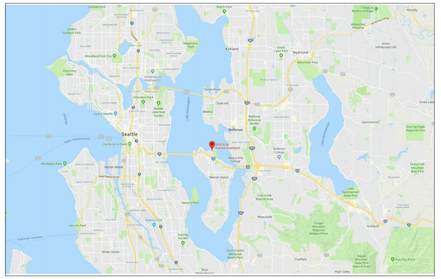
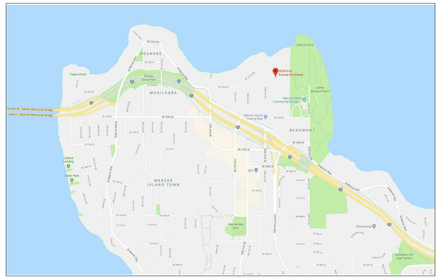
VICINITY PLAN NTS



NORTH

LOCATION PLAN NTS



NORTH

ABBREVIATIONS

ABV	ABOVE
AFF	ABOVE FINISH FLOOR
ADDL	ADDITIONAL
ADJ	ADJUSTABLE
ALT	ALTERNATE
ARCH	ARCHITECT, ARCHITECTURAL
BLW	BELOW
BSMT	BASEMENT
BTW	BETWEEN
BLD	BUILDING
CAB	CABINET
CALC	CALCULATION
CLG	CEILING
CL	CENTERLINE
CLR	CLEAR
COL	COLUMN
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
DEMO	DEMOLISH
DIA	DIAMETER
DIM	DIMENSION
DW	DISHWASHER
DBL	DOUBLE
EA	EACH
ELEC	ELECTRIC, ELECTRICIAN
ELEV	ELEVATION
ENGR	ENGINEER
EQUIV	EQUIVALENT
EXIST OR (E)	EXISTING
EXT	EXTERIOR
FF	FINISH FLOOR
GALV	GALVANIZED
GWB	GYPSUM WALL BOARD
HDR	HEADER
HT	HEIGHT
HORIZ	HORIZONTAL
INSUL	INSULATION
INT	INTERIOR
LOC	LOCATE, LOCATION
MAX	MAXIMUM
MFR	MANUFACTURER
MECH	MECHANICAL
MTL	METAL
MIN	MINIMUM
N/C	NOT INCLUDED
NTS	NOT TO SCALE
O.C.	ON CENTER
PLY	PLYWOOD
PRELIM	PRELIMINARY
PT	PRESSURE-TREATED
PL	PROPERTY LINE
REFR	REFRIGERATOR
REINF	REINFORCE, REINFORCING
REQD	REQUIRED
SCHED	SCHEDULE
SW	SHEARWALL
SIM	SIMILAR
SF	SQUARE FOOT
SPECS	SPECIFICATIONS
SSTL	STAINLESS STEEL
STL	STEEL
STRUCT	STRUCTURE, STRUCTURAL
TEMP	TEMPORARY
TOW	TOP OF WALL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VIF	VERIFY IN FIELD
VERT	VERTICAL
WP	WATERPROOF, WEATHERPROOF
WNDW	WINDOW
W/	WITH
W/O	WITHOUT
WD	WOOD

SYMBOLS KEY

GRID LINES — 0 / 0

ROOM REFERENCE — ROOM NAME / 101 — ROOM NAME, ROOM NUMBER

DOOR REFERENCE — 100A — ROOM NUMBER, DOOR NUMBER

WINDOW REFERENCE — 200A — ROOM NUMBER, WINDOW NUMBER

EXTERIOR ELEVATIONS — 1 / A4.0 — DRAWING NUMBER, SHEET NUMBER

WALL SECTION — SIM — 1 / 3.0 — DRAWING NUMBER, SHEET NUMBER

SECTION DETAIL — 1 / 8.0 — DRAWING NUMBER, SHEET NUMBER

AREA DETAIL — 1 / 9.0 — DRAWING NUMBER, SHEET NUMBER

INTERIOR ELEVATION — 4, 3, 1, 2 — A8.01 — DRAWING NUMBER, SHEET NUMBER

ELEVATION DATUM — FINISH FLOOR 101'-3" — LOCATION, ELEVATION

FINISH MATERIAL — T-1 — FINISH TYPE: SEE FINISH SCHEDULE, FINISH NUMBER

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

ASSEMBLY TYPE — W4a — R: ROOF TYPE; W: WALL TYPE; F: FLOOR TYPE; SEE ASSEMBLIES FOR MORE INFO

EXHAUST FAN

SMOKE DETECTOR

SMOKE/CARBON MONOXIDE DETECTOR

CENTERLINE — ℄

GENERAL NOTES

ALL WORK SHALL BE IN **COMPLIANCE** WITH THE 2009 INTERNATIONAL RESIDENTIAL CODE AS ADOPTED AND MODIFIED BY THE CITY OF SEATTLE, SEATTLE LAND USE CODE, AND ALL OTHER LAWS, CODES, ORDINANCES AND REGULATIONS OF THE COUNTY, STATE, AND FEDERAL JURISDICTIONS. (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.
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 INSPECTIONS.

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.

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

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

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 WORK BY OWNER.

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 CONDITIONS.

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 UNLESS NOTED OTHERWISE.

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

WATER PIPES TO BE INSULATED IN ALL UNHEATED AREAS.

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

GRAPHIC KEY
(NOT TO SCALE)

- GLASS
- CONCRETE
- STEEL
- EARTH
- GRAVEL
- WATER
- BRICK
- ALUMINUM
- BATT INSULATION
- RIGID INSULATION
- PLYWOOD
- FINISH WOOD
- STUCCO
- SPRAY FOAM INSULATION
- GYPSUM WALLBOARD

PROJECT DIRECTORY

OWNER — JANE & AARON ROSENSTEIN, 8404 SOUTHEAST 53RD PLACE, MERCER ISLAND, WA 98040

ARCHITECT — COLIN BRANDT, BRANDT DESIGN GROUP, 66 BELL ST., UNIT 1, SEATTLE, WA 98121, 206.239.0850, colin@brandtdesigninc.com

OWNER'S AGENT/CONTACT — BREE MEDLEY, BRANDT DESIGN GROUP, 66 BELL ST. UNIT 1, SEATTLE, WA 98121, 206.239.0850, bree@brandtdesigninc.com

GENERAL CONTRACTOR — CHRIS GREGERSON, GREGERSON CUSTOM HOMES, 14107 180TH AVE NE, REDMOND, WA 98052, 425.883.2435, chrisg@gregersoncustomhomes.com

STRUCTURAL ENGINEER — BRETT MOZDEN, SWENSON SAY FAGET, 2124 THIRD AVENUE, SUITE 100, SEATTLE, WA 98121, 206.443.6212, bmozden@ssfengineers.com

CIVIL ENGINEER — DUFFY ELLIS, CIVIL ENGINEERING SOLUTIONS, 102 NW CANAL ST, SEATTLE, WA 98107, 206.930.0342, duffy@cessolutions.com

GEOTECHNICAL ENGINEER — MARC MCGINNIS, GEOTECH CONSULTANTS, INC, 425.260.1116, marcm@geotechnw.com

ARBORIST — FAVERO GREENFOREST, GREENFOREST, INC., 206.723.0656, greenforestinc@mindspring.com

PROJECT DATA

SETBACKS

SIDE YARD	17% of 120' WIDTH = 20.4' COMBINED MIN = 6.7'
FRONT YARD *	20' *
REAR YARD	25'

* DEVIATION REQUESTED FOR 10' FRONT YARD SETBACK

EXISTING LOT AREA SUMMARY

GROSS LOT AREA	17,532 SF
ACCESS EASEMENTS	1870 SF
NET LOT AREA	15,662 SF
AVERAGE LOT SLOPE	61.3' / 116' ; 54.7/227 = 24%

LOT COVERAGE

(EXISTING)	
(E) RESIDENCE/CARPORT AND OVERHANGS	2,656 SF
(E) DRIVING SURFACES	834 SF
(E) TOTAL LOT COVERAGE	**3,490 SF = 22.2% OF LOT AREA**
(DEMO)	
(E) RESIDENCE/CARPORT AND OVERHANGS TO BE REMOVED	2,656 SF
(E) DRIVING SURFACES TO BE REMOVED	834 SF
(E) LOT COVERAGE REMOVED	**3,490 SF**
(PROPOSED)	
(N) BUILDING/OVERHANGS/COVERED DECKS	3,374 SF
(N) DRIVING SURFACES (LESS 73 SF INCL IN BLDG OH)	509 SF
PROPOSED TOTAL LOT COVERAGE	**3,883 SF = 24.8% OF LOT AREA**
LOT COVERAGE ALLOWED (35%)	15,622* 0.35 - 5481.7 SF

HARDSCAPE

(EXISTING)	
LANDSCAPE STAIRS	191 SF
DECKS	776 SF
PATIOS/PATHWAYS	331 SF
ROCKERY / SITE WALLS	409 SF
TOTAL EXISTING	**1,707 SF = 10.9% OF LOT AREA**
(DEMO)	
LANDSCAPE STAIRS	44 SF
DECKS	776 SF
PATIOS/PATHWAYS	331 SF
ROCKERY / SITE WALLS	38 SF
TOTAL TO BE REMOVED	**1,189 SF**
(PROPOSED)	
(E) HARDSCAPE TO REMAIN	
LANDSCAPE STAIRS	147 SF
ROCKERY / SITE WALLS	371 SF
TOTAL TO REMAIN	518 SF
(N) ADDED HARDSCAPE	
LANDSCAPE STAIRS	110 SF
DECKS	347 SF
PATIO/WALKWAYS	259 SF
ROCKERY / SITE WALLS	143 SF
TOTAL ADDED	859 SF
TOTAL PROPOSED HARDSCAPE =	**1,377 SF = 8.79% OF LOT AREA**

TREE REMOVAL

(E) TREES TO BE REMOVED	6
(N) TREES TO BE PLANTED AS REPLACEMENT	18

PROPOSED BUILDING AREA SUMMARY (GFA)

PROPOSED LOWER LEVEL (N/C STAIR)	1779 SF
PROPOSED LOWER LEVEL STORAGE SPACE	192 SF
PROPOSED LOWER LEVEL BELOW GRADE (EXCLUDED)	683 SF
PROPOSED STAIR @ 200 % MODIFIER (62 SF X 200%)	124 SF
PROPOSED MAIN LEVEL (N/C STAIR)	1886 SF
PROPOSED DECK W/ OH	312 SF
PROPOSED MAIN LEVEL EXTERIOR STORAGE	94 SF
PROPOSED ATTACHED GARAGE	562 SF
TOTAL PROPOSED BUILDING AREA (GSF)	4266 SF
PROPOSED FLOOR AREA RATIO:	**4266/17532 = 24.3% OF LOT AREA**
40% ALLOWABLE GROSS FLOOR AREA:	17532 SF X 0.40 = 7,012.8 SF

OCCUPANCY SUMMARY

EXISTING TYPE -	R-3
OCCUPANT LOAD -	SINGLE FAMILY

ENERGY CODE SUMMARY

CLIMATE ZONE 1 (TABLE 6-1)	
PRESCRIPTIVE OPTION III (EFFICIENT ENVELOPE OPTION 1A)	
UNLIMITED GLAZING	
GLAZING U-FACTOR (VERTICAL):	.30
GLAZING U-FACTOR (OVERHEAD):	.50
DOOR U-FACTOR:	.20
CEILING:	R-49
VAULTED CEILING:	R-38
WALL ABOVE GRADE:	R-21
WALL BELOW GRADE (INT.)	R-21 (INT.) OR R-10 (EXT.)
SLAB ON GRADE @ BASEMENT	R-10

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

VENTILATION
FANS ON TIMERS, PER PLANS. VOLUME OF REQUIRED OUTDOOR VENTILATION AIR TO BE PROVIDED BASED ON TABLE 403.8.1 / 403.8.5.1 OF THE INTERNATIONAL MECHANICAL CODE.
* PLUMBING, MECHANICAL, ELECTRICAL WORK TO BE PERMITTED SEPARATELY.
SEE SHEET A001 FOR VENTILATION & ENERGY CALCULATIONS.

GENERAL INFORMATION

PROJECT ADDRESS	2035 81ST AVE SE, MERCER ISLAND, WA 98040
PROJECT NUMBER	1908-009
ASSESSOR'S PARCEL #	544930-0070
LEGAL DESCRIPTION	TRACT 14 OF MERCER BEACH PARK, AS PER PLAT RECORDED IN VOLUME 46 OF PLATS, PAGE 7, RECORDS OF KING COUNTY AUDITOR; TOGETHER WITH AN UNDIVIDED 1/28TH INTEREST IN AND TO TRACT "B" OF SAID MERCER BEACH PARK. SITUATED IN THE CITY OF MERCER ISLAND, COUNTY OF KING, STATE OF WASHINGTON.

PLAT RESTRICTIONS

NO LOT OR A PORTION OF A LOT IN THIS PLAT SHALL BE DIVIDED AND SOLD, OR RESOLD, OR OWNERSHIP OF ANY PORTION OF THE THIS PLAT SHALL BE LESS THAN THE AREA REQUIRED FOR THE USE DISTRICT STATED ON THIS PLAT, NAMELY 6000 SQUARE FEET FOR RESIDENCE R-1 USE. ALL LOTS IN THIS PLAT ARE RESTRICTED TO RESIDENCE R-1 USE, WITH A MINIMUM WIDTH OF SIXTY FEE, GOVERNED BY RESTRICTIONS, RULES AND REGULATIONS OF COUNTY RESOLUTION NO. 6434 AND ANY SUBSEQUENT CHANGES MADE THEREIN BY OFFICIAL COUNTY RESOLUTION.

INGRESS / EGRESS EASEMENT PER RECORD # 4238422

PROJECT DESCRIPTION	DEMOLITION OF (E) SINGLE FAMILY DWELLING. CONSTRUCTION OF NEW SINGLE FAMILY DWELLING WITH ATTACHED GARAGE.
ZONE	R-12
BUILDING TYPE	SINGLE FAMILY RESIDENCE

SHEET INDEX

DISCIPLINE	SHEET NUMBER	SHEET NAME
ARCHITECTURAL	A000	COVERSHEET
	A001	WA STATE ENERGY CODE / VENTILATION CALC
SURVEYOR	—	SURVEY
	D100	DEMO SITE PLAN
	A100	PROPOSED SITE PLAN
	A101	BUILDING PAD & SETBACK PLAN
	A102	EXCAVATION PLAN
	A103	EXCAVATION SECTIONS
	A104	TREE RETENTION & REPLACEMENT PLAN
	A105	CRITICAL AREA SITE PLANTING PLAN
CIVIL	C1.0	EROSION CONTROL PLAN
	C1.2	TESC DETAILS
	C2.0	CIVIL SITE PLAN
	C2.1	GRADING PLAN
	C3.5	STORMWATER BMP DETAILS
	C4.0	DETENTION DETAILS
	C5.0	STORM PUMP DETAILS
ARCHITECTURAL	A200	LOWER FLOOR PLAN
	A201	MAIN FLOOR PLAN
	A202	ROOF PLAN
	A300	EXTERIOR ELEVATIONS
	A301	EXTERIOR ELEVATIONS
	A400	BUILDING SECTIONS
	A402	WALL SECTIONS
	A403	WALL SECTIONS
	A600	WINDOW / DOOR SCHEDULES
	A700	ASSEMBLY DETAILS
	A701	EXTERIOR DETAILS
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	CONCRETE DETAILS
	S3.2	CONCRETE DETAILS
	S4.1	WOOD FRAMING DETAILS
	S4.2	WOOD FRAMING DETAILS
	S4.3	WOOD FRAMING DETAILS
	S4.4	WOOD FRAMING DETAILS
	S4.5	WOOD FRAMING DETAILS
	SH1.1	GENERAL SHORING NOTES
	SH2.1	SHORING PLAN
	SH3.1	SHORING DETAILS

Brandt Design Group
66Bell Street Unit 1 Seattle, WA 98121
206.239.0850
brandtdesigninc.com

8843 REGISTERED ARCHITECT STATE OF WASHINGTON

ROSENSTEIN RESIDENCE

2035 81ST AVE SE
MERCER ISLAND, WA 98040

© COPYRIGHT 2019 BRANDT DESIGN, INC. SEATTLE, WA.

PERMIT DOCUMENTS

DATE: 11/22/19

SHEET SIZE: D (24X36)

REVISIONS

Revision Number	Date
1	08.16.19
2	11.20.19

DRAWN BY: SE/BM/NLD
CHECKED BY: BM/CB

COVERSHEET

SCALE: As indicated

A000

DEDICATED APPROVAL STAMP SPACE

WA STATE ENERGY CODE FORMS

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: www.MyBuildingPermits.com 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 Energy Code. The following worksheets provide much of the required documentation for plan review. **The details, systems, and ratings noted here must also be shown on the drawings.**

PRESCRIPTIVE ENERGY CODE COMPLIANCE FOR CLIMATE ZONE MARINE 4

Component	Fenestration [1]		Ceiling w/ Attic	Vaulted Ceiling	Wood Framed Wall (Int.)[2]	Mass Wall (Above grade)	Below-Grade Wall [2,3]	Framed Floor	Slab R-Value & Depth
	Vertical	Overhead							
Prescriptive Value	U. 0.30 max.	U. 0.50 max.	R-49 min.	R-38 min.	R-21 min.	R-21 min.	R- 10/15/21 Int. + TB	R-30 min.	R-10 min. 2'

[1] *Fenestration is defined as skylights, roof windows, vertical windows (fixed or moveable), opaque doors, glazed doors, glazed block and combination 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 Ventilation Rate" Handout.) A complete system required by one of the sections noted below must be specified on the drawings.

	WHOLE HOUSE VENTILATION METHOD	Whole House Ventilation Rate
☑	Intermittent Whole House Ventilation Using Exhaust Fans & Fresh Air Inlets. (IRC M1507.3.4)	90 cfm
☐	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 M1507.3.7)	

Source Specific Exhaust Ventilation & Fan Efficiency
Required in each kitchen, bathroom, water closet compartment, 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 than 400 cfm require makeup air per IRC M1503.4

Minimum Source Specific Ventilation Capacity Requirements

	Bathrooms – Utility Rooms		Kitchens	In-line fan
Intermittently operating	50 cfm min		100 cfm min	
Continuous operation	20 cfm min		25 cfm min	
Minimum Efficacy (cfm/watt)	1.4 cfm/watt if <90cfm	2.8 cfm/watt if >90cfm	2.8 cfm/watt	2.8 cfm/watt

Energy Efficiency Credits
Each dwelling unit shall comply with sufficient options from WSEC Table R406.2 so as to achieve the following minimum number 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 square feet of fenestration area. Additions to existing building that are greater than 500 SF of heated floor area, but less than 1500 SF. **TOTAL SQUARE FEET OF FENESTRATION:** _____ (doors, windows, skylights)
☑ **Medium Dwelling Unit: 3.5 credits** (All dwelling units not included in #1 or #3. Exception: Dwelling units serving R-2 occupancies shall require 2.5 credits.
☐ **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

2015 WSCE – Table R406.2 – circle the options that you will be using for this project

OPTION	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 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 **OR** Compliance based on Section R402.1.4: Reduce the Total UA by 30%.	2.0
1d ☐	**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 **AND** All whole house ventilation requirements as determined by Section M1507.3 of the *International Residential Code* shall be met with a high efficiency fan (maximum 0.35 watts/cfm), not interlocked with the furnace fan. Ventilation systems using a furnace including an ECM motor are allowed, provided that they are controlled to operate at low speed in ventilation only mode. *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 ventilation system with minimum sensible heat recovery efficiency of 0.70. *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.*	1.0
2c ☐	**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
3a ☑	**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
3b ☐	**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
3d ☐	**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 be installed 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

2015 WSCE – Table R406.2 - Continued

OPTION	DESCRIPTION	CREDIT(S)
4 ☐	**HIGH EFFICIENCY HVAC DISTRIBUTION SYSTEM:** All heating and cooling system components installed inside the conditioned space. This includes all equipment and distribution system components such as forced air ducts, hydronic piping, hydronic floor heating loop, convectors and radiators. All combustion equipment shall be direct vent or sealed combustion. For forced air ducts: A maximum of 10 linear feet of return ducts and 5 linear feet of supply ducts may be located outside the 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 using a plastic strapping tensioning tool. Ducts located outside the conditioned space must be insulated to a minimum of R-8. Locating system components in conditioned crawl spaces is not permitted under this option. Electric resistance heat and ductless heat pumps are not permitted under this option. Direct combustion heating equipment with AFUE less than 80% is not permitted under this option. *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.*	1.0
5a ☑	**EFFICIENT WATER HEATING 5a:** All showerhead and kitchen sink faucets installed in the house shall be rated at 1.75 GPM or less. All other lavatory faucets shall be rated at 1.0 GPM or less. Plumbing Fixtures Flow Ratings. Low flow plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following requirements: 1. Residential bathroom lavatory sink faucets: Maximum flow rate - 3.8 L/min (1.0 gal/min) when tested in accordance with ASME A112.18.1/CSA B125.1. 2. Residential kitchen faucets: Maximum flow rate - 6.6 L/min (1.75 gal/min) when tested in accordance with ASME A112.18.1/CSA B125.1. 3. Residential showerheads: Maximum flow rate - 6.6 L/min (1.75 gal/min) when tested in accordance with ASME A112.18.1/CSA B125.1. *To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the maximum flow rates for all showerheads, kitchen sink faucets, and other lavatory faucets.*	0.5
5b ☐	**EFFICIENT WATER HEATING 5b:** Water heating system shall include one of the following: Gas, propane or oil water heater with a minimum EF of 0.74 **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 2.0 that would supply DHW to all the units through a central minimum pipe insulation. *To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the water heater equipment type and the minimum equipment efficiency.*	1.0
5c ☑	**EFFICIENT WATER HEATING 5c:** Water 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 savings of 85 therms or 2000 kWh based on the Solar Rating and Certification Corporation (SRCC) Annual Performance of OG-300 Certified Solar Water Heating Systems **OR** Electric heat pump water heater with a minimum EF of 2.0 and meeting the standards of NEEA's Northern Climate Specifications for Heat Pump Water Heaters *To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the water heater equipment type and the minimum equipment efficiency and, for solar water heating systems, the calculation of the minimum energy savings.*	1.5
5d ☐	EFFICIENT WATER HEATING 5d: A drain water heat recovery unit(s) shall be installed, which captures waste water heat from all the showers, and has a minimum efficiency of 40% if installed for equal flow or a minimum efficiency of 52% if installed for unequal flow. Such units shall be rated in accordance CSA B55.1 and be so labeled. *To qualify to claim this credit, the building permit drawings shall include a plumbing diagram that specified the drain water heat recovery units and the plumbing layout needed to install it and labels or other documentation shall be provided that demonstrates that the unit complies with the standard.*	0.5
6 ☐	**RENEWABLE ELECTRIC ENERGY:** For 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 Laboratory calculator PVWATTs. *Documentation noting solar access shall be included on the plans.* For wind generation projects designs shall document annual power generation based on the following factors: The wind turbine power curve; average annual wind speed at the site; frequency distribution of the wind speed at the site and height of the tower. *To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall show the photovoltaic or wind turbine equipment type, provide documentation of solar and wind access, and include a calculation of the minimum annual energy power production.*	0.5

2

WHOLE HOUSE VENTILATION CALCS

PROPOSED CONDITIONED SF =	3527 SF
NUMBER OF BEDROOMS =	3
AIRFLOW IN CFM REQUIRED FOR CONTINUOUS VENTILATION =	145 CFM
RUN TIME PERCENTAGE IN EACH 4 HOUR SEGMENT =	25 %
FACTOR =	4
CALCULATION	145 CFM X 4 = **580 CFM**

OPTION 2015 IMC 403.8.1 & 403.8.5.1 - INTERMITANT WHOLE HOUSE VENTILATION
PER IMC TABLES 403.8.1 & 403.8.5.1 A 25% RUN-TIME IN EACH 4-HOUR SEGMENT REQUIRES A 580 CFM FAN(S) TO BE PROVIDED FOR THE REQUIRED WHOLE-HOUSE VENTILATION. THIS VENTILATION REQUIREMENT WILL BE HANDLED BY EXHAUST FANS & FRESH AIR INLETS. THIS SYSTEM WILL BE ON 24 HOUR AUTOMATIC TIMER TO ALLOW IT TO CYCLE AS REQUIRED. *OUTDOOR INLETS REQUIRED @ FANS DESIGNATED FOR VENTILATION PER 2015 IMC. EXHAUST FANS OF 400 CFM OR GREATER REQUIRE INTERLOCKED OUTSIDE MAKE-UP AIR PER IRC SECTION M1503.4.*

TABLE 403.8.1
VENTILATION RATES FOR ALL GROUP R PRIVATE DWELLINGS, SINGLE AND MULTIPLE (Continuously Operating Systems)

Floor Area (ft^2)	Bedrooms[a]				
	0-1	2-3	4-5	6-7	>7
<500	30	40	45	55	60
500 - 1000	45	55	60	70	75
1001 - 1500	60	70	75	85	90
1501 - 2000	75	85	90	100	105
2001 - 2500	90	100	105	115	120
2501 - 3000	105	115	120	130	135
3001 - 3500	120	130	135	145	150
>3500	135	145	150	160	165

a. Ventilation rates in table are minimum outdoor airflow rates measured in cfm.

TABLE 403.8.5.1
INTERMITTENT WHOLE HOUSE MECHANICAL VENTILATION RATE FACTORS[a,b]

Run-Time % in Each 4-hour Segment	25%	33%	50%	66%	75%	100%
Factor[a]	4	3	2	1.5	1.3	1.0

a. For ventilation system run-time values between those given, the factors are permitted to be determined by interpolation.
b. Extrapolation beyond the table is prohibited.

Fenestration Schedule See Door & Window Schedule Sheet A600

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 building permit.

☐ **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

Exemptions	Ref	Glazing U-Factor	Qt.	Width Feet	Width Inch	Height Feet	Height Inch	Glazing Area	Glazing UA
Swing Door (24 SF Max)									
Glazed Fenestration (15 SF Max)									

VERTICAL FENESTRATION (WINDOWS AND GLAZED DOORS)

Plan ID	Component Description	Ref	Glazing U-Factor	Qt.	Width Feet	Width Inch	Height Feet	Height Inch	Glazing Area	Glazing UA

TOPOGRAPHIC & BOUNDARY SURVEY

LEGAL DESCRIPTION

TRACT 14 OF MERCER BEACH PARK, AS PER PLAT RECORDED IN VOLUME 46 OF PLATS, PAGE 7, RECORDS OF KING COUNTY AUDITOR;

TOGETHER WITH AN UNDIVIDED 1/28TH INTEREST IN AND TO TRACT "B" OF SAID MERCER BEACH PARK.

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

REFERENCES

R1. PLAT OF MERCER BEACH PARK, VOL.46, PG.7.
RECORDS OF KING COUNTY, WASHINGTON.

SCHEDULE B ITEMS

1. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
PURPOSE: INGRESS AND EGRESS
RECORDING DATE: MAY 22, 1952
RECORDING NO.: 4238422
AFFECTS: AS DESCRIBED IN SAID INSTRUMENT (PLOTTED)

2. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
GRANTED TO: MERCER ISLAND SEWER DISTRICT, A MUNICIPAL CORPORATION
PURPOSE: SEWER PIPELINE
RECORDING DATE: JANUARY 30, 1956
RECORDING NO.: 4659064
AFFECTS: AS DESCRIBED IN SAID INSTRUMENT
(NOT PLOTTED–AFFECTS COMMUNITY WATERFRONT TRACT)

3. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
GRANTED TO: MERCER ISLAND SEWER DISTRICT, A MUNICIPAL CORPORATION
PURPOSE: SEWER PIPELINE OR LINES
RECORDING DATE: JANUARY 28, 1956
RECORDING NO.: 4759636
AFFECTS: AS DESCRIBED IN SAID INSTRUMENT
(NOT PLOTTABLE–10' EASEMENT NEAR WEST LOT LINE. LOCATION UNDETERMINABLE)

4. COVENANTS, CONDITIONS, RESTRICTIONS, RECITALS, RESERVATIONS, EASEMENTS, EASEMENT PROVISIONS, DEDICATIONS, BUILDING SETBACK LINES, NOTES, STATEMENTS, AND OTHER MATTERS, IF ANY, BUT OMITTING ANY COVENANTS OR RESTRICTIONS, IF ANY, INCLUDING BUT NOT LIMITED TO THOSE BASED UPON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, FAMILIAL STATUS, MARITAL STATUS, DISABILITY, HANDICAP, NATIONAL ORIGIN, ANCESTRY, OR SOURCE OF INCOME, AS SET FORTH IN APPLICABLE STATE OR FEDERAL LAWS, EXCEPT TO THE EXTENT THAT SAID COVENANT OR RESTRICTION IS PERMITTED BY APPLICABLE LAW, AS SET FORTH ON THE PLAT OF MERCER BEACH PARK, RECORDED IN VOLUME 46 OF PLATS, PAGE 7:
RECORDING NO: 3863792
(NO EASEMENTS TO PLOT)

5. NOTICE OF ADDITIONAL TAP OR CONNECTION CHARGES AND THE TERMS AND CONDITIONS THEREOF:
RECORDING DATE: DECEMBER 6, 1977
RECORDING NO.: 7712060812
(NOT SURVEY RELATED)

6. INDEMNIFICATION AND HOLD HARMLESS AGREEMENT AND COVENANT NOT TO SUE AND THE TERMS AND CONDITIONS THEREOF:
RECORDING DATE: OCTOBER 26, 2005
RECORDING NO.: 20051026000182
(NOT SURVEY RELATED)

7. ENCROACHMENT LICENSE AGREEMENT AND THE TERMS AND CONDITIONS THEREOF:
RECORDING DATE: JULY 5, 2007
RECORDING NO.: 20070705000406
(ERRONEOUS, THIS EASEMENT OVER PROPERTY 2 BLOCKS SOUTH AND 1 BLOCK EAST)

8. INDEMNIFICATION AND HOLD HARMLESS AGREEMENT AND THE TERMS AND CONDITIONS THEREOF:
RECORDING DATE: NOVEMBER 21, 2012
RECORDING NO.: 20121121000549
(NOT SURVEY RELATED)

SURVEYOR'S NOTES

1. THE TOPOGRAPHIC SURVEY SHOWN HEREON WAS PERFORMED IN OCTOBER OF 2018 THE FIELD DATA WAS COLLECTED AND RECORDED ON MAGNETIC MEDIA THROUGH AN ELECTRONIC THEODOLITE. THE DATA FILE IS ARCHIVED ON DISC OR CD. WRITTEN FIELD NOTES MAY NOT EXIST. CONTOURS ARE SHOWN FOR CONVENIENCE ONLY. DESIGN SHOULD RELY ON SPOT ELEVATIONS.

2. ALL MONUMENTS SHOWN HEREON WERE LOCATED DURING THE COURSE OF THIS SURVEY UNLESS OTHERWISE NOTED.

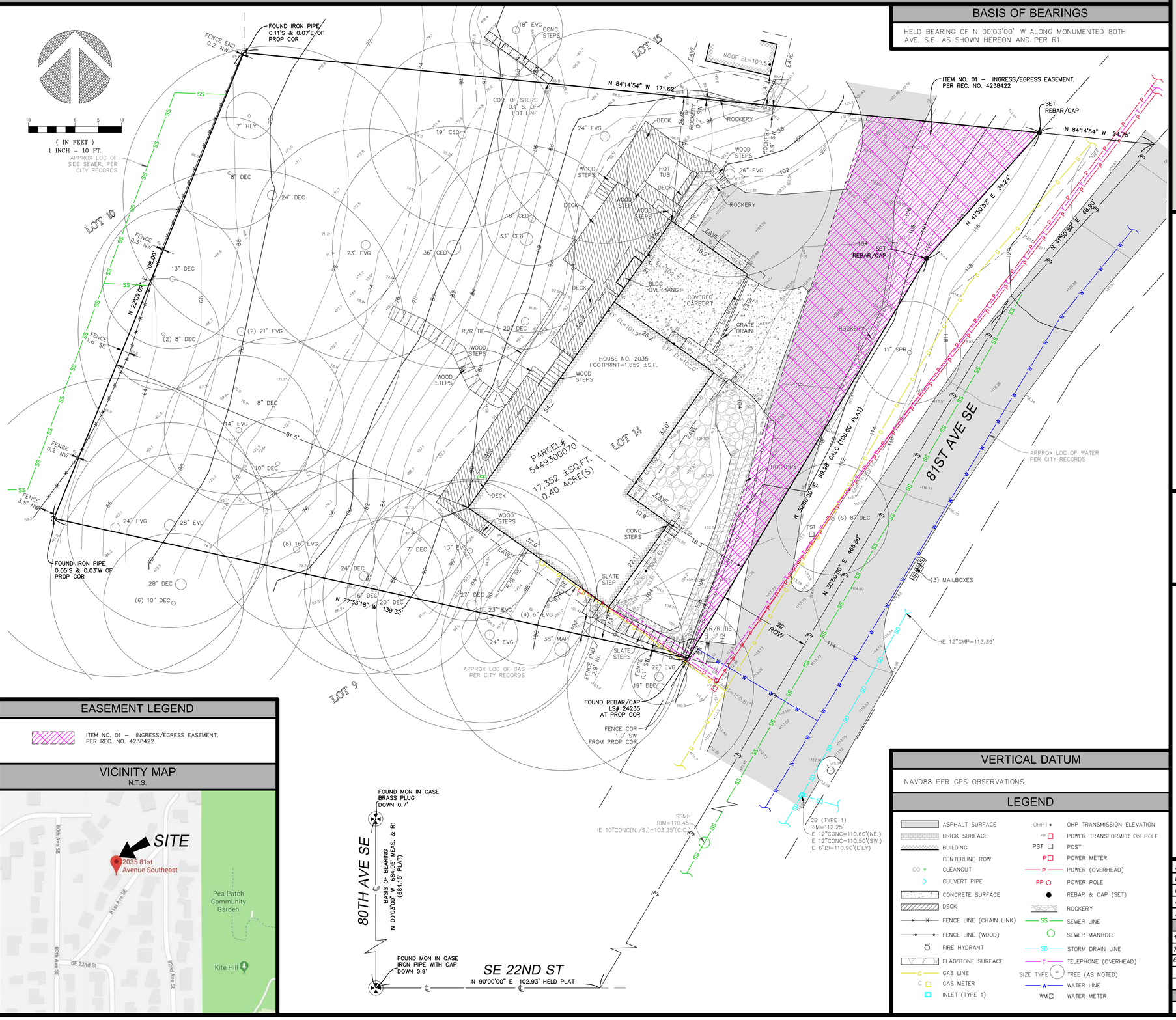
3. BURIED UTILITIES SHOWN BASED ON RECORDS FURNISHED BY OTHERS AND VERIFIED WHERE POSSIBLE IN THE FIELD. TERRANE ASSUMES NO LIABILITY FOR THE ACCURACY OF THOSE RECORDS OR ACCEPT RESPONSIBILITY FOR UNDERGROUND LINES WHICH ARE NOT MADE PUBLIC RECORD. FOR THE FINAL LOCATION OF EXISTING UTILITIES IN AREAS CRITICAL TO DESIGN CONTACT THE UTILITY OWNER/AGENCY. AS ALWAYS, CALL 1-800-424-5555 BEFORE CONSTRUCTION.

4. SUBJECT PROPERTY TAX PARCEL NO. 544930-0070

5. SUBJECT PROPERTY AREA PER THIS SURVEY IS 17,352 ±S.F. (0.40 ACRES)

6. THE PROPERTY DESCRIBED HEREON IS THE SAME AS THE PROPERTY DESCRIBED IN FIDELITY NATIONAL TITLE INSURANCE COMPANY, COMMITMENT NO. 611199346, WITH AN EFFECTIVE DATE OF NOVEMBER 19, 2018 AND THAT ALL EASEMENTS, COVENANTS AND RESTRICTIONS REFERENCED IN SAID TITLE COMMITMENT OR APPARENT FROM A PHYSICAL INSPECTION OF THE PROPERTY OR OTHERWISE KNOWN TO ME HAVE BEEN PLOTTED HEREON OR OTHERWISE NOTED AS TO THEIR EFFECT ON THE PROPERTY.

7. FIELD DATA FOR THIS SURVEY WAS OBTAINED BY DIRECT FIELD MEASUREMENTS WITH A CALIBRATED ELECTRONIC 5-SECOND TOTAL STATION AND/OR SURVEY GRADE GPS OBSERVATIONS. ALL ANGULAR AND LINEAR RELATIONSHIPS ARE ACCURATE AND MEET THE STANDARDS SET BY WAC 332-130-090.



BASIS OF BEARINGS

HELD BEARING OF N 00°03'00" W ALONG MONUMENTED 80TH AVE. S.E. AS SHOWN HEREON AND PER R1

EASEMENT LEGEND

ITEM NO. 01 – INGRESS/EGRESS EASEMENT, PER REC. NO. 4238422

VICINITY MAP

N.T.S.

VERTICAL DATUM

NAVD88 PER GPS OBSERVATIONS

LEGEND

- ASPHALT SURFACE
- BRICK SURFACE
- BUILDING
- CENTERLINE ROW
- CO CLEANOUT
- CULVERT PIPE
- CONCRETE SURFACE
- DECK
- FENCE LINE (CHAIN LINK)
- FENCE LINE (WOOD)
- FIRE HYDRANT
- FLAGSTONE SURFACE
- G GAS LINE
- G GAS METER
- INLET (TYPE 1)
- OHPT OHP TRANSMISSION ELEVATION
- PTR POWER TRANSFORMER ON POLE
- PST POST
- P POWER METER
- P POWER (OVERHEAD)
- PP POWER POLE
- REBAR & CAP (SET)
- ROCKERY
- SS SEWER LINE
- SEWER MANHOLE
- SD STORM DRAIN LINE
- T TELEPHONE (OVERHEAD)
- SIZE TYPE TREE (AS NOTED)
- W WATER LINE
- WM WATER METER

measure success

TOPOGRAPHIC & BOUNDARY SURVEY
SE 1/4 OF SE 1/4 SEC 01, TWP. 24 N., RGE 04 E., W.M.
PARCEL NO. 5449300070

ROSENSTEIN RESIDENCE
2035 81ST AVE SE
MERCER ISLAND, WA 98040

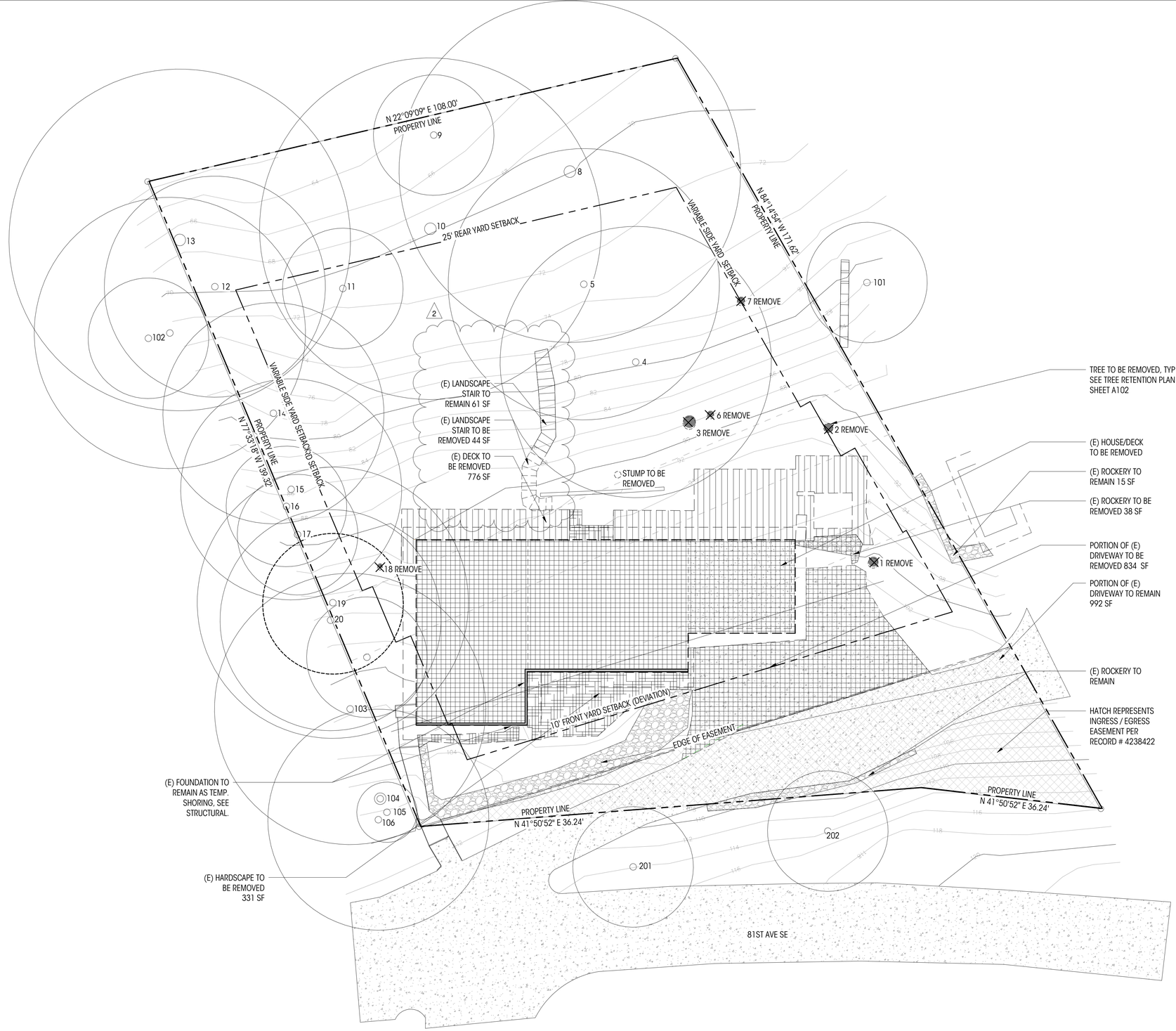
GREGORY J. ROSARIO
STATE OF WASHINGTON
LAND SURVEYOR
CERTIFICATE NO. 20018
REGISTERED PROFESSIONAL

Terrane
10801 Main Street, Suite 102, Bellevue, WA 98004
phone 425.458.4488 support@terrane.net
www.terrane.net

JOB NUMBER:	181741
DATE:	10/25/18
DRAFTED BY:	IDV-GKD
CHECKED BY:	EJG/TMM
SCALE:	1" = 10'

REVISION HISTORY	
12/10/18	ADD TITLE INFO
7/31/19	UPDATE TREES
8/16/19	UPDATE TREES

SHEET NUMBER
1 OF 1



PROJECT DATA

SETBACKS

SIDE YARD	17% of 120' WIDTH = 20.4' COMBINED MIN = 6.7'
FRONT YARD *	20' *
REAR YARD	25'

* DEVIATION REQUESTED FOR 10' FRONT YARD SETBACK

EXISTING LOT AREA SUMMARY

GROSS LOT AREA	17,532 SF
ACCESS EASEMENTS	1870 SF
NET LOT AREA	15,662 SF
AVERAGE LOT SLOPE	61.3' / 116' ; 54.7/227 = 24%

LOT COVERAGE

(EXISTING)	
(E) RESIDENCE/CARPORT AND OVERHANGS	2,656 SF
(E) DRIVING SURFACES	834 SF
(E) TOTAL LOT COVERAGE	**3,490 SF = 22.2% OF LOT AREA**
(DEMO)	
(E) RESIDENCE/CARPORT AND OVERHANGS TO BE REMOVED	2,656 SF
(E) DRIVING SURFACES TO BE REMOVED	834 SF
(E) LOT COVERAGE REMOVED	**3,490 SF**

HARDSCAPE

(EXISTING)	
LANDSCAPE STAIRS	191 SF
DECKS	776 SF
PATIOS/PATHWAYS	331 SF
ROCKERY / SITE WALLS	409 SF
TOTAL EXISTING	**1,707 SF = 10.9% OF LOT AREA**
(DEMO)	
LANDSCAPE STAIRS	44 SF
DECKS	776 SF
PATIOS/PATHWAYS	331 SF
ROCKERY / SITE WALLS	38 SF
TOTAL TO BE REMOVED	**1,189 SF**

SITE DEMOLITION LEGEND

- PROPERTY LINE
- SETBACK LINE
- ACCESS EASEMENT
- (E) TREE TO REMAIN
- (E) TREE TO BE DEMOLISHED
- (E) BUILDING TO BE REMOVED
- (E) DECK TO BE REMOVED
- (E) HARDSCAPE TO REMAIN
- PAVING/DECK TO BE REMOVED
- (E) ROCKERY TO REMAIN
- (E) ROCKERY TO BE REMOVED
- (E) DRIVEWAY TO REMAIN
- (E) DRIVEWAY TO BE REMOVED

1 DEMOLITION SITE PLAN
1" = 10'-0"

PROJECT NORTH / NORTH

Brandt
Design Group
66Bell Street
Unit 1
Seattle, WA
98121
206.239.0850
brandtdesigninc.com

8843 REGISTERED ARCHITECT STATE OF WASHINGTON

ROSENSTEIN RESIDENCE

2035 81ST AVE SE
MERCER ISLAND, WA 98040

© COPYRIGHT 2019 BRANDT DESIGN, INC. SEATTLE, WA.

