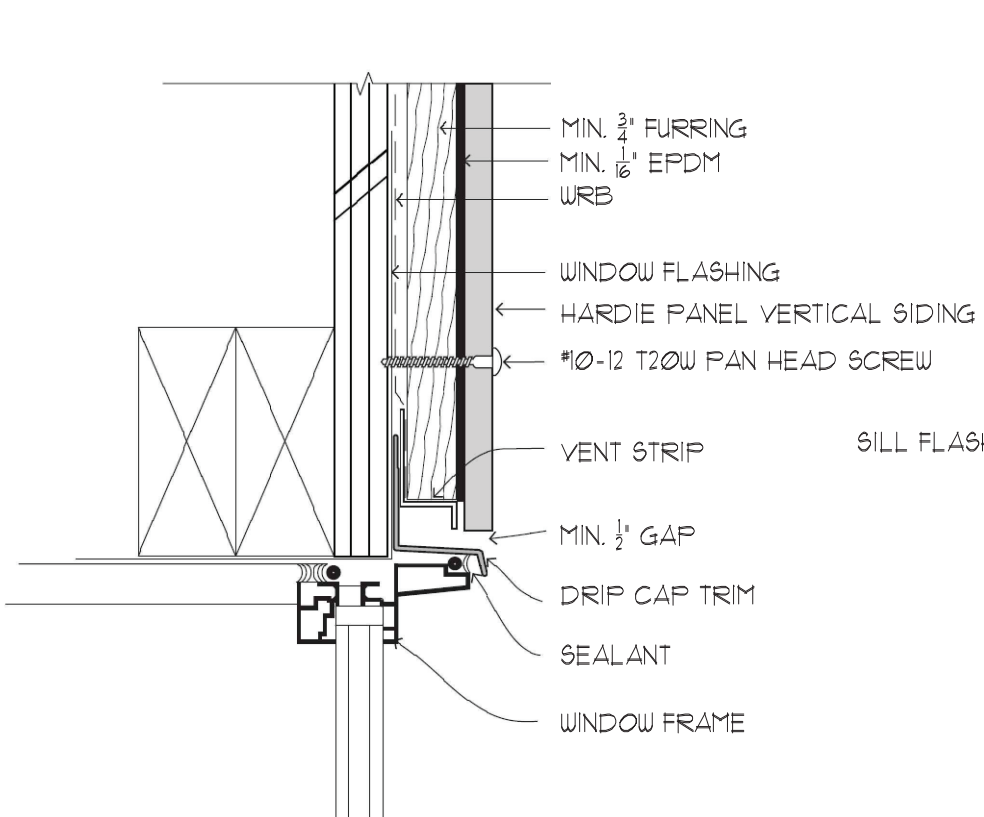
NOTE: MANUFACTURER'S TECHNICAL INSTALLATION SPECIFICATIONS TAKE PRECEDENCE



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



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



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

7 WINDOW FLASHING SEQUENCE
A5.00 NTS

REVISIONS

#	DATE	DESCRIPTION OF REVISION

Drawn By: _____
Checked By: _____
Job #: _____

Project Name:
HU RESIDENCE
30XX 68TH AVE SE
MERCER ISLAND, WA 98040

Approval Stamp



Drawing Title:
ARCHITECTURAL DETAILS

Sheet:

A5.00

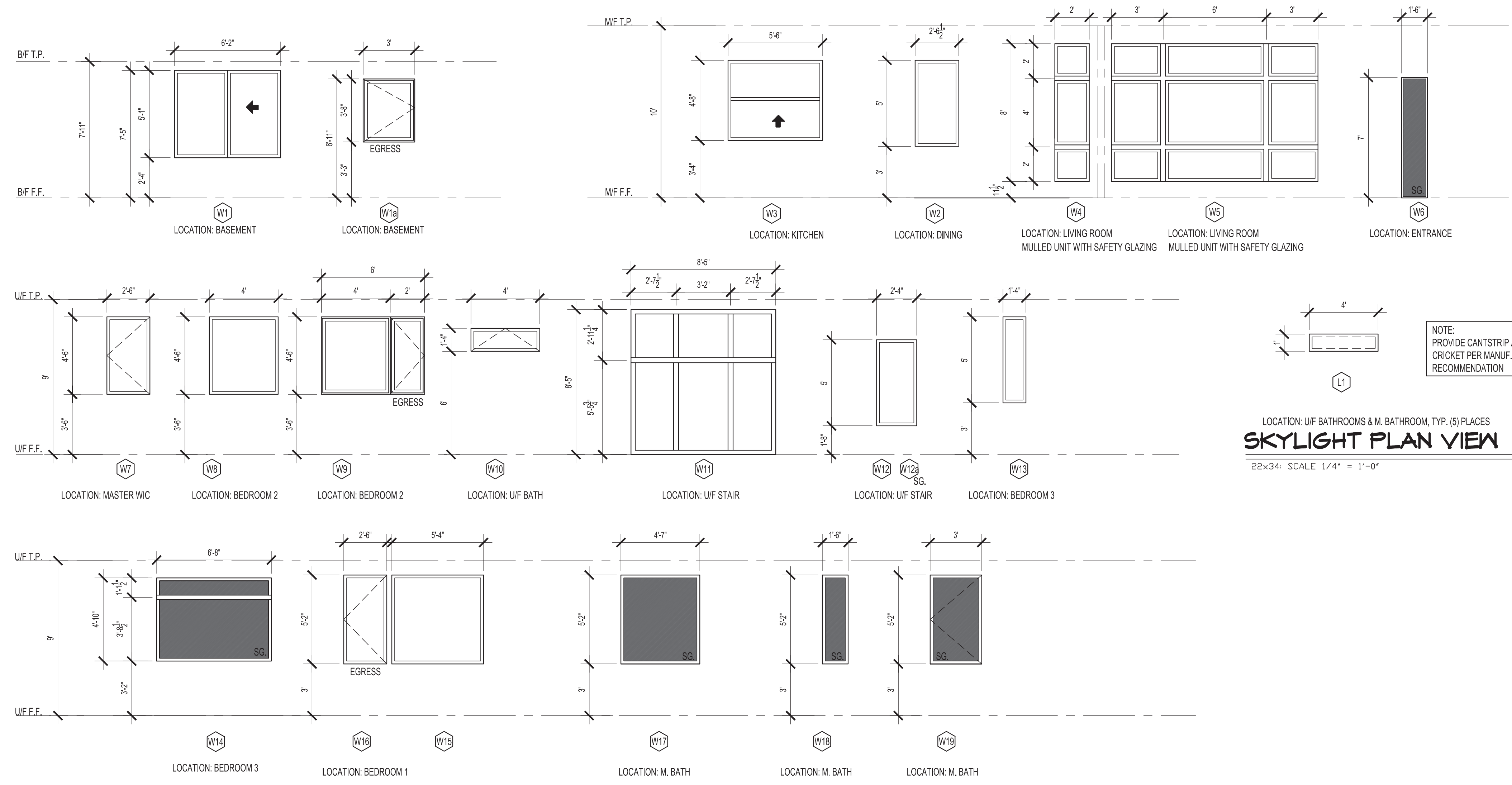
GLAZING NOTES

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, WINDOW DIVISIONS, AND OPERATION PRIOR TO FABRICATION. 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

#	DATE	DESCRIPTION OF REVISION
-	-	-

Drawn By:
 Checked By:
 Job #:



LOCATION: UF BATHROOMS & M. BATHROOM, TYP. (5) PLACES
SKYLIGHT PLAN VIEW
 22x34 SCALE 1/4" = 1'-0"

Project Name:
HU RESIDENCE
 30XX 68TH AVE SE
 MERCER ISLAND, WA 98040

Approval Stamp



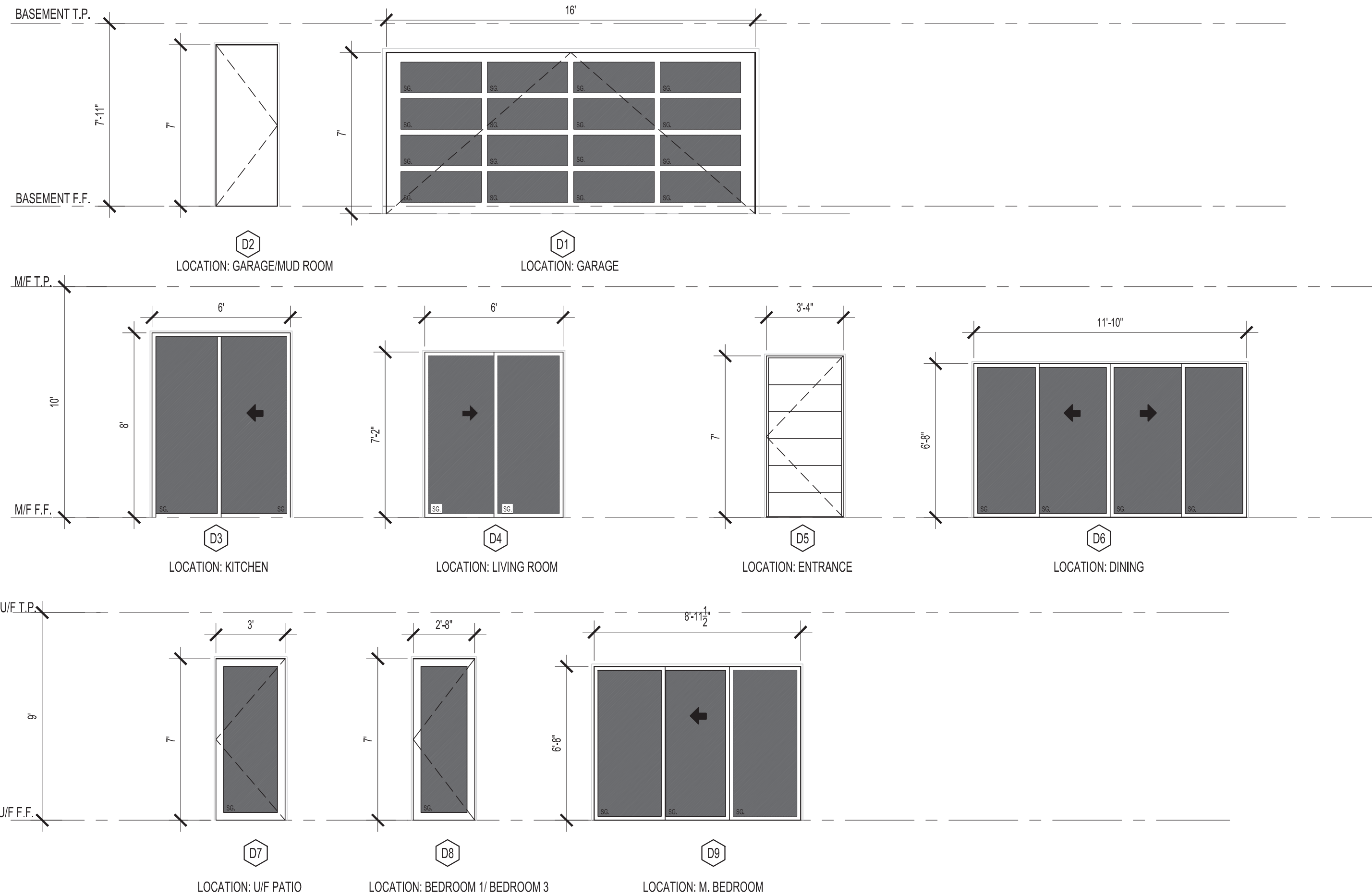
Drawing Title:
GLAZING ELEVATION

Sheet:
A6.00

REVISIONS

#	DATE	DESCRIPTION OF REVISION
-	-	-

Drawn By: _____
 Checked By: _____
 Job #: _____



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

GLAZING SCHEDULE	
CONDITIONED FLOOR AREA:	4504
SUM OF ALL GLAZING AREAS FROM BELOW:	846.5
GLAZING TO FLOOR AREA RATIO:	0.1879
Sum of UA for Heating System Sizing: 304.85	

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	WSEC	0.30	1	16	0	7	0	0	0	0	112.0	33.60
D2	Garage	20-Min./Single Solid	WSEC	0.30	1	3	0	7	0	0	0	0	21.0	6.30
D3	Kitchen	Double Glass Panels Slider	WSEC	0.30	1	6	0	8	0	0	0	48.0	14.40	
D4	Kitchen	Double Glass Panels Slider	WSEC	0.30	1	6	0	7	2	0	0	43.0	12.90	
D5	Entry	Single Solid	WSEC	0.30	1	3	4	7	0	0	0	23.3	7.00	
D6	Dining	Four Panels Slider	WSEC	0.30	1	11	10	6	8	0	0	78.9	23.67	
D7	U/F Patio	Single Swing Lite	WSEC	0.30	1	3	0	7	0	0	0	21.0	6.30	
D8	Bed 1&3	Sing Swing Lite	WSEC	0.30	2	2	8	7	0	0	0	37.3	11.20	
D9	M. BED	(3) Glass Panels Slider	WSEC	0.30	1	8	11.5	6	8	0	0	59.7	17.92	
					(1) Exempt Opaque Swinging Door (MAX 24 SF)									
					SUM OF GLAZING AREA, DOOR AREA, AND UA (does not include exempt door):			287.94		444.3		133.28		
					AREA WEIGHTED U = UA/AREA								0.3	
					SUM OF AREA AND UA FOR HEATING SYSTEM SIZE ONLY (include exempt door):			444.3		133.28				

TAG	ROOM	TYPE	Ref.	U-factor	Qt.	Width			Height			Sill	Area	UA
						Feet	Inch	Feet	Inch	Feet	Inch			
W1	Wet Bar	OX	WSEC	0.30	1	6	2	5	1	2	4		31.3	9.40
W1a	Guest	Casement	WSEC	0.30	1	3	0	3	8	3	3		11.0	3.30
W3	Kitchen	Fixed	WSEC	0.30	1	5	6	4	8	3	4		25.7	7.70
W2	Dining	Fixed	WSEC	0.30	2	4	0	4	2	2	6		33.3	10.00
W4	Living	Fixed. Mull. Unit. SG.	WSEC	0.30	1	2	0	8	0	0	11.5		16.0	4.80
W5	Living	Fixed. Mull. Unit. SG.	WSEC	0.30	1	12	0	8	0	0	11.5		96.0	28.80
W6	Entry	Fixed. SG.	WSEC	0.30	3	1	6	7	0	0	0		31.5	9.45
W7	MSTR WIC	Casement.	WSEC	0.30	1	2	6	4	6	3	6		11.3	3.38
W8	Bedroom2	Fixed.	WSEC	0.30	1	4	0	4	6	3	6		18.0	5.40
W9	Bedroom2	Fixed/Csmt. Mull. Egress	WSEC	0.30	1	6	0	4	6	3	6		27.0	8.10
W10	U/F Bath	Awning	WSEC	0.30	1	4	0	1	4	6	0		5.3	1.60
W11	U/F Stair	Fixed. Mull. Unit. SG.	WSEC	0.30	1	8	5	8	5	0	0		70.8	21.25
W12	U/F Stair	Fixed.	WSEC	0.30	3	2	4	5	0	1	8		35.0	10.50
W13	Bedroom3	Fixed.	WSEC	0.30	1	1	4	5	0	3	0		6.7	2.00
W14	Bedroom3	Fixed. Mull. Unit. SG.	WSEC	0.30	1	6	8	4	10	3	2		32.2	9.67
W15	Bedroom1	Fixed	WSEC	0.30	1	5	4	5	2	3	0		27.6	8.27
W16	Bedroom1	Casement. Egress	WSEC	0.30	1	2	6	5	2	3	0		12.9	3.88
W17	M Bath	Fixed. SG.	WSEC	0.30	1	4	7	5	2	3	0		23.7	7.10
W18	M Bath	Fixed. SG.	WSEC	0.30	1	1	6	5	2	3	0		7.8	2.33
W19	M Bath	Casement. SG.	WSEC	0.30	1	3	0	5	2	3	0		15.5	4.65
					SUM OF AREA AND UA:			538.6		161.57				
					AREA WEIGHTED U = UA/AREA						0.30			

OVERHEAD GLAZING													
TAG	ROOM	TYPE	Ref.	U-factor	Qt.	Feet	Inch	Feet	Inch	Feet	Inch	Area	UA
SL1	U/F PLAN	Skylight	WSEC	0.50	5	1	0	4	0	0	0	20.0	10.00
					SUM OF AREA AND UA:			20.0		10.00			
					AREA WEIGHTED U = UA/AREA						0.50		

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

Approval Stamp



Drawing Title:
GLAZING ELEVATION

Sheet:
A6.01

GENERAL STRUCTURAL NOTES:

(THE FOLLOWING NOTES APPLIES TO THE PROPOSED PROJECT UNLESS OTHERWISE NOTED ON THE PLANS AND DETAILS)

ALL DESIGN AND CONSTRUCTION SHALL COMPLY WITH THE 2015 INTERNATIONAL BUILDING CODE

DESIGN LOADING CRITERIA:

1. DESIGN LOADS:	ROOF SNOW LOAD:	25 PSF
	FLOOR LIVE LOAD:	40 PSF
	DECK LIVE LOAD:	60 PSF
	WIND:	110-MPH (3-SECOND GUST), EXPOSURE B, Kzt=2.00
	SEISMIC:	SEISMIC USER GROUP I, I=1.0, SITE CLASS SD R=6.5 (WOOD SHEAR WALL) Dd=3.0 Cd=4.0 Ss=1.476; S1=0.501, Fa=1.000; Fv=1.500, So=0.984; S0=0.501

DESIGN SOIL PRESSURE:

2,000 PSF MAXIMUM DEAD+LIVE LOAD WITH A ONE-THIRD INCREASE ALLOWED UNDER THE SHORT-TERM WIND OR SEISMIC LOADS. CAST FOOTING ON NATIVE SITE SOILS OR STRUCTURAL FILL THAT EXTENDS DOWN TO THESE SOILS.

COEFFICIENT OF FRICTION FOR FOUNDATIO BASE FRICTION	0.35 (SF=1.5)
EQUIVALENT FLUID PRESSURE	200 PCF (SF=2.0) EXCLUDING THE TOP 2FT OF SOIL FOR SHORING PILES
EARTH PRESSURE FOR YIELDING/ACTIVE CONDITION WALLS	40 PCF
EARTH PRESSURE FOR NON-YIELDING/AT-REST CONDITION WALLS	60 PCF
SEISMIC EARTH PRESSURE FOR PERMANENT SHORING WALLS	8H; WHERE H: EXPOSED HEIGHT OF THE SHORING WALL

REFER TO GEOTECHNICAL REPORT AND FOLLOW UP MEMO DATED JULY 10, 2020 AND NOVEMBER 11, 2020 RESPECTIVELY BY NELSON GEOTHNICAL ASSOCIATES, INC. FOR SPECIFICS.

CONCRETE AND FOUNDATION CONSTRUCTIONS:

1. ALL CONCRETE f_c=3,000 PSI (2,500 PSI USED FOR THE DESIGN), MAXIMUM WATER/CEMENT RATIO =0.45, MINIMUM 5-1/2 SACKS OF CEMENT PER CUBIC YARD. NO SPECIAL INSPECTION REQUIRED. CONCRETE BATCH TICKET OR DELIVERY RECEIPT FOR 3,000 PSI MINIMUM CONCRETE ON SITE FOR BUILDING INSPECTOR VERIFICATION. CONCRETE SHALL BE AIR ENTRAINED. TOTAL AIR CONTENT (PERCENT BY VOLUME OF CONCRETE) SHALL NOT BE LESS THAN 5 PERCENT OR MORE THAN 7 PERCENT.

2. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60. NO SPECIAL INSPECTION REQUIRED. ASTM A706, GRADE 60, REINFORCING STEEL SHALL BE USED FOR WELDED OR FIELD-BENT BARS, SHEAR WALL BOUNDARY MEMBER REINFORCING, MAIN REINFORCING, SPIRALS, TIES AND STIRRUPS IN THE FRAME MEMBERS (BEAMS AND COLUMNS) COMPRISING THE LATERAL FORCE RESISTING SYSTEM.

3. WELDED WIRE FABRIC PER ASTM A185. FURNISH IN FLAT SHEETS, NOT ROLLS. LAP EDGES 1-1/2 MESH MINIMUM.

4. PROVIDE CONCRETE COVER AS FOLLOWS: FOOTINGS 3", WALLS 1-1/2", AND SLAB ON GRADE 1-1/2".

5. PROVIDE 2#4 LONGITUDINAL BOTTOM BARS IN WALL FOOTINGS. PROVIDE CORNER BARS OF SAME SIZE AND NUMBER AT CORNERS AND INTERSECTIONS, 42 BAR DIAMETERS EACH LEG. PROVIDE VERTICAL DOWELS OF SAME SIZE, NUMBER AND SPACING AS CONCRETE STEM WALL VERTICAL BARS WITH A 90 DEGREE STANDARD HOOK AT THE BOTTOM OF THE FOOTING.

6. REINFORCING CONCRETE WALLS AS FOLLOWS"
6" WALLS, #4 @ 12" HORIZONTAL AND VERTICAL AT CENTER OF WALL,
8" WALLS, #5 @ 15" OR #4 @ 12" HORIZONTAL AND VERTICAL AT CENTER OF WALL,
10" WALLS, #4 @ 16" HORIZONTAL AND VERTICAL AT EACH FACE,
12" WALLS, #4 @ 12" HORIZONTAL AND VERTICAL AT EACH FACE.
AT OPENINGS OVER 12" SQUARE, PROVIDE 2#5 BARS AT CENTER OF WALL ALL FOUR SIDES, EXCEPT 10" WALLS OR OVER PROVIDE 1#6 BAR EACH FACE ALL FOUR SIDES, EXTENDING 42 BAR DIAMETERS PAST OPENING. PROVIDE 1#5X4'-0" DIAGONAL BAR AT CENTER OF WALL ALL FOUR CORNERS.

