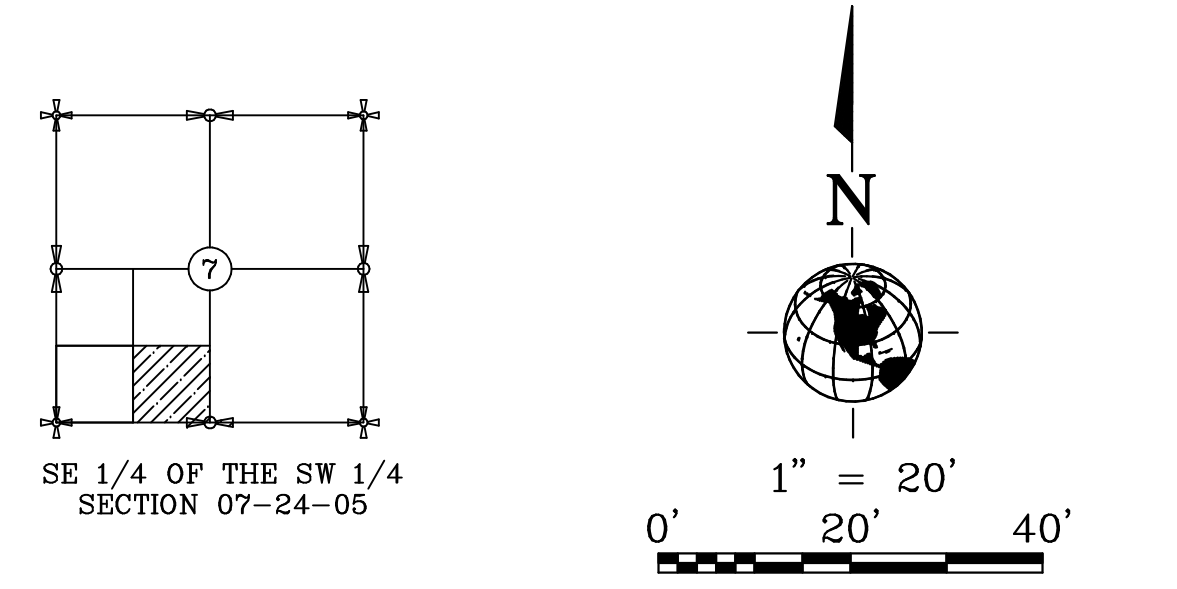
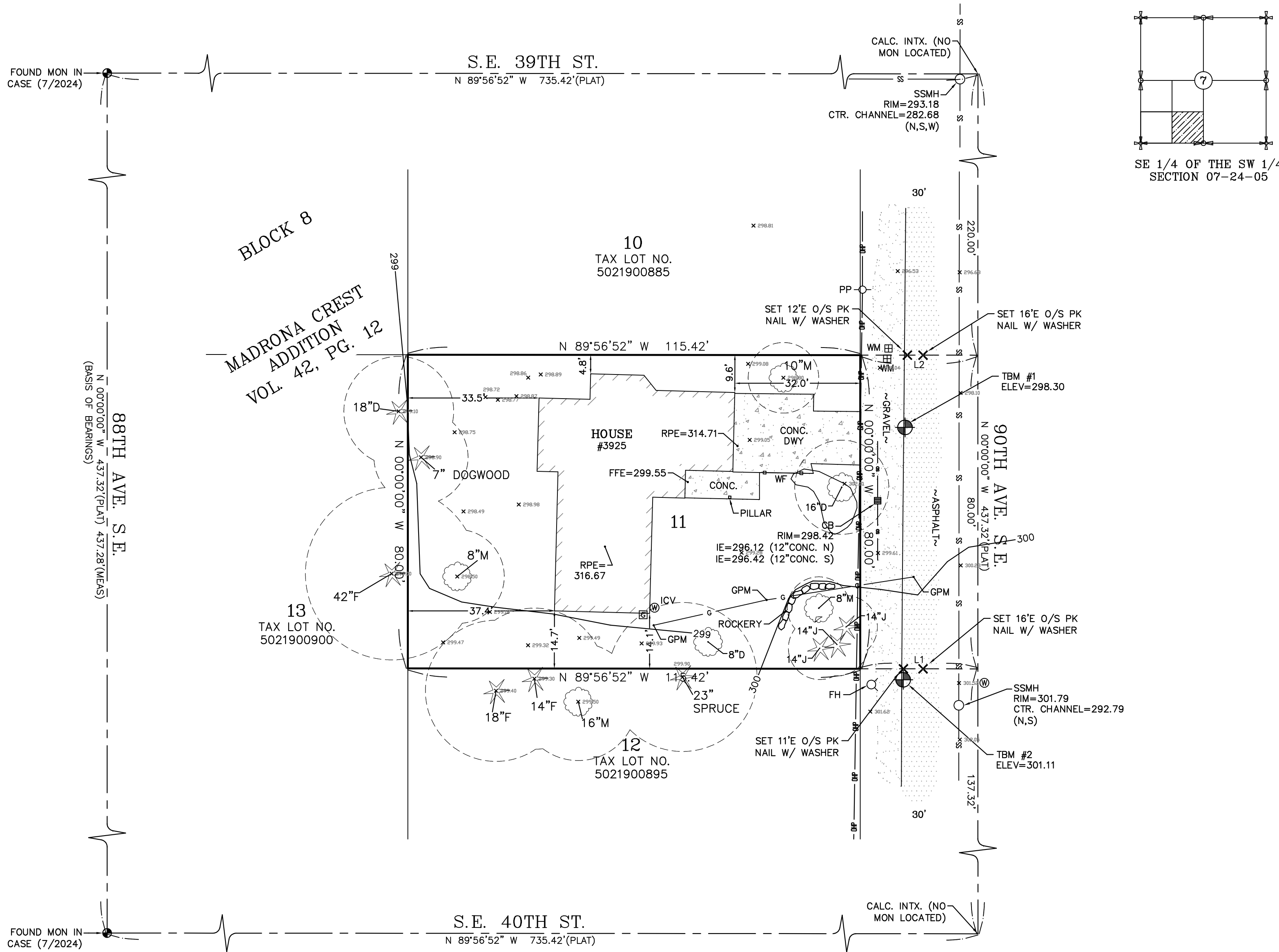


PORTION OF THE SE 1/4, SW 1/4, SECTION 7, TWP. 24 N., RGE. 5 E., W.M.
KING COUNTY, WASHINGTON



BASIS OF BEARINGS: HELD BEARING OF N 00°00'00" W FROM THE FOUND MONUMENT AT THE INTX. OF S.E. 40TH ST. AND 88TH AVE. S.E. AND THE FOUND MONUMENT AT THE INTX. OF S.E. 39TH ST. AND 88TH AVE. S.E. PER THE PLAT OF MADRONA CREST ADDITION, RECORDED IN 42 OF PLATS, PAGE 12, RECORDS OF KING COUNTY, WASHINGTON.

TAX PARCEL NO. 5021900890
TOTAL SITE AREA = 9,234 SQ. FT. OR 0.21 ACRES +/-

LEGEND

- = FOUND MONUMENT AS NOTED
- ✕ = SET PK NAIL W/ WASHER "LS #38992"
- (MEAS) = MEASURED
- (PLAT) = PLAT OF MADRONA CREST ADD. VOL. 42, PG. 12
- (R) = RECORD
- BC = BUILDING CORNER
- CB = CATCH BASIN
- FFE = FINISH FLOOR ELEVATION
- GPM = GAS PAINT MARK
- ICV = IRRIGATION CONTROL VALVE
- O/S = OFFSET
- PC = PROPERTY CORNER
- RPE = ROOF PEAK ELEVATION
- SSMH = SANITARY SEWER MANHOLE
- WF = WOOD FENCE
- ⊠ = GAS METER
- ⊕ = WATER VALVE
- ⊗ = WATER METER
- ⊙ = FIRE HYDRANT
- ⊠ = CATCH BASIN
- = MANHOLE (AS NOTED)
- PP-○ = POWER POLE
- ⊗ = ROCKERY
- ⊙ = CONIFEROUS TREE
- ⊙ = DECIDUOUS TREE

- LINETYPE LEGEND
- = GAS
 - DP— = OVERHEAD POWER
 - SS— = SANITARY SEWER
 - S— = STORM DRAIN
 - = WOOD FENCE

- HATCH LEGEND
- ▨ = ASPHALT
 - ▩ = CONCRETE
 - ▩ = GRAVEL

- TREE LEGEND
- D = DECIDUOUS
 - J = JUNIPER CEDAR

SURVEYOR'S NOTES

1. INSTRUMENTATION FOR THIS SURVEY WAS A SPECTRA VISION FOCUS 35 TOTAL STATION AND A SPECTRA PRECISION SP80 GPS UNIT. PROCEDURES USED IN THIS SURVEY WERE FIELD TRAVERSE, MEETING OR EXCEEDING STANDARDS SET BY WAC 332-130-090.
2. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE IN JULY 2024, AND SHOWS THE GENERAL CONDITION EXISTING AT THAT TIME.
3. THE UNDERGROUND UTILITIES SHOWN HEREON ARE BASED UPON PAINTMARKS AND FIELD OBSERVATIONS AND ARE NOT GUARANTEED TO BE CORRECT, NOR ALL INCLUSIVE. ALL UTILITIES MUST BE VERIFIED PRIOR TO CONSTRUCTION. CALL 1-800-424-5555 FOR UTILITY LOCATORS.
5. THIS SURVEY WAS DONE WITHOUT THE BENEFIT OF A CURRENT TITLE REPORT AND DOES NOT PURPORT TO SHOW ANY EASEMENTS WHICH MAY AFFECT THE SUBJECT PROPERTY.

LEGAL DESCRIPTION

PER STATUTORY WARRANTY DEED RECORDED UNDER AUDITOR'S FILE NUMBER 20231011001080, RECORDS OF KING COUNTY, WASHINGTON.

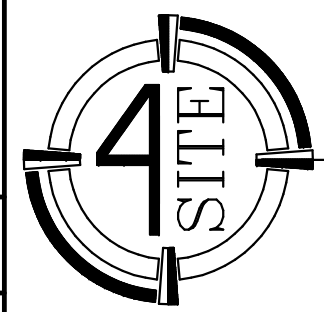
LOT 11, BLOCK 8, MADRONA CREST ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 42 OF PLATS, PAGE 12, RECORDS OF KING COUNTY, WASHINGTON;

SITUATE IN THE CITY OF MERCER ISLAND, COUNTY OF KING, STATE OF WASHINGTON.



BOUNDARY AND TOPOGRAPHIC SURVEY
FOR
JENNI CONDON
3925 90TH AVE SE, MERCER ISLAND, WA 98040

DWN BY RF/FAD	DATE 9/10/24	JOB NO. 24121
CHKD BY DMT	SCALE 1" = 20'	SHEET 1 OF 1



SURVEYING, LLC

4227 S. MERIDIAN STE. C-445
PUYALLUP, WASHINGTON 98373
4SITESURVEYING@COMCAST.NET
PHONE: 253-446-2188

LINE	BEARING	DISTANCE
L1	N 89°56'52" W	30.00'
L2	N 89°56'52" W	30.00'

VERTICAL CONTROL

TBM #1
SET PK NAIL AT EDGE OF ASPHALT (AS SHOWN)
ELEVATION = 298.30 FEET

TBM #2
SET PK NAIL AT EDGE OF ASPHALT (AS SHOWN)
ELEVATION = 301.11 FEET

CLEARING AND GRADING STANDARD NOTES

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

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

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

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

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

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

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

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

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

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 SUBJECT 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

- Surface restoration of existing asphalt pavement shall be as required by the right-of-way use permit.
- 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.

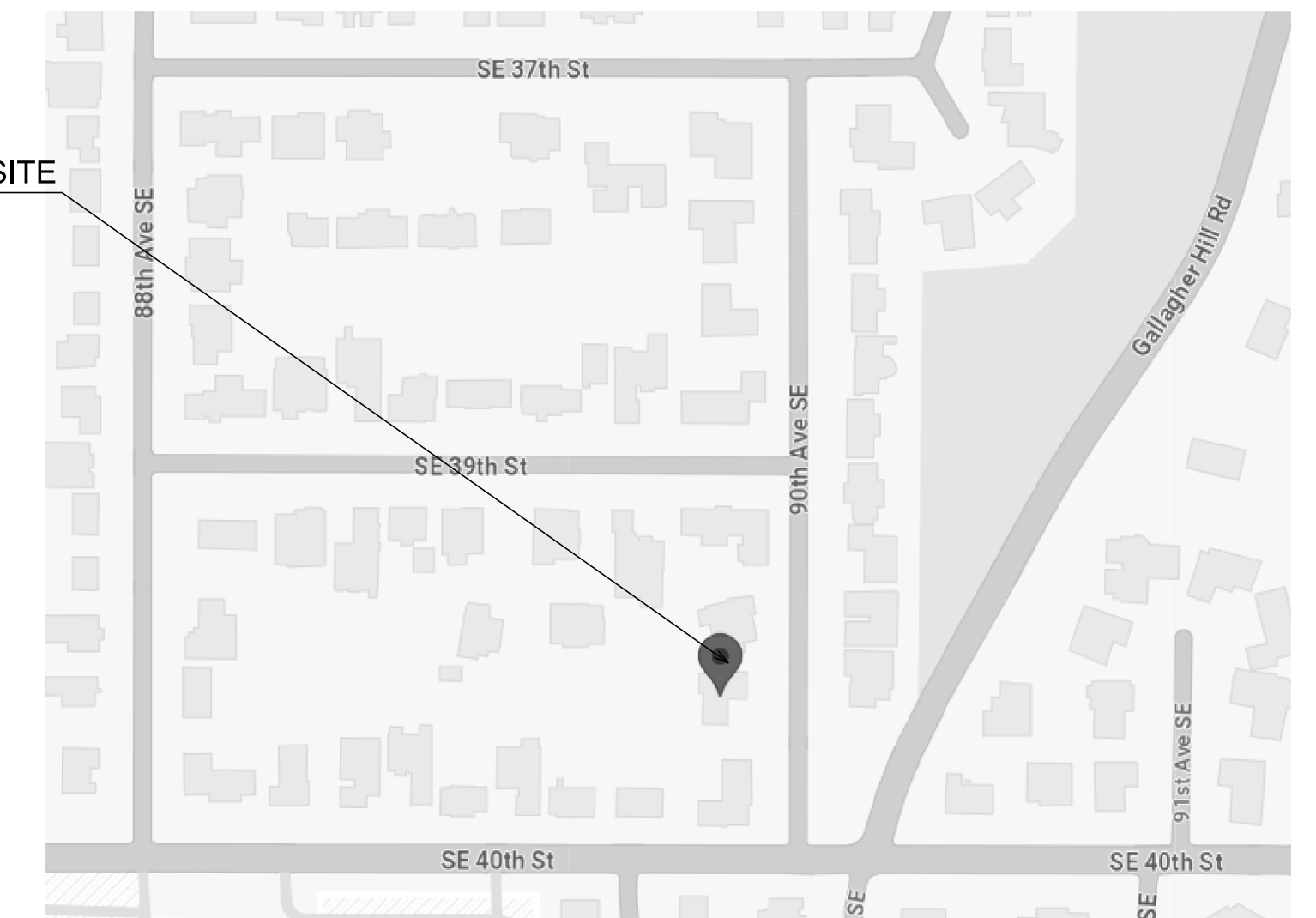
UTILITY NOTES

- 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.
- Call 1-800-424-5555, or 8-1-1, 72 hours before construction for utility locates.
- 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.
- Avoid crossing water or sewer mains at highly acute angles. The smallest angle measure between utilities should be 45 degrees.
- It shall be the Contractors responsibility to ensure that no conflicts exist between storm drainage lines and proposed or existing utilities prior to construction.
- At points where existing thrust blocking is found, minimum clearance between concrete blocking and other buried utilities or structures shall be 5 feet.
- 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

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- Side storm stations are referenced from nearest downstream manhole/catch basin.
- All testing and connections to existing mains shall be done in the presence of a representative of the City of Mercer Island Utilities Department.
- 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.
- Storm stubs shall be tested for acceptance at the same time the main storm is tested.
- All manholes/catch basins in unpaved areas shall include a concrete seal around adjustment rings per Standard Details.
- 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.
- 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.
- 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.
- Placement of surface appurtenances (MH lids, valve lids, etc.) in tire tracks of traffic lanes shall be avoided whenever possible.
- 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.
- Clearly label public and private systems on the plans. Private systems shall be marked private and shall be maintained by the property owner(s).
- All concrete structures (vaults, catch basins, manholes, oil/water separators, etc.) shall be vacuum tested.
- 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.
- Tops of manholes/catch basins within public right-of-way shall not be adjusted to final grade until after paving.
- Contractor shall adjust all manhole/catch basin rims to flush with final finished grades, unless otherwise shown.
- 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.
- 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.
- Minimum cover over storm drainage pipe shall be 2 feet, unless otherwise shown.
- 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.
- 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 MADRONA CREST ADD

PARCEL NUMBER: 502190-0890

PROPERTY OWNER: CONDON RESIDENCE
3925 90TH 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 LLC
8822 NE 178TH ST
BOTHELL, WA 98011
(206) 795-5674

GENERAL NOTES

3925 RESIDENCE
 3925 90TH AVE SE
 MERCER ISLAND WA 98040

SHEET
1
 OF
3
 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.

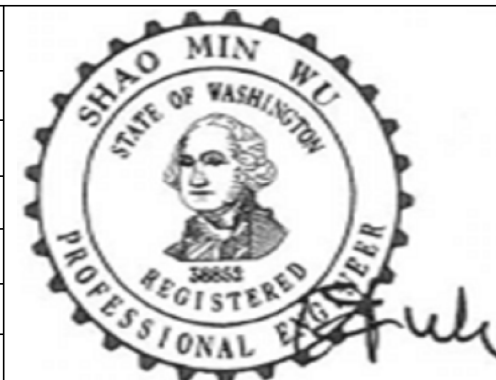
PLAN NOTES

- 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



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

TESC & DRAINAGE PLAN

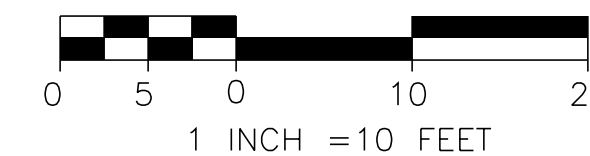
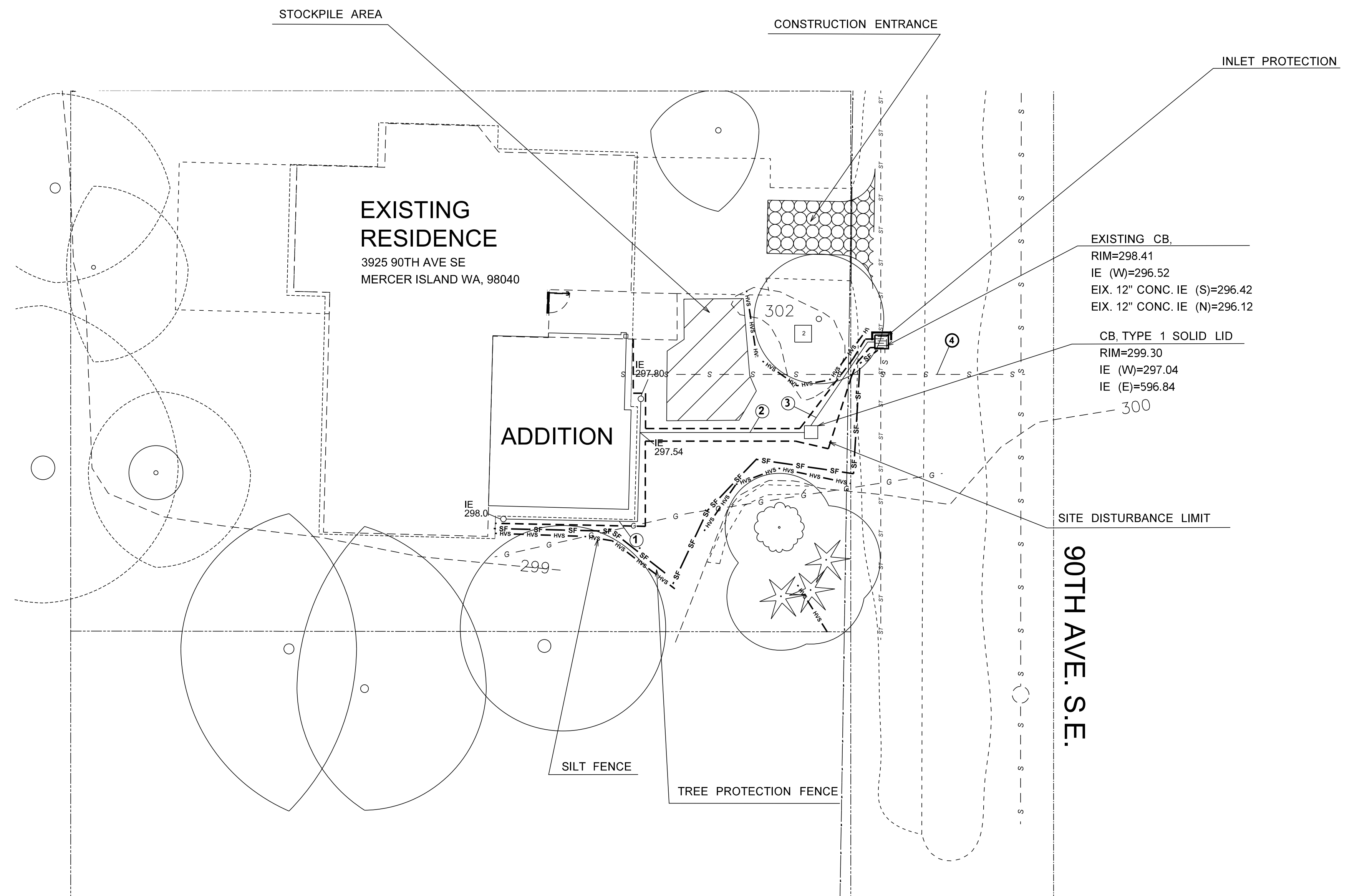
3925 RESIDENCE
 3925 90TH AVE SE
 MERCER ISLAND WA 98040

SHEET
2
 OF
3
 SHEETS

C-2.00

STORM DRAIN & SIDE SEWER NOTES

- 4" STORM DRAIN, L=25.0', S=2.0%, (ASTM D-3034 PVC)
- 4" STORM DRAIN, L=25.0', S=2.0% (ASTM D-3034 PVC)
- 6" STORM DRAIN, L=16.0', S=2.0% (ASTM D-3034 PVC)
- 4" EXISTING SIDE SEWER, (ASTM D-3034 PVC)



