GENERAL NOTES

1. CODE COMPLIANCE:
ALL WORK SHALL COMPLY WITH THE 2015 IRC, 2015 IMC, 2015 IFGC, 2015 IFC, 2015 UPC, 2015 IPMC, 2008 NEC, 2015 INTERNATIONAL ENERGY CONSERVATION CODE WITH WASHINGTON STATE AMENDMENTS, 2009 ICC A117.1, AND WITH ALL LOCAL CODES AND ORDINANCES.

2. DIMENSIONS: DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION. NOTIFY THE ARCHITECT OF DISCREPANCIES. IF WORK IS STARTED PRIOR TO NOTIFICATION, THE GENERAL AND SUBCONTRACTOR PROCEED AT THEIR OWN RISK. UNLESS OTHERWISE NOTED, PLAN DIMENSIONS ARE TO FACE OF STUDS OR FACE OF CONCRETE WALLS. FACE OF STONE VENEER LIES 6" +/- OUTSIDE THE FACE OF FRAMING. INTERIOR PLAN DIMENSIONS ARE TO FACE OF STUDS UNLESS OTHERWISE NOTED.
VERIFY ALL ROUGH-IN DIMENSIONS FOR WINDOWS, DOORS, PLUMBING, ELECTRICAL FIXTURES AND APPLIANCES PRIOR TO COMMITMENT OF WORK. NOTIFY ARCHITECT OF ANY DISCREPANCIES OF DIMENSIONAL TOLERANCES REQUIRED.

3. DOCUMENT REVIEW/VERIFICATION: CONSULT WITH ARCHITECT REGARDING ANY SUSPECTED ERRORS, OMISSIONS, OR CHANGES ON PLANS BEFORE PROCEEDING WITH THE WORK

4. ROUGH OPENINGS/BACKING: VERIFY SIZE AND LOCATION, AS WELL AS PROVIDE ALL OPENINGS THROUGH FLOORS AND WALLS, FURRING, CURBS, ANCHORS, INSERTS, EQUIPMENT BASES AND ROUGH BUCKS/BACKING FOR SURFACE-MOUNTED ITEMS.

5. FURRING: PROVIDE FURRING AS REQUIRED TO CONCEAL MECHANICAL AND/OR ELECTRICAL EQUIPMENT IN FINISHED AREAS. FURRING NOT SHOWN ON PLANS SHALL BE APPROVED BY ARCHITECT PRIOR TO CONSTRUCTION.

6. GRADES: VERIFY ALL GRADES AND THEIR RELATIONSHIP TO THE BUILDING(S).

7. FLOOR LINES: "FLOOR LINE" REFERS TO TOP OF CONCRETE SLAB OR TOP OF WOOD SUBFLOOR.

8. REPETITIVE FEATURES: OFTEN DRAWN ONLY ONCE AND SHALL BE PROVIDED AS IF FULLY DRAWN.

9. DOORS: DOORS NOT DIMENSIONALLY LOCATED SHALL BE 6" FROM STUD FACE TO EDGE OF DOOR, ROUGH OPENING OR CENTERED BETWEEN WALLS AS SHOWN.

10. WOOD MEMBERS IN CONTACT WITH CONCRETE, AND/OR EXPOSED TO WEATHER:
TO BE PRESSURE TREATED, TYPICAL. PROVIDE PRESSURE TREATED SILL PLATE IF FINISH GRADE IS WITHIN 8", TYPICAL.

11. FRAMING:
ALL NEW INTERIOR FRAME PARTITIONS TO BE 2X4 @ 16" O.C., & ALL NEW EXTERIOR FRAME PARTITIONS TO BE 2X6 @ 16" O.C., UNLESS OTHERWISE NOTED. VERIFY W/ STRUCTURAL DRAWINGS. EXISTING EXTERIOR WALLS ARE 2X4 STUDS @ 16" O.C., AND ARE TO REMAIN. NEW INTERMEDIATE FRAMING AT EXTERIOR WOOD WALLS REQUIRES HEADERS INSULATED WITH A MIN. R-10 INSULATION.

12. VENTILATION: VENT ALL BATHROOM FANS, LAUNDRY FANS, RANGE HOODS AND DRYERS TO OUTSIDE ATMOSPHERE. BATHROOM/UTILITY ROOM FANS SHALL BE CAPABLE OF 5 AIR CHANGES PER HOUR AND SHALL BE VENTED DIRECTLY TO THE OUTSIDE THROUGH SMOOTH, RIGID, NON-CORROSIVE METAL 24 GA. DUCTWORK. FLEX DUCTING IS NOT ALLOWED. WSEC R402.4.1.2 REQUIRES THE DWELLING UNIT TO BE TESTED AND VERIFIED AS HAVING AN AIR LEAKAGE RATE NOT EXCEEDING 5 AIR CHANGES PER HOUR. TESTING MUST BE CONDUCTED WITH A BLOWER DOOR AT A PRESSURE OF 0.2. NEW CONSTRUCTION MAY BE ISOLATED FROM EXISTING STRUCTURE FOR TESTING

13. FLUES: FLUES TO BE LOCATED MINIMUM 2" FROM ALL COMBUSTIBLE MATERIALS.

14. DOWNSPOUTS: LOCATE NEW DOWNSPOUTS AS SHOWN ON ROOF PLAN, FLOOR PLANS & ELEVATIONS.

15. OTHER DOCUMENTATION: REFER TO STRUCTURAL, MECHANICAL, ELECTRICAL, AND/OR LANDSCAPE DRAWINGS FOR ADDITIONAL DRAWINGS, NOTES, SCHEDULES, AND SYMBOLS.

16. PROTECTION: PROTECT ALL EXISTING FINISHES AND SURFACES. ANY DAMAGE WILL BE REPAIRED WITHOUT ADDITIONAL COST TO OWNER.

17. PERMITS: SEPARATE ELECTRICAL, MECHANICAL, AND PLUMBING PERMITS ARE REQUIRED IN ADDITION TO THE BASIC BUILDING PERMIT

18. ROOFING: PROVIDE NEW ROOFING.

19. EXHAUST DUCTS: PROVIDE BACKDRAFT DAMPERS AT ALL EXHAUST DUCTS. PROVIDE COMBUSTION AIR OPENINGS INTO FURNACE ROOM PER UMC 703.

20. APPLIANCES: CLEARANCES OF UL LISTED APPLIANCES FROM COMBUSTIBLE MATERIALS SHALL BE AS SPECIFIED IN UL LISTING.

21. WATER FLOW: SHOWER SHALL BE EQUIPPED WITH FLOW CONTROL DEVICE TO LIMIT WATER FLOW TO 2.5 GALLONS PER MINUTE.

22. SMOKE DETECTORS: SMOKE & CARBON MONOXIDE THROUGHOUT NEW CONSTRUCTION. TO BE MONITORED PER FIRE DEPARTMENT REQUIREMENTS.

23. FIREBLOCKING: FIREBLOCKING SHALL BE PROVIDED IN WOOD-FRAMED CONSTRUCTION PER 2015 IRC SECTION R302.11, SPECIFICALLY: 1) IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, 2) AT INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES, 3) IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT T.O. & B.O. RUN, 4) AT OPENINGS AROUND VENTS, PIPES, ETC. AT CEILING AND FLOOR LEVEL.

DUTY OF COOPERATION

RELEASE AND ACCEPTANCE OF THESE DOCUMENTS INDICATES COOPERATION AMONG THE OWNER, CONTRACTOR, AND STURMAN ARCHITECTS. ANY ERRORS, OMISSIONS, OR DISCREPANCIES DISCOVERED IN THE USE OF THESE DOCUMENTS SHALL BE REPORTED IMMEDIATELY TO STURMAN ARCHITECTS. FAILURE TO DO SO SHALL RELIEVE STURMAN ARCHITECTS FROM ANY RESPONSIBILITY FOR THE CONSEQUENCES.

ANY DEVIATIONS FROM THESE DOCUMENTS WITHOUT THE CONSENT OF STURMAN ARCHITECTS ARE UNAUTHORIZED. FAILURE TO OBSERVE THESE PROCEDURES SHALL RELIEVE STURMAN ARCHITECTS OF RESPONSIBILITY FOR ALL CONSEQUENCES ARISING FROM SUCH ACTIONS.

2018 WSEC CREDITS

MEDIUM DWELLING UNIT: 6.0 CREDITS REQUIRED
DWELLING UNIT EXCEEDS 1,500 SQUARE FEET BUT IS LESS THAN 5,000 SQUARE FEET CONDITIONED SPACE.

CREDITS	OPTION	DESCRIPTION
1.0	1	HEAT PUMP
0.5	1.3	VERTICAL FENESTRATION U = 0.28 FLOOR R-38 SLAB ON GRADE R-10
1.5	2.3	REDUCE TESTED AIR LEAKAGE TO 1.5 AIR CHANGES PER HOUR MAX. AT 50 PASCALS WHOLE HOUSE VENTILATION REQS MET W/ HEAT RECOVERY SYSTEM W/ MIN. EFFICIENCY OF 0.75, 125 CFM
0.5	4.1	ALL SUPPLY AND RETURN DUCTS IN UNCONDITIONED ATTIC SHALL BE DEEPLY BURRING IN CEILING INSULATION MECH EQUIPMENT LOCATED OUTSIDE OF CONDITIONED SPACE, MAX OF 10 LINER FEET OF RETURN DUCK AND 5 LINEAR FEET OF SUPPLY DUCT MAY BE OUSIDE THE DEEPLY BURIED INSULATION DUCT LEAKAGE SHALL BE LIMITED TO 3 CFM PER 100 SQUARE FEET OF CONDITIONED AREA AIR HANDLER(S) SHALL BE LOCATED WITHIN CONDITIONED SPACE
0.5	5.2	WATER HEATING SYSTEM SHALL INCLUDE ENERGY STAR RATED GAS OR PROPOANE WATER HEATER WITH MIN UEF OF 0.80
1.5	3.5	AIR-SOURCE CENTRALLY DUCTED HEAT PUMP WITH MINIMUM HSPF OF 11.0
0.5	7.1	APPLIANCE PACKAGE

TOTAL CREDITS
6 CREDITS

BUILDING AREA

	BASEMENT	MAIN FLOOR	SECOND FLOOR	HEATED SUB-TOTAL	BASEMENT MECH/ENTRY	OUTDOOR ROOM	ATTACHED GARAGE	GRAND TOTAL
PROPOSED HOUSE SF:	498 SF	2,150 SF	2,252 SF	4,900 SF	179 SF	817 SF	923 SF	6,819 SF

LOT COVERAGE AND HARDSCAPE

LOT COVERAGE

	GROSS LOT S.F.	MAIN ROOF STRUCT.	COVERED PATIO/DECK	DRIVEWAY	GRAVEL DRIVEWAY	TOTAL LOT COVERAGE	% LOT COVERAGE
	36,116 SF						
PROPOSED LOT COVERAGE		3,662 SF	763 SF	814 SF	422 SF	5,661 SF	15.7 %
% ALLOWED LOT COVERAGE						12,641 SF ALLOWABLE	35 %

HIGHEST EL: 112.5' -
LOWEST EL: 18.0'
ELEVATION DIFFERENCE= 94.5'

94.5' DIVIDED BY 460.4' (HORIZ. DIST. BTWN. HIGHEST & LOWEST ELEV.) = .205

LOT SLOPE IS 20.5%,
WHICH IS LESS THAN 30% BUT MORE THAN 15% SO LOT COVERAGE ALLOWED IS 35%.