PERMIT DOCUMENTS

DATE: 11/22/19

SHEET SIZE: D (24X36)

REVISIONS

Revision Number	Date
1	08.16.19
2	11.20.19

DRAWN BY: SE/BM/NLD
CHECKED BY: BM/CB

DEMO SITE PLAN

SCALE: As indicated

D100

DEDICATED APPROVAL STAMP SPACE

GENERAL INFORMATION

PROJECT ADDRESS	2035 81ST AVE SE MERCER ISLAND, WA 98040
PROJECT NUMBER	1908-009
ASSESSOR'S PARCEL #	544930-0070
LEGAL DESCRIPTION	TRACT 14 OF MERCER BEACH PARK, AS PER PLAT RECORDED IN VOLUME 46 OF PLATS, PAGE 7, RECORDS OF KING COUNTY AUDITOR; TOGETHER WITH AN UNDIVIDED 1/28TH INTEREST IN AND TO TRACT "B" OF SAID MERCER BEACH PARK. SITUATED IN THE CITY OF MERCER ISLAND, COUNTY OF KING, STATE OF WASHINGTON.

PLAT RESTRICTIONS

NO LOT OR A PORTION OF A LOT IN THIS PLAT SHALL BE DIVIDED AND SOLD, OR RESOLD, OR OWNERSHIP OF ANY PORTION OF THE THIS PLAT SHALL BE LESS THAN THE AREA REQUIRED FOR THE USE DISTRICT STATED ON THIS PLAT, NAMELY 6000 SQUARE FEET FOR RESIDENCE R-1 USE. ALL LOTS IN THIS PLAT ARE RESTRICTED TO RESIDENCE R-1 USE, WITH A MINIMUM WIDTH OF SIXTY FEE, GOVERNED BY RESTRICTIONS, RULES AND REGULATIONS OF COUNTY RESOLUTION NO. 6434 AND ANY SUBSEQUENT CHANGES MADE THEREIN BY OFFICIAL COUNTY RESOLUTION.

INGRESS / EGRESS EASEMENT PER RECORD # 4238422

PROJECT DESCRIPTION	DEMOLITION OF (E) SINGLE FAMILY DWELLING. CONSTRUCTION OF NEW SINGLE FAMILY DWELLING WITH ATTACHED GARAGE.
ZONE	R-12
BUILDING TYPE	SINGLE FAMILY RESIDENCE

PROJECT DATA

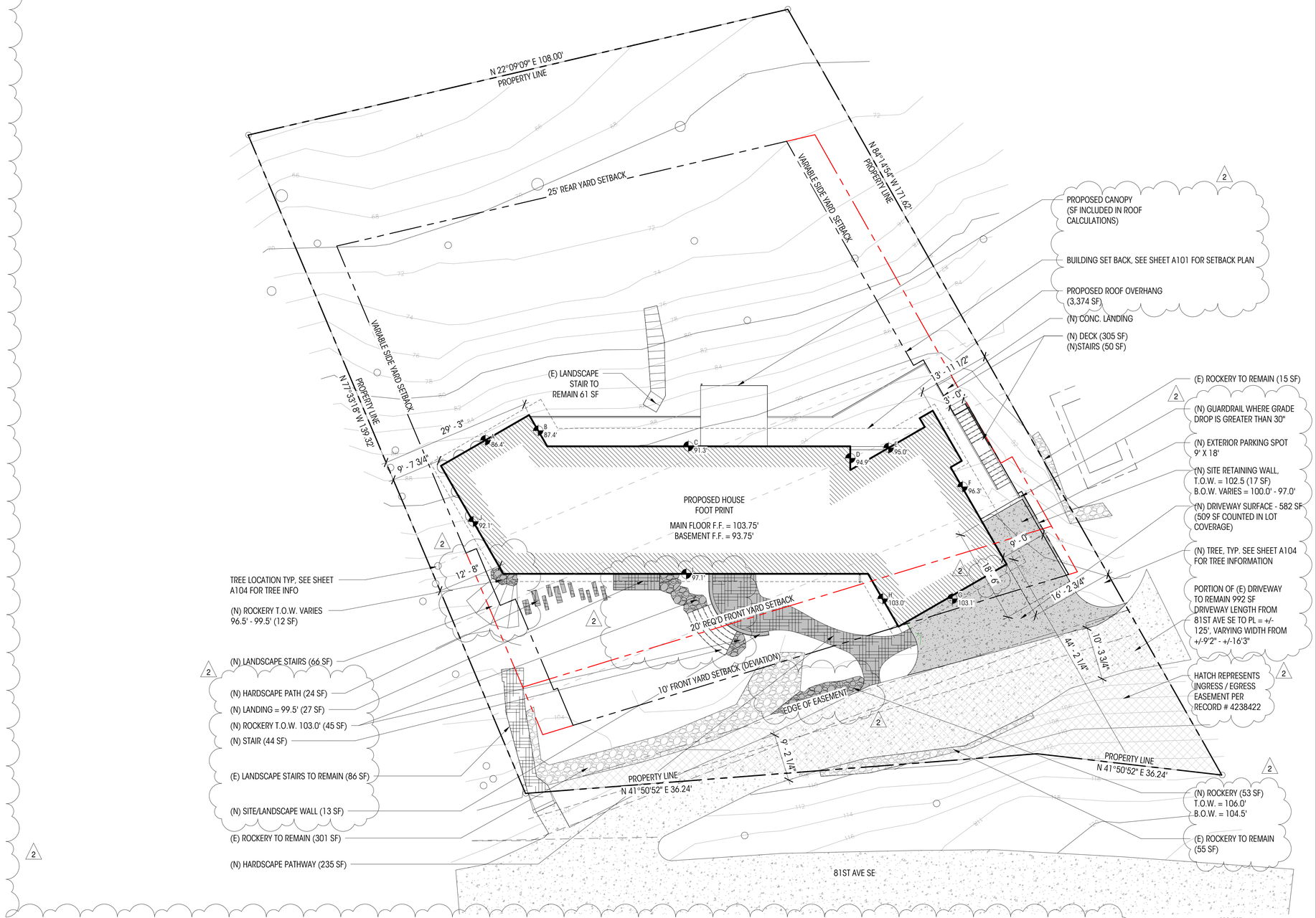
SETBACKS	
SIDE YARD	17% of 120' WIDTH = 20.4' COMBINED MIN = 6.7'
FRONT YARD *	20' *
REAR YARD	25'
* DEVIATION REQUESTED FOR 10' FRONT YARD SETBACK	
EXISTING LOT AREA SUMMARY	
GROSS LOT AREA	17,532 SF
ACCESS EASEMENTS	1870 SF
NET LOT AREA	15,662 SF
AVERAGE LOT SLOPE	61.3' / 116' ; 54.7/227 = 24%
LOT COVERAGE	
(EXISTING)	
(E) RESIDENCE/CARPORT AND OVERHANGS	2,656 SF
(E) DRIVING SURFACES	834 SF
(E) TOTAL LOT COVERAGE	**3,490 SF = 22.2% OF LOT AREA**
(DEMO)	
(E) RESIDENCE/CARPORT AND OVERHANGS TO BE REMOVED	2,656 SF
(E) DRIVING SURFACES TO BE REMOVED	834 SF
(E) LOT COVERAGE REMOVED	**3,490 SF**
(PROPOSED)	
(N) BUILDING/OVERHANGS/COVERED DECKS	3,374 SF
(N) DRIVING SURFACES (LESS 73 SF INCL IN BLDG OH)	509 SF
PROPOSED TOTAL LOT COVERAGE	**3,883 SF = 24.8% OF LOT AREA**
LOT COVERAGE ALLOWED (35%)	15,622* 0.35 - 5481.7 SF
HARDSCAPE	
(EXISTING)	
LANDSCAPE STAIRS	191 SF
DECKS	776 SF
PATIOS/PATHWAYS	331 SF
ROCKERY / SITE WALLS	409 SF
TOTAL EXISTING	**1,707 SF = 10.9% OF LOT AREA**
(DEMO)	
LANDSCAPE STAIRS	44 SF
DECKS	776 SF
PATIOS/PATHWAYS	331 SF
ROCKERY / SITE WALLS	38 SF
TOTAL TO BE REMOVED	**1,189 SF**
(PROPOSED)	
(E) HARDSCAPE TO REMAIN	
LANDSCAPE STAIRS	147 SF
ROCKERY / SITE WALLS	371 SF
TOTAL TO REMAIN	518 SF
(N) ADDED HARDSCAPE	
LANDSCAPE STAIRS	110 SF
DECKS	347 SF
PATIO/WALKWAYS	259 SF
ROCKERY / SITE WALLS	143 SF
TOTAL ADDED	859 SF
TOTAL PROPOSED HARDSCAPE =	**1,377 SF = 8.79% OF LOT AREA**
TREE REMOVAL	
(E) TREES TO BE REMOVED	6
(N) TREES TO BE PLANTED AS REPLACEMENT	18
PROPOSED BUILDING AREA SUMMARY (GFA)	
PROPOSED LOWER LEVEL (N/C STAIR)	1779 SF
PROPOSED LOWER LEVEL STORAGE SPACE	192 SF
PROPOSED LOWER LEVEL BELOW GRADE (EXCLUDED)	683 SF
PROPOSED STAIR @ 200 % MODIFIER (62 SF X 200%)	124 SF
PROPOSED MAIN LEVEL (N/C STAIR)	1886 SF
PROPOSED DECK W/ OH	312 SF
PROPOSED MAIN LEVEL EXTERIOR STORAGE	94 SF
PROPOSED ATTACHED GARAGE	562 SF
TOTAL PROPOSED BUILDING AREA (GSF)	4266 SF
PROPOSED FLOOR AREA RATIO:	**4266/17532 = 24.3% OF LOT AREA**
40% ALLOWABLE GROSS FLOOR AREA:	17532 SF X 0.40 = 7,012.8 SF

AVERAGE BUILDING ELEVATION

WALL	MIDPOINT ELEV. (FT.)	WALL LENGTH (FT.)	PRODUCT
A	86.4	19.8	1710.72
B	87.4	7.10	620.54
C	91.3	59.0	5386.7
D	94.9	4.60	436.54
E	95.0	16.8	1596.0
F	96.3	31.1	2994.93
G	103.1	24.3	2505.33
H	103.0	12.1	1246.3
I	97.1	71.1	6903.81
J	92.1	24.4	2247.24
TOTALS		270.3	25,648.11

AVERAGE GRADE =
TOTAL PRODUCTS / TOTAL WALL LENGTHS

TOTAL PRODUCTS	25,648.11'
TOTAL WALL LENGTHS	270.3'
AVERAGE GRADE	25,648.11 / 270.3 = **94.89'**
MAX HEIGHT ALLOWABLE	30' ABOVE AVERAGE GRADE
MAX HEIGHT ELEVATION/MAX BUILDING HEIGHT	**124.89'**
PROPOSED BUILDING HEIGHT:	**117.60'**



1 PROPOSED SITE PLAN
1" = 10'-0"

SITE PLAN LEGEND/NOTES

- PROPERTY LINE
- BUILDING FOOTPRINT
- PAVING/HARDSCAPE/DECK
- ROOF OVERHANG
- TREE PROTECTION FENCE (F)
- (E) TREE TO REMAIN
- (N) TREE
- (E) TREE TO BE DEMOLISHED
- (E) ROCKERY
- (N) ROCKERY/SITE RETAINING
- PORTION OF (N) DRIVEWAY
- (E) DRIVEWAY TO REMAIN
- (E) HARDSCAPE
- (N) HARDSCAPE

1. ALL DIMENSIONS AT EXTERIOR WALLS TO FACE OF FRAMING AT EXT. FACE OF WALL AND TO FACE OF FRAMING AT INTERIOR WALLS
2. ALL DIMENSIONS AT INTERIOR WALLS ARE TO FACE OF FRAMING
3. ALL DIMENSIONS AT KITCHEN TO EDGE OF COUNTERTOPS, U.N.O.

Per MICC 19.02.020(F)(3)(d), the project 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 (F)(3)(a) of this section. 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.

1. SEE SHEET A101 FOR CRITICAL AREA & BUILDING PAD DESIGNATION + SETBACK DIMENSIONS
2. SEE SHEET A102 FOR EXCAVATION PLAN W/ T.O.W. & B.O.F. HEIGHTS FOR SITE RETAINING WALLS
3. SEE SHEET A104 FOR TREE RETENTION / REPLACEMENT PLAN

Brandt
Design Group
66Bell Street
Unit 1
Seattle, WA
98121
206.239.0850
brandtdesigninc.com
8843
REGISTERED ARCHITECT
STATE OF WASHINGTON

ROSENSTEIN RESIDENCE

2035 81ST AVE SE
MERCER ISLAND, WA 98040

© COPYRIGHT 2019 BRANDT DESIGN, INC. SEATTLE, WA.

PERMIT DOCUMENTS

DATE: 11/22/19
SHEET SIZE: D (24X36)

REVISIONS

Revision Number	Date
1	08.16.19
2	11.20.19

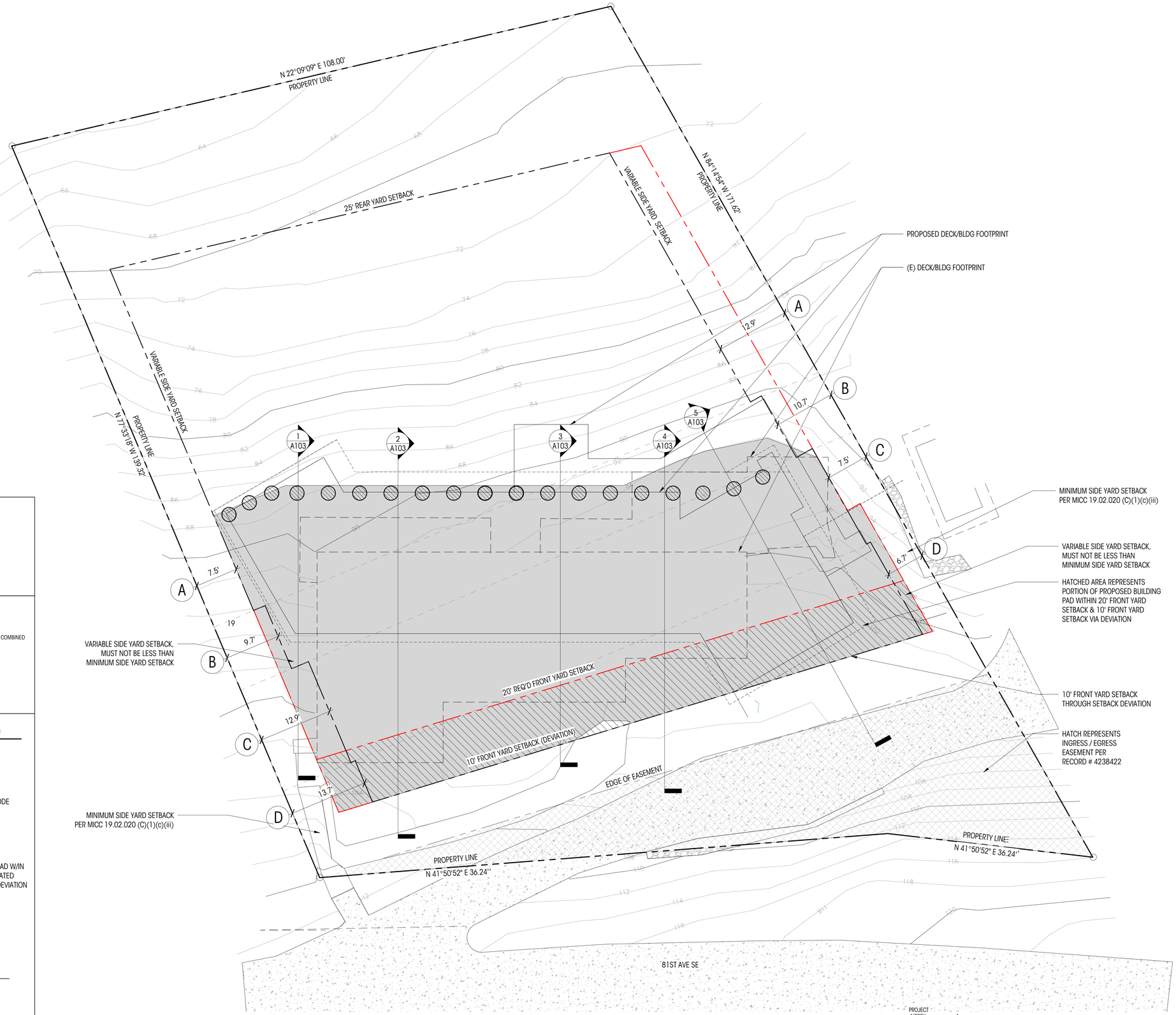
DRAWN BY: SE/BM/NLD
CHECKED BY: BM/CB

PROPOSED SITE PLAN

SCALE: As indicated

A100

DEDICATED APPROVAL STAMP SPACE



1 SITE SETBACK & BUILDING PAD SITE PLAN
1/8" = 1'-0"

SETBACK LEGEND

A 12.9' + 7.5' = 20.4'

B 10.7' + 9.7' = 20.4'

C 7.5' + 12.9' = 20.4'

D 6.7' + 13.7' = 20.4'

PROJECT DATA

SETBACKS

SIDE YARD	17% of 120' WIDTH = 20.4' COMBINED MIN = 6.7'
FRONT YARD	20'
REAR YARD	25'

EXISTING LOT AREA SUMMARY

GROSS LOT AREA	17,532 SF
ACCESS EASEMENTS	1870 SF
NET LOT AREA	15,662 SF
AVERAGE LOT SLOPE	61.3' / 116' ; 54.7/227 = 24%

BUILDING PAD & SETBACK LEGEND

- PROPERTY LINE
- SETBACK LINE
- MIN. REQ'D SETBACK PER MICC CODE 19.02.020(C)(1)(c)(iii)
- CRITICAL AREA SLOPE > 40%
- PROPOSED BUILDING PAD
- PORTION OF PRPOSED BUILDING PAD W/IN 20' FRONT YARD SETBACK ASSOCIATED W/10' FRONT YARD SETBACK VIA DEVIATION
- 10' CONTOUR LINE
- 2' CONTOUR LINE
- (E) FOOTPRINT / DECK
- (N) FOOTPRINT / DECK

NOTE

PROPOSED SITE STABILIZATION SHORING WALL PER GEOTECHNICAL RECOMMENDATIONS, SEE SHEET SH1.1 FOR PLANS.

Brandt
Design Group

66Bell Street
Unit 1
Seattle, WA
98121

206.239.0850

brandtdesigninc.com

8843
REGISTERED ARCHITECT
STATE OF WASHINGTON

ROSENSTEIN RESIDENCE

2035 81ST AVE SE
MERCER ISLAND, WA 98040

© COPYRIGHT 2019 BRANDT DESIGN, INC. SEATTLE, WA.

PERMIT DOCUMENTS

DATE: 11/22/19

SHEET SIZE: D (24X36)

REVISIONS

Revision Number	Date
2	11.20.19

DRAWN BY: SE/BM/NLD
CHECKED BY: BM/CB

BUILDING PAD & SETBACK PLAN

SCALE: As indicated

A101

2

DEDICATED APPROVAL STAMP SPACE

EXCAVATION PLAN LEGEND

EXISTING TOPOGRAPHY LINE

EXTENT OF EXCAVATION

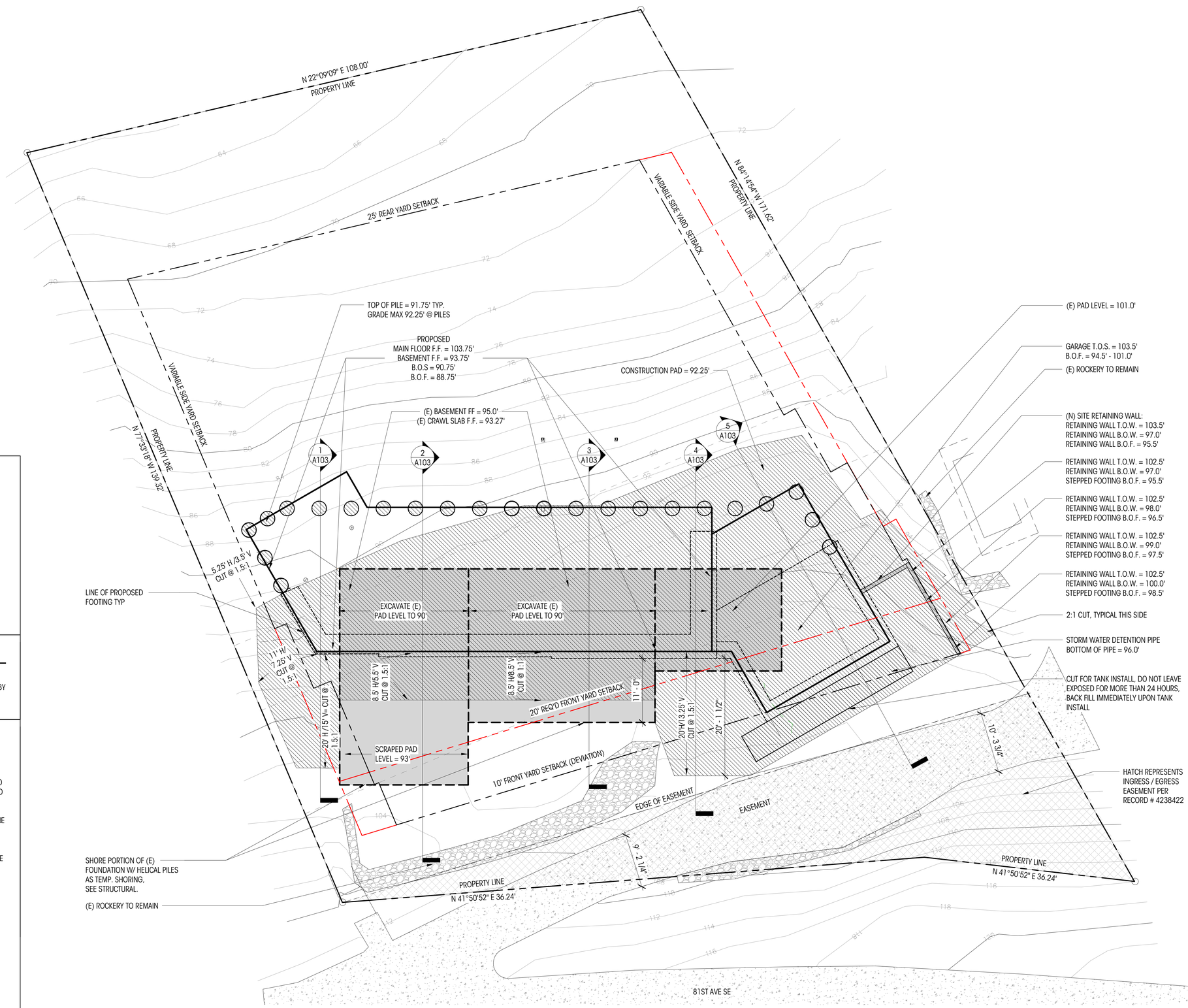
PROPOSED BUILDING PAD

CONSTRUCTION MONITORING NOTES

MONITOR ADJACENT BLDG. FOR SETTLEMENT. START MONITORING PRIOR TO DEMOLITION WEEKLY UNTIL PILE DRIVING IS COMPLETE. LEVELS TO BE MEASURED BY PROJECT SURVEYOR.

CONSTRUCTION PHASING

1. DEMOLITION OF (E) HOUSE, MAINTAIN (E) SOUTHERN PORTION OF THE FOUNDATION WALLS FOR TEMPORARY SHORING
2. (E) FOUNDATION WALLS TO BE SECURED WITH HELICAL ANCHORS PRIOR TO FULLY CUTTING OUT SLAB (ALTERNATE: BACK FILL WITH QUARRY SPALL ALSO ALLOWED WITH GEO CONFIRMATION AND INSPECTION)
3. CUT OUT (E) SLAB PAST NEW FOUNDATION LINE
4. GRADE RAMP FROM DRIVEWAY TO (E) LOWER BASEMENT PAD FOR MACHINE ACCESS
5. REMOVE TREES
6. DRILL/INSTALL SHORING PILES FOR STABILIZATION WALL
7. EXCAVATION & INSTALL OF DETENTION TANK (MAX 48 HOURS FOR PIT TO BE OPEN)
8. BACKFILL DETENTION TANK
9. EXCAVATE REMAINING SITE
10. SCRAPE BUILDING PAD
11. PIN PILE INSTALL
12. FOUNDATION FORMWORK
13. FOUNDASITON INSTALL
14. RETAINING WALL FORMWORK
15. RETAINING WALL INSTALL + CURING
16. NON-STRUCTURAL RAT-SLAB INSTALL
17. REMOVE REMAINING TEMP SHORING
18. BACKFILL FOUNDATION WALLS
19. FORM PARKING PAD FOUNDATION
20. POUR PARKING PAD FOUNDATIONS
21. FORM PARKING PAD RETAINING WALLS
22. FORM PARKING PAD & GARAGE SLAB
23. POUR PARKING/GARAGE SLABS
24. FINAL ROUGH GRADING
25. FRAMING



1 EXCAVATION PLAN
1/8" = 1'-0"

Brandt
Design Group

66Bell Street
Unit 1
Seattle, WA
98121

206.239.0850

brandtdesigninc.com

8843
REGISTERED ARCHITECT
STATE OF WASHINGTON

ROSENSTEIN RESIDENCE

2035 81ST AVE SE
MERCER ISLAND, WA 98040

© COPYRIGHT 2019 BRANDT DESIGN, INC. SEATTLE, WA.

PERMIT DOCUMENTS

DATE: 11/22/19

SHEET SIZE: D (24X36)

REVISIONS

Revision Number	Date
2	11.20.19

DRAWN BY: SE/BM/NLD
CHECKED BY: BM/CB

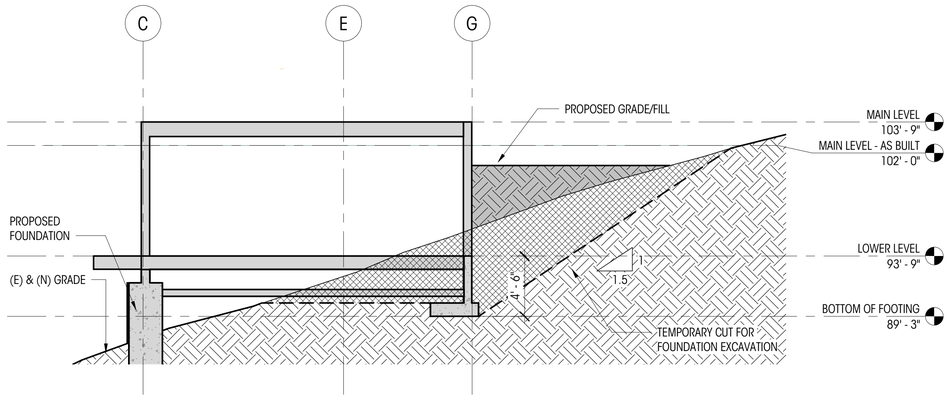
EXCAVATION PLAN

SCALE: As indicated

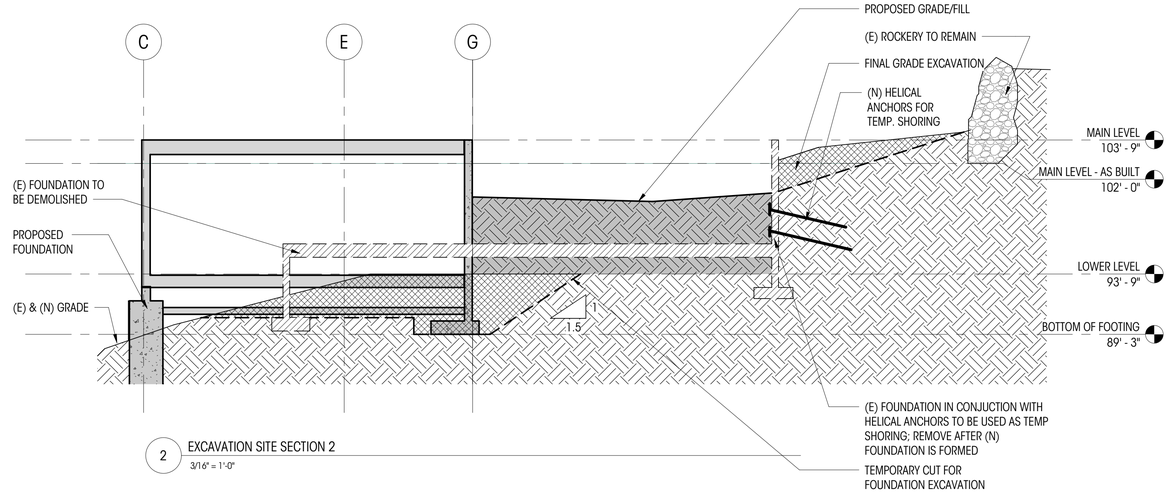
2

A102

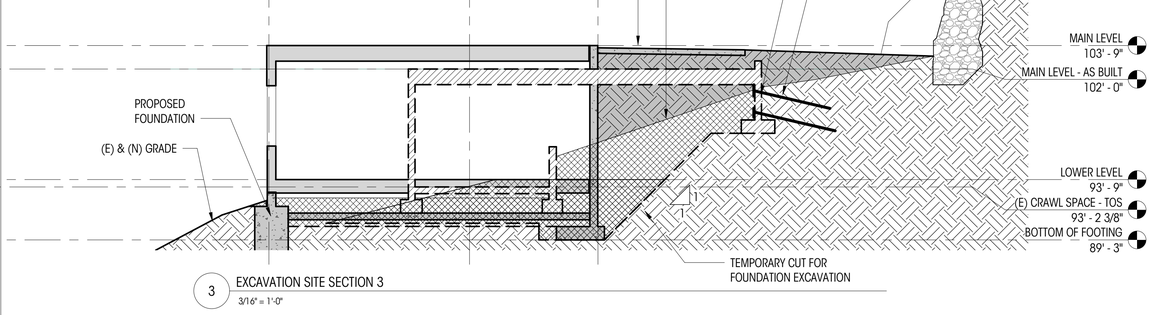
DEDICATED APPROVAL STAMP SPACE



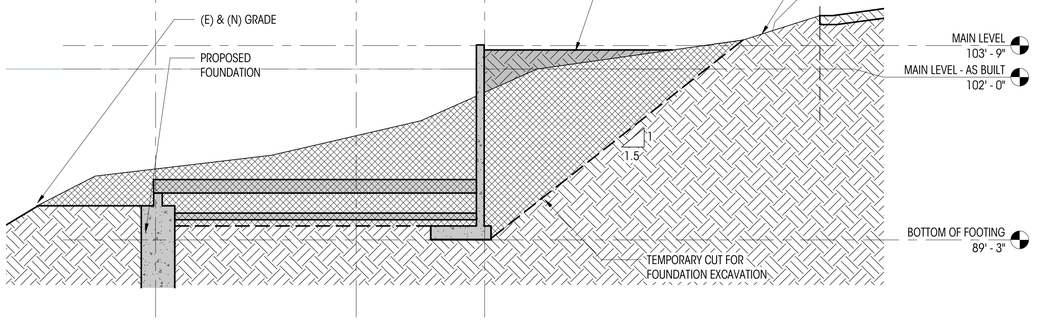
1 EXCAVATION SITE SECTION 1
3/16" = 1'-0"



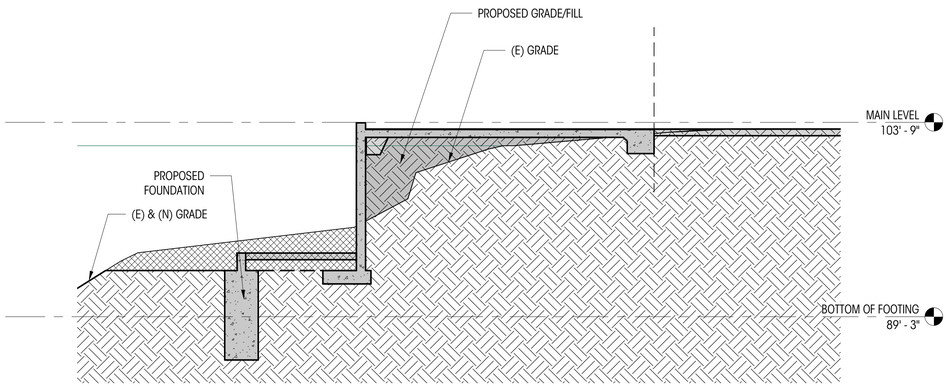
2 EXCAVATION SITE SECTION 2
3/16" = 1'-0"



3 EXCAVATION SITE SECTION 3
3/16" = 1'-0"



4 EXCAVATION SITE SECTION 4
3/16" = 1'-0"



5 EXCAVATION SITE SECTION 5
3/16" = 1'-0"

SITE EXCAVATION LEGEND

- PROPOSED GRADE
- (E) GRADE
- ALTERED (E) GRADE
- PROPOSED FOUNDATION
- EXISTING FOUNDATION
- FILL
- TEMPORARY CUT

Brandt
Design Group

66Bell Street
Unit 1
Seattle, WA
98121

206.239.0850

brandtdesigninc.com

8843
REGISTERED ARCHITECT
STATE OF WASHINGTON

ROSENSTEIN RESIDENCE

2035 81 ST AVE SE
MERCER ISLAND, WA 98040

© COPYRIGHT 2019 BRANDT DESIGN, INC. SEATTLE, WA

PERMIT DOCUMENTS

DATE: 11/22/19

SHEET SIZE: D (24X36)

REVISIONS

Revision Number	Date
2	11.20.19

DRAWN BY: SE/BM/NLD
CHECKED BY: BM/CB

EXCAVATION SECTIONS

SCALE: As indicated

2

A103

DEDICATED APPROVAL STAMP SPACE

TREE REMOVAL / REPLACEMENT

Regulated Category	Tree No.	DBH	Species	Dripline Radius
Exceptional	1	23.4"	Douglas-fir, Pseudotsuga menzeisii	18'
Exceptional	2	21.8"	Western hemlock, Tsuga heterophylla	20'
Exceptional	3	33.5"	Western red-cedar, Thuja plicata	20'
Exceptional	6	18"	Western red-cedar, Thuja plicata	10'
Exceptional	7	18.8"	Western red-cedar, Thuja plicata	12'
Exceptional	18	11.2"	Western red-cedar, Thuja plicata	12'

All Trees 3 shall be replaced at a 3:1 ratio

TREE REPLACEMENT SPECIES
- PINUS CONTORTA - SHORE PINE
- CORNUSKOUSA - KOUSA DOGWOOD
- SUGA MERTENSINUMA - MOUNTAIN HEMLOCK
- CERCIDIPHYLLUM JAPONICUM - KATSURA

TREE REPLACEMENT REQUIREMENTS:
- Replacement conifer trees shall be 6-8 feet tall, each with a single, straight trunk without defect or deformity. Each tree shall have even branch distribution around and along the trunk's axis, with a minimum 90% live crown ratio (percent of trunk with foliage-bearing branches).
- Deciduous trees shall be minimum 2" caliper, a trunk free from defect or injury, even and uniform branch distribution, and a LCR of 30% or greater.
- The trees shall have foliage that is normal in color and density, and shoot growth evident of good tree vitality.
- Tree planting activities shall comply with ANSI A-300 Part 6:Tree, Shrub, and Other Woody Plant Maintenance – Standard Practice (Transplanting). And shall follow ISAs Best Management Practices – Tree Planting (2005).
- Rootballs shall be set on undisturbed or packed soil to prevent sinking, and the rootcrowns shall be exposed prior to planting and set level with finished grade. All wires, cords and burlap shall be removed at planting. If staking is required to keep the tree upright during establishment, all cores, stakes and wires shall be removed after one year.

IMPACTS OF PROPOSED TREE REMOVAL
Per the arborist report (pg7) Removal of the above 6 trees will have no to negligible impact on those that remain. The six trees proposed for removal do not provide buffer from prevailing winds, and their absence will not change wind patterns or loads for the trees that remain.

TREE 3 IS LISTED AS EXCEPTION AND WE ARE PROPOSING THE REMOVAL BASED ON PER MICC 19.010.060 (A3) a
a. Retention of an exceptional tree(s) with a diameter of 24 inches or more will result in an unavoidable hazardous situation;
- Per the geotech report; The soil is of very poor quality, this in conjunction with the tree beig located in the steep slope/landslide critical area deems this tree a hazardous situation to both the (E) & proposed buildings.
- Per the arborist report; The geotechnical engineer for the project has found unstable soils across the site and that in order to do any development of the site a "site stabilization wall" is required along the downhill side of the building pad. That site stabilization wall directly impacts the critical root zone of tree #3. Additionally, the removal of tree #6 (which sits downslope of tree #3) will erode the long-term stability of tree #3. I therefore conclude that the retention of tree # 3 not viable.

WE ARE PROPOSING THE REMOVAL OF TREES 1,2,6,7,18 ARE CONSIDERED SIGNIFICANT BY THEIR GROVE STATUS; WE ARE PROPOSING THEIR REMOVAL BASED ON THE FOLLOWING PER THE ARBORIST REPORT.

- Removal of tree 2 and tree 18 – please see my comments above regarding the impact of the site stabilization wall on tree #3, which also applies here.
- Demolition of existing house and surrounds - Demolition of existing structures will occur inside the rootplate and/or the dripline of trees 1, 2 and 18 and includes removal of existing stairs and rockery; removal of asphalt parking pad; removal of the house itself; and removal of concrete slab beneath hot tub. It is assumed that in the process of demolition the critical root zones of each of these trees will be impacted to the point that they are viable.
- Removal of tree 6 and 7 – These trees have been significantly altered by previous topping and are not viable for retention.

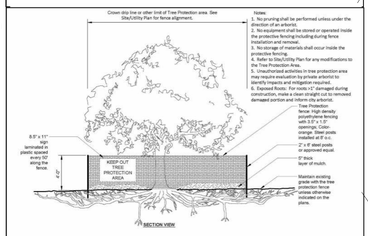
TREE RETENTION

	Onsite Trees	Offsite Trees	ROW Trees
Exceptional	20	6	
Significant	0	0	2
Total	20	6	2
Grove Trees	20	6	
Trees > 24" DBH	8	2	

TREE RETENTION PERCENTAGE

	# OF TREES	# REMOVED	RETENTION%
EXCPTIONAL	20	6	70%
SIGNIFICANT	0	0	100%

ON SITE RETENTION OF REGULATED TREES 14/20= 70%



TREE PROTECTION DETAIL

SPECIAL INSTRUCTIONS
There is work proposed within some portion of the critical root zones of retained trees 15, 19, 20 and 103 along the south property line. This work should be done with a combination of hand-digging and pneumatic air spade excavation in keeping with best management practices. Any proposed pruning of roots or branches is to addressed on a tree-by-tree basis and be done only under the supervision of a certified arborist, as should the replacement of removed soils within the critical root zone.

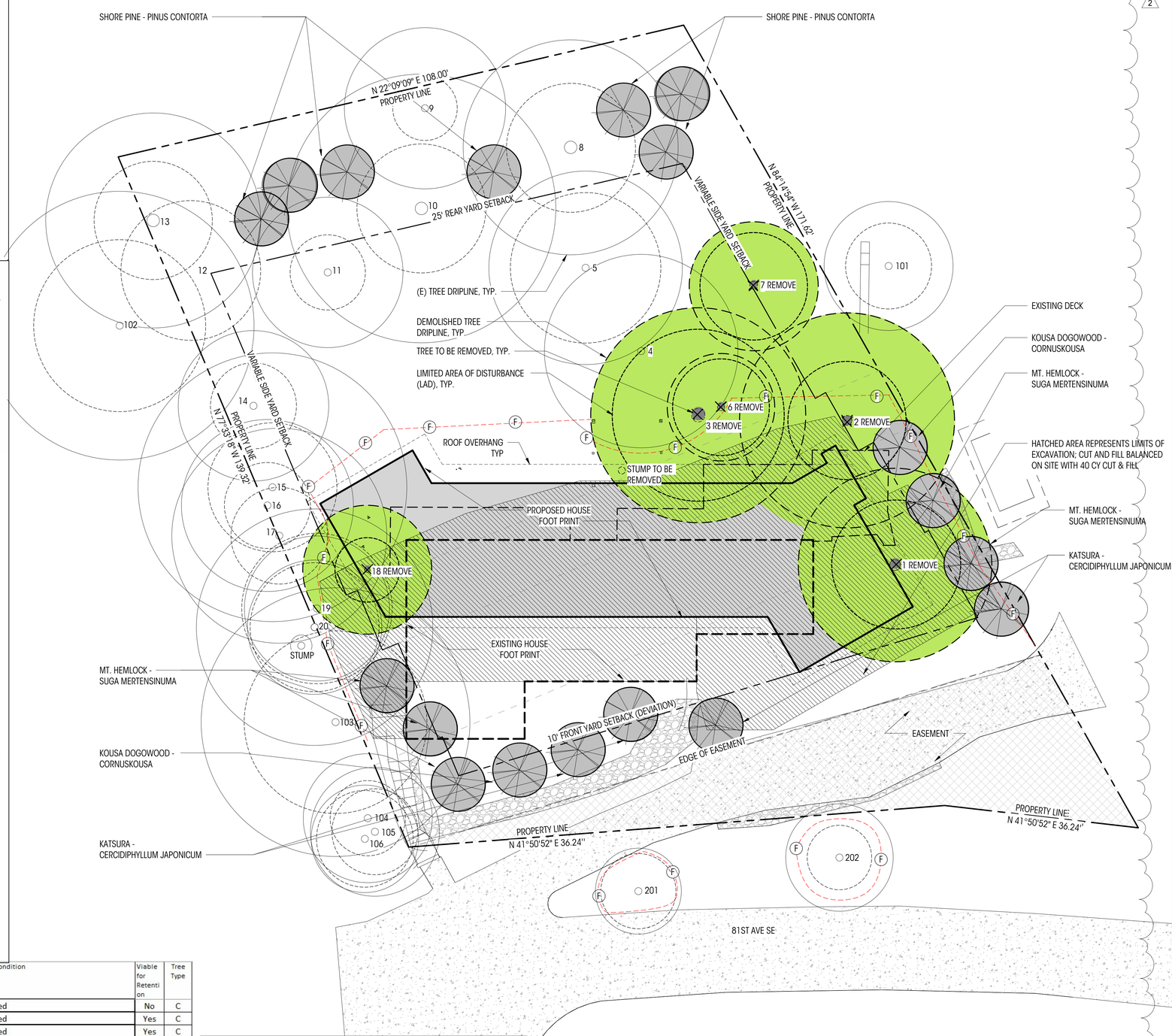
TREE PROTECTION MEASURES AROUND RETAINED TREES
Prior to site clearing or demolition, minimum six (6) foot temporary chain-link fence shall be installed at the driplines of all retained trees, or at the limits of disturbance, when construction or access is required within the dripline. Fence shall completely encircle the retained trees. Install fence posts using pier block only. A City planner must approve any modifications to the fencing material and location. Fencing must be in accordance with the tree protection standards as outlined in KZC 95.34.

No stockpiling of materials, vehicular or pedestrian traffic, material storage or use of equipment or machinery shall be allowed within the protective fencing. Fencing shall not be moved or removed unless approved by a City planner. Any work, activity or soil disturbance within the protection fencing, or critical root zone, shall be reviewed, approved and monitored by the project arborist.

Fencing signage as detailed (see attached) must be posted every fifteen (15) feet along the fencing.

Tree Protection Signage must include the following language:
WARNING TREE PROTECTION ZONE (TPZ)
•This fence shall not be removed/moved from the approved location without written authorization from the City Arborist and supervision by the Project Arborist.
•No pruning shall be performed unless under the direction of a Project Arborist.
•No grading, excavation, storage (materials, equipment, vehicles, etc.), or other unpermitted activity shall occur inside the protective fencing.
•Unauthorized activities in tree protection areas may require immediate evaluation by the Project Arborist to identify impacts and potential mitigation.
•Penalties for damaging or removing a saved tree may be a fine up to three times the value of the tree plus restoration (MICC 19.10.160).
•Any work in approved TPZ must be with the permission of the City Arborist (206) 275-7713, john.kenney@mercergov.org.

