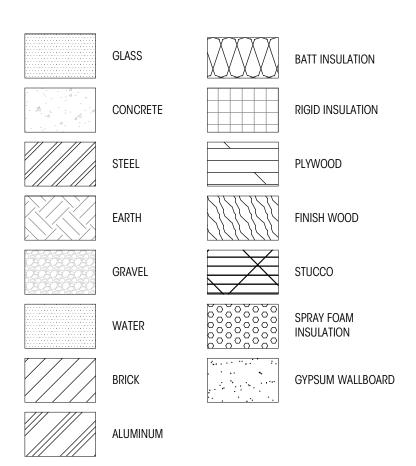
ABBREVIATIONS ABOVE EXISTING GRADE ABOVE FINISHED FLOOR ADDITIONAL ADJUSTABLE ALTERNATE ARCHITECT, ARCHITECTURAL BLW BELOW BASEMENT **BETWEEN BUILDING** CABINET CALCULATION CEILING CENTERLINE CLEAR COLUMN CONCRETE CONSTRUCTION CONT CONTINUOUS CONTRACTOR DOUBLE DEMOLISH DIAMETER DIMENSION DISHWASHER DOWNSPOUT EACH **ELECTRIC, ELECTRICIAN** ELEVATION ENGR **ENGINEER** EQUIV **EQUIVALENT** EXIST OR (E) EXISTING EXTERIOR **FINISHED FLOOR** GALVANIZED **GYPSUM WALL BOARD HEADER** HEIGHT HORIZONTAL INSULATION INTERIOR LOCATE, LOCATION MAXIMUM **MANUFACTURER** MECHANICAL METAL MINIMUM **NOT TO SCALE** NON-REGULATED ON CENTER OVERHANG ORDINARY HIGH WATER MARK PLYWOOD **PRELIMINARY** PRESSURE-TREATED PROPERTY LINE REFRIGERATOR REINFORCE, REINFORCING REINE REQUIRED **SCHEDULE SHEARWALL** SIMILAR **SQUARE FOOT SPECIFICATIONS** SPECS STAINLESS STEEL STRUCTURE, STRUCTURAL TEMPORAR\ TOP OF WALL TYPICAL **UNLESS NOTED OTHERWI**

GRAPHIC KEY



VERIFY IN FIELD

WATERPROOF, WEATHERPROOF

VERTICAL

WINDOW WITH

WITHOUT

WOOD

GENERAL NOTES

ALL WORK SHALL BE IN COMPLIANCE WITH THE 2015 INTERNATIONAL RESIDENTIAL CODE AS ADOPTED AND MODIFIED BY THE CITY OF MERCER ISLAND, MERCER ISLAND LAND USE CODE, AND ALL OTHER LAWS, CODES, ORDINANCES AND REGULATIONS OF THE COUNTY, STATE, AND FEDERAL JURISDICTIONS INCLUDING THE 2015 WASHINGTON STATE ENERGY CODE. (LATEST EDITION AND AMENDMENTS)

all **underground utilities** must be verified as to exact locations so as no interference by disruption WILL BE CAUSED. GENERAL CONTRACTOR SHALL PROTECT EXISTING FACILITIES, STRUCTURES AND UTILITIES BY THE METHODS RECOMMENDED BY THE GEOTECHNICAL ENGINEER AND DPD REPRESENTATIVE AT THE PRE-CONSTRUCTION SITE MEETING. DAMAGE THAT MAY BE CAUSED BY GENERAL CONTRACTOR OR SUBCONTRACTOR TO ANY OF THE ABOVE MENTIONED SHALL BE REPAIRED BY HIM AND LEFT IN AS GOOD A CONDITION AS EXISTED PRIOR TO DAMAGING.

CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL **DIMENSIONS AND JOB CONDITIONS** RELATED TO THIS WORK. ALL DIMENSIONS SHALL BE CONSIDERED "NOMINAL" UNLESS NOTED OTHERWISE. DO NOT SCALE DRAWINGS, USE WRITTEN DIMENSIONS ONLY, DIMENSIONS ON LARGE SCALE DRAWINGS OR DETAILS WILL PREVAIL OVER SMALLER SCALED DRAWINGS. WRITTEN DIMENSIONS ARE DRAWN TO THE FACE OF STUD OR CONCRETE U.N.O. VERIFY ALL ROUGH-IN DIMENSIONS FOR EQUIPMENT, PROVIDE ALL BUCKOUTS, BLOCKING, AND JACKS AS REQUIRED BY THE DRAWINGS AND OTHER TRADES. ANY DISCREPANCY IN DIMENSIONS SHALL BE REPORTED IN WRITING TO THE PROJECT MANAGER/ DESIGNER FOR CLARIFICATION, OR APPROVAL OF MODIFICATION BEFORE COMMENCING WORK. THE RESPONSIBILITY TO THE PROJECT MANAGER/DESIGNER, SHALL REST WITH THE CONTRACTOR OR ANY OTHER PERSON APPROVING SUCH A CHANGE.

ALL WORKMANSHIP AND MATERIALS SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF CERTIFICATE OF OCCUPANCY UNLESS SPECIFIED FOR A LONGER PERIOD OF TIME ON SPECIFIED ITEMS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING OR REPAIRING HIS OWN DEFECTIVE WORK AS WELL AS PAY ALL COSTS INCIDENTAL THERETO INCLUDING DAMAGE TO OTHER WORK, FURNISHINGS OR EQUIPMENT.

ALL WARRANTIES OR GUARANTEES AS TO MATERIALS OR WORKMANSHIP ON OR WITH RESPECT TO THE OWNER'S WORK SHALL BE CONTAINED IN THE CONTRACT OR SUBCONTRACT WHICH SHALL BE SO WRITTEN THAT SUCH GUARANTEE OR WARRANTIES SHALL INSURE TO THE BENEFIT OF OWNER.

INSURANCE: PRIOR TO THE COMMENCEMENT OF WORK THE GENERAL CONTRACTOR SHALL DELIVER TO THE OWNER CERTIFICATES OF INSURANCE FOR BOTH COMPREHENSIVE GENERAL LIABILITY AND WORKMAN'S COMPENSATION INCLUDING THE TOTAL AMOUNT OF COVERAGE AND CONDITIONS STIPULATED AND AGREED BY BOTH PARTIES.

THE OWNER SHALL BE RESPONSIBLE FOR PAYING FOR THE BUILDING PERMIT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL OTHER PERMITS REQUIRED OR NECESSARY FOR THE COMPLETION OF THE WORK FROM THE RESPECTIVE AGENCIES. THE CONTRACTOR SHALL NOTIFY THE GOVERNING AGENCIES AS REQUIRED FOR SITE

ALL TRADES SHALL REFER TO THE ARCHITECTURAL DRAWINGS REGARDING LOCATIONS OF WORK TO BE INSTALLED.

UNLESS OTHERWISE NOTED, PROVIDE ALL MISCELLANEOUS FASTENERS, HARDWARE AND ACCESSORIES AS REQUIRED FOR COMPLETE INSTALLATION. EVEN THOUGH SUCH ITEMS MAY NOT HAVE BEEN SPECIFICALLY MENTIONED IN THE DRAWINGS AND SPECIFICATIONS, NOTIFY THE ARCHITECT OF ANY REVISIONS OR ADDITIONAL INFORMATION OBTAINED FROM THE MANUFACTURER OF SPECIFIED MATERIALS OR EQUIPMENT WHICH MAY AFFECT THE CONTRACT TIME, COST OR QUALITY OF WORK.

THE GENERAL CONTRACTOR, ALL SUB-CONTRACTORS AND ALL MAJOR SUPPLIERS SHALL SUBMIT TO THE OWNER WITHIN 30 days after completion all "release of liens" for all work performed prior to final payment.

Partial Lien Waivers to be submitted with monthly requisition.

ALL MANUFACTURERS AND/OR SUPPLIERS SHALL SUBMIT SHOP DRAWINGS AND/OR MATERIAL SAMPLES TO THE DESIGNER/OWNER FOR APPROVAL PRIOR TO FABRICATION.

ALL OF THE GENERAL CONTRACTOR'S EQUIPMENT, SCAFFOLDING HOISTS, ETC., SHALL BE AVAILABLE TO THE OWNER/ DESIGNER AND THEIR STAFF FOR INSPECTION OF ANY AND ALL WORK DURING NORMAL WORKING HOURS.

the general contractor is responsible for all delivery points, hoists locations, access to and from the SITE OF THE BUILDING AND UTILITY SERVICES. BID TO INCLUDE ALL NECESSARY AND REQUIRED PERMITS, LICENSES, FEES, BONDS AND INSURANCE - EVIDENCE OF

GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SUBCONTRACTORS WORKING AT JOB SITE AND FOR ALL COORDINATION OF WORK.

WHICH MUST BE SUBMITTED TO OWNER/ DESIGNER PRIOR TO ANY CONSTRUCTION.

THE MECHANICAL. PLUMBING AND ELECTRICAL CONTRACTOR SHALL FULLY COORDINATE ALL EQUIPMENT WITH THE OTHER TRADES. THESE CONTRACTORS SHALL BE RESPONSIBLE FOR FINAL HOOK-UP OF ALL EQUIPMENT NOT FURNISHED BY THEM BUT REQUIRING THE SAME FOR FINAL COMPLETION.

GENERAL CONTRACTOR TO BE RESPONSIBLE FOR SECURITY OF ALL MATERIALS AT JOB SITE UNTIL FINAL ACCEPTANCE OF

ANY SUBCONTRACTOR CUTTING INTO WORK ALREADY COMPLETED, CUTTING CHASES AND TRENCHES FOR THE INTRODUCTION OF HIS WORK AND EQUIPMENT IN THE BUILDING SHALL DO OR PAY FOR ALL BACK FILLING, REPARATION

OF WALLS, FLOOR, ETC., DAMAGE BY SUCH A COMPANY. ALL REPAIRS SHALL MATCH EXISTING SURFACES.

CONSTRUCTION SPECIFICATIONS

NO SUBSTITUTIONS ARE ALLOWED FOR MATERIALS WHERE SPECIFIC MANUFACTURERS ARE INDICATED, UNLESS APPROVED BY THE OWNER/ARCHITECT. REQUESTS FOR SUBSTITUTIONS SHALL BE MADE IN WRITING PRIOR TO ORDERING MATERIALS OR COMMENCING WORK. SUCH REQUESTS SHALL INCLUDE THE DATE, SCOPE OF WORK, ANY ADDITIONAL COSTS TO THE OWNER, AND ANY ANTICIPATED DELAYS CAUSED BY SUCH CHANGES.

NO EXTRA WORK OR CHANGE SHALL BE MADE UNLESS A WRITTEN CHANGE ORDER IS SUBMITTED AND SIGNED BY THE OWNER AND ARCHITECT. THE ORDER SHALL STATE THAT THE OWNER HAS AUTHORIZED THE EXTRA WORK OR CHANGE, AND NO CLAIM FOR AN ADDITIONAL SUM SHALL BE VALID UNLESS SO OFFERED AS DESCRIBED ABOVE.

ALL WOOD IN CONTACT WITH MASONRY OR CONCRETE OR EXPOSED TO WEATHER SHALL BE PRESSURE TREATED.

WOOD SPECIFICATIONS TO CONFORM TO OUTLINE SPECIFICATIONS, STRUCTURAL PLANS, NOTES, AND GENERAL

CAULKING AND SEALANTS: INSTALLED SHALL BE GUARANTEED WATERTIGHT. EXTERIOR METAL WORK, INCLUDING WINDOWS AND DOOR FRAMES AND ALL JUNCTIONS BETWEEN MASONRY, CONCRETE AND METAL SHALL BE SEALED WITH NEOPRENE OR POLYURETHANE FILLER AND APPROVED SEALANT COMPOUNDS.

PROVIDE GALVANIC INSULATION BETWEEN ALL DISSIMILAR METALS.

PROVIDE WATERPROOFING MEMBRANE OVER PROTECTIVE BOARD AT ALL WALLS EXPOSED TO EARTH.

ALL PIPING AND CONDUIT UNDER SLAB SHALL BE A MINIMUM OF 2"-0' CLEAR OF UNDERSIDE OF FOOTING.

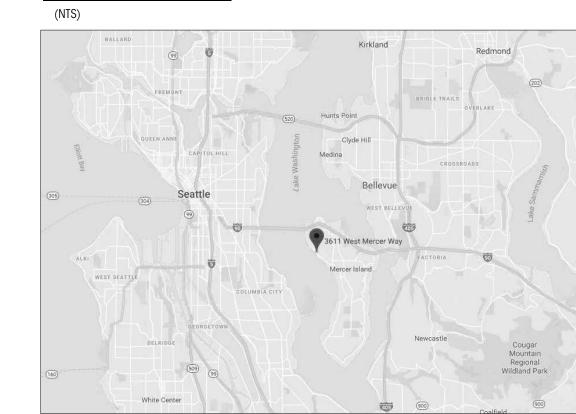
ALL FINAL SURFACE GRADING SHALL BE COMPLETED TO FACILITATE POSITIVE DRAINAGE AWAY FROM THE BUILDING

PROVIDE AND INSTALL INSULATION AT EXTERIOR WALLS, ROOF, FLOOR LOCATIONS AS SHOWN, SPECIFIED AND IN ACCORDANCE WITH WASHINGTON STATE ENERGY CODE.

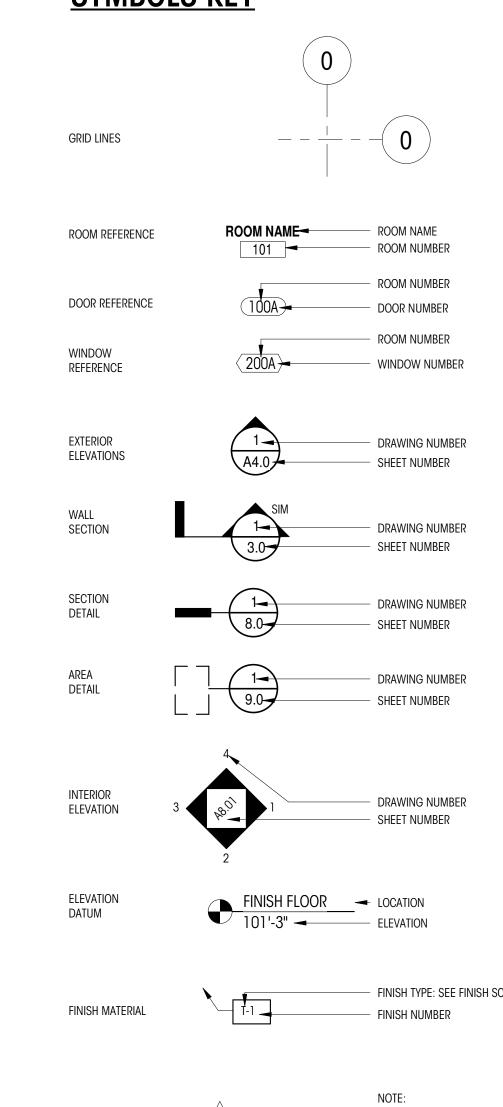
WATER PIPES TO BE INSULATED IN ALL UNHEATED AREAS.

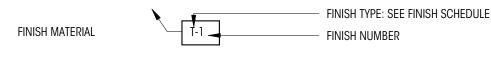
INSULATE ALL ROUGH-IN PLUMBING IN WALLS, FLOORS, AND CEILINGS FOR SOUND TRANSMISSION.

VICINITY PLAN

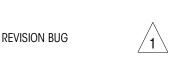


SYMBOLS KEY





W4a



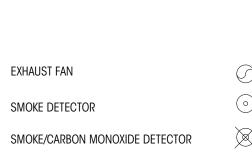
ONLY MOST RECENT REVISION SHOWN CLOUDED FOR PREVIOUS REVISIONS DELTAS REMAIN. DATE OF REVISIONS INDICATED AT RIGHT MARGINS.

ROOF TYPE

WALL TYPE

FLOOR TYPE

SEE ASSEMBLIES FOR MORE INFO



SETBACKS

ASSEMBLY TYPE

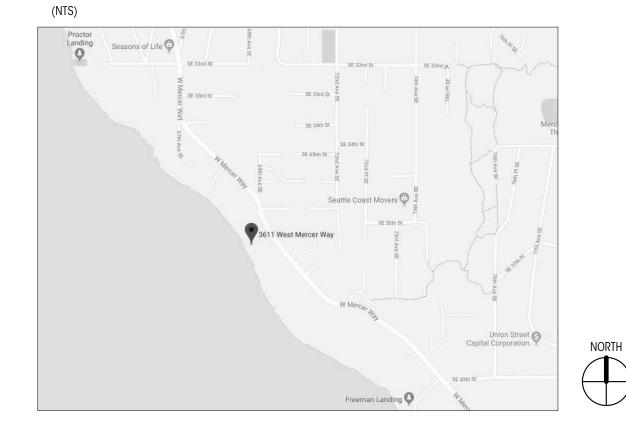
CENTERLINE

SIDE YARD MIN SIDE YARD FRONT YARD **SHORELINE**

33% X 17' = 5.61 FT20' - 0" 0 - 25' - 0" BUFFER FROM OHWM 25'- 0" - 50' - 0" BUFFER FROM OHWM

17% X 100' = 17' - 0" COMBINED

LOCATION PLAN



DDU IEUT DIDEUTUDA

<u>OWNER</u>	CHRISTINE AND RYAN YUAN
	3611 W MERCER WAY
	MERCER ISLAND, WA 98040
<u>ARCHITECT</u>	COLIN BRANDT
	BRANDT DESIGN GROUP
	66 BELL ST., UNIT 1
	SEATTLE, WA 98121
	206.239.0850
OWNER'S AGENT/CONTACT	colin@brandtdesigninc.com GEORGE STEIRER
OWNER 5 AGENT/CONTACT	PLAN TO PERMIT
	206.909.2893
	george@plantopermit.com
GENERAL CONTRACTOR	CHRIS GREGERSON
	GREGERSON CUSTOM HOMES
	14107 180TH AVE NE
	REDMOND, WA 98052
	206.691.0042
STRUCTURAL ENGINEER	BRETT MOZDEN
	SWENSON SAY FAGÉT
	2124 THIRD AVENUE, SUITE 100
	SEATTLE, WA 98121
0.0.4. FNONES	206.443.6212
<u>CIVIL ENGINEER</u>	DUFFY ELLIS
	CIVIL ENGINEERING SOLUTIONS 102 NW CANAL ST
	SEATTLE, WA 98107
	206.930.0342
	duffy@cesolutions.us
GEOTECH	STEPHEN EVANS
020.2011	PANGEO
	206 262-0370

ENERGY CODE SUMMARY

CLIMATE ZONE 4C TABLE R402.1.1 PRESCRIPTIVE OPTION III (EFFICIENT ENVELOPE OPTION 1A) **UNLIMITED GLAZING** .28 GLAZING U-FACTOR (VERTICAL): GLAZING U-FACTOR (OVERHEAD): DOOR U-FACTOR: CEILING: R-49 R-38 VAULTED CEILING: WALL ABOVE GRADE: R-21 R-21 (INT.) OR R-10 (EXT.) WALL BELOW GRADE (INT.) SLAB ON GRADE @ BASEMENT R-10

ENERGY CREDITS: PER 2015 WSEC TABLE 406.2. 3.5 CREDITS MIN: 1a, 3a,4 and 5c.

INSTALLED PER INTERNATIONAL MECHANICAL CODE, WORK TO BE COMPLETED UNDER A SEPARATE PERMIT.

sevans@pangeoinc.com

ARCHITECTURAL

FANS ON TIMERS, PER PLANS. VOLUME OF REQUIRED OUTDOOR VENTILATION AIR TO BE PROVIDED BASED ON TABLE M1507.3.3 OF THE IRC. * PLUMBING, MECHANICAL, ELECTRICAL WORK TO BE PERMITTED SEPARATELY. SEE SHEET A002 FOR VENTILATION & ENERGY CALCULATIONS.

SHEET NAME

COVERSHEET

SHEET INDEX

SHEET NUMBER

A000

ARCHITECTURAL	AUUU	COVERSHEET
	A001	WA STATE ENERGY CODE / VENTILATION CALC
SURVEYOR	1	SURVEY
	A100	SITE PLAN
	A101	SHORELINE VEGETATION PLAN
	D100	DEMO SITE PLAN
	A103	TEMPORARY EXCAVATION PLAN
	A104	FINAL GRADING PLAN
CIVIL	C1.0	EROSION CONTROL PLAN
	C1.2	TESC 7 CITY NOTES, TESC DETAILS
	C1.3	TREE INVENTORY
	C2.0	DRAINAGE/CIVIL PLAN
	C2.1	WATER SERVICE
	C3.5	DRAINAGE/BMP DETAILS
ARCHITECTURAL	A200	LOWER FLOOR PLAN
	A201	MAIN FLOOR PLAN
	A202	ROOF PLAN
	A203	ROOF DETAILS
	A300	EXTERIOR ELEVATIONS
	A301	EXTERIOR ELEVATIONS
	A400	BUILDING SECTIONS
	A401	WALL SECTIONS
	A600	WINDOW / DOOR SCHEDULES
STRUCTURAL	S1.1	GENERAL STRUCTURAL NOTES
	S1.2	GENERAL STRUCTURAL NOTES
	S2.1	FOUNDATION PLAN
	S2.2	MAIN FLOOR FRAMING PLAN
	S2.3	ROOF FRAMING PLAN
	S3.1	TYPICAL CONCRETE DETAILS
	S3.2	FOUNDATION DETAILS
	S3.3	FOUNDATION DETAILS
	S4.1	TYPICAL WOOD FRAMING DETAILS
	S4.2	WOOD FRAMING DETAILS
	S4.3	WOOD FRAMING DETAILS
	S4.4	WOOD FRAMING DETAILS
	S5.1	STEEL DETAILS
	SH1.1	GENERAL SHORING NOTES
	SH2.1	SHORING PLAN
	SH3.1	SHORING DETAILS
	SH3.2	SHORING ELEVATIONS

GENERAL INFORMATION

PROJECT ADDRESS	3611 W MERCER WAY, MERCER
ISLAND,	WA 98040

TBD PROJECT NUMBER

ASSESSOR'S PARCEL 362350-0265

LEGAL DESCRIPTION

THE NORTHWESTERLY 100 FT OF SOUTHEASTERLY 1000 FT OF BLOCK "A", AS MEASURED ALONG THE NORTHEASTERLY LINE THEREOF, REPLAT OF ISLAND PARK, ACCORDING TO THE PLAT RECORDED IN VOLUME 13 OF PLATS, PAGE 58, RECORDS OF KING COUNTY, WA.

PROJECT DESCRIPTION

DEMOLITION OF (E) 2,241 SF HOUSE W/ ATTACHED GARAGE AND PORTION OF (E) DRIVEWAY, CONSTRUCTION OF NEW 3988 SINGLE FAMILY DWELLING + 788 SF ATTACHED GARAGE; CONSTRUCTION OF NEW MOTOR COURT.

BUILDING TYPE SINGLE FAMILY RESIDENCE **PROJECT DATA**

ZONING: R-15 **EXISTING LOT AREA SUMMARY:**

17,535 SF **GROSS LOT AREA:** ACCESS EASEMENT: 1446 SF ACCESS EASEMENT LESS DRIVEWAY: 1446 - 1228 218 SF NET LOT AREA: 17,317 SF LOT SLOPE: 53' / 136.3' = **38.9**%

30% ALLOWABLE LOT COVERAGE: 17,317 SF X 0.30 = **5,195 SF**

EXISTING LOT COVERAGE: (E) HOUSE FOOTPRINT AND OVERHANGS 2,758 SF (E) DRIVEWAY 3,686 SF TOTAL EXISTING LOT COVERAGE: 6,444 SF = 37.2%10,920 SF = 62.8% TOTAL EXISTING LANDSCAPING: (INCLUDES EXIST 1936 SF (11.1 %) HARDSCAPE)

PROPOSED LOT COVERAGE: 1,491 SF (E) DRIVEWAY TO REMAIN <u>/1</u> **NEW DRIVEWAY** 626 SF 3555 SF HOUSE FOOTPRINT + OVERHANGS TOTAL PROPOSED LOT COVERAGE: 5,672 SF = 32.7%TOTAL PROPOSED LANDSCAPING: 11,592 SF = 67.3% (INCLUDES 1462 SF (8.4%) HARDSCAPE)

LOT COVERAGE 2:1 TRADE OFF CALCULATION (PER MICC 19.050 F3 biii): EXISTING LOT COVERAGE = 6,444 SF 1,526 SF LOT COVERAGE REMOVED = 2:1 LOT COVERAGE CREDIT: 1526/2 = 763 SF

ALLOWABLE LOT COVERAGE: (6,444-1,526)+763 = 5,681 **SF ALLOWABLE HARDSCAPE:** 17,317 X .9 = 1558.5 SF

PROPOSED HARDSCAPE:

(E) HARDSCAPE TO REMAIN: 36 SF (E) RETAINING WALLS: 269 SF (E) DECK: (E) BULKHEAD LANDWARD OF OHWM: 559 SF <u>NEW HARDSCAPE:</u> **NEW PATIO/WALKWAYS:** 195 SF 380 SF NEW DECK: NEW RETAINING WALLS: TOTAL PROPOSED HARDSCAPE: 1462 SF (8.4%)

12,000 SF OR 40% NET LOT AREA MAX R-15 ZONING MAX GFA:

ALLOWABLE GFA: $17535 \times .40 =$ 7,014 SF (40%)

GROSS FLOOR AREA CALCULATION: EXISTING GFA:

MAIN FLOOR < 12' CEILING HEIGHT 556 X 1 = 556 SF MAIN FLOOR > 12' CEILING HEIGHT 1546 X 1.5 = 2319 SF

2241 SF (12.9%)

559 SF 163 SF

0 SF

142 SF 640 SF

<u>/2</u>\

788 SF COVERED DECK @ MAIN LEVEL 273 SF **GROSS LOWER FLOOR AREA:** 1,886 SF LOWER FLOOR < 12' CEILING HEIGHT 1,110 X 1 = 1,100 SF LOWER FLOOR > 12' CEILING HEIGHT 776 X 1.5 = 1,164 SF LOWER FLOOR BELOW GRADE NOT INCLUDED (224 SF) TOTAL PROPOSED GFA: 5,976 SF (34.5%)

TOP OF PROPOSED ROOF: 59'-10" **DISTANCE TO NEAREST FIREHYDRANT:** 477'

SHORELINE BUFFERS: 2895 SF 0' - 25' SHORELINE BUFFER AREA: ALLOWABLE IMPERVIOUS AREA: 2895 SF X .10 = 289.5 SF **EXISTING IMPERVIOUS AREA:** 1222 SF (42.2%) (E) BULKHEAD: 559 SF (E) DECK: 626 SF (E) DRIVE: 37 SF PROPOSED IMPERVIOUS AREA:

(E) DECK TO REMAIN: **NEW IMPERVIOUS:** TOTAL PROPOSED @ 0-25' BUFFER:

(E) BULKHEAD TO REMAIN:

722 SF (24.9%) 25' - 50' SHORELINE BUFFER AREA: 2820 SF ALLOWABLE IMPERVIOUS AREA: 2820 X .30 = 846 SF **EXISTING IMPERVIOUS AREA:** 2099 SF (74.4%) 1317 SF

(E) HOUSE: (E) DECK: (E) DRIVEWAY

2:1 TRADE OFF CALC: 2099/2 = 1049.5 SF PROPOSED IMPERVIOUS AREA: (E) DECK TO REMAIN: NEW HOUSE AND OVERHANG:

0 SF 802 SF NEW DECK AND STAIR 244.25 SF TOTAL PROPOSED @ 25'-50' BUFFER: **1046.25 SF (**1049.5 ALLOW.**)** Brand

Design Group 66Bell Street

Unit 1 Seattle, WA 98121

206.239.0850

brandtdesigninc.com



PERMIT SET

ME ISL

DATE: 6/12/19 SHEET SIZE: D (24X36) **REVISIONS**

Revision Number Date 7/18/19 10/09/19 12/20/19

Drawn by: NLD/LL/SE CHECKED BY: LL

COVERSHEET

1" = 1'-0"

NOTE: MECHANICAL DESIGN WILL BE A DEFERRED SUBMITTAL SO DUCTWORK WILL NOT BE SHOWN ON PLANS.

heating and cooling system components installed inside the conditioned space. This includes all equipment and distribution

conditioned space. 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. Flex duct connections must be made with nylon straps and installed

em components such as forcedair ducts, hydronic piping, hydronic floor heating loop, convectors and radiators. All

For forced air ducts: A maximum of 10 linear feet of return ducts and 5 linear feetof supply ducts may be located outside the

using a plastic strapping tensioning tool. Ducts located outside the conditioned space must be insulated to a minimum of R-8.

heat pumps are not permitted under this option. Direct combustion heating equipment with AFUE less than 80% is not permitte

To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and shall show the location of the heating and cooling equipment and all the ductwork.

howerhead and kitchen sink faucets installed in the house shall be rated at 1.75 GPM or less. All other lavatory faucets shall be

umbing Fixtures Flow Ratings. Low flow plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shal

Residential showerheads: Maximum flow rate - 6.6 L/min (1.75 gal/min) when tested in accordance with ASME A112.18.1/CSA

. Water heating system shall include one of the following: Gas, propane or oil water heater with a minimum EF of OR Water heater heated by ground source heat pump meeting the requirements of Option 3c.
OR For R-2 occupancy, a central heat pump water heater with an EF greater than 2.0that would supply DHW to all the units through

To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the water he

ter heating system shall include one of the following: Gas, propane or oil water heater with a minimum EF of 0.91

OR Solar water heating supplementing a minimum standard water heater. Solar water heating will provide a rated minimum saving

To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the water heat equipment type and theminimum equipment efficiency and, for solar water heating systems, the calculation of the minimum ener

A drain water heat recovery unit(s) shall be installed, which captures waste water heat from all the showers, and has a minimum

To qualify to claim this credit, the building permit drawings shall include a plumbing diagram that specified the drain water hear

or each 1200 kWh of electrical generation per each housing unit provided annually by on-site wind or solar equipment a 0.5 credit

shall be allowed, up to 3 credits. Generation shall be calculated as follows:

For solar electric systems, the design shall be demonstrated to meet this requirement using the National Renewable Energy

o qualify to claim this credit, the building permit drawings shall specify the option being selected and shall show the ph

e wind turbine power curve; average annual wind speed at the site; frequency distribution of the wind speed at the site and

aboratory calculator PVWATTs. Documentation noting solar access shall be included on the plans.

wind generation projects designs shall document annual power generation based on the following fact

2015 WSCE - Table R406.2 - Continued

rated at 1.0 GPM or less.

A112.18.1/CSA B125.1.

EFFICIENT WATER HEATING 5c

accordance CSA B55.1 and be so labeled.

Water Heating Systems

comply with the following requirements:

CITY OF MERCER ISLAND

DEVELOPMENT SERVICES GROUP

9611 SE 36TH STREET | MERCER ISLAND, WA 98040 PHONE: 206.275.7605 | www.mercergov.org

Inspection Requests: Online: <u>www.MyBuildingPermits.com</u> VM: 206.275.7730

2015 WSEC & IRC Ventilation Worksheet (Effective July 1, 2016)

INFORMATION IN THESE WORKSHEETS MUST BE INCLUDED IN THE CONSTRUCTION DOCUMENTS This set of worksheets has been developed to assist permit applicants with documenting compliance with the 2015 Washington State Energ Code. The following worksheets provide much of the required documentation for plan review. The details, systems, and ratings noted here

PRESCRIPTIVE ENERGY CODE COMPLIANCE FOR CLIMATE ZONE MARINE 4 | Fenestration 1 | Ceiling | Vaulted | Framed | (Above | Wall (Int.) 2 | Grade Wall 2.3 | Ceiling | Vaulted | Framed | Ceiling | Wall (Int.) 2 | Grade Wall 2.3 | Ceiling | Ceil R-Value & Depth Prescriptive U. 0.30 U. 0.50 R-49 P.38 min P.21 min R-38 min. R-21 min. R-21 min. R- 10/15/21 Int. + TB R-30 min. opaque/glazed doors. Fenestration includes products with glass and non-glass glazing materials.

² Int. (intermediate framing) denotes standard framing 16" o.c. with headers insulated with a minimum R-10 insulation.
³ 10/15/21+TB" means R-10 continuous insulation on the exterior of the wall, or R-15 on the 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. "TB" means thermal break between floor slab and basement wall.

Whole House Ventilation (Prescriptive)

Please check the appropriate box to describe which of the four prescriptive Whole House Ventilation Systems you will be using AND fill in the required whole house ventilation rate in CFM's. (See "2015 Residential Whole House ired by one of the sections noted below must be specified on the drawings WHOLE HOUSE VENTILATION METHOD Intermittent Whole House Ventilation Using Exhaust Fans & Fresh Air Inlets. (IRC M1507.3.4) Intermittent Whole House Ventilation Integrated with a Forced Air System. (IRC M1507.3.5) Intermittent Whole House Ventilation using a Supply Fan. (IRC M1507.3.6) Intermittent Whole House Ventilation Using a Heat Recovery Ventilation System (IRC M1507.3.

Source Specific Exhaust Ventilation & Fan Efficiency , laundry room, indoor swimming pool, spa and other rooms where

water vapor or cooking odor is produced. (IRC M 1507.4) Fan efficiency from WAC 51-11R - Table R403.6.1. Kitchen Hoods greater Minimum Source Specific Ventilation Capacity Requirements

Bathrooms – Utility Rooms

Kitchens

50 cfm min 100 cfm min Intermittently operating <90cfm >90cfm

Energy Efficiency Credits

Each dwelling unit shall comply with sufficient options from WSEC Table R406.2 so as to achieve the following minimum numbor of credits as described on the reverse side of this page. **Small Dwelling Unit: 1.5 credits** (Dwelling units less than 1500 SF in conditioned floor area with less than 300

Medium Dwelling Unit: 3.5 credits (All dwelling units not included in #1 or #3. Exception: Dwelling units

Large Dwelling Unit: 4.5 credits (Dwelling Units exceeding 5000 SF of conditioned floor area. Additions less than 500 SF: 0.5 credits

 $S: \DSG\FORMS\2017\Building\2015_WSEC_IRC_Ventilation.pdf$

ION	DESCRIPTION	CREDIT(S
1a	EFFICIENT BUILDING ENVELOPE 1a: Vertical fenestration U = 0.28 Floor R-38 Slab on grade R-10 perimeter and under entire slab Below grade slab R-10 perimeter and under entire slab. OR Compliance based on Section R402.1.4: Reduce the Total UA by 5%.	0.5
1b	EFFICIENT BUILDING ENVELOPE 1b: Vertical fenestration U = 0.25 Wall R-21 plus R-4 Floor R-38 Basement wall R-21 int plus R-5 ci Slab on grade R-10 perimeter and under entire slab Below grade slab R-10 perimeter and under entire slab. OR Compliance based on Section R402.1.4: Reduce the Total UA by 15%.	1.0
1c	EFFICIENT BUILDING ENVELOPE 1c: Prescriptive compliance is based on Table R402.1.1 with the following modifications: Vertical fenestration U = 0.22 Ceiling and single-rafter or joist-vaulted R-49 advanced Wood frame wall R-21 int plus R-12 ci Floor R-38 Basement wall R-21 int plus R-12 ci Slab on grade R-10 perimeter and under entire slab Below grade slab R-10 perimeter and under entire slab ORCompliance based on Section R402.1.4: Reduce the Total UA by 30%.	2.0
ld	EFFICIENT BUILDING ENVELOPE 1d: Prescriptive compliance is based on Table R402.1.1 with the following modifications: Vertical fenestration U = 0.24. Projects using this option may not use Option 1a, 1b or 1c.	0.5
2a	AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION 2a: Compliance based on R402.4.1.2: Reduce the tested air leakage to 3.0 air changes per hour maximum AID 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. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the maximum tested building air leakage and shall show the qualifying ventilation system.	0.5
2b	AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION 2b: Compliance based on Section R402.4.1.2: Reduce the tested air leakage to 2.0 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 heat recovery ventilationsystem with minimum sensible heat recovery efficiency of 0.70. To qualify to claim this credit, the building permit drawings shall specify theoption being selected and shall specify the maximum tested building air leakage and shall show the heat recovery ventilation system.	1.0
ic	AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION 2c: Compliance based on Section R402.4.1.2: Reduce the tested air leakage to 1.5 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 heat recovery ventilation system with minimum sensible heat recovery efficiency of 0.85. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the maximum tested building air leakage and shall show the heat recovery ventilation system.	1.5
Sa	HIGH EFFICIENCY HVAC EQUIPMENT 3a: Gas, propane or oil-fired furnace with minimum AFUE of 94%, or Gas, propane or oiled-fired boiler with minimum AFUE of 92%. Projects may only include credit from one space heating option, 3a, 3b, 3c or 3d. When a housing unit has two pieces of equipment (i.e., two furnaces) both must meet the standard to receive the credit. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and the minimum equipment efficiency.	1.0
вь	HIGH EFFICIENCY HVAC EQUIPMENT 3b: Air-source heat pump with minimum HSPF of 9.0. Projects may only include credit from one space heating option, 3a, 3b, 3c or 3d. When a housing unit has two pieces of equipment (i.e., two furnaces) both must meet the standard to receive the credit. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and the minimum equipment efficiency.	1.0
3c	HIGH EFFICIENCY HVAC EQUIPMENT 3c: Closed-loop ground source heat pump; with a minimum COP of 3.3 OR Open loop water source heat pump with a maximum pumping hydraulic head of 150 feet and minimum COP of 3.6. Projects may only include credit from one space heating option, 3a, 3b, 3c or 3d. When a housing unit has two pieces of equipment (i.e., two furnaces) both must meet the standard to receive the credit. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and the minimum equipment efficiency.	1.5
Bd	HIGH EFFICIENCY HVAC EQUIPMENT 3d: Ductless Split System Heat Pumps, Zonal Control: In homes where the primary space heating system is zonal electric heating, a ductless heat pump system shall beinstalled and provide heating to the largest zone of the housing unit. Projects may only include credit from one space heating option, 3a, 3b, 3c or 3d. When a housing unit has two pieces of equipment (i.e., two furnaces) both must meet the standard to receive the credit. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and the minimum equipment efficiency.	1.0

Fenestration Schedule

Please check the applicable boxes and complete the information below

Weighted Average: Using the Prescriptive Method, all glazing must have an "area weighted average" U-Factor of 0.30. This means that some windows can have a higher U-factor than 0.30 and some can have a lower U-factor than 0.30, as long as the area weighted average is U-0.30 or lower you may need to complete this form to document glazing compliance when applying for your

Dwelling units less than 1500 SF in conditioned floor area: If using the option for new dwellings less than 1500 SF of conditioned floor area with no more than 300 SF fenestration

Electronic version available at: http://www.energy.wsu.edu/Documents/2015%20Glazing%20Schedule.xlsx

				Glazing		Wi	dth	Hei	ght	Gla	zing
ı	Exemptions	Ref	U-Factor	Qt.	Feet	Inch	Feet	Inch	Area	UA	
Swing Do	or (24 SF Max)										
Glazed Fe	enestration (15 SF										
Max)											
VERTICAI Plan	L FENESTRATION (W	VINDOWS	AND GLAZED	DOORS)		T A600	FOR WI		OOR GLAZ	ING zing	
ID	Description		U-Factor		Feet	Inch	Feet	Inch	Area	UA	
		+						+			
I											
				Sum of	L Vertical F	- enestrat	ion Area	and UA	1,569	439.3	

OVERH	EAD	GLAZING	(SKYL	IGHT
				-

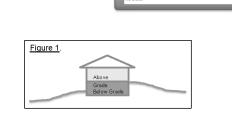
1	Component	Ref	Glazing	Qt.	Wi	dth	Hei	ght	Gla
	Description		U-Factor		Feet	Inch	Feet	Inch	Area
				Sun	n of Overh	nead Glaz	ing Area	and UA	21

Total Sums of Area and UA for Vertical Fenestration and Overhead Glazing Area and UA: | 1,590 | 449.82

Simple Heating System Size: Washington State culator is based on the Prescriptive Requirements of the 2015 Washington State Energy Code (WSEC) and ACCA

lanuals J and S. This calculator will calculate heating loads only. ACCA procedures for sizing cooling systems should be used to determine cooling glazing (window) and door portion of this calculator assumes the installed glazing and door products have an area weighted average U-factor of 0.30. The incorporated insulation requirements are the minimum prescriptive amounts specified by the 2015 WSEC. Please fill out all of 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 call the WSU Energy Extension

Program at (360) 956-2042 for assistan Heating System Type: To see detailed instructions for each section, place your cursor on the word "Instructions Design Temperature Design Temperature Difference (ΔT) Area of Building Conditioned Floor Area Conditioned Floor Area (sq ft) Average Ceiling Height 11.8 Average Ceiling Height (f 46,166 U-Factor X Area = UA Glazing and Doors 1,569 0.28 <u>Skylights</u> No selection Below Grade Walls (see Figure Slab Below Grade (see Figure 1) 0.570 Slab on Grade (see Figure



Location of Ducts

10.5

.50



0.360

Duct Leakage Coefficient 42,201 Btu / Hour 22,437 Btu / Hour 64,638 Btu / Hour 64,638 Btu / Hour 90,493 Btu / Hour

Duct Leakage Affidavit (New Construction

House address or lot number: City: _____ Zip: ____ Cond. Floor Area (ft²): _____ Source (circle one): Plans Estimated Measured

Maximum duct leakage:

Duct tightness testing is not required. The total leakage test is not required for ducts and air handlers located entirely within the building thermal envelope. Ducts located in crawl spaces do not qualify for this exception. Air Handler in conditioned space? yes no Air Handler present during test? yes no Circle Test Method: Leakage to Outside

Post Construction, leakage to outdoors: (floor area x .04) = _____CFM@25 Pa Rough-In, total duct leakage with air handler installed: (floor area x .04) = _____CFM@25 Pa Rough-In, total duct leakage with air handler not installed: (floor area x .03) = _____CFM@25 Pa

Test Result: _____CFM@25Pa Ring (circle one if applicable): Open 1 2 Duct Tester Location: _____ Pressure Tap Location: _____ I certify that these duct leakage rates are accurate and determined using standard duct testing protocol.