ADDITIONAL 9% OF LOT SIZE WILL DETERMINE ALLOWABLE HARDSCAPE SURFACE

HARDSCAPE

	GROSS LOT S.F.	CONC ENTRY	PATIO /STAIRS	WALKWAY	AC/GARBAGE PAD	EXISTING DOCK	PLANTER/CONC WALL/ROCKERY	TOTAL HARDSCAPE	% HARDSCAPE
	36,116 SF								
PROPOSED HARDSCAPE		53 SF	332 SF	169 SF	161 SF	32 SF	113 SF	860 SF	2.4 %
% ALLOWED HARDSCAPE								3,250.4 SF ALLOWABLE	9 %
UNUSED LOT COVERAGE AVAILABLE FOR HARDSCAPE								6,836 SF AVAILABLE	

NOXIOUS WEED REMOVAL

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

SHORELINE IMPERVIOUS

IMPERVIOUS IN 10% ZONE (NO STRUCTURES):
AREA OF ZONE: 2,162.9 SF
MAX IMPERVIOUS 10% 216 SF

EXISTING BULKHEAD SF
EXISTING STEPS SF
EXISTING CONCRETE PAD SF
EXISTING DOCK 31.6 SF

TOTAL X SF

IMPERVIOUS IN 30% ZONE (STRUCTURES ALLOWED):
AREA OF ZONE: 2,112.3 SF
MAX IMPERVIOUS 30% 633.7 SF

COVERED DECK 553.1 SF
(E) CONCRETE 6.2 SF
(E) STEPS 68.5 SF
(E) HOUSE 413.2 SF
NEW SANDSET PAVERS 69.6 SF

TOTAL 763 SF (25.0%)

GROSS FLOOR AREA

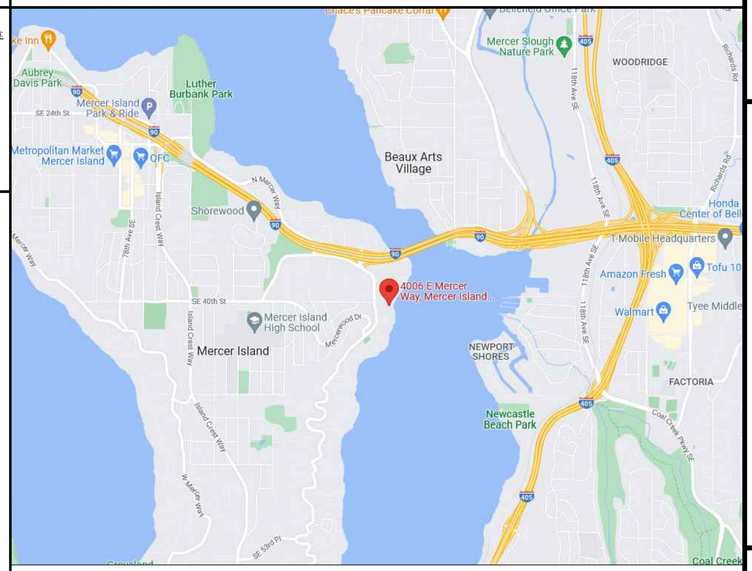
	PROPOSED FLOOR AREA
BASEMENT	851 SF
MAIN FLOOR	1,964 SF
SECOND FLOOR	2,043 SF
12'-16' OPEN AREA (+150%)	102 SF
16' + OPEN AREA (+200%)	490 SF
GARAGE	981 SF
TOTAL	6,431 SF

PROPOSED LOT SIZE 36,116 SF
GFA THRESHOLD = 8,000 SF

PROPOSED GFA = 6,431 SF
PROPOSED %GFA COVERAGE = 17.8%

PROPOSED GFA IS 6,431 SF
OR 17.8%

VICINITY MAP



PROJECT TEAM

OWNER: MITCHEL & WENDY MOUNGER
4006 E MERCER WAY
MERCER ISLAND, WA 98040
PHONE:

ARCHITECT: STURMAN ARCHITECTS, INC.
9 - 103RD AVE NE SUITE 203
BELLEVUE, WA 98004
PHONE: 425.451.7003
CONTACT: BRAD STURMAN

STRUCTURAL: ANNEE STRUCTURAL ENGINEERING LLC
1801 18TH AVE S.
SEATTLE, WA 98144
PHONE: 206.658.5169
CONTACT: MIKE ANNEE

CIVIL: NICK BOSSOFF ENGINEERING, INC.
191 NE TARI LANE
STEVENSON, WA 98648
PHONE: 425.881.5904
CONTACT: NICK BOSSOFF

GEOTECH: PANGEO INC.
3213 EASTLAKE AVE E.
SEATTLE, WA 98102
PHONE: 206.262.0370
CONTACT: MICHAEL XUE

ECOLOGIST: THE WATERSHED COMPANY
750 SIXTH STREET SOUTH
KIRKLAND, WA 98033
PHONE: 425.822.5242
CONTACT: RYAN KAHLO

ARBORIST: ARBORINFO LLC
2406 N CASTLE WAY
LYNNWOOD, WA 98036
PHONE: 206.300.9711
CONTACT: TOM HANSON

INTERIOR DESIGNER: SUSAN MARINELLO INTERIORS
119 SOUTH MAIN STREET, SUITE #300
SEATTLE, WA 98104
PHONE: 206.344.5551
CONTACT: SUSAN MARINELLO

PROJECT DATA

PROJECT ADDRESS: 4006 E MERCER WAY
MERCER ISLAND, WA 98040

PROPERTY TAX ID NUMBER: 413190-005

SCOPE OF WORK: DEMOLITION OF EXISTING SINGLE FAMILY HOME AND CONSTRUCTION OF NEW 2 STORY SINGLE FAMILY HOME WITH PARTIAL BASEMENT AND ATTACHED GARAGE ON EXISTING SINGLE FAMILY RESIDENTIAL LOT.

ZONING: R-9.6

CONSTRUCTION TYPE: TYPE V B

SEISMIC ZONE: 3

NUMBER OF STORIES: 2 STORY

FIRE PROTECTION: 13D FIRE SPRINKLER SYSTEM

BUILDING HEIGHT: 30 FT ABOVE AVERAGE BUILDING ELEVATION (FLAT ROOF)
35 FT ABOVE AVERAGE BUILDING ELEVATION (SLOPED ROOF)

LOT AREA: 36,116 SF

SETBACKS: FRONT LOT LINE = 20 FT
WATERFRONT LOT LINE = 50 FT
SIDE LOT LINES = 15 FT,
= 5 FT MIN. EACH

GROSS FLOOR AREA: LESSER OF 40.0% LOT AREA OR 8,000 SF = 8,000 SF

LEGAL DESCRIPTION

PER STATUTORY WARRANTY DEED REC. NO. 20200423001396

LOT 1, LAKEHOLM ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 12 OF PLATS, PAGE 52, RECORDS OF KING COUNTY, WASHINGTON;

TOGETHER WITH SECOND CLASS SHORELANDS ADJACENT OR ABUTTING THEREON.

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

SHEET INDEX

ENERGY NOTES

CODE: 2018 W.S.E.C. & 2015 IRC, WAC 51-11R
CLIMATIC ZONE: ZONE #4C -MARINE
SPACE HEAT TYPE: NATURAL GAS, FORCED AIR SYSTEM
THERMAL STANDARDS FOR OPENINGS: UNLIMITED OPTION
INSULATION VALUES: PRESCRIPTIVE METHOD
WALLS: R-21
FLAT ATTICS/CEILINGS: R-49
VAULTED CEILINGS: R-38
FLOORS (OVER UNHEATED SPACES): R-30
SLAB-ON-GRADE: R-10

PER WSEC R401.3, A CERTIFICATE IS REQUIRED TO BE POSTED WITHIN 3 FT OF THE ELECTRICAL PANEL; IT MUST INCLUDE THE FOLLOW: PREDOMINATE R-VALUES, U-VALUES OF FENESTRATION, RESULTS FROM DUCT SYSTEM AND BUILDING ENVELOPE AIR LEAKAGE TESTING, AND EFFICIENCIES OF HEATING/COOLING/WATER HEATING EQUIPMENT.

AIR INFILTRATION: MANUFACTURED DOORS/WINDOWS: CONFORM TO SECTION R402.4.3 OF THE WASHINGTON STATE ENERGY CODE

EXTERIOR JOINTS/OPENINGS: SEAL, CAULK, GASKET OR WEATHERSTRIP TO LIMIT AIR LEAKAGE AT EXTERIOR JOINTS AROUND WINDOW AND DOOR FRAMES, OPENINGS BETWEEN WALLS AND FOUNDATION, BETWEEN WALLS AND ROOF; OPENINGS AT PENETRATIONS OF UTILITY SERVICES AND ALL OTHER SUCH OPENINGS IN THE BUILDING ENVELOPE

MOISTURE CONTROL: WALLS: VAPOR RETARDER BONDED TO BATT INSULATION; INSTALL WITH STAPLES NOT MORE THAN 8 INCHES ON CENTER AND AND WITH A GAP BETWEEN AND OVER FRAMING NOT GREATER THAN 1/16 OF AN INCH; OR, VAPOR RETARDER OF ONE PERM CUP RATING (4 MIL POLYETHYLENE)

ATTICS/CEILINGS: VAPOR RETARDER OF ONE PERM CUP RATING (4 MIL POLYETHYLENE). INSTALL CONTINUOUSLY

CRAWL SPACE: 6 MIL POLYETHELENE

VENTILATION: ATTICS WITH LOOSE FILL: N.A. BAFFLE VENT OPENINGS TO DEFLECT AIR ABOVE INSULATION SURFACE ENCLOSED JOIST OR RAFTER SPACES: PROVIDE MINIMUM OF ONE INCH CLEAR VENTED AIR SPACE ABOVE INSULATION. TAPER OR COMPRESS INSULATION AT PERIMETER TO INSURE PROPER VENTILATION, MAINTAINING MINIMUM OF R-38.

HEATING & COOLING: GAS, PROPANE OR OIL-FIRED FURNACE WITH A MINIMUM AFUE OF 94% MAXIMUM OF 86,692 BTU/HR

TEMP. CONTROL: FOR HEATING AND COOLING, THERMOSTAT SHALL BE CAPABLE OF BEING SET FROM 55-85 DEGREES FARENHEIT AND OF OPERATING THE HEATING/COOLING SYSTEM IN SEQUENCE. THERMOSTAT TO BE AUTOMATIC DAY/NIGHT SETBACK TYPE.

DUCT INSULATION: THERMALLY INSULATE ALL PLENUMS, DUCTS AND ENCLOSURES IN ACCORDANCE WITH SECTION R403.3.1 OF THE WASHINGTON STATE ENERGY CODE.

a. ALL HEATING DUCTS IN UNCONDITIONED SPACES SHALL BE INSULATED WITH A MIN. OF R-8. ALL SEAM JOINTS SHALL BE TAPED, SEALED AND FASTENED WITH THE MINIMUM OF FASTENERS PER WSEC.

b. DUCTS WITHIN A CONCRETE SLAB OR IN THE GROUND SHALL BE INSULATED TO R-10, WITH INSULATION DESIGNED TO BE USED BELOW GRADE.

LIGHTING: RECESSED LIGHTING FIXTURES INSTALLED IN BUILDING ENVELOPE SHALL COMPLY WITH WSEC PROVISIONS AND SHALL BE IC LISTED. A MIN. OF 75% OF PERMANENTLY INSTALLED LAMPS IN INTERIOR AND EXTERIOR LIGHTING FIXTURES MUST BE HIGH-EFFICACY LAMPS, PER WSEC R404.1.

PIPE INSULATION: ALL HOT WATER PIPES, AND NON-RECIRCULATING COLD WATER PIPES LOCATED IN UNCONDITIONED SPACE, SHALL BE INSULATED TO R-3 MIN. PLUMBING OR MECHANICAL CANNOT DISPLACE THE REQUIRED INSULATION.

WHOLE HOUSE VENTILATION: WHOLE HOUSE VENTILATION SYSTEM:
a. WHOLE HOUSE VENTILATION SHALL BE PROVIDED BY EXHAUST FAN PROVIDING 320 CFM RUNNING INTERMITTENTLY PER 2015 IRC TABLES M1507.3.3 (182). FAN SHALL BE LESS THAN .35 WATT PER CFM AND CONNECTED TO A 24 HOUR CLOCK TIMER AND HAVE A SONE RATING OF LESS THAN 1.0. VENTILATION SHALL BE ABLE TO OPERATE INDEPENDENTLY OF HEATING SYSTEM.
b. SYSTEM SHALL HAVE A 5"Ø SMOOTH FRESH AIR DUCT W/ LOUVER & SCREEN CONNECTED TO THE RETURN AIR STREAM 4' UPSTREAM OF THE AIR HANDLER AND INSULATED W/ R-4 MIN IN HEATED AREAS.
c. SHALL HAVE A FILTER WITH A MERV OF AT LEAST 6 INSTALLED IN AN EASILY ACCESSIBLE LOCATION.
d. FRESH AIR VENT SHALL BE LOCATED AWAY FROM SOURCES OF ODORS OR FUMES, MIN 10' FROM PLUMBING OR APPLIANCE VENTS, AWAY FROM ROOMS W/ FUEL BURNING APPLIANCES, AND OUT OF ATTICS, CRAWL SPACES, AND GARAGES.
e. AIRFLOW FOR WHOLE HOUSE EXHAUST FAN SHALL BE PROVIDED BY UNDERCUTTING INTERIOR DOORS 1/2" ABOVE FINISHED FLOOR, TYP.

