## GENERAL NOTES

**PERMITS**

1. THIS DRAWING SET IS DEVELOPED AS REQUIRED FOR ATTAINING A BUILDING PERMIT AND IDENTIFYING AESTHETIC DESIGN ELEMENTS OF THE PROJECT. THIS SET IS NOT INTENDED, COORDINATED OR COMPLETED AS A DETAILED CONSTRUCTION DOCUMENT SET.

2. MECHANICAL, ELECTRICAL, AND PLUMBING WORK SHALL BE SUBMITTED UNDER SEPARATE PERMIT AND COORDINATED BY THE CONTRACTOR.

3. CONTRACTOR IS TO COORDINATE AND SCHEDULE ALL REQUIRED CITY INSPECTIONS

4. THE ELECTRICAL SUBCONTRACTOR SHALL SUBMIT TO THE OWNER AND CONTRACTOR FOR APPROVAL ELECTRICAL PLANS SHOWING ALL LIGHT FIXTURE, SWITCH, RECEPTACLE, AND EQUIPMENT LOCATIONS BEFORE CONSTRUCTION BEGINS.

5. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ANY SUBCONTRACTOR'S WORK INTO THE PROJECT, TO SECURE COMPLIANCE WITH THE DRAWINGS AND CODES. ALONG WITH THE ACCURATE VERIFICATION AND LOCATION OF PENETRATIONS THROUGH FOUNDATION WALLS, STRUCTURAL MEMBERS AND BUILDING SPACES.

6. INSTALLATION CONFLICT: IN CASE OF ANY CONFLICT WHEREIN THE METHODS OR STANDARDS OF INSTALLATION OF THE MATERIALS SPECIFIED DO NOT EQUAL OR EXCEED THE REQUIREMENTS OF THE CODE OR ORDINANCES, THE CODE OR ORDINANCES SHALL GOVERN.

7. THE ROLE OF THE ARCHITECT INCLUDES CONSTRUCTION ADMINISTRATION AND REVIEW OF CONSTRUCTION CHANGES, SUBSTITUTIONS AND CLARIFICATIONS REVIEWED WITH THE CONTRACTOR, OWNER PRIOR TO FABRICATION AND OR INSTALLATION

**DIMENSIONING**

1. GRID LINES ARE LOCATED AT THE FACE OF CONCRETE FOUNDATION WALL. DIMENSIONS ARE TO FACE OF FRAMING AND/OR EXTERIOR CONCRETE FOUNDATION GRID LINES.

2. DIMENSIONS WITHIN DETAILS AND ENLARGED PLANS IDENTIFY FACE OF FINISHES.

3. VERIFY ALL DIMENSIONS AND CONDITIONS SHOWN TO CONFIRM COORDINATION WITH ACTUAL FIELD FRAMING CONDITIONS.

4. DO NOT SCALE DRAWINGS. USE DIMENSIONS SHOWN ON THE DRAWINGS AND ACTUAL FIELD MEASUREMENTS.

**SITE SAFETY**

1. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO SECURE THE SAFETY OF OCCUPANTS AND WORKERS AT ALL TIMES.

2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONFORM AND COMPLY TO ALL HEALTH AND SAFETY CODES AND ORDINANCES

**CHANGE ORDERS**

1. THE ARCHITECT IS NOT AUTHORIZED TO APPROVE ANY COST INCREASES.

2. ALL COST INCREASES FOR ANY REASON MUST BE AUTHORIZED BY THE OWNER PRIOR TO COMMENCING THE WORK REQUIRING THE COST INCREASE.

**SHOP DRAWINGS, AND PRODUCT INFORMATION**

SUBMITTALS SHOP DRAWINGS AND PRODUCT INFORMATION SUBMITTALS FOR FINAL COORDINATION AND REVIEW, IN ADDITION TO THE MECHANICAL, ELECTRICAL AND PLUMBING APPLIANCES AND EQUIPMENT IS TO BE REVIEWED FOR DESIGN INTENT BY THE ARCHITECT BEFORE PURCHASING. SHOP DRAWINGS ARE TO INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:

-COLOR AND/OR MATERIAL SAMPLES OF ALL EXTERIOR AND INTERIOR FINISH COMPONENTS THAT WILL BE VISIBLE

- EXTERIOR AND INTERIOR DOOR AND WINDOW PRODUCT INFORMATION

- DOORS AND WINDOWS ARE TO BE ORDERED BASED ON ACTUAL SITE MEASUREMENT OF ROUGH OPENINGS.

- ARCHITECTS REVIEW OF SHOP DRAWINGS DOES NOT ALLOW FOR PRICE INCREASES

- A CHANGE ORDER IS REQUIRED FOR ANY PRICE INCREASES.

**MISCELLANEOUS**

1. ABBREVIATIONS: THROUGH OUT THE PLAN ARE ABBREVIATIONS WHICH ARE OF COMMON USE. THE ARCHITECT WILL DEFINE THE INTENT OF ANY ABBREVIATIONS IN QUESTION.

2. THESE DRAWINGS ARE COPYRIGHTED BY JOSEPH GREIF ARCHITECTS. THEY CAN NOT BE RE-USED, ADDED TO, MODIFIED OR REFERENCED TO WITHOUT THE WRITEN CONSENT OF THE ARCHITECT

**FLASHING AND DRAINAGE**

ALL EXTERIOR FLASHING AND COUNTER FLASHING IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONSTRUCT TO MAKE WEATHERPROOF IN COOPERATION WITH A WATERPROOFING CONSULTANT

SPECIFIC WATERPROOFING AND FLASHING NOTES:

PROVIDE GALVANIC INSULATION BETWEEN DISSIMILAR METALS

ALL EXTERIOR WOOD TRIM IS TO BE PRIMED AND PAINTED OR STAINED ALL SIDES

ALL WOOD MEMBERS IN DIRECT CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE TREATED AND METAL FLASHED WHERE POSSIBLE

USE PLASTIC WOOD AT ANY LOCATION WHERE EARTH COULD MAKE CONTACT WITH FRAMING MATERIALS

INSPECTIONS IN THE WATERPROOFING CONSULTANT SHALL BE (BUT NOT LIMITED TO THE FOLLOWING:

PRE-CONSTRUCTION MEETING ON SITE
BEFORE FOUNDATION IS BACKFILLED
BEFORE BASEMENT AND GARAGE SLABS ARE POURED
BEFORE WINDOWS AND DOORS ARE INSTALLED
BEFORE ROOFING IS INSTALLED

## CODE SPECIFIC DETAILS

GLAZING CODE REQUIREMENTS
SEE A5.2 FOR REFERENCE DETAILS

EGRESS OPENING REQUIREMENTS
SEE A5.2 FOR REFERENCE DETAILS

STAIRS AND RAILINGS
SEE A5.1 FOR REFERENCE DETAILS

SMOKE DETECTORS
SEE A5.1 FOR REFERENCE DETAILS

CARBON MONOXIDE ALARMS
SEE A5.1 FOR REFERENCE DETAILS

NOTCHING OF CONSTRUCTION FRAMING
SEE A5.3 FOR REFERENCE DETAIL

## PROJECT DIRECTORY

**CITY OF MERCER ISLAND**
DEVELOPMENT SERVICES GROUP
9611 SE 36TH STREET | MERCER ISLAND, WA 98040
*PHONE - 206 275 7605 - WWW.MERCERGOV.ORG*

**ARCHITECT**
N5 ARCHITECTURE
4200 STONE WAY N SEATTLE, WA 98103
*SETH HALE- PRINCIPAL - 206 300 5339- seth@n5architecture.com*

**STRUCTURAL ENGINEERING**
FRANK CO
*LIZ FEKETE - 206 579 8160 - liz@frankcompany.com*

**GEOTEC**
PANGEO, INC
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**WET LAND ENVIROMENTALIST**
*MARK RIGOS - 425 652 6013 - markrigos@hotmail.com*

**SURVEYOR AND CIVIL ENGINEERING**
PACE
11255 KIRKLAND WAY | SUITE 300 | KIRKLAND, WA 98033
PHONE 45 827 2014 - WWW.PACEENGRS.COM
*JOHN ANDERSON - PE | PROJECT MANAGER*

**ARBORIST**
ARBOR OPTIONS,LLC
*RYAN RINGE - PRINCIPAL - 206 755 5826 - ryan@arboroptions.com*

## PROJECT DATA

ALL WORK TO CONFORM TO ALL APPLICABLE CODES INCLUDING BUT NOT LIMITED TO:
A. 2021 INTERNATIONAL BUILDING CODE (STRUCTURAL)
B. 2021 INTERNATIONAL RESIDENTIAL CODE (ARCHITECTURAL)
C. 2021 INTERNATIONAL MECHANICAL CODE
D. 2021 UNIFORM PLUMBING CODE
E. 2021 INTERNATIONAL FIRE CODE
F. WASHINGTON STATE ENERGY CODE

OCCUPANCY: R3
TYPE OF CONSTRUCTION: VB SPRINKLED

## PROJECT INFORMATION

**PROJECT ADDRESS**
5236 WEST MERCER WAY, MERCER ISLAND, WA 98125

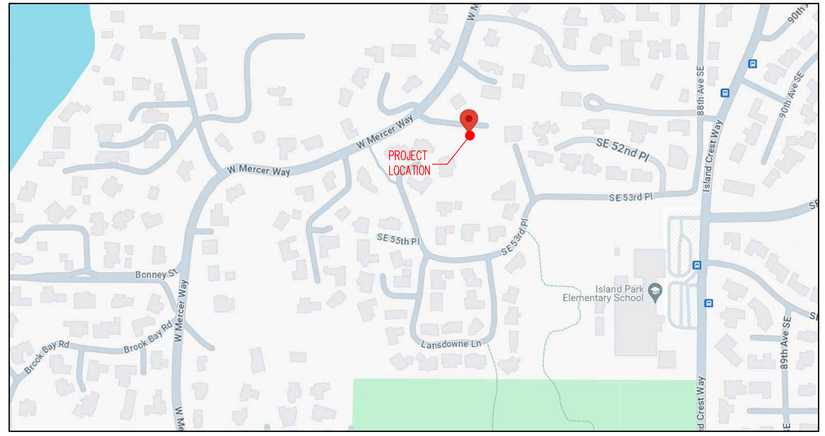
**OWNER**
LEVEL CAPITAL
ATTN: TERRY VAN NOSTRAND
11250 KIRKLAND WAY, SUITE 100
KIRKLAND, WA 98033
206-595-4545
terry@levelcapital.com

**PROJECT DESCRIPTION**
CONSTRUCTION OF NEW SINGLE FAMILY HOUSE ON AN UNDEVELOPED LOT WITH STEEPSLOPS AND WETLANDS

**LEGAL DESCRIPTION**
LOT 4A OF THE REVISED MILLS LOT LINE REVISION. PORTION OF : NW ¼, SW ¼, NW ¼. SECTION 19, T, 24N, R S E W M

**PARCEL NUMBER:** 192405-9324
**ZONING:** R-15

## PROJECT LOCATION MAP




## PROJECT DRAWING INDEX


**GENERAL INFORMATION**
CITY COVER SHEET
A0.01 PROJECT NOTES. INFORMATION. INDEX
A0.2 WSEC & VENTILATION
A0.3 SITE SURVEY
A0.4 ARBORIST PLAN

**WETLAND**
W1.0 WETLAND MITIGATION PLAN WEST
W2.0 WETLAND MITIGATION PLAN EAST
W3.0 MITIGATION NOTES AND DETAILS

**ARCHITECTURAL**

A.1 PLAN SHEETS
A1.0 SITE PLAN
A1.0a AVERAGE BUILDING ELEVATION
A1.0b BUILDING AREA
A1.0c LOT COVERAGE AREA
A1.1a BASEMENT LV FLOOR PLAN
A1.1b MAIN LEVEL FLOOR PLAN
A1.1c UPPER LEVEL FLOOR PLAN
A1.1d ROOF PLAN

A.2 BUILDING SECTIONS
A2.1 SOUTH SECTION
A2.2 STAIR SECTION
A2.3 NORTH SECTION
A2.4 WEST SECTION
A2.5 EAST SECTION
A2.6 WALL SECTIONS

A.3 BUILDING ELEVATION
A3.1 WEST ELEVATION
A3.2 SOUTH ELEVATION
A3.3 NORTH ELEVATION
A3.4 EAST ELEVATION

A.4 DR & WND SCHDS & DETAILS
A4.1 GLAZING SCHEDULE

A.5 CODE REFERENCE SHEETS
A5.1 CODE COMPLIANCE FRAMING
A5.2 STAIR & GLAZING GENERAL CODE

**CIVIL**
C0.0 COVER SHEET
C0.1 EXISTING CONDITION
C0.2 TREE PRESERVATION PLAN
C1.0 TESC PLAN AND CONSTRUCTION MANAGEMENT PLAN
C1.1 TESC DETAILS
C2.0 ROAD, GRADING AND STORM PLANS
C2.1 STORM DRAINAGE DETAILS
C2.2 STORM DRAINAGE DETAILS
C3.0 SITE, UTILITY, AND SEWER PLAN
C3.1 SANITARY SIDE SEWER DETAILS
C3.2 WATER DETAILS

**STRUCTURAL**
S1.1 GENERAL STRUCTURE NOTES
S1.2 GENERAL STRUCTURAL NOTES
S2.1 GROUND FLOOR AND FOUNDATION PLAN
S2.2 MAIN FLOOR FRAMING PLANS
S2.3 UPPER FLOOR FRAMING PLANS
S2.4 ROOF FRAMING PLAN
S3.1 CONCRETE AND FOUNDATION PLANS
S4.1 WOOD FRAMING DETAILS
S4.2 WOOD FRAMING DETAILS
S4.3 WOOD FRAMING DETAILS
SHORING - NEW
SH1.1 GENERAL SHORING NOTES AND DETAILS
SH2.1 SHORING PLAN

**SHORING - FOR REFERENCE**
S-0 COVER SHEET
S-1 STRUCTURAL GENERAL NOTES
S-2 SHORING AND TEMPORARY EXCAVATION PLANS
S-3 SOLDIER PILE SECTION AND SCHEDULE


## SUPPLEMENTAL DOCUMENTS

1) CITY OF MERCER ISLAND BUILDING PERMIT APPLICATION
2) SITE DEVELOPMENT WORKSHEET
3) GEOTECHNICAL REPORT
4) ENERGY CODE INFORMATION SHEET
5) STRUCTURAL CALCULATION
6) STORM DRAINAGE REPORT
7) WATER SIZING WORKSHEET
8) FIRE AREA VALUATION FORM
9) ARBORIST REPORT
10) CRITICAL AREA REVIEW APPLICATION
11) CONCURRENT REVIEW
12) MERCER ISLAND COVER SHEET
13) DEVELOPMENT APPLICATION FORM
14) SEPA
15) TRANSPORTATION CONCURRENCY
16) CRITICAL AREA STUDY
17) TREE INVENTORY


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# MERCER ISLAND RESIDENCE

5236 W MERCER WAY
MERCER ISLAND, WA 98125

SDCI PERMIT#: XXX

DATE
12/12/2024
09/17/2025

MARK REVISION
PERMIT
CORRECTION1

SDCI STAMP:

PROJECT TEAM:
SETH HALE

PROJECT NUMBER:
2023.014

SHEET TITLE:
GENERAL NOTES

SHEET NUMBER:
A0.01

## 2021 WSEC AND IRC VENTILATION WORKSHEET (EFFECTIVE MARCH 2024)

### PRESCRIPTIVE ENERGY CODE COMPLIANCE FOR CLIMATE ZONE MARINE 4

| COMPONENT: | FENESTRATION: | | CEILING WITH ATTIC: | VAULTED CEILING: | WOOD FRAMED WALL (INT): | FRAMED FLOOR: | BELOW GRADE WALL: | SLAB R-VALUE & DEPTH: |
|---|---|---|---|---|---|---|---|---|
| | VERTICAL: | OVERHEAD: | | | | | | |
| PRESCRIPTIVE VALUE: | 0.30 | 0.50 | R60 | R38 | ~~20+5 OR 13+10~~ R20+5 | R30 | ~~10/15/21 INT + 5TB~~ R21+5TB | ~~10, 4 FT~~ R10 CONTINUOUS INSULATION UNDER HEATED SLAB ON GRADE FLOORS |

## 2021 WSEC - TABLE R406.2

CREDITS REQUIRED:
MEDIUM DWELLING UNIT: 8.0 CREDITS
DWELLING UNITS NOT INCLUDED IN #1, #3 OR #4.

### TABLE R406.2 ENERGY EQUALIZATION CREDITS

| SYSTEM TYPE: | DESCRIPTION OF PRIMARY HEATING SOURCE: | CREDITS |
|---|---|---|
| 4. | FOR HEATING SYSTEMS USING A HEAT PUMP THAT MEETS FEDERAL STANDARDS FOR THE EQUIPMENT LISTED IN TABLE C403.3.2(2) OR C403.3.2(9) OR AIR TO WATER HEAT PUMP UNITS THAT ARE CONFIGURED TO PROVIDE BOTH HEATING AND COOLING AND ARE RATED IN ACCORDANCE WITH AHRI 550/590. | 3.0 |

### TABLE R406.3 ENERGY CREDITS

| OPTION: | DESCRIPTION: | CREDITS |
|---|---|---|
| 3.7 | HIGH EFFICIENCY HVAC<br>Ductless split system heat pumps with no electric resistance heating in the primary living areas. A ductless heat pump system with a minimum HSPF2 of 9 (HSPF of 10) shall be sized and installed to provide heat to entire dwelling unit at the design outdoor air temperature.<br>Exception: In homes with total heating loads of 24,000 or less using multi-zone mini-split systems with nominal ratings of 24,000 or less, the minimum HSPF s to claim this credit shall be 8.19 HSPF2 (or 9 HSPF). | 2.0 |
| 5.1 | EFFICIENT WATER HEATING<br>A drain water heat recovery unit(s) shall be installed, which captures waste water heat from at least two showers, including tub/shower combinations. It is acceptable, but not required, for sink water to be connected. Unit shall have a minimum efficiency of 40% if installed for equal flow or a minimum efficiency of 54% if installed for unequal flow. Such units shall be rated in accordance with CSA B55.1 or IAPMO IGC 346-2017 and be so labeled. | 0.5 |
| 5.6 | EFFICIENT WATER HEATING<br>Electric heat pump water heater with a minimum UEF of 2.9 and utilizing a split system configuration with the air-to-refrigerant heat exchanger located outdoors. Equipment shall meet Section 4, requirements for all units, of the NEEA standard Advanced Water Heating Specification with the UEF noted above | 2.0 |
| 7.1 | APPLIANCE PACKAGE<br>All of the following appliances shall be new and installed in the dwelling unit and shall meet the following standards:<br>1. Dishwasher, standard – Energy Star rated, Most Efficient 2021 or Dishwasher, compact – Energy Star rated (Version 6.0)<br>2. Refrigerator (if provided) – Energy Star rated (Version 5.1)<br>3. Washing machine (Residential) – Energy Star rated (Version 8.1)<br>4. Dryer – Energy Star rated, Most Efficient 2022 | 0.5 |
| | TOTAL ENERGY CREDITS | 8.0 |

## GLAZING SCHEDULE

SEE A4.1 FOR DETAILS

## SECTION M1505 - MECHANICAL VENTILATION

M1505.3: EXHAUST EQUIPMENT
EXHAUST FANS AND WHOLE HOUSE MECHANICAL VENTILATION FANS SHALL BE LISTED AND LABELED AS PROVIDING THE MINIMUM REQUIRED AIRFLOW IN ACCORDANCE WITH ANSI/AMCA 210-ANSI/ASHRAE 51.

M1505.4.1 SYSTEM DESIGN:
THE WHOLE HOUSE VENTILATION SYSTEM SHALL CONSIST AN ERV/HRV WITH INTEGRAL FANS, ASSOCIATED DUCTS AND CONTROLS. WHOLE HOUSE VENTILATION SHALL MEET THE REQUIREMENTS OF SECTIONS M1505.4.1.2, M1505.4.1.3, M1505.4.1.4 AND M1505.4.1.5. LOCAL EXHAUST FANS ARE PERMITTED TO SERVE AS PART OF THE WHOLE HOUSE VENTILATION SYSTEM WHEN PROVIDED WITH THE PROPER CONTROLS IN ACCORDANCE WITH SECTION M1505.4.2. . THE SYSTEM SHALL BE DESIGNED AND INSTALLED TO EXHAUST AND/OR SUPPLY THE MINIMUM OUTDOOR AIRFLOW RATES REQUIRED BE SECTION M1505.4.3 AS MODIFIED BY WHOLE HOUSE VENTILATION COEFFICIENTS IN SECTION M1505.4.3.1 WHERE APPLICABLE. THE WHOLE HOUSE VENTILATION SYSTEM SHALL OPERATE CONTINUOUSLY AT THE MINIMUM VENTILATION RATES REQUIRED BY SECTION M1505.4.2. UNLESS CONFIGURED WITH INTERMITTENT OFF CONTROLS IN ACCORDANCE WITH SECTION M14=505.4.3.2.

M1505.4.1.4 BALANCED WHOLE-HOUSE VENTILATION SYSTEM
A BALANCED WHOLE HOUSE VENTILATION SYSTEM SHALL INCLUDE BOTH SUPPLY AND EXHASUT FANS. THE SUPPLY AND EXHAUST FANS SHALL HAVE AIRFLOW THAT IS WITHIN 10% OF EACH OTHER. THE TESTED AND BALANCED TOTAL MECHANICAL EXHAUST AIRFLOW RATE IS WITHIN 10 PERCENT OR 5 CFM, WHICHEVER IS GREATER, OF THE TOTAL MECHANICAL SUPPLY AIR FLOW RATE. THE FLOW RATE TEST RESULTS SHALL BE SUBMITTED AND POSTED IN ACCORDANCE WITH SECTION M1505.4.1.7. THE EXHAUST FAN SHALL MEET THE REQUIREMENTS OF SECTION M1505.4.1.2. THE SUPPLY FAN SHALL MEET THE REQUIREMENTS OF SECTION M1505.4.1.3. BALANCED VENTILATION SYSTEMS WITH BOTH SUPPLY AND EXHAUST FANS IN A PACKAGED PRODUCT, SUCH AS AN ERV/HRV SHALL MEET THE REQUIREMENTS OF HVI 920 AS APPLICABLE. LOCAL EXHAUST SYSTEMS THAT ARE NOT A COMPONENT OF THE WHOLE HOUSE MECHANICAL VENTILATION SYSTEM ARE EXEMPT FROM THE BALANCE AIRFLOW CALCULATION.

M1505.4.3 MECHANICAL VENTILATION RATE
THE WHOLE HOUSE MECHANICAL VENTILATION SYSTEM SHALL PROVIDE OUTDOOR AIR AT A CONTINUOUS RATE AS DETERMINED IN ACCORDANCE WITH TABLE M1505.4.3(1) OR EQUATION 15-1.

### TABLE M1505.4.3(1)
### CONTINUOUS WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM AIRFLOW RATE REQUIREMENTS

| DWELLING UNIT FLOOR AREA: (SQUARE FEET) | NUMBER OF BEDROOMS |
|---|---|
| | 4 |
| | AIRFLOW IN CFM |
| 4,501-6,000 SF | 105 CFM |

### TABLE M1505.4.4
### MINIMUM LOCAL EXHAUST RATES

| AREA TO BE EXHAUSTED | EXHAUST RATES |
|---|---|
| KITCHENS | IN ACCORDANCE WITH SECTION M1505.4.4.3<br>100 CFM, 6" SMOOTH DIAMETER, 3 ELBOWS MAXIMUM |
| BATHROOMS-TOILET ROOMS | 50 CFM INTERMITTENT OR 20 CFM CONTINUOUS |

## FIRE SPRINKLER AND ALARMS

NFPA 13R FIRE SPRINKLERS ARE REQUIRED FOR THIS PROJECT. THEY ARE TO BE DESIGNED UNDER A SEPARATE PERMIT.
SUBMIT SHOP DRAWINGS SHOWING PROPOSED LAYOUT OF FIXTURE HEAD LOCATIONS AND CONTROLS PER ARCHITECTURAL REVIEW AND DESIGN COORDINATION.
NFPA 13R SPRINKLER SYSTEM REQUIRES A 1.5" METER AND 2" SUPPLY LINE OR GREATER, IF REQUIRED BY SPRINKLER DESIGNER.
A NFPA 72 CHAPTER 29 COMPLIANT MONITORED FIRE ALARM SYSTEM IS REQUIRED.
HEAT DETECTION THAT IS INTERCONNECTED WITH HOUSEHOLD SMOKE DETECTION IS REQUIRED.
ALL SMOKE DETECTORS/SOUNDERS SHALL MUST ACTIVATE UPON WATER FLOW OF THE SPRINKLER SYSTEM.
FIRE ALARM SYSTEMS MAY TAKE THE PLACE OF A "TYPICAL" LINE VOLTAGE SMOKE DETECTOR SYSTEM WHEN PERMITTED AND INSTALLED PER NFPA 72 - CHAPTER 29 AND CITY OF MERCER ISLAND REQUIREMENTS. IRC 314.7.1 - 314,7,4.

## FIRE CODE ALTERNATIVE

TO ALLEVIATE ACCESS DEFICIENCIES THE PROJECT WILL UTILIZE 5/8" TYPE X GWB THROUGHOUT

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5236 W MERCER WAY
MERCER ISLAND, WA 98125
SDCI PERMIT#: XXX

| MARK | REVISION | DATE |
|---|---|---|
| | PERMIT | 12/12/2024 |
| 1 | CORRECTION1 | 09/17/2025 |

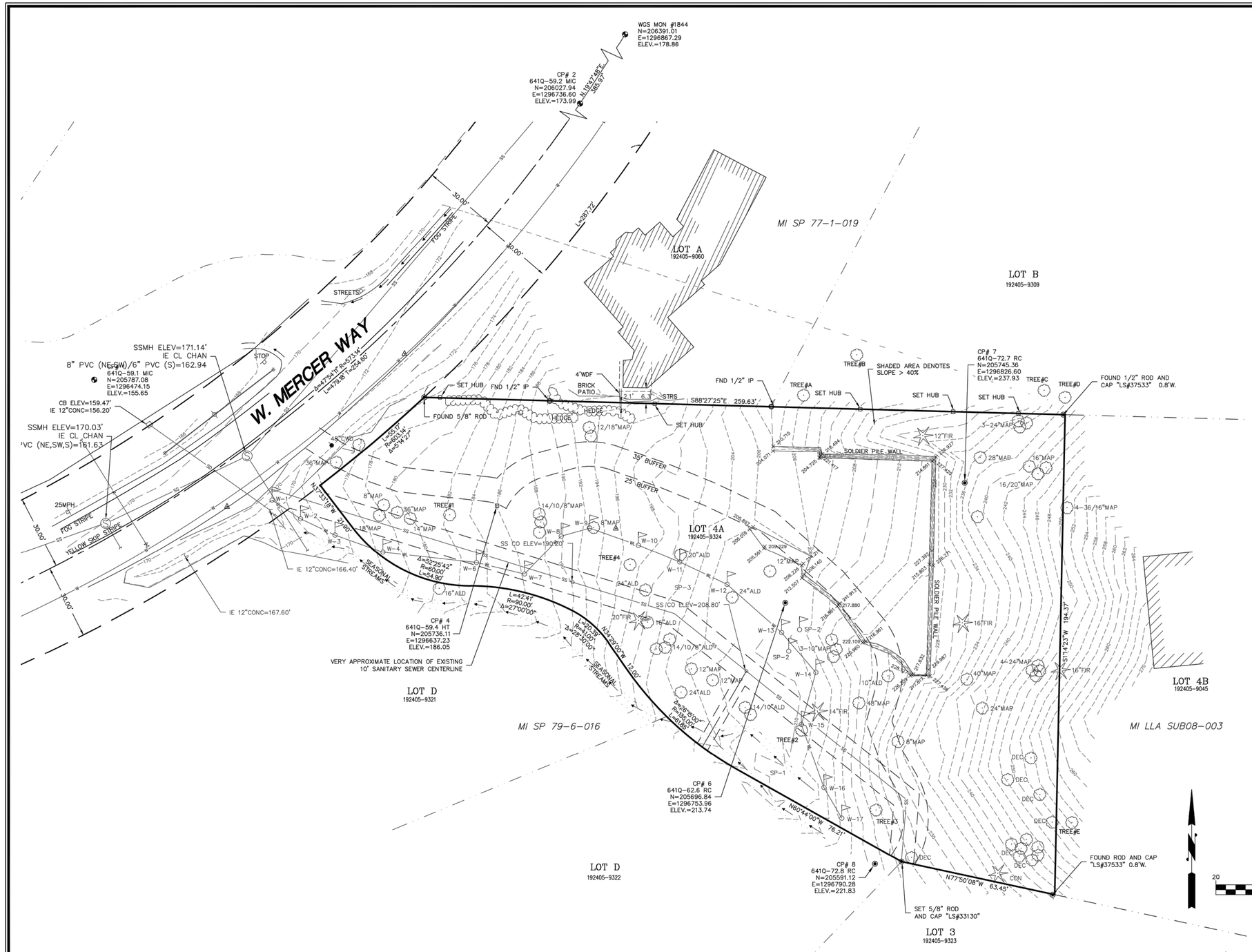
SDCI STAMP:

PROJECT TEAM:
SETH HALE

PROJECT NUMBER:
2023.014

SHEET TITLE:
GENERAL INFORMATION ENERGY CODE COMPLIANCE

SHEET NUMBER:
A0.02




## RECORD LEGAL DESCRIPTION:

LOT 4A OF THE REVISED MILLS LOT LINE REVISION.

## REFERENCES:

REVISED MILLS LOT LINE REVISION, MI LLA #SUB08-003, VOL. 265, PG. 020. AF#20090710900001

## LEGEND

- WATER VALVE
- HYDRANT
- SOIL TEST PIT
- WETLAND FLAG
- WATER METER
- MANHOLES (SS/SD)
- CB
- POWER/UTILITY POLE
- GUY ANCHOR
- POWER TRANSFORMER
- POWER/TELEPHONE VAULT
- POWER METER
- TELEPHONE/TV RISER
- GAS VALVE
- JUNCTION BOX
- GAS METER
- STREET LIGHT
- LUMINAIRE
- SPOT ELEVATION
- SIGN
- MAILBOX
- ROCKERY
- CONIFEROUS TREE
- DECIDUOUS TREE
- CASED MONUMENT
- MAGNETIC NAIL W/ WASHER
- REBAR AND CAP
- HUB AND TACK

- CENTER LINES
- PROPERTY LINES
- RIGHT-OF-WAY LINES
- LOT LINES
- DITCH LINE
- FLOW LINE
- W — WATER LINE
- SS — SANITARY SEWER LINE
- SD — STORM DRAIN LINE
- G — GAS LINE
- UP — UNDERGROUND POWER LINES
- UT — UNDERGROUND TELEPHONE LINES
- UTV — UNDERGROUND CABLE TV LINES
- UFO — UNDERGROUND FIBER OPTIC LINES
- P — OVERHEAD POWER LINES
- OHL — OVERHEAD UTILITY LINES
- CHAIN LINK FENCE
- WIRE FENCE
- WOOD FENCE

SHADED AREA DENOTES SLOPE > 40%

## NOTES:

HORIZONTAL DATUM: NAD 1983/91 BASED ON FOUND MONUMENTS IN WEST MERCER WAY.

VERTICAL DATUM: NAVD 88 BASED ON FOUND MONUMENTS IN WEST MERCER WAY.

SITE AREA: 37,350 SQUARE FEET, MORE OR LESS.

ALL DISTANCES SHOWN ARE GROUND DISTANCES UNLESS OTHERWISE NOTED.

THE LOCATION AND DESCRIPTION OF ALL SURVEY MARKERS SHOWN HEREON ARE BASED ON FIELD OBSERVATIONS TAKEN IN APRIL ,2017, UNLESS OTHERWISE INDICATED.

WORK PERFORMED IN CONJUNCTION WITH THIS SURVEY UTILIZED THE FOLLOWING EQUIPMENT AND PROCEDURES: (A) 1" TRIMBLE S6 SERIES ELECTRONIC TOTAL STATION, MAINTAINED TO THE MANUFACTURER'S SPECIFICATIONS PER W.A.C. 332-130-100. (B) FIELD TRAVERSE, EXCEEDING REQUIREMENTS SET FORTH IN W.A.C. 332-130-090.

THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT AND DOES NOT PURPORT TO SHOW ALL EASEMENTS.

THIS TOPOGRAPHIC SURVEY DRAWING ACCURATELY PRESENTS SURFACE FEATURES LOCATED DURING THE COURSE OF THIS SURVEY. UNDERGROUND UTILITIES SHOWN HEREON ARE BASED SOLELY UPON INFORMATION PROVIDED BY OTHERS AND PACE ENGINEERS, INC. DOES NOT ACCEPT RESPONSIBILITY OR ASSUME LIABILITY FOR THEIR ACCURACY OR COMPLETENESS. CONTRACTOR/ENGINEERS SHALL VERIFY EXACT SIZE AND LOCATION PRIOR TO CONSTRUCTION.
CALL FOR LOCATE: UTILITY LOCATION SERVICE: 811

PORTION OF: NW 1/4, SW 1/4, NW 1/4, SECTION 19, T. 24 N., R. 5 E., W.M.

WILLIAM R. HAWKINS
STATE OF WASHINGTON
23078
REGISTERED
PROFESSIONAL LAND SURVEYOR
2024.04.10 15:12:11-07'00'

| | | | | | |
|---|---|---|---|---|---|
| CAD/CALC WRH | | | | | |
| DRAWN CPB | | | | | |
| PLAT CHK WRH | | | | | |
| | SYM | REVISION | DATE | BY | APP'D |
| | | REVISED WETLAND FLAGS, BUFFERS AND WALL | 4/16/24 | DLB | WRH |

PACE Engineers
11255 Kirkland Way, Suite 300
Kirkland, WA 98033
p. 425.827.2014
www.paceengrs.com

**5236 W MERCER WAY**

| | |
|---|---|
| DATE | 4/10/2024 |
| SCALE | 1" = 20' |
| SURVEY TEAM | BL/RMc/PA/RD |
| FIELD BOOK | 641Q, 641T |
| DWG FILE | :\FILE |

**TOPOGRAPHIC SURVEY**
**FOR**
**LEVEL CAPITAL LLC**

PROJECT NO.
**17387A**
SHEET 1 OF 1

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SDCI PERMIT#: XXX

DATE
12/12/2024
09/17/2025

MARK REVISION
PERMIT CORRECTION1

SDCI STAMP:

PROJECT TEAM:
SETH HALE

PROJECT NUMBER:
2023.014

SHEET TITLE:
GENERAL INFORMATION
SITE SURVEY

SHEET NUMBER:
A0.03

SEE CIVIL SHEET C0.2
FOR ARBORIST & TREE
INFORMATION

N5

2562 DEXTER AVENUE N
SEATTLE, WA 98109 | 206-300-5339
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10009 REGISTERED ARCHITECT
SETH LINTON HALE
STATE OF WASHINGTON

# MERCER ISLAND RESIDENCE

5236 W MERCER WAY
MERCER ISLAND, WA 98125

SDCI PERMIT#: XXX

| MARK | REVISION | DATE |
|---|---|---|
| | PERMIT | 12/12/2024 |
| 1 | CORRECTION1 | 09/17/2025 |

SDCI STAMP:

PROJECT TEAM:

SETH HALE

PROJECT NUMBER:

2023.014

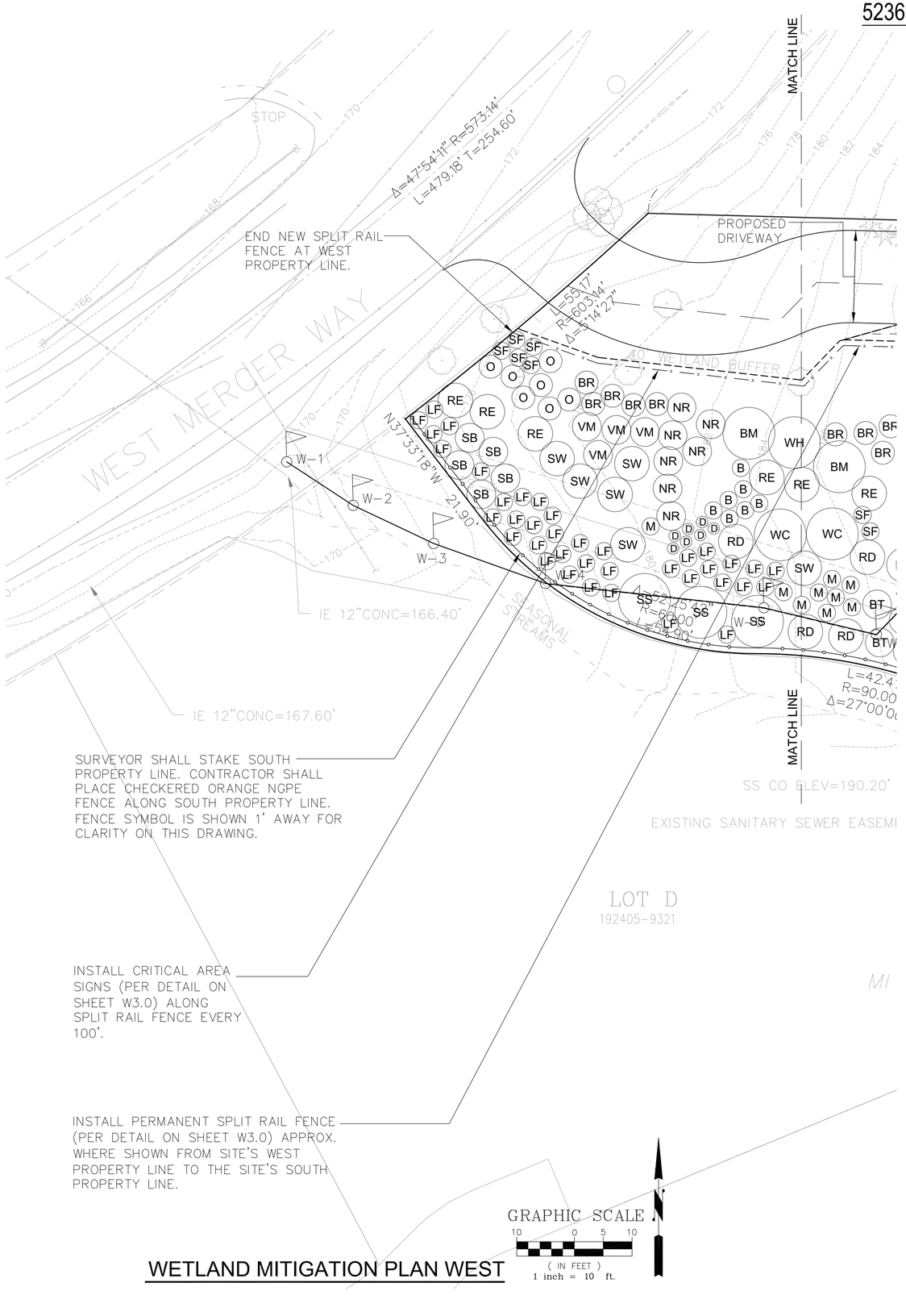
SHEET TITLE:

GENERAL
INFORMATION
ARBORIST PLAN
TREE INFO

SHEET NUMBER:

A0.04

# 5236 WMW SINGLE FAMILY RESIDENTIAL (SFR)

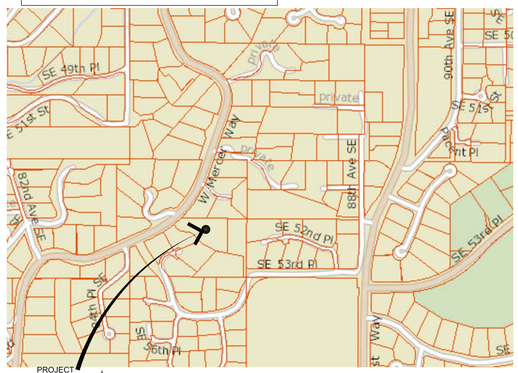



## WETLAND MITIGATION PLAN WEST

### WETLAND LEGEND

- WL — WETLAND BOUNDARY
- W-# — WETLAND FLAG #
- WETLAND FLAG
- WETLAND
- WETLAND BUFFER ADDITION AREA
- WETLAND BUFFER SUBTRACTION AREA
- PROPOSED PERMANENT SPLIT RAIL FENCE
- PROPOSED TEMPORARY ORANGE CHECKERED NGPE FENCE AND TEMP. BLACK SILT FENCE
- SP-# — SAMPLE POINT FLAG #
- EXISTING EVERGREEN TREE
- EXISTING DECIDUOUS TREE
- MAP — MAPLE TREE
- DEC — DECIDUOUS TREE
- ALD — ALDER TREE
- CON — CONIFER TREE
- XX — PROPOSED TREE OR SHRUB

Call 2 Working Days Before You Dig
**1-800-424-5555**
Utilities Underground Location Center
(ID,MT,ND,OR,WA)
SAFETY PRECAUTION SHALL BE IMPLEMENTED BY CONTRACTOR(S) AT ALL TRENCHING IN ACCORDANCE WITH CURRENT OSHA STANDARDS
ELECTRIC=RED SEWER=GREEN GAS/OIL=YELLOW SURVEY=PINK TELCATV=ORANGE PROPOSED=WHITE WATER=BLUE




VICINITY MAP SCALE: NTS

## SPECIAL NOTES:

1. TREE DATA FOR EXISTING TREES IS SHOWN ON THE TOPOGRAPHICAL AND BOUNDARY SURVEY PROVIDED BY OTHERS.
2. 40' WETLAND BUFFER WAS USED FOR PURPOSES OF CALCULATING REQUIRED MITIGATION.

## INVASIVE REMOVAL NOTES:

BEFORE INSTALLING PLANTINGS FOR RESTORATION AREAS, TAKE NOTE OF ANY INVASIVE WEED SPECIES FOUND ON-SITE. CONTROL OF THESE SPECIES IS VERY IMPORTANT IN RESTORATION AREAS IN ORDER TO ALLOW FOR THE SUCCESSFUL ESTABLISHMENT OF PLANTINGS THAT MIGHT OTHERWISE HAVE DIFFICULTY COMPETING WITH THESE AGGRESSIVE PLANTS.

WHERE ENCOUNTERED, INVASIVE WEEDS SHOULD BE REMOVED MANUALLY WITHOUT THE USE OF PESTICIDE (INCLUDES HERBICIDE), EXCEPT IN RARE CASES WHEN APPLIED BY A STATE LICENSED PESTICIDE APPLICATOR. MANUAL REMOVAL CAN BE ACCOMPLISHED BY GRUBBING OUT PLANTS AND ROOTS ENTIRELY (INCLUDING SEED PODS, FRUITS AND LEAVES) WITHOUT SIMULTANEOUSLY SPREADING MORE SEEDS. THE IDEAL TIME FOR REMOVAL IS PRIOR TO FLOWERING IN SPRING OR SUMMER. IF REMOVAL IS TO OCCUR AFTER FLOWERING, IT IS RECOMMENDED THAT FLOWERS BE CUT OFF AND DISPOSED OF PRIOR TO GRUBBING. GRUBBED OUT MATERIALS SHOULD BE DISPOSED OF OFF-SITE IMMEDIATELY, SINCE MANY OF THESE SPECIES ARE STILL CAPABLE OF PROPAGATING POST-REMOVAL. DO NOT USE WEED MATERIALS FOR MULCH AND DO NOT PUT INTO COMPOST OR YARD WASTE BINS.

ONCE THE INVASIVE SPECIES HAVE BEEN REMOVED, YOU CAN ASSESS SITE SOIL QUALITY. CERTAIN INVASIVE SPECIES SUCH AS SCOTCH BROOM DISPERSES THOUSANDS OF SEEDS PER PLANT. IN EXTREME CASES, TOPSOIL REMOVAL MAY BE NECESSARY TO EVACUATE THE INVASIVE SEED BANK. DENSE NATIVE PLANTING IS RECOMMENDED AND HAS PROVEN SUCCESSFUL AT PREVENTING WEEDY AND/OR INVASIVE SPECIES FROM REEMERGING.

## PROJECT INFORMATION

**PROJECT NAME:**
5236 WMW SINGLE FAMILY RESIDENCE

**TAX PARCEL NUMBER:**
192405-9324

**SITE ADDRESS:**
5236 WEST MERCER WAY
MERCER ISLAND, WA 98040

**SITE AREA:**
15,682 SQUARE FEET / 0.36 ACRES

**JURISDICTION:**
CITY OF MERCER ISLAND

**AREA CALCULATIONS:**
ONSITE WETLAND AREA
= XXXX SF
ONSITE 40-FOOT WETLAND BUFFER AREA
= XXXX SF

PURPOSE OF MITIGATION IS TO IMPROVE FUNCTIONS AND VALUES OF WETLAND AND WETLAND BUFFER.

**SHEET INDEX:**

W1.0 WETLAND MITIGATION PLAN WEST
W2.0 WETLAND MITIGATION PLAN EAST
W3.0 MITIGATION NOTES AND DETAILS


**PROPERTY OWNER:**
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(425) 605-3104

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SEATTLE, WA 98103
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SETH@N5ARCHITECTURE.COM

**CIVIL ENGINEER:**
PACE ENGINEERS
DAN WESTLEY, P.E.
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**ARCHITECT:**
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**SURVEYOR:**
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**WETLAND BIOLOGIST:**
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**ARBORIST:**
ARTIST TOUCH
ADAM HARKE
9608 WALL STREET
SNOHOMISH, WA 98296
(360) 739-5236

**GEOTECHNICAL ENGINEER:**
GEOTECH CONSULTANTS INC.
MARC McGINNIS
2401 10TH AVE EAST
SEATTLE, WA 98102
(425) 747-5618

| "NO NET LOSS" TABLE FOR 40 FOOT WETLAND BUFFER |
|---|
| WETLAND AREA = 6,387 SF |
| WETLAND 40-FOOT BUFFER AREA = 12,943 SF |
| PROPOSED WETLAND BUFFER SUBTRACTION AREA = 694 SF |
| PROPOSED WETLAND BUFFER AREA = 12,249 SF (WITH SUBTRACTION) |
| PROPOSED WETLAND BUFFER ADDITION AREA = 1,433 SF |
| PROPOSED WETLAND BUFFER = 13,682 SF (WITH ADDITION AND SUBTRACTION) |
| PROPOSED NET REDUCTION AREA IN WETLAND BUFFER = 0 SF |
| MERCER ISLAND CODE 19.07.190,E.5 REQUIRES A 2:1 MITIGATION RATIO FOR WETLAND CREATION ENHANCEMENT. |
| WETLAND BUFFER RESTORATION AT 1:1 RATIO |
| WETLAND BUFFER AREA OF 12,249 SF IS PROPOSED TO BE RESTORED |
| WETLAND CREATION AT 2:1 RATIO |
| TOTAL RESTORATION AREA = 13,682+6,387 = 20,069 SF |

PLANT MATERIALS FOR WETLAND AND WETLAND BUFFER RESTORATION

| SYMBOL | COMMON NAME | SCIENTIFIC NAME | SIZE | TOTAL NUMBER | STRATUM | SPACING ON CENTER | MAX HEIGHT | SITE PLACEMENT | LIGHT NEEDS |
|---|---|---|---|---|---|---|---|---|---|
| BM | BIG LEAF MAPLE | ACER MACROPHYLLUM | 2 GAL. | 5 | TREE | 9' | 100' | DRIER BUFFER | SHADE TOLERANT |
| SP | SHORE PINE | PINUS CONTORTA | 2 GAL. | 4 | TREE | 9' | 60' | WETTER BUFFER | HIGHLY ADAPTABLE |
| PY | PACIFIC YEW | TAXUS BREVIFOLIA | 2 GAL. | 1 | TREE | 9' | 80' | WETTER BUFFER | SHADE TOLERANT |
| SS | SITKA SPRUCE | PICEA SITCHENSIS | 2 GAL. | 7 | TREE | 9' | 230' | SATURATED SOILS | SHADE INTOLERANT |
| WC | WESTERN RED CEDAR | THUJA PLICATA | 2 GAL. | 12 | TREE | 9' | 230' | SATURATED SOILS | SHADE DEPENDENT |
| WH | WESTERN HEMLOCK | TSUGA HETEROPHYLLA | 2 GAL. | 7 | TREE | 9' | 200' | DRIER BUFFER | SHADE DEPENDENT |
| PW | PACIFIC WILLOW | SALIX LASIANDRA | 2 GAL. | 3 | TREE | 9' | 50' | SATURATED SOILS | HIGHLY ADAPTABLE |
| SW | SITKA WILLOW | SALIX SITCHENSIS | 2 GAL. | 11 | SHRUB | 6' | 20' | SATURATED SOILS | SHADE TOLERANT |
| RD | RED-OSIER DOGWOOD | CORNUS STOLONIFERA | 2 GAL. | 31 | SHRUB | 6' | 20' | SATURATED SOILS | SHADE TOLERANT |
| VM | VINE MAPLE | ACER CIRCINATUM | 2 GAL. | 8 | SHRUB | 5' | 25' | WETTER BUFFER | SHADE DEPENDENT |
| SB | SALMONBERRY | RUBUS SPECTABILIS | 2 GAL. | 48 | SHRUB | 5' | 15' | WETTER BUFFER | HIGHLY ADAPTABLE |
| RE | RED ELDERBERRY | SAMBUCUS RACEMOSA | 2 GAL. | 22 | SHRUB | 6' | 20' | WETTER BUFFER | HIGHLY ADAPTABLE |
| IP | INDIAN PLUM | OEMLERIA CERASIFORMIS | 2 GAL. | 20 | SHRUB | 6' | 15' | DRIER BUFFER | SHADE DEPENDENT |
| NR | NOOTKA ROSE | ROSA NUTKANA | 2 GAL. | 7 | SHRUB | 5' | 10' | WETTER BUFFER | SHADE TOLERANT |
| BT | BLACK TWINBERRY | LONICERA INVOLUCRATA | 2 GAL. | 26 | SHRUB | 5' | 10' | SATURATED SOILS | SHADE TOLERANT |
| BR | BALD-HIP ROSE | ROSA GYMNOCARPA | 2 GAL. | 13 | SHRUB | 4' | 7' | DRIER BUFFER | SHADE TOLERANT |
| O | SHORT OREGON GRAPE | BERBERIES NERVOSA | 2 GAL. | 49 | SHRUB | 4' | 4' | DRIER BUFFER | SHADE TOLERANT |
| SF | WESTERN SWORD FERN | POLYSTICHUM MUNITUM | 2 GAL. | 82 | FERN | 3' | 5' | DRIER BUFFER | SHADE TOLERANT |
| B | SMALL FRUITED BULRUSH | SCIRPUS MICROCARPUS | 1 GAL. | 27 | RUSH | 4.5' | 3' | SATURATED SOILS | SHADE TOLERANT |
| LF | LADY FERN | ATHYRIUM FILIX-FEMINA | 1 GAL. | 145 | FERN | 3' | 4' | WETTER BUFFER | SHADE TOLERANT |
| M | TALL MANNAGRASS | GLYCERIA ELATA | 1 GAL. | 51 | GRASS | 3' | 4.5' | WATER'S EDGE | SHADE DEPENDENT |
| D | DEER FERN | BLECHUM SPICANT | 1 GAL. | 11 | FERN | 2' | 2' | WETTER BUFFER | SHADE DEPENDENT |


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440 SE DARST STREET
ISSAQUAH, WA 98027
(425) 652-6013


5236 WMW
5236 WEST MERCER WAY
MERCER ISLAND, WA 98040

| REV. | DATE: |
|---|---|
| | |

DATE: 09/20/2025

W1.0

WETLAND BUFFER SUBTRACTION AREA=334 SF

4'WDF BRICK PATIO

2.1' 6.3' STRS

PROPOSED DRIVEWAY

MATCH LINE

PROPOSED DRIVEWAY

S88°27'25"E 259.63'

GARAGE

PROPOSED HOME

SET HUB

SET HUB

SET HUB

FOUND 1/2" ROD AND CAP "LS#37533" 0.8'W.

BUILDING PAD AREA

10' STRUCTURE SETBACK

RETAINING WALL

DO NOT PLANT TREES IN THE EXISTING SANITARY SEWER EASEMENT. SHRUBS ARE ACCEPTABLE THOUGH. CONTRACTOR SHALL PROTECT EXISTING SEWER PIPE.

333 SF

40' WETLAND BUFFER

WETLAND BUFFER

PROPOSED WETLAND BUFFER EDGE

460 SF

10'

WETLAND BUFFER SUBTRACTION AREA=360 SF

PROPOSED WETLAND BUFFER EDGE

L=42.41'
R=90.00'
Δ=27°00'00"

MATCH LINE

SS CO ELEV=190.20'

WETLAND BOUNDARY

EXISTING SANITARY SEWER EASEMENT

INSTALL TEMP. CHECKERED ORANGE NGPE FENCE APPROX. WHERE SHOWN OR ON PROPERTY LINE. BEHIND ORANGE FENCE, INSTALL BLACK SILT FENCE.

L=20.39'
R=4100'
Δ=28°30'00"

SEASONAL STREAMS

MI SP 79-6-016

Δ=26°15'00"
R=135.00'
L=61.85'

REMOVE BY HAND ALL INVASIVE VEGETATION INSIDE WETLAND BUFFER WHICH INCLUDES MASSIVE AMOUNT OF ENGLISH IVY AND HIMALAYAN BLACKBERRY. SEE NOTES ON SHEET W1.0.

SAME SPECIES AS EXISTING NATIVE VEGETATION IN THE WETLAND BUFFER CAN REMAIN. THIS INCLUDES RED ALDER, SALMONBERRY, INDIAN PLUM, BIG LEAF MAPLE AND SWORD FERN.

SS CO ELEV=208.80'

PLANT SHRUBS PER SHRUB PLANTING DETAIL ON SHEET W3.0.

PLANT TREES PER TREE PLANTING DETAIL ON SHEET W3.0.

WETLAND BOUNDARY WAS RE-DELINEATED IN NOVEMBER 2023. THE WETLAND BOUNDARY DID NOT CHANGE MUCH SINCE THE ORIGINAL WETLAND DELINEATION IN MARCH 2017.

SOUTH WETLAND BOUNDARY WAS NOT DELINEATED.

N60°44'00"W 76.21'

LOT D
192405-9322

D
9321

LOT 4B
192405-9045

MI LLA SUB08-003

STEEP SLOPES

S1°14'23"W 194.37'

INSTALL PERMANENT SPLIT RAIL FENCE PER DETAIL ON SHEET W3.0 FROM SITE'S WEST PROPERTY LINE TO SOUTH PROPERTY LINE.

PROPOSED WETLAND BUFFER

WETLAND ADDITION: 1433 SF

AREA IS CURRENTLY WELL VEGETATED, BUT SIGNIFICANT HIMALAYAN BLACKBERRY SHALL BE REMOVED AND REPLACED WITH NATIVE PLANTS.

FOUND ROD AND CAP "LS#37533" 0.8'W.

END NEW SPLIT RAIL FENCE AT SOUTH PROP. LINE.

EXISTING SANITARY SEWER PIPE

SET 5/8" ROD AND CAP "LS#33130"

LOT 3
192405-9323

N77°50'08"W 63.45'

GRAPHIC SCALE
10 0 5 10
( IN FEET )
1 inch = 10 ft.

# WETLAND MITIGATION PLAN EAST


MARK RIGOS
440 SE DARST STREET
ISSAQUAH, WA 98027
(425) 652-6013


5236 WMW
5236 WEST MERCER WAY
MERCER ISLAND, WA 98040

| REV. | DATE: |
|---|---|
| | |

DATE: 09/20/2025

W2.0

# 5236 WMW SINGLE FAMILY RESIDENTIAL (SFR)

GENERAL NOTES:

1. THE GOAL OF THIS MITIGATION PLAN IS TO PROVIDE EQUIVALENT OR GREATER HABITAT ASSOCIATED WITH STREAM AND WETLAND BUFFER RESTORATION. IT IS A 5-YEAR MONITORING PERIOD.

2. VEGETATION WILL HAVE 100% SURVIVAL RATE AFTER YEAR 1 AND 85% AFTER YEAR 2. VEGETATION WILL HAVE AN 80% SURVIVAL RATE THROUGH THE MONITORING PERIOD. THERE WILL BE LESS THAN 10% AERIAL COVER BY NON-NATIVE INVASIVE SPECIES IN THE MITIGATION AREA DURING THE ENTIRE MONITORING PERIOD.

3. SHRUB COVER WILL BE GREATER THAN 60% AFTER YEAR 1, AND GREATER THAN 60% AFTER YEAR 2, AND GREATER THAN 85% AFTER YEAR 5.

4. NON-NATIVE INVASIVE PLANTS WILL NOT MAKE UP MORE THAN 10% OF COVER IN ANY GROWING SEASON.

5. IF ANY MONITORING REPORT OR CITY INSPECTION SHOWS THAT MITIGATION IS NOT MEETING THESE PERFORMANCE STANDARDS, BOND HOLDER WILL WORK WITH CITY TO PERFORM CORRECTIVE ACTIONS APPROPRIATE TO THE MITIGATION: E.G., FAILING PLANTS WILL BE REPLACED, OTHER PLANT SPECIES WILL BE SUBSTITUTED, NON-NATIVE INVASIVE WILL BE REMOVED BY HAND WITHOUT PESTICIDES, ETC.

6. WHEN IT IS AVAILABLE, CONTACT INFORMATION MUST BE PROVIDED TO CITY FROM THE APPLICANT THAT INCLUDES NAMES, ADDRESSES, AND PHONE NUMBERS OF PERSONS/FIRMS THAT WILL BE RESPONSIBLE FOR INSTALLING REQUIRED PLANTING, AND PERFORMING REQUIRED MAINTENANCE AND MONITORING.