Offsite	Retain	Remove	Threshold (in.)	Significant	Exceptional Grove	Size Exceptional	≥ 24" DBH	Tree No.	DBH (in.)	QMD	Species	Dripline radius (ft.)	Health	Structure	Comment on Condition	Viable for Retention	Tree Type
		X	30		X	X	X	3	33.5		Western red-cedar, Thuja plicata	20	1	2	Canopy raised	No	C
	X		30		X	X	X	4	36		Western red-cedar, Thuja plicata	18	1	2	Canopy raised	Yes	C
	X		30		X		X	5	27		Western red-cedar, Thuja plicata	18	1	2	Canopy raised	Yes	C
		X	30		X			6	18		Western red-cedar, Thuja plicata	10	3	3	Topped to 12' height	No	C
		X	30		X			7	18.8		Western red-cedar, Thuja plicata	12	3	3	Topped to 16'height	No	C
	X		24		X	X	X	8	24.5		Oregon Ash, Fraxinus latifolia	20	2	2	Previously topped	Yes	D
	X		24		X			9	13		Oregon Ash, Fraxinus latifolia	15	1	2	Ivy	Yes	D
	X		24		X	X	X	10	16.5,18	24	Oregon Ash, Fraxinus latifolia	25	2	2	Double leader, ivy	Yes	D
	X		30		X			11	12.3		Western red-cedar, Thuja plicata	14	2	2	Topped, girdled by ivy	Yes	C
	X		30		X		X	12	26.5		Douglas-fir, Pseudotsuga menzeisii	25	1	2	Deadwood, Canopy raised, ivy	Yes	C
	X		30		X			13	21		Bigleaf maple, Acer macrophyllum	20	2	2	Asymmetric canopy, on stilts, ivy	Yes	D
	X		30		X			14	7.2,14.4	16	Western red-cedar, Thuja plicata	14	2	2	Double leader	Yes	C
	X		30		X			15	23.7		Bigleaf maple, Acer macrophyllum	25	1	2	Asymmetric canopy	Yes	D
	X		30		X			16	15.2		Douglas-fir, Pseudotsuga menzeisii	16	1	2	Slender, LCR	Yes	C
	X		30		X			17	18.6		Bigleaf maple, Acer macrophyllum	20	1	2	Asymmetric	Yes	D
		X	30		X			18	11.2		Western red-cedar, Thuja plicata	12	1	2	Asymmetric, pruned away from house	Yes	C
	X		30		X		X	19	27.1		Bigleaf maple, Acer macrophyllum	25	2	2	Decay in trunk, multiple leaders, asymmetric	Yes	D
	X		30		X		X	20	25		Douglas-fir, Pseudotsuga menzeisii	16	2	2	Seam in trunk, dogleg, topped	Yes	C



1 TREE RETENTION SITE PLAN
1" = 10'-0"

PROJECT NORTH / NORTH

SITE PLAN LEGEND / NOTES

- PROPERTY LINE
- BUILDING FOOTPRINT
- PAVING/HARDSCAPE/DECK
- ROOF OVERHANG
- TREE PROTECTION FENCE
- LIMITS OF EXCAVATION
- (E) TREE TO REMAIN W/ DRIPLINE & LAD
- (N) TREE
- (E) TREE TO BE DEMOLISHED W/ DRIPLINE & LAD

Per MICC 19.02.020(F)(3)(d), the project 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 (F)(3)(a) of this section. 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
8843 REGISTERED ARCHITECT STATE OF WASHINGTON

ROSENSTEIN RESIDENCE

2035 81ST AVE SE
MERCER ISLAND, WA 98040

© COPYRIGHT 2019 BRANDT DESIGN, INC. SEATTLE, WA.

PERMIT DOCUMENTS

DATE: 11/22/19
SHEET SIZE: D (24X36)

REVISIONS

Revision Number	Date
1	08.16.19
2	11.20.19

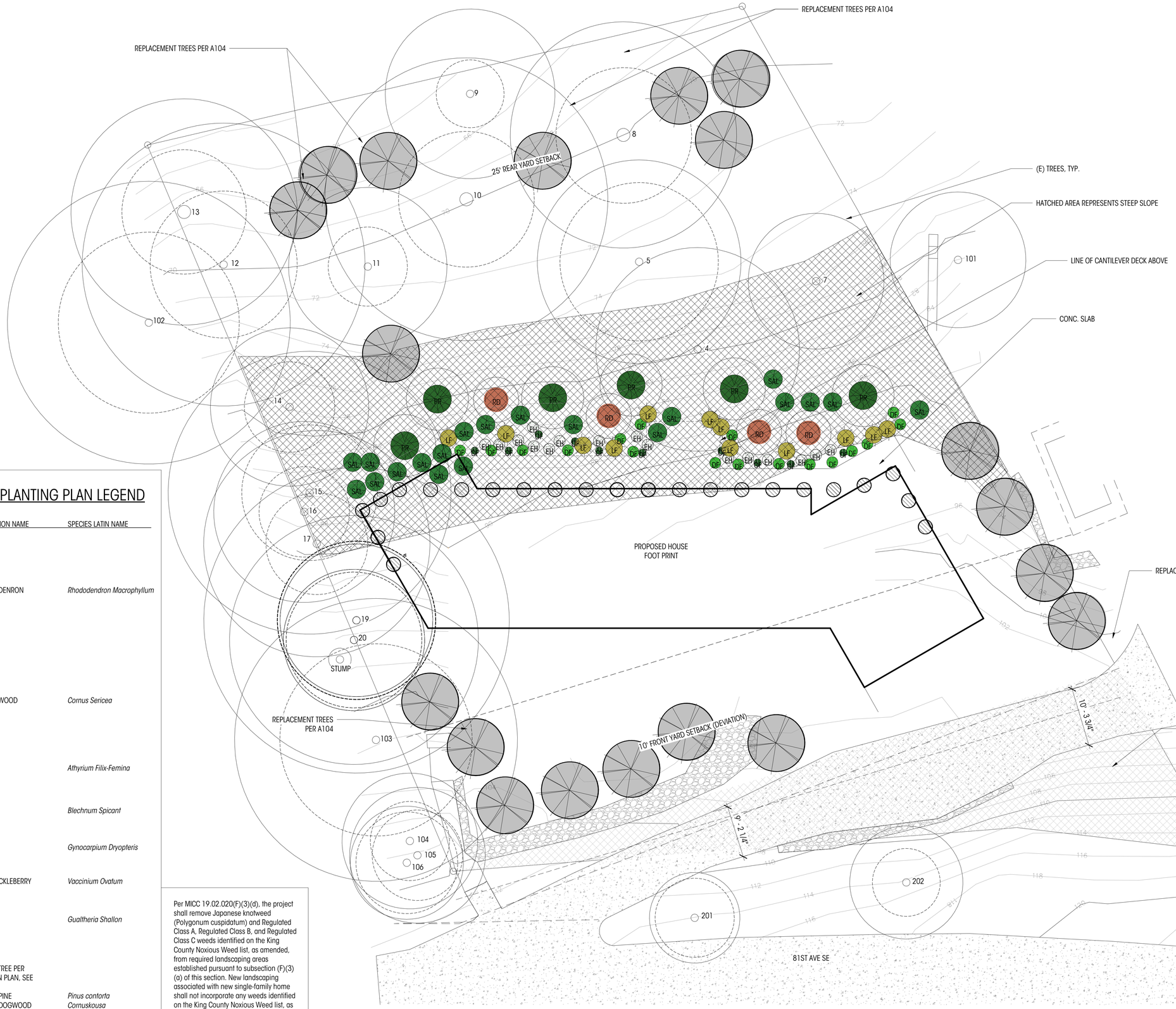
DRAWN BY: SE/BM/NLD
CHECKED BY: BM/CB

TREE RETENTION & REPLACEMENT PLAN

SCALE: As indicated

A104

DEDICATED APPROVAL STAMP SPACE



SLOPE STABILIZATION PLANTING PLAN LEGEND

VEGETATION	SPECIES COMMON NAME	SPECIES LATIN NAME
PR	PACIFIC RHODEDENRON	*Rhododendron Macrophyllum*
RD	RED TWIG DOGWOOD	*Cornus Sericea*
LF	LADY FERN	*Athyrium Filix-Femina*
DF	DEER FERN	*Blechnum Spicant*
OH	OAK FERN	*Gynocarpium Dryopteris*
EH	EVERGREEN HUCKLEBERRY	*Vaccinium Ovatum*
SAL	SALAL	*Gualtheria Shallon*
	REPLACEMENT TREE PER TREE RETENTION PLAN, SEE SHEET A104	
	SHORE PINE	*Pinus contorta*
	KOUSA DOGWOOD	*Cornuskousa*
	MT. HEMLOCK	*Suga Mertensinuma*
	KATSURA	*Cercidiphyllum Japnonica*

Per MICC 19.02.020(F)(3)(d), the project 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 (F)(3)(a) of this section. 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.

1 SLOPE STABILIZATION PLANTING PLAN
1/8" = 1'-0"

PROJECT NORTH / NORTH

Brandt
Design Group
66Bell Street
Unit 1
Seattle, WA
98121
206.239.0850
brandtdesigninc.com

8843 REGISTERED ARCHITECT STATE OF WASHINGTON

ROSENSTEIN RESIDENCE

2035 81ST AVE SE
MERCER ISLAND, WA 98040

© COPYRIGHT 2019 BRANDT DESIGN, INC. SEATTLE, WA.

PERMIT DOCUMENTS

DATE: 11/22/19
SHEET SIZE: D (24X36)

REVISIONS

Revision Number	Date
2	11.20.19

DRAWN BY: SE/BM/NLD
CHECKED BY: BM/CB

CRITICAL AREA SITE PLANTING PLAN

SCALE: As indicated

2

A105

DEDICATED APPROVAL STAMP SPACE

SILT FENCE DETAIL — DOE

Figure II-4.2.12 Silt Fence

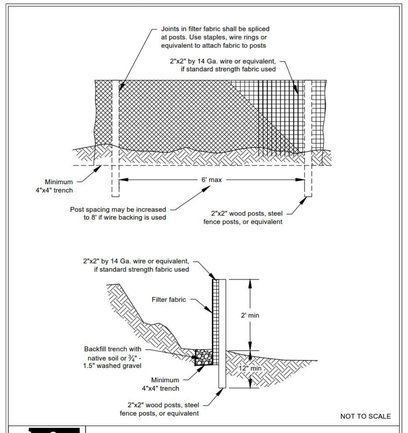


Figure II-4.2.12
Silt Fence

Revised October 2014

DEPARTMENT OF ECOLOGY
State of Washington

Please see http://www.ecy.wa.gov/copyright.html for copyright notice including permissions, limitation of liability, and disclaimer.

CONSTRUCTION ENTRANCE — DOE

Figure II-4.1.1 Stabilized Construction Entrance

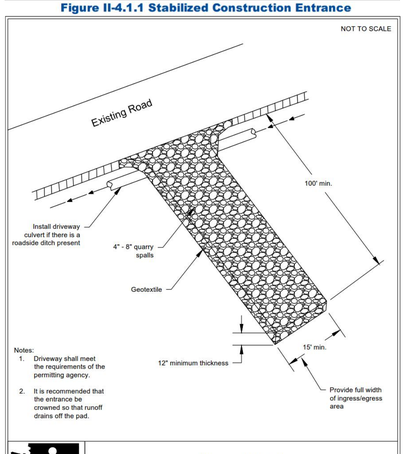


Figure II-4.1.1
Stabilized Construction Entrance

Revised June 2015

DEPARTMENT OF ECOLOGY
State of Washington

Please see http://www.ecy.wa.gov/copyright.html for copyright notice including permissions, limitation of liability, and disclaimer.

TYPICAL CONSTRUCTION/TESC 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.).

7. CONSTRUCT SEDIMENT PONDS AND TRAPS IF SHOWN ON TESC PLANS.

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.

ROSENSTEIN ESTIMATED CONST. SEQUENCE

ROSENSTEIN CONSTRUCTION SEQUENCE

1. Demolition of (E) house, maintain (E) southern portion of the foundation walls for temporary shoring
2. Back fill (E) foundation walls with quarry spall (in lieu of helical anchors???) prior to fully cutting out slab
3. Cut out (E) slab past new foundation line
4. Grade ramp from driveway to (e) lower basement pad for machine access
5. Remove Trees
6. Drill/install shoring piles for stabilization wall
7. Excavation & install of detention tank in front of new garage (CMP PIPE) (max 48 hours for pit to be open)
8. Backfill detention tank
9. Excavate remaining site
10. Scrape building pad
11. Foundation formwork
12. Pin Pile install
13. Foundation install
14. Foundation/Retaining wall formwork
15. Foundation/Retaining wall install + curing
16. Non-structural rat-slab install
17. Remove remaining temp shoring
18. Backfill foundation walls
19. Form parking pad foundation
20. Pour parking pad Foundations
21. Form Parking pad retaining walls
22. Form parking pad & garage slab
23. Pour parking/garage slabs
24. Final Rough Grading
25. Framing

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, 6, ETC.

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, ETC.).

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

1. 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.
3. 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
6. DO NOT BACKFILL WITH NATIVE MATERIAL ON PUBLIC RIGHT-OF-WAY. ALL MATERIAL MUST BE IMPORTED
7. 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:
8. 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.
9. 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.
11. 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.
12. 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.
13. 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 MAINS.
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.
19. 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 MAINS.
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.

PERMIT 1908-009

NO.	DATE	BY	REVISIONS

APPLICANT:
JANE + AARON ROSENSTEIN
8404 SE 53rd PLACE
MERCER ISLAND, WA 98040

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

DATE: Dec 09, 2019
JOB# 1806
DRAFTED: CH DESIGN: DE
DIGITAL SIGNATURE

Dec 09, 2019 — JEFFREY E. HALLAM — STATE OF WASHINGTON — 39766 — REGISTERED PROFESSIONAL ENGINEER

CIVIL ENGINEERING SOLUTIONS
102 NW CANAL STREET SEATTLE, WA 98107
PHONE: 206.930.0342 DUFFY@CESOLUTIONS.US

TESC & CITY NOTES
TESC DETAILS

ROSENSTEIN RESIDENCE
2035 81st AVENUE SE, MERCER ISLAND, WA 98040

DRAWING NO: C1.2

APN 544930-0070
1908-009

SANITARY SEWER IMPROVEMENTS

(1) -

(2) -6" SDR 35 PVC SANITARY SEWER(SS) @ MIN 1.0%.

(3) -

(4) -

(7) -LOCATE AND VIDEO CONDITION OF EXISTING SANITARY SIDE SEWER. REPLACE LINE IF FOUND DEFECTIVE AS DETERMINED BY CITY INSPECTOR.

WATER IMPROVEMENTS

(10) -

(11) -MIN 1.5" 250 PSI PRIVATE HDPE WATER (ASTM D2239) FROM METER TO HOUSE. RECOMMENDED DEPTH=36". COORDINATE HOUSE ENTRY WITH BUILDER/OWNER.

(12) -

(14) -POSSIBLE METER UPGRADE

STORM DRAIN

(20) -4" STORM DRAIN (3034 PVC) @ MIN 2% GRADE

(21) -4" FOUNDATION DRAIN (3034 PVC) @ MIN 1% GRADE

(22) -6" STORM DRAIN (3034 PVC) @ MIN 2% GRADE

(23) -

(24) -12" STORM DRAIN (HDPE N12 OR EQUAL). SEE PROFILE SHEET.

(25) -STORM DRAIN FORCE MAIN @ MIN. 36" DEPTH, SEE PLAN FOR DIAMETER. SUITABLE PIPE INCLUDES SDR-21 PVC OR SDR-11 HDPE.

(26) -

(28) -

(29) -

STORM DRAIN STRUCTURES

(30) -TYPE 1 CB WITH STANDARD GRATE. MAX 5' RIM TO FL DEPTH.

(31) -

(32) -TYPE 1 CB WITH ROUND SOLID LID

(33) -

(34) -

(35) -

(36) -

(39) -

(40) -

(41) -54" ID TYPE 2 MH CONTROL STRUCTURE WITH SOLID LID. SEE ALL DETAILS AND PROFILE C4.0.

(43) -48" ID DUPLEX STORM PUMP STRUCTURE. NYLOPLAST CATCH BASIN OK. SOLID LID. SET PUMP CYCLE FLOATS FOR 12" PUMP CYCLE. SEE PUMP SPECS AND SCHEMATIC ON SHEET C5.0.

(46) -PUMPS: DUPLEX STORM PUMPS REQUIRED, SEE PLAN FOR PUMP SUGGESTION. COORDINATE PUMP PACKAGE AND CONTROLLER WITH PUMP SUPPLIER (FOWLER PUMP OR EQUAL).

(47) -DETENTION PIPE: ALUMINIZED CMP @ 0.5% GRADE. SEE PLAN FOR SIZE AND CONFIGURATION. SEE PROFILE, NOTES, AND DETAILS ON C4.0.

(48) -FOUNDATION & UNDER-SLAB DRAINAGE SUMP PUMP REQUIRED. GEOTECHNICAL ENGINEER DOES NOT RECOMMEND ANY RUNOFF DISCHARGE TO SLOPE. RECOMMEND MEYERS MBSP-3 (OR EQUAL) WITH 12V BATTERY BACKUP AND INTERNET CONNECTIVITY AND PHONE APP.

[A] CLEARING LIMIT NOTE

ALL SELECTIVE CLEARING, TRENCHING AND OTHER WORK WITHIN THE DRIPLINES OF SIGNIFICANT TREES SHALL BE BY LOW IMPACT/HAND METHODS ONLY AND WORK SHALL BE ADJUSTED AS POSSIBLE TO MINIMIZE ANY DISTURBANCE TO THE SIGNIFICANT AND RETAINED TREES AND PROTECTED UNDERSTORY. CONSTRUCTION MATERIALS AND VEHICLES SHALL NOT BE STORED OUTSIDE THE CLEARING LIMITS.

[B] TREE DRIPLINE NOTE

WORK WITHIN THE DRIPLINE OF TREES TO BE SAVED MUST BE UNDER THE DIRECTION OF A CERTIFIED ARBORIST (TYP.) SEE ALSO CLEARING LIMIT NOTE ON THIS SHEET.

STORM BMP's

COMPOSTED AMENDED SOIL IS REQUIRED FOR DISTURBED AREAS. SEE DETAIL ON C3.5.

STORM BMP'S (BEYOND DETENTION) ARE NOT PROPOSED FOR PROJECT. SEE STORM REPORT SECTION A FOR MR#5 LIST DESCRIPTION.

FIRE REQUIREMENTS

NFPA 13D PER INTAKE COMMENTS
MONITOR ALARM SYSTEM REQUIRED

SOILS

SITE IS IN AN AREA MAPPED "INFILTRATING LID FACILITIES ARE NOT PERMITTED" ON THE "LOW IMPACT DEVELOPMENT INFILTRATION FEASIBILITY ON MERCER ISLAND" MAP

SURVEYOR

TOPOGRAPHIC & BOUNDARY SURVEY BY;
TERRANE LAND SURVEYING
10801 MAIN STREET, SUITE 102
BELLEVUE, WA 98004
PHONE 425.458.4488
WWW.TERRANE.NET

LEGAL DESCRIPTION

(PER STATUTORY WARRANTY DEED RECORDING #20020710000921)

TRACT 14 OF MERCER BEACH PARK, AS PER PLAT RECORDED IN VOLUME 46 OF PLATS, PAGE 7, RECORDS OF KING COUNTY AUDITOR,

TOGETHER WITH AN UNDIVIDED ONE TWENTY EIGHTH IN AN TO TRACT "B" OF SAID MERCER BEACH PARK.

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

VERTICAL DATUM

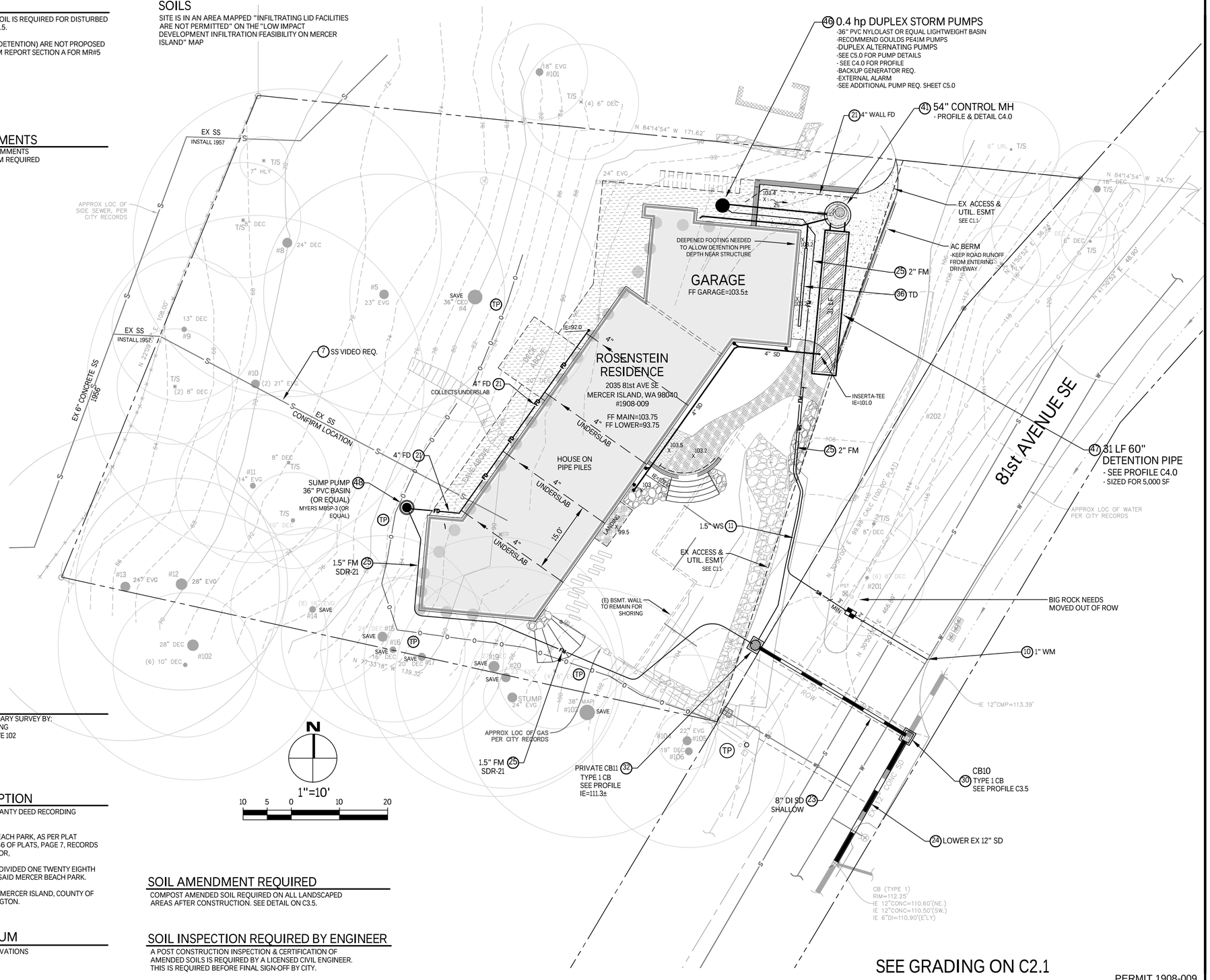
NAVD88 PER GPS OBSERVATIONS

SOIL AMENDMENT REQUIRED

COMPOST AMENDED SOIL REQUIRED ON ALL LANDSCAPED AREAS AFTER CONSTRUCTION. SEE DETAIL ON C3.5.

SOIL INSPECTION REQUIRED BY ENGINEER

A POST CONSTRUCTION INSPECTION & CERTIFICATION OF AMENDED SOILS IS REQUIRED BY A LICENSED CIVIL ENGINEER. THIS IS REQUIRED BEFORE FINAL SIGN-OFF BY CITY.



SEE GRADING ON C2.1

PERMIT 1908-009

NO.	DATE	BY	REVISIONS

APPLICANT:
JANE + AARON ROSENSTEIN
8404 SE 53rd PLACE
MERCER ISLAND, WA 98040

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

DATE: Dec 09, 2019
JOB# 1806
DRAFTED: DE DESIGN: DE
DIGITAL SIGNATURE

Dec 09, 2019 JEFFREY E. DUFFY STATE OF WASHINGTON 39766 REGISTERED PROFESSIONAL ENGINEER

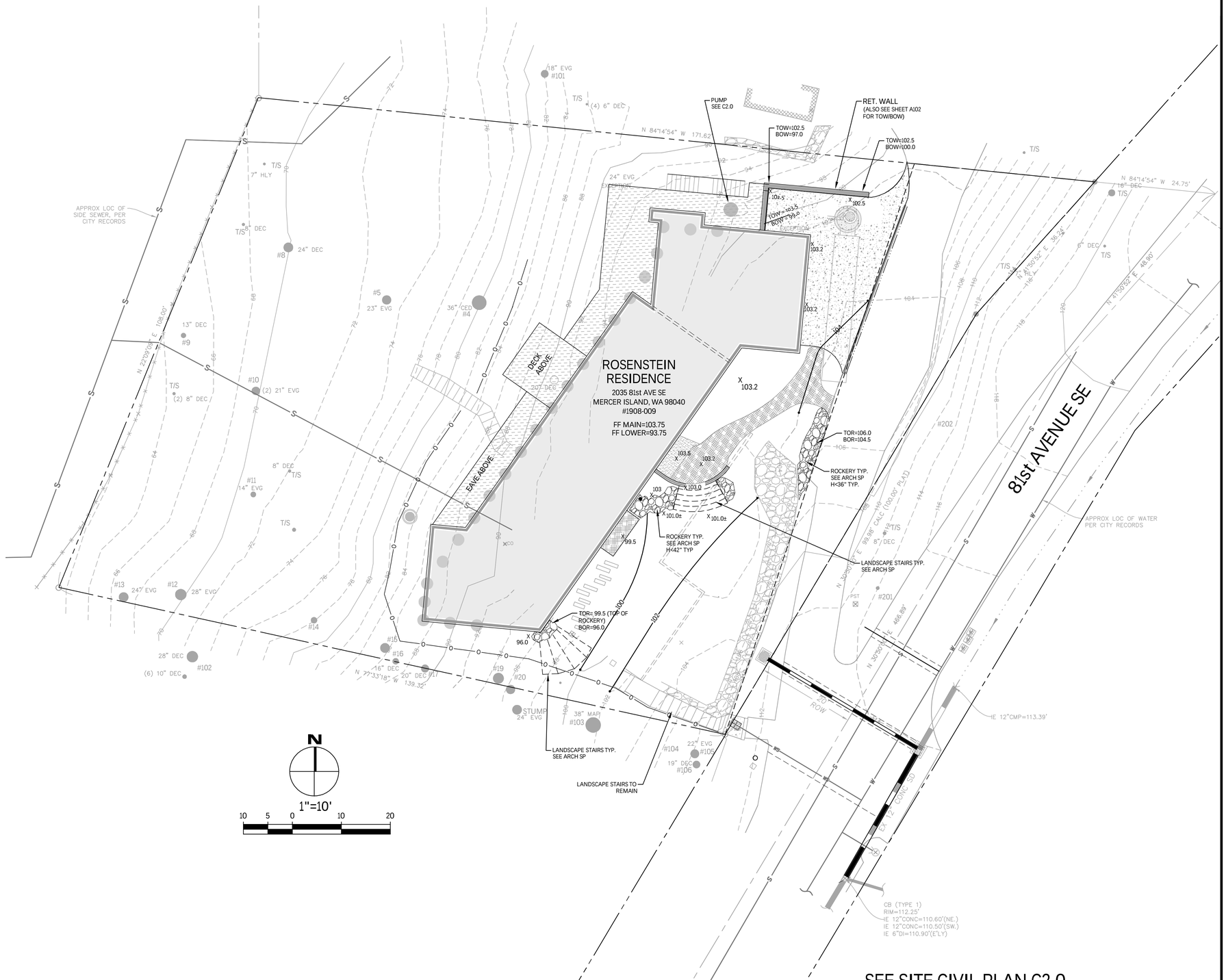
CIVIL ENGINEERING SOLUTIONS
102 NW CANAL STREET SEATTLE, WA 98107
PHONE: 206.930.0342 DUFFY@CESOLUTIONS.US

CIVIL SITE PLAN

ROSENSTEIN RESIDENCE
2035 81st AVENUE SE, MERCER ISLAND, WA 98040

DRAWING NO: C2.0

APN 544930-0070
1908-009



SOIL AMENDMENT REQUIRED

COMPOST AMENDED SOIL REQUIRED ON ALL LANDSCAPED AREAS AFTER CONSTRUCTION. SEE DETAIL ON C3.5.

SOIL INSPECTION REQUIRED BY ENGINEER

A POST CONSTRUCTION INSPECTION & CERTIFICATION OF AMENDED SOILS IS REQUIRED BY A LICENSED CIVIL ENGINEER. THIS IS REQUIRED BEFORE FINAL SIGN-OFF BY CITY.

SEE SITE CIVIL PLAN C2.0

PERMIT 1908-009

NO.	DATE	BY	REVISIONS

APPLICANT:
JANE + AARON ROSENSTEIN
8404 SE 53rd PLACE
MERCER ISLAND, WA 98040

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

DATE: Dec 16, 2019
JOB# 1806
DRAFTED: DE DESIGN: DE
DIGITAL SIGNATURE

Dec 16, 2019
JEFFREY E. DUFFY
STATE OF WASHINGTON
39798
REGISTERED
PROFESSIONAL ENGINEER

CIVIL ENGINEERING
SOLUTIONS
102 NW CANAL STREET
PHONE: 206.930.0342
SEATTLE, WA 98107
DUFFY@CESOLUTIONS.US

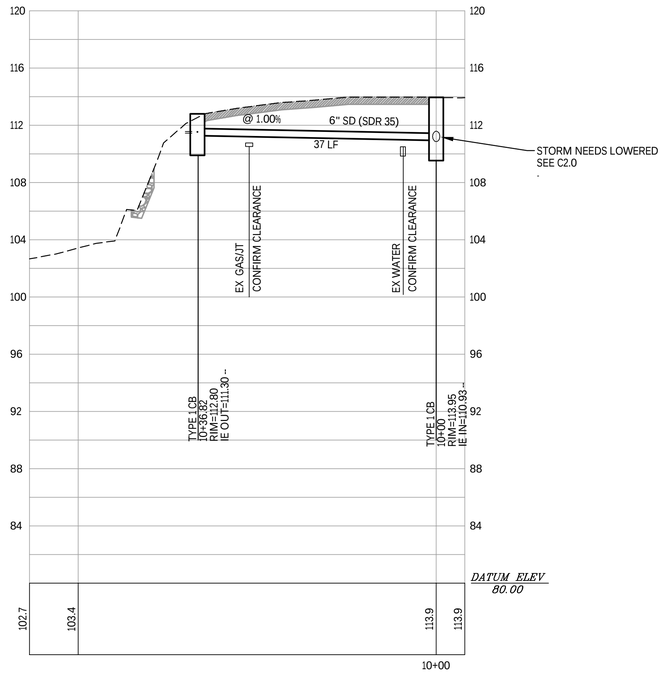
GRADING PLAN

ROSENSTEIN RESIDENCE
2035 81st AVENUE SE, MERCER ISLAND, WA 98040

DRAWING NO:
C2.1

APN 544930-0070
1908-009

81st AVE NE
STORM CROSSING PROFILE



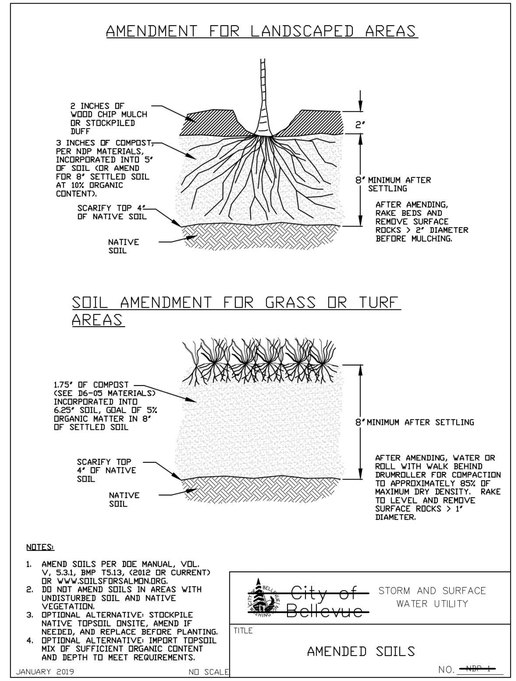
SOIL AMENDMENT REQUIRED

COMPOST AMENDED SOIL REQUIRED ON ALL LANDSCAPED AREAS AFTER CONSTRUCTION. SEE DETAIL ON C3.5.

SOIL INSPECTION REQUIRED BY ENGINEER

A POST CONSTRUCTION INSPECTION & CERTIFICATION OF AMENDED SOILS IS REQUIRED BY A LICENSED CIVIL ENGINEER. THIS IS REQUIRED BEFORE FINAL SIGN-OFF BY CITY.

COMPOST AMENDED SOIL SPEC



NOTES:

1. AMEND SOILS PER BOE MANUAL, VOL. V, 5.3.1, BMP T5.13, (2012 OR CURRENT) OR WWW.SOILSFORSALMON.ORG.
2. DO NOT AMEND SOILS IN AREAS WITH UNDISTURBED SOIL AND NATIVE VEGETATION.
3. OPTIONAL ALTERNATIVE: STOCKPILE NATIVE TOPSOIL ONSITE, AMEND IF NEEDED, AND REPLACE BEFORE PLANTING.
4. OPTIONAL ALTERNATIVE: IMPORT TOPSOIL MIX OF SUFFICIENT ORGANIC CONTENT AND DEPTH TO MEET REQUIREMENTS.

City of Bellevue — STORM AND SURFACE WATER UTILITY

TITLE: AMENDED SOILS

JANUARY 2019 — NO SCALE — NO. ~~NBP-1~~

PERMIT 1908-009

NO.	DATE	BY	REVISIONS

APPLICANT:
JANE + AARON ROSENSTEIN
8404 SE 53rd PLACE
MERCER ISLAND, WA 98040

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

DATE: Dec 09, 2019
JOB# 1806
DRAFTED: SS DESIGN: SS
DIGITAL SIGNATURE

Dec 09, 2019 — JEFFREY E. ELLING — STATE OF WASHINGTON — 39795 — REGISTERED PROFESSIONAL ENGINEER

CIVIL ENGINEERING SOLUTIONS
102 NW CANAL STREET SEATTLE, WA 98107
PHONE: 206.930.0342 DUFFY@CESOLUTIONS.US

STORM BMP

ROSENSTEIN RESIDENCE
2035 81st AVENUE SE, MERCER ISLAND, WA 98040

DRAWING NO: C3.5

APN 544930-0070
1908-009

MERCER ISLAND DETENTION "TABLE 1"

Table 1

ON-SITE DETENTION DESIGN FOR PROJECTS BETWEEN 500 SF AND 9,500 SF NEW PLUS REPLACED IMPERVIOUS SURFACE AREA

New and Replaced Impervious Surface Area (sf)	Detention Pipe Diameter (in)	Detention Pipe Length (ft)		Lowest Orifice Diameter (in)[3]		Distance from Outlet Invert to Second Orifice (ft)		Second Orifice Diameter (in)	
		B soils	C soils	B soils	C soils	B soils	C soils	B soils	C soils
500 to 1,000 sf	36"	30	22	0.5	0.5	2.2	2.0	0.5	0.8
	48"	18	11	0.5	0.5	3.3	3.2	0.9	0.8
	60"	11	7	0.5	0.5	4.2	3.4	0.5	0.6
1,001 to 2,000 sf	36"	66	43	0.5	0.5	2.2	2.3	0.9	1.4
	48"	34	23	0.5	0.5	3.2	3.3	0.9	1.2
	60"	22	14	0.5	0.5	4.3	3.6	0.9	0.9
2,001 to 3,000 sf	36"	90	66	0.5	0.5	2.2	2.4	0.9	1.9
	48"	48	36	0.5	0.5	3.1	2.8	0.9	1.5
	60"	30	20	0.5	0.5	4.2	3.7	0.9	1.1
3,001 to 4,000 sf	36"	120	78	0.5	0.5	2.4	2.2	1.4	1.6
	48"	62	42	0.5	0.5	2.8	2.9	0.8	1.3
	60"	42	26	0.5	0.5	3.8	3.9	0.9	1.3
4,001 to 5,000 sf	36"	134	91	0.5	0.5	2.8	2.2	1.7	1.5
	48"	73	49	0.5	0.5	3.6	2.9	1.6	1.5
	60"	46	31	0.5	0.5	4.6	3.5	1.6	1.3
5,001 to 6,000 sf	36"	162	109	0.5	0.5	2.7	2.2	1.8	1.6
	48"	90	59	0.5	0.5	3.5	2.9	1.7	1.5
	60"	54	37	0.5	0.5	4.6	3.6	1.6	1.4
6,001 to 7,000 sf	36"	192	128	0.5	0.5	2.7	2.2	1.9	1.8
	48"	102	68	0.5	0.5	3.7	2.9	1.9	1.6
	60"	64	43	0.5	0.5	4.6	3.6	1.8	1.5
7,001 to 8,000 sf	36"	216	146	0.5	0.5	2.8	2.2	2.0	1.9
	48"	119	79	0.5	0.5	3.8	2.9	2.2	1.7
	60"	73	49	0.5	0.5	4.5	3.6	2.0	1.6
8,001 to 8,500 sf[1]	36"	228	155	0.5	0.5	2.8	2.2	2.1	1.9
	48"	124	84	0.5	0.5	3.7	2.9	1.9	1.8
	60"	77	53	0.5	0.5	4.6	3.6	2.0	1.6
8,501 to 9,000 sf	36"	NA [1]	164	0.5	0.5	NA [1]	2.2	NA [1]	1.9
	48"	NA [1]	89	0.5	0.5	NA [1]	2.9	NA [1]	1.9
	60"	NA [1]	55	0.5	0.5	NA [1]	3.6	NA [1]	1.7
9,001 to 9,500 sf[2]	36"	NA [1]	174	0.5	0.5	NA [1]	2.2	NA [1]	2.1
	48"	NA [1]	94	0.5	0.5	NA [1]	2.9	NA [1]	2.0
	60"	NA [1]	58	0.5	0.5	NA [1]	3.7	NA [1]	1.7

Notes:

• Minimum Requirement #7 (Flow Control) is required when the 100-year flow frequency causes a 0.15 cubic feet per second increase (when modeled in WWHM with a 15-minute timestep). Breakpoints shown in this table are based on a flat slope (0-5%). The 100-year flow frequency will need to be evaluated on a site-specific basis for projects on moderate (5-15%) or steep (> 15%) slopes.

• Soil type to be determined by geotechnical analysis or soil map.

• Sizing includes a Volume Correction Factor of 120%.

• Upper bound contributing area used for sizing.

[1] On Type B soils, new plus replaced impervious surface areas exceeding 8,500 sf trigger Minimum Requirement #7 (Flow Control)

[2] On Type C soils, new plus replaced impervious surface areas exceeding 9,500 sf trigger Minimum Requirement #7 (Flow Control)

[3] Minimum orifice diameter = 0.5 inches

in = inch

ft = feet

sf = square feet

Basis of Sizing Assumptions:

Sized per MR#5 in the Stormwater Management Manual for Puget Sound Basin (1992 Ecology Manual)

SBUH, Type 1A, 24-hour hydrograph

2-year, 24-hour storm = 2 in; 10-year, 24-hour storm = 3 in; 100-year, 24-hour storm = 4 in

Predeveloped = second growth forest (CN = 72 for Type B soils, CN = 81 for Type C soils)

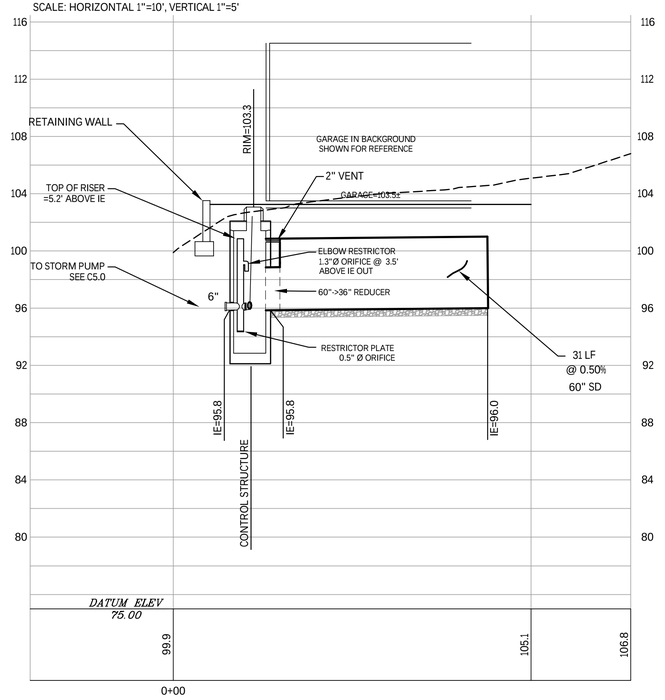
Developed = impervious (CN = 98)

0.5 foot of sediment storage in detention pipe

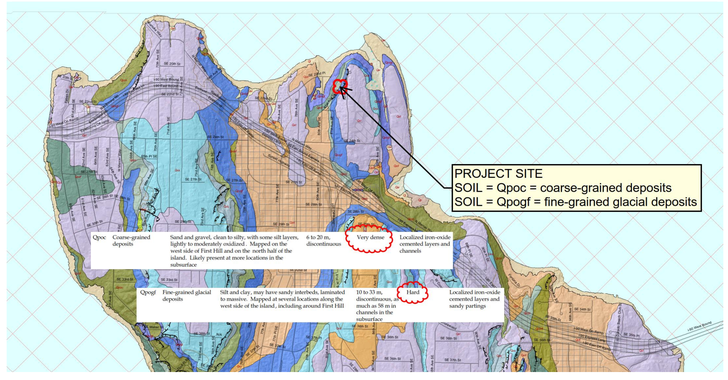
Overland slope = 5%

DETENTION PROFILE

SCALE: HORIZONTAL 1"=10', VERTICAL 1"=5'



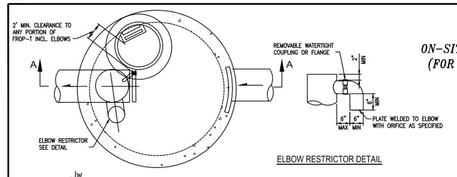
GEOLOGY MAP



IMPERVIOUS TABLE

Impervious Area Spreadsheet		
Rosenstein Residence - 2035 81st Avenue SE, Mercer Island, WA 98040 - CES #1806		
Gross Site area	17,352	sf
	0.398	acres
Existing Impervious Area to be demolished		
Ex roof to be demolished (all of it)	2,662	sf
Ex back hardscape to be demolished	714	sf
Ex front hardscape to be demolished	527	sf
Ex driveway portion to be demolished	446	sf
total existing, to be demolished =	**4,349**	**sf**
Proposed Impervious Area		
Roof	3,391	sf
Exposed back patios	389	sf incl stairs
Front hardscape, exposed (new)	104	sf
New portion of driveway, exposed	354	sf
total on-site (new + replaced) proposed =	**4,238**	**sf**
total new + replaced impervious =	**4,238**	**sf**
total new impervious =	**(111)**	**sf**
Total Existing Impervious Area to remain		
Remaining Driveway, on-site	1,127	sf - incl rockery
Remaining Front Hardscape, on-site	387	sf
total on-site to remain =	**1,514**	**sf**
total on-site proposed =	**5,752**	**sf**

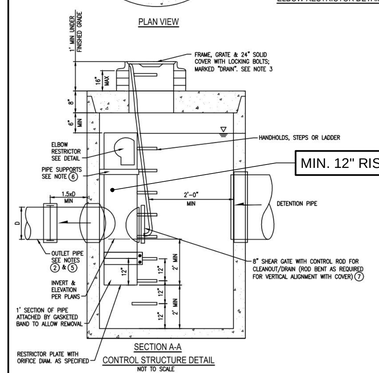
MERCER ISLAND DETENTION DETAIL

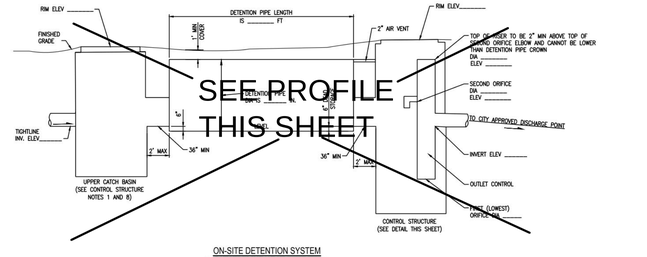


ATTACHMENT 1
CITY OF MERCER ISLAND
ON-SITE DETENTION SYSTEM WORKSHEET
(FOR NEW PLUS REPLACED IMPERVIOUS AREA OF 9,500 SF OR LESS)

OWNER: JAN + AARON ROSENSTEIN ADDRESS: 2035 81st AVE SE Mercer Island, WA 98040 PREPARED BY: DUFFY ELLIS, P.E.
PERMIT #: TBD PHONE: 206.930.0342
DATE: NOV 2019
NEW PLUS REPLACED IMPERVIOUS SURFACE AREA (SF): 4,238 DETENTION PIPE DIA (INCH): 60" DIA DETENTION PIPE LENGTH (FT): 31 LF ORIFICE #1 DIA * INCH, ELEV *
SOIL TYPE: Type C per Mercer Island map PIPE MATERIAL: CMP OR HDPE ORIFICE #2 DIA * INCH, ELEV *

*SEE TABLE 1, THIS SHEET





CONTROL STRUCTURE NOTES

1. USE A MINIMUM OF A 54 IN. DIAM. TYPE 2 CATCH BASIN. THE ACTUAL SIZE IS DEPENDENT ON CONNECTING PIPE MATERIAL AND DIAMETER.
2. OUTLET PIPE: MIN. 6 INCH.
3. METAL PARTS: CORROSION RESISTANT. NON-GALVANIZED PARTS PREFERRED. GALVANIZED PIPE PARTS TO HAVE ASPHALT TREATMENT 1.
4. FRAME AND LADDER OR STEPS OFFSET SO:
   A. CLEANOUT GATE IS VISIBLE FROM TOP;
   B. CLIMB-DOWN SPACE IS CLEAR OF RISER AND CLEANOUT GATE;
   C. FRAME IS CLEAR OF CURB.
5. IF METAL OUTLET PIPE CONNECTS TO CEMENT CONCRETE PIPE, OUTLET PIPE TO HAVE SMOOTH O.D. EQUAL TO CONCRETE PIPE I.D. LESS 1/4 IN.
6. PROVIDE AT LEAST ONE 3 X 0.090 GAUGE SUPPORT BRACKET ANCHORED TO CONCRETE WALL WITH 5/8 IN. STAINLESS STEEL EXPANSION BOLTS OR EMBEDDED SUPPORTS 2 IN. INTO CATCH BASIN WALL (MAXIMUM 3'-0" VERTICAL SPACING).
7. THE SHEAR GATE SHALL BE MADE OF ALUMINUM ALLOY IN ACCORDANCE WITH ASTM B 26M AND ASTM B 275, DESIGNATION 2633A, OR CAST IRON IN ACCORDANCE WITH ASTM A 48, CLASS 30B. THE LIFT HANDLE SHALL BE MADE OF A SIMILAR METAL TO THE GATE (TO PREVENT GALVANIC CORROSION), IT MAY BE OF SOLID ROD OR HOLLOW TUBING, WITH ADJUSTABLE HOOK AS REQUIRED. A NEOPRENE RUBBER GASKET IS REQUIRED BETWEEN THE RISER MOUNTING FLANGE AND THE GATE FLANGE. INSTALL THE GATE SO THAT THE LEVEL-LINE MARK IS LEVEL WHEN THE GATE IS CLOSED. THE MATING SURFACES OF THE LID AND THE BODY SHALL BE MACHINED FOR PROPER FIT. ALL SHEAR GATE BOLTS SHALL BE STAINLESS STEEL.
8. THE UPPER CATCH BASIN IS REQUIRED IF THE LENGTH OF THE DETENTION PIPE IS GREATER THAN 50 FT.