Technician Signature: _____

Post Construction, total duct leakage: (floor area x .04) = _____CFM@25 Pa

____ Technician: ____

Duct Leakage Test Results (Existing Construction)

Duct tightness testing is not required for this residence per exceptions listed at the end of this document

I certify that these duct leakage rates are accurate and determined using standard duct testing protocol

R101.4.3.1 Mechanical Systems: When a space-conditioning system is altered by the installation or replacement of space-conditioning equipment (includir replacement of the air handler, outdoor condensing unit of a split system air conditioner or heat pump, cooling or heating coil, or the furnace heat exchang the duct system that is connected to the new or replacement space-conditioning equipment shall be tested as specified in RS-33. The test results shall be

House address or lot number: _____

Duct Tester Location:

Duct Testing Technician:

Phone Number: _____

Ducts with less than 40 linear feet in unconditioned spaces.

3. Existing duct systems constructed, insulated or sealed with asbestos.

Technician Signature:

Washington State Energy Code Reference:

provided to the building official and the homeowner.

Pressure Tap Location: _____

Cond. Floor Area (ft2): ____

WASHINGTON STATE UNIVERSITY **Duct Testing Standard (RS-33)**

For New and Existing Construction

Based on the protocol for "Total Leakage Testing," or "Leakage Testing to Outdoors" duct leakage in new construction shall not exceed 0.04 CFM₂₅ x floor area (in square feet) served by the system for leakage to outdoors or for total leakage when tested post construction. When testing at rough-in, targets should not exceed 0.04 CFM₂₅ x floor area (in square feet) for total leakage or 0.03 CFM₂₅ x floor area (in square feet) if the air handler is not installed.

Exception: The total leakage test is not required for ducts and air handlers located entirely within the building thermal envelope. Ducts located in crawl spaces do not qualify for this

Existing Construction

When a space-conditioning system is altered by the installation or replacement of spaceconditioning equipment (including replacement of the air handler, outdoor condensing unit of a split system air conditioner or heat pump, cooling or heating coil, or the fumace heat exchanger), the duct system that is connected to the new or replacement space-conditionin equipment shall be tested. The test results shall be provided to the building official and the

Exception 1: Duct systems that are documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in RS-33.

Exception 2: Ducts with less than 40 linear feet in unconditioned spaces.

Exception 3: Existing duct systems constructed, insulated or sealed with asbestos. Exception 4: Additions of less than 750 square feet of conditioned floor area.

In addition, the following requirements must be met:

cooling loads are delivered to each zone.

- 1. All testing must be done by a qualified technician. The minimum qualification requirement is documented attendance at a duct testing training course approved by the building official. The following existing training programs are recognized as equivalent to this
- a. Northwest ENERGY STAR Homes Program, Performance Testing training for new
- b. Performance Tested Comfort Systems (PTCS) training for existing homes and new construction. 2. Duct systems must be designed, sized, and installed using recognized industry standards and International Residential Code (IRC) requirements, so that calculated heating and/or

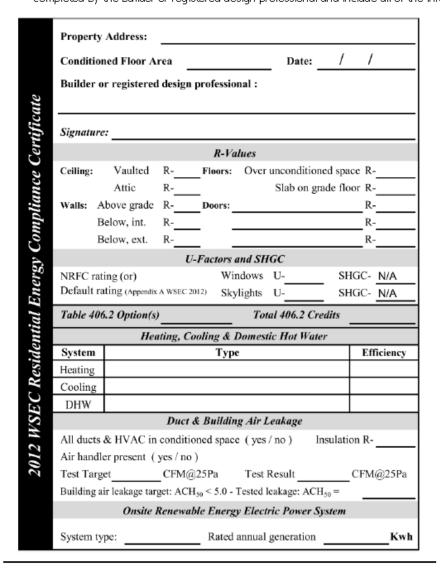
Energy Code Total Duct Leakage Test

Testing Procedure Application: This test is appropriate in new construction when ducts are to be tested at the rough-in stage the total collected leaks in the system at an induced pressure of 25 Pascals (PA). Compared to the leakage to exterior test, the total leakage test is simpler, but does not discriminate between leakage to inside and outside the heated space; as such, this test is not recommended for homes with complete house envelopes and HVAC systems. In such cases, the leakage to

1) For certification, the measured duct leakage must not exceed 0.04 CFM25 x floor area (in square feet) served by the system at rough-in when the air handler is installed. 2) The measured duct leakage at rough-in must not exceed 0.03 CFM₂₅ x floor area (in square feet) served by the system when the air handler is <u>not</u> installed. 3) If testing post construction, the total leakage must not exceed 0.04 CFM₂₅ x floor area (in

Certificate (Electronic version available at: http://www.energv.wsu.edu/Documents/W5EC-2012-Avery-6878 4 Per Sheet.pdf)

A permanent certificate shall be posted within three feet of the electrical distribution panel. The certificate shall be completed by the builder or registered design professional and include all of the information as follows:



WHOLE HOUSE VENTILATION CHART

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

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

REQUIRED VENTILATION

PROPOSED CONDITIONED SF = 3,929 NUMBER OF BEDROOMS = 4

AIRFLOW IN CFM REQUIRED FOR CONTINUOUS VENTILATION = 90 CFM RUN TIME PERCENTAGE IN EACH 4 HOUR SEGMENT = 33% VENTILATION RATE FACTOR = 3

CALCULATION: 90 CFM x 3 = **270 CFM**

OPTION M1507.3.3(2) - INTERMITTENT WHOLE HOUSE VENTILATION.

PER IRC TABLES M1507.3.3(1) + M1507.3.3(2) A 33% RUN-TIME IN EACH 4-HOUR SEGMENT REQUIRES A 450 CFM VENTILATION RATE TO BE PROVIDED FOR THE REQUIRED WHOLE-HOUSE VENTILATION. THIS VENTILATION REQUIREMENT WILL BE HANDLED BY EXHUAST FANS & FRESH AIR INLETS. THIS SYSTEM WILL BE ON 24 HOUR AUTOMATIC TIMER TO ALLOW IT TO CYCLE AS REQUIRED. (3) 50 CFM FANS AND (2) 75 CFM FANS TO RUN AT 33% TIME.

PER M403.4.5.1 OUTDOOR AIR SHALL BE DISTRIBUTED TO ALL HABITABLE SPACES. DOORS SHALL BE UNDERCUT TO A MINIMUM 1/2" ABOVE FINISHED FLOOR TO ALLOW AIRFLOW.

Brand

Design Group

Unit 1 Seattle, WA 98121

66Bell Street

206.239.0850

brandtdesigninc.com

PERMIT SET

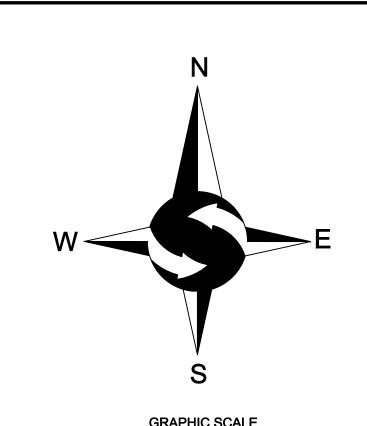
6/12/19 DATE:

SHEET SIZE: D (24X36) Revision

Number Date 7/18/19 10/09/19 12/20/19

Drawn by: NLD/LL/SE CHECKED BY: LL WA STATE ENERGY CODE / VENTILATION CALC

1" = 1'-0"



1INCH = 10 FT.

LEGEND

•	FOUND MONUMENT AS DESCRIBED	— ОНР—	OVERHEAD POWER
0	FOUND REBAR AS DESCRIBED	-OHU $-$	OVERHEAD UTILITIE
X	TACK IN LEAD FOUND	_ X —	CHAINLINK FENCE
•	SET 5/8" X 24" IRON ROD W/1" YELLOW PLASTIC CAP	— — —	WOOD FENCE
P	POWER METER		CONCRETE WALL
Ø	UTILITY POLE		ROCKERY
0	GAS METER		ASPHALT SURFACE
	YARD DRAIN		
\boxtimes	CATCH BASIN	A	CONCRETE SURFAC
\bowtie	WATER VALVE		GRAVEL SURFACE
Q	FIRE HYDRANT		0,000
\blacksquare	WATER METER	СН	CHERRY
\leftarrow	GUYWIRE	DS	DECIDUOUS
—ss—	APPROXIMATE LOCATION SANITARY	MP	MAPLE
	SEWER LINE	ВІ	BIRCH
—sd—	APPROXIMATE LOCATION STORM DRAIN LINE	LA	LAUREL
		* INDICA	TES MULTI-TRUNK

LEGAL DESCRIPTION

THE NORTHWESTERLY 100 FEET OF THE SOUTHEASTERLY 1,000 FEET OF BLOCK "A", AS MEASURED ALONG THE NORTHEASTERLY LINE THEREOF, REPLAT OF ISLAND PARK, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 13 OF PLATS, PAGE 58, RECORDS OF KING COUNTY, WASHINGTON; TOGETHER WITH SECOND CLASS SHORELANDS ADJOINING;

EXCEPT SAID PORTION OF SAID SHORELANDS, IF ANY, AS MAY FALL WITHIN LAKE VIEW AVENUE AS EXTENDED BY THE COMMISSIONER OF PUBLIC LANDS

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

BASIS OF BEARINGS

RECORD OF SURVEY BY DAVID EVANS AND ASSOCIATES FOR BOYD AND ANN GIVAN AS RECORDED UNDER RECORDING NO. 199109189001, RECORDS OF KING COUNTY, WASHINGTON. ACCEPTED A BEARING OF \$42°09'00E BETWEEN REBAR AND CAPS FOUND.

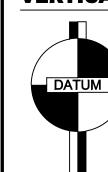
PROJECT INFORMATION

SITE SURVEYING, INC. SURVEYOR: 21923 NE 11TH ST SAMMAMISH, WA 98074 PHONE: 425,298,4412 PROPERTY OWNER: RYAN YUAN 3611 W MERCER WAY MERCER ISLAND, WA 98040 TAX PARCEL NUMBER: 362350-0265 PROJECT ADDRESS: 3611 W MERCER WAY MERCER ISLAND, WA 98040 ZONING: JURISDICTION: CITY OF MERCER ISLAND 17,535 S.F. (± 0.403 ACRES) AS SURVEYED ABOVE OHWM PARCEL ACREAGE:

GENERAL NOTES

- 1. THIS SURVEY WAS COMPLETED WITHOUT BENEFIT OF A CURRENT TITLE REPORT. EASEMENTS AND OTHER ENCUMBRANCES MAY EXIST ON THIS PROPERTY THAT ARE NOT SHOWN HEREON.
- INSTRUMENTATION FOR THIS SURVEY WAS A 3-SECOND NIKON NIVO 5.C TOTAL STATION. PROCEDURES USED IN THIS SURVEY MEET OR EXCEED STANDARDS SET BY WAC 332-130-090.
- 3. THE INFORMATION ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE IN SEPTEMBER 2018 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.
- 4. UTILITIES SHOWN ON THIS SURVEY ARE BASED UPON ABOVE GROUND OBSERVATIONS AND AS-BUILT PLANS WHERE AVAILABLE. ACTUAL LOCATIONS OF UNDERGROUND UTILITIES MAY VARY AND UTILITIES NOT SHOWN ON THIS SURVEY MAY EXIST ON THIS SITE.
- 5. ALL MONUMENTS WERE LOCATED DURING THIS SURVEY UNLESS OTHERWISE

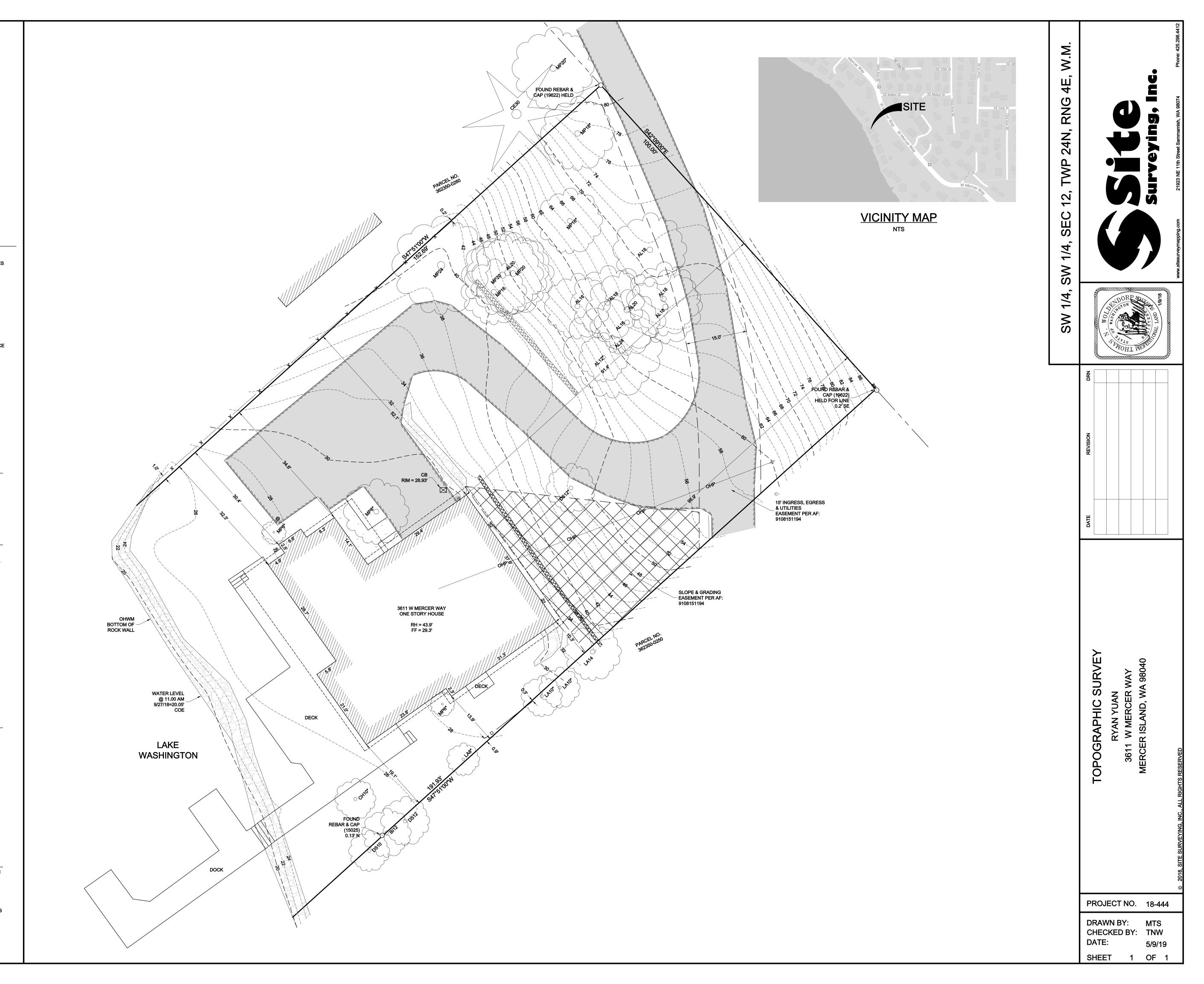
VERTICAL DATUM & CONTOUR INTERVAL

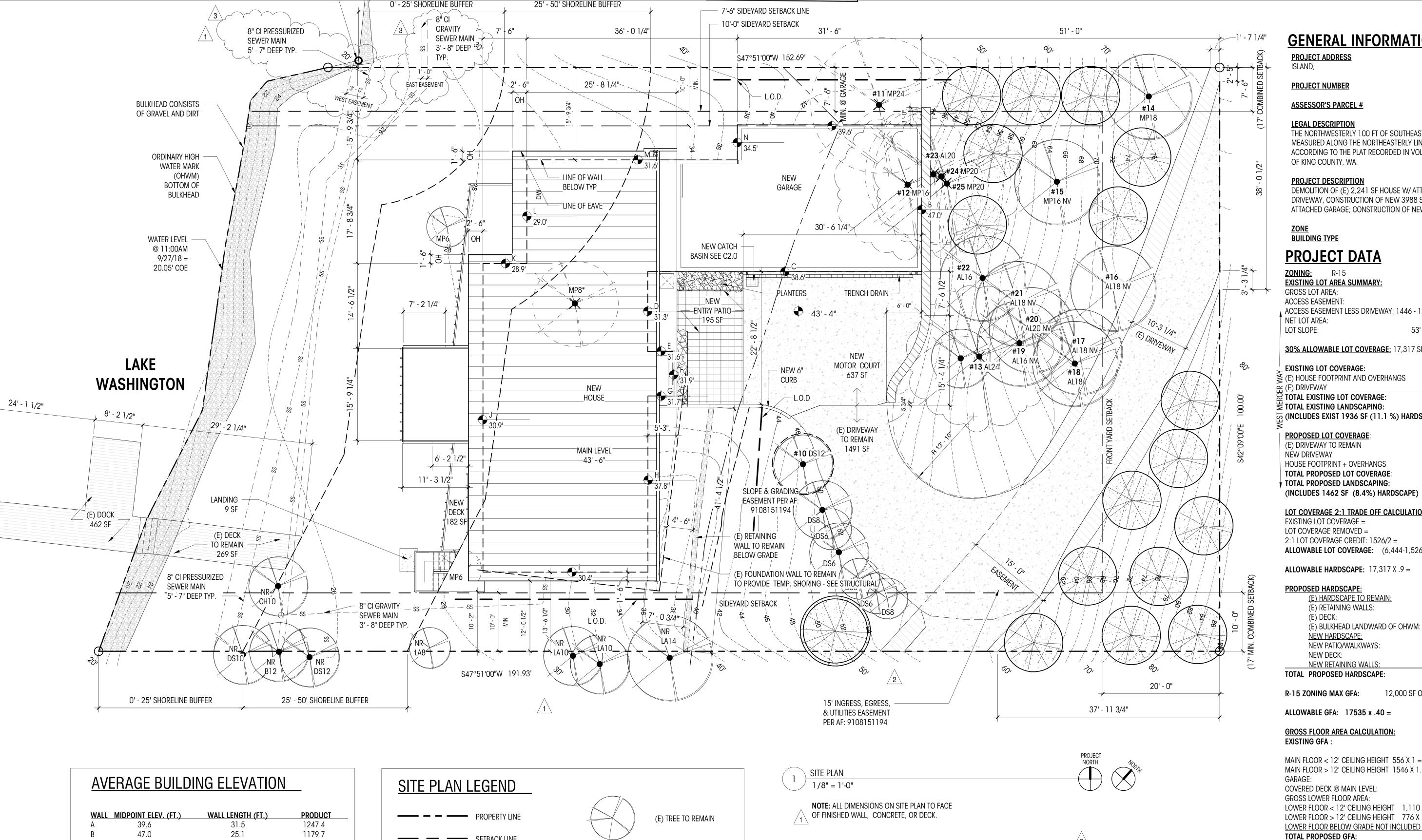


ELEVATIONS SHOWN ON THIS DRAWING WERE DERIVED FROM INFORMATION PROVIDED BY US CORPS OF ENGINEERS AND ARE ON USCE CHITTENDEN LOCKS DATUM.

WATER LEVEL = 20.050 1131 AM SEPTEMBER 9, 2018

2.0' CONTOUR INTERVAL - THE EXPECTED VERTICAL ACCURACY IS EQUAL TO 1/2 THE CONTOUR INTERVAL OR PLUS / MINUS 1.0' FOR THIS PROJECT.

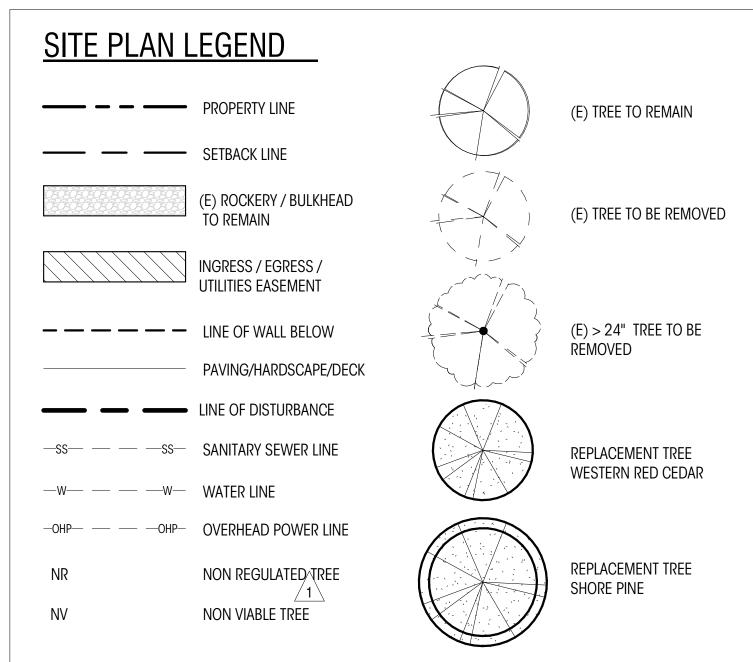




WALL	MIDPOINT ELEV. (FT.)	WALL LENGTH (FT.)	PRODUCT
A	39.6	31.5	1247.4
В	47.0	25.1	1179.7
С	38.6	46.8	1806.5
D	31.3	13.6	425.7
E	31.7	4.6	145.8
F	31.9	7.8	248.8
G	31.7	4.6	145.8
Н	37.8	30.1	1137.8
	30.4	28.2	857.3
J	30.9	52.1	1609.9
K	28.9	7.5	216.7
L	29.0	18.4	533.6
M	31.6	36.0	1137.6
N	34.5	6.0	207.0
TOTALS	6	312.3	10,899.6
	GE GRADE =	NOTUS	
	PRODUCTS / TOTAL WALL LE PRODUCTS		۷۱
	PRODUCTS WALL LENGTHS	10,899. 312.	
	GE GRADE		5/312.3 = 34.9'
AVEKA	JE UKADE	10,099.0	ルシ

PROPOSED BUILDING HEIGHT:

59.83'



/8" = 1'-0"		
_	MENSIONS ON SITE PLAN TO FACE VALL, CONCRETE, OR DECK.	
		\wedge
	OUODELINE DUEEEDO	<u>/2</u> \
	<u>Shoreline Buffers:</u> D' - 25' shoreline Buffer Area:	2005 CE
	ALLOWABLE IMPERVIOUS AREA: 2895 SF X .10 =	2895 SF 289.5 SF
	EXISTING IMPERVIOUS AREA: 2093 SI X . 10 =	1222 SF (42.2%)
!	(E) BULKHEAD:	559 SF
	(E) DECK:	626 SF
	(E) DRIVE:	37 SF
	PROPOSED IMPERVIOUS AREA:	G/ G.
	(E) BULKHEAD TO REMAIN:	559 SF
	(E) DECK TO REMAIN:	163 SF
	NÉW IMPERVIOUS:	0 SF
•	TOTAL PROPOSED @ 0-25' BUFFER:	722 SF (24.9%)
	25' - 50' Shoreline Buffer Area:	2820 SF
	ALLOWABLE IMPERVIOUS AREA: 2820 X .30 =	846 SF
	EXISTING IMPERVIOUS AREA:	2099 SF (74.4%)
	(E) HOUSE:	1317 SF
\ \	(E) DECK:	142 SF
	(E) DRIVEWAY:	640 SF
1	2:1 Trade off calc: 2099/2 = 1049.5 Sf Proposed impervious area:	_
	(E) DECK TO REMAIN:	0 SF
	NEW HOUSE AND OVERHANG:	802 SF
	NEW DECK AND STAIR	244.25 SF
> .	TOTAL PROPOSED @ 25'-50' BUFFER:	1046.25 SF (1049.5 ALLOW.)
\searrow	λ Λ Λ Λ Λ Λ	λ λ λ (1047.3 ALLOW.)

GENERAL INFORMATION

PROJECT ADDRESS 3611 W MERCER WAY, MERCER

WA 98040

TBD

PROJECT NUMBER

362350-0265 ASSESSOR'S PARCEL #

LEGAL DESCRIPTION

THE NORTHWESTERLY 100 FT OF SOUTHEASTERLY 1000 FT OF BLOCK "A", AS MEASURED ALONG THE NORTHEASTERLY LINE THEREOF, REPLAT OF ISLAND PARK, ACCORDING TO THE PLAT RECORDED IN VOLUME 13 OF PLATS, PAGE 58, RECORDS OF KING COUNTY, WA.

PROJECT DESCRIPTION

DEMOLITION OF (E) 2,241 SF HOUSE W/ ATTACHED GARAGE AND PORTION OF (E) DRIVEWAY, CONSTRUCTION OF NEW 3988 SINGLE FAMILY DWELLING + 788 SF ATTACHED GARAGE; CONSTRUCTION OF NEW MOTOR COURT.

BUILDING TYPE

SINGLE FAMILY RESIDENCE

PROJECT DATA

ZONING: R-15 **EXISTING LOT AREA SUMMARY** 17,535 SF **GROSS LOT AREA:** ACCESS EASEMENT: 1446 SF ACCESS EASEMENT LESS DRIVEWAY: 1446 - 1228 = 218 SF 17,317 SF **NET LOT AREA:** LOT SLOPE: 53' / 136.3' = **38.9**%

30% ALLOWABLE LOT COVERAGE: 17,317 SF X 0.30 = **5,195 SF**

EXISTING LOT COVERAGE:

≶ (E) HOUSE FOOTPRINT AND OVERHANGS 2,758 SF 3,686 SF (E) DRIVEWAY **TOTAL EXISTING LOT COVERAGE:** 6,444 SF = 37.2%10,920 SF = 62.8% (INCLUDES EXIST 1936 SF (11.1 %) HARDSCAPE)

PROPOSED LOT COVERAGE: (E) DRIVEWAY TO REMAIN

1,491 SF 626 SF **NEW DRIVEWAY** HOUSE FOOTPRINT + OVERHANGS 3555 SF 5,672 SF = 32.7% TOTAL PROPOSED LOT COVERAGE TOTAL PROPOSED LANDSCAPING: 11,592 SF = 67.3%

LOT COVERAGE 2:1 TRADE OFF CALCULATION (PER MICC 19.050 F3 biii): EXISTING LOT COVERAGE = 6,444 SF LOT COVERAGE REMOVED = 1,526 SF

2:1 LOT COVERAGE CREDIT: 1526/2 = 763 SF **ALLOWABLE LOT COVERAGE:** (6,444-1,526)+763 = 5,681 **SF**

ALLOWABLE HARDSCAPE: 17,317 X .9 = 1558.5 SF

PROPOSED HARDSCAPE: (E) HARDSCAPE TO REMAIN: (E) RETAINING WALLS: 36 SF (E) DECK: 269 SF (E) BULKHEAD LANDWARD OF OHWM: 559 SF **NEW HARDSCAPE:** 195 SF NEW PATIO/WALKWAYS: 380 SF NEW DECK: 23 SF **NEW RETAINING WALLS:**

12,000 SF OR 40% NET LOT AREA MAX R-15 ZONING MAX GFA:

1462 SF (8.4%)

7,014 SF (40%)

59'-10"

477'

ALLOWABLE GFA: 17535 x .40 =

GROSS FLOOR AREA CALCULATION:

EXISTING GFA: 2241 SF (12.9%)

MAIN FLOOR < 12' CEILING HEIGHT 556 X 1 = 556 SF 2319 SF MAIN FLOOR > 12' CEILING HEIGHT 1546 X 1.5 = 788 SF 273 SF COVERED DECK @ MAIN LEVEL: GROSS LOWER FLOOR AREA: 1,886 SF LOWER FLOOR < 12' CEILING HEIGHT 1,110 X 1 = 1,100 SF LOWER FLOOR > 12' CEILING HEIGHT 776 X 1.5 = 1,164 SF (224 SF) LOWER FLOOR BELOW GRADE NOT INCLUDED 5,976 SF (34.5%)

TOP OF PROPOSED ROOF: DISTANCE TO NEAREST FIREHYDRANT: Brandt

Design Group

66Bell Street Unit 1 Seattle, WA

98121

206.239.0850

brandtdesigninc.com

S MEI ISL

PERMIT SET

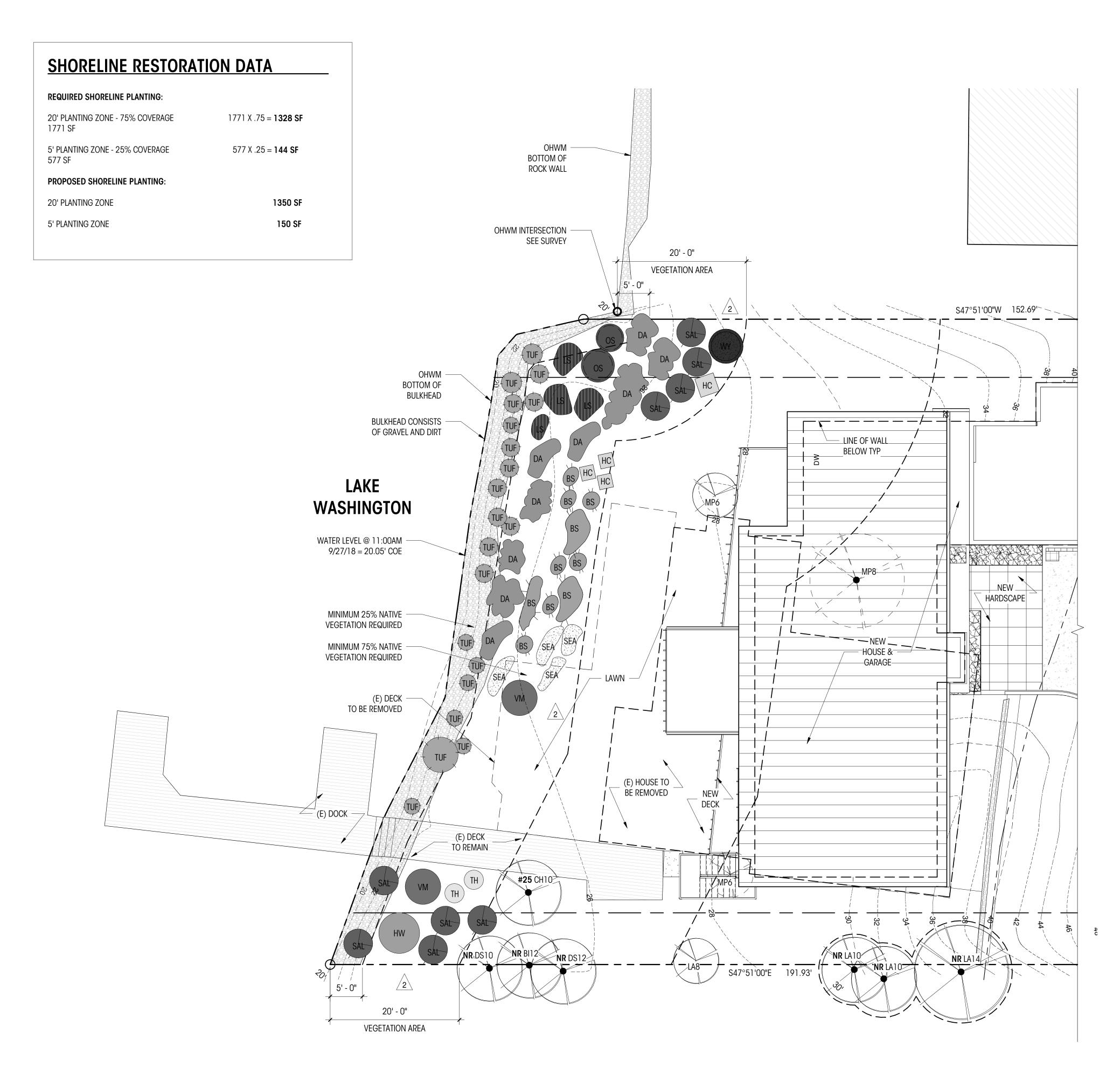
DATE: 6/12/19 SHEET SIZE: D (24X36)

REVISIONS Revision Date Number 7/18/19 10/09/19 12/20/19

Drawn by: NLD/LL/SE CHECKED BY: LL

SITE PLAN

1" = 10' -(0"



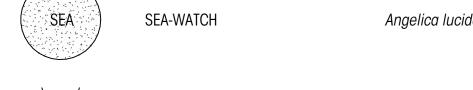
VEGITATION PLAN

1/8" = 1'-0"





SHORELINE RESTORATION PLAN LEGEND SPECIES LATIN NAME VEGETATION SPECIES COMMON NAME TUFTED HAIRGRASS Deschampsia cespitosa OCEANSPRAY Holodiscus discolor DUNEGRASS Elymus mollis LYNGBYE'S SEDGE Carex lyngbyei SEA SEA-WATCH Angelica lucida

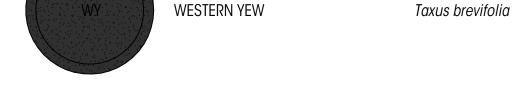




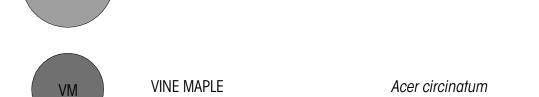
HENDERSON'S CHECKER MALLOW Sidalcea hendersonii



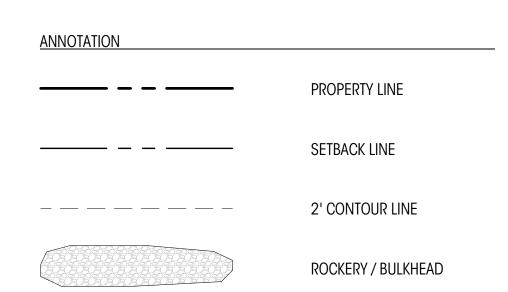




HOOKERS WILLOW



Salix hookeriana



*DEVELOPMENT PROPOSALS FOR A NEW SINGLE-FAMILY HOME SHALL REMOVE JAPANESE KNOTWEED (POLYGONUM CUSPIDATUM) AND REGULATED CLASS A, REGULATED CLASS B, AND REGULATED CLASS C WEEDS IDENTIFIED ON THE KING COUNTY NOXIOUS WEED LIST, AS AMENDED, FROM REQUIRED LANDSCAPING AREAS ESTABLISHED PURSUANT TO SUBSECTION 19.02.020(F)(3)(a). NEW LANDSCAPING ASSOCIATED WITH NEW SINGLE-FAMILY HOME SHALL NOT INCORPORATE ANY WEEDS IDENTIFIED ON THE KING COUNTY NOXIOUS WEED LIST, AS AMENDED. PROVIDED, THAT REMOVAL SHALL NOT BE REQUIRED IF THE REMOVAL WILL RESULT IN INCREASED SLOPE INSTABILITY OR RISK OF LANDSLIDE OR EROSION.