PLUMBING FIXTURES: ALL PLUMBING FIXTURES SHALL CONFORM TO RCW 19.27.170
ALL TOILETS 1.6 GPM MAX URINALS 1.0 GPF MAX
SHOWERHEADS <1.75 GPM KITCHEN FAUCETS <1.75 GPM
LAVATORIES < 1.0 GPM

SCALE: IF SHEET IS LESS THAN 24" x 36", IT IS A REDUCED PRINT, REDUCE SCALE ACCORDINGLY

PERMIT SET 5/2/2022

STURMAN ARCHITECTS
9 - 103rd Ave NE Suite 203 Bellevue, WA 98004
TEL: 425.451.7003

REGISTERED ARCHITECT
9960
BRADLEY J. STURMAN
STATE OF WASHINGTON

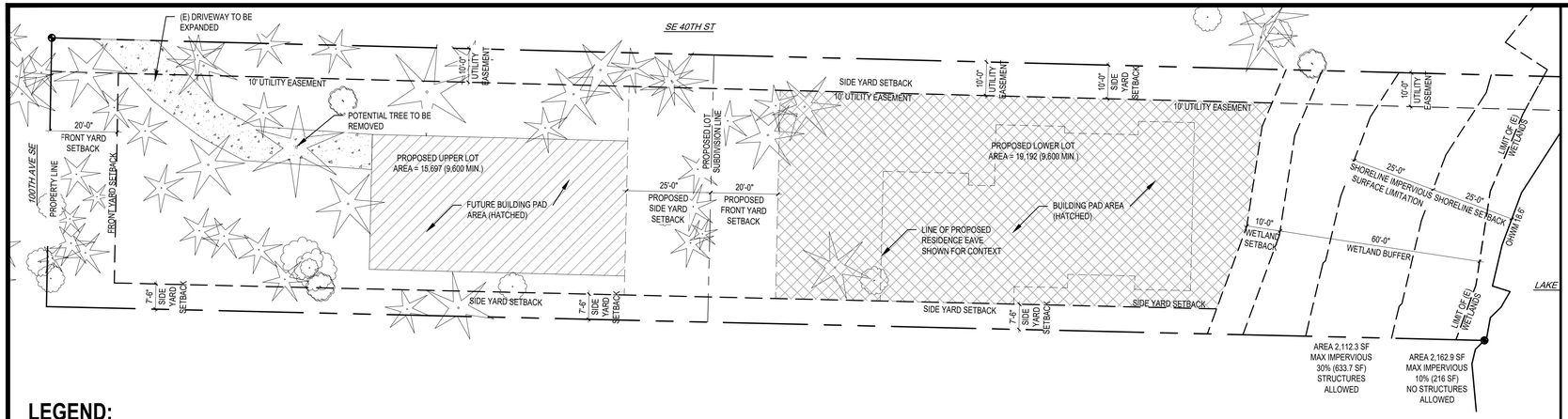
MOUNGER REMODEL
4006 E MERCER WAY
MERCER ISLAND, WA 98040

TITLE SHEET PROJECT DATA

REVISIONS:

PLOT DATE: 5/2/2022
DRAWN BY: JM
CHECKED BY: BJS

SHEET T1.0



LEGEND:

- CURRENT BUILDING PAD AREA
- PROPOSED UPPER LOT BUILDING PAD AREA
- PROPOSED MAIN BUILDING PAD AREA

PROPOSED LOT AREAS AFTER SUBDIVISION:

MAIN LOT = 19,192 SF
UPPER LOT = 15,697 SF

NOTE:

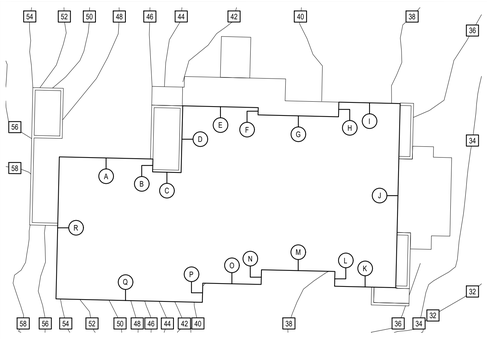
DIAGRAM IS FOR FUTURE SUBDIVISION TO INDICATE COMPLIANCE WITH MICC 19.02.020(I)(1)

N

SUBDIVISION/BUILDING PAD DIAGRAM

SCALE: 1" = 20'-0"

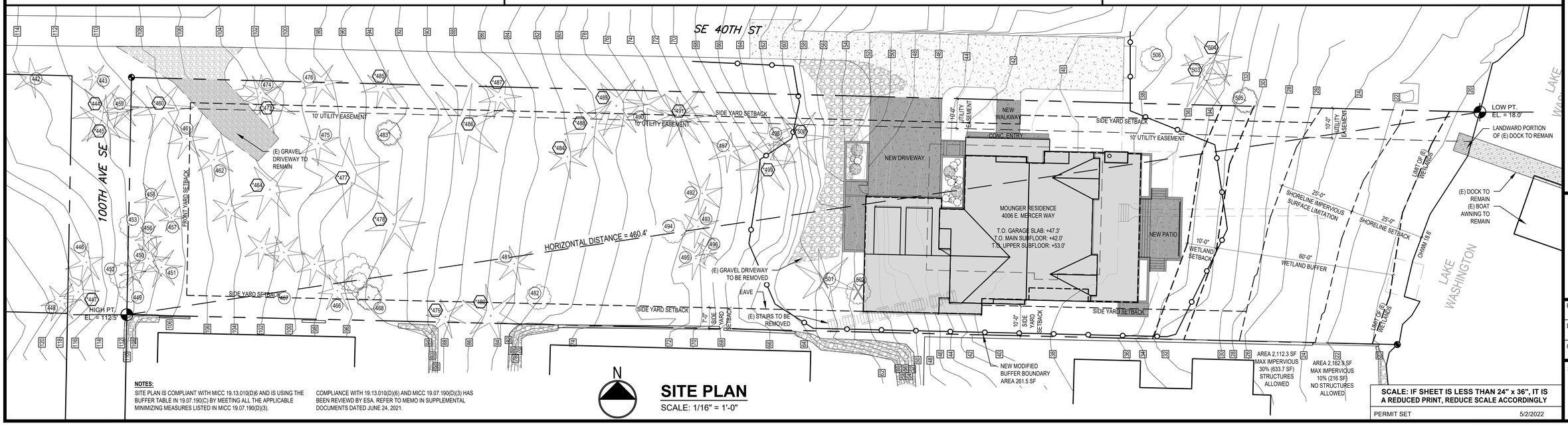
A.B.E.



	MIDPOINT ELEVATION	SEGMENT LENGTH
A:	47.1 FT	25.4 FT
B:	44.1 FT	3.5 FT
C:	43.2 FT	7.8 FT
D:	42.9 FT	18.1 FT
E:	41.9 FT	20.5 FT
F:	40.3 FT	2.0 FT
G:	39.8 FT	21.9 FT
H:	38.9 FT	4.0 FT
I:	38.3 FT	16.3 FT
J:	36.9 FT	50.0 FT
K:	36.9 FT	16.3 FT
L:	37.7 FT	4.0 FT
M:	38.6 FT	19.9 FT
N:	39.1 FT	4.0 FT
O:	39.5 FT	15.8 FT
P:	39.9 FT	5.2 FT
Q:	48.5 FT	39.9 FT
R:	54.2 FT	38.6 FT

MID POINT ELEVATION X SEGMENT LENGTH: / TOTAL WALL SEGMENT LENGTH: = 13,436.0 FT^2 / 313.2 FT = 42.9 FT

A.B.E.
42.9 FT



NOTES:

SITE PLAN IS COMPLIANT WITH MICC 19.13.010(D)6 AND IS USING THE BUFFER TABLE IN 19.07.190(C) BY MEETING ALL THE APPLICABLE MINIMIZING MEASURES LISTED IN MICC 19.07.190(D)(3).

COMPLIANCE WITH 19.13.010(D)(6) AND MICC 19.07.190(D)(3) HAS BEEN REVIEWD BY ESA. REFER TO MEMO IN SUPPLEMENTAL DOCUMENTS DATED JUNE 24, 2021.

N

SITE PLAN

SCALE: 1/16" = 1'-0"

SCALE: IF SHEET IS LESS THAN 24" x 36", IT IS A REDUCED PRINT, REDUCE SCALE ACCORDINGLY

PERMIT SET 5/2/2022

STURMAN ARCHITECTS
9 - 103rd Ave NE Suite 203 Bellevue, WA 98004
TEL: 425.457.7003

9562 REGISTERED ARCHITECT BRADLEY J. STURMAN STATE OF WASHINGTON

www.sturmanarchitects.com

MOUNGER REMODEL

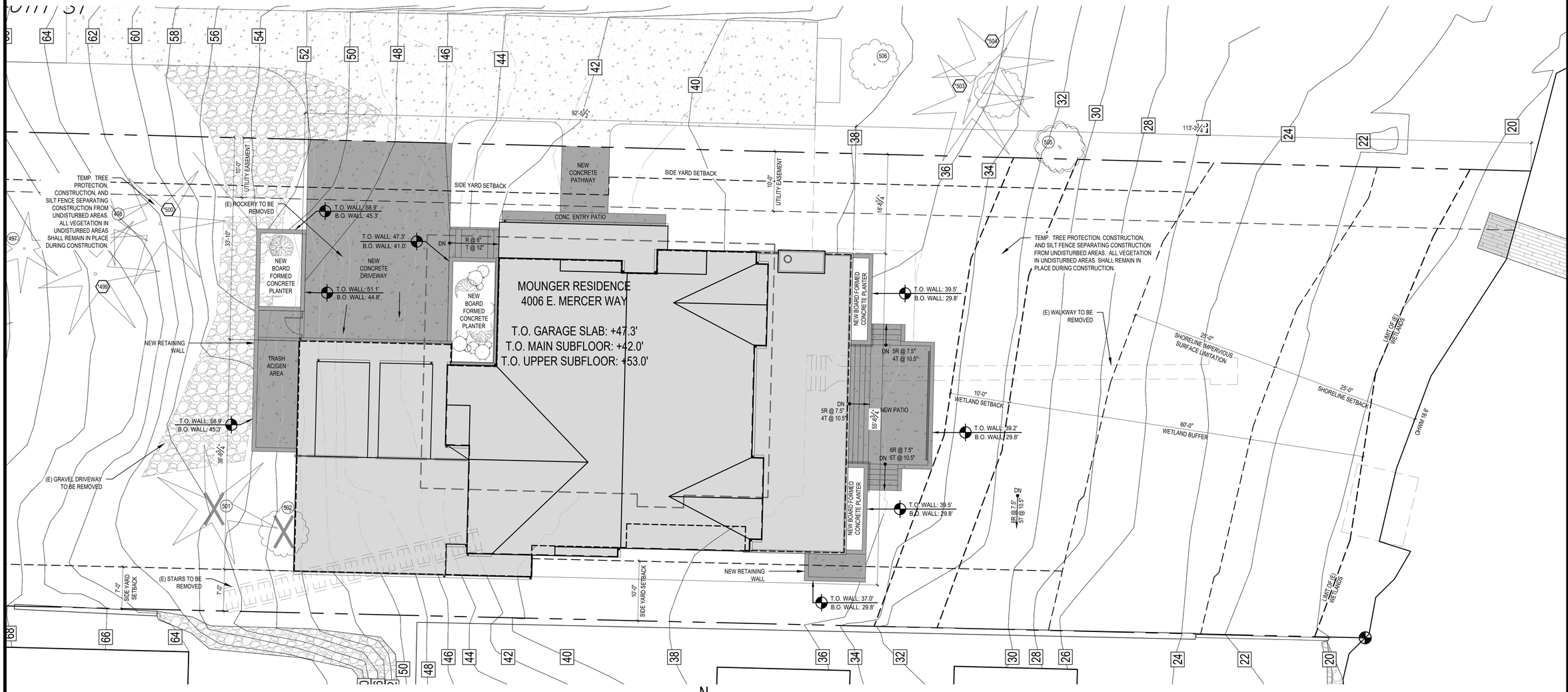
4006 E MERCER WAY
MERCER ISLAND, WA 98040

SITE PLAN PROJECT DATA

REVISIONS:

PLOT DATE: 5/2/2022
DRAWN BY: JM
CHECKED BY: BJS

SHEET T1.1



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SITE PLAN

SCALE: 1/8" 1'-0"

SCALE: IF SHEET IS LESS THAN 24" x 36", IT IS A REDUCED PRINT, REDUCE SCALE ACCORDINGLY

PERMIT SET 5/2/2022

STURMAN ARCHITECTS
9 - 103rd Ave NE Suite 203 Bellevue, WA 98004
TEL: 425.457.7003

REGISTERED ARCHITECT
9960
BRADLEY J. STURMAN
STATE OF WASHINGTON

4006 RESIDENCE

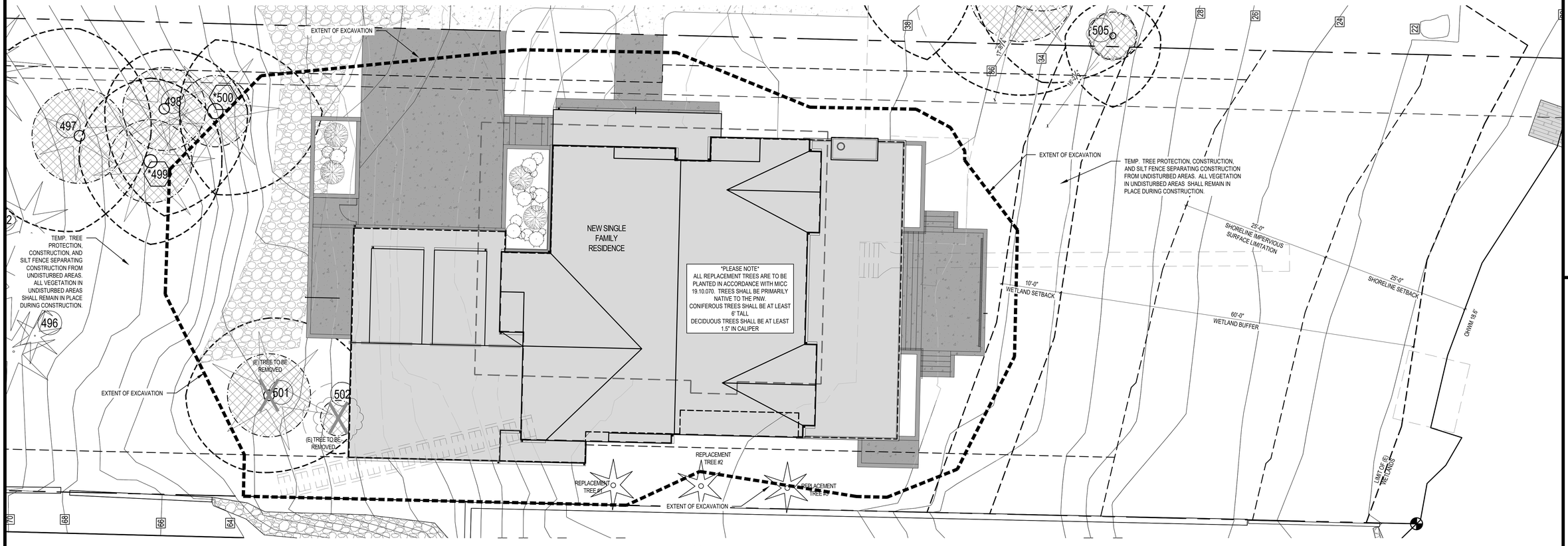
4006 E MERCER WAY
MERCER ISLAND, WA 98040