ON-SITE DETENTION SYSTEM NOTES:

1. CALL DEVELOPMENT SERVICES (206-275-7605) 24 HOURS IN ADVANCE FOR A DETENTION SYSTEM INSPECTION BEFORE BACKFILLING AND FOR FINAL INSPECTIONS.
2. RESPONSIBILITY FOR OPERATION AND MAINTENANCE OF DRAINAGE SYSTEMS ON PRIVATE PROPERTY IS RESPONSIBILITY OF THE PROPERTY OWNER. MATERIAL ACCUMULATED IN THE STORAGE PIPE MUST BE REMOVED FROM CATCH BASINS TO ALLOW PROPER OPERATION. THE OUTLET CONTROL ORIFICE MUST BE KEPT OPEN AT ALL TIMES.
3. PIPE MATERIAL, JOINT, AND PROTECTIVE TREATMENT SHALL BE IN ACCORDANCE WITH SECTION 7.04 AND 9.05 OF THE WSDOT STANDARD SPECIFICATION FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, LATEST VERSION. SUCH MATERIALS INCLUDE THE FOLLOWING, LINED CORRUGATED POLYETHYLENE PIPE (LCPE), ALUMINIZED TYPE 2 CORRUGATED STEEL PIPE AND PIPE ARCH (MEETS AASHTO DESIGNATIONS M274 AND M36), CORRUGATED OR SPIRAL RIB ALUMINUM PIPE, OR REINFORCED CONCRETE PIPE. CORRUGATED STEEL PIPE IS NOT ALLOWED.
4. FOOTING DRAINS SHALL NOT BE CONNECTED TO THE DETENTION SYSTEM.

009

NO.	DATE	BY	REVISIONS

APPLICANT:
JANE + AARON ROSENSTEIN
8404 SE 53rd PLACE
MERCER ISLAND, WA 98040

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

DATE: Dec 09, 2019
JOB# 1806
DRAFTED: SS DESIGN: SS
DIGITAL SIGNATURE

Dec 09, 2019 JEFFREY E. ELLIS STATE OF WASHINGTON 39796 REGISTERED PROFESSIONAL ENGINEER

CIVIL ENGINEERING SOLUTIONS
102 NW CANAL STREET SEATTLE, WA 98107
PHONE: 206.930.0342 DUFFY@CESOLUTIONS.US

DETENTION PROFILE AND DETAIL

ROSENSTEIN RESIDENCE
2035 81st AVENUE SE, MERCER ISLAND, WA 98040

DRAWING NO: C4.0

APN 544930-0070
1908-009

CONTROL PANEL CUT SHEET

MODEL 122 Control Panel

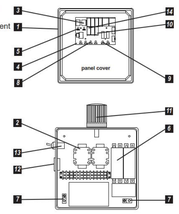
Single phase, duplex alternating pump control with override.

The Model 122 control panel is designed to alternately control two 120, 208, or 240 VAC single phase pumps in water and sewage installations. The alternating action equalizes pump wear. In addition to the alternating pump control, this system provides override control should either pump fail. If an alarm condition occurs, an alarm switch activates the audio/visual alarm system. Common applications include pump chambers, sump pump basins, irrigation systems and lift stations.

PANEL COMPONENTS

1. **Enclosure** measures 10 X 10 X 6 inches (25.4 X 25.4 X 15.24 cm). Choice of NEMA 1 (steel for indoor use), or NEMA 4X (ultraviolet stabilized thermoplastic with removable mounting feet for outdoor or indoor use). **Note:** Options selected may increase enclosure size and change component layout.
2. **Magnetic Motor Contactors** control pumps by switching electrical lines.
3. **HOA Switches** for manual pump control (mounted on circuit board).
4. **Control Circuit Board** provides pump control and alternation.
5. **Green pump Run Indicator Lights** (mounted on circuit board).
6. **Circuit Breakers** (optional) provide pump disconnect and branch circuit protection.
7. **Ground Lugs**
8. **Float Status Indicator Lights** (mounted on circuit board).
9. **Control and Alarm Power Indicator Lights** (mounted on circuit board)
10. **Auxiliary Alarm Contact,** form C (mounted on circuit board).

NOTE: Schematic is located inside the panel on enclosure cover.



Model Shown 1221W114X6A

STANDARD ALARM PACKAGE

11. **Red Alarm Beacon** provides 360° visual check of alarm condition. **Note:** NEMA 1 style utilizes a door mounted indicator in lieu of a beacon.
12. **Alarm Horn** provides audio warning of alarm condition (83 to 85 decibel rating). **Note:** NEMA 1 style utilizes an internally mounted buzzer in lieu of horn.
13. **Exterior Alarm Test/Normal/Silence Switch** allows horn and light to be tested and horn to be silenced in an alarm condition. Alarm automatically resets once alarm condition is cleared.
14. **Horn Silence Relay** (mounted on circuit board).

NOTE: other options available.

FEATURES

- Entire control system (panel and switches) is UL Listed to meet and/or exceed industry safety standards
- Dual safety certification for the United States and Canada
- Standard package includes three 20' control switches or EZconnex® float system
- Complete with step-by-step installation instructions
- Five-year limited warranty

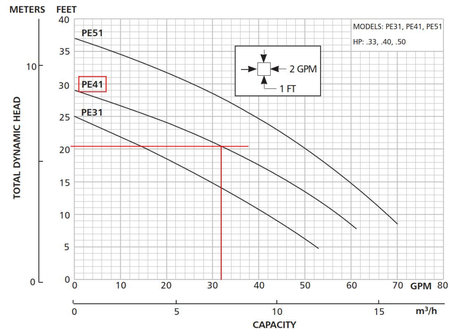
SJE RHOMBUS
PO Box 1708, Detroit Lakes, MN 56502
1-888-DIAL-SJE • 1-218-847-1317
1-218-847-4617 Fax
email: customer.service@sjerhombus.com
www.sjerhombus.com

SEE BACKSIDE FOR COMPLETE LISTING OF AVAILABLE OPTIONS.
SEE PRICE BOOK FOR LIST PRICE.

STORM PUMP CURVE

Goulds Water Technology

Wastewater



PERFORMANCE RATINGS

PE31

Total Head (feet of water)	GPM
5	52
10	42
15	29
20	16
25	0

PE41

Total Head (feet of water)	GPM
0	61
10	57
15	46
20	33
25	16

PE51

Total Head (feet of water)	GPM
10	67
15	59
20	50
25	39
30	26
35	8

STORM PUMP SPEC (GOULDS PE41, OR EQUAL)

Goulds Water Technology

Wastewater

APPLICATIONS

Specially designed for the following uses:
- Mound Systems
- Effluent/Dosing Systems
- Low Pressure Pipe Systems
- Basement Draining
- Heavy Duty Sump/Dewatering

SPECIFICATIONS

Pump – General:
- Discharge: 1½" NPT
- Temperature: 104ºF (40ºC) maximum, continuous when fully submerged.
- Solids handling: ½" maximum sphere.
- Automatic models include a float switch.
- Manual models available.
- Pumping range: see performance chart or curve.

PE31 Pump:
- Maximum capacity: 53 GPM
- Maximum head: 25' TDH

PE41 Pump:
- Maximum capacity: 61 GPM
- Maximum head: 29' TDH

PE51 Pump:
- Maximum capacity: 70 GPM
- Maximum head: 37' TDH

MOTOR

General:
- Single phase
- 60 Hertz
- 115 and 230 volts
- Built-in thermal overload protection with automatic reset.
- Class B insulation
- Oil-filled design
- High strength carbon steel shaft

PE31 Motor:
- .33 HP, 3000 RPM
- 115 volts
- Shaded pole design

PE41 Motor:
- .40 HP, 3400 RPM
- 115 and 230 volts
- PSC design

PE51 Motor:
- .50 HP, 3400 RPM
- 115 and 230 volts
- PSC design

AGENCY LISTINGS

Tested to UL 778 and CSA 22.2 108 Standards
By Canadian Standards Association
File #LR38549

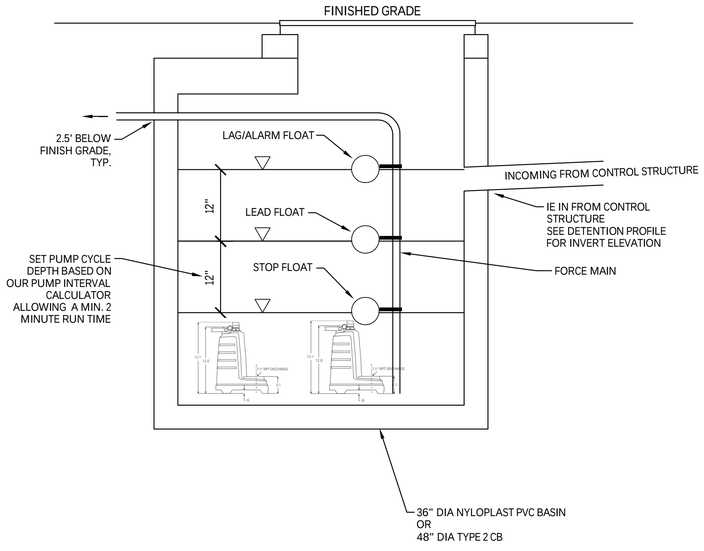
PUMP INFORMATION

Order No.	HP	Volts	Amps	Minimum Circuit Breaker	Phase	Float Switch Style	Cord Length	Discharge Connection	Minimum Basin Diameter	Maximum Solids Size	Shipping Weight lbs/kg
PE31M	0.33	115	12	20	1	Manual / No Switch	20'	1.5"	18"	.5"	31 / 14.1
PE31P1						Piggyback Float Switch					
PE41M	0.4		7.5	15		Manual / No Switch					
PE41P1						Piggyback Float Switch					
PE42M		230	3.7	10		Manual / No Switch					
PE42P1						Piggyback Float Switch					
PE51M	0.5	115	9.5	20		Manual / No Switch					
PE51P1						Piggyback Float Switch					
PE52M		230	4.7	10		Manual / No Switch					
PE52P1						Piggyback Float Switch					

STORM PUMP SCHEMATIC

USE 48" NYLOPLAST OR 48" TYPE 2 CB

3-FLOAT DUPLEX



PUMPING DEPTH CALCULATOR - 48" DIA BASIN

Storm Pump-Float Depth / Pump Interval Calculator

	Value	Units	Comments
Input Pump Basin Diameter (feet)=	4.0	feet	48" type 2 CB recommended
Calculate pump basin radius=	2.0	feet	
Calculate cross section Area of basin=	12.57	sf	
Input a pump depth to achieve 2 min run time=	1.0	feet	
Calculate volume of water per pump cycle=	12.6	cf	
Convert volume to gallons	94.0	gallons	convert to gallons pumped
Input pump rate based on pump curve and TDH	32	gpm	
Calculated time for pump to operate per cycle	2.9	Minutes	Ensure greater than 2 minutes

TDH CALCULATOR FOR PUMP CURVE

Pump Flow Rate	Pipe Diameter(ID)	Pipe Length	Differential Elevation	Pipe Material	Total Dynamic Head(TDH)
US GPM	in.	ft.	ft.	Plastic	ft.
32	2	115	18		20.363111953605

Compute Total Dynamic Head(TDH) | Reset

PUMP DESIGN HYDROLOGY

Peak Flow Rates in Puget Sound

100 year, 24 hour storm event
I=4.0 inches/24 hours per isopluvials

Impervious Area	Acres	SBUH (CFS) Tc=6.3	SBUH (GPM)	SBUH (CFS) Tc=10	SBUH (GPM)	
2,000	0.046	0.041	18	0.045	20	
3,000	0.069	0.062	28	0.067	30	
4,000	0.092	0.082	36	0.075	40	
5,000	0.115	0.103	46	0.112	50	
6,000	0.138	0.124	55	0.135	60	
7,000	0.161	0.143	64	0.156	69	
8,000	0.184	0.164	73	0.179	80	
9,000	0.207		0		0	
10,000	0.230	0.206	92		0	

IMPERVIOUS AREA FLOWING THROUGH PUMP (MAX. 5,000 SF)

PUMP DESIGN RATE SELECT SINGLE PUMP FOR HALF THIS RATE.

MERCER ISLAND PUMP REQUIREMENTS

Pump systems shall be owned, operated, maintained, repaired, and replaced (as needed) by property owner(s) served by such system. The pump system shall have dual, alternating pumps with emergency on–site, back–up power supply and an external alarm system for system failures. It is the sole responsibility of the home owner if the flood or sewer backup occurs due to the failure of the pump system. It is the responsibility of the home owner to provide an adequate and functional backup system for the pump system in the event of the power failure.

PERMIT 1908-009

NO.	DATE	BY	REVISIONS

APPLICANT:
JANE + AARON ROSENSTEIN
8404 SE 53rd PLACE
MERCER ISLAND, WA 98040

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

DATE: Dec 09, 2019
JOB# 1806
DRAFTED: SS DESIGN: SS
DIGITAL SIGNATURE

Dec 09, 2019 JEFFREY E. HALLING STATE OF WASHINGTON 39798 REGISTERED PROFESSIONAL ENGINEER

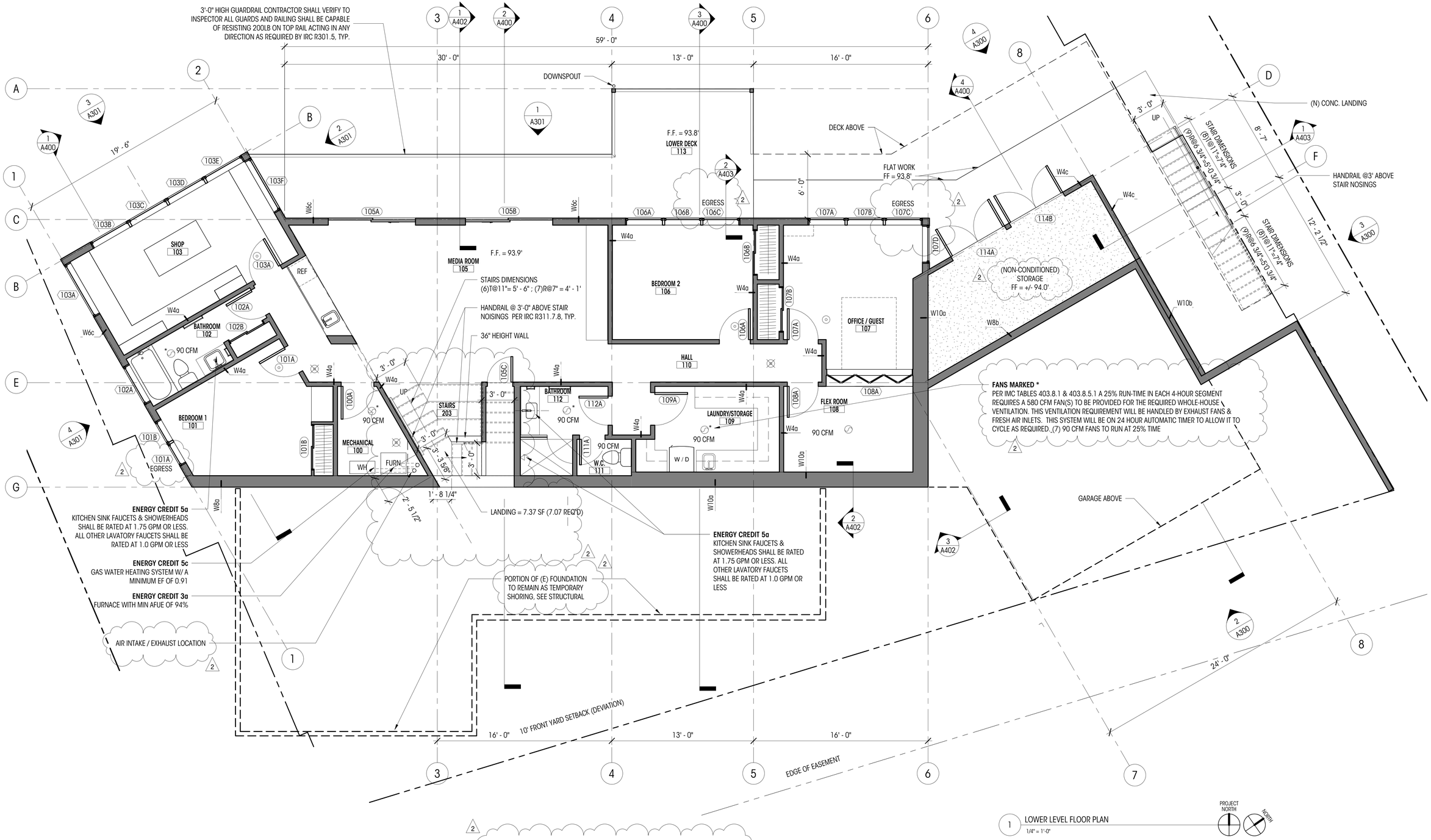
CIVIL ENGINEERING SOLUTIONS
102 NW CANAL STREET SEATTLE, WA 98107
PHONE: 206.930.0342 DUFFY@CESOLUTIONS.US

STORM PUMPS

ROSENSTEIN RESIDENCE
2035 81st AVENUE SE, MERCER ISLAND, WA 98040

DRAWING NO: C5.0

APN 544930-0070
1908-009



1 LOWER LEVEL FLOOR PLAN
1/4" = 1'-0"

PROJECT NORTH / NORTH

LEGEND

- 200A WINDOW ID
- 100A DOOR ID
- 100A FINISH ID
- SMOKE DETECTOR
- SMOKE/CARBON MONOXIDE DETECTOR
- FAN - 100 CFM U.N.O.
- EL= 148.5' (+0'-0") MAIN LEVEL FIN. FLR. — ELEVATION DATUM
- 0 — GRIDLINE
- NEW WALL
- WALL TO REMAIN
- TO BE REMOVED
- 1-HOUR RATED ASSEMBLY

NOTES

1. ALL DIMENSIONS AT EXTERIOR WALLS TO FACE OF FRAMING AT EXT. FACE OF WALL AND TO FACE OF FRAMING AT INT. FACE OF WALL, U.N.O.

2. ALL DIMENSIONS AT INTERIOR WALLS TO FACE OF FRAMING (5/8" GWB ASSUMED AT EA. SIDE OF WALL), U.N.O.

3. ALL DIMENSIONS AT KITCHEN TO EDGE OF COUNTERTOPS, U.N.O.

WHOLE HOUSE VENTILATION CALCS

PROPOSED CONDITIONED SF =	3527 SF
NUMBER OF BEDROOMS =	3
AIRFLOW IN CFM REQUIRED FOR CONTINUOUS VENTILATION =	145 CFM
RUN TIME PERCENTAGE IN EACH 4 HOUR SEGMENT =	25 %
FACTOR =	4
CALCULATION	145 CFM X 4 = **580 CFM**

OPTION 2015 IMC 403.8.1 & 403.8.5.1 - INTERMITTANT WHOLE HOUSE VENTILATION

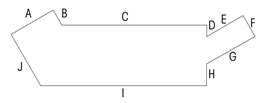
PER IMC TABLES 403.8.1 & 403.8.5.1 A 25% RUN-TIME IN EACH 4-HOUR SEGMENT REQUIRES A 580 CFM FAN(S) TO BE PROVIDED FOR THE REQUIRED WHOLE-HOUSE VENTILATION. THIS VENTILATION REQUIREMENT WILL BE HANDLED BY EXHAUST FANS & FRESH AIR INLETS. THIS SYSTEM WILL BE ON 24 HOUR AUTOMATIC TIMER TO ALLOW IT TO CYCLE AS REQUIRED. *OUTDOOR INLETS REQUIRED @ FANS DESIGNATED FOR VENTILATION PER 2015 IMC. EXHAUST FANS OF 400 CFM OR GREATER REQUIRE INTERLOCKED OUTSIDE MAKE-UP AIR PER IRC SECTION M1503.4.

ENERGY CREDITS

2a		
•	COMPLIANCE BASED ON IRC R402.4.1.2: REDUCE THE TESTED AIR LEAKAGE TO 3.0 AIR CHANGES PER HOUR MAX.	**0.5**
3a		
•	GAS, PROPANE OR OIL-FIRED FURNACE WITH MIN AFUE OF 94%.	**1.0**
5a		
•	KITCHEN SINK FAUCETS & SHOWERHEADS SHALL BE RATED AT 1.75 GPM OR LESS	**0.5**
•	ALL OTHER LAVATORY FAUCETS SHALL BE RATED AT 1.0 GPM OR LESS	
5c		
•	GAS WATER HEATING SYSTEM W/ A MINIMUM EF OF 0.91	**1.5**
TOTAL		**3.5**

BASEMENT LEVEL BELOW GRADE AREA CALC

WALL SEGMENT	LENGTH	COVERAGE	RESULT
A	19.8'	0%	0'
B	7.0'	0%	0'
C	59.1'	0%	0'
D	4.6'	0%	0'
E	17.1'	6.9%	1.71'
F	9.8'	5.7%	0.5'
G	22.8'	100%	22.8'
H	8.9'	100%	8.9'
I	67.5'	68.9%	46.5'
J	24.1'	12.6%	3.0'
TOTAL	240.7'		83.41'



TOTAL BASEMENT GSF = 1971 SF
PORTION OF EXCLUDED BASEMENT FLOOR AREA:
(83.41/240.7) X 1971 = **683 SF**
NET BASEMENT GFA: (1971 - 683) = **1288 SF**

Brandt
Design Group
66Bell Street
Unit 1
Seattle, WA
98121
206.239.0850
brandtdesigninc.com
8843 REGISTERED ARCHITECT STATE OF WASHINGTON

ROSENSTEIN RESIDENCE

2035 81ST AVE SE
MERCER ISLAND, WA 98040

© COPYRIGHT 2019 BRANDT DESIGN, INC. SEATTLE, WA.

PERMIT DOCUMENTS

DATE: 11/22/19

SHEET SIZE: D (24X36)

REVISIONS

Revision Number	Date
2	11.20.19

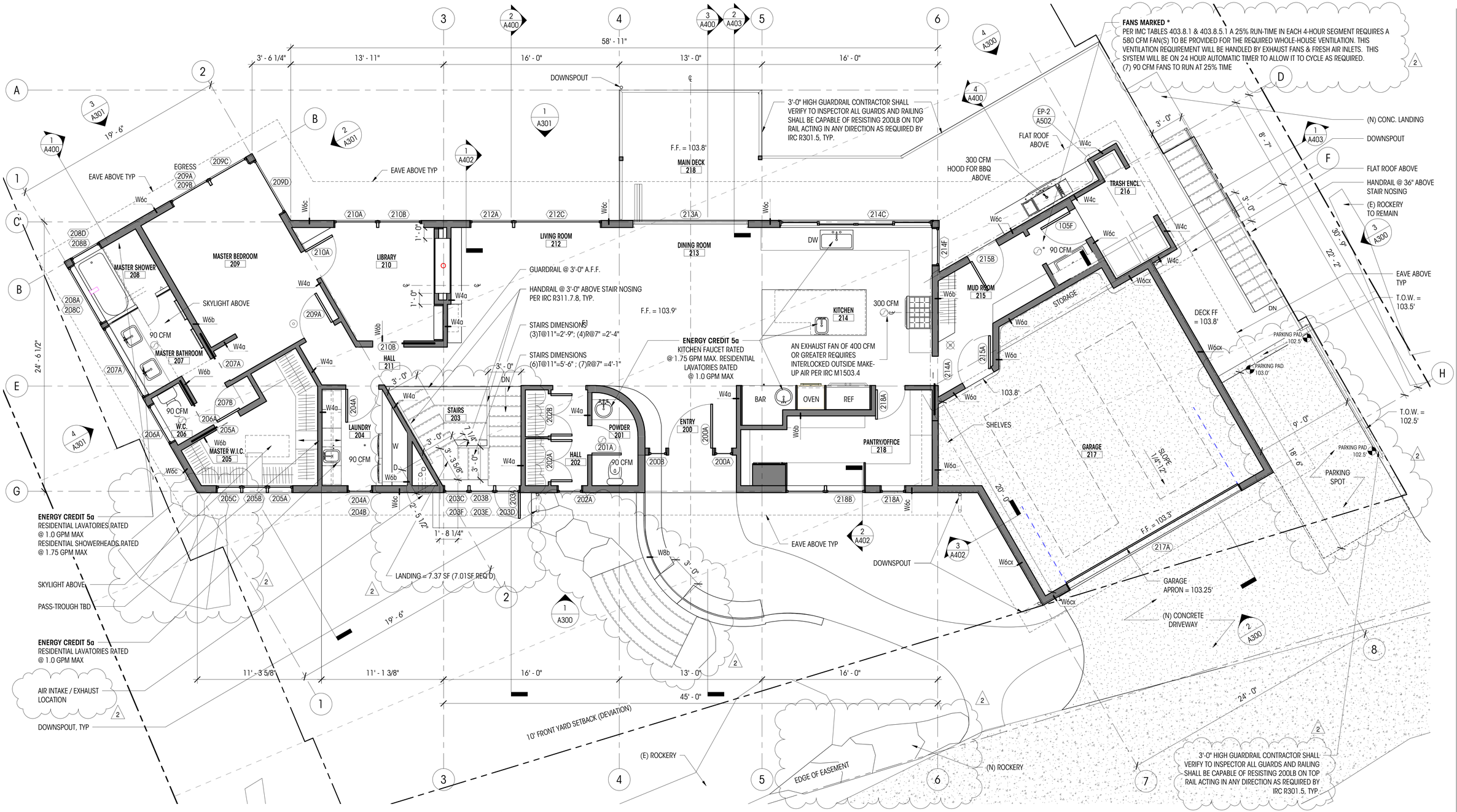
DRAWN BY: SE/BM/NLD
CHECKED BY: BM/CB

LOWER FLOOR PLAN

SCALE: As indicated

A200

DEDICATED APPROVAL STAMP SPACE



LEGEND

- 200A WINDOW ID
- 100A DOOR ID
- 100A FINISH ID
- SMOKE DETECTOR
- SMOKE/CARBON MONOXIDE DETECTOR
- FAN - 100 CFM U.N.O.
- EL= 148.5' (+0'-0") MAIN LEVEL FIN. FLR. — ELEVATION DATUM
- 0 — GRIDLINE
- NEW WALL
- WALL TO REMAIN
- TO BE REMOVED
- 1-HOUR RATED ASSEMBLY

NOTES

1. ALL DIMENSIONS AT EXTERIOR WALLS TO FACE OF FRAMING AT EXT. FACE OF WALL AND TO FACE OF FRAMING AT INT. FACE OF WALL, U.N.O.

2. ALL DIMENSIONS AT INTERIOR WALLS TO FACE OF FRAMING (5/8" GWB ASSUMED AT EA. SIDE OF WALL), U.N.O.

3. ALL DIMENSIONS AT KITCHEN TO EDGE OF COUNTERTOPS, U.N.O.

WHOLE HOUSE VENTILATION CALCS

PROPOSED CONDITIONED SF =	3527 SF
NUMBER OF BEDROOMS =	3
AIRFLOW IN CFM REQUIRED FOR CONTINUOUS VENTILATION =	145 CFM
RUN TIME PERCENTAGE IN EACH 4 HOUR SEGMENT =	25 %
FACTOR =	4
CALCULATION	145 CFM X 4 = **580 CFM**

OPTION 2015 IMC 403.8.1 & 403.8.5.1 - INTERMITANT WHOLE HOUSE VENTILATION
PER IMC TABLES 403.8.1 & 403.8.5.1 A 25% RUN-TIME IN EACH 4-HOUR SEGMENT REQUIRES A 580 CFM FAN(S) TO BE PROVIDED FOR THE REQUIRED WHOLE-HOUSE VENTILATION. THIS VENTILATION REQUIREMENT WILL BE HANDLED BY EXHAUST FANS & FRESH AIR INLETS. THIS SYSTEM WILL BE ON 24 HOUR AUTOMATIC TIMER TO ALLOW IT TO CYCLE AS REQUIRED. *OUTDOOR INLETS REQUIRED @ FANS DESIGNATED FOR VENTILATION PER 2015 IMC. EXHAUST FANS OF 400 CFM OR GREATER REQUIRE INTERLOCKED OUTSIDE MAKE-UP AIR PER IRC SECTION M1503.4.

ENERGY CREDITS

2a		
•	COMPLIANCE BASED ON IRC R402.4.1.2: REDUCE THE TESTED AIR LEAKAGE TO 3.0 AIR CHANGES PER HOUR MAX.	**0.5**
3a		
•	GAS, PROPANE OR OIL-FIRED FURNACE WITH MIN AFUE OF 94%.	**1.0**
5a		
•	KITCHEN SINK FAUCETS & SHOWERHEADS SHALL BE RATED AT 1.75 GPM OR LESS	**0.5**
•	ALL OTHER LAVATORY FAUCETS SHALL BE RATED AT 1.0 GPM OR LESS	
5c		
•	GAS WATER HEATING SYSTEM W/ A MINIMUM EF OF 0.91	**1.5**
TOTAL		**3.5**

1 MAIN LEVEL
1/4" = 1'-0"

PROJECT NORTH / NORTH

Brandt
Design Group
66Bell Street
Unit 1
Seattle, WA
98121
206.239.0850
brandtdesigninc.com

8843 REGISTERED ARCHITECT STATE OF WASHINGTON

ROSENSTEIN RESIDENCE

2035 81ST AVE SE
MERCER ISLAND, WA 98040

© COPYRIGHT 2019 BRANDT DESIGN, INC. SEATTLE, WA.

PERMIT DOCUMENTS

DATE: 11/22/19
SHEET SIZE: D (24X36)

REVISIONS

Revision Number	Date
2	11.20.19

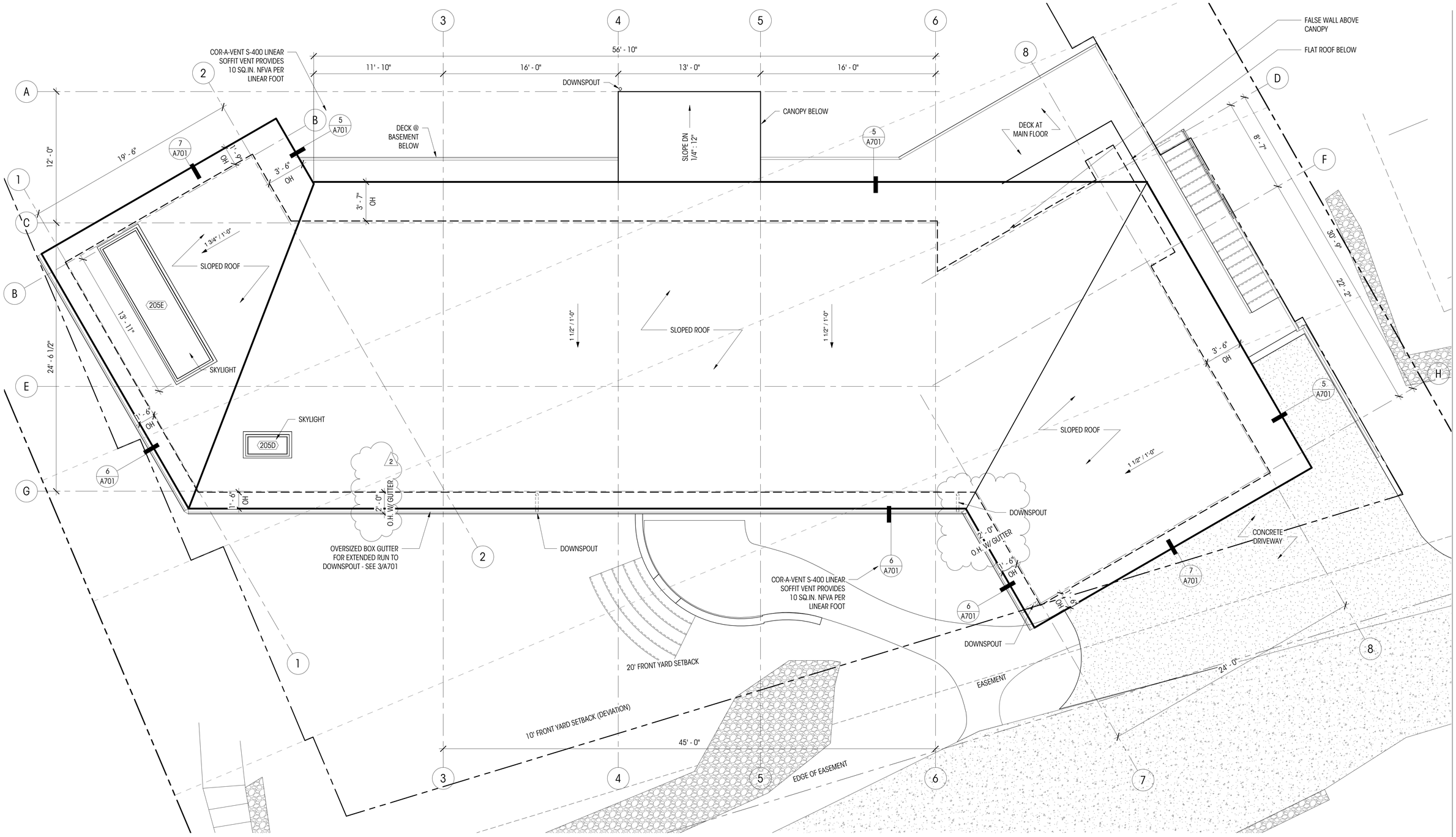
DRAWN BY: SE/BM/NLD
CHECKED BY: BM/CB

MAIN FLOOR PLAN

SCALE: As indicated

A201

DEDICATED APPROVAL STAMP SPACE



LEGEND

- 200A WINDOW ID
- 100A DOOR ID
- 100A FINISH ID
- SMOKE DETECTOR
- SMOKE/CARBON MONOXIDE DETECTOR
- FAN - 100 CFM U.N.O.
- EL= 148.5' (+0'-0") MAIN LEVEL FIN. FLR. — ELEVATION DATUM
- 0 — GRIDLINE
- NEW WALL
- WALL TO REMAIN
- TO BE REMOVED
- 1-HOUR RATED ASSEMBLY

NOTES

1. ALL DIMENSIONS AT EXTERIOR WALLS TO FACE OF FRAMING AT EXT. FACE OF WALL AND TO FACE OF FRAMING AT INT. FACE OF WALL, U.N.O.

2. ALL DIMENSIONS AT INTERIOR WALLS TO FACE OF FRAMING (5/8" GWB ASSUMED AT EA. SIDE OF WALL), U.N.O.

3. ALL DIMENSIONS AT KITCHEN TO EDGE OF COUNTERTOPS, U.N.O.

ROOF VENTILATION CALCS

REQUIRED VENTILATION

1 SF/300 SF OF TOTAL ROOF AREA

TOTAL ROOF AREA = **3294 SF**
REQUIRED VENTILATION = 3294/300 = **11.0 SF = 1584.0 SQ.IN.**

PROPOSED VENTILATION

PROJECT NORTH EAVES		112.8'
PROJECT SOUTH EAVES		110.1'
TOTAL VENTING LINEAR FEET		222.9'
VENTS @ 10 SQ.IN. / FT NFVA	222.9' X 10	**2229.0 SQ.IN.**

COR-A-VENT S-400 LINEAR SOFFIT VENT PROVIDES 10 SQ.IN. NFVA PER LINEAR FOOT

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

PROJECT NORTH / NORTH

Brandt
Design Group
66Bell Street
Unit 1
Seattle, WA
98121
206.239.0850
brandtdesigninc.com
8843
REGISTERED ARCHITECT
STATE OF WASHINGTON

ROSENSTEIN RESIDENCE

2035 81ST AVE SE
MERCER ISLAND, WA 98040

© COPYRIGHT 2019 BRANDT DESIGN, INC. SEATTLE, WA.

PERMIT DOCUMENTS

DATE: 11/22/19

SHEET SIZE: D (24X36)

REVISIONS

Revision Number	Date
2	11.20.19

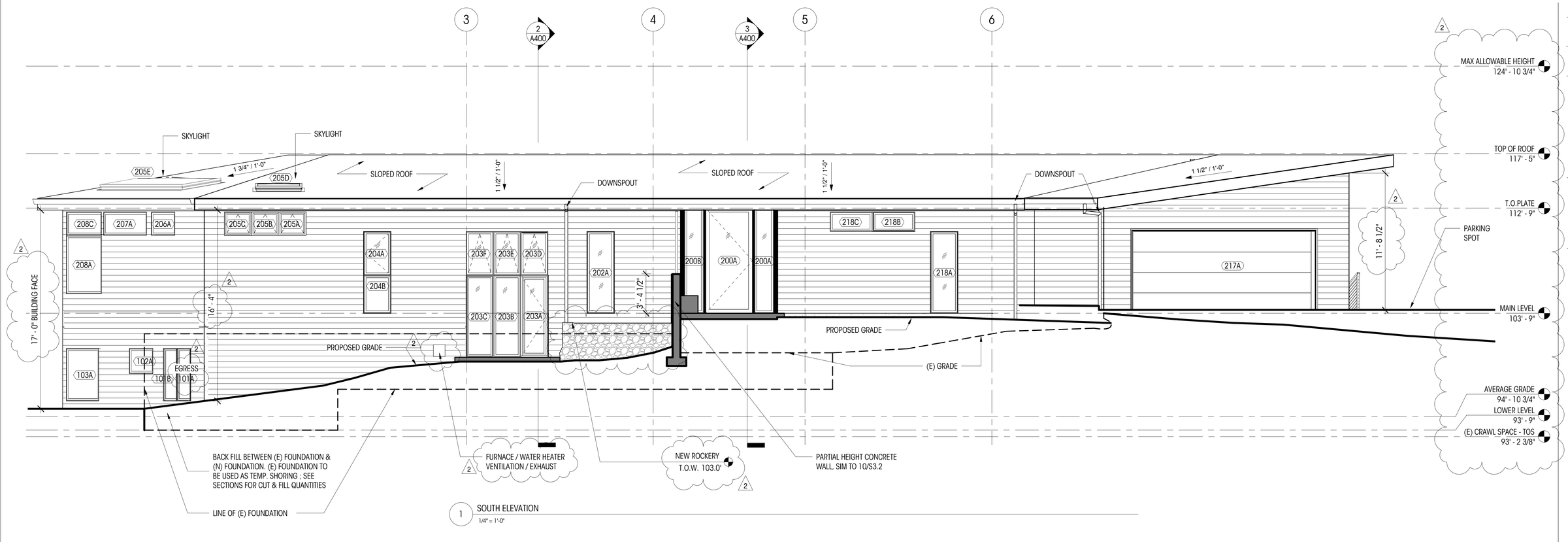
DRAWN BY: SE/BM/NLD
CHECKED BY: BM/CB

ROOF PLAN

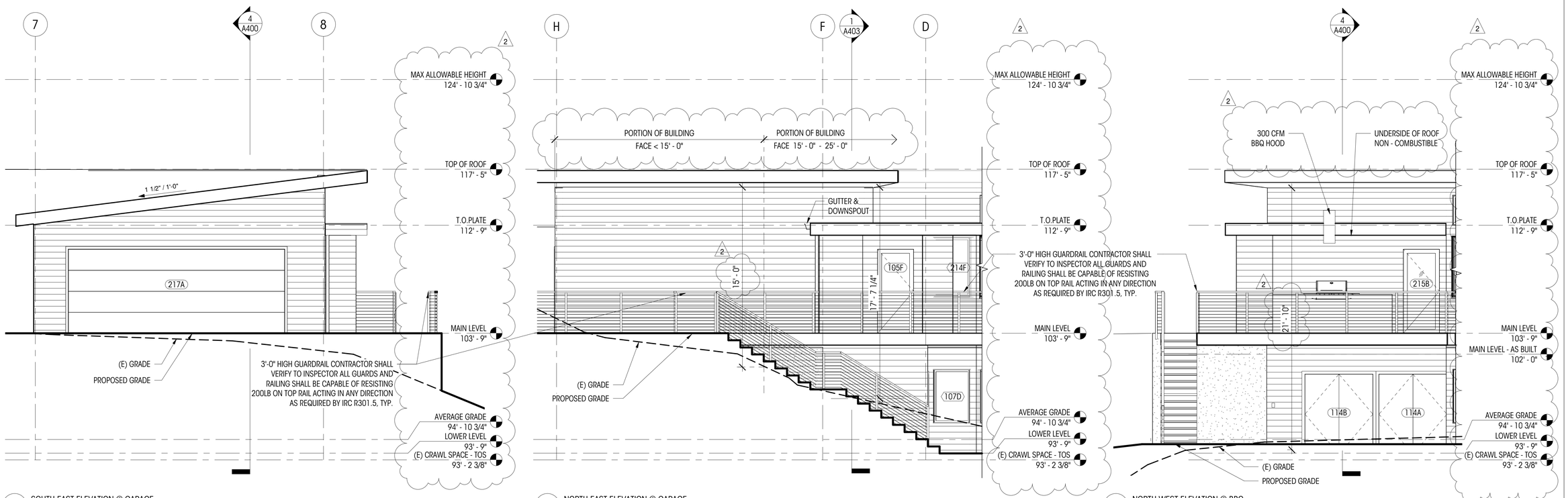
SCALE: As indicated

A202

DEDICATED APPROVAL STAMP SPACE



1 SOUTH ELEVATION
1/4" = 1'-0"



2 SOUTH-EAST ELEVATION @ GARAGE
1/4" = 1'-0"

3 NORTH-EAST ELEVATION @ GARAGE
1/4" = 1'-0"

4 NORTH-WEST ELEVATION @ BBQ
1/4" = 1'-0"

Brandt
Design Group
66Bell Street
Unit 1
Seattle, WA
98121
206.239.0850
brandtdesigninc.com
8843
REGISTERED ARCHITECT
STATE OF WASHINGTON

ROSENSTEIN RESIDENCE

2035 81ST AVE SE
MERCER ISLAND, WA 98040

© COPYRIGHT 2019 BRANDT DESIGN, INC. SEATTLE, WA.