AT CORNERS, PROVIDE CORNER BARS IN OUTSIDE FACE OF SAME SIZE AND SPACING AS HORIZONTAL BARS, 42 BAR DIAMETER EACH LEG.

AT INTERSECTIONS, PROVIDE CORNER BARS OF SAME SIZE, NUMBER AND SPACING AS HORIZONTAL BAR SOF INTERSECTING WALL, 42 BAR DIAMETER EACH LEG.

PROVIDE 2#4 LONGITUDINAL BARS AT TOP OF WALLS. PROVIDE KEYWAY OR ROUGHENED SURFACE AT CONSTRUCTION JOINTS.

PROVIDE VERTICAL DOWELS OF SAME SIZE, NUMBER AND SPACING AS VERTICAL BARS.

7. GROUT – 5000 PSI MINIMUM 7-DAY CUBE STRENGTH PER ASTM C1157-00. GROUT TO BE PREMIXED, NON-SHRINK "MASTERFLOW 928 GROUT" BY MASTER BUILDERS OR APPROVED EQUAL. ICC CERTIFICATION REQUIRED. USE SPECIFIC GROUT MIX RECOMMENDED BY MANUFACTURER FOR EACH GROUT APPLICATION AND FOLLOW MANUFACTURER'S INSTRUCTIONS.

8. ANCHOR BOLTS, ASTM A307. NO SPECIAL INSPECTION REQUIRED. SET ALL ANCHOR BOLTS BY TEMPLATE WHEREVER POSSIBLE.

9. DRILL-IN EXPANSION BOLTS, "Kwik-Bolt TZ" BY HILTI FASTENING SYSTEMS BY HILTI FASTENING SYSTEM OR APPROVED EQUAL. ICC CERTIFICATION REQUIRED (ERS-1917). SPECIAL INSPECTION REQUIRED.

10. DRILL-IN ADHESIVE BOLTS, "HIT RE-500" ADHESIVE ANCHOR SYSTEM BY HILTI FASTENING SYSTEM OR APPROVED EQUAL. ICC CERTIFICATION REQUIRED (ESR-2322). SPECIAL INSPECTION REQUIRED.

CONSTRUCTION REQUIREMENTS:

1. CONTRACTOR SHALL VERIFY DIMENSIONS AND CONDITIONS FOR COMPATIBILITY AND SHALL NOTIFY OWNER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN IN THE DRAWINGS ARE INTENDED AS GUIDELINES ONLY AND MUST BE VERIFIED. THE CONTRACTOR SHALL BRING ALL DISCREPANCIES TO THE OWNER.

2. CONTRACTOR SHALL PROVIDE TEMPORARY SHORING AND BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDING WITH THE PLANS AND DETAILS. THIS INCLUDES EXISTING STRUCTURE.

3. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY AND HEALTH PRECAUTIONS INCLUDING HAZARDOUS CONDITIONS AND MATERIALS EXISTED OR CREATED BY OTHER PARTIES THAT WORKING ON THE PROJECT. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR CONSTRUCTION METHODS, TECHNIQUES, AND SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE WORK.

4. CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ALL EXISTING COMPONENTS, WHICH ARE REQUIRED TO REMAIN, IN THEIR ORIGINAL CONDITION. THIS INCLUDES WEATHER PROTECTIONS FOR THESE COMPONENTS UNTIL SUCH TIME THAT THE ENTIRE DWELLING INCLUDING THE NEW ADDITION ITSELF IS WEATHER PROTECTED.

5. CONTRACTOR INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE OWNER FOR APPROVAL PRIOR FABRICATION OR CONSTRUCTION. CHANGES SHOWN IN SHOP DRAWINGS ONLY WILL NOT SATISFY THIS REQUIREMENT.

6. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS BEFORE COMMENCING ANY DEMOLITION. SHORING SHALL BE INSTALLED TO SUPPORT EXISTING CONSTRUCTION AS REQUIRED AND IN A MANNER SUITABLE TO THE WORK SEQUENCES. DEMOLITION DEBRIS SHALL NOT BE ALLOWED TO DAMAGE OR OVERLOAD THE EXISTING STRUCTURAL. LIMIT CONSTRUCTION LOADING (INCLUDING DEMOLITION DEBRIS) ON EXISTING CEILING FACING TO 10 PSF AND ON EXISTING FLOOR FRAMING TO 40 PSF. PROVIDE TEMPORARY PLANKS OR STRUCTURAL SHEATHING OVER THE EXISTING CEILING JOISTS AS REQUIRED TO PROTECT THE EXISTING SOFFIT.

7. CONTRACTOR SHALL CHECK FOR DRY-ROT FOR ALL EXISTING STRUCTURAL COMPONENTS AT EXTERIOR WALLS, EXISTING TOILET ROOM FLOORS AND WALLS, AREAS SHOWN WATER STAINS, WOOD IN CONTACT WITH EARTH AND CONCRETE, AND ALL WOOD MEMBERS IN CRAW SPACES. ALL ROTTEN WOOD SHALL BE REMOVED AND DAMAGED MEMBERS SHALL BE REPLACED OR REPAIRED AS DIRECTED BY THE OWNER.

8. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE OWNER.

9. ALL STRUCTURAL SYSTEMS, WHICH ARE TO BE COMPOSED OF COMPONENTS TO BE FIELD ERRECTED, SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE, AND ERECTION IN ACCORDANCE WITH INSTRUCTIONS PREPARED BY THE SUPPLIER.

10. THE MANUFACTURER'S INSTRUCTIONS SHALL BE AVAILABLE ON THE JOB SITE AT THE TIME OF INSPECTION, FOR THE INSPECTOR'S USE AND REFERENCE.

STRUCTURAL FRAMING REQUIREMENTS:

1. ALL LUMBER SHALL BE KILN DRIED OR MC-19 WITH WPPA GRADED OR APPROVED EQUAL. ALL STRUCTURAL FLOOR, ROOF, AND SHEAR WALL SHEARING SHALL BE APA RATED. ALL SPECIFIED INDUSTRIAL LUMBERS, NAMELY PARALLAM PSL, MICROLAM LVL, TIMBERSTRAND LSL, AND TJI SHALL BE MADE BY TRUS-JOIST CORPORATION OR OWNER APPROVED EQUAL. ALL GLUED LAMINATED MEMBERS SHALL BE FABRICATED IN ACCORDANCE WITH AITC 110, AITC 117 AND ANSI/AITC A190.1. EACH MEMBER SHALL BEAR AN AITC IDENTIFICATION MARK AND SHALL BE ACCOMPANIED BY AITC CERTIFICATE OF PERFORMANCE. USE EXTERIOR TYPE ADHESIVES. BEAMS SHALL BE INDUSTRIAL APPEARANCE GRADE, UON BY THE ARCHITECT. SINGLE SPAN BEAMS SHALL BE COMBINATION 24F-V4, Fb=2400 PSI, Fv=265 PSI, E=1,800,000 PSI; CANTILEVERED SPAN BEAMS SHALL BE COMBINATION 24F-V8, Fb=2400 PSI, Fv=265 PSI, E=1,800,000 PSI.

2. MINIMUM NAILING SHALL COMPLY WITH TABLE 2304.10.1 OF THE 2015 IBC.

3. ALL NAILS SIZES SPECIFIED ON DRAWINGS ARE BASED ON THE FOLLOWING SPECIFICATIONS:

NAIL SIZE, LENGTH, AND DIAMETER
6D 2' 0.113" 8D 2-1/2' 0.131 10D 3' 0.148 16D BOX 3' 0.131
THE FOLLOWING STAPLES MAY BE SUBSTITUTED FOR NAILING OF PLYWOOD
NAIL SIZE, EQUIVALENT STAPLE, AND MINIMUM LENGTH
6D 16GA 1-3/4" 8D 15GA 1-3/4" 10D 13GA 1-3/4"

4. GALVANIZED METAL TIMBER CONNECTORS CALLED OUT BY LETTERS AND NUMBERS SHALL BE "STRONG-TIE" BY SIMPSON COMPANY INCLUDING SIMPSON STRONG WALLS AND SIMPSON GARAGE PORTAL WALLS (WHERE OCCUR) OR OWNER APPROVED EQUAL. IF NO SPECIFIC HANGER IS CALLED OUT, ANY HANGER MADE FOR THE SPECIFIED BEAM OR JOIST CAN BE USED.

5. ALL EXTERIOR WALL STUDS ARE 2X6 DOUGLAS FIR NO.2 STUDS AT 16" ON CENTER. ALL INTERIOR BEARING AND SHEAR WALL STUDS ARE 2X4 DOUBLAS FIR NO.2 STUDS AT 16" ON CENTER. PROVIDE ONE BEARING STUD AND ONE FULL HEIGHT STUD AT EACH SIDE OF DOOR AND WINDOW OPENINGS WHEN THEIR ROUGH OPENING WIDTH IS EQUAL OR LESS THAN 3'-0". PROVIDE TWO BEARING STUDS AND TWO FULL HEIGHT STUDS AT EACH SIDE OF DOOR AND WINDOW OPENINGS WHEN THEIR ROUGH OPENING WIDTH IS GREATER THAN 3'-0" OR WALL IS FRAMED WITH (2)2X6 AT 16" ON CENTER. PROVIDE MULTIPLE STUDS UNDER ALL BEAM AND KING-TRUSS BEARING LOCATIONS WITH THEIR TOTAL WIDTH/DEPTH EQUAL OR WIDER/DEEPER THAN THE BEAM/KING-TRUSS WIDTH. THESE MULTIPLE STUDS NEED TO EXTEND DOWN TO THE TOP OF CONCRETE. PROVIDE EQUAL AMOUNT OF MULTIPLE VERTICAL BLOCKING AT JOIST SPACING TO ALLOW CONTINUITY. THIS ALSO APPLIES TO ALL HOLLOW STUDS FOR THE SHEAR WALLS. FACE NAIL WALL TOP DOUBLE PLATE WITH 16D @ 12" AND LAP MINIMUM 4'-0" AT JOINTS AND PROVIDE (6) 16D @ 4" ON CENTER EACH SIDE OF JOINT. FACE NAIL WALL SILL PLATE THROUGH FLOOR SHEATHING TO DOUBLE PLATES, BEAM, OR SUPPORTING MEMBER BELOW WITH 16D @ 6" ON CENTER. MULTIPLE STUD SHALL BE NAILED TOGETHER WITH 16D @ 12" ON CENTER STAGGERED EACH FACE. PROVIDE SOLID BLOCKING BETWEEN STUDS AT MID-HEIGHT FOR ALL STUD WALLS OVER 10' IN HEIGHT.

6. PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS THAT EXTEND OVER MORE THAN HALF THE JOIST LENGTH AND AROUND ALL OPENING IN FLOOR. FLOOR JOISTS SHALL BE BLOCKED PER THE JOIST MANUFACTURER'S INSTRUCTIONS.

7. ALL FLOOR FRAMING LUMBERS: DOUGLAS FIR NO.2.
ALL HEADERS: DOUGLAS FIR NO.2. TYPICAL HEADER 4X8 MINIMUM UNLESS OTHERWISE SHOWN ON THE PLANS.
ALL POSTS: DOUGLAS FIR NO.2 UNLESS OTHERWISE SHOWN ON THE PLANS
STUDS, PLATES, AND MISCELLANEOUS LIGHT NON-STRUCTURAL FRAMING: HEM-FIR NO.2

8. METAL PLATE CONNECTED WOOD TRUSSES: WOOD TRUSSES SHALL BE DESIGNED, MANUFACTURED AND INSTALLED PER TRUSS PLATE INSTITUTE (ANSI/TPI 1) SPECIFICATIONS. TPI SPECIFICATIONS SHALL NOT REVISE TRUSS ENGINEER'S AND TRUSS MANUFACTURER'S RESPONSIBILITY NOTED BELOW. WEB AND CHORD SIZES INDICATED ON PLANS AND NOTES ARE MINIMUM ONLY. ROOF DESIGN LIVE LOAD PER DESIGN LOADING CRITERIA. ROOF DESIGN DEAD LOAD 10 PSF MINIMUM TOP CHORD AND 7 PSF MINIMUM BOTTOM CHORD WITH LIVE LOAD OF 40 PSF MINIMUM AT ATTIC FLOOR WHERE APPLICABLE. USE 2X6 MINIMUM BOTTOM CHORD FOR ATTIC FLOOR. ROOF DESIGN WIND UPLIFT 15 PSF MINIMUM TYPICAL. EXCEPT USE 30 PSF MINIMUM WITHIN 10 FEET OF ROOF EAVES OR RAKES. DESIGN TRUSSES FOR SUPPORT OF DEAD, LIVE, SNOWDRIFT, AND WIND LOADS AND MECHANICAL/ELECTRICAL EQUIPMENT, PIPING, ETC AS REQUIRED. SNOW DRIFT LOADING LOCATIONS AND VALUES TO BE DETERMINED BY TRUSS ENGINEER. SUBMIT SHOP DRAWINGS AND DESIGN CALCULATIONS SHOWING TRUSSES, TRUSS TO TRUSS AND TRUSS TO SUPPORTING STRUCTURE CONNECTIONS, ERECTION DRAWINGS AND PERMANENT BRACING SIZES AND CONNECTIONS. PROVIDE STANDARD TRUSS CAMBER. PROVIDE ERECTION BRACING PER MANUFACTURE'S INSTRUCTIONS. PROVIDE AND INSTALL PERMANENT BRACING FOR LATERAL SUPPORT OF INDIVIDUAL WEB AND CHORD MEMBERS AS DESIGNED BY THE TRUSS ENGINEER. PROVIDE AND INSTALL ALL TRUSS TO TRUSS AND TRUSS TO SUPPORTING STRUCTURE CONNECTIONS. TRUSS ALTERATIONS SHALL NOT OCCUR UNLESS THE APPROVAL OF A DESIGN PROFESSIONAL.

9. VENT BLOCKINGS CALLED OUT IN THE DRAWINGS ARE 2X WOOD BLOCKING WITH (3) EQUAL SPACED 1-1/2" DIAMETER HOLES ON EACH BLOCKING WITH MASH INSTALLED.

10. ROOF SHEATHING: 15/32"(1/2") MINIMUM CDX PLYWOOD OR STRUCTURAL PANEL WITH SPAN RATING OF 32/16, UNBLOCKED, LAID UP WITH FACE GRAIN PERPENDICULAR TO FRAMING BELOW, STAGGER END JOINTS. INSTALL PLYCLIPS AS REQUIRED. NAILING IS AS FOLLOWS: 10D @ 6" DIAPHRAGM BOUNDARIES, OVER EXTERIOR WALLS, AND INTERIOR SHEAR WALLS, 10D @ 6" ALL SUPPORTED EDGES, AND 10D @ 12" FIELD.

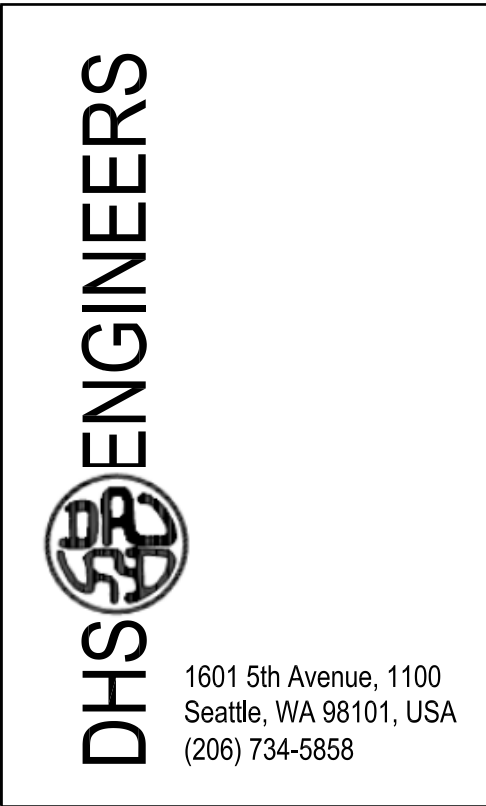
11. FLOOR AND ROOF DECK SHEATHING: 23/32"(3/4") MINIMUM CDX TONGUE AND GROOVE PLYWOOD WITH SPAN RATING OF 40/20, UNBLOCKED FOR FLOOR JOIST SPACED AT 16" ON CENTER; 7/8" MINIMUM CDX TONGUE AND GROOVE PLYWOOD WITH SPAN RATING OF 40/20 UNBLOCKED FOR FLOOR JOIST SPACED AT 24" ON CENTER; LAID UP WITH FACE GRAIN PERPENDICULAR TO FRAMING BELOW, STAGGER END JOINTS. GLUE FLOOR SHEATHING TO ALL SUPPORTS WITH A CONTINUOUS 3/16" DIAMETER BEAD MINIMUM. PROVIDE TWO BEADS AT PANEL JOINTS. NAILING IS AS FOLLOWS: 10D @ 6" DIAPHRAGM BOUNDARIES, OVER EXTERIOR WALLS, AND INTERIOR SHEAR WALLS, 10D @ 6" ALL SUPPORTED EDGES, AND 10D @ 10" FIELD.

12. EXTERIOR/INTERIOR/SHEAR WALL SHEATHING 15/32" (1/2") MINIMUM CDX PLYWOOD WITH SPAN RATING OF 24/0, EXTERIOR SIDE BLOCKED (BLOCK ALL UNSUPPORTED EDGES), NAIL WITH 10D @ 6" ALL EDGES AND 10D @ 12" FIELD. NAIL BOTTOM PLATE TO FRAMING BELOW WITH 16D @ 6".

13. WALL SILL PLATES OVER THE CONCRETE ARE TO BE 3X TREATED LUMBER WITH 1/2" DIAMETER ANCHOR BOLTS AT 4'-0" ON CENTER WITH EMBED IN CONCRETE OF 7" MINIMUM. ALL BOLTS SHALL HAVE 3X3X1/4 STEEL WASHER PLATE UNDER BOLT NUTS. THE EDGE OF A WASHER SHOULD NOT BE LOCATED MORE 1/2" AWAY FROM THE INSIDE FACE OF A SHEAR WALL SHEATHING. MINIMUM OF TWO BOLTS PER PLATE WITH BOLT END DISTANCE OF 6" MINIMUM. SHEAR WALL BOTTOM PLATE NAILING AND ALL NAILING AT PRESSURE TREATED PLATE/MEMBERS SHALL BE HOT-DIPPED ZINC-COATED GALVANIZED STEEL OR STAINLESS-STEEL NAILS.

14. WOOD IN CONTACT WITH CONCRETE SHOULD BE PRESERVATIVE-TREATED WOOD IN ACCORDNACE WITH AWPA U1 AND M4 STANDARDS.

15. FASTENERS INSTALLED IN PRESERVATIVE-TREATED OR IN FIRE-RETARDANT-TREATED WOOD SHALL BE HOT-DIPPED ZINC-COATED GALVANIZED WITH A MINIMUM COATING WEIGHT COMPLYING WITH ASTM A153. THIS INCLUDES NUTS AND WASHERS. FASTENERS OTHER THAN NAILS AND TEMBER RIVETS ARE PERMITTED TO BE MECHANICALLY DEPOSITED ZINC-COATED WITH COATING WEIGHTS COMPLYING WITH ASTM B 695, CLASS 55 MINIMUM.