Brandt

Design Group

66Bell Street Unit 1 Seattle, WA 98121

206.239.0850

brandtdesigninc.com

SIDENCE

PERMIT SET

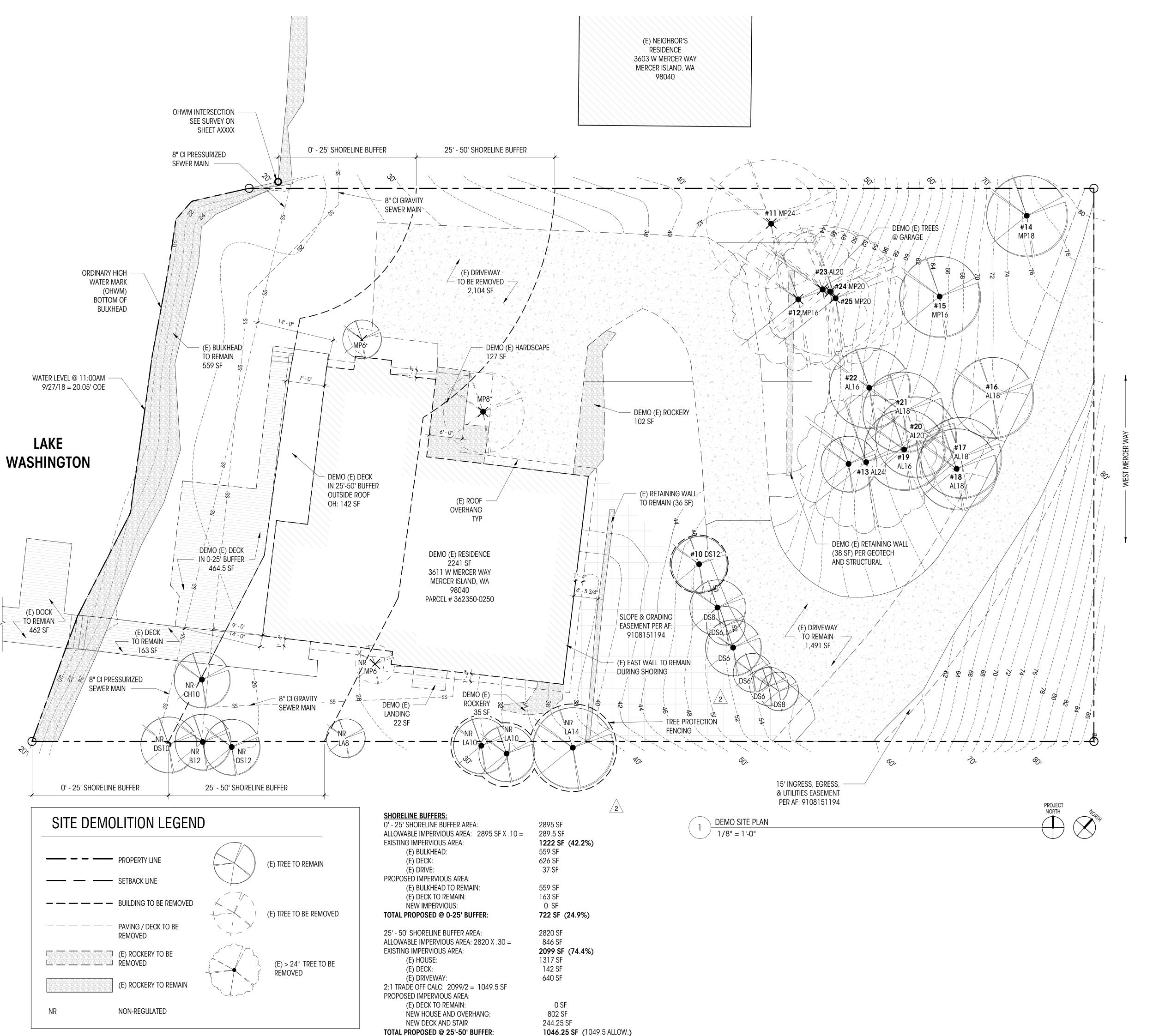
DATE: 6/12/19 SHEET SIZE: D (24X36) **REVISIONS**

Revision Date Number 7/18/19 10/09/19

DRAWN BY: NLD/LL/SE CHECKED BY: LL

SHORELINE **VEGETATION PLAN**

As indicated



GENERAL INFORMATION

PROJECT ADDRESS3611 W MERCER WAY, MERCERISLAND,WA 98040

PROJECT NUMBER

ASSESSOR'S PARCEL # 362350-0265

LEGAL DESCRIPTION

THE NORTHWESTERLY 100 FT OF SOUTHEASTERLY 1000 FT OF BLOCK "A", AS MEASURED ALONG THE NORTHEASTERLY LINE THEREOF, REPLAT OF ISLAND PARK, ACCORDING TO THE PLAT RECORDED IN VOLUME 13 OF PLATS, PAGE 58, RECORDS OF KING COUNTY, WA.

PROJECT DESCRIPTION

DEMOLITION OF (E) 2,241 SF HOUSE W/ ATTACHED GARAGE AND PORTION OF (E) DRIVEWAY, CONSTRUCTION OF NEW 3988 SINGLE FAMILY DWELLING + 788 SF ATTACHED GARAGE; CONSTRUCTION OF NEW MOTOR COURT.

ZONE R-15 **BUILDING TYPE** SINGLE FAMILY RESIDENCE

PROJECT DATA

ZONING: R-15
EXISTING LOT AREA SUMMARY:

GROSS LOT AREA: 17,535 SF
ACCESS EASEMENT: 1446 SF
ACCESS EASEMENT LESS DRIVEWAY: 1446 - 1228 = 218 SF
NET LOT AREA: 17,317 SF
LOT SLOPE: 53' / 136.3' = **38.9**%

30% ALLOWABLE LOT COVERAGE: 17,317 SF X 0.30 = **5,195 SF**

EXISTING LOT COVERAGE:

(E) HOUSE FOOTPRINT AND OVERHANGS
2,758 SF
(E) DRIVEWAY
3,686 SF

TOTAL EXISTING LOT COVERAGE:
6,444 SF = 37.2%
TOTAL EXISTING LANDSCAPING:
(INCLUDES EXIST 1936 SF (11.1 %) HARDSCAPE)

PROPOSED LOT COVERAGE:

(E) DRIVEWAY TO REMAIN

NEW DRIVEWAY

626 SF

HOUSE FOOTPRINT + OVERHANGS

TOTAL PROPOSED LOT COVERAGE:

TOTAL PROPOSED LANDSCAPING:

(INCLUDES 1462 SF (8.4%) HARDSCAPE)

LOT COVERAGE 2:1 TRADE OFF CALCULATION (PER MICC 19.050 F3 biii): EXISTING LOT COVERAGE = 6,444 SF LOT COVERAGE REMOVED = 1,526 SF 2:1 LOT COVERAGE CREDIT: 1526/2 = 763 SF ALLOWABLE LOT COVERAGE: (6,444-1,526)+763 = 5,681 SF

ALLOWABLE HARDSCAPE: 17,317 X .9 = **1558.5 SF**

PROPOSED HARDSCAPE:

(E) HARDSCAPE TO REMAIN:

(E) RETAINING WALLS:

(E) DECK:

(E) BULKHEAD LANDWARD OF OHWM:

NEW HARDSCAPE:

NEW PATIO/WALKWAYS:

195 SF

NEW DECK: 380 SF
NEW RETAINING WALLS: 23 SF

TOTAL PROPOSED HARDSCAPE: 1462 SF (8.4%)

R-15 ZONING MAX GFA: 12,000 SF OR 40% NET LOT AREA MAX

ALLOWABLE GFA: $17535 \times .40 = 7,014 \text{ SF } (40\%)$

GROSS FLOOR AREA CALCULATION: EXISTING GFA:

EXISTING GFA: **2241 SF (12.9%)**MAIN FLOOR < 12' CEILING HEIGHT 556 X 1 = 556 SF

MAIN FLOOR > 12' CEILING HEIGHT 1546 X 1.5 = 2319 SF GARAGE: 788 SF COVERED DECK @ MAIN LEVEL: 273 SF GROSS LOWER FLOOR AREA: 1,886 SF LOWER FLOOR < 12' CEILING HEIGHT 1,110 X 1 = 1,100 SF LOWER FLOOR > 12' CEILING HEIGHT 776 X 1.5 = 1,164 SF LOWER FLOOR BELOW GRADE NOT INCLUDED (224 SF) TOTAL PROPOSED GFA: 5,976 SF (34.5%)

TOP OF PROPOSED ROOF: 59'-10"
DISTANCE TO NEAREST FIREHYDRANT: 477'

Brandt

Design Group

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206.239.0850

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U

YUAN RESID 3611 W MERCER ISLAND, WA 98040

PERMIT SET

DATE: 6/12/19

SHEET SIZE: D (24X36)

REVISIONS

Revision
Number
Date

10/09/19

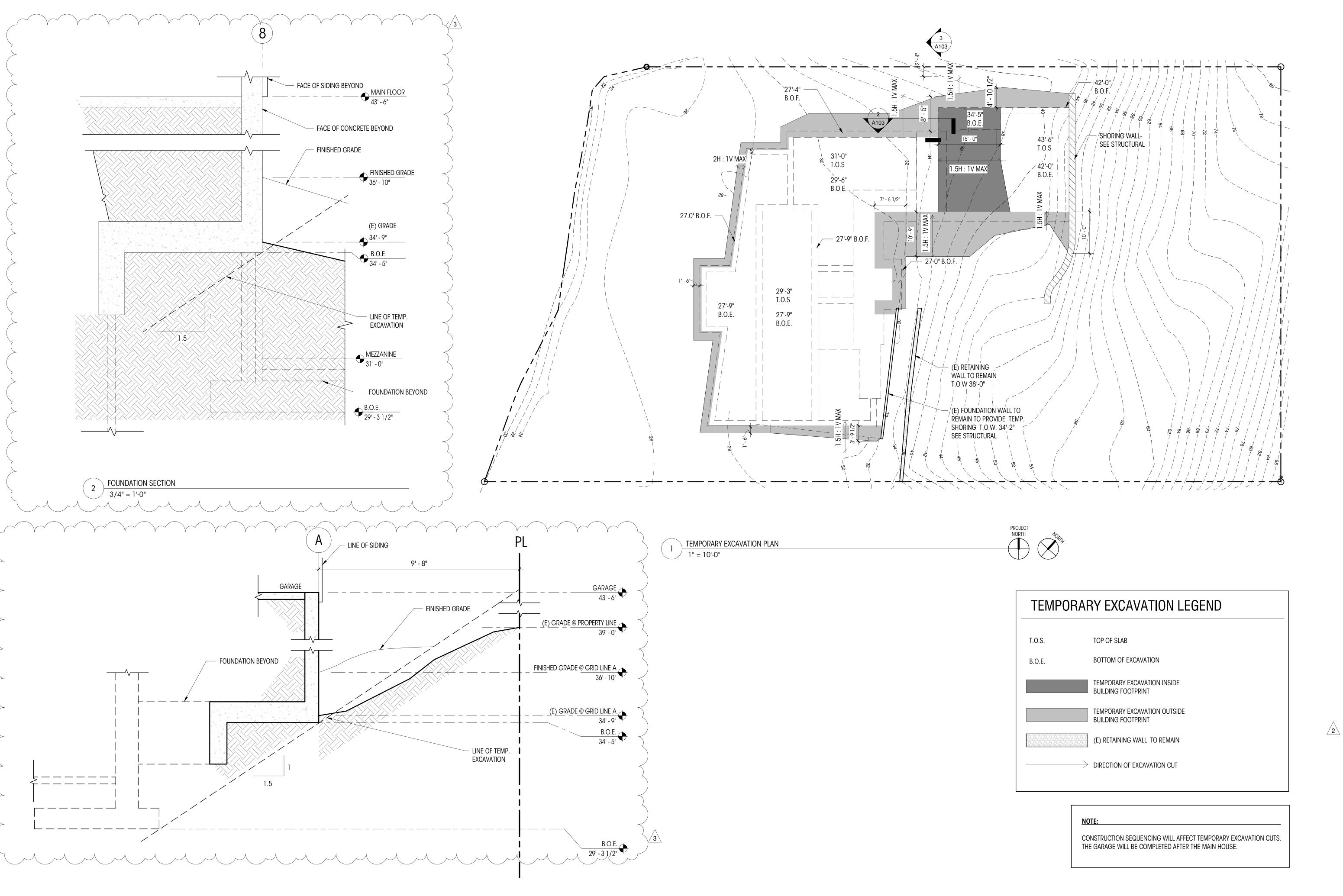
Drawn by: NLD/LL/SE

DEMO SITE PLAN

CHECKED BY: LL

As indicated

D100



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206.239.0850

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YUAN RESIDENCE
3611 W MERCER WAY,
MERCER ISLAND, WA 98040

PERMIT SET

DATE: 10/9/19
SHEET SIZE: D (24X36)
REVISIONS

Revision Number Date
1 7/18/19
2 10/09/19
3 12/20/19

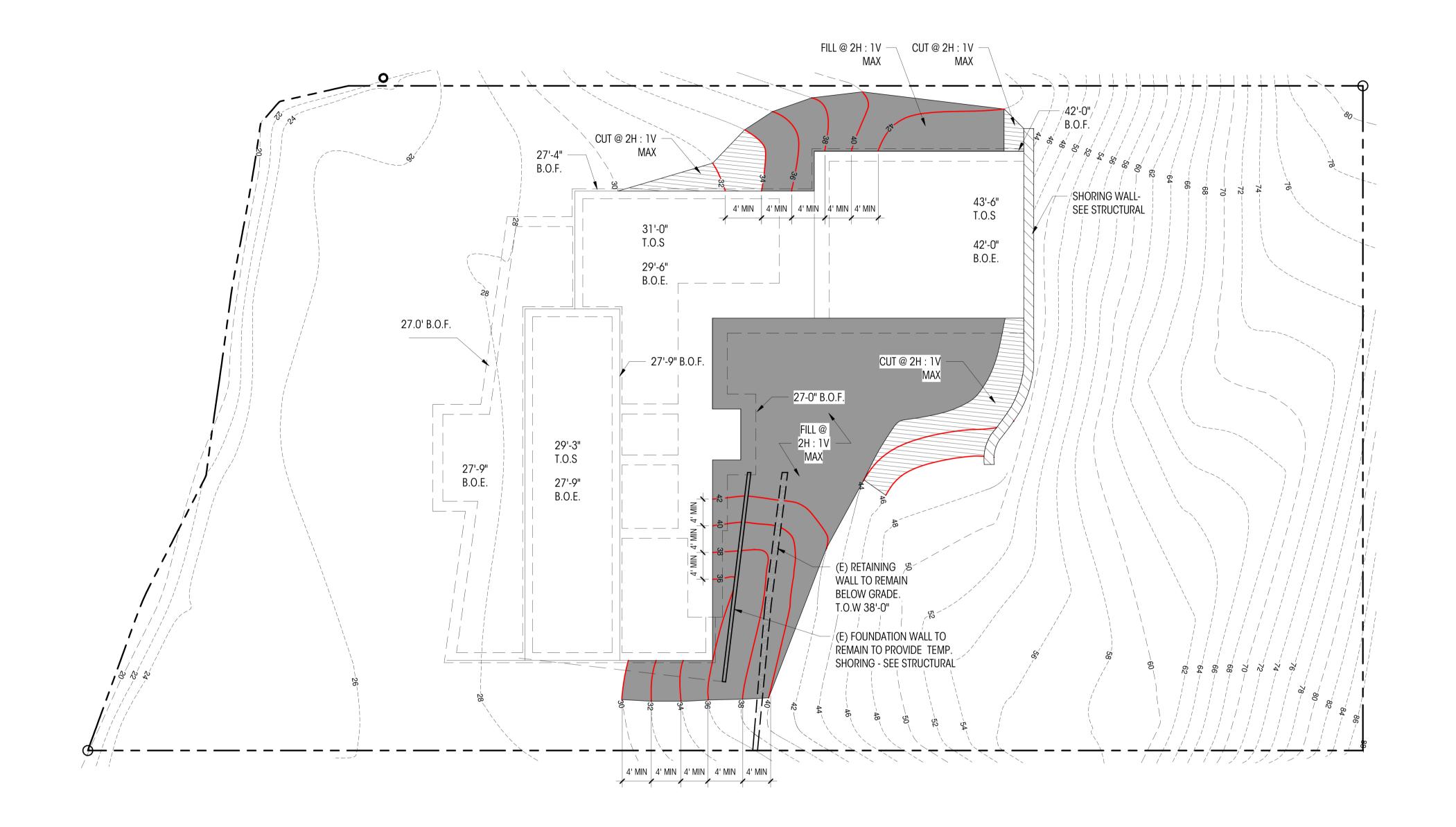
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CHECKED BY: LL

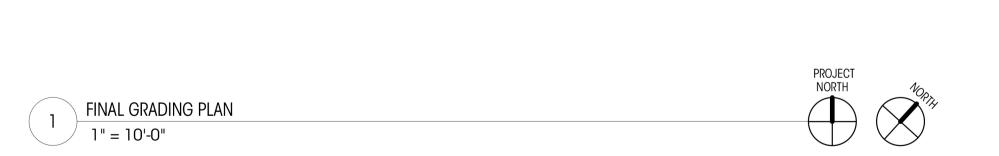
TEMPORARY EXCAVATION PLAN

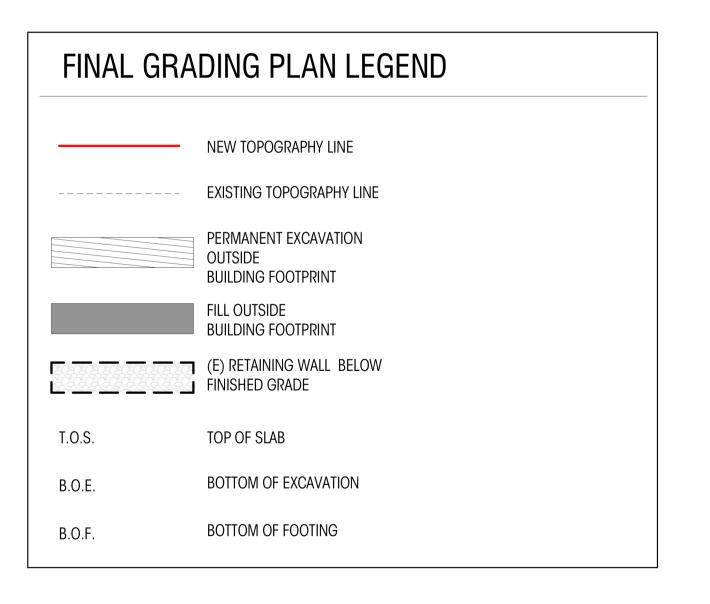
SCALE: As indicated

A103

3 FOUNDATION SITE SECTION
1/2" = 1'-0"







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206.239.0850

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RESIDENCE 3611 W MERC MERCER ISLAN

PERMIT SET

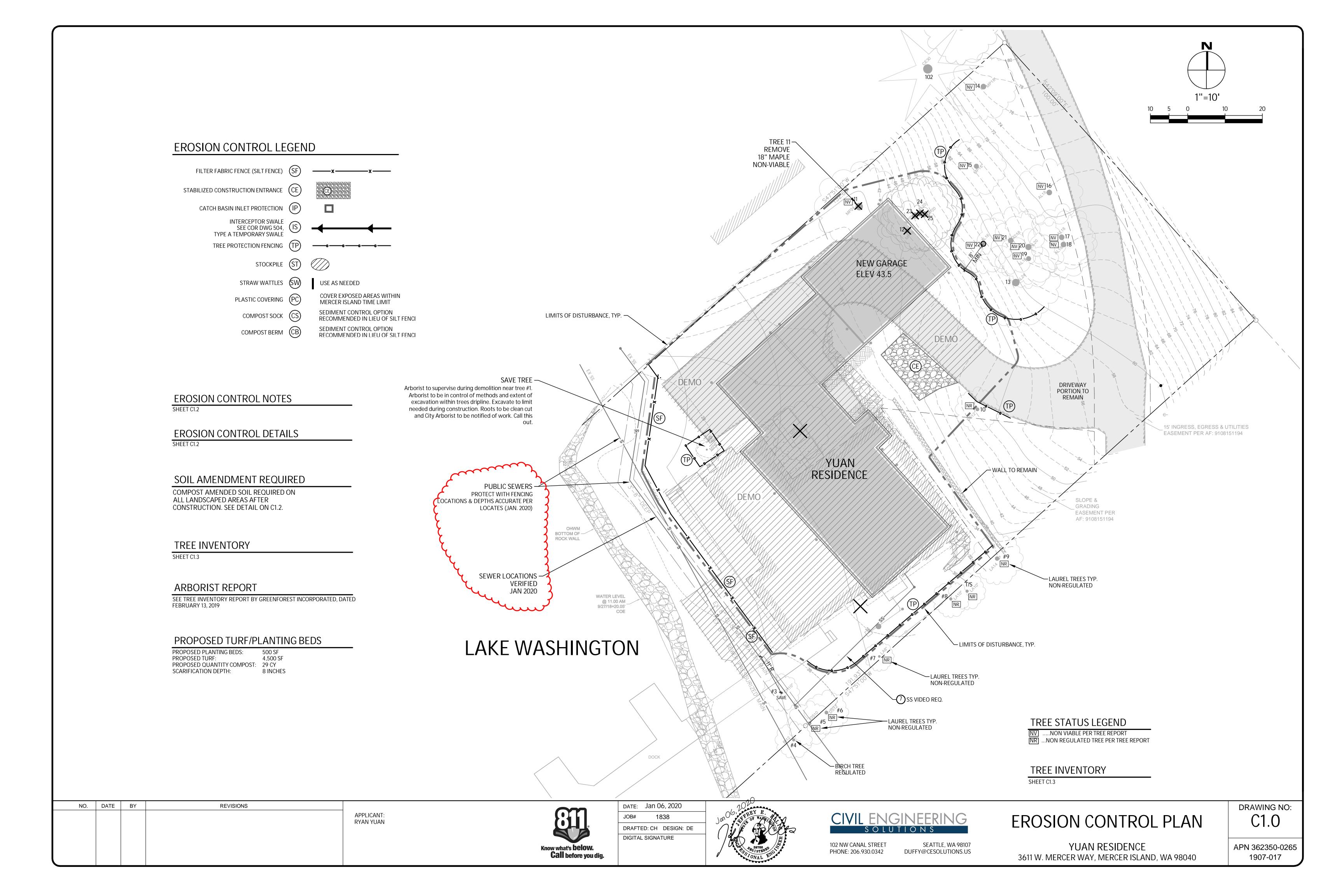
DATE: 10/9/19 SHEET SIZE: D (24X36) **REVISIONS** Revision Number Date

10/09/19

DRAWN BY: NLD/LL/SE CHECKED BY: LL

FINAL GRADING PLAN

SCALE: As indicated

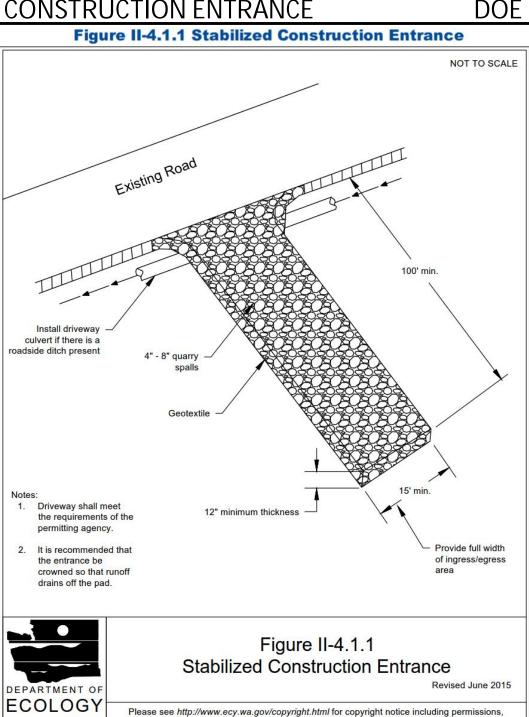


2014 Stormwater Management Manual for Western Washington Volume II - Chapter 4 - Page 369

CONSTRUCTION ENTRANCE

APPLICANT:

RYAN YUAN



2014 Stormwater Management Manual for Western Washington Volume II - Chapter 4 - Page 273

REVISIONS

NO. DATE BY

RECOMMENDED CONSTRUCTION SEQUENCE

A DETAILED CONSTRUCTION SEQUENCE IS NEEDED TO ENSURE THAT EROSION AND SEDIMENT CONTROL MEASURES ARE APPLIED AT THE APPROPRIATE TIMES. A RECOMMENDED CONSTRUCTION SEQUENCE IS PROVIDED BELOW:

1. HOLD AN ONSITE PRE-CONSTRUCTION MEETING.

2. POST SIGN WITH NAME AND PHONE NUMBER OF ESC SUPERVISOR (MAY BE CONSOLIDATED WITH THE REQUIRED NOTICE OF CONSTRUCTION SIGN).

3. FLAG OR FENCE CLEARING LIMITS.

4. INSTALL CATCH BASIN PROTECTION, IF REQUIRED

5. GRADE AND INSTALL CONSTRUCTION ENTRANCE(S).

6. INSTALL PERIMETER PROTECTION (SILT FENCE, BRUSH BARRIER, ETC.).

CONSTRUCT SEDIMENT PONDS AND TRAPS.

8. GRADE AND STABILIZE CONSTRUCTION ROADS.

9. CONSTRUCT SURFACE WATER CONTROLS (INTERCEPTOR DIKES, PIPE SLOPE DRAINS, ETC.) SIMULTANEOUSLY WITH CLEARING AND GRADING FOR PROJECT DEVELOPMENT.

10. MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH CITY OF MERCER ISLAND STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.

11. RELOCATE SURFACE SURFACE WATER CONTROLS OR TESC MEASURES, OR INSTALL NEW MEASURES SO THAT AS SITE CONDITIONS CHANGE, THE TESC IS ALWAYS IN ACCORDANCE WITH CITY OF MERCER ISLAND TESC REQUIREMENTS.

12. COVER ALL AREAS THAT WILL BE UN-WORKED FOR MORE THAN SEVEN DAYS DURING THE DRY SEASON (MAY 1 TO SEPT 30) OR TWO DAYS DURING THE WET SEASON (OCT 1 TO APRIL 30) WITH STRAW, WOOD FIBER MULCH, COMPOST, PLASTIC SHEETING, OR EQUIVALENT.

13. STABILIZE ALL AREAS WITHIN SEVEN DAYS OF REACHING FINAL GRADE.

14. SEED, SOD, STABILIZE, OR COVER ANY AREAS TO REMAIN UNWORKED FOR MORE THAN 30 DAYS.

15. UPON COMPLETION OF THE PROJECT, STABILIZE ALL DISTURBED AREAS AND REMOVE BMPS IF APPROPRIATE.

DENUDED AREAS REQUIREMENTS

APRIL 1 TO SEPT 30 ALL DENUDED AREAS MUST BE STABILIZED WITHIN 7 DAYS OF CONSTRUCTION. PLEASE READ ALL CITY TESC NOTES ON SHEET C1.2.

OCT 1 TO MARCH 31

ALL DENUDED AREAS MUST BE STABILIZED WITHIN 2 DAYS OF GRADING. IF AN EROSION PROBLEM ALREADY EXISTS ON THE SITE, OTHER COVER PROTECTION AND EROSION CONTROL WILL BE REQUIRED.

EROSION CONTROL NOTES

D.8.2 STANDARD ESC PLAN NOTES

THE STANDARD ESC PLAN NOTES MUST BE INCLUDED ON ALL ESC PLANS. AT THE APPLICANT'S DISCRETION, NOTES THAT IN NO WAY APPLY TO THE PROJECT MAY BE OMITTED; HOWEVER, THE REMAINING NOTES MUST NOT BE RENUMBERED. FOR EXAMPLE, IF ESC NOTE #3 WERE OMITTED, THE REMAINING NOTES SHOULD BE NUMBERED 1, 2, 4, 5,

1. APPROVAL OF THIS EROSION AND SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G., SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES,

2. THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/ESC

SUPERVISOR UNTIL ALL CONSTRUCTION IS APPROVED. 3. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY

FLAGGED BY SURVEY TAPE OR FENCING, IF REQUIRED, PRIOR TO CONSTRUCTION (SWDM APPENDIX D). DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE CLEARING LIMITS SHALL BE PERMITTED. THE CLEARING LIMITS SHALL BE MAINTAINED BY THE APPLICANT/ESC SUPERVISOR FOR THE DURATION OF CONSTRUCTION.

4. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES, SUCH AS CONSTRUCTED WHEEL WASH SYSTEMS OR WASH PADS, MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN AND TRACK OUT TO ROAD RIGHT OF WAY DOES NOT OCCUR FOR THE DURATION OF THE PROJECT.

5. THE ESC 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.

6. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND MODIFIED TO ACCOUNT FOR CHANGING SITE CONDITIONS (E.G. ADDITIONAL COVER MEASURES, ADDITIONAL SUMP PUMPS, RELOCATION OF DITCHES AND SILT FENCES, PERIMETER PROTECTION ETC.) AS DIRECTED BY CITY OF MERCER ISLAND.

7. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/ESC SUPERVISOR AND MAINTAINED TO ENSURE CONTINUED PROPER FUNCTIONING. WRITTEN RECORDS SHALL BE KEPT OF WEEKLY REVIEWS OF THE ESC FACILITIES.

8. ANY AREAS OF EXPOSED SOILS, INCLUDING ROADWAY EMBANKMENTS, THAT WILL NOT BE DISTURBED FOR TWO CONSECUTIVE DAYS DURING THE WET SEASON OR SEVEN DAYS DURING THE DRY SEASON SHALL BE IMMEDIATELY STABILIZED WITH THE APPROVED ESC METHODS (E.G., SEEDING, MULCHING, PLASTIC COVERING, ETC.).

9. ANY AREA NEEDING ESC MEASURES THAT DO NOT REQUIRE IMMEDIATE ATTENTION SHALL BE ADDRESSED WITHIN SEVEN (7) DAYS.

10. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH DURING THE DRY SEASON, BI-MONTHLY DURING THE WET SEASON, OR WITHIN TWENTY FOUR (24) HOURS FOLLOWING A STORM EVENT.

11. 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 PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT-LADEN WATER INTO THE DOWNSTREAM SYSTEM.

12. ANY PERMANENT RETENTION/DETENTION FACILITY USED AS A TEMPORARY SETTLING BASIN SHALL BE MODIFIED WITH THE NECESSARY EROSION CONTROL MEASURES AND SHALL PROVIDE ADEQUATE STORAGE CAPACITY. IF THE FACILITY IS TO FUNCTION ULTIMATELY AS AN INFILTRATION SYSTEM, THE TEMPORARY FACILITY MUST BE ROUGH GRADED SO THAT THE BOTTOM AND SIDES ARE AT LEAST THREE FEET ABOVE THE FINAL GRADE OF THE PERMANENT FACILITY.

13. COVER MEASURES WILL BE APPLIED IN CONFORMANCE WITH APPENDIX D OF THE SURFACE WATER DESIGN MANUAL

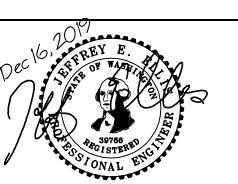
14. PRIOR TO THE BEGINNING OF THE WET SEASON (OCT. 1), ALL DISTURBED AREAS SHALL BE REVIEWED TO IDENTIFY WHICH ONES CAN BE SEEDED IN PREPARATION FOR THE WINTER RAINS. DISTURBED AREAS SHALL BE SEEDED WITHIN ONE WEEK OF THE BEGINNING OF THE WET SEASON.

CITY NOTES

- ANY CHANGES TO THE APPROVED PLANS REQUIRES CITY APPROVAL THROUGH A REVISION.
- 2. APPLICANT IS RESPONSIBLE FOR ANY DAMAGES TO UNDERGROUND UTILITIES CAUSED FROM THIS CONSTRUCTION.
- CATCH BASIN FILTERS SHOULD BE PROVIDED FOR ALL STORM DRAIN CATCH BASINS/INLETS DOWNSLOPE AND WITHIN 500 FEET OF THE CONSTRUCTION AREA. CATCH BASIN FILTERS SHOULD BE DESIGNED BY THE MANUFACTURER FOR USE AT CONSTRUCTION SITES AND APPROVED BY THE CITY INSPECTOR. CATCH BASIN FILTERS SHOULD BE INSPECTED FREQUENTLY, ESPECIALLY AFTER STORM EVENTS. IF THE FILTER BECOMES CLOGGED, IT SHOULD BE CLEANED OR REPLACED.
- 4. CONTRACTORS SHALL VERIFY LOCATIONS AND DEPTHS OF UTILITES.
- 5. AT LEAST 48 HOURS PRIOR TO CONSTRUCTION, CALL "ONE CALL" AT 1.800.424.5555
- DO NOT BACKFILL WITH NATIVE MATERIAL ON PUBLIC RIGHT-OF-WAY. ALL MATERIAL MUST BE IMPORTED
- EROSION CONTROL: ALL "LAND DISTURBING ACTIVITY" IS SUBJECT TO PROVISIONS OF MERCER ISLAND ORDINANCE 95C-118 "STORM WATER MANAGEMENT." SPECIFIC ITEMS TO BE FOLLOWED AT YOUR SITE:
- PROTECT ADJACENT PROPERTIES FROM ANY INCREASED RUNOFF OR SEDIMENTATION DUE TO THE CONSTRUCTION PROJECT THROUGH THE USE OF APPROPRIATE "BEST MANAGEMENT PRACTICES" (BMP) EXAMPLES INCLUDE, BUT ARE NOT LIMITED TO, SEDIMENT TRAPS, SEDIMENT PONDS, FILTER FABRIC FENCES, VEGETATIVE BUFFER STRIPS OR BIOENGINEERED SWALES.
- CONSTRUCTION ACCESS TO THE SITE SHOULD BE LIMITED TO ONE ROUTE. STABILIZE ENTRANCE WITH QUARRY SPALLS TO PREVENT SEDIMENT FROM LEAVING THE SITE OR ENTERING THE STORM DRAINS.
- 10. PREVENT SEDIMENT, CONSTRUCTION DEBRIS, PAINTS, SOLVENTS, ETC., OR OTHER TYPES OF POLLUTION FROM ENTERING PUBLIC STORM DRAINS. KEEP ALL POLLUTION ON YOUR SITE.
- ALL EXPOSED SOILS SHALL REMAIN DENUDED FOR NO LONGER THAN SEVEN (7) DAYS AND SHALL BE STABILIZED WITH MULCH, HAY, OR THE APPROPRIATE GROUND COVER. ALL EXPOSED SOILS SHALL BE COVERED IMMEDIATELY DURING ANY RAIN EVENT.
- INSTALLATION OF CONCRETE DRIVEWAYS, TREES, SHRUBS, IRRIGATION, BOULDERS, BERMS, WALLS, GATES, AND OTHER IMPROVEMENTS ARE NOT ALLOWED IN THE PUBLIC RIGHT-OF-WAY WITHOUT PRIOR APPROVAL, AND AN ENCROACHMENT AGREEMENT AND RIGHT OF WAY PERMIT FROM THE SENIOR DEVELOPMENT ENGINEER.
- OWNER SHALL CONTROL DISCHARGE OF SURFACE DRAINAGE RUNOFF FROM EXISTING AND NEW IMPERVIOUS AREAS IN A RESPONSIBLE MANNER. CONSTRUCTION OF NEW GUTTERS AND DOWNSPOUTS, DRY WELLS, LEVEL SPREADERS OR DOWNSTREAM CONVEYANCE PIPE MAY BE NECESSARY TO MINIMIZE DRAINAGE IMPACT TO YOUR NEIGHBORS. CONSTRUCTION OF MINIMUM DRAINAGE IMPROVEMENTS SHOWN OR CALLED OUT ON THIS PLAN DOES NOT IMPLY RELIEF FROM CIVIL LIABILITY FOR YOUR DOWNSTREAM DRAINAGE.
- 14. POT HOLING THE PUBLIC UTILITIES IS REQUIRED PRIOR TO ANY GRADING ACTIVITIES LESS THAN 6" OVER THE PUBLIC MAINS (WATER, SEWER AND STORM SYSTEMS). IF THERE IS A CONFLICT, THE APPLICANT IS REQUIRED TO SUBMIT A REVISION FOR APPROVAL PRIOR TO ANY GRADING ACTIVITIES OVER THE PUBLIC
- 15. REMEMBER: EROSION CONTROL IS YOUR FIRST INSPECTION.
- 16. ROOF DRAINS MUST BE CONNECTED TO THE STORM DRAIN SYSTEM AND INSPECTED BY THE PUBLIC WORKS DEPARTMENT PRIOR TO ANY BACKFILLING OF PIPE.
- 17. SILENT FENCE: CLEAN AND PROVIDE REGULAR MAINTENANCE OF THE SILT FENCE. THE FENCE IS TO REMAIN VERTICAL AND IS TO FUNCTION PROPERLY THROUGHOUT THE TERM OF THE PROJECT.
- 18. WORK IN PUBLIC RIGHT OF WAY REQUIRES A RIGHT-OF-WAY USE PERMIT.
- REFER TO WATER SERVICE PERMIT FOR ACTUAL LOCATION OF NEW WATER METER AND SERVICE LINE DETERMINED BY MERCER ISLAND WATER DEPARTMENT.
- 16. THE TV INSPECTION OF THE EXISTING SIDE SEWER TO THE CITY SEWER MAIN IS REQUIRED. IF THE RESULT OF THE TV INSPECTION IS NOT IN SATISFACTORY CONDITION, AS DETERMINED BY THE CITY OF MERCER ISLAND INSPECTOR, THE REPLACEMENT OF THE EXISTING SIDE SEWER IS REQUIRED. ALTERNATELY, A PRESSURE TEST OF THE SIDE SEWER, FROM SEWER MAIN TO POINT OF CONNECTION, MAY BE SUBSTITUTED FOR THE VIDEO INSPECTION.
- 20. NEWLY INSTALLED SIDE SEWER REQUIRES A 4 P.S.I. AIR TEST OR PROVIDE 10' OF HYDROSTATIC HEAD TEST.
- 21. POT HOLING THE PUBLIC UTILITIES IS REQUIRED PRIOR TO ANY GRADING ACTIVITIES LESS THAN 6" OVER THE PUBLIC MAINS (WATER, SEWER AND STORM SYSTEMS). IF THERE IS A CONFLICT, THE APPLICANT IS REQUIRED TO SUBMIT A REVISION FOR APPROVAL PRIOR TO ANY GRADING ACTIVITIES OVER THE PUBLIC
- 22. THE LIMITS AND EXTENDS OF THE PAVEMENT IN THE PUBLIC RIGHT OF WAY SHALL BE DETERMINED BY THE CITY ENGINEER PRIOR TO FINALIZE THE PROJECT.