7. FOR THE FIRST YEAR FOLLOWING INSTALLATION, WATER THE MITIGATION AREA AT A RATE OF ONE INCH PER WEEK FROM JUNE THROUGH OCTOBER, IN WEEKS WHEN THERE IS LESS THAN ONE INCH OF RAINFALL. ALSO, THE MITIGATION AREA SHALL BE WATERED AS APPROPRIATE DURING THE VARIOUS SEASONS TO ENSURE A HIGH SHRUB SURVIVAL RATE.

8. IMPLEMENTATION OF THE MITIGATION PLAN MUST OCCUR DURING THE FIRST DORMANT SEASON FOLLOWING INSTALLATION. INSTALLATION MUST BE INSPECTED AND APPROVED BY CITY. THE INSTALLATION INSPECTION WILL VERIFY THAT SOILS HAVE BEEN DECONSOLIDATED AND AMENDED, PLANTS ARE INSTALLED ACCORDING TO DESIGN AND IN GOOD HEALTH, AREA HAS BEEN SEEDED, AND OTHER CONDITIONS HAVE BEEN MET. NURSERY INVOICES MUST BE PROVIDED TO INSPECTOR. ONCE APPROVED, MONITORING PERIOD BEGINS.

9. MONITORING PERIOD WILL BE FOR FIVE YEARS, WITH RESULTS OF ANNUAL MONITORING EVENTS REPORTED TO THE CITY. MONITORING MAY BE EXTENDED IF FINAL INSPECTION SHOWS RESTORATION HAS NOT ACHIEVED PERFORMANCE STANDARDS, UNTIL SUCH TIME AS PERFORMANCE STANDARDS HAVE BEEN MET.

10. MONITORING MUST INCLUDE DESCRIPTION/DATA FOR:
-PLANT SURVIVAL, VIGOR, AND ESTIMATED AERIAL COVERAGE
-OBSERVED WILDLIFE, INCLUDING AMPHIBIANS, AVIANS, AND OTHERS
-RECEIPTS FOR OFFSITE DISPOSAL OF ANY DUMPING, WEEDS, OR INVASIVE PLANTS
-4"x6" COLOR PHOTOGRAPHS FROM PERMANENT PHOTO-POINTS AS SHOWN ON REVISED MITIGATION PLANS

11. THE MITIGATION AREA/BUFFER MUST BE IDENTIFIED USING PERMANENT SENSITIVE AREA BOUNDARY SIGNS INSTALLED IN TWO LOCATIONS. SIGNS ARE AVAILABLE FOR SALE AT THE KING COUNTY DPER CASHIER.

12. ANY DEFICIENCY DISCOVERED DURING ANY MONITORING OR INSPECTION VISIT MUST BE CORRECTED WITHIN 60 DAYS.

13. PRIOR TO BEGINNING ANY WORK, THE APPLICANT MUST PROVIDE A RESTORATION BOND OR ASSIGNMENT OF FUNDS PER CITY PROCEDURES. A BOND QUANTITY WORKSHEET WILL NEED TO BE COMPLETED BASED ON ALL ELEMENTS OF THE MITIGATION PLAN. THE TOTAL COST, PLUS CONTINGENCY FEES, WILL BE THE AMOUNT OF THE RESTORATION BOND THE APPLICANT IS REQUIRED TO PROVIDE. NOTE THAT THE APPROVED BOND WILL INCLUDE REQUIRED START DATE FOR MITIGATION CONSTRUCTION. BONDS ARE ELIGIBLE FOR REDUCTION TO MAINTENANCE STATUS AFTER SUCCESSFUL INSTALLATION INSPECTION, PROVIDING THAT IT ALSO MEETS PERFORMANCE STANDARDS ESTABLISHED IN THE MITIGATION PLAN AND CITY SENSITIVE AREA MITIGATION GUIDELINES (OCTOBER 2000).

14. STANDARDS: ALL WORK AND MATERIALS SHALL CONFORM TO CITY STANDARDS AND SPECIFICATIONS, AND TO THE SPECIFICATIONS AND DETAILS SHOWN ON THESE PLANS.

15. CONTRACTOR'S QUALIFICATIONS: ALL WORK SHALL BE PERFORMED BY A LICENSED LANDSCAPE CONTRACTOR REGISTERED IN THE STATE OF WASHINGTON. CONTRACTOR MUST BE EXPERIENCED IN MITIGATION AND RESTORATION WORK. THE CONTRACTOR SHALL PROVIDE THAT THERE IS ONE PERSON ON THE SITE AT ALL TIMES DURING WORK AND INSTALLATION WHO IS THOROUGHLY FAMILIAR WITH THE TYPE OF MATERIALS BEING INSTALLED AND THE BEST METHODS FOR THEIR INSTALLATION, AND WHO SHALL DIRECT ALL WORK BEING PERFORMED UNDER THESE SPECIFICATIONS. THIS PERSON SHALL HAVE A MINIMUM OF FIVE (5) YEARS EXPERIENCE INSTALLING NATIVE PLANT MATERIALS FOR WETLAND MITIGATION OR RESTORATION PROJECTS, UNLESS OTHERWISE ALLOWED BY THE LANDSCAPE DESIGNER, WETLAND BIOLOGIST AND/OR CITY ECOLOGIST.

16. SITE CONDITIONS: THE APPLICANT SHALL IMMEDIATELY NOTIFY CITY OF ANY DISCREPANCIES BETWEEN THESE PLANS AND THE SITE CONDITIONS. THE LOCATIONS OF PLANTS AND THE QUANTITIES OF PLANTS SHOWN MAY BE MODIFIED IN THE FIELD BY THE LANDSCAPE DESIGNER AND / OR THE WETLAND BIOLOGIST BASED ON FIELD CONDITIONS AT THE TIME OF PLANTING.

17. PLANTS: PLANTS IN NUMBER AND SIZE ARE REQUIRED IN ACCORDANCE WITH APPROVED PLANS.

A. ORIGIN: PLANT MATERIALS SHALL BE NATIVE PLANTS, NURSERY GROWN IN THE PUGET SOUND AREA OF WASHINGTON. DUG PLANTS MAY ONLY BE USED UPON APPROVAL OF THE CITY.

B. HANDLING: PLANTS SHALL BE HANDLED SO AS TO AVOID ALL DAMAGE, INCLUDING BREAKING, BRUISING, ROOT DAMAGE, SUNBURN, DRYING, FREEZING OR OTHER INJURY. PLANTS MUST BE COVERED DURING TRANSPORT. PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE IN A MANNER THAT COULD DAMAGE BRANCHES. PROTECT PLANT ROOTS WITH SHADE AND WET SOIL IN THE TIME PERIOD BETWEEN DELIVERY AND INSTALLATION. DO NOT LIFT CONTAINER STOCK BY TRUNKS, STEMS, OR TOPS. DO NOT REMOVE FROM CONTAINERS UNTIL READY TO PLANT. WATER ALL PLANTS AS NECESSARY TO KEEP MOISTURE LEVELS APPROPRIATE TO THE SPECIES HORTICULTURAL REQUIREMENTS. PLANTS SHALL NOT BE ALLOWED TO DRY OUT. ALL PLANTS SHALL BE WATERED THOROUGHLY IMMEDIATELY UPON INSTALLATION. SOAK ALL CONTAINERIZED PLANTS THOROUGHLY PRIOR TO INSTALLATION. BARE ROOT PLANTS ARE SUBJECT TO THE FOLLOWING SPECIAL REQUIREMENTS, AND SHALL NOT BE USED UNLESS PLANTED BETWEEN NOVEMBER 1 AND MARCH 1, AND ONLY WITH THE PERMISSION OF THE LANDSCAPE DESIGNER AND CITY ECOLOGIST. BARE ROOT PLANTS MUST HAVE ENOUGH FIBROUS ROOT TO INSURE PLANT SURVIVAL. ROOTS MUST BE COVERED AT ALL TIMES WITH MUD AND/OR WET STRAW, MOSS, OR OTHER SUITABLE PACKING MATERIAL UNTIL TIME OF INSTALLATION. PLANTS WHOSE ROOTS HAVE DRIED OUT FROM EXPOSURE WILL NOT BE ACCEPTED AT INSTALLATION INSPECTION.

C. STORAGE: PLANTS STORED BY THE APPLICANT FOR LONGER THAN ONE MONTH PRIOR TO PLANTING SHALL BE PLANTED IN NURSERY ROWS, AND TREATED IN A MANNER SUITABLE TO THAT SPECIES HORTICULTURAL REQUIREMENTS. PLANTS MUST BE REINSPECTED BY THE WETLAND BIOLOGIST AND / OR LANDSCAPE DESIGNER PRIOR TO INSTALLATION.

D. DAMAGED PLANTS: DAMAGED DRIED OUT, OR OTHERWISE MISHANDLED PLANTS WILL BE REJECTED AT INSTALLATION INSPECTION. ALL REJECTED PLANTS SHALL BE IMMEDIATELY REMOVED FROM THE SITE.

E. PLANT NAMES: PLANT NAMES SHALL COMPLY WITH THOSE GENERALLY ACCEPTED IN THE NATIVE PLANT NURSERY TRADE. ANY QUESTION REGARDING PLANT SPECIES OR VARIETY SHALL BE REFERRED TO THE LANDSCAPE DESIGNER, WETLAND BIOLOGIST OR CITY ECOLOGIST. ALL PLANT MATERIALS SHALL BE TRUE TO SPECIES AND VARIETY AND LEGIBLY TAGGED.

F. PLANT SUBSTITUTIONS: PLANT SUBSTITUTIONS ARE NOT PERMITTED WITHOUT THE PERMISSION OF THE LANDSCAPE DESIGNER, WETLAND BIOLOGIST AND/OR CITY ECOLOGIST. SAME SPECIES SUBSTITUTIONS OF LARGER SIZE DO NOT REQUIRE SPECIAL PERMISSION.

G. QUALITY AND CONDITION: PLANTS SHALL BE NORMAL IN PATTERN OF GROWTH, HEALTHY, WELL-BRANCHED, VIGOROUS, WITH WELL-DEVELOPED ROOT SYSTEMS, AND FREE OF PESTS AND DISEASES. DAMAGED, DISEASED, PEST-INFESTED, SCRAPED, BRUISED, DRIED OUT, BURNED, BROKEN, OR DEFECTIVE PLANTS WILL BE REJECTED. PLANTS WITH PRUNING WOUNDS OVER 1" IN DIAMETER WILL BE REJECTED.

H. ROOTS. ALL PLANTS SHALL BE BALLED AND BURLAPPED OR CONTAINERIZED, UNLESS EXPLICITLY AUTHORIZED BY THE LANDSCAPE DESIGNER. ROOT BOUND PLANTS OR B&B PLANTS WITH DAMAGED, CRACKED OR LOOSE ROOTBALLS WILL BE REJECTED. BARE ROOT PLANTINGS OF WOODY MATERIAL IS ALLOWED ONLY WITH PERMISSION FROM THE LANDSCAPE DESIGNER.

I. SIZES. PLANT SIZES SHALL BE AT LEAST THE SIZE INDICATED IN THE PLANT SCHEDULE. LARGER STOCK IS ACCEPTABLE PROVIDED THAT IT HAS NOT BEEN CUT BACK TO SIZE SPECIFIED, AND THAT THE ROOT BALL IS PROPORTIONATE TO THE SIZE OF THE PLANT. MEASUREMENTS, CALIPER, BRANCHING AND BALLING AND BURLAPPING SHALL CONFORM TO THE AMERICAN STANDARD OF NURSERY STOCK BY THE AMERICAN ASSOCIATION OF NURSERYMEN (LATEST EDITION).

J. FORM: EVERGREEN TREES, IF USED, SHALL HAVE SINGLE TRUNKS AND SYMMETRICAL, WELL-DEVELOPED FORM. DECIDUOUS TREES SHALL BE SINGLE TRUNKED UNLESS SPECIFIED AS MULTI-STEM IN THE PLANT SCHEDULE. SHRUBS SHALL HAVE MULTIPLE STEMS, AND BE WELL-BRANCHED.

K. PLANTING: PLANTING SHALL BE DONE IN ACCORDANCE WITH ILLUSTRATED DETAILS IN THE MITIGATION PLAN SET AND ACCEPTED INDUSTRY STANDARDS.

L. WEEDING: EXISTING AND EXOTIC VEGETATION IN THE MITIGATION AND BUFFER AREAS WILL BE HAND WEEDED FROM AROUND ALL NEWLY INSTALLED PLANTS AT THE TIME OF INSTALLATION. NO CHEMICAL CONTROL OF VEGETATION ON ANY PORTION OF THE SITE IS ALLOWED WITHOUT THE WRITTEN PERMISSION OF THE CITY.

M. COMPOST: ALL LANDSCAPED AREAS DENUDED OF VEGETATION AND ALL PLANTING PIT AREAS SHALL RECEIVE NO LESS THAN 2" OF COMPOST AFTER PLANTING. COMPOST SHALL BE KEPT WELL AWAY (AT LEAST 2") FROM THE TRUNKS AND STEMS OF WOODY PLANTS. COMPOST SHALL BE CEDAR GROVE PURE COMPOST OR APPROVED EQUAL. NO BARK PRODUCTS OR SAWDUST WILL BE PERMITTED. WEED-FREE STRAW MAY BE REQUIRED FOR APPLICATION OVER COMPOST FOR EROSION CONTROL (SEE EROSION CONTROL NOTES).

N. SITE CONDITIONS: CONTRACTOR SHALL IMMEDIATELY NOTIFY THE LANDSCAPE DESIGNER AND WETLAND BIOLOGIST OF DRAINAGE OR SOIL CONDITIONS LIKELY TO BE DETRIMENTAL TO THE GROWTH OR SURVIVAL OF PLANTS. PLANTING OPERATIONS SHALL NOT BE CONDUCTED UNDER THE FOLLOWING CONDITIONS: FREEZING WEATHER, WHEN THE GROUND IS FROZEN, EXCESSIVELY WET WEATHER, EXCESSIVELY WINDY WEATHER, OR IN EXCESSIVE HEAT.

O. PLANT LOCATIONS: LOCATIONS SHALL BE AS DEPICTED IN THE APPROVED PLAN SET. THE LANDSCAPE DESIGNER AND / OR WETLAND BIOLOGIST MAY CHANGE THE LOCATIONS OF PLANTINGS SHOWN ON PLANS BASED ON FIELD CONDITIONS.

P. PLANTING IN PITS: PLANTING PITS SHALL BE CIRCULAR OR SQUARE WITH VERTICAL SIDES, AND SHALL BE 6" DEEPER AND 12" LARGER IN DIAMETER THAN THE ROOT BALL OF THE PLANT. BREAK UP THE SIDES OF THE PIT IN COMPACTED SOILS. SET PLANTS UPRIGHT IN PITS, WITH CROWN OF ROOT BALL 2"-3" ABOVE FINAL GRADE. BURLAP SHALL BE REMOVED FROM THE PLANTING PIT. BACKFILL SHALL BE TAMPED DOWN FIRMLY.

Q. WATER: PLANTS SHALL BE WATERED MIDWAY THROUGH BACKFILLING, AND AGAIN UPON COMPLETION OF BACKFILLING. A RIM OF EARTH SHALL BE MOUNDED AROUND THE BASE OF THE TREE OR SHRUB NO CLOSER THAN THE DRIP LINE, EXCEPT ON STEEP SLOPES OR IN HOLLOWS. PLANTS SHALL BE WATERED A SECOND TIME WITHIN 24-48 HOURS AFTER INSTALLATION.

R. INTERMEDIATE INSPECTIONS: ALL PLANTS SHALL BE INSPECTED AND APPROVED BY THE LANDSCAPE DESIGNER AND /OR WETLAND BIOLOGIST PRIOR TO INSTALLATION. CONDITION OF ROOTS OF A RANDOM SAMPLE OF PLANTS WILL BE INSPECTED, AS WELL AS ALL ABOVEGROUND GROWTH ON ALL PLANTS. ROOTS OF ANY BARE ROOT PLANTS, IF PERMITTED FOR USE, WILL BE INSPECTED. PLANT MATERIAL MAY BE APPROVED AT THE SOURCE, AT THE DISCRETION OF THE LANDSCAPE DESIGNER AND THE WETLAND BIOLOGIST, BUT ALL MATERIAL MUST BE RE-INSPECTED AND APPROVED ON THE SITE PRIOR TO INSTALLATION. PLANT LOCATIONS SHALL BE INSPECTED AND APPROVED PRIOR TO PLANTING.

18. HAND SEEDING: SEEDING IS REQUIRED AS DESCRIBED IN APPROVED PLANS,

A. TIMING: SEEDING SHALL NOT TAKE PLACE UNTIL MULCHING IS COMPLETE. CONTRACTOR SHALL INSURE THAT AREAS TO RECEIVE SEED ARE CLEAN OF DEBRIS AND THAT FINAL GRADES ARE CORRECT. SEEDING SHALL BE PERFORMED AFTER OTHER PLANT INSTALLATION IS COMPLETE. SEEDING IS THE FINAL STEP OF THE INITIAL INSTALLATION; SITE SHALL BE CLOSED TO ALL VEHICLES AND FOOT TRAFFIC SHALL BE MINIMIZED AFTER SEEDING IS COMPLETE. SEEDING SHALL NOT TAKE PLACE WHEN THE GROUND IS FROZEN OR IN WINDY WEATHER. SEEDS SHALL BE HAND BROADCAST OR BY MECHANICAL HAND POWERED SPREADER, WITH AS EVEN DISTRIBUTION AS FEASIBLE. AREAS WITHIN 6"-12" OF STEMS OF INSTALLED PLANTS SHALL NOT BE SEEDED.

B. SEED MIX: USE WETLAND SEED MIX IN WETLAND AREA AND BUFFER SEED MIX FOR WETLAND BUFFER AREAS. THE MIX SHOULD BE COMPOSED OF WEIGHT PERCENTAGES SPECIFIED IN THE TABLE. ALL SEED MATERIALS SHALL BE FREE OF WEED SEEDS OR OTHER FOREIGN MATTER DETRIMENTAL TO PLANT GROWTH. NOTE: SEED MIX SHOULD BE ORDERED AS EARLY AS POSSIBLE TO INSURE AN ADEQUATE SUPPLY OF SPECIFIED NATIVE SEED. SEED MIX SHALL NOT INCLUDE CLOVER, PERENNIAL GRASS OR TURF GRASS.

C. POST SEEDING EROSION CONTROL: SCATTER 2" OF CERTIFIED WEED-FREE STRAW ON ALL BARE GROUND AFTER SEEDING IS COMPLETE AND INSPECTED, FOR EROSION CONTROL (SEE EROSION CONTROL NOTES).

19. MAINTENANCE: MAINTENANCE SHALL BE REQUIRED IN ACCORDANCE WITH CITY SENSITIVE AREAS MITIGATION GUIDELINES (2000) AND APPROVED PLANS.

A. SURVIVAL: THE APPLICANT SHALL BE RESPONSIBLE FOR THE HEALTH OF 100% OF ALL NEWLY INSTALLED PLANTS FOR ONE GROWING SEASON AFTER INSTALLATION HAS BEEN ACCEPTED BY CITY ECOLOGIST (SEE PERFORMANCE STANDARDS). A GROWING SEASON IS DEFINED AS OCCURRING FROM SPRING (MARCH 15 – MARCH 15, FOLLOWING YEAR). FOR FALL INSTALLATION, THE GROWING SEASON WILL BEGIN THE FOLLOWING SPRING. THE APPLICANT SHALL REPLACE ANY PLANTS THAT ARE FAILING, WEAK, DEFECTIVE IN MANNER OF GROWTH, OR DEAD DURING THIS GROWING SEASON, AS DIRECTED BY THE APPLICANT'S LANDSCAPE DESIGNER, WETLAND BIOLOGIST, AND/OR CITY ECOLOGIST.

B. INSTALLATION TIMING FOR REPLACEMENT PLANTS: THE APPLICANT'S LANDSCAPE DESIGNER, WETLAND BIOLOGIST, AND/OR CITY ECOLOGIST SHALL DETERMINE TIMING OF THE INSTALLATION FOR REPLACEMENT PLANTS.

C. DURATION AND EXTENT: IN ORDER TO ACHIEVE PERFORMANCE STANDARDS, THE APPLICANT SHALL HAVE THE MITIGATION AREA MAINTAINED FOR THE DURATION OF THE MONITORING PERIOD, 5 YEARS. MAINTENANCE WILL INCLUDE WATERING, WEEDING AROUND BASE OF INSTALLED PLANTS, PRUNING, FERTILIZING, REPLACEMENT, REMOVAL OF DEAD MATERIAL (OTHER THAN FALLEN LOGS, LARGE WOODY DEBRIS, ETC), RESTAKING, AND ANY OTHER MEASURES NEEDED TO INSURE PLANT SURVIVAL. ALL MAINTENANCE SHALL BE DIRECTED BY THE LANDSCAPE DESIGNER AND / OR WETLAND BIOLOGIST.

D. STANDARDS FOR REPLACEMENT PLANTS: REPLACEMENT PLANTS SHALL MEET THE SAME STANDARDS FOR SIZE AND TYPE AS THOSE SPECIFIED FOR ORIGINAL INSTALLATION UNLESS OTHERWISE DIRECTED BY THE LANDSCAPE DESIGNER, WETLAND BIOLOGIST, AND/OR CITY ECOLOGIST. REPLACEMENT PLANTS SHALL BE INSPECTED AS DESCRIBED ABOVE FOR THE ORIGINAL INSTALLATION.

E. REPLANTING: PLANTS THAT HAVE SETTLED IN THEIR PLANTING PITS TOO DEEP, TOO SHALLOW, LOOSE, OR CROOKED SHALL BE REPLANTED AS DIRECTED BY THE LANDSCAPE DESIGNER, WETLAND BIOLOGIST, AND/OR CITY ECOLOGIST.

20. MONITORING: MONITORING SHALL BE CONDUCTED IN ACCORDANCE WITH THE APPROVED MITIGATION / RESTORATION MONITORING PLAN.

A. VEGETATION MONITORING: SAMPLING POINTS OR TRANSECTS WILL BE ESTABLISHED FOR VEGETATION MONITORING, AND PHOTO-POINTS ESTABLISHED FROM WHICH PHOTOS WILL BE TAKEN THROUGHOUT THE MONITORING PERIOD. LINEAR TRANSECTS ARE THE PREFERRED METHOD FOR VEGETATION MONITORING FOR THIS SITE. NO LESS THAN ONE (1) – 25 METER TRANSECTS WILL BE ESTABLISHED IN THE RESTORATION AREA. PERMANENT TRANSECT LOCATION(S) MUST BE IDENTIFIED ON RESTORATION SITE PLANS IN THE FIRST MONITORING REPORT (THEY MAY BE DRAWN ON APPROVED RESTORATION PLANS BY HAND). EACH TRANSECT SHALL DETAIL HERB, SHRUB, AND TREE AERIAL COVER AT RADII OF 1M, 5M, AND 10M RESPECTIVELY, USING THE BRAUN-BLANQUET RELEVE METHOD OR OTHER ACCEPTABLE FIELD METHOD.

B. PHOTOPOINTS: NO LESS THAN THREE (3) PHOTOPOINTS WILL BE ESTABLISHED – PHOTOGRAPHS WILL BE TAKEN FROM AT LEAST THREE (3) POINTS WITHIN THE RESTORATION AREA TO VISUALLY DEPICT THE CONDITION OF THE RESTORATION AREA.

C. REPORTS: MONITORING REPORTS SHALL BE SUBMITTED AFTER THE END OF EACH GROWING SEASON (BY NOVEMBER 15) FOR FIVE (5) CONSECUTIVE YEARS FOLLOWING SUCCESSFUL INSTALLATION INSPECTION. MONITORING REPORTS MUST INCLUDE DESCRIPTION / DATA FOR:

I. PLANT SURVIVAL, VIGOR, AND AERIAL COVERAGE FROM EVERY PLANT COMMUNITY (TRANSECT DATA)
II. SITE HYDROLOGY, INCLUDING EXTENT OF INUNDATION, SATURATION, DEPTH TO GROUNDWATER, FUNCTION OF
ANY HYDROLOGIC STRUCTURES, INPUTS, OUTLETS, ETC.
III. SLOPE CONDITION, SITE STABILITY, ANY STRUCTURES OR SPECIAL FEATURES
IV. BUFFER CONDITIONS, E.G. SURROUNDING LAND USE, USE BY HUMANS, WILD AND DOMESTIC CREATURES
V. OBSERVED WILDLIFE, INCLUDING AMPHIBIANS, AVIANS, AND OTHERS
VI. SOILS, INCLUDING TEXTURE,
MUNSELL COLOR, ROOTING AND OXIDIZED RHIZOSPHERES
VII. RECEIPTS FOR OFF-SITE DISPOSAL OF ANY
DUMPING, WEEDS, OR INVASIVE PLANTS
VIII. RECEIPTS FOR ANY STRUCTURAL REPAIR OR REPLACEMENT
IX. 4" X 6" COLOR PHOTOGRAPHS TAKEN FROM PERMANENT PHOTO-POINTS AS SHOWN ON MONITORING PLAN.

D. CONTINGENCY PLAN: SHOULD ANY MONITORING REPORT REVEAL THE MITIGATION HAS FAILED IN WHOLE OR IN PART, AND SHOULD THAT FAILURE BE BEYOND THE SCOPE OF ROUTINE MAINTENANCE, A CONTINGENCY PLAN WILL BE SUBMITTED. THE CONTINGENCY PLAN MAY RANGE IN COMPLEXITY FROM A LIST OF PLANTS SUBSTITUTED, TO CROSS-SECTIONS OF PROPOSED ENGINEERED STRUCTURES. ONCE APPROVED, IT MAY BE INSTALLED, AND WILL REPLACE THE APPROVED MITIGATION PLAN. IF THE FAILURE IS SUBSTANTIAL, THE CITY MAY EXTEND THE MONITORING PERIOD FOR THAT MITIGATION.

PREPARATION AND PLANTING NOTES:

1. ENSURE THAT ALL NON-NATIVE VEGETATION SUCH AS HIMALAYAN BLACKBERRY HAS BEEN REMOVED IN THE MITIGATION AREAS.

2. DECONSOLIDATE DISTURBED SOIL TO A MINIMUM DEPTH OF 12". SPREAD 2" (TWO INCHES) OF VEGETATIVE COMPOST OVER BARE SOILS WITHIN MITIGATION AREA.

3. MIX INTO SOIL TO A DEPTH OF 12" (TWELVE INCHES) USING A ROTOTILLER OR A SHOVEL.

4. PUT PLANTS IN THEIR PLACES ACCORDING TO THE APPROVED BASIC MITIGATION PLAN.

5. DIG SQUARE BOTTOMED HOLES FOR PLANTS, TWICE THE SIZE OF CONTAINER (SEE SHRUB PLANTING DETAIL).

6. SCORE EDGES OF PLANTING HOLE WITH SHOVEL, SO THAT ROOTS CAN TRAVEL OUTSIDE HOLE.

7. LOOSEN PLANT ROOTS SLIGHTLY, AND PLACE IN CENTER OF HOLE, UPRIGHT AND LEVEL WITH GROUND SURFACE.

8. AFTER ALL PLANTS HAVE BEEN PLANTED, HANDSEED OVER THE ENTIRE RESTORATION AREA. USE APPROXIMATELY 1-2 POUNDS OF GRASS SEED MIX PER 1,000 SQ. FT. OF MITIGATION AREA USING THE SEED MIXES NOTED BELOW.

9. WATER THE MITIGATION PLANTS WITH WATER RIGHT AFTER PLANTING. CONTINUE TO WATER AS NECESSARY TO ENSURE PLANT SURVIVAL.

10. PLAN SHOWS PLANTS ARRANGED IN NATURALIZED CLUSTERS. PLAN SHOWS CERTAIN PLANTS IN THE WETTER BUFFER AND DRIER BUFFER, ACCORDING TO THEIR WATER AND LIGHT NEEDS.




ATTACH SIGN TO POST WITH TWO 5/16 GALVANIZED LAG BOLTS WITH WASHERS

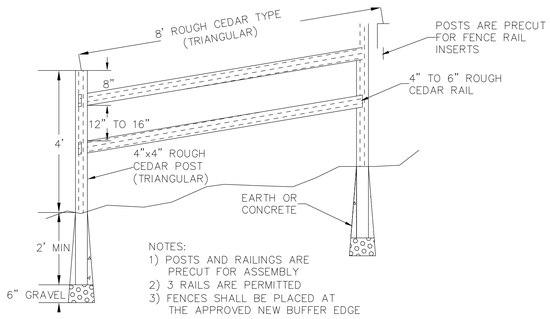
5' TO GRADE

PRE-PRINTED PLASTIC SIGN

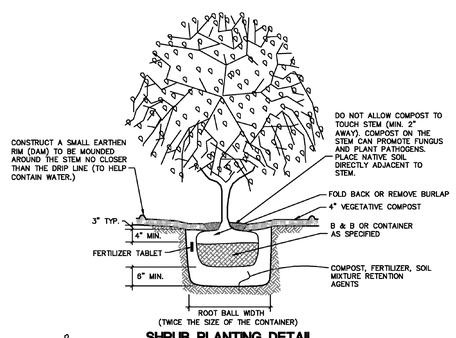
8' 4X4 CEDAR OR PREASURE-TREATED POST SET 3' INTO HOLE

## WETLAND/STREAM SIGN INSTALLATION DETAIL
NTS

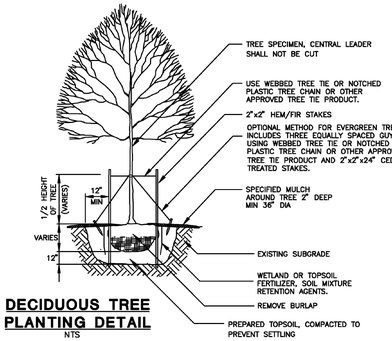
1. WETLAND/STREAM SIGN SHALL BE POSTED AT THE NEW WETLAND BUFFER.
2. ONE SIGN SHALL BE POSTED WHERE SHOWN ON THE PLAN. SIGNS MAY ALSO BE ATTACHED TO FENCES.
3. SIGNS SHALL NOT SAY KING COUNTY ON THEM.



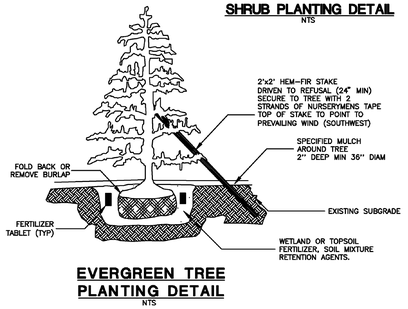

## SPLIT-RAIL CEDAR FENCE DETAIL
NTS



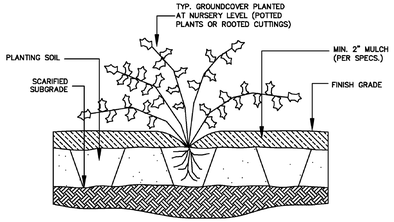

## SHRUB PLANTING DETAIL
NTS




## DECIDUOUS TREE PLANTING DETAIL
NTS




## EVERGREEN TREE PLANTING DETAIL
NTS




## GROUNDCOVER PLANTING DETAIL
NTS

MARK RIGOS
440 SE DARST STREET
ISSAQUAH, WA 98027
(425) 652-6013

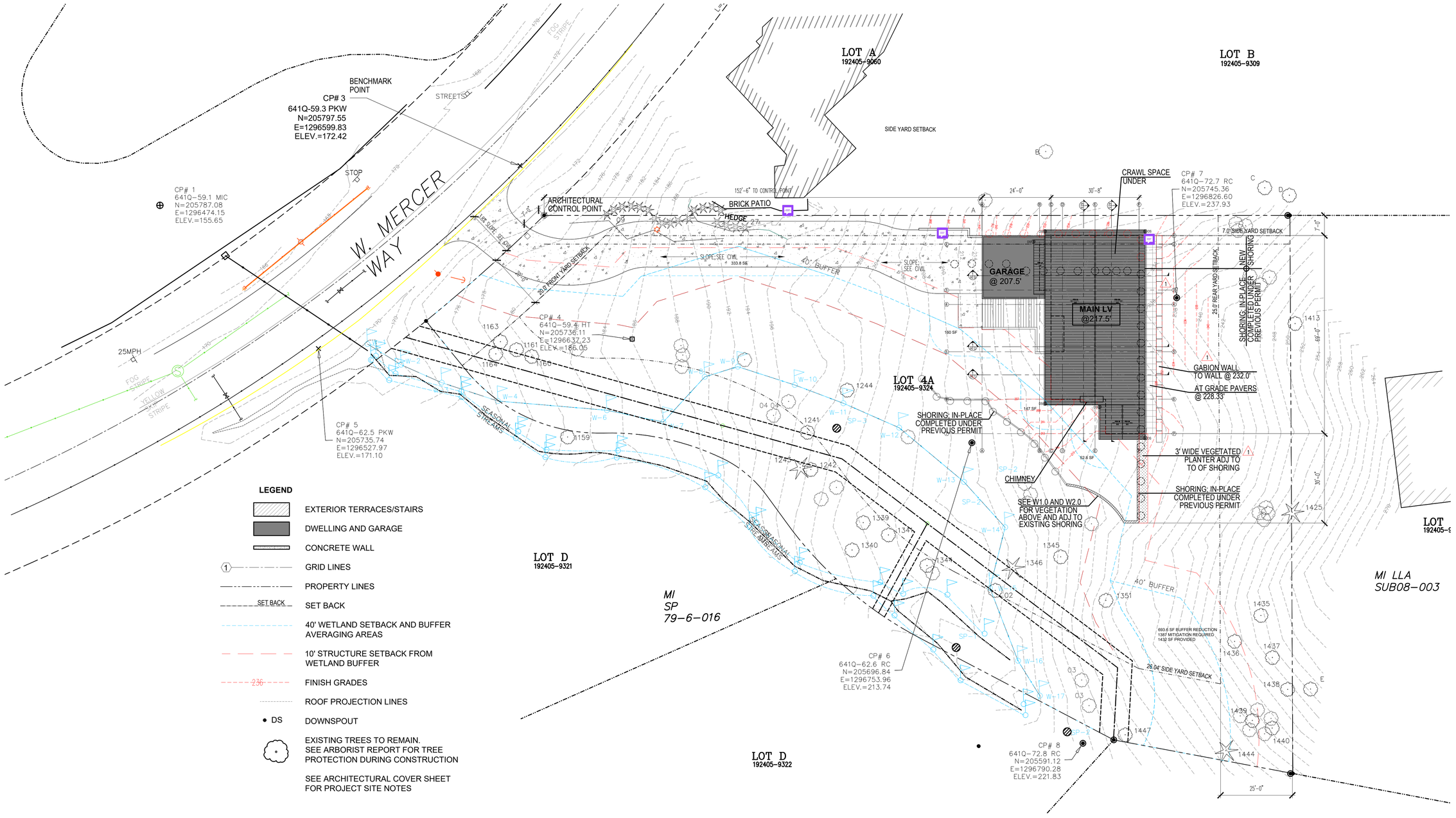
5236 WMW
5236 WEST MERCER WAY
MERCER ISLAND, WA 98040

| REV. | DATE: |
|---|---|
| | |
| | |
| | |
| | |

DATE: 09/20/2025

MITIGATION NOTES AND DETAILS

W3.0




**LEGEND**

- EXTERIOR TERRACES/STAIRS
- DWELLING AND GARAGE
- CONCRETE WALL
- GRID LINES
- PROPERTY LINES
- SET BACK
- 40' WETLAND SETBACK AND BUFFER AVERAGING AREAS
- 10' STRUCTURE SETBACK FROM WETLAND BUFFER
- 236 FINISH GRADES
- ROOF PROJECTION LINES
- DS DOWNSPOUT
- EXISTING TREES TO REMAIN. SEE ARBORIST REPORT FOR TREE PROTECTION DURING CONSTRUCTION

SEE ARCHITECTURAL COVER SHEET FOR PROJECT SITE NOTES

MINIMUM SIDE YARD SETBACK:

LOTS WITH A WIDTH OF MORE THAN 90 FEET, THE SIDE YARD SETBACKS MUST SUM TO 17% OF THE LOT WIDTH; PROVIDED THAT NO SIDE YARD SHALL BE LESS THAN 33% OF THE REQUIRED SIDE YARD WIDTH.

REQUIRED SIDE YARD WIDTH= 194.37' x 17% = 33.04'
NORTH PL SIDE YARD = 7.0'
SOUTH PL SIDE YARD = 26.04'

## NOTES

- SEE SITE SURVEY A0.3 FOR EXISTING GRADE
- SEE CIVIL DRAWINGS FOR TREE PROTECTION, SITE GRADING DRIVE WAY & SITE UTILITIES
- SEE WET LAND DRAWING FOR SITE MITTIGATION REQUIREMENTS
- SEE CIVIL SHEET C0.2 FOR ARBORIST AND TREE REMOVAL, COMPLETED UNDER PREVIOUS PERMIT

( IN FEET )
1 inch = 16ft.

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10009 REGISTERED ARCHITECT SETH LENTON HALE STATE OF WASHINGTON

# MERCER ISLAND RESIDENCE

5236 W MERCER WAY
MERCER ISLAND, WA 98125

SDCI PERMIT#: XXX

| MARK | REVISION | DATE |
|---|---|---|
| 1 | PERMIT CORRECTION1 | 09/17/2025 |

DATE 12/12/2024

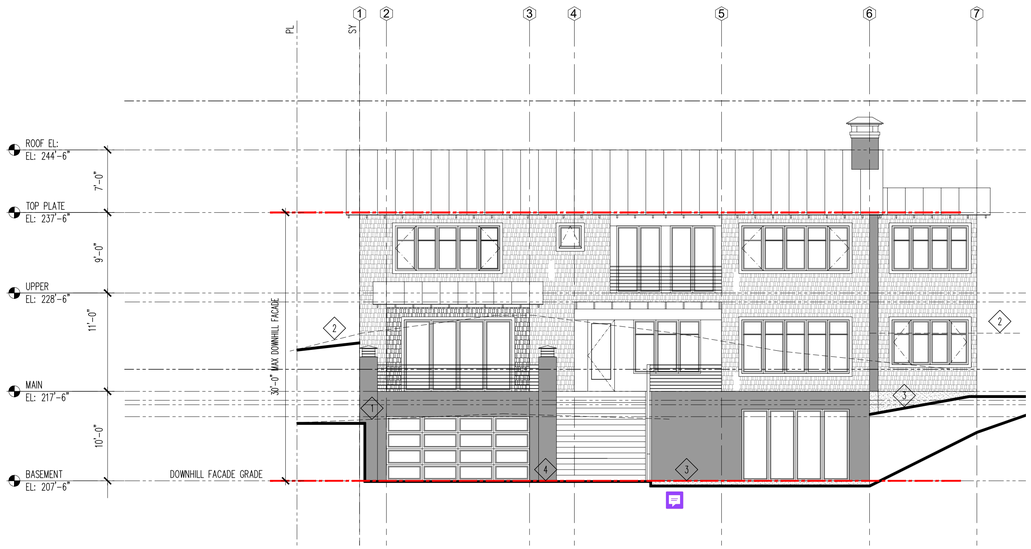
SDCI STAMP:

PROJECT TEAM:
SETH HALE

PROJECT NUMBER:
2023.014

SHEET TITLE:
ARCHITECTURAL SITE PLAN
GENERAL PLAN

SHEET NUMBER:
A1.0



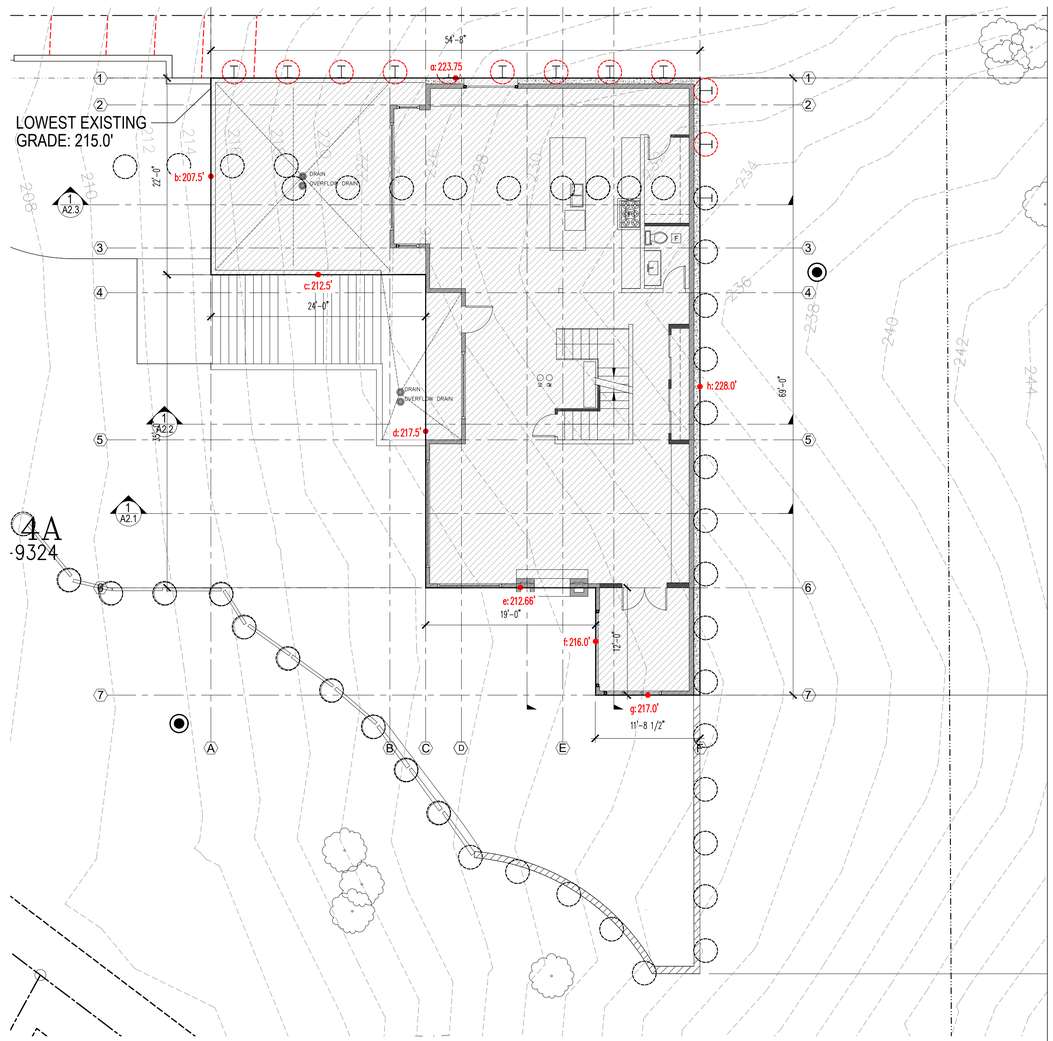

## 1 DOWNHILL FACADE ELEVATION
BUILDING FOOTPRINT

8' 4' 0 4' 8' 12' 16'
SCALE 1/8" = 1'

KEY NOTES:

1. EXISTING GRADE AT WEST FACADE OF GARAGE
2. EXISTING GRADE AT WEST FACADE DWELLING
3. FINISH GRADE AT WEST (DOWNHILL FACADE) OF DWELLING
4. FINISH GRADE AT WEST (DOWNHILL FACADE) OF GARAGE

| BUILDING HEIGHT | |
|---|---|
| AVERAGE BUILDING ELEVATION | 219.97 FEET |
| ALLOWABLE BUILDING HEIGHT (ABE + 30 FT) | 249.97 FEET |
| PROPOSED BUILDING HEIGHT | 244.5' |
| BENCHMARK ELEVATION | 172.42 FEET |
| BENCHMARK DESCRIPTION<br>AT W MERCER WAY<br>SEE A0.3 SITE SURVEY | CP #3<br>641Q-59.3 PKW<br>N=205797.55<br>E=1296599.83 |
| MAXIMUM HEIGHT OF TOP EXTERIOR WALL FACADE ABOVE LOWEST EXISTING GRADE (30 FT MAX) | 30'-0" |
| ABE & ALLOWED BUILDING HEIGHT SHOWN ON ELEVATIONS-PLAN SHEET # | A1.0a, A3.1,A3.2, A3.3,A3.4 |
| TOPO SURVEY ACCURACY ATTESTED ON PLAN SHEET # | A0.3 |




N

## ABE CALCULATION
BUILDING FOOTPRINT

8' 4' 0 4' 8' 12' 16'
SCALE 1/8" = 1'

### AVERAGE BUILDING ELEVATION

$$\frac{223.75'(54.66') + 207.5'(22.00') + 212.5'(24.0') + 217.5'(35.00') + 212.66'(19.0') + 216.0'(12.0') + 217.0'(11.71') + 228.0'(69.0')}{(54.66') + (22.0') + (24.0') + (35.0') + (19.0') + (12.0') + (11.71') + (69.0')} =$$

$$\frac{12,230.18 + 4,565.0 + 5,100.0 + 7,612.5 + 4,040.5 + 2,592.0 + 2,541.07 + 15,732.0}{247.37'} =$$

$$\frac{54,413.25'}{247.37'} = 219.97'$$

**AVG BUILDING ELEVATION = 219.97'**
MAX BUILDING HEIGHT = 249.97'

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SETH LENTON HALE
STATE OF WASHINGTON

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5236 W MERCER WAY
MERCER ISLAND, WA 98125

SDCI PERMIT#: XXX

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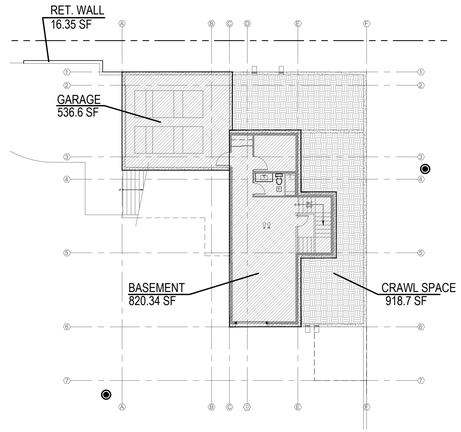
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PROJECT TEAM:
SETH HALE

PROJECT NUMBER:
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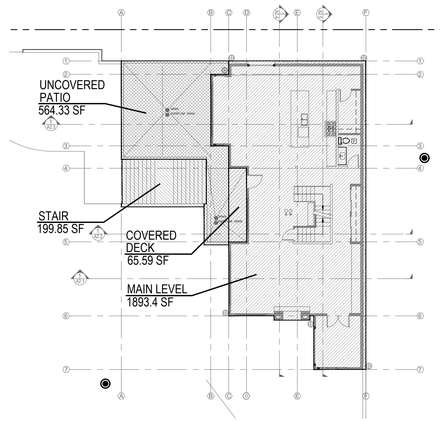
SHEET TITLE:
ARCHITECTURAL
AVERAGE
BUILDING
ELEVATION

SHEET NUMBER:
A1.0a



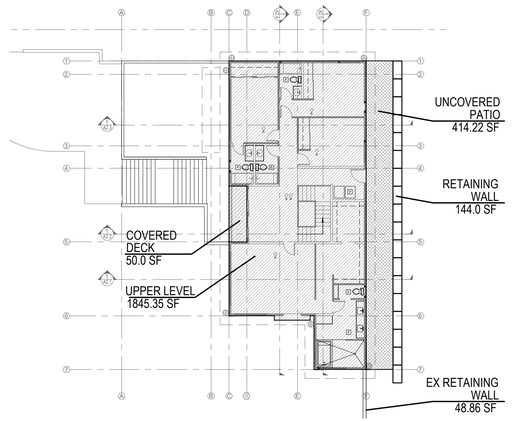

N

GROSS AREA
BASEMENT/GARAGE SCALE 1/16" = 1'




N

GROSS AREA
MAIN LEVEL SCALE 1/16" = 1'




N

GROSS AREA
UPPER LEVEL SCALE 1/16" = 1'

**LEGEND**

- PATIO
- MAIN BUILDING
- COVERED DECK
- STAIR
- CONCRETE WALL
- GRID LINES
- PROPERTY LINES
- SET BACK
- ROOF PROJECTION LINES

| HARDSCAPE AREA | |
|---|---|
| FLOOR NAME | FLOOR AREA (SF) |
| UNCOVERED DECKS | 0 SF |
| UNCOVERED PATIOS | 978.55 SF |
| WALKWAYS | 0 SF |
| STAIRS | 199.85 SF |
| ROCKERIES/ RET. WALLS | 209.21 SF |
| TOTAL HARDSCAPE | 1,387.61 SF |
| TOTAL PERCENTAGE | 3.72% |

| ALLOWABLE HARDSCAPE | |
|---|---|
| GROSS LOT AREA | 37,350 SF |
| | |
| 9% OF LOT AREA: | |
| ALLOWED HARDSCAPE | 3,361.5 SF |
| PROPOSED GROSS FLOOR AREA | 1,387.61 SF |
| PROPOSED % OF LOT AREA | 3.720000% |

| GROSS BUILDING AREA | |
|---|---|
| FLOOR NAME | FLOOR AREA (SF) |
| ROOF LEVEL | 0 SF |
| | |
| UPPER LEVEL | 1,845.35 SF |
| MAIN LEVEL | 1,893.4 SF |
| BASEMENT | 820.34 SF |
| GARAGE | 536.6 SF |
| TOTAL GROSS FLOOR AREA | 5,095.69 GSF |

| | |
|---|---|
| BASEMENT AREA EXCLUDED | 0 SF |
| ACTUAL TOTAL BUILDING AREA | 5,095.69 |

- SEE SHEET A1.0c FOR LOT COVERAGE CALCULATION

| ALLOWABLE GROSS FLOOR AREA | |
|---|---|
| GROSS LOT AREA | 37,350 SF |
| | |
| 12,000 SF OR 40% OF LOT AREA: | |
| ALLOWED GROSS FLOOR AREA | 12,000 SF |
| PROPOSED GROSS FLOOR AREA | 5,095.69 SF |
| PROPOSED % OF LOT AREA | 13% |

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PERMIT CORRECTION1

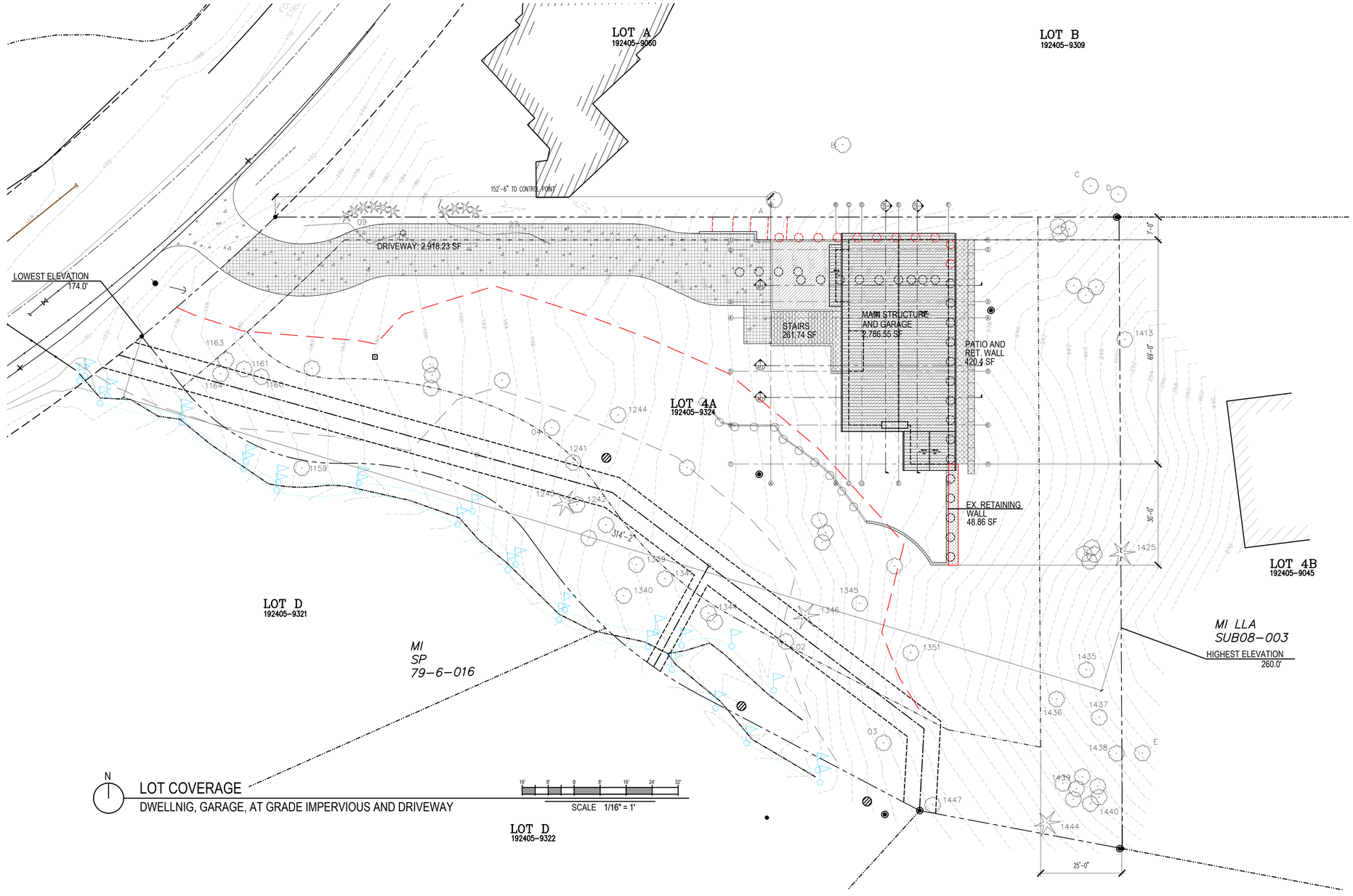
SDCI STAMP:

PROJECT TEAM:
SETH HALE

PROJECT NUMBER:
2023.014

SHEET TITLE:
ARCHITECTURAL
BUILDING AREA
GROSS FLOOR AREA

SHEET NUMBER:
A1.0b




| LOT SLOPE | |
|---|---|
| HIGHEST ELEVATION POINT OF LOT | 260 FEET |
| LOWEST ELEVATION POINT OF LOT | 174 FEET |
| ELEVATION DIFFERENCE | 86 FEET |
| HORIZONTAL DISTANCE BETWEEN HIGH AND LOW POINTS | 314.17 FEET |
| LOT SLOPE | 27.4 % |

| LOT COVERAGE | |
|---|---|
| GROSS LOT AREA | 37,350 SF |
| ALLOWED LOT COVERAGE (35%) | 13,072.5 SF |
| MAIN STRUCTURE AND GARAGE | 2,786.55 SF |
| | |
| PATIOS, DECKS, STAIRS AND RETAINING WALLS | 731 SF |
| DRIVEWAY | 2,918.23 SF |
| TOTAL IMPERVIOUS AREA | 6,435.78 SF |
| PROPOSED LOT COVERAGE | 17.23% |

**LEGEND**

- MAIN STRUCTURE AND GARAGE WITH ROOF INCLUDED
- STAIR, PATIO, RETAINING WALLS
- DRIVEWAY (IMPERVIOUS)
- LANDSCAPE AREA
- GRID LINES
- PROPERTY LINES
- SET BACK — SET BACK

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SETH LENTON HALE
STATE OF WASHINGTON

# MERCER ISLAND RESIDENCE

5236 W MERCER WAY
MERCER ISLAND, WA 98125

SDCI PERMIT#: XXX

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|---|---|---|
| | PERMIT | 12/12/2024 |
| 1 | CORRECTION1 | 09/17/2025 |

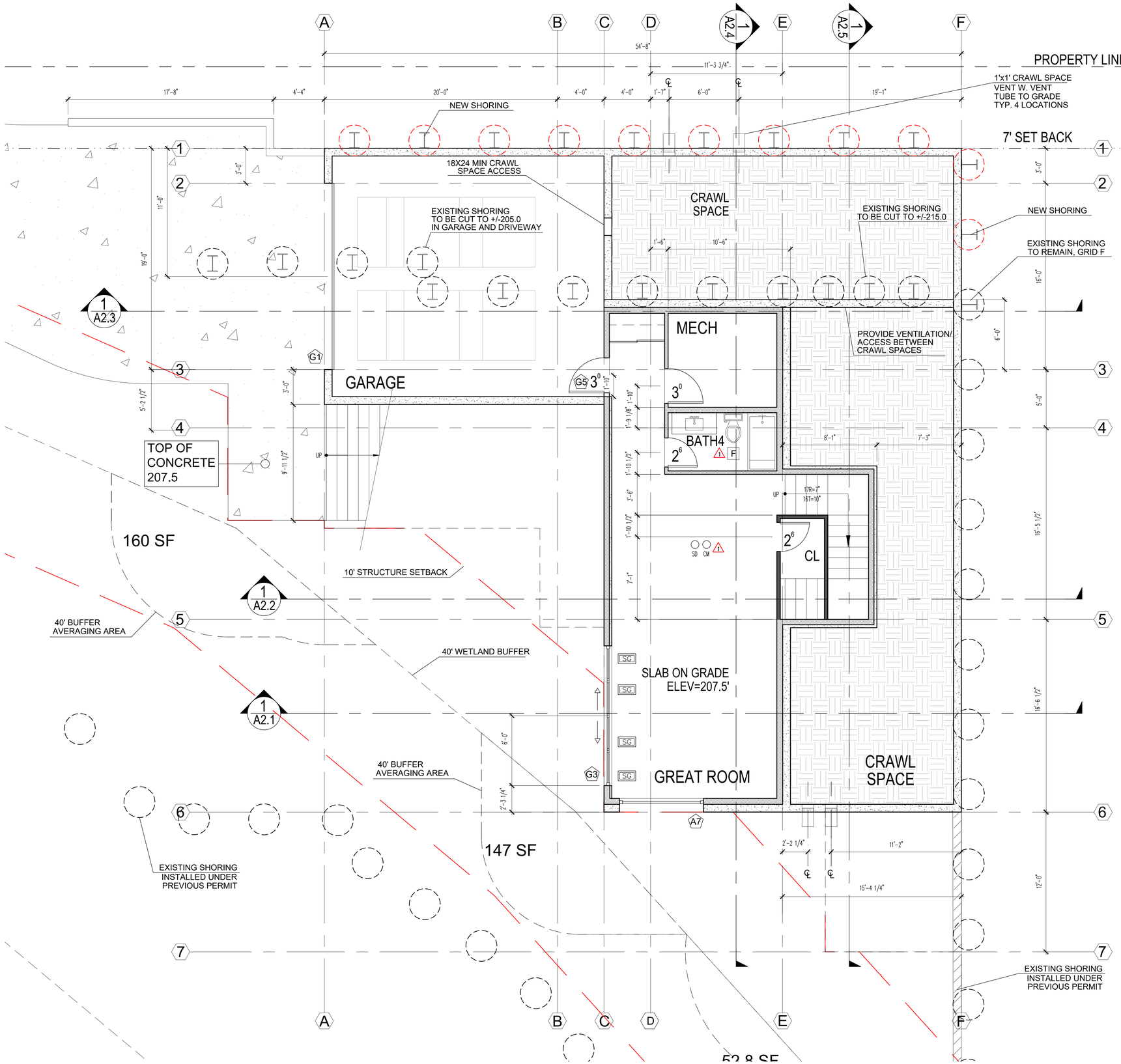
SDCI STAMP:

PROJECT TEAM:
SETH HALE

PROJECT NUMBER:
2023.014

SHEET TITLE:
ARCHITECTURAL
LOT COVERAGE

SHEET NUMBER:
A1.0c




N

## FLOOR PLAN
BASEMENT LEVEL

SCALE 1/4" = 1'

| | |
|---|---|
| FLOOR AREA | 820 SF |
| GARAGE | 537 SF |

CRAWL SPACE VENTING

NORTH CRAWL SPACE = 362 SF
362 SF/ 300 = 1.2 SF REQUIRED
12"x12" x 2 VENTS PROVIDE = 2 SF

SOUTH CRAWL SPACE = 480 SF
480 SF/ 300 = 1.6 SF REQUIRED
12"x12" x 2 VENTS PROVIDE = 2 SF

**NOTES:**

- SEE STRUCTURAL DRAWINGS FOR FRAMING AND FOUNDATION NOTES
- ALL CABINETS DIMENSIONS ARE TO FACE OF CABINET BOX
- VERIFY WITH OWNER HOSEBIB LOCATION

**LEGEND:**

- 2x6 EXTERIOR FRAMING
- 2x6 INTERIOR FRAMING
- 2x4 INTERIOR FRAMING
- GRID LINES
- PROPERTY LINES
- SET BACK
- UPPER LV PROJECTION LINES
- SG SAFETY GLAZING
- HOSE BIB
- DS DOWNSPOUT
- SD SMOKE DETECTOR
- CM CARBON MONOXIDE DETECTOR
- F VENTILATION FAN

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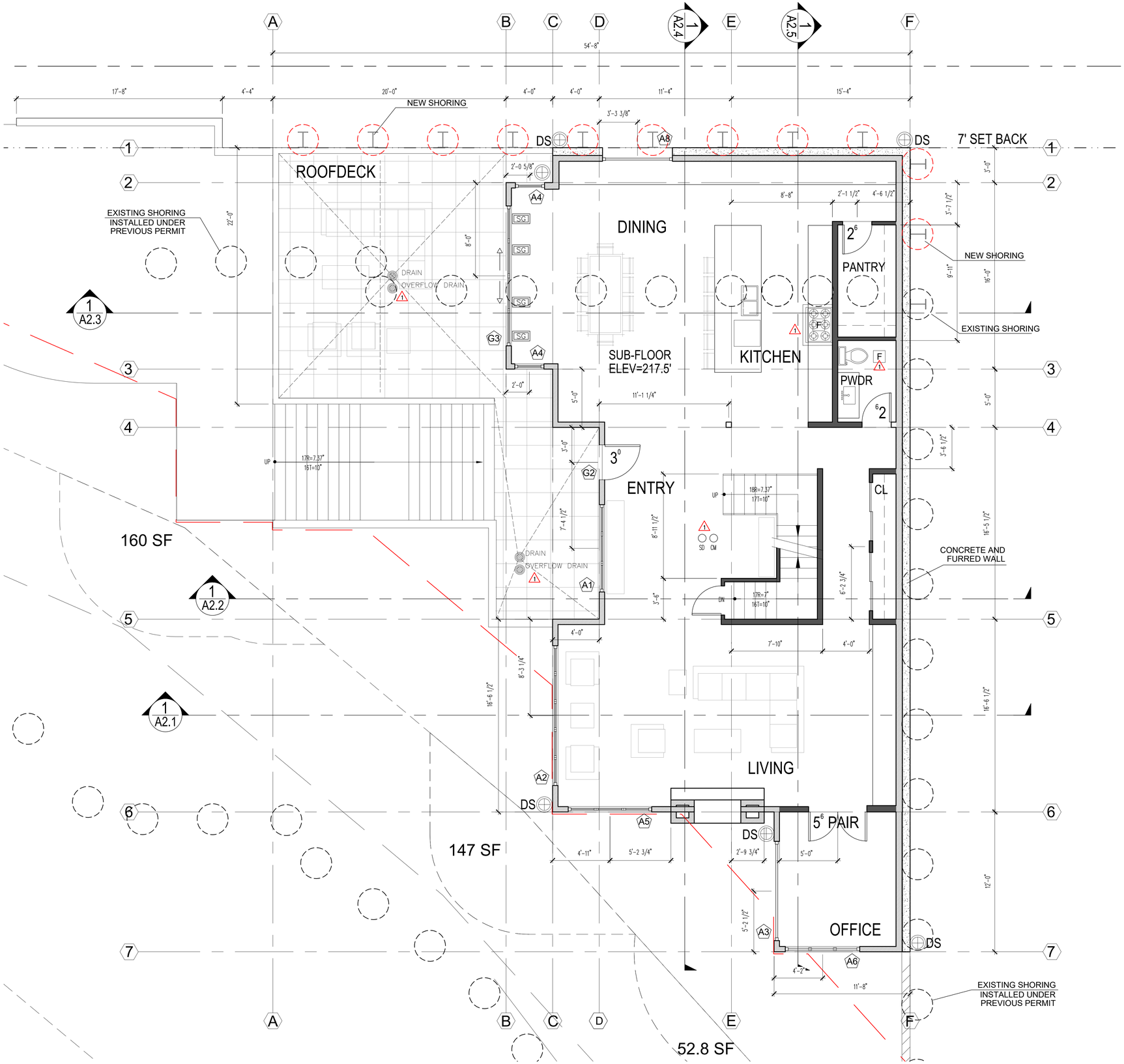
SDCI STAMP:

PROJECT TEAM:
SETH HALE

PROJECT NUMBER:
2023.014

SHEET TITLE:
BASEMENT FLOOR PLAN

SHEET NUMBER:
A1.1a




N

FLOOR PLAN
MAIN LEVEL

SCALE 1/4" = 1'

| FLOOR AREA | 1,886 SF |
|---|---|

**NOTES:**

- SEE STRUCTURAL DRAWINGS FOR FRAMING AND FOUNDATION NOTES
- ALL CABINETS DIMENSIONS ARE TO FACE OF CABINET BOX
- VERIFY WITH OWNER HOSEBIB LOCATION

**LEGEND:**

- 2x6 EXTERIOR FRAMING
- 2x6 INTERIOR FRAMING
- 2x4 INTERIOR FRAMING
- GRID LINES
- PROPERTY LINES
- SET BACK
- UPPER LV PROJECTION LINES
- SG — SAFETY GLAZING
- HOSE BIB
- DS — DOWNSPOUT
- SD — SMOKE DETECTOR
- CM — CARBON MONOXIDE DETECTOR
- F — VENTILATION FAN

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| 1 | PERMIT CORRECTION | 09/17/2025 |

DATE 12/12/2024

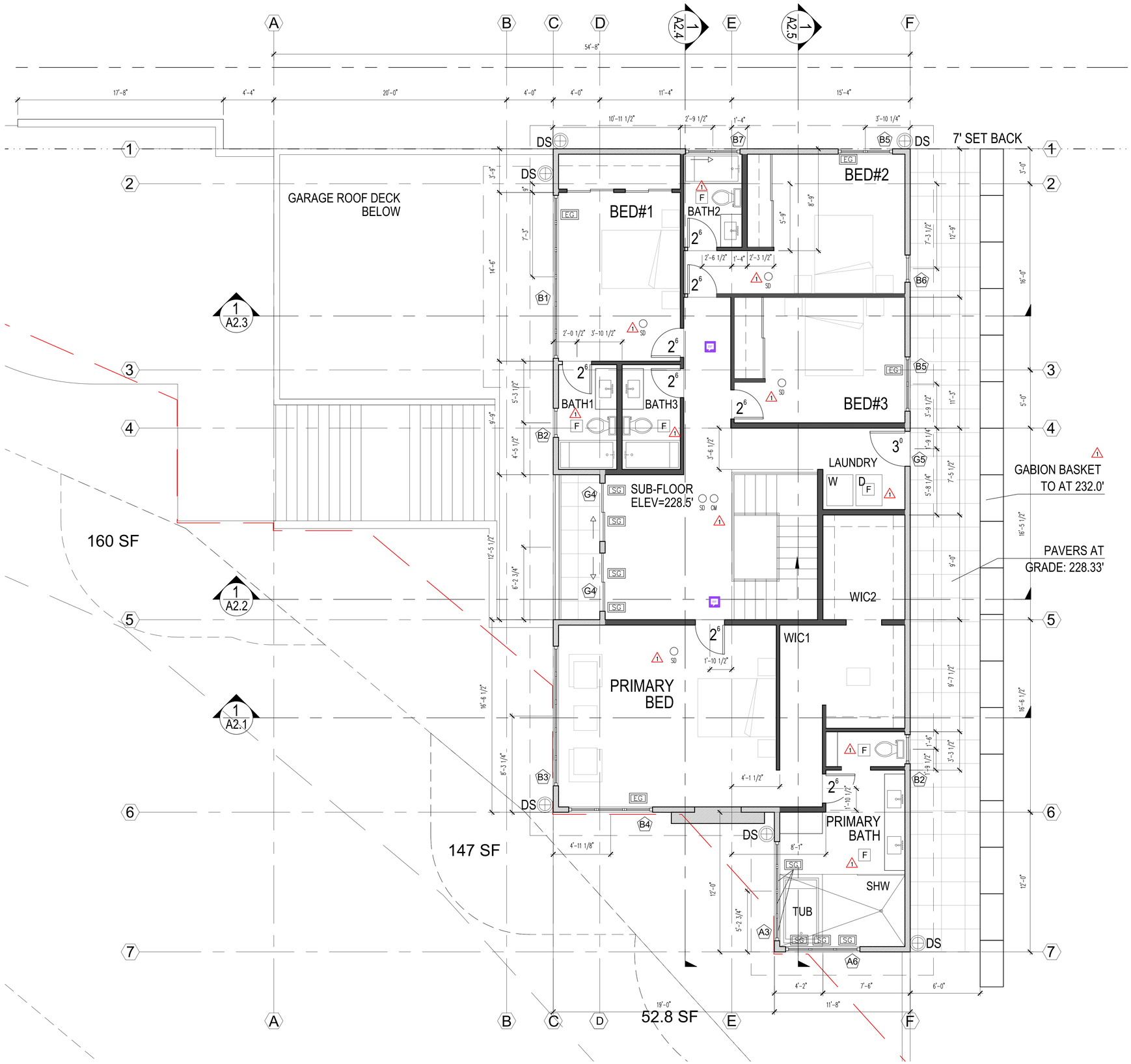
SDCI STAMP:

PROJECT TEAM:
SETH HALE

PROJECT NUMBER:
2023.014

SHEET TITLE:
MAIN FLOOR PLAN

SHEET NUMBER:
A1.1b




N

FLOOR PLAN
UPPER LEVEL

4' 2' 0 2' 4' 6' 8'
SCALE 1/4" = 1'

| FLOOR AREA | 1,643 SF |
|---|---|

**NOTES:**

- SEE STRUCTURAL DRAWINGS FOR FRAMING AND FOUNDATION NOTES
- ALL CABINETS DIMENSIONS ARE TO FACE OF CABINET BOX
- VERIFY WITH OWNER HOSEBIB LOCATION

**LEGEND:**

- 2x6 EXTERIOR FRAMING
- 2x6 INTERIOR FRAMING
- 2x4 INTERIOR FRAMING
- 1 — GRID LINES
- PROPERTY LINES
- SET BACK — SET BACK
- UPPER LV PROJECTION LINES
- SG — SAFETY GLAZING
- HOSE BIB
- DS — DOWNSPOUT
- SD — SMOKE DETECTOR
- CM — CARBON MONOXIDE DETECTOR
- F — VENTILATION FAN

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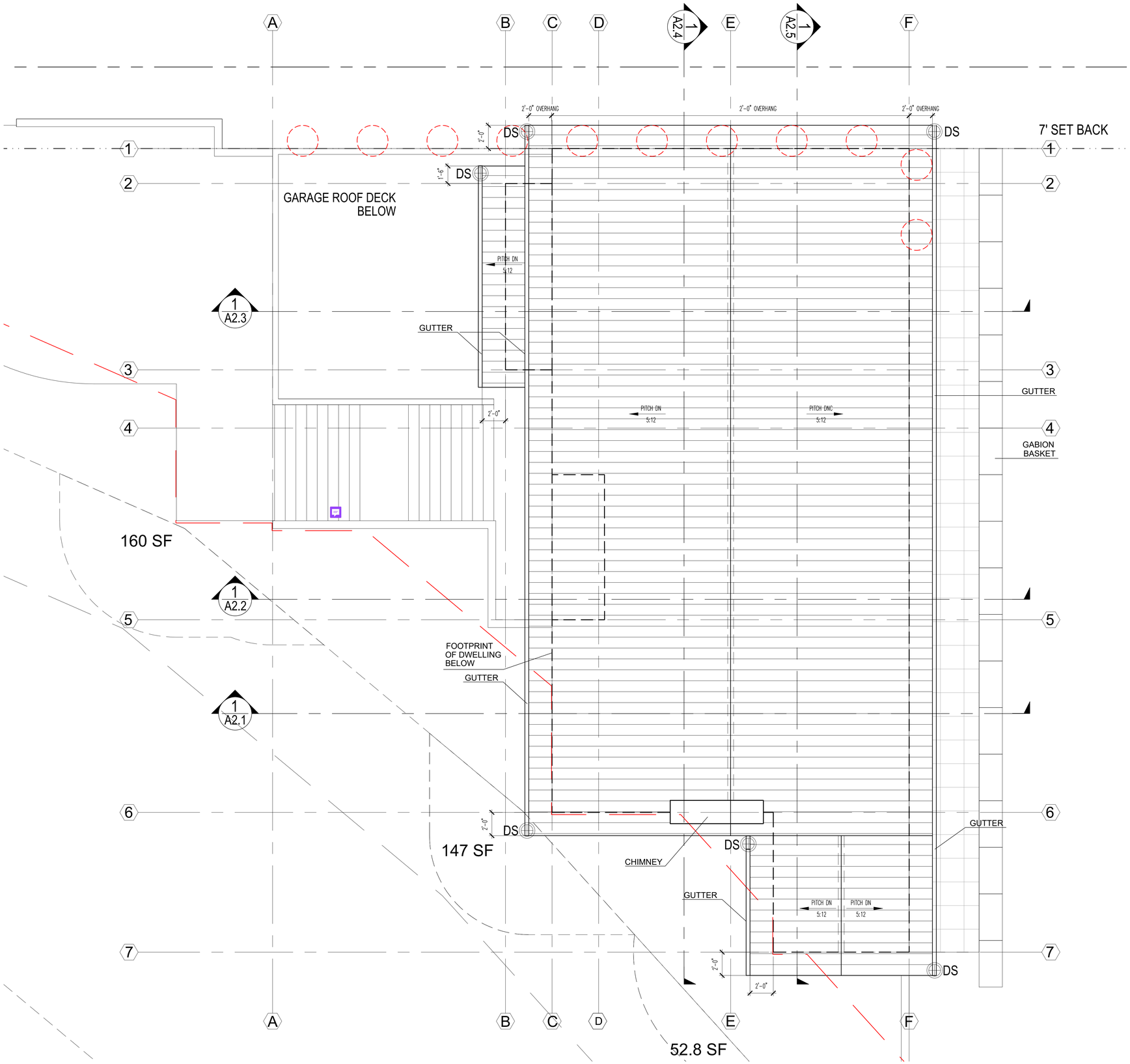
SDCI STAMP:

PROJECT TEAM:
SETH HALE

PROJECT NUMBER:
2023.014

SHEET TITLE:
UPPER LEVEL PLAN

SHEET NUMBER:
A1.1c




N

# FLOOR PLAN
ROOF LEVEL

4' 2' 0 2' 4' 6' 8'

SCALE 1/4" = 1'

| FLOOR AREA | 1,228 SF |
|---|---|

**NOTES:**

- SEE STRUCTURAL DRAWINGS FOR FRAMING AND FOUNDATION NOTES
- ALL CABINETS DIMENSIONS ARE TO FACE OF CABINET BOX
- VERIFY WITH OWNER HOSEBIB LOCATION

**LEGEND:**

- 2x6 EXTERIOR FRAMING
- 2x6 INTERIOR FRAMING
- 2x4 INTERIOR FRAMING
- GRID LINES
- PROPERTY LINES
- SET BACK
- UPPER LV PROJECTION LINES
- SG SAFETY GLAZING
- HOSE BIB
- DS DOWNSPOUT
- SD SMOKE DETECTOR
- CM CARBON MONOXIDE DETECTOR
- F VENTILATION FAN

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09/17/2025

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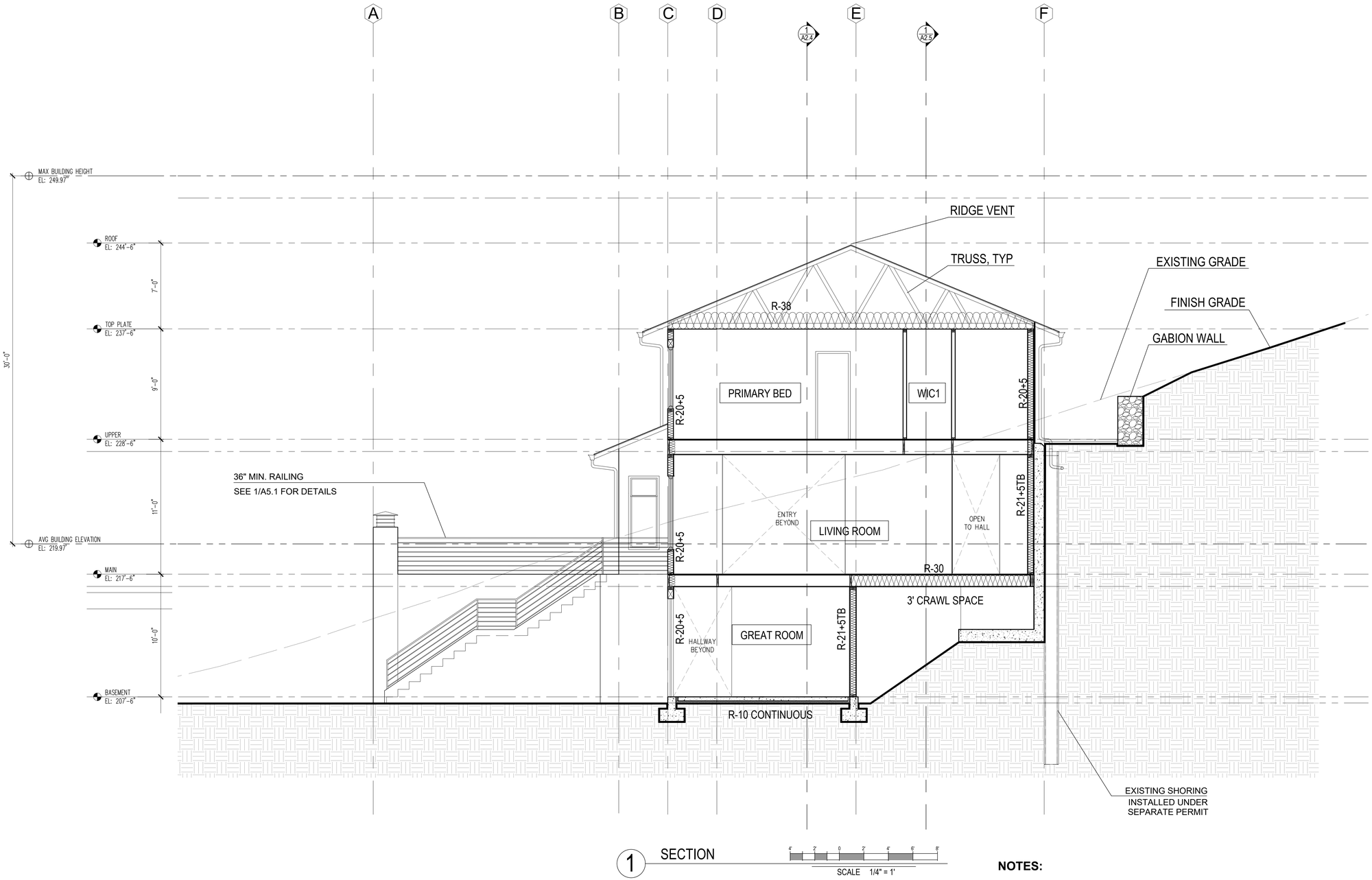
SDCI STAMP:

PROJECT TEAM:
SETH HALE

PROJECT NUMBER:
2023.014

SHEET TITLE:
ROOF PLAN

SHEET NUMBER:
A1.1d




1 SECTION

SCALE 1/4" = 1'

**NOTES:**

- ALL ROOF EAVES & UNDERSIDE OF ENCLOSED DECKS TO HAVE CONTINUOUS SCREENED VENTING
- SEE A2.6 FOR ENLARGED WALL SECTION SHOWING LOCATIONS FOR INSULATION VALUES & TYPICAL VENTING LOCATIONS
- CONTRACTORS SHALL VERIFY TO INSPECTOR ALL GUARD & RAILING SHALL BE CAPABLE OF RESISTING 200 LB LOAD ON TOP RAIL ACTING IN ANY DIRECTION AS REQ'D BY IRC TABLE R301.5

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| | PERMIT | 12/12/2024 |
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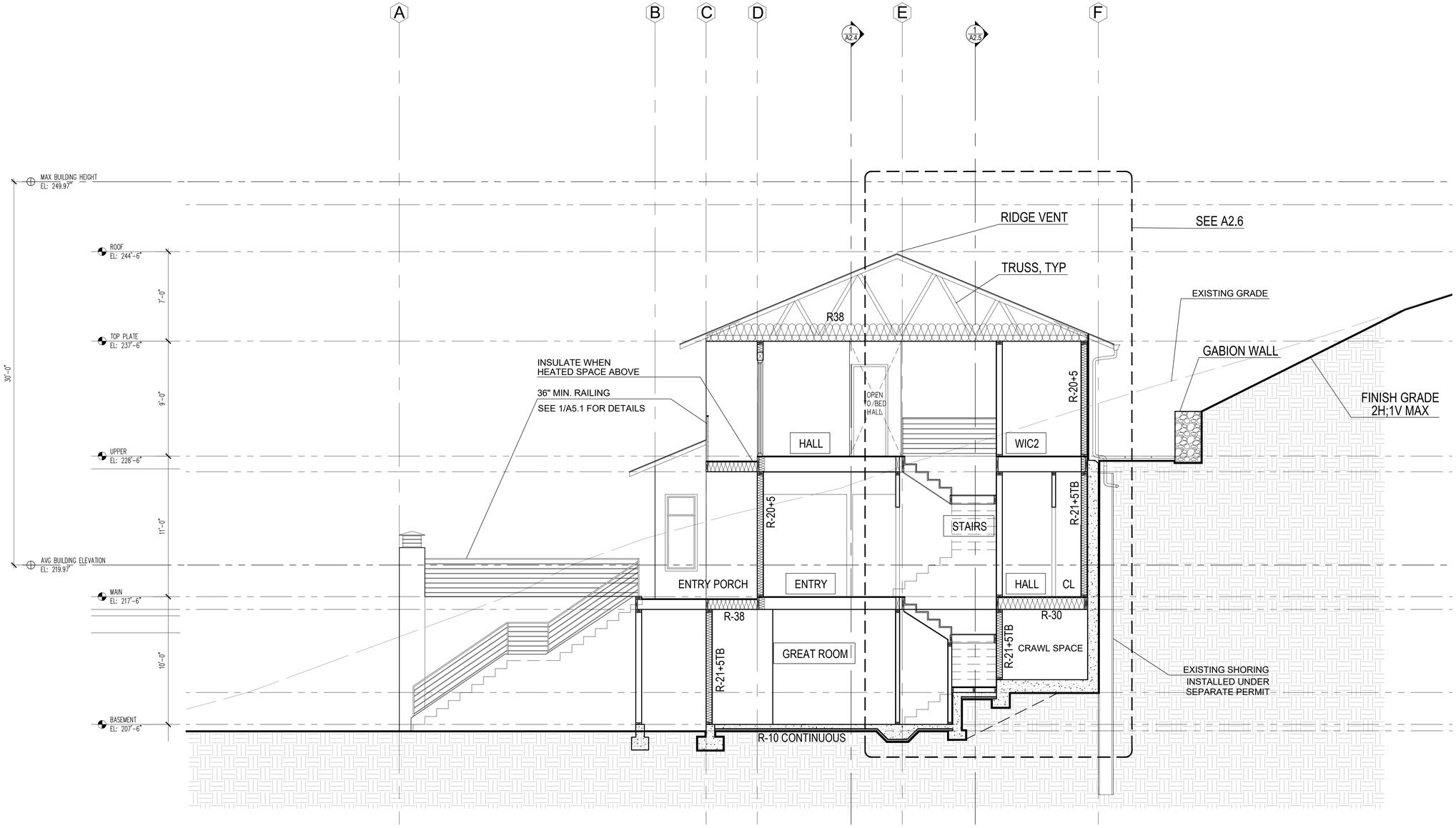
SDCI STAMP:

PROJECT TEAM:
SETH HALE

PROJECT NUMBER:
2023.014

SHEET TITLE:
ARCHITECTURAL SOUTH SECTION

SHEET NUMBER:
A2.1




1 SECTION

4' 2' 0 2' 4' 6' 8'

SCALE 1/4" = 1'

**NOTES:**

- ALL ROOF EAVES & UNDERSIDE OF ENCLOSED DECKS TO HAVE CONTINUOUS SCREENED VENTING
- SEE A2.6 FOR ENLARGED WALL SECTION SHOWING LOCATIONS FOR INSULATION VALUES & TYPICAL VENTING LOCATIONS
- CONTRACTORS SHALL VERIFY TO INSPECTOR ALL GUARD & RAILING SHALL BE CAPABLE OF RESISTING 200 LB LOAD ON TOP RAIL ACTING IN ANY DIRECTION AS REQ'D BY IRC TABLE R301.5

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| | PERMIT | 12/12/2024 |
| 1 | CORRECTION1 | 09/17/2025 |

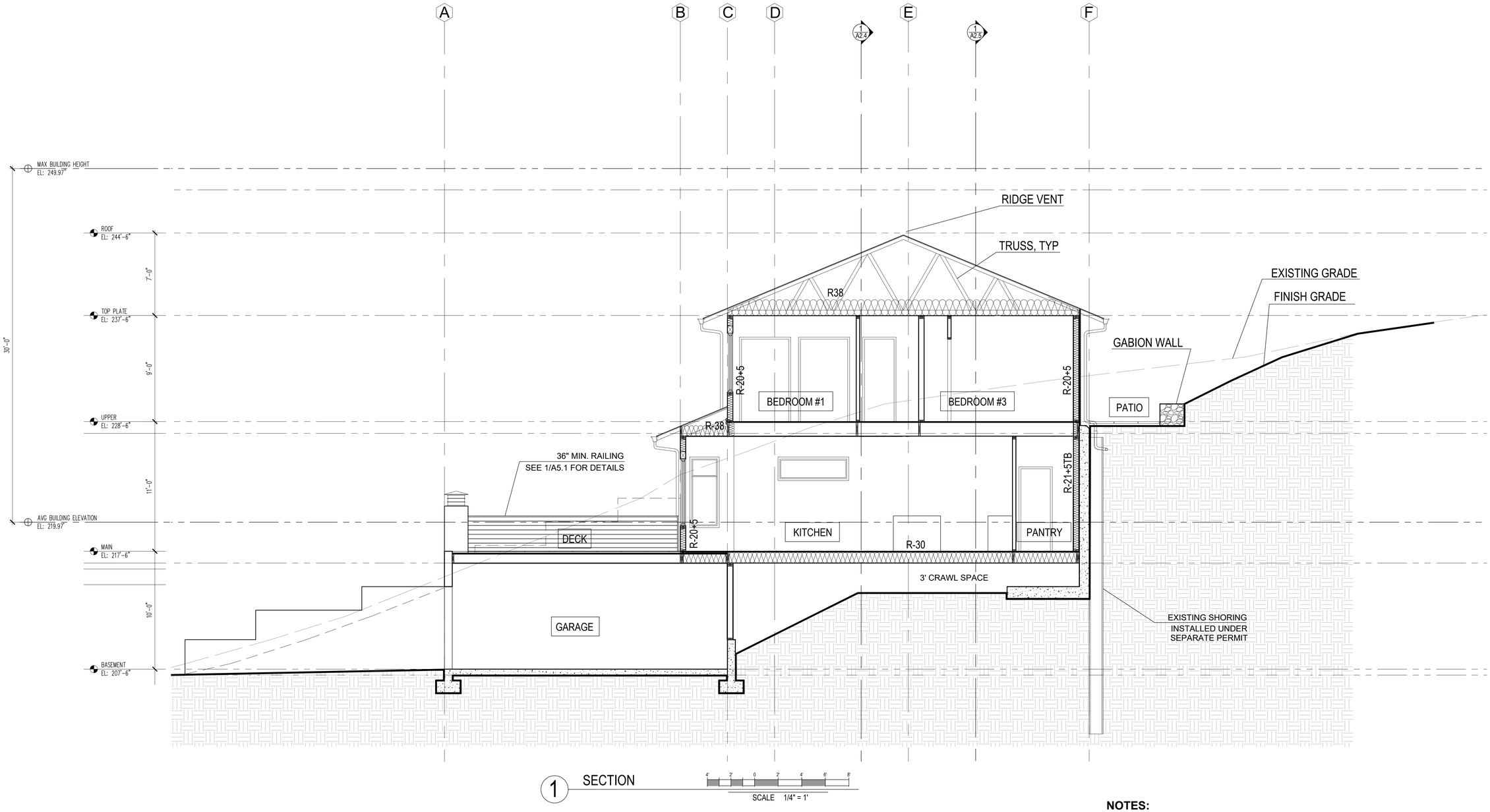
SDCI STAMP:

PROJECT TEAM:
SETH HALE

PROJECT NUMBER:
2023.014

SHEET TITLE:
STAIR SECTION

SHEET NUMBER:
A2.2




1 SECTION

SCALE 1/4" = 1'

**NOTES:**

- ALL ROOF EAVES & UNDERSIDE OF ENCLOSED DECKS TO HAVE CONTINUOUS SCREENED VENTING
- SEE A2.6 FOR ENLARGED WALL SECTION SHOWING LOCATIONS FOR INSULATION VALUES & TYPICAL VENTING LOCATIONS
- CONTRACTORS SHALL VERIFY TO INSPECTOR ALL GUARD & RAILING SHALL BE CAPABLE OF RESISTING 200 LB LOAD ON TOP RAIL ACTING IN ANY DIRECTION AS REQ'D BY IRC TABLE R301.5

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| | CORRECTION1 | 09/17/2025 |

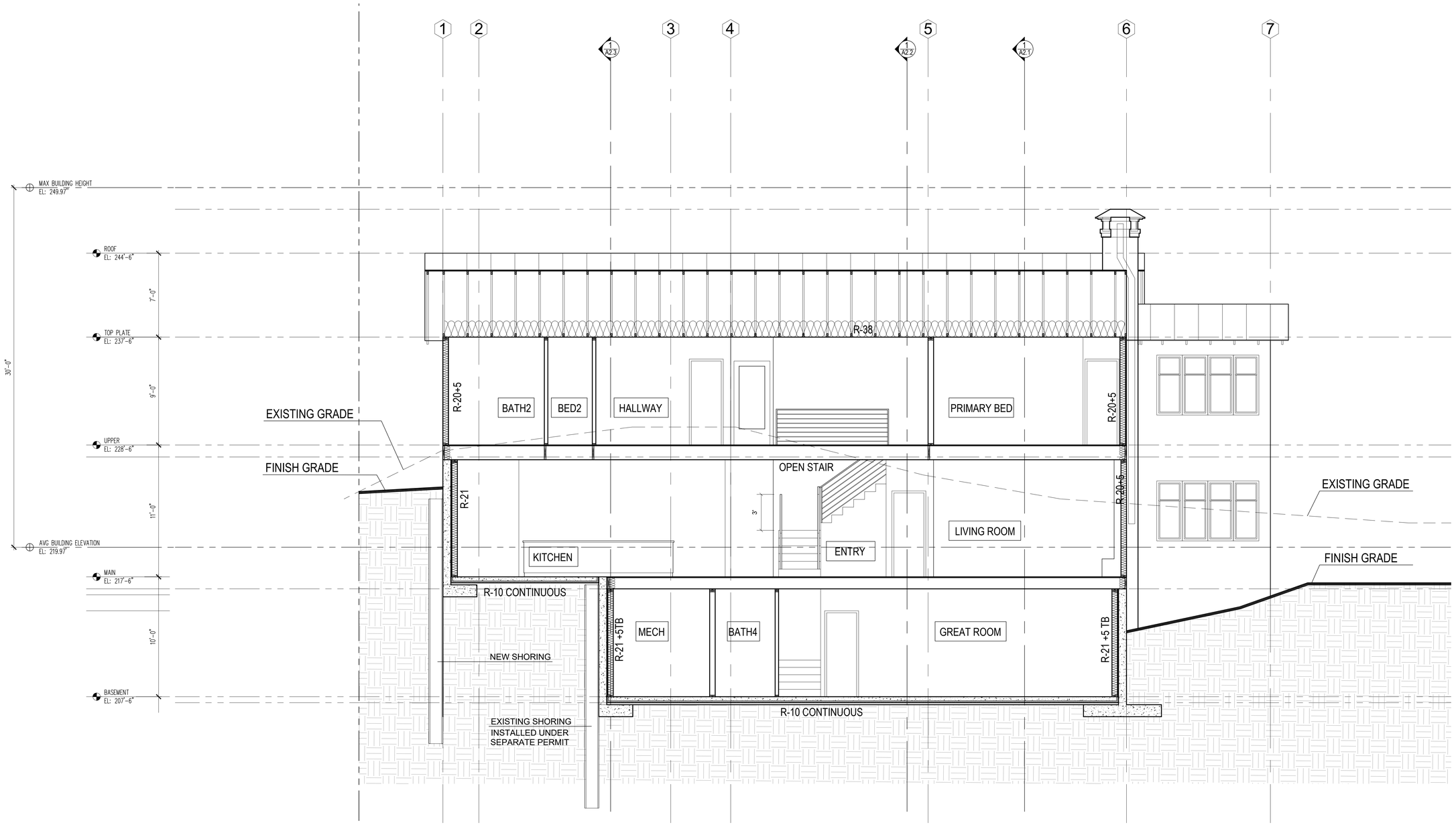
SDCI STAMP:

PROJECT TEAM:
SETH HALE

PROJECT NUMBER:
2023.014

SHEET TITLE:
NORTH SECTION

SHEET NUMBER:
A2.3




1 SECTION

4' 2' 0 2' 4' 6' 8'

SCALE 1/4" = 1'

**NOTES:**

- ALL ROOF EAVES & UNDERSIDE OF ENCLOSED DECKS TO HAVE CONTINUOUS SCREENED VENTING
- SEE A2.6 FOR ENLARGED WALL SECTION SHOWING LOCATIONS FOR INSULATION VALUES & TYPICAL VENTING LOCATIONS
- CONTRACTORS SHALL VERIFY TO INSPECTOR ALL GUARD & RAILING SHALL BE CAPABLE OF RESISTING 200 LB LOAD ON TOP RAIL ACTING IN ANY DIRECTION AS REQ'D BY IRC TABLE R301.5

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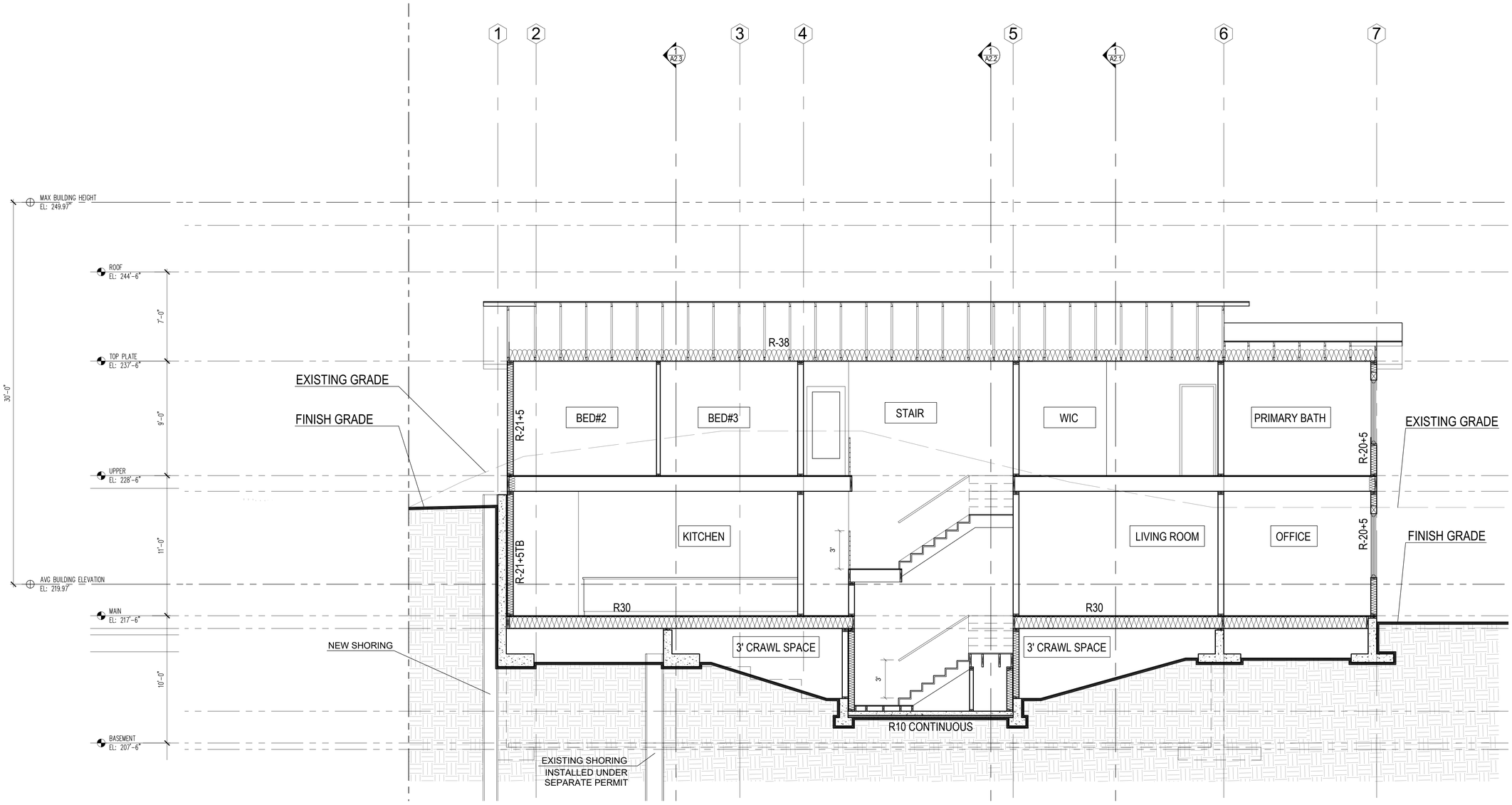
SDCI STAMP:

PROJECT TEAM:
SETH HALE

PROJECT NUMBER:
2023.014

SHEET TITLE:
WEST SECTION

SHEET NUMBER:
A2.4




1 SECTION

4' 2' 0 2' 4' 6' 8'

SCALE 1/4" = 1'

**NOTES:**

- ALL ROOF EAVES & UNDERSIDE OF ENCLOSED DECKS TO HAVE CONTINUOUS SCREENED VENTING
- SEE A2.6 FOR ENLARGED WALL SECTION SHOWING LOCATIONS FOR INSULATION VALUES & TYPICAL VENTING LOCATIONS
- CONTRACTORS SHALL VERIFY TO INSPECTOR ALL GUARD & RAILING SHALL BE CAPABLE OF RESISTING 200 LB LOAD ON TOP RAIL ACTING IN ANY DIRECTION AS REQ'D BY IRC TABLE R301.5

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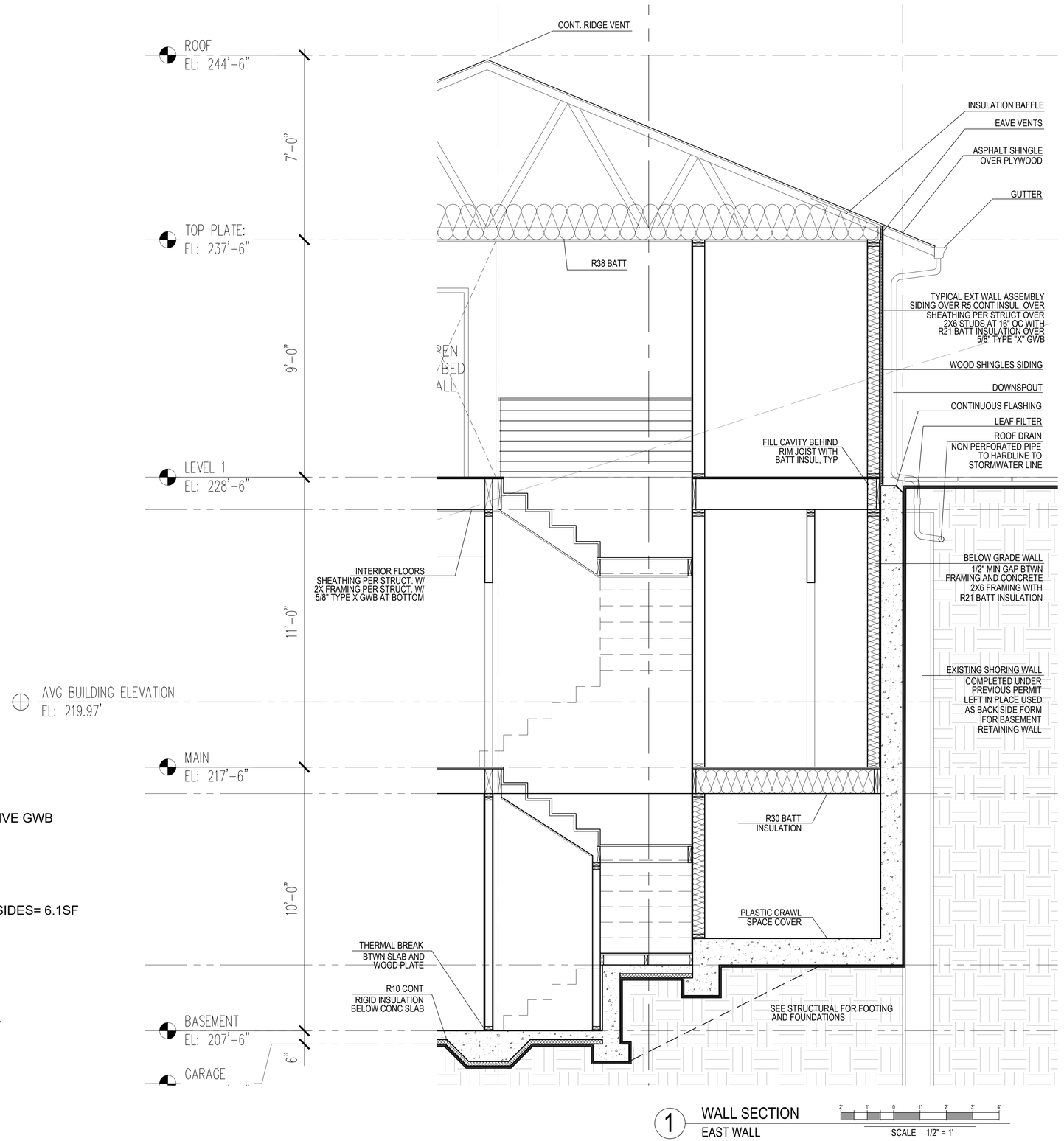
SDCI STAMP:

PROJECT TEAM:
SETH HALE

PROJECT NUMBER:
2023.014

SHEET TITLE:
EAST SECTION

SHEET NUMBER:
A2.5




1 WALL SECTION
EAST WALL

SCALE 1/2" = 1'

**NOTE:**

- VERIFY ALL WATERPROOFING REQUIREMENTS WITH WATERPROOFING ENGINEER TYP.
- PROVIDE 5/8" TYPE X GWB AT ALL SURFACES TO RECEIVE GWB

ROOF VENTILATION
*REFERENCE IRC R806*

*EAVE VENTILATION*
(4) 2"Ø HOLES PER TRUSS BAY x 35= 439.6/144= 3.05 SF x 2 SIDES= 6.1SF

*RIDGE VENTILATION*
NORTH ROOF: 55.91 LF x .125 SF/LF= 6.99 SF
SOUTH ROOF: 10 LF x 0.125= 1.25 SF

ROOF AREA: 1,888 SF/150 = **12.58 SF** OF VENTING AREA.
PROVIDED 14.34 SF

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| 1 | CORRECTION1 | 09/17/2025 |

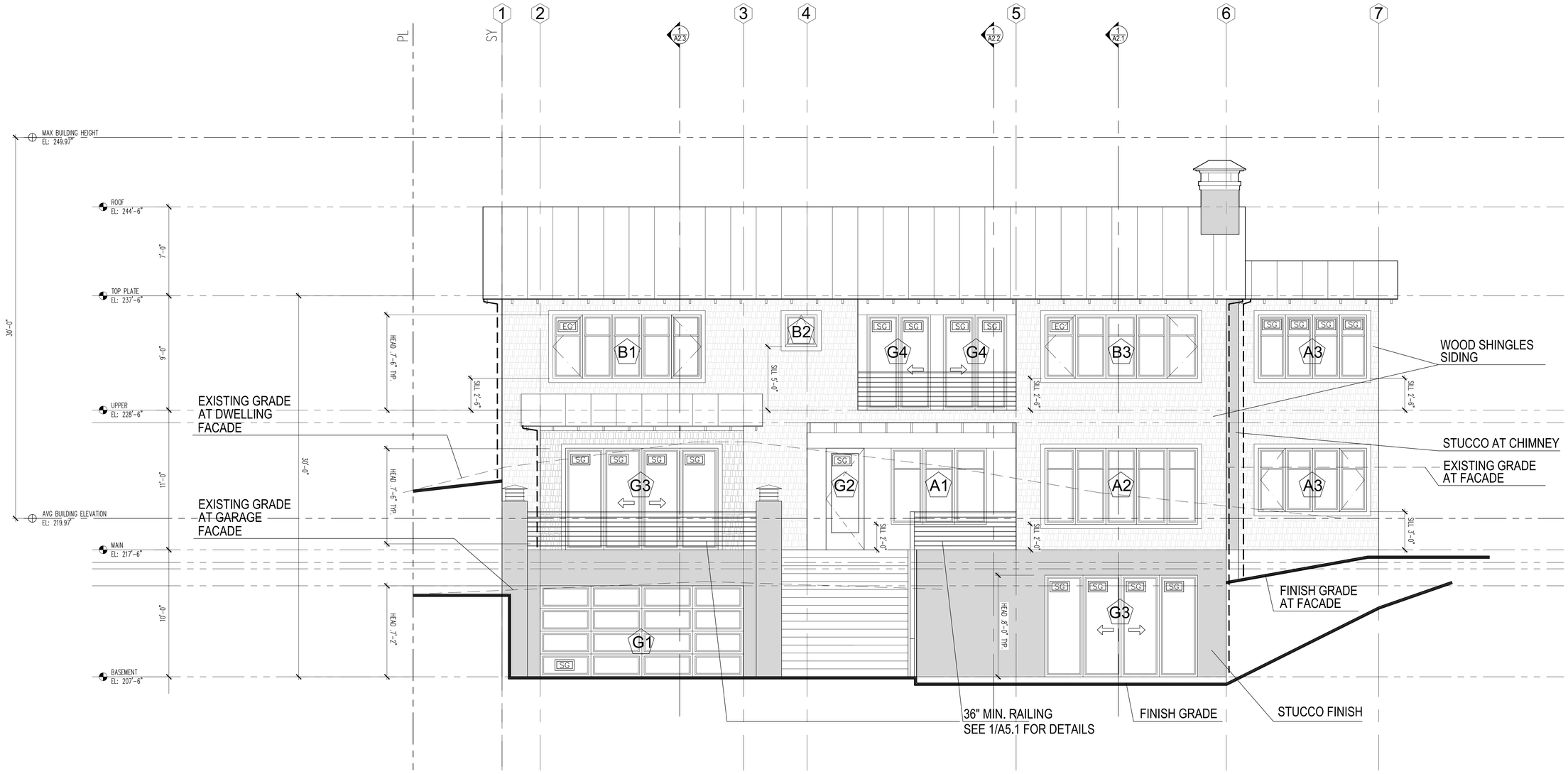
SDCI STAMP:

PROJECT TEAM:
SETH HALE

PROJECT NUMBER:
2023.014

SHEET TITLE:
WALL SECTIONS

SHEET NUMBER:
A2.6




1 WEST ELEVATION

SCALE 1/4" = 1'



2" X 3/8" BLADED STEEL POWDER COATED POST, 1/8" S.S. CABLES, AND S.S. ACORN TENSION NUT

2 CABLE RAILING DESIGN INTENT

NOT TO SCALE

SG - SAFETY GLAZING

EG - EGRESS WINDOW

DS - DOWNSPOUT

**NOTE:**

- CONTRACTORS SHALL VERIFY TO INSPECTOR ALL GUARD AND RAILING SHALL BE CAPABLE OF RESISTING 200 LB LOAD ON TOP RAIL ACTING IN ANY DIRECTION AS REQ'D BY IRC TABLE R301.5

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DATE
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MARK REVISION
1 PERMIT CORRECTION

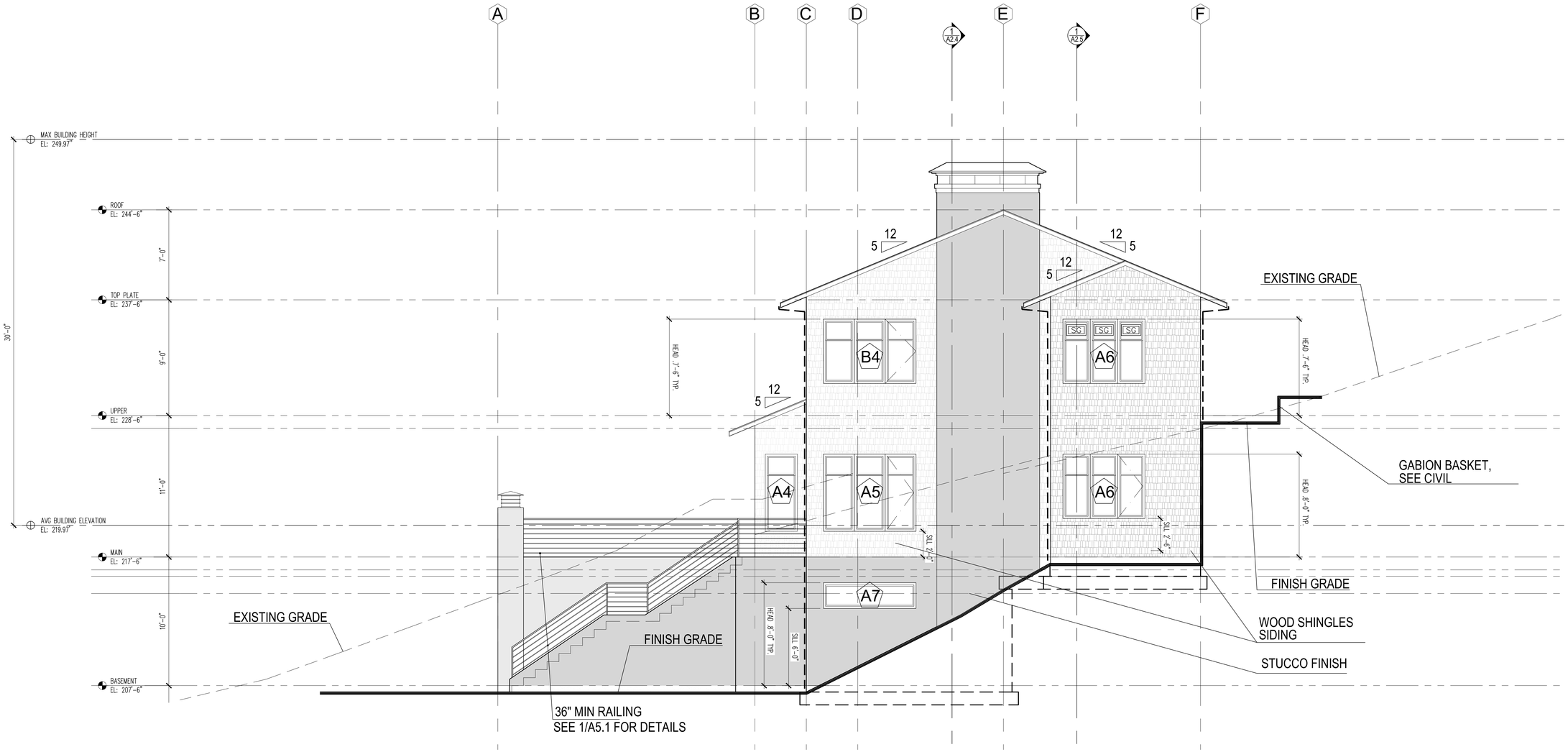
SDCI STAMP:

PROJECT TEAM:
SETH HALE

PROJECT NUMBER:
2023.014

SHEET TITLE:
ARCHITECTURAL WEST ELEVATION

SHEET NUMBER:
A3.1




1 SOUTH ELEVATION

SCALE 1/4" = 1'

SG - SAFETY GLAZING

EG - EGRESS WINDOW

DS - DOWNSPOUT

SEE A3.1 FOR EXTERIOR FINISH MATERIALS TYP

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| | | 12/12/2024 |
| 1 | PERMIT CORRECTION1 | 09/17/2025 |

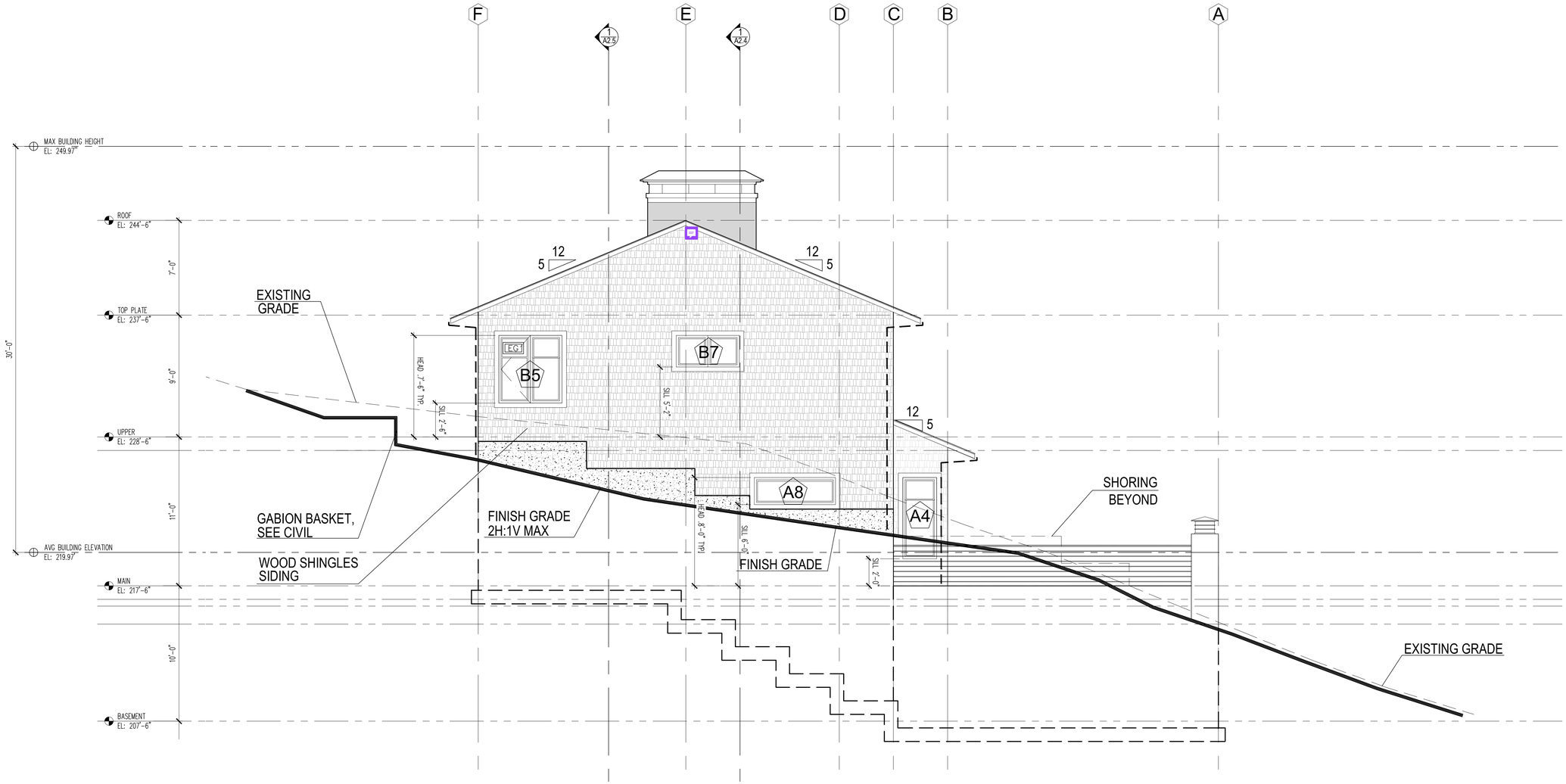
SDCI STAMP:

PROJECT TEAM:
SETH HALE

PROJECT NUMBER:
2023.014

SHEET TITLE:
SOUTH ELEVATION

SHEET NUMBER:
A3.2




1 NORTH ELEVATION

SCALE 1/4" = 1'

SG - SAFETY GLAZING

EG - EGRESS WINDOW

DS - DOWNSPOUT

SEE A3.1 FOR EXTERIOR FINISH MATERIALS TYP

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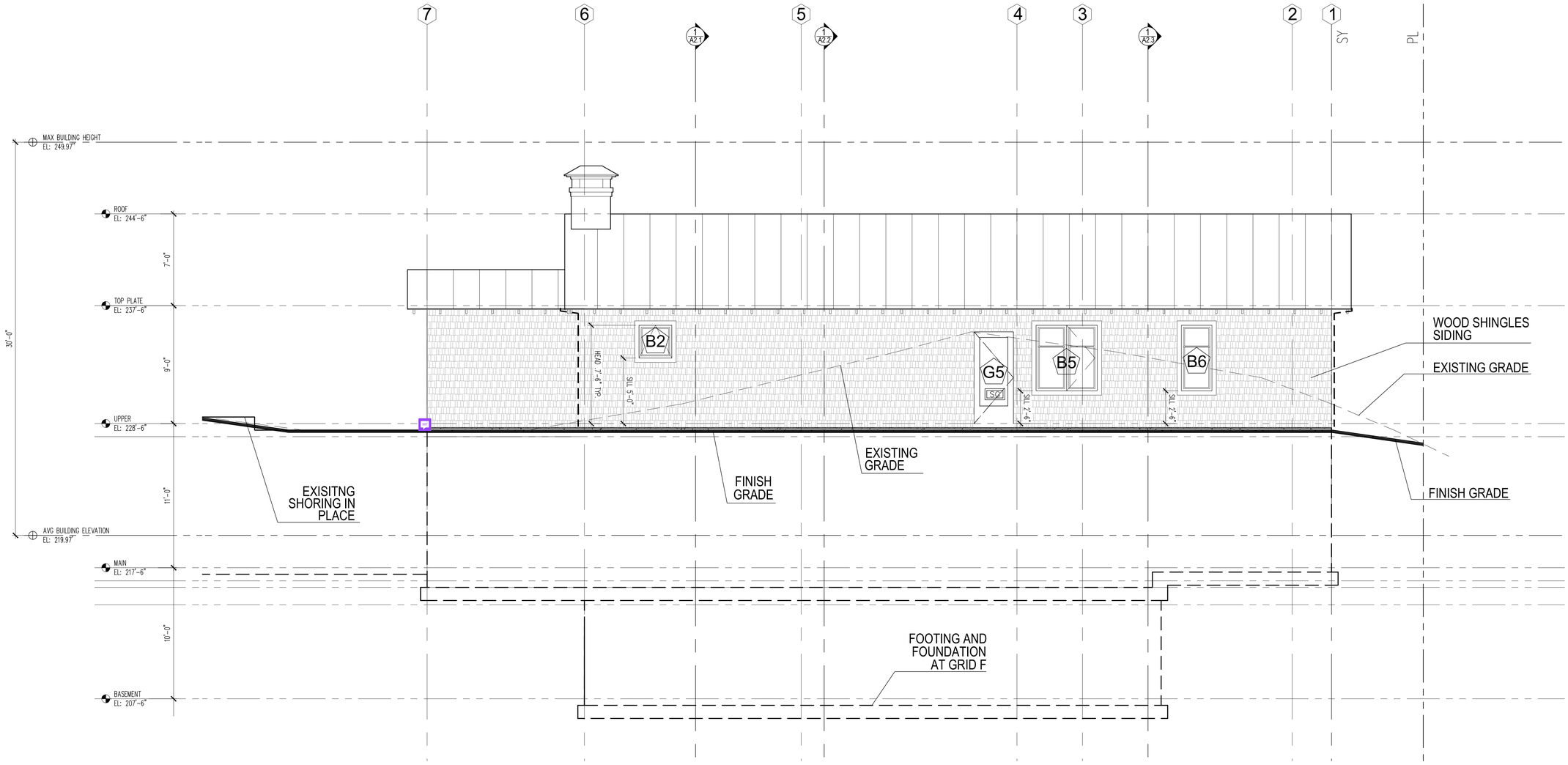
SDCI STAMP:

PROJECT TEAM:
SETH HALE

PROJECT NUMBER:
2023.014

SHEET TITLE:
NORTH ELEVATION

SHEET NUMBER:
A3.3




1 EAST ELEVATION

SCALE 1/4" = 1'

SG - SAFETY GLAZING

EG - EGRESS WINDOW

DS - DOWNSPOUT

SEE A3.1 FOR EXTERIOR FINISH MATERIALS TYP


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SEATTLE, WA 98109 | 206-300-5339


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10009 REGISTERED ARCHITECT SETH LEVITON HALE STATE OF WASHINGTON

# MERCER ISLAND RESIDENCE

5236 W MERCER WAY
MERCER ISLAND, WA 98125

SDCI PERMIT#: XXX

DATE
12/12/2024
09/17/2025

MARK REVISION
PERMIT CORRECTION1

SDCI STAMP:

PROJECT TEAM:
SETH HALE

PROJECT NUMBER:
2023.014

SHEET TITLE:
EAST ELEVATION

SHEET NUMBER:
A3.4

# GLAZING SCHEDULE

| DOOR REFERENCE | WINDOW REFERENCE | QTY | GLAZING EACH | TOTAL AREA SF | - | U FACTOR | UA | NOTES |
|---|---|---|---|---|---|---|---|---|
| WEST ELEVATION | | | | | | | | |
| G1 | | 1 | 16'-0" x 7'-2" | 114.4 SF | 114.4 | N/A | N/A | AUTOMATIC GARAGE DOOR |
| G2 | | 1 | 3'-0" x 7'-6" | 24 SF | 24 | 0.30 | 7.2 | MAIN DOOR |
| G3 | | 2 | 12'-0" x 8'-0" | 96 SF | 192 | 0.30 | 57.6 | SIDING DOOR, 4 UNITS (TWO FIXED) |
| G4 | | 2 | 5'-0" x 7'-6" | 37.5 SF | 75 | 0.30 | 22.5 | SLIDING DOOR, 2 UNITS (1 FIXED) |
| G5 | | 1 | 3'-0"X7'-0" | 21.0 SF | - | 0.30 | | 20 MINUTE DOOR, SELF CLOSING |
| | A1 | 1 | 7'-6" x 6'-0" | 45 SF | 45 | 0.30 | 13.5 | 3 FIXED UNITS |
| | A2 | 1 | 12'-0" x 7'-6" | 72 SF | 72 | 0.30 | 21.6 | 5 FIXED UNITS |
| | A3 | 2 | 8'-6" x 5'-0" | 42.5 SF | 85 | 0.30 | 25.5 | 4 UNITS (2 FIXED) |
| | B1 | 1 | 11'-8" x 5'-0" | 58 SF | 58 | 0.30 | 17.4 | 6 UNITS (4 FIXED) |
| | B2 | 1 | 2'-6" x 2'-6" | 6.25 SF | 6.25 | 0.30 | 1.9 | |
| | B3 | 1 | 12'-0" x 5'-0" | 60 SF | 60 | 0.30 | 18.0 | 5 UNITS (3 FIXED) |
| | | | | **TOTAL** | **732** | | **185.2** | |
| SOUTH ELEVATION | | | | | | | | |
| | A4 | 1 | 2'-6" x 6'-0" | 15 SF | 15 | 0.30 | 4.5 | |
| | A5 | 1 | 7'-2" x 6'-0" | 43 SF | 43 | 0.30 | 12.9 | 3 UNITS (1 FIXED) |
| | A6 | 2 | 6'-5" x 5'-0" | 32 SF | 64 | 0.30 | 19.2 | 3 FIXED UNITS |
| | A7 | 1 | 7'-2" x 2'-0" | 14.4 SF | 14.4 | 0.30 | 4.3 | |
| | B4 | 1 | 7'-2" x 5'-0" | 36 SF | 36 | 0.30 | 10.8 | 3 UNITS (1 FIXED) |
| | | | | **TOTAL** | **172** | | **51.7** | |
| NORTH ELEVATION | | | | | | | | |
| | A4 | 1 | 2'-6" x 6'-0" | 15SF | 15 | 0.30 | 4.5 | |
| | B5 | 1 | 4'-8" x 5'-0" | 23 SF | 23 | 0.30 | 6.9 | 2 UNITS (1 FIXED) |
| | B7 | 1 | 4'-8" x 2'-4" | 11 SF | 11 | 0.30 | 3.3 | |
| | A8 | 1 | 6'-0" x 2'-0" | 12 SF | 12 | 0.30 | 3.6 | |
| | | | | **TOTAL** | **61** | | **18.3** | |
| EAST ELEVATION | | | | | | | | |
| | B2 | 1 | 2'-6" x 2'-6" | 6.25 SF | 6.25 | 0.30 | 1.9 | |
| | B5 | 1 | 4'-8" x 5'-0" | 23 SF | 23 | 0.30 | 6.9 | 2 UNITS (1 FIXED) |
| | B6 | 1 | 2'-4" x 5'-0" | 6.25 SF | 6.25 | 0.30 | 1.9 | |
| G5 | | 1 | 3'-0" x 7'-6" | 11.6 SF | 11.5 | 0.30 | 3.5 | BACK DOOR AT LAUNDRY |
| | | | | **TOTAL** | **6** | | **1.9** | |
| **TOTAL** | | | | | **971** | | **257.1** | |

NOTE:

- SEE ELEVATION PLANS FOR WINDOW ELEVATIONS
- SEE ELEVATION FOR WINDOW/DOOR FUNCTION
- SEE PLAN AND ELEVATIONS FOR SAFETY GLAZING LOCATIONS
- ALL FENESTRATION WILL BE NFRC CERTIFIED

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MERCER ISLAND RESIDENCE

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MARK REVISION
PERMIT CORRECTION1

SDCI STAMP:

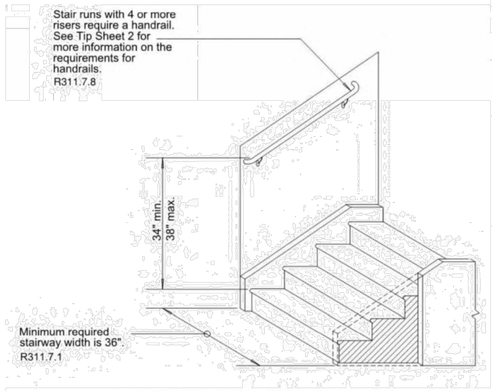
PROJECT TEAM:
SETH HALE

PROJECT NUMBER:
2023.014

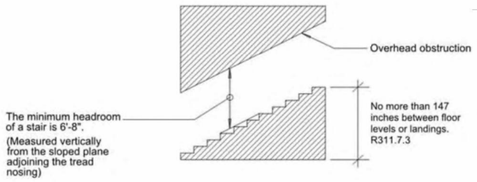
SHEET TITLE:
DOOR & WINDOW SCHEDULE

SHEET NUMBER:
A4.1

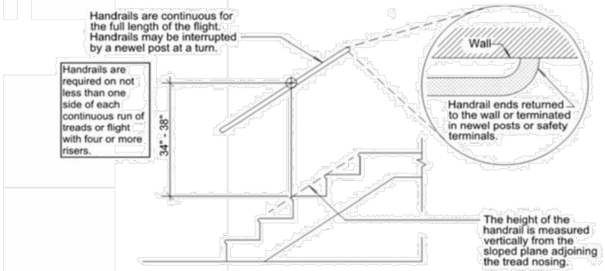
**NOTE**
- CONTRACTORS SHALL VERIFY TO INSPECTOR ALL GUARD AND RAILING SHALL BE CAPABLE OF RESISTING 200 LB LOAD ON TOP RAIL ACTING IN ANY DIRECTION AS REQUIRED BY IRC TABLE R301.5

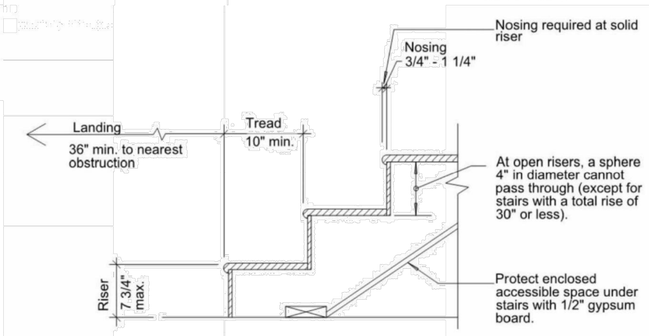



**Typical Stair Elevation**




**Handrails are required on at least one side of each continuous run of treads or flight with four or more risers.**



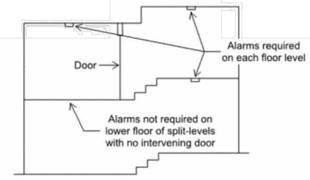

- **Stair treads and risers:** The largest tread or riser within any flight of stairs is not to exceed the smallest by more than 3/8". (R311.7.5)
- **Illumination:**
  - Interior stairways shall be provided with an artificial light source to illuminate landings and treads. There shall be a wall switch at each floor level to control the light source where the stairway has 6 or more risers. (R303.7)
  - Exterior stairways shall be provided with an artificial light source located at the top landing of the stairway, and located at the bottom landing where accessing a basement. (R303.8)
- **Handrails:** Handrails are required on at least one side for stairways with four or more risers. See Tip Sheet 2 for additional information regarding handrails. (R311.7.8)
- **Landings required:** Landings are required at the top and the bottom of stairways. A floor landing is not required at the top of an interior flight of stairs, provided a door does not swing over the stairs. (R311.7.6)
- **Landing dimensions:** A landing extending the width of the stair and measuring a minimum of 36" in the direction of travel is required at the top and bottom of every stairway. (R311.7.6)
- **Circular, winding or spiral stairways**: For exceptions related to the construction of circular, winding, or spiral stairways. (R311.7.5.2.1 & R311.7.10)

CODE REFERENCE
STAIRS AND RAILING

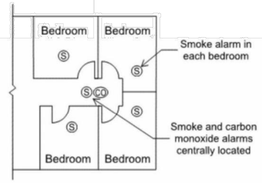
**Smoke and carbon monoxide alarms must be provided in all required locations and must be:**
- audible in all parts of the house
- installed per manufacturer's instructions

**New Houses** (IRC R314 & R315)
Smoke alarms and carbon monoxide alarms are required and must be connected to the main electrical system with battery backup.

**Required Locations**
- Smoke alarms shall be located in each sleeping room and in napping areas in a family home child care.
- Smoke alarms and carbon monoxide alarms shall be located outside each sleeping area in the immediate vicinity of the bedrooms.
- Smoke alarms and carbon monoxide alarms shall be located on every floor level, including basements (does not include crawlspace and uninhabitable attics).
- In split level floor plans, at the upper level, provided there is no intervening door between adjacent levels and the lower level is less than a full story below the upper level
- A carbon monoxide alarm is required in a bedroom when a fuel-burning appliance is installed in the bedroom or its attached bathroom.
- A combination alarm (combined smoke and carbon monoxide alarm) is acceptable in any required location.

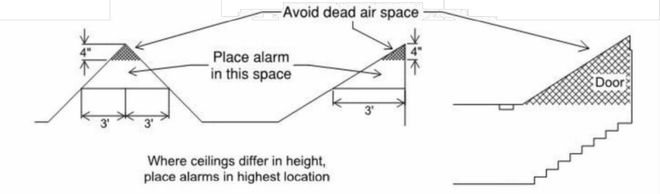



Section View

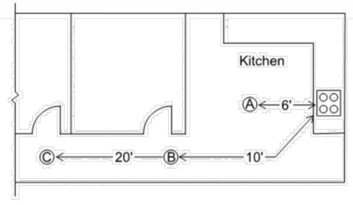



Plan View

**Smoke Alarm Location Limitations**
- Wall mounted alarms must be not more than 12 inches from the adjoining ceiling surface.
- Avoid placing alarms less than 3 feet from supply registers of a forced air heating or cooling system and do not place alarms in the direct airflow of the registers.
- Avoid placing alarms within 3 feet horizontally from doors to bathrooms containing a bathtub or shower.
- Do not place alarms in spaces where temperatures may be above or below the alarm's operating temperature range.
- Do not place alarms within 3 feet of the blades of a ceiling fan.
- Alarms in peaked or sloped ceilings must be within 3 feet of the peak, measured horizontally, but not in the highest 4 inches of the ceiling, measured vertically. (See figure below)
- Avoid placing alarms in dead air spaces. (See figure below)




**Smoke Alarms near Cooking Appliances**




**A.** Photoelectric smoke alarms must not be less than 6 feet from a permanent cooking appliance.

**B.** Ionization smoke alarms with an alarm-silencing switch must not be less than 10 feet from a permanent cooking appliance.

**C.** Ionization smoke alarms without an alarm-silencing switch must not be less than 20 feet from a permanent cooking appliance.

**Carbon Monoxide Alarm Location Limitations**
- Do not place alarms directly above or beside fuel-burning appliances.
- Do not place alarms in direct sunlight.
- Do not place alarms in low areas where children can reach. Do not place alarms behind curtains or any structure that might prevent carbon monoxide from reaching the sensor.

CODE REFERENCE
SMOKE DETECTORS


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SDCI PERMIT#: XXX

| MARK | REVISION | DATE |
|---|---|---|
| | PERMIT | 12/12/2024 |
| 1 | CORRECTION1 | 09/17/2025 |

SDCI STAMP:

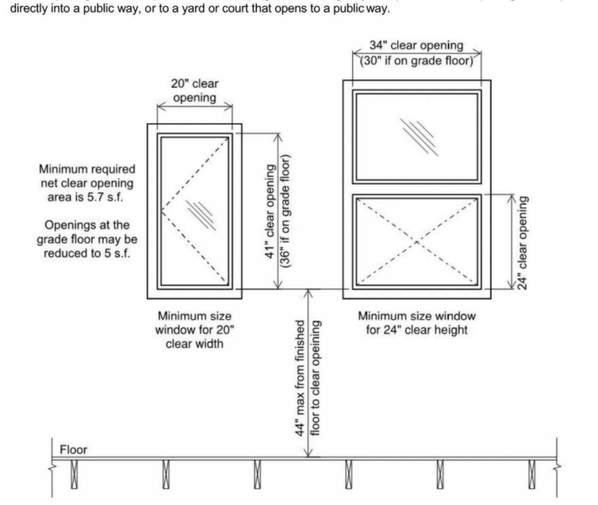
PROJECT TEAM:
SETH HALE

PROJECT NUMBER:
2023.014

SHEET TITLE:
CODE REFERENCE
STAIR DETAIL
& SMOKE ALARM

SHEET NUMBER:
A5.1

Basements, habitable attics and every sleeping room shall have not less than one operable emergency escape and rescue opening. Where basements contain one or more sleeping rooms, an emergency escape and rescue opening shall be required in each sleeping room. Emergency escape and rescue openings shall open directly into a public way, or to a yard or court that opens to a public way.




## CODE REFERENCE
EGRESS OPENING

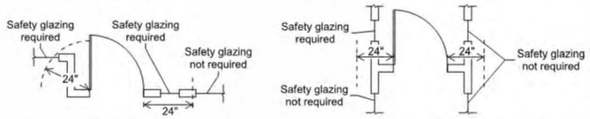
**Safety Glazing Markings:**

Where safety glazing is required, each pane must be provided with a manufacturer's label defining the type of glass and safety glazing standard to which it complies. The label must be permanently etched, fired, or embossed, on the glass or be a type that once applied cannot be removed without being destroyed.

**Safety Glazing Required Locations:**

1. **Glazing in Doors:** Safety glazing is required in fixed and operable panels of swinging, sliding, and bifold doors. Safety glazing is not required in a door if the glazed openings do not allow the passage of a 3 inch sphere, or the glazing in the door is decorative.

2. **Glazing Adjacent to Doors:** Glazing adjacent to doors is required in the following locations if the bottom edge of the glazing is less than 60 inches above the walking surface: Within 24 inches of either side of the door if glazing is in the same plane as the door, or if glazing is in a wall perpendicular to the door within 24 inches on the hinge side of an inswing door. Safety glazing is not required if there is an intervening wall or permanent barrier between the door and the glazing.

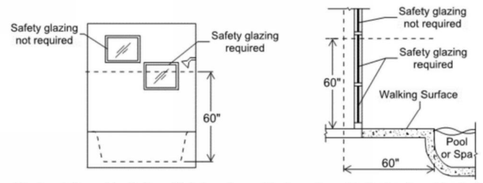



3. **Glazing in Windows:** Safety glazing in windows is required if the individual panel meets **all** of the following requirements:
   - Exposed area of the individual panel is greater than 9 square feet.
   - The bottom edge of the glazing is less than 18 inches from the floor.
   - The top edge of the glazing is more than 36 inches above the floor.
   - There is a walking surface within 36 inches, measured horizontally, from the glazing.

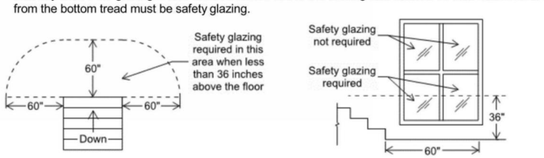
   **Exceptions:**
   - Decorative glazing.
   - Where a horizontal rail capable of resisting 50 pounds per lineal foot of force without making contact with the glass is installed on the accessible side of the glazing 34-38 inches above the walking surface.

4. **Glazing in Railings and Guards:** All glazing in guards and railings, including structural baluster panels and nonstructural in-fill panels, is required to be safety glazing.

5. **Glazing and Wet Surfaces:** Glazing in walls, enclosures, or fences around showers, bathtubs, pools, hot tubs, spas, saunas, and steam rooms where the bottom edge of the glazing is less than 60 inches from the standing or walking surface is required to be safety glazing. Safety glazing is not required where the glazing is more than 60 inches, horizontally, from the edge of the water.

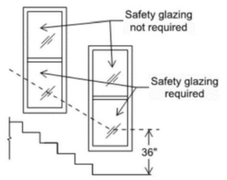



6. **Glazing Adjacent to Bottom Stair Landings:** Glazing adjacent to the landing at the bottom of a stairway where the glazing is less than 36 inches above the landing and within a 60 inch horizontal arc from the bottom tread must be safety glazing.

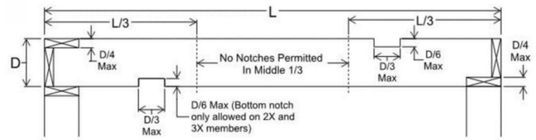



7. **Glazing Adjacent to Stairs and Ramps:** Glazing where the bottom edge is less than 36 inches above the plane of the adjacent walking surface of stairways, ramps, and landings between stair flights and ramp runs, must be safety glazing.

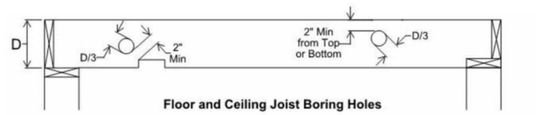
   **Exceptions:**
   - Where a horizontal rail capable of resisting 50 pounds per lineal foot of force without making contact with the glass is installed on the accessible side of the glazing 34-38 inches above the walking surface.
   - Glazing more than 36 inches horizontally from the walking surface is not required to be safety glazing.



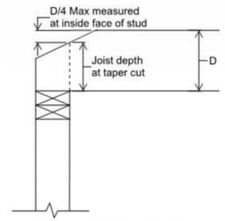

## CODE REFERENCE
GLAZING CODE REQUIREMENTS



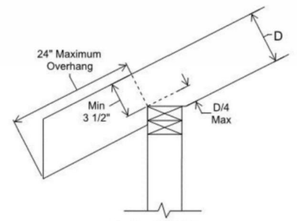

**Floor and Ceiling Joist Notching**



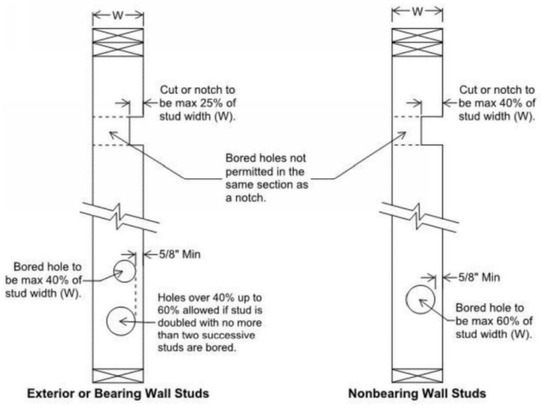

**Floor and Ceiling Joist Boring Holes**



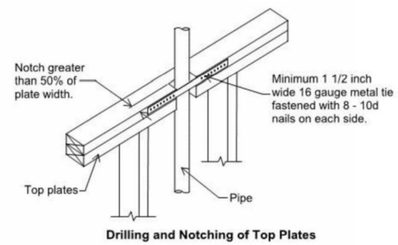

**Ceiling Joist Taper Cutting**




**Rafter Notching**




**Exterior or Bearing Wall Studs** **Nonbearing Wall Studs**




**Drilling and Notching of Top Plates**

## 2. CODE REFERENCE
NOTCHING OF CONSTRUCTION FRAMING


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PROJECT TEAM:
SETH HALE

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2023.014

SHEET TITLE:
CODE REFERENCE: GLAZING GENERAL, EGRESS, FRAMING

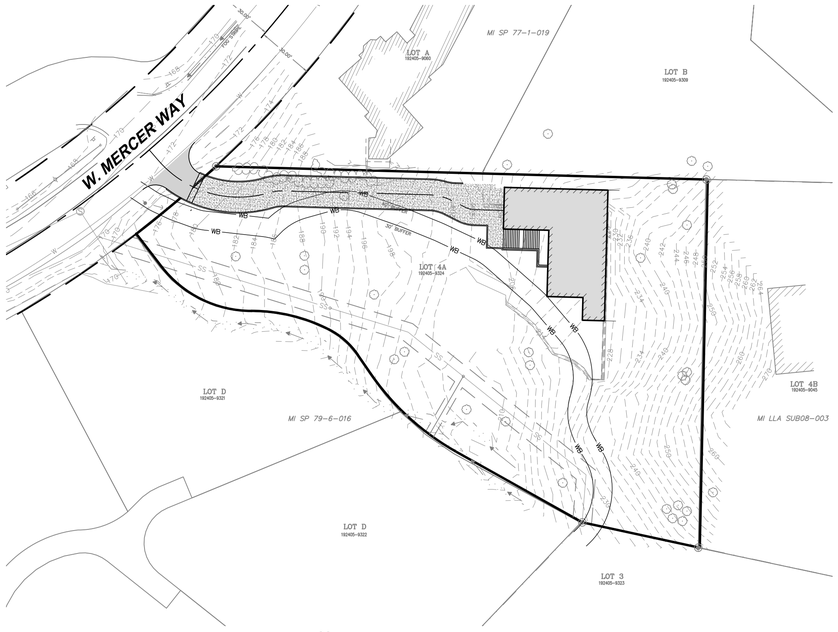
SHEET NUMBER:
A5.2

# 5236 W MERCER WAY

## SINGLE FAMILY RESIDENCE
## CIVIL ENGINEERING PLANS

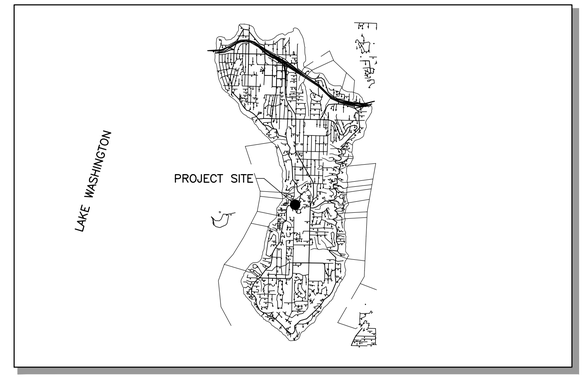
### SEPTEMBER 2025

PACE Engineers
11255 Kirkland Way, Suite 300
Kirkland, WA 98033
p. 425.827.2014
www.paceengrs.com




N

**SITE PLAN**
SCALE= 1"=40'




N

**VICINITY MAP**
NTS

## PROJECT DATA

### AREA SUMMARY:

| | |
|---|---|
| TOTAL SITE AREA: | 37,350 SF |
| TOTAL IMPERVIOUS AREA: | 8,000 SF |
| IMPERVIOUS COVERAGE: | 21.4% |

### EARTHWORK QUANTITIES:

| | |
|---|---|
| CUT: | 3,200* CY |
| FILL: | 50* CY |
| NET: | 3,150* CY (CUT) |

* EARTHWORK QUANTITIES FOR PERMITTING PURPOSES ONLY

### SETBACKS:

| | |
|---|---|
| FRONT: | 20-FEET |
| SIDE: | 5 MIN. (SUM 15)-FEET EACH SIDE |
| REAR: | 25-FEET |

### RECORD LEGAL DESCRIPTION:

LOT 4A OF THE REVISED MILLS LOT LINE REVISION.

### SURVEY NOTES:

HORIZONTAL DATUM: NAD 1983/91 BASED ON FOUND MONUMENTS IN WEST MERCER WAY.

VERTICAL DATUM: NAVD 88 BASED ON FOUND MONUMENTS IN WEST MERCER WAY.

SITE AREA:37,350 SQUARE FEET, MORE OR LESS.

## UTILITY PURVEYOURS

| | |
|---|---|
| **WATER:** CITY OF MERCER ISLAND | **SEWER:** CITY OF MERCER ISLAND |
| **GAS:** PUGET SOUND ENERGY | **POWER:** PSE |
| **CABLE:** COMCAST | **PHONE:** COMCAST |
| **GARBAGE:** REPUBLIC SERVICES | |

## OWNER/DEVELOPER/CONSULTANTS

**APPLICANT / ARCHITECT:**
SETH HALE
N5 ARCHITECTURE
4200 STONE WAY N
SEATTLE, WA 98103
(206) 300-5339
SETH@N5ARCHITECTURE.COM

**CIVIL ENGINEER:**
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11255 KIRKLAND WAY
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KIRKLAND, WA 98033
(425) 827-2014
TYLERC@PACEENGRS.COM

**GEOTECHNICAL ENGINEER:**
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SEATTLE, WA 98102
(206) 262-0370
JREHKOPF@PANGEOINC.COM

**SURVEYOR:**
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KIRKLAND, WA 98033
(425) 827-2014
BILLH@PACEENGRS.COM

**ARBORIST:**
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(206) 755-5826
RYAN@ARBOROPTIONS.COM

**STRUCTURAL ENGINEER:**
TOM WOLF
QUALITY ENGINEERING AND DESIGN
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WOLFTOMJ@MSN.COM

**WET LAND ENVIRONMENTALIST:**
MARK RIGOS
(425) 652-6013
MARKRIGOS@HOTMAIL.COM

**CONTRACTOR:**
TO BE DETERMINED

## SITE INFORMATION

**ADDRESS:**
5236 W MERCER WAY

**TAX PARCEL NO.: 192405-9324**

**ZONING: R-15**

## SHEET INDEX



| NO. | TITLE |
|---|---|
| C0.0 | COVER SHEET |
| C0.1 | EXISTING CONDITIONS |
| C0.2 | TREE PRESERVATION PLAN |
| C1.0 | TESC AND CONSTRUCTION MANAGEMENT PLAN |
| C1.1 | TESC DETAILS |
| C2.0 | ROAD, GRADING, AND STORM PLAN |
| C2.1 | STORM DRAINAGE DETAILS |
| C2.2 | STORM DRAINAGE DETAILS |
| C3.0 | SITE, UTILITY, AND SEWER PLAN |
| C3.1 | SANITARY SIDE SEWER DETAILS |
| C3.2 | WATER DETAILS |



DATE | REVISION | SYM

PACE Engineers
11255 Kirkland Way, Suite 300
Kirkland, WA 98033
p. 425.827.2014
www.paceengrs.com

TYLER A. CHRISTOFFERSON
STATE OF WASHINGTON
47631
REGISTERED
PROFESSIONAL ENGINEER
9/22/25

ORIGINAL COPY OF DIGITALLY SIGNED DOCUMENT AVAILABLE UPON REQUEST

N5 ARCHITECTURE
4200 STONE WAY N
SEATTLE, WA 98103

5236 W MERCER WAY
SINGLE FAMILY RESIDENCE

COVER SHEET

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

| SCALE: | DATE: |
|---|---|
| AS SHOWN | 9/22/2025 |
| DESIGNED BY: JP | CHECKED BY: TC |

PACE PROJECT NO. 17387

SHEET **C0.0**

FILE NAME: P:\KIR\P17\17387 5236 WEST MERCER WAY SFR\CAD\ENGINEERING\SHEETS\P17387-OVR.DWG
SAVE TIME: 9/22/2025 3:46:58 PM PLOT TIME: 9/22/2025 3:46 PM
USER NAME: TYLER CHRISTOFFERSON

## RECORD LEGAL DESCRIPTION:

LOT 4A OF THE REVISED MILLS LOT LINE REVISION.

## REFERENCES:

REVISED MILLS LOT LINE REVISION, MI LLA #SUB08–003. VOL. 265, PG. 020.
AF#20090710900001

## LEGEND

- WATER VALVE
- HYDRANT
- SOIL TEST PIT
- WETLAND FLAG
- WATER METER
- MANHOLES (SS/SD)
- CB
- POWER/UTILITY POLE
- GUY ANCHOR
- POWER TRANSFORMER
- POWER/TELEPHONE VAULT
- POWER METER
- TELEPHONE/TV RISER
- GAS VALVE
- JUNCTION BOX
- GAS METER
- STREET LIGHT
- LUMINAIRE
- SPOT ELEVATION
- SIGN
- MAILBOX
- ROCKERY
- CONIFEROUS TREE
- DECIDUOUS TREE
- CASED MONUMENT
- MAGNETIC NAIL W/ WASHER
- REBAR AND CAP
- HUB AND TACK

- CENTER LINES
- PROPERTY LINES
- RIGHT-OF-WAY LINES
- LOT LINES
- DITCH LINE
- FLOW LINE
- W — WATER LINE
- SS — SANITARY SEWER LINE
- SD — STORM DRAIN LINE
- G — GAS LINE
- UP — UNDERGROUND POWER LINES
- UT — UNDERGROUND TELEPHONE LINES
- UTV — UNDERGROUND CABLE TV LINES
- UFO — UNDERGROUND FIBER OPTIC LINES
- P — OVERHEAD POWER LINES
- OHL — OVERHEAD UTILITY LINES
- CHAIN LINK FENCE
- WIRE FENCE
- WOOD FENCE

SHADED AREA DENOTES SLOPE > 40%

## NOTES:

HORIZONTAL DATUM: NAD 1983/91 BASED ON FOUND MONUMENTS IN WEST MERCER WAY.

VERTICAL DATUM: NAVD 88 BASED ON FOUND MONUMENTS IN WEST MERCER WAY.

SITE AREA: 37,350 SQUARE FEET, MORE OR LESS.

ALL DISTANCES SHOWN ARE GROUND DISTANCES UNLESS OTHERWISE NOTED.

THE LOCATION AND DESCRIPTION OF ALL SURVEY MARKERS SHOWN HEREON ARE BASED ON FIELD OBSERVATIONS TAKEN IN APRIL ,2017, UNLESS OTHERWISE INDICATED.

WORK PERFORMED IN CONJUNCTION WITH THIS SURVEY UTILIZED THE FOLLOWING EQUIPMENT AND PROCEDURES: (A) 1" TRIMBLE S6 SERIES ELECTRONIC TOTAL STATION, MAINTAINED TO THE MANUFACTURER'S SPECIFICATIONS PER W.A.C. 332–130–100. (B) FIELD TRAVERSE, EXCEEDING REQUIREMENTS SET FORTH IN W.A.C. 332–130–090.

THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT AND DOES NOT PURPORT TO SHOW ALL EASEMENTS.

THIS TOPOGRAPHIC SURVEY DRAWING ACCURATELY PRESENTS SURFACE FEATURES LOCATED DURING THE COURSE OF THIS SURVEY. UNDERGROUND UTILITIES SHOWN HEREON ARE BASED SOLELY UPON INFORMATION PROVIDED BY OTHERS AND PACE ENGINEERS, INC. DOES NOT ACCEPT RESPONSIBILITY OR ASSUME LIABILITY FOR THEIR ACCURACY OR COMPLETENESS. CONTRACTOR/ENGINEERS SHALL VERIFY EXACT SIZE AND LOCATION PRIOR TO CONSTRUCTION.
CALL FOR LOCATE: UTILITY LOCATION SERVICE: 811

HORIZ. 0 10 20 40 Scale In Feet

| DATE | REVISION | SYM |
|---|---|---|
| | | |

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TYLER A. CHRISTOPHERSON — STATE OF WASHINGTON — 47631 — REGISTERED PROFESSIONAL ENGINEER
9/22/25

ORIGINAL COPY OF DIGITALLY SIGNED DOCUMENT AVAILABLE UPON REQUEST

N5 ARCHITECTURE
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5236 W MERCER WAY
SINGLE FAMILY RESIDENCE

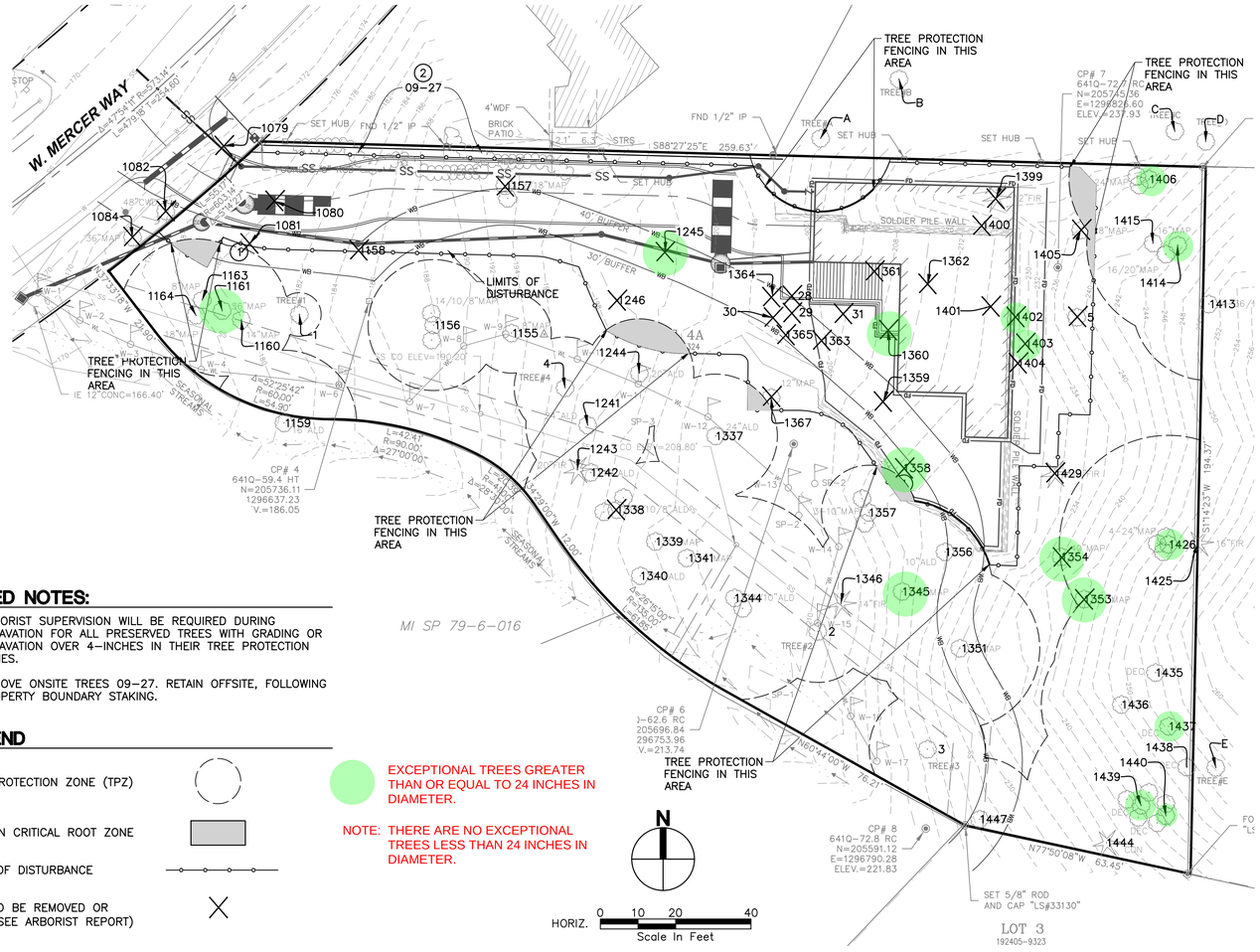
EXISTING CONDITIONS

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

| SCALE: | DATE: |
|---|---|
| AS SHOWN | 9/22/2025 |
| DESIGNED BY: JP | CHECKED BY: TC |
| PACE PROJECT NO. 17387 | |

SHEET C0.1

FILE NAME: P:\KIR\P17\17387 5236 WEST MERCER WAY .SFR\CAD\ENGINEERING\SHEETS\P17387–CC.DWG
SAVE TIME: 9/18/2025 8:48:41 PM
PLOT TIME: 9/22/2025 3:47 PM
USER NAME: TYLER CHRISTOPHERSON




## KEYED NOTES:

1. ARBORIST SUPERVISION WILL BE REQUIRED DURING EXCAVATION FOR ALL PRESERVED TREES WITH GRADING OR EXCAVATION OVER 4-INCHES IN THEIR TREE PROTECTION ZONES.
2. REMOVE ONSITE TREES 09-27. RETAIN OFFSITE, FOLLOWING PROPERTY BOUNDARY STAKING.

## LEGEND

TREE PROTECTION ZONE (TPZ)

WORK IN CRITICAL ROOT ZONE

LIMITS OF DISTURBANCE

TREE TO BE REMOVED OR SNAG (SEE ARBORIST REPORT)

EXCEPTIONAL TREES GREATER THAN OR EQUAL TO 24 INCHES IN DIAMETER.

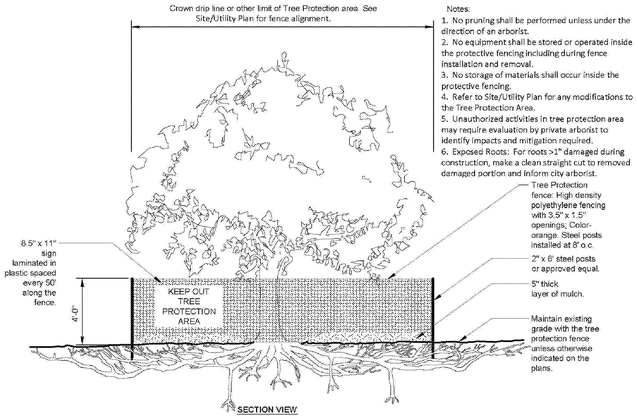
NOTE: THERE ARE NO EXCEPTIONAL TREES LESS THAN 24 INCHES IN DIAMETER.

## GENERAL NOTES:

1. SEE ARBORIST PLAN AND ARBORIST REPORT FOR ADDITIONAL INFORMATION.
2. RETAINED TREE #1439 (41.1" BIGLEAF MAPLE, NON-WETLANDS TREE) HAS A LARGE DEAD STEM THAT SHOULD BE REMOVED OR SHORTENED BEFORE COMMENCEMENT OF CONSTRUCTION ACTIVITIES. RETAINED TREE #1156 (23.1" BIGLEAF MAPLE, 35' WETLANDS BUFFER TREE) HAS A LARGE DEAD INTERIOR STEM THAT SHOULD BE REMOVED BEFORE BUILDING OCCUPANCY. ALL RETAINED TREES WITH IVY GROWING UP THE TRUNK SHOULD HAVE THE IVY CUT AT THE BASE OF THE TREE.
3. RETAINED TREES #1426 (48.9" BIGLEAF MAPLE, NON-WETLANDS TREE) AND #1415 (11.6" BIGLEAF MAPLE, NON-WETLANDS TREE) HAVE CONDITIONS OR DEFECTS WARRANTING FUTURE ARBORIST INSPECTIONS. THEY SHOULD BE INSPECTED AT 5-YEAR MINIMUM INTERVALS TO ENSURE THAT THE STRUCTURAL INTEGRITY OF THE TREES IS STILL INTACT.
4. SUBJECT PROPERTY TREES #1158, 1400, 1429, 1354, 1353, 1415, AND ROW TREE #1084 ARE EITHER IN POOR CONDITION WITH LIMITED LIFE SPANS OR ARE HAZARD TREES AND REMOVAL OR CONVERSION INTO WILDLIFE SNAGS IS RECOMMENDED.
5. CONSIDER CONVERTING REQUIRED TREE REMOVALS INTO WILDLIFE SNAGS INSTEAD OF COMPLETE REMOVAL OF ALL WOOD, WHERE POSSIBLE.
6. ARBORIST SUPERVISION BY A CERTIFIED ARBORIST IS REQUIRED FOR ALL EXCAVATION THAT TAKES PLACE WITHIN THE DRIP LINES OF TREE #'S 1406, 1161, 1156, 1337, 1345
7. TREE #1244 AND 1357 (35' WETLANDS BUFFER TREES) ARE TOO CLOSE TO PROPOSED DEVELOPMENT (DRIVEWAY) BUT WE WILL ATTEMPT TO RETAIN THROUGH ARBORIST SUPERVISION/ ROOT PRUNING. IF THE ARBORIST DETERMINES IN THE FIELD DURING EXCAVATION ACTIVITIES THAT THE TREES MAY RETAINED, THEY WILL BE RETAINED AND PROTECTED.
8. TREES #06-27 ARE ALL PART OF A LEYLAND CYPRESS HEDGE THAT MEANDERS BETWEEN THE NORTH ADJACENT PROPERTY AND THE SUBJECT PROPERTY. THE TREES ARE LOCATED NEAR THE NORTHWEST CORNER OF THE SUBJECT PROPERTY, AND ARE NUMBERED FROM WEST TO EAST (TREE #6 WESTERNMOST TREE AND TREE #27 EASTERNMOST TREE).

PROBABLE LOCATIONS OF LEYLAND CYPRESS HEDGE TREES #6-27 ARE TREES #6-8, 15-19, AND 24-27 LOCATED ON THE SUBJECT PROPERTY; AND TREES #9-14 & 20-23 LOCATED ON THE NORTH ADJACENT PROPERTY. ALL ADJACENT PROPERTY CYPRESS TREES WILL BE RETAINED AND PROTECTED, AND ALL SUBJECT PROPERTY CYPRESS TREES WILL BE REMOVED.

IF THE CONSTRUCTION STAGING AREA IS LOCATED CLOSER THAN 6 FT. TO THE ADJACENT PROPERTY CYPRESS TREES, A ½" MINIMUM THICKNESS STEEL PLATE IS TO BE PLACED ON THE GROUND TO AVOID COMPACTION, AND THE TPZ PROTECTION FENCE MAY BE TEMPORARILY REDUCED TO LESS THAN 6 FT.




## 1 TREE PROTECTION DETAIL
NTS

### Subject Property Significant Trees

| Tree # | Species | DBH (in.) | Drip line Radius (ft.) | TPZ Radius (ft.) | Retain Yes/ No | Arborist Supervision Required During Excavation? |
|---|---|---|---|---|---|---|
| | (Non-Wetlands) | | | | | |
| 1080 | Bigleaf Maple | 11.9 | 18 | N/A | No | |
| 1157 | Bigleaf Maple | 19.1 | 22 | N/A | No | |
| 1245 | Bigleaf Maple | 47.3 | 32 | N/A | No | |
| 1363 | Bigleaf Maple | 23.1 | 34 | N/A | No | |
| 1365 | Western Red Cedar | 6.6 | 8 | N/A | No | |
| 1364 | Western Red Cedar | 10.1 | 17 | N/A | No | |
| 1361 | Douglas Fir | 20.7 | 23 | N/A | No | |
| 1360 | Bigleaf Maple | 43.4 | 34 | N/A | No | |
| 1359 | Bigleaf Maple | 12.8 | 17 | N/A | No | |
| 1362 | Bigleaf Maple | 12.1 | 25 | N/A | No | |
| 1400 | Western Hemlock | 10.5 | 13 | N/A | No | |
| 1399 | Western Hemlock | 10 | 13 | N/A | No | |
| 1401 | Bigleaf Maple | 10.8 | 19 | N/A | No | |
| 1402 | Bigleaf Maple | 37.4 | 30 | N/A | No | |
| 1403 | Bigleaf Maple | 39.4 | 29 | N/A | No | |
| 1404 | Western Hemlock | 8 | 15 | N/A | No | |
| 1405 | Bigleaf Maple | 23.3 | 30 | N/A | No | |
| 1406 | Bigleaf Maple | 38.6 | 33 | *33/17 | Yes | Yes |

*Note: Tree Protection Zone radius = *33 ft. (drip line radius) except where the east gabion wall excavation intersects with the dripline 17 ft. southwest of the tree.

| | | | | | | |
|---|---|---|---|---|---|---|
| 1415 | Bigleaf Maple | 11.6 | 12 | 12 | Yes | |
| 1414 | Bigleaf Maple | 28.9 | 30 | 25 | Yes | |
| 5 | Bigleaf Maple | 7.6 | 17 | N/A | No | |
| 1429 | Western Hemlock | 16 | 16 | N/A | No | |
| 1354 | Bigleaf Maple | 47.3 | 35 | N/A | No | |
| 1353 | Bigleaf Maple | 34.7 | 10/20 | N/A | No | |
| 1426 | Bigleaf Maple | 48.9 | 32 | 32 | Yes | |
| 1425 | Western Hemlock | 14.6 | 20 | 20 | Yes | |
| 1435 | Bigleaf Maple | 26.2 | 28 | 28 | Yes | |
| 1437 | Bigleaf Maple | 34.7 | 29 | 29 | Yes | |
| 1438 | Bigleaf Maple | 28.5 | 31 | 31 | Yes | |
| 1436 | Bigleaf Maple | 10.2 | 22 | 22 | Yes | |
| 1439 | Bigleaf Maple | 41.1 | 32 | 32 | Yes | |
| 1440 | Bigleaf Maple | 41.5 | 32 | 32 | Yes | |
| 1444 | Western Red Cedar | 19.1 | 18 | 18 | Yes | |
| 06-27 | Leyland Cypress | 3.5-5 | 4-7 | 6 | *Yes/ No | |

*Note: Probable locations of Trees #6-27 are Trees #6-8, 15-19, and 24-27 located on the subject property, and Trees #9-14 & 20-23 located on the north adjacent property. All adjacent property Cypress trees will be retained and protected, and all subject property Cypress trees will be removed.

If the construction staging area is located closer than 6 ft. to the adjacent property Cypress trees, a ½? minimum thickness steel plate is to be placed on the ground to avoid compaction, and the TPZ protection fence may be temporarily reduced to less than 6 ft.

| | | | | | | |
|---|---|---|---|---|---|---|
| 28 | Western Red Cedar | 5.2 | 12 | N/A | No | |
| 29 | Western Red Cedar | 2.8 | 7 | N/A | No | |
| 30 | Western Red Cedar | 1.9 | 7 | N/A | No | |
| 31 | Western Red Cedar | 2.1 | 6 | N/A | No | |
| | (35 Wetlands Buffer Trees) | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1081 | Bigleaf Maple | 21.7 | 18 | N/A | No | |
| 1161 | Bigleaf Maple | 33.2 | 30 | 18 | Yes | Yes |
| 1160 | Bigleaf Maple | 13.7 | 26 | 14 | Yes | |
| 1163 | Bigleaf Maple | 6.4 | 14 | 14 | Yes | |
| 1164 | Bigleaf Maple | 20.9 | 26 | 21 | Yes | |
| 1158 | Red Alder | 20 | 21 | N/A | No | |
| 1 | Bigleaf Maple | 6.2 | 18 | 6 | Yes | |
| 1156 | Bigleaf Maple | 23.1 | 22 | 18 | Yes | Yes |
| 1155 | Bigleaf Maple | 7.6 | 21 | 8 | Yes | |
| 1246 | Bigleaf Maple | 9 | 20 | N/A | No | |
| 1244 | Red Alder | 19.7 | 16 | N/A | No | *Yes |

*Tree #1244 is too close to proposed development (driveway) but we will attempt to retain through arborist supervision/ root pruning. If the arborist determines in the field during excavation activities that the tree may retained, it will be retained and protected.

| | | | | | | |
|---|---|---|---|---|---|---|
| 1337 | Red Alder | 23 | 26 | 17 | Yes | *Yes |

*Tree #1357 is too close to proposed development (driveway) but we will attempt to retain through arborist supervision/ root pruning. If the arborist determines in the field during excavation activities that the tree may retained, it will be retained and protected.

| | | | | | | |
|---|---|---|---|---|---|---|
| 1367 | Bigleaf Maple | 10.1 | 21 | N/A | No | |
| 1358 | Bigleaf Maple | 36.8 | 36 | N/A | No | |
| 1357 | Bigleaf Maple | 18.4 | 30 | N/A | No | |
| 1345 | Bigleaf Maple | 44.3 | 39 | 24 | Yes | Yes |
| 1346 | Western Hemlock | 18.1 | 18 | 18 | Yes | |
| 2 | Bigleaf Maple | 7.1 | 14 | 14 | Yes | |
| 1356 | Pacific Dogwood | 10.6 | 19 | N/A | No | |
| 1351 | Bigleaf Maple | 9.3 | 22 | 22 | Yes | |
| 3 | Bigleaf Maple | 6.7 | 16 | 16 | Yes | |
| 1447 | Bigleaf Maple | 10 | 17 | 17 | Yes | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | (Wetlands Trees) | | | | | |
| 1241 | Red Alder | 20.5 | 17 | 17 | Yes | |
| 4 | Bigleaf Maple | 18.1 | 26 | 18 | Yes | |
| 1242 | Red Alder | 13.8 | 11 | 11 | Yes | |
| 1243 | Western Hemlock | 15.7 | 11 | 11 | Yes | |
| 1338 | Red Alder | 20.2 | 26 | 26 | Yes | |
| 1339 | Bigleaf Maple | 12 | 22 | 22 | Yes | |
| 1340 | Red Alder | 21.4 | 24 | 24 | Yes | |
| 1341 | Bigleaf Maple | 13 | 22 | 22 | Yes | |
| 1344 | Red Alder | 17.2 | 28 | 28 | Yes | |
| | Encroaching Adjacent Property Significant Trees | | | | | |
| A | Western Red Cedar | 26 | 20 | 20 | Yes | |
| B | Western Hemlock | 22 | 26 | 26 | Yes | |
| C | Bigleaf Maple | 16 | 24 | 24 | Yes | |
| D | Bigleaf Maple | 17 | 24 | 24 | Yes | |
| E | Bigleaf Maple | 40 | 30 | 30 | Yes | |
| 1413 | Bigleaf Maple | 42 | 34 | 34 | Yes | |
| 1159 | Red Alder | 20 | 20 | 20 | Yes | |
| | R.O.W. (Right-Of-Way) Trees | | | | | |
| 1079 | Bigleaf Maple | 20.1 | 36 | N/A | No | |
| 1082 | Black Cottonwood | 41.9 | 29 | N/A | No | |
| 1084 | Bigleaf Maple | 29.5 | 25 | N/A | No | |

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ORIGINAL COPY OF DIGITALLY SIGNED DOCUMENT AVAILABLE UPON REQUEST

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4200 STONE WAY N
SEATTLE, WA 98103

5236 W MERCER WAY
SINGLE FAMILY RESIDENCE

TREE PRESERVATION PLAN

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

| SCALE: | DATE: |
|---|---|
| AS SHOWN | 9/22/2025 |
| DESIGNED BY: JP | CHECKED BY: TC |

PACE PROJECT NO. 17387

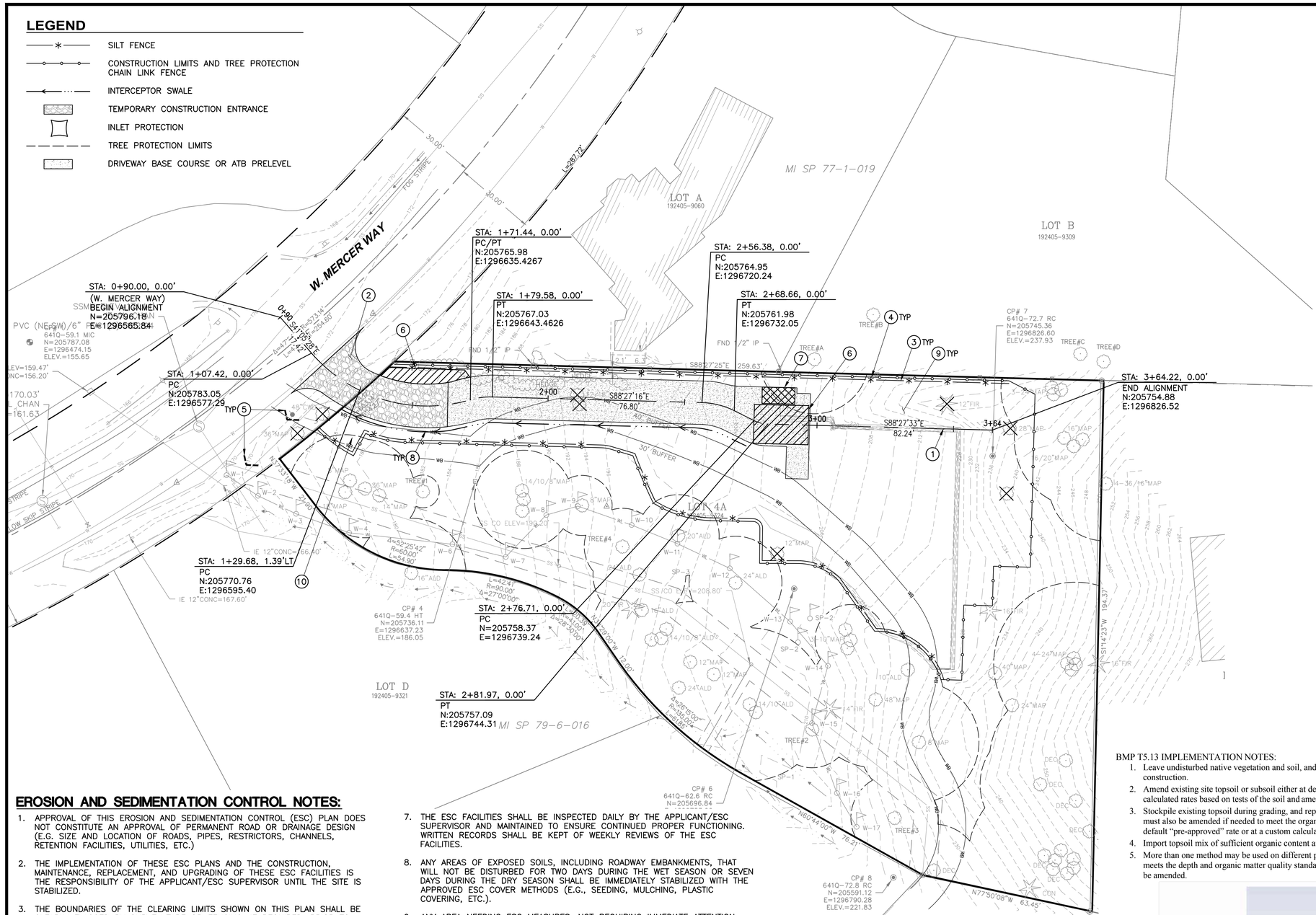
SHEET C0.2

| DATE | REVISION | SYM |
|---|---|---|

FILE NAME: P:\KIR\P17\17387 5236 WEST MERCER WAY SFR\CAD\ENGINEERING\SHEETS\P17387-TREE.DWG
SAVE TIME: 9/22/2025 3:46:09 PM
USER NAME: TYLER CHRISTOPHERSON
PLOT TIME: 9/22/2025 3:47 PM

## LEGEND

- SILT FENCE
- CONSTRUCTION LIMITS AND TREE PROTECTION CHAIN LINK FENCE
- INTERCEPTOR SWALE
- TEMPORARY CONSTRUCTION ENTRANCE
- INLET PROTECTION
- TREE PROTECTION LIMITS
- DRIVEWAY BASE COURSE OR ATB PRELEVEL




## EROSION AND SEDIMENTATION CONTROL NOTES:

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 THE SITE IS STABILIZED.
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, RELOCATION OF DITCHES AND SILT FENCES, PERIMETER PROTECTION ETC.).
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 DAYS DURING THE WET SEASON OR SEVEN DAYS DURING THE DRY SEASON SHALL BE IMMEDIATELY STABILIZED WITH THE APPROVED ESC COVER METHODS (E.G., SEEDING, MULCHING, PLASTIC COVERING, ETC.).
9. ANY AREA NEEDING ESC MEASURES, NOT REQUIRING 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 OR WITHIN 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. COVER MEASURES WILL BE APPLIED IN CONFORMANCE WITH APPENDIX D OF THE SURFACE WATER DESIGN MANUAL.
13. 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. A SKETCH MAP OF THOSE AREAS TO BE SEEDED AND THOSE AREAS TO REMAIN UNCOVERED SHALL BE SUBMITTED TO THE DDES INSPECTOR FOR REVIEW.