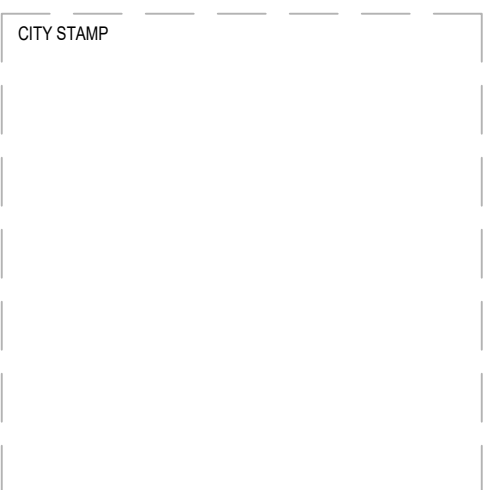


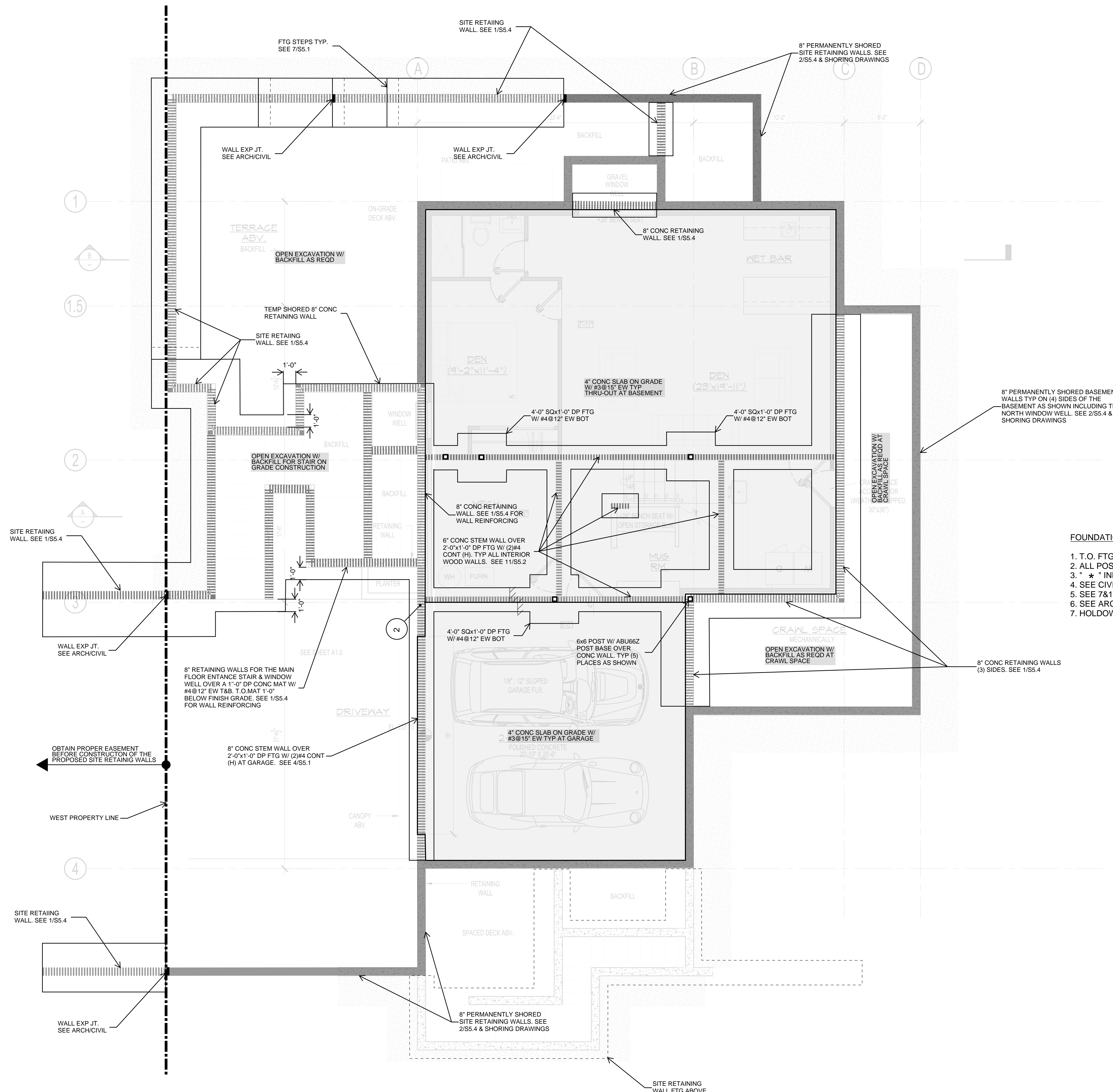
NUMBER	DATE	DESCRIPTION OF REVISIONS
00	01/08/21	PERMIT SET

SHEET TITLE
GENERAL NOTE

JOB NUMBER
SHEET NUMBER

S0.1





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

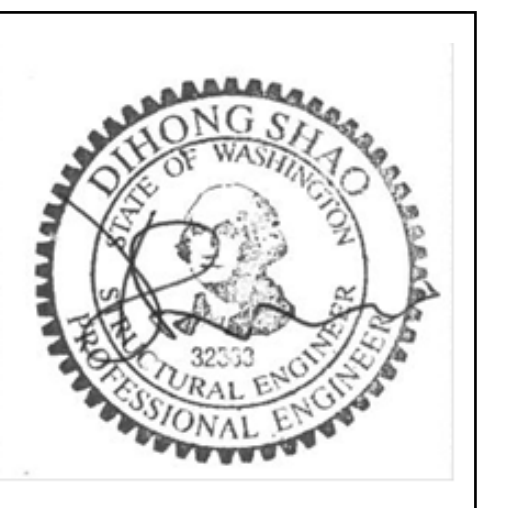
FOUNDATION & BASEMENT FLOOR PLAN

1/4"=1'-0"



DHS ENGINEERS

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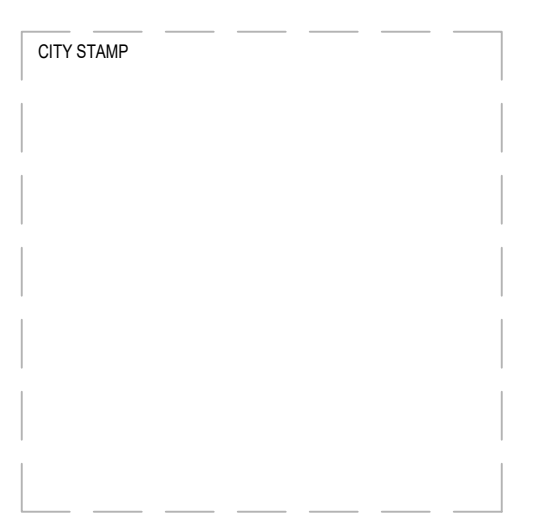
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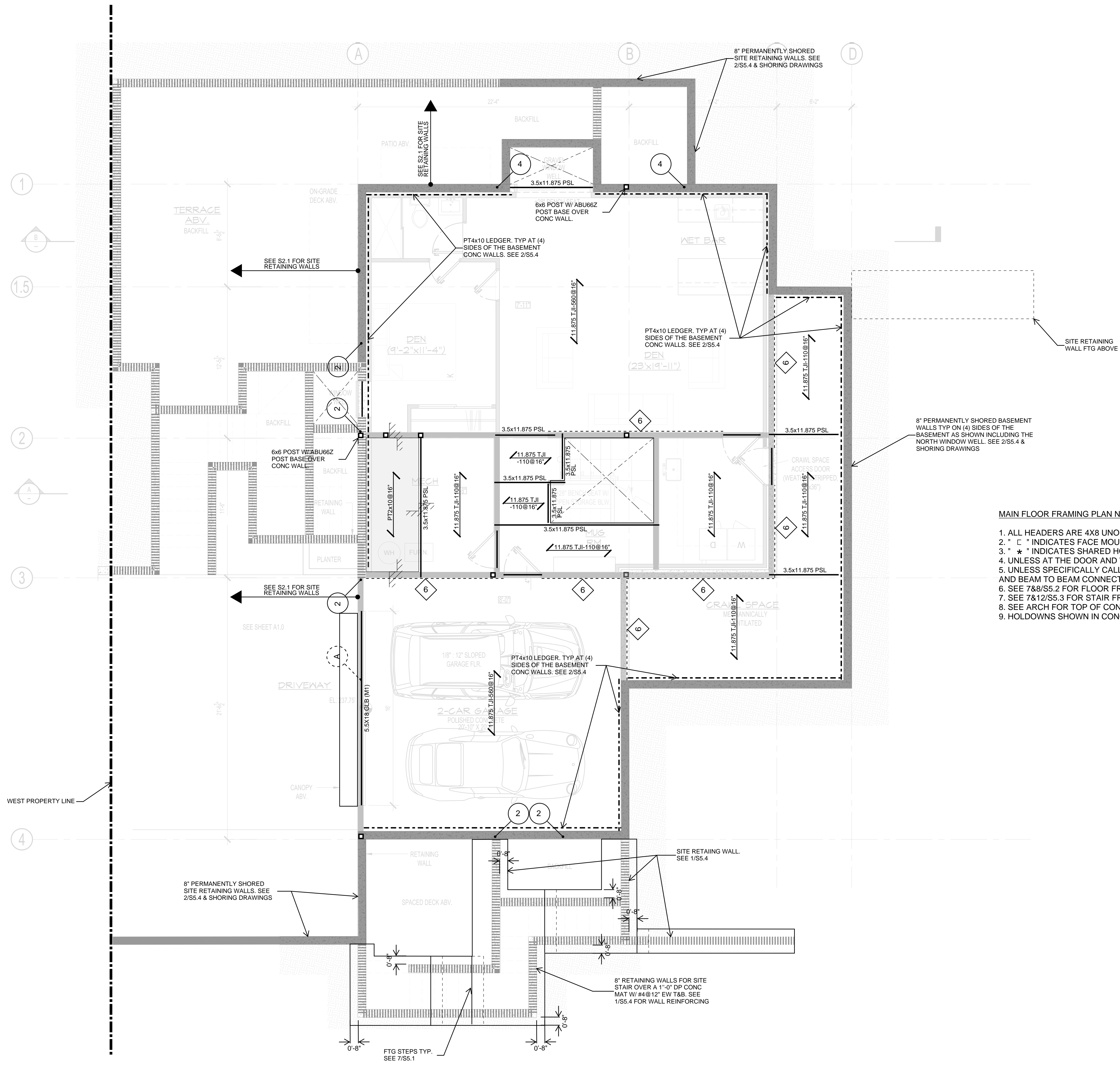
SHEET TITLE
FOUNDATION & BASEMENT FLOOR PLAN

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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 Seattle, WA 98101, USA
 (206) 734-6858



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

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

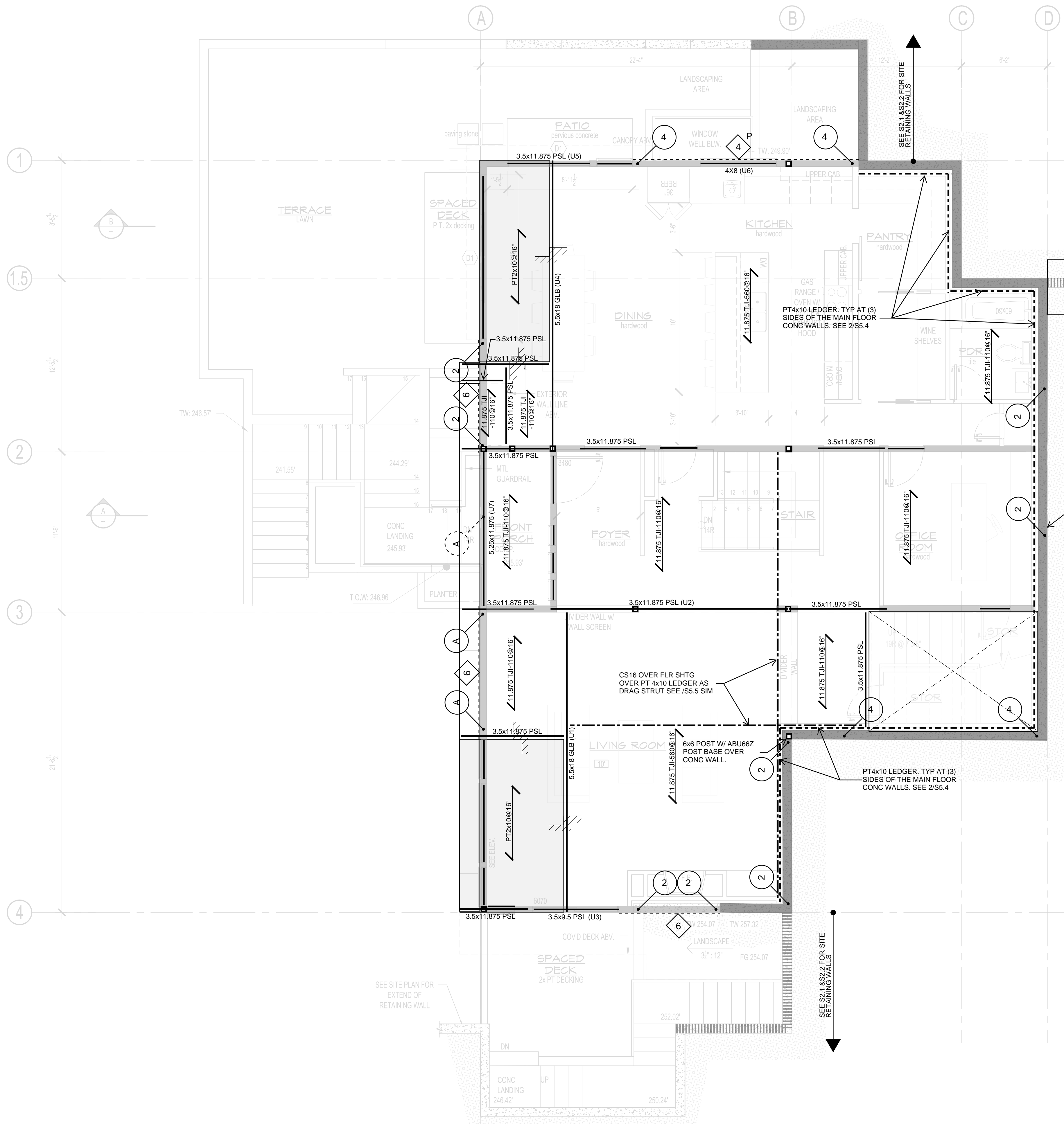
SHEET TITLE
MAIN FLOOR FRAMING PLAN

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 PERPENDICULAR 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

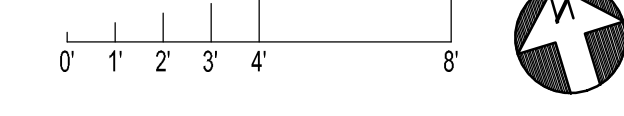
- ALL BEARING/SHEAR WALLS SHOWN IN PLANS ARE FOR WALLS BELOW. TYPICAL UNO.
- X LINEAR FT OF TYPE Y SHEAR WALL; REFER TO 8/S5.5 FOR SCHEDULE AND DETAILS.
 - TYPE Y PERFORATED SHEAR WALL; REFER TO 6/S5.5 FOR DETAIL.
 - HOLDOWN STRAP TIES AT TOP (DASHED WHERE OCCURS) AND BOT OF SHEAR WALL PANEL BELOW; REFER 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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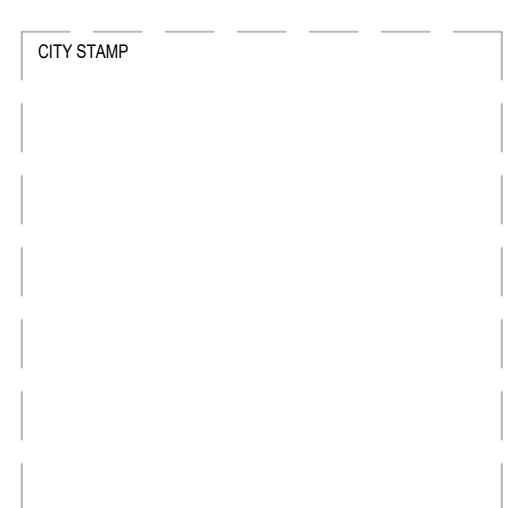
NUMBER	DATE	DESCRIPTION OF REVISIONS
00	01/08/21	PERMIT SET

SHEET TITLE
UPPER FLOOR FRAMING PLAN

JOB NUMBER

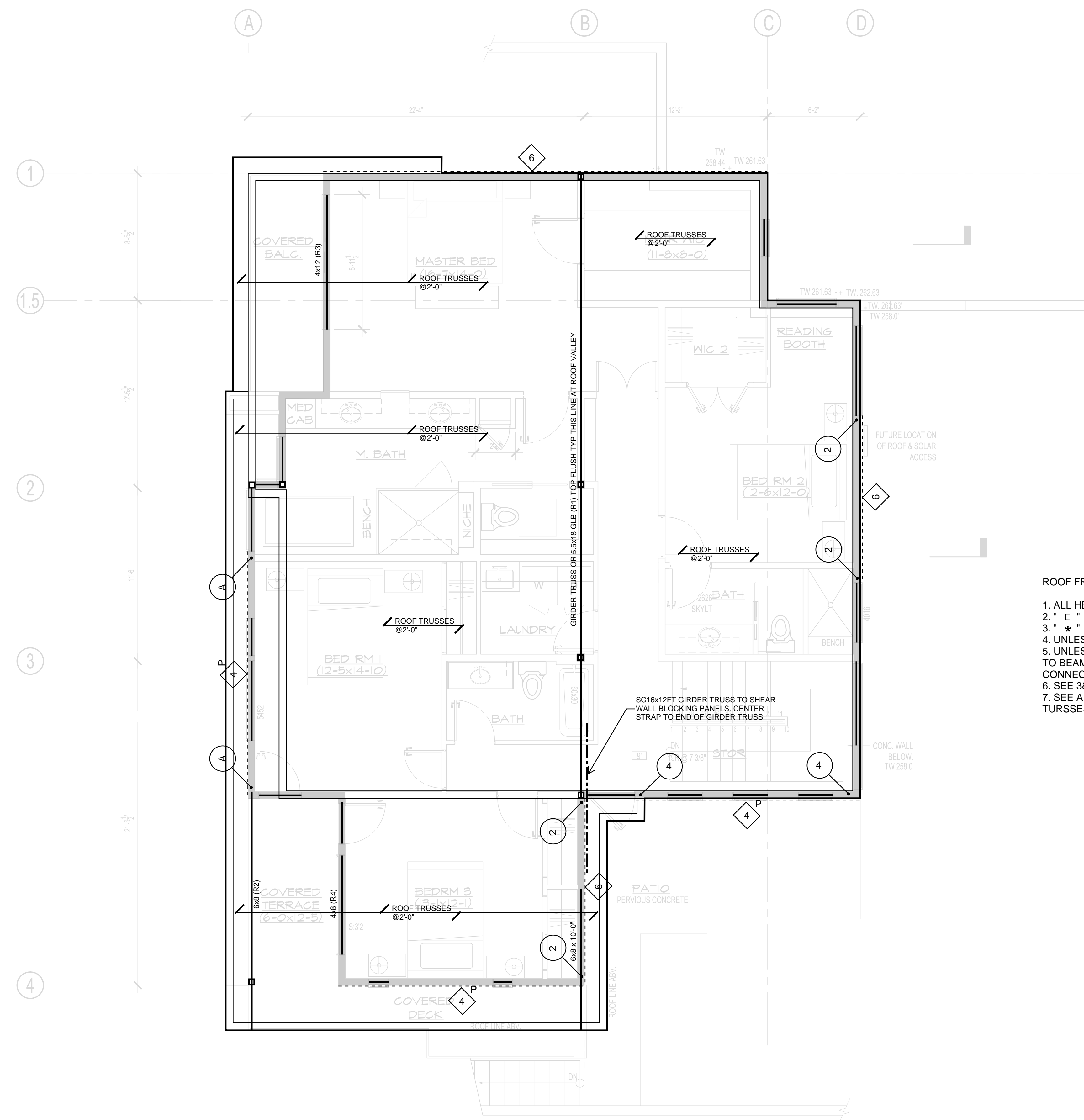
SHEET NUMBER

S2.3





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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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SHEET TITLE
ROOF FRAMING PLAN

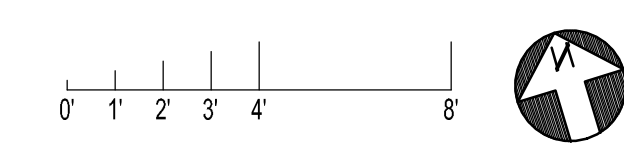
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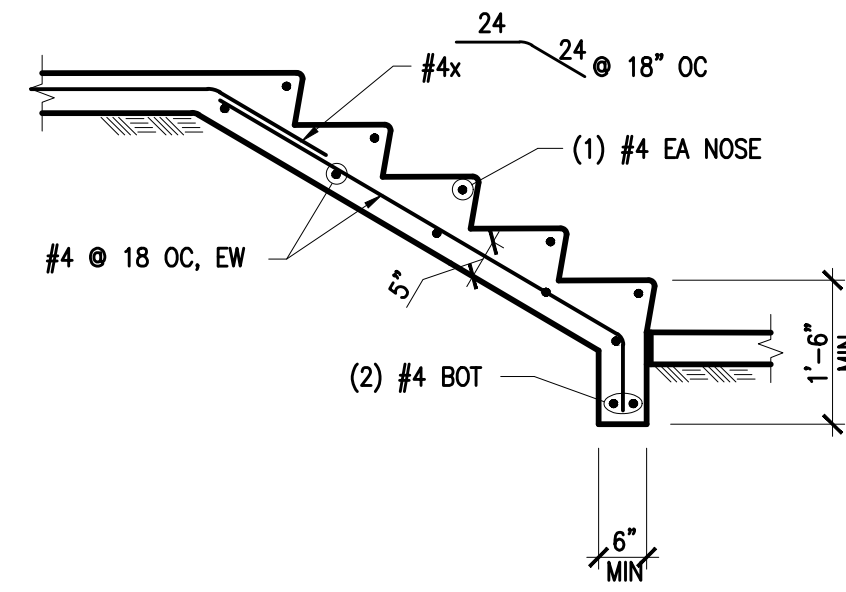
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S2.4

CITY STAMP

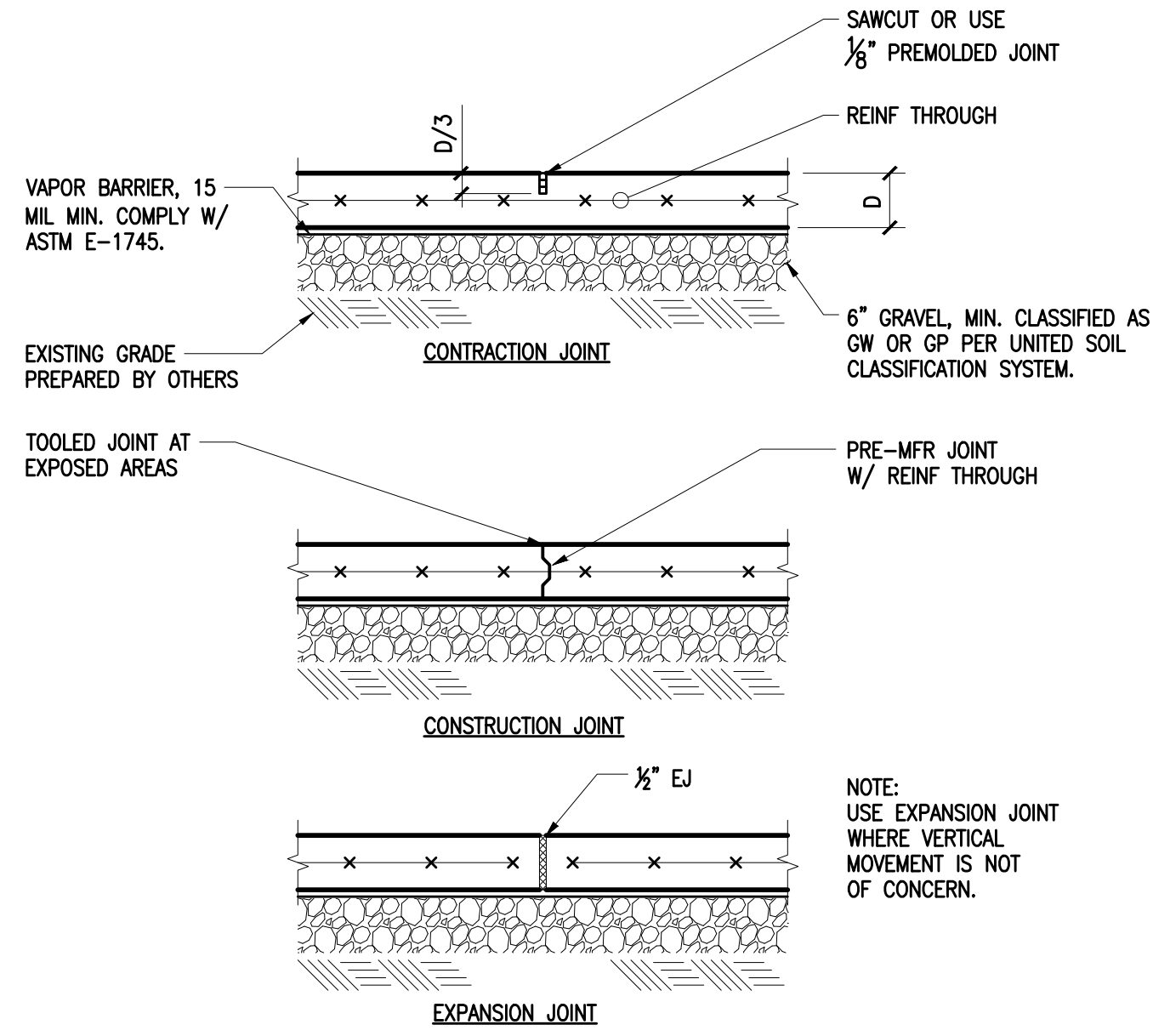
ROOF FRAMING PLAN
1/4"=1'-0"