PERMIT DOCUMENTS

DATE: 11/22/19

SHEET SIZE: D (24X36)

REVISIONS

Revision Number	Date
1	08.16.19
2	11.20.19

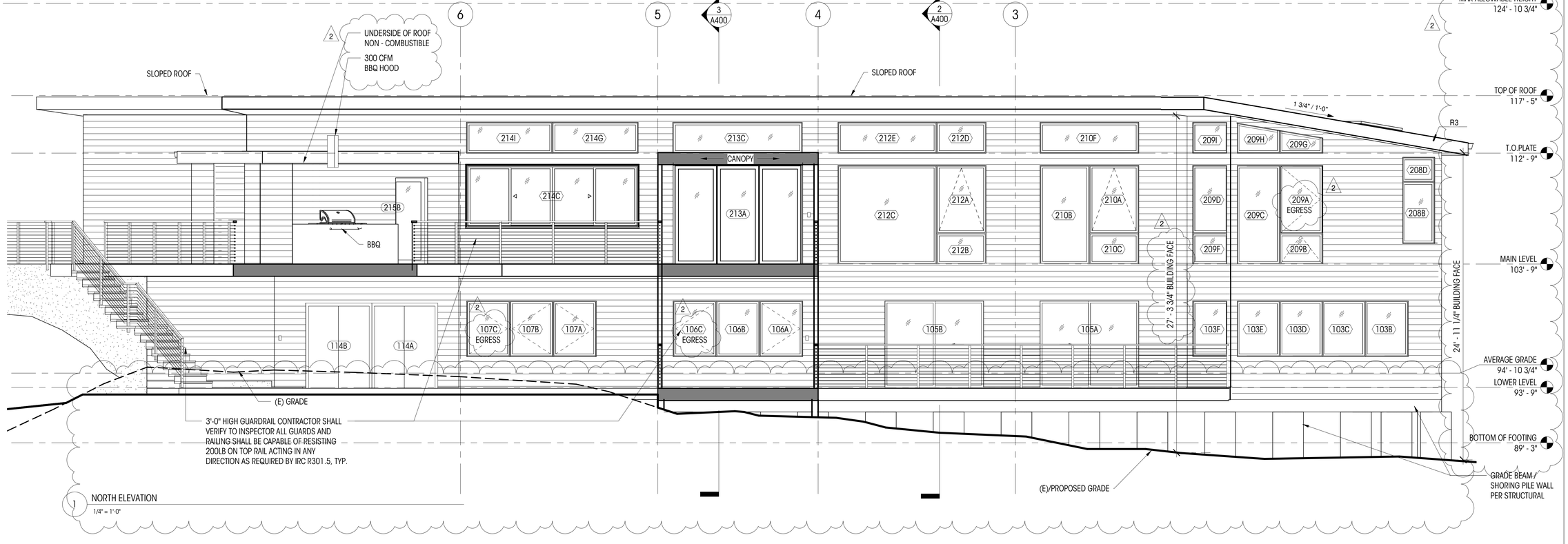
DRAWN BY: SE/BM/NLD
CHECKED BY: BM/CB

EXTERIOR ELEVATIONS

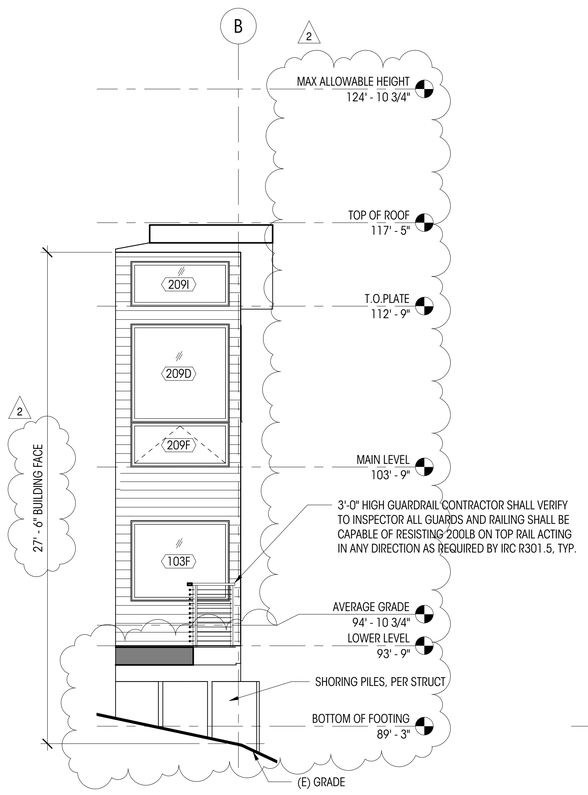
SCALE: 1/4" = 1'-0"

A300

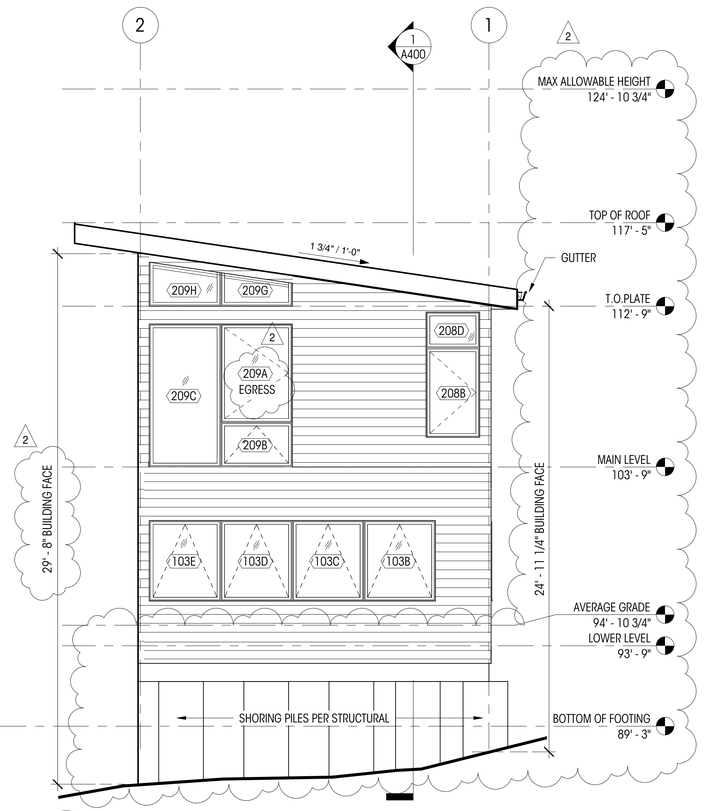
DEDICATED APPROVAL STAMP SPACE



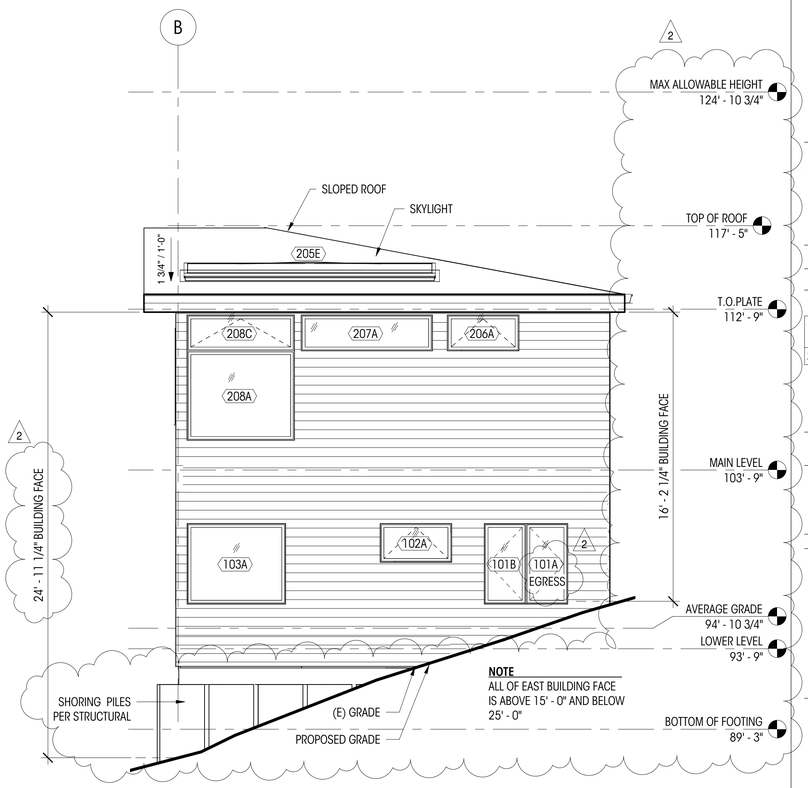
1 NORTH ELEVATION
1/4" = 1'-0"



2 NORTH-EAST ELEVATION
1/4" = 1'-0"



3 NORTH-WEST ELEVATION
1/4" = 1'-0"



4 SOUTH-WEST ELEVATION
1/4" = 1'-0"

Brandt
Design Group
66Bell Street
Unit 1
Seattle, WA
98121
206.239.0850
brandtdesigninc.com

8843
REGISTERED ARCHITECT
STATE OF WASHINGTON

ROSENSTEIN RESIDENCE

2035 81ST AVE SE
MERCER ISLAND, WA 98040

© COPYRIGHT 2019 BRANDT DESIGN, INC. SEATTLE, WA.

PERMIT DOCUMENTS

DATE: 11/22/19
SHEET SIZE: D (24X36)

REVISIONS

Revision Number	Date
2	11.20.19

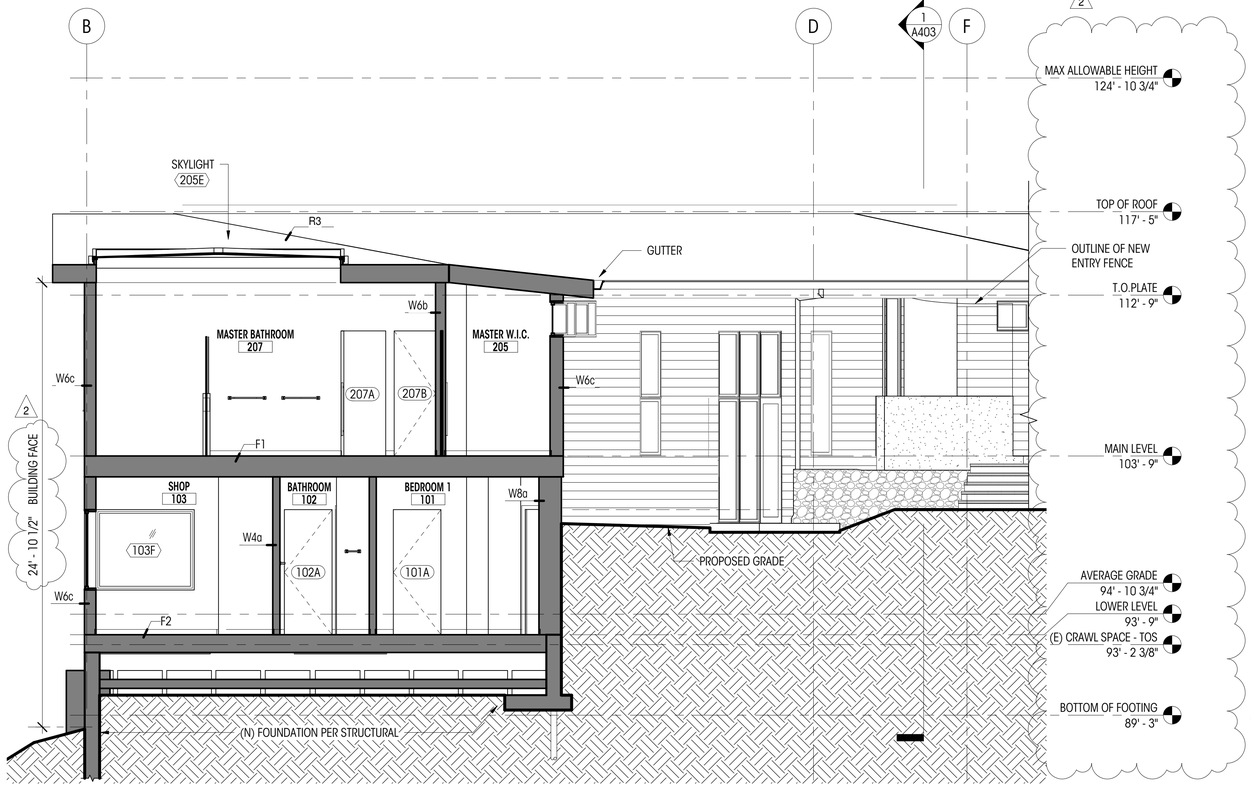
DRAWN BY: SE/BM/NLD
CHECKED BY: BM/CB

EXTERIOR ELEVATIONS

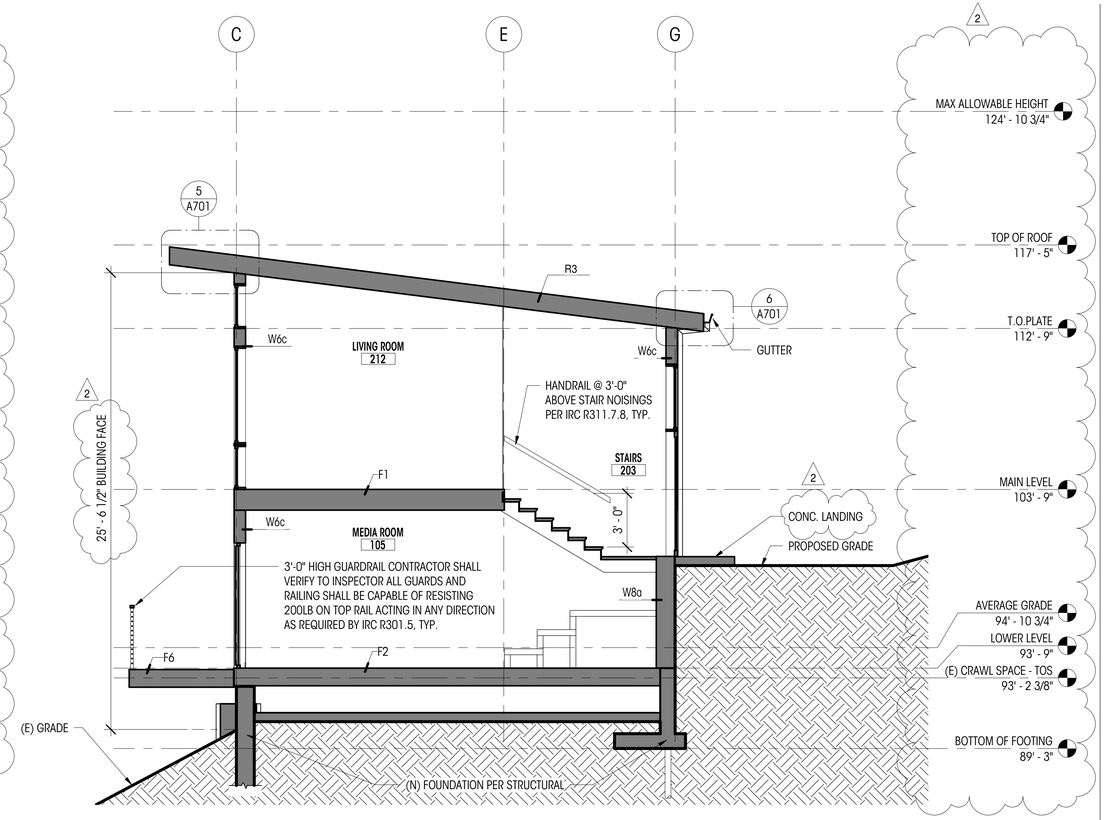
SCALE: 1/4" = 1'-0"

A301

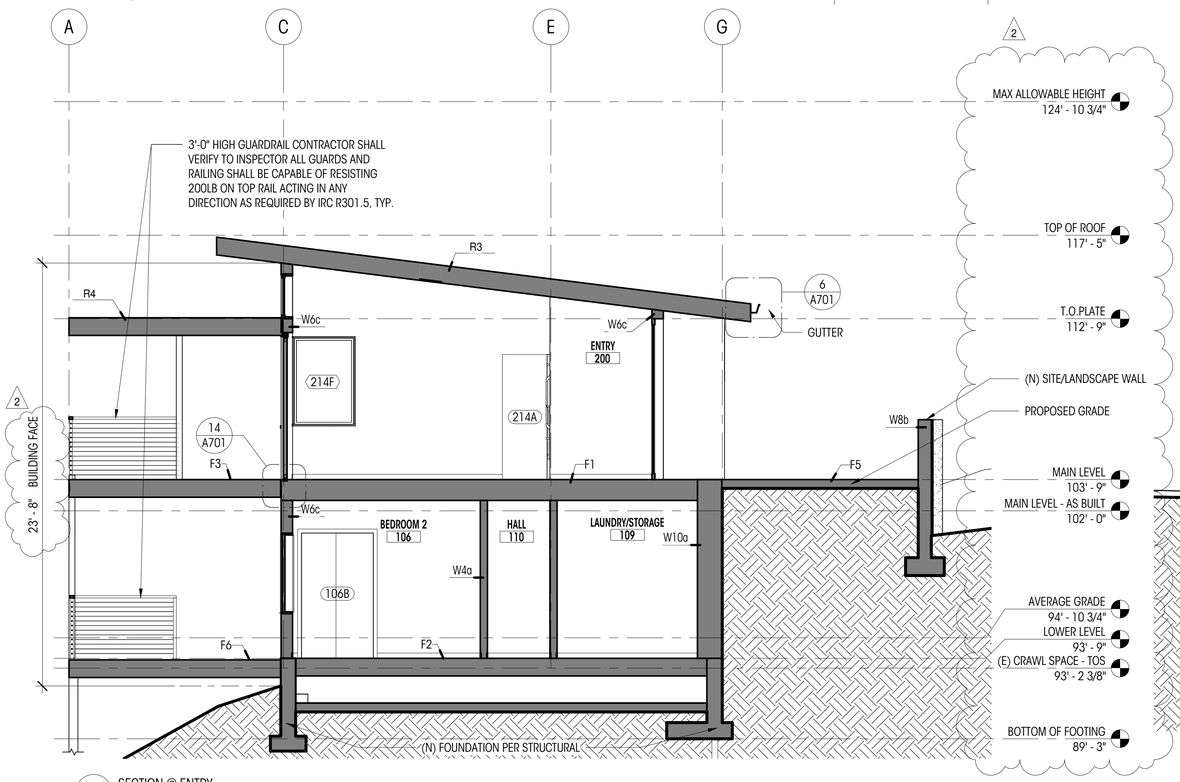
DEDICATED APPROVAL STAMP SPACE



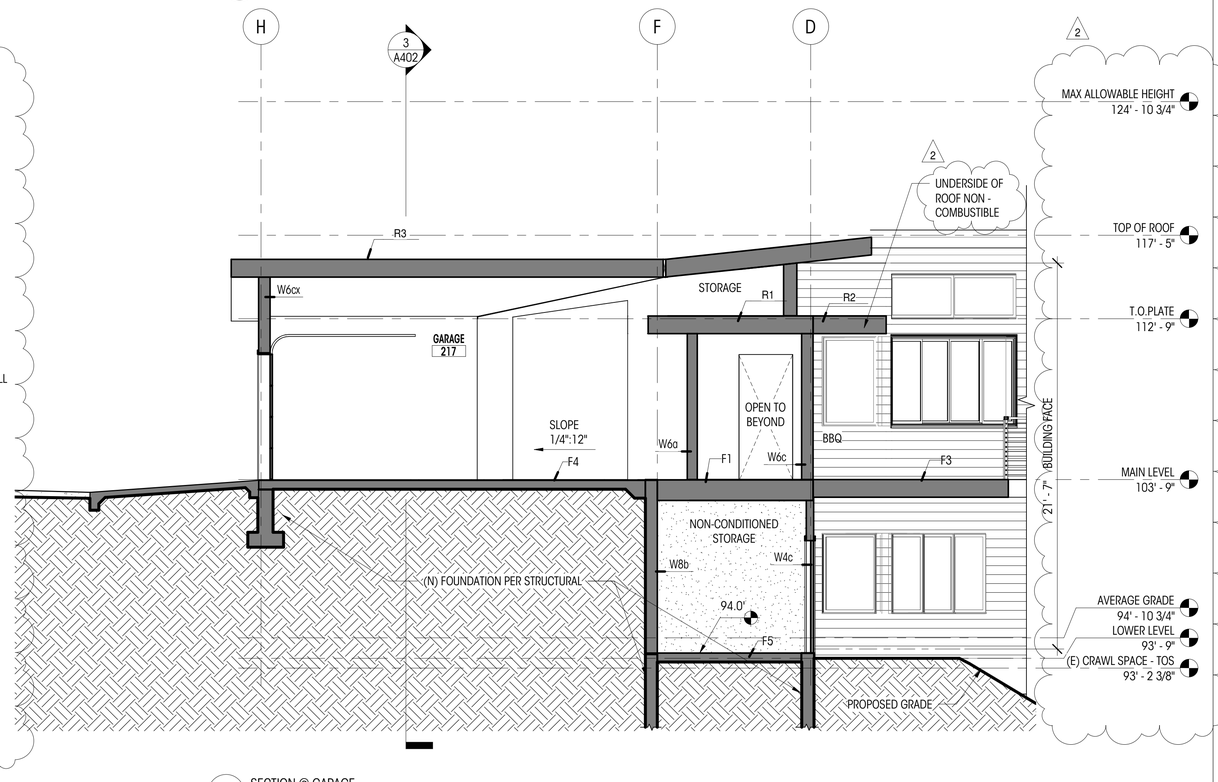
1 SECTION @ MASTER BATHROOM
1/4" = 1'-0"



2 SECTION @ LIVING ROOM
1/4" = 1'-0"



3 SECTION @ ENTRY
1/4" = 1'-0"



4 SECTION @ GARAGE
1/4" = 1'-0"

Brandt
Design Group
66Bell Street
Unit 1
Seattle, WA
98121
206.239.0850
brandtdesigninc.com
8843
REGISTERED
ARCHITECT
STATE OF WASHINGTON

ROSENSTEIN RESIDENCE

2035 81ST AVE SE
MERCER ISLAND, WA 98040

© COPYRIGHT 2019 BRANDT DESIGN, INC. SEATTLE, WA.

PERMIT DOCUMENTS

DATE: 11/22/19

SHEET SIZE: D (24X36)

REVISIONS

Revision Number	Date
1	08.16.19
2	11.20.19

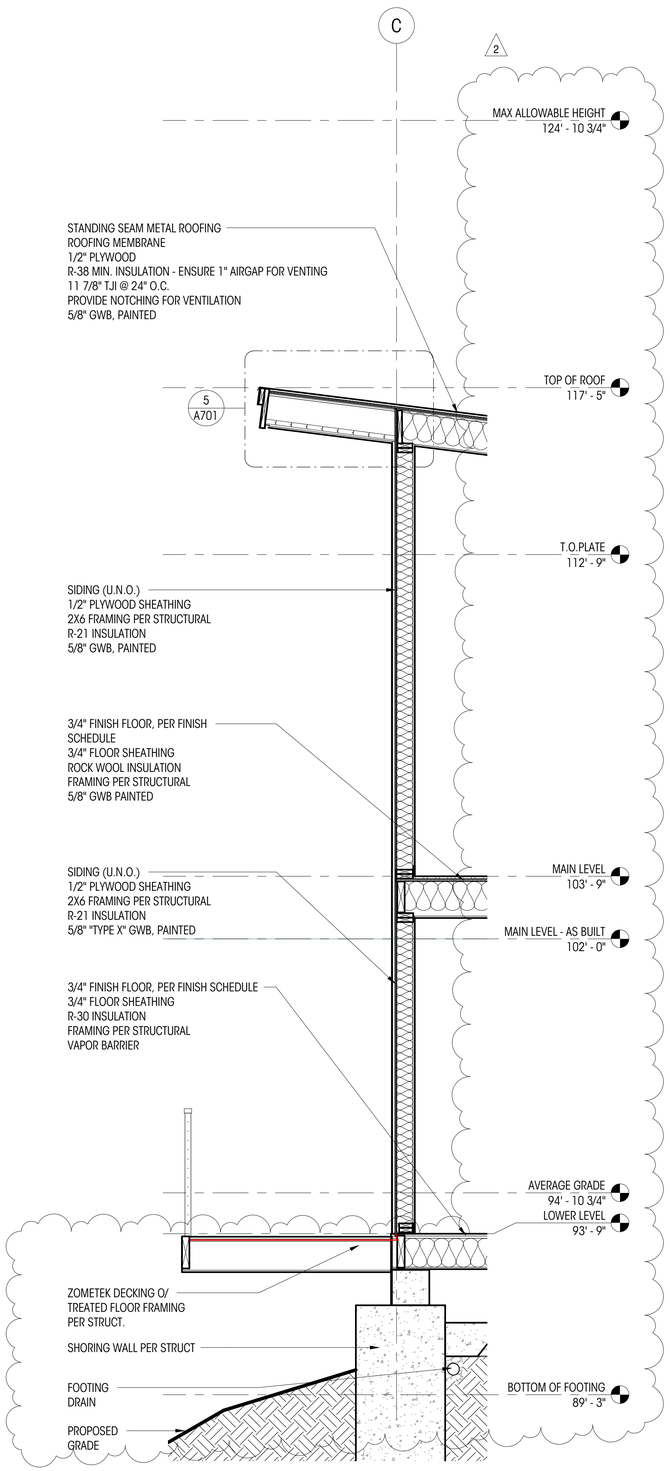
DRAWN BY: SE/BM/NLD
CHECKED BY: BM/CB

BUILDING SECTIONS

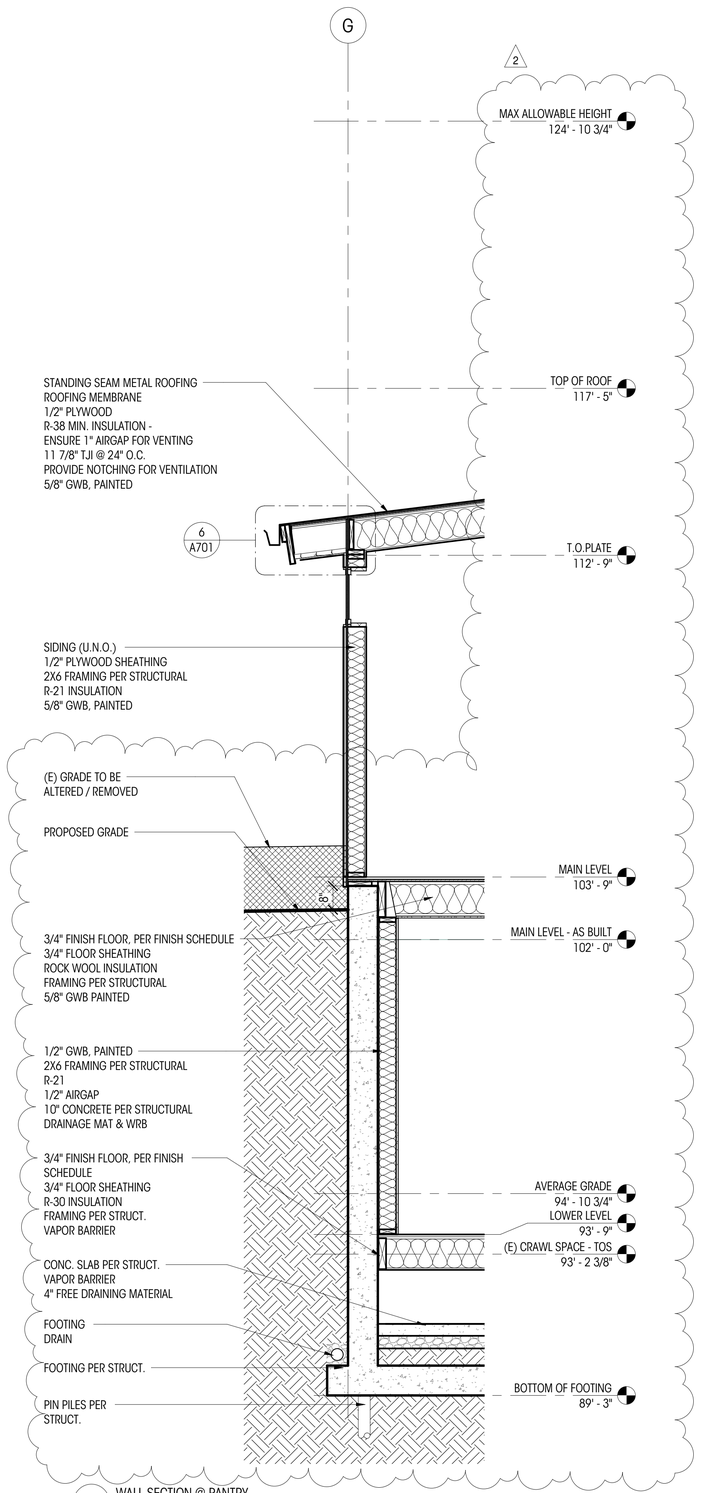
SCALE: 1/4" = 1'-0"

A400

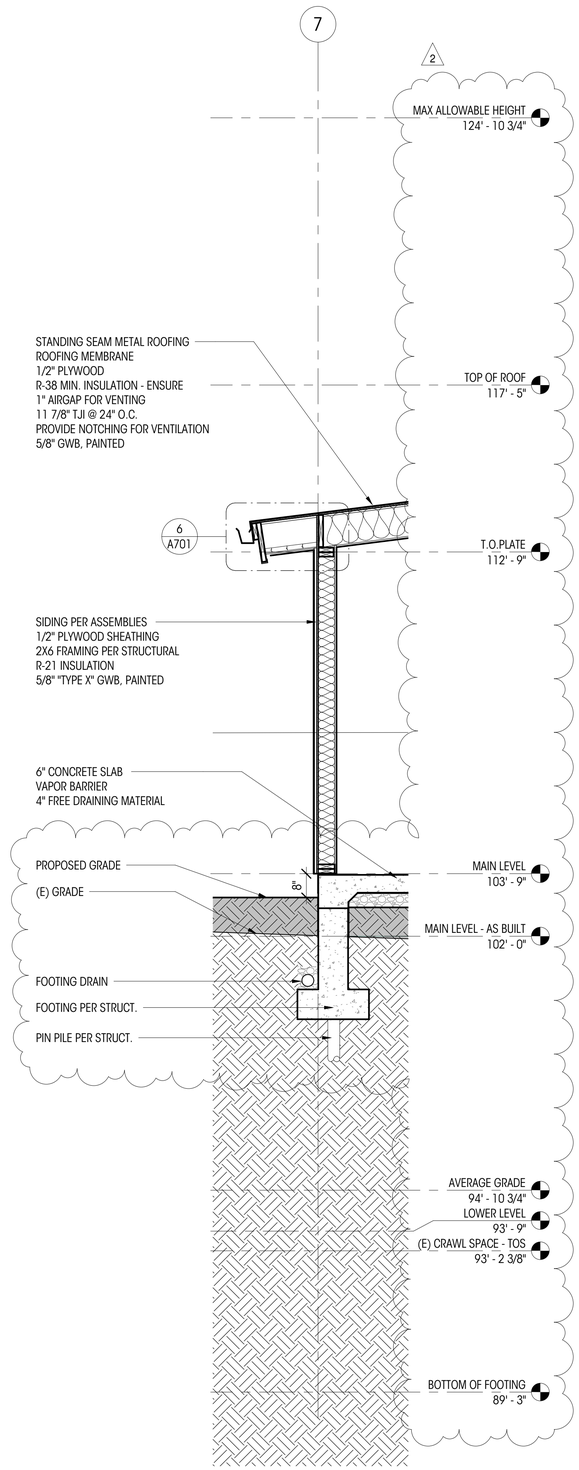
DEDICATED
APPROVAL
STAMP SPACE



1 WALL SECTION @ LIVING ROOM
1/2" = 1'-0"



2 WALL SECTION @ PANTRY
1/2" = 1'-0"



3 WALL SECTION @ GARAGE
1/2" = 1'-0"

Brandt
Design Group
66Bell Street
Unit 1
Seattle, WA
98121
206.239.0850
brandtdesigninc.com
8843
REGISTERED ARCHITECT
STATE OF WASHINGTON

ROSENSTEIN RESIDENCE

2035 81ST AVE SE
MERCER ISLAND, WA 98040

© COPYRIGHT 2019 BRANDT DESIGN, INC. SEATTLE, WA.

PERMIT DOCUMENTS

DATE: 11/22/19

SHEET SIZE: D (24X36)

REVISIONS

Revision Number	Date
2	11.20.19

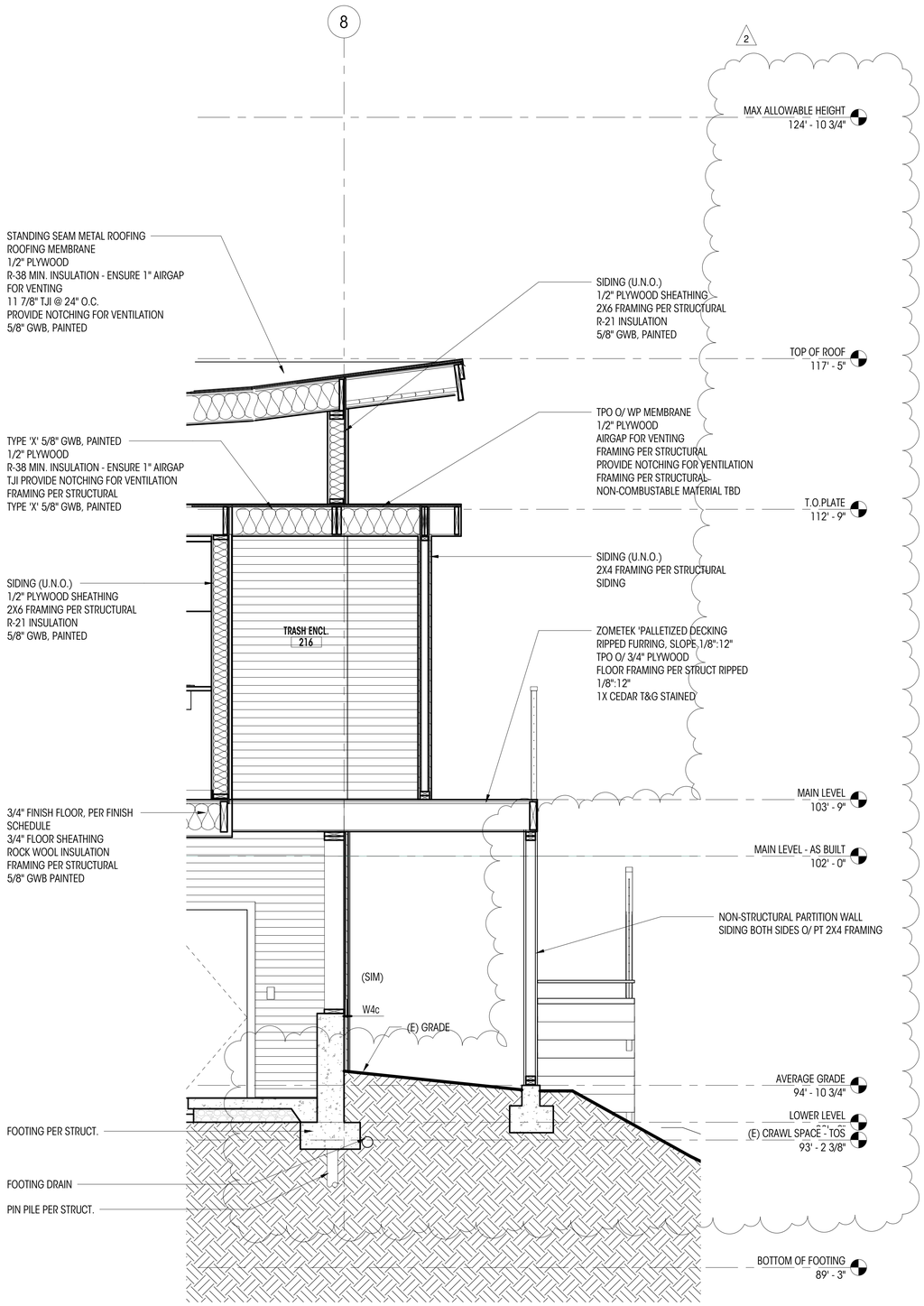
DRAWN BY: SE/BM/NLD
CHECKED BY: BM/CB

WALL SECTIONS

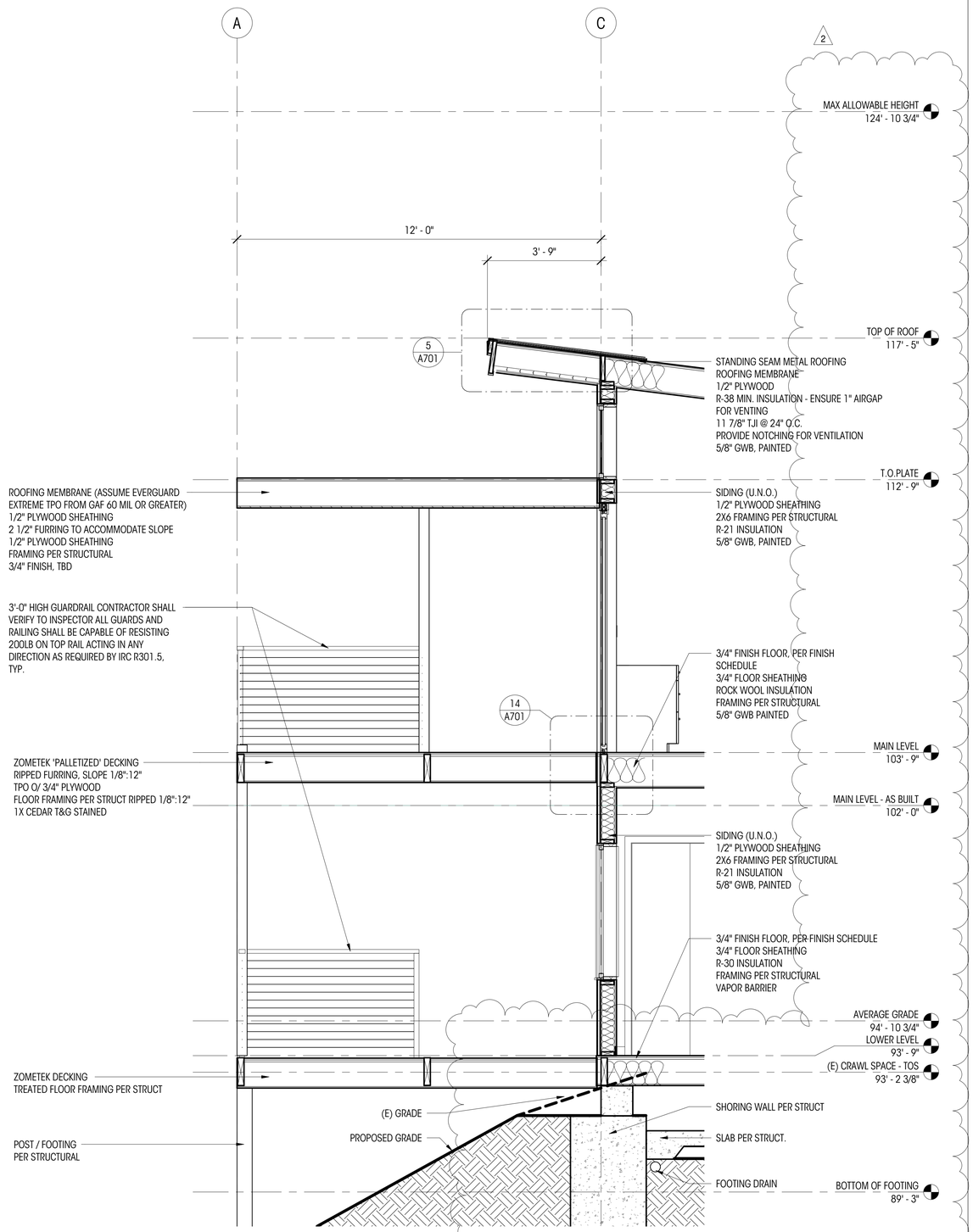
SCALE: 1/2" = 1'-0"

A402

DEDICATED APPROVAL STAMP SPACE



1 WALL SECTION @ DISPOSAL
1/2" = 1'-0"



2 WALL SECTION @ DECK
1/2" = 1'-0"

Brandt
Design Group
66Bell Street
Unit 1
Seattle, WA
98121
206.239.0850
brandtdesigninc.com

8843
REGISTERED ARCHITECT
STATE OF WASHINGTON

ROSENSTEIN RESIDENCE

2035 81ST AVE SE
MERCER ISLAND, WA 98040

© COPYRIGHT 2019 BRANDT DESIGN, INC. SEATTLE, WA.

PERMIT DOCUMENTS

DATE: 11/22/19

SHEET SIZE: D (24X36)

REVISIONS

Revision Number	Date
2	11.20.19

DRAWN BY: SE/BM/NLD
CHECKED BY: BM/CB

WALL SECTIONS

SCALE: 1/2" = 1'-0"

A403

DEDICATED APPROVAL STAMP SPACE

2

WINDOW SCHEDULE

PLAN ID	TYPE	WIDTH (ft)	HEIGHT (ft)	HEAD HT	UNIT AREA (sf)	U VALUE	UA	NOTES
101A	A	2' - 4"	4' - 6"	7' - 0"	11 SF	0.3	3 SF	1
101B	A	2' - 4"	4' - 6"	7' - 0"	11 SF	0.3	3 SF	1
102A	B	4' - 0"	2' - 2"	7' - 0"	9 SF	0.3	3 SF	2
103A	C	5' - 6"	4' - 6"	7' - 0"	25 SF	0.3	7 SF	
103B	B	4' - 0"	4' - 6"	7' - 0"	18 SF	0.3	5 SF	
103C	B	4' - 0"	4' - 6"	7' - 0"	18 SF	0.3	5 SF	
103D	B	4' - 0"	4' - 6"	7' - 0"	18 SF	0.3	5 SF	
103E	B	4' - 0"	4' - 6"	7' - 0"	18 SF	0.3	5 SF	
103F	C	5' - 6"	4' - 6"	7' - 0"	25 SF	0.3	7 SF	
106A	A	3' - 6"	4' - 6"	7' - 0"	16 SF	0.3	5 SF	
106B	C	3' - 6"	4' - 6"	7' - 0"	16 SF	0.3	5 SF	
106C	A	3' - 6"	4' - 6"	7' - 0"	16 SF	0.3	5 SF	1
107A	A	3' - 6"	4' - 6"	7' - 0"	16 SF	0.3	5 SF	
107B	A	3' - 6"	4' - 6"	7' - 0"	16 SF	0.3	5 SF	
107C	A	3' - 6"	4' - 6"	7' - 0"	16 SF	0.3	5 SF	1
107D	A	3' - 6"	4' - 6"	7' - 0"	16 SF	0.3	5 SF	
108A	H	7' - 10"	4' - 0"	7' - 0"	31 SF	0.3	9 SF	2,7
200A	C	1' - 8"	9' - 0"	9' - 0"	15 SF	0.3	5 SF	2
200B	C	1' - 8"	9' - 0"	9' - 0"	15 SF	0.3	5 SF	2
202A	C	2' - 4"	7' - 0"	7' - 0"	16 SF	0.3	5 SF	2
203B	C	2' - 4"	7' - 0"	5' - 0"	16 SF	0.3	5 SF	2
203C	C	2' - 4"	7' - 0"	3' - 3"	16 SF	0.3	5 SF	2
203D	B	2' - 4"	3' - 9"	7' - 0"	9 SF	0.3	3 SF	
203E	B	2' - 4"	3' - 9"	7' - 0"	9 SF	0.3	3 SF	
203F	B	2' - 4"	3' - 9"	7' - 0"	9 SF	0.3	3 SF	
204A	A	2' - 4"	3' - 9"	7' - 0"	9 SF	0.3	3 SF	
204B	C	2' - 4"	3' - 3"	3' - 3"	8 SF	0.3	2 SF	
205A	B	2' - 4"	2' - 0"	8' - 8"	5 SF	0.3	1 SF	
205B	B	2' - 4"	2' - 0"	8' - 8"	5 SF	0.3	1 SF	
205C	B	2' - 4"	2' - 0"	8' - 8"	5 SF	0.3	1 SF	
205D	J	1' - 10"	3' - 10"		7 SF	0.5	4 SF	2,6
205E	J	3' - 9"	13' - 11"		52 SF	0.5	26 SF	2,6
206A	B	4' - 0"	2' - 0"	8' - 8"	8 SF	0.3	2 SF	2
207A	C	7' - 4"	2' - 0"	8' - 8"	15 SF	0.3	4 SF	2
208A	C	6' - 0"	5' - 0"	6' - 8"	30 SF	0.3	9 SF	2,4
208B	A	3' - 0"	5' - 0"	6' - 8"	15 SF	0.3	5 SF	2,4
208C	B	6' - 0"	2' - 0"	8' - 8"	12 SF	0.3	4 SF	2
208D	C	3' - 0"	2' - 0"	8' - 8"	6 SF	0.3	2 SF	2
209A	A	4' - 0"	5' - 6"	8' - 0"	22 SF	0.3	7 SF	1,2
209B	B	4' - 0"	2' - 6"	4' - 3"	10 SF	0.3	3 SF	
209C	C	4' - 0"	8' - 0"	8' - 0"	32 SF	0.3	10 SF	1,2
209D	C	5' - 6"	5' - 6"	8' - 0"	30 SF	0.3	9 SF	2
209F	B	5' - 6"	2' - 6"	2' - 6"	14 SF	0.3	4 SF	
209G	C	4' - 0"	2' - 6"	11' - 6"	10 SF	0.3	3 SF	5
209H	C	4' - 0"	2' - 6"	11' - 6"	10 SF	0.3	3 SF	5
209I	C	5' - 6"	2' - 6"	11' - 6"	14 SF	0.3	4 SF	
210A	B	4' - 0"	5' - 6"	8' - 0"	22 SF	0.3	7 SF	
210B	C	4' - 0"	8' - 0"	8' - 0"	32 SF	0.3	10 SF	
210C	C	4' - 0"	2' - 6"	2' - 6"	10 SF	0.3	3 SF	
210F	C	8' - 0"	2' - 6"	11' - 6"	20 SF	0.3	6 SF	
212A	B	4' - 0"	5' - 6"	8' - 0"	22 SF	0.3	7 SF	2
212B	C	4' - 0"	2' - 6"	4' - 3"	10 SF	0.3	3 SF	
212C	C	8' - 0"	8' - 0"	8' - 0"	64 SF	0.3	19 SF	2
212D	C	4' - 0"	2' - 6"	11' - 6"	10 SF	0.3	3 SF	
212E	C	8' - 0"	2' - 6"	11' - 6"	20 SF	0.3	6 SF	
213C	C	10' - 6"	2' - 6"	11' - 6"	26 SF	0.3	8 SF	
214C	I	13' - 10 1/2"	5' - 0"	8' - 0"	69 SF	0.3	21 SF	2,4
214F	C	3' - 6"	5' - 0"	8' - 0"	18 SF	0.3	5 SF	2,4
214G	C	6' - 11 1/2"	2' - 6"	11' - 6"	17 SF	0.3	5 SF	
214I	C	6' - 11 1/2"	2' - 6"	11' - 6"	17 SF	0.3	5 SF	
218A	C	2' - 4"	7' - 0"	7' - 0"	16 SF	0.3	5 SF	2
218B	C	3' - 7 1/2"	1' - 8"	8' - 8"	6 SF	0.3	2 SF	
218C	C	3' - 7 1/2"	1' - 8"	8' - 8"	6 SF	0.3	2 SF	

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 WALLS ARE TEMPERED GLASS.
- REFER TO PLANS AND TAGS FOR LOCATION AND SWINGS.
- ALL ELEVATIONS ARE FROM THE EXTERIOR.
- ALL NEW VERTICAL FENESTRATION U-VALUE TO MEET ENERGY COMPLIANCE GUIDELINES
- PER IBC 8310.2 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
- PER IRC R308.4.3, GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL NEEDS TO BE TEMPERED GLASS / SAFETY GLAZING IN THE FOLLOWING HAZARDOUS LOCATIONS:
  1. THE EXPOSED AREA OF AN INDIVIDUAL PANE IS LARGER THAN 9 SF, AND
  2. THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 18" ABOVE THE FLOOR,
  3. THE TOP EDGE OF THE GLAZING IS MORE THAN 36 " AVOVE THE FLOOR, AND
  4. ONE OR MORE WALKING SURFACES ARE WITHING 36", MEASURE HORIZONTALLY IN A STRAIGHT LINE OF THE GLAZING.