ENLARGED SITE PLAN

REVISIONS:

PLOT DATE: 5/2/2022
DRAWN BY: JM
CHECKED BY: BJS

SHEET
A1.0



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EXCAVATION PLAN

SCALE: 1/8" 1'-0"

SCALE: IF SHEET IS LESS THAN 24" x 36", IT IS A REDUCED PRINT, REDUCE SCALE ACCORDINGLY

PERMIT SET 5/2/2022

STURMAN ARCHITECTS
9- 103rd Ave NE Suite 203 Bellevue, WA 98004
TEL: 425.457.7003

REGISTERED ARCHITECT
BRADLEY J. STURMAN
STATE OF WASHINGTON
9960

4006 RESIDENCE

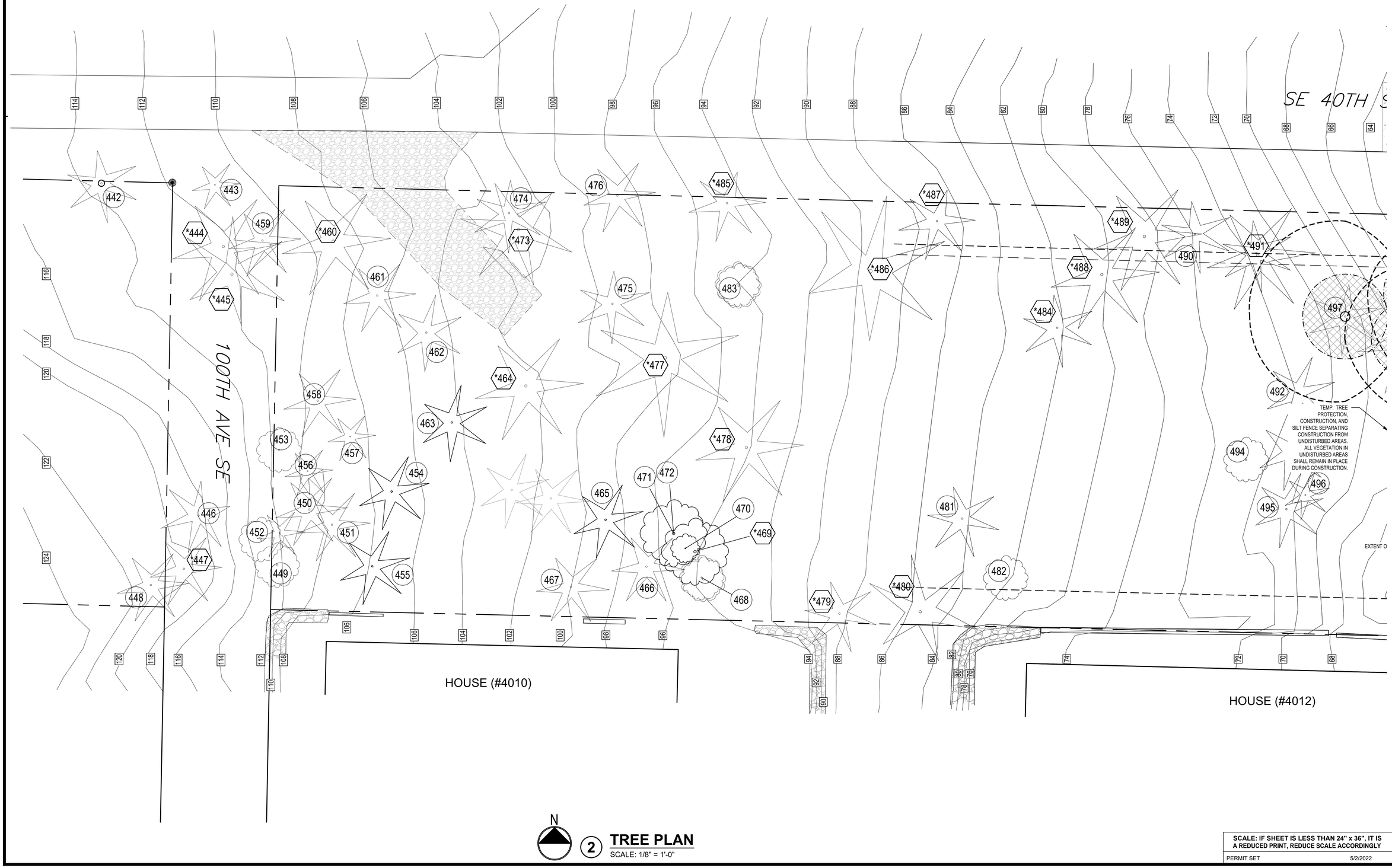
4006 E MERCER WAY
MERCER ISLAND, WA 98040

EXCAVATION PLAN

REVISIONS:

PLOT DATE: 5/2/2022
DRAWN BY: JM
CHECKED BY: BJS

SHEET
A1.2



N

2 TREE PLAN

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

SCALE: IF SHEET IS LESS THAN 24" x 36", IT IS A REDUCED PRINT, REDUCE SCALE ACCORDINGLY

PERMIT SET 5/2/2022

STURMAN ARCHITECTS
TEL: 425.451.7003 9 - 103rd Ave NE Suite 203 Bellevue, WA 98004

REGISTERED ARCHITECT
9960
BRADLEY J. STURMAN
STATE OF WASHINGTON

4006 RESIDENCE

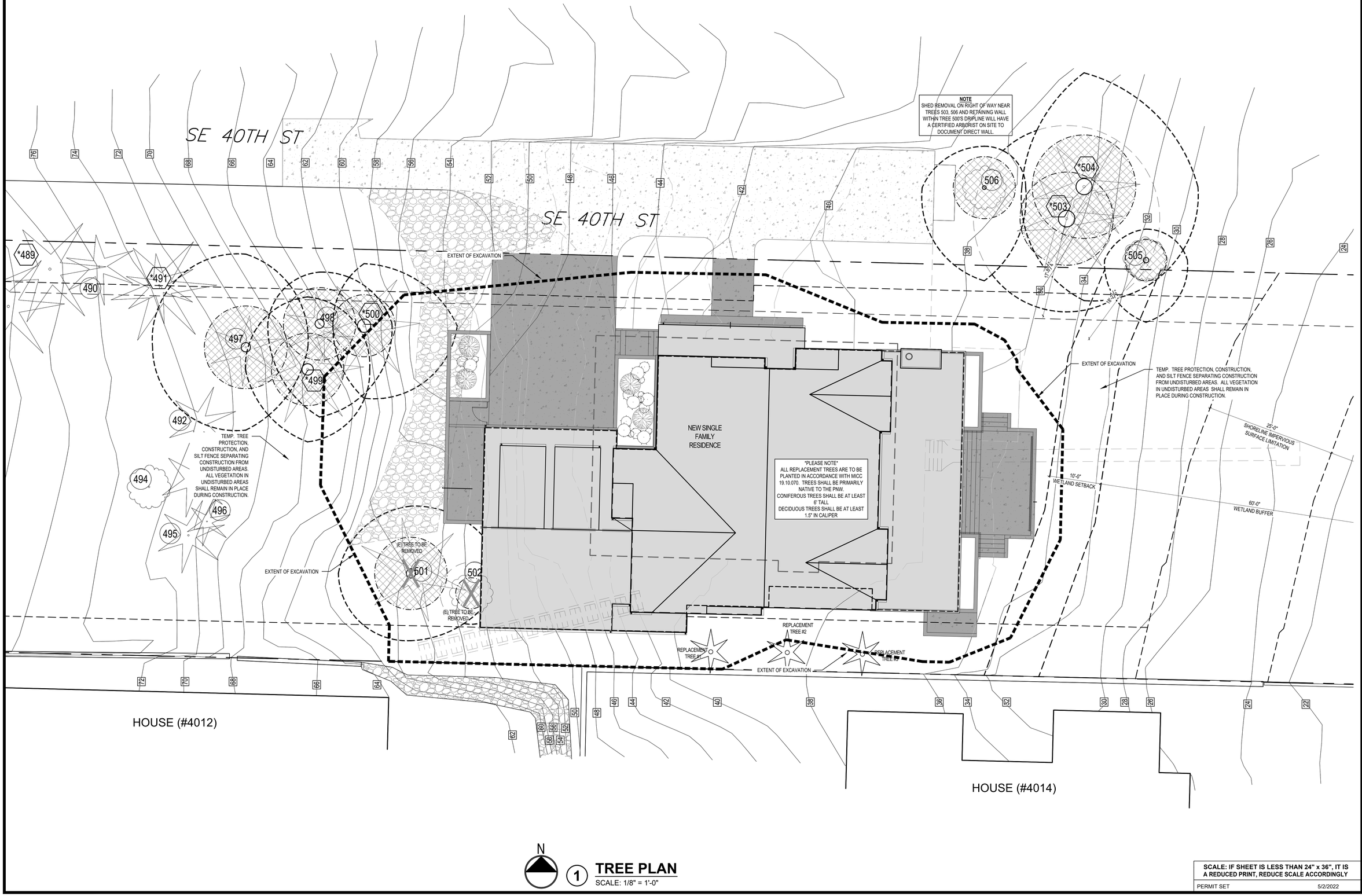
4006 E MERCER WAY
MERCER ISLAND, WA 98040

TREE PLAN (CONT.)

REVISIONS:

PLOT DATE: 5/2/2022
DRAWN BY: JM
CHECKED BY: BJS

SHEET
A1.4



N

1 **TREE PLAN**
SCALE: 1/8" = 1'-0"

SCALE: IF SHEET IS LESS THAN 24" x 36", IT IS A REDUCED PRINT, REDUCE SCALE ACCORDINGLY

PERMIT SET 5/2/2022

STURMAN ARCHITECTS
9 - 103rd Ave NE Suite 203 Bellevue, WA 98004
TEL: 425.457.7003

REGISTERED ARCHITECT
BRADLEY J. STURMAN
STATE OF WASHINGTON
9960

4006 RESIDENCE

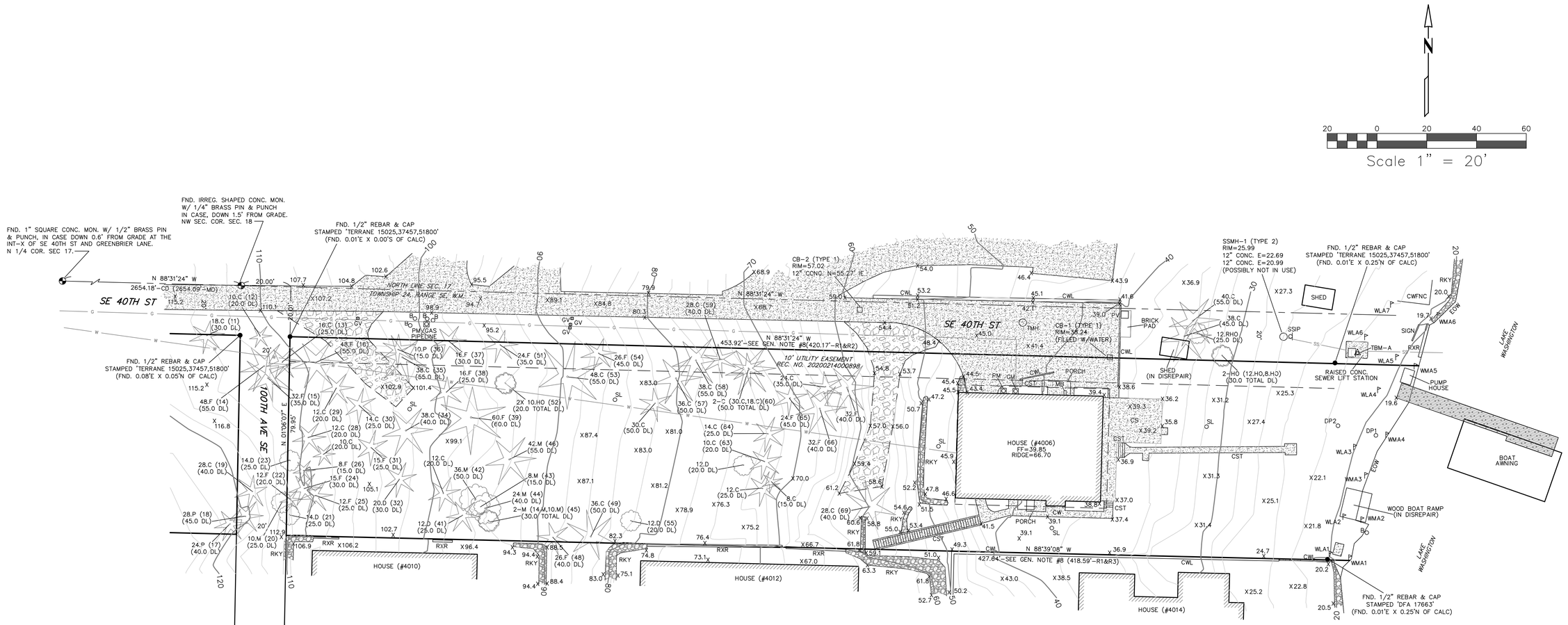
4006 E MERCER WAY
MERCER ISLAND, WA 98040