## TESC AND CONSTRUCTION MANAGEMENT NOTES

1. CONSTRUCTION CETNERLINE PER DETAILS ON THIS SHEET. TEMPORARY SHORING WALLS.
2. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE PER DETAIL 4 ON SHEET C1.1.
3. INSTALL HIGH VISIBILITY SILT FENCE PER DETAIL 1 ON SHEET C1.1.
4. CONSTRUCTION LIMITS AND TREE PROTECTION CHAIN LINK FENCE PER DETAIL ON SHEET C0.2.
5. INSTALL STRAW WATTLES PER DETAIL 5 ON SHEET C1.1.
6. CONSTRUCTION STAGING AND PARKING AREA.
7. MATERIAL STOCKPILE LOCATION.
8. INSTALL INTERCEPTOR SWALE WITH ROCK CHECK DAMS PER DETAIL 3 ON SHEET C1.1.
9. USE BMP T5.13 POST CONSTRUCTION SOIL QUALITY AND DEPTH OR BETTER FOR ALL DISTURBED LANDSCAPE AREAS PER DETAIL 1 ON THIS SHEET.
10. TURBIDITY TESTING LOCATION IF DETERMINED NECESSARY BY ON-SITE INSPECTION OR ESC SUPERVISOR

## GENERAL NOTES:

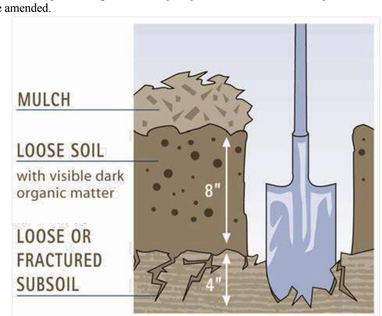
1. TREE REMOVAL TO BE COORDINATED WITH ARBORIST AND THE CITY OF MERCER ISLAND.

## CONSTRUCTION SEQUENCE

1. INSTALL CONSTRUCTION LIMITS AND TREE PROTECTION CHAIN LINK FENCE, ALONG IDENTIFIED CONSTRUCTION LIMITS.
2. INSTALL PERMANENT DOWNSTREAM PIPED CONVEYANCE INCLUDING CB5 AND CB2. SEE SHEET C2.0.
3. INSTALL STORM DRAIN INLET PROTECTION.
4. GRADE AND INSTALL CONSTRUCTION ENTRANCE AND PERMANENT DRIVEWAY CULVERT.
5. GRADE AND INSTALL CONSTRUCTION STAGING / PARKING AREA.
6. GRADE AND DESIGNATE STOCKPILE AREAS.
7. INSTALL TEMPORARY INTERCEPTOR SWALE AND SEDIMENT CONTROL MEASURES.
8. BEGIN DRIVEWAY CLEARING AND GRADING.
9. INSTALL UTILITIES LOCATED IN DRIVEWAY CORRIDOR.
10. INSTALL DRIVEWAY, GRADE WALLS, DRIVEWAY ACCESS BASE COURSE OR ATB PRELEVEL.
11. INSTALL GABION BASKET WALLS.
12. INSTALL BUILDING FOUNDATION SHORING.
13. CONSTRUCT BUILDING AND REMAINING HARDSCAPE FEATURES.
14. CONNECT UTILITIES.
15. STABILIZE SITE.
16. REMOVE REMAINING TESC FEATURES.
17. CONDUCT ALL ACTIVITIES IN ACCORDANCE WITH ESC NOTES, THIS SHEET.

BMP T5.13 IMPLEMENTATION NOTES:

1. Leave undisturbed native vegetation and soil, and protect from compaction during construction.
2. Amend existing site topsoil or subsoil either at default "pre-approved" rates, or at custom calculated rates based on tests of the soil and amendment.
3. Stockpile existing topsoil during grading, and replace it prior to planting. Stockpiled topsoil must also be amended if needed to meet the organic matter or depth requirements, either at a default "pre-approved" rate or at a custom calculated rate.
4. Import topsoil mix of sufficient organic content and depth to meet the requirements.
5. More than one method may be used on different portions of the same site. Soil that already meets the depth and organic matter quality standards, and is not compacted, does not need to be amended.




1 **DETAIL**
NTS

N

HORIZ. 0 10 20 40
Scale In Feet

| DATE | REVISION | SYM |
|---|---|---|


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PETER A. CHRISTOPHERSEN
STATE OF WASHINGTON
47631
REGISTERED
PROFESSIONAL ENGINEER
9/22/25

ORIGINAL COPY OF DIGITALLY SIGNED DOCUMENT AVAILABLE UPON REQUEST

N5 ARCHITECTURE
4200 STONE WAY N
SEATTLE, WA 98103

5236 W MERCER WAY
SINGLE FAMILY RESIDENCE

TESC AND CONSTRUCTION MANAGEMENT PLAN

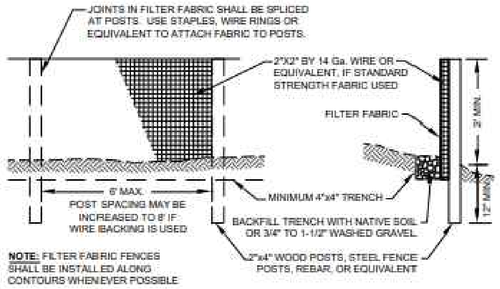
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| PACE PROJECT NO. | 17387 |

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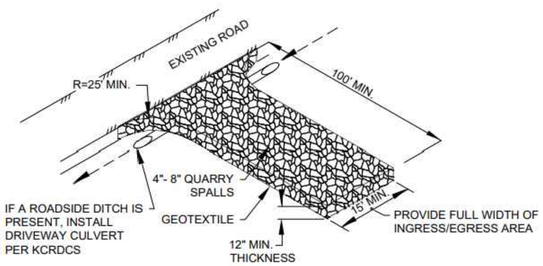

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PLOT TIME: 9/22/2025 3:47 PM
USER NAME: TYLER CHRISTOPHERSEN

**FIGURE D.2.1.3.A SILT FENCE**




**1 HIGH VISIBILITY SILT FENCE**
NTS

**FIGURE D.2.1.4.A STABILIZED CONSTRUCTION ENTRANCE**

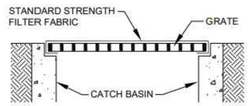



**NOTES:**

- PER KING COUNTY ROAD DESIGN AND CONSTRUCTION STANDARDS (KCRDCS), DRIVEWAYS SHALL BE PAVED TO EDGE OF R-O-W PRIOR TO INSTALLATION OF THE CONSTRUCTION ENTRANCE TO AVOID DAMAGING OF THE ROADWAY.
- IT IS RECOMMENDED THAT THE ENTRANCE BE CROWNED SO THAT RUNOFF DRAINS OFF THE PAD.

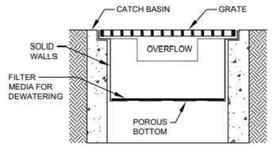
**4 STABILIZED CONSTRUCTION ENTRANCE**
NTS

**FIGURE C.3.9.A FILTER FABRIC PROTECTION**




NOTE: ONLY TO BE USED WHERE PONDING OF WATER ABOVE THE CATCH BASIN WILL NOT CAUSE TRAFFIC PROBLEMS AND WHERE OVERFLOW WILL NOT RESULT IN EROSION OF SLOPES.

**FIGURE C.3.9.B CATCH BASIN INSERT**

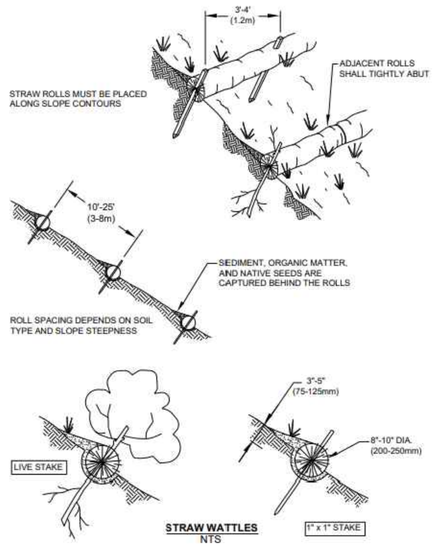



NOTE: THIS DETAIL IS ONLY SCHEMATIC. ANY INSERT IS ALLOWED THAT HAS:

- A MIN. 0.5 C.F. OF STORAGE,
- THE MEANS TO DEWATER THE STORED SEDIMENT,
- AN OVERFLOW, AND
- CAN BE EASILY MAINTAINED.

**2 INLET PROTECTION**
NTS

**FIGURE D.2.1.2.E STRAW WATTLES**



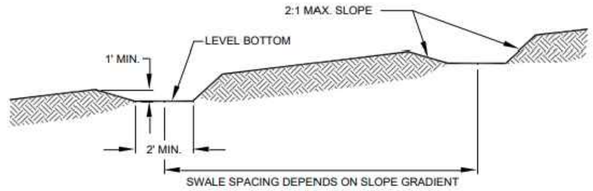

**STRAW WATTLES**
NTS

**NOTES:**

1. STRAW ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH, 3" x 5" (75-125mm) DEEP, DUG ON CONTOUR.
2. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND ROLL.

**5 STRAW WATTLES**
NTS

**FIGURE C.3.12.B INTERCEPTOR SWALE**




**3 INTERCEPTOR SWALE W/ROCK CHECK DAMS**
NTS



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9/22/25

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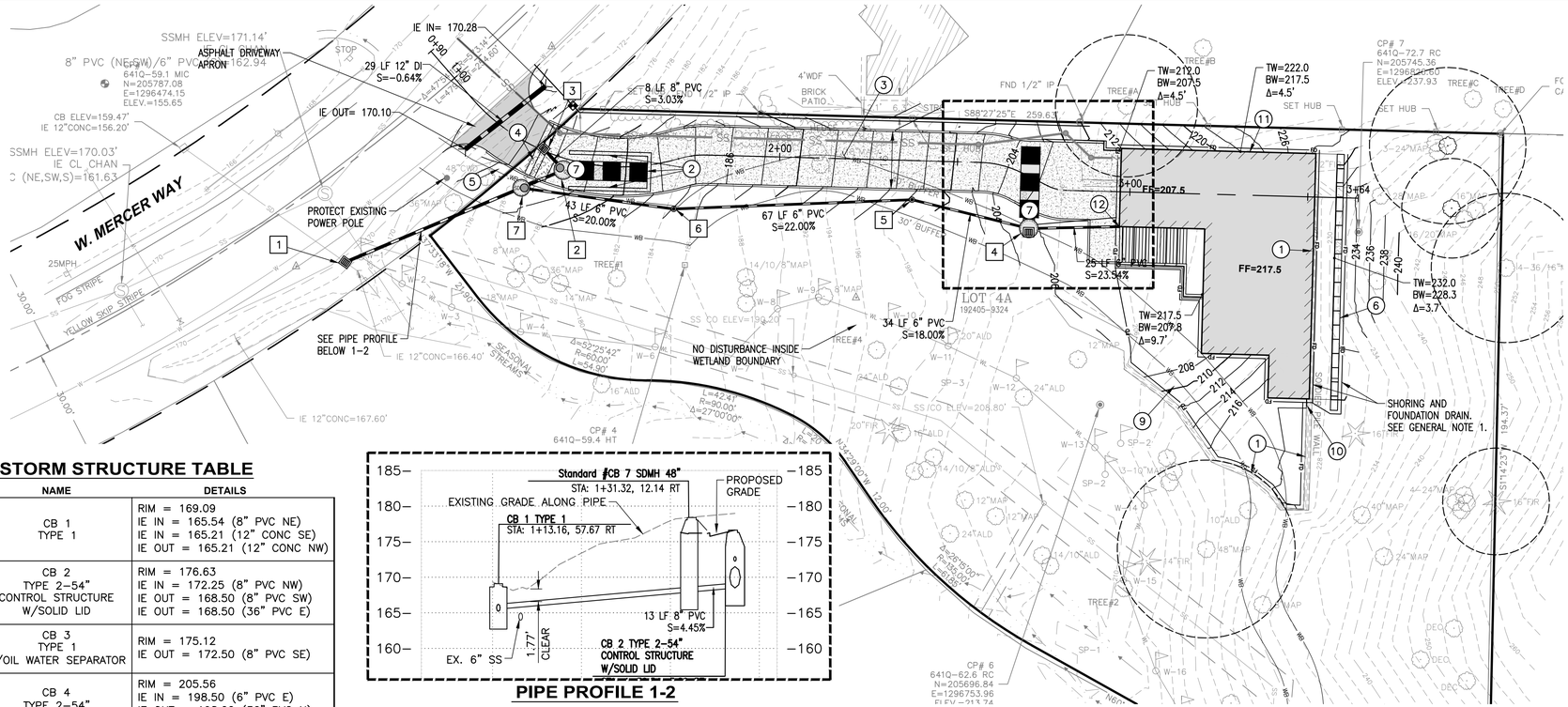
TESC DETAILS

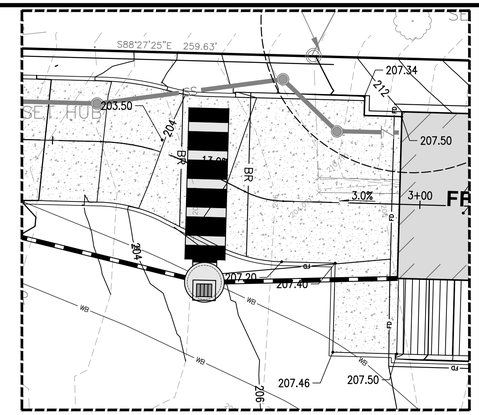
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SHEET **C1.1**

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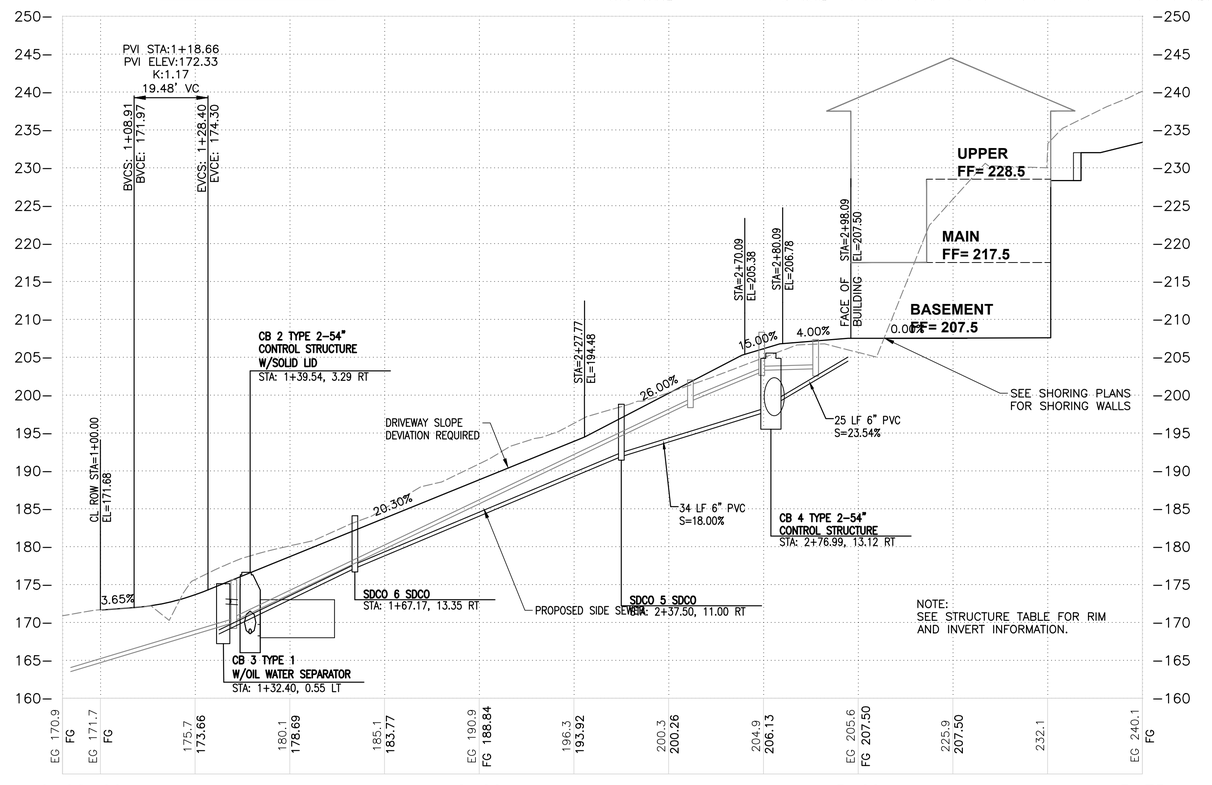

## DRIVEWAY GRADING
1"=10'

## STORM STRUCTURE TABLE

| | NAME | DETAILS |
|---|---|---|
| 1 | CB 1<br>TYPE 1 | RIM = 169.09<br>IE IN = 165.54 (8" PVC NE)<br>IE IN = 165.21 (12" CONC SE)<br>IE OUT = 165.21 (12" CONC NW) |
| 2 | CB 2<br>TYPE 2-54"<br>CONTROL STRUCTURE<br>W/SOLID LID | RIM = 176.63<br>IE IN = 172.25 (8" PVC NW)<br>IE OUT = 168.50 (8" PVC SW)<br>IE OUT = 168.50 (36" PVC E) |
| 3 | CB 3<br>TYPE 1<br>W/OIL WATER SEPARATOR | RIM = 175.12<br>IE OUT = 172.50 (8" PVC SE) |
| 4 | CB 4<br>TYPE 2-54"<br>CONTROL STRUCTURE | RIM = 205.56<br>IE IN = 198.50 (6" PVC E)<br>IE OUT = 198.00 (36" PVC N)<br>IE OUT = 198.00 (6" PVC W) |
| 7 | CB 7<br>SDMH 48" | RIM = 178.40<br>IE IN = 167.93 (8" PVC NE)<br>IE IN = 168.51 (6" PVC E)<br>IE OUT = 167.93 (8" PVC SW) |
| 5 | SDCO 5<br>SDCO | RIM = 198.80<br>IE IN = 191.92 (6" PVC E)<br>IE OUT = 191.92 (6" PVC W) |
| 6 | SDCO 6<br>SDCO | RIM = 184.09<br>IE IN = 177.17 (6" PVC E)<br>IE OUT = 177.17 (6" PVC W) |




## PIPE PROFILE 1-2




## LEGEND

- PERMANENT SHORING
- TEMP. SHORING
- SANITARY SIDE SEWER — SS
- SS CLEANOUT
- STORM DRAIN
- TRENCH DRAIN
- FOOTING DRAIN — FD
- WALL DRAIN
- SD CLEANOUT
- YARD DRAIN
- CB TYPE 1
- CB TYPE 2
- CAST-IN-PLACE WALL

## KEY NOTES

1. PERMANENT SHORING WALLS (COMPLETED UNDER PREVIOUS PERMIT)
2. TEMPORARY SHORING WALLS
3. 6" CONCRETE DRIVEWAY WITH ⅜" TRACTION GROOVES ON SECTIONS WITH SLOPES GREATER THAN 20%, AND VERTICAL CURB AND GUTTER. SEE DETAIL 5, SHEET C2.1.
4. VALLEY GUTTER AT EDGE OF ASPHALT. SEE DETAIL 3, SHEET C2.1.
5. 1" WATER METER, MINIMUM.
6. GABION BASKET WALL (TYP), SEE DETAIL 4, SHEET C2.1.
7. CMP DETENTION PIPE, SEE DETAILS ON SHEET C2.1.
8. FINAL WALL DESIGN SHALL BE COMPLETED BY THE BLOCK WALL MANUFACTURER, BASED ON GEOTECTNICAL PARAMETERS PRESENTED IN THE GEOTECHNICAL REPORT, SECTION 6.6.
9. CONNECT FOOTING DRAIN TO WALL DRAIN.
10. CONNECT GABION BASKET WALL FOOTING DRAINS TO SOLDIER PILE SHORING FOOTING DRAIN.
11. PROPOSED PERMANENT SHORING WALLS
12. 6" ROOF DRAIN OUTLET, S=2.00% MIN.

## GENERAL NOTES:

1. REFERENCE SHORING AND STRUCTURAL DETAILS FOR SHORING AND FOUNDATION DRAIN OUTLET DETAILS.
2. BASEMENT FLOOR SHORING-FOUNDATION DRAIN OUTLET SD @ 2.0% MIN.
3. YARD DRAIN OUTLET SD @ 2.0% MIN
4. STORM CONVEYANCE PIPE SHALL BE SDR 35 PVC.
5. GABION BASKET WALL CONSTRUCTED PRIOR TO PERMANENT SHORING CONSTRUCTION. SEE SHORING AND STRUCTURAL PLANS.
6. BMP T5.13 POST CONSTRUCTION SOIL QUALITY AND DEPTH OR BETTER FOR ALL DISTURBED LANDSCAPE AREAS.

HORIZ. 0 10 20 40 Scale In Feet
VERT. 0 5 10 20 Scale In Feet
N

| DATE | REVISION | SYM |
|---|---|---|

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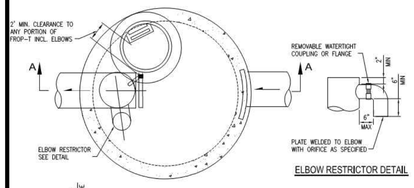
ROAD, GRADING, AND STORM PLAN

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| PACE PROJECT NO. 17387 | |

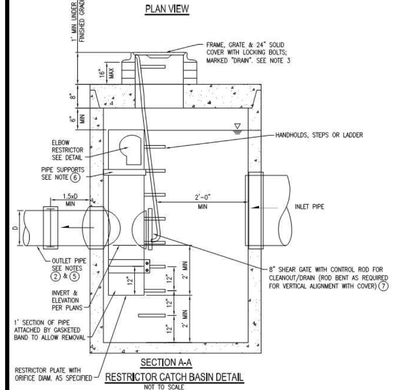
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ELBOW RESTRICTOR DETAIL

PLAN VIEW



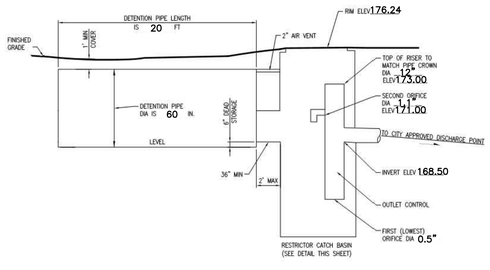

SECTION A-A

RESTRICTOR CATCH BASIN DETAIL
NOT TO SCALE

**Attachment 1**
*CITY OF MERCER ISLAND*
*STANDARD DETENTION SYSTEM WORKSHEET*
*(FOR IMPERVIOUS AREA OF 5,000 SF OR LESS)*

OWNER: _____ ADDRESS: 5236 W. MERCER WAY MERCER ISLAND, WA
PREPARED BY: TYLER CHRISTOFFERSON
PERMIT #: _____ PHONE: 425.827.2014
DATE: 1024/2024
IMPERVIOUS SURFACE AREA (SF): 3,000 DETENTION POND DIA (INCH): 60 DETENTION PIPE LENGTH (FT): 20 ORIFICE #1: DIA 0.5 INCH, ELEV 168.50
PIPE MATERIAL: CORRUGATED ALUMINUM PIPE ORIFICE #2: DIA 1.1 INCH, ELEV 171.00

*FOOTING DRAINS SHALL NOT BE CONNECTED TO DETENTION SYSTEM*



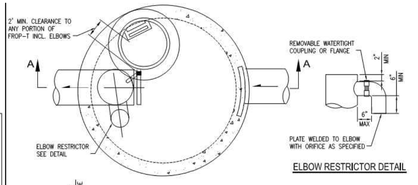

STANDARD PIPE DETENTION SYSTEM
NOT TO SCALE (ENGINEER TO FILL IN BLANKS)

RESTRICTOR CATCH BASIN NOTES:

1. USE A MINIMUM OF A 72 IN. DIAM. TYPE 2 CATCH BASIN WHEN CONNECTING PIPE MATERIAL IS CONCRETE OR LCPE, A 54 IN. DIAM. TYPE 2 CATCH BASIN MAY BE USED FOR OTHER CIRCULAR SINGLE WALL PIPE (SUCH AS CORRUGATED ALUMINUM PIPE).
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 2L32A, 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.

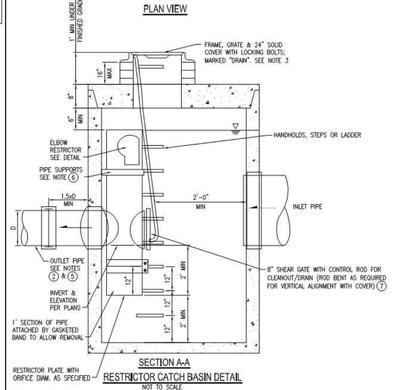
STANDARD DETENTION SYSTEM NOTES:

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 MAINTANANCE 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.




ELBOW RESTRICTOR DETAIL

PLAN VIEW



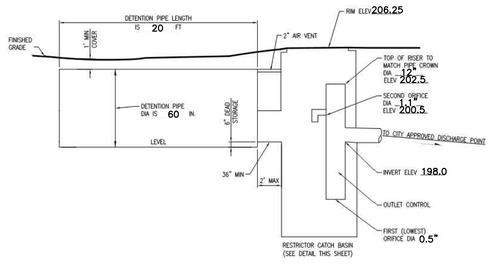

SECTION A-A

RESTRICTOR CATCH BASIN DETAIL
NOT TO SCALE

**Attachment 1**
*CITY OF MERCER ISLAND*
*STANDARD DETENTION SYSTEM WORKSHEET*
*(FOR IMPERVIOUS AREA OF 5,000 SF OR LESS)*

OWNER: _____ ADDRESS: 5236 W. MERCER WAY MERCER ISLAND, WA
PREPARED BY: TYLER CHRISTOFFERSON
PERMIT #: _____ PHONE: 425.827.2014
DATE: 10/24/2024
IMPERVIOUS SURFACE AREA (SF): 2,825 DETENTION POND DIA (INCH): 60 DETENTION PIPE LENGTH (FT): 20 ORIFICE #1: DIA 0.5 INCH, ELEV 198.0
PIPE MATERIAL: CORRUGATED ALUMINUM PIPE ORIFICE #2: DIA 1.1 INCH, ELEV 200.5

*FOOTING DRAINS SHALL NOT BE CONNECTED TO DETENTION SYSTEM*




STANDARD PIPE DETENTION SYSTEM
NOT TO SCALE (ENGINEER TO FILL IN BLANKS)

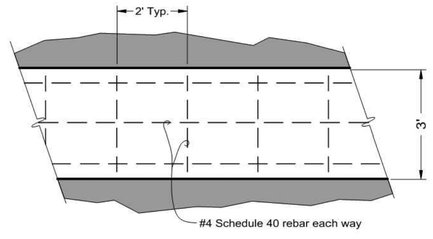
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   A NEOPRENE RUBBER GASKET IS REQUIRED BETWEEN THE RISER MOUNTING FLANGE AND THE GATE FLANGE.
   INSTALL THE GATE SO THAT THE LEVEL-LINE MARK IS LEVEL WHEN THE GATE IS CLOSED.
   THE MATING SURFACES OF THE LID AND THE BODY SHALL BE MACHINED FOR PROPER FIT.
   ALL SHEAR GATE BOLTS SHALL BE STAINLESS STEEL.

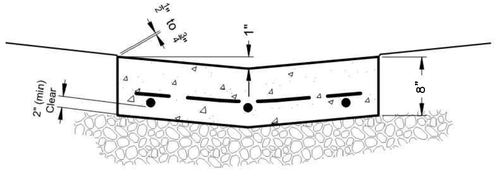
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1. CALL DEVELOPMENT SERVICES (206-275-7605) 24 HOURS IN ADVANCE FOR A DETENTION SYSTEM INSPECTION BEFORE BACKFILLING AND FOR FINAL INSPECTIONS.
2. RESPONSIBILITY FOR OPERATION AND MAINTANANCE OF DRAINAGE SYSTEMS ON PRIVATE PROPERTY IS RESPONSIBILITY 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.

## 1 DETENTION SYSTEM DETAIL (WEST)
NTS



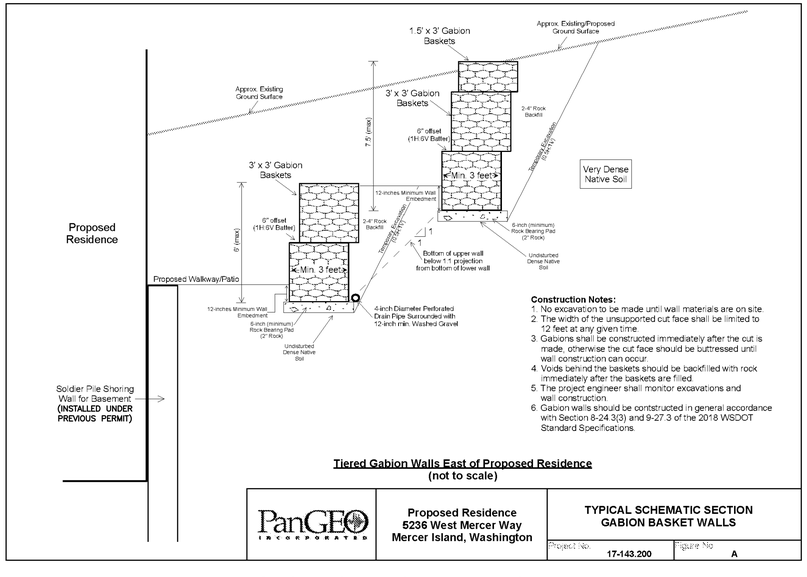

PLAN




TYPICAL SECTION

## 3 VALLEY GUTTER CURB
NTS

## 2 DETENTION SYSTEM DETAIL (EAST)
NTS

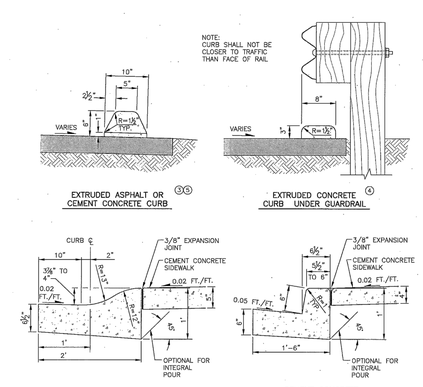



**Construction Notes:**
1. No excavation to be made until wall materials are on site.
2. The width of the unsupported cut face shall be limited to 12 feet at any given time.
3. Gabions shall be constructed immediately after the cut is made, otherwise the cut face should be buttressed until wall construction can occur.
4. Voids behind the baskets should be backfilled with rock immediately after the baskets are filled.
5. The project engineer shall monitor excavations and wall construction.
6. Gabion walls should be constructed in general accordance with Section 8-24.3(3) and 9-27.3 of the 2018 WSDOT Standard Specifications.

**Tiered Gabion Walls East of Proposed Residence**
**(not to scale)**

| PanGEO INCORPORATED | Proposed Residence 5236 West Mercer Way Mercer Island, Washington | TYPICAL SCHEMATIC SECTION GABION BASKET WALLS |
|---|---|---|
| | | Project No. 17-143.200 / Figure No. A |

## 4 GABION BASKET WALLS
NTS




NOTES:
1. SEE SEC. 3.04 K.C.R.S. FOR JOINT REQUIREMENTS.
2. ROLL AND VERTICAL GUTTER TO MATCH POSITIVE SUPERELEVATION.
3. SEE FIG. NO. 2-005 FOR CONFIGURATION OF FILL AND WALKWAY BEHIND CURB IF REQUIRED.
4. THIS IS A CURB LOCATION DETAIL, NOT A GUARDRAIL DETAIL.
5. SEE SEC. 3.03 FOR EXTRUDED CURB ANCHORAGE.

King County Department of Transportation Road Services Division 2016 Design and Construction Standards

CURB DETAILS 3-13

FIG. 3-002

## 5 VERTICAL CURB
NTS

DATE | REVISION | SYM

PACE Engineers
11255 Kirkland Way, Suite 300
Kirkland, WA 98033
P: 425.827.2014
www.paceengrs.com

TYLER A. CHRISTOFFERSON
STATE OF WASHINGTON
47631
REGISTERED PROFESSIONAL ENGINEER
9/22/25

ORIGINAL COPY OF DIGITALLY SIGNED DOCUMENT AVAILABLE UPON REQUEST

N5 ARCHITECTURE
4200 STONE WAY N
SEATTLE, WA 98103

5236 W MERCER WAY
SINGLE FAMILY RESIDENCE

STORM DRAINAGE DETAILS

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

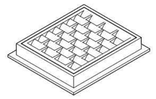
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|---|---|
| DESIGNED BY: JP | CHECKED BY: TC |

PACE PROJECT NO. 17387

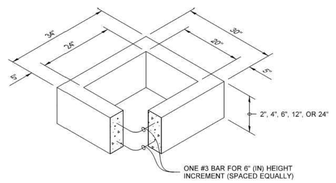
SHEET C2.1

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SAVE TIME: 9/17/2025 9:42:13 AM PLOT TIME: 9/22/2025 3:48 PM
USER NAME: TYLER CHRISTOFFERSON

DRAWN BY: LISA CYFORD



FRAME AND VANED GRATE



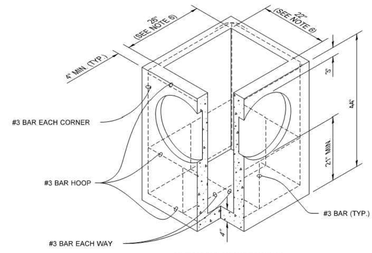

RECTANGULAR ADJUSTMENT SECTION

| PIPE ALLOWANCES | |
|---|---|
| **PIPE MATERIAL** | **MAXIMUM INSIDE DIAMETER (INCHES)** |
| REINFORCED OR PLAIN CONCRETE | 12" |
| ALL METAL PIPE | 15" |
| CPSSP ★ **(STD. SPEC. SECT. 9-05.20)** | 12" |
| SOLID WALL PVC **(STD. SPEC. SECT. 9-05.12(1))** | 15" |
| PROFILE WALL PVC **(STD. SPEC. SECT. 9-05.12(2))** | 15" |

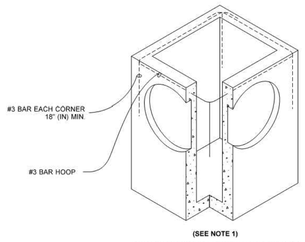
★ CORRUGATED POLYETHYLENE STORM SEWER PIPE

**NOTES**

1. As acceptable alternatives to the rebar shown in the **PRECAST BASE SECTION**, fibers (placed according to the Standard Specifications), or wire mesh having a minimum area of 0.12 square inches per foot shall be used with the minimum required rebar shown in the ALTERNATIVE **PRECAST BASE SECTION**. Wire mesh shall not be placed in the knockouts.
2. The knockout diameter shall not be greater than 20" (in). Knockouts shall have a wall thickness of 2" (in) minimum to 2.5" (in) maximum. Provide a 1.5" (in) minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with **Standard Specification Section 9-04.3**.
3. The maximum depth from the finished grade to the lowest pipe invert shall be 5' (ft).
4. The frame and grate may be installed with the flange down, or integrally cast into the adjustment section with flange up.
5. The Precast Base Section may have a rounded floor, and the walls may be sloped at a rate of 1 : 24 or steeper.
6. The opening shall be measured at the top of the **Precast Base Section**.
7. All pickup holes shall be grouted full after the basin has been placed.




PRECAST BASE SECTION




(SEE NOTE 1)

ALTERNATIVE PRECAST BASE SECTION

JULIE HEILMAN STATE OF WASHINGTON 41810 REGISTERED PROFESSIONAL ENGINEER

Heilman, Julie
Jan 25 2017 2:53 PM

**CATCH BASIN TYPE 1**

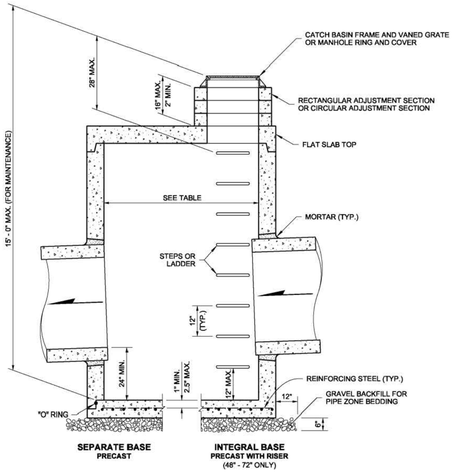
**STANDARD PLAN B-5.20-02**

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Jan 26 2017 6:48 AM
STATE DESIGN ENGINEER
Washington State Department of Transportation

## 1 TYPE 1 CATCH BASIN
NTS

DRAWN BY: LISA CYFORD




**SEPARATE BASE** PRECAST

**INTEGRAL BASE** PRECAST WITH RISER (48" - 72" ONLY)

**NOTES**

1. No steps are required when height is 4' or less.
2. The bottom of the precast catch basin may be sloped to facilitate cleaning.
3. The rectangular frame and grate may be installed with the flange up or down. The frame may be cast into the adjustment section.
4. Knockouts shall have a wall thickness of 2" minimum to 2.5" maximum. Provide a 1.5" minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with **Standard Specification 9-04.3**.

| CATCH BASIN DIMENSIONS | | | | |
|---|---|---|---|---|
| **CATCH BASIN DIAMETER** | **MIN. WALL THICKNESS** | **MIN. BASE THICKNESS** | **MAXIMUM KNOCKOUT SIZE** | **MINIMUM DISTANCE BETWEEN KNOCKOUTS** |
| 48" | 4" | 6" | 36" | 8" |
| 54" | 4.5" | 8" | 42" | 8" |
| 60" | 5" | 8" | 48" | 8" |
| 72" | 6" | 8" | 60" | 12" |
| 84" | 8" | 12" | 72" | 12" |
| 96" | 8" | 12" | 84" | 12" |
| 120" | 10" | 12" | 96" | 12" |
| 144" | 12" | 12" | 108" | 12" |

| PIPE ALLOWANCES | | | | | |
|---|---|---|---|---|---|
| **CATCH BASIN DIAMETER** | **PIPE MATERIAL WITH MAXIMUM INSIDE DIAMETER** | | | | |
| | **CONCRETE** | **ALL METAL** | **CPSSP ①** | **SOLID WALL PVC ②** | **PROFILE WALL PVC ③** |
| 48" | 24" | 30" | 24" | 30" | 30" |
| 54" | 30" | 36" | 30" | 36" | 36" |
| 60" | 36" | 42" | 36" | 42" | 42" |
| 72" | 42" | 54" | 42" | 48" | 48" |
| 84" | 54" | 60" | 54" | 48" | 48" |
| 96" | 60" | 72" | 60" | 48" | 48" |
| 120" | 66" | 84" | 60" | 48" | 48" |
| 144" | 78" | 96" | 60" | 48" | 48" |

① Corrugated Polyethylene Storm Sewer Pipe **(Standard Specification 9-05.20)**
② **(Standard Specification 9-05.12(1))**
③ **(Standard Specification 9-05.12(2))**

CASEY M. KRAMER STATE OF WASHINGTON 44535 REGISTERED PROFESSIONAL ENGINEER

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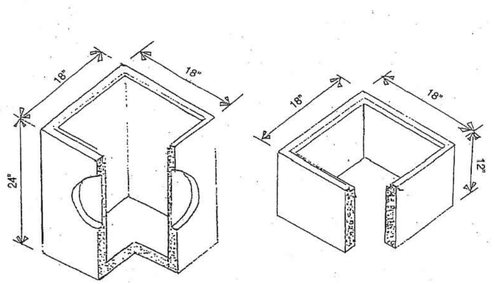
**CATCH BASIN TYPE 2**

**STANDARD PLAN B-10.20-01**

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
*Pasco Bakotich III* 02-07-12
STATE DESIGN ENGINEER — DATE
Washington State Department of Transportation

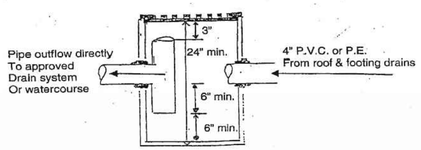
## 2 TYPE 2 CATCH BASIN
NTS




Catch Basin (C.B.)
Depth & Volume are
Minimum Dimensions.

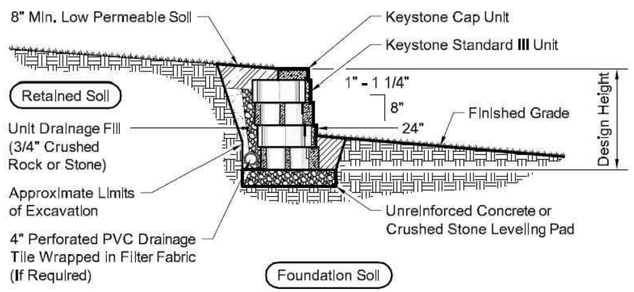
Minimum Volume = 24 gal.

6" & 12" Adjustment Riser




Catch Basin with Oil Separator

## 3 CATCH BASIN WITH OIL SEPARATOR
NTS




Typical Gravity Wall Section

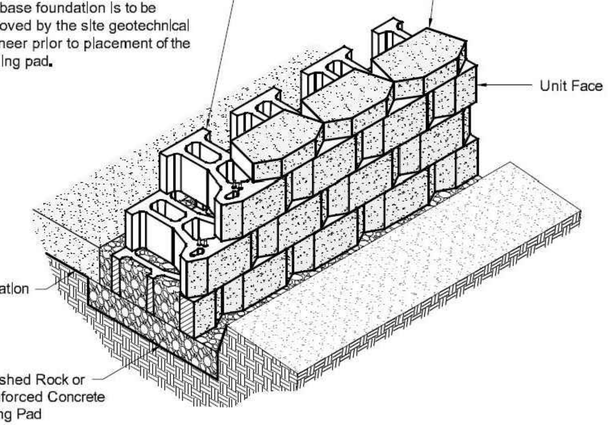
Standard III Unit - 1" Setback

**Base Leveling Pad Notes:**

1. The leveling pad is to be constructed of crushed stone or 2,000 psi± unreinforced concrete
2. The base foundation is to be approved by the site geotechnical engineer prior to placement of the leveling pad.

| Standard III Unit | |
|---|---|
| Width: | 18" |
| *Depth: | 21" |
| Height: | 8" |
| *Weight: | 92 lbs |

| Cap Unit | |
|---|---|
| Width: | 18" |
| *Depth: | 10 1/2" |
| Height: | 4" |
| *Weight: | 45 lbs |




Standard III Unit/Base Pad Isometric Section View

* Dimensions & Weight May Vary by Region

## 1 TYPICAL GRAVITY WALL SECTION
NTS

PACE Engineers
11255 Kirkland Way, Suite 300
Kirkland, WA 98033
P: 425.827.2014
www.paceengrs.com

PETER M. CHRISTOPHERSON STATE OF WASHINGTON 47631 REGISTERED PROFESSIONAL ENGINEER
9/22/25

ORIGINAL COPY OF DIGITALLY SIGNED DOCUMENT AVAILABLE UPON REQUEST

N5 ARCHITECTURE
4200 STONE WAY N
SEATTLE, WA 98103

5236 W MERCER WAY
SINGLE FAMILY RESIDENCE

STORM DRAINAGE DETAILS

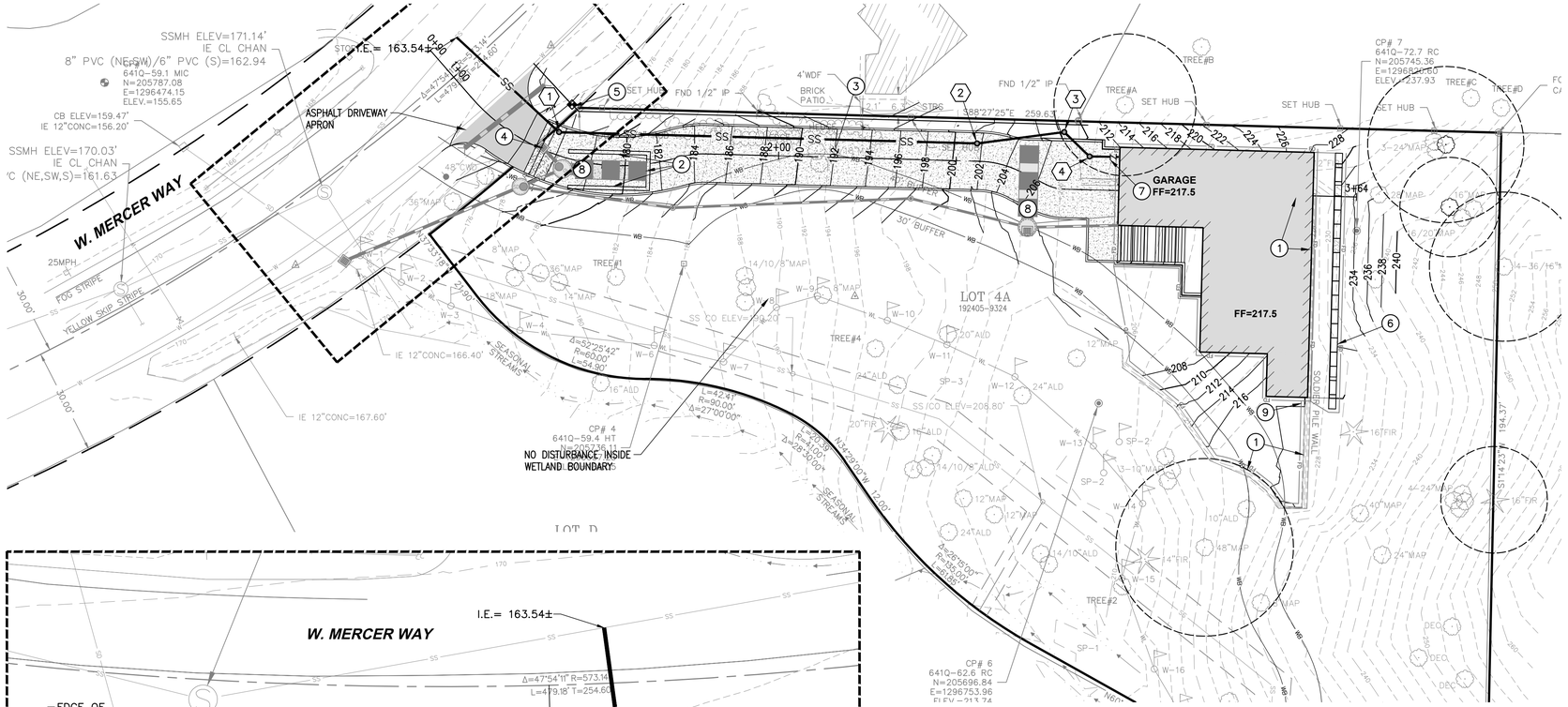
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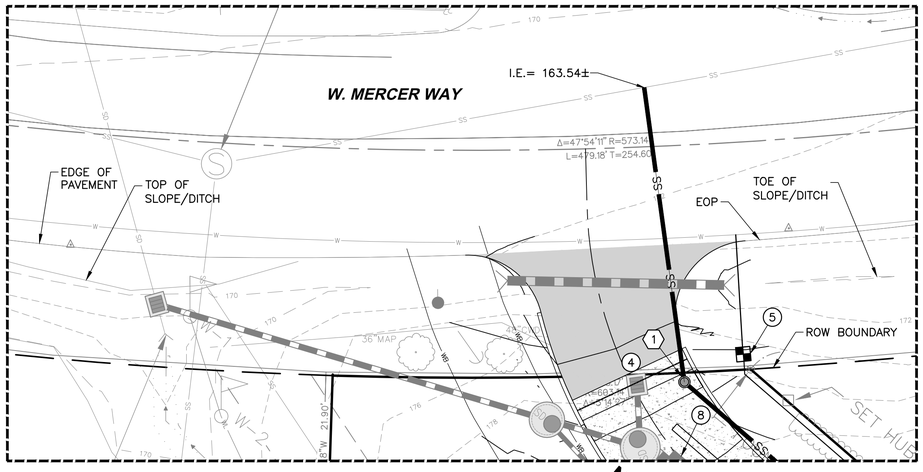
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| PACE PROJECT NO. | 17387 |

SHEET **C2.2**

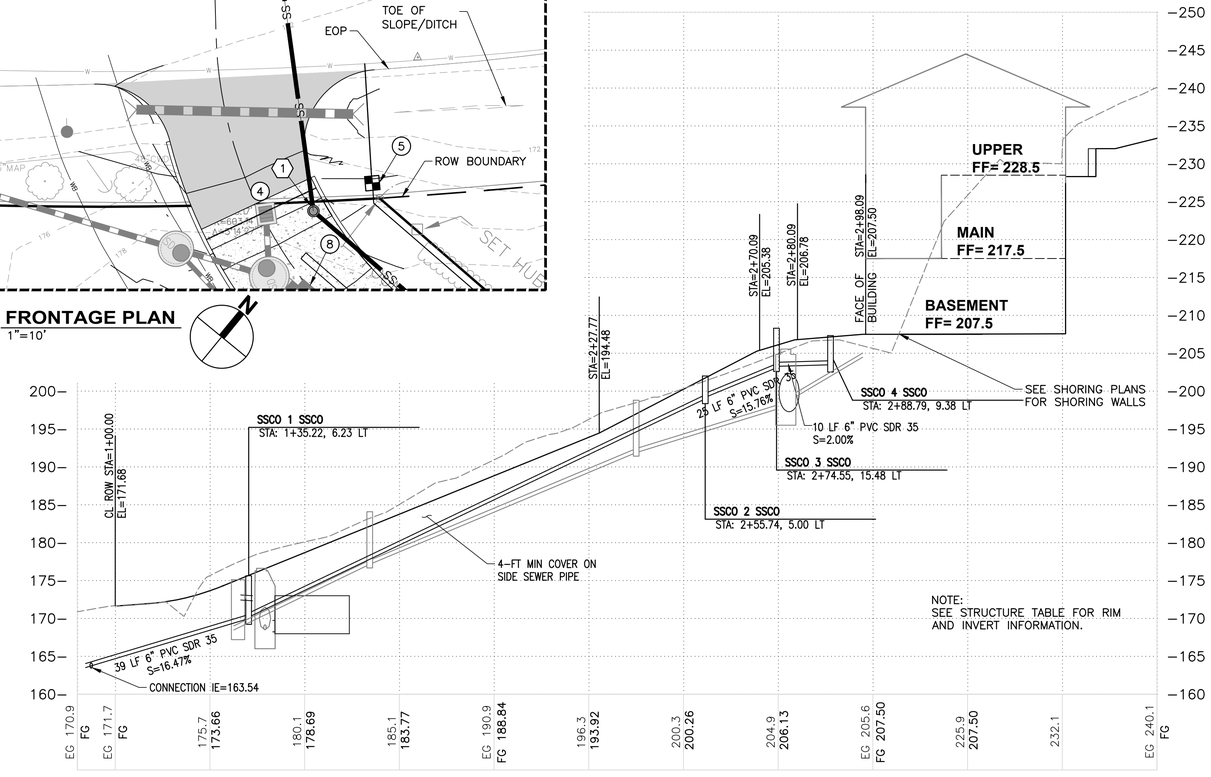
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PLOT TIME: 9/22/2025 3:48 PM
USER NAME: TYLER CHRISTOPHERSON




**FRONTAGE PLAN**
1"=10'




## SEWER STRUCTURE TABLE

| | NAME | DETAILS |
|---|---|---|
| 1 | SSCO 1 SSCO | RIM = 175.64<br>IE IN = 170.20 (6" PVC SDR 35 E)<br>IE OUT = 170.00 (6" PVC SDR 35 NW) |
| 2 | SSCO 2 SSCO | RIM = 202.01<br>IE IN = 199.20 (6" PVC SDR 35 E)<br>IE OUT = 199.00 (6" PVC SDR 35 W) |
| 3 | SSCO 3 SSCO | RIM = 208.30<br>IE IN = 203.30 (6" PVC SDR 35 SE)<br>IE OUT = 203.10 (6" PVC SDR 35 W) |
| 4 | SSCO 4 SSCO | RIM = 207.35<br>IE OUT = 203.50 (6" PVC SDR 35 NW) |

## KEY NOTES

1. PERMANENT SHORING WALLS
2. TEMPORARY SHORING WALLS
3. CONCRETE DRIVEWAY WITH VERTICAL CURB AND GUTTER.
4. VALLEY GUTTER AT EDGE OF ASPHALT. SEE DETAIL 3, SHEET C2.1.
5. 1" WATER METER, MINIMUM.
6. GABION BASKET WALL (TYP), SEE DETAIL 4, SHEET C2.1.
7. SIDE SEWER BACKFLOW PREVENTION VALVE, SEE DETAIL 5, SHEET C3.1. VERIFY BUILDING SEWER CONNECTION DEPTH PRIOR TO CONSTRUCTION. ADJUST DEPTH IF NECESSARY.
8. CMP DETENTION PIPE, SEE DETAILS ON SHEET C2.1.
9. CONNECT GABION BASKET WALL FOOTING DRAINS TO SOLDER PILE SHORING FOOTING DRAIN.