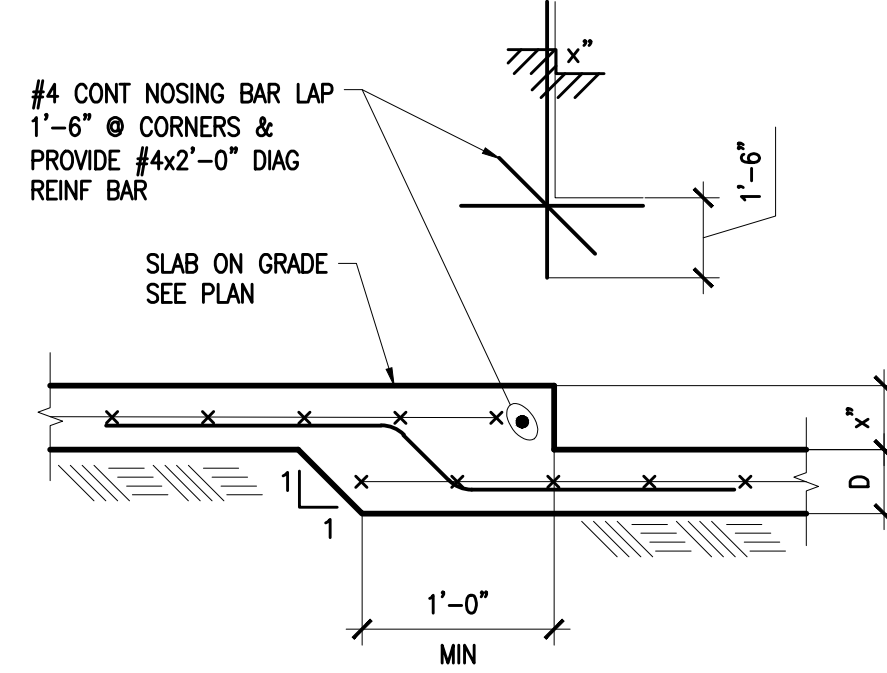
NOTES:
1. SEE ARCH FOR STAIR DIMENSIONS AND CONFIGURATION.

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

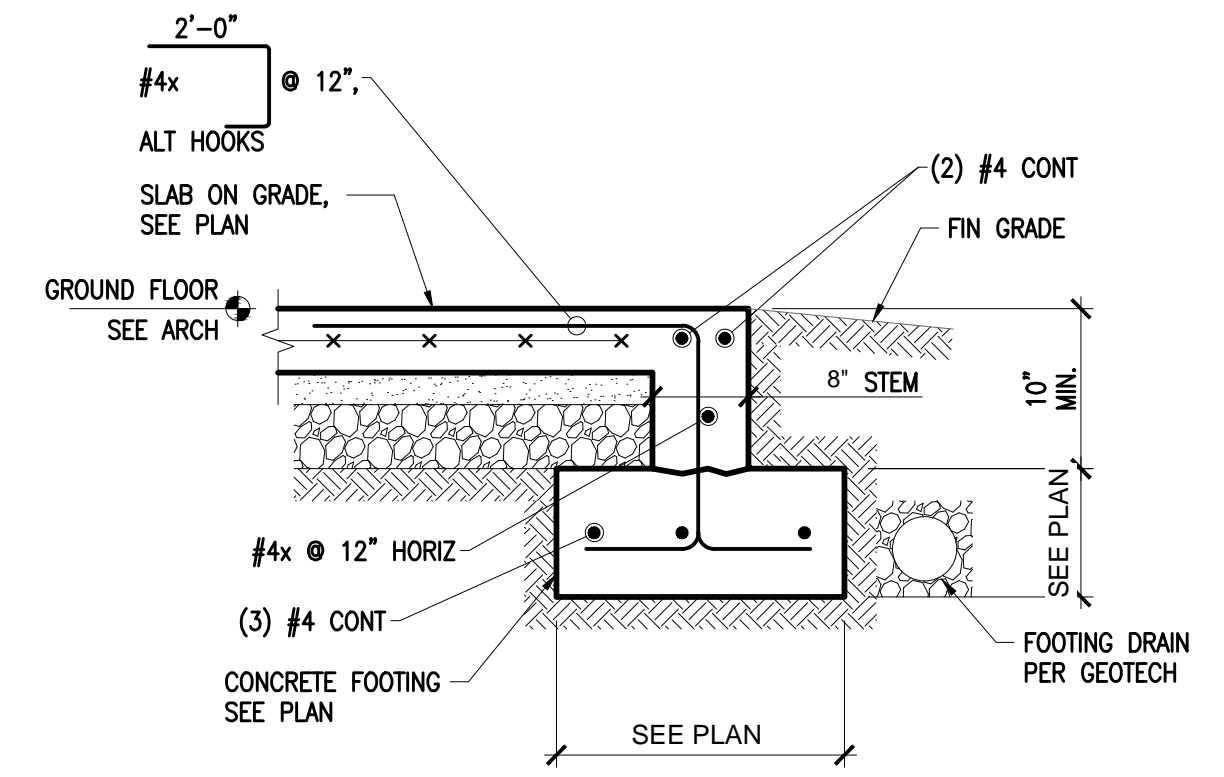


NOTE:
USE EXPANSION JOINT WHERE VERTICAL MOVEMENT IS NOT OF CONCERN.

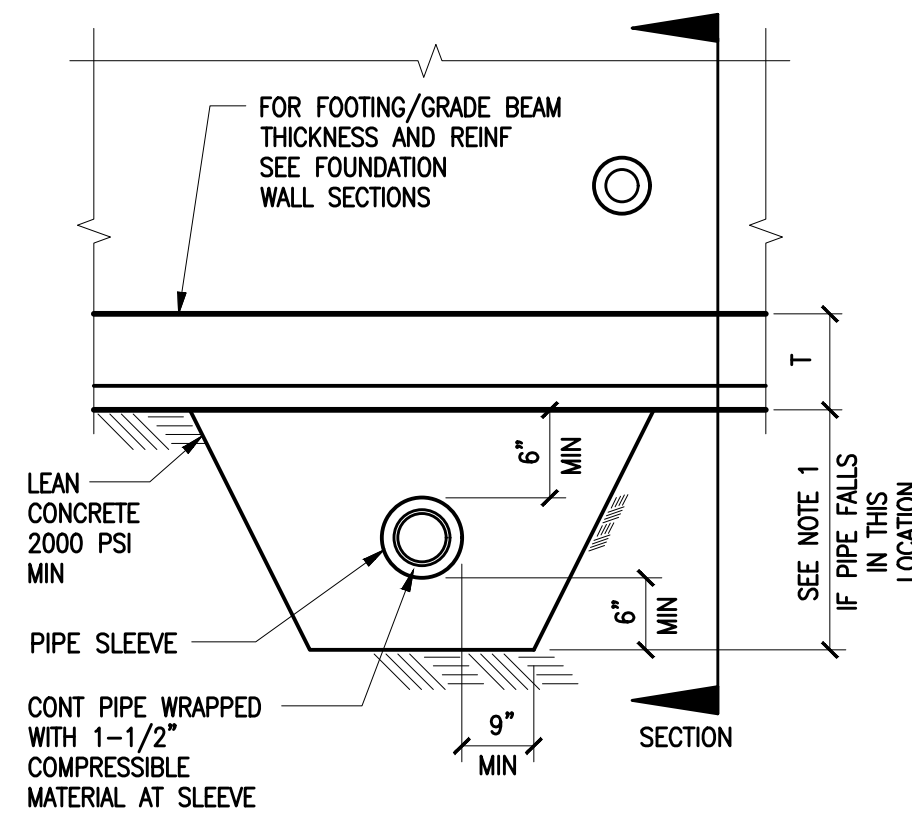
2 SLAB JOINT DETAILS
1"=1'-0"



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

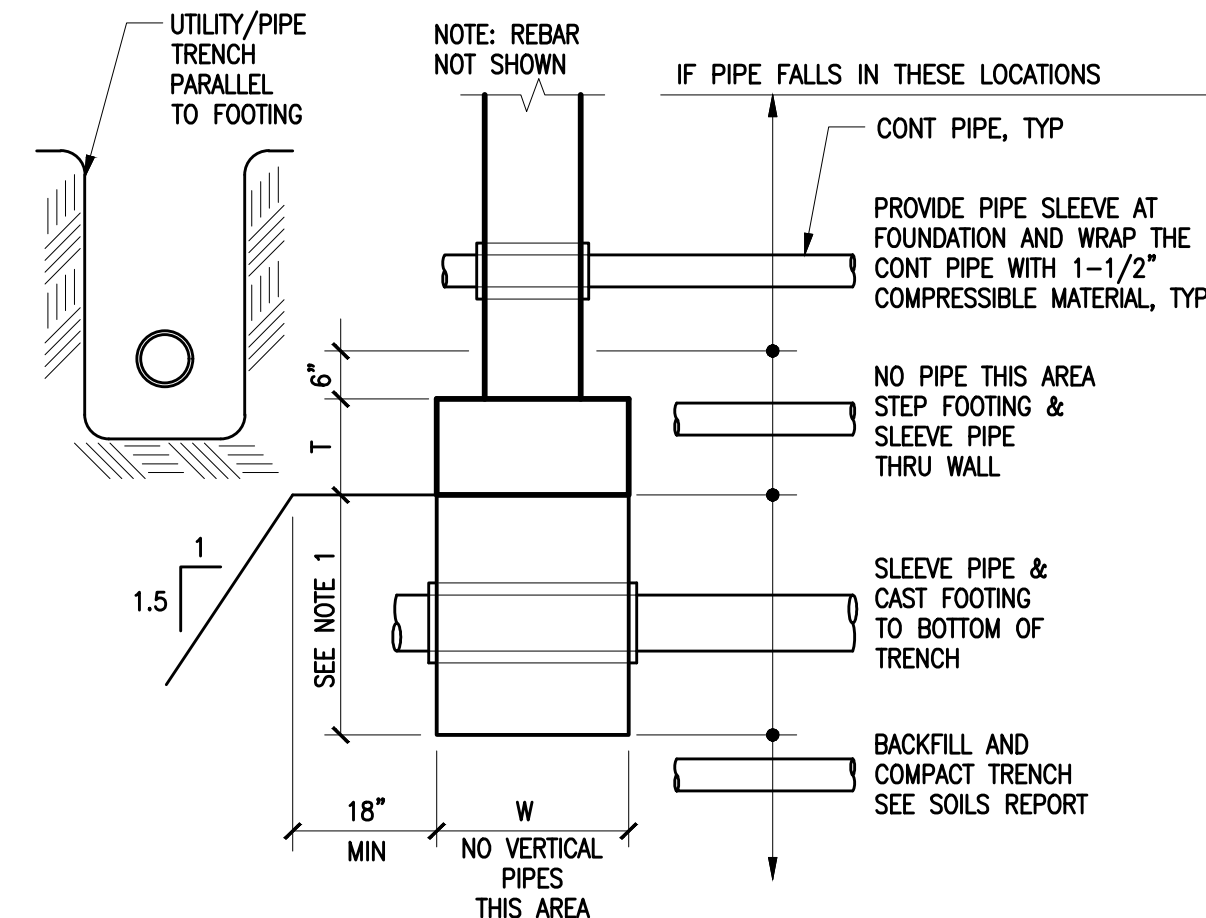


4 SLAB EDGE AT (GARAGE) DOOR
1"=1'-0"

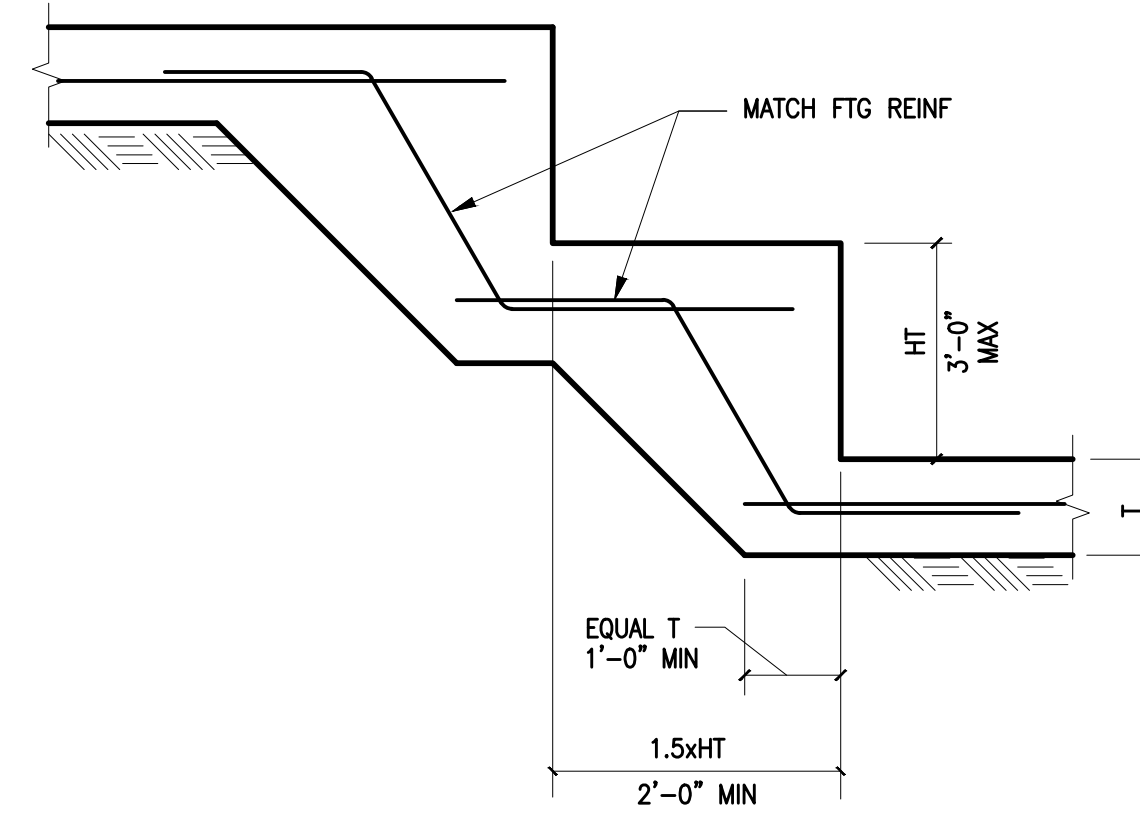


NOTES:
1. SINGLE PIPES 8" OR LESS PERPENDICULAR TO AND GREATER THAN 24" CLEAR BELOW FOOTINGS DO NOT REQUIRE CONCRETE ENCASEMENT. (PIPE GROUPINGS BELOW 24" SHALL BE REVIEWED BY THE STRUCTURAL ENGINEER).
2. PIPES LARGER THAN 8" SHALL BE REVIEWED BY THE STRUCTURAL ENGINEER.

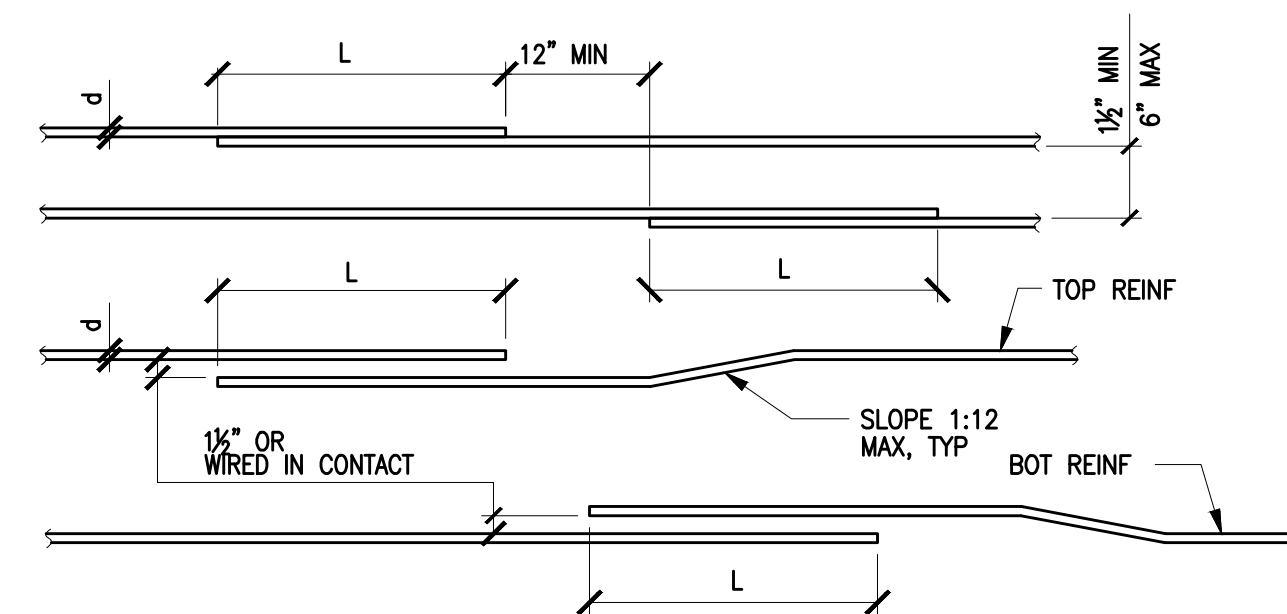
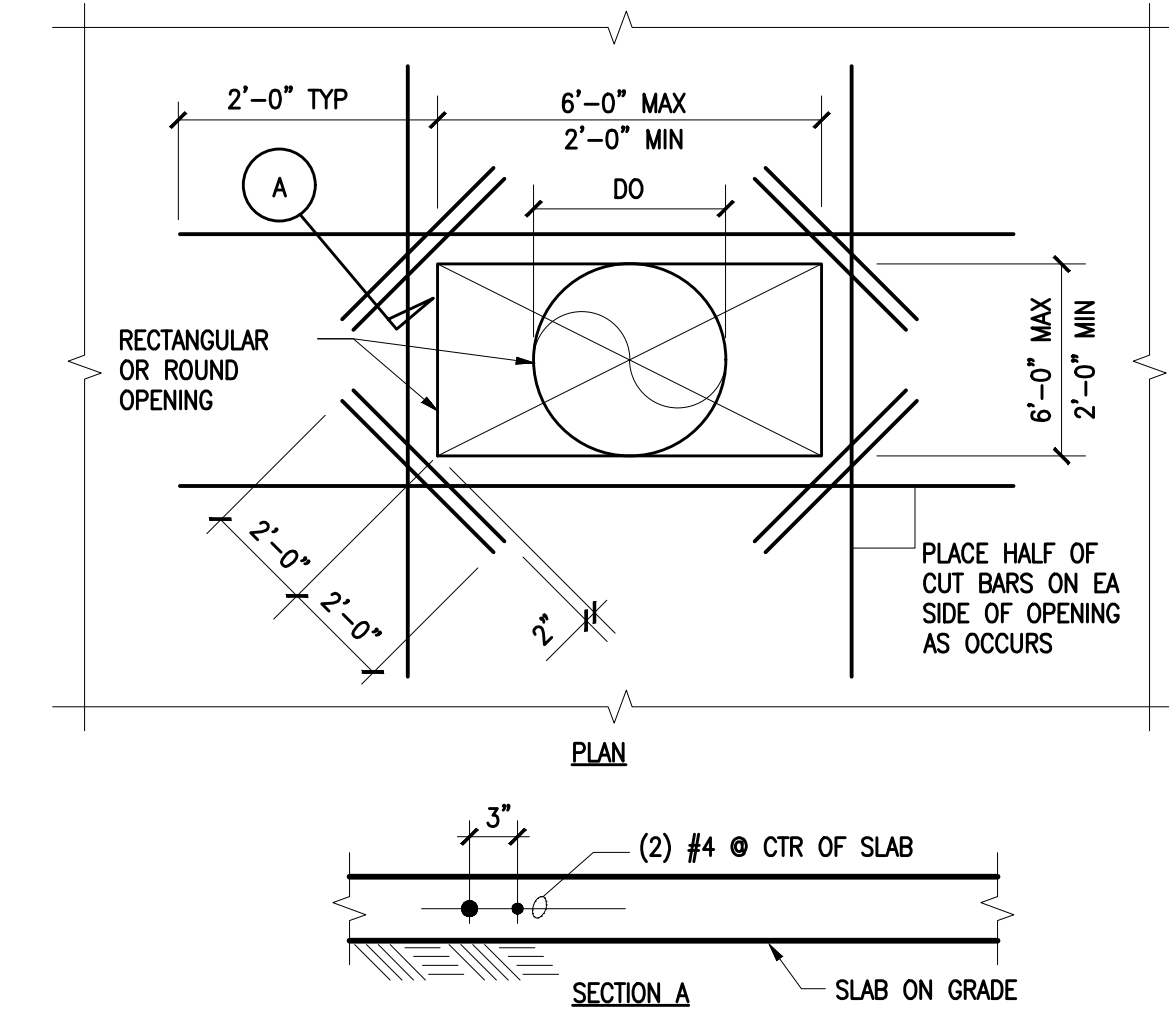
5 PIPE CLEARANCE AT STRIP FOOTING/GRADE BEAM
1/2"=1'-0"



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=4500psi USE VALUES FOR 4000psi.