TREE PLAN

REVISIONS:

PLOT DATE: 5/2/2022
DRAWN BY: KE
CHECKED BY: BJS

SHEET **A1.3**



MERIDIAN

ASSUMED– BASIS OF BEARING N. LINE OF SEC. 17, T.24N, R.5E, W.M. AS SHOWN HEREON

LEGEND:

- FOUND MONUMENT AS DESCRIBED
- FOUND EXISTING PROP. COR. AS SHOWN
- TEMPORARY BENCHMARK AS SHOWN ON MAP

B	BOLLARD
C	CEDAR TREE
CB	CATCH BASIN
CD	CALCULATED DIMENSION
CS	CONCRETE SLAB
CST	CONCRETE STAIRS
CW	CONCRETE WALK
CWL	CONCRETE WALL
CWFNC	CHICKEN WIRE FENCE
D	DECIDUOUS TREE
DL	DRIP LINE
DP	DATA POINT
EOW	EDGE OF WATER
F	FIR TREE
FF	FINISH FLOOR ELEVATION
GM	GAS METER
GV	GAS VALVE
HO	HOLLY TREE
IE	INVERT ELEVATION
M	MAPLE TREE
MB	MAILBOX
MD	MEASURED DIMENSION
P	PINE TREE
PM	POWER METER
PV	POWER VAULT
RXR	RAILROAD TIE WALL
RHO	RHODODENDRON TREE
RKY	ROCKERY
SL	SOIL LOG
TMH	TELEPHONE MANHOLE
WM	WATER METER
WMA	WATER LOCATION FLAG
WLA	WETLAND FLAG

LEGAL DESCRIPTION

PER STATUTORY WARRANTY DEED REC. NO. 20200423001396

LOT 1, LAKEHOLM ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 12 OF PLATS, PAGE 52, RECORDS OF KING COUNTY, WASHINGTON;

TOGETHER WITH SECOND CLASS SHORELANDS ADJACENT OR ABUTTING THEREON.

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

CONTOUR INTERVAL = 2'

EQUIPMENT & PROCEDURES

FIELD SURVEY CONDUCTED USING A COMBINATION OF GPS USING A REFERENCE NETWORK AND A 5" ELECTRONIC TOTAL STATION WAS USED FOR THIS FIELD TRAVERSE SURVEY. SURVEY PROCEDURES MEET OR EXCEED STATE STANDARDS AS SPECIFIED BY W.A.C. 332-130 WITH REGARD TO LINEAR AND ANGULAR CLOSURES.
ALL MEASURING INSTRUMENTS FOR THIS SURVEY HAVE BEEN MAINTAINED ACCORDING TO MANUFACTURES SPECIFICATIONS AND HAVE BEEN COMPARED WITH A NATIONAL GEODETIC SURVEY CALIBRATED BASELINE WITHIN THE LAST 12 MONTHS.

REFERENCES

1. ALTA/NSPS LAND TITLE SURVEY BY TERRANE; PROVIDED BY CLIENT (R1)
2. RECORD OF SURVEY; VOL. 54 OF SURVEYS, PAGE 202; REC. NO. 198704019003 (R2)
3. RECORD OF SURVEY; VOL. 164 OF SURVEYS, PAGE 03; REC. NO. 20031029900002 (R3)

GENERAL NOTES

1. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE ON THE DATE INDICATED AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITION EXISTING AT THAT TIME.

2. UNDERGROUND UTILITIES WERE LOCATED BASED ON THE SURFACE EVIDENCE OF UTILITIES (I.E. PAINT MARKS, SAW CUTS IN PAVEMENT, COVERS, LIDS ETC.) THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION, ELEVATION AND SIZE OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.

3. TREE SIZES WERE LOCATED & SPECIES DETERMINED TO THE BEST OF OUR ABILITY. HOWEVER, TYEE SURVEYORS DOES NOT WARRANT THE ACCURACY OF SIZE & SPECIES SHOWN HEREON. ANY TREES CONSIDERED TO BE CRITICAL SHOULD BE VERIFIED BY A TRAINED ARBORIST. TREES MEASURED IN INCHES AT BREAST HEIGHT, DRIPLINES SHOWN ARE DIAMETER, IN FEET. (XX) IS NUMBER OF TREE TAG, IF AVAILABLE.

4. NO PROPERTY CORNERS WERE SET IN CONJUNCTION WITH THIS SURVEY.

5. MAP SYMBOLS ARE NOT TO SCALE, AND ARE FOR GRAPHIC PURPOSES ONLY.

6. THIS SURVEY WAS CREATED USING A COMBINATION OF INTERNAL RECORDS, KING COUNTY RECORDS OF SURVEY NO'S. 20031029900002 & 198704019003 AND THE PLAT OF LAKEHOLM ADD.

7. THE INTENT OF THIS SURVEY IS TO AID WITH DESIGN/PLANNING FOR THIS SITE.

8. THE NORTH AND SOUTH PROPERTY LINES WERE CREATED FROM AND MATCH R1, R2, & R3 IN BEARING RELATIONSHIP BUT HAVE BEEN EXTENDED TO THE EDGE OF WATER LOCATIONS DONE BY TYEE SURVEYORS ON 5-20-2020.

BENCHMARK & DATUM INFO

VERTICAL DATUM: NAVD88

ORIGINAL BM: CITY OF MERCER ISLAND BM-MI 1074: FND. 1" SQUARE CONC. MON. W/ 1/2" BRASS SPIN & PUNCH, IN CASE DOWN 0.6' FROM GRADE AT THE INT-X OF SE 40TH ST AND GREENBRIER LANE
ELEV. = 305.67

TBM – A: CITY OF MERCER ISLAND BM-PS 12: FND. 2" BRASS DISC SURFACE MON. STAMPED 'CITY OF MERCER ISLAND GPS CONTROL' SET ON TOP OF A RAISED SEWER LIFT STATION VAULT NEAR THE NE CORNER OF THE SITE AS SHOWN ON MAP.
ELEV. = 24.18

HATCH LEGEND

- DECK HATCH
- BUILDING HATCH
- CONCRETE HATCH
- GRAVEL HATCH
- ROCKERY HATCH
- W — UNDERGROUND WATER LINE
- G — UNDERGROUND GAS LINE
- SS — SANITARY SEWER LINE
- XXX.X SPOT ELEVATION
- CONIFER TREE
- DECIDUOUS TREE

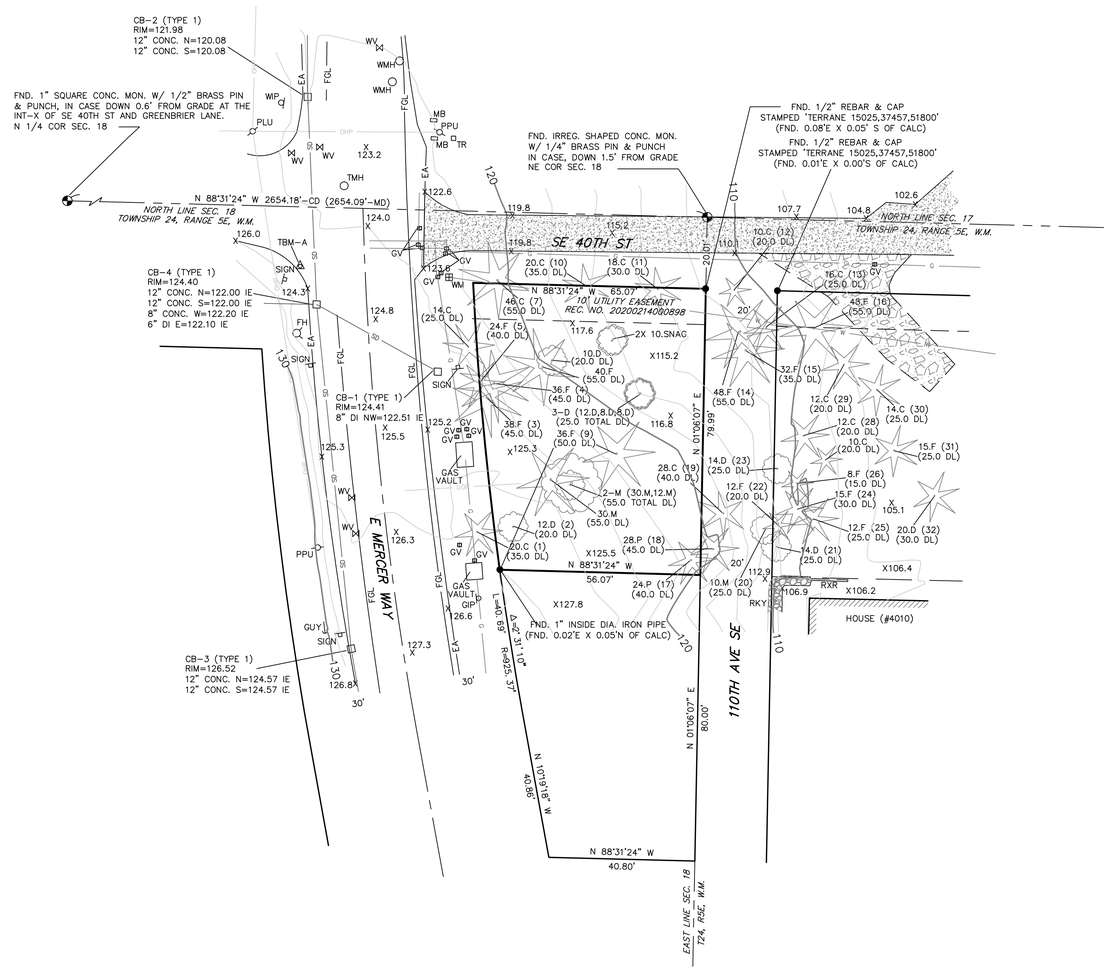
5-24-2021

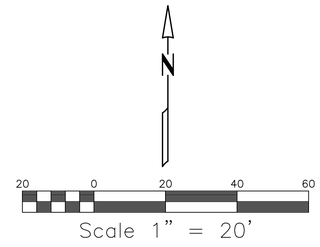
SITE ADDRESS: 4006 E MERCER WAY
PARCEL NUMBER: 413190-0005
NW1/4, NW1/4, SEC. 17, T. 24 N., R. 5 E., W.M.
CITY OF MERCER ISLAND, WASHINGTON

TOPOGRAPHIC SURVEY
for
MITCH MOUNGER
4006 E MERCER WAY MERCER ISLAND, WASHINGTON 98040

TYEE SURVEYORS
Tyee Surveyors
PROFESSIONAL LAND SURVEYORS
10007 GREENWOOD AV. N. SEATTLE, WA. 98133 206-525-3660

DRAWN BY:	DATE:	JOB NO.:
AA	5-24-2021	20057
CHKD BY:	SCALE:	SHEET:
TG	1" = 20'	1 OF 2





MERIDIAN

ASSUMED– BASIS OF BEARING N. LINE OF SEC. 18, T.24N, R.5E, W.M. AS SHOWN HEREON

LEGEND:

- FOUND MONUMENT AS DESCRIBED
- FOUND EXISTING PROP. COR. AS SHOWN
- TEMPORARY BENCHMARK AS SHOWN ON MAP

C	CEDAR TREE	MD	MEASURED DIMENSION
CB	CATCH BASIN	P	PINE TREE
CD	CALCULATED DIMENSION	PM	POWER METER
D	DECIDUOUS TREE	PPU	POWER POLE W/UNDERGND.
DL	DRIP LINE	PPL	POWER POLE W/LIGHT
EA	EDGE ASPHALT	PLU	POWER POLE W/LIGHT + UNDERGND.
F	FIR TREE	PV	POWER VAULT
FGL	FOG LINE	RXR	RAILROAD TIE WALL
GIP	GAS INDICATOR POST	RHO	RHODODENDRON TREE
GUY	GUY WIRE	RKY	ROCKERY
GV	GAS VALVE	TMH	TELEPHONE MANHOLE
IE	INVERT ELEVATION	TR	TELEPHONE RISER
M	MAPLE TREE	WIP	WATER INDICATOR POST
MB	MAILBOX	WM	WATER METER

ROCKERY HATCH · BUILDING HATCH · CONCRETE HATCH · GRAVEL HATCH

UGP UNDERGROUND POWER LINE
OHP OVERHEAD POWER LINE
G UNDERGROUND GAS LINE
W UNDERGROUND WATER LINE

XXX.X SPOT ELEVATION

CONIFER TREE · DECIDUOUS TREE

CONTOUR INTERVAL = 2'

BENCHMARK & DATUM INFO

VERTICAL DATUM: NAVD88

ORIGINAL BM: CITY OF MERCER ISLAND BM–MI 1074: FND. 1" SQUARE CONC. MON. W/ 1/2" BRASS SPIN & PUNCH, IN CASE DOWN 0.6' FROM GRADE AT THE INT–X OF SE 40TH ST AND GREENBRIER LANE
ELEV. = 305.67

TBM – A: MAG NAIL SET AT IN THE SW QUAD OF THE INT–X OF E MERCER WAY & SE 40TH ST.
ELEV. = 124.31

LEGAL DESCRIPTION

(PER FIDELITY NATIONAL TITLE COMPANY EXHIBIT 'A', ORDER NO. 611232976)

THE NORTH 80 FEET OF THE SOUTH 160 FEET OF THE NORTH 180 FEET OF THAT PORTION OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 18, TOWNSHIP 24 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON, LYING EAST OF EAST MERCER WAY.