## GENERAL NOTES:

1. REFERENCE SHORING AND STRUCTURAL DETAILS FOR SHORING AND FOUNDATION DRAIN OUTLET DETAILS.
2. BASEMENT FLOOR SHORING–FOUNDATION DRAIN OUTLET SD @ 2.0% MIN.
3. YARD DRAIN OUTLET SD @ 2.0% MIN
4. STORM CONVEYANCE PIPE SHALL BE SDR 35 PVC.
5. FIRE PROTECTION SYSTEM REQUIRED AND SHALL BE DESIGNED BY A FIRE SPRINKLER DESIGNER.
6. GABION BASKET WALL CONSTRUCTED PRIOR TO PERMANENT SHORING CONSTRUCTION. SEE SHORING AND STRUCTURAL PLANS.
7. FIRE PROTECTION SYSTEM REQUIRED AND SHALL BE DESIGNED BY A FIRE SPRINKLER DESIGNER.
8. CONSULT FIRE SPRINKLER DESIGNER FOR FINAL METER AND SUPPLY LINE SIZING.

## LEGEND

- PERMANENT SHORING
- TEMP. SHORING
- SANITARY SIDE SEWER — SS
- SS CLEANOUT
- STORM DRAIN
- TRENCH DRAIN
- FOOTING DRAIN — FD
- WALL DRAIN
- SD CLEANOUT
- YARD DRAIN
- CB TYPE 1
- CB TYPE 2

HORIZ. 0 10 20 40 Scale In Feet
VERT. 0 5 10 20 Scale In Feet
N

| SYM | REVISION | DATE |
|---|---|---|

PACE Engineers
11255 Kirkland Way, Suite 300
Kirkland, WA 98033
p: 425.827.2014
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**N5 ARCHITECTURE**
**4200 STONE WAY N**
**SEATTLE, WA 98103**

**5236 W MERCER WAY**
**SINGLE FAMILY RESIDENCE**

**SITE, UTILITY, AND SEWER PLAN**

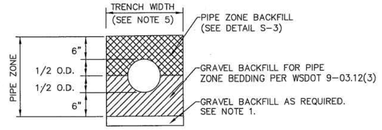
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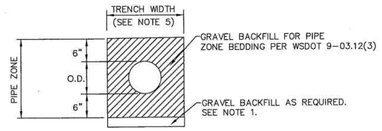
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PLOT TIME: 9/22/2025 4:08 PM
USER NAME: TYLER CHRISTOPHERSON

**BEDDING FOR RIGID PIPE MATERIAL**




**BEDDING FOR FLEXIBLE PIPE MATERIAL**




**NOTES**

1. EXCAVATE UNSTABLE MATERIAL DOWN TO FIRM SOIL. REPLACE WITH GRAVEL BACKFILL PER WSDOT 9-03.12(3) AS DIRECTED BY THE CITY ENGINEER.
2. PROVIDE UNIFORM SUPPORT UNDER BARREL.
3. HAND TAMP UNDER HAUNCHES.
4. COMPACT BEDDING AND BACKFILL MATERIAL TO 95% MAX. DENSITY EXCEPT DIRECTLY OVER PIPE. HAND TAMP ONLY UNTIL MINIMUM 6" ABOVE TOP OF PIPE.
5. 30" MAXIMUM TRENCH WIDTH FOR PIPE UP TO AND INCLUDING 12", FOR PIPE LARGER THAN 12", USE O.D. PLUS 16".

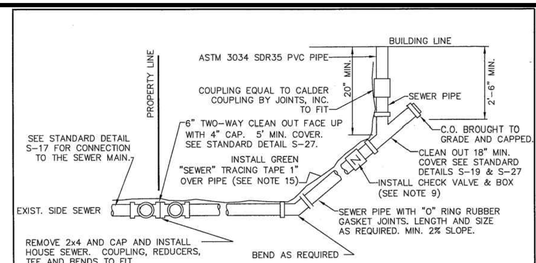
CITY OF MERCER ISLAND
**STANDARD DETAILS**
SEWER

PIPE BEDDING

| 6-5-2009 | NO SCALE | S-4 |
|---|---|---|

REV DATE | | | | | | APPROVED

## 1 PIPE BEDDING
NTS




**BUILDING CONNECTION**

**NOTES**

1. ELBOWS SHALL NOT BE GREATER THAN 45 DEGREES.
2. CLEAN OUT IS REQUIRED FOR EACH PIPE LENGTH GREATER THAN 100' AND FOR EACH 90° ACCUMULATED ELBOW/100'.
3. ALL HOUSE PLUMBING OUTLETS MUST BE CONNECTED TO THE SEWER. NO DOWN SPOUTS OR STORM DRAINAGE MAY BE CONNECTED TO THE SEWER SYSTEM.
4. 18" MINIMUM COVERAGE OVER PIPE.
5. LAY PIPE IN STRAIGHT LINE BETWEEN BENDS. MAKE ALL CHANGES IN GRADE OR LINE WITH ⅛ BEND OR WYE. 90° CHANGE WITH 1/8 BEND AND WYE.
6. 4" SEWER PIPE MINIMUM SIZE ON PROPERTY. 2% MINIMUM GRADE.
7. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT SEWER ORDINANCES.
8. ALL CONSTRUCTION REQUIRES A PLAN SHOWING PROPERTY AND DIMENSIONS AND COMPLETION OF SIDE SEWER APPLICATION AND MAINTENANCE AGREEMENT, AS NEEDED.
9. BACK WATER VALVE (CHECK VALVE) IS REQUIRED:
   A. IF CONNECTED TO A SHARED SIDE SEWER.
   B. IF CONNECTION AT HOUSE IS LOWER THAN BOTH UPSTREAM AND DOWNSTREAM MANHOLE.
   C. SEE S-23 & S-24 FOR LAKE LINE REQUIREMENTS.
10. AS-BUILT DRAWING SHOWING LOCATION OF SIDE SEWER & ALL BENDS, C.O. ETC., IN RELATION TO THE HOUSE IS REQUIRED AFTER INSPECTION & INSTALLATION. SEE STANDARD DETAIL S-38 FOR A TYPICAL "AS BUILT".
11. THE MINIMUM PIPE SIZE FOR SIDE SEWERS SHALL BE:
    6" – WITHIN THE PUBLIC RIGHT-OF-WAY.
    4" – SINGLE FAMILY RESIDENCES.
    6" – 2 TO 6 SINGLE FAMILY RESIDENCES.
    6" – BUILDINGS OTHER THAN SINGLE FAMILY RESIDENCES.
12. UTILITY PIPE TRACER TAPE SHALL BE DETECTABLE BELOW GROUND SURFACE, COLOR CODED, WITH UTILITY NAME PRINTED ON TAPE. CONDUCTIVE WARNING TAPE REQUIRED OVER ALL WATER PIPE. TAPE SHALL BE MANUFACTURER'S STANDARD PERMANENT, BRIGHT-COLORED, CONTINUOUS PRINTED PLASTIC TAPE, ALUMINUM BACKED, INTENDED FOR DIRECT-BURIAL SERVICE. TAPE SHALL BE NOT LESS THAN 6" WIDE X 4 MILS THICK.

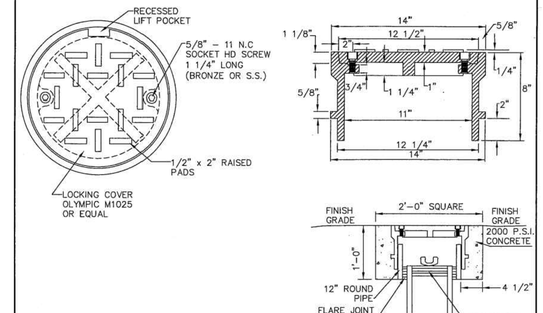
CITY OF MERCER ISLAND
**STANDARD DETAILS**
SEWER

HOUSE SEWER CONNECTION

| 6-5-2009 | NO SCALE | S-18 |
|---|---|---|

REV DATE | | | | | | APPROVED

## 2 HOUSE SEWER CONNECTION
NTS




**FOR PVC PIPE**

**NOTES**

1. SEE S-27 FOR INSTALLATION DETAILS.

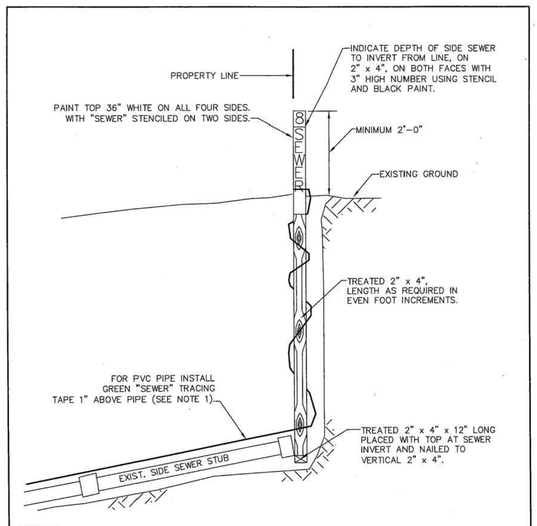
CITY OF MERCER ISLAND
**STANDARD DETAILS**
SEWER

CLEAN OUT DETAIL

| 6-5-2009 | NO SCALE | S-19 |
|---|---|---|

REV DATE | | | | | | APPROVED

## 3 CLEAN OUT DETAIL
NTS




**NOTES**

1. UTILITY PIPE TRACER TAPE SHALL BE DETECTABLE BELOW GROUND SURFACE, COLOR CODED, WITH UTILITY NAME PRINTED ON TAPE. CONDUCTIVE WARNING TAPE REQUIRED OVER ALL WATER PIPE. TAPE SHALL BE MANUFACTURER'S STANDARD PERMANENT, BRIGHT-COLORED, CONTINUOUS PRINTED PLASTIC TAPE, ALUMINUM BACKED, INTENDED FOR DIRECT-BURIAL SERVICE. TAPE SHALL BE NOT LESS THAN 6" WIDE X 4 MILS THICK.

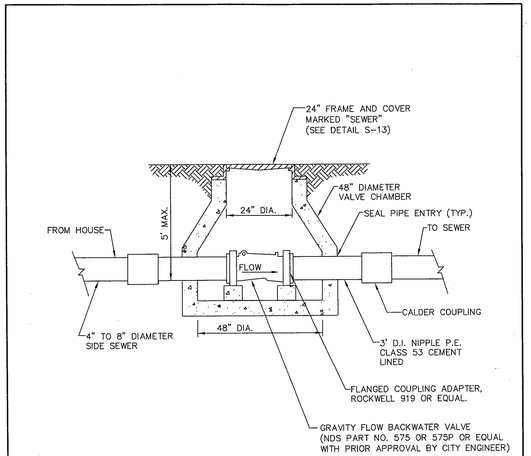
CITY OF MERCER ISLAND
**STANDARD DETAILS**
SEWER

SIDE SEWER MARKER POST

| 6-5-2009 | NO SCALE | S-20 |
|---|---|---|

REV DATE | | | | | | APPROVED

## 4 SIDE SEWER MARKER POST
NTS



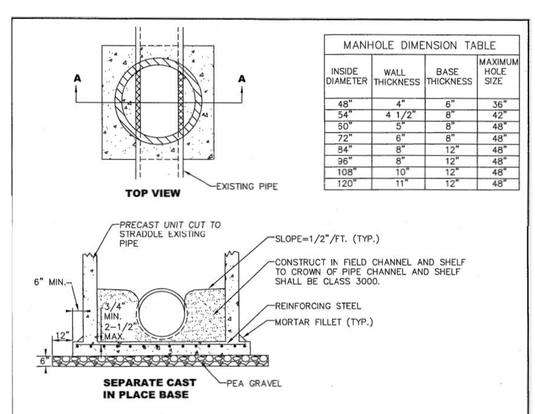

CITY OF MERCER ISLAND
**STANDARD DETAILS**
SEWER

BACK WATER VALVE ASSEMBLY FOR JOINT USE SIDE SEWER (4" OR 6" DIAMETER)

| 6-5-2009 | NO SCALE | S-26 |
|---|---|---|

REV DATE | | | | | | APPROVED

## 5 BACKFLOW PREVENTION VALVE
NTS




MANHOLE DIMENSION TABLE

| INSIDE DIAMETER | WALL THICKNESS | BASE THICKNESS | MAXIMUM HOLE SIZE |
|---|---|---|---|
| 48" | 4" | 6" | 36" |
| 54" | 4 1/2" | 8" | 42" |
| 60" | 5" | 8" | 48" |
| 72" | 6" | 8" | 48" |
| 84" | 8" | 12" | 48" |
| 96" | 8" | 12" | 48" |
| 108" | 10" | 12" | 48" |
| 120" | 11" | 12" | 48" |

**NOTES**

1. EXISTING PIPE SHALL BE SUPPORTED AT ALL TIMES.
2. NO WEIGHT OF THE PRECAST UNIT SHALL BEAR ON THE EXISTING PIPE.
3. CONCRETE FOR CAST-IN-PLACE BASE SHALL BE CLASS 4000.
4. PRECAST MANHOLE SECTION SHALL BE INSTALLED IN ACCORDANCE WITH THE STANDARD PLAN FOR THE SPECIFIED MANHOLE SIZE AND TYPE.
5. MANHOLE SECTIONS SHALL NOT BE INSTALLED UNTIL CONCRETE BASE HAS SET FOR 12 HOURS.
6. THE EXISTING MAIN SHALL BE LEFT IN PLACE AND THE TOP PORTION OF THE MAIN SHALL BE REMOVED. THE BOTTOM PORTION OF THE MAIN SHALL BE TIED IN AS THE CHANNEL OF THE NEW MANHOLE.
7. GROUT ALL OPENINGS TO ENSURE WATER TIGHT STRUCTURE.
8. A FLEXIBLE PIPE-TO-MANHOLE CONNECTOR SHALL BE EMPLOYED IN ALL CONNECTIONS OF RIGID AND FLEXIBLE PIPES TO NEW PRECAST CONCRETE MANHOLES. THE CONNECTOR SHALL BE "KOR-N-SEAL" WITH "WEDGE KORBAND" MANUFACTURED BY NPC. INC., OR APPROVED EQUAL.
9. BASE REINFORCING STEEL SHALL BE PER MANUFACTURER'S RECOMMENDATION.

CITY OF MERCER ISLAND
**STANDARD DETAILS**
SEWER

NEW MANHOLE OVER AN EXISTING SEWER LINE

| 6-5-2009 | NO SCALE | S-15 |
|---|---|---|

REV DATE | | | | | | APPROVED

## 6 NEW MANHOLE OVER AN EXISTING SEWER LINE
NTS

| DATE | REVISION | SYM |
|---|---|---|
| | | |

PACE Engineers
11255 Kirkland Way, Suite 300
Kirkland, WA 98033
p: 425.827.2014
www.paceengrs.com

PETER A. CHRISTOPHERSON
STATE OF WASHINGTON
47631
REGISTERED
PROFESSIONAL ENGINEER
9/22/25

ORIGINAL COPY OF DIGITALLY SIGNED DOCUMENT AVAILABLE UPON REQUEST

N5 ARCHITECTURE
4200 STONE WAY N
SEATTLE, WA 98103

5236 W MERCER WAY
SINGLE FAMILY RESIDENCE

SANITARY SIDE SEWER DETAILS

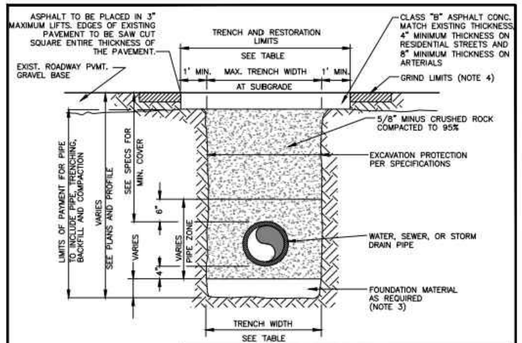
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1" 2"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

| SCALE: AS SHOWN | DATE: 9/22/2025 |
|---|---|
| DESIGNED BY: JP | CHECKED BY: TC |

PACE PROJECT NO. 17387

SHEET **C3.1**

FILE NAME: P:\WR\P17\17387 5236 WEST MERCER WAY SFR\CAD\ENGINEERING\SHEETS\P17387-DET.DWG
SAVE TIME: 9/17/2025 9:42:13 AM
USER NAME: TYLER CHRISTOPHERSON
PLOT TIME: 9/22/2025 3:48 PM




| PIPE SIZE | PIPE ZONE MAX. TRENCH WIDTH | MAX. TRENCH WIDTH AT SUBGRADE | MAX. RESTORATION WIDTH AT SURFACE |
|---|---|---|---|
| WATER SERVICES | 2'-0" | 2'-0" | 4'-0" |
| 4" OR 6" | 2'-2" | 3'-0" | 5'-0" |
| 8" | 2'-4" | 4'-0" | 6'-0" |
| 10" | 2'-6" | 4'-0" | 6'-0" |
| 12" | 2'-8" | 4'-6" | 6'-6" |
| 16" | 3'-0" | 5'-0" | 7'-0" |

WIDTH TRENCH

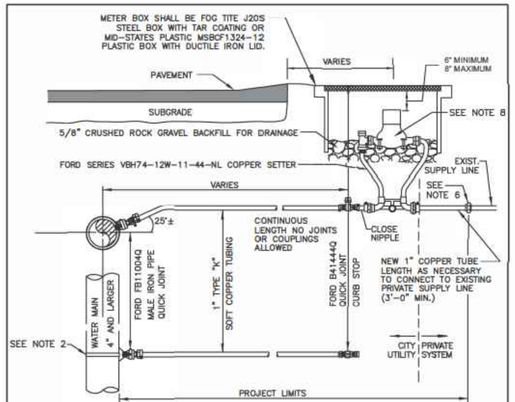
**NOTES**

1. CALL IN LOCATES TWO BUSINESS DAYS BEFORE YOU DIG. (1-800-424-5555)
2. IN RIGHT-OF-WAY USE 100% 5/8 MINUS CRUSHED ROCK FOR BEDDING, PIPE ZONE AND BACKFILL
3. FOUNDATION MATERIAL SHALL BE 1 ¾" MINUS CRUSHED ROCK OR OTHER AGGREGATE AS APPROVED BY CITY ENGINEER.
4. GRIND AND OVERLAY LIMITS SHALL EXTEND A MINIMUM OF 10' PAST THE END OF TRENCH AREAS.
5. SEAL ALL FINAL PATCHING AND PAVING SEAMS WITH LIQUID ASPHALT. SQUEEGEE OR MOP THE SEALER. COVER WITH DRY SAND.

CITY OF MERCER ISLAND
**STANDARD DETAILS**
**WATER**
TRENCH SECTION

| 3-29-2021 | NO SCALE | W-3 |
|---|---|---|
| | | APPROVED |

**1 TRENCH SECTION**
NTS



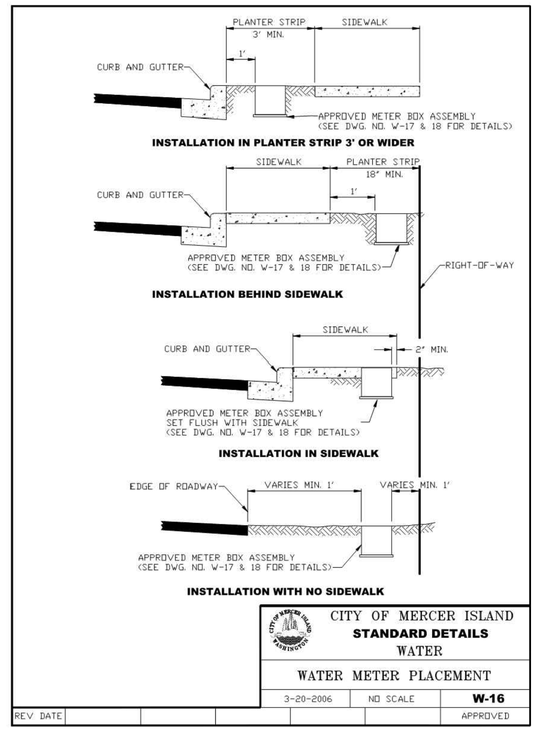

**NOTES**

1. WATER SERVICES SHALL COMPLY WITH THE REDUCTION OF LEAD IN DRINKING WATER ACT DATED 01/04/2014.
2. ON EXISTING WATER MAINS USE NYLON COATED D.I. SADDLE WITH STAINLESS STEEL DOUBLE STRAPS, ROMAC 202NS, OR APPROVED EQUAL.
3. MINIMUM DISTANCE BETWEEN CORP STOPS SHALL BE 18" MINIMUM DISTANCE BETWEEN TAPS, BETWEEN CORP STOP AND PIPE ENDS SHALL BE 24", ALL HORIZONTALLY STAGGERED.
4. PLASTIC METER BOXES SHALL NOT BE INSTALLED WITHIN ROADWAY, SIDEWALK, OR DRIVEWAYS.
5. UPON CITY ENGINEER'S APPROVAL, METER BOXES ARE ALLOWED TO BE INSTALLED IN PORTLAND CEMENT CONCRETE PAVEMENT OR SIDEWALK.
6. WHEN CONNECTING TO EXISTING PRIVATE SUPPLY LINE CONTAINING FERROUS METAL, PROVIDE INSULATING COUPLING (DB SERIES WITH C21 SERIES ADAPTERS) AND PROVIDE REDUCER AS NECESSARY TO MATCH EXISTING PRIVATE SUPPLY LINE DIAMETER.
7. SERVICE LINE SHALL BE PERPENDICULAR TO THE WATER MAIN AND STRAIGHT TO WATER METER, UNLESS OTHERWISE APPROVED BY CITY ENGINEER. PROVIDE WINDING SLACK IN THE SERVICE LINE BETWEEN THE MAIN AND WATER METER.
8. WATER METER SUPPLIED BY CITY.
9. ALL FITTINGS TO BE BRASS COMPRESSION TYPE, FORD QUICK JOINT OR EQUAL.
10. NO SERVICE CONNECTIONS BETWEEN BLOW-OFF AND END OF MAIN.

CITY OF MERCER ISLAND
**STANDARD DETAILS**
**WATER**
1" WATER METER INSTALLATION

| 05-02-2023 | NO SCALE | W-13 |
|---|---|---|
| REV DATE | | APPROVED |

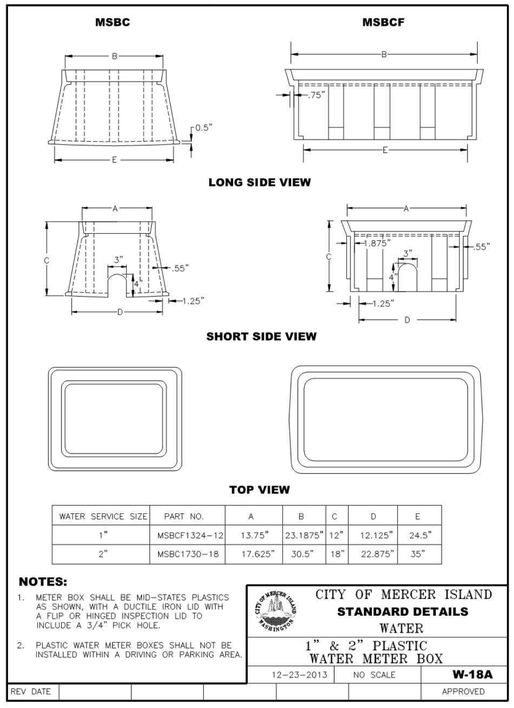
**2 1" WATER METER INSTALLATION**
NTS




CITY OF MERCER ISLAND
**STANDARD DETAILS**
WATER
WATER METER PLACEMENT

| 3-20-2006 | NO SCALE | W-16 |
|---|---|---|
| REV DATE | | APPROVED |

**3 WATER METER PLACEMENT**
NTS




| WATER SERVICE SIZE | PART NO. | A | B | C | D | E |
|---|---|---|---|---|---|---|
| 1" | MSBCF1324-12 | 13.75" | 23.1875" | 12" | 12.125" | 24.5" |
| 2" | MSBC1730-18 | 17.625" | 30.5" | 18" | 22.875" | 35" |

**NOTES:**

1. METER BOX SHALL BE MID-STATES PLASTICS AS SHOWN, WITH A DUCTILE IRON LID WITH A FLIP OR HINGED INSPECTION LID TO INCLUDE A 3/4" PICK HOLE.
2. PLASTIC WATER METER BOXES SHALL NOT BE INSTALLED WITHIN A DRIVING OR PARKING AREA.

CITY OF MERCER ISLAND
**STANDARD DETAILS**
WATER
1" & 2" PLASTIC WATER METER BOX

| 12-23-2013 | NO SCALE | W-18A |
|---|---|---|
| REV DATE | | APPROVED |

**4 1" & 2" PLASTIC WATER METER BOX**
NTS

| NO. | REVISION | DATE |
|---|---|---|
| | | |

PACE Engineers
11255 Kirkland Way, Suite 300
Kirkland, WA 98033
p: 425.827.2014
www.paceengrs.com

PETER A. CHRISTOPHERSEN
STATE OF WASHINGTON
47631
REGISTERED
PROFESSIONAL ENGINEER
9/22/25

ORIGINAL COPY OF DIGITALLY SIGNED DOCUMENT AVAILABLE UPON REQUEST

N5 ARCHITECTURE
4200 STONE WAY N
SEATTLE, WA 98103

**5236 W MERCER WAY**
**SINGLE FAMILY RESIDENCE**

WATER DETAILS

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

| SCALE: AS SHOWN | DATE: 9/22/2025 |
|---|---|
| DESIGNED BY: JP | CHECKED BY: TC |

PACE PROJECT NO. 17387

SHEET **C3.2**

FILE NAME: P:\VDR\P17\17387_5236 WEST MERCER WAY SFR\CAD\ENGINEERING\SHEETS\P17387-DET.DWG
SAVE TIME: 9/17/2025 9:42:13 AM
PLOT TIME: 9/22/2025 3:48 PM
USER NAME: TYLER CHRISTOPHERSON

# General Structural Notes

The Following Apply Unless Noted Otherwise on the Drawings

## Criteria

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

2. DESIGN LOADING CRITERIA:

   RESIDENTIAL
   - FLOOR LIVE LOAD . . . . . 40 PSF
   - FLOOR LIVE LOAD (BALCONIES) . . . . . 60 PSF

   ROOF
   - ROOF LIVE LOAD . . . . . 25 PSF
   - ROOF LIVE LOAD (TENANT ACCESSIBLE) . . . . . 60 PSF
   - ROOF DEAD LOAD (PHOTO VOLTAIC PANELS) . . . . . 5 PSF

   ENVIRONMENTAL LOADS
   - SNOW . . . . . Ce=1.0, Is=1.0, Ct=1.1, Pg=25 PSF, Pf=20 PSF
   - WIND . . . . . Iw=1.0, GCpi=0.18, 110 MPH, EXPOSURE "C", Kzt=1.6
   - EARTHQUAKE . . . ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE
     LATERAL SYSTEM: LIGHT FRAMED SHEAR WALLS, Vs = 11.7 KIPS
     SITE CLASS=D, Ss=1.44, Sds=0.96, S1=.55, SD1=.55, Cs=0.148
     SDC D, Ie=1.0, R=6.5

   SEE PLANS FOR ADDITIONAL LOADING CRITERIA

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

4. PRIMARY STRUCTURAL ELEMENTS NOT DIMENSIONED ON THE STRUCTURAL PLANS AND DETAILS SHALL BE LOCATED BY THE ARCHITECTURAL PLANS AND DETAILS. VERTICAL DIMENSION CONTROL IS DEFINED BY THE ARCHITECTURAL WALL SECTIONS, BUILDING SECTION, AND PLANS. DETAILING AND SHOP DRAWING PRODUCTION FOR STRUCTURAL ELEMENTS WILL REQUIRE DIMENSIONAL INFORMATION CONTAINED IN BOTH ARCHITECTURAL AND STRUCTURAL DRAWINGS.

5. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE CONTRACTORS WORK. THE STRUCTURAL ENGINEER HAS NO OVERALL SUPERVISORY AUTHORITY OR ACTUAL AND/OR DIRECT RESPONSIBILITY FOR THE SPECIFIC WORKING CONDITIONS AT THE SITE AND/OR FOR ANY HAZARDS RESULTING FROM THE ACTIONS OF ANY TRADE CONTRACTOR. THE STRUCTURAL ENGINEER HAS NO DUTY TO INSPECT, SUPERVISE, NOTE, CORRECT, OR REPORT ANY HEALTH OR SAFETY DEFICIENCIES TO THE OWNER, CONTRACTORS, OR OTHER ENTITIES OR PERSONS AT THE PROJECT SITE.

6. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. CONFORM TO ASCE 37-14 "DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION".

7. CONTRACTOR-INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS ONLY WILL NOT SATISFY THIS REQUIREMENT.

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

## Quality Assurance

10. 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:

| | |
|---|---|
| SOIL CONDITIONS, FILL PLACEMENT, AND DENSITY | PER TABLE 1705.6 |
| EXPANSION BOLTS AND THREADED EXPANSION INSERTS | PER MANUFACTURER |
| EPOXY GROUTED INSTALLATIONS | PER MANUFACTURER |

## Geotechnical

11. 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. 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.

    ALLOWABLE SOIL PRESSURE. . . . . 3000 PSF
    LATERAL EARTH PRESSURE (RESTRAINED/UNRESTRAINED) . . . . . .50 PCF/35 PCF
    SEISMIC LATERAL EARTH PRESSURE . . . . . 7H PSF

    SOILS REPORT REFERENCE:
    "GEOTECHNICAL REPORT, PROPOSED RESIDENCE, 5236 WEST MERCER WAY, MERCER ISLAND, WASHINGTON", PREPARED BY PANGEO, INC., DATED OCTOBER 5, 2017, PROJECT NO. 17-143.200.

## Concrete

12. CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH ACI 318 CHAPTER 26, AND 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 ACI WEATHER EXPOSURE. DESIGN STRENGTH IS f'c = 2,500 PSI.

13. THE MINIMUM AMOUNTS OF CEMENT MAY BE CHANGED IF A CONCRETE PERFORMANCE MIX IS SUBMITTED TO THE STRUCTURAL ENGINEER AND THE BUILDING DEPARTMENT FOR APPROVAL TWO WEEKS PRIOR TO PLACING ANY CONCRETE. THE PERFORMANCE MIX SHALL INCLUDE THE AMOUNTS OF CEMENT, FINE AND COARSE AGGREGATE, WATER AND ADMIXTURES AS WELL AS THE WATER CEMENT RATIO, SLUMP, CONCRETE YIELD AND SUBSTANTIATING STRENGTH DATA IN ACCORDANCE WITH ACI 318 SECTION 26.12. THE USE OF A PERFORMANCE MIX REQUIRES BATCH PLANT INSPECTION, THE COST OF WHICH SHALL BE PAID BY THE GENERAL CONTRACTOR. REVIEW OF MIX SUBMITTALS BY THE ENGINEER OF RECORD INDICATES ONLY THAT INFORMATION PRESENTED CONFORMS GENERALLY WITH CONTRACT DOCUMENTS. CONTRACTOR OR SUPPLIER MAINTAINS FULL RESPONSIBILITY FOR SPECIFIED PERFORMANCE.

14. 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 TABLE 19.3.2.1 MODERATE EXPOSURE, F1.

15. 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.

16. DETAILING OF REINFORCING STEEL (INCLUDING HOOKS AND BENDS) SHALL BE IN ACCORDANCE WITH ACI 315-18 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.

17. 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"

18. 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 |

19. 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.

## Anchorage

20. EXPANSION BOLTS INTO CONCRETE SHALL BE STRONG BOLT WEDGE ANCHORS AS MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY AND INSTALLED IN STRICT CONFORMANCE TO ICC-ES REPORT NUMBER ESR-1771, INCLUDING MINIMUM EMBEDMENT REQUIREMENTS. BOLTS INTO CONCRETE MASONRY OR BRICK MASONRY UNITS SHALL BE INTO FULLY GROUTED CELLS. SPECIAL INSPECTION IS REQUIRED FOR ALL EXPANSION BOLT INSTALLATION.

21. 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. SPECIAL INSPECTION OF INSTALLATION IS REQUIRED. RODS SHALL BE ASTM A-36 UNLESS OTHERWISE NOTED.

## Wood

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

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

23. GLUED LAMINATED MEMBERS SHALL BE FABRICATED IN CONFORMANCE WITH ASTM AND ANSI/AITC STANDARDS. EACH MEMBER SHALL BEAR AN A.I.T.C. OR APA-EWS IDENTIFICATION MARK AND SHALL BE ACCOMPANIED BY AN A.I.T.C. OR APA-EWS CERTIFICATE OF CONFORMANCE. ALL SIMPLE SPAN BEAMS SHALL BE DOUGLAS FIR COMBINATION 24F-V4, Fb = 2,400 PSI, Fv =265 PSI. ALL CANTILEVERED BEAMS SHALL BE DOUGLAS FIR COMBINATION 24F-V8, Fb = 2400 PSI, Fv = 265 PSI. CAMBER ALL SIMPLE SPAN GLULAM BEAMS TO 3,000' RADIUS, UNLESS SHOWN OTHERWISE ON THE PLANS.

24. MANUFACTURED LUMBER, PSL, LVL, AND LSL, SHALL BE MANUFACTURED UNDER A PROCESS APPROVED BY THE NATIONAL RESEARCH BOARD. EACH PIECE SHALL BEAR A STAMP OR STAMPS NOTING THE NAME AND PLANT NUMBER OF THE MANUFACTURER, THE GRADE, THE NATIONAL RESEARCH BOARDS NUMBER, AND THE QUALITY CONTROL AGENCY. ALL PSL, LVL, AND LSL LUMBER SHALL BE MANUFACTURED IN ACCORDANCE WITH ICC-ES REPORT ESR-1387 USING DOUGLAS FIR VENEER GLUED WITH A WATERPROOF ADHESIVE MEETING THE REQUIREMENTS OF ASTM D2559 WITH ALL GRAIN PARALLEL WITH THE LENGTH OF THE MEMBER. THE MEMBERS SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:

| | | | |
|---|---|---|---|
| PSL (2.2E) | Fb = 2900 PSI, | E = 2200 KSI, | Fv = 290 PSI |
| LVL (1.9E) | Fb = 2600 PSI, | E = 1900 KSI, | Fv = 285 PSI |
| LSL (1.55E) | Fb = 2325 PSI, | E = 1550 KSI, | Fv = 310 PSI |

    DESIGN SHOWN ON PLANS FOR PSL, LVL, AND LSL IS BASED ON LUMBER MANUFACTURED BY THE WEYERHAEUSER CORPORATION. DESIGN SHOWN ON PLANS FOR BIG BEAMS ARE BASED ON LUMBER MANUFACTURED BY ROSBORO. ALTERNATE MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER, ALTERNATE JOIST HANGERS AND OTHER HARDWARE MAY BE SUBSTITUTED FOR ITEMS SHOWN PROVIDED THEY HAVE ICC APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. ALL JOIST HANGERS AND OTHER HARDWARE SHALL BE COMPATIBLE IN SIZE WITH MEMBERS PROVIDED.

    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.

25. 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 JOIST HANGERS AND OTHER HARDWARE MAY BE SUBSTITUTED FOR ITEMS SHOWN PROVIDED THEY HAVE I.C.B.O. APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. ALL JOIST HANGERS AND OTHER HARDWARE SHALL BE COMPATIBLE IN SIZE WITH PLYWOOD WEB JOIST PROVIDED.

26. PREFABRICATED CONNECTOR PLATE WOOD ROOF TRUSSES SHALL BE DESIGNED BY THE MANUFACTURER IN ACCORDANCE WITH THE "NATIONAL DESIGN STANDARD FOR METAL PLATE-CONNECTED WOOD TRUSS CONSTRUCTION, ANSI/TPI 1" BY THE TRUSS PLATE INSTITUTE FOR THE SPANS AND CONDITIONS SHOWN ON THE PLANS. LOADING SHALL BE AS FOLLOWS:

| | |
|---|---|
| TOP CHORD LIVE LOAD | 25 PSF |
| TOP CHORD DEAD LOAD | 15 PSF |
| BOTTOM CHORD DEAD LOAD | 5 PSF |
| TOTAL LOAD | 45 PSF |
| WIND UPLIFT (TOP CHORD) | 5 PSF |
| BOTTOM CHORD LIVE LOAD (BOTTOM CHORD LIVE LOAD DOES NOT ACT CONCURRENTLY WITH THE ROOF LIVE LOAD) | 10 PSF |

    WOOD TRUSSES SHALL UTILIZE APPROVED CONNECTOR PLATES (GANGNAIL OR EQUAL). SUBMIT SHOP DRAWINGS AND DESIGN CALCULATIONS TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION. SUBMITTED DOCUMENTS SHALL BE SIGNED AND STAMPED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF WASHINGTON. PROVIDE FOR SHAPES, BEARING POINTS, INTERSECTIONS, HIPS, VALLEYS, ETC., SHOWN ON THE DRAWINGS. EXACT COMPOSITION OF SPECIAL HIP, VALLEY, AND INTERSECTION AREAS (USE OF GIRDER TRUSSES, JACK TRUSSES, STEP-DOWN TRUSSES, ETC.) SHALL BE DETERMINED BY THE MANUFACTURER UNLESS SPECIFICALLY INDICATED ON THE PLANS. PROVIDE ALL TRUSS TO TRUSS AND TRUSS TO GIRDER TRUSS CONNECTION DETAILS AND REQUIRED CONNECTION MATERIALS. PROVIDE FOR ALL TEMPORARY AND PERMANENT TRUSS BRACING AND BRIDGING.

27. 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.

    REFER TO WOOD FRAMING NOTES BELOW FOR TYPICAL NAILING REQUIREMENTS.

28. 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.

29. PRESSURE TREATED WOOD (INCLUDES PRESERVATIVE AND FIRE TREATED)SHALL BE TREATED PER AWPA STANDARD. PRESSURE TREATED WOOD FOR ABOVE GROUND USE SHALL BE TREATED TO RETENTION OF 0.25 PCF. 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. FASTENERS AND TIMBER CONNECTORS WITHOUT AMMONIA IN DIRECT CONTACT WITH ACQ-A (UP TO A RETENTION LEVEL OF 0.40 PCF), CBA-A (UP TO A RETENTION LEVEL OF 0.41 PCF), CA-B (UP TO A RETENTION LEVEL OF 0.21 PCF), OR SBX TREATED WOOD SHALL BE G185 OR A185 HOT DIPPED OR CONTINUOUS HOT-GALVANIZED PER ASTM A653. FASTENERS AND TIMBER CONNECTORS WITH AMMONIA IN DIRECT CONTACT WITH ACQ-A (OVER A RETENTION LEVEL OF 0.40 PCF), CBA-A (OVER A RETENTION LEVEL OF 0.41 PCF), CA-B (OVER A RETENTION LEVEL OF 0.21 PCF), OR WITH ACZA TREATED WOOD SHALL BE TYPE 304 OR 316 STAINLESS STEEL.

30. TIMBER CONNECTORS CALLED OUT BY LETTERS AND NUMBERS SHALL BE "STRONG-TIE" BY SIMPSON COMPANY, AS SPECIFIED IN THEIR CATALOG NUMBER 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 "WIT" 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.

31. 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 | 3-1/2" | 0.131" |

    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.

    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 (2005 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.

32. 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. TOENAIL JOISTS TO SUPPORTS WITH TWO 16d NAILS. ATTACH TIMBER JOISTS TO FLUSH HEADERS OR BEAMS WITH SIMPSON METAL JOIST HANGERS IN ACCORDANCE WITH NOTES ABOVE. NAIL ALL MULTI JOIST BEAMS TOGETHER WITH TWO ROWS 16d @ 12" ON-CENTER.

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

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Project:
**Mercer Island Residence**
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Mercer Island, WA

N5
4200 Stone Way N
Seattle, Washington 98103

Frank Co. Project No.: 0031-2025-06
Design: EAF
Drawn: JAS
Approved: EAF
Issue: Permit
Date: 09-22-2025
Revisions:

ELIZABETH A. FRANK — STATE OF WASHINGTON — 37179 — REGISTERED PROFESSIONAL ENGINEER
09-19-2025

For Building Department use:

Sheet Contents:
**General Structural Notes**

Scale (u.n.o.): na
Sheet No.: **S1.1**

# General Structural Notes, cont.

The Following Apply Unless Noted Otherwise on the Drawings

## Abbreviations

| | |
|---|---|
| ° | DEGREE |
| @ | AT |
| & | AND |
| ∠ | ANGLE |
| ℄ | CENTERLINE |
| ø | DIAMETER |
| ℙ | PLATE |
| AB | ANCHOR BOLT |
| ACI | AMERICAN CONCRETE INSTITUTE |
| ADD'L | ADDITIONAL |
| ADJ | ADJACENT |
| AGGR | AGGREGATE |
| AISC | AMERICAN INSTITUTE OF STEEL CONSTRUCTION |
| ALT | ALTERNATE |
| ALUM | ALUMINUM |
| ANSI | AMERICAN NATIONAL STANDARDS INSTITUTE |
| APA | AMERICAN PLYWOOD ASSOCIATION |
| APPD | APPROVED |
| APPROX | APPROXIMATE |
| ARCH | ARCHITECT, ARCHITECTURAL |
| ASTM | AMERICAN SOCIETY FOR TESTING AND MATERIALS |
| AWS | AMERICAN WELDING SOCIETY |
| BOT | BOTTOM |
| BD | BOARD |
| BLDG | BUILDING |
| BLK, BLKG | BLOCK, BLOCKING |
| BM | BEAM |
| BOS | BOTTOM OF STEEL |
| BRG | BEARING |
| BRKT | BRACKET |
| BTWN | BETWEEN |
| C | STANDARD CHANNEL |
| CC | CENTER TO CENTER |
| CFS | COLD FORMED STEEL |
| CG | CENTER OF GRAVITY |
| CIP | CAST IN PLACE |
| CJ | CONSTRUCTION JOINT, CONTROL JOINT |
| CLR | CLEARANCE, CLEAR |
| CMU | CONCRETE MASONRY UNIT |
| COL | COLUMN |
| COMP | COMPRESSION |
| CONC | CONCRETE |
| CONN | CONNECTION, CONNECT |
| CONST | CONSTRUCTION |
| CONTR | CONTRACTOR |
| COORD | COORDINATION, COORDINATE |
| CORR | CORRUGATED |
| CP | COMPLETE PENETRATION WELD-ULTRASONIC TEST |
| CTR | CENTER |
| CTSK | COUNTERSINK, COUNTERSUNK |
| CU FT | CUBIC FOOT |
| CU | CUBIC |
| d | PENNY (NAILS) |
| db | BAR DIAMETERS |
| DBAW | DEFORMED BAR ANCHOR WELDED STUD |
| DBL | DOUBLE |
| DEMO | DEMOLISH, DEMOLITION |
| DEPT | DEPARTMENT |
| DET | DETAIL |
| DIAG | DIAGONAL |
| DIAPH | DIAPHRAGM |
| DIM | DIMENSION |
| DISC | DISCONTINUED, DISCONTINUOUS |
| DL | DEAD LOAD |
| DN | DOWN |
| DS | DRAG STRUT |
| DWG | DRAWING |
| DWL | DOWEL |
| (E) | EXISTING |
| EA | EACH |
| EF | EACH FACE |
| EJ | EXPANSION JOINT |
| EL | ELEVATION |
| ELEC | ELECTRICAL |
| ELEV | ELEVATOR |
| EMBED | EMBEDDED, EMBEDMENT |
| ENGR | ENGINEER |
| EQ | EARTHQUATE, EQUAL |
| EQUIP | EQUIPMENT |
| ES | EACH SIDE |
| ETC | ET CETERA |
| EW | EACH WAY |
| EXT | EXTERIOR |
| EXTD | EXTEND, EXTENDED |
| FB | FLAT BAR, FLUSH BEAM |
| FD | FLOOR DRAIN |
| FDN | FOUNDATION |
| FF | FAR FACE |
| FIN | FINISH |
| FL | FLOOR |
| FLG | FLANGE |
| FOS | FACE OF STUD |
| FRMG | FRAMING |
| FT | FOOT, FEET |
| FTG | FOOTING |
| GA | GAUGE, GAGE |
| GALV | GALVANIZED |
| GT | GIRDER TRUSS |
| GL | GLUE LAMINATED |
| GLB | GLUE LAMINATED BEAM |
| GRND | GROUND |
| H, HORIZ | HORIZONTAL |
| HD | HOLDOWN |
| HGR | HANGER |
| HP | HP SHAPES, HIGH POINT |
| HS | HIGH STRENGTH |
| HSS | HOLLOW STRUCTURAL SECTION |
| HT | HEIGHT |
| IBC | INTERNATIONAL BUILDING CODE |
| ID | INSIDE DIAMETER |
| IF | INSIDE FACE |
| IN | INCH |
| INCL | INCLUDE |
| INFO | INFORMATION |
| INSUL | INSULATION |
| INT | INTERIOR |
| JT | JOINT |
| K, KIP | 1,000 POUNDS |
| KO | KNOCK OUT |
| KSI | KIPS PER SQUARE INCH |
| LB, # | POUND |
| LF | LINEAL FOOT |
| LIN | LINEAL, LINEAR |
| LL | LIVE LOAD |
| LLH | LONG LEG HORIZONTAL |
| LLV | LONG LEG VERTICAL |
| LONG | LONGITUDINAL |
| LP | LOW POINT |
| LSL | LONG SLOTTED HOLES |
| LTW | LIGHT WEIGHT |
| LVL | LEVEL |
| MAS | MASONRY |
| MATL | MATERIAL |
| MAX | MAXIMUM |
| MB | MACHINE BOLT |
| MC | MISCELLANEOUS CHANNEL |
| MECH | MECHANICAL |
| MEMB | MEMBRANE |
| MEP | MECHANICAL/ ELECTRICAL/ PLUMBING |
| MF | MOMENT FRAME |
| MFR | MANUFACTURE, MANUFACTURER |
| MIN | MINIMUM |
| MISC | MISCELLANEOUS |
| ML | MATCH LINE |
| N | NORTH |
| NF | NEAR FACE |
| NFPA | NATIONAL FOREST PRODUCTS ASSOCIATION |
| NIC | NOT IN CONTRACT |
| NO., # | NUMBER |
| NS | NEAR SIDE |
| NTS | NOT TO SCALE |
| OC | ON CENTER |
| OD | OUTSIDE DIAMETER |
| OF | OUTSIDE FACE |
| OPNG | OPENING |
| OPP | OPPOSITE (HAND) |
| OPT | OPTION, OPTIONAL |
| OVS | OVER SIZED HOLES |
| OWJ | OPEN WEB JOIST |
| PC | PRECAST |
| PCF | POUNDS PER CUBIC FOOT |
| PCP | PRECAST CONCRETE PANEL |
| PEN | PENETRATION |
| PERP | PERPENDICULAR |
| PLF | POUNDS PER LINEAL FOOT |
| PLYWD | PLYWOOD |
| PP | PARTIAL PENETRATION |
| PREFAB | PREFABRICATED |
| PS | PRESTRESSED |
| PSF | POUNDS PER SQUARE FOOT |
| PSI | POUNDS PER SQUARE INCH |
| PT | POST TENSIONED, PRESSURE TREATED |
| PVC | POLYVINYL CHLORIDE |
| REINF | REINFORCE, REINFORCING, REINFORCEMENT |
| REF | REFERENCE |
| REQD | REQUIRED |
| REQMTS | REQUIREMENTS |
| RND | ROUND |
| S | AMERICAN STANDARD SHAPE |
| SB | SPACE BAR or SUPPORT BAR |
| SC | SLIP CRITICAL |
| SCHED | SCHEDULE, SCHEDULED |
| SECT | SECTION |
| SER | STRUCTURAL ENGINEER OF RECORD |
| SHT | SHEET |
| SHTG | SHEATHING |
| SIM | SIMILAR |
| SPCG | SPACING |
| SPECS | SPECIFICATIONS |
| SQ | SQUARE |
| SSL | SHORT SLOTTED HOLES |
| STD | STANDARD |
| STIFF | STIFFENER |
| STIRR | STIRRUP |
| STL | STEEL |
| STR | STRAIGHT |
| STRUCT | STRUCTURAL |
| SW | SHEAR WALL |
| SYM | SYMMETRICAL |
| T&B | TOP AND BOTTOM |
| T&G | TONGUE AND GROOVE |
| TEMP | TEMPERATURE, TEMPORARY |
| THICK | THICKNESS |
| TOC | TOP OF CURB, TOP OF CONCRETE |
| TOF | TOP OF FOOTING |
| TOS | TOP OF STEEL |
| TOW | TOP OF WALL |
| TRANS | TRANSVERSE |
| TYP | TYPICAL |
| UL | UNDERWRITERS LABORATORY INCORPORATED |
| UNO | UNLESS NOTED OTHERWISE |
| UT | ULTRA-SONIC TEST |
| V, VERT | VERTICAL |
| VG | VERTICAL GRAIN |
| w/ | WITH |
| w/o | WITHOUT |
| WF | WIDE FLANGE |
| WH | WEEP HOLE |
| WP | WORK POINT |
| WT | STRUCTURAL TEE CUT FROM W-SHAPE |
| WTS | WELDED THREADED STUD |
| WWF | WELDED WIRE FABRIC |

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Project:

**Mercer Island Residence**

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Seattle, Washington 98103

Frank Co. Project No.: 0031-2025-06

Design: EAF

Drawn: JAS

Approved: EAF

Issue: Permit

Date: 09-22-2025

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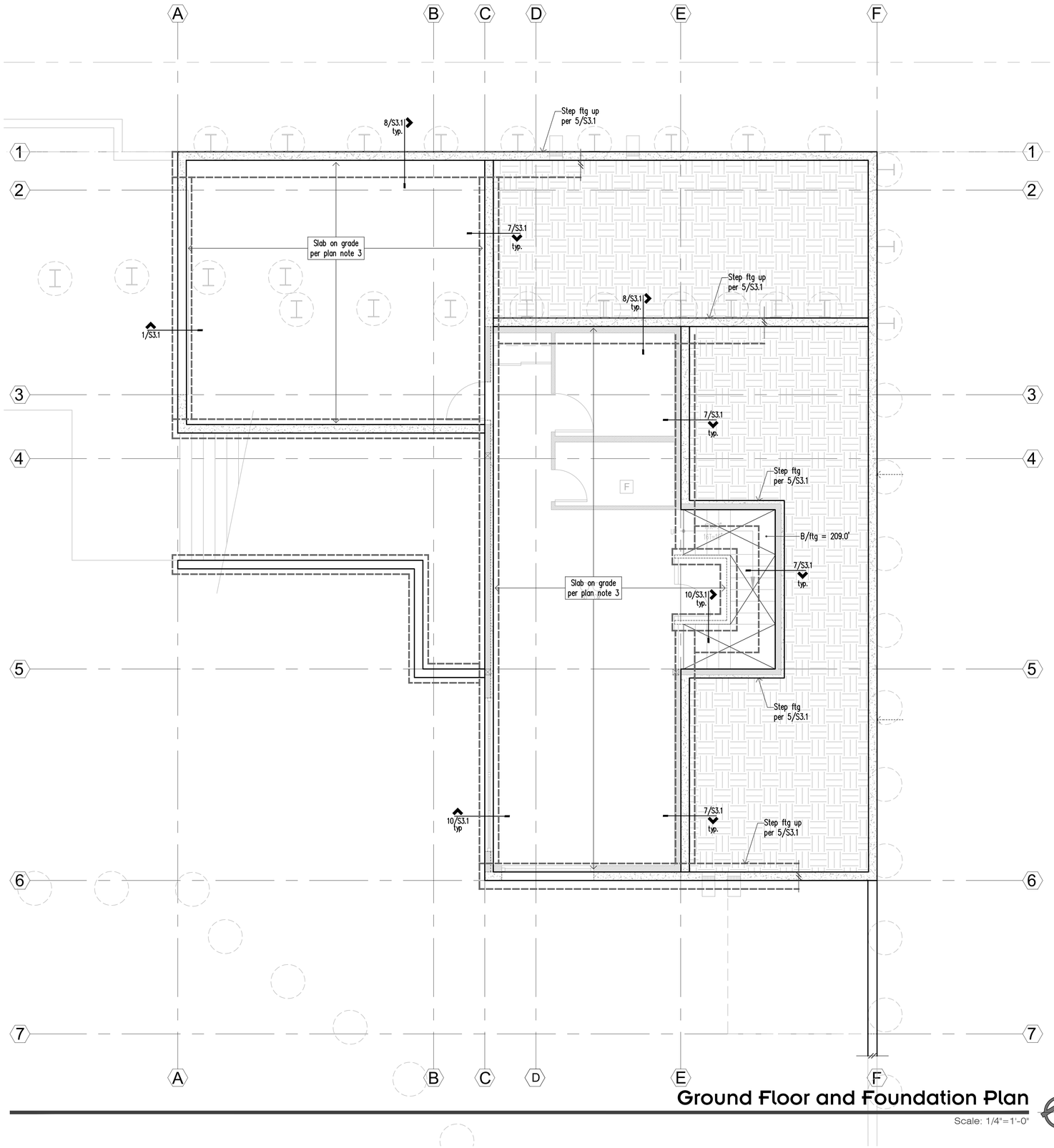
Sheet Contents:

**General Structural Notes (cont'd)**

Scale (u.n.o.): na

Sheet No.:

**S1.2**




## Ground Floor and Foundation Plan

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

### Legend

| | | | |
|---|---|---|---|
| | Concrete Wall at this level | SW_ | Shearwall. Refer plan note 5. |
| | Structural Wood Wall or Post below | | Beam |
| | Structural Wood Wall or Post above | | Joist or Beam Hanger |
| CS16 | | CS16 | Holdown. Refer to 6/S4.1 |
| | Concrete Footing | | Abrupt change in top of Slab elevation |
| | Span Direction | | |
| | Extent of Span | | |

### Plan Notes

1. For General Structural Notes refer to S1.1 and S1.2.
2. Dimensions: Verify all dimensions and elevations with architectural drawings. Columns and footings are centered on grid lines u.n.o. All existing dimensions shall be field verified. All dimensions are to centerline of grid, u.n.o.
3. Slab on grade shall be 4" minimum thickness. Reinforce with 6x6 W1.4xW1.4 WWM centered in slab. Provide 10mil vapor barrier below slab over 4" minimum pea gravel capillary break over compacted soils. Provide construction/control joints in slab on grade per 3/S3.1.
4. For subgrade preparation and fill requirements at slabs and footings, refer to General Structural Notes. Bottom of all footings shall be 18" min. below nearest adjacent grade. Refer detail 5/S3.1 for footing step where required.
5. For all ducts, chases, and pipes refer to Mechanical and Electrical drawings. Footings may be lowered to avoid conflicts. Refer to 6/S3.1.
6. For typical corner reinforcing at concrete walls and footings refer to 2/S3.1.
7. "SW" indicates shearwall per schedule 11/S4.1. All exterior walls are SW1, u.n.o.
8. All structural walls shown are bearing walls, min HF#2 studs @ 16"oc, u.n.o. Refer schedule this sheet. Refer to Architectural drawings for additional wall type information.