EXPOSED & STOCKPILES SOIL BMP'S

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

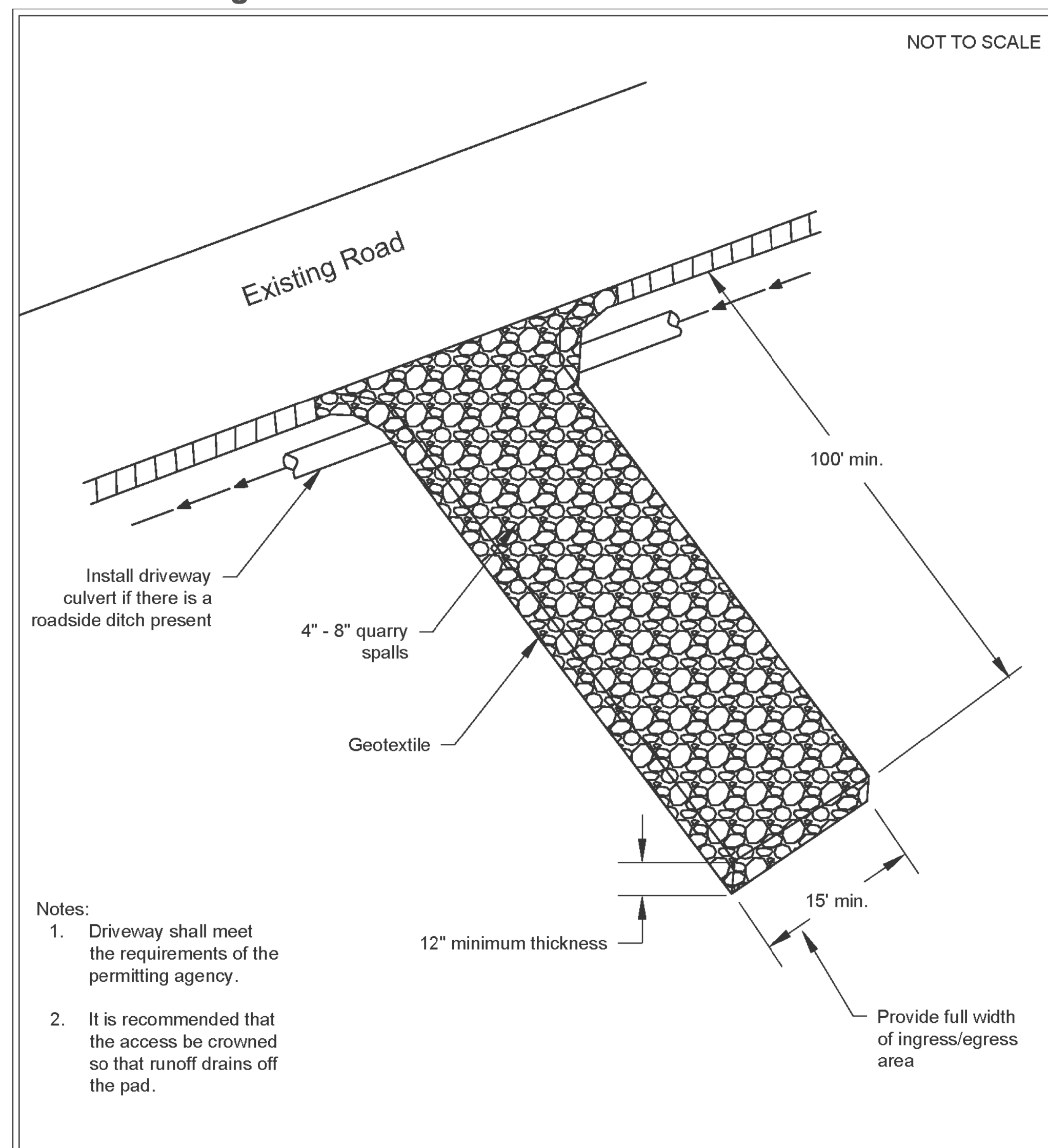
- Preserving natural vegetation
- Sodding
- Topsoil
- Mulching
- Check dam
- Soil binding using polyacrylamide
- Wattles
- Biodegradable erosion control blanket
- Compost blanket
- Stabilized construction entrance
- Plastic covering
- Construction road stabilization
- Seeding and planting
- Dust Control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

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



FIELD BOOK: _____
 SURVEYED: _____
 SURVEY BASE MAP: _____
 DESIGN ENTERED: _____
 DESIGNED: _____
 CHECKED: _____

Figure II-3.1: Stabilized Construction Access



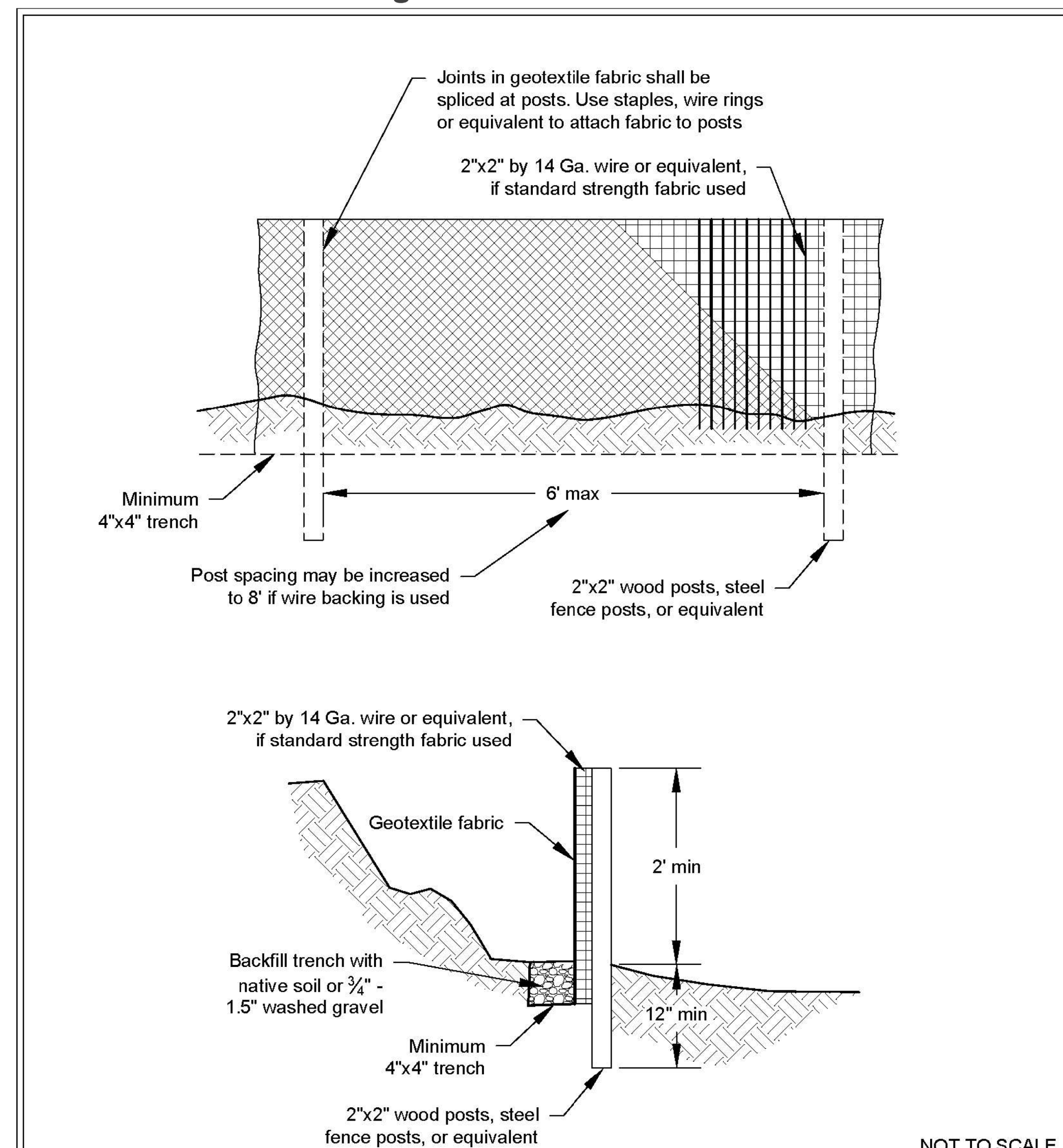
Stabilized Construction Access

Revised June 2018

DEPARTMENT OF ECOLOGY
State of Washington

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Figure II-3.22: Silt Fence



Silt Fence

Revised July 2017

DEPARTMENT OF ECOLOGY
State of Washington

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



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

TESC DETAILS

3925 RESIDENCE
 3925 90TH AVE SE
 MERCER ISLAND WA 98040

SHEET
3
 OF
3
 SHEETS

C-3.00

PROJECT DESCRIPTION

519 SF ADDITION & INTERIOR ALTERATION TO EXISTING SFR. WORKS INCLUDE ADDING A NEW MASTER SUITE AND RECONFIGURING THE MAIN FLOOR, PER PLAN.

LEGAL DESCRIPTION

MADRONA CREST ADD
PLAT BLOCK: 8
PLAT LOT: 11

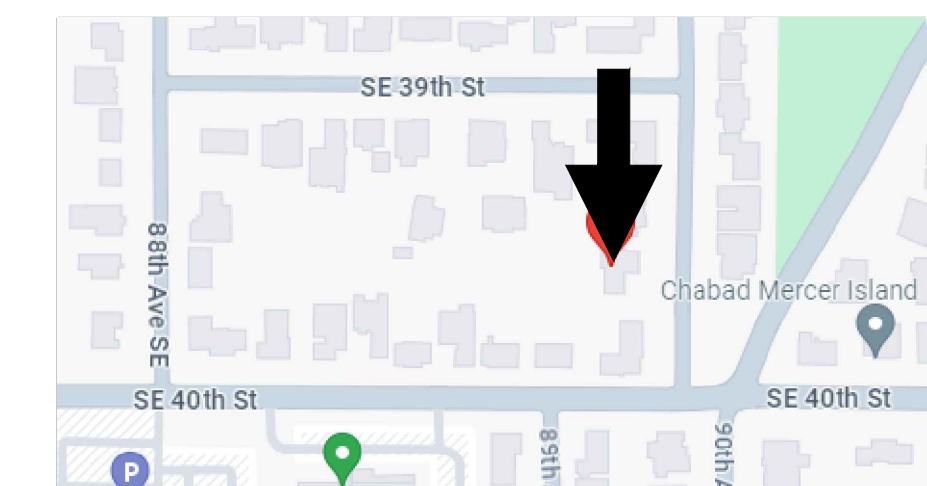
SHEET INDEX

- △ C-1.00 GENERAL NOTES
- C-2.00 TESC & DRAINAGE PLAN
- C-3.00 TESC DETAILS
- C1.1 SITE PLAN & PROJECT INFO
- C1.2 LAND USE CALCULATIONS
- C1.3 IMPERVIOUS SURFACE CALCULATIONS & DIAGRAMS
- C1.4 TREE ASSESSMENT TABLE
- C1.5 TESC PLAN
- A1.1 GENERAL NOTES & WINDOW & DOOR SCHEDULE
- A.2 ENERGY CODE COMPLIANCE
- A2.1 MAIN FLOOR PLANS
- A2.2 ROOF PLAN
- A3.1 ELEVATIONS
- A3.2 ELEVATIONS
- A4.1 BUILDING SECTIONS
- A4.2 BUILDING SECTIONS
- A4.3 TYP WALL SECTIONS
- A5.1 ARCHITECTURAL DETAILS
- S-SHEETS STRUCTURAL PLANS

LEGEND

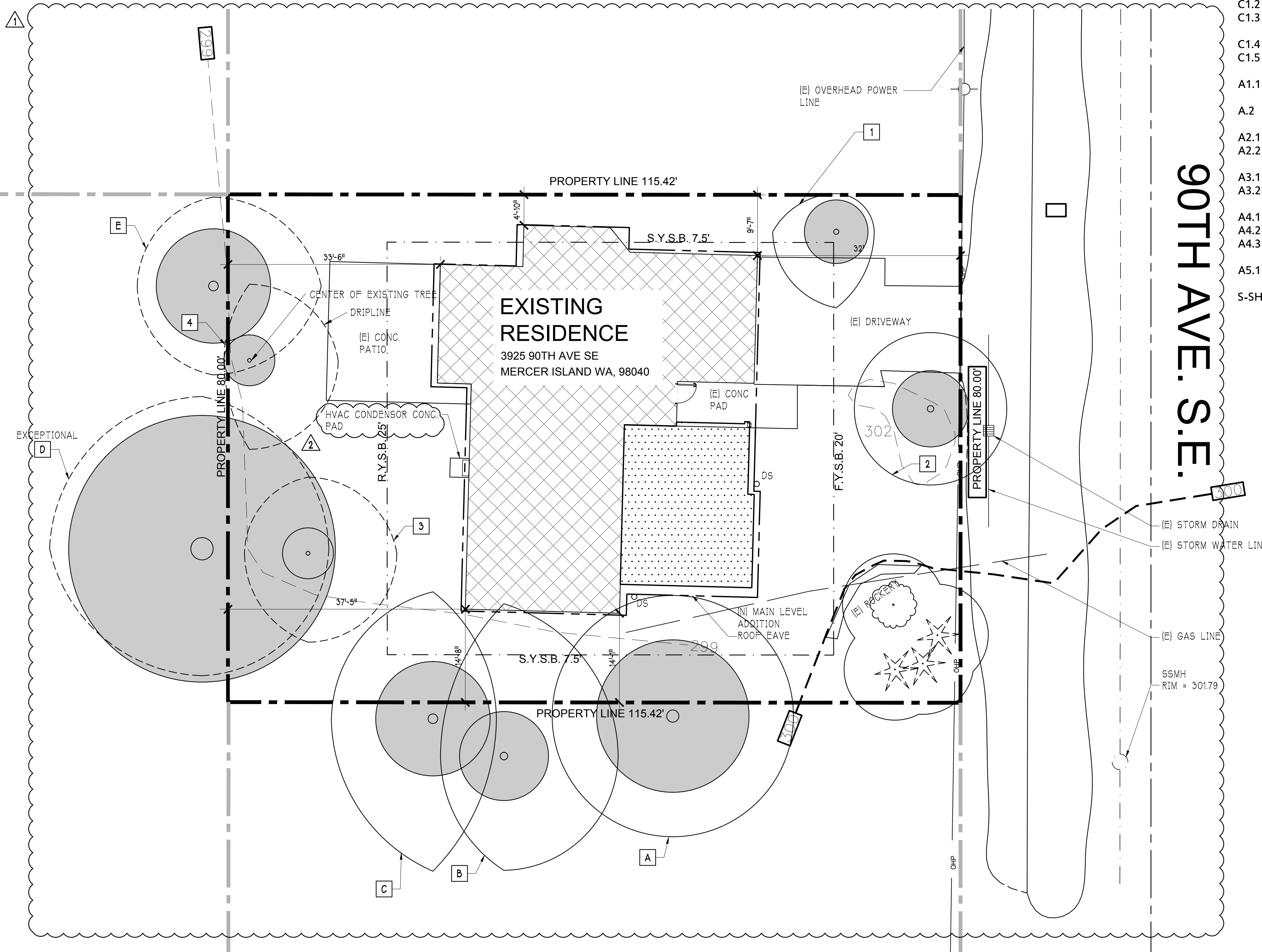
- — — — — PROPERTY LINE OF PROPOSED PROJECT
- — — — — PROPERTY LINE OF ADJACENT PROPERTIES
- - - - - CONTOUR LINE - 1' ELEVATION CHANGE
- 10' CONTOUR
- - - - - EXISTING FENCE
- EXISTING STRUCTURE W/ INTERIOR RENOVATION
- NEW MAIN FLOOR ADDITION TO EXISTING SFR
- EXISTING STRUCTURE
- CENTER LINE OF STREET
- EDGE OF CONCRETE
- ROOF OUTLINE W/ GUTTER
- PROPERTY SETBACK
- EDGE OF GRAVEL
- PRIMARY ENTRANCE (FOR DADUS, ADUS AND SFRS)
- EXISTING TREES
- PROPOSED DOWN SPOUTS
- TREE TABLE TAG
- CENTER OF EXISTING TREE
- CRZ
- DRIPLINE
- OHP OVERHEAD POWER LINES
- SEWER LINE
- SBS SIDE SEWER LINE
- PROPOSED SIDE SEWER LINE
- STORM WATER
- GAS LINE

VICINITY MAP
FROM GOOGLE MAPS



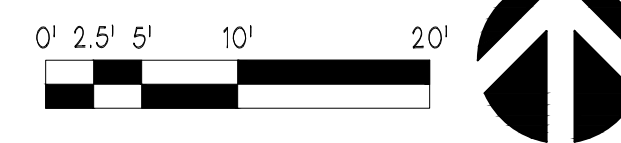
PROJECT INFORMATION

OWNER	JENNI CONDON
JURISDICTION	MERCER ISLAND
PARCEL NUMBER	502190-0890
ZONING	R8.4
YEAR BUILT	1955
LOT AREA (SQ-FT)	9234



SITE PLAN

SCALE 22X34 1" = 10'-0"
SCALE 11X17 1" = 20'-0"



REV	DATE	DESCRIPTION
0	05/22/23	ENGINEER PLAN
1	11/19/24	CORRECTION RESPONSE #1
2	02/11/25	CORRECTION RESPONSE #2



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JENNI CONDON
3925 90TH AVE SE
MERCER ISLAND WA 98040

**SITE PLAN
& PROJECT INFO**

JOB NO.	22-0317
HALF SCALE	11x17
FULL SCALE	22x34
SHEET	

C1.1

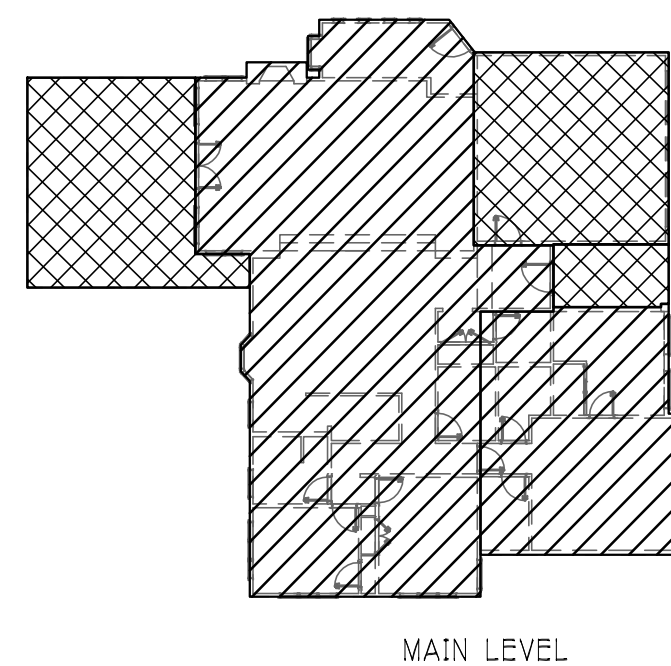
LEGEND

- CONDITIONED AREA INCLUDED IN AREA TABULATIONS
- UNCONDITIONED AREA INCLUDED IN AREA TABULATIONS

SFR (MEASURED TO OUTSIDE OF STUD WALL)

CONDITIONED SPACE	EXISTING/RENO	NEW	TOTAL
MAIN LEVEL	1554 SQ-FT	517 SQ-FT	2071 SQ-FT
TOTAL	1554 SQ-FT	517 SQ-FT	2071 SQ-FT
UNCONDITIONED SPACE	EXISTING/RENO	NEW	TOTAL
ATTACHED GARAGE	407 SQ-FT	0 SQ-FT	407 SQ-FT
REAR PATIO	403 SQ-FT	0 SQ-FT	403 SQ-FT
COVERED ENTRANCE	85 SQ-FT	-7 SQ-FT	78 SQ-FT
TOTAL	895 SQ-FT	-7 SQ-FT	888 SQ-FT

GRAND TOTAL: 2959 SQ-FT



LOT COVERAGE

	EXISTING	NEW	TOTAL
SFR ROOF	2072 SQ-FT	658 SQ-FT	2730 SQ-FT
DRIVEWAY	562 SQ-FT	0 SQ-FT	562 SQ-FT
TOTAL	2634 SQ-FT	658 SQ-FT	3292 SQ-FT

MAX LOT COVERAGE = (9234 SQ-FT * 40%) = 3694 SQ-FT (MAX)
 PROPOSED LOT COVERAGE = 3292 SQ-FT < 3694 SQ-FT (OK)

HARDSCAPE

	EXISTING	NEW	TOTAL
UNCOVERED PATIO	374 SQ-FT	0 SQ-FT	374 SQ-FT
CONC. PAD	0 SQ-FT	7 SQ-FT	7 SQ-FT
WALKWAYS	45 SQ-FT	0 SQ-FT	45 SQ-FT
TOTAL	419 SQ-FT	7 SQ-FT	426 SQ-FT