SPECIFIC NOTES

1. EGRESS
2. TEMPERED GLASS / SAFETY GLAZING
3. OPAQUE / FROSTED GLAZING
4. SILLS FLUSH WITH COUNTERTOP / TUBDECK
5. CUSTOM SHAPE
6. SKYLIGHT
7. BIFOLD WINDOW

WINDOW WALL GENERAL NOTES

*ALL WINDOW WALL MUST HAVE A U-VALUE OF .3 OR LOWER

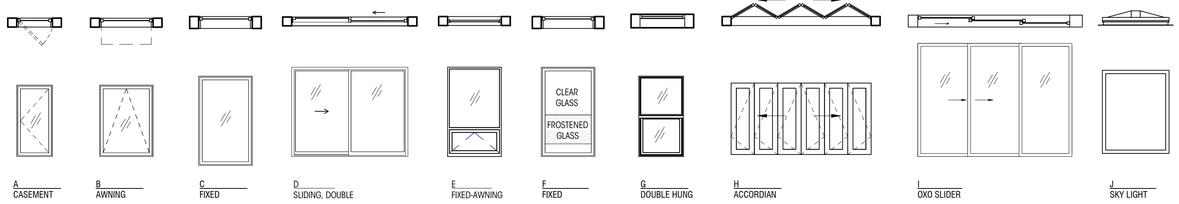
*CONTRACTOR TO VERIFY ALL SIZES AND DIMENSIONS IN FIELD WITH OWNER BEFORE ORDERING.

*ALL WINDOW WALL IS TEMPERED GLASS

*REFER TO PLANS AND TAGS FOR LOCATION

*ALL ELEVATIONS ARE FROM THE EXTERIOR

*ALL DIMENSIONS SHOWN ARE FINISHED DIMENSIONS, R.O. PER CONTRACTOR



A CASEMENT · B AWNING · C FIXED · D SLIDING, DOUBLE · E FIXED-AWNING · F FIXED · G DOUBLE HUNG · H ACCORDIAN · I OXO SLIDER · J SKY LIGHT

WINDOW TYPES
1/4" = 1'-0"

DOOR SCHEDULE

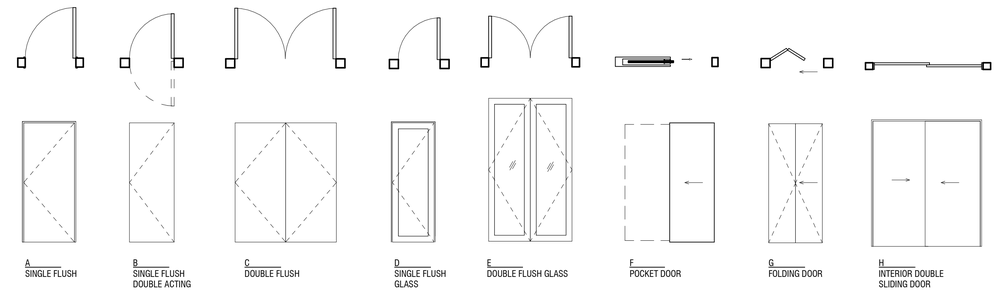
PLAN ID	TYPE	WIDTH (ft.)	HEIGHT (ft.)	AREA (sf.)	U VALUE	UA	NOTES
		2' - 0"	6' - 8"	13 SF			
100A	A	3' - 0"	7' - 0"	21 SF			
101A	A	2' - 8"	7' - 0"	19 SF			
101B	H	4' - 0"	7' - 0"	28 SF			
102A	A	2' - 8"	7' - 0"	19 SF			
102B		3' - 6"	7' - 0"	25 SF			
103A	A	2' - 10"	7' - 0"	20 SF			
105A	I	8' - 0"	7' - 0"	56 SF	0.3	17 SF	1
105B	I	8' - 0"	7' - 0"	56 SF	0.3	17 SF	1
105C	A	2' - 4"	7' - 0"	16 SF			
105F	D	3' - 0"	7' - 0"	21 SF	0.3	6 SF	1
105G		3' - 0"	7' - 0"	21 SF			
106A	A	2' - 10"	7' - 0"	20 SF			
106B	H	4' - 0"	7' - 0"	28 SF			
107A	A	2' - 10"	7' - 0"	20 SF			
107B	H	4' - 0"	7' - 0"	28 SF			
108A	A	2' - 10"	7' - 0"	20 SF			
108I		3' - 0"	7' - 0"	21 SF			
108J		3' - 0"	7' - 0"	21 SF			
108K		5' - 0"	1' - 6"	8 SF			
108L		3' - 0"	1' - 11 1/2"	6 SF			
109A	A	3' - 0"	7' - 0"	21 SF			
111A	A	2' - 4"	7' - 0"	16 SF			
112A	A	2' - 8"	7' - 0"	19 SF			
114A	C	5' - 8"	6' - 8"	38 SF			
114B	C	5' - 8"	6' - 8"	38 SF			
200A	A	4' - 0"	9' - 0"	36 SF			
201A	A	2' - 8"	7' - 0"	19 SF			
202A		3' - 10"	7' - 0"	27 SF			
202B		3' - 10"	7' - 0"	27 SF			
203A	A	2' - 4"	7' - 0"	16 SF	0.3	5 SF	1
204A	A	3' - 0"	7' - 0"	21 SF			
205A	F	2' - 6"	7' - 0"	18 SF			
206A	F	2' - 6"	7' - 0"	18 SF			
207A	F	2' - 6"	7' - 0"	18 SF			
207B		2' - 3 3/4"	7' - 0"	16 SF			
209A	A	3' - 0"	7' - 0"	21 SF			
210A	A	2' - 10"	7' - 0"	20 SF			
210B	F	2' - 10"	7' - 0"	20 SF			
213A	F	10' - 6"	8' - 0"	84 SF	0.3	25 SF	1
214A		2' - 8"	7' - 0"	19 SF			
215A	A	3' - 0"	7' - 0"	21 SF			3
215B	D	3' - 0"	7' - 0"	21 SF	0.3	6 SF	1
217A	L	18' - 0"	7' - 0"	126 SF			
218A	A	2' - 8"	7' - 0"	19 SF			

GENERAL NOTES

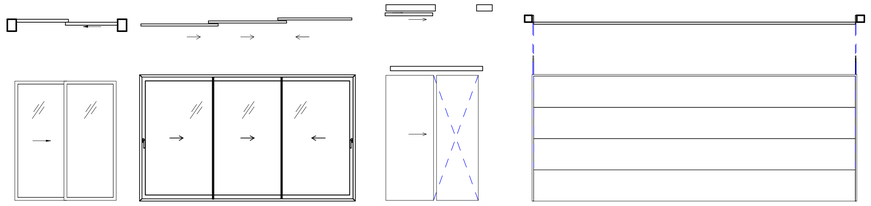
- ALL NEW DOORS TO BE NFRC CERTIFIED
- ALL NEW VERTICAL FENESTRATION U-VALUE TO MEET ENERGY COMPLIANCE GUIDELINES FOR **EFFICIENT BUILDING ENVELOPE OPTION 1A**
- ALL DOORS TO BE SOLID-CORE WOOD VENEER FLAT PANELS UNO

SPECIFIC NOTES

1. TEMPERED GLASS/SAFETY GLAZING
2. EGRESS
3. 20-MINUTE RATED W/SELF-CLOSURE
4. OVERHEAD DOOR
5. ACCESS DOOR TO UNDER STAIR



A SINGLE FLUSH · B SINGLE FLUSH DOUBLE ACTING · C DOUBLE FLUSH · D SINGLE FLUSH GLASS · E DOUBLE FLUSH GLASS · F POCKET DOOR · G FOLDING DOOR · H INTERIOR DOUBLE SLIDING DOOR



I EXTERIOR DOUBLE SLIDING DOOR · J TRIPLE PANEL SLIDING DOOR · K BARN DOOR · L GARAGE

DOOR TYPES
1/4" = 1'-0"

Brandt
Design Group
66Bell Street
Unit 1
Seattle, WA
98121
206.239.0850
brandtdesigninc.com

8843 REGISTERED ARCHITECT STATE OF WASHINGTON

ROSENSTEIN RESIDENCE

2035 81ST AVE SE
MERCER ISLAND, WA 98040

© COPYRIGHT 2019 BRANDT DESIGN, INC. SEATTLE.

PERMIT DOCUMENTS

DATE: 11/22/19

SHEET SIZE: D (24X36)

REVISIONS

Revision Number	Date
2	11.20.19

DRAWN BY: SE/BM/NLD
CHECKED BY: BM/CB

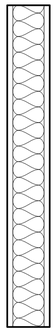
WINDOW / DOOR SCHEDULES

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

A600

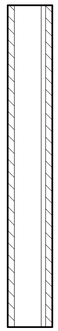
DEDICATED APPROVAL STAMP SPACE

VERTICAL ASSEMBLIES



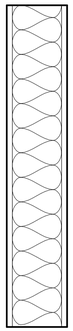
5/8" GWB, PAINTED
2X4 FRAMING
ROCK WOOL INSULATION
5/8" GWB, PAINTED

W4a
INTERIOR



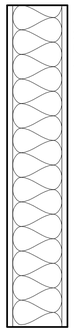
SIDING (U.N.O.)
2X4 FRAMING PER STRUCTURAL
SIDING

W4c
EXTERIOR
(BBQ)



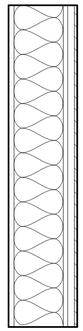
5/8" GWB, PAINTED
2X6 FRAMING PER STRUCTURAL
R-21
5/8" "TYPE X" GWB, PAINTED

W6a
INTERIOR
(Office-Garage)



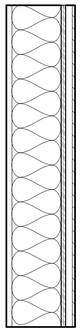
5/8" GWB, PAINTED
2X6 FRAMING PER STRUCTURAL
ROCK WOOL INSULATION
5/8" GWB, PAINTED

W6b
INTERIOR



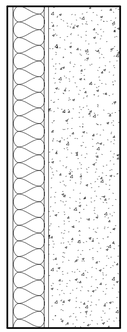
SIDING (U.N.O.)
1/2" PLYWOOD SHEATHING
2X6 FRAMING PER STRUCTURAL
R-21 INSULATION
5/8" GWB, PAINTED

W6c
EXTERIOR



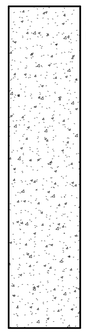
SIDING
1/2" PLYWOOD SHEATHING
2X6 FRAMING PER STRUCTURAL
R-21 INSULATION
5/8" "TYPE X" GWB, PAINTED

W6cx
EXTERIOR
(Garage)



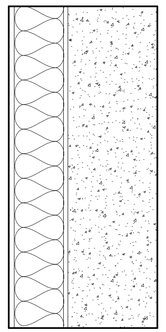
5/8" GWB, PAINTED
2X4 FRAMING PER STRUCTURAL
R-21
1/2" AIRGAP
8" CONCRETE PER STRUCTURAL
DRAINAGE MAT & WRB

W8a
FURRING
(Basement)



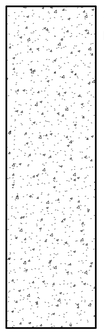
8" CONCRETE WALL
PER STRUCT

W8b



1/2" GWB, PAINTED
2X6 FRAMING PER STRUCTURAL
R-21
1/2" AIRGAP
10" CONCRETE PER STRUCTURAL
DRAINAGE MAT & WRB

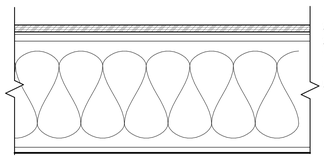
W10a
FURRING
(Basement)



10" CONCRETE WALL
PER STRUCT

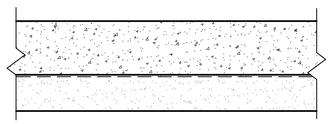
W10b
EXTERIOR
(Retaining wall under Garage)

HORIZONTAL ASSEMBLIES



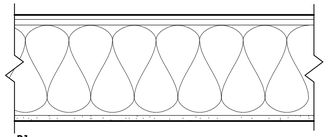
3/4" FINISH FLOOR, PER FINISH SCHEDULE
3/4" FLOOR SHEATHING
ROCK WOOL INSULATION
FRAMING PER STRUCTURAL
5/8" GWB PAINTED

F1
(Main Floor)



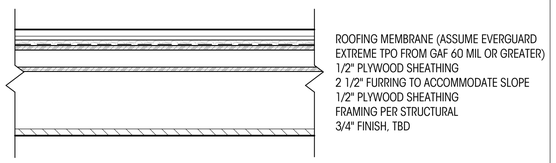
6" CONCRETE SLAB
VAPOR BARRIER
4" FREE DRAINING MATERIAL

F4
(Garage)



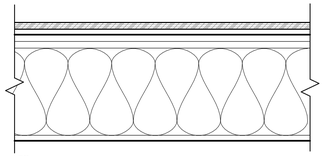
TYPE 'X' 5/8" GWB, PAINTED
1/2" PLYWOOD
R-38 MIN. INSULATION - ENSURE 1" AIRGAP
TJI PROVIDE NOTCHING FOR VENTILATION
FRAMING PER STRUCTURAL
TYPE 'X' 5/8" GWB, PAINTED

R1
(Flat at Mud Room)



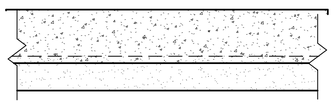
ROOFING MEMBRANE (ASSUME EVERGUARD
EXTREME TPO FROM GAF 60 MIL OR GREATER)
1/2" PLYWOOD SHEATHING
2 1/2" FURRING TO ACCOMMODATE SLOPE
1/2" PLYWOOD SHEATHING
FRAMING PER STRUCTURAL
3/4" FINISH, TBD

R4
(Canopy at Deck)



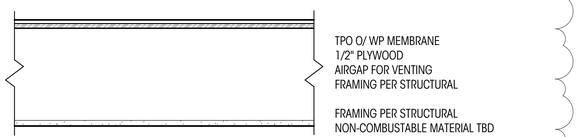
3/4" FINISH FLOOR, PER FINISH SCHEDULE
3/4" FLOOR SHEATHING
R-30 INSULATION
FRAMING PER STRUCTURAL
VAPOR BARRIER

F2
(Basement)



4" CONCRETE SLAB
VAPOR BARRIER
4" FREE DRAINING MATERIAL

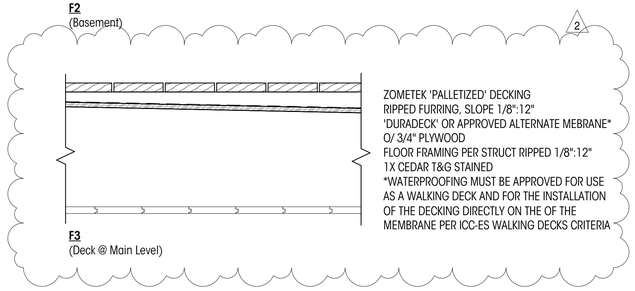
F5
(Entry/Patio)



TPO O/ WP MEMBRANE
1/2" PLYWOOD
AIRGAP FOR VENTING
FRAMING PER STRUCTURAL

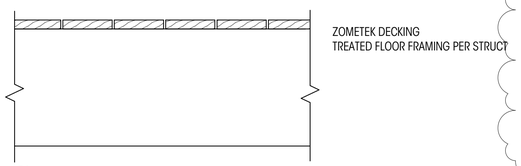
FRAMING PER STRUCTURAL
NON-COMBUSTABLE MATERIAL TBD

R2
(Flat - Non-Combustable)



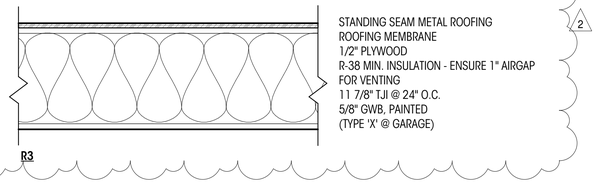
ZOMETEK 'PALLETIZED' DECKING
RIPPED FURRING, SLOPE 1/8":12"
'DURADECK' OR APPROVED ALTERNATE MEBRANE*
O/ 3/4" PLYWOOD
FLOOR FRAMING PER STRUCT RIPPED 1/8":12"
1X CEDAR T&G STAINED
*WATERPROOFING MUST BE APPROVED FOR USE
AS A WALKING DECK AND FOR THE INSTALLATION
OF THE DECKING DIRECTLY ON THE OF THE
MEMBRANE PER ICC-ES WALKING DECKS CRITERIA

F3
(Deck @ Main Level)



ZOMETEK DECKING
TREATED FLOOR FRAMING PER STRUCT

F6
(Deck @ Basement)



STANDING SEAM METAL ROOFING
ROOFING MEMBRANE
1/2" PLYWOOD
R-38 MIN. INSULATION - ENSURE 1" AIRGAP
FOR VENTING
11 7/8" TJI @ 24" O.C.
5/8" GWB, PAINTED
(TYPE 'X' @ GARAGE)

R3

Brandt
Design Group

66Bell Street
Unit 1
Seattle, WA
98121

206.239.0850

brandtdesigninc.com

8843
REGISTERED ARCHITECT
STATE OF WASHINGTON

ROSENSTEIN RESIDENCE

2035 81ST AVE SE
MERCER ISLAND, WA 98040

© COPYRIGHT 2019 BRANDT DESIGN, INC. SEATTLE, WA.

PERMIT DOCUMENTS

DATE: 11/22/19

SHEET SIZE: D (24X36)

REVISIONS

Revision Number	Date

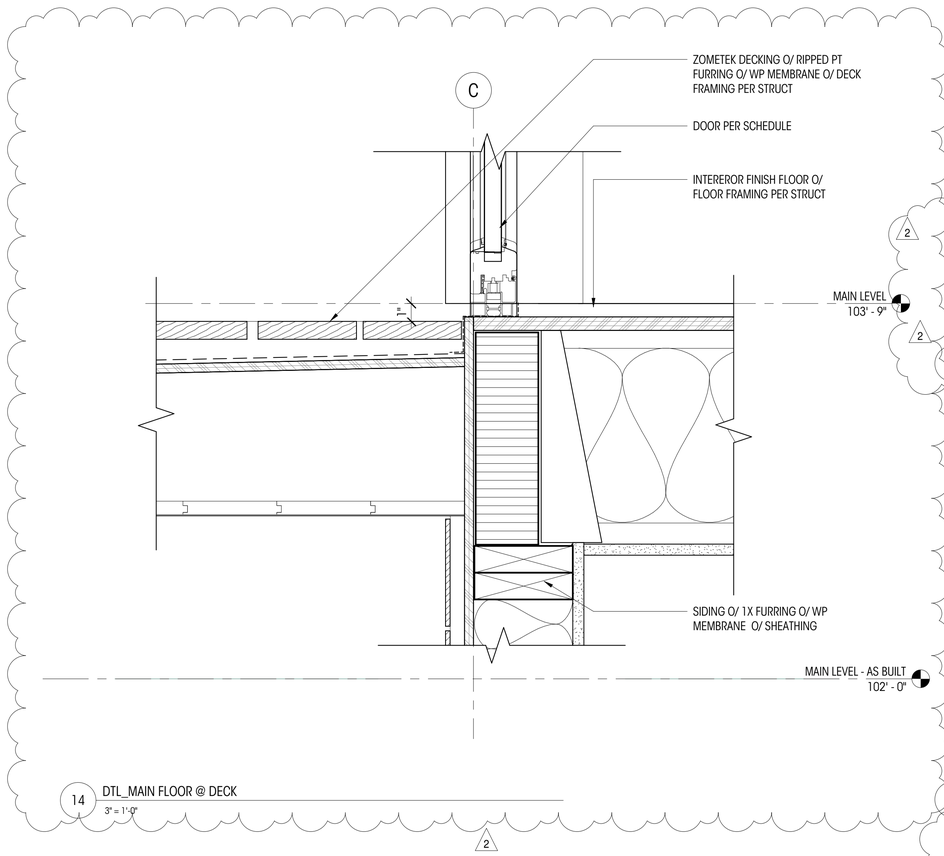
DRAWN BY: SE/BM/NLD
CHECKED BY: BM/CB

ASSEMBLY DETAILS

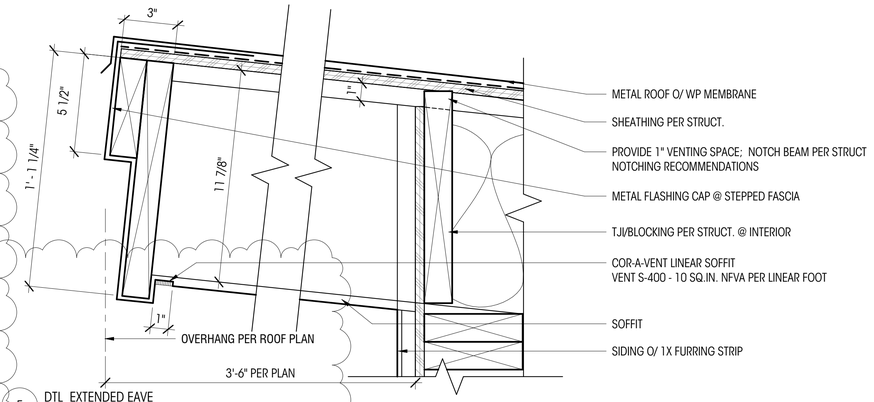
SCALE: 1 1/2" = 1'-0"

A700

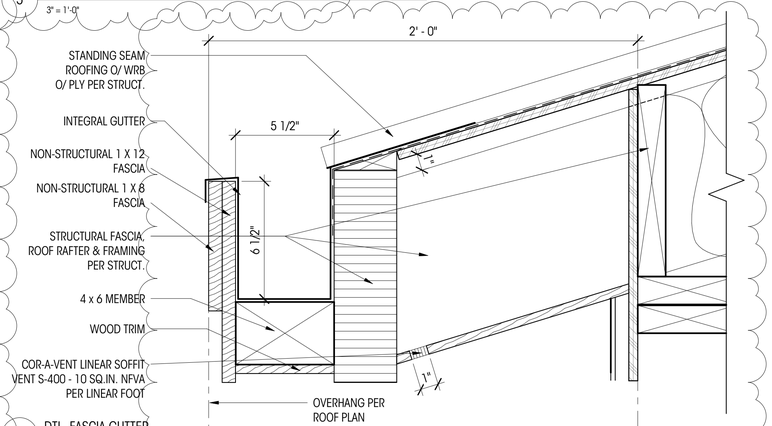
DEDICATED
APPROVAL
STAMP SPACE



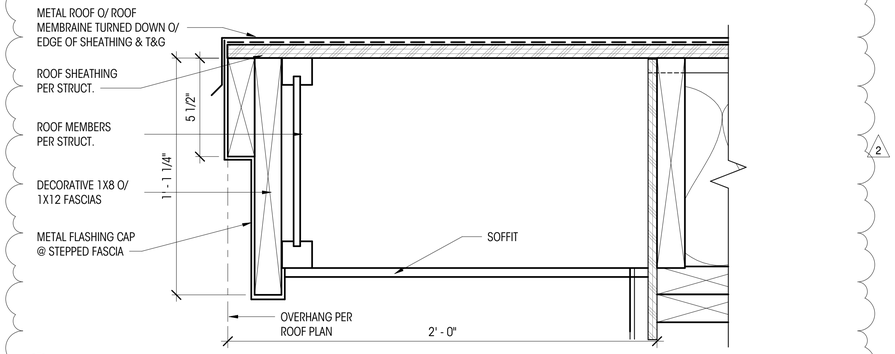
14 DTL_MAIN FLOOR @ DECK
3" = 1'-0"



5 DTL_EXTENDED EAVE
3" = 1'-0"



6 DTL_FASCIA GUTTER
3" = 1'-0"



7 DTL_EXTENDED RAKE
3" = 1'-0"

Brandt
Design Group
66Bell Street
Unit 1
Seattle, WA
98121
206.239.0850
brandtdesigninc.com

8843
REGISTERED ARCHITECT
STATE OF WASHINGTON

ROSENSTEIN RESIDENCE

2035 81ST AVE SE
MERCER ISLAND, WA 98040

© COPYRIGHT 2019 BRANDT DESIGN, INC. SEATTLE, WA.

PERMIT DOCUMENTS

DATE: 11/22/19

SHEET SIZE: D (24X36)

REVISIONS

Revision Number	Date
2	11.20.19

DRAWN BY: SE/BM/NLD
CHECKED BY: BM/CB

EXTERIOR DETAILS

SCALE: 3" = 1'-0"

A701

DEDICATED
APPROVAL
STAMP SPACE

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 INTERNATIONAL BUILDING CODE (2015 EDITION).

2. DESIGN LOADING CRITERIA:
   GUARDRAILS/BALCONY RAILS CONCENTRATED LOAD . . . . . 200 LBS
   FLOOR LIVE LOAD . . . . . 40 PSF
   ROOF LIVE LOAD . . . . . 25 PSF
   DECKS . . . . . 1.5 x AREA SERVED
   SNOW . . . . . Ce=1.0, Is=1.0, Ct=1.1, Pg=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=136, Sds=91, S1=52, SD1=52, Cs=0.140
   SDC D, Ie=1.0, R=6.5

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

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. IF 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.

QUALITY ASSURANCE

12. 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.

SOIL CONDITIONS, FILL PLACEMENT, AND DENSITY	PER TABLE 1705.6
DRIVEN DEEP FOUNDATION	PER TABLE 1705.7
HELICAL PILE FOUNDATION	CONTINUOUS

    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

13. 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 ENGINEER. 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) . 40 PCF + 10 H PSF/40 PCF
    ALLOWABLE PASSIVE EARTH PRESSURE (FS OF 1.5 INCLUDED). . . . . 167 PCF
    TRAFFIC SURCHARGE PRESSURE (UNIFORM LOAD) . . . . . 75 PSF
    SEISMIC SURCHARGE PRESSURE (UNIFORM LOAD) . . . . . 8H PSF
    PIPE PILE CAPACITY (3"DIA./4"DIA.) . . . . . 6 TONS/10 TONS

    SOILS REPORT REFERENCE:
    PROPOSED NEW RESIDENCE
    2035 - 81ST AVE SOUTHEAST
    MERCER ISLAND, WA

    PREPARED BY:
    GEOTECH CONSULTANTS, INC. ON OCTOBER 29, 2019
    JN 19011

14. PIN PILES SHOWN ON THE PLAN SHALL BE 3"DIAMETER SCHEDULE 40. THE MAXIMUM CAPACITY OF 3"PILES SHALL BE 6 TONS. THE MAXIMUM PILE ECCENTRICITY SHALL BE 2 INCHES. GEOTECHNICAL SPECIAL INSPECTION SHALL BE REQUIRED BY THE GEOTECHNICAL ENGINEER.

    PIPE PILES MAY BE DRIVEN WITH HYDRAULIC HAMMERS TO THE FINAL PENETRATION RATES MEASURED IN SECONDS PER INCH WITH THE ASSIGNED FOLLOWING COMPRESSIVE CAPACITIES.

PILE		(HYDRAULIC HAMMERS)		
DIAM	CAPACITY	850LB	1100LB	2000LB
3IN	6T	10	6	2

    THE REFUSAL CRITERIA INDICATED IN THE ABOVE TABLE ARE VALID ONLY FOR PIPE PILES THAT ARE INSTALLED USING A HYDRAULIC IMPACT HAMMER CARRIED ON LEADS THAT ALLOW THE HAMMER TO SIT ON THE TOP OF THE PILE DURING DRIVING. IF THE PILES ARE INSTALLED BY ALTERNATIVE METHODS, SUCH AS A VIBRATORY HAMMER OR A HAMMER THAT IS HARD-MOUNTED TO THE INSTALLATION MACHINE, NUMEROUS LOAD TESTS TO 200 PERCENT OF THE DESIGN CAPACITY WOULD BE NECESSARY TO SUBSTANTIATE THE ALLOWABLE PILE LOAD. THE APPROPRIATE NUMBER OF LOAD TESTS WOULD NEED TO BE DETERMINED AT THE TIME THE CONTRACTOR AND INSTALLATION METHOD ARE CHOSEN. AS A MINIMUM, LOAD TESTS SHALL BE REQUIRED ON AT LEAST 3 PERCENT OF ALL PILES INSTALLED AT THE SITE, WITH A MINIMUM OF ONE TEST AND A MAXIMUM OF FIVE TESTS. ALL TESTS MUST CONFORM TO THE QUICK LOAD TEST METHOD ACCORDING TO AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) D-1143.

    SUBSEQUENT SECTIONS OF PIPE CAN BE CONNECTED WITH SLIP OR THREADED COUPLERS, OR THEY CAN BE WELDED TOGETHER. IF SLIP COUPLERS ARE USED, THEY SHOULD FIT SNUGLY INTO THE PIPE SECTIONS WITH PIPE SLEEVES CONTAINING MATCHING PIPE COUPLING RINGS.

RENOVATION

15. DEMOLITION: CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS BEFORE COMMENCING ANY DEMOLITION. SHORING SHALL BE INSTALLED TO SUPPORT EXISTING CONSTRUCTION AS REQUIRED AND IN A MANNER SUITABLE TO THE WORK SEQUENCES. DEMOLITION DEBRIS SHALL NOT BE ALLOWED TO DAMAGE OR OVERLOAD THE EXISTING STRUCTURE. LIMIT CONSTRUCTION LOADING (INCLUDING DEMOLITION DEBRIS) ON EXISTING FLOOR SYSTEMS TO 40 PSF.

16. CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS, MEMBER SIZES, AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS ARE INTENDED AS GUIDELINES ONLY AND MUST BE VERIFIED. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND STRUCTURAL ENGINEER IF EXISTING CONDITIONS DETERMINED DURING WORK VARY FROM THE EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS.

17. EXISTING REINFORCING SHALL BE SAVED WHERE AND AS NOTED ON THE PLANS. SAW CUTTING, IF AND WHERE USED, SHALL NOT CUT EXISTING REINFORCING THAT IS TO BE SAVED.

    A. ALL NEW OPENINGS THROUGH EXISTING WALLS, SLABS AND BEAMS SHALL BE ACCOMPLISHED BY SAW CUTTING WHEREVER POSSIBLE. CORNERS SHALL NOT BE OVERCUT.
    B. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND LOCATION OF MEMBERS PRIOR TO CUTTING ANY OPENINGS.
    C. SMALL ROUND OPENINGS SHALL BE ACCOMPLISHED BY CORE DRILLING.
    D. WHERE NEW REINFORCING TERMINATES AT EXISTING CONCRETE, DRILL AND EPOXY DOWELS MATCHING THE NEW REINFORCING INTO THE EXISTING CONCRETE WITH 6" EMBED, UNLESS OTHERWISE NOTED ON PLANS.

CONCRETE

18. 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 PSI.

19. 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.

20. 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.

21. DETAILING OF REINFORCING STEEL (INCLUDING HOOKS AND BENDS) SHALL BE IN 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.

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

    FOOTINGS AND OTHER UNFORMED SURFACES CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH . . . . . 3"
    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"
    COLUMN TIES OR SPIRALS AND BEAM STIRRUPS . . . . . 1-1/2"
    SLABS AND WALLS (INT. FACE). . . GREATER OF BAR DIAMETER PLUS 1/8" OR 3/4"

23. 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
12" WALLS	#4 @ 16 HORIZ.	#4 @ 18 VERTICAL	2 CURTAINS

24. 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 PRECAST.

25. 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

26. 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.

27. 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.

28. 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.

STEEL

29. 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.

30. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

TYPE OF MEMBER	ASTM SPECIFICATION	FY
A. WIDE FLANGE SHAPES	A992	50 KSI
B. OTHER SHAPES, PLATES, AND RODS	A36	36 KSI
C. OTHER SHAPES AND PLATES (NOTED GRADE 50 ON PLANS)	A572 (GRADE 50)	50 KSI
D. PIPE COLUMNS	A53 (E OR S, GR.B)	35 KSI
E. STRUCTURAL TUBING	A500 (GR.B)	
-SQUARE OR RECTANGULAR		46 KSI
-ROUND		42 KSI
-ANY SHAPE	ASTM A1085	50 KSI
F. CONNECTION BOLTS (3/4" ROUND, UNLESS SHOWN OTHERWISE)	A325-N	

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

32. ALL STEEL EXPOSED TO THE WEATHER OR IN CONTACT WITH GROUND SHALL BE CORROSION PROTECTED BY GALVANIZATION OR PROVIDED WITH EXTERIOR PAINT SYSTEM, UNLESS OTHERWISE NOTED.

33. 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.

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

35. 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.

36. 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.

STRUCTURAL ENGINEERING
2124 Third Avenue - Suite 100 - Seattle, WA 98121
p: 206.443.6212 ssfengineers.com
934 Broadway - Tacoma, WA 98402
p: 253.284.9470 ssfengineers.com

Copyright 2019 Swenson Say Fagét - All Rights Reserved

DANN J. SAY — STATE OF WASHINGTON — 23000 — REGISTERED PROFESSIONAL ENGINEER — 08/08/19

DESIGN: BDM
DRAWN: NHD
CHECKED: BDM
APPROVED: DJS

REVISIONS:

1	Corrections	Dec. 17, 2019

DPD:

PROJECT TITLE:
Rosenstein Residence
2035 81st Ave SE
Mercer Island, WA 98040

ARCHITECT:
Brandt Design Group
66 Bell Street, Unit 1
Seattle, WA 98121
PH 206.239.0850

ISSUE:
Permit

SHEET TITLE:
General Structural Notes

SCALE: -
DATE: August 8, 2019
PROJECT NO: 01519-2019-04
SHEET NO: S1.1

General Structural Notes

THE FOLLOWING APPLY UNLESS SHOWN OTHERWISE ON THE DRAWINGS

WOOD

37. 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)	DOUGLAS FIR-LARCH NO. 2 MINIMUM BASE VALUE, Fb = 900 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 MINIMUM BASE VALUE, Fc = 1000 PSI
STUDS, PLATES & MISC. FRAMING:		DOUGLAS-FIR-LARCH NO. 2

38. 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.

39. 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.

40. 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.

41. 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 1/2" (NOMINAL) WITH SPAN RATING 32/16.

FLOOR SHEATHING SHALL BE 3/4" (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.

42. 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.

43. 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.

44. FASTENERS AND TIMBER CONNECTORS USED WITH TREATED WOOD SHALL HAVE CORROSION RESISTANCE AS INDICATED IN THE FOLLOWING TABLE, UNLESS OTHERWISE NOTED.

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

SIZE	LENGTH	DIAMETER
6d	2"	0.113"
8d	2-1/2"	0.131"
10d	3"	0.148"
12d	3-1/4"	0.148"
16d BOX	3-1/2"	0.135"

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.

STRUCTURAL ENGINEERING

2124 Third Avenue - Suite 100 - Seattle, WA 98121
p: 206.443.6212 ssfengineers.com

934 Broadway - Tacoma, WA 98402
p: 253.284.9470 ssfengineers.com

Copyright 2019 Swenson Say Fagét - All Rights Reserved

DAN J. SAY — STATE OF WASHINGTON — 23000 — REGISTERED PROFESSIONAL ENGINEER

08/08/19

DESIGN: BDM
DRAWN: NHD
CHECKED: BDM
APPROVED: DJS

REVISIONS:

1	Corrections	Dec. 17, 2019

DPD:

PROJECT TITLE:

Rosenstein Residence
2035 81st Ave SE
Mercer Island, WA 98040

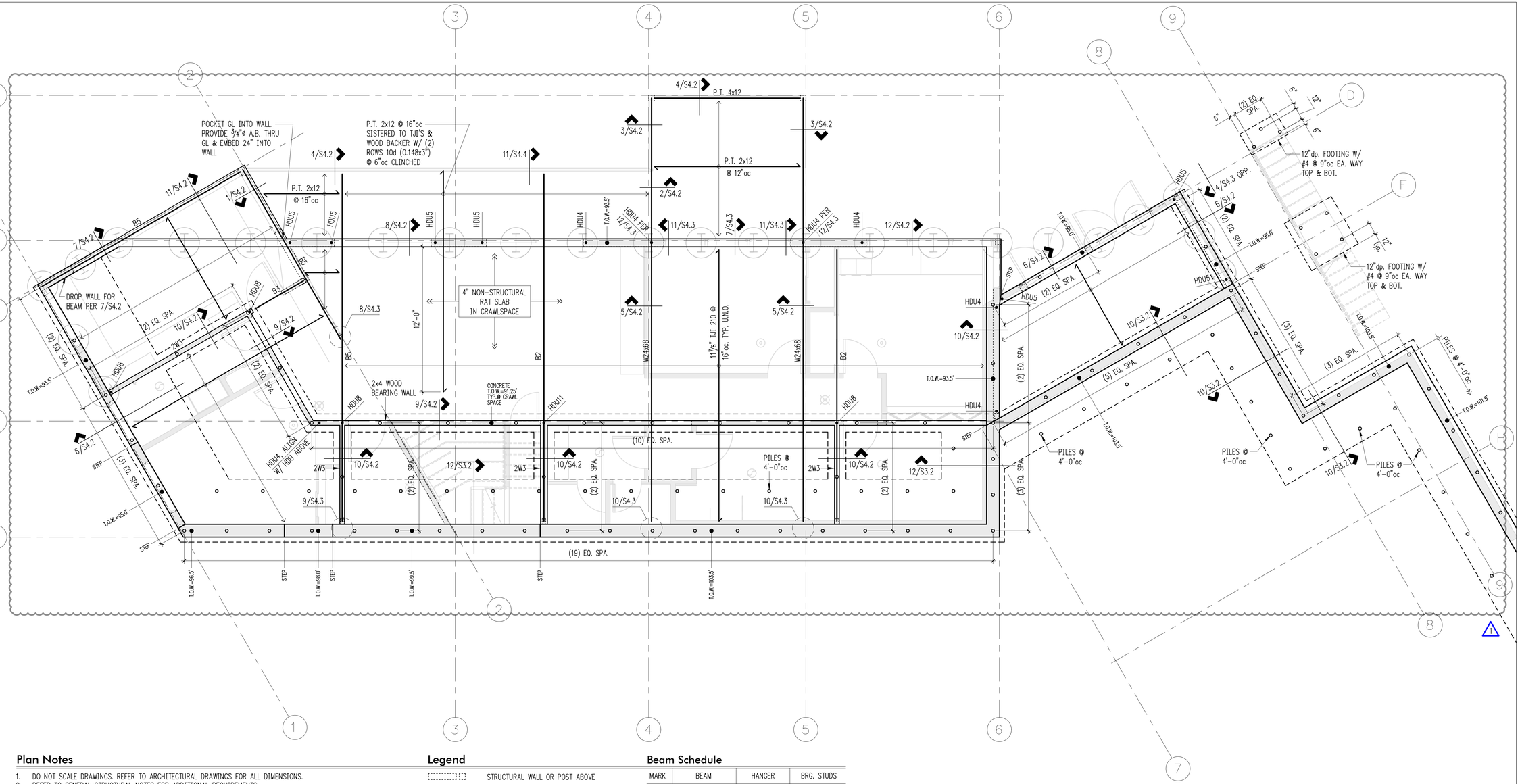
ARCHITECT:

Brandt Design Group
66 Bell Street, Unit 1
Seattle, WA 98121
PH 206.239.0850

ISSUE: Permit

SHEET TITLE: General Structural Notes

SCALE: -
DATE: August 8, 2019
PROJECT NO: 01519-2019-04
SHEET NO: S1.2



Plan Notes

1. DO NOT SCALE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.
2. REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.
3. THE BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE 18" MINIMUM BELOW EXTERIOR GRADE.
4. TYPICAL FLOOR FRAMING CONSISTS OF FLOORING PER ARCHITECT OVER 3/4" T&G APA RATED PLYWOOD FACE GRAIN PERPENDICULAR TO FRAMING PER PLAN, U.O.N.
5. NAIL FLOOR SHEATHING W/ 8D AT 6" OC AT FRAMED PANEL EDGES AND OVER SHEARWALLS, AND AT 12" OC IN FIELD.
6. PROVIDE BLOCKING/BRIDGING AT 8'-0" O.C. IN FLOOR FRAMING
7. "W_" INDICATES PLYWOOD SHEARWALL BELOW FRAMING SHOWN. REFER TO SHEARWALL SCHEDULE FOR WALL ATTACHMENTS. ALL EXTERIOR WOOD FRAMED WALLS ARE W6, U.O.N.
8. PROVIDE (2) BEARING STUDS AT EACH END OF ALL HEADERS AND BEAMS OVER 3'-0" IN LENGTH, U.O.N.
9. PROVIDE LCE COLUMN CAP AND BASE AT ALL BEAM TO COLUMN CONNECTIONS U.O.N.
10. ALL POSTS ABOVE SHALL BEAR FULLY ON BEAMS OR POSTS BELOW AND SHALL HAVE FULL CONTINUOUS BEARING THROUGH FLOORS TO FOUNDATION.