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

NORMAL WT. CONCRETE f' _c (psi)		SPlice OR DEVELOPMENT LENGTH (INCHES)																			
		"CLASS B" TENSION LAP SPlice SCHEDULE																			
		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	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			

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SHEET TITLE
TYPICAL CONCRETE DETAIL

JOB NUMBER

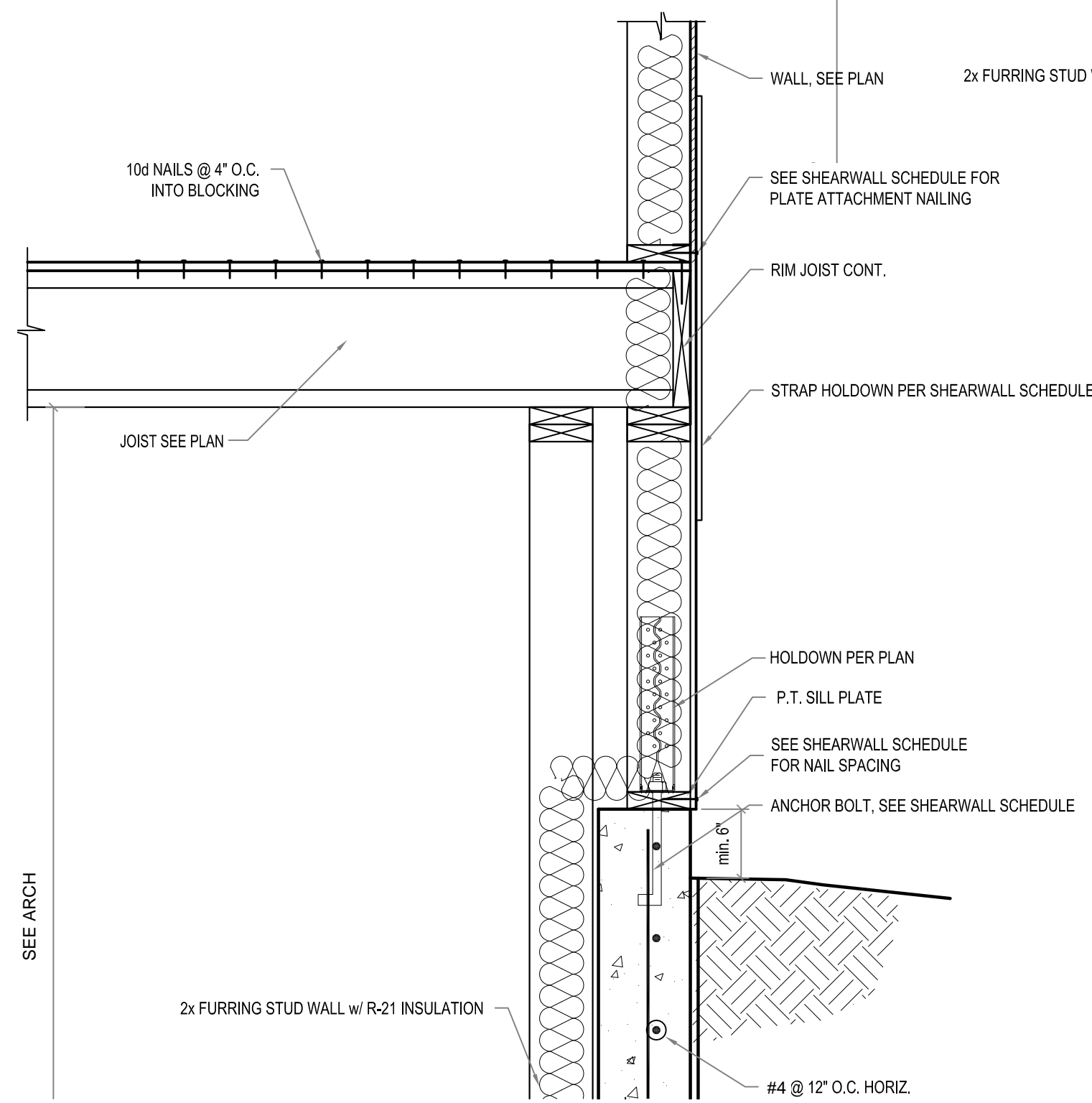
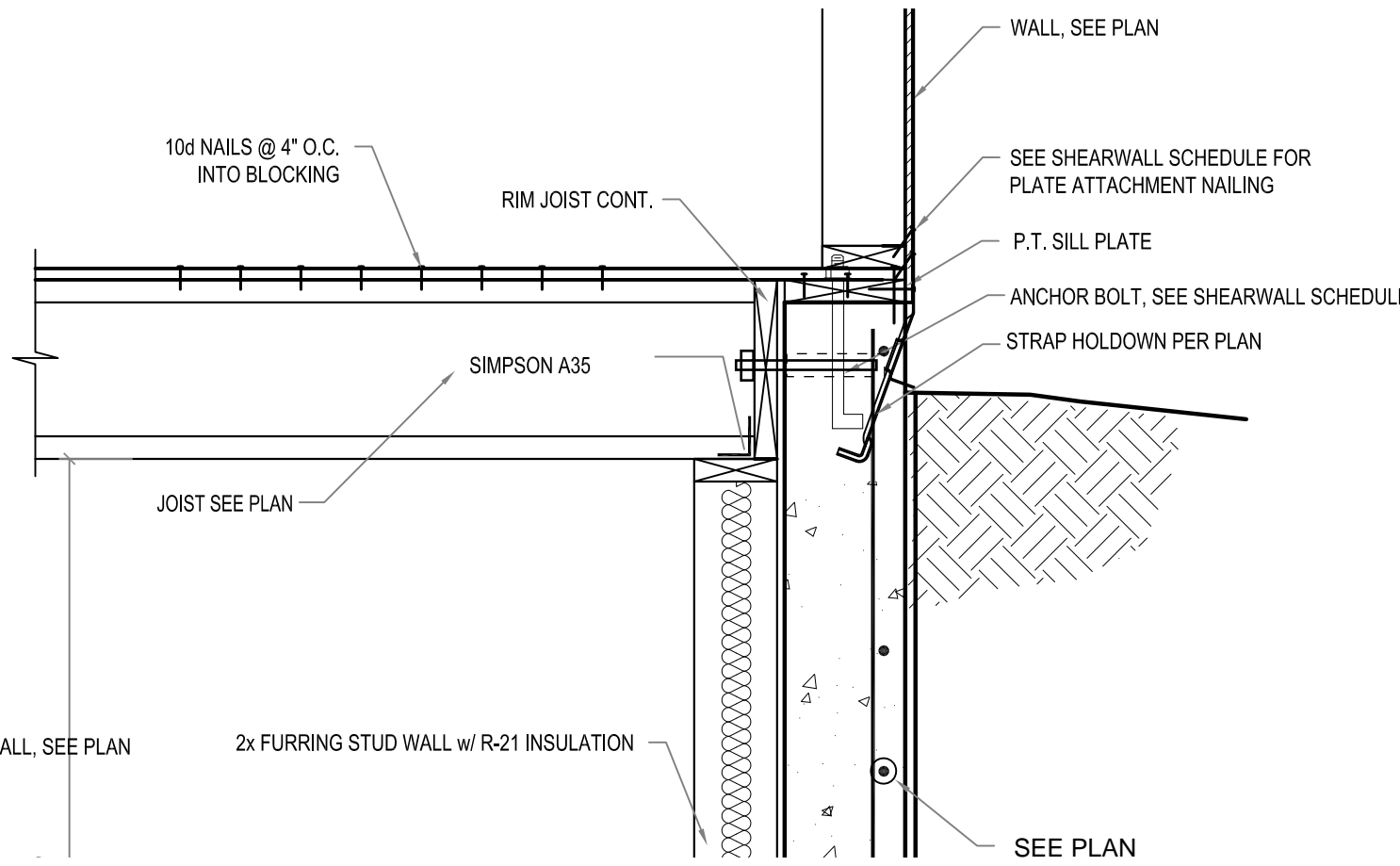
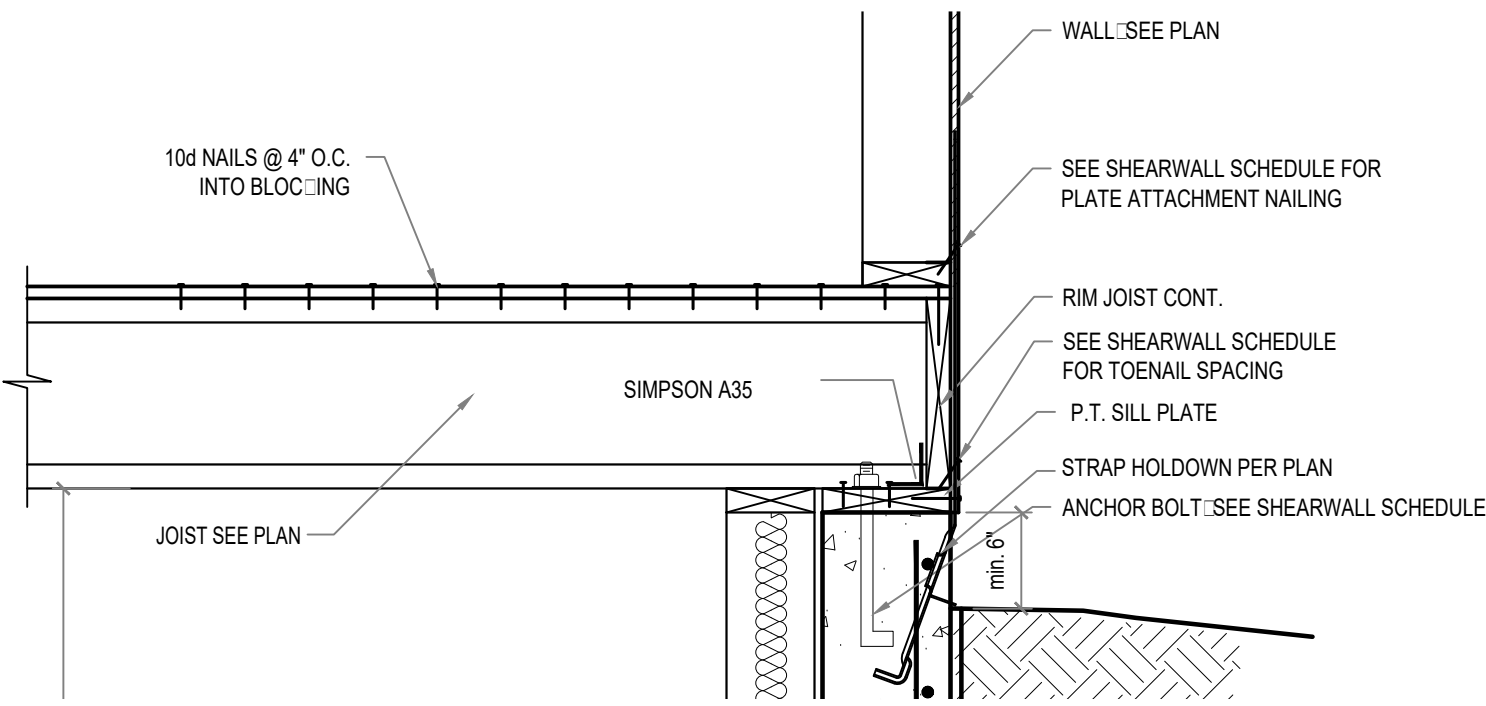
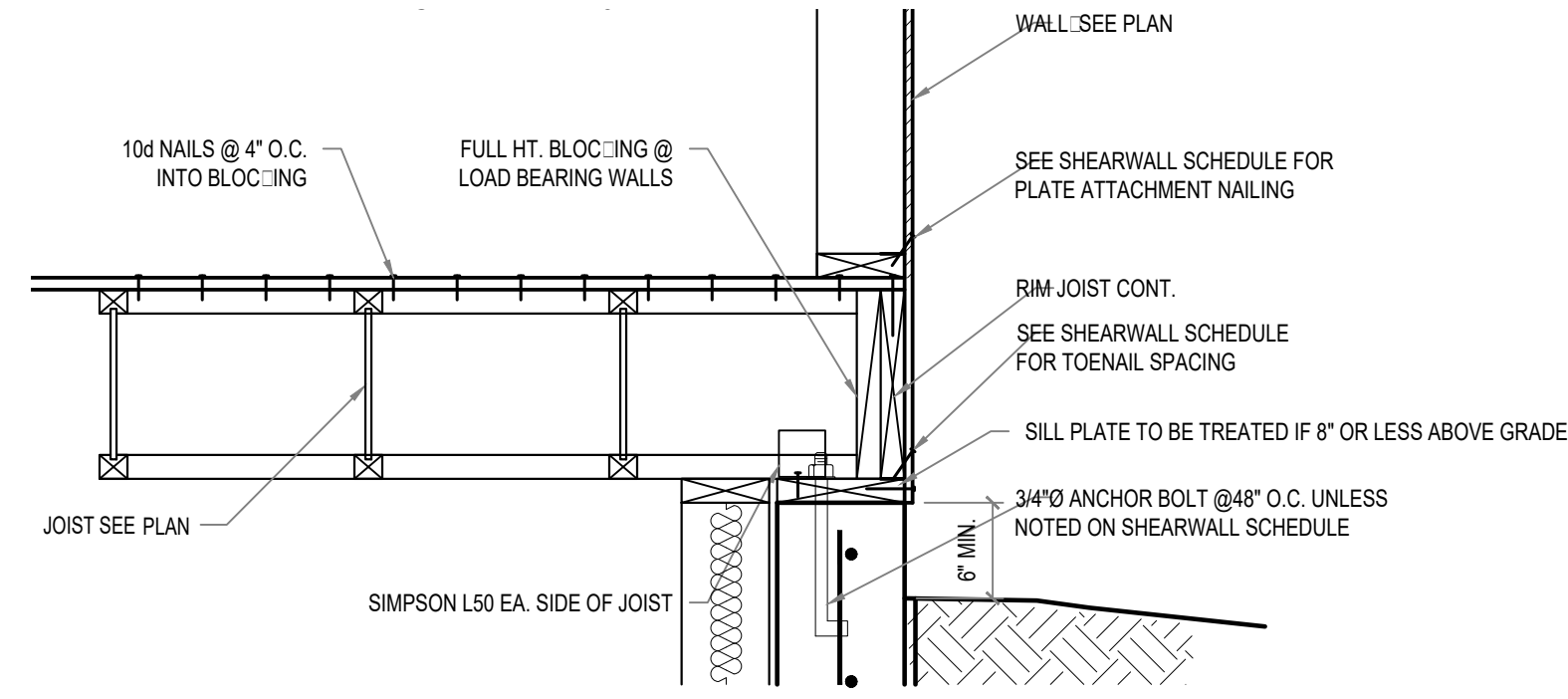
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S5.1