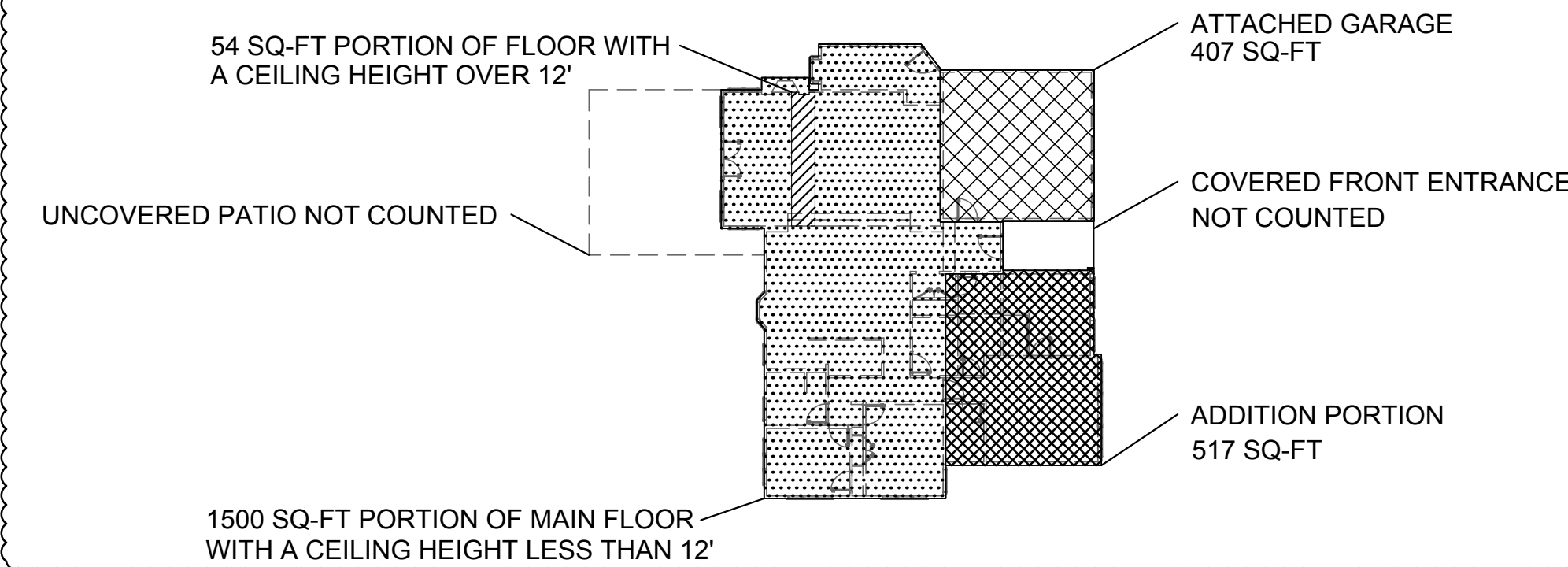
MAX HARDSCAPE = (9234 SQ-FT * 9%) = 831 SQ-FT (MAX)
 PROPOSED HARDSCAPE = 426 SQ-FT < 831 SQ-FT (OK)

AREA TABULATIONS

LOT COVERAGE AND HARDSCAPE

LEGEND

- CONDITIONED AREA INCLUDED IN AREA TABULATIONS
- CEILING HEIGHT OVER 12' BUT LESS THAN 16'
- ADDITION PORTION
- ATTACHED GARAGE



GROSS FLOOR AREA

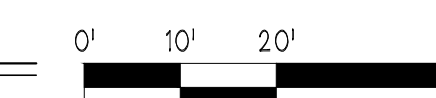
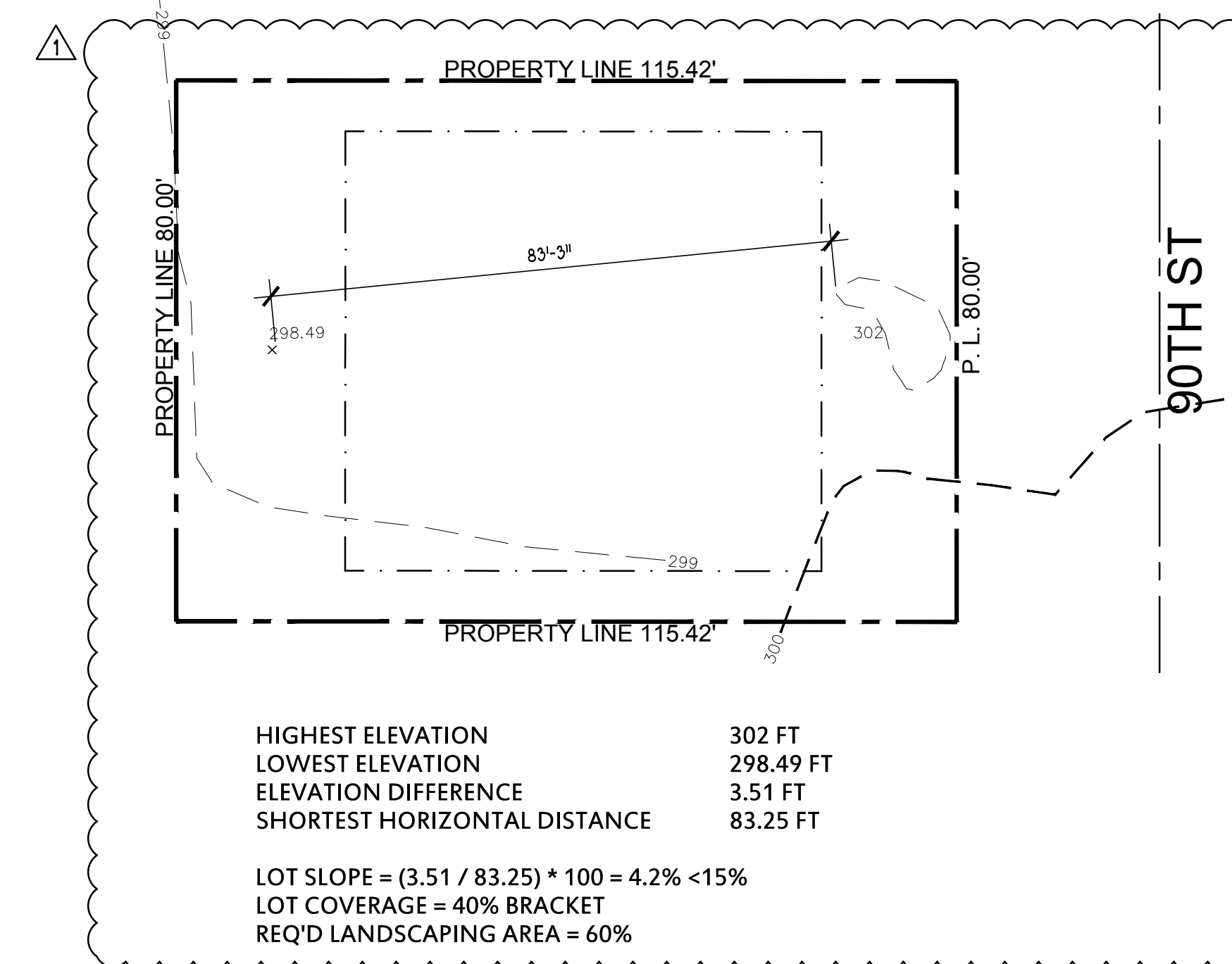
TOTAL LOT AREA	9234 SQ-FT
ADDITION PORTION	517 SQ-FT
ATTACHED GARAGE	407 SQ-FT
MAIN w/ CEILING < 12'	1500 SQ-FT
TOTAL	2423 SQ-FT

MAIN w/ CEILING > 12'	54 SQ-FT
54 SQ-FT x 1.5	81 SQ-FT
TOTAL = 2474 + 81 =	2504 SQ-FT

ALLOWABLE GFA = 9234 SQ-FT * 40% = 3694 SQ-FT
 PROPOSED GFA = 2504 SQ-FT < 3694 SQ-FT (OK)

GFA CALCULATION & DIAGRAM

SCALE 22X34 1" = 20'-0"
 SCALE 11X17 1" = 40'-0"



AVERAGE BUILDING ELEVATION CALCULATION

MIDPOINT ELEVATION (FT)	EXTERIOR WALL LENGTH (FT)	x * x		
a	289.30	A	18.69	5593.92
b	289.34	B	13.00	3891.42
c	289.38	C	6.50	1945.97
d	289.43	D	13.59	4069.25
e	289.49	E	4.96	1485.47
f	289.52	F	20.09	6071.36
g	301.39	G	20.15	6073.01
h	301.28	H	12.05	3630.42
i	301.18	I	6.46	1945.62
j	301.19	J	10.73	3231.77
k	301.27	K	0.33	89.42
l	301.28	L	0.79	238.01
m	301.14	M	11.41	3436.01
n	300.97	N	1.00	300.97
o	300.76	O	14.70	4421.17
p	289.28	P	20.72	6201.08
q	289.16	Q	4.55	1361.18
r	289.06	R	24.30	7267.16
s	289.23	S	35.50	10622.67
t	289.32	T	5.34	1588.37
FINAL ELEVATION (FT)	244.86			73430.24
				289.88

MAX HEIGHT = 30 FEET
 (DOUBLE TOP PLATE OR SPECIFIC CIRCUMSTANCES?)

JURISDICTION ALLOWABLE HEIGHT: 30 FT
 JURISDICTION ALLOWABLE BUILDING ELEVATION: EL. 329.89'
 ACTUAL BUILDING HEIGHT: 14.89 FT
 ACTUAL BUILDING ELEVATION: EL. 314.71'
 ABE @ EL. 299.89'

AVERAGE GRADE CALCULATION AND HEIGHT

CODE: 19.02.020.E.1

LOT SLOPE DIAGRAM & CALCULATION

REV	DATE	DESCRIPTION
0	05/22/23	ENGINEER PLAN
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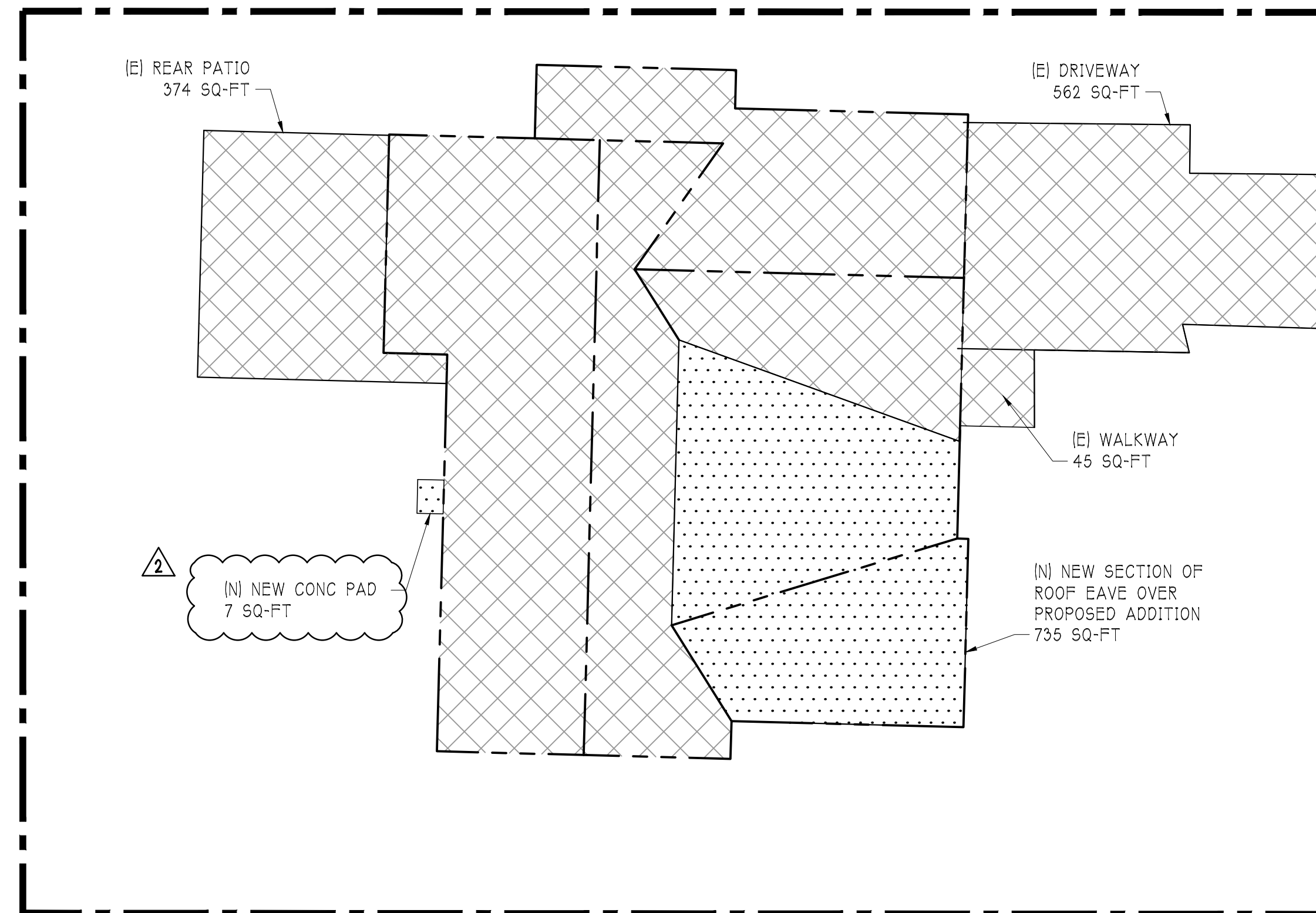
LAND USE CALCULATIONS

JOB NO.	22-0317
HALF SCALE	11x17
FULL SCALE	22x34
SHEET	

C1.2

LEGEND

- — — — — PROPERTY LINE OF PROPOSED PROJECT
- - - - - BUILDING ROOF LINE
- [Dotted Pattern] NEW STRUCTURE/SURFACE
- [Cross-hatch Pattern] EXISTING STRUCTURE/SURFACE



IMPERVIOUS SURFACE

	REPLACED	NEW
TOTAL	0 SQ-FT	742 SQ-FT
	0 SQ-FT	742 SQ-FT
742 SQ-FT NEW + 0 SQ-FT REPLACED = 742 SQ-FT		
TOTAL NEW + REPLACED IMPERVIOUS = 742 SQ-FT		

IMPERVIOUS SURFACE CALCULATIONS AND DIAGRAMS

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**IMPERVIOUS SURFACE
CALCULATIONS**

JOB NO.	22-0317
HALF SCALE	11x17
FULL SCALE	22x34
SHEET	

C1.3

Tree Assessment																		
Site: 3925 90th Ave SE ,Mercer Island, WA						Tax ID: 502190-0890			Date: 3/28/2024			Assessor: Tom Hanson PN0426A			Project: 2024-42			
Tag #	Tree #	Species		DBH (inches)	Height (feet)	Crown Ratio (%)	Dripline(ft)				Protection Zone-Outer Radius (feet)	Inner Zone- Radius (feet)	Vigor			Class		Comments
		Common	Scientific				N	S	E	W			Vigor	Structure	Viability	Exceptional	Grove	
On Site																		
1	1	Japanese maple	<i>Acer palmatum</i>	9.8	25	80	6	12	6	10	10	5	Good	Good	Yes	Small	No	
2	2	Zelkova	<i>Zelkova serrata</i>	12.1	20	80	12	12	12	12	12	6	Good	Fair	Yes	Large	No	Topped for utilities
3	3	Japanese maple	<i>Acer palmatum</i>	7.5	18	50	12	14	14	10	8	4	Good	Good	Yes	Small	No	
4	4	Florida Dogwood	<i>Cornus Florida</i>	7.1	22	60	12	14	14	4	7	4	Good	Good	Yes	Small	No	
Off Site																		
A	Norway spruce	<i>Picea abies</i>	23	70	90	19	19	19	19	23	12	Good	Good	Yes	Large	No	Over hang 4'	
B	Douglas-fir	<i>Psuedotsuga Menziesii</i>	14	110	80	24	18	18	10	14	7	Good	Fair	Yes	Large	No	Over hang 10'	
C	Douglas-fir	<i>Psuedotsuga Menziesii</i>	18	110	80	20	24	10	16	18	9	Good	Good	Yes	Large	No	Over hang 12'	
D	Douglas-fir	<i>Psuedotsuga Menziesii</i>	42	120	80	24	20	24	20	42	21	Good	Fair	Yes	Exceptional	No	2 Codominates at 50', overhang 14'	
E	Deciduous	<i>Unknown</i>	18	45	70	14	14	17	12	18	9	Good	Good	Yes	Large	No	Over hang 14'	
* multiple stems converted to single = (square root(stem1)^2+(stem2)^2+(stem3)^2)																		

TREE PROTECTION AREA (TPZ)

KEEP OUT!

DO NOT REMOVE OR ADJUST THE APPROVED LOCATION OF THIS TREE PROTECTION AREA

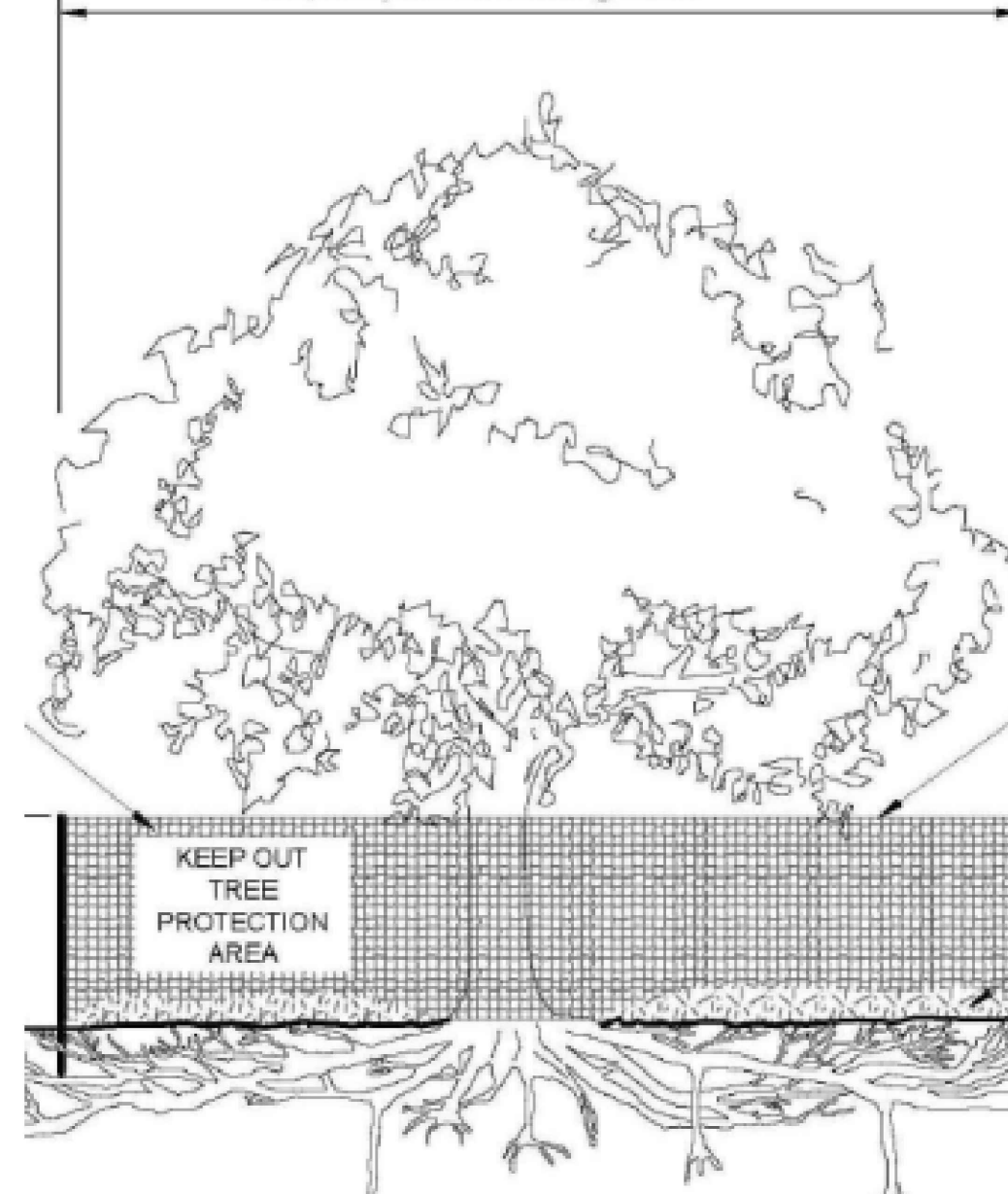
Trees enclosed by this fence are protected and are subject to the conditions of the tree permit. Violation of tree conditions may lead to:

1. Correction Notices or Stop Work Orders until compliance is achieved
2. RE Inspection Fees/financial penalties
3. Arborist reports recommending mitigation

Notes

1. No pruning shall be performed unless under the direction of the Project Arborist. Including limbing trees up.
2. No grading, excavation, storage (materials, equipment, vehicles, etc.), or other unpermitted activity shall occur inside the protective fencing.
3. Penalties for damaging by root damage/compaction or removing a saved tree may be a fine up to three times the value of the tree plus restoration (MICC 19.10.160).
4. Any work in approved TPZ must be with the permission of the City Arborist (206) 275-7713, john.kenney@mercergov.org.
5. 5" course woodchips within the tree protection zone, but not against the tree trunk.

Crown drip line or other limit of Tree Protection area. See Site/Utility Plan for fence alignment.



Tree protection fence: 6' chain link fence, solidly anchored into the ground, or if authorized High-density polyethylene fencing with 3.5" x 1.5" openings; color orange. Steel posts installed at 8' o.c.

2" x 6" steel posts or approved equal

Maintain existing grade with the tree protection fence unless otherwise indication on the plans

Any Work in the protected area must be with the permission of the City Arborist john.kenney@mercergov.org

REV	DATE	DESCRIPTION
0	05/22/23	ENGINEER PLAN
1	11/19/24	CORRECTION RESPONSE #1
2	02/11/25	CORRECTION RESPONSE #2



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MERCER ISLAND WA 98040

TREE ASSESSMENT TABLE

JOB NO.	22-0317
HALF SCALE	11x17
FULL SCALE	22x34
SHEET	

C1.4

GENERAL NOTES

CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS AND DIMENSIONS PRIOR TO COMMENCING THE WORK.
 WORK SHALL COMPLY WITH THE FOLLOWING CODES:
2021 INTERNATIONAL RESIDENTIAL CODE
2021 WASHINGTON ENERGY CODE
 OTHER CODES APPLICABLE BY JURISDICTION.

AIR SEALING:

- ALL PLUMBING, ELECTRICAL, AND HVAC PENETRATIONS IN FLOOR, WALLS, AND CEILINGS ARE CAULKED AND SEALED.
- WHERE PENETRATIONS NEED A FIRESTOP, DISCUSS WITH BUILDING OFFICIAL.
- ELECTRICAL OUTLET AND LIGHT SWITCH BOXES ON EXTERIOR WALLS MUST BE SEALED AT THE BACK OF THE RECEPTACLE OR SEALED WITH FACEPLATE GASKETS.
- SEAL RIM JOIST BETWEEN HEATED FLOORS OR USE PRODUCT LIKE "TYVEK" ON EXTERIOR.
- VAPOR BARRIER SHALL BE EITHER FACE STAPLED BATT, 4 MIL. VISQUEEN OR AN APPROVED VAPOR BARRIER PAINT.