DATE: Dec 16, 2019 JOB# 1838 DRAFTED: CH DESIGN: DE **DIGITAL SIGNATURE**





SEATTLE, WA 98107 DUFFY@CESOLUTIONS.US TESC & CITY NOTES TESC DETAILS

YUAN RESIDENCE

3611 W. MERCER WAY, MERCER ISLAND, WA 98040

DRAWING NO:

APN 362350-0265 1907-017

102 NW CANAL STREET PHONE: 206.930.0342

TREE INVENTORY 1 4.8,2.9, 3.7" Vine maple, Acer circinatum Stumpsprout, Acer circinatum multiple stems Japanese maple, 2 14.5" 13' 1 2 obstruction, roots Yes D Acer palmatum are soil surface Kwanzan flowering ch. P. serrulata 'Kwanzan' 11' 3 3 Diseased, decay, 3 10.8" European white birch, 15' 1 2 lvy 4 12.7" Betula pendula 7 4.5,6,8" 10.9" Portugal laurel, **NOT A REGULATED SPECIES 8** 6,7,9" 12.8" Prunus lusitanica Bigleaf maple, 20' 1 3 canopy, sweep, rootplate failure Acer macrophyllum 27.3" Bigleaf maple, ivy, perched on Acer macrophyllum Branch decline, 18' 2 2 Alnus rubra lean, ivy Stumpsprout, 10' 1 3 diseased, decay, NO D 12" Acer macrophyllum Bigleaf maple, **15** 16.5" Acer macrophyllum 15' 2 3 12' 2 3 Branch dieback, NO D 12' 2 3 asymmetric, very NO D Red alder, 16' 2 3 dense ivy covering NO D Alnus rubra 18' 2 3 nearly the entire NO D 16 2 3 tree NO D 16' 3 3 Tree NO D 14' 3 3 NO D 20' 2 2 Lean, asymmetric, ivy, perched on Yes D Bigleaf maple, 23 20" retaining wall Lean, asymmetric, Red alder, ivy, perched on Alnus rubra retaining wall Multiple leaders, 2 ivy, perched on Yes D Acer macrophyllum retaining wall Bigleaf maple, Acer macrophyllum Western red-cedar, Offsite Remove or Retain Status: Project is still in the design phase and tree status will be indicated in these columns by onwer. QMD - quadratic mean diameter in inches.

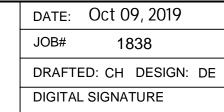
Know what's **below. Call** before you dig.

NO. DATE BY

REVISIONS

APPLICANT:

RYAN YUAN

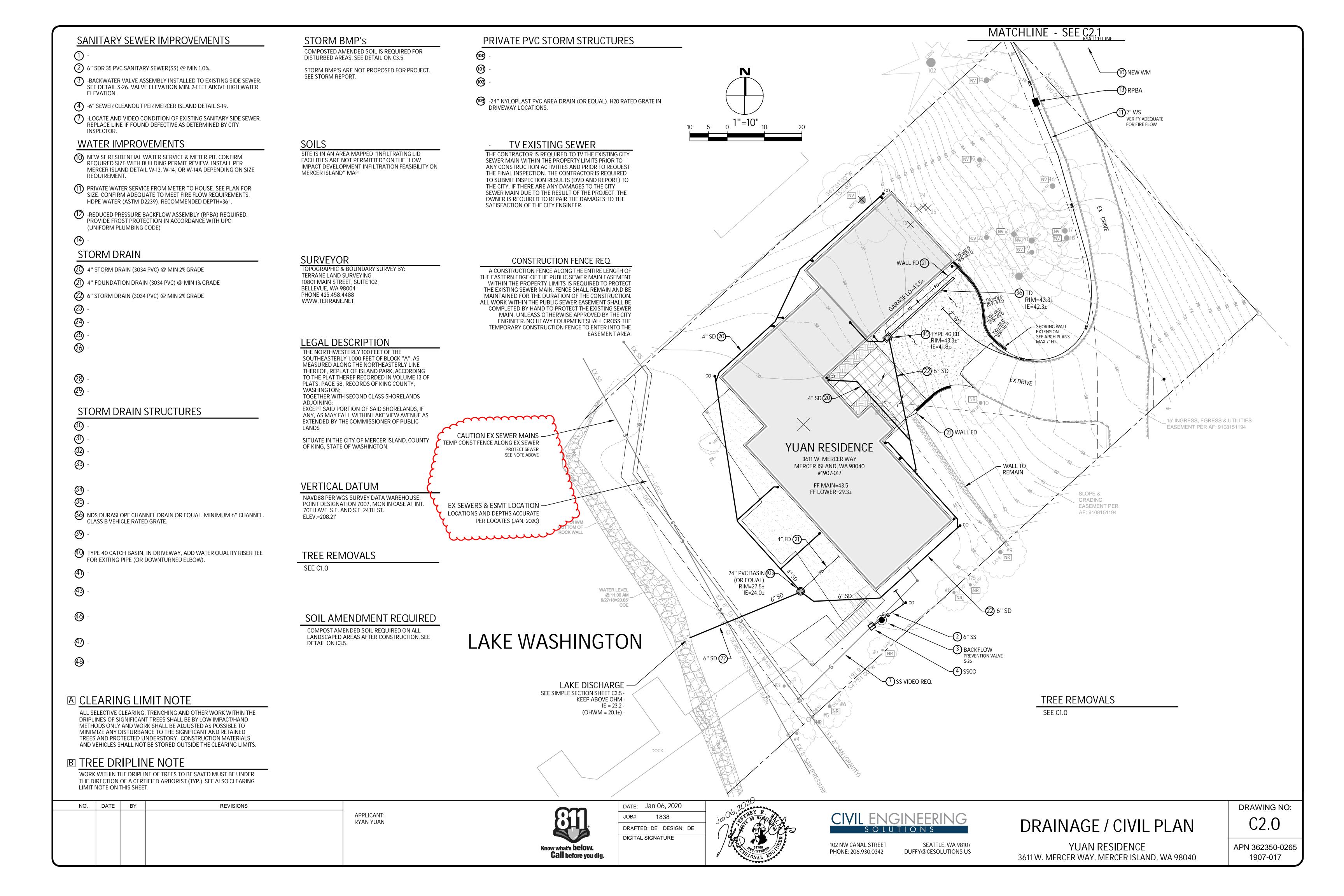


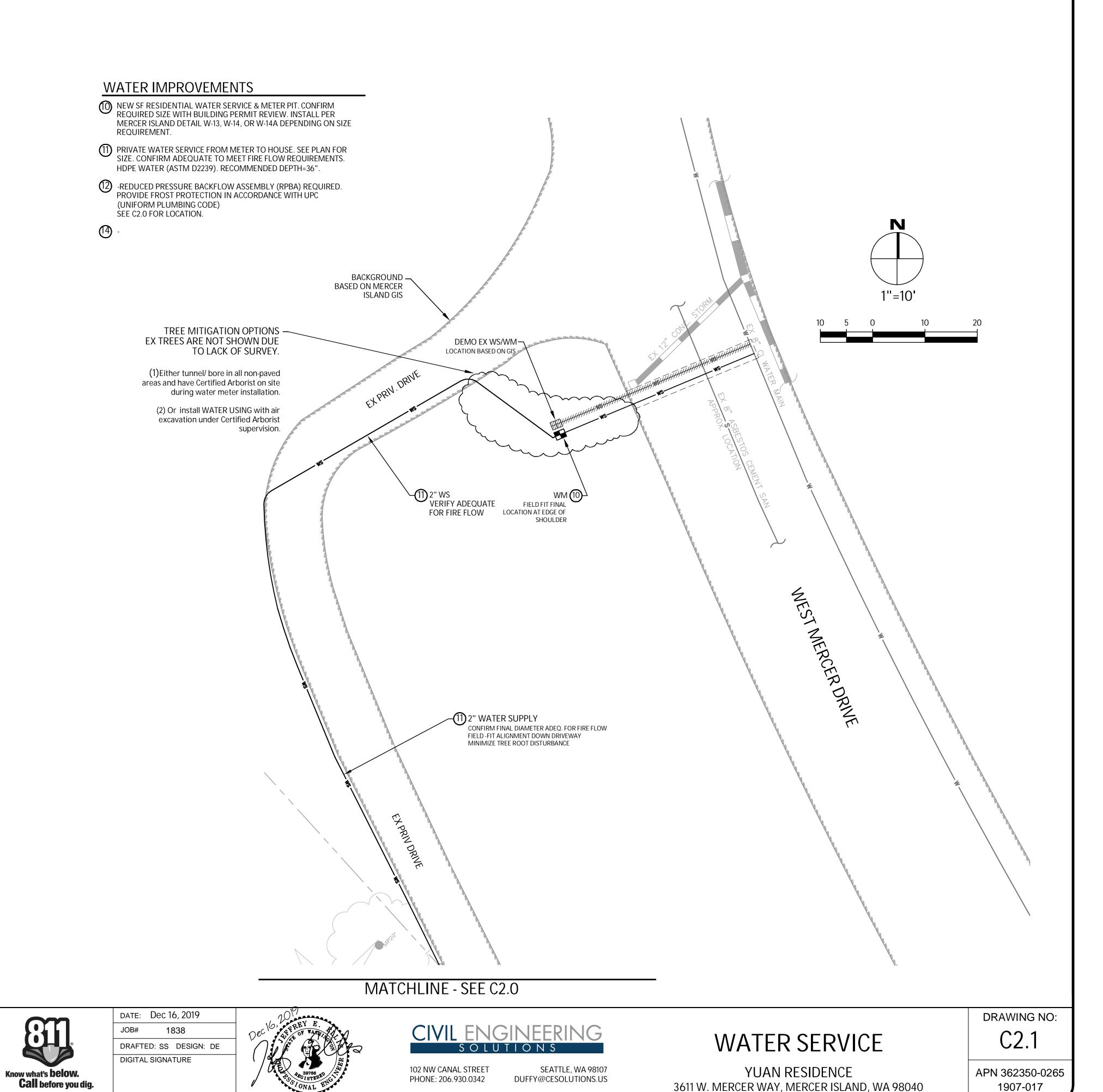


TREE INVENTORY

DRAWING NO:

3611 W. MERCER WAY, MERCER ISLAND, WA 98040





3611 W. MERCER WAY, MERCER ISLAND, WA 98040

1907-017

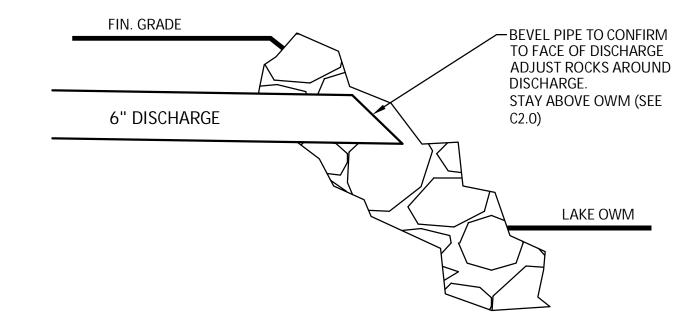
NO. DATE BY

REVISIONS

APPLICANT:

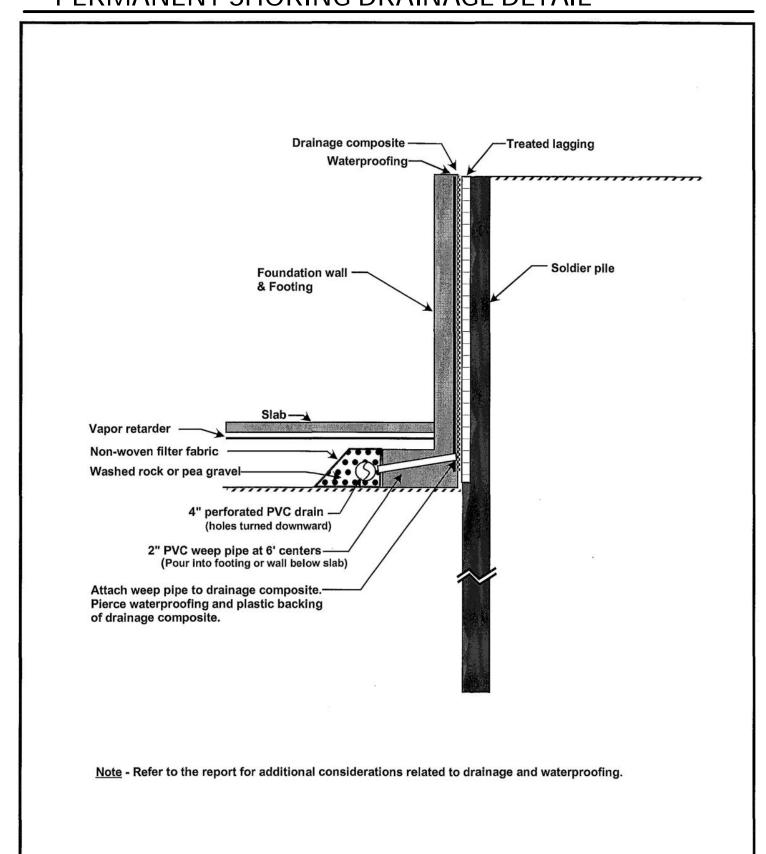
RYAN YUAN

PIPE @ LAKE DISCHARGE

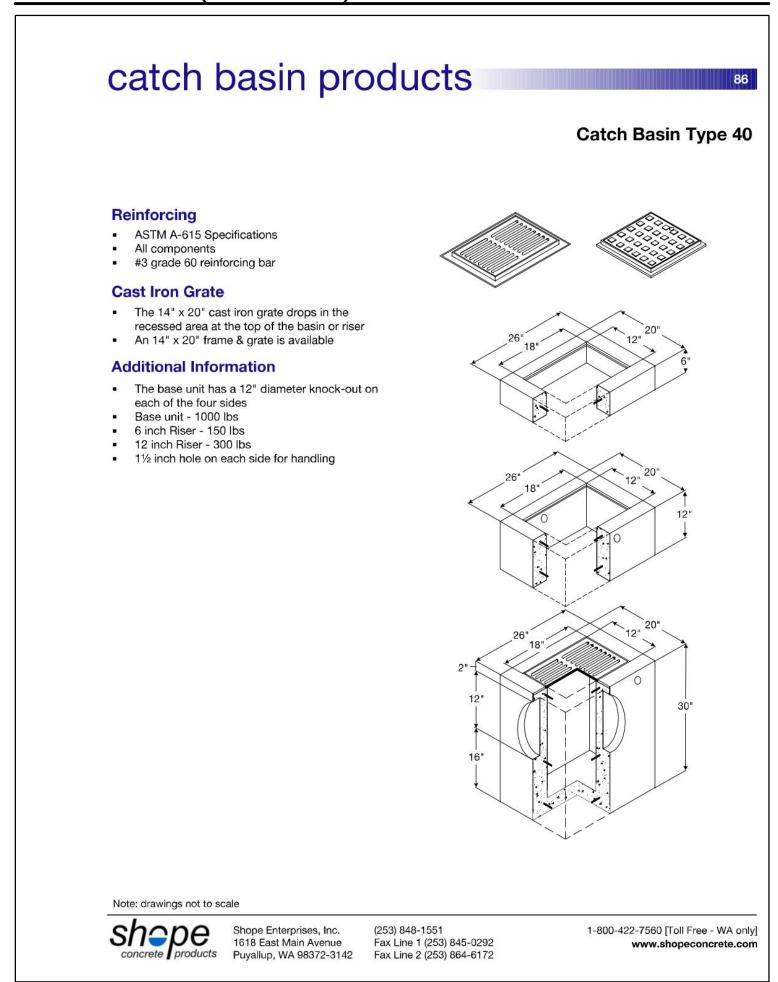


THE LAWN AND LANDSCAPE AREAS ARE REQUIRED TO PROVIDE POST-CONSTRUCTION SOIL QUALITY AND DEPTH IN ACCORDANCE WITH BMP T5.13. THE PROJECT CIVIL ENGINEER MUST PROVIDE A LETTER OF CERTIFICATION TO ENSURE THAT THE LAWN ADN LANDSCAPE AREAS ARE MEETING THE POST-CONSTRUCTION SOIL QUALITY AND DEPTH REQUIREMENTS SPECIFIED ON THE APPROVED PLAN SET PRIOR TO FINAL INSPECTION OF THE PROJECT.

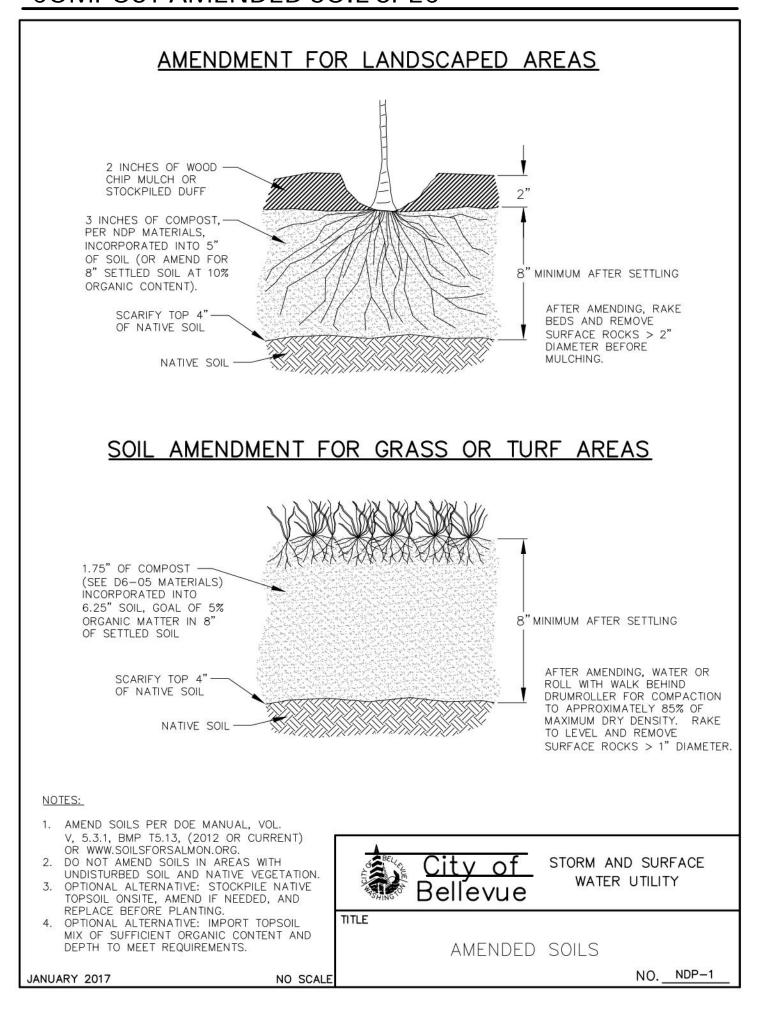
PERMANENT SHORING DRAINAGE DETAIL



TYPE 40 CB (OR EQUAL)



COMPOST AMENDED SOIL SPEC



NO. DATE BY REVISIONS

APPLICANT:
RYAN YUAN

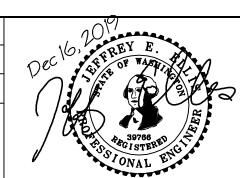


DATE: Dec 16, 2019

JOB# 1838

DRAFTED: SS DESIGN: SS

DIGITAL SIGNATURE





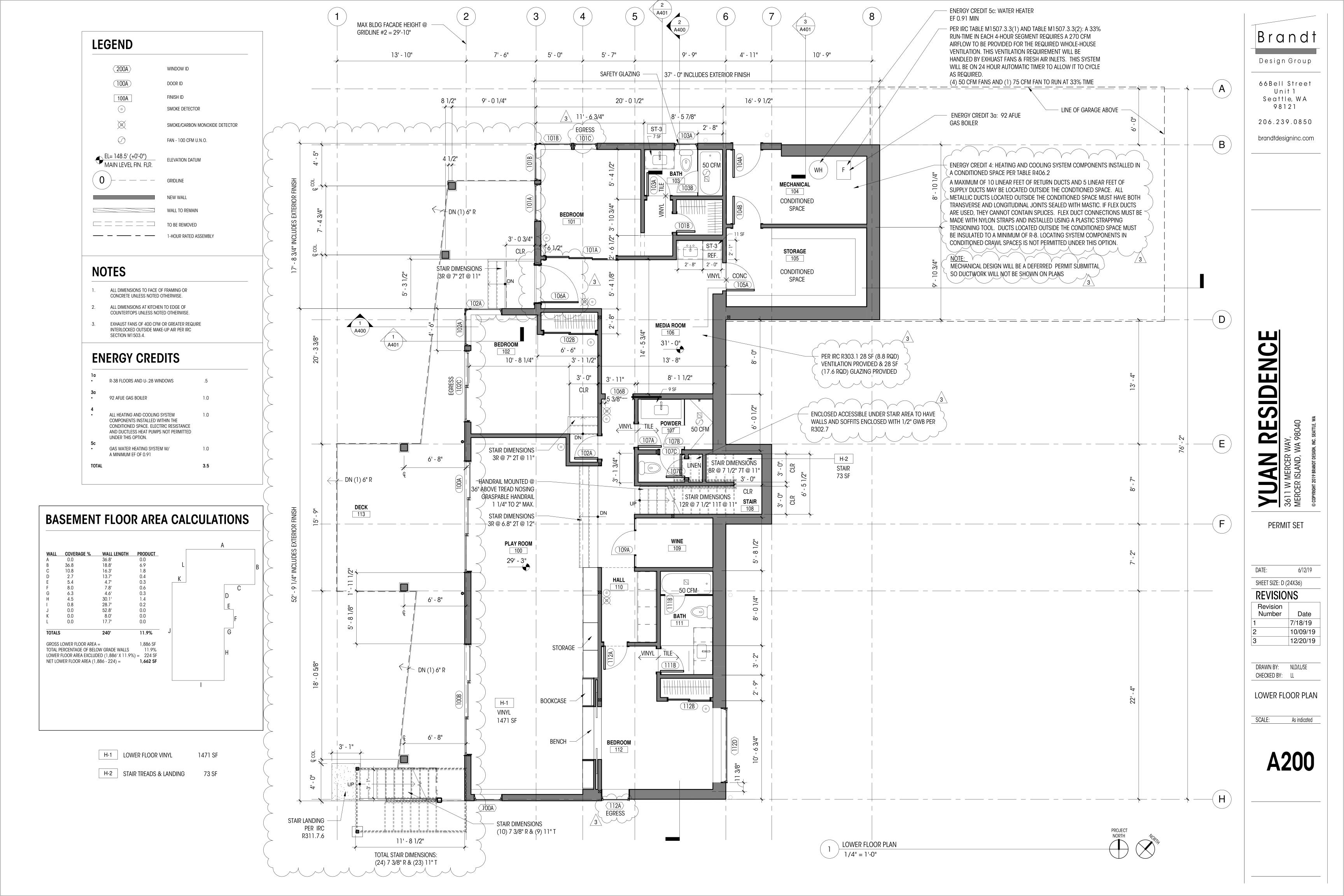
DUFFY@CESOLUTIONS.US

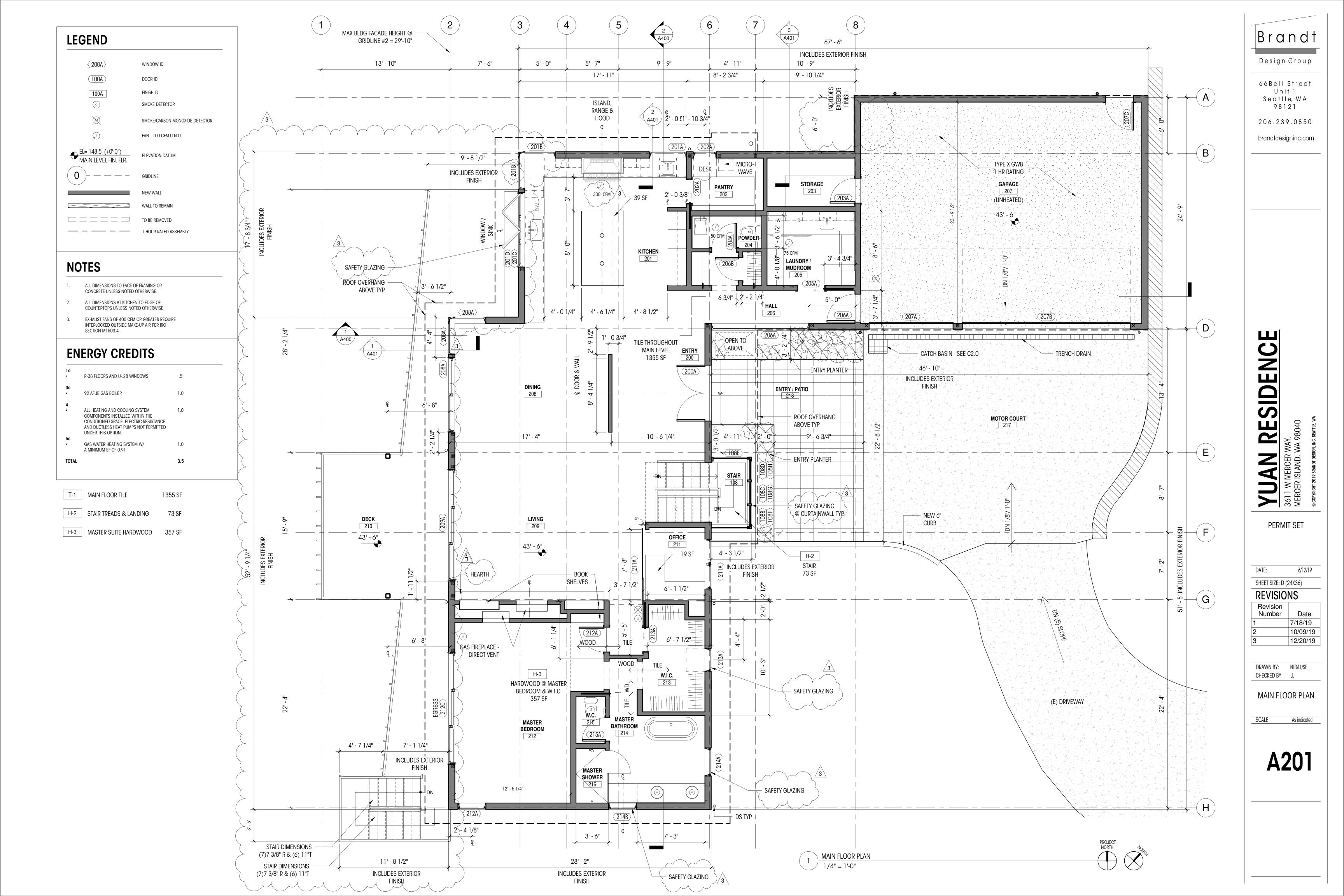
PHONE: 206.930.0342

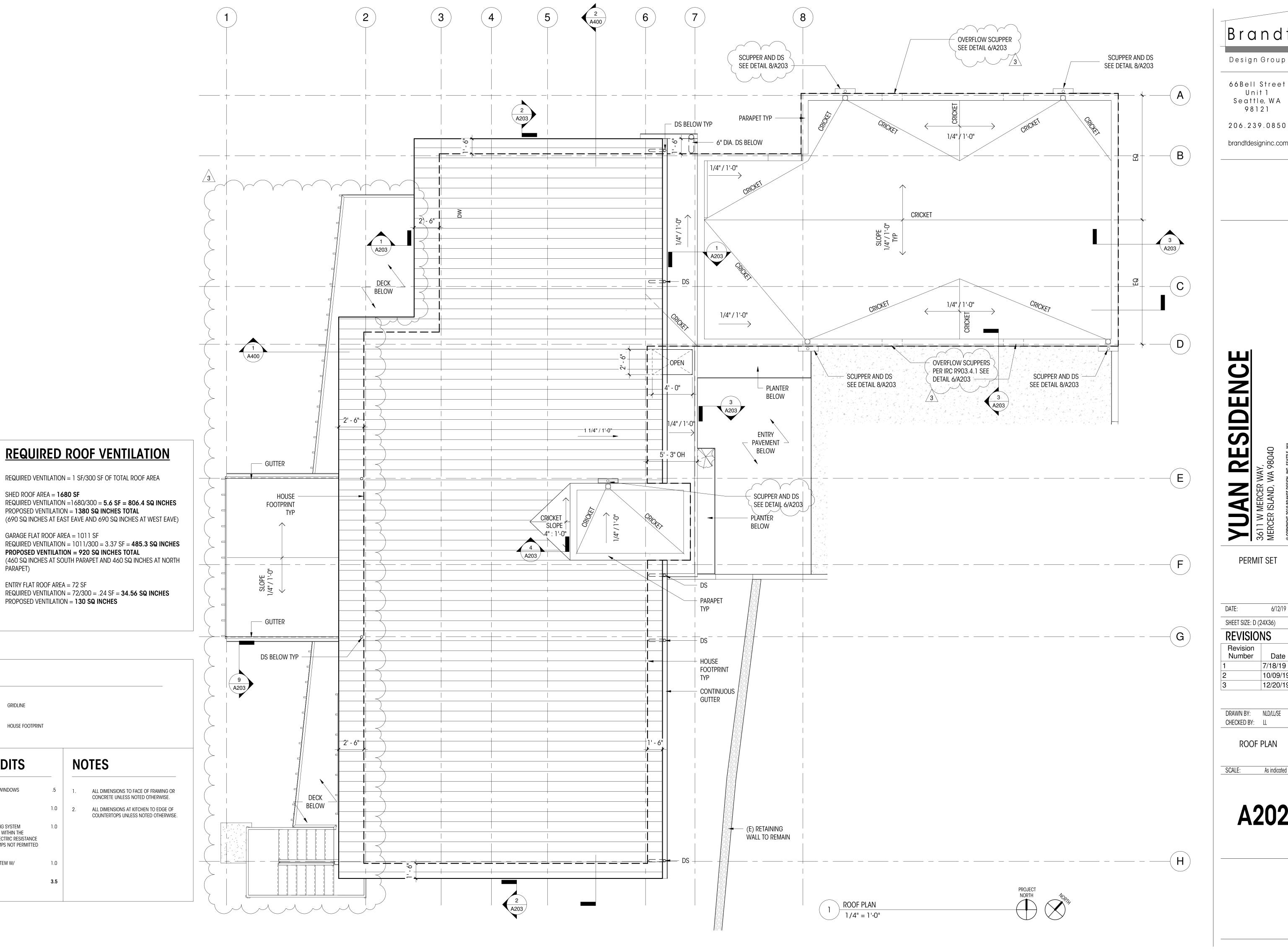
DRAINAGE/BMP DETAILS

YUAN RESIDENCE 3611 W. MERCER WAY, MERCER ISLAND, WA 98040 C3.5

APN 362350-0265 1907-017







REQUIRED VENTILATION = 1 SF/300 SF OF TOTAL ROOF AREA

PROPOSED VENTILATION = 1380 SQ INCHES TOTAL

PROPOSED VENTILATION = 920 SQ INCHES TOTAL

NOTES

SHED ROOF AREA = 1680 SF

PARAPET)

LEGEND

— — — GRIDLINE

— — — — HOUSE FOOTPRINT

ENERGY CREDITS

R-38 FLOORS AND U-.28 WINDOWS

ALL HEATING AND COOLING SYSTEM

GAS WATER HEATING SYSTEM W/

COMPONENTS INSTALLED WITHIN THE

CONDITIONED SPACE. ELECTRIC RESISTANCE AND DUCTLESS HEAT PUMPS NOT PERMITTED

92 AFUE GASS BOILER

UNDER THIS OPTION.

A MINIMUM EF OF 0.91

GARAGE FLAT ROOF AREA = 1011 SF

ENTRY FLAT ROOF AREA = 72 SF

PROPOSED VENTILATION = 130 SQ INCHES

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RESIDENCE

PERMIT SET

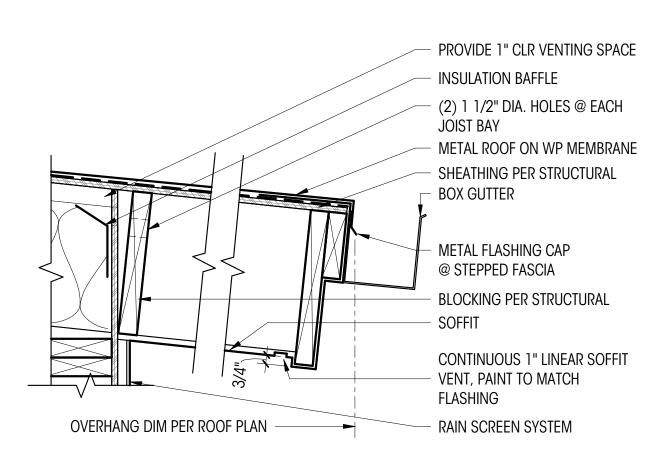
6/12/19 SHEET SIZE: D (24X36)

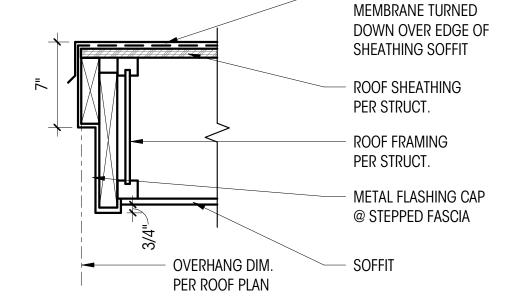
REVISIONS Revision Number Date 7/18/19 10/09/19 12/20/19

DRAWN BY: NLD/LL/SE CHECKED BY: LL

ROOF PLAN

As indicated





METAL ROOF ON ROOF

LOCKED AND

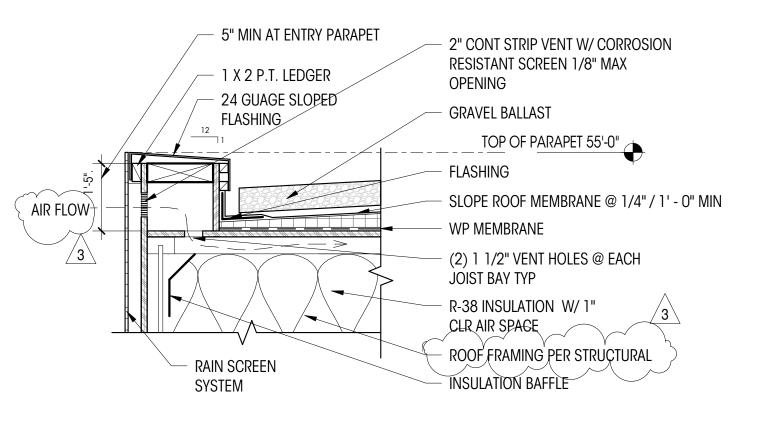
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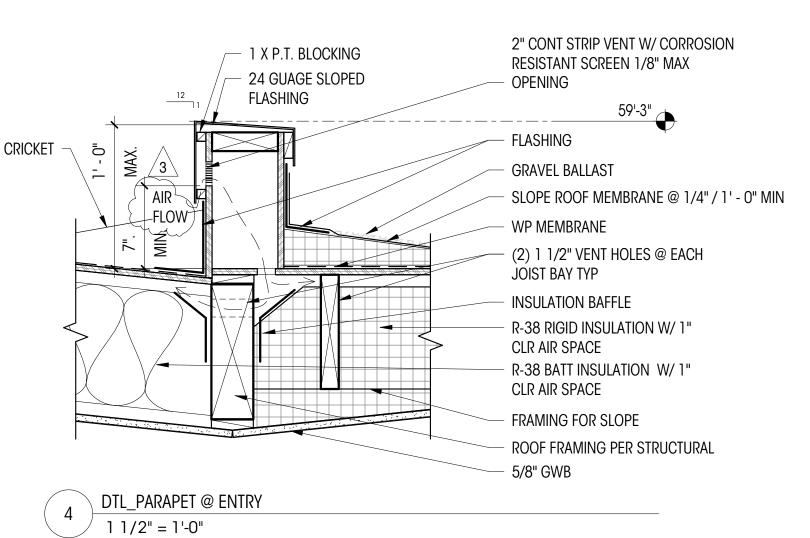
- FLASHING

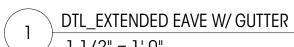
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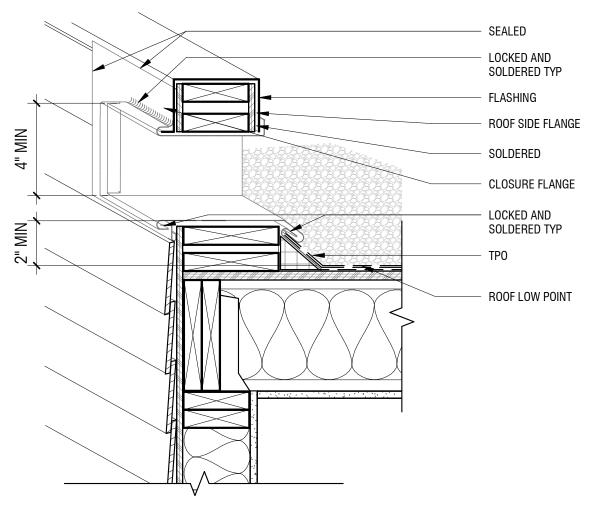
SOLDERED TYP