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Project:

**Mercer Island Residence**

5236 W Mercer Way
Mercer Island, WA

N5
4200 Stone Way N
Seattle, Washington 98103

Frank Co. Project No.: 0031-2025-06
Design: EAF
Drawn: JAS
Approved: EAF
Issue: Permit
Date: 09-22-2025
Revisions:

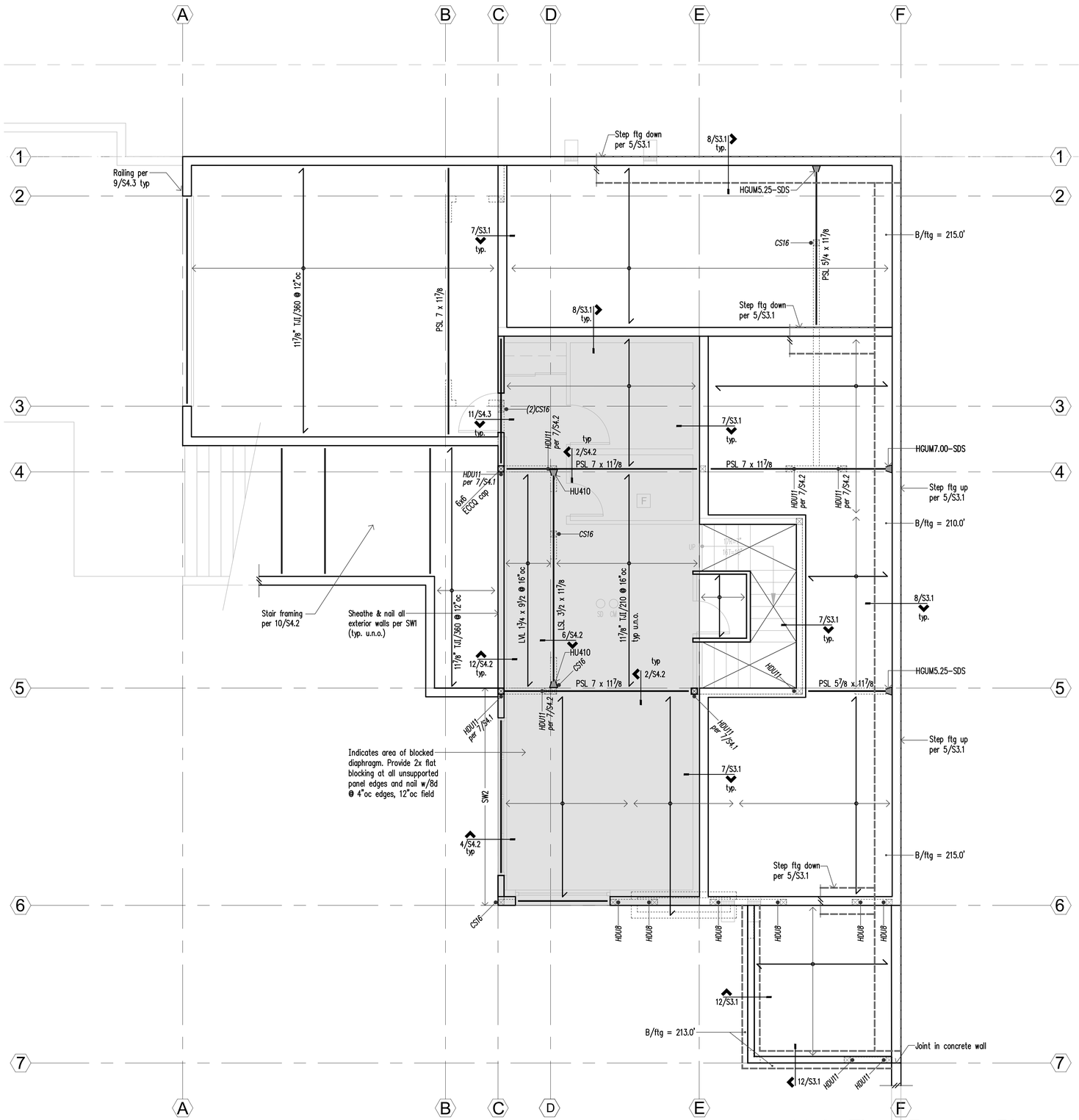
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37
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09-19-2025

For Building Department use:

Sheet Contents:

**Ground Floor and Foundation Plan**

Scale (u.n.o.): 1/4"=1'-0"
Sheet No.: **S2.1**




## Main Floor Framing Plan

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

### Legend

| | | | |
|---|---|---|---|
| | Concrete Wall at this level | SW_ | Shearwall. Refer plan note 9. |
| | Structural Wood Wall or Post below | | Beam |
| | Structural Wood Wall or Post above | | Joist or Beam Hanger |
| | Concrete Footing | CS16 | Holdown. Refer to 9/S4.1 |
| | Span Direction | | Abrupt change in top of Slab elevation |
| | Extent of Span | | |

### Plan Notes

1. For General Structural Notes refer to S1.1 and S1.2.
2. Dimensions: Verify all dimensions and elevations with Architectural drawings. All dimensions are to centerline of grid, u.n.o.
3. For subgrade preparation and fill requirements at slabs and footings, refer to General Structural Notes. Bottom of all footings shall be 18" min. below nearest adjacent grade. Refer detail 5/S3.1 for footing step where required.
4. For all ducts, chases, and pipes refer to Mechanical and Electrical drawings. Footings may be lowered to avoid conflicts. Refer to 6/S3.1.
5. For typical corner reinforcing at concrete walls and footings refer to 2/S3.1.
6. Typical floor framing consists of ¾" T&G plywood over TJI joists, direction as shown on plan. Refer to plan for additional spacing requirements.
7. Glue and nail floor sheathing with 8d @ 6"oc edges and over shearwalls, 12"oc field.
8. "SW" indicates shearwall per schedule, 11/S4.1. All exterior walls are SW1, u.n.o.
9. All structural walls shown are bearing walls, min HF#2 studs @ 16"oc, u.n.o. Refer schedule this sheet. Refer to Architectural drawings for additional wall type information.
10. Headers over door and window openings shall be (2)2x8 unless noted otherwise. Refer to 6/S4.1 for additional requirements. Flush headers at exterior walls shall be LSL 3½x11⅞ min. Strap headers to rim per 9/S4.2.
11. Provide (2) bearing studs minimum each end of all headers and flush beams, unless noted otherwise. Refer to plan for additional requirements.
12. For typical stair framing refer to 10/S4.2.

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Project:

**Mercer Island Residence**

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N5
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Seattle, Washington 98103

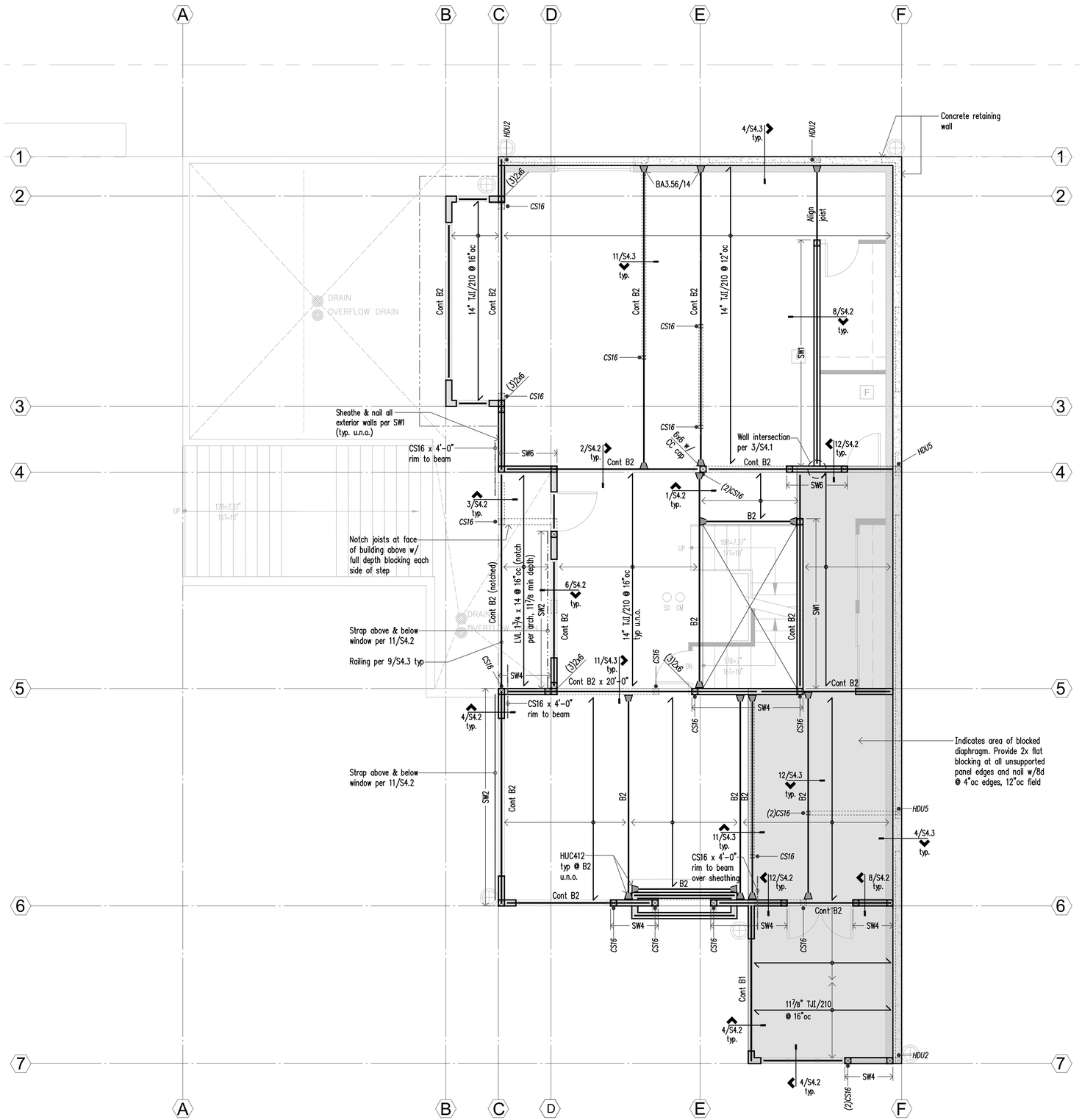
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Approved: EAF
Issue: Permit
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Revisions:

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For Building Department use:

Sheet Contents: Main Floor Framing Plan

Scale (u.n.o.): 1/4"=1'-0"
Sheet No.: S2.2




## Upper Floor Framing Plan

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

### Legend

| | | | |
|---|---|---|---|
| | Structural Wood Wall or Post below | SW_ | Shearwall. Refer plan note 5. |
| | Structural Wood Wall or Post above | | Beam |
| | Span Direction | | Joist or Beam Hanger |
| | Extent of Span | CS16 | Holdown. Refer to 9/S4.1 |

### Plan Notes

1. For General Structural Notes refer to S1.1 and S1.2.
2. Dimensions: Verify all dimensions and elevations with Architectural drawings. All dimensions are to centerline of grid, u.n.o.
3. Typical floor framing consists of ¾" T&G plywood over TJI joists, direction as shown on plan. Refer to plan for additional spacing requirements.
4. Glue and nail floor sheathing with 8d @ 6"oc edges and over shearwalls, 12"oc field.
5. "SW" indicates shearwall per schedule, 11/S4.1. All exterior walls are SW1, u.n.o.
6. All structural walls shown are bearing walls, min HF#2 studs @ 16"oc, u.n.o. Refer schedule this sheet. Refer to Architectural drawings for additional wall type information.
7. Headers over door and window openings shall be (2)2x8 unless noted otherwise. Refer to 6/S4.1 for additional requirements. Flush headers at exterior walls shall be LSL 3½x14 min. Strap headers to rim per 9/S4.2.
8. Provide (2) bearing studs minimum each end of all headers and flush beams, unless noted otherwise. Refer to plan for additional requirements.
9. For typical stair framing refer to 10/S4.2.

### Flush Beam Schedule

| Mark | Beam Type |
|---|---|
| B1 | LSL 1¾ x 14 |
| B2 | LSL 3½ x 14 |

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Project:

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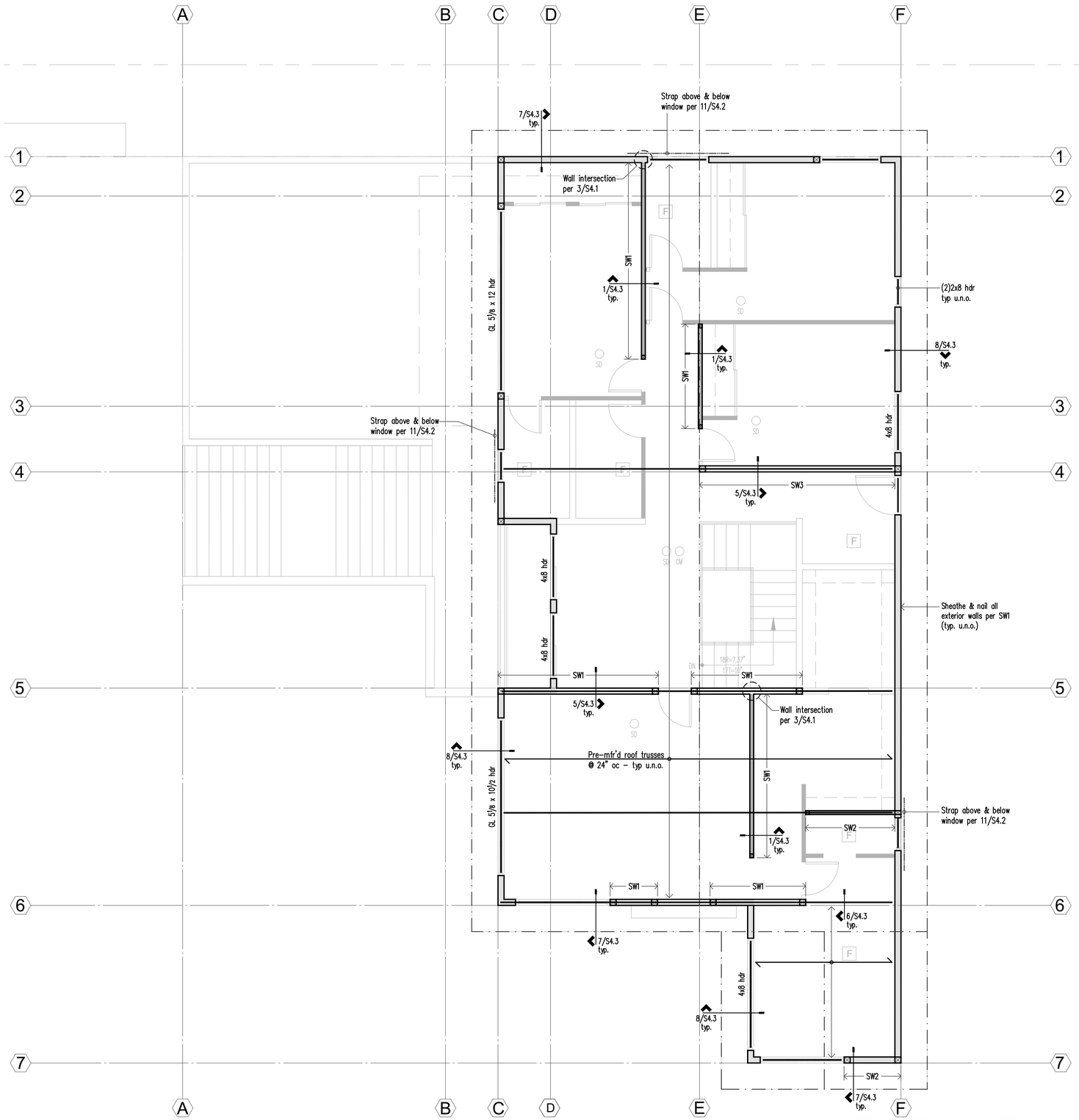
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For Building Department use:

Sheet Contents: Upper Floor Framing Plan

Scale (u.n.o.): 1/4"=1'-0"
Sheet No.: S2.3




## Roof Framing Plan

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

### Legend

| | | | |
|---|---|---|---|
| | Structural Wood Wall or Post below | SW_ | Shearwall. Refer plan note 6. |
| | Structural Wood Wall or Post above | | Beam |
| | Span Direction | | Joist or Beam Hanger |
| | Extent of Span | CS16 | Holdown. Refer to 9/S4.1 |

### Plan Notes

1. For General Structural Notes refer to S1.1 and S1.2.
2. Dimensions: Verify all dimensions and elevations with Architectural drawings. All dimensions are to centerline of grid, u.n.o.
3. Typical roof framing consists of ½" APA rated sheathing (span rating 32/16) over trusses per plan, u.n.o. Provide H1 at each end of all trusses, u.n.o.
4. Nail roof sheathing with 8d @ 6"oc edges and over shearwalls, 12"oc field.
5. "SW" indicates shearwall per schedule 11/S4.1. All exterior walls are SW1, u.n.o.
6. All structural walls shown are bearing walls, min HF#2 studs @ 16"oc, u.n.o. Refer schedule this sheet. Refer to Architectural drawings for additional wall type information.
7. Headers over door and window openings shall be (2)2x8 unless noted otherwise. Refer to 6/S4.1 for for additional requirements.
8. Provide (2) bearing studs minimum each end of all girder trusses, headers and flush beams, unless noted otherwise. Refer to plan for additional requirements.
9. For typical stair framing refer to 10/S4.2.

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Project:

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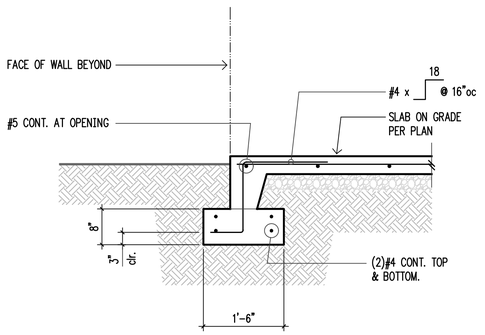
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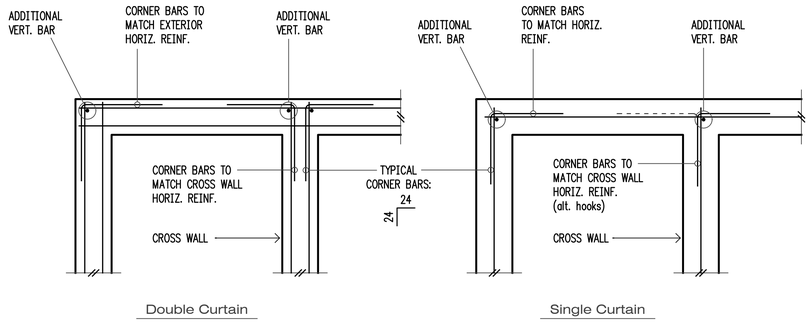
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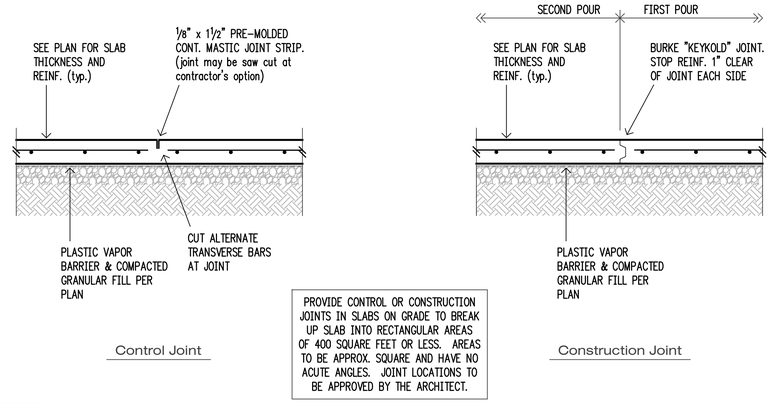
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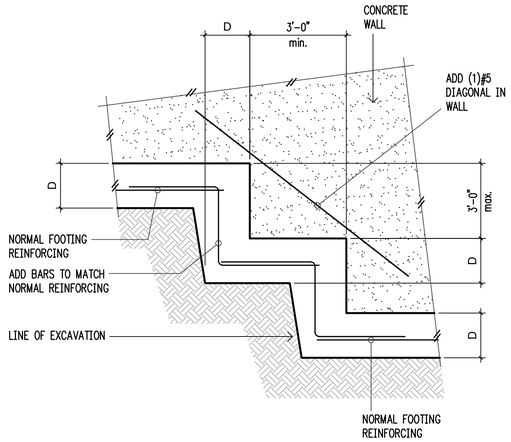

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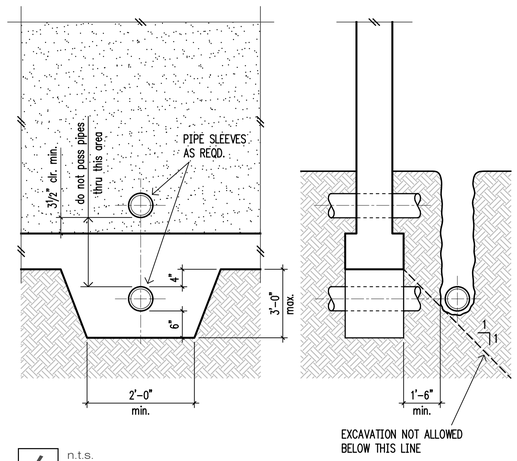

2 n.t.s.
## Typical Corner Bars at Concrete Walls and Footings



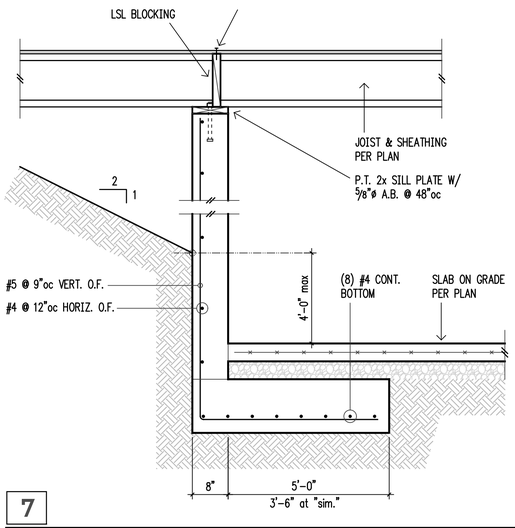

3 n.t.s.
## Typical Slab Joints



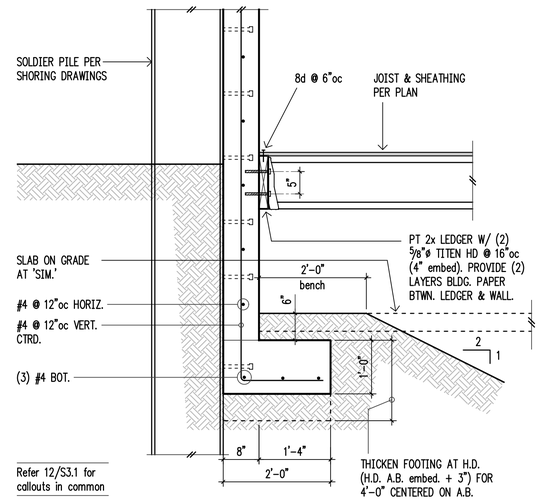

5 n.t.s.
## Typical Stepped Footing




6 n.t.s.
## Pipe and Trench Locations

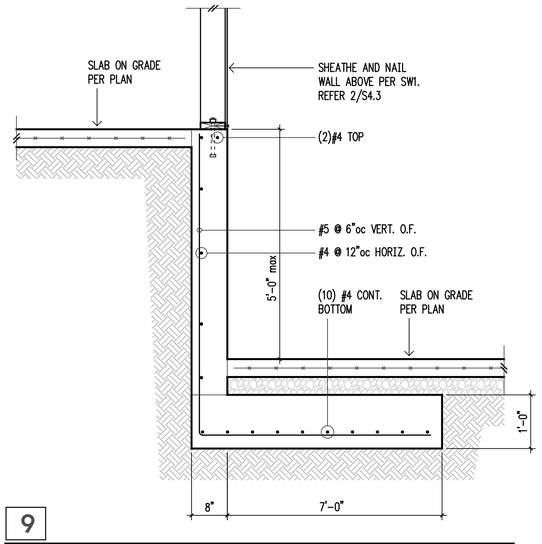



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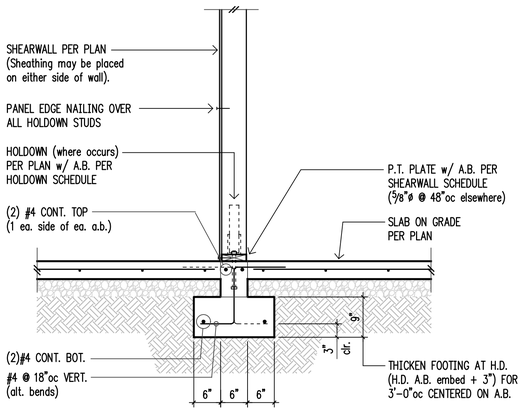



Refer 12/S3.1 for callouts in common

8

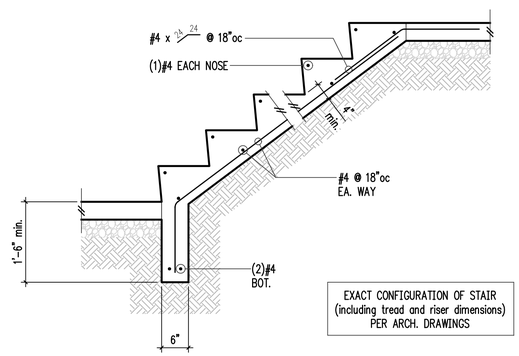



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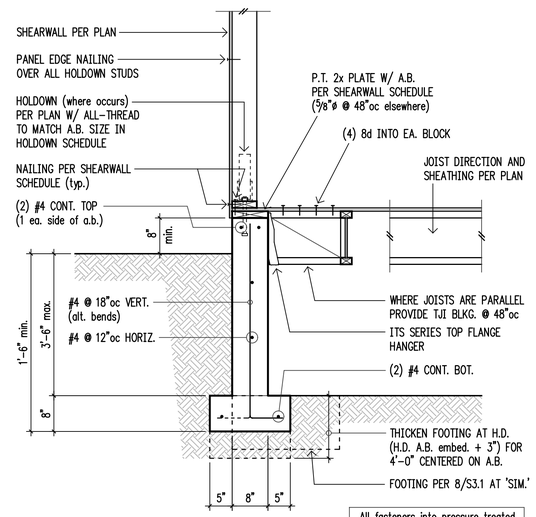

All fasteners into pressure treated wood shall be galvanized or stainless steel per General Notes.

10




EXACT CONFIGURATION OF STAIR (including tread and riser dimensions) PER ARCH. DRAWINGS

11 n.t.s.
## Stair on Grade




All fasteners into pressure treated wood shall be galvanized or stainless steel per General Notes.

12

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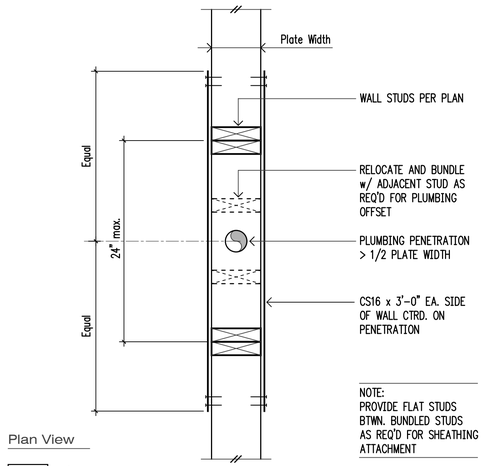
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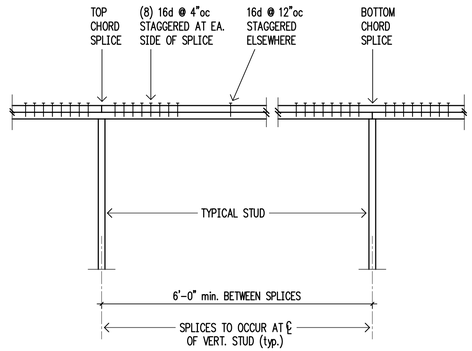
Sheet Contents:
Concrete and Foundation Details

Scale (u.n.o.): 3/4"=1'-0"
Sheet No.: S3.1

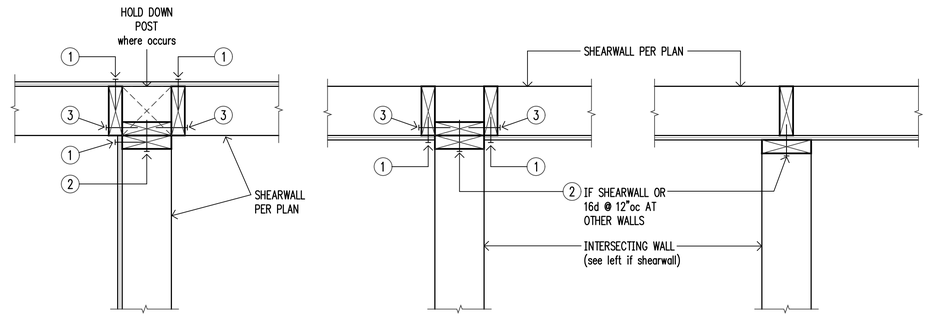



Plan View

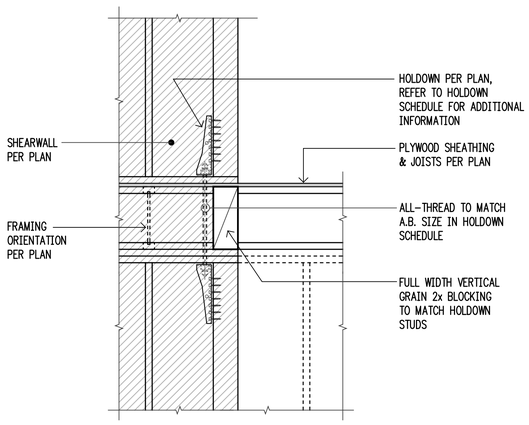
1 n.t.s.
## Typical Penetration Thru Wall Plate



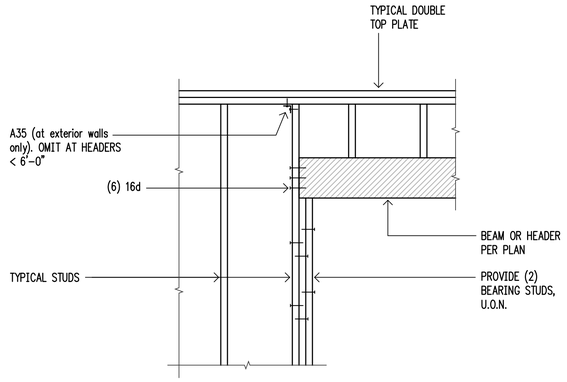

2 n.t.s.
## Typical Top Plate Splice



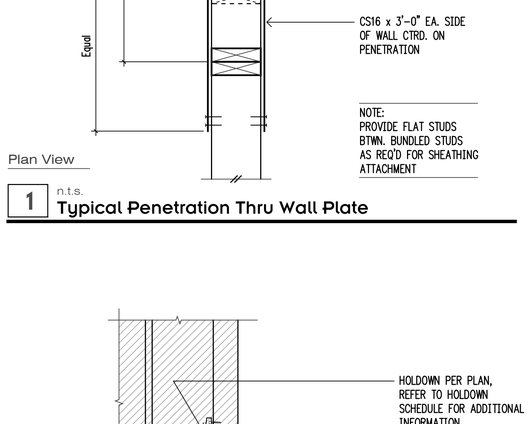

3 n.t.s.
## Typical Shearwall Intersections



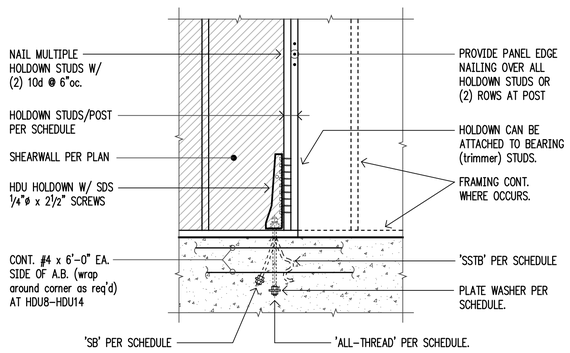

5




6 n.t.s.
## Typical Header Support




9 n.t.s.
## Typical CS Holdown

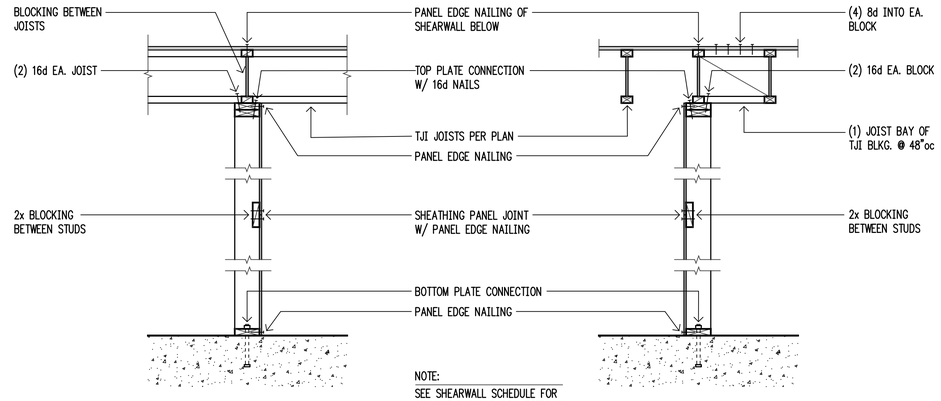



### HDU Holdown Schedule

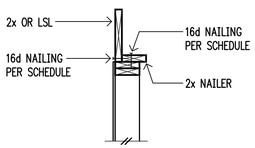
| Plan Mark | Stemwall | | Footing Anchor Bolt (1) | | | HD Post (2) | |
|---|---|---|---|---|---|---|---|
| | A.B. | Embed | All-thread | Washer | Embed | 4x Wall | 6x Wall |
| HDU2 | ⅝"ø – SSTB16(L) | 12⅝" | ⅝"ø | 1/2 x 1¾"sq. | 9" | (2)2x4 | (2)2x6 |
| HDU5 | ⅝"ø – SB⅝ x 24 | 18" | ⅝"ø | 1/2 x 1¾"sq. | 9" | 4x6 | 6x6 |
| HDU8 | ⅞"ø – SB⅞ x 24 | 18" | ⅞"ø | 1/2 x 2½"sq. | 12" | 4x6 | 6x6 |
| HDU11 | 1"ø – SB1 x 30 (3) | 24" | 1"ø | ⅝ x 2¾"sq. | 12" | 4x8 | 6x6 |

HDU Schedule Notes:
(1) A307 ALL-THREAD W/ PLATE WASHER PER SCHEDULE AND DOUBLE NUT BOTTOM OR EQUIVALENT SIMPSON PAB.
(2) MINIMUM SIZE OF POST, UNLESS NOTED OTHERWISE ON FRAMING PLANS.
(3) REQUIRES MINIMUM 8" THICK CONCRETE WALL.

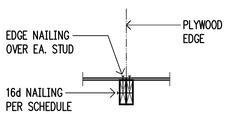
10 n.t.s.
## HDU Holdown




7 n.t.s.
## Typical Shearwall Construction




Detail A




Detail B

PLAN VIEW AT ABUTTING PANEL EDGES OF SW3 & SW4

### Shearwall Schedule ①②⑥⑦⑧

| Mark | Sheathing | Panel Edge Nailing | Top Plate Connection if TJI | Top Plate Connection if 2x or LSL ⑨ | Base Plate Connection at Wood | Base Plate Connection at Concrete |
|---|---|---|---|---|---|---|
| SW1 | ½" CDX PLYWOOD | 8d @ 6"oc | 16d @ 6"oc | A35 @ 24"oc ⑩ | 16d @ 6"oc | ⅝"ø A.B. @ 48"oc |
| SW2 | ½" CDX PLYWOOD | 8d @ 4"oc | 16d @ 4"oc | A35 @ 16"oc ⑩ | 16d @ 4"oc | ⅝"ø A.B. @ 32"oc |
| SW3 ④ | ½" CDX PLYWOOD | 8d @ 3"oc | (2) rows 16d @ 6"oc | A35 @ 12"oc ⑩ | 16d @ 3"oc | ⅝"ø A.B. @ 16"oc |
| SW4 ④ | ½" CDX PLYWOOD | 8d @ 2"oc | (2) rows 16d @ 4½"oc | A35 @ 9"oc ⑩ | (2) rows 16d @ 4½"oc | ⅝"ø A.B. @ 12"oc |
| SW5 ⑤ | ½" CDX PLYWD. EA. SIDE | 8d @ 3"oc EA. SIDE | n/a | A35 @ 6"oc | (2) rows 16d @ 3"oc | ⅝"ø A.B. @ 16"oc |
| SW6 ⑤ | ½" CDX PLYWD. EA. SIDE | 8d @ 2"oc EA. SIDE | n/a | HGA10 @ 8"oc | (2) rows 16d @ 2"oc | ⅝"ø A.B. @ 12"oc |

① BLOCK PANEL EDGES WITH 2x LAID FLAT AND NAIL PANELS TO INTERMEDIATE SUPPORTS WITH 8d @ 12"o.c.
② 8d NAILS SHALL BE 0.131"ø x 2½" (common) – 16d NAILS SHALL BE 0.135"ø x 3½" (box)
③ EMBED ANCHOR BOLTS AT LEAST 7". EXPANSION BOLTS MAY BE SUBSTITUTED FOR ANCHOR BOLTS WITH 4" EMBEDMENT. ALL BOLTS SHALL HAVE 3" x 3" x ¼" PLATE WASHERS. LOCATE EDGE OF PLATE WASHER WITHIN ½" OF THE SHEATHED EDGE OF WALL BOTTOM PLATE.
④ 3x STUDS OR DOUBLE STUDS NAILED TOGETHER W/ BASE PLATE NAILING ARE REQUIRED AT ABUTTING PANEL EDGES OF SW3 AND SW4. REFER TO DETAIL B. WHERE 3x STUDS ARE USED FOR SW4, STAGGER NAILS AT ADJOINING PANEL EDGES.
⑤ 3x FOUNDATION SILL PLATES AND 3x STUDS ARE REQUIRED FOR SW5 AND SW6. ABUTTING PANEL EDGES SHALL BE OFFSET EACH SIDE OF WALL. STAGGER NAILS AT ADJOINING PANEL EDGES.
⑥ TWO STUDS MINIMUM ARE REQUIRED AT EACH END OF ALL SHEARWALLS AND ALL END STUDS SHALL RECEIVE PANEL EDGE NAILING.
⑦ ALL EXTERIOR WALLS ARE SHEARWALLS, UNLESS NOTED OTHERWISE.
⑧ 7/16" O.S.B. MAY BE SUBSTITUTED FOR ½" CDX.
⑨ LTP4's 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 n.t.s.
## Shearwall Schedule

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N5
4200 Stone Way N
Seattle, Washington 98103

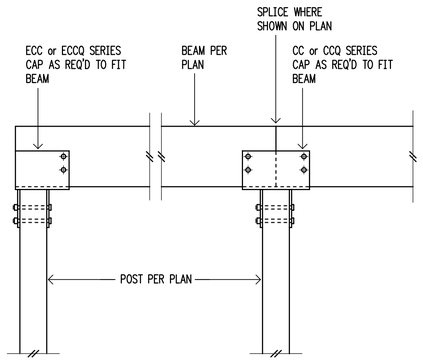
Frank Co. Project No.: 0031-2025-06
Design: EAF
Drawn: JAS
Approved: EAF
Issue: Permit
Date: 09-22-2025
Revisions:

ELIZABETH A. FRANK — STATE OF WASHINGTON — 37... — PROFESSIONAL ENGINEER
09-19-2025

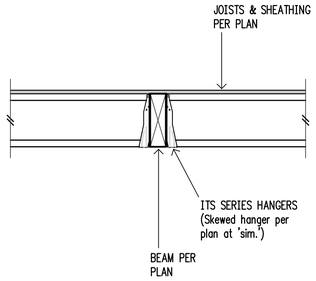
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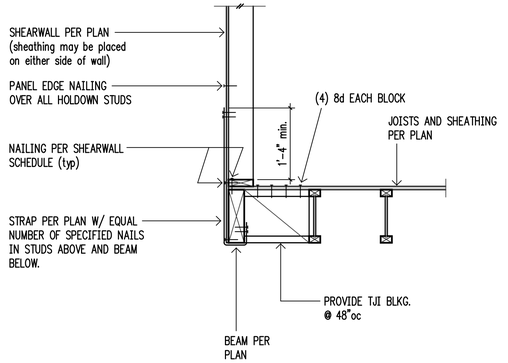
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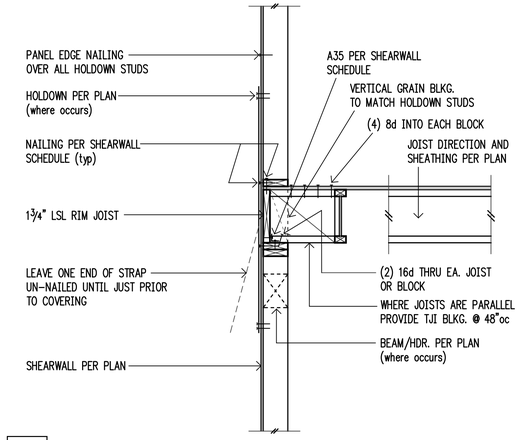

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## CC/CCQ Series Connection



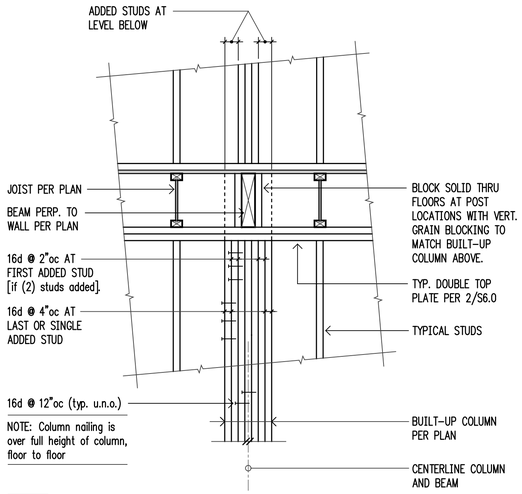

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## Flush Beam



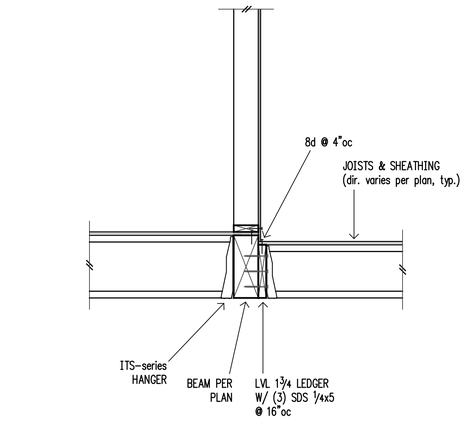

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## Exterior Floor Beam (w/TJI's)



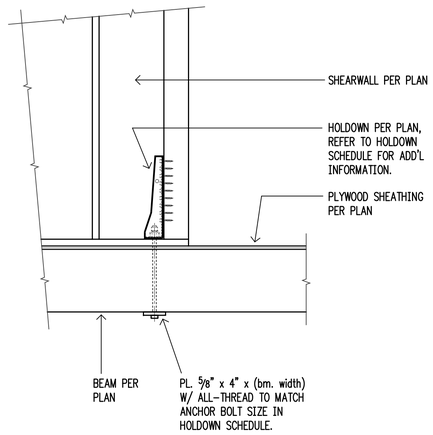

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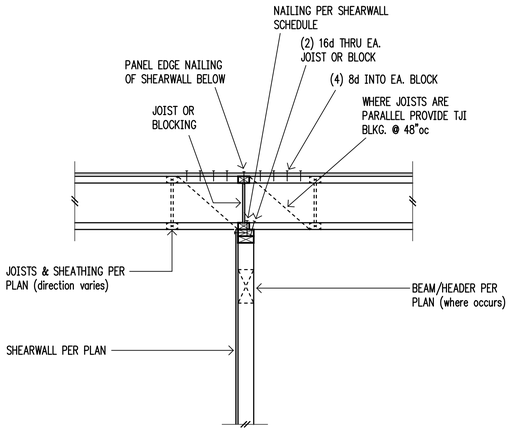

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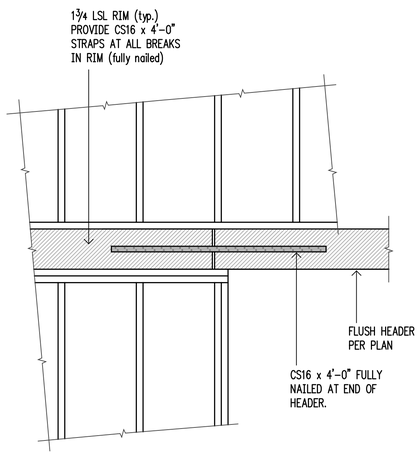

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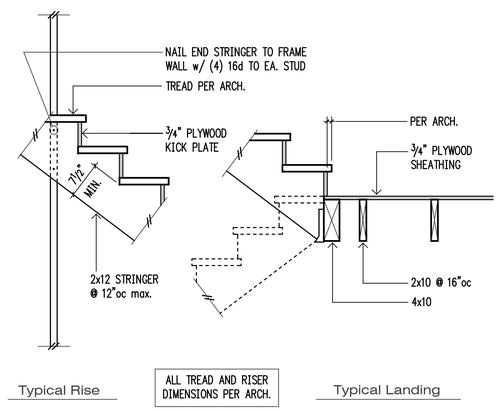

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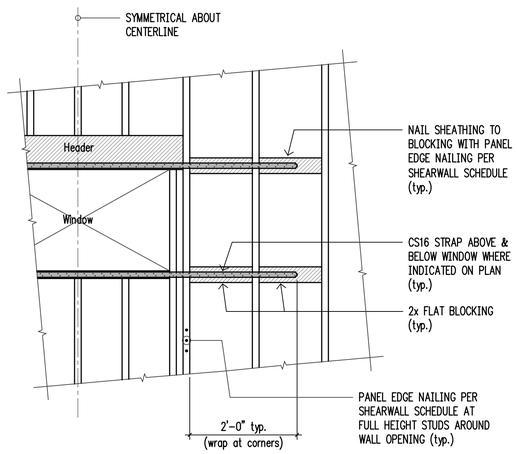

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## Interior Shearwall Below



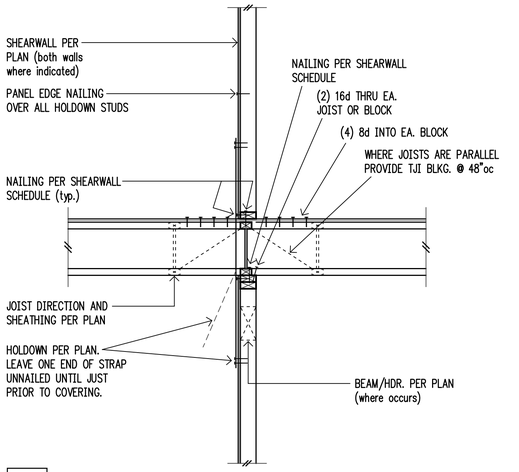

9 n.t.s.
## Typical Header / Rim Splice




10 n.t.s.
## Typical Stair and Landing Detail




11 n.t.s.
## Straps at Wall Opening (above & below)




12

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FRANK CO
structural engineering
4742 42nd ave. sw, #297
seattle, wa 98116
206.579.8160

Project:

**Mercer Island Residence**

5236 W Mercer Way
Mercer Island, WA

N5
4200 Stone Way N
Seattle, Washington 98103

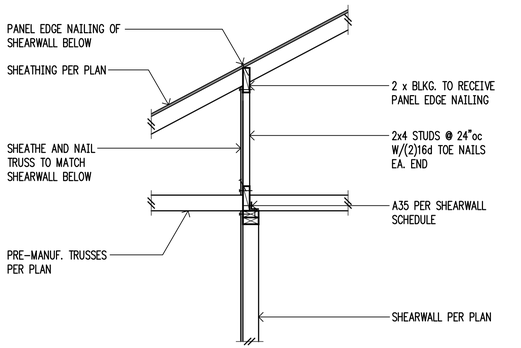
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ELIZABETH A. FEKETE — STATE OF WASHINGTON — 37196 — REGISTERED PROFESSIONAL ENGINEER
09-19-2025

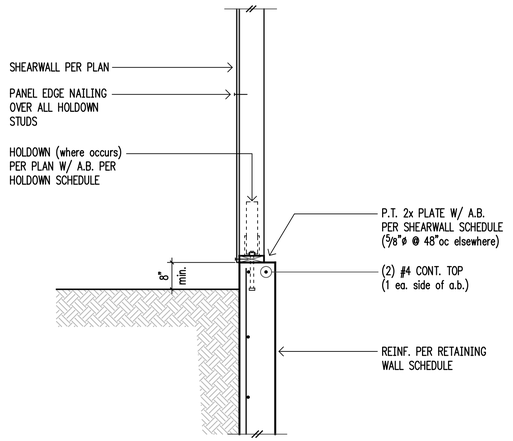
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Wood Framing Details

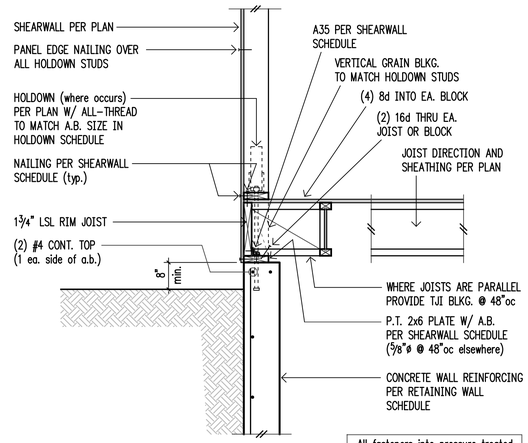
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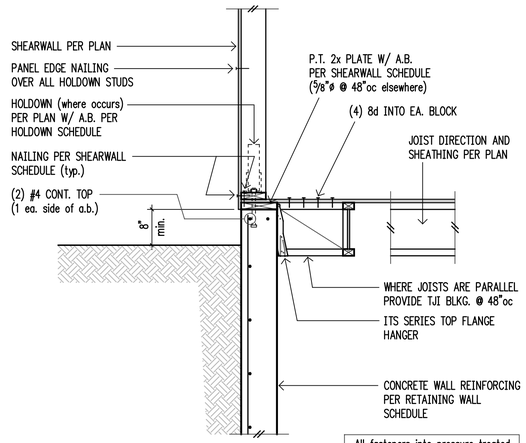



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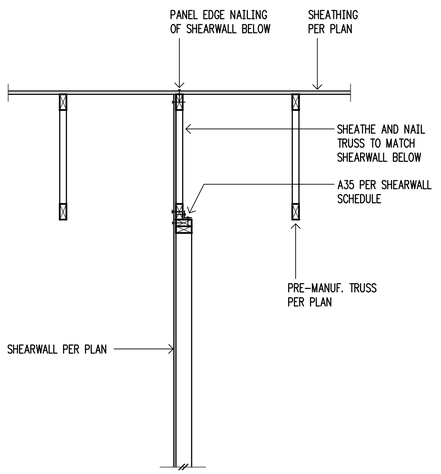

All fasteners into pressure treated wood shall be galvanized or stainless steel per General Notes.

3

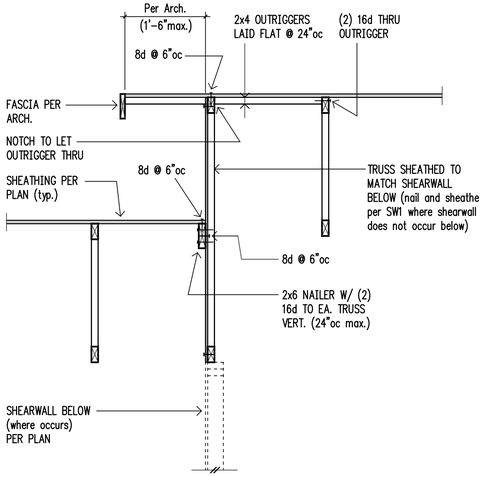



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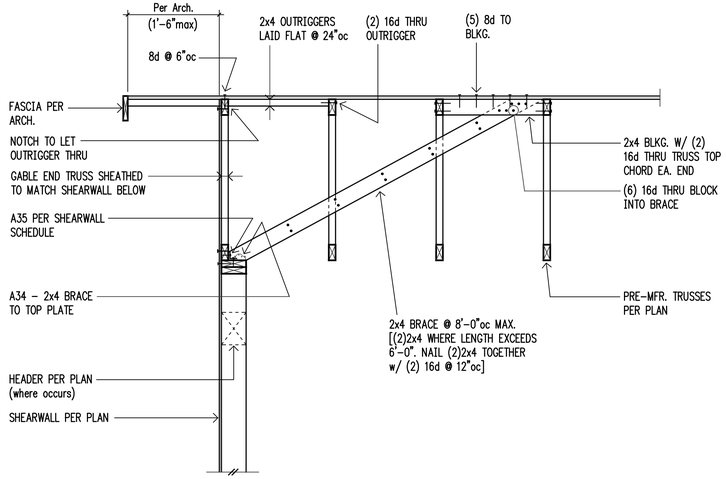
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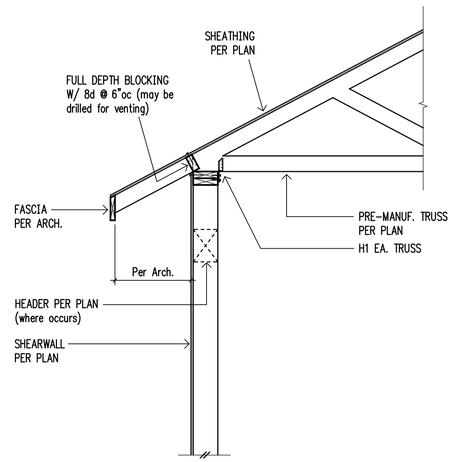

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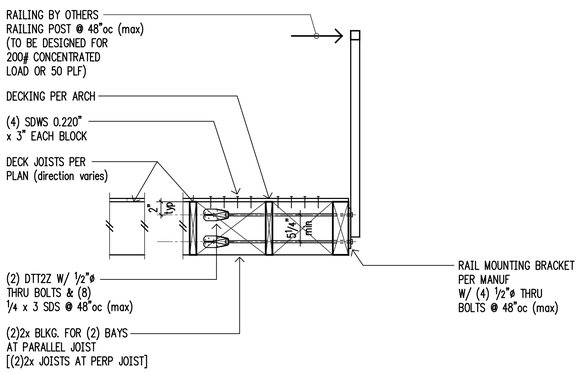

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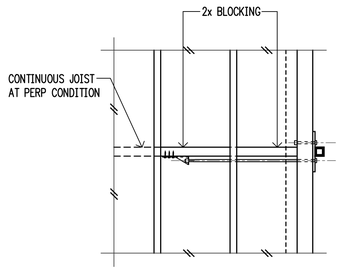

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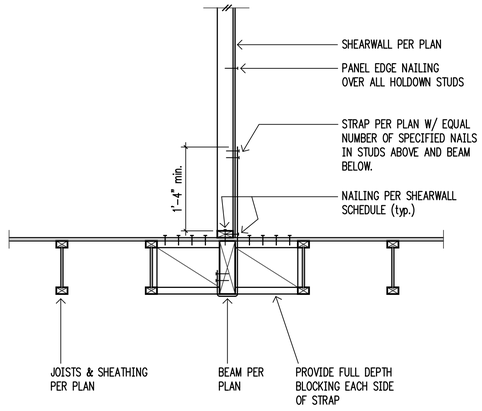



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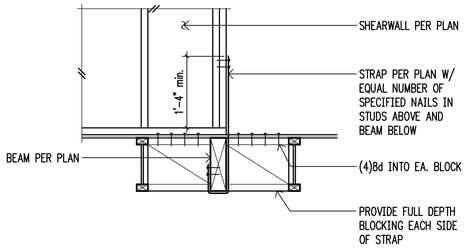



Plan View

9




11




12

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4742 42nd ave. sw, #297
seattle, wa 98116
206.579.8160

Project:

**Mercer Island Residence**

5236 W Mercer Way
Mercer Island, WA

N5
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ELIZABETH A. EFKEMA — STATE OF WASHINGTON — 37[illegible] — REGISTERED PROFESSIONAL ENGINEER
09-19-2025

For Building Department use:

Sheet Contents:
Wood Framing Details

Scale (u.n.o.): 3/4"=1'-0"
Sheet No.: **S4.3**

# General Shoring Notes

The Following Apply Unless Noted Otherwise on the Drawings

## General

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

2. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING APPROPRIATE CLEARANCES FROM UTILITIES. FOR ACCEPTABLE CLEARANCES FROM SEATTLE CITY LIGHT UTILITIES, SEE "SEATTLE CITY LIGHT CONSTRUCTION STANDARD U2-10/NDK-50.(7) WORKING AROUND CITY LIGHT CABLES AND CONDUITS: DURING NEW CONSTRUCTION AROUND EXISTING CITY LIGHT CABLES AND CONDUITS, HAND DIGGING IS REQUIRED WITHIN THE RED, LOCATE-LINES UNTIL THE DUCT BANKS ARE EXPOSED. USE OF AN EARTH AUGER FOR CONSTRUCTION WILL REQUIRE CASE-BY-CASE DIRECT SUPERVISION BY CITY LIGHT. DURING CONSTRUCTION PROJECTS, INSTALLATIONS OF SHORING, SHORING PILES AND SHORING LAGGING SHALL MAINTAIN A SEPARATION FROM CITY LIGHT CONDUITS, DUCT BANKS, VAULTS AND MANHOLES OF NO LESS THAN ONE FOOT FOR THE DURATION OF CONSTRUCTION" FOR SEATTLE CITY LIGHT QUESTIONS, REQUESTING SEATTLE CITY LIGHT CREW SAFETY STANDBY, COORDINATION OF SEATTLE CITY LIGHT WORK AND TO SCHEDULE INSPECTIONS, CONTACT THE ELECTRICAL SERVICE ENGINEER.

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

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

5. A PRE-CONSTRUCTION MEETING, SEPARATE FROM ANY PRE-CONSTRUCTION MEETING WITH THE CITY OF SEATTLE, SHALL BE HELD PRIOR TO THE START OF EXCAVATIONS ADJACENT TO THE PUBLIC RIGHT-OF-WAY, AND SHALL BE ATTENDED BY THE OWNER'S REPRESENTATIVES, THE GENERAL CONTRACTOR, THE EXCAVATION SUBCONTRACTOR, THE SHORING SPECIALTY SUBCONTRACTOR, THE GEOTECHNICAL SPECIAL INSPECTOR, PROJECT SURVEYORS, AND SDOT SHORING REVIEW AND INSPECTION PERSONNEL. THE MEETING SHALL BE CONDUCTED TO CLARIFY THE REQUIREMENTS FOR THE WORK, TO COORDINATE CONSTRUCTION ACTIVITIES, AND TO IDENTIFY CONTRACTUAL RELATIONSHIPS AND RESPONSIBILITIES.

## Criteria

6. CODE REQUIREMENTS: ALL DESIGN AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE SEATTLE BUILDING CODE, 2015 EDITION.