SEPARATION BETWEEN DWELLING AND GARAGE/CARPORIT:

- NO SEPARATION REQUIRED IF ENTIRELY OPEN ON 2 OR MORE SIDES AND NO ENCLOSED USES. (OPEN DECKS ABOVE ARE OKAY. NON-RATED WALLS AND OPENABLE WINDOWS BETWEEN THE DWELLING AND CARPORT ARE OKAY).
- MINIMUM 1/2" GWB ON GARAGE/CARPORIT SIDE OF WALLS REQUIRED FOR ALL GARAGES/CARPORITS NOT COVERED BY 1A ABOVE.
- 1-HOUR FIRE RATED WALL REQUIRED IF LESS THAN 5 FEET FROM PROPERTY LINE (NO OPENINGS ALLOWED LESS THAN 3' FROM PROPERTY LINE, 25% MAXIMUM OPENINGS BETWEEN 3' AND 5' TO PROPERTY LINE). OVERHANGS MUST BE A MINIMUM 2' FROM PROPERTY LINE, EXCEPT STEEL GUTTER ALLOWED CLOSER AND 5/8" GWB SHEATHING REQUIRED ON UNDERSIDE WHEN 5' OR LESS FROM PROPERTY LINE.

EGRESS WINDOWS: REQUIRED FOR 1 WINDOW/BEDROOM OR SLEEPING AREA (BELOW 4TH FLOOR) AND 1 WINDOW/BASEMENT.

- MIN NET CLEAR AREA = 5.7 SQ. FT., [MIN. 3'0" x 4'6" IF DOUBLE HUNG OR 4'0" x 3'6" WINDOW IF SLIDER], 5.0 SQ. FT. IF SILL HEIGHT IS WITHIN 44" OF GRADE (ABOVE OR BELOW).
- MIN. NET CLEAR OPENING WIDTH = 20"; MIN. NET CLEAR OPENING HEIGHT = 24"
- MAX. SILL HEIGHT = 44"

REQUIRED GLAZING FOR HABITABLE ROOMS:

- MIN. GLAZED EXTERIOR OPENING AREA = 8% OF FLOOR AREA.
- GLAZED OPENINGS NOT REQUIRED WHERE PERMANENTLY INSTALLED ARTIFICIAL LIGHT IS PROVIDED.
- OK IF OPENINGS ARE BELOW DECK & ROOFED PORCHES w/MIN. CEILING HEIGHT OF 7 FT. (LONG SIDE 65X OPEN).

MECHANICAL/VENTILATION: REQUIRED FOR HABITABLE ROOMS OF ADDITIONS AND ALTERATIONS MORE THAN 500 SQ. FT. OR THAT INCLUDE A KITCHEN, BATHROOM AND OTHER AREAS WHERE COOKING ODOOR OR EXCESS WATER VAPOR WILL BE PRODUCED.

- MIN. 50 CFM FOR BATHROOM AND LAUNDRY; MIN. 100 CFM FOR KITCHEN.
- MIN. AIR INTAKE OPENINGS = 4 SQ. IN. PER ROOM.
- WHOLE HOUSE FAN MUST OPERATE AS SPECIFIED IN IRC M1505.4.

SMOKE ALARMS: REQUIRED INSIDE AND OUTSIDE OF SLEEPING AREAS AND ON ALL FLOORS. DIRECT WIRING IS REQUIRED FOR SMOKE DETECTORS, UNLESS REMOVAL OF INTERIOR WALL OR CEILING FINISHES IS NECESSARY TO INSTALL THE WIRING.

CARBON MONOXIDE ALARMS: REQUIRED OUTSIDE SLEEPING AREAS AND ON ALL FLOORS, UNLESS WORK ONLY INVOLVES EXTERIOR SURFACES OF THE BUILDING.

STAIR REQUIREMENTS: (APPLIES TO ALL R-3 STAIRS AND R-2 PRIVATE STAIRWAYS):

- MIN. WIDTH = 36"
- MAX. HEIGHT/RISE = 7-3/4"; MIN. TREAD RUN = 10"
- MIN. HEADROOM = 6'8"
- HANDRAIL 34"-38" ABOVE TREAD NOSING (RETURN ENDS)
- HANDRAIL GRASP DIMENSION: MIN. 1-1/4", MAX. 2"
- WINDING STAIRS:
 - MIN. TREAD RUN AT NARROWEST POINT = 6"
 - MIN. TREAD RUN 12" FROM NARROWEST POINT = 10"
- MIN. CLEAR WALKING AREA WIDTH = 26"
- MIN. TREAD RUN 12" FROM NARROWEST POINT = 7-1/2" / MAX. RISER HEIGHT = 9-1/2"
- MIN. HEADROOM = 6'6"

CEILING HEIGHT IN ADDITIONS AND ALTERATIONS:

- MIN. 7'0". FOR NEW CONSTRUCTION OR ADDITIONS
- ROOMS WITH SLOPED CEILINGS REQUIRE MINIMUM CEILING HEIGHT IN 1/2 OF THE AREA. (PORTIONS OF THE ROOM WITH CEILING HEIGHT LESS THAN 5 FT. DO NOT COUNT IN TOTAL AREA).

INSULATION:

- FACED BATTS ARE LAPPED AND FACE STAPLED AT FRAMING MEMBERS.
- ALL EXTERIOR WALL CAVITIES ARE FILLED WITH UNCOMPRESSED INSULATION, INCLUDING ALL CAVITIES ISOLATED DURING FRAMING, WIRING, AND PLUMBING.
- ALL RECESSED FIXTURES IN EXTERIOR WALLS HAVE RIGID BOARD INSULATION BEHIND THEM.
- UNDERFLOOR INSULATION IS SUPPORTED BY LATH, TWINE, OR OTHER NON-COMPRESSING MEANS.
- ATTIC ACCESS IS BAFFLED, WEATHER-STRIPPED AND INSULATED.

FOUNDATION LOCATION: PROPERTY CORNERS MUST BE ACCURATELY DETERMINED AND INDICATED ON SITE FOR FOUNDATION INSPECTION. A SURVEY MAY BE REQUIRED. FENCE LOCATIONS WILL NOT BE ACCEPTED AS ESTABLISHING PROPERTY CORNERS.

OTHER REQUIREMENTS:

- GUARDRAILS: MUST BE AT LEAST 36" HT. W/ LESS THAN 4" SPACING BETWEEN INTERMEDIATE MEMBERS [42" MIN. HT. FOR R-2 EXTERIOR].
- FLOORINGS: BOTTOM MIN. 12" ABOVE EXPOSED GROUND IN CRAWL SPACE, TOP OF FOUNDATION WALL MIN. 6" ABOVE GRADE.
- CONCRETE SLABS ON GRADE: 3-1/2" MIN. THICKNESSES.
- PIER BLOCKS: MIN. 12" X 12" SIZE; RESTING ON CONCRETE PAD MIN. 12" BELOW GRADE.
- FOUNDATION WALLS: PROVIDE ONE (1) #4 REBAR TOP AND BOTTOM AND AT ALL WINDOWS/DOOR OPENINGS. LIMIT 4' MAX. BACKFILL.
- FOUNDATION ANCHOR BOLTS: MIN. 1/2" x 10", 6 FT. ON CENTER MAX. WITH TWO (2) BOLTS PER PIECE OF PLATE AND AT LEAST ONE (1) BOLT WITH 12" AT END OF EACH PIECE (REQUIRED FOR NEW CONSTRUCTION).
- ALL STRUCTURAL SOFTWOOD PLYWOOD, PARTICLE BOARD, WAFFER BOARD, AND OSB BOARD ARE STAMPED WITH EXPOSURE 1" OR 'EXTERIOR'.
- WATER HEATER STORAGE TANK LABELED AS MEETING 1987 NAT'L APPLIANCE ENERGY CONSERVATION ACT. ASHRAE STANDARD 90A-1980 INSULATION TO R-16 OR R-10 PAD IF LOCATED OVER UNINSULATED SLAB.
- INSULATE HOT AND COLD WATER PIPES TO R-3 IN UNHEATED AREAS. (INSULATION FOR HOT WATER PIPE, BOTH WITHIN AND OUTSIDE CONDITIONED SPACE, SHALL HAVE A MIN R-VALUE OF R-3 PER WSEC R403.5.3)
- SHOWER REGULATOR TO LIMIT HOT WATER DISCHARGE TO 2.5 GPM.
- WOODSTOVES AND FIREPLACES HAVE TIGHT FITTING DOORS, OUTSIDE COMBUSTION AIR DUCTED TO FIREBOX WITH ACCESSIBLE DAMPER, MIN 6 SQ IN FREE VENT AREA. TIGHT FITTING FLUE DAMPERS REQ'D.
- ALL GAS AND OIL COMBUSTION APPLIANCES HAVE A DIRECT VENT OR FORCED DRAFT VENTING.
- RECESSED LIGHTS ARE I.C. RATED, DOUBLE WALL CAN LIGHTS OR WITHIN SEALED WPGWB BOX-IN.
- CONTRACTOR TO PROVIDE (1) 16"x24" MINIMUM CRAWL SPACE ACCESS INTO NEW CRAWL SPACE AREA THAT IS ACCESSIBLE FROM EITHER THE OUTSIDE OR FROM THE EXISTING CRAWLSPACE AREA. OTHERWISE CONTRACTOR IS TO PROVIDE (1) 18"x24" MINIMUM CRAWL SPACE ENTRANCE THROUGH MAIN LEVEL FLOOR FRAMING THAT ACCESSES NEW CRAWL SPACE AREA.
- A CERTIFICATE IS REQUIRED TO BE POSTED WITHIN 3' OF THE ELECTRICAL PANEL PER WSEC R401.3 AND INCLUDE THE FOLLOWING: PREDOMINATE R-VALUES, U-VALUES OF FENESTRATION, RESULTS FROM DUCT SYSTEM AND BUILDING ENVELOPE AIR LEAKAGE TESTING, AND EFFICIENCIES OF HEATING/COOLING/WATER HEATING EQUIPMENT.
- A MIN OF 90 PERCENT OF PERMANENTLY INSTALLED LAMPS IN INTERIOR AND EXTERIOR LIGHTING FIXTURES MUST BE HIGH-EFFICIENCY LAMPS PER WSEC R404.1

INSULATION

INSULATION AND FENESTRATION REQUIREMENTS R402.1.2		
CLIMATE ZONE	5 AND MARINE 4	ENERGY CREDIT 12
FENESTRATION U-FACTOR (U)	0.30	0.25
SKYLIGHT U-FACTOR (U)	0.50	
CEILING R-VALUE (R)	60	
WOOD FRAME WALL R-VALUE (R)	20-5 OR 21+4	
FLOOR R-VALUE	30	38
BELOW-GRADE WALL R-VALUE (R)	10/15/21 INT-5TB	
SLAB R-VALUE & DEPTH (d)	10, 4FT	10, FULL LENGTH

- FOR 3/4" FOOT = 304.8 MM, C = 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 +5TB" 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 +5TB" 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 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 WALL.
 - R-7.5 CONTINUOUS INSULATION INSTALLED OVER AN EXISTING SLAB IS DEEMED TO BE EQUIVALENT TO 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.

h. 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.

MECHANICAL/VENTILATION

LOCAL EXHAUST REQUIREMENTS M1505.4.4	
AREAS TO BE EXHAUSTED	EXHAUST RATES
KITCHENS	160 CFM FOR HOOD OVER ELECTRIC RANGE OR 250 CFM FOR HOOD OVER COMBUSTION RANGE
BATHROOMS/TOILET ROOMS, LAUNDRY ROOMS, INDOOR SWIMMING POOL ROOMS, SPA ROOMS.	MECHANICAL EXHAUST CAPACITY OF 50 CFM INTERMITTENT OR 20 CFM CONTINUOUS

WHOLE-HOUSE MECHANICAL VENTILATION AIRFLOW RATE M1505.4.3(1)

DWELLING UNIT FLOOR AREA (SQUARE FEET)	NUMBER OF BEDROOMS				
	0-1	2	3	4	5 OR MORE
	AIRFLOW IN CFM				
<500	30	30	35	45	50
501-1000	30	35	40	50	55
1001-1500	30	40	45	55	60
1501-2000	35	45	50	60	65
2001-2500	40	50	55	65	70
2501-3000	45	55	60	70	75
3001-3500	50	60	65	75	80
3501-4000	55	65	70	80	85
4001-4500	60	70	75	85	90
4501-5000	65	75	80	90	95

INTERMITTENT WHOLE-HOUSE MECHANICAL VENTILATION RATE FACTORS M1505.4.3(2)

RUN-TIME X IN EACH 4-HOUR SEGMENT	50%	66%	75%	100%
FACTOR	2	1.5	1.3	1.0

BATHROOMS, TOILET ROOMS, AND KITCHENS SHALL INCLUDE A LOCAL EXHAUST SYSTEM. SUCH LOCAL EXHAUST SYSTEMS SHALL HAVE THE CAPACITY TO EXHAUST THE MINIMUM AIRFLOW RATE IN ACCORDANCE WITH TABLE M1505.4.4(1). FANS REQUIRED BY THIS SECTION SHALL BE PROVIDED WITH CONTROLS THAT ENABLE MANUAL OVERRIDE OR AUTOMATIC OCCUPANCY SENSOR, HUMIDITY SENSOR OR POLLUTANT SENSOR CONTROLS. AN "ON/OFF" SWITCH SHALL MEET THIS REQUIREMENT FOR MANUAL CONTROLS. MANUAL FAN CONTROLS SHALL BE READILY ACCESSIBLE IN THE ROOM SERVED BY THE FAN.

- EXHAUST FANS SHALL MEET THE FOLLOWING CRITERIA:
 - EXHAUST FANS SHALL BE TESTED AND RATED IN ACCORDANCE WITH THE AIRFLOW AND SOUND RATING PROCEDURES OF THE HOME VENTILATING INSTITUTE (HVI 915, HVI LOUDNESS TESTING AND RATING PROCEDURE; HVI 916, HVI AIRFLOW TEST PROCEDURE; AND HVI 920, HVI PRODUCT PERFORMANCE CERTIFICATION PROCEDURE).
 - EXCEPTION: WHERE A RANGE HOOD OR DOWN DRAFT EXHAUST FAN IS USED FOR LOCAL EXHAUST FOR A KITCHEN, THE DEVICE IS NOT REQUIRED TO BE RATED PER THESE STANDARDS.
 - FAN AIRFLOW RATING AND DUCT SYSTEM SHALL BE DESIGNED AND INSTALLED TO DELIVER AT LEAST THE EXHAUST AIRFLOW REQUIRED BY TABLE M1505.4.4(1). THE AIRFLOWS REQUIRED REFER TO THE DELIVERED AIRFLOW OF THE SYSTEM AS INSTALLED AND TESTED USING A FLOW HOOD, FLOW GRID, OR OTHER AIRFLOW MEASUREMENT DEVICE. LOCAL EXHAUST SYSTEMS SHALL BE TESTED, BALANCED AND VERIFIED TO PROVIDE A FLOW RATE NOT LESS THAN THE MINIMUM REQUIRED BY THIS SECTION.
 - DESIGN AND INSTALLATION OF THE SYSTEM OR EQUIPMENT SHALL BE CARRIED OUT IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
 - FAN AIRFLOW RATING AND DUCT SYSTEM SHALL BE DESIGNED AND INSTALLED TO DELIVER AT LEAST THE EXHAUST AIRFLOW REQUIRED BY TABLE M1505.4.4(1).
- WHOLE-HOUSE VENTILATION USING EXHAUST FANS MUST COMPLY WITH:
 - IRC M1505.4: EACH DWELLING UNIT SHALL BE EQUIPPED WITH A VENTILATION SYSTEM. THE WHOLE-HOUSE MECHANICAL VENTILATION SYSTEMS SHALL BE DESIGNED IN ACCORDANCE WITH SECTIONS M1505.4.1 THROUGH M1505.4.4.
 - WHOLE-HOUSE VENTILATION FANS SHALL BE RATED FOR SOUND AT NO LESS THAN THE MINIMUM AIRFLOW RATE REQUIRED BY SECTION M1505.4.3.1. VENTILATION FANS SHALL BE RATED FOR SOUND AT A MAXIMUM OF 10 SONE. THIS SOUND RATING SHALL BE AT A MINIMUM OF 0.1 IN. W.C. [25 PA] STATIC PRESSURE IN ACCORDANCE WITH HVI PROCEDURES SPECIFIED IN SECTIONS M1505.4.1.2 AND M1505.4.1.3.
- DUCTS MUST BE LEAK TESTED IN ACCORDANCE WITH WSU RS-33 USING THE MAXIMUM DUCT LEAKAGE RATES SPECIFIED. DUCT TIGHTNESS MUST BE VERIFIED BY EITHER A POST-CONSTRUCTION TEST OR ROUGH - IN TEST PER WSEC R403.3.3. TOTAL LEAKAGE MUST BE LESS THAN OR EQUAL TO 4 CFM PER 100 SQ-FT OF CONDITIONED FLOOR AREA WHEN TESTED AT A PRESSURE DIFFERENTIAL OF 0.1" W.G. [25 PA] ACROSS THE ENTIRE SYSTEM.

4. PER IRC M1503.6, WHERE ONE OR MORE GAS, LIQUID OR SOLID FUEL-BURNING APPLIANCE THAT IS NEITHER DIRECT-VENT NOR USES A MECHANICAL DRAFT VENTING SYSTEM IS LOCATED WITHIN A DWELLING UNIT'S AIR BARRIER, EACH EXHAUST SYSTEM CAPABLE OF EXHAUSTING IN EXCESS OF 400 CUBIC FEET PER MINUTE (0.19 M3/S) SHALL BE MECHANICALLY OR PASSIVELY PROVIDED WITH MAKEUP AIR AT A RATE APPROXIMATELY EQUAL TO THE EXHAUST AIR RATE. SUCH MAKEUP AIR SYSTEMS SHALL BE EQUIPPED WITH NOT FEWER THAN ONE DAMPER COMPLYING WITH SECTION M1503.6.2.

5. WHERE A CLOSET IS DESIGNED FOR THE INSTALLATION OF A CLOTHES DRYER, AN OPENING HAVING AN AREA OF NOT LESS THAN 100 SQ. INCHES SHALL BE PROVIDED IN THE CLOSET ENCLOSURE OR MAKEUP AIR SHALL BE PROVIDED BY OTHER APPROVED MEANS PER SMC 504.6.

Vertical Fenestration (Windows and doors)				ACTUAL SIZE							
Component	Ref.	U-factor	Width	Height	Sill			Area	UA		
Description			Qt.	Feet Inch	Feet Inch	Feet Inch					
W1 - C - EGRESS	WSEC	0.30	1	3	0	4	7.5	2	0.5	13.9	4.16
W2 - C - EGRESS	WSEC	0.30	3	3	11	4	7.5	2	0.5	54.3	16.30
W3 - XO	WSEC	0.30	2	3	11	1	0	5	8	7.8	2.35
W4 - SH	WSEC	0.30	4	2	6	3	6	3	2	35.0	10.50
<i>Sum of Vertical Fenestration Area and UA</i>								111.1	33.32		
<i>Vertical Fenestration Area Weighted U = UA/Area</i>										0.30	

SAFETY GLAZING FOR EXISTING OPENING REPLACEMENT:

- GLAZING IN DOORS: SAFETY GLAZING IS REQUIRED IN FIXED AND OPERABLE PANELS OF SWINGING, SLIDING, AND BIFOLD DOORS. SAFETY GLAZING IS NOT REQUIRED IN A DOOR IF THE GLAZED OPENINGS DO NOT ALLOW THE PASSAGE OF A 3 INCH SPHERE, OR THE GLAZING IN THE DOOR IS DECORATIVE.
- GLAZING ADJACENT TO DOORS: GLAZING ADJACENT TO DOORS IS REQUIRED IN THE FOLLOWING LOCATIONS IF THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 60 INCHES ABOVE THE WALKING SURFACE: WITHIN 24 INCHES OF EITHER SIDE OF THE DOOR IF GLAZING IS IN THE SAME PLANE AS THE DOOR, OR IF GLAZING IS IN A WALL PERPENDICULAR TO THE DOOR WITHIN 24 INCHES ON THE HINGE SIDE OF AN INSWING DOOR. SAFETY GLAZING IS NOT REQUIRED IF THERE IS AN INTERVENING WALL OR PERMANENT BARRIER BETWEEN THE DOOR AND THE GLAZING.
- GLAZING IN WINDOWS: SAFETY GLAZING IN WINDOWS IS REQUIRED IF THE INDIVIDUAL PANEL MEETS ALL OF THE FOLLOWING REQUIREMENTS:
 - EXPOSED AREA OF THE INDIVIDUAL PANEL IS GREATER THAN 9 SQUARE FEET.
 - THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 18 INCHES FROM THE FLOOR.
 - THE TOP EDGE OF THE GLAZING IS MORE THAN 36 INCHES ABOVE THE FLOOR.
 - THERE IS A WALKING SURFACE WITHIN 36 INCHES, MEASURED HORIZONTALLY, FROM THE GLAZING.
 - EXCEPTIONS
 - * DECORATIVE GLAZING
 - * WHERE A HORIZONTAL RAIL CAPABLE OF RESISTING 50 PLF OF FORCE WITHOUT MAKING CONTACT WITH THE GLASS IS INSTALLED ON THE ACCESSIBLE SIDE OF THE GLAZING 34-38 INCHES ABOVE WALKING SURFACE.
- GLAZING IN RAILINGS AND GUARDS: ALL GLAZING IN GUARDS AND RAILINGS, INCLUDING STRUCTURAL BALUSTER PANELS AND NONSTRUCTURAL IN-FILL PANELS, IS REQUIRED TO BE SAFETY GLAZING.
- GLAZING AND WET SURFACE: GLAZING IN WALLS, ENCLOSURES, OR FENCES AROUND SHOWERS, BATHTUBS, POOLS, HOT TUBS, SPAS, SAUNAS, AND STEAM ROOMS WHERE THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 60 INCHES FROM THE STANDING OR WALKING SURFACE IS REQUIRED TO BE SAFETY GLAZING. SAFETY GLAZING IS NOT REQUIRED WHERE THE GLAZING IS MORE THAN 60 INCHES, HORIZONTALLY, FROM THE EDGE OF THE WATER.

REFER TO IRC SECTION 312.2 FOR ADDITIONAL WINDOW FALL PROTECTION REQUIREMENTS.