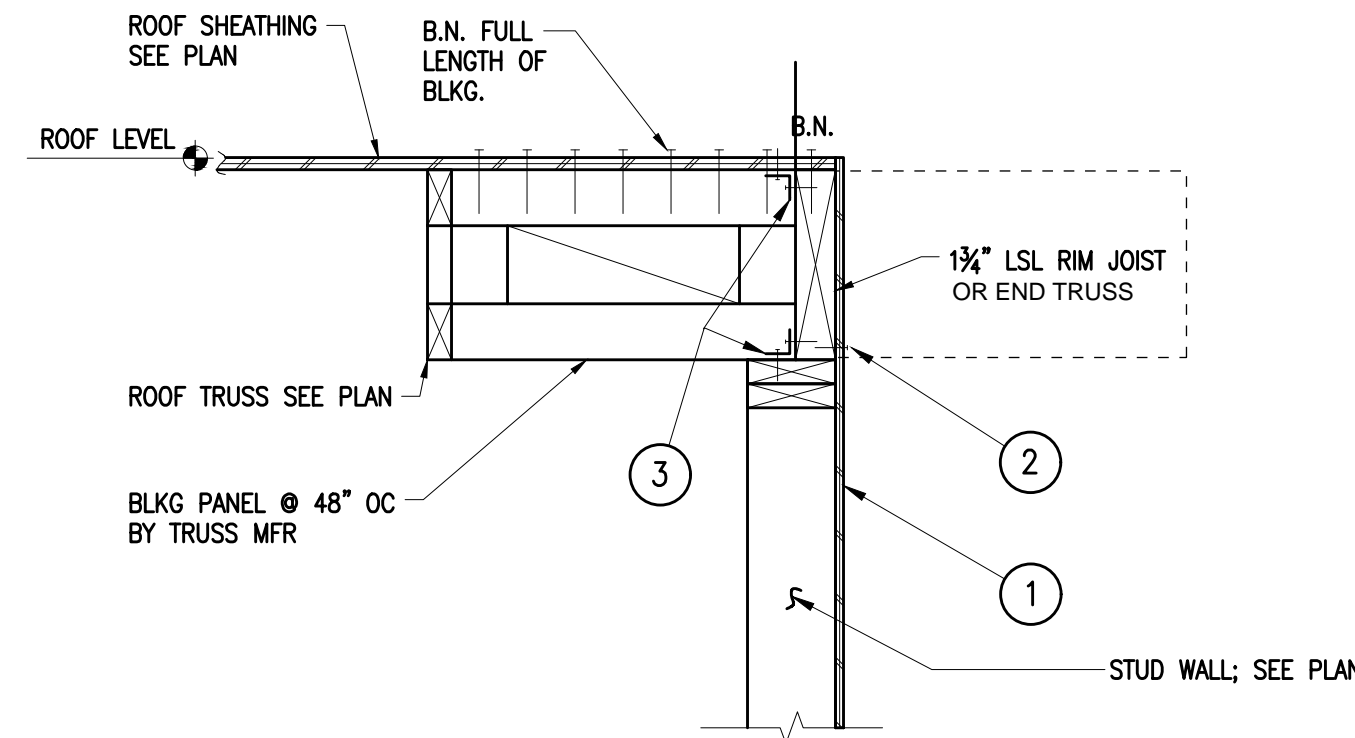
CITY STAMP

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

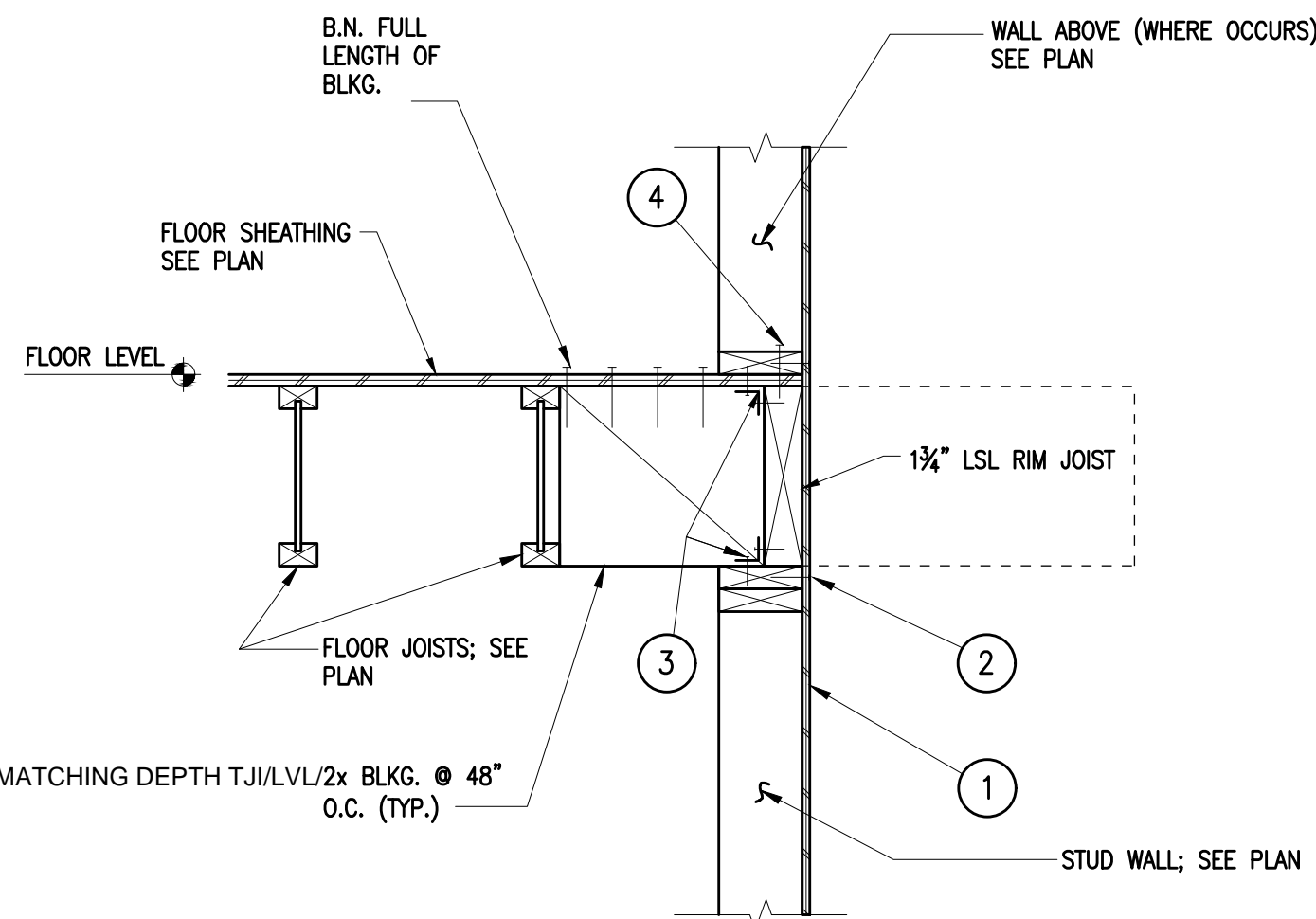
1 STRAP TIE SCHEDULE
NTS



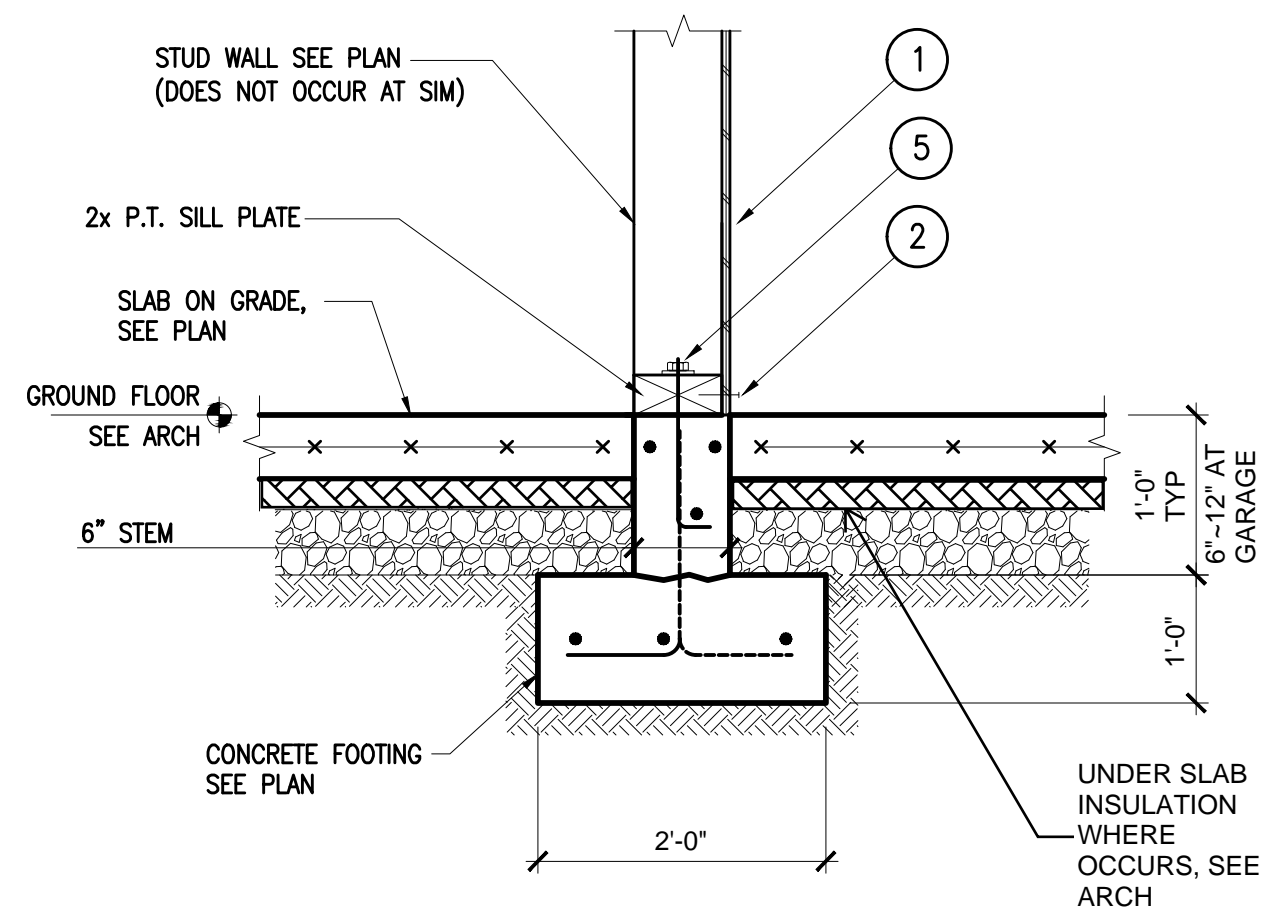
10 BASEMENT FOOTING AND FRAMING
NTS



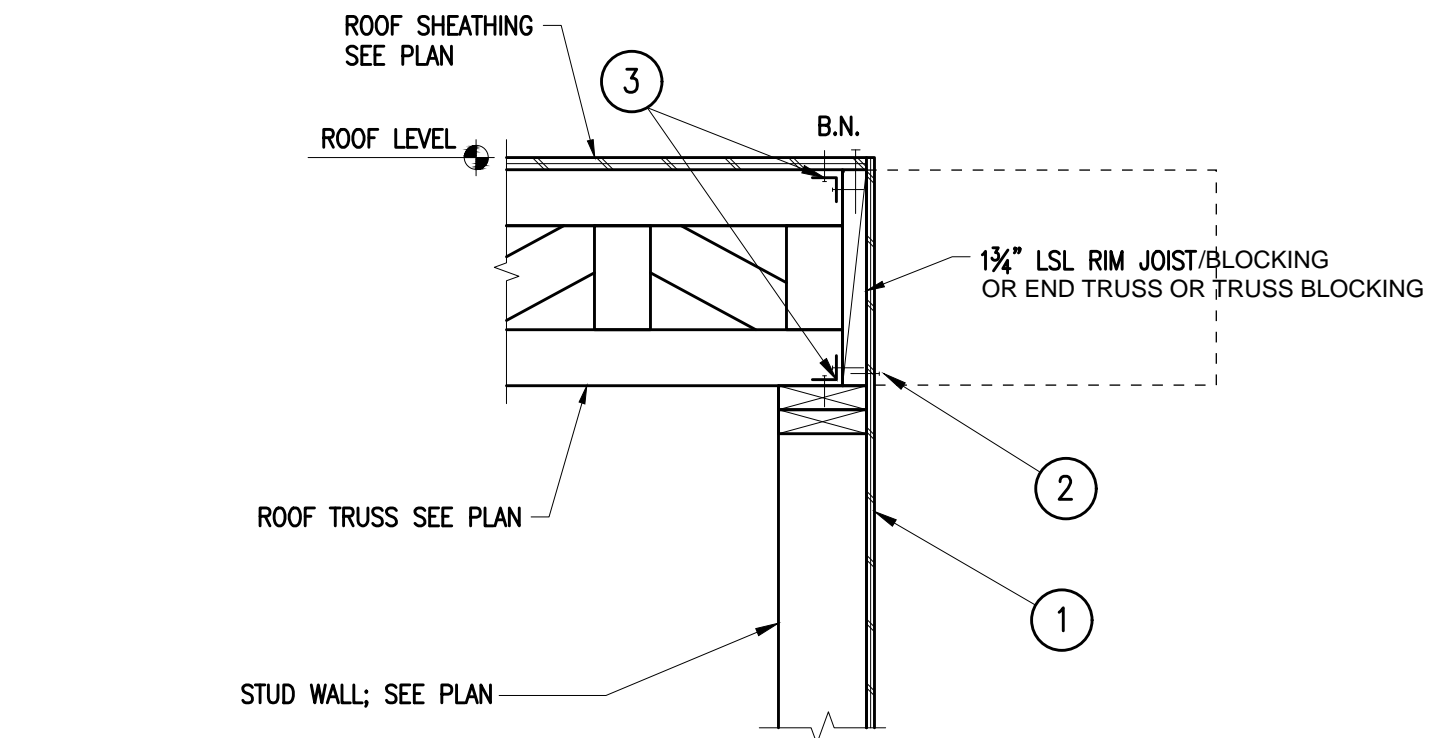
3 ROOF TRUSSES PARALLEL
NTS



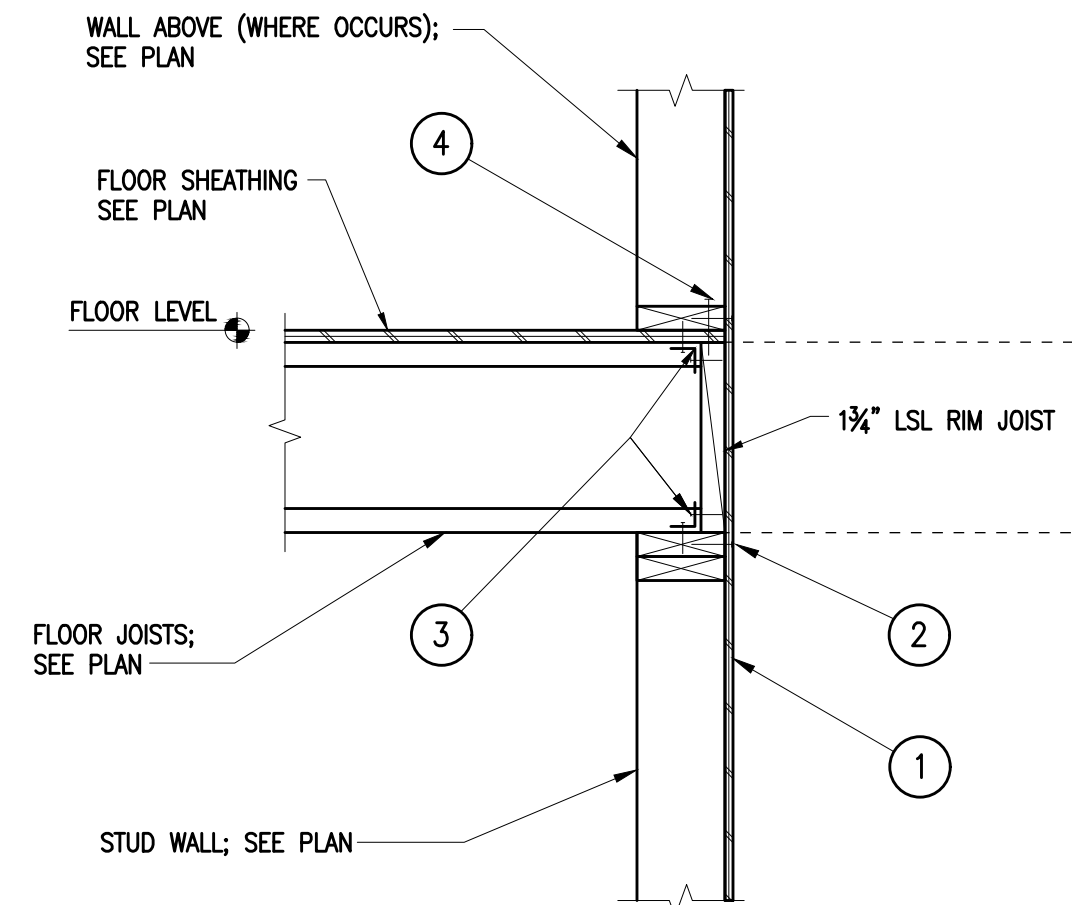
7 FLOOR JOISTS PARALLEL
NTS



11 FOOTING AT INTERIOR WALL
NTS



4 ROOF TRUSSES PERPENDICULAR
NTS



8 FLOOR JOISTS PERPENDICULAR
NTS

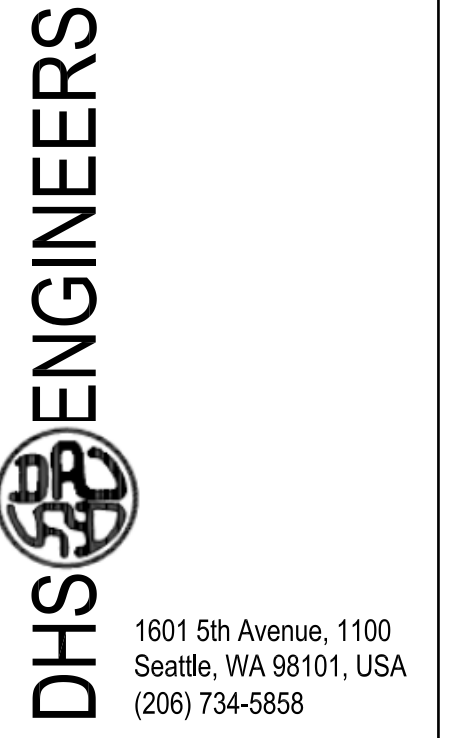
NOTES:
1. SEE 8/SS.5 FOR ITEMS NOT CALLED OUT ON THIS DETAIL AND FOR SHEAR WALL SCHEDULE & HARDWARE.

NOTES:
1. SEE 8/SS.5 FOR ITEMS NOT CALLED OUT ON THIS DETAIL AND FOR SHEAR WALL SCHEDULE & HARDWARE.

NOTES:
1. SEE 8/SS.5 FOR ITEMS NOT CALLED OUT ON THIS DETAIL AND FOR SHEAR WALL SCHEDULE & HARDWARE.
2. SEE 12/SS.2 FOR ITEMS NOT CALLED OUT ON THIS DETAIL.

NOTES:
1. SEE 8/SS.5 FOR ITEMS NOT CALLED OUT ON THIS DETAIL AND FOR SHEAR WALL SCHEDULE & HARDWARE.
2. WHERE THERE IS NO WALL ABOVE, USE #6 x 3/4" LONG SCREWS TO SHEATHING ABOVE.

NOTES:
1. SEE 8/SS.5 FOR ITEMS NOT CALLED OUT ON THIS DETAIL AND FOR SHEAR WALL SCHEDULE & HARDWARE.



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SHEET TITLE
TYPICAL FRAMING DETAIL

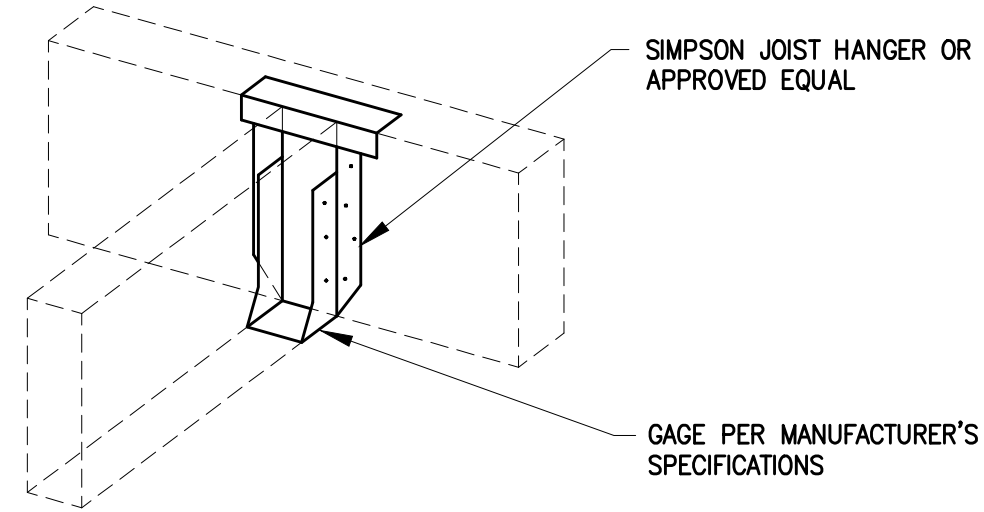
JOB NUMBER

SHEET NUMBER

S5.2

CITY STAMP

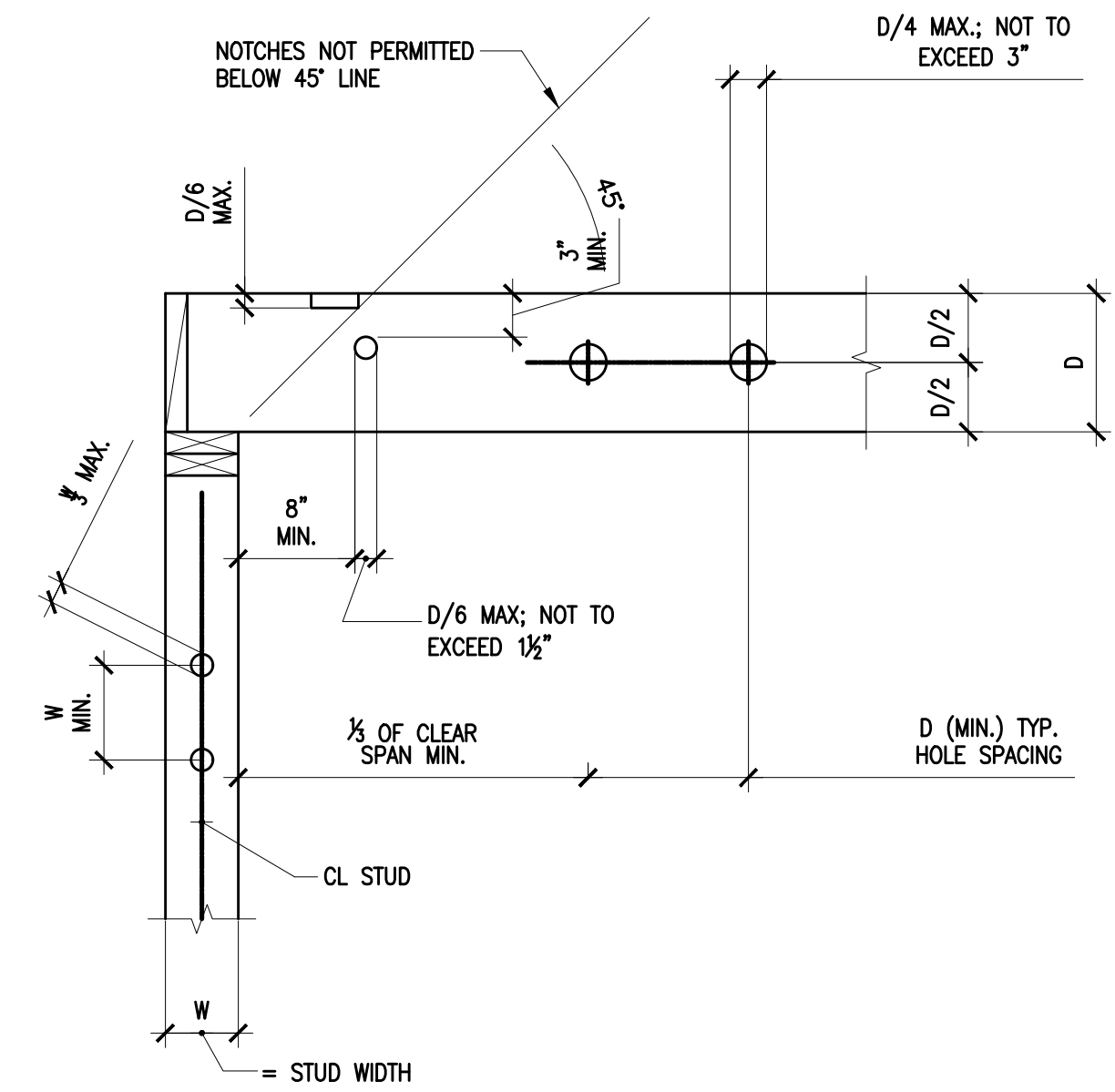
HANGER SCHEDULE	
JOIST/BEAM	TYP HANGER
2x12	JB212A
1 1/8" TJI210	ITS2.06/11.88
1 1/8" TJI360	ITS2.37/11.88
(2) 1 1/8" TJI210	MIT4.28/11.88
1 3/4 x 1 1/2 LVL	BA1.81/11.88 (MIN)
3/4 x 1 1/2 PSL	BA3.56/11.88 (MAX)
5/8 x 1 1/2 PSL	HB5.50/11.88
5/8 x 1 1/2 PSL	HGLTV5.516



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.