GENERAL NOTES

1. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE ON THE DATE INDICATED AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITION EXISTING AT THAT TIME.

2. UNDERGROUND UTILITIES WERE LOCATED BASED ON THE SURFACE EVIDENCE OF UTILITIES (I.E. PAINT MARKS, SAW CUTS IN PAVEMENT, COVERS, LIDS ETC.) THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION, ELEVATION AND SIZE OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.

3. TREE SIZES WERE LOCATED & SPECIES DETERMINED TO THE BEST OF OUR ABILITY. HOWEVER, TYEE SURVEYORS DOES NOT WARRANT THE ACCURACY OF SIZE & SPECIES SHOWN HEREON. ANY TREES CONSIDERED TO BE CRITICAL SHOULD BE VERIFIED BY A TRAINED ARBORIST.

4. TREE SIZES MEASURED IN INCHES AT BREAST HEIGHT. DL = DRIP LINE DIAMETER IN FEET WITH A DESIGNATION OF (XX) FOR THE TREE TAG NUMBER IF MARKED ON TREE

5. NO PROPERTY CORNERS WERE SET IN CONJUNCTION WITH THIS SURVEY.

6. MAP SYMBOLS ARE NOT TO SCALE, AND ARE FOR GRAPHIC PURPOSES ONLY.

7. THIS SURVEY WAS CREATED USING A COMBINATION OF INTERNAL RECORDS AND KING COUNTY RECORDS OF SURVEY NO'S. 20031029900002 & 19870419003.

8. THE INTENT OF THIS SURVEY IS TO AID WITH DESIGN/PLANNING FOR THIS SITE.

EQUIPMENT & PROCEDURES

FIELD SURVEY CONDUCTED USING A COMBINATION OF GPS USING A REFERENCE NETWORK AND A 5" ELECTRONIC TOTAL STATION WAS USED FOR THIS FIELD TRAVERSE SURVEY.
SURVEY PROCEDURES MEET OR EXCEED STATE STANDARDS AS SPECIFIED BY W.A.C. 332–130 WITH REGARD TO LINEAR AND ANGULAR CLOSURES.
ALL MEASURING INSTRUMENTS FOR THIS SURVEY HAVE BEEN MAINTAINED ACCORDING TO MANUFACTURES SPECIFICATIONS AND HAVE BEEN COMPARED WITH A NATIONAL GEODETIC SURVEY CALIBRATED BASELINE WITHIN THE LAST 12 MONTHS.

5–24–2021

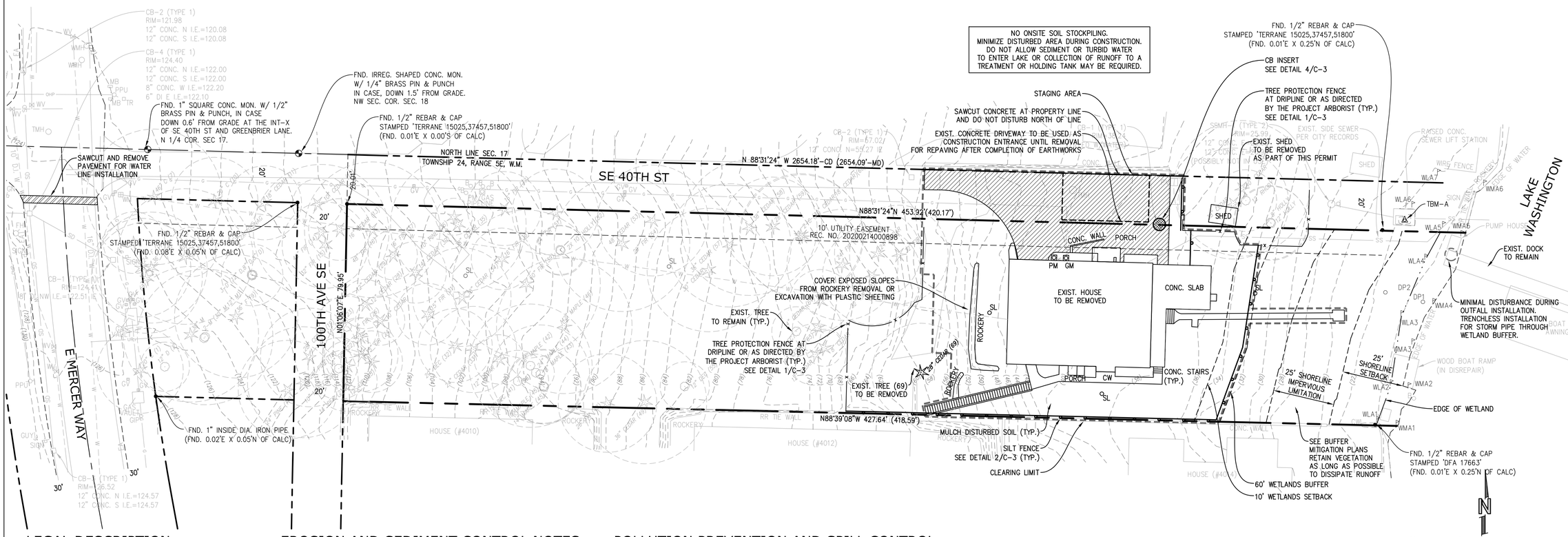
PARCEL NUMBER: 182405–9028
NE1/4, NE1/4, SEC. 18, T. 24 N., R. 5 E., W.M.
CITY OF MERCER ISLAND, WASHINGTON

TOPOGRAPHIC SURVEY
for
MITCH MOUNGER
4006 E MERCER WAY MERCER ISLAND, WASHINGTON 98040

Tyee Surveyors
PROFESSIONAL LAND SURVEYORS
10007 GREENWOOD AV. N. SEATTLE, WA. 98133 206–525–3660

DRAWN BY:	DATE:	JOB NO.:
AA	5–24–2021	20057
CHKD BY:	SCALE:	SHEET:
TG	1" = 20'	2 OF 2

NW1/4, NW1/4, SEC. 17, T. 24 N., R. 5 E., W.M.



LEGAL DESCRIPTION

PER STATUTORY WARRANTY DEED REC. NO. 20200423001396

LOT 1, LAKEHOLM ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 12 OF PLATS, PAGE 52, RECORDS OF KING COUNTY, WASHINGTON;

TOGETHER WITH SECOND CLASS SHORELANDS ADJACENT OR ABUTTING THEREON.

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

BENCHMARK & DATUM

VERTICAL DATUM: NAVD88

ORIGINAL BM: CITY OF MERCER ISLAND BM-MI 1074: FND. 1" SQUARE CONC. MON. W/ 1/2" BRASS SPIN & PUNCH, IN CASE DOWN 0.6' FROM GRADE AT THE INT-X OF SE 40TH ST AND GREENBRIER LANE
ELEV.=305.67

TBM A: CITY OF MERCER ISLAND BM-PS 12: FND. 2" BRASS DISC SURFACE MON. STAMPED 'CITY OF MERCER ISLAND GPS CONTROL' SET ON TOP OF A RAISED SEWER LIFT STATION VAULT NEAR THE NE CORNER OF THE SITE AS SHOWN ON MAP.
ELEV.=24.18

EROSION AND SEDIMENT CONTROL NOTES

1. APPROVAL OF THIS EROSION AND SEDIMENT CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G., SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
2. THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/ESC SUPERVISOR UNTIL ALL CONSTRUCTION IS APPROVED.
3. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED BY A CONTINUOUS LENGTH OF SURVEY TAPE (OR FENCING, IF REQUIRED) PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE CLEARING LIMITS SHALL BE PERMITTED. THE CLEARING LIMITS SHALL BE MAINTAINED BY THE APPLICANT/ESC SUPERVISOR FOR THE DURATION OF CONSTRUCTION.
4. 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.
5. 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 SUMP PUMPS, RELOCATION OF DITCHES AND SILT FENCES, ETC.).
6. 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 DURING THE WET SEASON (OCT. 1 TO APRIL 30) AND OF MONTHLY REVIEWS DURING THE DRY SEASON (MAY 1 TO SEPT. 30).
7. 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 METHODS (E.G., SEEDING, MULCHING, PLASTIC COVERING, ETC.).
8. ANY AREA NEEDING ESC MEASURES NOT REQUIRING IMMEDIATE ATTENTION SHALL BE ADDRESSED WITHIN FIFTEEN (15) DAYS.
9. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN FORTY-EIGHT (48) HOURS FOLLOWING A STORM EVENT.
10. 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.
11. STABILIZED CONSTRUCTION ENTRANCES AND ROADS SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES, SUCH AS WASH PADS, MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
12. ANY PERMANENT FLOW CONTROL FACILITY USED AS A TEMPORARY SETTLING BASIN SHALL BE MODIFIED WITH THE NECESSARY EROSION CONTROL MEASURES AND SHALL PROVIDE ADEQUATE STORAGE CAPACITY. IF THE FACILITY IS TO FUNCTION ULTIMATELY AS AN INFILTRATION SYSTEM, THE TEMPORARY FACILITY MUST BE GRADED SO THAT THE BOTTOM AND SIDES ARE AT LEAST THREE FEET ABOVE THE FINAL GRADE OF THE PERMANENT FACILITY.
13. WHERE STRAW MULCH FOR TEMPORARY EROSION CONTROL IS REQUIRED, IT SHALL BE APPLIED AT A MINIMUM THICKNESS OF 2 TO 3 INCHES.
14. PRIOR TO THE BEGINNING OF THE WET SEASON (OCT. 1), ALL DISTURBED AREAS SHALL BE REVIEWED TO IDENTIFY WHICH ONES CAN BE SEEDED IN PREPARATION FOR THE WINTER RAINS. DISTURBED AREAS SHALL BE SEEDED WITHIN ONE WEEK OF THE BEGINNING OF THE WET SEASON. A SKETCH MAP OF THOSE AREAS TO BE SEEDED AND THOSE AREAS TO REMAIN UNCOVERED SHALL BE SUBMITTED TO THE DOES INSPECTOR. THE DOES INSPECTOR CAN REQUIRE SEEDING OF ADDITIONAL AREAS IN ORDER TO PROTECT SURFACE WATERS, ADJACENT PROPERTIES, OR DRAINAGE FACILITIES.

POLLUTION PREVENTION AND SPILL CONTROL

STORAGE AND HANDLING OF LIQUIDS
1. MINIMIZE AMOUNT OF LIQUIDS STORED ON SITE.
2. STORE AND CONTAIN LIQUID MATERIALS IN SUCH A MANNER THAT IF A VESSEL IS RUPTURED OR LEAKS, THE CONTENTS WILL NOT DISCHARGE, FLOW, OR BE WASHED INTO THE STORM DRAINAGE SYSTEM, SURFACE WATERS, OR GROUNDWATER. TYPICALLY THIS MEANS INSTALLING SECONDARY CONTAINMENT, SUCH AS A LINED EXCAVATION, LARGER CONTAINER, OR USING A DOUBLE-WALLED TANK OR SIMILAR COMMERCIALLY AVAILABLE CONTAINMENT FACILITY.
3. PLACE TIGHT-FITTING LIDS ON ALL CONTAINERS.
4. ENCLOSE OR COVER THE CONTAINERS WHERE THEY ARE STORED TO PROTECT FROM RAIN. THE LOCAL FIRE DISTRICT MUST BE CONSULTED FOR LIMITATIONS ON CLEARANCE OF ROOF COVERS OVER CONTAINERS USED TO STORE FLAMMABLE MATERIALS.
5. RAISE THE CONTAINERS OFF THE GROUND BY USING A SPILL CONTAINMENT PALLET OR SIMILAR METHOD THAT HAS PROVISIONS FOR SPILL CONTROL.
6. PLACE DRIP PANS OR ABSORBENT MATERIALS BENEATH ALL MOUNTED CONTAINER TAPS, AND AT ALL POTENTIAL DRIP AND SPILL LOCATIONS DURING FILLING AND UNLOADING OF CONTAINERS. ANY COLLECTED LIQUIDS OR SOILED ABSORBENT MATERIALS MUST BE REUSED, RECYCLED, OR PROPERLY DISPOSED OF.
7. STORE AND MAINTAIN ABSORBENT PADS OR APPROPRIATE SPILL CLEANUP MATERIALS NEAR THE CONTAINER STORAGE AREA, IN A LOCATION KNOWN TO ALL. ENSURE THAT EMPLOYEES ARE FAMILIAR WITH THE SITE'S SPILL PLAN AND/OR PROPER SPILL CLEANUP PROCEDURES.
8. CHECK CONTAINERS (AND ANY CONTAINMENT SUMPS) DAILY FOR LEAKS AND SPILLS. REPLACE CONTAINERS THAT ARE LEAKING, CORRODED, OR OTHERWISE DETERIORATING. IF THE LIQUID CHEMICALS ARE CORROSIVE, CONTAINERS MADE OF COMPATIBLE MATERIALS MUST BE USED INSTEAD OF METAL DRUMS. NEW OR SECONDARY CONTAINERS MUST BE LABELED WITH THE PRODUCT NAME AND HAZARDS.
9. PLACE DRIP PANS OR ABSORBENT MATERIALS BENEATH A CONTAINER THAT IS FOUND TO BE LEAKING. REMOVE THE DAMAGED CONTAINER AS SOON AS POSSIBLE. MOP UP THE SPILLED LIQUID WITH ABSORBENT PADS OR RAGS. ANY COLLECTED LIQUIDS OR SOILED ABSORBENT MATERIALS MUST BE REUSED, RECYCLED, OR PROPERLY DISPOSED OF.