WINDOW & DOOR SCHEDULE NOTES:

- XO = SLIDER, SH = SINGLE HUNG, DH = DOUBLE HUNG, FIX = PICTURE, C = CASEMENT
- IF CONTRACTOR DECIDES TO REPLACE WINDOWS, THEY MUST MEET ENERGY PERFORMANCE STANDARDS, HEAT TREATMENT REQUIREMENTS AND EGRESS.
- ALL WINDOWS SHALL BE NFRC CERTIFIED.
- CONTRACTOR TO VERIFY EGRESS AND HEAT TREATMENT REQUIREMENTS WITH WINDOW & DOOR MANUFACTURER.
- EGRESS WINDOWS SIZED FOR "MILGARD STYLE LINE" SERIES WINDOWS. CONTRACTOR TO VERIFY EGRESS REQUIREMENTS IF A DIFFERENT MANUFACTURER / MODEL IS CHOSEN.

MECHANICAL WHOLE HOUSE VENTILATION SYSTEM

TYPE
 AN CONTINUOUS OPERATING EXHAUST FAN, NOT BALANCED & NOT DISTRIBUTED VENTILATION SYSTEM [PER IRC M1507.3]

MINIMUM VENTILATION RATES

DWELLING UNIT FLOOR AREA (SF)	NUMBER OF BEDROOMS	AIRFLOR (CFM)
2071	3	55
		FACTIONAL OP. TIME RATE FACTOR (4-HOUR SEGMENT)
100%	1.0	
		REQUIRED VENTILATION RATE
		55*1.5 = 83 CFM

REV	DATE	DESCRIPTION
0	05/22/23	ENGINEER PLAN
1	11/19/24	CORRECTION RESPONSE #1
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ENGINEER STAMP

RESIDENTIAL CONSTRUCTION
3925 MERCER ISLAND
 JENNI CONDON
 3925 90TH AVE SE
 MERCER ISLAND WA 98040

GENERAL NOTES &
 WINDOW & DOOR
 SCHEDULE

JOB NO.	22-0317
HALF SCALE	11x17
FULL SCALE	22x34
SHEET	

A1.1

WASHINGTON STATE ENERGY CREDIT CALCULATION

1. 519 SF OF NEW HEATED FLOOR AREA. 5.0 CREDITS REQ'D.
TOTAL 5.0 CREDITS PROV'D

ENERGY CREDITS CHOSEN:

Table R406.2 ENERGY EQUALIZATION CREDITS		
System Type	Description of Primary Heating Source	Credits - select ONE system type
4 ^c	For heating system using a heat pump that meets federal standards for the equipment listed in Table C403.3.2(2) or C403.3.2(9) or Air to water heat pump units that are configured to provide both heating and cooling and are rated in accordance with AHRI 550/590	3.0 <input checked="" type="radio"/>
3.7 ^{a,d,e}	Ductless split system heat pumps with no electric resistance heating in the primary living areas. A ductless heat pump system with a minimum HSPF of 10 shall be sized and installed to provide heat to entire dwelling unit at the design outdoor air temperature. Exception: In homes with total heating loads of 24,000 BTUs or less using multi-zone mini-split systems with nominal ratings of 24,000 or less, the minimum HSPF to claim this credit shall be 9 HSPF. To qualify to claim this credit, the building permit drawings shall specify the option being selected, the heated floor area calculation, the heating equipment type(s), the minimum equipment efficiency, and total installed heat capacity (by equipment type).	2.0 <input type="radio"/>

Simple Heating System Size: Washington State

This heating system sizing calculator is based on the Prescriptive Requirements of the 2018 and 2021 Washington State Energy Code (WSEC). This tool will calculate heating loads only. ACCA procedures for sizing cooling systems should be used to determine cooling loads.

Please complete the green drop-downs and boxes that are applicable to your project. As you make selections in the drop-downs for each section, some values will be calculated for you. If you do not see the selection you need in the drop-down options, please contact the WSU Energy Program at energycode@energy.wsu.edu or (360) 956-2042 for assistance.

This tool is for the permitting purposes only. A Manual J calculation is required to meet the requirement of the Washington State Energy Code.

Project Information	Contact Information
3925 90th Ave SE Mercer Island	James@yendes.com

Heating System Type: All Other Systems Heat Pump

To see detailed instructions for each section, place your cursor on the word "Instructions"

Design Temperature Design Temperature 25
 Instructions Design Temperature Difference (ΔT) 45
ΔT = Indoor (70 degrees) - Outdoor Design Temp

Area of Building
Conditioned Floor Area
 Instructions Conditioned Floor Area (sq ft)
Average Ceiling Height
 Instructions Average Ceiling Height (ft) Conditioned Volume 3,899

Glazing and Doors
 Instructions U-Factor X Area = UA
 0.250 X 111 = 27.75

Skylights
 Instructions U-Factor X Area = UA
 0.50 X 56 = 28.00

Insulation
Attic
 Instructions U-Factor X Area = UA
 0.024 X 1,548 = 37.15

Single Rafter or Joist Vaulted Ceilings
 Instructions U-Factor X Area = UA
 No selection --

Above Grade Walls (see Figure 1)
 Instructions U-Factor X Area = UA
 0.043 X 1,451 = 62.39

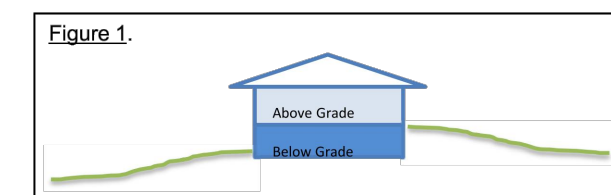
Floors
 Instructions U-Factor X Area = UA
 0.029 X 1,383 = 40.11

Below Grade Walls and Slabs (see Figure 1)
 Instructions Wall U-Factor X Area = UA
 No Selection --
 Instructions Slab F-Factor X Length = UA
 --

Slab on Grade (see Figure 1)
 Instructions F-Factor X Length = UA
 0.540 X 125 = 67.64

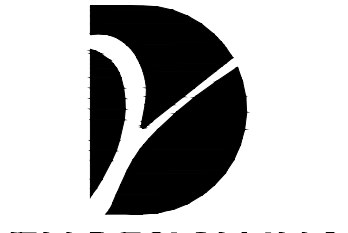
Location of Ducts
 Instructions Duct Leakage Coefficient 1.000

Sum of UA 263.03
 Envelope Heat Load 11,837 Btu / Hour
Sum of UA x ΔT
 Air Leakage Heat Load 1,895 Btu / Hour
Volume x 0.6 x ΔT x 0.019
 Building Design Heat Load 13,732 Btu / Hour
Air leakage + envelope heat loss
 Building and Duct Heat Load 13,732 Btu / Hour
Ducts in unconditioned space: sum of building heat loss x 1.10
Ducts in conditioned space: sum of building heat loss x 1
 Maximum Heat Equipment Output 19,224 Btu / Hour
Building and duct heat loss x 1.40 for forced air furnace
Building and duct heat loss x 1.25 for heat pump



(07/01/17)

REV	DATE	DESCRIPTION
0	05/22/23	ENGINEER PLAN
1	11/19/24	CORRECTION RESPONSE #1
2	02/11/25	CORRECTION RESPONSE #2



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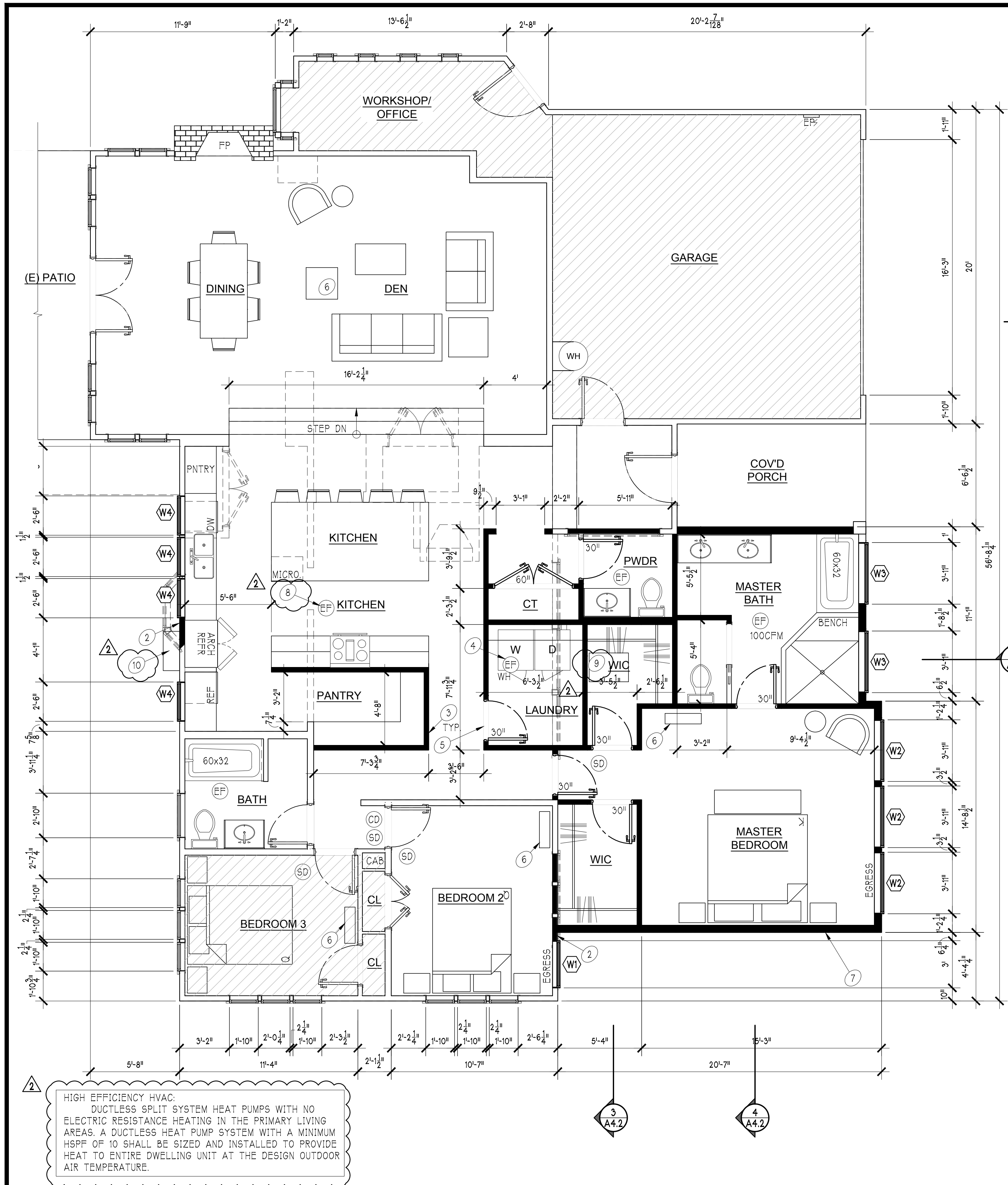
ENGINEER STAMP

RESIDENTIAL CONSTRUCTION
3925 MERCER ISLAND
 JENNI CONDON
 3925 90TH AVE SE
 MERCER ISLAND WA 98040

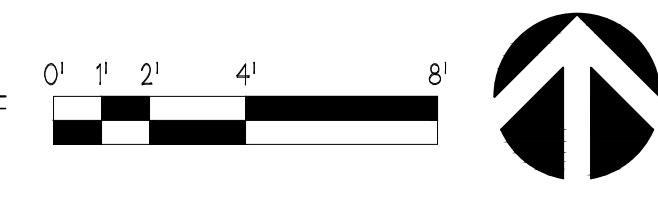
ENERGY CODE
 COMPLIANCE

JOB NO. 22-0317
 HALF SCALE 11x17
 FULL SCALE 22x34
 SHEET

A1.2



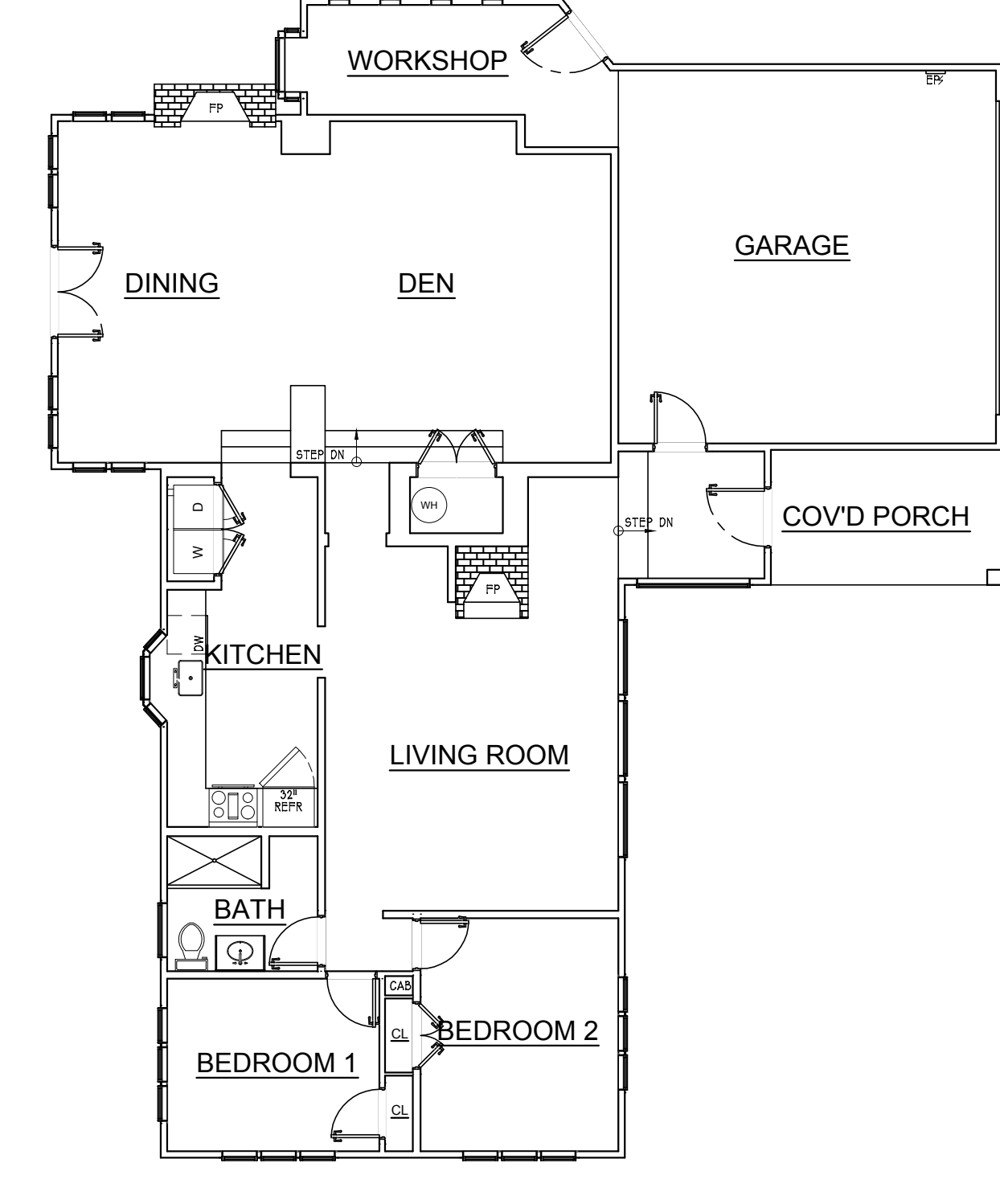
PROPOSED MAIN FLOOR PLAN
 22x34: SCALE 1/4" = 1'-0"
 11x17: SCALE 1/8" = 1'-0"



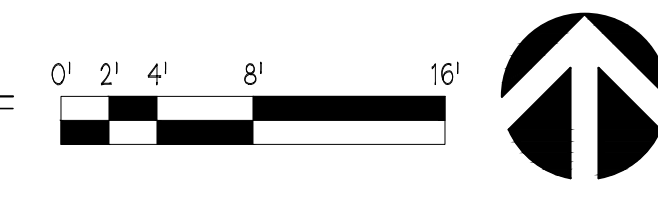
- ### PLAN KEYNOTES
- BEARING WALLS TO BE REMOVED. SEE STRUCT.
 - WINDOW OR DOOR TO BE INFILLED PER SHEET A11 - INSULATION AND PENETRATION REQUIREMENTS. SEE 4/A5.1 FOR BALANCE OF INFO.
 - NEW INTERIOR STUD WALL, TYP. SEE 1/A5.1 FOR FRAMING INFO.
 - 83 CFM CONTINUOUS WHOLE HOUSE FAN AT 0.25" WATER GAUGE WITH A SONE RATING OF 1.0 OR LESS MEASURED AT 0.1 INCHES WATER GAUGE. IF FAN IS TO BE INTERMITTENT, APPLY VENTILATION RATE FACTOR PER IRC M1507.3.3(2) ON PAGE A11.
 - DOOR SHALL BE LOUVERED OR UNDERCUT TO A MINIMUM OF 1/2 INCH ABOVE THE SURFACE OF THE FINISH FLOOR COVERING.
 - IN-DOOR HEAT PUMP AIR HANDLER UNIT
 - PROVIDE FOUNDATION VENTS ALONG CRAWL SPACE PERIMETER SEE FOUNDATION VENT CAL. ON THIS SHEET AND 5/A5.1 FOR DETAIL.
 - KITCHEN LOCAL EXHAUST - 160 CFM FOR HOOD OVER ELECTRIC RANGE OR 250 CFM FOR HOOD OVER COMBUSTION RANGE
 - MIN. 18"x24" CRAWL SPACE ACCESS, FLOOR JOISTS TO BE HEADED OFF WITH (2) 2X10 PERP. TO JOISTS AT EA. END OF OPENING.
 - HEAT PUMP CONDENSOR

FOUNDATION VENT. CAL.

1833 SQ-FT = 4.61 SQ-FT OR 664 SQ-IN OF CRAWL SPACE VENTS FOR NEW CRAWL SPACE
 USE: 16" X 7" FOUNDATION VENTS
 VENT AREA = 55.25 S.I.
 VENTS REQUIRED = 664 S.I. / VENT AREA = 12.01 NOS.
 PROVIDE: 13 16" X 7" VENTS, AREA = 718.25 S.I.
 VENTILATION PROVIDED = 718.25 S.I. IS GREATER THAN 664 S.I. REQ'D
 USE: 13 16" X 7" FOUNDATION VENTS
 * FOUNDATION VENTS SHALL NOT INTERFERE WITH DIRECT LOAD PATH OF COLUMNS
 * INSTALL 6 MIL BLACK POLYETHYLENE VAPOR RETARDER GROUND COVER
 * LOCATE ONE VENT WITHIN 3 FEET OF EACH CORNER OF THE BUILDING, EXCEPT ONE SIDE OF THE BUILDING SHALL BE PERMITTED TO HAVE NO VENTS.
 REFER TO DETAIL 5/A5.1 FOR CRAWL SPACE VENT DETAIL.



EXISTING MAIN FLOOR PLAN
 22x34: SCALE 1/8" = 1'-0"
 11x17: SCALE 1/16" = 1'-0"



- ### LEGEND
- NEW STUD WALL.
 - EXISTING WALL TO REMAIN
 - INDICATES REFERENCE TO KEYNOTES SEE KEYNOTES ON THIS SHEET FOR BALANCE OF INFORMATION
 - SMOKE DETECTOR
 - CARBON MONOXIDE DETECTOR WITH BATTERY BACKUP.
 - HEAT DETECTOR. TO BE CONNECTED TO ALARM SYSTEM OR SMOKE DETECTOR WITHIN DWELLING.
 - EXHAUST FAN (INTERMITTENT) 50 CFM U.N.O.
 - SEE DOOR AND WINDOW SCHEDULE ON SHEET A11 FOR DETAILED INFO. SEE 2/A5.1 FOR FRAMING INFO & 3/A5.1 FOR INSULATION INFO.
 - WINDOW TO BE SAFETY GLAZING
 - AREAS INDICATE NO WORK

- ### GENERAL NOTES
- PLANS MUST BE APPROVED BY THE GOVERNING BUILDING OFFICIAL OR PROFESSIONAL ENGINEER PRIOR TO WORK COMMENCING.
 - CONTRACTOR TO VERIFY ALL STRUCTURAL LOAD PATHS AND EXISTING SHEAR / BRACED WALL LOCATIONS BEFORE REMOVING ANY WALLS. STRUCTURAL DEVIATIONS FROM THE PLAN SHOULD BE VERIFIED BY A STRUCTURAL ENGINEER OR BUILDING INSPECTOR. YEN DESIGN IS TO BE CONTACTED IF ACTUAL EXISTING FRAMING CONDITIONS VARY FROM PLAN ASSUMPTIONS AFTER CEILING WALL COVERINGS ARE REMOVED.
 - SEE SHEET A11 FOR COMMON CODE REQUIREMENTS.
 - CARBON MONOXIDE DETECTORS SHALL BE INSTALLED ON ALL LEVELS OF THE DWELLING AND PLACED IN PROXIMITY TO SLEEPING AREAS. CO DETECTORS TO BE INTERCONNECTED.
 - SMOKE DETECTORS SHALL BE INSTALLED ON ALL LEVELS OF THE DWELLING AND WITHIN EACH SLEEPING AREA. DIRECT WIRING REQUIRED. SMOKE DETECTORS TO BE INTERCONNECTED.
 - VERIFY WINDOW & DOOR ROUGH OPENING SIZES WITH WINDOW & DOOR MANUFACTURER.
 - ALL DIMENSIONS TO STUD WALL.
 - CONTRACTOR TO VFY ALL DIMENSIONS ON SITE PRIOR TO CONSTRUCTION.
 - CONTRACTOR TO DETERMINE & VERIFY ALL WASTE DIVERSION REQUIREMENTS PER THE LOCAL JURISDICTION. CONTRACTOR MAY BE REQUIRED TO REQUEST LEED REPORTS FROM RECEIVING FACILITIES.
 - DOORS WITHOUT PLACEMENT DIMENSIONS WILL BE 3" OFF WALL OR ON CENTER, AS APPROPRIATE.
 - EXHAUST FANS IN UPPER LEVEL TO BE VENTED THROUGH ROOF.
 - CONTRACTOR TO VERIFY EXHAUST POINTS ARE NOT LESS THAN 3' FROM PROPERTY LINES, 3' FROM OPERABLE OPENINGS INTO THE BUILDING, AND 10' FROM MECHANICAL AIR INTAKES.