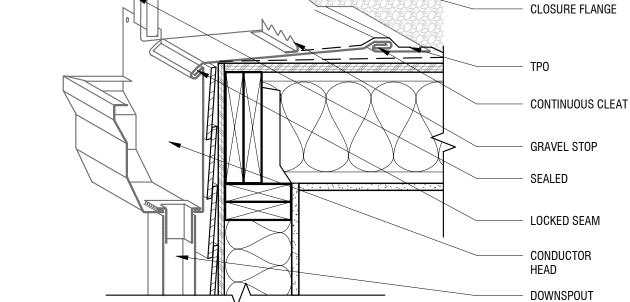
ROOF SIDE FLANGE

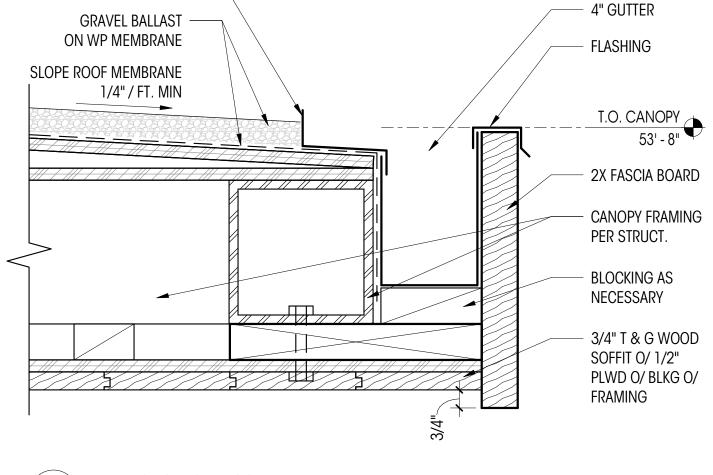












DTL_PARAPET @ GARAGE

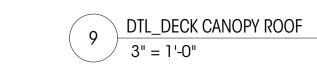
3 DIL_PARAPET @

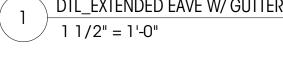
GRAVEL STOP -

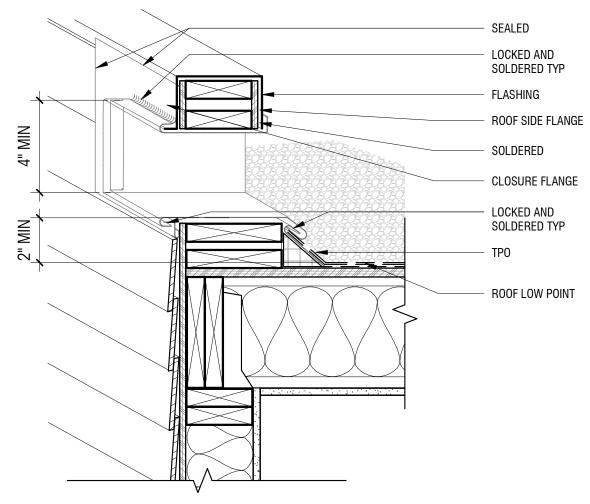
DTL_ROOF SCUPPER @ PARAPET

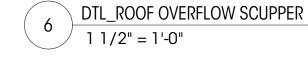
DTL_EXTENDED RAKE

2 DIL_EXTENDED
1 1/2" = 1'-0"









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SIDE

PERMIT SET

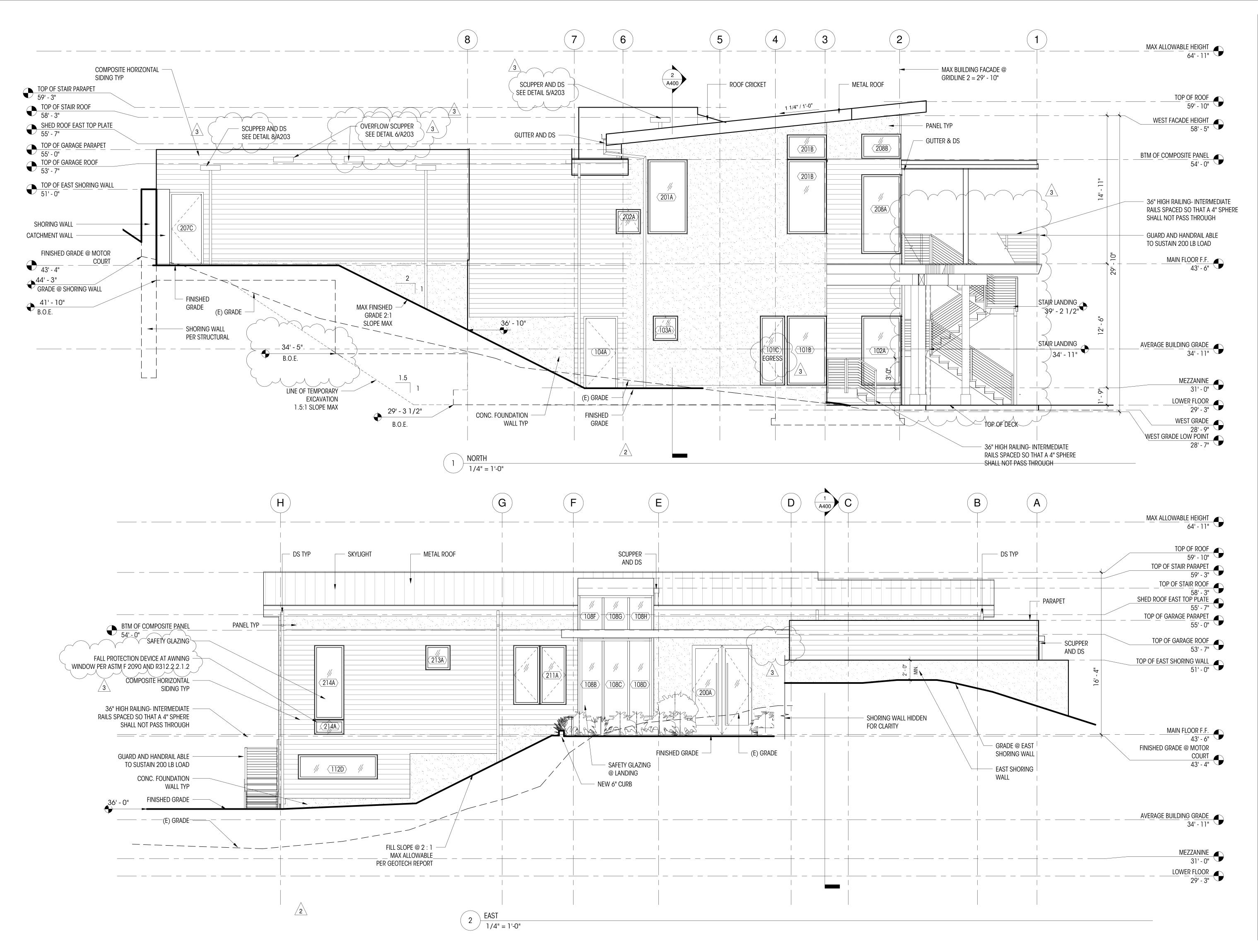
DATE: 6/12/19 SHEET SIZE: D (24X36) **REVISIONS**

Revision Date Number 7/18/19 10/09/19 12/20/19

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ROOF DETAILS

As indicated



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AN RESIDENCI MERCER WAY, ISLAND, WA 98040

PERMIT SET

DATE: 6/12/19
SHEET SIZE: D (24X36)

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1 7/18/19
2 10/09/19

12/20/19

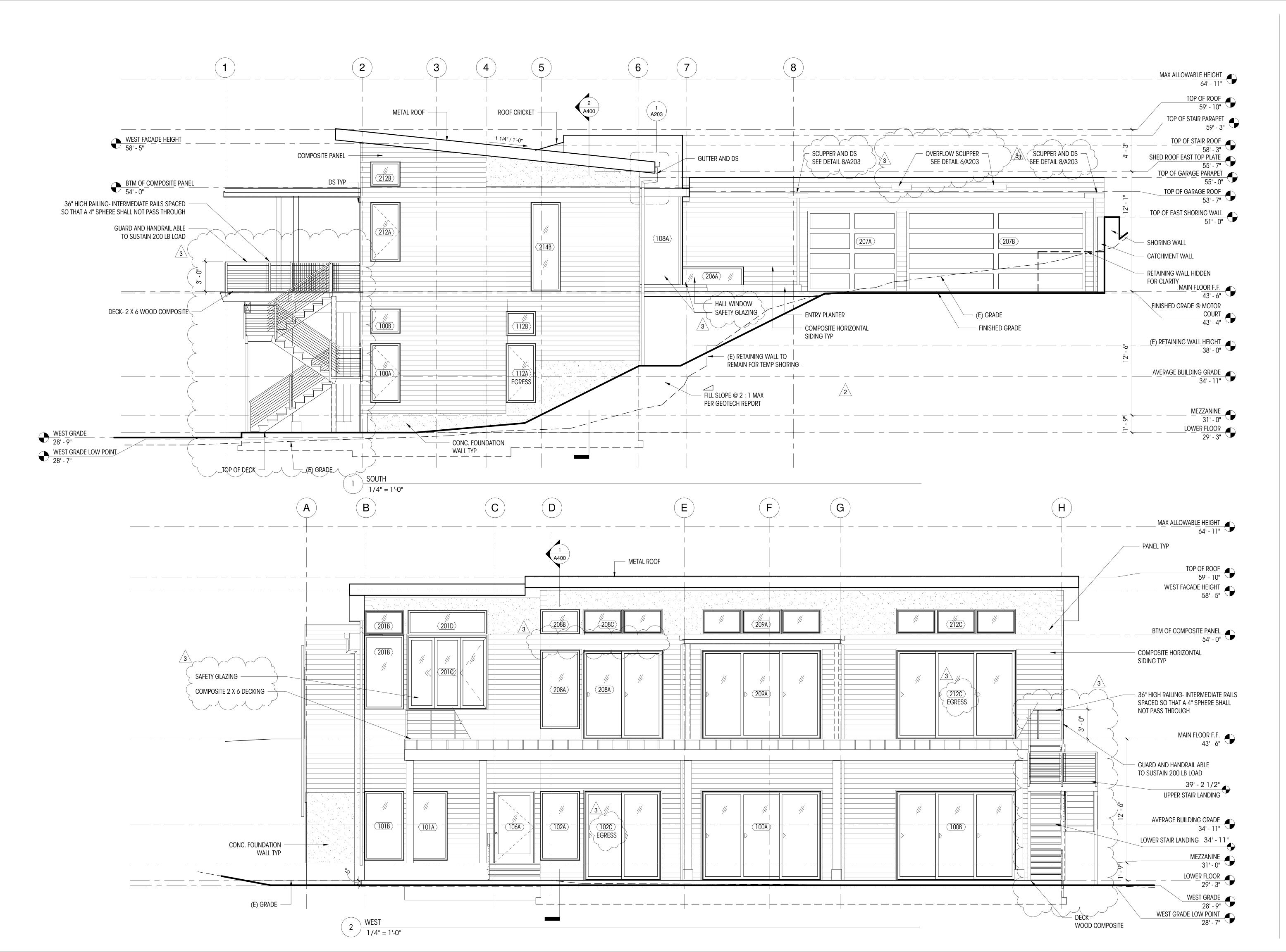
DRAWN BY: NLD/LL/SE

CHECKED BY: LL

EXTERIOR

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

ELEVATIONS



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YUAN RESIDENCE 3611 W MERCER WAY, MERCER ISLAND, WA 98040

PERMIT SET

DATE: 6/12/19

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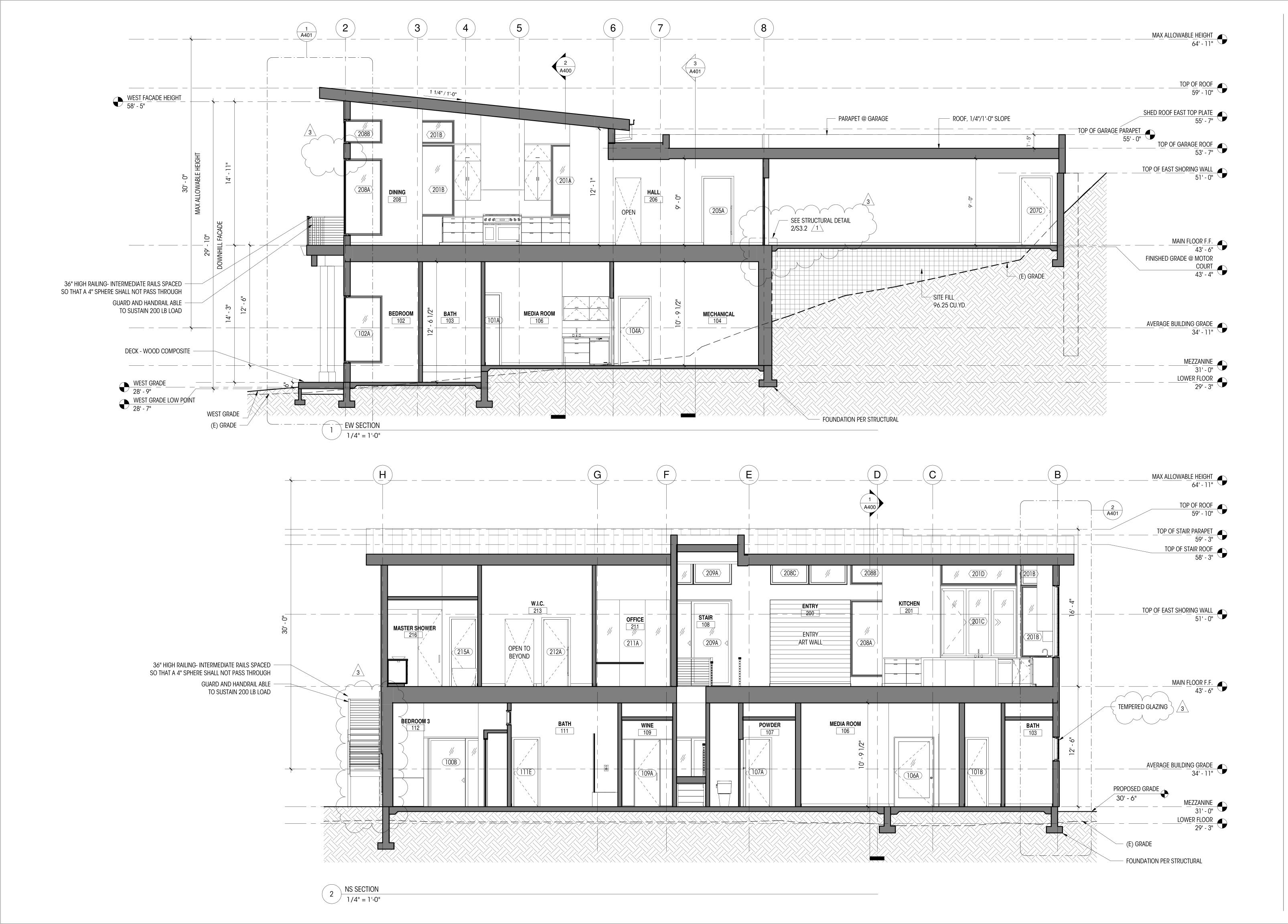
12/20/19

CHECKED BY: LL

EXTERIOR

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

ELEVATIONS



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YUAN RESIDENCE
3611 W MERCER WAY,
MERCER ISLAND, WA 98040

PERMIT SET

DATE: 6/12/19

SHEET SIZE: D (24X36)

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Revision

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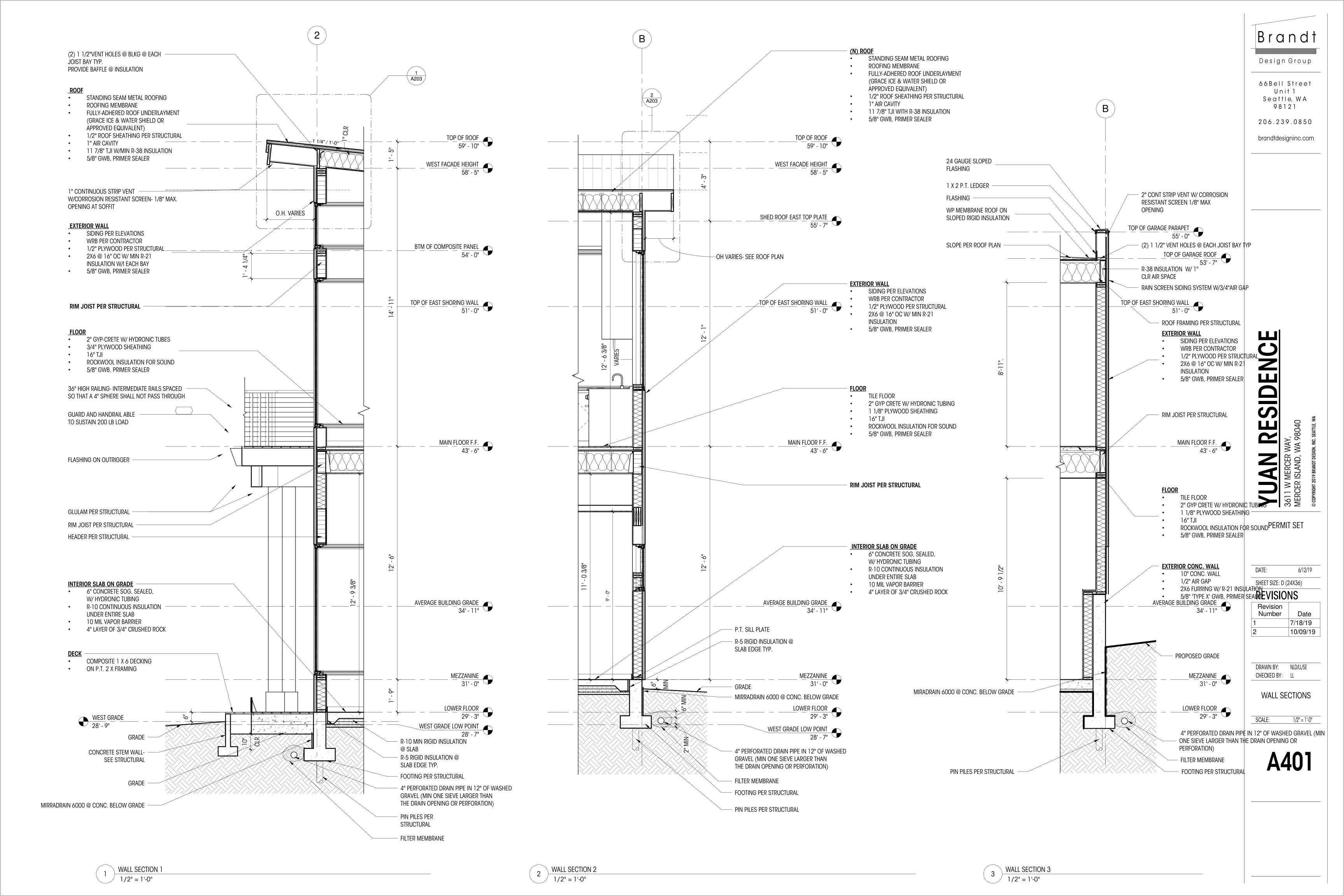
 2
 10/09/19

 3
 12/20/19

DRAWN BY: NLD/LL/SE CHECKED BY: LL

BUILDING SECTIONS

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



	PLAN ID	TYPE	WIDTH (ff)	HEIGHT (ff)	HEAD HT	UNIT AREA (sf)	U VALUE	UA	NOT
Γ	100A	A	3' - 0"	6' - 0"	7' - 3"	18 SF	0.28	5 SF	2
	100A	C	3' - 0"	2' - 6"	10' - 9"	8 SF	0.28	2 SF	2
AL UNIT SF	101A	C	4' - 0"	7' - 0"	7' - 3"	28 SF	0.28	8 SF	2
_	101K	D	4' - 0"	7' - 0"	7' - 3"	28 SF	0.28	8 SF	2
56 SF L	101B	D	4' - 0"	7' - 0"	7' - 3"	28 SF	0.28	8 SF	2
	101C	A	2' - 6"	7' - 0"	7' - 3"	18 SF	0.28	5 SF	1,2
	102A	D	4' - 0"	7' - 0"	9' - 0"	28 SF	0.28	8 SF	2
56 SF	102A	D	4' - 0"	7' - 0"	9' - 0"	28 SF	0.28	8 SF	2
	103A	В	2' - 6"	2' - 6"	7' - 3"	6 SF	0.28	2 SF	2
	108B	F	2' - 2 3/4"	8' - 8 3/4"	_	19 SF	0.28	5 SF	2,6
	108C	F	2' - 4 7/32"	8' - 8 3/4"	_	21 SF	0.28	6 SF	2,6
	108D	F	2' - 2 3/4"	8' - 8 3/4"	_	19 SF	0.28	5 SF	2,6
	108E	F	3' - 10 19/32"	8' - 10"	_	34 SF	0.28	10 SF	2,6
	108F	F	2' - 2 3/4"	3' - 8 1/2"	_	8 SF	0.28	2 SF	2,6
	108G	F	2' - 4 7/32"	3' - 8 1/2"	_	9 SF	0.28	2 SF	2,6
	108H	F	2' - 2 3/4"	3' - 8 1/2"	_	8 SF	0.28	2 SF	2,6
	112A	A	3' - 0"	6' - 0"	9' - 0"	18 SF	0.28	5 SF	1,2
	112B	С	3' - 0"	2' - 6"	10' - 6"	8 SF	0.28	2 SF	2
	112C	С	5' - 0"	1' - 6"	10' - 0"	8 SF	0.28	2 SF	2,7
	112D	С	8' - 0"	2' - 6"	10' - 6"	20 SF	0.28	6 SF	2
	201A	С	4' - 0"	7' - 6"	10' - 6"	30 SF	0.28	8 SF	2
[201B	D	4' - 0"	7' - 6"	10' - 6"	30 SF	0.28	8 SF	2,6
	201B	D	4' - 0"	2' - 6"	13' - 0"	10 SF	0.28	3 SF	2,6
80 SF	201B	D	4' - 0"	7' - 6"	10' - 6"	30 SF	0.28	8 SF	2,6
L	201B	D	4' - 0"	2' - 6"	13' - 0"	10 SF	0.28	3 SF	2,6
	201C	E	8' - 0"	7' - 6"	10' - 6"	60 SF	0.28	17 SF	2,4
	201D	С	8' - 0"	2' - 6"	13' - 0"	20 SF	0.28	6 SF	2
	202A	В	2' - 6"	2' - 6"	5' - 6"	6 SF	0.28	2 SF	2
	206A	С	10' - 6"	2' - 6"	2' - 6"	26 SF	0.28	7 SF	2
,, of [208A	D	4' - 0"	8' - 0"	9' - 0"	32 SF	0.28	9 SF	2
64 SF	208A	D	4' - 0"	8' - 0"	9' - 0"	32 SF	0.28	9 SF	2
00.05	208B	D	4' - 0"	2' - 6"	3' - 0"	10 SF	0.28	3 SF	2
20 SF	208B	D	4' - 0"	2' - 6"	3' - 0"	10 SF	0.28	3 SF	2
	208C	С	8' - 0"	2' - 6"	3' - 0"	20 SF	0.28	6 SF	2,6
	209A	С	12' - 0"	2' - 6"	3' - 0"	30 SF	0.28	8 SF	2,6
	211A	A	5' - 4"	6' - 0"	9' - 0"	32 SF	0.28	9 SF	2,6
	212A	A	3' - 0"	6' - 0"	9' - 0"	18 SF	0.28	5 SF	2
	212B	С	3' - 0"	2' - 6"	3' - 0"	8 SF	0.28	2 SF	2
	212C	С	12' - 0"	2' - 6"	3' - 0"	30 SF	0.28	8 SF	2,6
	213A	С	2' - 6"	2' - 6"	9' - 0"	6 SF	0.28	2 SF	2
28 SF	214A	В	3' - 0"	1' - 6"	1' - 6"	5 SF	0.28	1 SF	2,6,8
20 SF	214A	С	3' - 0"	7' - 6"	9' - 0"	23 SF	0.28	6 SF	2,6
	214B	С	3' - 0"	9' - 0"	9' - 0"	27 SF	0.28	8 SF	2

WINDOW TYPES

1/4" = 1'-0"

ELEVATION

ELEVATION

CURTAIN WALL

GENERAL NOTES

- ALL DIMENSIONS SHOWN ARE FINISHED DIMENSIONS, R.O. PER CONTRACTOR.
- CONTRACTOR TO VERIFY ALL SIZES AND DIMENSIONS IN FIELD WITH OWNER BEFORE ORDERING.
- ALL NEW WINDOWS TO BE NFRC CERTIFIED.
- ALL WINDOW WALL IS TEMPERED GLASS.
 REFER TO PLANS AND TAGS FOR LOCATION AND SWINGS.
- ALL ELEVATIONS ARE FROM THE EXTERIOR.
- ALL NEW VERTICAL FENESTRATION U-VALUE TO BE .28
- PER IBC 1030.2 AND 1030.3 AND 310.2.1 ALL **EGRESS** OPENINGS SHALL HAVE A NET CLEAR OPENING OF NOT LESS THAN 5.7 SF, NET CLEAR HEIGHT OPENING SHALL NOT BE LESS THAN 24" AND THE NET
- CLEAR WIDTH SHALL BE NOT LESS THAN 20".
 THE WINDOW SILL SHALL HAVE HEIGHT OF NOT MORE THAN 44" ABOVE THE FLOOR
- PROVIDE WINDOW FALL PROTECTION PER IRC R312 FOR ANY WINDOW WITH SILL HEIGHT LESS THAN 24"
 AND GREATER THAN 72" ABOVE FINISHED GRADE

SPECIFIC NOTES

- 1. EGRESS
- . TEMPERED GLASS/SAFETY GLAZING
- FROSTED/OPAQUE GLASS
 BIFOLD WINDOW SYSTEM
- 5. SILLS FLUSH WITH COUNTERTOP
- 6. FACTORY MULLED UNITS
- 7. INTERIOR UNIT
- 8. ASTM F 2090 OPENING CONTROL DEVICE
- PER R312.2 9. SKYLIGHT

<u>D</u> CORNER <u>E</u> BIFOLD

PLAN ID TYPE WIDTH (ft.) HEIGHT (ft.) AREA (sf.) U VALUE UA NOTES 12' - 0" 9' - 0" 108 SF 0.28 100B 12' - 0" 9' - 0" 108 SF 0.28 30 SF 101A 7' - 6" 7' - 4" 55 SF 0 0 SF 2' - 0" 7' - 0" 14 SF 101B A 102A 2' - 6" 7' - 0" 18 SF 102B 5' - 6" 7' - 0" 39 SF 102C 7' - 8" 9' - 0" 69 SF 0.28 19 SF 1,2 103A 2' - 6" 7' - 0" 18 SF 103B 2' - 4" 7' - 3" 17 SF 3' - 0" 7' - 0" 21 SF 104A 0 SF 104B 105A 3' - 0" 7' - 0" 21 SF 3' - 0" 7' - 0" 21 SF 106A 4' - 0" 7' - 2" 29 SF 0.28 8 SF 106B 3' - 0" 7' - 0" 21 SF 2' - 6" 7' - 0" 18 SF 107A 107B 2,6 2' - 4" 7' - 0" 16 SF 107C A 2' - 4" 7' - 0" 16 SF 107D A 2' - 0" 7' - 0" 14 SF 109A 2' - 7" 6' - 11 1/2" 18 SF 2,6 111B C 2' - 2" 6' - 1" 13 SF 2,6 111D 3' - 0" 7' - 0" 21 SF 111E 2' - 6" 7' - 0" 18 SF 112A 2' - 6" 7' - 0" 18 SF 4' - 6" 7' - 0" 32 SF 112B 6' - 0" 9' - 0" 54 SF 0.28 15 SF 1,2,5 200A 202A 2' - 8" 7' - 0" 19 SF 203A 2' - 8" 7' - 0" 19 SF 204A 2' - 8" 7' - 0" 19 SF 205A 3' - 0" 7' - 0" 21 SF 3' - 0" 7' - 0" 21 SF 206A A 2' - 6" 7' - 0" 18 SF 206B 207A F 9' - 0" 8' - 0" 72 SF 207B 18' - 0" 8' - 0" 144 SF 207C 3' - 0" 7' - 0" 21 SF 0.28 8' - 0" 9' - 0" 72 SF 208A 0.28 20 SF 209A 12' - 0" 9' - 0" 0.28 108 SF 30 SF 211A 7' - 8" 9' - 0" 69 SF 212A 2' - 8" 7' - 0" 19 SF 212C 12' - 0" 9' - 0" 108 SF 0.28 30 SF 1,2 213A B 2' - 8" 7' - 0" 19 SF 2' - 6" 7' - 0" 18 SF 215A A

2' - 6" 8' - 0" 20 SF

TOTAL EXTERIOR DOOR AREA: 938 SF

TOTAL EXTERIOR DOOR GLAZING AREA: 616 SF

AVERAGE UA: .28 SF

DOOR SCHEDULE

216A D

<u>r</u> MULTI-SLIDE

TOTAL DOOR COUNT: 42

GENERAL NOTES

- ALL NEW DOORS TO BE NFRC CERTIFIED
 ALL NEW VERTICAL FENESTRATION U-VALUE TO MEET ENERGY
- COMPLIANCE GUIDELINES
- ALL DOORS TO BE SOLID-CORE WOOD VENEER FLAT PANELS UNO
- ALL DOORS UNDERCUT TO 1/2" MIN. ABOVE FINISHED FLOOR TO ENSURE AIRFLOW PER M403.4.5.1

SPECIFIC NOTES

- 1. EXTERIOR
- TEMPERED GLASS/SAFETY GLAZING
 20-MINUTE RATED W/SELF-CLOSURE PER IRC R302.5.1
- OVERHEAD DOOR
- 5. ENTRY DOOR6. FRAMELESS GLASS DOOR W/ FRAMELESS GLASS SURROUND
- 7. FROSTED/OPAQUE GLASS
- 7. FROSTED/OPA 3. BARN DOOR

PLAN	DOOR TYPES 1/4" = 1'-0"	→			
ELEVATION	A SWING	B POCKET	$\stackrel{\frown}{\longrightarrow} \longleftarrow$	D FRAMELESS GLASS	E
PLAN	SWING	POCKET	C DOUBLE/MULTI SLIDING	FRAMELESS GLASS	ENTRY
ELEVATION					

OVERHEAD GARAGE

RESIDENCE

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Design Group

66Bell Street

Unit 1

Seattle, WA

98121

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PERMIT SET

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DRAWN BY: NLD/LL/SE
CHECKED BY: LL

WINDOW / DOOR SCHEDULES

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

General Structural Notes

THE FOLLOWING APPLY UNLESS SHOWN OTHERWISE ON THE DRAWINGS

CRITERIA

1. ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE 2015 SEATTLE BUILDING CODE.

2. DESIGN LOADING CRITERIA: RESIDENTIAL - ONE AND TWO-FAMILY DWELLINGS MISCELLANEOUS LOADS ENVIRONMENTAL LOADS SNOW Ce=1.0, Is=1.0, Ct=1.1, Pq=25 PSF, Pf=20 PSF WIND GCpi=0.18, 110 MPH, RISK CATEGORY II, EXPOSURE "C" EARTHQUAKE . . . ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE

LATERAL SYSTEM: LIGHT FRAMED SHEAR WALLS SITE CLASS=D, Ss=1.402, Sds=0.935, S1=0.54, SD1=0.54,

SDC D, Ie=1.0, R=6.5 SEE PLANS FOR ADDITIONAL LOADING CRITERIA

3. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS FOR BIDDING AND CONSTRUCTION. ARCHITECTURAL DRAWINGS ARE THE PRIME CONTRACT DRAWINGS. ANY DISCREPANCIES FOUND AMONG THE DRAWINGS, THE SPECIFICATION, THESE GENERAL NOTES AND THE SITE CONDITIONS SHALL BE REPORTED TO THE ARCHITECT, WHO SHALL CORRECT SUCH DISCREPANCY IN WRITING. ANY WORK DONE BY THE GENERAL CONTRACTOR AFTER DISCOVERY OF SUCH DISCREPANCY SHALL BE DONE AT THE GENERAL CONTRACTOR'S RISK.

- 4. PRIMARY STRUCTURAL ELEMENTS NOT DIMENSIONED ON THE STRUCTURAL PLANS AND DETAILS SHALL BE LOCATED BY THE ARCHITECTURAL PLANS AND DETAILS. VERTICAL DIMENSION CONTROL IS DEFINED BY THE ARCHITECTURAL WALL SECTIONS, BUILDING SECTION, AND PLANS. DETAILING AND SHOP DRAWING PRODUCTION FOR STRUCTURAL ELEMENTS WILL REQUIRE DIMENSIONAL INFORMATION CONTAINED IN BOTH ARCHITECTURAL AND STRUCTURAL DRAWINGS.
- 5. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE CONTRACTORS WORK. THE STRUCTURAL ENGINEER HAS NO OVERALL SUPERVISORY AUTHORITY OR ACTUAL AND/OR DIRECT RESPONSIBILITY FOR THE SPECIFIC WORKING CONDITIONS AT THE SITE AND/OR FOR ANY HAZARDS RESULTING FROM THE ACTIONS OF ANY TRADE CONTRACTOR. THE STRUCTURAL ENGINEER HAS NO DUTY TO INSPECT. SUPERVISE, NOTE, CORRECT, OR REPORT ANY HEALTH OR SAFETY DEFICIENCIES TO THE OWNER, CONTRACTORS, OR OTHER ENTITIES OR PERSONS AT THE PROJECT SITE.
- 6. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. CONFORM TO ASCE 37-14 "DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION".
- 7. CONTRACTOR-INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS ONLY WILL NOT SATISFY THIS REQUIREMENT.
- 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 ARCHITECT AND THE STRUCTURAL ENGINEER. ALL TYPICAL NOTES AND DETAILS SHOWN ON DRAWINGS SHALL APPLY, UNLESS NOTED OTHERWISE. TYPICAL DETAILS MAY NOT NECESSARILY BE INDICATED ON THE PLANS BUT SHALL STILL APPLY AS SHOWN OR DESCRIBED IN THE DETAILS. WHERE TYPICAL DETAILS ARE NOTED ON THE PLANS, THE SPECIFIED TYPICAL DETAIL SHALL BE USED. WHERE NO TYPICAL DETAIL IS NOTED, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CHOOSE THE APPROPRIATE TYPICAL DETAIL FROM THOSE PROVIDED OR REQUEST ADDITIONAL INFORMATION. THE CONTRACTOR SHALL SUBMIT ALL PROPOSED ALTERNATE TYPICAL DETAILS TO THOSE PROVIDED WITH RELATED CALCULATIONS TO THE ENGINEER FOR APPROVAL PRIOR TO SHOP DRAWING PRODUCTION AND FIELD USE.
- 9. ALL STRUCTURAL SYSTEMS, WHICH ARE TO BE COMPOSED OF COMPONENTS TO BE FIELD ERECTED, SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE AND ERECTION IN ACCORDANCE WITH INSTRUCTIONS PREPARED BY THE SUPPLIER.
- 10. SHOP DRAWINGS FOR THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION OF THESE ITEMS.

GLUED LAMINATED MEMBERS MANUFACTURED LUMBER (PSL'S, LSL'S, LVL'S) PLYWOOD WEB JOISTS STRUCTURAL STEEL

CONTRACTOR SHALL SUBMIT WALL ELEVATION DRAWINGS OF AT LEAST 1/8" = 1'-0" SCALE INDICATING LOCATIONS OF CONNECTION EMBEDMENT'S AND WALL OPENINGS FOR REVIEW PRIOR TO CONSTRUCTION. CONTRACTOR SHALL COORDINATE WALL ELEVATION DRAWINGS WITH REINFORCEMENT SHOP DRAWINGS.

APPROVED SETS OF ALL SHOP DRAWINGS SHALL ALSO BE SUBMITTED TO THE BUILDING DEPARTMENT.

11. SHOP DRAWING REVIEW: DIMENSIONS AND QUANTITIES ARE NOT REVIEWED BY THE ENGINEER OF RECORD, THEREFORE MUST BE VERIFIED BY THE CONTRACTOR. CONTRACTOR SHALL REVIEW AND STAMP DRAWINGS PRIOR TO REVIEW BY ENGINEER OF RECORD. CONTRACTOR SHALL REVIEW DRAWINGS FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND OPERATIONS OF CONSTRUCTION, AND ALL SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO. SUBMITTALS SHALL INCLUDE A REPRODUCIBLE AND ONE COPY; REPRODUCIBLE WILL BE MARKED AND RETURNED WITHIN TWO WEEKS OF RECEIPT WITH A NOTATION INDICATING THAT THE SUBMITTAL HAS BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THE SUBMITTED ITEMS SHALL NOT BE INSTALLED UNTIL THEY HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

SHOP DRAWING SUBMITTALS PROCESSED BY THE ENGINEER ARE NOT CHANGE ORDERS. THE PURPOSE OF SHOP DRAWING SUBMITTALS BY THE CONTRACTOR IS TO DEMONSTRATE TO THE ENGINEER THAT THE CONTRACTOR UNDERSTANDS THE DESIGN CONCEPT. BY INDICATING WHICH MATERIAL IS INTENDED TO BE FURNISHED AND INSTALLED AND BY DETAILING THE INTENDED FABRICATION AND INSTALLATION METHODS. DEVIATIONS, DISCREPANCIES, OR CONFLICTS BETWEEN SHOP DRAWING SUBMITTALS AND THE CONTRACT DOCUMENTS ARE DISCOVERED EITHER PRIOR TO OR AFTER SHOP DRAWING SUBMITTALS ARE PROCESSED BY THE ENGINEER, THE DESIGN DRAWINGS AND SPECIFICATIONS SHALL CONTROL AND SHALL BE FOLLOWED.

12. SHOP DRAWINGS OF DESIGN BUILD COMPONENTS INCLUDING CANOPIES, BALCONIES, COLD FORM STEEL FRAMING, TEMPORARY SHORING, CURTAIN WALL SYSTEMS, SKYLIGHT FRAMES, PREFABRICATED STAIR SYSTEMS, EXTERIOR CLADDING, AND PRE-ENGINEERED SYSTEMS SHALL BE STAMPED AND SIGNED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF WASHINGTON. SHOP DRAWINGS SHALL BE APPROVED BY THE COMPONENT DESIGNER PRIOR TO REVIEW OF THE ARCHITECT OR ENGINEER OF RECORD FOR GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THE COMPONENT DESIGNER IS RESPONSIBLE FOR CODE CONFORMANCE AND ALL NECESSARY CONNECTIONS NOT SPECIFICALLY CALLED OUT ON ARCHITECTURAL OR STRUCTURAL DRAWINGS. SHOP DRAWINGS SHALL INDICATE MAGNITUDE AND DIRECTION OF ALL LOADS IMPOSED ON BASIC STRUCTURE. DESIGN CALCULATIONS SHALL BE SUBMITTED WITH THE SHOP DRAWINGS.

QUALITY ASSURANCE

13. SPECIAL INSPECTION SHALL BE PROVIDED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND SECTIONS 110 AND 1705 OF THE INTERNATIONAL BUILDING CODE BY A QUALIFIED TESTING AGENCY DESIGNATED BY THE ARCHITECT, AND RETAINED BY THE BUILDING OWNER. THE ARCHITECT, STRUCTURAL ENGINEER, AND BUILDING DEPARTMENT SHALL BE FURNISHED WITH COPIES OF ALL INSPECTION AND TEST RESULTS. SPECIAL INSPECTION OF THE FOLLOWING TYPES OF CONSTRUCTION IS REQUIRED UNLESS NOTED OTHERWISE.