Legend

	STRUCTURAL WALL OR POST ABOVE
	STRUCTURAL WALL BELOW
	NON-STRUCTURAL WALL BELOW
	STEM WALL & FOOTING
Wx	SHEARWALL PER 12/S4.1
	SPAN DIRECTION
	EXTENT OF JOISTS
	HEADER/BEAM PER PLAN
	HANGER
	INVERTED HANGER
Bx	BEAM PER SCHEDULE, THIS SHEET
XX	HOLDOWN PER 12/S3.1
	3"ø PIN PILE, TYP. (98 total this sheet)
	CONCRETE WALL
T.O.W.	TOP OF WALL ELEVATION. ELEVATIONS ARE ESTIMATES, CONTRACTOR TO CONFIRM W/ ARCHITECT & ACTUAL SITE CONDITIONS

1

Beam Schedule

MARK	BEAM	HANGER	BRG. STUDS
B1	LSL 1 3/4x11 7/8	HU11	2
B2	LSL 3 1/2x11 7/8	HHUS410	3
B3	(3)LVL 1 3/4x11 7/8	HGUS5.50/12	4
B4	(4)LVL 1 3/4x11 7/8	HGUS7.25/12	5
B5	P.T. GL 8 3/4x15	–	–

Basement Floor Framing/Foundation Plan

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

PROJECT NORTH TRUE NORTH

STRUCTURAL ENGINEERING

2124 Third Avenue - Suite 100 - Seattle, WA 98121
p: 206.443.6212 ssfengineers.com

934 Broadway - Tacoma, WA 98402
p: 253.284.9470 ssfengineers.com

Copyright 2019 Swenson Say Fagét - All Rights Reserved

DYAN J. SAY — STATE OF WASHINGTON — 43000 — REGISTERED PROFESSIONAL ENGINEER — 08/08/19

DESIGN: BDM
DRAWN: NHD
CHECKED: BDM
APPROVED: DJS

REVISIONS:

1	Corrections	Dec. 17, 2019

DPD:

PROJECT TITLE:

Rosenstein Residence
2035 81st Ave SE
Mercer Island, WA 98040

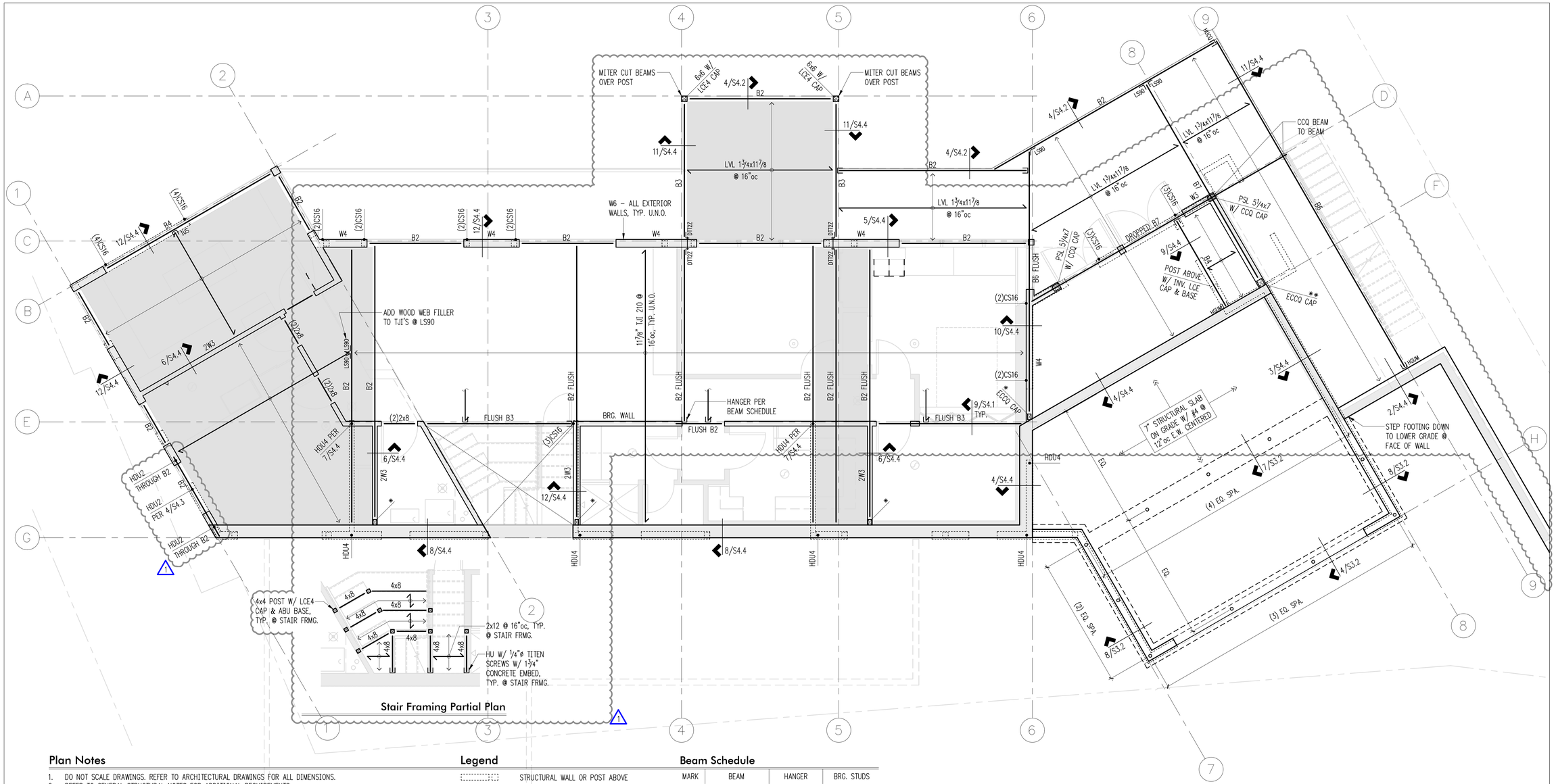
ARCHITECT:

Brandt Design Group
66 Bell Street, Unit 1
Seattle, WA 98121
PH 206.239.0850

ISSUE: Permit

SHEET TITLE: Basement Floor Framing/ Foundation Plan

SCALE: 1/4" = 1'-0" U.N.O.
DATE: August 8, 2019
PROJECT NO: 01519-2019-04
SHEET NO: S2.1



Plan Notes

1. DO NOT SCALE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.
2. REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.
3. THE BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE 18" MINIMUM BELOW EXTERIOR GRADE.
4. INTERIOR STRUCTURAL SLABS ON GRADE PER PLAN. BELOW SLAB PROVIDE A 10-MIL VAPOR BARRIER OVER 6" MINIMUM FREE DRAINING GRAVEL OVER FIRM NATIVE SOILS OR STRUCTURAL FILL.
5. TYPICAL FLOOR FRAMING CONSISTS OF FLOORING PER ARCHITECT OVER 3/4" T&G APA RATED PLYWOOD FACE GRAIN PERPENDICULAR TO FRAMING PER PLAN, U.O.N.
6. NAIL FLOOR SHEATHING W/ 8D AT 6" OC AT FRAMED PANEL EDGES AND OVER SHEARWALLS, AND AT 12" OC IN FIELD.
7. PROVIDE BLOCKING/BRIDGING AT 8'-0" O.C. IN FLOOR FRAMING
8. "W_" INDICATES PLYWOOD SHEARWALL BELOW FRAMING SHOWN. REFER TO SHEARWALL SCHEDULE FOR WALL ATTACHMENTS. ALL EXTERIOR WOOD FRAMED WALLS ARE W6, U.O.N.
9. PROVIDE (2) BEARING STUDS AT EACH END OF ALL HEADERS AND BEAMS OVER 3'-0" IN LENGTH, U.O.N.
10. PROVIDE LCE COLUMN CAP AND BASE AT ALL BEAM TO COLUMN CONNECTIONS U.O.N.
11. ALL POSTS ABOVE SHALL BEAR FULLY ON BEAMS OR POSTS BELOW AND SHALL HAVE FULL CONTINUOUS BEARING THROUGH FLOORS TO FOUNDATION.

Legend

- STRUCTURAL WALL OR POST ABOVE
- STRUCTURAL WALL BELOW
- NON-STRUCTURAL WALL BELOW
- STEM WALL & FOOTING
- Wx — SHEARWALL PER 12/S4.1
- SPAN DIRECTION
- EXTENT OF JOISTS
- HEADER/BEAM PER PLAN
- HANGER
- INVERTED HANGER
- Bx — BEAM PER SCHEDULE, THIS SHEET
- BLOCKED FLOOR DIAPHRAGM: 2x4 FLAT BLKG. AT ALL PLYWOOD PANEL EDGES. NAIL ALL PLYWOOD PANEL EDGES W/ 8d @ 4"oc & @ 12"oc FIELD
- CSxx — HOLDOWN STRAP PER 10/S4.1
- HDUx — HOLDOWN PER 12/S3.1
- 3"ø PIN PILE, TYP. (10 total this sheet)
- * — 4x6 END STUD BOLTED TO CONCRETE WALL W/ ⅝"ø TITEN HD @ 12"oc W/ 4" EMBED INTO CONCRETE
- ** — PSL 5¼x7 BOLTED TO CONCRETE WALL W/ ⅝"ø TITEN HD @ 12"oc W/ 4" EMBED INTO CONCRETE

Beam Schedule

MARK	BEAM	HANGER	BRG. STUDS
B1	LSL 1¾x11⅞	HU11	2
B2	LSL 3½x11⅞	HHUS410	3
B3	(3)LVL 1¾x11⅞	HGUS5.50/12	4
B4	(4)LVL 1¾x11⅞	HGUS7.25/12	5
B5	GL 5½x12	–	–
B6	GL 5½x18	–	–
B7	GL 8¾x18	–	–

Main Floor Framing Plan

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

PROJECT NORTH / TRUE NORTH

STRUCTURAL ENGINEERING
2124 Third Avenue - Suite 100 - Seattle, WA 98121
p: 206.443.6212 ssfengineers.com
934 Broadway - Tacoma, WA 98402
p: 253.284.9470 ssfengineers.com

Copyright 2019 Swenson Say Faget - All Rights Reserved

DAN J. SAY — STATE OF WASHINGTON — 43000 — REGISTERED PROFESSIONAL ENGINEER — 08/08/19

DESIGN: BDM
DRAWN: NHD
CHECKED: BDM
APPROVED: DJS

REVISIONS:
1 Corrections Dec. 17, 2019

DPD:

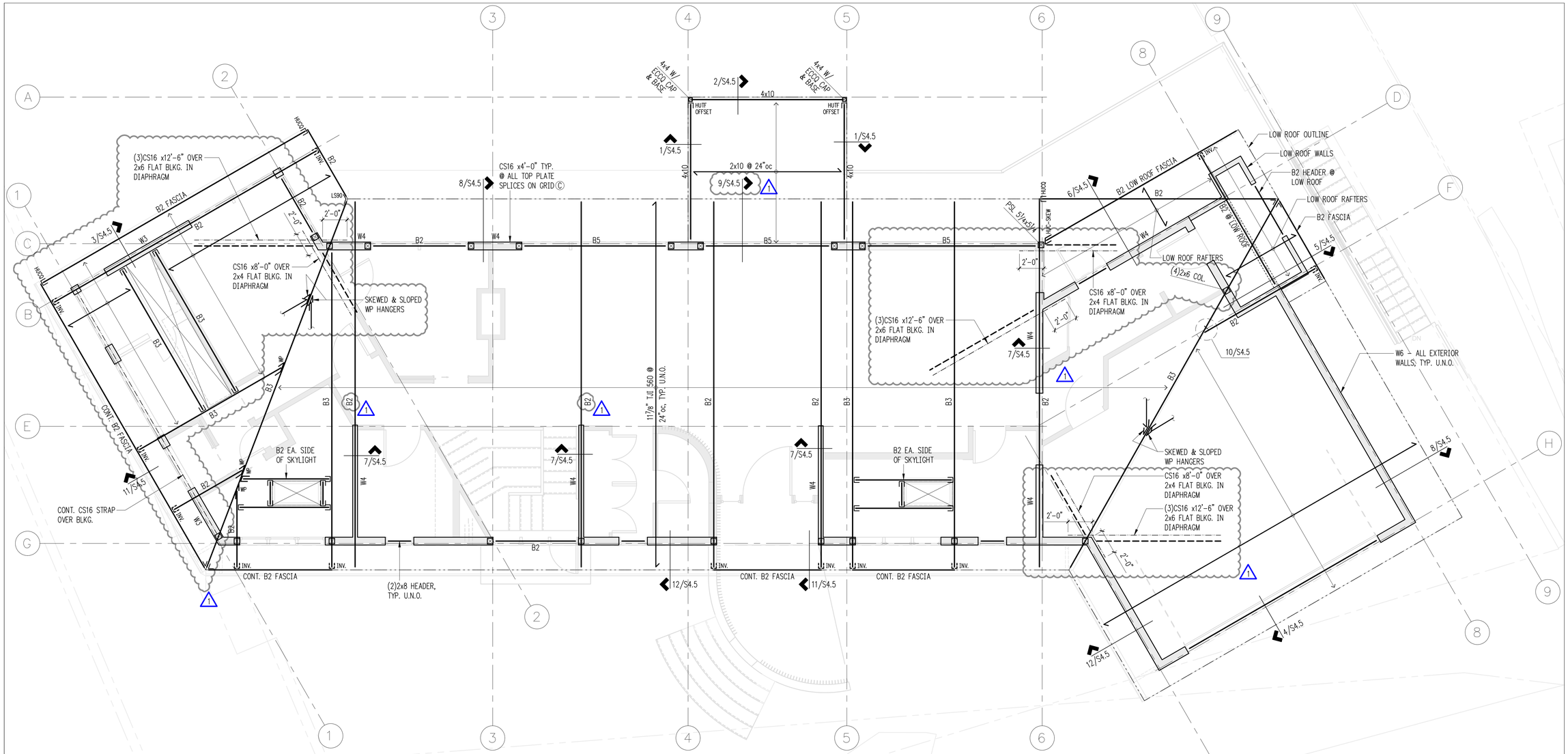
PROJECT TITLE:
Rosenstein Residence
2035 81st Ave SE
Mercer Island, WA 98040

ARCHITECT:
Brandt Design Group
66 Bell Street, Unit 1
Seattle, WA 98121
PH 206.239.0850

ISSUE: Permit

SHEET TITLE: Main Floor Framing Plan

SCALE: 1/4" = 1'-0" U.N.O.
DATE: August 8, 2019
PROJECT NO: 01519-2019-04
SHEET NO: S2.2



Plan Notes

1. DO NOT SCALE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.
2. REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.
3. "W_" INDICATES PLYWOOD SHEARWALL BELOW FRAMING SHOWN. REFER TO SHEARWALL SCHEDULE FOR WALL ATTACHMENTS. ALL EXTERIOR WOOD FRAMED WALLS ARE W6, U.O.N.
4. PROVIDE (2) BEARING STUDS AT EACH END OF ALL HEADERS AND BEAMS OVER 3'-0" IN LENGTH, U.O.N.
5. PROVIDE LCE COLUMN CAP AND BASE AT ALL BEAM TO COLUMN CONNECTIONS U.O.N.
6. ALL POSTS ABOVE SHALL BEAR FULLY ON BEAMS OR POSTS BELOW AND SHALL HAVE FULL CONTINUOUS BEARING THROUGH FLOORS TO FOUNDATION.
7. TYPICAL ROOF FRAMING CONSISTS OF ROOFING PER ARCHITECTURAL DRAWINGS OVER 1/2" CDX APA RATED SHEATHING (EXPOSURE 1), FACE GRAIN PERPENDICULAR TO FRAMING PER PLAN, U.O.N.
8. BLOCKED ROOF DIAPHRAGM: 2x4 FLAT BLKG. AT ALL PLYWOOD PANEL EDGES. NAIL ALL PLYWOOD PANEL EDGES & OVER SHEARWALLS W/ 8d @ 4"oc & @ 12"oc FIELD
9. PROVIDE H8 AT ENDS OF ALL NEW RAFTERS, U.O.N.

Legend

	STRUCTURAL WALL BELOW
	NON-STRUCTURAL WALL BELOW
Wx	SHEARWALL PER 12/S4.1
	SPAN DIRECTION
	EXTENT OF JOISTS
	HEADER/BEAM PER PLAN
	HANGER
	INVERTED HANGER
Bx	BEAM PER SCHEDULE, THIS SHEET

Beam Schedule

MARK	BEAM	HANGER	BRG. STUDS
B1	LSL 1 3/4x11 7/8	HU11	2
B2	LSL 3 1/2x11 7/8	HHUS410	3
B3	(3)LVL 1 3/4x11 7/8	HGUS5.50/12	4
B4	(4)LVL 1 3/4x11 7/8	HGUS7.25/12	5
B5	GL 5 1/8x15	HGUS5.50/12	(3)2x4/(3)2x6

Roof Framing Plan

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

PROJECT NORTH / TRUE NORTH

SSF STRUCTURAL ENGINEERING

2124 Third Avenue - Suite 100 - Seattle, WA 98121
p: 206.443.6212 ssfengineers.com

934 Broadway - Tacoma, WA 98402
p: 253.284.9470 ssfengineers.com

Copyright 2019 Swenson Say Faget - All Rights Reserved

DAN J. SAY — STATE OF WASHINGTON — 43000 — REGISTERED PROFESSIONAL ENGINEER — 08/08/19

DESIGN: BDM
DRAWN: NHD
CHECKED: BDM
APPROVED: DJS

REVISIONS:

1	Corrections	Dec. 17, 2019

DPD:

PROJECT TITLE:

Rosenstein Residence
2035 81st Ave SE
Mercer Island, WA 98040

ARCHITECT:

Brandt Design Group
66 Bell Street, Unit 1
Seattle, WA 98121
PH 206.239.0850

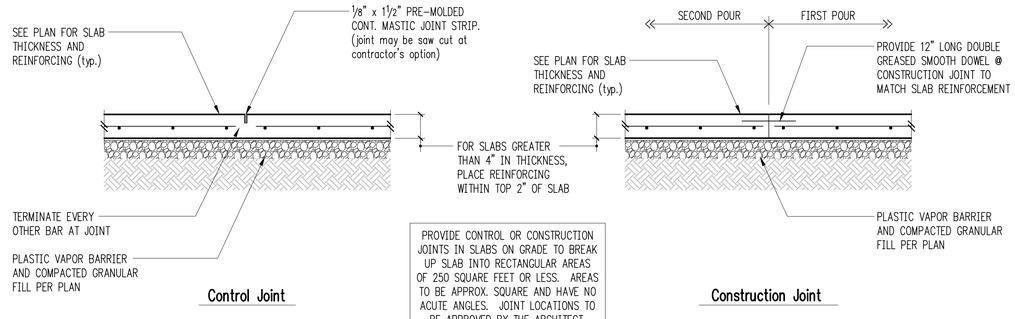
ISSUE: Permit

SHEET TITLE: Roof Framing Plan

SCALE: 1/4" = 1'-0" U.N.O.
DATE: August 8, 2019
PROJECT NO: 01519-2019-04
SHEET NO: S2.3

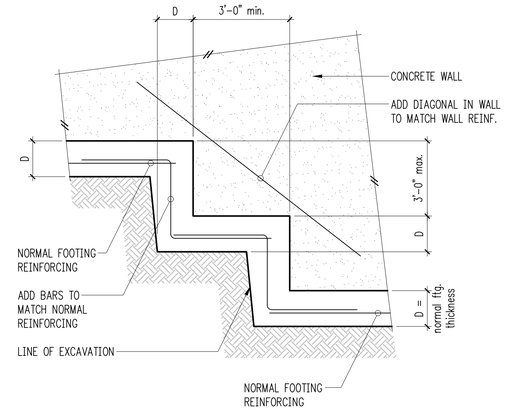
1

2

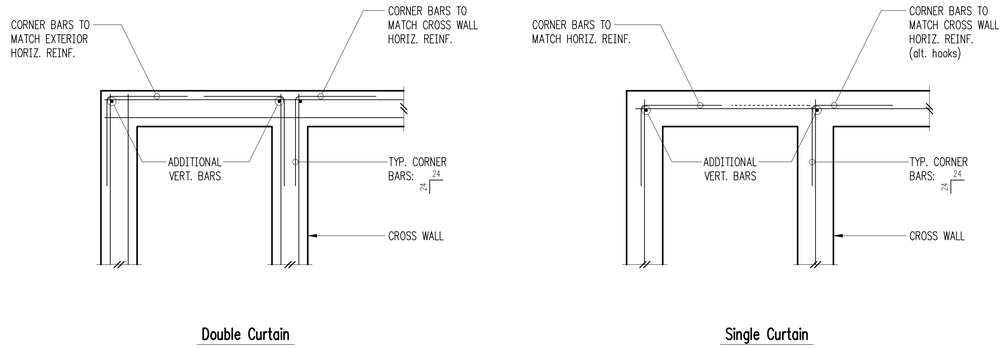


Typical Slab Joints 4

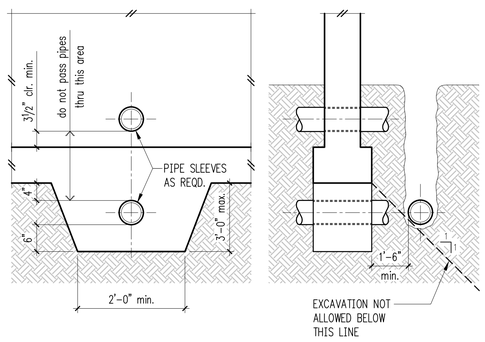
5



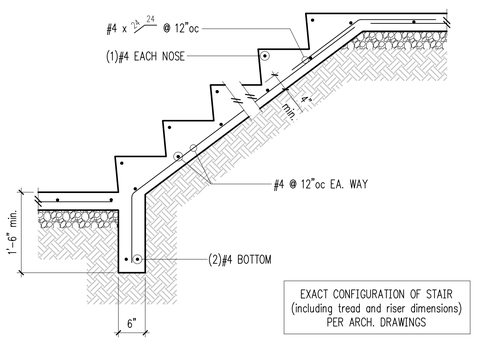
Typical Stepped Footing 6



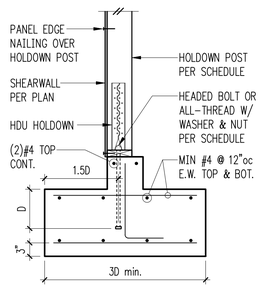
Typical Corner Bars at Concrete Walls and Footings 8



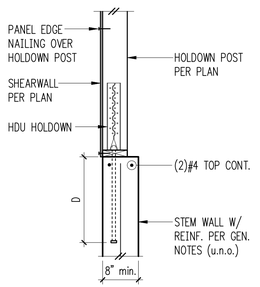
Pipe and Trench Locations 9



Typical Stair On Grade 10



HDU Into Footing Option



HDU Into Stem Wall Option

Holdown Schedule

Plan Mark	Screws	Anchor Bolt	Min. A.B. Embed (D)		Holdown Post ①	
			Stem Wall	Footing	if 2x4	if 2x6
HDU2-SDS2.5	(6)SDS 1/4"x2 1/2"	5/8"ø	12"	4"	(2) 2x4	(2) 2x6
HDU4-SDS2.5	(10)SDS 1/4"x2 1/2"	5/8"ø	18"	6"	4x4	4x6
HDU5-SDS2.5	(14)SDS 1/4"x2 1/2"	5/8"ø	SB5/8x24	7"	4x4	4x6
HDU8-SDS2.5	(20)SDS 1/4"x2 1/2"	7/8"ø	SSTB28	8"	4x6	6x6
HDU11-SDS2.5	(30)SDS 1/4"x2 1/2"	1"ø	SB1x30	10"	4x8	6x6
HDU14-SDS2.5	(36)SDS 1/4"x2 1/2"	1"ø	N/A	12"	4x8	6x6

① MINIMUM SIZE OF POST AT END OF WALL UNLESS OTHERWISE NOTED ON FRAMING PLANS.

Typical HDU Holdown 12

STRUCTURAL ENGINEERING
2124 Third Avenue - Suite 100 - Seattle, WA 98121
p: 206.443.6212 ssfengineers.com
934 Broadway - Tacoma, WA 98402
p: 253.284.9470 ssfengineers.com

Copyright 2019 Swenson Say Faget - All Rights Reserved

DAN J. SAY — STATE OF WASHINGTON — 23000 — REGISTERED PROFESSIONAL ENGINEER

08/08/19

DESIGN: BDM
DRAWN: NHD
CHECKED: BDM
APPROVED: DJS

REVISIONS:

1	Corrections	Dec. 17, 2019

DPD:

PROJECT TITLE:
Rosenstein Residence
2035 81st Ave SE
Mercer Island, WA 98040

ARCHITECT:
Brandt Design Group
66 Bell Street, Unit 1
Seattle, WA 98121
PH 206.239.0850

ISSUE: Permit

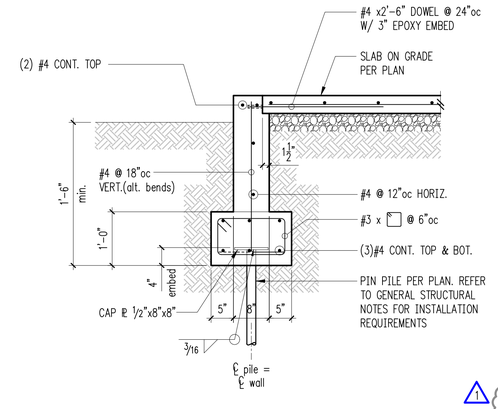
SHEET TITLE: Typical Concrete Details

SCALE: 3/4" = 1'-0" U.N.O.
DATE: August 8, 2019
PROJECT NO: 01519-2019-04
SHEET NO: S3.1

1

2

3

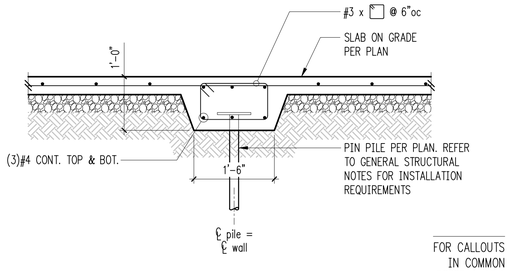


1 4

4

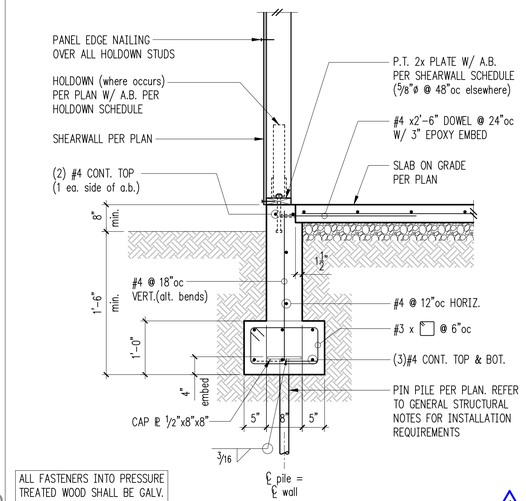
5

6



FOR CALLOUTS IN COMMON REFER 8/S3.2

1 7



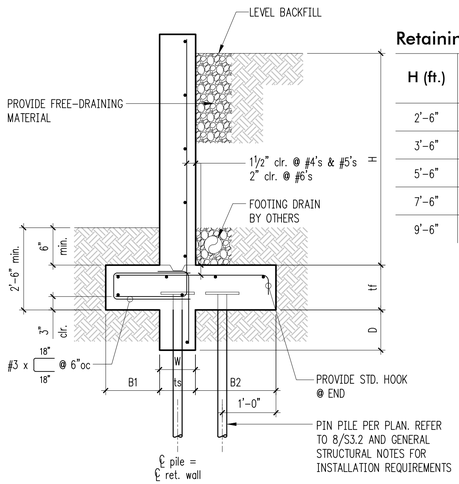
ALL FASTENERS INTO PRESSURE TREATED WOOD SHALL BE GALV. OR STAINLESS STEEL PER GENERAL NOTES

1 8

Exterior Wall w/ Slab on Grade

5

6



Retaining Wall Schedule

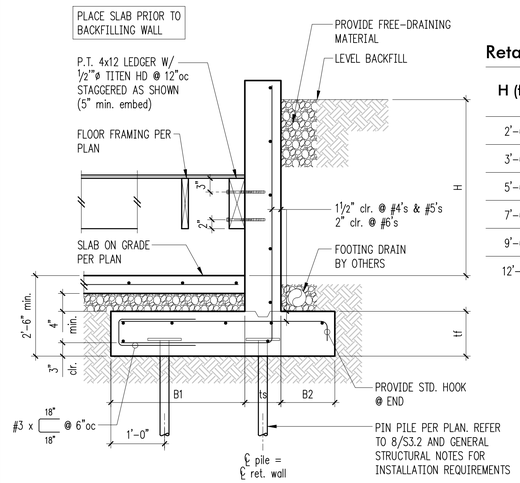
H (ft.)	B1	ts	B2	tf	Stem Reinforcing		Footing Reinforcing		D	W	Key Reinforcing	
					Vert.	Horiz.	Top	Longit.			Vert.	Longit.
2'-6"	5"	8"	5"	12"	#4 @ 18"oc	#4 @ 12"oc	–	(2)#4	6"	8"	#4 @ 12"oc	(1)#4
3'-6"	5"	8"	1'-0"	12"	#4 @ 18"oc	#4 @ 12"oc	#4 @ 18"oc	(2)#4	9"	8"	#4 @ 12"oc	(1)#4
5'-6"	5"	8"	2'-3"	12"	#4 @ 12"oc	#4 @ 12"oc	#4 @ 12"oc	(4)#4	21"	8"	#4 @ 12"oc	(2)#4
7'-6"	1'-0"	8"	2'-9"	12"	#5 @ 12"oc	#4 @ 12"oc	#5 @ 12"oc	(5)#5	32"	10"	#4 @ 9"oc	(3)#5
9'-6"	1'-9"	8"	3'-9"	18"	#7 @ 12"oc	#4 @ 12"oc	#6 @ 12"oc	(8)#5	42"	12"	#5 @ 12"oc	(6)#5

1 10

10

11

12



Retaining Wall Schedule W/ Slab

H (ft.)	B1	ts	B2	tf	Stem Reinforcing		Footing Reinforcing	
					Vert.	Horiz.	Top	Longit.
2'-6"	5"	8"	5"	12"	#4 @ 18"oc	#4 @ 12"oc	–	(2)#4
3'-6"	1'-0"	8"	5"	12"	#4 @ 18"oc	#4 @ 12"oc	–	(2)#4
5'-6"	2'-3"	8"	5"	12"	#4 @ 12"oc	#4 @ 12"oc	–	(4)#4
7'-6"	2'-9"	8"	1'-0"	12"	#5 @ 12"oc	#4 @ 12"oc	#4 @ 9"oc	(6)#5
9'-6"	3'-9"	8"	1'-6"	18"	#7 @ 12"oc	#4 @ 12"oc	#5 @ 9"oc	(8)#5
12'-0"	4'-6"	10"	2'-3"	18"	#9 @ 12"oc	#5 @ 12"oc	#5 @ 9"oc	(9)#5

1 12

STRUCTURAL ENGINEERING

2124 Third Avenue - Suite 100 - Seattle, WA 98121
p: 206.443.6212 ssfengineers.com

934 Broadway - Tacoma, WA 98402
p: 253.284.9470 ssfengineers.com

Copyright 2019 Swenson Say Fagét - All Rights Reserved

DAN J. SAY — STATE OF WASHINGTON — 23000 — REGISTERED PROFESSIONAL ENGINEER

08/08/19

DESIGN: BDM
DRAWN: NHD
CHECKED: BDM
APPROVED: DJS

REVISIONS:

1	Corrections	Dec. 17, 2019

DPD:

PROJECT TITLE:

Rosenstein Residence
2035 81st Ave SE
Mercer Island, WA 98040

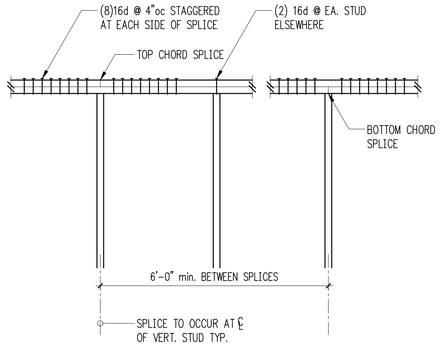
ARCHITECT:

Brandt Design Group
66 Bell Street, Unit 1
Seattle, WA 98121
PH 206.239.0850

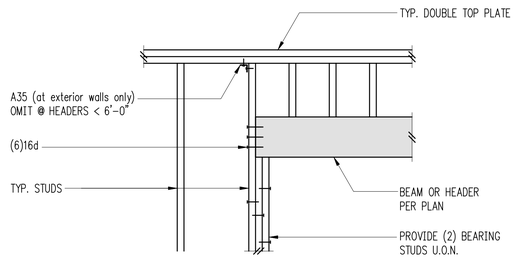
ISSUE: Permit

SHEET TITLE: Foundation Details

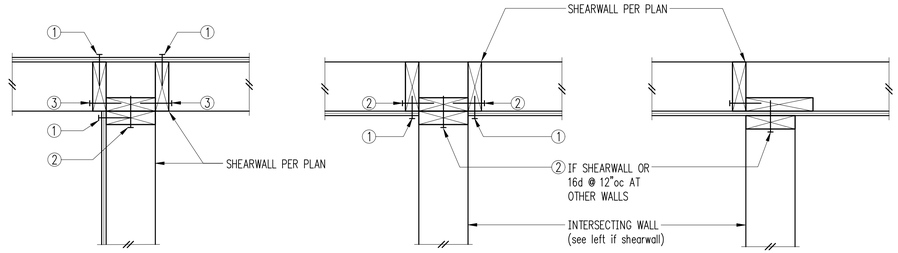
SCALE: 3/4" = 1'-0" U.N.O.
DATE: August 8, 2019
PROJECT NO: 01519-2019-04
SHEET NO: S3.2



Typical Top Plate Splice 1



Typical Header Support w/2 Bearing Studs 2

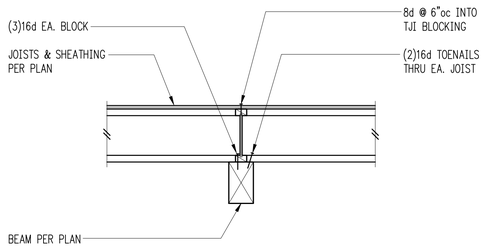


① PLYWOOD PANEL EDGE NAILING PER SHEARWALL SCHEDULE

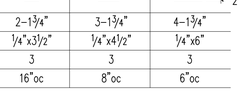
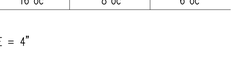
② BASE PLATE NAILING PER SHEARWALL SCHEDULE

③ 16d @ 8"oc

Typical Shearwall Intersections 4

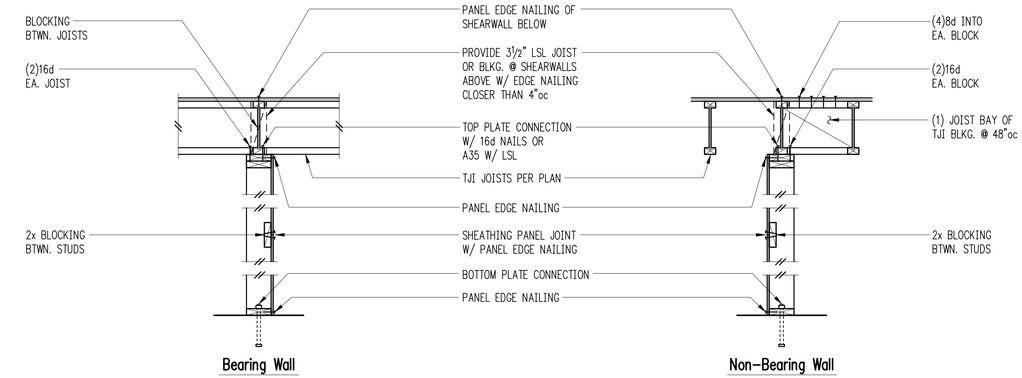


Typical Header Beam 5

	A	B	C
PLAN VIEW			
SECTION			
# OF WOOD BMS (LVL)	2–1¾"	3–1¾"	4–1¾"
SDS SCREW SIZE	¼"x3½"	¼"x4½"	¼"x6"
# OF SDS SCREWS	3	3	3
SPACING OF SDS SCREWS	16"oc	8"oc	6"oc

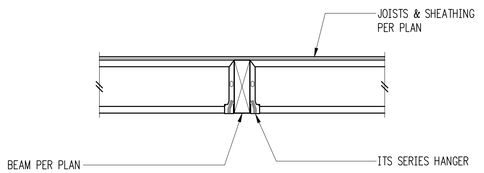
NOTES:
– MIN. SCREW END DISTANCE = 4"

Sistering Schedule for Multi Beams 6

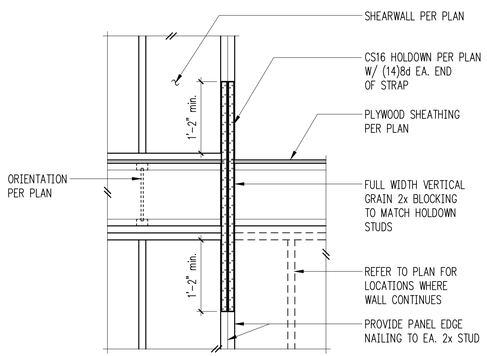


NOTE:
SEE SHEARWALL SCHEDULE FOR ALL NAILING AND CONNECTIONS, NOT OTHERWISE NOTED

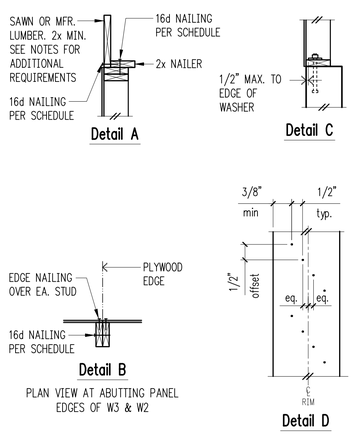
Typical Shearwall Construction 8



Typical Flush Beam 9



Typical CS16 Holdown 10



Shearwall Schedule ①②③⑥⑦⑧

Mark	Sheathing	Panel Edge Nailing	Top Plate Connection		Base Plate Connection	
			if TJI	if Wood ⑨	at Wood ⑪⑫	at Concrete
W6	15/32" CDX PLYWOOD	8d @ 6"oc	16d @ 6"oc	A35 @ 24"oc ⑩	16d @ 6"oc	⅝"ø A.B. @ 48"oc
W4	15/32" CDX PLYWOOD	8d @ 4"oc	16d @ 4"oc	A35 @ 16"oc ⑩	(2)rows 16d @ 6"oc	⅝"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 @ 6"oc	⅝"ø A.B. @ 24"oc
W2 ④	15/32" CDX PLYWOOD	8d @ 2"oc	(2)rows 16d @ 4"oc	A35 @ 9"oc ⑩	(2)rows 16d @ 4"oc ⑬	⅝"ø A.B. @ 16"oc
2W3 ⑤	15/32" CDX PLYWD. EA. SIDE	8d @ 3"oc EA. SIDE	n/a	A35 @ 6"oc	(3)rows 16d @ 4"oc ⑭	⅝"ø A.B. @ 16"oc
2W2 ⑤	15/32" CDX PLYWD. EA. SIDE	8d @ 2"oc EA. SIDE	n/a	HGA10KT @ 8"oc	(3)rows 16d @ 4"oc ⑭	⅝"ø A.B. @ 12"oc
2W2–10 ⑮	15/32" CDX PLYWD. EA. SIDE	10d @ 2"oc EA. SIDE	n/a	HGA10KT @ 6"oc	(4)rows 16d @ 4"oc ⑭	⅝"ø A.B. @ 12"oc

① BLOCK PANEL EDGES WITH 2x MIN. LAID FLAT AND NAIL PANELS TO INTERMEDIATE SUPPORTS WITH 8d @ 12"o.c.
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 BE SUBSTITUTED FOR ANCHOR BOLTS W/ 4" EMBEDMENT. ALL BOLTS SHALL HAVE 3" x 3" x 1/4" MIN. PLATE WASHERS. PLATE WASHERS SHALL EXTEND TO WITHIN 1/2" OF THE EDGE OF THE BOTTOM PLATE ON THE SIDE WITH SHEATHING. SEE DETAIL C.
④ 3x STUDS OR DOUBLE STUDS NAILED TOGETHER W/ BASE PLATE NAILING ARE REQUIRED AT ABUTTING PANEL EDGES OF W3 AND W2. SEE DETAIL B. WHERE 3x STUDS ARE USED FOR W2, STAGGER NAILS AT ADJOINING PANEL EDGES.
⑤ 3x FOUNDATION SILL PLATES ARE REQUIRED FOR 2W3 AND 2W2. 3x STUDS ARE REQUIRED AT ABUTTING PANEL EDGES AND PANEL JOINTS SHALL BE OFFSET EACH SIDE OF WALL. STAGGER NAILS AT ADJOINING PANEL EDGES. 3x STUD, MIN., REQUIRED AT END OF SHEARWALL.
⑥ TWO STUDS MINIMUM ARE REQUIRED AT EACH END OF ALL SINGLE–SIDED SHEARWALLS. ALL END STUDS SHALL RECEIVE PANEL EDGE NAILING. SEE PLANS AND HOLDOWN SCHEDULE FOR ALTERNATE REQUIREMENTS.
⑦ ALL EXTERIOR WALLS SHALL BE W6, UNLESS NOTED OTHERWISE.
⑧ 7/16" O.S.B. MAY BE SUBSTITUTED FOR 15/32" CDX, EXCEPT AT 10d PANEL EDGE NAILING.
⑨ LTP4's (HORIZONTAL ORIENTATION) W/ 8d COMMON MAY BE SUBSTITUTED FOR A35's AT CONTRACTORS OPTION.
⑩ A 2x NAILER ATTACHED W/ BASE PLATE NAILING PER DETAIL A MAY BE SUBSTITUTED FOR A35's AT CONTRACTORS OPTION.
⑪ AT MULTI–ROW NAILING, MINIMUM OFFSET BETWEEN ROWS AND ROW SPACING 1/2", SEE DETAIL D.
⑫ LVL RIMS PERMITTED AT SINGLE SIDED SHEAR WALLS ONLY.
⑬ PROVIDE (3) ROWS 16d @ 6"oc AT LVL RIMS.
⑭ MINIMUM RIM OR JOIST 3½" WIDE BELOW SHEARWALL.