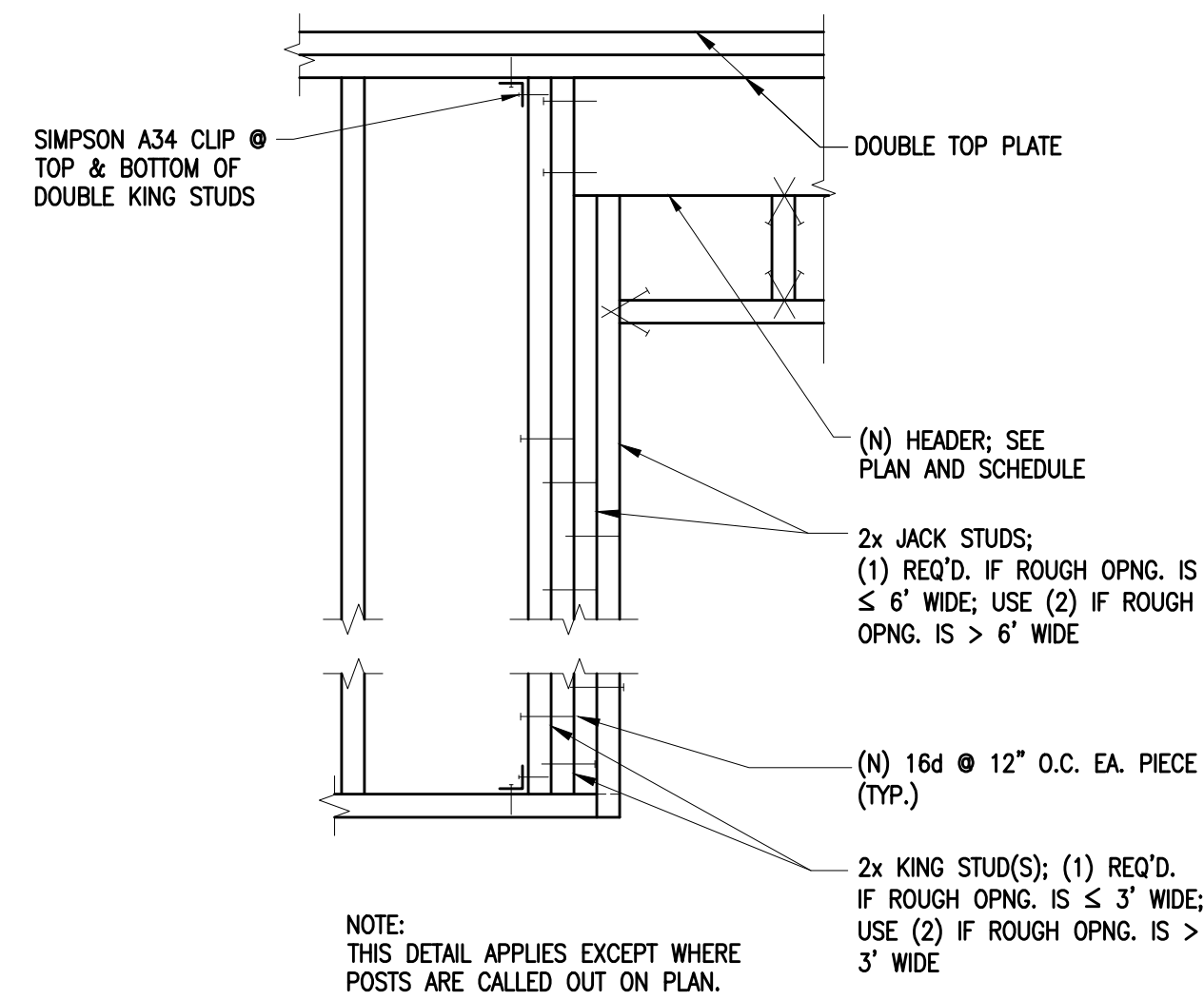
1 HANGER DETAIL AND SCHEDULE

NTS



2 ALLOWABLE HOLES & NOTCHES IN JOISTS & STUDS

1"=1'-0"

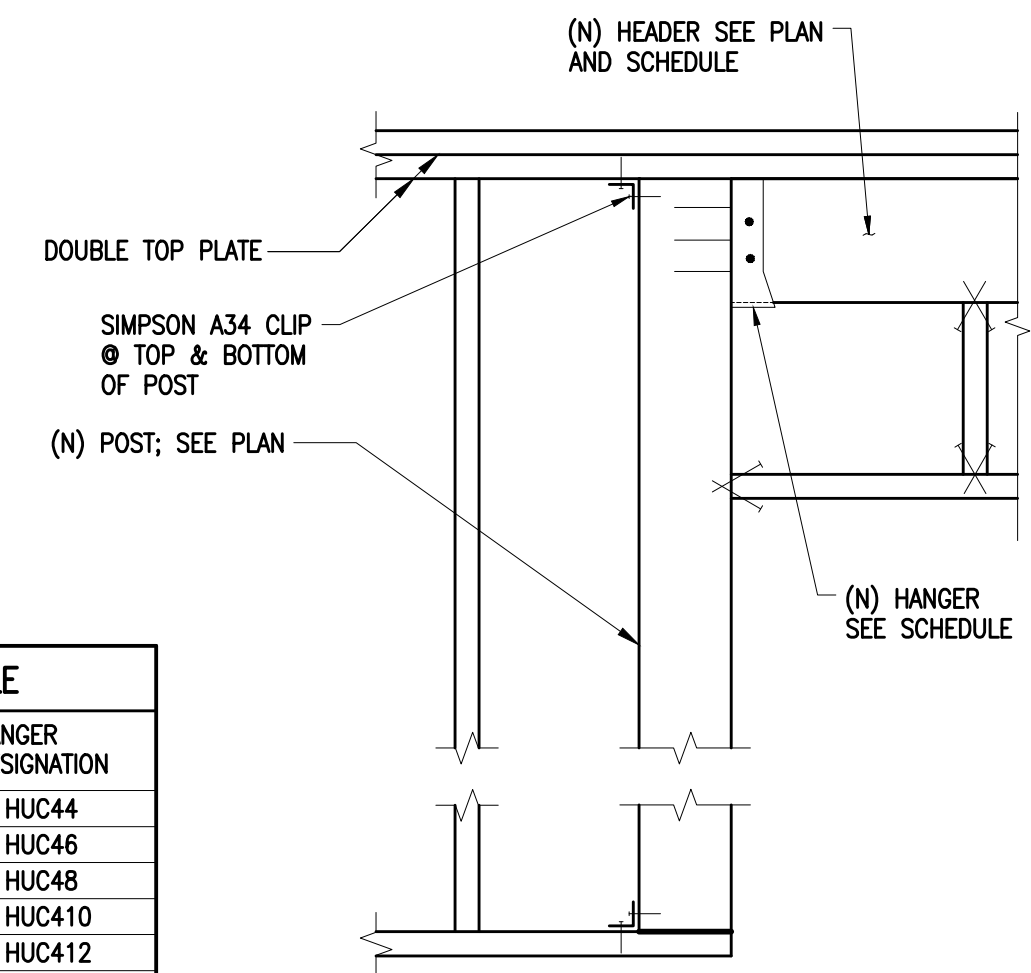


TRADITIONAL HEADER DETAILS

3 TYPICAL HEADER DETAILS

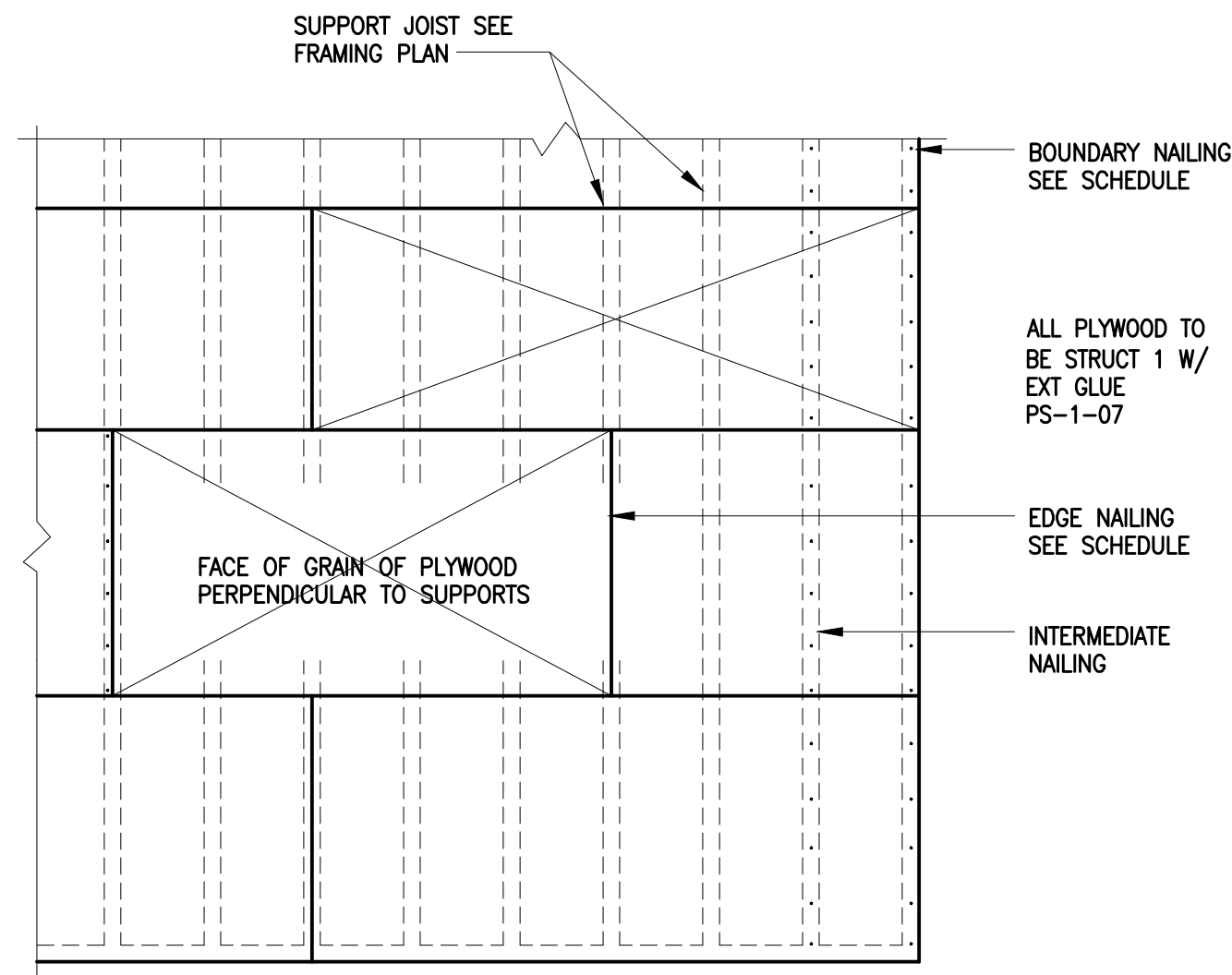
1"=1'-0"

HEADER SCHEDULE		
PLAN DESIGNATION	HEADER SIZE	HANGER DESIGNATION
H44	4x4	HUC44
H46	4x6	HUC46
H48	4x8	HUC48
H410	4x10	HUC410
H412	4x12	HUC412
H414	3/4 x 14 PSL	HUC414
H66	6x6	HUC66
H68	6x8	HUC68
H610	6x10	HUC610
H612	6x12	HUC612
H614	5/8 x 14 PSL	HUC614



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

HEADER DETAILS AT POSTS



DIAPHRAGM SCHEDULE

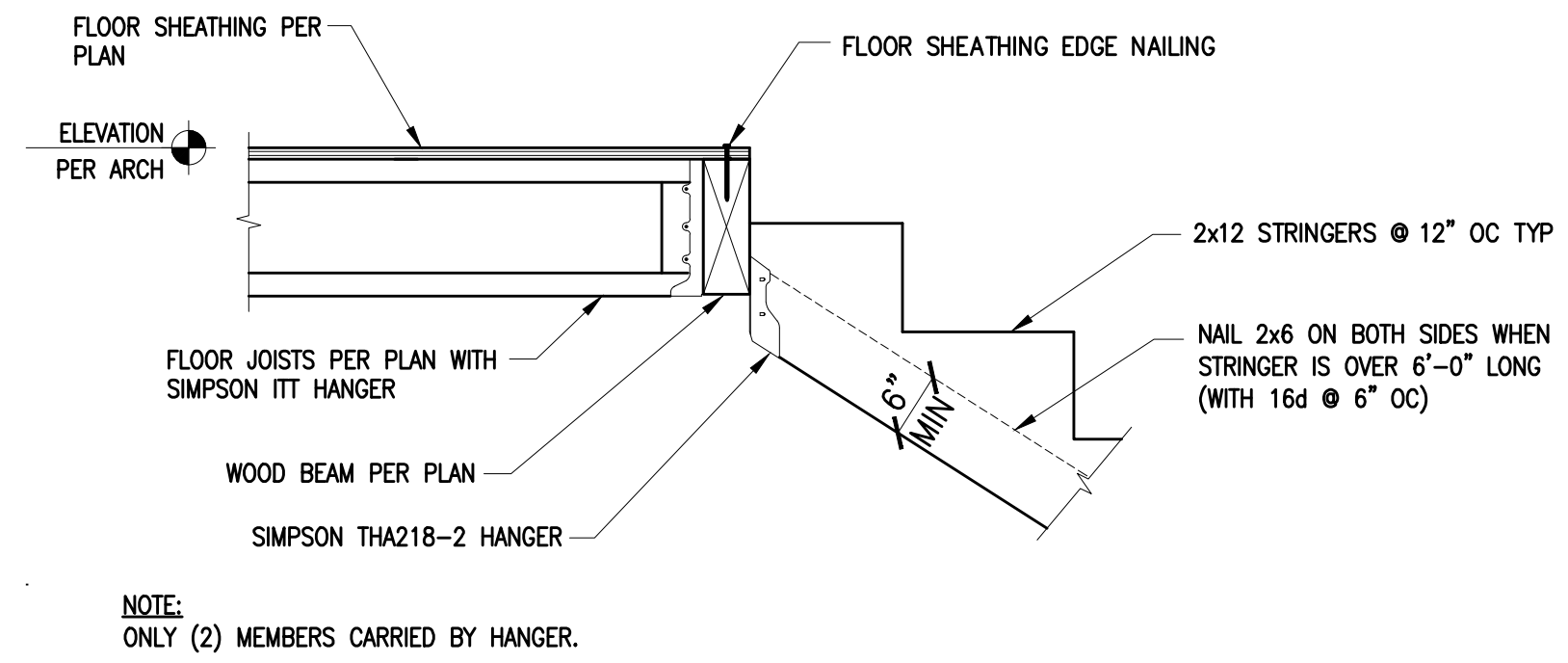
LOCATION	PLYWOOD	PANEL ID	BOUN. NAILS	EDGE NAILS	INTER. NAILS
FLAT ROOF DECK	3/2" STRUCT 1 T&G OSB	40/20	10d @ 4"	10d @ 6"	10d @ 12"
SLOPED ROOF	3/2" STRUCT 1 T&G OSB	40/20	10d @ 4"	10d @ 6"	10d @ 12"
FLOOR	3/2" STRUCT 1 T&G OSB	40/20	10d @ 4"	10d @ 6"	10d @ 12"

NOTES:

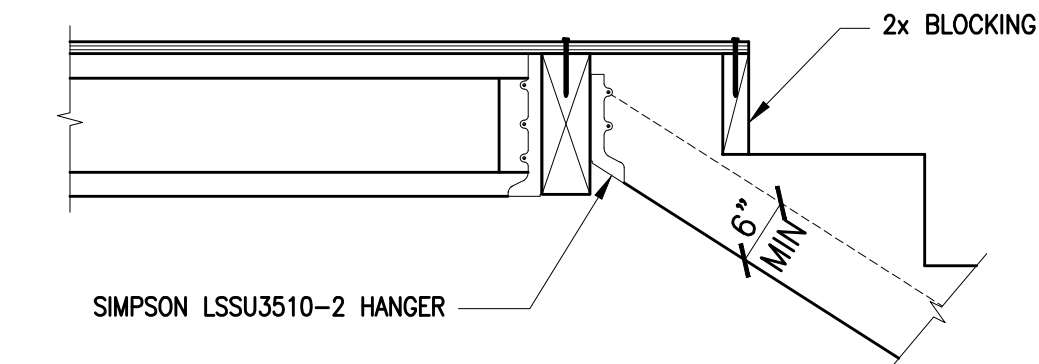
1. USE BOUNDARY NAILING AT ALL HIPs, RIDGES, VALLEYS AND OPENINGS.
2. USE COMMON NAIL FOR ALL DIAPHRAGM NAILING.
3. PLYWOOD SHALL BE GLUED (SUB-FLOOR ADHESIVE) FOR FLOORS.
4. USE 3/2" PLYWOOD T & G AT FLAT ROOF.
5. MIN EDGE DISTANCE FOR NAILS SHALL BE 3/8".
6. MIN SHEATHING SHEET SIZE SHALL BE 2'-0" x 4'-0".
7. 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.
8. NAILS SHALL BE COMMON WIRE TYPE.
9. SEE PLANS FOR AREAS OF BLOCKED DIAPHRAGMS.
10. USE BOUNDARY NAILING AT ALL CONNECTIONS TO SHEAR WALLS.

9 ROOF & FLOOR DIAPHRAGM

NTS



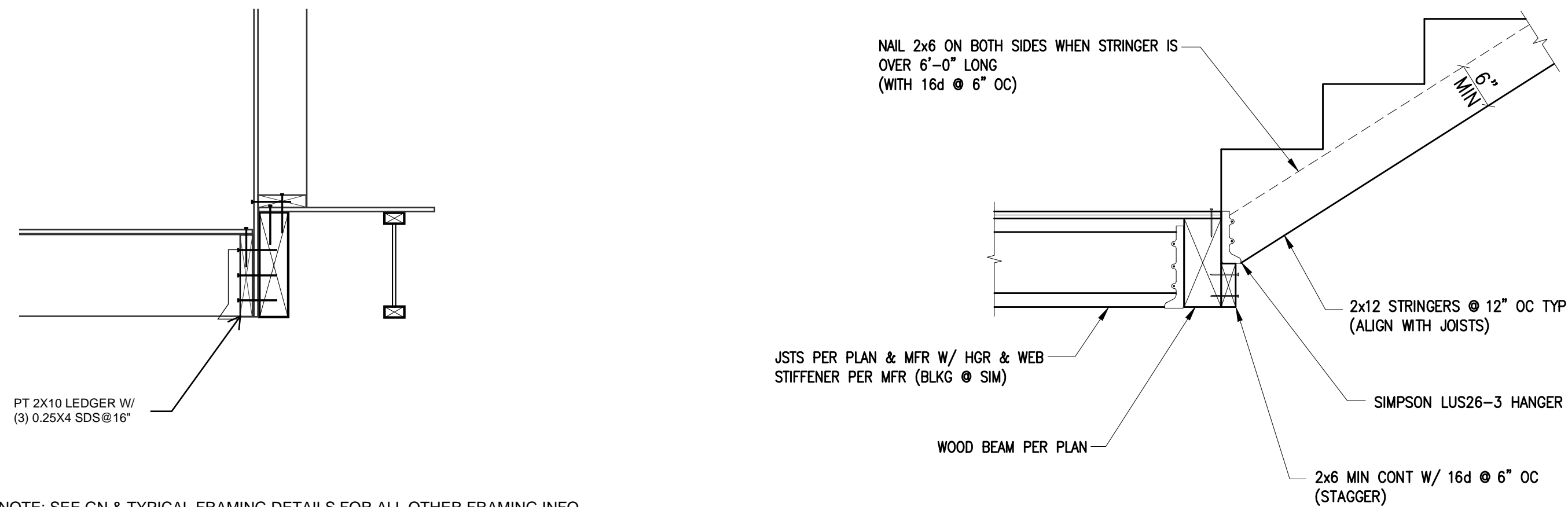
ALTERNATE 1



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

NTS

12 TYPICAL STRINGER CONNECTION

SCALE: 1"=1'-0"

DHS ENGINEERS

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

SHEET TITLE
TYPICAL FRAMING DETAIL

JOB NUMBER

SHEET NUMBER

S5.3

CITY STAMP

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"

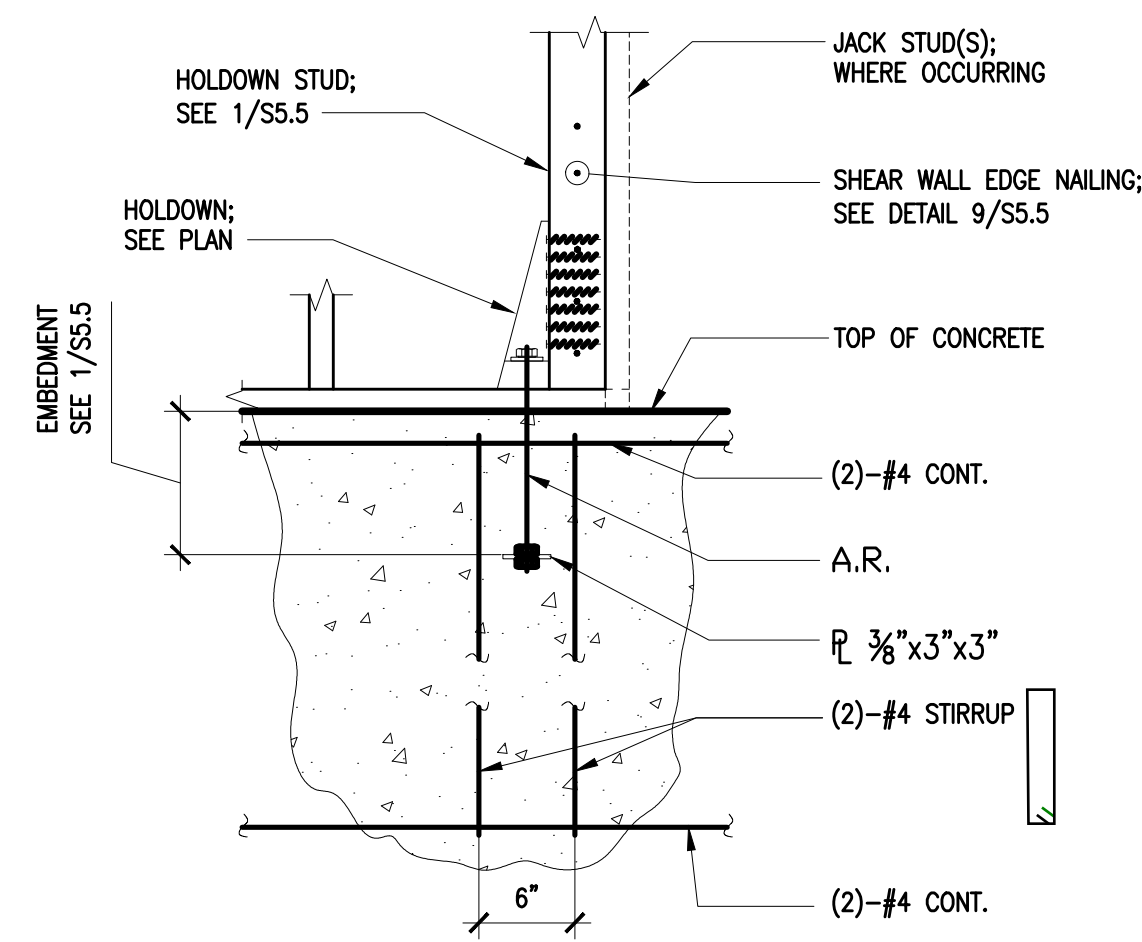
- NOTES:
 1. SEE PLAN FOR HODOWN TYPES AND LOCATIONS.
 2. SEE PLAN FOR TYPICAL STUD SIZES IN SHEARWALLS.
 3. REFER TO DETAIL 2/S5.5 FOR TYPICAL HOLDOWN INSTALLATION DETAILS.
 4. ALT. USE (2) 2x STUDS.