STRUCTURAL STEEL FABRICATION AND ERECTION PER AISC 360 PER TABLE 1705.6 SOIL CONDITIONS, FILL PLACEMENT, AND DENSITY PER TABLE 1705. 7 DRIVEN DEEP FOUNDATION HELICAL PILE FOUNDATION CONTINUOUS PER MANUFACTURER EXPANSION BOLTS AND THREADED EXPANSION INSERTS EPOXY GROUTED INSTALLATIONS PER MANUFACTURER

PERIODIC INSPECTION: INSPECTION SHALL BE PERFORMED AT INTERVALS NECESSARY TO CONFIRM THAT WORK REQUIRING SPECIAL INSPECTION IS IN COMPLIANCE WITH REQUIREMENTS. CONTINUOUS INSPECTION: INSPECTOR SHALL BE ONSITE AND OBSERVE THE WORK REQUIRING INSPECTION AT ALL TIMES THAT WORK IS PERFORMED.

GEOTECHNICAL

14. FOUNDATION NOTES: SUBGRADE PREPARATION INCLUDING DRAINAGE. EXCAVATION. COMPACTION, AND FILLING REQUIREMENTS, SHALL CONFORM STRICTLY WITH RECOMMENDATIONS GIVEN IN THE SOILS REPORT OR AS DIRECTED BY THE SOILS ENGINEER. FOOTINGS SHALL BEAR ON SOLID UNDISTURBED EARTH OR COMPACTED STRUCTURAL FILL AT LEAST 18" BELOW LOWEST ADJACENT FINISHED GRADE. FOOTING DEPTHS/ELEVATIONS SHOWN ON PLANS (OR IN DETAILS) ARE MINIMUM AND FOR GUIDANCE ONLY; THE ACTUAL ELEVATIONS OF FOOTINGS MUST BE ESTABLISHED BY THE CONTRACTOR IN THE FIELD WORKING WITH THE TESTING LAB AND SOILS FNGINFER. BACKFILL BEHIND ALL RETAINING WALLS WITH FREE DRAINING GRANULAR FILL AND PROVIDE FOR SUBSURFACE DRAINAGE AS NOTED IN THE SOILS REPORT.

LATERAL EARTH PRESSURE (RESTRAINED/UNRESTRAINED) 50 PCF/35 PCF ACTIVE PRESSURE AT EAST WALL WITH MAX. SLOPE
4" DIA PILE CAPACITY

SOILS REPORT REFERENCE:

GEOTECHNICAL ENGINEERING STUDY PROPOSED RESIDENCE 3611 WEST MERCER WAY, MERCER ISLAND, WA

PREPARED BY:

PANGEO INCORPORATED ON APRIL 16, 2019

15. PIN PILES SHOWN ON THE PLAN SHALL BE 4" DIAMETER SCHEDULE 40. THE MAXIMUM CAPACITY OF 4" PILES SHALL BE 10 TONS. ALL PILES SHALL BE DRIVEN TO REFUSAL IN ACCORDANCE WITH THE GEOTECHNICAL REPORT. PILES USED IN COMMON TO RESIST LATERAL EARTH PRESSURES SHALL HAVE THE ADDITIONAL REQUIREMENT OF BEING EMBEDDED A MINIMUM OF 10 FEET BELOW RETAINED GRADE. THE MAXIMUM PILE ECCENTRICITY SHALL BE 2 INCHES. GEOTECHNICAL SPECIAL INSPECTION SHALL BE SUBJECT TO THE DISCRETION OF THE GEOTECHNICAL ENGINEER AND THE BUILDING DEPARTMENT. SEE PLANS FOR OTHER SIZES AND CRITERIA. DRIVING CRITERIA FOR 4" DIAMETER PIPE PILES ARE AS FOLLOWS:

HAMMER MODEL	HAMMER WEIGHT (lb)/ BLOWS PER MINUTE	REFUSAL CRITERIA (seconds per inch of penetration)
YDRAULIC TB 325	850/900	16
YDRAULIC TB 425	1,100/900	10
YDRAULIC TB 725X	2,000/600	4

NOTE: USE OF LARGER OR SMALLER PILES WITH DIFFERENT DRIVING EQUIPMENT MAY OR MAY NOT REQUIRE A LOAD TEST. THE POTENTIAL NEED FOR A LOAD TEST WILL BE ADDRESSED IN THE FIELD.

CONCRETE

- 16. CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH ACI 301, INCLUDING TESTING PROCEDURES. CONCRETE SHALL ATTAIN A 28-DAY STRENGTH OF f'c = 3,000 PSI AND MIX SHALL CONTAIN NOT LESS THAN 5-1/2 SACKS OF CEMENT PER CUBIC YARD AND SHALL BE PROPORTIONED TO PRODUCE A SLUMP OF 5" OR LESS. REQUIRED CONCRETE STRENGTH IS BASED ON THE DURABILITY REQUIREMENTS OF SECTION 1904 OF THE IBC. DESIGN STRENGTH IS f'c = 2,500
- 17. A CONCRETE PERFORMANCE MIX SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER AND THE BUILDING DEPARTMENT FOR APPROVAL TWO WEEKS PRIOR TO PLACING ANY CONCRETE. THE PERFORMANCE MIX SHALL INCLUDE THE AMOUNTS OF CEMENT, FINE AND COARSE AGGREGATE, WATER AND ADMIXTURES AS WELL AS THE WATER CEMENT RATIO, SLUMP, CONCRETE YIELD AND SUBSTANTIATING STRENGTH DATA IN ACCORDANCE WITH ACI 318-14, SECTIONS 26.4.3 AND 26.4.4. THE USE OF A PERFORMANCE MIX REQUIRES BATCH PLANT INSPECTION, THE COST OF WHICH SHALL BE PAID BY THE GENERAL CONTRACTOR. REVIEW OF MIX SUBMITTALS BY THE ENGINEER OF RECORD INDICATES ONLY THAT INFORMATION PRESENTED CONFORMS GENERALLY WITH CONTRACT DOCUMENTS. CONTRACTOR OR SUPPLIER MAINTAINS FULL RESPONSIBILITY FOR SPECIFIED PERFORMANCE.
- 18. ALL CONCRETE WITH SURFACES EXPOSED TO WEATHER OR STANDING WATER SHALL BE AIR-ENTRAINED WITH AN AIR-ENTRAINING AGENT CONFORMING TO ASTM C260, C494, AND C618. TOTAL AIR CONTENT FOR FROST-RESISTANT CONCRETE SHALL BE IN ACCORDANCE WITH ACI 318-14, TABLE 19.3.2.1 MODERATE EXPOSURE, F1.
- 19. REINFORCING STEEL SHALL CONFORM TO ASTM A615 (INCLUDING SUPPLEMENT S1), GRADE 60, FY = 60,000 PSI. EXCEPTIONS: ANY BARS SPECIFICALLY SO NOTED ON THE DRAWINGS SHALL BE GRADE 40, FY = 40,000 PSI. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185. SPIRAL REINFORCEMENT SHALL BE DEFORMED WIRE CONFORMING TO ASTM A615, GRADE 60, FY = 60,000 PSI.
- 20. DETAILING OF REINFORCING STEEL (INCLUDING HOOKS AND BENDS) SHALL BE IN 31. ALL STEEL EXPOSED TO THE WEATHER OR IN CONTACT WITH GROUND SHALL BE ACCORDANCE WITH ACI 315-99 AND 318-14. LAP ALL CONTINUOUS REINFORCEMENT #5 AND SMALLER 40 BAR DIAMETERS OR 2'-0" MINIMUM. PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP CORNER BARS #5 AND SMALLER 40 BAR DIAMETERS OR 2'-0" MINIMUM. LAPS OF LARGER BARS SHALL BE MADE IN ACCORDANCE WITH ACI 318-14, CLASS B. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 8" AT SIDES AND ENDS.

NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY SO DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER.

21. CONCRETE PROTECTION (COVER) FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

FOOTINGS AND OTHER UNFORMED SURFACES CAST AGAINST AND PERMANENTLY EXPOSED FORMED SURFACES EXPOSED TO EARTH OR WEATHER (#6 BARS OR LARGER) 2" FORMED SURFACES EXPOSED TO EARTH OR WEATHER (#5 BARS OR SMALLER). 1-1/2" SLABS AND WALLS (INT. FACE). . . GREATER OF BAR DIAMETER PLUS 1/8" OR 3/4"

22. CONCRETE WALL REINFORCING--PROVIDE THE FOLLOWING UNLESS DETAILED OTHERWISE:

6" WALLS #4 @ 16 HORIZ. #4 @ 18 VERTICAL 1 CURTAIN 8" WALLS #4 @ 12 HORIZ. #4 @ 18 VERTICAL 1 CURTAIN 10" WALLS #4 @ 18 HORIZ. #4 @ 18 VERTICAL 2 CURTAINS #4 @ 16 HORIZ. #4 @ 18 VERTICAL 2 CURTAINS 12" WALLS

23. CAST-IN-PLACE CONCRETE: SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND DIMENSIONS OF DOOR AND WINDOW OPENINGS IN ALL CONCRETE WALLS. SEE MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF MISCELLANEOUS MECHANICAL OPENINGS THROUGH CONCRETE WALLS. SEE ARCHITECTURAL DRAWINGS FOR ALL GROOVES, NOTCHES, CHAMFERS, FEATURE STRIPS, COLOR, TEXTURE, AND OTHER FINISH DETAILS AT ALL EXPOSED CONCRETE SURFACES, BOTH CAST-IN-PLACE AND 24. NON-SHRINK GROUT SHALL BE FURNISHED BY AN APPROVED MANUFACTURER AND SHALL BE MIXED AND PLACED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED RECOMMENDATIONS. GROUT STRENGTH SHALL BE AT LEAST EQUAL TO THE MATERIAL ON WHICH IT IS PLACED (3000 PSI MINIMUM).

ANCHORAGE

- 25. EXPANSION BOLTS INTO CONCRETE SHALL BE "STRONG-BOLT 2" WEDGE ANCHORS AS MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY AND INSTALLED IN STRICT CONFORMANCE TO ICC-ES REPORT NUMBER ESR-3037. INCLUDING MINIMUM EMBEDMENT REQUIREMENTS. BOLTS INTO CONCRETE MASONRY OR BRICK MASONRY UNITS SHALL BE INTO FULLY GROUTED CELLS. PERIODIC SPECIAL INSPECTION IS REQUIRED TO VERIFY ANCHOR TYPE, ANCHOR DIMENSIONS, ANCHOR LOCATION, TIGHTENING TORQUE. HOLE DIMENSIONS, ANCHOR EMBEDMENT, AND ADHERENCE TO THE INSTALLATION INSTRUCTIONS.
- 26. EPOXY-GROUTED ITEMS (THREADED RODS OR REINFORCING BAR) SPECIFIED ON THE DRAWINGS SHALL BE INSTALLED USING "SET-XP" HIGH STRENGTH EPOXY AS MANUFACTURED BY THE SIMPSON STRONG, TIE COMPANY. INSTALL IN STRICT ACCORDANCE WITH ICC-ES REPORT NO. ESR-2508. MINIMUM BASE MATERIAL TEMPERATURE IS 50 DEGREES, F. RODS SHALL BE ASTM A-36 UNLESS OTHERWISE NOTED. PERIODIC SPECIAL INSPECTION OF INSTALLATION IS REQUIRED TO VERIFY ANCHOR OR EMBEDDED BAR TYPE AND DIMENSIONS, LOCATION, ADHESIVE IDENTIFICATION AND EXPIRATION, HOLE DIMENSIONS, HOLE CLEANING PROCEDURE, ANCHOR EMBEDMENT. AND ADHERENCE TO THE INSTALLATION INSTRUCTIONS. CONTINUOUS SPECIAL INSPECTION IS REQUIRED FOR HORIZONTAL AND OVERHEAD INSTALLATIONS.
- 27. CONCRETE SCREW ANCHORS INTO CONCRETE AND CONCRETE MASONRY UNITS SHALL BE "TITEN HD" HEAVY DUTY SCREW ANCHOR AS MANUFACTURED BY THE SIMPSON STRONG-TIE COMPANY, INSTALLED IN STRICT ACCORDANCE WITH ICC-ES REPORT NO. ESR-2713 (CONCRETE), NO. ESR-1056 (CMU), INCLUDING MINIMUM EMBEDMENT REQUIREMENTS. SCREW ANCHORS INTO CONCRETE MASONRY UNITS SHALL BE INTO FULLY GROUTED CELLS. SPECIAL INSPECTION IS REQUIRED.

28. STRUCTURAL STEEL DESIGN, FABRICATION, AND ERECTION SHALL BE BASED ON:

A. AISC 360 AND SECTION 2205. 2 OF THE INTERNATIONAL BUILDING CODE. B. APRIL 14, 2010 AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES AMENDED AS FOLLOWS: AS NOTED IN THE CONTRACT DOCUMENTS, BY THE DELETION OF PARAGRAPH 4.4.1, AND REVISE REFERENCE FROM "STRUCTURAL DESIGN DRAWINGS" TO "CONTRACT DOCUMENTS" IN PARAGRAPH 3.1.

C. SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS.

29. WIDE FLANGE SHAPES SHALL CONFORM TO ASTM A992, FY = 50 KSI. OTHER ROLLED SHAPES INCLUDING PLATES, SHALL CONFORM TO ASTM A36, FY = 36 KSI. STEEL PIPE SHALL CONFORM TO ASTM A-53, TYPE E OR S, GRADE B, Fy = 35 KSI. STRUCTURAL TUBING SHALL CONFORM TO ASTM A500, GRADE B, FY = 42 KSI (ROUND), FY = 46 KSI (SQUARE AND RECTANGULAR). CONNECTION BOLTS SHALL CONFORM TO ASTM A307.

30. ARCHITECTURALLY EXPOSED STRUCTURAL STEEL SHALL CONFORM TO SECTION 10 OF THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES.

CORROSION PROTECTED BY GALVANIZATION OR PROVIDED WITH EXTERIOR PAINT SYSTEM, UNLESS OTHERWISE NOTED.

32. SHOP PRIME ALL STEEL EXCEPT:

A. STEEL ENCASED IN CONCRETE.

B. SURFACES TO BE WELDED.

C. CONTACT SURFACES AT HIGH-STRENGTH BOLTS. D. MEMBERS TO BE GALVANIZED.

E. MEMBERS WHICH WILL BE CONCEALED BY INTERIOR FINISHES.

F. SURFACES TO RECEIVE SPRAYED FIREPROOFING. G. SURFACES TO RECEIVE OTHER SPECIAL SHOP PRIMERS.

33. ALL A-325N CONNECTION BOLTS NEED ONLY BE TIGHTENED TO A SNUG TIGHT CONDITION, DEFINED AS THE TIGHTNESS THAT EXISTS WHEN ALL PLIES IN A JOINT ARE IN FIRM CONTACT. THIS MAY BE ATTAINED BY A FEW IMPACTS OF AN IMPACT

34. ALL ANCHORS EMBEDDED IN MASONRY OR CONCRETE SHALL BE A307 HEADED BOLTS OR A36 THREADED ROD WITH AN ASTM 563 HEAVY HEX NUT TACK WELDED ON THE EMBEDDED END.

WRENCH OR THE FULL EFFORT OF AN IRONWORKER USING AN ORDINARY SPUD WRENCH.

35. ALL WELDING SHALL BE IN CONFORMANCE WITH AISC AND AWS STANDARDS AND SHALL BE PERFORMED BY WABO CERTIFIED WELDERS USING E70XX ELECTRODES. ONLY PREQUALIFIED WELDS (AS DEFINED BY AWS) SHALL BE USED. ALL COMPLETE JOINT PENETRATION GROOVE WELDS SHALL BE MADE WITH A FILLER MATERIAL THAT HAS A MINIMUM CVN TOUGHNESS OF 20 FT-LBS AT -20 DEGREES F AND 40 FT - LBS AT 70 DEGREES F. AS DETERMINED BY AWS CLASSIFICATION OR MANUFACTURER CERTIFICATION.



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	Revisions	Oct. 09, 2
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PERMIT

General Structural Notes

DATE:

SHEET NO:

Aprill 20, 2019 PROJECT NO: 01519-2019-01

General Structural Notes

THE FOLLOWING APPLY UNLESS SHOWN OTHERWISE ON THE DRAWINGS

WOOD

36. FRAMING LUMBER SHALL BE S-DRY, KD, OR MC-19, AND GRADED AND MARKED IN CONFORMANCE WITH WCLIB STANDARD "GRADING RULES FOR WEST COAST LUMBER NO. 17", OR WWPA STANDARD, "WESTERN LUMBER GRADING RULES 2011". FURNISH TO THE FOLLOWING MINIMUM STANDARDS:

JOISTS AND BEAMS	(2X & 3X MEMBERS)	HEM-FIR NO. 2 MINIMUM BASE VALUE, Fb = 850 PSI
	(4X MEMBERS)	DOUGLAS FIR-LARCH NO. 1 MINIMUM BASE VALUE, Fb = 1000 PSI
BEAMS	(INCL. 6X AND LARGER)	DOUGLAS FIR-LARCH NO. 1 MINIMUM BASE VALUE, Fb = 1350 PSI
POSTS	(4X MEMBERS)	DOUGLAS FIR-LARCH NO. 2 MINIMUM BASE VALUE, Fc = 1350 PSI
	(6X AND LARGER)	DOUGLAS FIR-LARCH NO. 1

STUDS, PLATES & MISC. FRAMING: DOUGLAS-FIR-LARCH OR HEM-FIR NO. 2

MINIMUM BASE VALUE, Fc = 1000 PSI

- 37. GLUED LAMINATED MEMBERS SHALL BE FABRICATED IN CONFORMANCE WITH ASTM AND ANSI/AITC STANDARDS. EACH MEMBER SHALL BEAR AN AITC OR APA-EWS IDENTIFICATION MARK AND SHALL BE ACCOMPANIED BY AN AITC OR APA-EWS CERTIFICATE OF CONFORMANCE. ALL SIMPLE SPAN BEAMS SHALL BE DOUGLAS FIR COMBINATION 24F-V4, Fb = 2,400 PSI, Fv =265 PSI. ALL CANTILEVERED BEAMS SHALL BE DOUGLAS FIR COMBINATION 24F-V8, Fb = 2400 PSI, Fv = 265 PSI. CAMBER ALL SIMPLE SPAN GLULAM BEAMS, WITH SPANS OVER 30', TO 3,500' RADIUS, UNLESS SHOWN OTHERWISE ON THE PLANS.
- 38. MANUFACTURED LUMBER, PSL, LVL, AND LSL SHOWN ON PLAN ARE BASED PRODUCTS MANUFACTURED BY THE WEYERHAEUSER CORPORATION IN ACCORDANCE WITH ICC-ES REPORT ESR-1387. MEMBERS SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:

PSL (2.0E)	Fb = 2900 PSI,	E = 2000 KSI,	Fv = 290 PSI
LVL (2.0E)	Fb = 2600 PSI,	E = 2000 KSI,	Fv = 285 PSI
LSL (1.55E)	Fb = 2325 PSI,	E = 1550 KSI,	Fv = 310 PSI

ALTERNATE MANUFACTURED LUMBER MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER. ALTERNATE MANUFACTURER'S PRODUCTS SHALL BE COMPATIBLE WITH THE JOIST HANGERS AND OTHER HARDWARE SPECIFIED ON PLANS, OR ALTERNATE HANGERS AND HARDWARE SHALL SUBMITTED FOR REVIEW AND APPROVAL. SUBSTITUTED ITEMS SHALL HAVE ICC-ES REPORT APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES.

MANUFACTURED LUMBER PRODUCTS SHALL BE INSTALLED WITH A MOISTURE CONTENT OF 12% OR LESS. THE CONTRACTOR SHALL MAKE PROVISIONS DURING CONSTRUCTION TO PREVENT THE MOISTURE CONTENT OF INSTALLED BEAMS FROM EXCEEDING 12%. EXCESSIVE DEFLECTIONS MAY OCCUR IF MOISTURE CONTENT EXCEEDS THIS VALUE.

- 39. PREFABRICATED PLYWOOD WEB JOIST DESIGN SHOWN ON PLANS IS BASED ON JOISTS MANUFACTURED BY THE WEYERHAEUSER CORPORATION. ALTERNATE PLYWOOD WEB JOIST MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER. ALTERNATE MANUFACTURER'S PRODUCTS SHALL BE COMPATIBLE WITH THE JOIST HANGERS AND OTHER HARDWARE SPECIFIED ON PLANS, OR ALTERNATE HANGERS AND HARDWARE SHALL SUBMITTED FOR REVIEW AND APPROVAL. SUBSTITUTED ITEMS SHALL HAVE ICC-ES REPORT APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES.
- 40. PLYWOOD SHEATHING SHALL BE GRADE C-D, EXTERIOR GLUE OR STRUCTURAL II, EXTERIOR GLUE IN CONFORMANCE WITH DOC PS 1 OR PS 2. ORIENTED STRAND BOARD OF EQUIVALENT THICKNESS, EXPOSURE RATING AND PANEL INDEX MAY BE USED IN LIEU OF PLYWOOD.

ROOF SHEATHING SHALL BE 5/8" (NOMINAL) WITH SPAN RATING 32/16.

FLOOR SHEATHING SHALL BE 1-1/8" (NOMINAL) WITH SPAN RATING 48/24.

WALL SHEATHING SHALL BE 1/2" (NOMINAL) WITH SPAN RATING 24/0.

PROVIDE APPROVED PLYWOOD EDGE CLIPS CENTERED BETWEEN JOISTS/TRUSSES AT UNBLOCKED ROOF SHEATHING EDGES. ALL FLOOR SHEATHING EDGES SHALL HAVE APPROVED T&G JOINTS OR SHALL BE SUPPORTED WITH SOLID BLOCKING. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS OF FLOOR AND ROOF SHEATHING.

REFER TO WOOD FRAMING NOTES BELOW FOR TYPICAL NAILING REQUIREMENTS.

41. ALL WOOD IN DIRECT CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE-TREATED WITH AN APPROVED PRESERVATIVE OR (2) LAYERS OF ASPHALT IMPREGNATED BUILDING PAPER SHALL BE PROVIDED BETWEEN UNTREATED WOOD AND CONCRETE OR MASONRY.

- 42. PRESERVATIVE TREATED WOOD SHALL BE TREATED PER AWPA STANDARD U1 TO THE USE CATEGORY EQUAL TO OR HIGHER THAN THE INTENDED APPLICATION. TREATED WOOD FOR ABOVE GROUND USE SHALL BE TREATED TO AWPA UC3B. WOOD IN CONTINUOUS CONTACT WITH FRESH WATER OR SOIL SHALL BE TREATED TO AWPA UC4A. WOOD FOR USE IN PERMANENT FOUNDATIONS SHALL BE TREATED TO AWPA UC4B.
- 43. WOOD TREATED FOR FIRE RESISTANCE SHALL MEET THE REQUIREMENTS OF ASTM E 84 OR UL 723 AND HAVE A LISTED FLAME SPREAD INDEX OF 25 OR LESS. FIRE RETARDANT TREATED LUMBER AND WOOD STRUCTURAL PANELS SHALL BE LABELED IN ACCORDANCE WITH IBC 2303. 2. 4. WOOD TREATED FOR FIRE PROTECTION FOR USE IN INTERIOR ABOVE GROUND CONSTRUCTION AND CONTINUOUSLY PROTECTED FROM WEATHER AND OTHER SOURCES OF MOISTURE SHALL BE TREATED TO AWPA UCFA. WOOD TREATED FOR FIRE PROTECTION FOR USE IN EXTERIOR ABOVE GROUND CONSTRUCTION AND SUBJECT TO WETTING OR OTHER SOURCES OF MOISTURE SHALL BE TREATED TO AWPA UCFB.
- 44. FASTENERS AND TIMBER CONNECTORS USED WITH TREATED WOOD SHALL HAVE CORROSION RESISTANCE AS INDICATED IN THE FOLLOWING TABLE, UNLESS OTHERWISE NOTED

WOOD TREATMENT HAS NO AMMONIA CARRIER CONTAINS AMMONIA CARRIER	CONDITION INTERIOR DRY INTERIOR DRY	PROTECTION G90 GALVANIZED G185 OR A185 HOT DIPPED OR CONTINUOUS HOT-GALVANIZED PER ASTM A653
CONTAINS AMMONIA CARRIER CONTAINS AMMONIA CARRIER AZCA	INTERIOR WET EXTERIOR ANY	TYPE 304 OR 316 STAINLESS TYPE 304 OR 316 STAINLESS TYPE 304 OR 316 STAINLESS

INTERIOR DRY CONDITIONS SHALL HAVE WOOD MOISTURE CONTENT LESS THAN 19%. WOOD MOISTURE CONTENT IN OTHER CONDITIONS (INTERIOR WET, EXTERIOR WET, AND EXTERIOR DRY) IS EXPECTED TO EXCEED 19%. CONNECTORS AND THEIR FASTENERS SHALL BE THE SAME MATERIAL. COMPLY WITH THE TREATMENT MANUFACTURERS RECOMMENDATIONS FOR PROTECTION OF METAL.

- 45. TIMBER CONNECTORS CALLED OUT BY LETTERS AND NUMBERS SHALL BE "STRONG-TIE" BY SIMPSON COMPANY, AS SPECIFIED IN THEIR CATALOG NUMBER C-C-2019. EQUIVALENT DEVICES BY OTHER MANUFACTURERS MAY BE SUBSTITUTED, PROVIDED THEY HAVE ICC-ES APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. PROVIDE NUMBER AND SIZE OF FASTENERS AS SPECIFIED BY MANUFACTURER FOR MAXIMUM LOAD CARRYING CAPACITY. CONNECTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- ALL 2X JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "LUS" SERIES JOIST HANGERS. ALL TJI JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "ITS" SERIES JOIST HANGERS. ALL DOUBLE-JOIST BEAMS SHALL BE CONNECTED TO FLUSH BEAMS WITH "MIT" SERIES JOIST HANGERS.

WHERE CONNECTOR STRAPS CONNECT TWO MEMBERS, PLACE ONE-HALF OF THE NAILS OR BOLTS IN EACH MEMBER.

ALL SHIMS SHALL BE SEASONED AND DRIED AND THE SAME GRADE (MINIMUM)AS MEMBERS CONNECTED.

46. WOOD FASTENERS

A. NAIL SIZES SPECIFIED ON DRAWINGS ARE BASED ON THE FOLLOWING SPECIFICATIONS:

LENGTH	DIAMETER
2"	0. 113"
2-1/2"	0. 131"
3"	0. 148"
3-1/4"	0. 148"
3-1/2"	0. 135"
	2" 2-1/2" 3" 3-1/4"

IF CONTRACTOR PROPOSES THE USE OF ALTERNATE NAILS, THEY SHALL SUBMIT NAIL SPECIFICATIONS TO THE STRUCTURAL ENGINEER (PRIOR TO CONSTRUCTION) FOR REVIEW AND APPROVAL.

NAILS - PLYWOOD (APA RATED SHEATHING) FASTENERS TO FRAMING SHALL BE DRIVEN FLUSH TO FACE OF SHEATHING WITH NO COUNTERSINKING PERMITTED. TOE-NAILS SHALL BE DRIVEN AT AN ANGLE OF 30 DEGREES WITH THE MEMBER AND STARTED 1/3 THE LENGTH OF THE NAIL FROM THE MEMBER END.

B. ALL BOLTS IN WOOD MEMBERS SHALL CONFORM TO ASTM A307. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG BOLTS BEARING ON WOOD. INSTALLATION OF LAG BOLTS SHALL CONFORM TO THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION WITH A LEAD BORE HOLE OF 60 TO 70 PERCENT OF THE SHANK DIAMETER. LEAD HOLES ARE NOT REQUIRED FOR 3/8" AND SMALLER LAG SCREWS.

47. NOTCHES AND HOLES IN WOOD FRAMING:

- A. NOTCHES ON THE ENDS OF SOLID SAWN JOISTS AND RAFTERS SHALL NOT EXCEED ONE-FOURTH THE JOIST DEPTH. NOTCHES IN THE TOP OR BOTTOM OF SOLID SAWN JOISTS SHALL NOT EXCEED ONE-SIXTH THE DEPTH AND SHALL NOT BE LOCATED IN THE MIDDLE THIRD OF THE SPAN. HOLES BORED IN SOLID SAWN JOISTS AND RAFTERS SHALL NOT BE WITHIN 2 INCHES OF THE TOP OR BOTTOM OF THE JOIST, AND THE DIAMETER OF ANY SUCH HOLE SHALL NOT EXCEED ONE-THIRD THE DEPTH OF THE JOIST.
- B. IN EXTERIOR WALLS AND BEARING PARTITIONS, ANY WOOD STUD IS PERMITTED TO BE CUT OR NOTCHED TO A DEPTH NOT EXCEEDING 25 PERCENT OF ITS WIDTH. A HOLE NOT GREATER IN DIAMETER THAN 40 PERCENT OF THE STUD WIDTH IS PERMITTED TO BE BORED IN ANY WOOD STUD. IN NO CASE SHALL THE EDGE OF THE BORED HOLE BE NEARER THAN 5/8 INCH TO THE EDGE OF THE STUD. BORED HOLES SHALL NOT BE LOCATED AT THE SAME SECTION OF STUD AS A CUT OR NOTCH.
- C. NOTCHES AND HOLES IN MANUFACTURED LUMBER AND PREFABRICATED PLYWOOD WEB JOISTS SHALL BE PER THE MANUFACTURERS RECOMMENDATIONS UNLESS OTHERWISE NOTED
- 48. WOOD FRAMING NOTES--THE FOLLOWING APPLY UNLESS OTHERWISE SHOWN ON THE PLANS:
 - A. ALL WOOD FRAMING DETAILS NOT SHOWN OTHERWISE SHALL BE CONSTRUCTED TO THE MINIMUM STANDARDS OF THE INTERNATIONAL BUILDING CODE, THE AITC "TIMBER CONSTRUCTION MANUAL" AND THE AF&PA "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION". MINIMUM NAILING, UNLESS OTHERWISE NOTED, SHALL CONFORM TO IBC TABLE 2304. 10. 1. COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH MECHANICAL AND ARCHITECTURAL DRAWINGS.
 - B. WALL FRAMING: REFER ARCHITECTURAL DRAWINGS FOR THE SIZE OF ALL WALLS. ALL STUDS SHALL BE SPACED AT 16" O.C. UNO. TWO STUDS MINIMUM SHALL BE PROVIDED AT THE END OF ALL WALLS AND AT EACH SIDE OF ALL OPENINGS, AND AT BEAM OR HEADER BEARING LOCATIONS. TWO 2x8 HEADERS SHALL BE PROVIDED OVER ALL OPENINGS NOT OTHERWISE NOTED. SOLID BLOCKING FOR WOOD COLUMNS SHALL BE PROVIDED THROUGH FLOORS TO SUPPORTS BELOW. PROVIDE CONTINUOUS SOLID BLOCKING AT MID—HEIGHT OF ALL STUD WALLS OVER 10'-0" IN HEIGHT.

ALL WALLS SHALL HAVE A SINGLE BOTTOM PLATE AND A DOUBLE TOP PLATE. END NAIL TOP PLATE TO EACH STUD WITH TWO 16d NAILS, AND TOENAIL OR END NAIL EACH STUD TO BOTTOM PLATE WITH TWO 16d NAILS. FACE NAIL DOUBLE TOP PLATE WITH 16d @ 12" O.C. AND LAP MINIMUM 4'-0" AT JOINTS AND PROVIDE EIGHT 16d NAILS @ 4" O.C. EACH SIDE JOINT.

ALL STUD WALLS SHALL HAVE THEIR LOWER WOOD PLATES ATTACHED TO WOOD FRAMING BELOW WITH TWO ROWS OF 16d NAILS @ 12" ON-CENTER, OR ATTACHED TO CONCRETE BELOW WITH 5/8" DIAMETER ANCHOR BOLTS @ 4'-0" ON-CENTER EMBEDDED 7" MINIMUM, UNLESS INDICATED OTHERWISE. INDIVIDUAL MEMBERS OF BUILT-UP POSTS SHALL BE NAILED TO EACH OTHER WITH TWO ROWS OF 16d @12" ON-CENTER. UNLESS OTHERWISE NOTED, GYPSUM WALLBOARD SHALL BE FASTENED TO THE INTERIOR SURFACE OF ALL STUDS AND PLATES WITH NO. 6 X 1-1/4" TYPE S OR W SCREWS @ 8" ON-CENTER. UNLESS INDICATED OTHERWISE, 1/2" (NOMINAL) APA RATED SHEATHING (SPAN RATING 24/0) SHALL BE NAILED TO ALL EXTERIOR SURFACES WITH 8d NAILS @ 6" ON-CENTER AT PANEL EDGES AND TOP AND BOTTOM PLATES (BLOCK UN-SUPPORTED EDGES) AND TO ALL INTERMEDIATE STUDS AND BLOCKING WITH 8d NAILS @ 12" ON-CENTER ALLOW 1/8" SPACING AT ALL PANEL EDGES AND PANEL ENDS.

C. FLOOR AND ROOF FRAMING: PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS THAT EXTEND OVER MORE THAN HALF THE JOIST LENGTH AND AROUND ALL OPENINGS IN FLOORS OR ROOFS UNLESS OTHERWISE NOTED. PROVIDE SOLID BLOCKING AT ALL BEARING POINTS. TOE-NAIL JOISTS TO SUPPORTS WITH TWO 16d NAILS. ATTACH TIMBER JOISTS TO FLUSH HEADERS OR BEAMS WITH SIMPSON METAL JOIST HANGERS IN ACCORDANCE WITH NOTES ABOVE. NAIL ALL MULTI JOIST BEAMS TOGETHER WITH TWO ROWS 16d @ 12" ON-CENTER.

UNLESS OTHERWISE NOTED ON THE PLANS, PLYWOOD ROOF AND FLOOR SHEATHING SHALL BE LAID UP WITH GRAIN PERPENDICULAR TO SUPPORTS AND NAILED AT 6"ON-CENTER WITH 8d NAILS TO FRAMED PANEL EDGES, STRUTS AND OVER STUD WALLS AS SHOWN ON PLANS AND @ 12" ON-CENTER TO INTERMEDIATE SUPPORTS. PROVIDE APPROVED PLYWOOD EDGE CLIPS CENTERED BETWEEN JOISTS/TRUSSES AT UNBLOCKED ROOF SHEATHING EDGES. ALL FLOOR SHEATHING EDGES SHALL HAVE APPROVED T&G JOINTS OR SHALL BE SUPPORTED WITH SOLID BLOCKING. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS OF FLOOR AND ROOF SHEATHING. TOENAIL BLOCKING TO SUPPORTS WITH 16d @ 12" ON-CENTER UNLESS OTHERWISE NOTED.



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CHECKED:	BDM
APPROVED:	DJS

REVISIO	ONS:	
	Revisions	Oct. 09, 2
2	Revisions	Dec. 20, 2

PROJECT TITLE:

Yuan Residence
3611 West Mercer Way
Mercer Island, WA 98040

ARCHITECT:

Brandt Design Group

66 Bell Street, Unit 1 Seattle, WA 98121 PH 206.239.0850

ISSUE:

PERMIT

General Structural Notes

SCALE:

DATE:

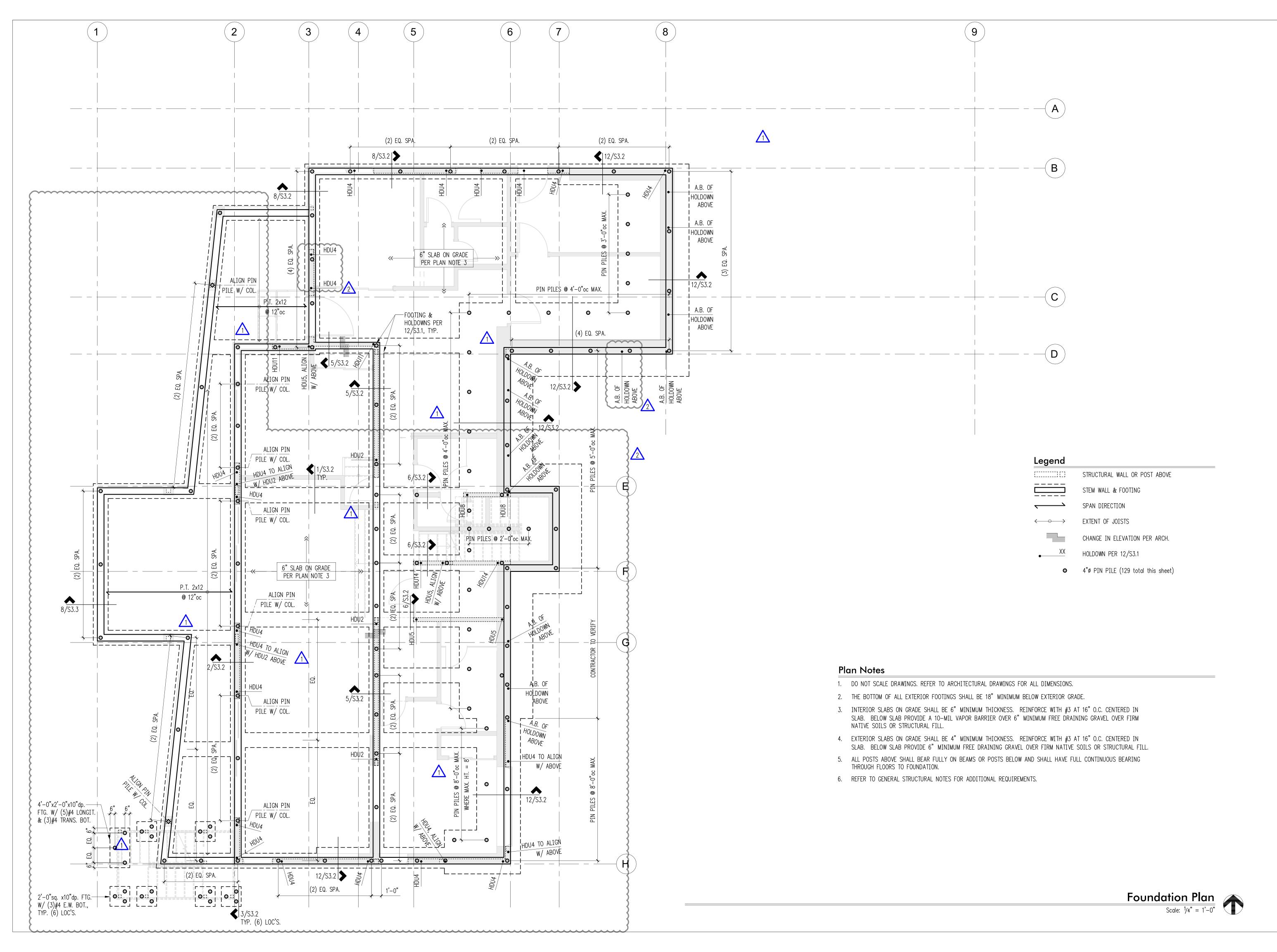
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S1.2





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REVISIO	ONS:	
1	Revisions	Oct. 09, 201
2	Revisions	Dec. 20, 20

PROJECT TITLE:

Yuan Residence

3611 West Mercer Way Mercer Island, WA 98040

ARCHITECT:

Brandt Design Group

66 Bell Street, Unit 1

Seattle, WA 98121

PH 206.239.0850

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HEET TITLE:

Foundation Plan

SCALE:

1/4" = 1'-0" U.N.O.