Shearwall Schedule 12

STRUCTURAL ENGINEERING
2124 Third Avenue - Suite 100 - Seattle, WA 98121
p: 206.443.6212 ssfengineers.com
934 Broadway - Tacoma, WA 98402
p: 253.284.9470 ssfengineers.com

Copyright 2019 Swenson Say Faget - All Rights Reserved

DAN J. SAY STATE OF WASHINGTON 23000 REGISTERED PROFESSIONAL ENGINEER
08/08/19

DESIGN: BDM
DRAWN: NHD
CHECKED: BDM
APPROVED: DJS

REVISIONS:
1 Corrections Dec. 17, 2019

DPD:

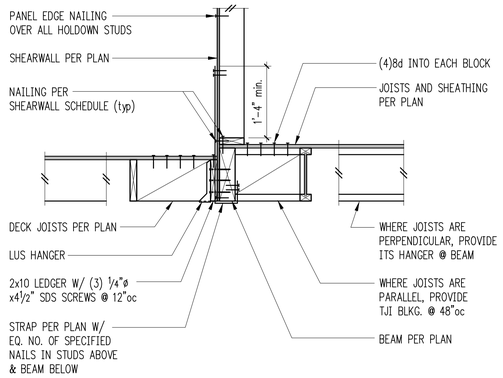
PROJECT TITLE:
Rosenstein Residence
2035 81st Ave SE
Mercer Island, WA 98040

ARCHITECT:
Brandt Design Group
66 Bell Street, Unit 1
Seattle, WA 98121
PH 206.239.0850

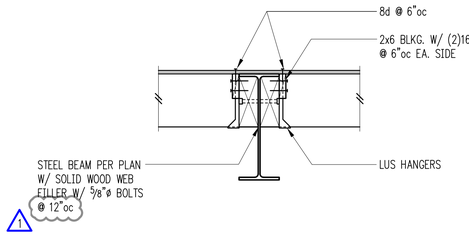
ISSUE:
Permit

SHEET TITLE:
Typical Wood Framing Details

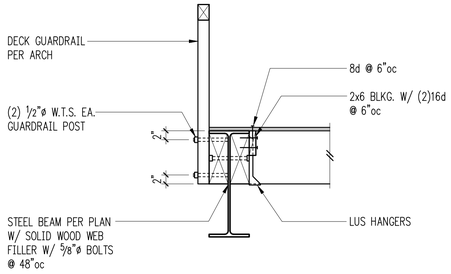
SCALE: 3/4" = 1'-0" U.N.O.
DATE: August 8, 2019
PROJECT NO: 01519-2019-04
SHEET NO:
S4.1



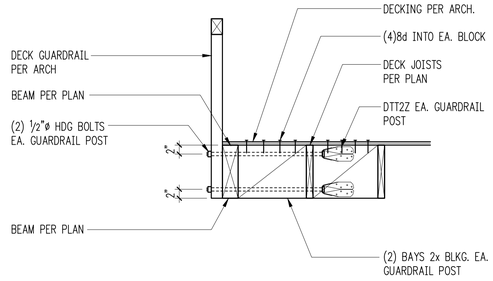
Exterior Beam w/ Deck 1



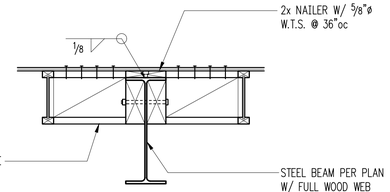
Joists Hung from Flush Beam - No Nailer 2



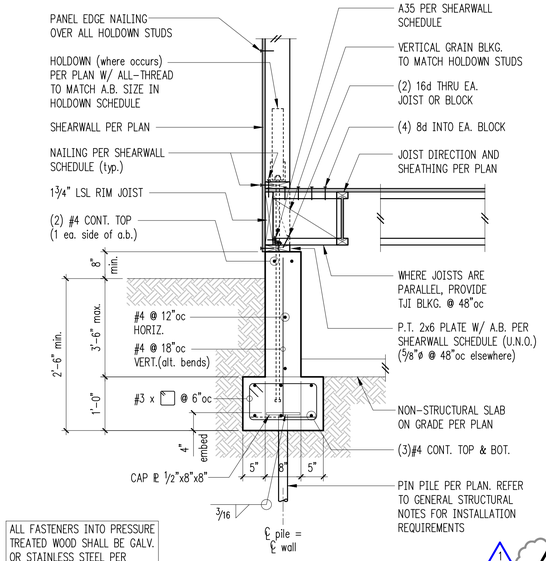
3



4

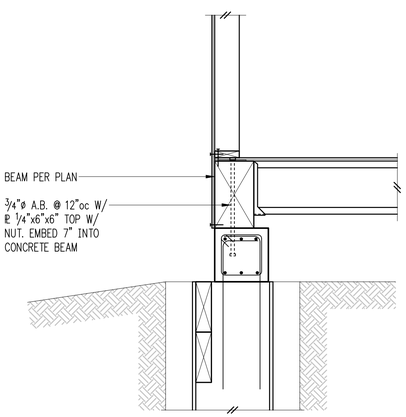


Steel Beam Parallel to Framing 5



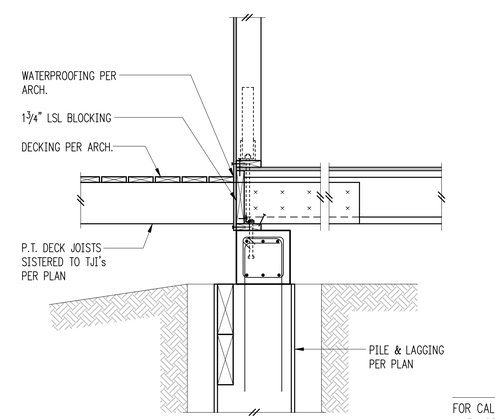
ALL FASTENERS INTO PRESSURE TREATED WOOD SHALL BE GALV. OR STAINLESS STEEL PER GENERAL NOTES

Exterior Framing at Crawl Space 6



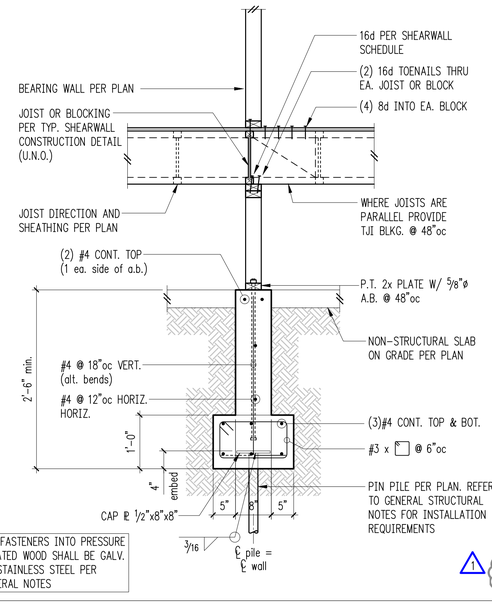
FOR CALLOUTS IN COMMON REFER 12/S4.2

7



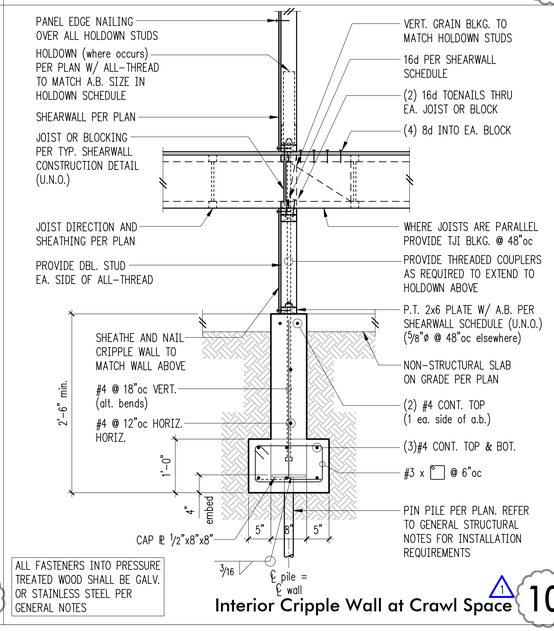
FOR CALLOUTS IN COMMON REFER 12/S4.2

Typical Deck Ledger Detail 8



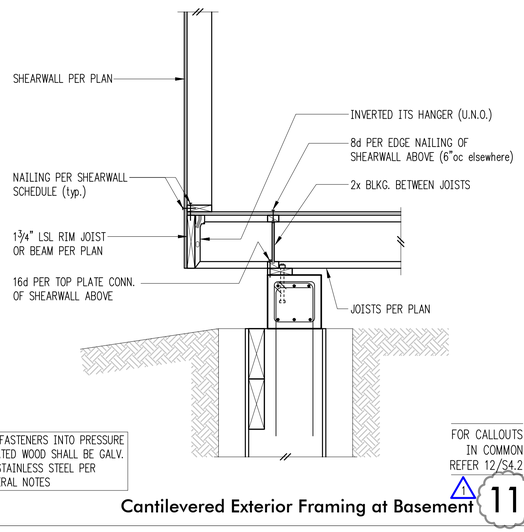
ALL FASTENERS INTO PRESSURE TREATED WOOD SHALL BE GALV. OR STAINLESS STEEL PER GENERAL NOTES

9



ALL FASTENERS INTO PRESSURE TREATED WOOD SHALL BE GALV. OR STAINLESS STEEL PER GENERAL NOTES

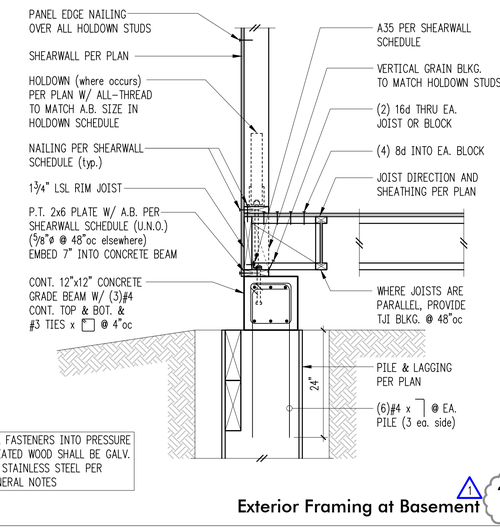
Interior Cripple Wall at Crawl Space 10



ALL FASTENERS INTO PRESSURE TREATED WOOD SHALL BE GALV. OR STAINLESS STEEL PER GENERAL NOTES

FOR CALLOUTS IN COMMON REFER 12/S4.2

11



ALL FASTENERS INTO PRESSURE TREATED WOOD SHALL BE GALV. OR STAINLESS STEEL PER GENERAL NOTES

Cantilevered Exterior Framing at Basement 11

Exterior Framing at Basement 12

STRUCTURAL ENGINEERING
2124 Third Avenue - Suite 100 - Seattle, WA 98121
p: 206.443.6212 ssfengineers.com
934 Broadway - Tacoma, WA 98402
p: 253.284.9470 ssfengineers.com

Copyright 2019 Swenson Say Fagét - All Rights Reserved

DAN J. SAY — STATE OF WASHINGTON — 53000 — REGISTERED PROFESSIONAL ENGINEER
08/08/19

DESIGN: BDM
DRAWN: NHD
CHECKED: BDM
APPROVED: DJS

REVISIONS:

1	Corrections	Dec. 17, 2019

DPD:

PROJECT TITLE:
Rosenstein Residence
2035 81st Ave SE
Mercer Island, WA 98040

ARCHITECT:
Brandt Design Group
66 Bell Street, Unit 1
Seattle, WA 98121
PH 206.239.0850

ISSUE: Permit

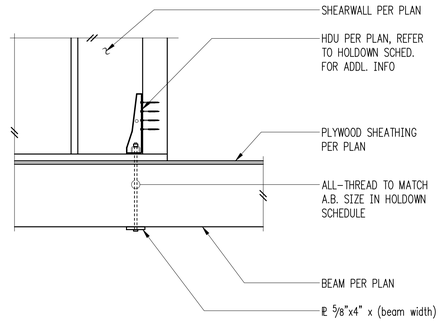
SHEET TITLE: Wood Framing Details

SCALE: ¾" = 1'-0" U.N.O.
DATE: August 8, 2019
PROJECT NO: 01519-2019-04
SHEET NO: S4.2

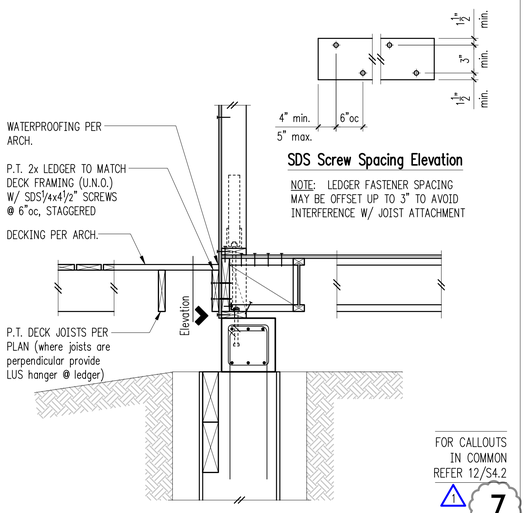
1

2

3



HDU at Floor Beam 1 4

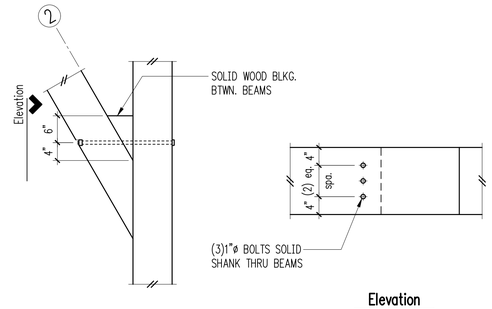


SDS Screw Spacing Elevation

NOTE: LEDGER FASTENER SPACING MAY BE OFFSET UP TO 3" TO AVOID INTERFERENCE W/ JOIST ATTACHMENT

FOR CALLOUTS IN COMMON REFER 12/S4.2

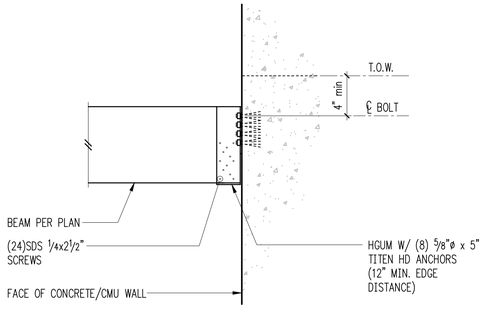
7



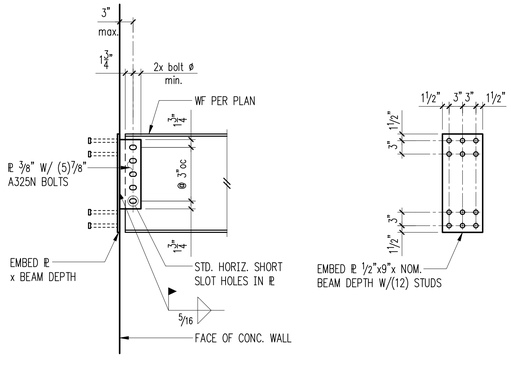
Elevation

Plan View

8



HGUM Beam Connection to Concrete Wall 1 9

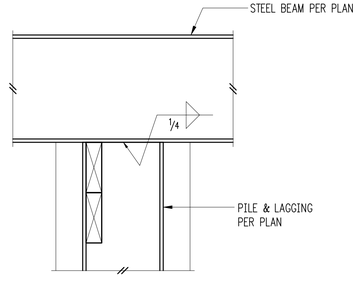


NOTES:

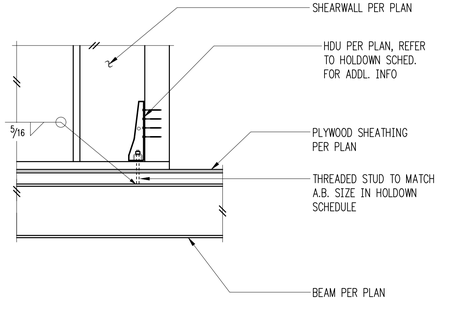
- ALL STUDS TO BE 3/4"ø x 6" U.O.N.
- DISTANCE FROM EDGE OF CONCRETE TO CENTER OF NEAREST STUD SHALL BE A MINIMUM OF 6" HORIZONTALLY AND 7 1/2" VERTICALLY
- PLACE EMBEDDED PLATE IN WALL SUCH THAT ATTACHED PLATE WILL BE VERTICALLY CENTERED

10

NOTE: WOOD FRAMING NOT SHOWN FOR CLARITY



11



Holdown at WF Beam - HDU 12

SSF STRUCTURAL ENGINEERING

2124 Third Avenue - Suite 100 - Seattle, WA 98121
p: 206.443.6212 ssfengineers.com

934 Broadway - Tacoma, WA 98402
p: 253.284.9470 ssfengineers.com

Copyright 2019 Swenson Say Faget - All Rights Reserved

DJS

08/08/19

DESIGN: BDM
DRAWN: NHD
CHECKED: BDM
APPROVED: DJS

REVISIONS:

1	Corrections	Dec. 17, 2019

DPD:

PROJECT TITLE:

Rosenstein Residence
2035 81st Ave SE
Mercer Island, WA 98040

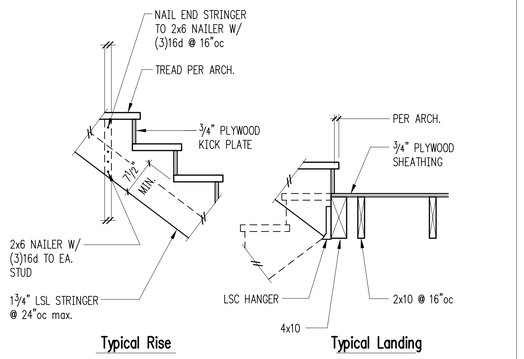
ARCHITECT:

Brandt Design Group
66 Bell Street, Unit 1
Seattle, WA 98121
PH 206.239.0850

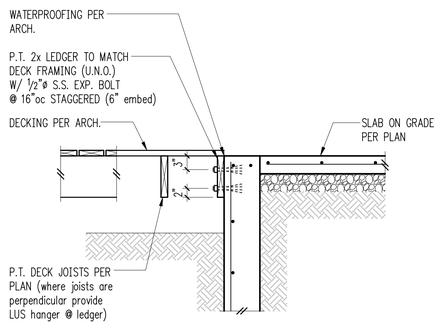
ISSUE: Permit

SHEET TITLE: Wood Framing Details

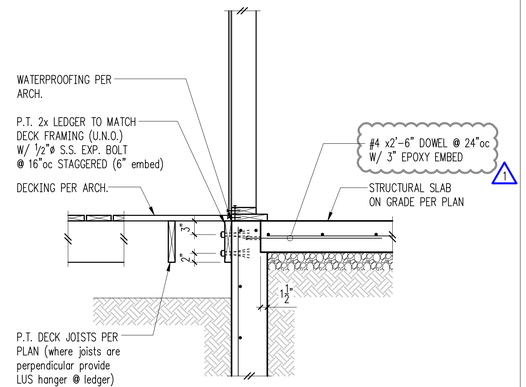
SCALE: 3/4" = 1'-0" U.N.O.
DATE: August 8, 2019
PROJECT NO: 01519-2019-04
SHEET NO: S4.3



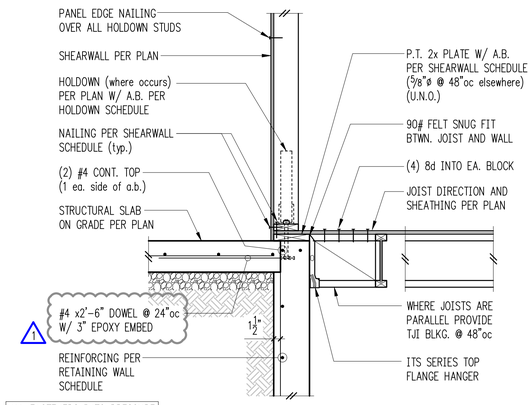
Typical Stair and Landing Detail 1



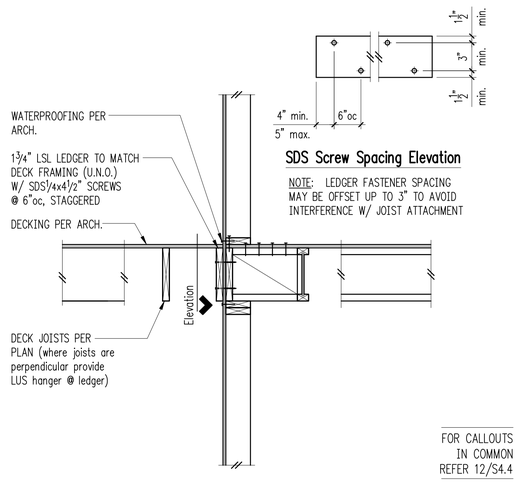
Typical Deck Ledger Detail (High Grade) 2



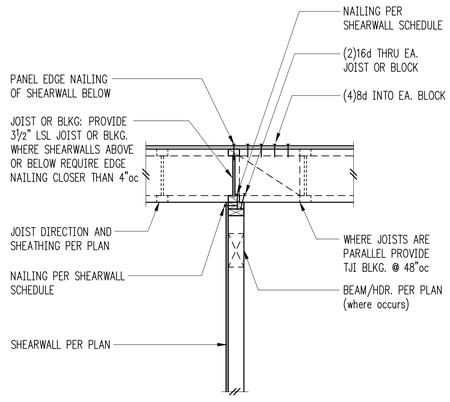
Typical Deck Ledger Detail (High Grade) 3



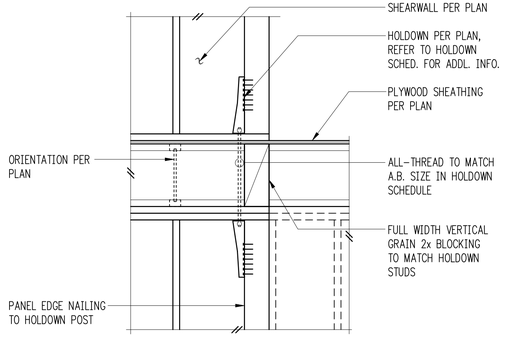
Exterior Framing at Basement (High Grade) 4



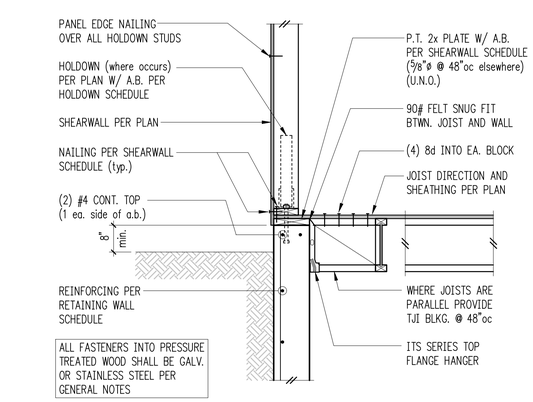
Typical Deck Ledger Detail 5



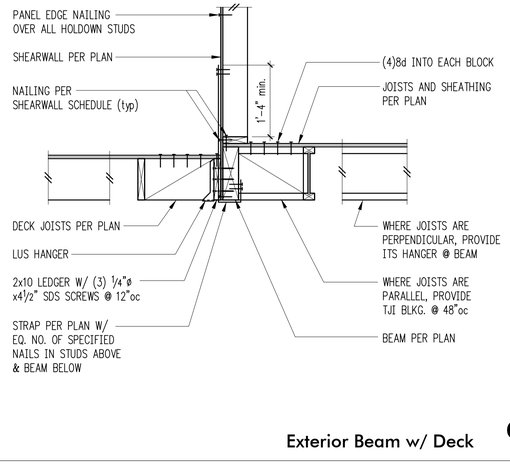
Interior Shearwall Below 6



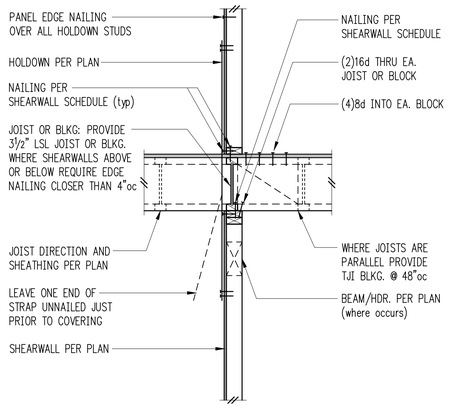
Typical HDU Holdowns 7



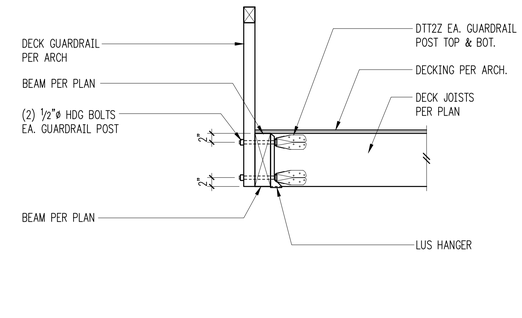
Exterior Framing at Basement (High Grade) 8



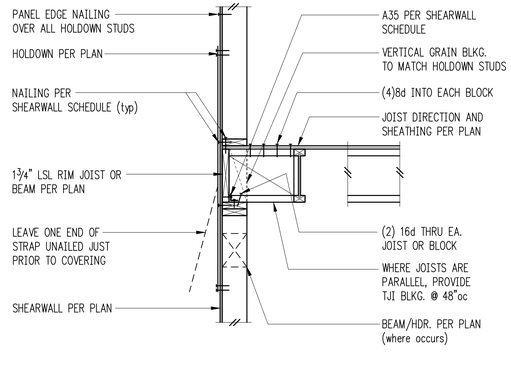
Exterior Beam w/ Deck 9



Interior Shearwall 10



Typical Deck w/ Guardrail Detail 11



Exterior Floor Framing 12

STRUCTURAL ENGINEERING
2124 Third Avenue - Suite 100 - Seattle, WA 98121
p: 206.443.6212 ssfengineers.com
934 Broadway - Tacoma, WA 98402
p: 253.284.9470 ssfengineers.com

Copyright 2019 Swenson Say Faget - All Rights Reserved

DAN J. SAY — STATE OF WASHINGTON — 23000 — REGISTERED PROFESSIONAL ENGINEER — 08/08/19

DESIGN: BDM
DRAWN: NHD
CHECKED: BDM
APPROVED: DJS

REVISIONS:
1 Corrections Dec. 17, 2019

DPD:

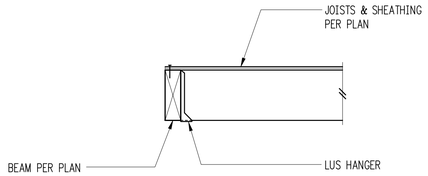
PROJECT TITLE:
Rosenstein Residence
2035 81st Ave SE
Mercer Island, WA 98040

ARCHITECT:
Brandt Design Group
66 Bell Street, Unit 1
Seattle, WA 98121
PH 206.239.0850

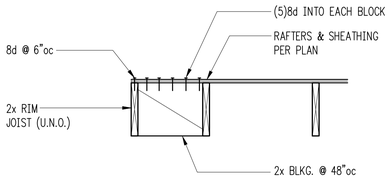
ISSUE:
Permit

SHEET TITLE:
Wood Framing Details

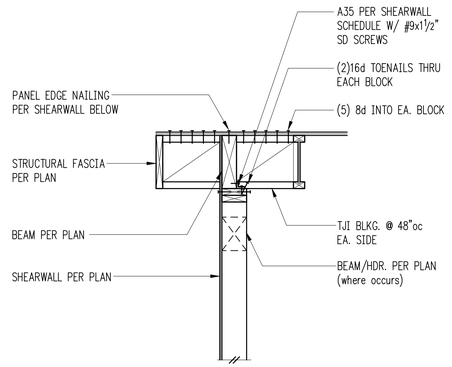
SCALE: ¾" = 1'-0" U.N.O.
DATE: August 8, 2019
PROJECT NO: 01519-2019-04
SHEET NO: S4.4



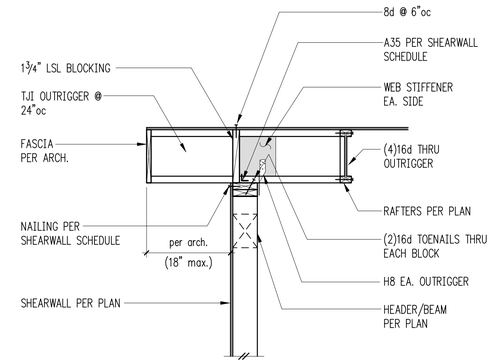
1



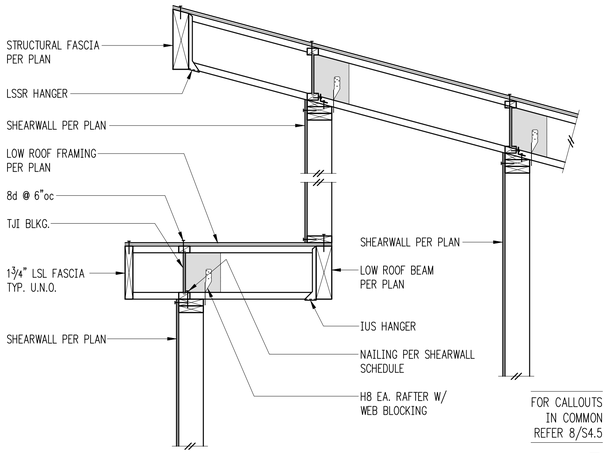
Rafters Parallel to Exterior Wall 2



3

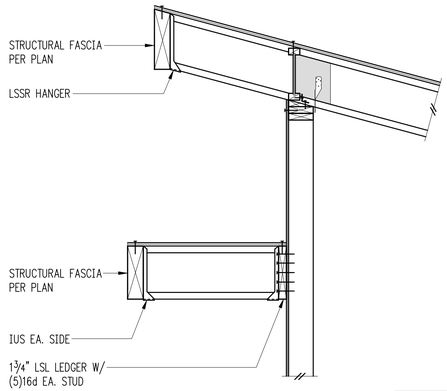


4



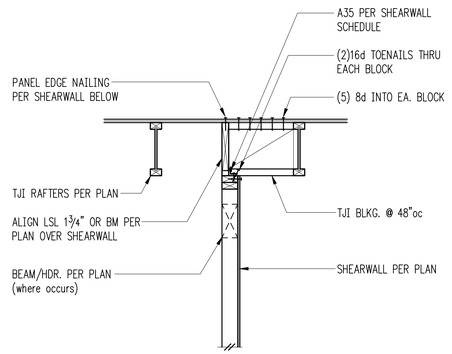
FOR CALLOUTS
IN COMMON
REFER 8/S4.5

5

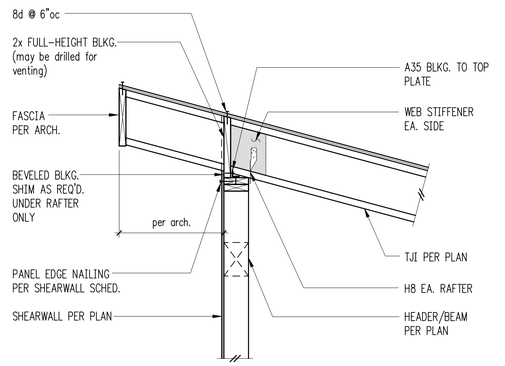


FOR CALLOUTS
IN COMMON
REFER 8/S4.5

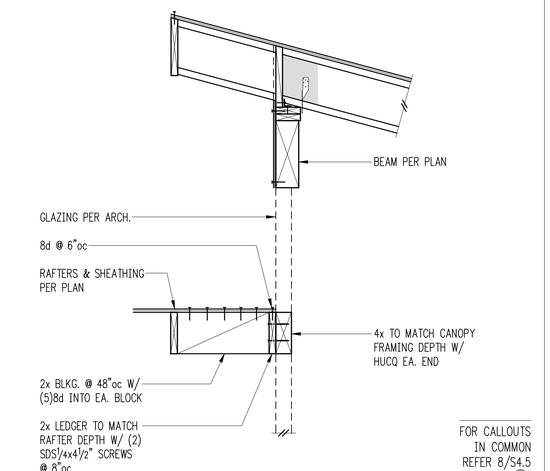
6



7

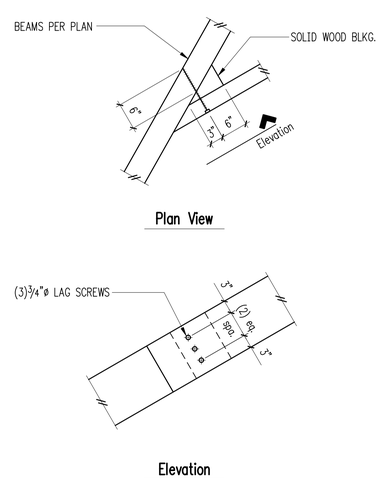


Exterior Bearing Wall 8



FOR CALLOUTS
IN COMMON
REFER 8/S4.5

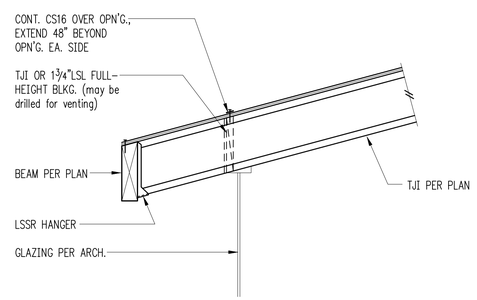
9



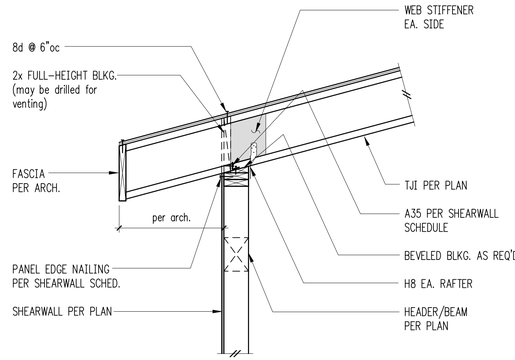
Plan View

Elevation

10



11



Exterior Bearing Wall 12

STRUCTURAL ENGINEERING
2124 Third Avenue - Suite 100 - Seattle, WA 98121
p: 206.443.6212 ssfengineers.com
934 Broadway - Tacoma, WA 98402
p: 253.284.9470 ssfengineers.com

Copyright 2019 Swenson Say Fagét - All Rights Reserved

DAN J. SAY — STATE OF WASHINGTON — 53000 — REGISTERED PROFESSIONAL ENGINEER
08/08/19

DESIGN: BDM
DRAWN: NHD
CHECKED: BDM
APPROVED: DJS

REVISIONS:

1	Corrections	Dec. 17, 2019

DPD:

PROJECT TITLE:
Rosenstein Residence
2035 81st Ave SE
Mercer Island, WA 98040

ARCHITECT:
Brandt Design Group
66 Bell Street, Unit 1
Seattle, WA 98121
PH 206.239.0850

ISSUE: Permit

SHEET TITLE: Roof Framing Details

SCALE: 3/4" = 1'-0" U.N.O.
DATE: August 8, 2019
PROJECT NO: 01519-2019-04
SHEET NO: S4.5

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.

SOILS REPORT REFERENCE:
PROPOSED NEW RESIDENCE
2035 - 81ST/ AVE SOUTHEAST
MERCER ISLAND, WA

PREPARED BY:
GEOTECH CONSULTANTS, INC. ON AUGUST 6, 2019
JN 19011

1

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 DRIVING PILES, DRILLING PILE HOLES, TIEBACK ANCHORS, OR CUTTING OR DIGGING IN STREETS OR ALLEYS. THIS INCLUDES CALLING UTILITY LOCATE AND THEN POTHOLING ALL UTILITIES PRIOR TO CONSTRUCTION TO CONFIRM DEPTHS AND LOCATIONS AND TO VERIFY THAT THERE ARE NO CONFLICTS WITH THE PILE AND HELICAL CROSSING ELEVATIONS. PILES AND HELICAL ANCHORS, 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
DRIVEN DEEP FOUNDATION	PER TABLE 1705.7
HELICAL PILE FOUNDATION	CONTINUOUS

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 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 AND TIEBACK PLACING AND STRESSING. 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.

GEOTECHNICAL INFORMATION AND CRITERIA

15. 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.

16. 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.

17. 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.

18. SOIL DESIGN PARAMETERS ARE AS FOLLOWS:

LATERAL EARTH PRESSURES	E.F.P.
ACTIVE EARTH PRESSURE	45 PCF
PASSIVE EARTH PRESSURE (INCLUDES FS=1.5)	267 PCF
ALLOWABLE SKIN FRICTION	0.9 PSF

CONCRETE

19. 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:

f'c PSI	Minimum Cement Per Cubic Yard	Max. Water Per 94 LB Cement	Use
____	1-1/2 sacks	_____	pile & tieback leap concrete
3000	5-1/2 sacks	.5 w/c	structural concrete

1

STEEL

20. STEEL SPECIFICATIONS: DESIGN, FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AISC MANUAL, AISC 360 AND SECTION 2205 OF THE BUILDING CODE.

21. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

TYPE OF MEMBER	ASTM SPECIFICATION	FY
WIDE FLANGE SHAPES	A992	50 KSI
OTHER SHAPES, PLATES, AND RODS	A36	36 KSI
OTHER SHAPES AND PLATES (NOTED GRADE 50 ON PLANS)	A572 (GRADE 50)	50 KSI
PIPE COLUMNS	A53 (E OR S, GR.B)	35 KSI
STRUCTURAL TUBING	A500 (GRADE B) (SQUARE OR RECTANGULAR)	46 KSI
	(ROUND)	42 KSI
CONNECTION BOLTS	A325N BEARING TYPE (SNUG TIGHT)	
ANCHOR BOLTS	A307 OR ASTM A-36	
HEADED SHEAR STUDS	A108	

22. 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.

WOOD

23. 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

24. WOOD IN CONTINUOUS CONTACT WITH FRESH WATER OR SOIL SHALL BE TREATED TO A RETENTION OF 0.40 PCF. WOOD FOR USE IN PERMANENT FOUNDATIONS SHALL BE TREATED TO A RETENTION OF 0.60 PCF. SODIUM BORATE (SBX) TREATED WOOD SHALL NOT BE USED WHERE EXPOSED TO WEATHER.

25. 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 (2012 EDITION) 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.

PILE AND LAGGING CONSTRUCTION

26. DEMOLITION: SHORING AND SOIL EXCAVATION SHALL BE DONE SIMULTANEOUSLY.

27. 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.

28. PILE AND ANCHOR 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.

29. STEEL PILE PLACEMENT TOLERANCES:

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

30. 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.

HELICAL ANCHORS

31. HELICAL ANCHORS SHALL BE "ECP TORQUE ANCHORS" AS MANUFACTURED BY EARTH CONTACT PRODUCTS, OR APPROVED EQUAL. 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.

32. THE DESIGN ALLOWABLE CAPACITY FOR THE HELICAL ANCHORS IS 19.2 KIPS. THIS SHALL BE VERIFIED BY TORQUE TESTING EACH ANCHOR TO 200% OF ITS THEORETICAL ALLOWABLE CAPACITY. IN ORDER TO ACCOMPLISH THIS, EACH ANCHOR SHALL BE INSTALLED TO A MINIMUM TORQUE OF 3,840 FT-POUNDS. FORMAL LOAD TESTING BEYOND THIS IS NOT REQUIRED.

SHORING MONITORING

33. 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.

34. MONITORING SHALL BE PERFORMED BY A PROFESSIONAL LAND SURVEYOR (PLS) LICENSED IN THE STATE OF WASHINGTON.

35. 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.

1

STRUCTURAL ENGINEERING
2124 Third Avenue - Suite 100 - Seattle, WA 98121
p: 206.443.6212 ssfengineers.com
934 Broadway - Tacoma, WA 98402
p: 253.284.9470 ssfengineers.com

Copyright 2019 Swenson Say Fagét - All Rights Reserved

DAN J. SAY — STATE OF WASHINGTON — 21613 — REGISTERED PROFESSIONAL ENGINEER — 08/08/19

DESIGN: BDM
DRAWN: NHD
CHECKED: BDM
APPROVED: DJS

REVISIONS:

1	Corrections	Dec. 17, 2019

DPD:

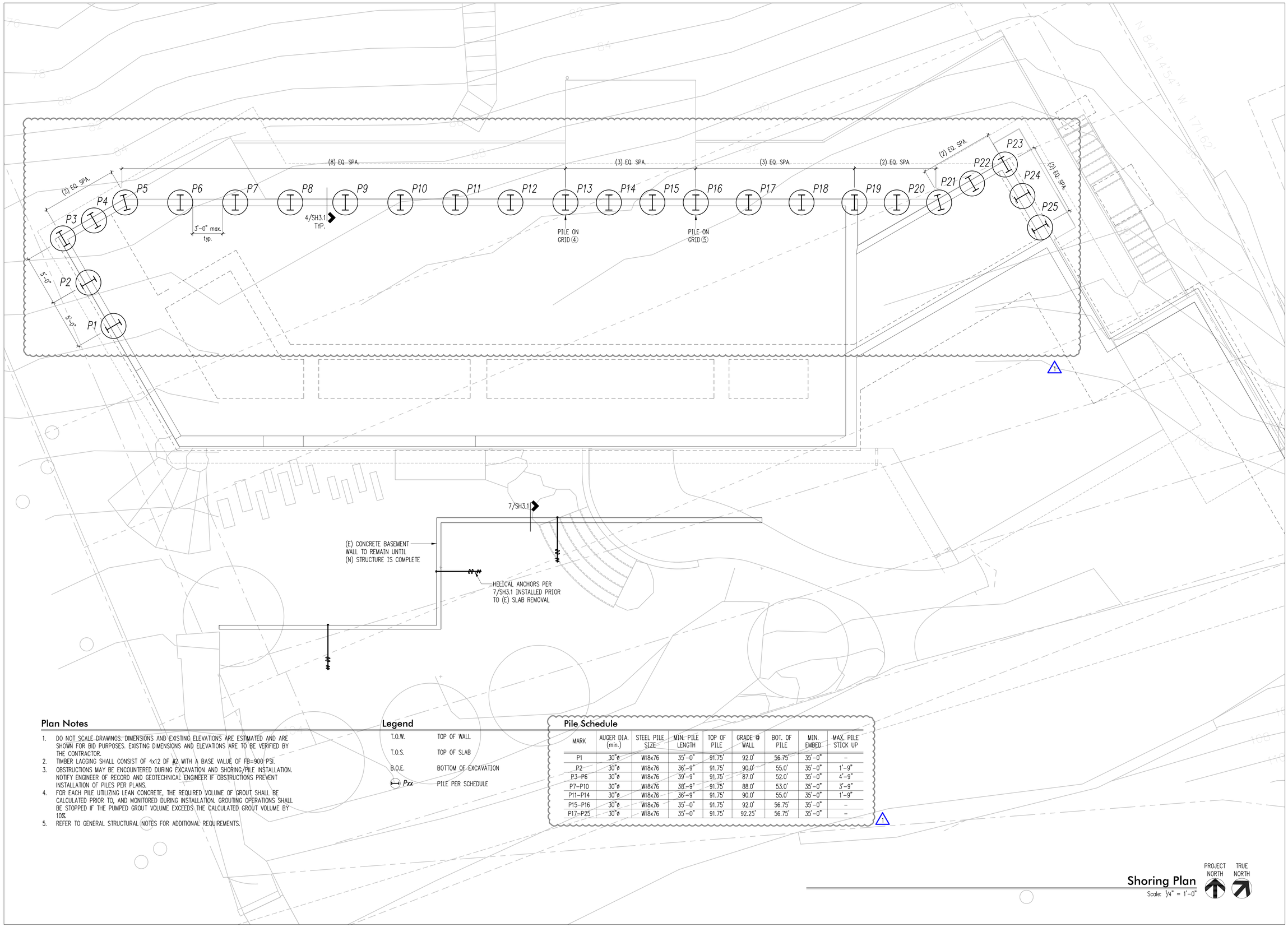
PROJECT TITLE:
Rosenstein Residence
2035 81st Ave SE
Mercer Island, WA 98040

ARCHITECT:
Brandt Design Group
66 Bell Street, Unit 1
Seattle, WA 98121
PH 206.239.0850

ISSUE:
Permit

SHEET TITLE:
General Shoring Notes

SCALE: -
DATE: August 8, 2019
PROJECT NO: 01519-2019-04
SHEET NO:
SH1.1



Plan Notes

1. DO NOT SCALE DRAWINGS. DIMENSIONS AND EXISTING ELEVATIONS ARE ESTIMATED AND ARE SHOWN FOR BID PURPOSES. EXISTING DIMENSIONS AND ELEVATIONS ARE TO BE VERIFIED BY THE CONTRACTOR.
2. TIMBER LAGGING SHALL CONSIST OF 4x12 DF #2 WITH A BASE VALUE OF FB=900 PSI.
3. OBSTRUCTIONS MAY BE ENCOUNTERED DURING EXCAVATION AND SHORING/PILE INSTALLATION. NOTIFY ENGINEER OF RECORD AND GEOTECHNICAL ENGINEER IF OBSTRUCTIONS PREVENT INSTALLATION OF PILES PER PLANS.
4. FOR EACH PILE UTILIZING LEAN CONCRETE, THE REQUIRED VOLUME OF GROUT SHALL BE CALCULATED PRIOR TO, AND MONITORED DURING INSTALLATION. GROUTING OPERATIONS SHALL BE STOPPED IF THE PUMPED GROUT VOLUME EXCEEDS THE CALCULATED GROUT VOLUME BY 10%.
5. REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

Legend

T.O.W.	TOP OF WALL
T.O.S.	TOP OF SLAB
B.O.E.	BOTTOM OF EXCAVATION
Pxx	PILE PER SCHEDULE

Pile Schedule

MARK	AUGER DIA. (min.)	STEEL PILE SIZE	MIN. PILE LENGTH	TOP OF PILE	GRADE @ WALL	BOT. OF PILE	MIN. EMBED	MAX. PILE STICK UP
P1	30"ø	W18x76	35'-0"	91.75'	92.0'	56.75'	35'-0"	–
P2	30"ø	W18x76	36'-9"	91.75'	90.0'	55.0'	35'-0"	1'-9"
P3-P6	30"ø	W18x76	39'-9"	91.75'	87.0'	52.0'	35'-0"	4'-9"
P7-P10	30"ø	W18x76	38'-9"	91.75'	88.0'	53.0'	35'-0"	3'-9"
P11-P14	30"ø	W18x76	36'-9"	91.75'	90.0'	55.0'	35'-0"	1'-9"
P15-P16	30"ø	W18x76	35'-0"	91.75'	92.0'	56.75'	35'-0"	–
P17-P25	30"ø	W18x76	35'-0"	91.75'	92.25'	56.75'	35'-0"	–

Shoring Plan

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

PROJECT NORTH TRUE NORTH

STRUCTURAL ENGINEERING

2124 Third Avenue - Suite 100 - Seattle, WA 98121
p: 206.443.6212 ssfengineers.com

934 Broadway - Tacoma, WA 98402
p: 253.284.9470 ssfengineers.com

Copyright 2019 Swenson Say Faget - All Rights Reserved

DAN J. SAY — STATE OF WASHINGTON — 23000 — REGISTERED PROFESSIONAL ENGINEER

08/08/19

DESIGN: BDM
DRAWN: NHD
CHECKED: BDM
APPROVED: DJS

REVISIONS:

1	Corrections	Dec. 17, 2019

DPD:

PROJECT TITLE:

Rosenstein Residence
2035 81st Ave SE
Mercer Island, WA 98040

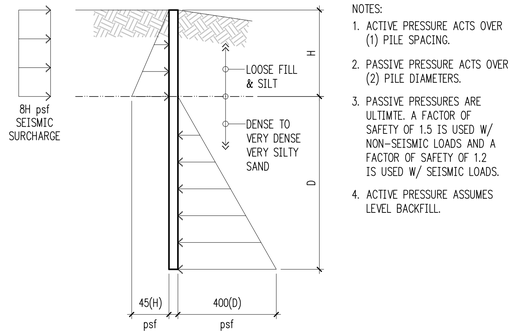
ARCHITECT:

Brandt Design Group
66 Bell Street, Unit 1
Seattle, WA 98121
PH 206.239.0850

ISSUE: Permit

SHEET TITLE: Shoring Plan

SCALE: 1/8" = 1'-0" U.N.O.
DATE: August 8, 2019
PROJECT NO: 01519-2019-04
SHEET NO: SH2.1

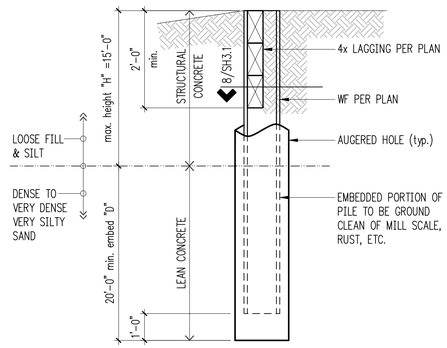


NOTES:

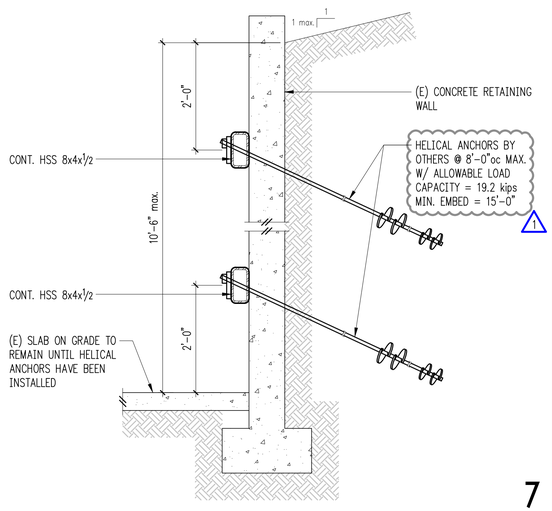
1. ACTIVE PRESSURE ACTS OVER (1) PILE SPACING.
2. PASSIVE PRESSURE ACTS OVER (2) PILE DIAMETERS.
3. PASSIVE PRESSURES ARE ULTIMTE. A FACTOR OF SAFETY OF 1.5 IS USED W/ NON-SEISMIC LOADS AND A FACTOR OF SAFETY OF 1.2 IS USED W/ SEISMIC LOADS.
4. ACTIVE PRESSURE ASSUMES LEVEL BACKFILL.

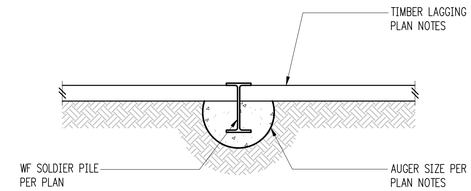
Active Pressure Passive Pressure

Cantilever Pile With Slope Diagram 3



Cantilever Pile 4





Typical Pile Plan 8

STRUCTURAL ENGINEERING

2124 Third Avenue - Suite 100 - Seattle, WA 98121
p: 206.443.6212 ssfengineers.com

934 Broadway - Tacoma, WA 98402
p: 253.284.9470 ssfengineers.com

Copyright 2019 Swenson Say Fagét - All Rights Reserved

DAN J. SAY — STATE OF WASHINGTON — 23000 — REGISTERED PROFESSIONAL ENGINEER

08/08/19

DESIGN: BDM
DRAWN: NHD
CHECKED: BDM
APPROVED: DJS

REVISIONS:

1	Corrections	Dec. 17, 2019

DPD:

PROJECT TITLE:

Rosenstein Residence
2035 81st Ave SE
Mercer Island, WA 98040

ARCHITECT:

Brandt Design Group
66 Bell Street, Unit 1
Seattle, WA 98121
PH 206.239.0850

ISSUE: Permit

SHEET TITLE: Shoring Details

SCALE: 3/4" = 1'-0" U.N.O.
DATE: August 8, 2019
PROJECT NO: 01519-2019-04
SHEET NO: SH3.1