FUELING
1. LOCATE THE FUELING OPERATION TO ENSURE LEAKS OR SPILLS WILL NOT DISCHARGE, FLOW, OR BE WASHED INTO THE STORM DRAINAGE SYSTEM, SURFACE WATER, OR GROUNDWATER.
2. USE DRIP PANS OR ABSORBENT PADS TO CAPTURE DRIPS OR SPILLS DURING FUELING OPERATIONS.
3. IF FUELING IS DONE DURING EVENING HOURS, LIGHTING MUST BE PROVIDED.
4. STORE AND MAINTAIN APPROPRIATE SPILL CLEANUP MATERIALS IN THE MOBILE FUELING VEHICLE. ENSURE THAT EMPLOYEES ARE FAMILIAR WITH PROPER SPILL CONTROL AND CLEANUP PROCEDURES.
5. IMMEDIATELY MOP UP ANY SPILLED FUEL WITH ABSORBENT PADS OR RAGS. ANY COLLECTED LIQUIDS OR SOILED ABSORBENT MATERIALS MUST BE REUSED, RECYCLED, OR PROPERLY DISPOSED OF.

CONCRETE SAW CUTTING, SLURRY, AND WASHWATER DISPOSAL
1. SLURRY FROM SAW CUTTING THE SIDEWALK SHALL BE VACUUMED SO THAT IT DOES NOT ENTER NEARBY STORM DRAINS.
2. CONCRETE TRUCK CHUTES, PUMPS, AND INTERNALS SHALL BE WASHED OUT ONLY INTO FORMED AREAS AWAITING INSTALLATION OF CONCRETE.
3. UNUSED CONCRETE REMAINING IN THE TRUCK AND PUMP SHALL BE RETURNED TO THE ORIGINATING BATCH PLANT FOR RECYCLING.
4. HAND TOOLS INCLUDING, BUT NOT LIMITED, SCREEDS, SHOVELS, RAKES, FLOATS, AND TROWELS SHALL BE WASHED OFF ONLY INTO FORMED INTO FORMED AREAS AWAITING INSTALLATION OF CONCRETE OR IMPERMEABLE ASPHALT.
5. EQUIPMENT THAT CANNOT BE EASILY MOVED, SUCH AS CONCRETE PAVERS, SHALL ONLY BE WASHED IN AREAS THAT DO NOT DIRECTLY DRAIN TO NATURAL OR CONSTRUCTED STORMWATER CONVEYANCES.
6. WASHDOWN FROM AREAS SUCH AS CONCRETE AGGREGATE DRIVEWAY SHALL NOT DRAIN DIRECTLY TO NATURAL OR CONSTRUCTED STORMWATER CONVEYANCES.
7. WHEN NO FORMED AREAS ARE AVAILABLE, WASHWATER AND LEFTOVER PRODUCT SHALL BE CONTAINED IN A LINED CONTAINER. CONTAINED CONCRETE SHALL BE DISPOSED OF IN A MANNER THAT DOES NOT VIOLATE GROUNDWATER OR SURFACE WATER QUALITY STANDARDS.
8. CONTAINERS SHALL BE CHECKED FOR HOLES IN THE LINER DAILY DURING CONCRETE POURS AND REPLACED THE SAME DAY.

CALL 48 HOURS BEFORE YOU DIG 1-800-424-5555

N3L
Nick Bossoff Engineering, Inc.
191 NE Tarl Lane
Stevenson, WA 98648-4201
Phone: (425) 881-5904

BOSSOFF, NICHOLAS E. — STATE OF WASHINGTON — 29631 — REGISTERED PROFESSIONAL ENGINEER
EXPIRES 7/2/23

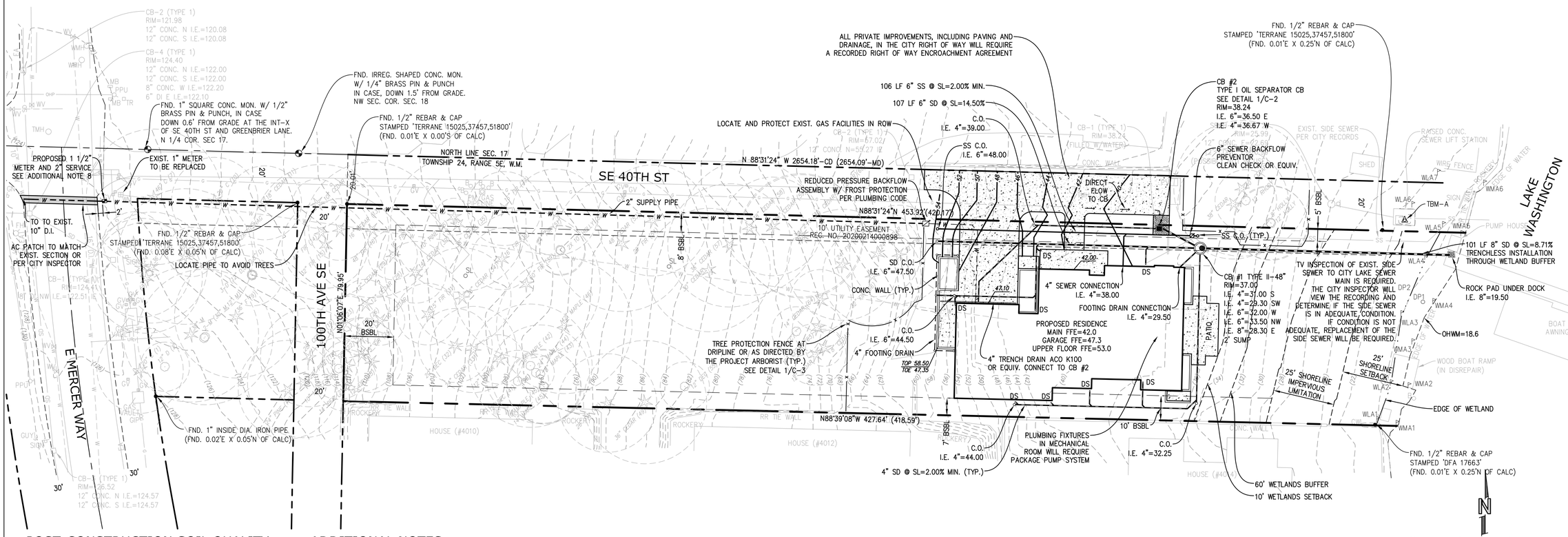
NO.	DATE	REVISION
1	09/25/20	PERMIT SUBMITTAL
2	07/14/21	BLDG SCOPE CHANGE & CITY COMMENTS
3	10/18/21	WALL REVISION
4	02/07/22	CITY COMMENTS
5	04/29/22	REVISED BUILDING

N. BOSSOFF, P.E.
PROJECT MANAGER: NB
DESIGNED: TKB
DRAWN: SARC-2002
JOB NUMBER: SARC-2002pln.dwg
FILE NAME:

MOUNGER RESIDENCE
4006 E MERCER WAY
MERCER ISLAND WASHINGTON

TITLE: T.E.S.C. PLAN

SHEET: C-1



POST-CONSTRUCTION SOIL QUALITY AND DEPTH NOTES

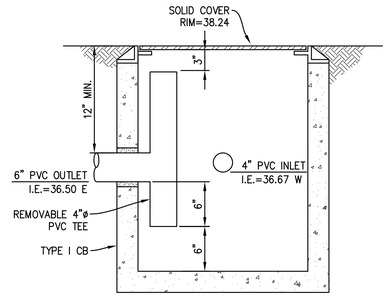
A. SOIL RETENTION. RETAIN, IN AN UNDISTURBED STATE, THE DUFF LAYER AND NATIVE TOPSOIL TO THE MAXIMUM EXTENT PRACTICABLE. IN ANY AREAS REQUIRING GRADING REMOVE AND STOCKPILE THE DUFF LAYER AND TOPSOIL ON SITE IN A DESIGNATED, CONTROLLED AREA, NOT ADJACENT TO PUBLIC RESOURCES AND CRITICAL AREAS, TO BE REAPPLIED TO OTHER PORTIONS OF THE SITE WHERE FEASIBLE.

B. SOIL QUALITY. ALL AREAS SUBJECT TO CLEARING AND GRADING THAT HAVE NOT BEEN COVERED BY IMPERVIOUS SURFACE, INCORPORATED INTO A DRAINAGE FACILITY OR ENGINEERED AS STRUCTURAL FILL OR SLOPE SHALL, AT PROJECT COMPLETION, DEMONSTRATE THE FOLLOWING:
   1. A TOPSOIL LAYER WITH A MINIMUM ORGANIC MATTER CONTENT OF 10% DRY WEIGHT IN PLANTING BEDS, AND 5% ORGANIC MATTER CONTENT IN TURF AREAS, AND A PH FROM 6.0 TO 8.0 OR MATCHING THE PH OF THE UNDISTURBED SOIL. THE TOPSOIL LAYER SHALL HAVE A MINIMUM DEPTH OF EIGHT INCHES EXCEPT WHERE TREE ROOTS LIMIT THE DEPTH OF INCORPORATION OF AMENDMENTS NEEDED TO MEET THE CRITERIA. SUBSOILS BELOW THE TOPSOIL LAYER SHOULD BE SCARIFIED AT LEAST 4 INCHES WITH SOME INCORPORATION OF THE UPPER MATERIAL TO AVOID STRATIFIED LAYERS, WHERE FEASIBLE.
   2. MULCH PLANTING BEDS WITH 2 INCHES OF ORGANIC MATERIAL
   3. USE COMPOST AND OTHER MATERIALS THAT MEET THESE ORGANIC CONTENT REQUIREMENTS:
      A. THE ORGANIC CONTENT FOR "PRE-APPROVED" AMENDMENT RATES CAN BE MET ONLY USING COMPOST MEETING THE DEFINITION OF "COMPOSTED MATERIALS" IN WAC 173-350-220, WITH THE EXCEPTION THAT THE COMPOST MAY HAVE UP TO 35 % BIOSOLIDS OR MANURE. THE COMPOST MUST ALSO HAVE AN ORGANIC MATTER CONTENT OF 40% TO 65%, AND A CARBON TO NITROGEN RATIO BELOW 25:1. THE CARBON TO NITROGEN RATIO MAY BE AS HIGH AS 35:1 FOR PLANTINGS COMPOSED ENTIRELY OF PLANTS NATIVE TO THE PUGET SOUND LOWLANDS REGION.
      B. CALCULATED AMENDMENT RATES MAY BE MET THROUGH USE OF COMPOSTED MATERIAL MEETING (A.) ABOVE; OR OTHER ORGANIC MATERIALS AMENDED TO MEET THE CARBON TO NITROGEN RATIO REQUIREMENTS, AND NOT EXCEEDING THE CONTAMINANT LIMITS IDENTIFIED IN TABLE 220-B, TESTING PARAMETERS, IN WAC 173- 350-220. THE RESULTING SOIL SHOULD BE CONDUCIVE TO THE TYPE OF VEGETATION TO BE ESTABLISHED.

C. IMPLEMENTATION OPTIONS: THE SOIL QUALITY DESIGN GUIDELINES LISTED ABOVE CAN BE MET BY USING ONE OF THE METHODS LISTED BELOW:
   1. LEAVE UNDISTURBED NATIVE VEGETATION AND SOIL AND PROTECT FROM COMPACTION DURING CONSTRUCTION.
   2. AMEND EXISTING SITE TOPSOIL OR SUBSOIL EITHER AT DEFAULT "PREAPPROVED" 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. 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.