7. REFERENCE DOCUMENTS:
   a. TOPOGRAPHIC AND BOUNDARY SURVEY:
   b. SOILS REPORT: "GEOTECHNICAL REPORT, PROPOSED RESIDENCE, 5236 WEST MERCER WAY, MERCER ISLAND, WASHINGTON", PREPARED BY PANGEO, INC., DATED OCTOBER 5, 2017, PROJECT NO. 17-143.200.

8. DESIGN LOADS: ALL SUBSURFACE DESIGN PARAMETERS USED IN THE SHORING DESIGN ARE BASED ON THE SUBSURFACE CHARACTERIZATION PRESENTED IN THE GEOTECHNICAL REPORT REFERENCED ABOVE. THE SOIL PRESSURE USED FOR DESIGN IS INDICATED ON THE SOIL PRESSURE DIAGRAM IN THE PLANS, IN ADDITION TO THE DEAD AND LIVE LOADS.

9. SUBMITTALS: SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO ANY FABRICATION OR CONSTRUCTION FOR ALL STRUCTURAL ITEMS INCLUDING THE FOLLOWING: STRUCTURAL STEEL, MISCELLANEOUS METAL, TENDONS, ANCHORS, REINFORCING STEEL, GROUTS, AND CONCRETES. PROPOSED DEMOLITION AND SHORING SEQUENCE SHALL ALSO BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

10. 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 PILE. SOIL COMPACTION SHALL BE SUPERVISED BY AN APPROVED TESTING LAB.

11. SPECIAL INSPECTION: SPECIAL INSPECTION OF THE FOLLOWING TYPES OF CONSTRUCTION SHALL BE PROVIDED IN ACCORDANCE WITH SECTIONS 108 AND 1705 OF THE SEATTLE BUILDING CODE AND THE PROJECT SPECIFICATIONS 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.

    CONCRETE CONSTRUCTION
    STRUCTURAL STEEL FABRICATION AND ERECTION (INCLUDING FIELD WELDING AND HIGH-STRENGTH FIELD BOLTING)
    AUGERCAST PILE, CAISSON, OR DRIVEN PILE INSTALLATION

12. UTILITY LOCATION: THE SHORING CONTRACTOR SHALL DETERMINE THE LOCATION OF ALL ADJACENT UNDERGROUND UTILITIES PRIOR TO DRILLING PILE HOLES, TIEBACK ANCHORS, OR CUTTING OR DIGGING IN STREETS OR ALLEYS. THE UTILITIES INFORMATION SHOWN ON THE PLANS MAY BE NOT COMPLETE.

13. SPECIAL CONDITIONS: 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.

14. SOILS: SEE REPORT OF GEOTECHNICAL INVESTIGATION FOR MORE COMPLETE INFORMATION, INCLUDING RECOMMENDATIONS FOR SHORING IN GENERAL, SHORING MONITORING, EXCAVATION, LAGGING, AND DRAINAGE.

15. CONCRETE: CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF CHAPTER 19 OF THE SEATTLE BUILDING CODE, AND ACI 318. CONCRETE STRENGTHS SHALL BE VERIFIED BY STANDARD CYLINDER TESTS, UNLESS APPROVED OTHERWISE. REQUIRED ULTIMATE COMPRESSIVE STRENGTH OF STRUCTURAL GROUT SHALL BE REACHED BY 7 DAYS FOR TIEBACKS AND 28 DAYS FOR PILES.

| f'c (psi) | Minimum Cement Per Cubic Yard | Max. Water Per 94 LB Cement | Use |
|---|---|---|---|
| ----- | 1-1/2 Sacks | ----- | Pile lean concrete |
| 3,000 | 6 Sacks | 6 Gallons | Pile struct. grout |

AS AN ALTERNATIVE TO THE ABOVE, THE CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGNS FOR APPROVAL TWO WEEKS PRIOR TO PLACING ANY CONCRETE. THE ALTERNATE MIX DESIGN WILL BE REVIEWED FOR CONFORMANCE TO ACI 318 CHAPTER 26.

16. SAWN LUMBER: SAWN LUMBER SHALL CONFORM TO "GRADING AND DRESSING RULES," WEST COAST LUMBER INSPECTION BUREAU (WCLIB), LATEST EDITION. LUMBER SHALL BE THE SPECIES AND GRADE NOTED BELOW.

| Use | Grade | Fb (psi, single use) |
|---|---|---|
| 4X12 TIMBER LAGGING | DOUGLAS FIR-LARCH NO. 2 | 875 |
| | HEM-FIR NO. 1 | 950 |

TIMBER LAGGING SHALL BE PRESSURE TREATED IN ACCORDANCE WITH AWPA STANDARD U1-05 (FOR END USE CLASSIFICATION UC4), TO A MINIMUM RETENTION OF 0.40LBS/CU.FT., USING THE CCA PROCESS (COMMERCIAL PRODUCT NAME OSMOSE OR APPROVED EQUAL). LAGGING SHALL BE 4X12 UNLESS OTHERWISE NOTED ON DRAWINGS.

17. STEEL SPECIFICATIONS: DESIGN, FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE FOLLOWING SPECIFICATIONS:
   a. STRUCTURAL STEEL: AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS--ALLOWABLE STRESS DESIGN.
   b. WELDING: AWS D1.1. (AWS PREQUALIFIED JOINT DETAILS USE 1/4" MINIMUM WELDS UNLESS NOTED OTHERWISE).
   c. WELDER CERTIFICATION: WASHINGTON ASSOCIATION OF BUILDING OFFICIALS (WABO)

18. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

| TYPE OF MEMBER | ASTM SPECIFICATION | Fy |
|---|---|---|
| PLATES, ANGLES, AND RODS | A36 | 36 KSI |
| SHAPES | A992 | 50 KSI |
| STRUCTURAL BOLTS | A325-N | |
| WOOD CONNECTION BOLTS | A307 | |
| ANCHOR BOLTS | A307 | |
| WELDING ELECTRODES | E70XX | |
| HEADED SHEAR STUDS | A108 | |

19. WATERPROOFING: THE SHORING SYSTEM IS TEMPORARY IN NATURE, IS CONSTRUCTED EXTERNAL TO THE BUILDING ENVELOPE OF THE PERMANENT STRUCTURE, AND SHOULD NOT BE CONSTRUED AS CONTRIBUTING ANY THE LONG-TERM UTILITY OF THE PERMANENT STRUCTURE, UNLESS NOTED OTHERWISE ON THE PLANS. THIS INCLUDES ISSUES RELATING TO DRAINAGE/WATERPROOFING OF THE PERMANENT BASEMENT WALLS. IF THE STRUCTURAL ENGINEER INTENDS TO INCORPORATE ANY ELEMENTS OF THE SHORING SYSTEM INTO THE PERMANENT BUILDING DESIGN (INCLUDING DRAINAGE/WATERPROOFING COMPONENTS), THEY SHOULD BE INDEPENDENTLY EVALUATED FOR THEIR UTILITY FOR INCLUSION AS PART OF THE PERMENENT DESIGN.

## Pile and Lagging Construction

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

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

22. VERIFICATION: 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.

23. HOLE DIGGING: SHAFTS SHALL BE EXCAVATED TO THE REQUIRED DEPTH AS SHOWN ON THE PLANS. THE EXCAVATION SHALL BE COMPLETED IN A CONTINUOUS OPERATION USING EQUIPMENT CAPABLE OF EXCAVATION THROUGH THE TYPE OF MATERIAL EXPECTED TO BE ENCOUNTERED.

    IF THE SHAFT EXCAVATION IS STOPPED WITH THE APPROVAL OF THE ENGINEER, THE SHAFT SHALL BE SECURED BY INSTALLATION OF A SAFETY COVER. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO ENSURE THE SAFETY OF THE SHAFT AND SURROUNDING SOIL AND THE STABILITY OF THE SIDE WALLS. A TEMPORARY CASING SHOULD BE USED IF NECESSARY TO ENSURE SUCH SAFETY AND STABILITY.

    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.

24. PILE PLACEMENT: ALTERNATE PILES SHALL BE PLACED AND COMPLETED SO THAT AT LEAST 24 HOURS IS ALLOWED FOR THE CONCRETE TO SET PRIOR TO DRILLING ADJACENT PILES.

25. THE MINIMUM REQUIRED STRUCTURAL STEEL SHAPES FOR THE SOLDIER PILES ARE INDICATED IN THE SCHEDULES. ALTERNATIVE STEEL SECTIONS MAY BE USED PROVIDED THAT THE CROSS-SECTIONAL AREA AND SECTION MODULUS OF EACH ALTERNATIVE STEEL SECTION ARE EQUAL TO OR GREATER THAN THE CROSS-SECTIONAL AREA AND SECTION MODULUS OF THE CORRESPONDING STEEL SECTION SHOWN ON THE PLANS. ALTERNATES SHALL BE REVIEWED BY THE SHORING ENGINEER OF RECORD PRIOR TO INSTALLATION.

26. STEEL PILE PLACEMENT TOLERANCES:
    1" INSIDE PERPENDICULAR TO SHORING WALL.
    1" OUTSIDE PERPENDICULAR TO SHORING WALL.
    3" LATERALLY.

27. REMOVAL OF SHORING ELEMENTS: PER CITY OF SEATTLE MUNICIPAL CODE SECTTION SMC 15.44.170 "RESTRICTION ON ENCROACHMENTS BY SHORING," ALL SOLDIER PILES OR OTHER SHORING MATERIALS SITUATED WITHIN FOUR (4) VERTICAL FEET OR LESS OF ESTABLISHED GRADE OF A PUBLIC SPACE SHALL BE REMOVED AT, OR PRIOR TO, COMPLETION OF CONSTRUCTION OF A PROJECT FOR WHICH AN EXCAVATION OR FILL PERMIT WAS GRANTED.

28. LAGGING: THE CONTRACTOR SHALL EXCAVATE THE WALL FACE AND INSTALL LAGGIN IN SUCH A MANNER AS TO MAINTAIN A SAFE WORKPLACE AND AVOID EXCESSIVE SLOUGHING AND OVERBREAK. AS A MINIMUM, PRIOR TO PLACING THE SUBSEQUENT SET OF TIMBER LAGGING, DO NOT EXCAVATE MORE THAN FOUR (4) FEET BELOW THE CURRENT DEPTH OF LAGGED WALL FACE. IF FACE STABILITY CONDITIONS REQUIRE, THIS HEIGHT MUST BE REDUCED.

    TIMBER LAGGING SHALL BE INSTALLED IN ALL AREAS. LAGGING SHALL BE INSTALLED FROM THE TOP OF THE PILE, PROCEEDING DOWNWARD. THE LAGGING SHALL MAKE DIRECT CONTACT WITH THE SOIL. VOIDS BETWEEN LAGGING AND SOIL SHALL BE BACKFILLED WITH FREE-DRAINING FILL. DRAINAGE BEHIND THE WALL MUST BE MAINTAINED.

29. SHORING MONITORING: A SYSTEMATIC PROGRAM OF OBSERVATION 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 STRUCTURAL AND GEOTECHNICAL ENGINEER FOR REVIEW. ADDITIONAL INFORMATION REGARDING SHORING MONITORING IS PROVIDED ON THE PLANS.

## Concrete Wall

1. CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH ACI 318 CHAPTER 26, AND 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 ACI WEATHER EXPOSURE. DESIGN STRENGTH IS f'c = 2,500 PSI.

2. THE MINIMUM AMOUNTS OF CEMENT MAY BE CHANGED IF A CONCRETE PERFORMANCE MIX IS SUBMITTED TO THE STRUCTURAL ENGINEER AND THE BUILDING DEPARTMENT FOR APPROVAL TWO WEEKS PRIOR TO PLACING ANY CONCRETE. THE PERFORMANCE MIX SHALL INCLUDE THE AMOUNTS OF CEMENT, FINE AND COARSE AGGREGATE, WATER AND ADMIXTURES AS WELL AS THE WATER CEMENT RATIO, SLUMP, CONCRETE YIELD AND SUBSTANTIATING STRENGTH DATA IN ACCORDANCE WITH ACI 318 SECTION 26.12. THE USE OF A PERFORMANCE MIX REQUIRES BATCH PLANT INSPECTION, THE COST OF WHICH SHALL BE PAID BY THE GENERAL CONTRACTOR. REVIEW OF MIX SUBMITTALS BY THE ENGINEER OF RECORD INDICATES ONLY THAT INFORMATION PRESENTED CONFORMS GENERALLY WITH CONTRACT DOCUMENTS. CONTRACTOR OR SUPPLIER MAINTAINS FULL RESPONSIBILITY FOR SPECIFIED PERFORMANCE.

3. 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 TABLE 19.3.2.1 MODERATE EXPOSURE, F1.

4. 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.

5. DETAILING OF REINFORCING STEEL (INCLUDING HOOKS AND BENDS) SHALL BE IN ACCORDANCE WITH ACI 315-18 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.

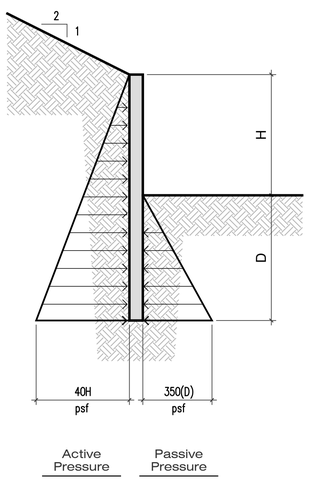
    NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY SO DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER.

6. 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 (#5 BARS OR SMALLER) . . . . . 1-1/2"
    SLABS AND WALLS (INT. FACE). . . . . GREATER OF BAR DIAMETER PLUS 1/8" OR 3/4"

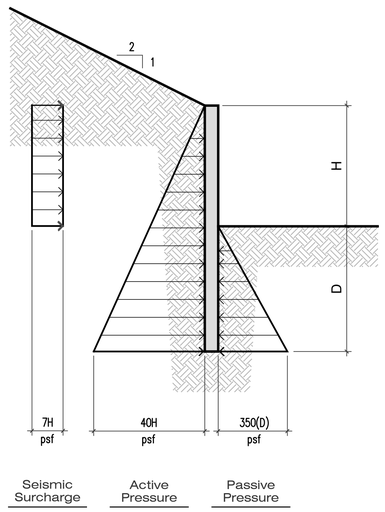
7. CONCRETE WALL REINFORCING--PROVIDE THE FOLLOWING UNLESS DETAILED OTHERWISE:

| | | | |
|---|---|---|---|
| 6" WALLS | #4 @ 16 HORIZ. | #4 @ 18 VERTICAL | 1 CURTAIN |
| 8" WALLS | #4 @ 12 HORIZ. | #4 @ 18 VERTICAL | 1 CURTAIN |

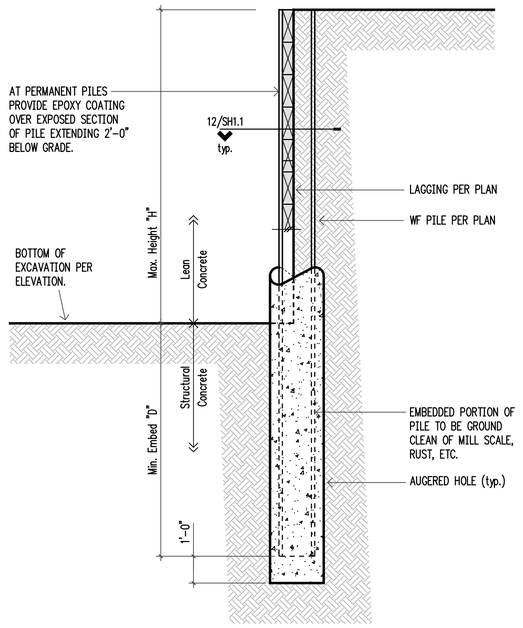
8. HEADED STUDS FOR COMPOSITE CONNECTION OF STRUCTURAL STEEL TO CAST-IN-PLACE CONCRETE SHALL BE MANUFACTURED FROM MATERIAL CONFORMING TO ASTM A-108 AND SHALL BE WELDED IN CONFORMANCE WITH A.W.S. REQUIREMENTS.



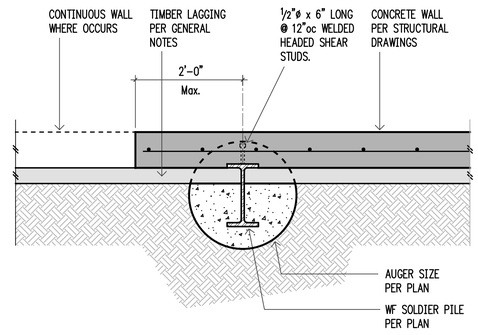

9 Typical Pile Loading Diagram (Temporary)




10 Typical Pile Loading Diagram (Permanent)




11 Cantilever Soldier Pile Section




Plan View

12 n.t.s. Typical Augercast Pile

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FRANK CO.
structural engineering
4742 42nd ave. sw, #297
seattle, wa 98116
206.579.8160

Project:

**Mercer Island Residence**

5236 W Mercer Way
Mercer Island, WA

N5
4200 Stone Way N
Seattle, Washington 98103

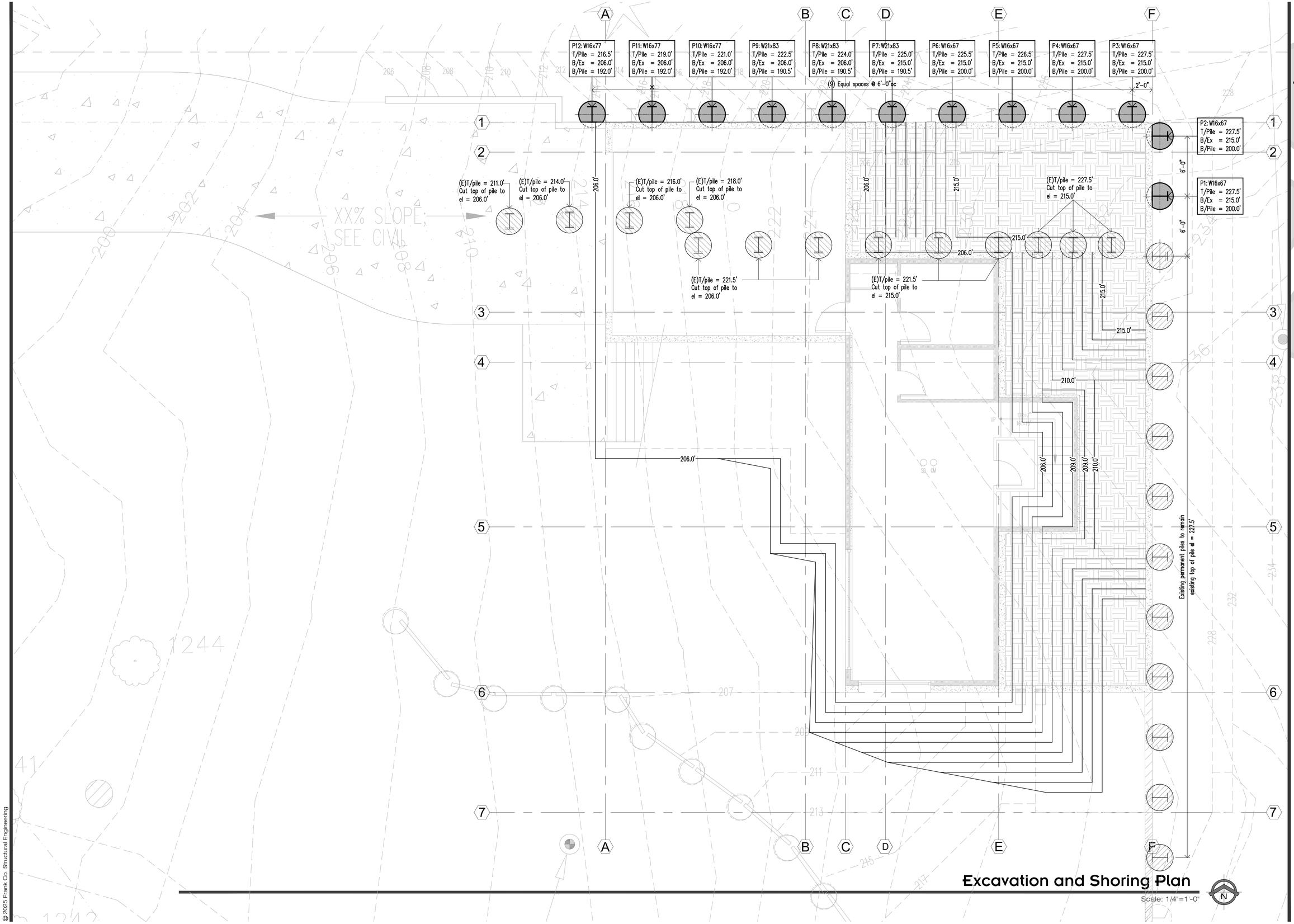
Frank Co. Project No.: 0031-2025-06
Design: EAF
Drawn: JAS
Approved: EAF
Issue: Permit
Date: 09-22-2025
Revisions:

ELIZABETH A. FIKKERT — STATE OF WASHINGTON — 37819 — REGISTERED PROFESSIONAL ENGINEER
09-19-2025

For Building Department use:

Sheet Contents: General Shoring Notes & Details

Scale (u.n.o.): N/A
Sheet No.: **SH1.1**




## Excavation and Shoring Plan

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

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structural engineering
4742 42nd ave. sw, #297
seattle, wa 98116
206.579.8160

Project:

**Mercer Island Residence**

5236 W Mercer Way
Mercer Island, WA

N5
4200 Stone Way N
Seattle, Washington 98103

Frank Co. Project No.: 0031-2025-06
Design: EAF
Drawn: JAS
Approved: EAF
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Date: 09-22-2025
Revisions:

ELIZABETH A. FERKEN
STATE OF WASHINGTON
37911
REGISTERED
PROFESSIONAL ENGINEER
09-19-2025

For Building Department use:

Sheet Contents:

**Shoring Plan**

Scale (u.n.o.): 1/4"=1'-0"
Sheet No.: **SH2.1**

# MERCER ISLAND RESIDENCE

## 5236 W MERCER WAY MERCER ISLAND, WA 98125

### PROJECT INFORMATION


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PHONE: (206) 633-4293

STRUCTURAL ENGINEER
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16240 118TH LN NE
BOTHELL, WA 98011
CONTACT: MANS THURFJELL, PE
EMAIL: MTHURFJELL@L120ENGINEERING.COM
PHONE: (206) 790-9502


### CODES

| | |
|---|---|
| ENGINEERED PER: | 2015 (IRC) INTERNATIONAL RESIDENTIAL CODE |
| | 2015 (IBC) INTERNATIONAL BUILDING CODE |

### ABBREVIATIONS

| | |
|---|---|
| AB | ANCHOR BOLT |
| ABV | ABOVE |
| AFF | ABOVE FINISH FLOOR |
| ALT | ALTERNATE |
| ALUM | ALUMINUM |
| APPROX | APPROXIMATE |
| AYC | ALASKAN YELLOW CEDAR |
| BB | BOX BEAM |
| BF | BOTTOM FLUSH |
| BLDG | BUILDING |
| BLKG | BLOCKING |
| BM | BEAM |
| BOT | BOTTOM |
| BP | BOTTOM PLATE |
| BRG | BEARING |
| BTWN | BETWEEN |
| BSMT | BASEMENT |
| B/W | BOTTOM OF WALL |
| CANT | CANTILEVER |
| CJ | CONTROL JOINT |
| CLG. | CEILING |
| CLJ | CEILING JOIST |
| CLR | CLEAR |
| CMU | CONCRETE MASONRY UNIT |
| COL | COLUMN |
| CONC | CONCRETE |
| CONN | CONNECTION |
| CONST | CONSTRUCTION |
| CONT | CONTINUOUS |
| CTR | CENTER |
| DET | DETAIL |
| DF | DOUGLAS FIR (SOUTH) |
| DFL | DOUGLAS FIR LARCH |
| DIM | DIMENSION |
| DJ | DOUBLE JOIST |
| DIA | DIAMETER |
| DN | DOWN |
| DS | DOWN SPOUT |
| EA | EACH |
| EF | EACH FACE |
| EJ | EXPANSION JOINT |
| ELEV | ELEVATION |
| EN | EDGE NAILING (PANEL) |
| EQ | EQUAL |
| ES | EACH SIDE |
| EW | EACH WAY |
| FB | FLUSH BEAM |
| FIN | FINISH |
| FL | FLOOR |
| FLSHG | FLASHING |
| FND | FOUNDATION |
| FP | FIREPLACE |
| FT | FOOT |
| FTG | FOOTING |
| GA | GAUGE |
| GALV | GALVANIZED |
| GLB | GLULAM BEAM |
| GR | GRADE |
| GYP | GYPSUM WALL BOARD |
| HDG | HOT-DIPPED GALVANIZED |
| HDR | HEADER |
| HF | HEM FIR |
| HGT | HEIGHT |
| HT | HEIGHT |
| IN | INCH |
| JT | JOINT |
| MAX | MAXIMUM |
| MIN | MINIMUM |
| MISC | MISCELLANEOUS |
| NB | NON-BEARING |
| NO | NUMBER |
| OC | ON CENTER |
| PSF | POUNDS PER SQUARE FOOT |
| PSI | POUNDS PER SQUARE INCH |
| PT | PRESSURE TREATED |
| RAF | RAFTER |
| REF | REFERENCE |
| REINF | REINFORCEMENT |
| REQD | REQUIRED |
| SF | SQUARE FOOT |
| SIM | SIMILAR |
| SPF | SPRUCE PINE FIR |
| STD | STANDARD |
| SYP | SOUTHERN YELLOW PINE |
| T/ | TOP OF |
| T/C | TOP OF CONCRETE |
| T/P | TOP OF PLATE |
| T/S | TOP OF STEEL |
| T/W | TOP OF WALL |
| TF | TOP FLUSH |
| TJ | TRIPLE JOIST |
| T/BM | TOP OF BEAM |
| T/SLAB | TOP OF SLAB |
| TP | TOP PLATE |
| TYP | TYPICAL |
| UNO | UNLESS NOTED OTHERWISE |
| UPA | UNDER POST ABOVE |
| UWA | UNDER WALL ABOVE |
| VERT | VERTICAL |
| VIF | VERIFY IN FIELD |
| W/ | WITH |
| WC | WESTERN CEDAR |
| WP | WATERPROOF |
| WWF | WELDED WIRE FABRIC |

### SHEET INDEX


ARCHITECTURAL DRAWINGS

| | |
|---|---|
| S-0 | COVER SHEET |
| S-1 | STRUCTURAL GENERAL NOTES |
| S-2 | SHORING AND TEMPORARY EXCAVATION PLAN |
| S-3 | SOLDIER PILE SECTION AND SCHEDULE |


FOR REFERENCE -
WORK IS COMPLETE

MANS R. THURFJELL
STATE OF WASHINGTON
PROFESSIONAL ENGINEER

LONGITUDE ONE TWENTY°
ENGINEERING & DESIGN

REVISIONS

| | DESCRIPTION | DATE | BY |
|---|---|---|---|
| 1 | PERMIT REVISION | 4/20/18 | |
| 2 | PERMIT REVISION | 12/12/18 | |
| - | | | |

PROJECT NAME
MERCER ISLAND RESIDENCE

PROJECT NUMBER
S180115

DRAWN BY - MR

CHECKED BY - MT

SHEET DATE -

SCALE
24X36 SHEET:1/4"=1'-0"

DESCRIPTION
COVER SHEET

S-0
SHEET

# GENERAL STRUCTURAL NOTES

DESIGN CRITERIA

1. CODE: 2015 IBC/IRC & AMENDMENTS AS ADOPTED BY THE REVIEWING AGENCY/COUNTY.
2. GEOTECHNICAL REPORT PROVIDED BY PanGEO INC. DATED OCT. 5, 2017.
3. DESIGN EARTH PRESSURE:

   ACTIVE PRESSURE: 40 PCF EQUIVALENT FLUID DENSITY
   PASSIVE PRESSURE: 350 PCF ACTING ON 2x DRILLED SHAFT DIAMETER

GENERAL CONDITIONS

1. THE CONTRACTOR SHALL EXAMINE THE STRUCTURAL DRAWINGS AND SHALL NOTIFY THE STRUCTURAL ENGINEER OF ANY DISCREPANCIES HE MAY FIND BEFORE PROCEEDING WITH THE WORK.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND SITE CONDITIONS BEFORE STARTING WORK. THE ARCHITECT/ENGINEER SHALL IMMEDIATELY BE NOTIFIED IN WRITING OF ANY DISCREPANCIES.
3. ALL OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND THE STRUCTURAL ENGINEER BEFORE PROCEEDING WITH ANY WORK SO INVOLVED.
4. IN CASE OF CONFLICT, NOTES AND DETAILS OF THESE STRUCTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER THE "GENERAL NOTES" AND/OR "STANDARD DETAILS".
5. IF A SPECIFIC DETAIL IS NOT SHOWN FOR ANY PART OF THE WORK, THE CONSTRUCTION SHALL BE THE SAME AS FOR SIMILAR WORK.
6. WORKING DIMENSIONS SHALL NOT BE SCALED FROM PLANS, SECTIONS, OR DETAILS ON THESE DRAWINGS.
7. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT AND THE STRUCTURAL ENGINEER OF ANY CONDITION WHICH IN HIS OPINION MIGHT ENDANGER THE STABILITY OF THE STRUCTURE OR CAUSE DISTRESS TO THE STRUCTURE.
8. THE CONTRACTOR SHALL SUPERVISE AND DIRECT HIS WORK AND HE SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. PROVIDE ADEQUATE SHORING AND BRACING OF ALL STRUCTURAL MEMBERS DURING CONSTRUCTION.
9. ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE LATEST EDITION OF THE INTERNATIONAL BUILDING CODE, AND ALL OTHER REGULATING AGENCIES EXERCISING AUTHORITY OVER ANY PORTION OF THE WORK.
10. SPECIFIC NOTES AND DETAILS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE THE NOTES, DRAWINGS, AND/OR SPECIFICATIONS DIFFER, THE MORE STRINGENT REQUIREMENT SHALL APPLY.
11. REFER TO THE ARCHITECTURAL DRAWINGS FOR INFORMATION NOT COVERED BY THESE GENERAL NOTES OR THE STRUCTURAL DRAWINGS.
12. NOTIFY ENGINEER OF ALL FIELD CHANGES PRIOR TO INSTALLATION.
13. DISCREPANCIES FOUND BETWEEN STRUCTURAL DRAWINGS AND OTHER DOCUMENTS ARE TO BE NOTED IN WRITING TO THE ENGINEER PRIOR TO CONSTRUCTION.
14. ALL CONSTRUCTION SHALL BE DONE WITH MATERIALS, METHODS, AND WORKMANSHIP ACCEPTED AS GOOD PRACTICE BY THE CONSTRUCTION INDUSTRY IN CONFORMANCE TO THE PROVISIONS OF THE "INTERNATIONAL BUILDING CODE" (IBC), AND STANDARDS REFERENCED THEREIN.

CONCRETE

1. REFERENCE STANDARDS: ACI-301, ACI-318, IBC.
   MINIMUM STRUCTURAL CONCRETE STRENGTH (28 DAYS).....2,500 PSI
   LEAN CONCRETE STRENGTH .....300 PSI
2. MIXING: COMPLY WITH ACI-301. DO NOT EXCEED THE AMOUNT OF WATER SPECIFIED IN THE APPROVED MIX. PROPORTIONS OF AGGREGATE TO CEMENT SHALL BE SUCH AS TO PRODUCE A DENSE WORKABLE MIX WHICH CAN BE PLACED WITHOUT SEGREGATION OR EXCESS FREE SURFACE WATER
3. PLACING: COMPLY WITH ACI-301. PROVIDE A 3/4 INCH CHAMFER ALL EXPOSED CONCRETE EDGES, UNLESS INDICATED OTHERWISE ON ARCHITECTURAL DRAWINGS.
4. SLUMP: 4" PLUS OR MINUS ONE INCH. DO NOT ADD WATER TO MIX TO INCREASE SLUMP. GREATER SLUMP, ACCELERATED SET, OR HIGH EARLY STRENGTH MAY BE ACHIEVED BY USING APPROVED ADMIXTURES.
5. CURING: COMPLY WITH ACI-301. KEEP CONCRETE MOIST FOR SEVEN DAYS MINIMUM.
6. JOINTING: PROVIDE ADEQUATE JOINTING TO MINIMIZE EFFECTS OF VOLUME CHANGE. JOINTS SHOWN MAY BE ADJUSTED AT CONTRACTOR'S OPTION, WITH PRIOR APPROVAL FROM ENGINEER.
7. WEATHER EXTREMES: COMPLY WITH ACI 305R FOR HOT WEATHER. COMPLY WITH ACI 306R FOR COLD WEATHER.
8. WATER/CEMENT RATIO SHALL NOT EXCEED 0.50 (BY WEIGHT), TYPICAL.

STRUCTURAL AND MISC. STEEL

1. REFERENCE STANDARDS: DESIGN, FABRICATION AND ERECTION ARE TO BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES".
2. MATERIALS:
   WF BEAMS - ASTM A572-50 (Fy = 50,000 PSI)
   ALL OTHER STEEL - ASTM A36 (Fy = 36,000 PSI)
   ALL STEEL SHALL BE PRIME AND PAINT FOR CORROSION PROTECTION.

STRUCTURAL STEEL WELDING

1. CONFORM TO THE AWS CODES D1.1 AND D1.3., AND USE ONLY CERTIFIED WELDERS. WELDS NOT SPECIFIED ARE TO BE 1/4" CONTINUOUS FILLET MINIMUM. USE DRY E70 ELECTRODES.

DIMENSIONAL LUMBER

1. MEET REQUIREMENTS OF PS 20-70 AND NATIONAL GRADING RULES FOR SOFTWOOD DIMENSIONAL LUMBER. BEAR STAMP OF WWPA.
2. MINIMUM DIMENSIONAL LUMBER GRADES TO BE:
   LAGGING: 4x - PRESSURE TREATED, #1 HEM-FIR OR BETTER
3. PRESSURE TREATED WOOD: WOOD MATERIALS ARE REQUIRED TO BE "TREATED WOOD" IN ACCORDANCE WITH IBC SECTION 2304.11. "DECAY AND TERMITE PROTECTION" SHALL CONFORM TO THE APPROPRIATE STANDARDS OF THE AMERICAN WOOD-PRESERVERS ASSOCIATION (AWPA) FOR SAWN LUMBER. FOLLOW AMERICAN LUMBER STANDARDS COMMITTEE (ALSC) QUALITY ASSURANCE PROCEDURES. PRODUCTS SHALL BEAR THE APPROPRIATE MARK. ALL NAILS INTO PT WOOD SHALL BE HOT DIPPED GALVANIZED PER ASTM A153 OR STAINLESS STEEL.

SHORING WALL DRAINAGE

1. WALL DRAINAGE MATERIAL SHALL BE IN ACCORDANCE WITH GEOTECHNICAL REPORT. DRAINAGE MAT SHALL BE INSTALLED ON THE FACE OF WOOD LAGGING. PROVIDE FULL COVERAGE OF DRAINAGE MAT. LAP DRAINAGE MAT IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. PROVIDE CONNECTION AT THE BASE OF SHORING WALLS TO THE UNDERSLAB DRAINAGE SYSTEM USING DRAINAGE GRATE CONNECTORS THAT ARE COMPATIBLE WITH THE DRAINAGE MAT. EACH DRAINAGE MAT SHOULD BE CONNECTED TO A SUBDRAIN USING A DRAINAGE GRATE CONNECTOR.

SHORING MONITORING

1. A SYSTEMATIC PROGRAM OF OBSERVATION SHALL BE CONDUCTED DURING THE PROJECT EXECUTION TO DETERMINE MOVEMENT OF THE SHORING WALLS. INITIAL SURVEY POINTS SHOULD BE PLACED AT STRATEGIC LOCATION ALONG ADJACENT RETAINING WALL, RIGHT OF WAY ALIGNMENTS THAT WILL ALLOW FOR PERIOD MEASUREMENT DURING AND AFTER THE SHORING INSTALLATION. MONITORING POINTS ARE TO BE ESTABLISHED AT THE TOPS OF AT LEAST TWO SOLDIER PILES PRIOR TO PROCEEDING WITH EXCAVATION. PRIOR TO THE START OF CONSTRUCTION, THE GEOTECHNICAL ENGINEER, THE PROJECT OWNER, AND THE CONSTRUCTION CONTRACTOR SHOULD REVIEW RELEVANT PROJECT PLANS AND DEVELOP A MONITORING PROGRAM FOR THE SITE.
2. A LICENSED SURVEYOR (NOT THE CONTRACTOR) MUST DO THE SURVEYING AT LEAST ONCE A WEEK.
3. SURVEY FREQUENCY CAN BE DECREASED AFTER THE SHORING SYSTEM HAS BEEN INSTALLED AND EXCAVATION IS COMPLETE IF THE DATA INDICATES LITTLE OR NO ADDITIONAL MOVEMENT. SURVEYING MUST CONTINUE UNTIL THE PERMANENT STRUCTURE (INCLUDING FLOOR SLABS AS BRACES) IS COMPLETE UP TO FINAL AND STREET GRADES. THE SURVEY FREQUENCY WILL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AFTER REVIEW AND APPROVAL BY SDCI.
4. THE GEOTECHNICAL ENGINEER SHALL REVIEW SURVEY DATA AND PROVIDE AN EVALUATION OF WALL PERFORMANCE ALONG WITH SURVEY DATA TO SDCI ON AT LEAST A WEEKLY BASIS. IMMEDIATELY AND DIRECTLY, NOTIFY SDCI IF ANY UNUSUAL OR SIGNIFICANTLY INCREASED MOVEMENT OCCURS.
5. IMMEDIATELY AND DIRECTLY NOTIFY THE GEOTECHNICAL AND STRUCTURAL ENGINEERS, WALL DESIGNER, AND SDCI IF 1 INCH OF MOVEMENT OCCURS BETWEEN TWO CONSECUTIVE READINGS AND WHEN TOTAL MOVEMENT REACH 1 INCH. AT THAT AMOUNT OF MOVEMENT, THE ENGINEERS AND DESIGNERS SHALL DETERMINE THE CAUSE OF DISPLACEMENT AND DEVELOP REMEDIAL MEASURES SUFFICIENT TO LIMIT TOTAL WALL MOVEMENTS TO 1 INCH, TYP., EXCEPT NORTH WALL LIMIT TO 1 3/4".. ALL EARTHWORK AND CONSTRUCTION ACTIVITIES MUST BE DIRECTED TOWARDS IMMEDIATE IMPLEMENTATION OF REMEDIAL MEASURES NECESSARY TO LIMIT TOTAL WALL MOVEMENTS TO WHAT HAS BEEN DEFINED AS ACCEPTABLE BY THE DESIGN TEAM.

PERMANENT SHORING CONSTRUCTION NOTES

1. CLEAR THE SITE AND SET UP A SAFE AREA FOR DRILLER.
2. DRILL VERTICAL SHAFTS SUCH THAT THE TOP OF SHAFT IS WITHIN 3"+/- OF PLAN LOCATION. PILE SHAFTS SHALL BE DRILLED TO WITHIN 1% OF PLUMB, WITHOUT LOSS OF GROUND AND WITHOUT ENDANGERING PREVIOUSLY INSTALLED PILES.
3. POUR CONCRETE MIX INTO THE DRILLED HOLES AND INSTALL SOLDIER PILES. STEEL PILES ARE TO BE PLACED SO THAT THE CENTERLINE IS WITHIN 1" +/- OF PLAN LOCATION AND SHALL BE WITHIN 1% OF PLUMB.
4. NO EXCAVATION ALLOWED UNTIL CONCRETE HAS CURED AND REACHED ITS DESIGN STRENGTH.
5. EXCAVATE 4'-0" MAX LIFTS AND INSTALL LAGGING RIGHT AWAY. IT IS THE RESPONSIBILITY OF THE SHORING CONTRACTOR TO PLACE THE LAGGING IN SUCH A MANNER THAT PREVENTS SOIL FAILURE, SLOUGHING, OR LOSS OF GROUND. VOIDS BEHIND THE LAGGING SHALL BE BACKFILLED PER RECOMMENDATIONS OF THE GEOTECHNICAL REPORT.
6. CONTINUE STEP 5 UNTIL THE BOTTOM OF THE EXCAVATION IS REACHED.

SHOP DRAWINGS AND SUBMITTALS

1. SUBMIT 2 SETS OF PRINTS AND 1 SET OF REPRODUCIBLES FOR REVIEW FOR:
   A) REINFORCING STEEL
   B) MISCELLANEOUS STEEL
   C) GLU-LAMINATED BEAMS
   D) PRE-MANUFACTURED WOOD TRUSSES
2. SUBMIT 3 COPIES FOR REVIEW PRIOR TO FABRICATION FOR:
   A) CONCRETE DESIGN MIX
   B) CONCRETE INSERTS
   C) EPOXY ADHESIVES

INSPECTIONS

1. REFERENCE STANDARDS: IBC 110.
   INSPECTIONS ARE TO BE PERFORMED BY THE BUILDING OFFICIAL. INSPECTIONS REQUIRED ARE AS FOLLOWS:
2. SOIL: VERIFY SUBGRADE IS DRY DENSE AND DOES NOT HAVE STANDING WATER PRIOR TO POURING FOOTINGS.
3. CONCRETE: INSPECTIONS REQUIRED ONLY FOR DESIGN MIXES SPECIFIED GREATER THAN 2500 PSI. TAKE CONCRETE CYLINDERS AS REQUIRED. VERIFY SLUMP AND STRENGTH.

ALTERNATES:

1. ALTERNATE ASSEMBLIES AND MATERIALS WILL BE CONSIDERED FOR REVIEW. ENGINEER MAY REQUEST PAYMENT FOR REVIEW; CONTRACTOR WILL BEAR BURDEN FOR ADDITIONAL PAYMENT AT NO ADDITIONAL COST TO OWNER.

JOBSITE SAFETY:

1. THE ENGINEER AND/OR ARCHITECT HAVE NOT BEEN RETAINED OR COMPENSATED TO PROVIDE DESIGN AND/OR CONSTRUCTION REVIEW SERVICES RELATED TO THE CONTRACTOR'S SAFETY PRECAUTIONS OR TO MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES FOR THE CONTRACTOR TO PERFORM HIS WORK. THE UNDERTAKING OF PERIODIC SITE VISITS BY THE ENGINEER AND/OR ARCHITECT SHALL NOT BE CONSTRUED AS SUPERVISION OF ACTUAL CONSTRUCTION NOR MAKE HIM RESPONSIBLE FOR PROVIDING A SAFE PLACE FOR THE PERFORMANCE OF WORK BY THE CONTRACTOR, SUBCONTRACTORS, SUPPLIERS OR THEIR EMPLOYEES, OR FOR ACCESS, VISITS, USE, WORK, TRAVEL, OR OCCUPANCY BY ANY PERSON.

FOR REFERENCE -
WORK IS COMPLETE


MANS R. THURFJELL
STATE OF WASHINGTON
PROFESSIONAL ENGINEER

LONGITUDE ONE TWENTY°
ENGINEERING & DESIGN


REVISIONS

| △ | DESCRIPTION | DATE | BY |
|---|---|---|---|

PROJECT NAME
MERCER ISLAND RESIDENCE

PROJECT NUMBER
S180115

DRAWN BY - MR

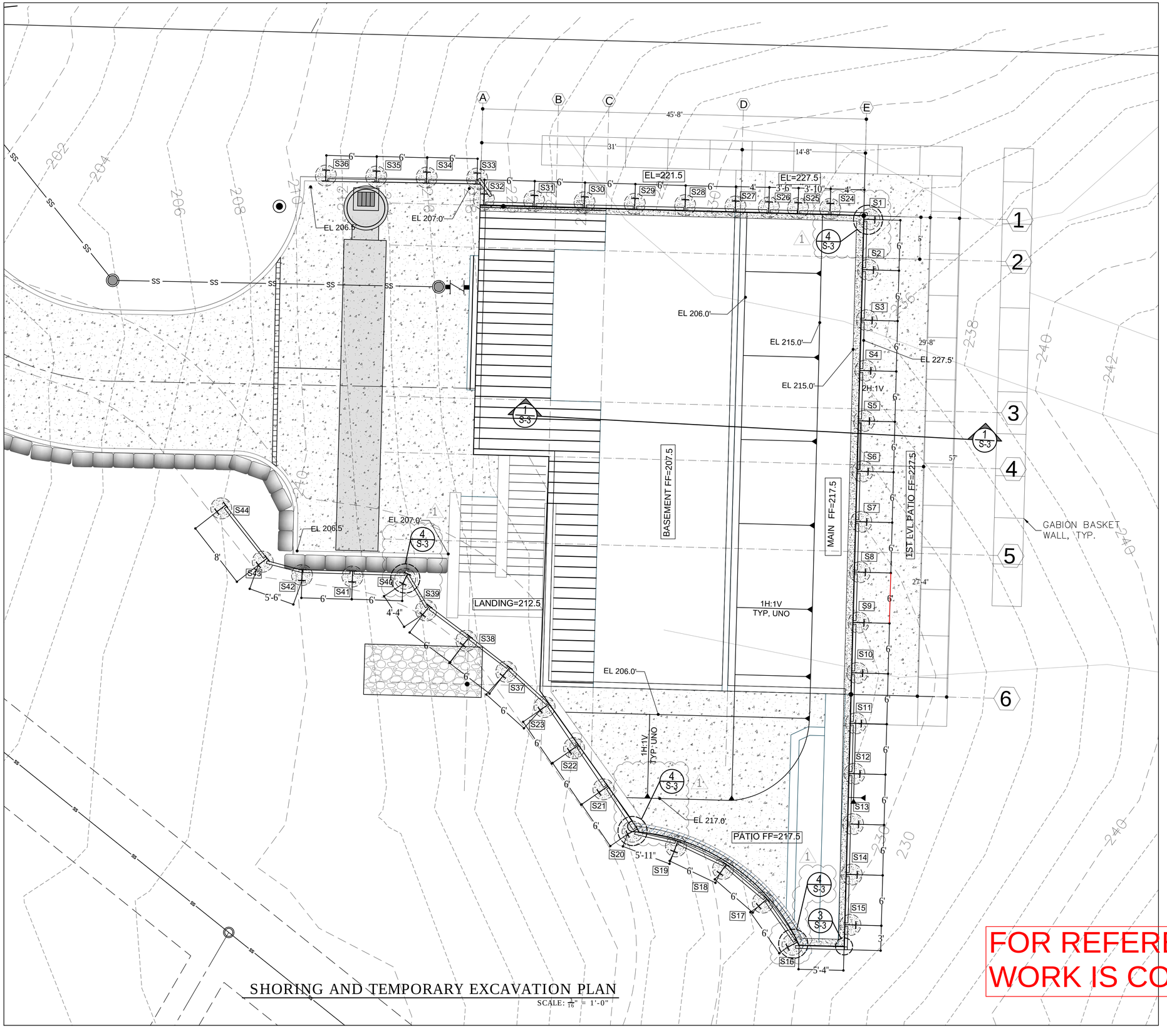
CHECKED BY - MT

SHEET DATE -

SCALE
24X36 SHEET:1/4"=1'-0"

DESCRIPTION
STRUCTURAL GENERAL NOTES

SHEET
S-1




SHORING AND TEMPORARY EXCAVATION PLAN

SCALE: $\frac{3}{16}$" = 1'-0"

FOR REFERENCE - WORK IS COMPLETE


HANS R. THURFJELL
STATE OF WASHINGTON
PROFESSIONAL ENGINEER

LONGITUDE ONE TWENTY°
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REVISIONS

| △ | DESCRIPTION | DATE | BY |
|---|---|---|---|
| 1 | PERMIT REVISION | 4/20/18 | |
| 2 | PERMIT REVISION | 12/12/18 | |
| - | | | |

PROJECT NAME
MERCER ISLAND RESIDENCE

PROJECT NUMBER
S180115

DRAWN BY - MR

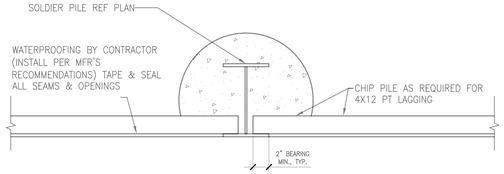
CHECKED BY - MT

SHEET DATE - 12/12/18

SCALE
24X36 SHEET: 3/16"=1'-0"

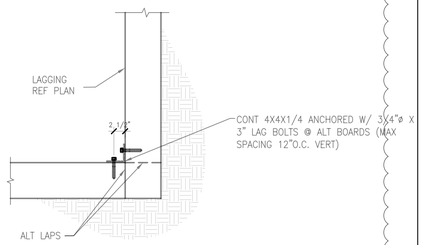
DESCRIPTION
SHORING AND TEMPORARY EXCAVATION PLAN

SHEET
S-2



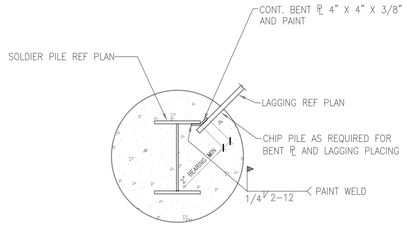

2 SOLDIER PILE SHORING DETAIL

SCALE: 3/4" = 1'-0"



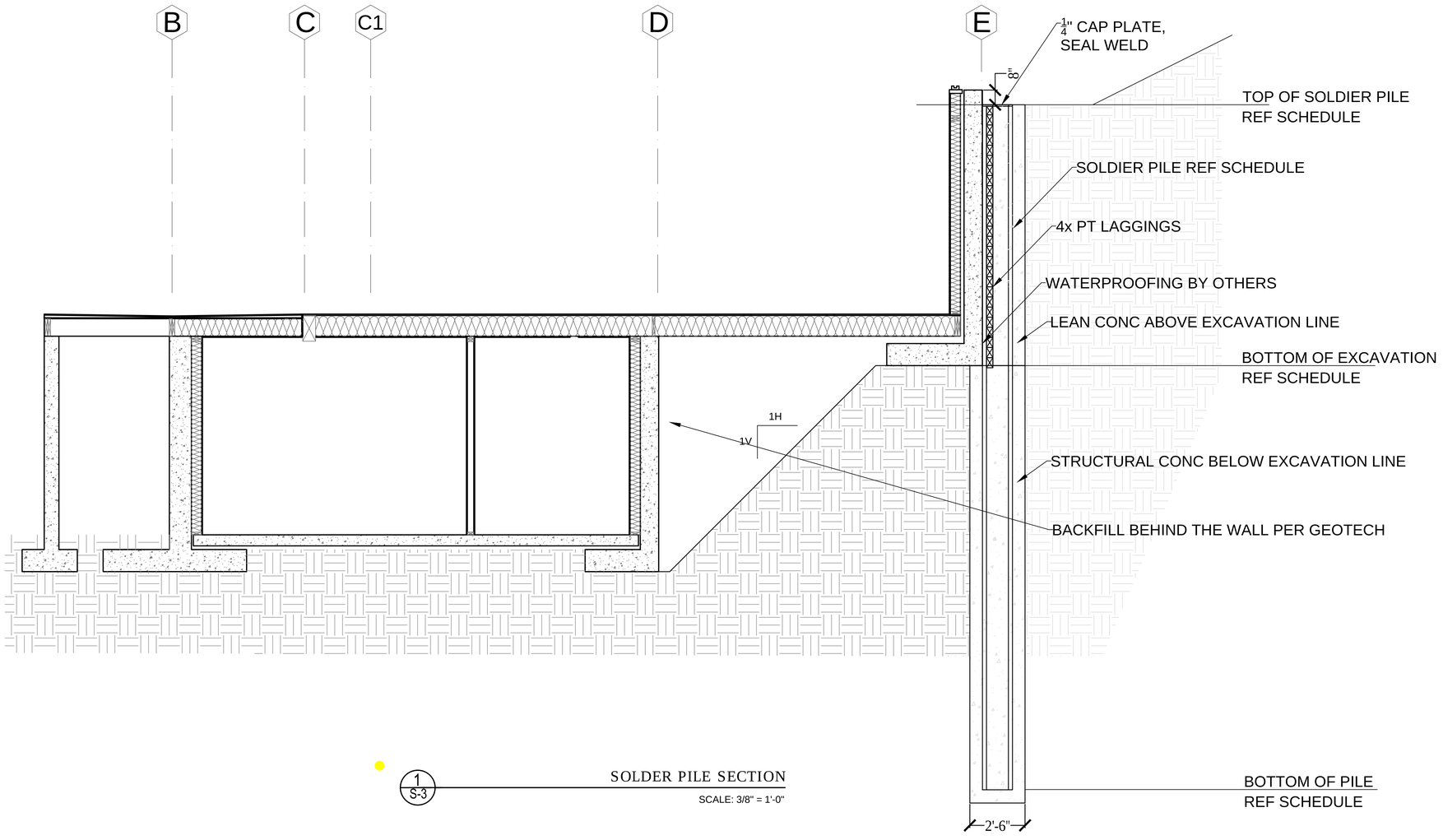

3 CORNER LAGGING DETAIL

SCALE: 3/4" = 1'-0"




4 CORNER LAGGING DETAIL

SCALE: 3/4" = 1'-0"




1 S-3 SOLDER PILE SECTION

SCALE: 3/8" = 1'-0"

## SOLDIER PILE SCHEDULE

| MARK | PILE SIZE | TOP OF PILE ELEVATION | BOTTOM OF EXCAVATION | BOT OF PILE ELEVATION | PILE LENGTH (ft) |
|---|---|---|---|---|---|
| S1 | W16X67 | 227.5' | 215.0' | 198.5' | 29 |
| S2 | W16X67 | 227.5' | 215.0' | 198.5' | 29 |
| S3 | W16X67 | 227.5' | 215.0' | 198.5' | 29 |
| S4 | W16X67 | 227.5' | 215.0' | 198.5' | 29 |
| S5 | W16X67 | 227.5' | 215.0' | 198.5' | 29 |
| S6 | W16X67 | 227.5' | 215.0' | 198.5' | 29 |
| S7 | W16X67 | 227.5' | 215.0' | 198.5' | 29 |
| S8 | W16X67 | 227.5' | 215.0' | 198.5' | 29 |
| S9 | W16X67 | 227.5' | 215.0' | 198.5' | 29 |
| S10 | W16X67 | 227.5' | 215.0' | 198.5' | 29 |
| S11 | W16X67 | 227.5' | 215.0' | 198.5' | 29 |
| S12 | W16X67 | 228.0' | 217.0' | 199.0' | 29 |
| S13 | W16X67 | 229.0' | 217.0' | 200.0' | 29 |
| S14 | W16X67 | 230.0' | 217.0' | 203.0' | 27 |
| S15 | W16X67 | 230.0' | 217.0' | 203.0' | 27 |
| S16 | W16X67 | 228.0' | 217.0' | 201.0' | 27 |
| S17 | W16X67 | 227.0' | 217.0' | 200.0' | 27 |
| S18 | W16X67 | 225.0' | 217.0' | 198.0' | 27 |
| S19 | W16X67 | 224.0' | 217.0' | 197.0' | 27 |
| S20 | W16X67 | 222.0' | 217.0' | 195.0' | 27 |
| S21 | W16X67 | 221.0' | 209.0' | 194.0' | 27 |
| S22 | W16X67 | 220.0' | 207.0' | 193.0' | 27 |
| S23 | W16X67 | 218.0' | 206.0' | 192.0' | 26 |
| S24 | W21X211 | 227.5' | 215.0' | 183.5' | 44 |
| S25 | W21X211 | 227.5' | 212.0' | 183.5' | 44 |
| S26 | W21X211 | 227.5' | 209.0' | 183.5' | 44 |
| S27 | W16X89 | 221.5' | 206.0' | 188.5' | 33 |
| S28 | W16X89 | 221.5' | 206.0' | 188.5' | 33 |
| S29 | W16X89 | 221.5' | 206.0' | 188.5' | 33 |
| S30 | W16X89 | 221.5' | 206.0' | 188.5' | 33 |
| S31 | W16X89 | 221.5' | 206.0' | 188.5' | 33 |
| S32 | W16X89 | 221.5' | 206.0' | 188.5' | 33 |
| S33 | W16X89 | 218.0' | 207.0' | 185.0' | 33 |
| S34 | W21x211 | 216.0' | 201.0' | 172.0' | 44 |
| S35 | W21x211 | 214.0' | 196.0' | 170.0' | 44 |
| S36 | W21x211 | 211.0' | 200.0' | 167.0' | 44 |
| S37 | W16X50 | 217.0' | 212.5' | 197.0' | 20 |
| S38 | W16X50 | 216.0' | 212.5' | 196.0' | 20 |
| S39 | W16X50 | 214.0' | 207.0' | 194.0' | 20 |
| S40 | W16X50 | 214.0' | 207.0' | 194.0' | 20 |
| S41 | W16X50 | 212.0' | 200.0' | 185.0' | 27 |
| S42 | W16X50 | 210.0' | 206.5' | 190.0' | 20 |
| S43 | W16X50 | 209.0' | 206.5' | 189.0' | 20 |
| S44 | W16X50 | 208.0' | 206.5' | 188.0' | 20 |

FOR REFERENCE - WORK IS COMPLETE


MARK R. THURFJELL
STATE OF WASHINGTON
PROFESSIONAL ENGINEER

LONGITUDE ONE TWENTY°
ENGINEERING & DESIGN


REVISIONS

| | DESCRIPTION | DATE | BY |
|---|---|---|---|
| 1 | PERMIT REVISION | 4/20/18 | |
| 2 | PERMIT REVISION | 12/12/18 | |

PROJECT NAME: MERCER ISLAND RESIDENCE

PROJECT NUMBER: S180115

DRAWN BY - MR

CHECKED BY - MT

SHEET DATE - 12/12/18

SCALE: 24X36 SHEET

DESCRIPTION: SOLDIER PILE SECTION AND SCHEDULE

SHEET: S-3