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

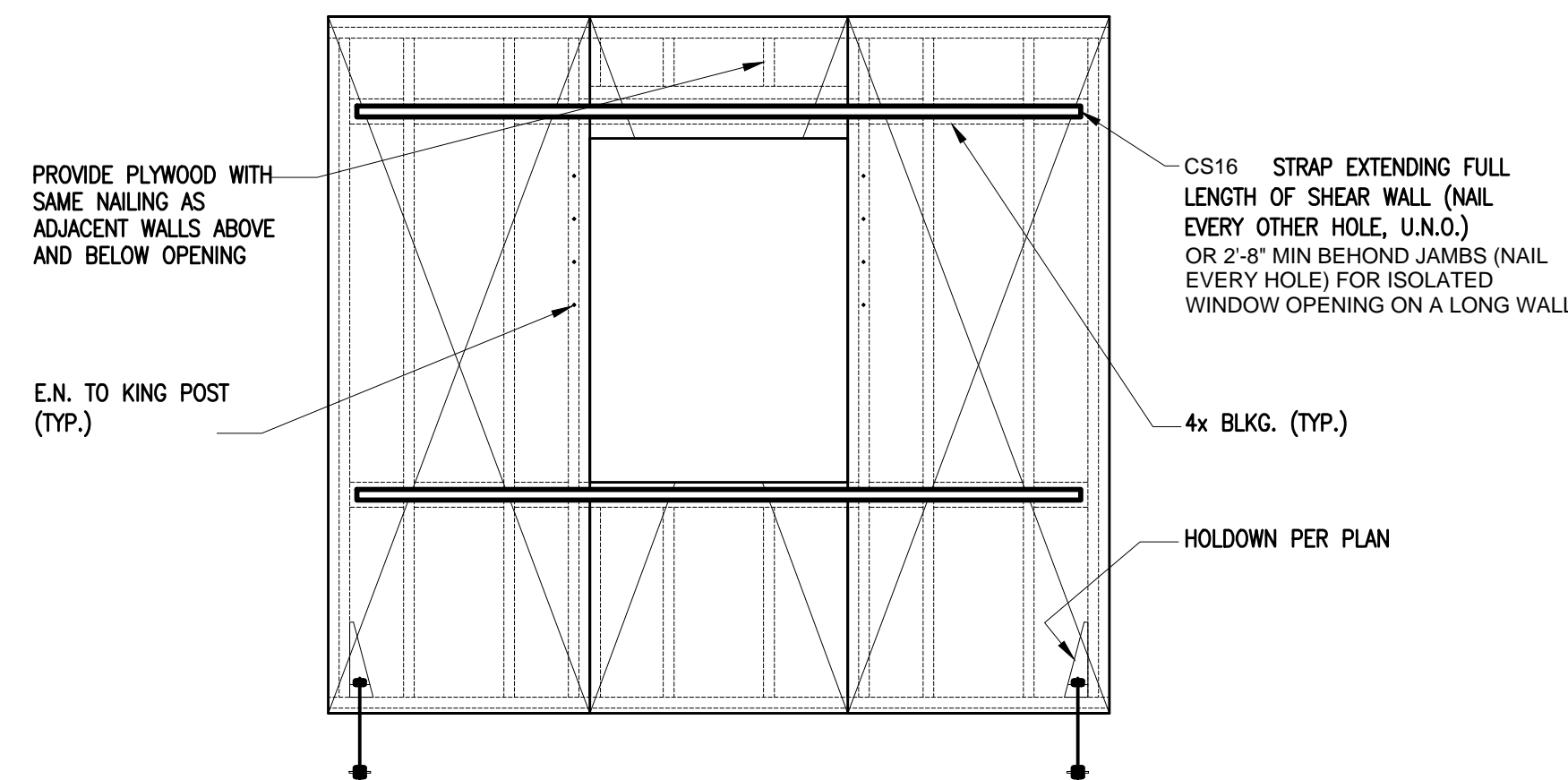
SHEAR WALL SCHEDULE						
TYPE	STUD SIZE AND SPACING*	PLYWOOD ^① SHEATHING	EDGE NAILS ^② FIELD NAILS	FRAMING CLIPS ^③	SOLE PLATE NAILING ^④	SILL PLATE BOLTS ^⑤
②	2x STUDS @ 16" O.C. PER PLAN	1 1/2" PLYWOOD	10d @ 2" O.C. 10d @ 12" O.C.	(2)-A35 @ 12" O.C.	16d @ 2 1/2" O.C.	5/8" @ BOLTS @ 16" O.C.
③	2x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

- NOTES:
 1. SEE PLANS FOR SHEAR WALL TYPE, LOCATIONS, AND HOLDOWNS.
 2. REFER TO SHEET S5.2 FOR TYPICAL SHEAR WALL CONSTRUCTION DETAILS.
 3. REFER TO DETAIL 9/S5.5 FOR TYPICAL SHEAR WALL ELEVATION.
 4. REFER TO DETAIL 2/S5.5 FOR TYPICAL HOLDOWN INSTALLATION DETAILS.
 5. PLYWOOD SHALL BE PLACED ON THE SIDE OF THE WALL WHERE THE SYMBOL ◇ OCCURS ON THE PLAN.
 6. 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.
 7. 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.
 8. 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.
 9. BLOCK ALL UNSUPPORTED PLYWOOD EDGES WITH MINIMUM 2x LAID FLAT BEHIND EDGES OF PLYWOOD.
 10. SEE GENERAL NOTES FOR PLYWOOD GRADES AND SPECIFICATIONS.
 11. AT WALLS WITH 2x STUDS, DOUBLE THE STUDS AT PLYWOOD JOINTS PER DETAIL 9/S5.5.

8 SHEARWALL SCHEDULE
 NTS

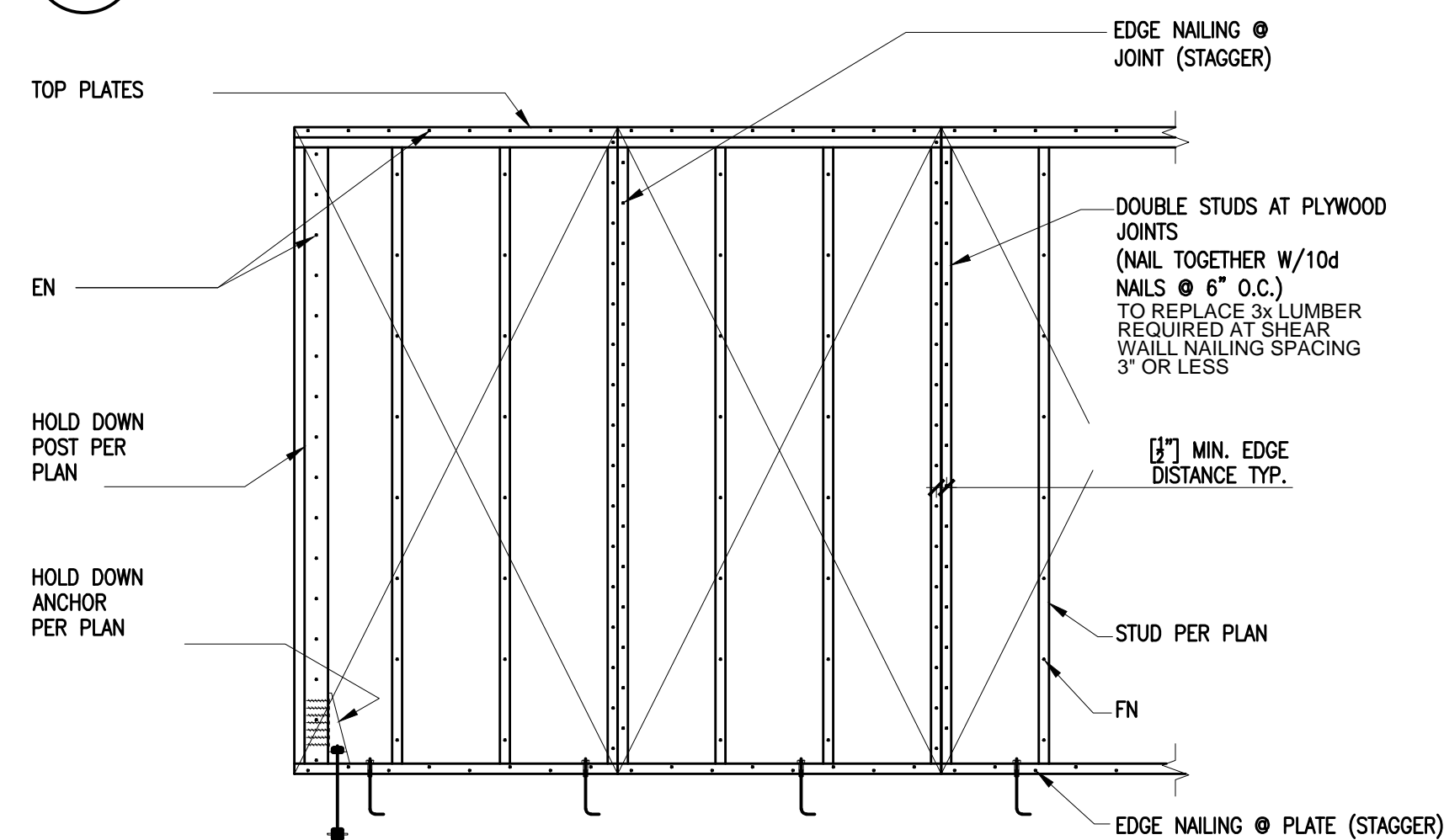


2 TYPICAL HOLDOWN DETAIL
 SCALE: 1"=1'-0"



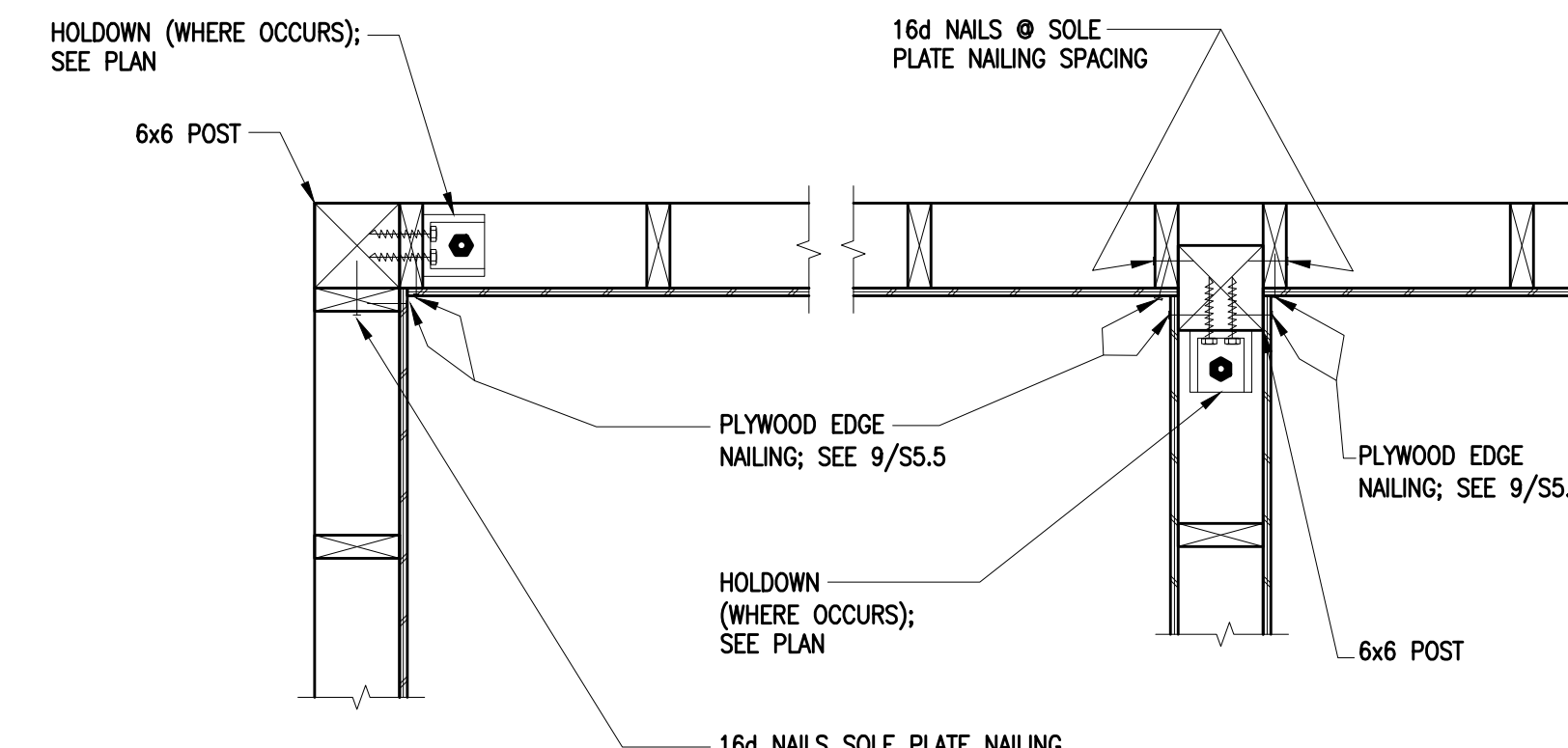
NOTE: HOLDOWN LOCATIONS NOT SHOWN FOR CLARITY.

6 SHEARWALL ELEVATION
 1/2"=1'-0"



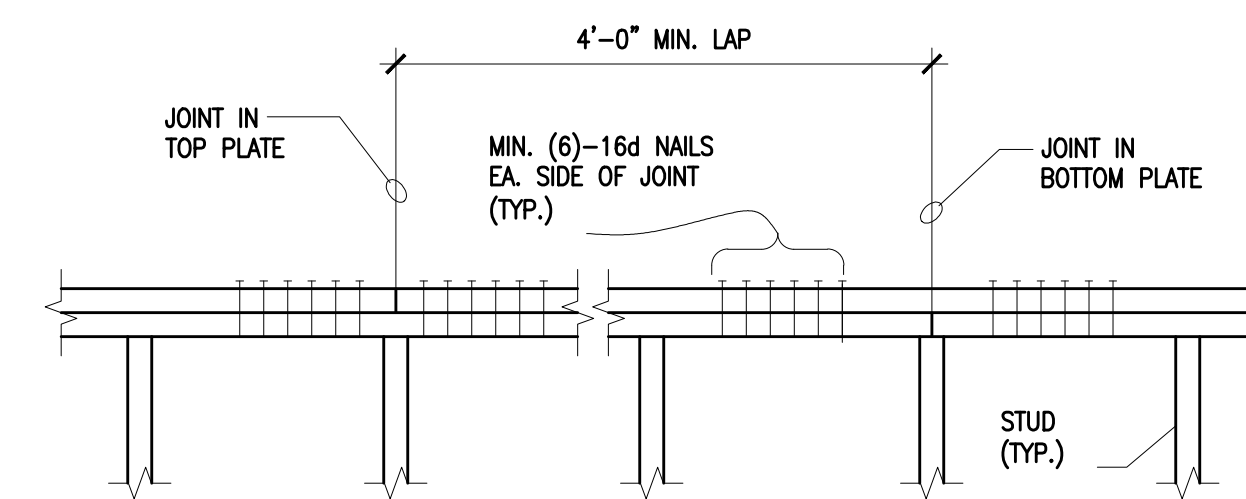
- NOTES:
 1. FOR ITEMS NOT NOTED SEE PLAN & SHEAR WALL SCHED.
 2. MINIMUM PANEL DIMENSION IS 1'-0".
 3. USE FULL SIZE PANELS WHERE POSSIBLE.
 4. FIELD NAILING (FN) @ 12" UON.
 5. [2x] SOLID BLOCKING @ HORIZONTAL JOINTS.

9 TYPICAL SHEARWALL ELEVATION
 1/2"=1'-0"



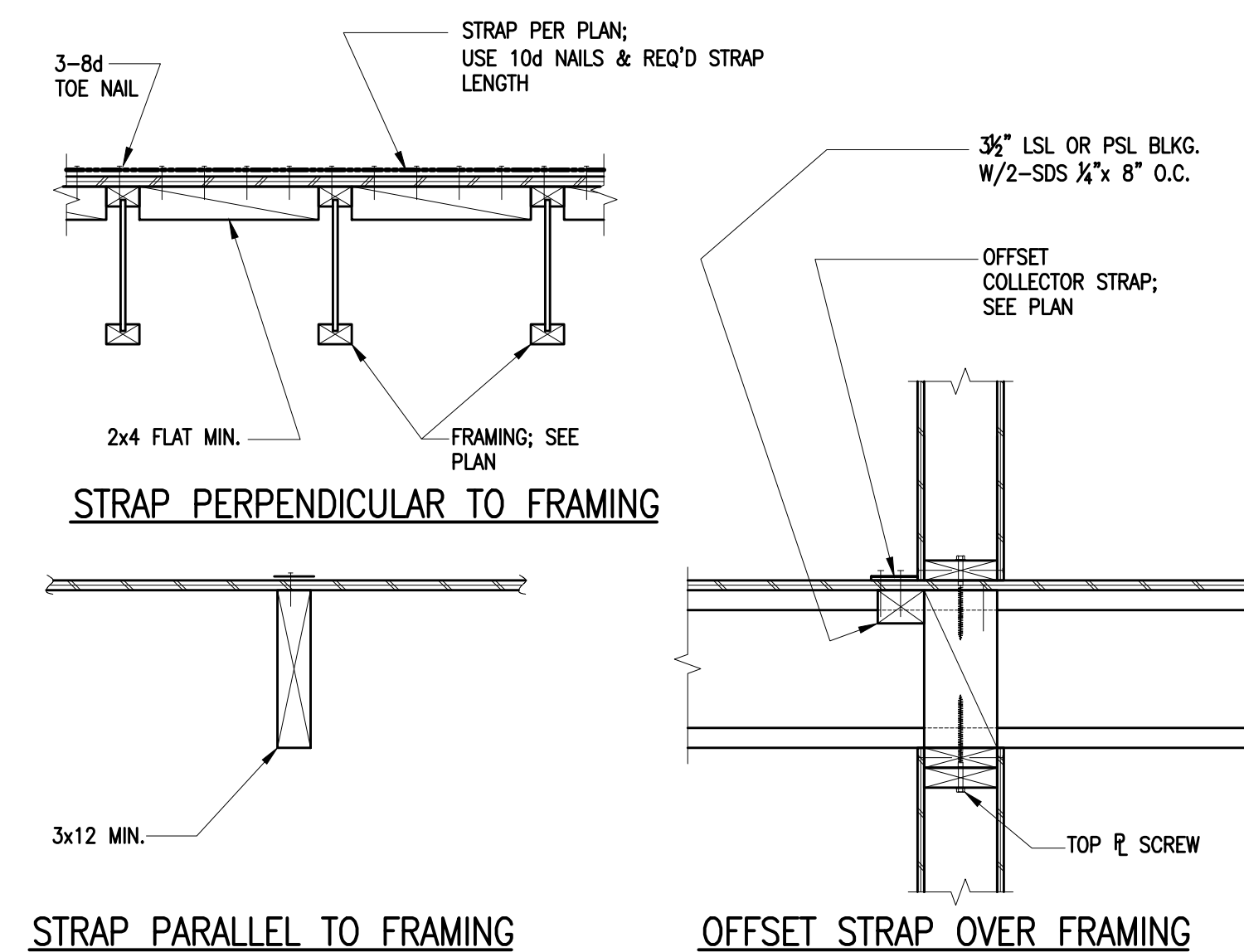
PLAN VIEW

4 SHEARWALL DETAILS AT WALL INTERSECTIONS
 SCALE: 1"=1'-0"

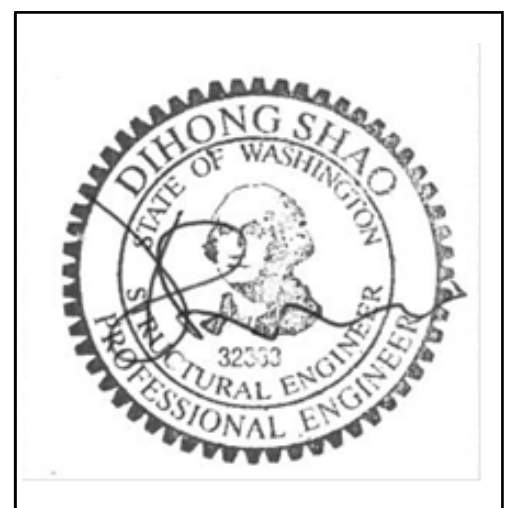
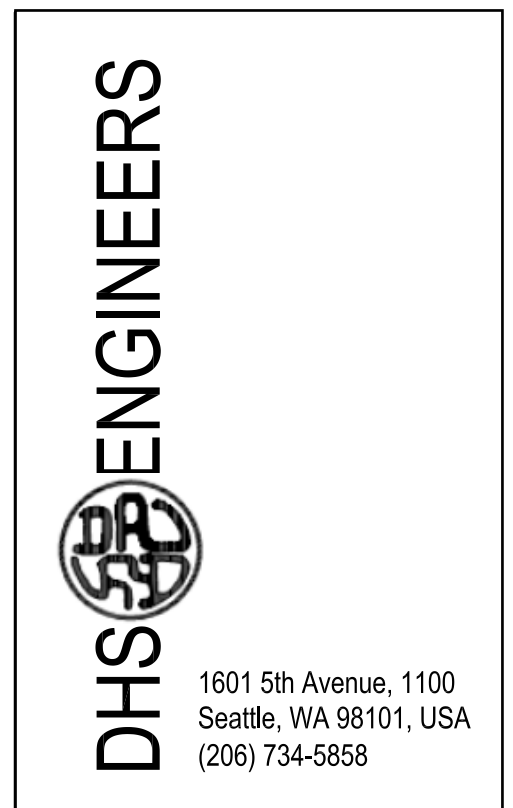


NOTE: SEE PLAN AND DETAILS FOR SIZE OF STUDS AND DOUBLE TOP PLATE.

7 TYPICAL STUD WALL TOP PLATE SPLICE
 1"=1'-0"



12 HORIZONTAL STRAP DETAIL
 NTS



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S5.5