REV	DATE	DESCRIPTION
0	05/22/23	ENGINEER PLAN
1	11/19/24	CORRECTION RESPONSE #1
2	02/11/25	CORRECTION RESPONSE #2

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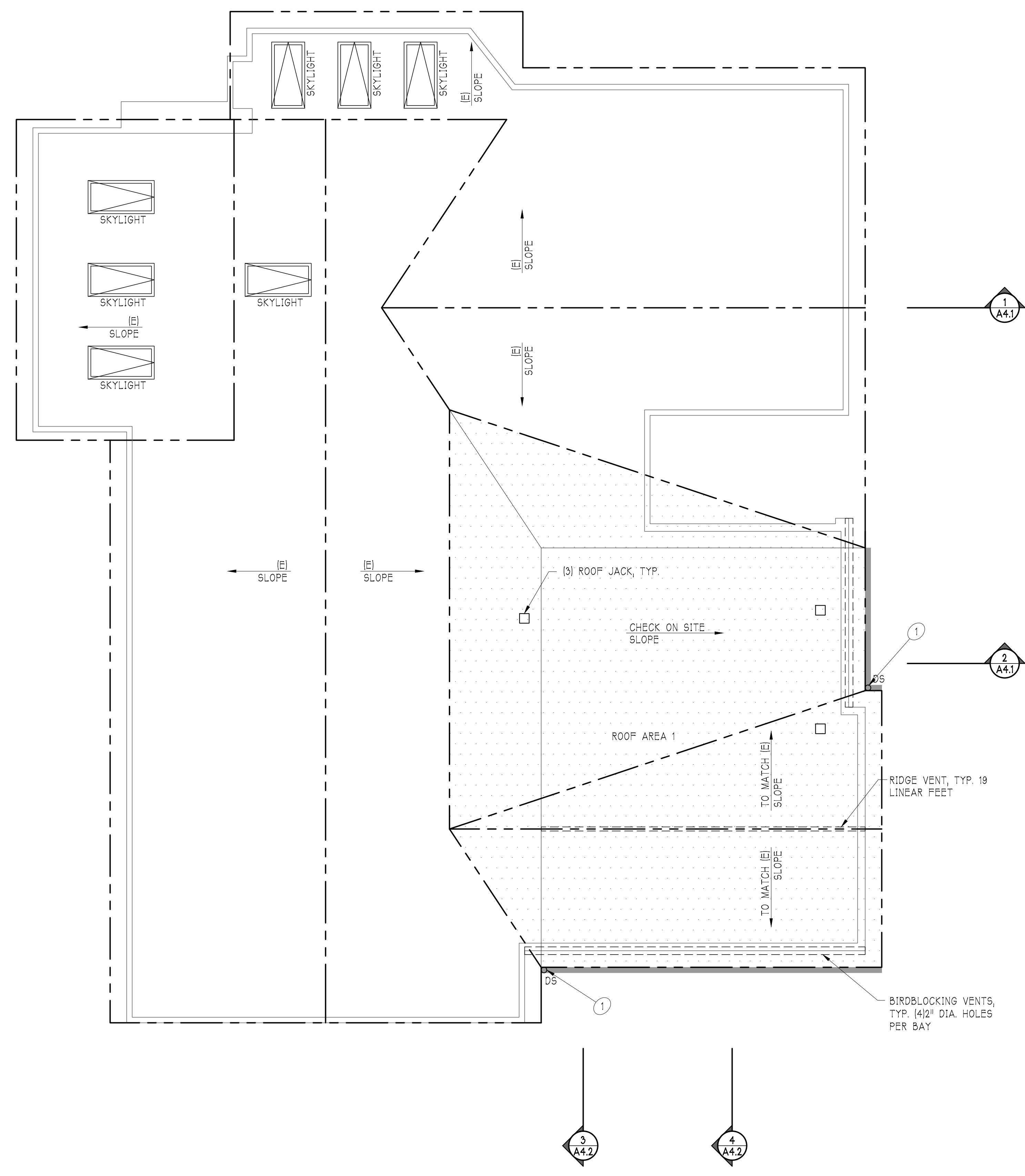
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3925 MERCER ISLAND
 JENNI CONDON
 3925 90TH AVE SE
 MERCER ISLAND WA 98040

MAIN FLOOR PLANS

JOB NO.	22-0317
HALF SCALE	11x17
FULL SCALE	22x34
SHEET	

A2.1



LEGEND

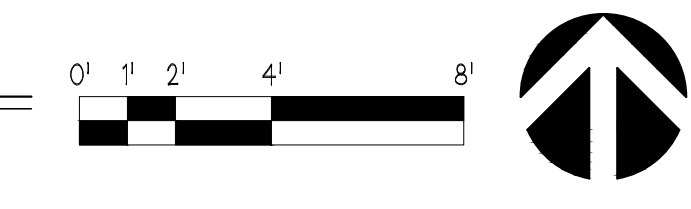
- ROOF LINE
- WALL BELOW
- 5" SEAMLESS GUTTER
- DS DOWNSPOUT
- ⊕ SEE KEYNOTES, THIS SHEET.
- CONTINUOUS SOFFIT STRIP VENT
- "IN-VENT" UNDER-SHINGLE VENT
- RIDGE VENT
- ROOF AREA 1
- ROOF AREA 2
- ROOF OVERFRAMING
- ▨ QUALIFYING SOLAR-READY AREA

PLAN KEYNOTES

1. PROPOSED DOWNSPOUT LOCATION. EACH DOWNSPOUT SERVES UP TO MAXIMUM OF 700 SQ-FT OF ROOF AREA. STORM WATER TO BE MITIGATED ON-SITE VIA SPLASH BLOCKS. DIRECT FLOW AWAY FROM NEIGHBORING PROPERTIES.

ROOF VENTING CALCULATIONS		Roof Area 1
Roof Area:		519 sq./ft.
Ventilation Req'd:	519 sq/ft x 144 sq/in / 150	= 498.24 sq/in
50 %	Upper Roof (Ridge) Vent Req'd	= 249.12 sq/in
50 %	Lower Roof (Eave) Vent Req'd	= 249.12 sq/in
19.58	LF, Standard Comp. Ridge Vent @ 17 sq/in/LF	= 332.92 sq/in
1	Roof Jacks @ 50 sq/in ea. Unit @ Upper	= 50 sq/in
2	Roof Jacks @ 50 sq/in ea. Unit @ Lower	= 100 sq/in
0	LF, Metal Roof Ridge Vent @ 29 sq/in/LF	= 0 sq/in
0	LF, Eave Venting @ 3.3 sq/in/LF	= 0 sq/in
0	LF, Continuous Soffit Vent @ 10 sq/in/LF	= 0 sq/in
31	LF, bird blocking vents	= 194.68 sq/in
	[(4) 2" dia. Holes per block @ each bay, 24"o.c.]	
0	LF, bird blocking vents, @ alt. bays	= 0 sq/in
	[(3) 2" dia. Holes per block @ alt. bays]	
0	LF, bird blocking vents, upper roof	= 0 sq/in
	[(3) 2" dia. Holes per block @ each bay]	
0	LF, bird blocking vents, upper roof @ alt. bays	= 0 sq/in
	[(3) 2" dia. Holes per block @ alt. bays]	
	Total Venting @ Upper Roof	= 382.92 sq/in
	Total Venting @ Lower Roof	= 294.68 sq/in
	TOTAL SQ./IN. OF VENTING PROVIDED	= 677.6 sq/in.

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



REV	DATE	DESCRIPTION
0	05/22/23	ENGINEER PLAN
1	11/19/24	CORRECTION RESPONSE #1
2	02/11/25	CORRECTION RESPONSE #2

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APPROVAL STAMP

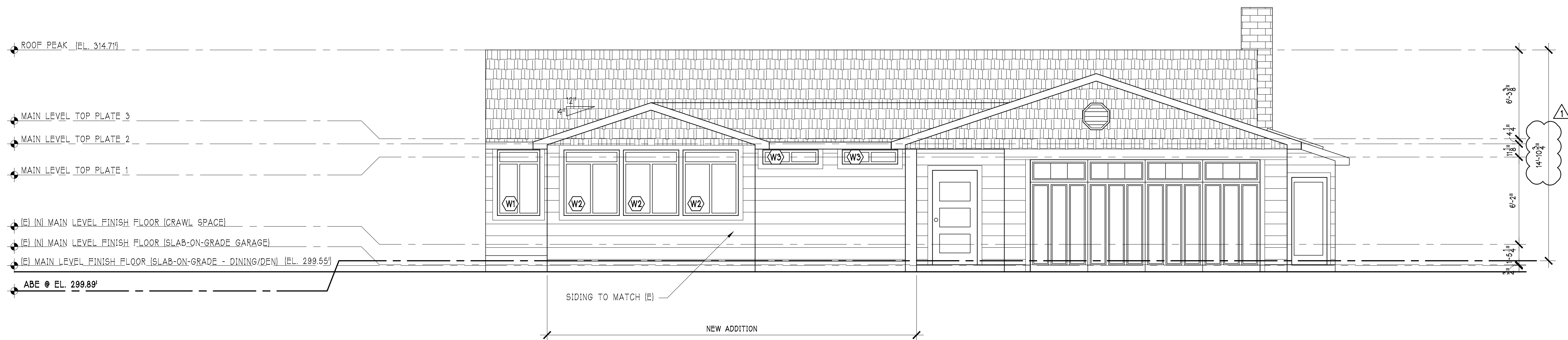
ENGINEER STAMP

RESIDENTIAL CONSTRUCTION
3925 MERCER ISLAND
 JENNI CONDON
 3925 90TH AVE SE
 MERCER ISLAND WA 98040

ROOF PLAN

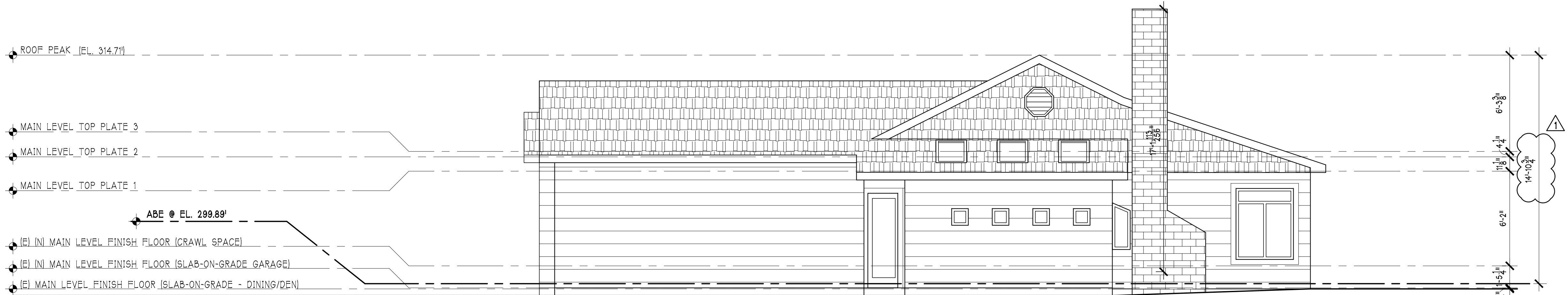
JOB NO.	22-0317
HALF SCALE	11x17
FULL SCALE	22x34
SHEET	

A2.2



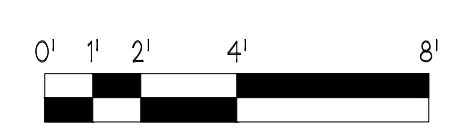
EAST ELEVATION

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



NORTH ELEVATION

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



REV	DATE	DESCRIPTION
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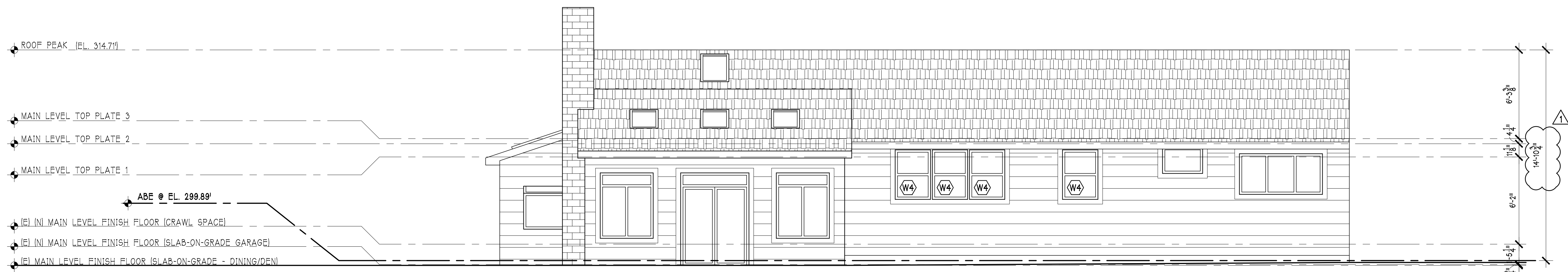
ENGINEER STAMP

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ELEVATIONS

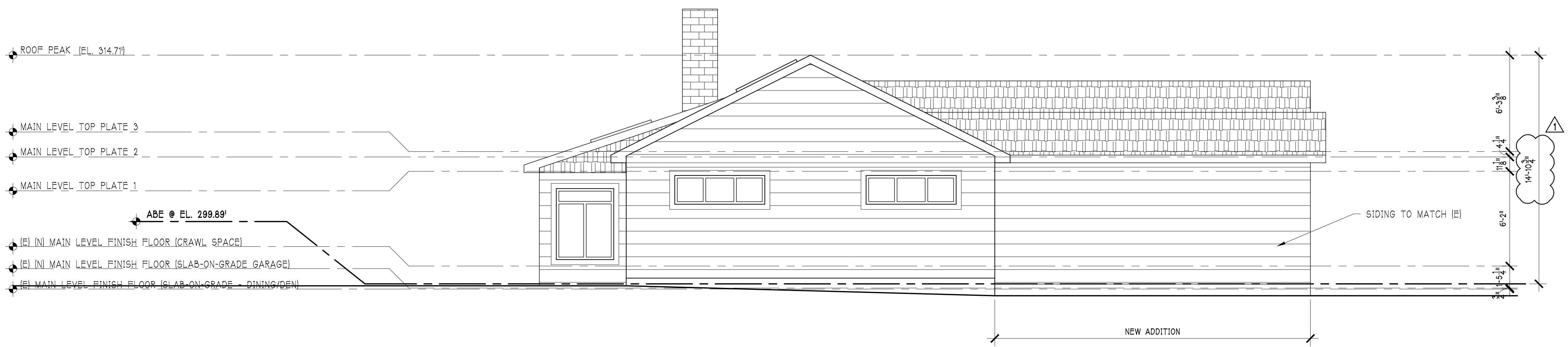
JOB NO.	22-0317
HALF SCALE	11x17
FULL SCALE	22x34
SHEET	

A3.1



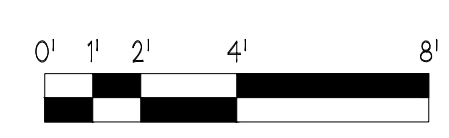
WEST ELEVATION

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



SOUTH ELEVATION

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



REV	DATE	DESCRIPTION
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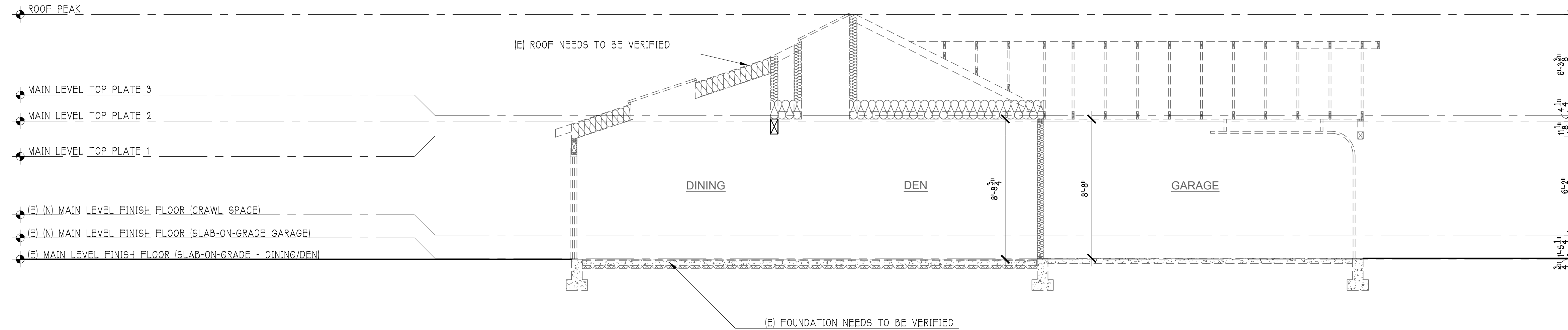
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ELEVATIONS

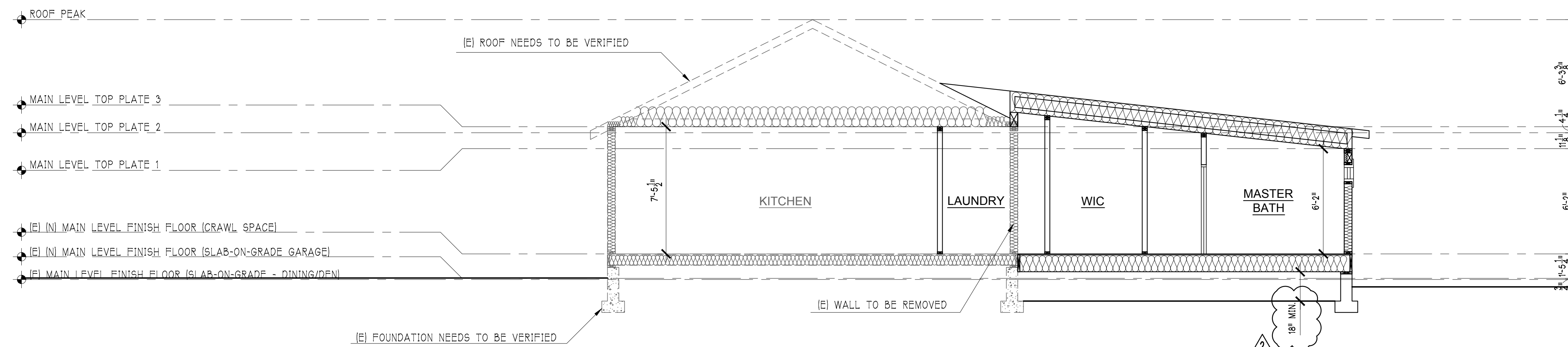
JOB NO.	22-0317
HALF SCALE	11x17
FULL SCALE	22x34
SHEET	

A3.2



SECTION 1

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



SECTION 2

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



REV	DATE	DESCRIPTION
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2	02.11.25	CORRECTION RESPONSE #2



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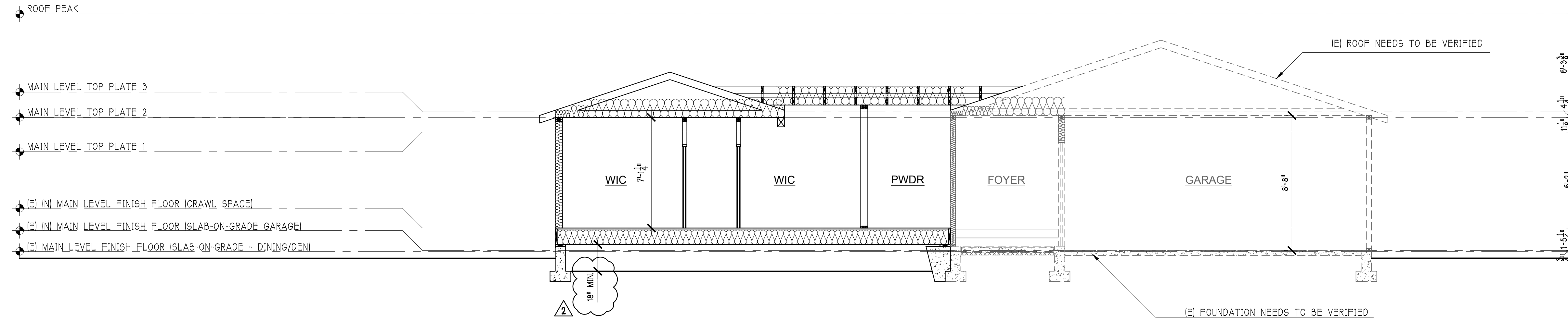
ENGINEER STAMP

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BUILDING SECTIONS

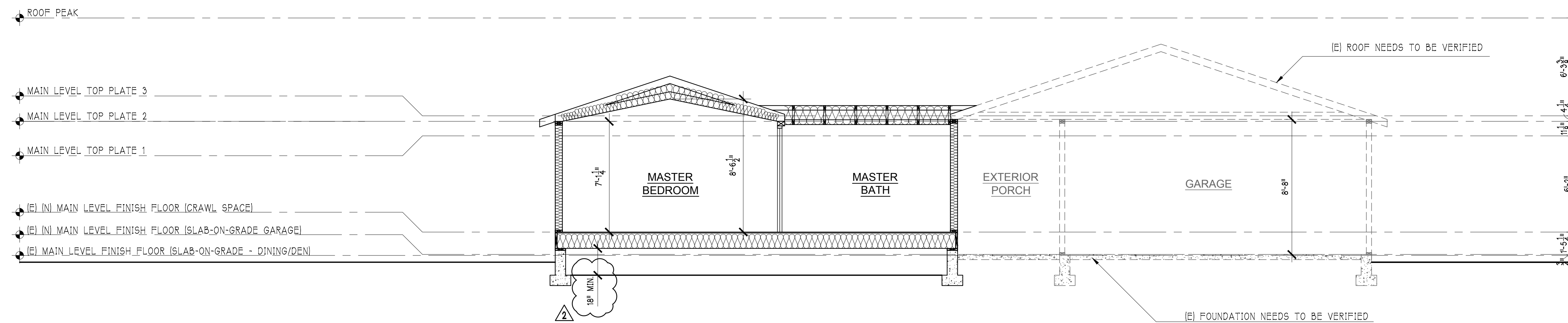
JOB NO.	22-0317
HALF SCALE	11x17
FULL SCALE	22x34
SHEET	

A4.1



SECTION 3

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



SECTION 4

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



REV	DATE	DESCRIPTION
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1	11.19.24	CORRECTION RESPONSE #1
2	02.11.25	CORRECTION RESPONSE #2