DATE:

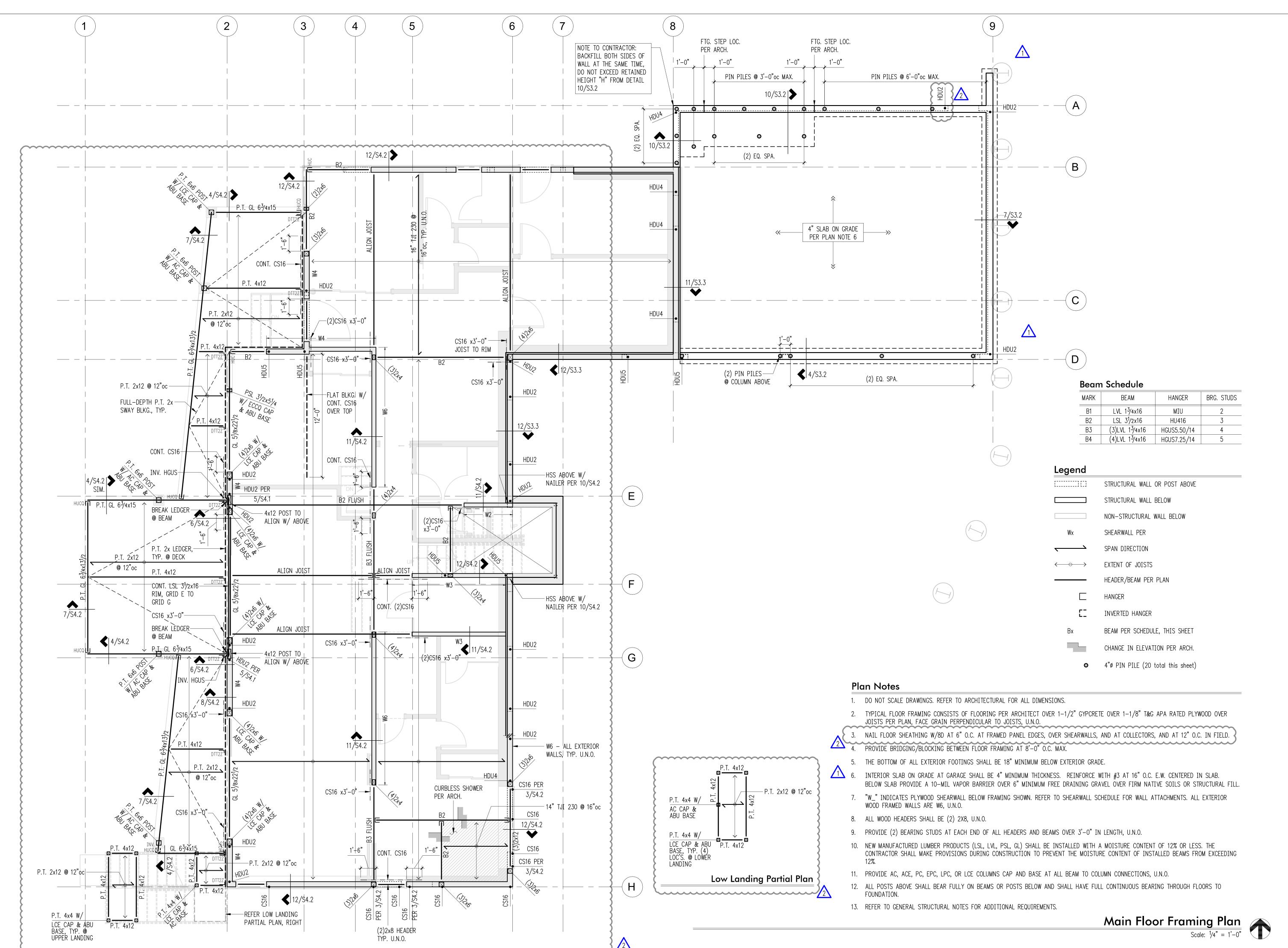
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PROJECT NO:

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SHEET NO:

S2.1





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REVISIONS:

 Revisions
 Oct. 09, 2019

 Revisions
 Dec. 20, 2019

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PROJECT TITLE:

Yuan Residence

3611 West Mercer Way Mercer Island, WA 98040

ARCHITECT:

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66 Bell Street, Unit 1 Seattle, WA 98121 PH 206.239.0850

ISSUE:

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HEET TITLE:

SHEET NO:

Main Floor

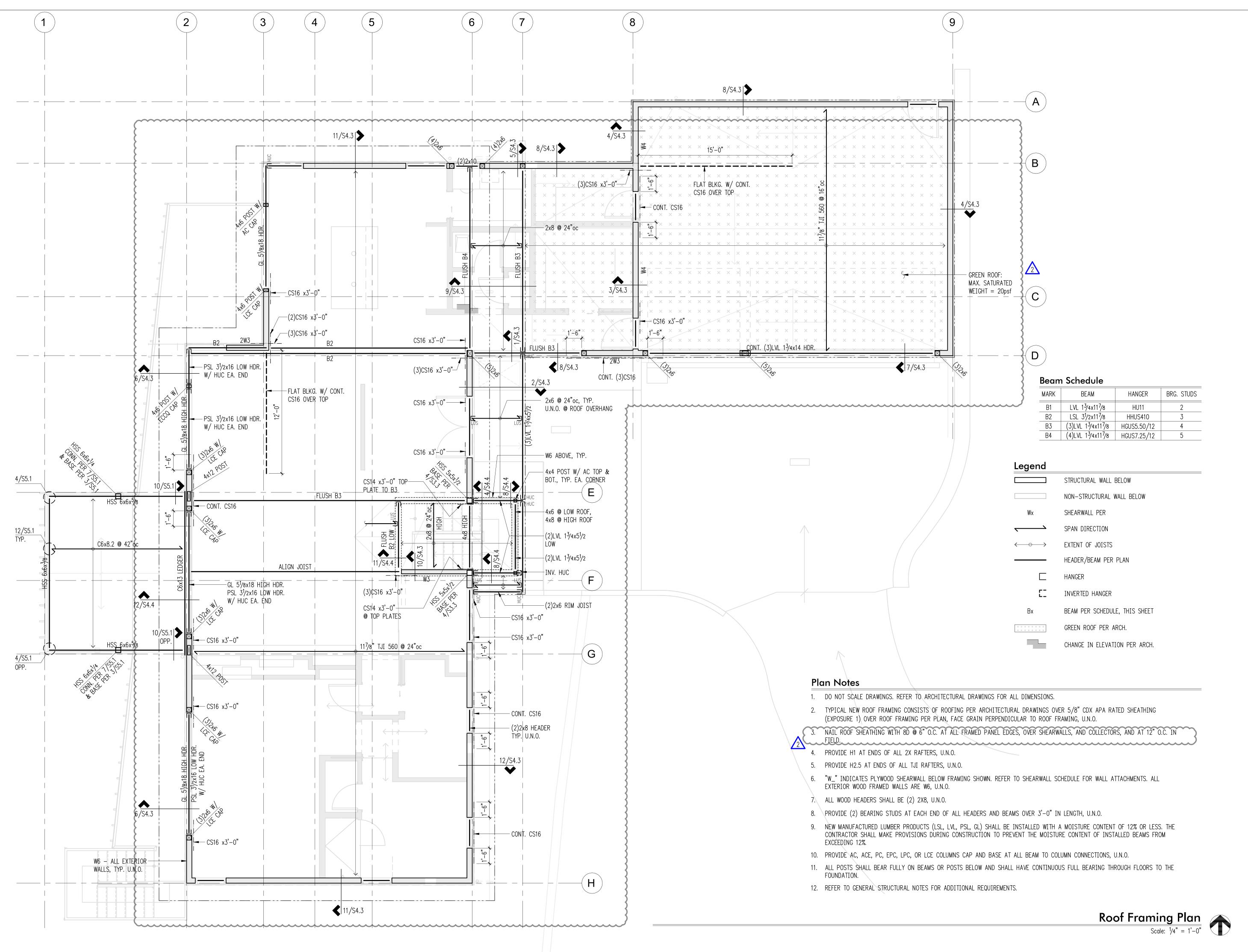
1/4" = 1'-0" U.N.C

1/4" = 1'-0" U.N.O.

DATE:
Aprill 20, 2019

PROJECT NO:
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SHEET TITLE:

SHEET NO:

Roof Framing Plan

SCALE:

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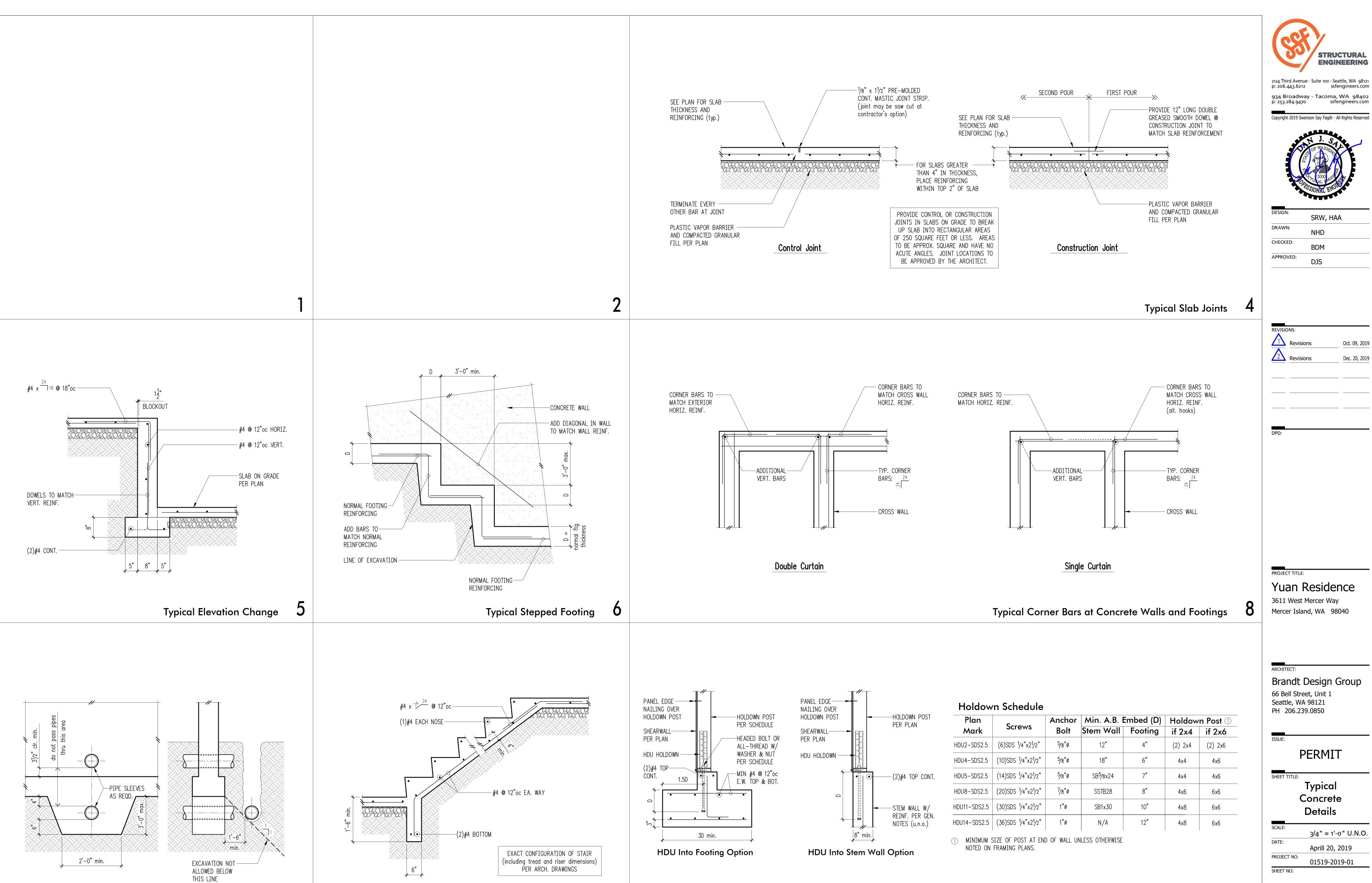
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S2 3



Typical Stair On Grade 10

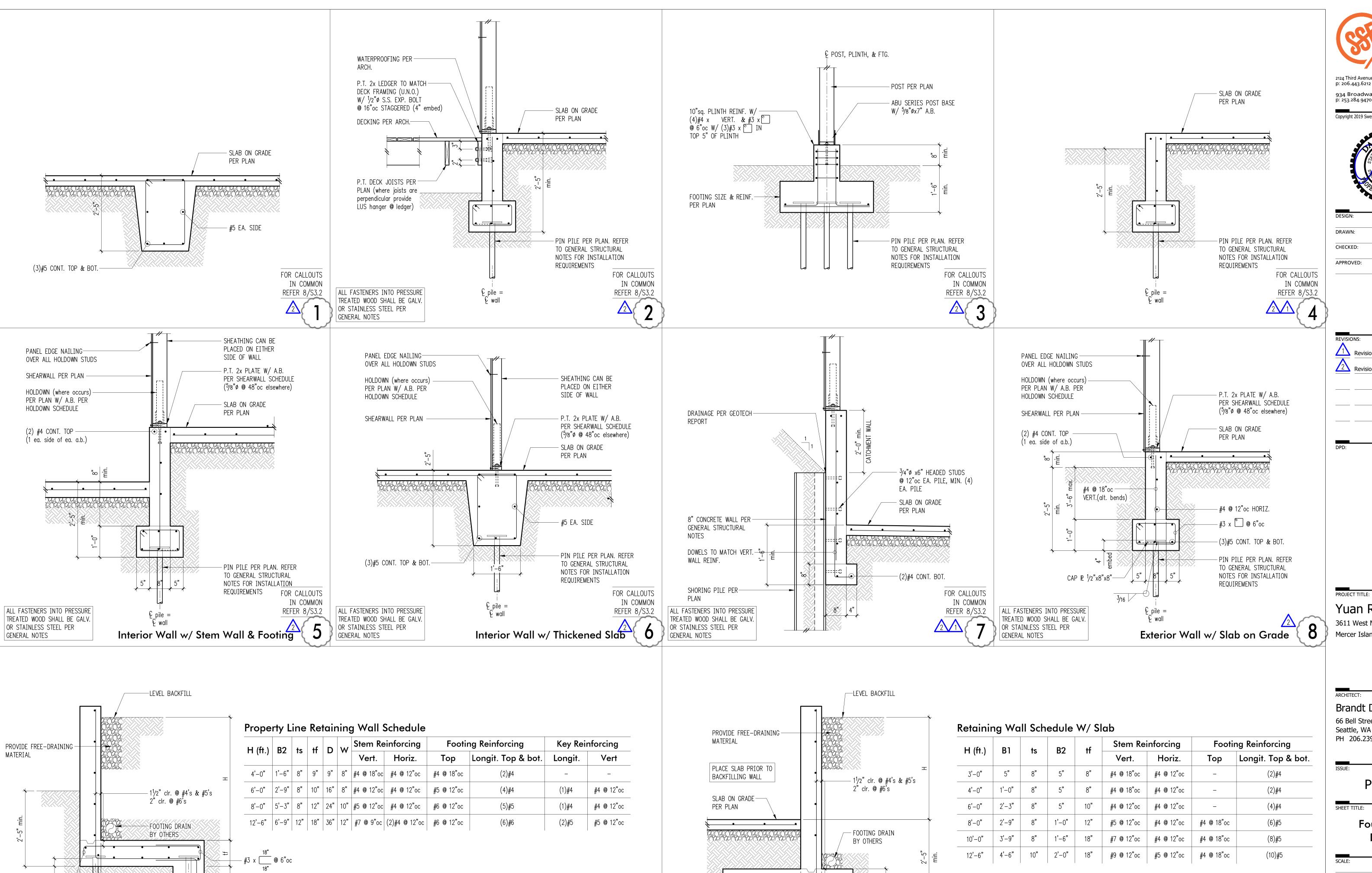
Pipe and Trench Locations

S3.1

Oct. 09, 2019

Dec. 20, 2019

Typical HDU Holdown 12



#3 x ____ @ 6"oc EA. END

PIN PILE PER PLAN. REFER

INSTALLATION REQUIREMENTS

TO 8/S3.2 AND GENERAL STRUCTURAL NOTES FOR

B2

€ pile =

1'-0"

2/1

PROVIDE STD.

HOOK @ END

W

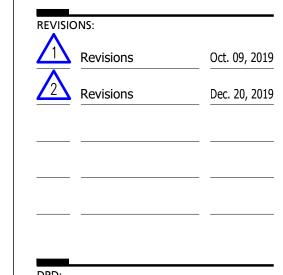
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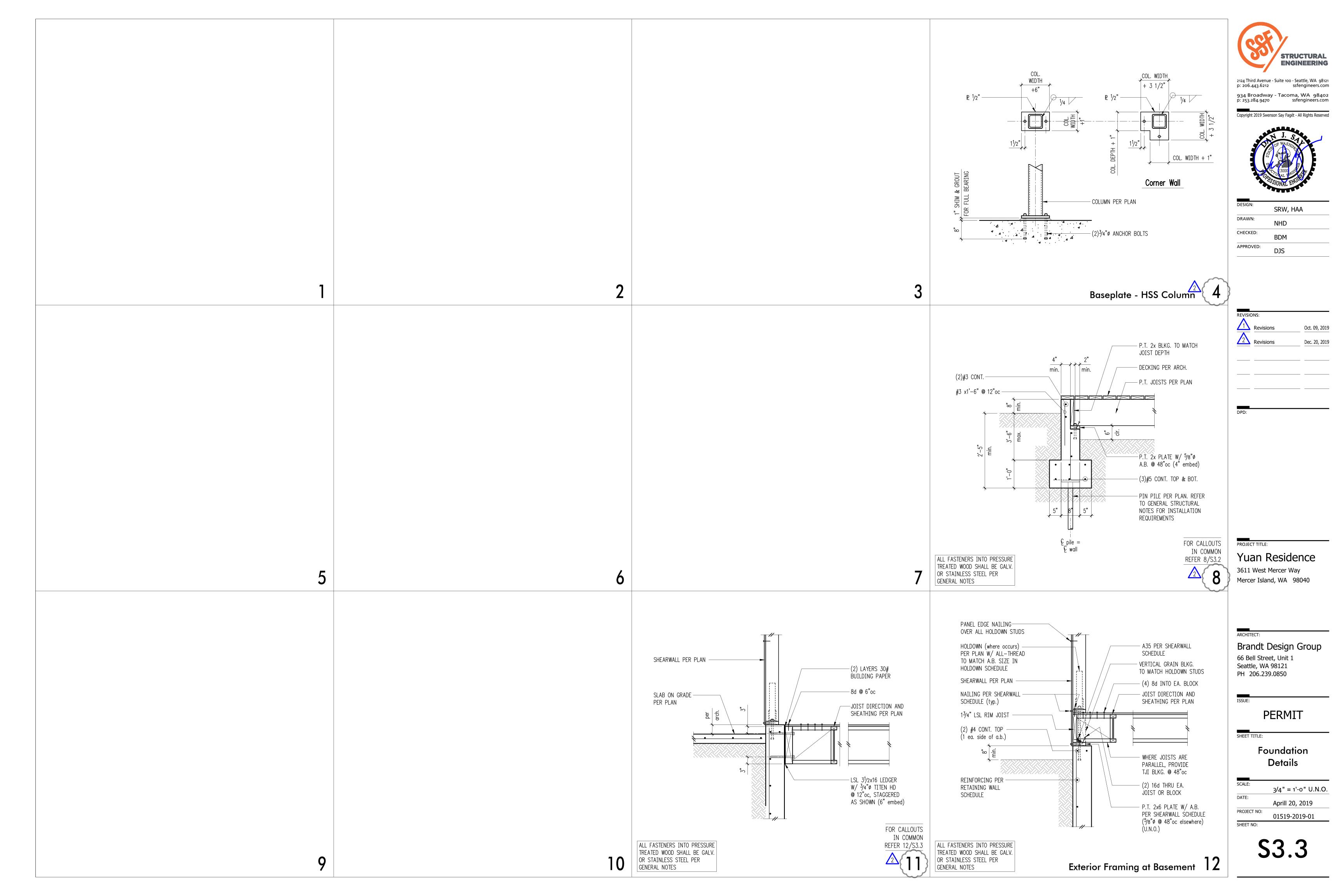
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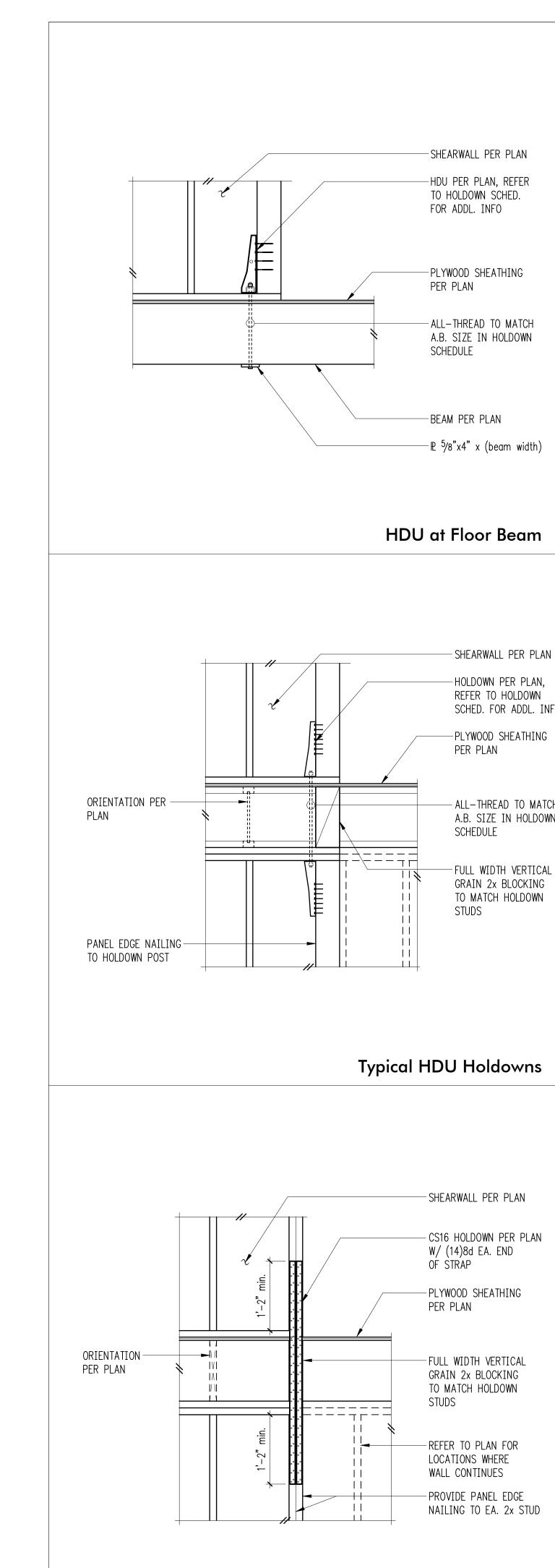
Foundation Details

3/4" = 1'-0" U.N.O. Aprill 20, 2019 PROJECT NO: 01519-2019-01

2/1

SHEET NO:





-SHEARWALL PER PLAN

HDU PER PLAN, REFER TO HOLDOWN SCHED.

FOR ADDL. INFO

-PLYWOOD SHEATHING

- ALL-THREAD TO MATCH

A.B. SIZE IN HOLDOWN

PER PLAN

SCHEDULE

-BEAM PER PLAN

— № ⁵/8"x4" x (beam width)

-SHEARWALL PER PLAN

- CS16 HOLDOWN PER PLAN

W/ (14)8d EA. END OF STRAP

-PLYWOOD SHEATHING

-FULL WIDTH VERTICAL

GRAIN 2x BLOCKING

TO MATCH HOLDOWN

-REFER TO PLAN FOR

LOCATIONS WHERE

WALL CONTINUES

Typical CS16 Holdown

PROVIDE PANEL EDGE

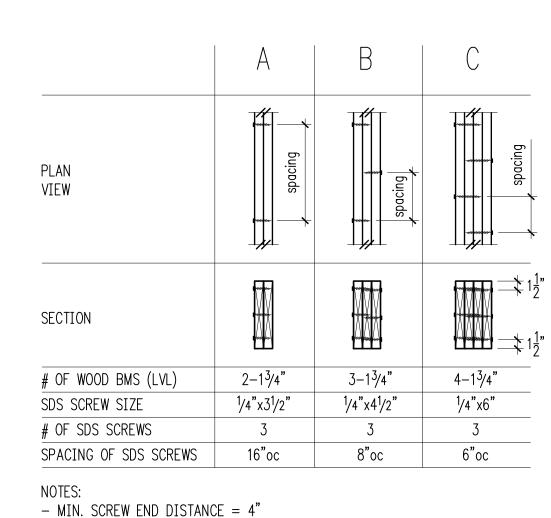
NAILING TO EA. 2x STUD

A35 (at exterior walls only) -OMIT @ HEADERS < 6'-0"

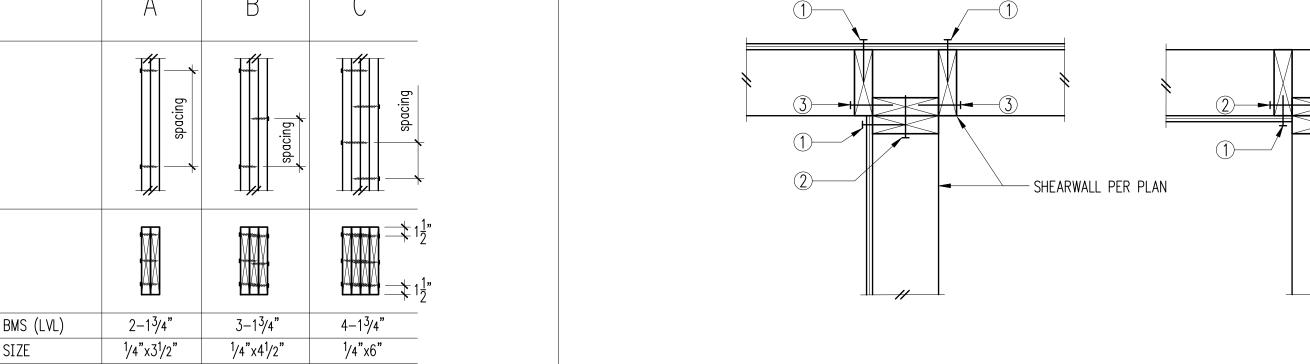
TYP. STUDS -

PER PLAN

STUDS



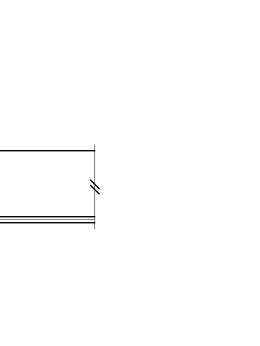
Sistering Schedule for Multi Beams



- 1) PLYWOOD PANEL EDGE NAILING PER SHEARWALL SCHEDULE
- 2) BASE PLATE NAILING PER SHEARWALL SCHEDULE
- 3 16d **@** 8"oc

Typical Shearwall Intersections

Typical Shearwall Construction



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A Revisions

22 Revisions

Oct. 09, 2019

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						NOTE: SEE SHEARWALL SCHEDULE FOR ALL NAILING AND CONNECTIONS, NOT OTHERWISE NOTED		
			SPLICE TO OCCUR AT © OF VERT. STUD TYP.		Bearing Wall	NOTE:	Non-Bearing Wall	
PANEL EDGE NAILING —— TO HOLDOWN POST			CDUTOE TO COOUR AT C					
		TUDS	6'-0" min. BETWEEN SPLICES			PANEL EDGE NAILING		
		RAIN 2x BLOCKING MATCH HOLDOWN		BTWN. STUDS		W/ PANEL EDGE NAILING BOTTOM PLATE CONNECTION		BTWN. STUDS
	FU	ILL WIDTH VERTICAL		2x BLOCKING —		SHEATHING PANEL JOINT —		2x BLOCKING
PLAN		B. SIZE IN HOLDOWN CHEDULE				TJI JOISTS PER PLAN ————————————————————————————————————		
ORIENTATION PER ———		L-THREAD TO MATCH	BOTTOM CHORD SPLICE			A35 W/ LSL		
	PE	R PLAN				TOP PLATE CONNECTION ————————————————————————————————————	2-	—— (1) JOIST BAY OF TJI BLKG. @ 48"oc
		YWOOD SHEATHING R PLAN		EA. J0151		CLOSER THAN 4"oc		
	RE	FER TO HOLDOWN CHED. FOR ADDL. INFO.	TOP CHORD SPLICE	(2)16d ————————————————————————————————————		PROVIDE 3½" LSL JOIST OR BLKG. @ SHEARWALLS ABOVE W/ EDGE NAILING		—— (2)16d EA. BLOCK
		DLDOWN PER PLAN,	— (8)16d @ 4"oc STAGGERED ———————————————————————————————————	BLOCKING ————————————————————————————————————		SHEARWALL BELOW		———(4)8d INTO EA. BLOCK
	C	IEARWALL PER PLAN			/	PANEL EDGE NAILING OF —		4.5

Typical Top Plate Splice **O**

TYP. DOUBLE TOP PLATE

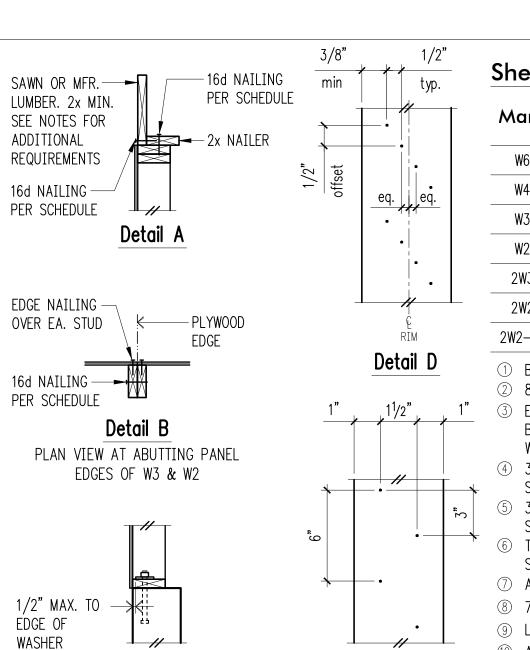
-BEAM OR HEADER

- PROVIDE (2) BEARING

PER PLAN

STUDS U.O.N.

Typical Header Support w/2 Bearing Studs 10



Detail C

Detail E

	Charalla a	Panel Edge	Top Plate Connection		Base Plate Connection	
Mark	Sheathing	Nailing	if TJI	if Wood ⁹	at Wood 111 12	at Concrete
W6	15/32" CDX PLYWOOD	8d @ 6"oc	16d @ 6"oc	A35 @ 24"oc 10	(2)rows 16d @ 6"oc	⁵ /8"ø A.B. @ 48"oc
W4	15/32" CDX PLYWOOD	8d @ 4"oc	16d @ 4"oc	A35 @ 16"oc ¹⁰	(2)rows 16d @ 4"oc ¹³	⁵ /8"ø A.B. @ 32"oc
W3 4	15/32" CDX PLYWOOD	8d @ 3"oc	(2)rows 16d @ 4"oc	A35 @ 12"oc 10	(2)rows 16d @ 4"oc ¹³	⁵ /8"ø A.B. @ 24"oc
W2 4	15/32" CDX PLYWOOD	8d @ 2"oc	(2)rows 16d @ 4"oc	A35 @ 9"oc 10	(3)rows 16d @ 4"oc (14)	⁵ /8"ø A.B. @ 16"oc
2W3 ^⑤	15/32" CDX PLYWD. EA. SIDE	8d @ 3"oc EA. SIDE	n/a	A35 @ 6"oc	(4)rows 16d @ 4"oc (14)	⁵ /8"ø A.B. @ 16"oc
2W2 ⁽⁵⁾	15/32" CDX PLYWD. EA. SIDE	8d @ 2"oc EA. SIDE	n/a	HGA10KT @ 8"oc	(2)ROWS SDS 1/4x5" 6"oc 15	⁵ /8"ø A.B. @ 12"oc
2W2-10 ⁵	15/32" CDX PLYWD. EA. SIDE	10d @ 2"oc EA. SIDE	n/a	HGA10KT @ 6"oc	n/a	⁵ /8"ø A.B. @ 12"oc

-SHEARWALL PER PLAN-

-2 IF SHEARWALL OR

OTHER WALLS

16d @ 12"oc AT

-INTERSECTING WALL

(see left if shearwall)

- ② 8d NAILS SHALL BE 0.131"ø x 2 1/2" (common) 16d NAILS SHALL BE 0.135"ø x 3 1/2" (box) 10d NAILS SHALL BE 0.148"ø x 3" (common). ③ EMBED ANCHOR BOLTS AT LEAST 7". EXPANSION BOLTS MAY BE SUBSTITUTED FOR ANCHOR BOLTS WITH 4" EMBEDMENT. TITEN HD SCREW ANCHORS MAY UTED FOR ANCHOR BOLTS W/ 4" EMBEDMENT. ALL BOLTS SHALL HAVE 3" \times 3" \times 1/4" MIN. PLATE WASHERS. PLATE WASHERS SHALL EXTEND TO

- SEE PLANS AND HOLDOWN SCHEDULE FOR ALTERNATE REQUIREMENTS.
- ALL EXTERIOR WALLS SHALL BE W6, UNLESS NOTED OTHERWISE

- ① AT MULTI-ROW NAILING, MINIMUM OFFSET BETWEEN ROWS AND ROW SPACING 1/2", SEE DETAIL D.
- ② LVL RIMS PERMITTED AT "W6", "W4", & "W3" ONLY.
- ① PROVIDE (3) ROWS 16d @ 6"oc AT LVL RIMS. 4 MINIMUM RIM OR JOIST 31/2" WIDE.
- $^{(5)}$ MINIMUM RIM OR JOIST $3\frac{1}{2}$ " WIDE. SEE DETAIL E FOR SPACING REQUIREMENTS.