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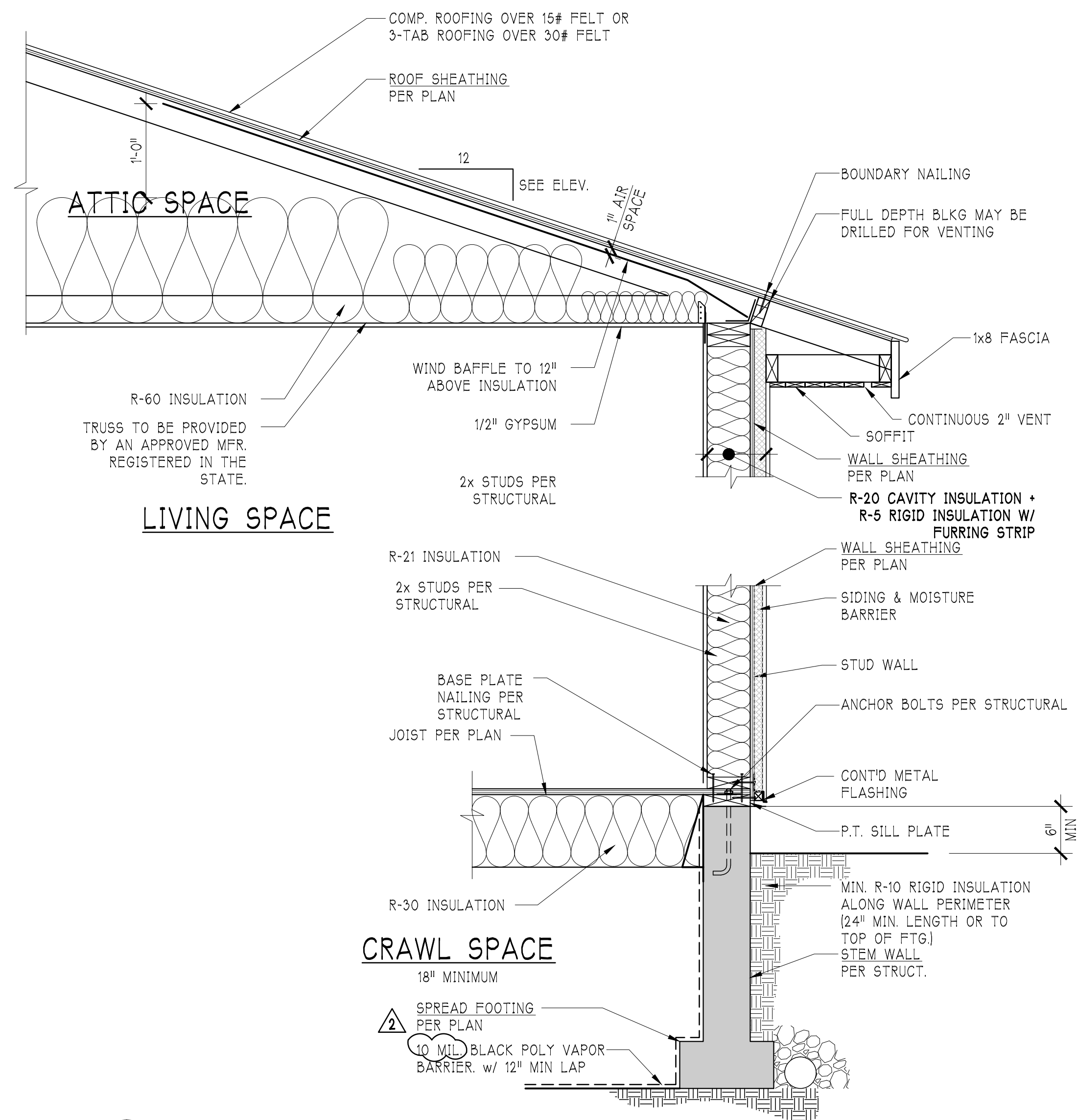
ENGINEER STAMP

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BUILDING SECTIONS

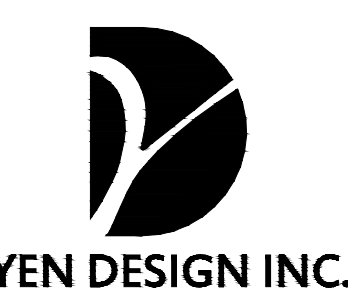
JOB NO.	22-0317
HALF SCALE	11x17
FULL SCALE	22x34
SHEET	

A4.2



1 TYP. WALL DETAIL
A4.3 SCALE: 1"=1'-0"

REV	DATE	DESCRIPTION
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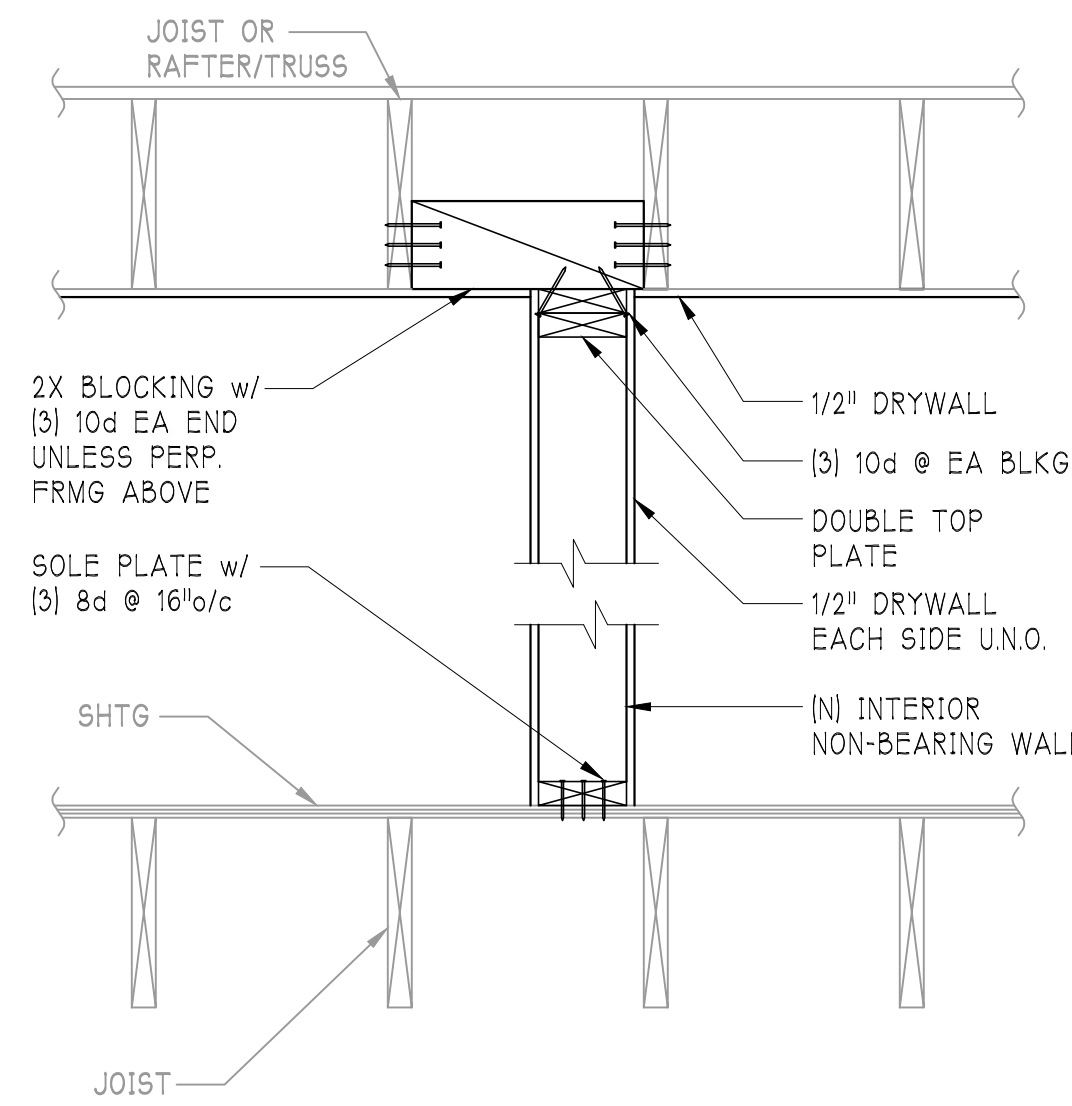
ENGINEER STAMP

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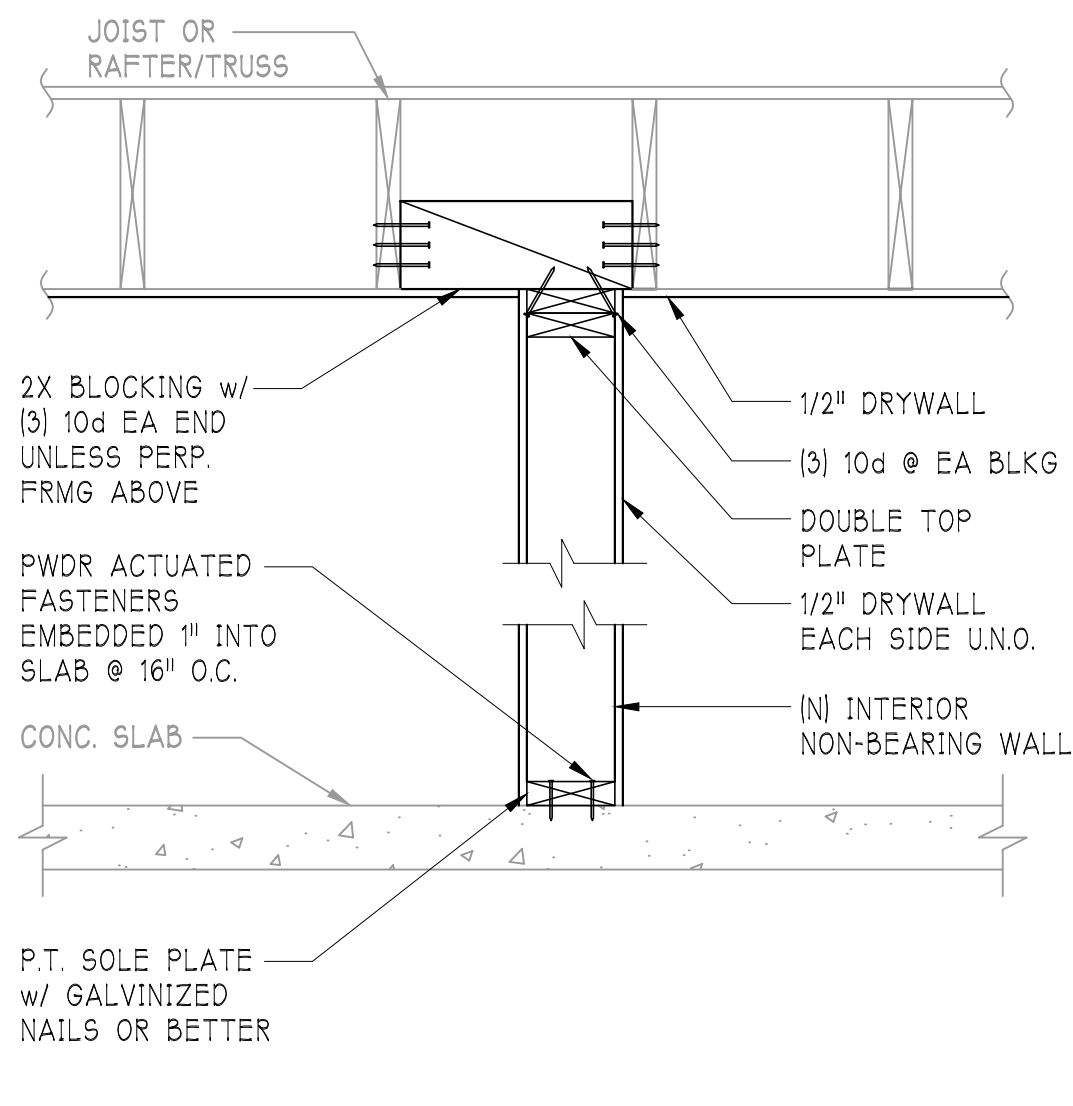
TYP WALL SECTIONS

JOB NO.	22-0317
HALF SCALE	11x17
FULL SCALE	22x34
SHEET	

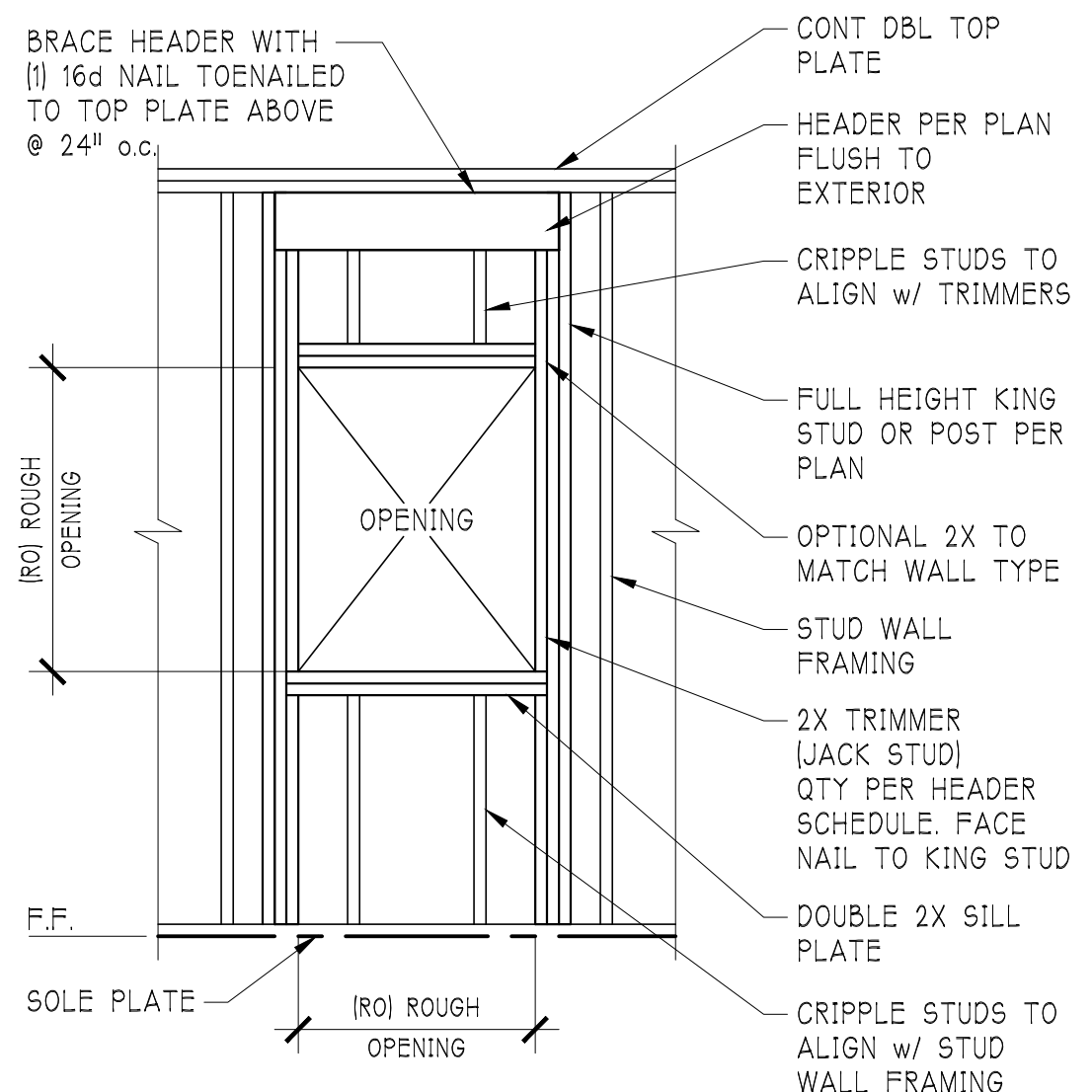
A4.3



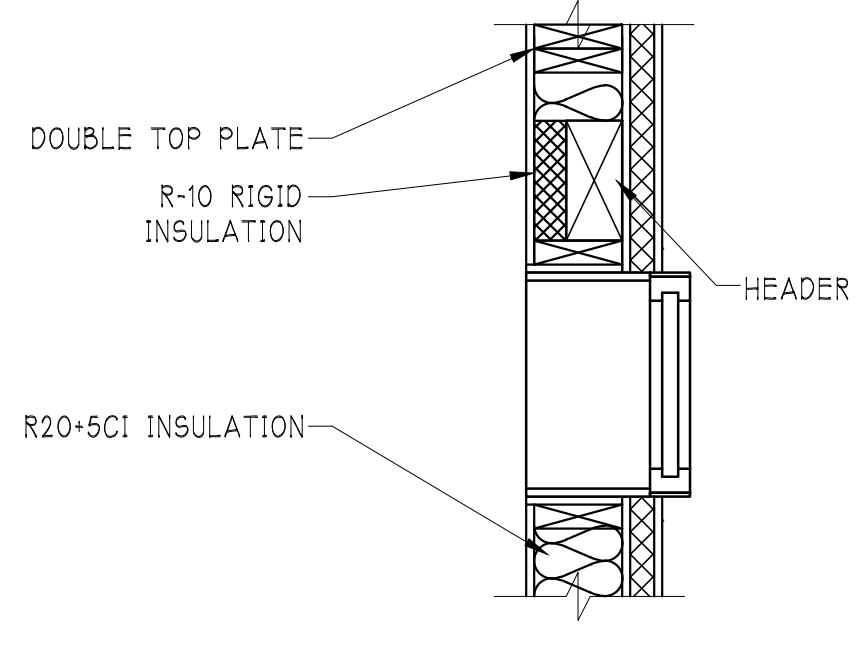
1 NEW INTERIOR WALL SECTION
A5.1 SCALE: 1"=1'-0"



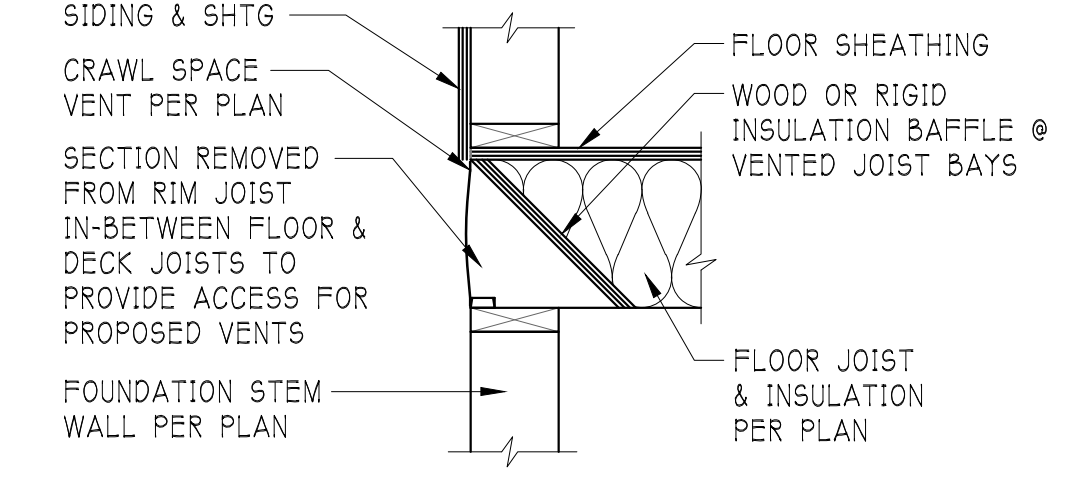
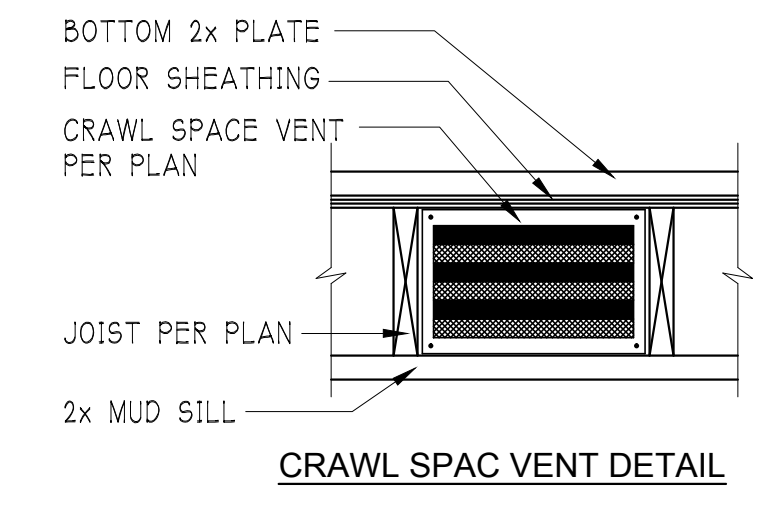
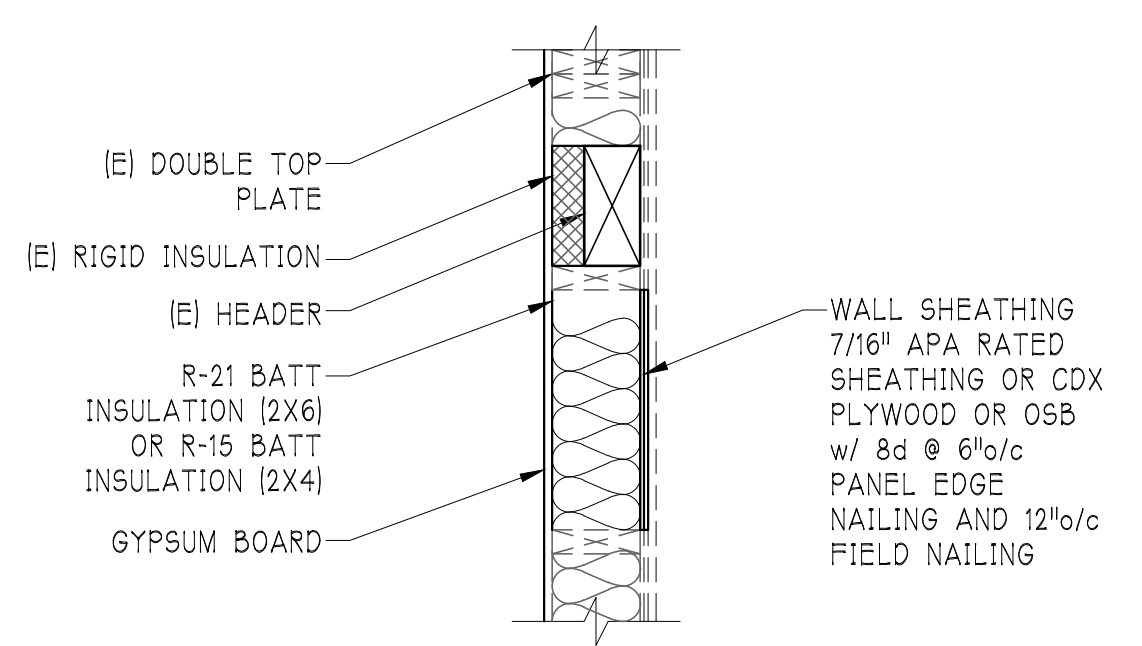
2 TYP. OPENING FRAMING
A5.1 SCALE: 1/2"=1'-0"



3 WINDOW SECTION
A5.1 SCALE: 1"=1'-0"



4 INFILLED WINDOW SECTION
A5.1 SCALE: 1"=1'-0"



5 CRAWL SPACE VENT DETAIL
A5.1 SCALE: 1"=1'-0"

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 JENNI CONDON
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ARCHITECTURAL DETAILS

JOB NO.	22-0317
HALF SCALE	11x17
FULL SCALE	22x34
SHEET	

A5.1

GENERAL STRUCTURAL NOTES

FOUNDATION

- DESIGN IS BASED ON 2021 INTERNATIONAL RESIDENTIAL CODE & 2021 INTERNATIONAL EXISTING BUILDING CODE.
- DESIGN LOADS: SOIL: 1500 PSF ALLOWABLE BEARING PRESSURE
- CONCRETE SHALL ATTAIN THE FOLLOWING MINIMUM COMPRESSIVE STRENGTHS IN 28 DAYS, UNO.
 - $f'_c = 2500$ psi: FOUNDATION WALLS*
 - 2500 psi: FOOTINGS*
 - 2500 psi: INTERIOR SLABS ON GRADE
 - 3500 psi: GARAGE & EXT. SLABS ON GRADE
 - $f_y = 60,000$ psi
- * UTILIZE 95% SACK 2500 PSI CONCRETE MIXES THAT ARE EQUIVALENT TO 3000 PSI CONCRETE FOR WEATHERING POTENTIAL
- ALL CONCRETE EXPOSED TO THE WEATHER SHALL NOT HAVE LESS THAN 5% OR MORE THAN 7% AIR ENTRAINMENT.
- FOUNDATION WALL DESIGN IS BASED ON BACKFILL SOIL CLASSIFICATIONS OF SC, ML-CL, OR CL (600 psf) SOIL.
- TYPICAL REINFORCEMENT DETAILS: LAP ALL REBAR 24" MIN; BEND BARS AND LAP AT CORNERS PROVIDE 6" HOOK INTO SUPPORTING FOOTINGS WHEN FOOTINGS INTERSECT; PROVIDE 3" MINIMUM COVER AT THE BOTTOM BARS AND 1 1/2" COVER AT THE SIDES.
- FOUNDATION WALLS SHALL BE BRACED PRIOR TO BACKFILLING, BY EITHER ADEQUATE TEMPORARY BRACING OR INSTALLATION OF FIRST FLOOR DECK.
- ALL FOOTINGS SHALL BEAR BELOW FROST LINE. CONSULT SOILS REPORT FOR LOCAL MINIMUM DEPTH BELOW GRADE.
- FOOTINGS AND SLABS ON GRADE SHALL BEAR ON VIRGIN SOIL OR 95% COMPACTED FILL.
- PROVIDE CONTROL JOINTS AT ALL INSIDE CORNERS OF SLAB EDGES, AND OTHER LOCATIONS WHERE SLAB CRACKS ARE LIKELY TO DEVELOP. (15'-0" O.C.)
- FASTEN SILL PLATES TO FOUNDATION WALLS WITH 3/8" DIA. ANCHOR BOLTS W/ MIN. 3"x3"x1/4" PLATE WASHERS (EDGE OF WASHER TO BE LOCATED WITHIN 1/2" OF EXTERIOR EDGE OF SILL PLATE) & NUTS @ 6'-0" O.C. W/ 7" MIN EMBEDMENT INTO CONC. PROVIDE A MINIMUM OF 2 ANCHORS PER PLATE, 12" MAXIMUM FROM PLATE ENDS, UNO. (SEE FND. DETAILS).
- ALL LUMBER EXPOSED TO WEATHER OR IN CONTACT W/ CONCRETE OR MASONRY FOUNDATION SHALL BE PRESERVATIVE TREATED HEM FIR #2.
- BUILDER TO VERIFY CORROSION-RESISTANCE COMPATIBILITY OF HARDWARE & FASTENERS IN CONTACT W/ PRESERVATIVE-TREATED WOOD. CONTACT LUMBER & HARDWARE SUPPLIERS TO COORDINATE.
- ARCH/BUILDER TO VERIFY ALL DIMENSIONS.

DEMOLITION/RENOVATION NOTES

- FRAMING AND FOUNDATION PLANS HAVE BEEN DESIGNED TO BE STRUCTURALLY SOUND UPON COMPLETION OF THE WORK. THE MEANS AND METHODS OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE BUILDER/CONTRACTOR (UNLESS SPECIFICALLY NOTED ON PLANS).
- DURING DEMOLITION AND CONSTRUCTION, IT IS THE BUILDER/CONTRACTOR'S RESPONSIBILITY TO PROVIDE ADEQUATE TEMPORARY SHORING/BRACING OF EXISTING ELEMENTS INTENDED TO REMAIN.
- THE STRUCTURAL PLANS HAVE BEEN PREPARED WITH EXISTING FRAMING/FOUNDATION ASSUMPTIONS AS NOTED ON THE PLANS. IT IS THE BUILDER/CONTRACTOR'S RESPONSIBILITY TO CONTACT MKK STRUCTURAL ENGINEERING IF ACTUAL SITE CONDITIONS VARY FROM WHAT IS DEPICTED ON THE CONSTRUCTION DOCUMENTS.

LOADING AND DESIGN PARAMETERS

GRAVITY DESIGN LOADS

DEAD LOAD (PSF)	7
ROOF TRUSS TOP CHORD	10
ROOF TRUSS BOTTOM CHORD	10
ROOF RAFTERS (2x)	10
FLOOR/CEILING JOIST (2x)	10
TILE LOAD	10

LIVE LOAD (PSF)

ROOF	20
RESIDENTIAL LIVING AREAS	40
RESIDENTIAL SLEEPING AREAS	30

SNOW LOAD

GROUND SNOW LOAD (P _g) (PSF)	25
FLAT ROOF SNOW LOAD (P _f) (PSF)	25
SNOW EXPOSURE FACTOR (C _e)	0.9
SNOW LOAD IMPORTANCE FACTOR (I _s)	1.0
THERMAL FACTOR (C _t)	1.2

LATERAL DESIGN LOADS:

WIND LOAD: (IBC 1609)

SPEED (V ₅₀) (MPH)	100
WIND RISK CATEGORY	II
IMPORTANCE FACTOR (I _w)	1.0
EXPOSURE CATEGORY	B
INTERNAL PRESSURE COEFF. (GC _{pi})	±0.18
TOPOGRAPHIC FACTOR (K _{zt})	1.00

SEISMIC LOAD: (IBC 1601)

SEISMIC RISK CATEGORY	II
SEISMIC IMPORTANCE FACTOR (I _s)	1.6
MAPPED SPECTRAL RESPONSE	S _s 1.408 S ₁ 0.490
SITE CLASS	D (DEFAULT)
SPECTRAL RESPONSE COEFF. (S _s)	1.026
SEISMIC DESIGN CATEGORY	D
BASIC SEISMIC-FORCE-RESISTING SYS	1 LIGHT FRAMED WALLS
W/ WOOD STRUCTURAL PANELS	ULTIMATE BASE SHEAR:
TRANS: 8 k	LONG: 8 k
SEISMIC RESPONSE COEFF. (C _w)	LONG: 0.113
RESPONSE MODIFICATION FACTOR (R)	TRANS: 6.5 LONG: 6.5
ANALYSIS PROCEDURE USED	EQUIVALENT LATERAL FORCE

MEANS & METHODS NOTES

THE STRUCTURE IS DESIGNED TO BE SELF SUPPORTING AND STABLE AFTER THE BUILDING IS FINISHED AND ALL PLAN, DETAIL, AND NOTE SPECIFICATIONS HAVE BEEN COMPLETED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE THE ERECTION PROCEDURES AND SEQUENCE TO INSURE THE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING CONSTRUCTION. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACINGS, GUTS, AND TIE-DOWNS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SHORING AND BRACING REQUIRED TO STABILIZE AND PROTECT EXISTING AND ADJACENT STRUCTURES AND SYSTEMS DURING COURSE OF DEMOLITION AND CONSTRUCTION OF THE PROJECT.

STRUCTURAL DESIGN AND SPECIFICATIONS ASSUME THAT ALL SUPPORTING AND NON-SUPPORTING ELEMENTS IN CONTACT WITH FLOOR FRAMING ARE LEVEL, INCLUDING, BUT NOT LIMITED TO, FOUNDATIONS, SLABS ON GRADE, BEAMS, WALLS, AND NON-BEARING ELEMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LEVELNESS AND MAKE ADJUSTMENTS AS NECESSARY, INCLUDING CONSIDERATION OF THOSE AREAS THAT MAY BE WITHIN CONTRACTUAL, INDUSTRY, OR WARRANTY TOLERANCES.

ADDITIONAL NOTES FOR TRUSS & I-JOIST MANUFACTURER

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

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

- ROOF TRUSSES:
 - 1/4" DEAD LOAD
 - FLOOR TRUSSES, & I-JOISTS: 1/8" DEAD LOAD
- FLOOR TRUSSES ADJACENT TO FLOOR FRAMING BY OTHERS. LIMIT ABSOLUTE TRUSS DEFLECTION TO 3/16" DEAD LOAD. (NOT DIFFERENTIAL DEFLECTION)

LATERAL BRACING NOTES

THIS REMODEL HAS BEEN ENGINEERED TO RESIST LATERAL FORCES RESULTING FROM: 100 MPH WIND SPEED, EXP. B (ASCE 7-16 WIND MAP, PER IRC R301.2.1.1) RISK CAT. 2 & SEISMIC CAT. D.

110 MPH WIND IN 2021 IRC MAP ENGINEERED DESIGN WAS COMPLETED PER 2021 IBC (SECTION 1609) & ASCE 7-16, AS PERMITTED BY R301.3 OF THE 2021 IRC. ACCORDINGLY, THIS HOME, AS DOCUMENTED AND DETAILED HEREIN, IS ADEQUATE TO RESIST THE CODE REQUIRED LATERAL FORCES, AND DOES NOT NEED TO CONFORM TO THE PRESCRIPTIVE PROVISIONS OF R602.10.

STANDARD EXTERIOR WALL SHEATHING SPECIFICATIONS

- 3/8" OSB OR 1/2" PLYWOOD: FASTEN SHEATHING W/ 2"x0.131" NAILS @ 6" O.C. AT ALL SUPPORTED PANEL EDGES AND 12" O.C. IN THE PANEL FIELD. ALL SHEATHING SHEET PANEL EDGES SHALL OCCUR OVER WALL FRAMING MEMBERS OR 2x HORIZONTAL BLOCKING SHALL BE PROVIDED TO SUPPORT PANEL EDGE. ALL EXTERIOR WALLS SHALL BE CONSTRUCTED PER THIS SPECIFICATION UNO. ON PLANS.

3" O.C. EDGE NAILING (WHERE NOTED ON PLANS)

3/8" OSB OR PLYWOOD: ONLY AT LOCATIONS INDICATED ON PLANS - SHEATH WALL SHOWN WITH 3/8" OSB. FASTEN SHEATHING W/ 2"x0.131" NAILS @ 3" O.C. AT EDGES AND 12" O.C. IN THE FIELD. ALL PANEL EDGES SHALL OCCUR OVER WALL FRAMING MEMBERS OR 2x HORIZONTAL BLOCKING SHALL BE PROVIDED TO SUPPORT PANEL EDGE AND 3" O.C. FASTENING.

- NOTES:**
- LATERAL ANALYSIS ASSUMES STUD SPACING @ 16" O.C.
 - ALL SHEAR WALLS SHALL HAVE DOUBLE TOP PLATES FASTENED TOGETHER W/ 3"x0.131" NAILS @ 8" O.C. USE (12.25"x0.131" NAILS AT EACH LAP SPlice, (6) EACH SIDE OF JOINT (TYP. UNO.)
 - ALL EXTERIOR WALLS ARE CONTINUOUSLY SHEATHED.
 - ALL INTERIOR SHEAR WALLS AND EXTERIOR WALLS ARE SHEATHED ABOVE AND BELOW OPENINGS.

LEGEND

- INTERIOR BEARING WALL
- BEARING WALL ABOVE (B.W.A.) OR SHEARWALL ABOVE (S.W.A.)
- BEAM / HEADER
- INTERIOR SHEAR WALL PANEL OR EXTERIOR SHEAR WALL W/ 3" O.C. EDGE NAILING
- INDICATES AREA OF ROOF OVERFRAMING
- JL METAL HANGER
- INDICATES POST ABOVE. PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.
- INDICATES HOLD-DOWN.

GENERAL STRUCTURAL NOTES

FLOOR FRAMING

- 2x FLOOR JOISTS HAVE BEEN DESIGNED TO MEET OR EXCEED L/360 LIVE LOAD DEFLECTION CRITERIA.
- TYPICAL 2x JOIST HANGERS (UNO. ON PLANS): SINGLE PLY: SIMPSON LUS28 DOUBLES: SIMPSON LUS28-2
- FLOOR SHEATHING SHALL BE 23/32" A.P.A. RATED "STURD-I-FLOOR" 24" O.C. EXPOSURE I (OR APPROVED EQUAL) WITH TONGUE AND GROOVE EDGES. FASTEN TO FRAMING MEMBERS W/ GLUE AND 2 1/2" x 0.131" NAILS @ 6" O.C. @ PANEL EDGES & @ 12" O.C. FIELD.
- ALL FLUSH CONNECTIONS SHALL BE CONNECTED WITH HANGER APPROPRIATE FOR MEMBER SIZE. UNO.
- FASTEN HANGERS TO SINGLE PLY FLUSH BEAMS W/ 1/2" LONG NAILS.

ROOF FRAMING

- FASTEN EACH ROOF TRUSS TO TOP PLATE W/ (3) 3"x0.131" TOENAILS (MIN) & (1) SIMPSON H25T CLIP @ ALL BEARING POINTS. PROVIDE (2) SIMPSON H25T CLIPS AT 2-PLY GIRDER TRUSSES & (3) SIMPSON H25T CLIPS AT 3-PLY GIRDER TRUSSES @ ALL BEARING POINTS.
- FASTEN EACH ROOF RAFTER TO TOP PLATE WITH (1) SIMPSON H25T CLIP. PROVIDE (2) SIMPSON H25T CLIPS AT FLUSH BEAMS IN THE ROOF - AT ALL BEARING POINTS.
- ROOF SHEATHING SHALL BE 7/8" A.P.A. RATED SHEATHING 24/16 EXPOSURE I (OR APPROVED EQUAL). FASTEN TO FRAMING MEMBERS W/ 2 1/2" x 0.131" NAILS @ 6" O.C. AT PANEL EDGES & @ 12" O.C. AT INTERMEDIATE SUPPORTS. ROOF SHEATHING SHALL EXTEND BELOW ALL INSTANCES OF OVERFRAMING. BLOCKING SHALL BE INSTALLED AS REQUIRED TO LIMIT ROOF SHEATHING SPANS TO 24" MAX.
- WITHIN 48" OF ALL ROOF EDGES, RIDGES, & HIPs FASTEN ROOF SHEATHING FIELDS PER EDGE NAILING SPEC.
- ALL METAL HANGERS SHALL BE SPECIFIED BY THE TRUSS MANUFACTURER, UNLESS OTHERWISE NOTED.
- ROOF TRUSS SHOP DRAWINGS SHALL BE SUBMITTED TO ARCHITECT AND ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OR DELIVERY.
- ROOF TRUSS SHOP DRAWINGS & CALCULATIONS SHALL BE PREPARED BY A WASHINGTON STATE LICENSED ENGINEER AND SHALL BE DESIGNED FOR UNBALANCED SNOW LOADING PER ASCE 7-16, SECTION 1.6.
- ERECT AND INSTALL ROOF TRUSSES PER ITC4 & TPIS BCS1 1-08 "GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING & BRACING OF METAL FRAME CONNECTED WOOD TRUSSES."
- FASTEN OVER-FRAMED TRUSS SETS TO TRUSSES BELOW W/ (2) 3"x0.131" TOENAILS AT EA. TRUSS.
- SUPPORT PORCH & SHORT SPAN ROOF TRUSSES (UP TO 6' TRIP) W/ 2x6 LEDGER FASTENED TO FRAMING W/ (3) 3"x0.131" NAILS @ 16" O.C.
- FASTEN ALL INTERIOR NON-BEARING PARTITION WALLS TO TRUSS BOTTOM CHORD ABOVE WITH SIMPSON STG CLIPS AT 24" O.C. MAX. PROVIDE BLOCKING BETWEEN THE TRUSS BOTTOM CHORDS AS REQUIRED FOR THE PARALLEL CONDITIONS.

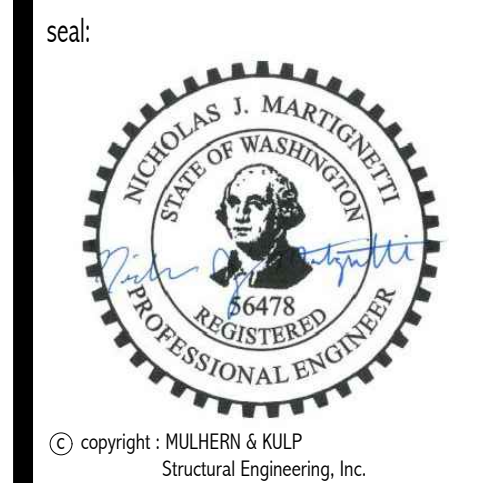
GENERAL STRUCTURAL NOTES

DESIGN PARAMETERS

- DESIGN IS BASED ON 2021 INTERNATIONAL RESIDENTIAL CODE & 2021 INTERNATIONAL EXISTING BUILDING CODE.
- WOOD FRAME ENGINEERING IS BASED ON NDS, "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" - LATEST EDITION.

GENERAL FRAMING

- EXTERIOR BEARING WALLS SHALL BE 2x4 OR 2x6 (AS SHOWN ON PLANS) @ 16" O.C. (W/ DOUBLE TOP PLATE) HEM FIR (HF) "STUD" GRADE LUMBER, OR BETTER, UNO.
- INTERIOR BEARING WALLS SHALL BE 2x4 OR 2x6 (AS SHOWN ON PLANS) @ 16" O.C. (W/ DOUBLE TOP PLATE) HEM FIR (HF) "STUD" GRADE LUMBER, OR BETTER, UNO.
- ALL NON-BEARING INTERIOR STUD WALLS SHALL BE CONSTRUCTED WITH 2x "STUD" GRADE MEMBERS SPACED @ 24" O.C. (MAX.)
- ALL WALLS TALLER THEN TYP. PLATE HEIGHT SHALL BE CONSIDERED BALLOON FRAMED & SHALL BE CONSTRUCTED FROM FLOOR TO UNDERSIDE OF FRAMING AT NEXT LEVEL. B.F. WALLS SHALL BE 2x4 OR 2x6 (AS SHOWN ON PLANS) HEM FIR (HF) #2 GRADE LUMBER, OR BETTER.
- ALL HEADERS SHALL BE SUPPORTED BY (1) 2x JACK STUDS & (1) 2x KING STUD, MINIMUM. - THE NUMBER OF STUDS SPECIFIED AT A SUPPORT INDICATES THE NUMBER OF JACK STUDS REQUIRED, UNO.
- BUILT-UP POSTS SHALL BE 2x4 OR 2x6 HEM FIR (HF) "STUD" GRADE LUMBER, OR BETTER, UNO. & SOLID WOOD COLLUMS SHALL BE SPRUCE PINE FIR (SPF) #2 GRADE LUMBER, OR BETTER, UNO.
- ALL 2x6 AND LARGER SOLID SAWN BEAMS/HEADERS SHALL BE HEM FIR #2 (IF #2) OR BETTER. ALL 4x6 AND LARGER SOLID SAWN LUMBER SHALL BE DOUG FIR #2 (IF #2) OR BETTER.
- ALL FRAMING LUMBER SHALL BE KILN DRIED TO 15% MC (KD-15).
- ALL TYP. NAIL FASTENER REQUIREMENTS ARE NOTED IN GENERAL NOTES, IN DETAILS, OR ON PLANS. ALL NAILS SPECIFIED ARE MIN. DIAMETER AND LENGTH REQUIRED FOR CONNECTION. ALL HANGER WALLS SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS FOR MAX. CHARTED CAPACITY. NOTE: HANGERS USE COMMON NAIL DIAMETERS, NOT TYPICAL FRAMING GUN NAILS.
- FASTEN ALL BEAMS TO COLLUMS, OR FLUSH BEAMS TO SUPPORTING BEAMS, W/ (4) 3"x0.131" TOENAILS (MIN), TYP. UNO.
- PROVIDE SOLID BLOCKING IN FLOOR SYSTEM UNDER ALL POSTS & HOLD-DOWNS CONTINUOUS TO FOUNDATION/BEARING. BLOCKING TO MATCH POST ABOVE.
- ENGINEERED LUMBER TO MEET OR EXCEED THE FOLLOWING:
 - LVL MEMBERS - Fb=2600 PSI; Fv=285 PSI; E=2.0x10⁶ PSI
 - GLB MEMBERS - Fb=1,2400 PSI; Fv=1,1850 PSI; Fv=265 PSI; E=1.8x10⁶ PSI; DF/DF: 24F-V4 (UNO.)
- FACE NAIL MULTI-PLY 2x BEAMS & HEADERS W/ 3-RINGS OF 3"x0.131" NAILS (MIN) @ 12" O.C. STAGGERED. APPLY NAILING FROM BOTH FACES @ 3-PLY OR MORE CONDITIONS. UTILIZE 2 RINGS OF NAILS FOR 2x6 & 2x8 MEMBERS.
- ALL 2 PLY BEAMS OR HEADERS MAY BE INTERCHANGED W/ 4x SOLID BEAM OF EQUAL DEPTH.
- ALL MEMBERS SPECIFIED AS MULTI-PLY (3") SHALL BE FASTENED TOGETHER PER MANUFACTURER. EQUIVALENT WIDTH STUD MATERIAL MAY BE USED AS EQUAL.
- REFER TO IRC FASTENING SCHEDULE TABLE R602.2(1) FOR ALL CONNECTIONS, TYP. UNO.



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M&K project number: 251-24025

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REVISIONS:
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STRUCTURAL NOTES

YEN DESIGN

STRUCTURAL NOTES

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