Shearwall Schedule 12

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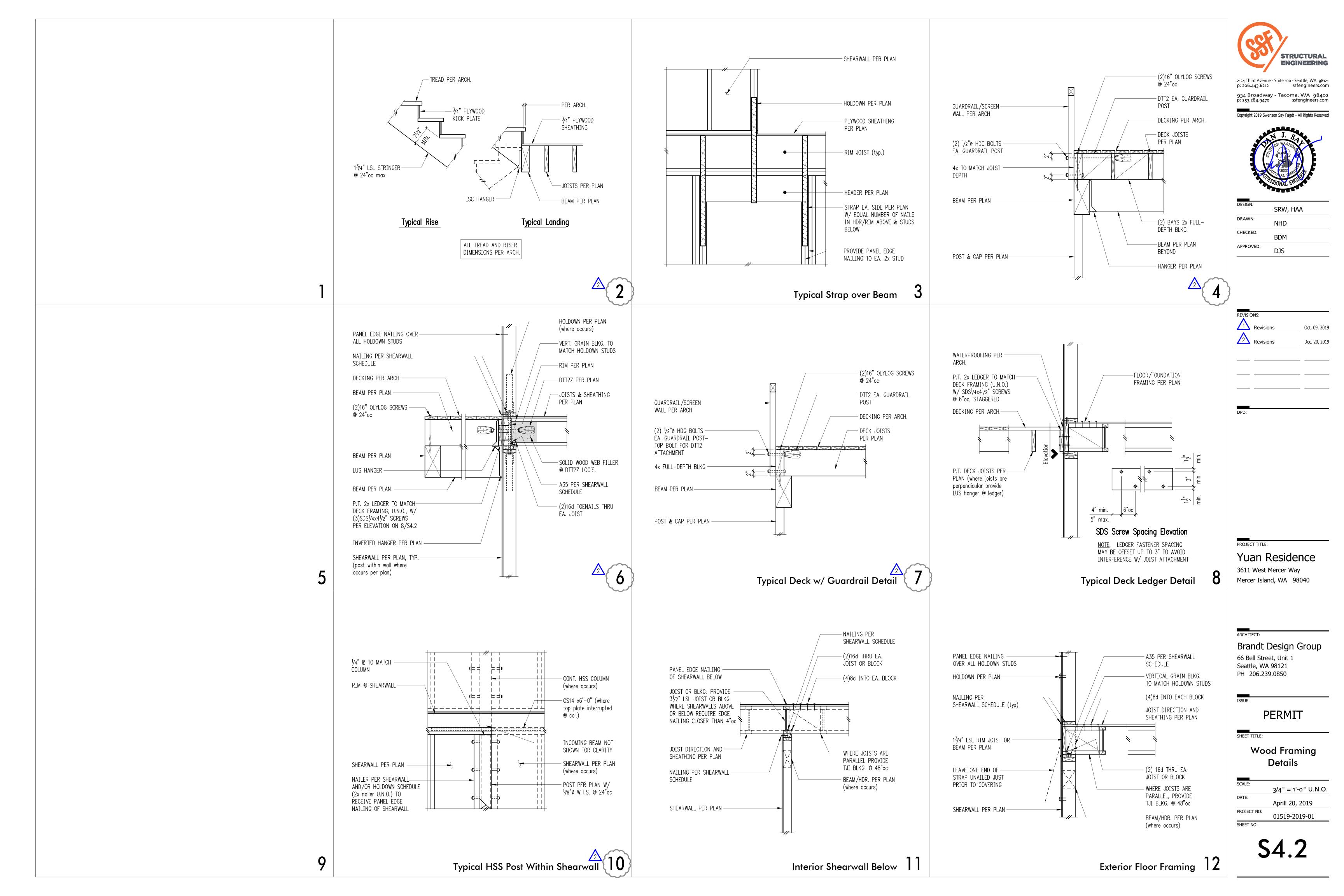
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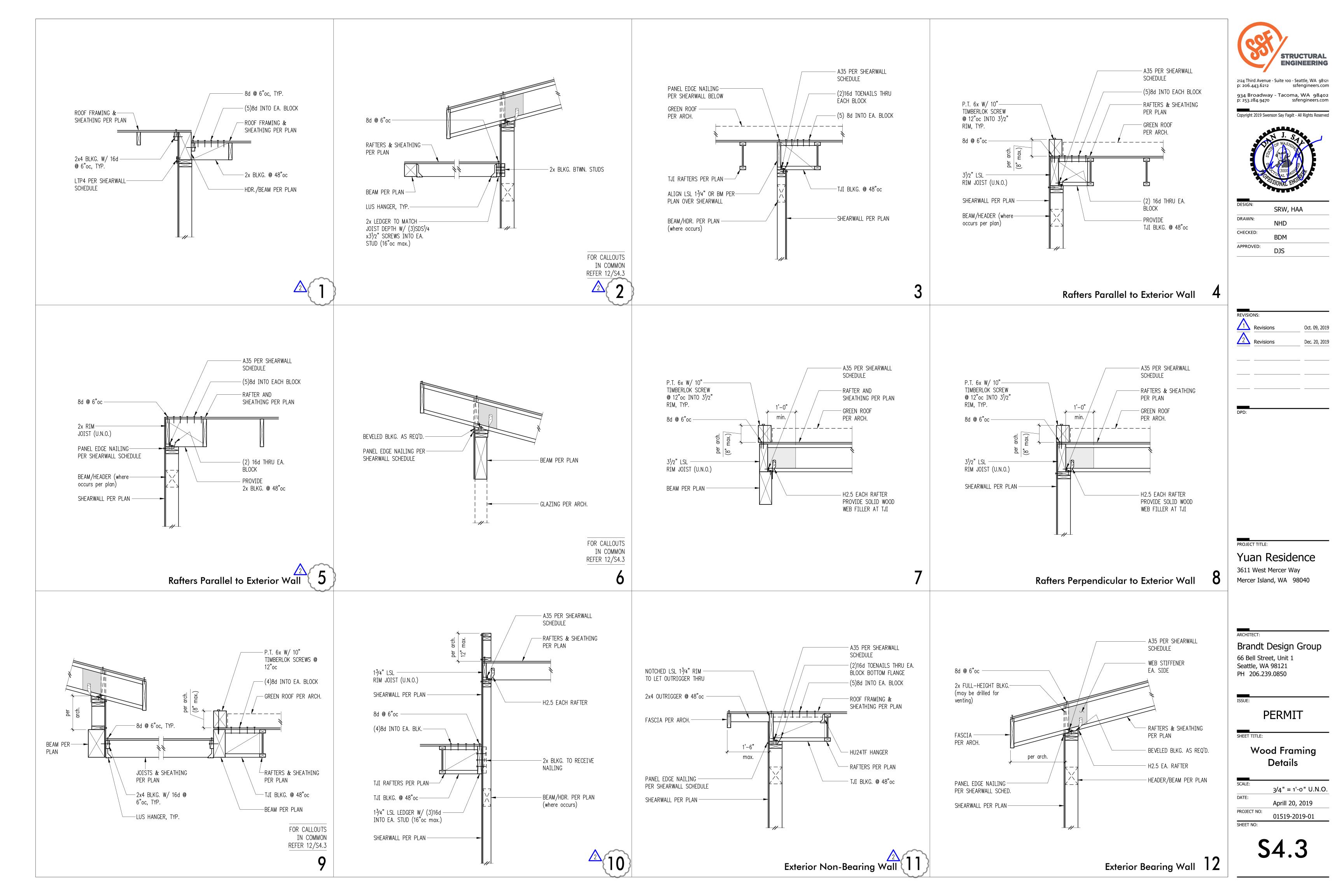
Typical

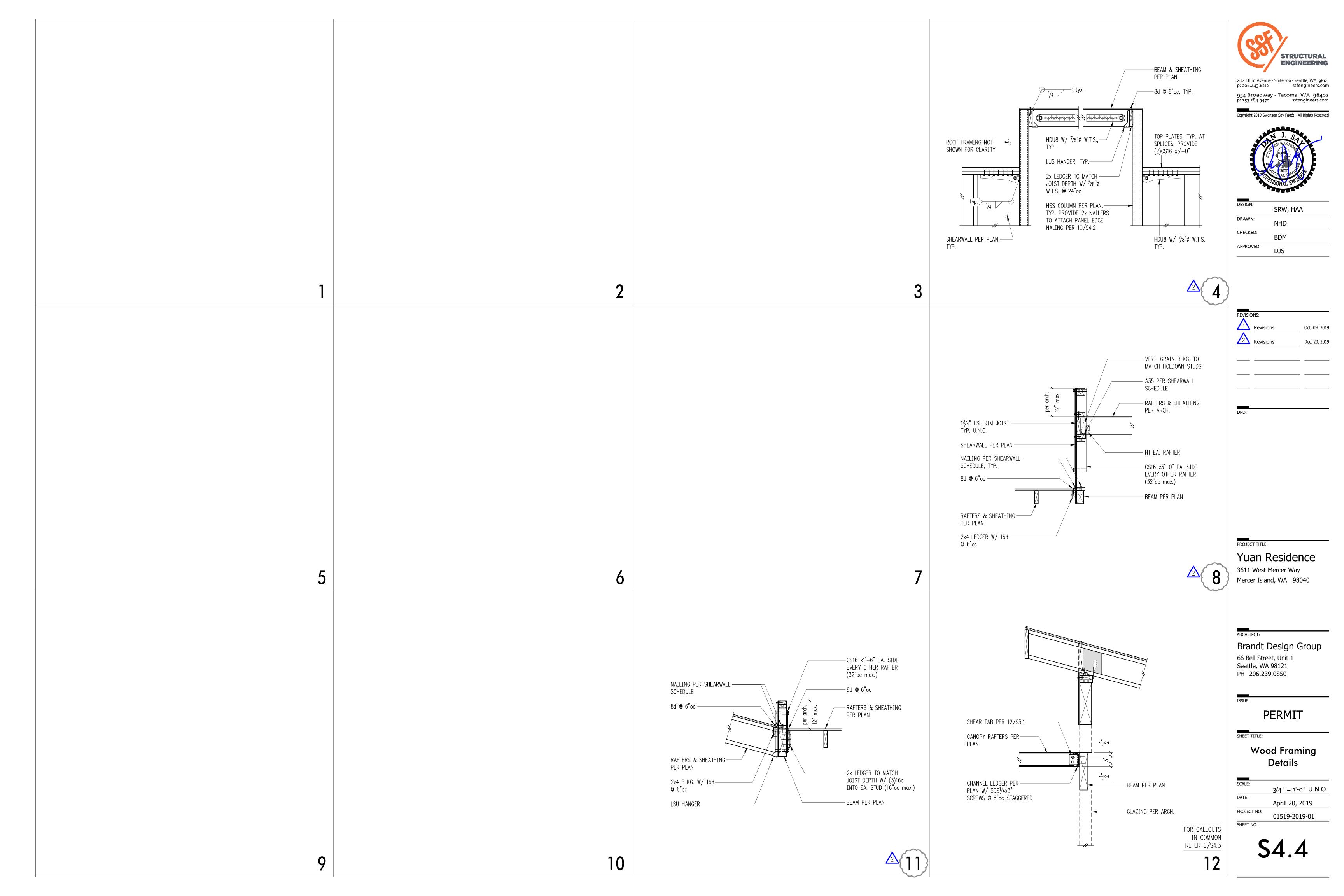
Wood Framing Details

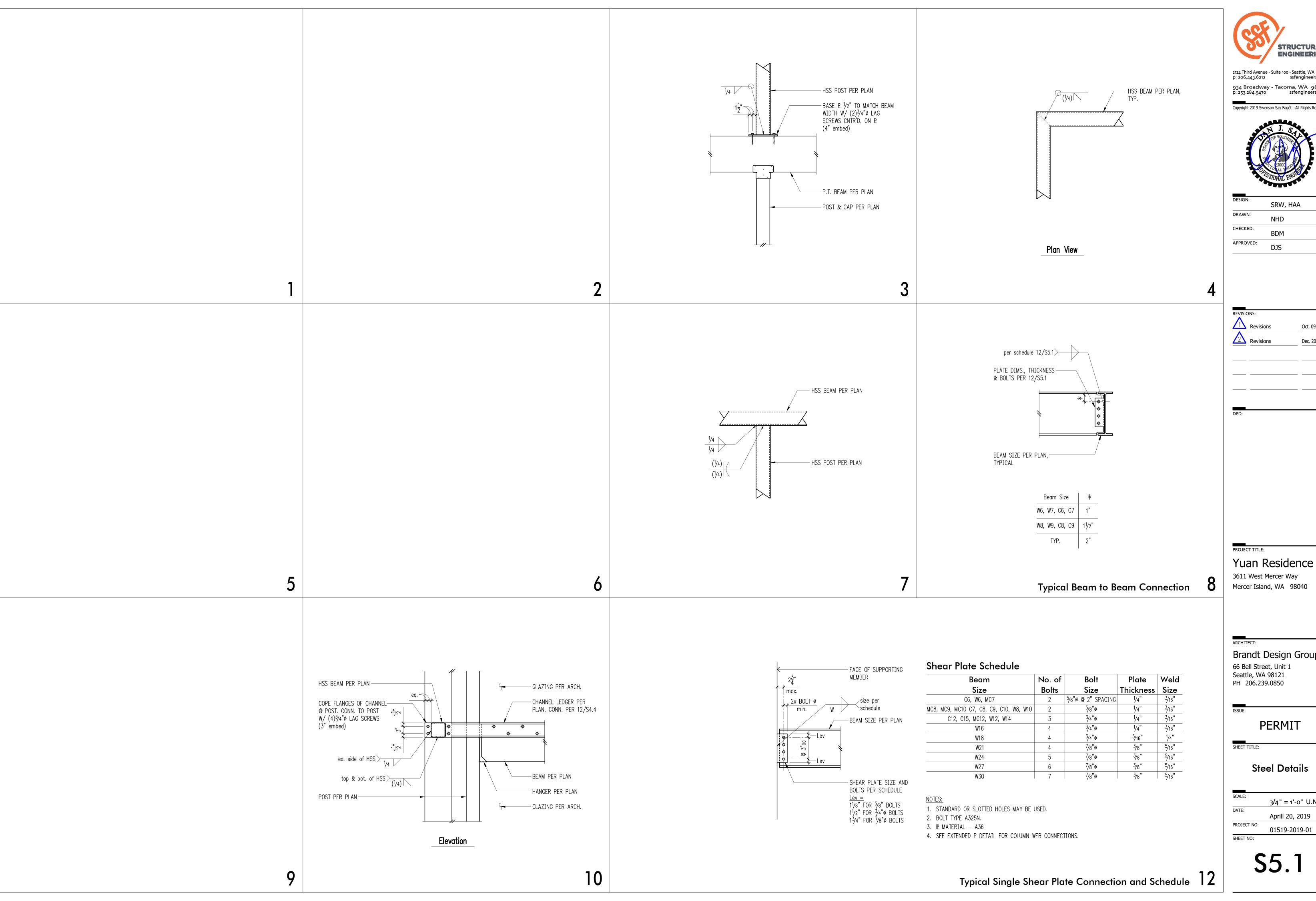
3/4" = 1'-0" U.N.O. Aprill 20, 2019 PROJECT NO: 01519-2019-01

SHEET NO:









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Oct. 09, 2019 2 Revisions Dec. 20, 2019

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Steel Details

3/4" = 1'-0" U.N.O. Aprill 20, 2019 01519-2019-01

\$5.1

General Shoring Notes

THE FOLLOWING APPLY UNLESS SHOWN OTHERWISE ON THE DRAWINGS

CODE REQUIREMENTS

1. ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE, 2015 EDITION, AND THE LATEST EDITION OF PTI DC-35.1, "RECOMMENDATIONS FOR PRESTRESSED ROCK AND SOIL ANCHORS".

REFERENCE DOCUMENTS

2. REPORT ON GEOTECHNICAL INVESTIGATION BY PANGEO INC. DATED APRIL 16, 2019. FILE NO. 18-371. GEOTECHNICAL ENGINEERING STUDY - PROPOSED RESIDENCE - 3611 WEST MERCER WAY, MERCER ISLAND, WA

GENERAL REQUIREMENTS

- 3. ANY DISCREPANCIES FOUND AMONG THE DRAWINGS, THE SPECIFICATIONS, THESE GENERAL NOTES AND THE SITE CONDITIONS SHALL BE REPORTED TO THE ENGINEER AND ARCHITECT, WHO SHALL CORRECT SUCH DISCREPANCY IN WRITING. ANY WORK DONE BY THE GENERAL CONTRACTOR AFTER DISCOVERY OF SUCH DISCREPANCY SHALL BE DONE AT THE GENERAL CONTRACTOR'S RISK.
- 4. SHOULD ANY DISCREPANCIES BE FOUND IN THE PROJECT DOCUMENTS, THE CONTRACTOR WILL BE DEEMED TO HAVE INCLUDED IN THE PRICE THE MOST EXPENSIVE WAY OF COMPLETING THE WORK, UNLESS PRIOR TO SUBMISSION OF THE PRICE THE CONTRACTOR ASKS FOR A DECISION FROM THE ENGINEER AND ARCHITECT AS TO WHICH SHALL GOVERN.
- 5. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE CONTRACTOR'S WORK. THE STRUCTURAL ENGINEER HAS NO OVERALL SUPERVISORY AUTHORITY OR ACTUAL AND/OR DIRECT RESPONSIBILITY FOR THE SPECIFIC WORKING CONDITIONS AT THE SITE AND/OR FOR ANY HAZARDS RESULTING FROM THE ACTIONS OF ANY TRADE CONTRACTOR. THE STRUCTURAL ENGINEER HAS NO DUTY TO INSPECT, SUPERVISE, NOTE, CORRECT, OR REPORT ANY HEALTH OR SAFETY DEFICIENCIES TO THE OWNER, CONTRACTORS, OR OTHER ENTITIES OR PERSONS AT THE PROJECT SITE.
- 6. CONTRACTOR SHALL VERIFY ALL DIMENSIONS OF EXISTING STRUCTURES IN THE FIELD AND SHALL NOTIFY THE ENGINEER OF ALL FIELD CHANGES PRIOR TO FABRICATION AND INSTALLATION OF ANY STRUCTURAL MEMBER.
- 7. CONTRACTOR-INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS ONLY WILL NOT SATISFY THIS REQUIREMENT.
- 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 ARCHITECT AND THE STRUCTURAL ENGINEER. ALL TYPICAL AND NOTES SHOWN ON DRAWINGS SHALL APPLY, UNLESS NOTED OTHERWISE. TYPICAL DETAILS MAY NOT NECESSARILY BE INDICATED ON THE PLANS BUT SHALL STILL APPLY AS SHOWN OR DESCRIBED IN THE DETAILS. WHERE TYPICAL DETAILS ARE NOTED ON THE PLANS, THE SPECIFIED TYPICAL DETAIL SHALL BE USED. WHERE NO TYPICAL DETAIL IS NOTED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CHOOSE THE APPROPRIATE TYPICAL DETAIL FROM THOSE PROVIDED. THE CONTRACTOR SHALL SUBMIT ALL PROPOSED ALTERNATE TYPICAL DETAILS TO THOSE PROVIDED WITH RELATED CALCULATIONS TO THE ENGINEER FOR APPROVAL PRIOR TO SHOP DRAWING PRODUCTION AND FIELD USE.
- 9. SHOP DRAWINGS FOR THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION OF THESE ITEMS.

STRUCTURAL STEEL

- 10. SHOP DRAWING REVIEW: DIMENSIONS AND QUANTITIES ARE NOT REVIEWED BY THE ENGINEER OF RECORD, THEREFORE MUST BE VERIFIED BY THE CONTRACTOR. CONTRACTOR SHALL REVIEW AND STAMP DRAWINGS PRIOR TO REVIEW BY ENGINEER OF RECORD. CONTRACTOR SHALL REVIEW DRAWINGS FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES. SEQUENCES AND OPERATIONS OF CONSTRUCTION, AND ALL SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO. SUBMITTALS SHALL INCLUDE A REPRODUCIBLE AND ONE COPY: REPRODUCIBLE WILL BE MARKED AND RETURNED WITHIN TWO WEEKS OF RECEIPT WITH A NOTATION INDICATING THAT THE SUBMITTAL HAS BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THE SUBMITTED ITEMS SHALL NOT BE INSTALLED UNTIL THEY HAVE BEEN APPROVED BY THE DESIGN TEAM.
- SHOP DRAWING SUBMITTALS PROCESSED BY THE ENGINEER ARE NOT CHANGE ORDERS. THE PURPOSE OF SHOP DRAWING SUBMITTALS BY THE CONTRACTOR IS TO DEMONSTRATE TO THE ENGINEER THAT THE CONTRACTOR UNDERSTANDS THE DESIGN CONCEPT, BY INDICATING WHICH MATERIAL IS INTENDED TO BE FURNISHED AND INSTALLED AND BY DETAILING THE INTENDED FABRICATION AND INSTALLATION METHODS.
- 11. UTILITY LOCATION: THE UTILITIES INFORMATION SHOWN ON THE PLANS MAY NOT BE COMPLETE. THE SHORING CONTRACTOR SHALL DETERMINE THE HORIZONTAL AND VERTICAL LOCATION OF ALL ADJACENT UNDERGROUND UTILITIES PRIOR TO DRILLING PILE HOLES OR CUTTING OR DIGGING. PILES INCLUDING CONCRETE CASING SHALL MAINTAIN A MINIMUM OF 12" CLEARANCE TO ANY EXISTING UTILITIES TO REMAIN. CONTRACTOR SHALL NOTIFY THE ENGINEER OF CONFLICTS. CONFLICTS SHALL BE RESOLVED IN WRITING PRIOR TO PROCEEDING WITH CONSTRUCTION.

QUALITY ASSURANCE

12. SPECIAL INSPECTION SHALL BE PROVIDED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND SECTIONS 110 AND 1704 OF THE INTERNATIONAL BUILDING CODE BY A QUALIFIED TESTING AGENCY DESIGNATED BY THE ARCHITECT, AND RETAINED BY THE BUILDING OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ALL INSPECTIONS. THE ARCHITECT, STRUCTURAL ENGINEER, AND BUILDING DEPARTMENT SHALL BE FURNISHED WITH COPIES OF ALL INSPECTION AND TEST RESULTS WITHIN TWO WEEKS OF COMPLETION OF EACH PHASE OF WORK. SPECIAL INSPECTION OF THE FOLLOWING TYPES OF CONSTRUCTION IS REQUIRED

SOIL CONDITIONS, FILL PLACEMENT, AND DENSITY PER TABLE 1705.6

PERIODIC INSPECTION ALLOWS INSPECTION AT INTERVALS NECESSARY TO CONFIRM THAT WORK REQUIRING SPECIAL INSPECTION IS IN COMPLIANCE WITH REQUIREMENTS. CONTINUOUS SPECIAL INSPECTION REQUIRES THAT THE INSPECTOR BE ONSITE AT ALL TIMES THAT WORK REQUIRING SPECIAL INSPECTION IS PERFORMED.

- 13. INSPECTORS SHALL BRING DEFICIENCIES TO THE IMMEDIATE ATTENTION OF THE 25. SOIL DESIGN PARAMETERS ARE AS FOLLOWS: CONTRACTOR FOR CORRECTION. IF THE DISCREPANCIES ARE NOT CORRECTED, THE INSPECTOR SHALL BRING THE UNCORRECTED DEFICIENCY TO THE ATTENTION OF THE BUILDING OFFICIAL AND THE STRUCTURAL ENGINEER IMMEDIATELY AND PRIOR TO COMPLETION OF THAT PHASE OF WORK.
- 14. SOILS INSPECTION: INSPECTION BY THE SOILS ENGINEER SHALL BE PERFORMED FOR PILE PLACEMENT. ALL PREPARED SOIL BEARING SURFACES SHALL BE INSPECTED BY THE SOILS ENGINEER PRIOR TO PLACEMENT OF PILES. SOIL COMPACTION SHALL BE SUPERVISED BY AN APPROVED TESTING LAB. THE GEOTECHNICAL ENGINEER SHALL ALSO ADVISE ON WATER CONTROL AND SLAB ON GRADE CONSTRUCTION.
- 15. WET WEATHER INSPECTION: A SITE VISIT FROM THE GEOTECHNICAL SPECIAL INSPECTOR SHALL OCCUR DURING EACH DAY OF ACTIVE GRADING AND IN THE EVENT OF SIGNIFICANT RAINFALL WHICH MIGHT COMPROMISE STABILIZATION MEASURES BETWEEN NOVEMBER 1 AND MARCH 31. THE DETERMINATION OF WHAT CONSTITUTES SIGNIFICANT RAINFALL IS SUBJECT TO THE DISCRETION OF THE GEOTECHNICAL SPECIAL INSPECTOR. HOWEVER. AS A MINIMUM STANDARD, THE GEOTECHNICAL SPECIAL INSPECTOR IS REQUIRED TO CONDUCT A SITE VISIT IF MORE THAN ONE HALF INCH OF PRECIPITATION OCCURS ON ANY GIVEN DAY. ANY RECOMMENDATIONS REQUIRED TO MAINTAIN STABILITY OF EXCAVATIONS AND PROPER FUNCTIONING OF THE SEDIMENT/EROSION CONTROL SYSTEM PROVIDED BY THE GEOTECHNICAL SPECIAL INSPECTOR SHALL BE IMPLEMENTED IMMEDIATELY. THE GEOTECHNICAL SPECIAL INSPECTOR SHALL PROVIDE WRITTEN NOTICE THAT THE SITE HAS BEEN STABILIZED FOLLOWING COMPLETION OF GRADING.

SHORING MONITORING

- 16. A SYSTEMATIC PROGRAM OF MONITORING SHALL BE CONDUCTED DURING THE PROJECT EXECUTION TO DETERMINE THE EFFECT OF CONSTRUCTION ON ADJACENT FACILITIES AND STRUCTURES IN ORDER TO PROTECT THEM FROM DAMAGE. REFER TO REPORT OF GEOTECHNICAL INVESTIGATION FOR RECOMMENDATIONS. FIELD DATA AND MEASUREMENTS ARE TO BE SUBMITTED TO THE STRUCTURAL AND GEOTECHNICAL ENGINEER FOR REVIEW.
- 17. MONITORING SHALL BE PERFORMED BY A PROFESSIONAL LAND SURVEYOR (PLS) LICENSED IN THE STATE OF WASHINGTON.
- 18. UNLESS OTHERWISE REQUIRED BY THE GEOTECHNICAL ENGINEER, THE MONITORING PROGRAM SHALL INCLUDE A VIDEO OR PHOTOGRAPHIC SURVEY PRIOR TO THE BEGINNING OF THE SHORING INSTALLATION TO DOCUMENT THE CURRENT CONDITIONS OF THE SURROUNDING FEATURES. THE SIZE AND LOCATION OF ANY EXISTING CRACKS IN ADJACENT SLABS, PAVEMENTS OR BUILDINGS SHALL BE MEASURED AND DOCUMENTED. CONTROL POINTS SHALL BE ESTABLISHED AT A DISTANCE WELL AWAY FROM THE WALLS AND SLOPES, AND DEFLECTIONS FROM THE REFERENCE POINTS SHALL BE MEASURED THROUGHOUT CONSTRUCTION BY OPTICAL SURVEY. A MINIMUM OF 3 MONITORING POINTS SHALL BE ESTABLISHED ON NEARBY ADJACENT BUILDINGS. MINIMUM SURVEY FREQUENCY SHALL BE ONCE PER WEEK.
- 19. SOLDIER PILE MONITORING PROGRAM: FOLLOWING INSTALLATION OF THE SOLDIEF PILES, MONITORING POINTS SHALL BE ESTABLISHED ON THE TOP OF THE PILES PRIOR TO PROCEEDING WITH THE EXCAVATION. ONE MONITORING POINT SHALL BE ESTABLISHED FOR EVERY FOUR PILES. THE MONITORING POINTS SHALL BE READ DAILY DURING EXCAVATION OPERATIONS AND TWICE WEEKLY ONCE THE EXCAVATION IS COMPLETED. THE INITIAL READINGS FOR THIS MONITORING SHALL BE TAKEN BEFORE STARTING ANY DEMOLITION OR EXCAVATION ON THE SITE. NOTIFY THE GEOTECHNICAL AND STRUCTURAL ENGINEERS, SHORING DESIGNER, AND THE BUILDING DEPARTMENT IF .5"OF MOVEMENT OCCURS BETWEEN TWO CONSECUTIVE READINGS. THE ENGINEERS AND DESIGNERS SHALL DETERMINE THE CAUSE OF DISPLACEMENT AND DEVELOP REMEDIAL MEASURES IF WARRANTED. PLEASE NOTE THAT A MAXIMUM OF 1"HORIZONTAL DISPLACEMENT IS REQUIRED ANYWHERE ON SHORING WALL SURFACES THROUGHOUT THE SHORING WALL SERVICE LIFETIME. CONSTRUCTION SHALL BE SUSPENDED IMMEDIATELY AND REMEDIAL PROCEDURES APPLIED AS LONG AS A DISPLACEMENT READING EXCEEDS 1". IF THE TOTAL MEASURED LATERAL DEFLECTION OF THE PILES EXCEEDS 1", REMEDIAL MEASURES MAY BE REQUIRED.
- 20. EACH SET OF MONITORING DATA MUST BE PROVIDED TO THE GEOTECHNICAL ENGINEER FOR REVIEW. IT MAY BE NECESSARY TO INSTALL ADDITIONAL MONITORING POINTS IF WARRANTED BY THE DATA. RECOMMENDATIONS WILL BE PROVIDED BY THE GEOTECHNICAL ENGINEER DURING CONSTRUCTION IF ADDITIONAL MONITORING POINTS BECOME NECESSARY.
- 21. SURVEY FREQUENCY MAY BE DECREASED AFTER THE SHORING SYSTEM HAS BEEN INSTALLED AND EXCAVATION IS COMPLETE IF THE DATA INDICATES LITTLE OR NO ADDITIONAL MOVEMENT. CHANGE IN THE SURVEY FREQUENCY SHALL BE APPROVED IN WRITING BY THE GEOTECHNICAL ENGINEER. SURVEYING MUST CONTINUE UNTIL THE PERMANENT STRUCTURE (INCLUDING FLOOR SLABS AS BRACES) IS COMPLETE TO FINAL AND STREET GRADES.

GEOTECHNICAL INFORMATION AND CRITERIA

- 22. INSTALLATION OF SHORING, SUBGRADE PREPARATION INCLUDING DRAINAGE, EXCAVATION, COMPACTION AND FILLING REQUIREMENTS SHALL CONFORM WITH THE RECOMMENDATIONS CONTAINED IN THE SOILS REPORT AND/OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER. THE SUBSURFACE CHARACTERIZATIONS USED TO DESIGN THE SHORING ARE CONTAINED IN THE SOILS REPORT AS REFERENCED ABOVE.
- 23. EXCAVATIONS FOR FOUNDATIONS SHALL BE PER PLAN DOWN TO UNDISTURBED NATIVE MATERIAL PER THE GEOTECHNICAL ENGINEERING RECOMMENDATIONS. OVER EXCAVATED AREAS SHALL BE BACKFILLED WITH LEAN CONCRETE OR PER GEOTECHNICAL RECOMMENDATIONS AT THE CONTRACTOR'S EXPENSE. EXCAVATION SLOPES SHALL BE SAFE AND SHALL NOT BE GREATER THAN THE LIMITS SPECIFIED BY LOCAL, STATE, AND NATIONAL SAFETY REGULATIONS. CONTRACTOR SHALL PROTECT CUT SLOPES AS NECESSARY IF CONSTRUCTION OCCURS DURING WET WEATHER, AND SHALL CONTROL AND MANAGE RUNOFF TO MINIMIZE EFFECTS ON CONSTRUCTION.
- 24. DESIGN SOIL CAPACITIES ARE DETERMINED BY THE GEOTECHNICAL ENGINEER. THE SOIL PRESSURES INDICATED ON THE SOIL PRESSURE DIAGRAM WERE USED FOR DESIGN. IN ADDITION TO THE DEAD AND LIVE LOADS. SEE REPORT OF GEOTECHNICAL INVESTIGATION FOR MORE COMPLETE INFORMATION, INCLUDING RECOMMENDATIONS FOR SHORING IN GENERAL, SHORING MONITORING, EXCAVATION, LAGGING, AND DRAINAGE.

LATERAL EARTH PRESSURES	E. F. P.
ACTIVE EARTH PRESSURE (YIELDING)	
LEVEL BACKFILL	35 PCF
MAX SLOPE BACKFILL	55 PCF
SEISMIC SURCHARGE PRESSURE (UNIFORM LOAD)	6H PSF
PASSIVE EARTH PRESSURE (INCLUDES FS=1.5)	400 PCF
ALLOWABLE END BEARING PRESSURE	20.0 KSF
ALLOWABLE SKIN FRICTION	1.0 KSF

- 26. SHORING DURATION: PERMANENT
- 27. HELICAL ANCHORS SHALL BE DESIGNED TO MEET THE LOADING REQUIREMENTS SHOWN ON THE DRAWINGS AND SHALL INCLUDE A MINIMUM SAFETY FACTOR OF 2. DRAWINGS AND CALCULATIONS STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF WASHINGTON SHALL BE SUBMITTED PRIOR TO INSTALLATION. INSTALLATION SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS OF THE ANCHOR MANUFACTURER AND INSTRUCTIONS OF THE GEOTECHNICAL ENGINEER. THE CAPACITY OF THE INSTALLED ANCHORS SHALL BE VERIFIED BY FIELD TESTING THE GREATER OF ONE ANCHOR OR 5% OF THE TOTAL ANCHORS TO THE SPECIFIED ANCHOR CAPACITY MULTIPLIED BY THE SAFETY FACTOR USED FOR DESIGN

CONCRETE

28. CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH IBC SECTION 1905, 1906, AND ACI 301. STRENGTHS AT 28 DAYS AND MIX CRITERIA SHALL BE AS FOLLOWS:

	Minimum Cement Per Cubic Yard	Max. Water Per 94 LB Cement	Use
 n/a	1-1/2 sacks		pile & tieback lean concrete
		STEEL	

ACCORDANCE WITH THE LATEST EDITION OF THE AISC MANUAL, AISC 360 AND SECTION 2205 OF THE BUILDING CODE.

29. STEEL SPECIFICATIONS: DESIGN, FABRICATION AND ERECTION SHALL BE IN

TYPE OF MEMBER	ASTM SPECIFICATION	FY
WIDE FLANGE SHAPES OTHER SHAPES, PLATES, AND RODS	A992 A36	50 KSI 36 KSI
HEADED CHEAR CTUDG	A 1 N R	

30. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

- 31. ALL WELDING SHALL BE IN CONFORMANCE WITH AISC AND AWS STANDARDS AND SHALL BE PERFORMED BY WABO CERTIFIED WELDERS USING E70XX ELECTRODES. ONLY PREQUALIFIED WELDS (AS DEFINED BY AWS) SHALL BE USED. ALL COMPLETE JOINT PENETRATION GROOVE WELDS SHALL BE MADE WITH A FILLER MATERIAL THAT HAS A MINIMUM CVN TOUGHNESS OF 20 FT-LBS AT 20 DEGREES F AND 40 FT-LBS AT 70 DEGREES F, AS DETERMINED BY AWS CLASSIFICATION OR MANUFACTURER CERTIFICATION.
- 32. STEEL PROVIDED FOR PERMANENT SHORING SHALL BE GALVANIZED OR PAINTED BLACK FOR CORROSION RESISTANCE.

WOOD

33. FRAMING LUMBER SHALL BE KILN DRIED OR MC-19. AND GRADED AND MARKED IN CONFORMANCE WITH WCLIB STANDARD GRADING RULES FOR WEST COAST LUMBER NO. 17. FURNISH TO THE FOLLOWING MINIMUM STANDARDS:

Use		Grade		Fb (psi, single use)
 4X	TIMBER LAGGING	HEM-FIR NO	. 2	850 (WHERE SPECIFIED)

PILE AND LAGGING CONSTRUCTION

- 34. DEMOLITION: SHORING AND SOIL EXCAVATION SHALL BE DONE SIMULTANEOUSLY.
- 35. DIMENSIONS AND LOCATION OF EXISTING STRUCTURES SHALL BE VERIFIED PRIOR TO FABRICATION AND INSTALLATION OF ANY STRUCTURAL MEMBER. NOTIFY ENGINEER ABOUT ANY DISCREPANCIES PRIOR TO FABRICATION.
- 36. PILE HOLES SHALL BE DRILLED WITHOUT LOSS OF GROUND AND WITHOUT ENDANGERING PREVIOUSLY INSTALLED PILES AND ANCHORS. THIS MAY INVOLVE CASING THE HOLES OR OTHER METHODS OF PROTECTION FROM CAVING. REFER TO REPORT OF GEOTECHNICAL INVESTIGATION FOR RECOMMENDED HOLE DIGGING PROCEDURE.
- 37. STEEL PILE PLACEMENT TOLERANCES:

1" INSIDE PERPENDICULAR TO SHORING WALL. 1"OUTSIDE PERPENDICULAR TO SHORING WALL 3" LATERALLY. 1" IN ANY DIRECTION

38. LAGGING: TIMBER LAGGING SHALL BE INSTALLED IN ALL AREAS. VOIDS BETWEEN LAGGING AND SOIL SHALL BE BACKFILLED WITH PEA GRAVEL OR LEAN MIX FILL. DRAINAGE BEHIND THE WALL MUST BE MAINTAINED. IT IS CONTRACTOR'S RESPONSIBILITY TO LIMIT THE AMOUNT OF EXPOSED SOIL WITHOUT LAGGING TO AVOID LOSS OF SOIL. MAXIMUM HEIGHT OF 4 FEET IS RECOMMENDED. THE CONTRACTOR SHALL TAKE SPECIAL CARE TO AVOID GROUND LOSS DURING EXCAVATION.

STRUCTURAL **ENGINEERING**

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DESIGN:	SRW, HAA
DRAWN:	NHD
CHECKED:	BDM
APPROVED:	DJS

REVISIONS:	
Revisions	Oct. 09, 2
Revisions	Dec. 20, 2

Yuan Residence 3611 West Mercer Way

Mercer Island, WA 98040

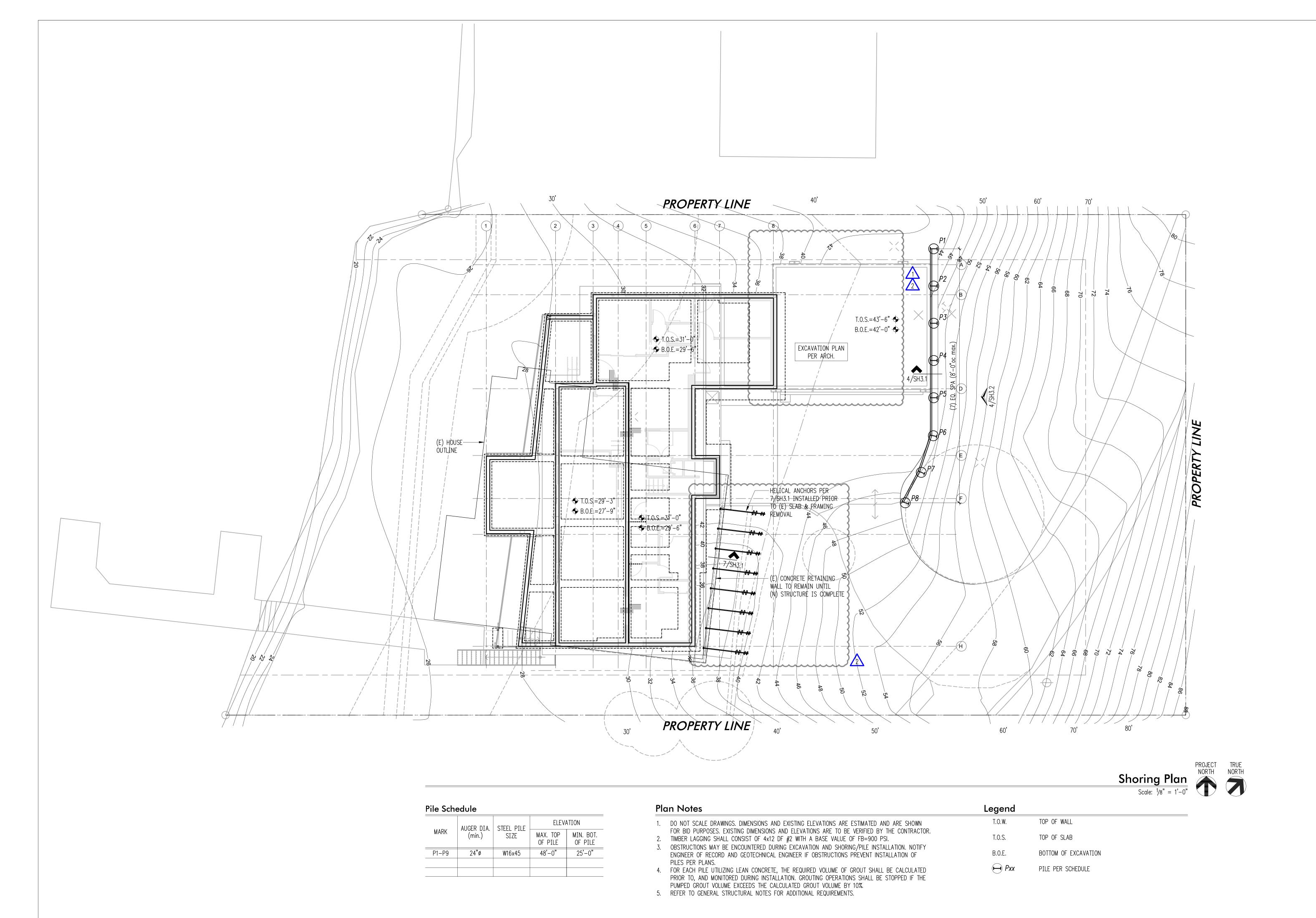
Brandt Design Group

66 Bell Street, Unit 1 Seattle, WA 98121 PH 206.239.0850

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General Shoring Notes

DATE: Aprill 20, 2019 PROJECT NO: 01519-2019-01





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DESIGN:	SRW, HAA
DRAWN:	NHD
CHECKED:	BDM
APPROVED:	DJS

OPD:

PROJECT TITLE:

Yuan Residence

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ARCHITECT:

Brandt Design Group

66 Bell Street, Unit 1 Seattle, WA 98121 PH 206.239.0850

SSUE:

PERMIT

JEET TITLE:

Shoring Plan

SCALE:	
	1/8" = 1'-0" U.N.C
DATE:	
	Aprill 20, 2019
PROJECT NO:	
	01519-2019-01

SH2.1