ADDITIONAL NOTES:

1. ALL CONSTRUCTION MATERIALS AND PRACTICE SHALL CONFORM TO THE CITY OF MERCER ISLAND STANDARDS AND THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARDS.
2. EXISTING UTILITIES AS SHOWN ARE FROM CITY RECORDS AND ARE APPROXIMATE. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO IDENTIFY, LOCATE AND PROTECT ABOVE AND BELOW GRADE UTILITIES. CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION IF A CONFLICT EXISTS BETWEEN EXISTING UTILITIES AND THE PROPOSED IMPROVEMENTS.
3. THE CONTRACTOR IS RESPONSIBLE FOR EROSION AND SEDIMENTATION CONTROL AND SHALL MAINTAIN THE NECESSARY SAFEGUARDS AND MANAGE THE CONSTRUCTION SO AS TO PREVENT WATERBORNE SEDIMENTS FROM LEAVING THE SITE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH, AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACTOR.
5. ON-SITE PRIVATE STORM AND SEWER PIPE SHALL BE SOLVENT WELDED SCHEDULE 40 PVC OR PVC ASTM D3034 SDR35 UNLESS SHOWN OTHERWISE. PVC PIPE LAID AT A SLOPE IN EXCESS OF 20% SHALL BE SOLVENT WELDED SCHEDULE 40 PVC. STORM PIPE IN THE RIGHT-OF-WAY SHALL BE HIGH-DENSITY POLYETHYLENE DOUBLE-WALLED SMOOTH INTERIOR PIPE SUCH AS ADS N-12 OR EQUIVALENT.
6. FOOTING DRAINS SHALL BE INSTALLED AROUND THE BASE OF ALL FOUNDATION FOOTINGS THAT ENCLOSE A CRAWL SPACE, CELLAR, BASEMENT, GARAGE OR OTHER BUILDING SPACE. FOOTING DRAINS SHALL BE PERFORATED 4-INCH DIAMETER PVC CONFORMING TO D2729, PERFORATIONS DOWN, PLACED BEHIND AND AT THE BASE OF WALL FOOTINGS, AND EMBEDDED IN 12 TO 18 INCHES OF CLEAN CRUCHED ROCK OR PEA GRAVEL WRAPPED IN A LAYER OF FILTER FABRIC (MIRAFI 140N OR EQUIVALENT). A MINIMUM 18-INCH-WIDE ZONE OF FREE DRAINING GRANULAR BACKFILL (I.E. PEA GRAVEL OR WASHED ROCK) SHALL BE PLACED ADJACENT THE WALL AND FOR THE FULL HEIGHT OF THE WALL. ALTERNATIVELY, A COMPOSITE DRAINAGE MATERIAL, SUCH AS MIRADRAIN 6000, MAY BE USED IN LIEU OF THE CLEAN CRUSHED ROCK OR PEA GRAVEL. THE DRAINPIPE AT THE BASE OF THE WALL SHOULD BE GRADED TO DIRECT WATER TO THE OUTLET. TIE THE FOOTING DRAIN INTO THE STORM LINE AT A LOCATION WHERE THE FOOTING DRAIN ELEVATION IS AT LEAST 12-INCHES ABOVE THE STORM LINE. SEE ALSO THE GEOTECHNICAL REPORT BY PANGEO, JULY 7, 2020.
7. EXISTING SIDE SEWER AND STORM DRAIN DEPTH AND LOCATION SHALL BE DETERMINED PRIOR TO ANY CONSTRUCTION, INCLUDING BUILDING CONSTRUCTION. REPORT CONFLICTS WITH PROPOSED CONSTRUCTION TO ENGINEER. NEW SIDE SEWER CONNECTION TO MAIN OR SEWER EJECTOR PUMP MAY BE NECESSARY FOR BASEMENT.
8. PROPOSED METER LOCATION, IF SHOWN, IS APPROXIMATE. CONTRACTOR TO COORDINATE EXACT LOCATION OF NEW SERVICE/METER/ SUPPLY LINE WITH CITY WATER DEPARTMENT DURING CONSTRUCTION.
9. EACH DOWNSPOUT SHALL CONNECT TO A RIGID NON-PERFORATED PIPE AT THE BUILDING PERIMETER. UNDER NO CIRCUMSTANCES SHALL DOWNSPOUTS CONNECT DIRECTLY TO THE PERFORATED FOOTING DRAIN.
10. USE SAND COLLARS FOR PVC PIPE CONNECTIONS TO MANHOLES.
11. VERTICAL BENDS ON THE STORM DRAINS MAY BE NECESSARY TO MAINTAIN MIN. 1.5' SOIL COVER OVER PIPE. MAX. PIPE BENDS TO BE 45°.
12. DOWNSPOUT LOCATIONS SHOWN ARE PRELIMINARY. REFER TO ARCHITECTURAL PLANS FOR FINAL DOWNSPOUT LOCATIONS.
13. AN UNDERSLAB DRAINAGE SYSTEM MAY BE NECESSARY DEPENDENT ON GEOTECHNICAL EVALUATION BY OTHERS.
14. WINDOW WELLS SHALL BE DESIGNED FOR PROPER DRAINAGE BY CONNECTING TO THE BUILDING'S FOUNDATION DRAINAGE SYSTEM REQUIRED PER SECTION R310.2.3.2 OF THE INTERNATIONAL RESIDENTIAL CODE. A DRAINAGE SYSTEM FOR WINDOW WELLS IS NOT REQUIRED WHERE THE FOUNDATION IS ON WELL-DRAINED SOIL OR SAND-GRAVEL MIXTURE SOILS IN ACCORDANCE WITH THE UNITED SOIL CLASSIFICATION SYSTEM, GROUP I SOILS, AS DETAILED IN TABLE R405.1 OF THE IRC



OIL SEPARATOR CB — 1

SCALE: NTS

N. BOSSOFF, P.E.
PROJECT MANAGER:
NB
DESIGNED:
TKB
DRAWN:
SARC-2002
JOB NUMBER:
SARC-2002pln.dwg
FILE NAME:

Nick Bossoff Engineering, Inc.
191 NE Tarl Lane
Stevenson, WA 98648-4201
Phone: (425) 881-5904

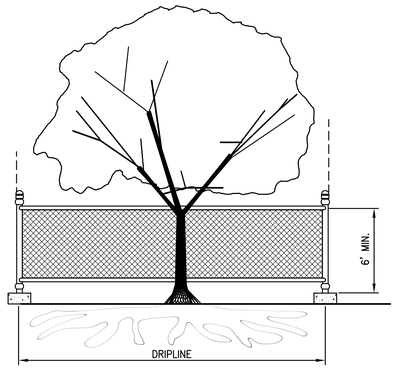
EXPIRES 7/2/23

NO.	DATE	REVISION
1	09/25/20	PERMIT SUBMITTAL
2	07/14/21	BLDG SCOPE CHANGE & CITY COMMENTS
3	10/18/21	WALL REVISION
4	02/07/22	CITY COMMENTS
5	04/29/22	REVISED BUILDING

MOUNGER RESIDENCE
4006 E MERCER WAY
MERCER ISLAND WASHINGTON

TITLE:
DRAINAGE PLAN

SHEET:
C-2

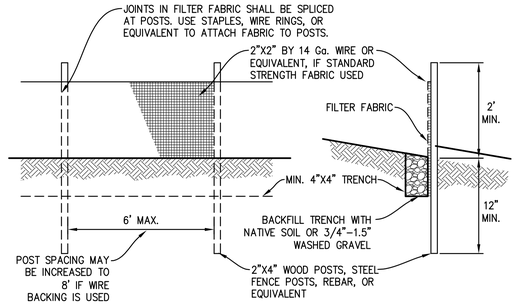


TREE PROTECTION DURING CONSTRUCTION

1. 6-FT. HIGH TEMPORARY CHAIN LINK FENCE SHALL BE PLACED AT THE DRIPLINE OF THE TREE TO BE SAVED. FENCE SHALL COMPLETELY ENCIRCLE THE TREE(S). INSTALL FENCE POSTS USING PIER BLOCKS ONLY. AVOID DRIVING POSTS OR STAKES INTO MAJOR ROOTS.
2. FOR ROOTS OVER 1-IN DIA. THAT ARE DAMAGED DURING CONSTRUCTION, MAKE A CLEAN, STRAIGHT CUT TO REMOVE THE DAMAGED PORTION. ALL EXPOSED ROOTS SHALL BE TEMPORARILY COVERED WITH DAMP BURLAP TO PREVENT DRYING, AND SHALL BE COVERED WITH SOIL AS SOON AS POSSIBLE.
3. WORK WITHIN PROTECTION FENCE SHALL BE DONE MANUALLY. NO STOCKPILING OF MATERIALS, VEHICULAR TRAFFIC, OR STORAGE OF EQUIPMENT OR MACHINERY SHALL BE ALLOWED WITHIN THE LIMIT OF THE FENCING.

TREE PROTECTION 1

SCALE: NTS



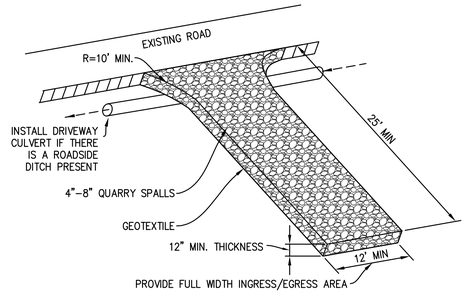
NOTE: FILTER FABRIC FENCE SHALL BE INSTALLED ALONG CONTOUR WHENEVER POSSIBLE.

MAINTENANCE STANDARDS

1. ANY DAMAGE SHALL BE REPAIRED IMMEDIATELY.
2. IF CONCENTRATED FLOWS ARE EVIDENT UPHILL OF THE FENCE, THEY MUST BE INTERCEPTED AND CONVEYED TO A SEDIMENT TRAP OR POND.
3. IT IS IMPORTANT TO CHECK THE UPHILL SIDE OF THE FENCE FOR SIGN OF THE FENCE CLOGGING AND ACTING AS A BARRIER TO FLOW AND THEN CAUSING CHANNELIZATION OF FLOWS PARALLEL TO THE FENCE. IF THIS OCCUR, REPLACE THE FENCE AND/OR REMOVE THE TRAPPED SEDIMENT.
4. SEDIMENT MUST BE REMOVED WHEN THE SEDIMENT IS 6" HIGH.
5. IF THE FILTER FABRIC HAS DETERIORATED DUE TO ULTRAVIOLET BREAKDOWN, IT SHALL BE REPLACED.

SILT FENCE 2

SCALE: NTS

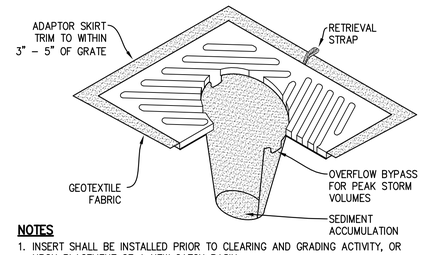


MAINTENANCE STANDARDS

1. QUARRY SPALLS (OR HOG FUEL) SHALL BE ADDED IF THE PAD IS NO LONGER IN ACCORDANCE WITH THE SPECIFICATIONS.
2. IF THE ENTRANCE IS NOT PREVENTING SEDIMENT FROM BEING TRACKED ONTO PAVEMENT, THEN ALTERNATIVE MEASURES TO KEEP THE STREETS FREE OF SEDIMENT SHALL BE USED. THIS MAY INCLUDE STREET SWEEPING, AN INCREASE IN THE DIMENSIONS OF THE ENTRANCE, OR THE INSTALLATION OF A WHEEL WASH. IF WASHING IS USED, IT SHALL BE DONE ON AN AREA COVERED WITH CRUSHED ROCK, AND WASH WATER SHALL DRAIN TO A SEDIMENT TRAP OR POND.
3. ANY SEDIMENT THAT IS TRACKED ONTO PAVEMENT SHALL BE REMOVED IMMEDIATELY BY SWEEPING. THE SEDIMENT COLLECTED BY SWEEPING SHALL BE REMOVED OR STABILIZED ON-SITE. THE PAVEMENT SHALL NOT BE CLEANED BY WASHING DOWN THE STREET, EXCEPT WHEN SWEEPING IS INEFFECTIVE AND THERE IS A THREAT TO PUBLIC SAFETY. IF IT IS NECESSARY TO WASH THE STREET, THE CONSTRUCTION OF A SMALL SUMP SHALL BE CONSIDERED. THE SEDIMENT WOULD THEN BE WASHED INTO THE SUMP.
4. ANY ROCK SPALLS THAT ARE LOOSENED FROM THE PAD AND END UP ON THE ROADWAY SHALL BE REMOVED IMMEDIATELY.
5. IF VEHICLES ARE ENTERING OR EXITING THE SITE AT POINTS OTHER THAN THE CONSTRUCTION ENTRANCE(S), FENCING (SECTION 5.4.1) SHALL BE INSTALLED TO CONTROL TRAFFIC.

ROCK CONSTRUCTION ENTRANCE 3

SCALE: NTS



NOTES

1. INSERT SHALL BE INSTALLED PRIOR TO CLEARING AND GRADING ACTIVITY, OR UPON PLACEMENT OF A NEW CATCH BASIN.
2. SEDIMENT SHALL BE REMOVED FROM THE UNIT WHEN IT BECOMES HALF FULL.
3. SEDIMENT REMOVAL SHALL BE ACCOMPLISHED BY REMOVING THE INSERT, EMPTYING, AND RE-INSERTING IT INTO THE CATCH BASIN.

CB INSERT 4

SCALE: NTS

Nick Bossoff Engineering, Inc.
191 NE Tarl Lane
Stevenson, WA 98648-4201
Phone: (425) 881-5904

NICHOLAS A. BOSSOFF — STATE OF WASHINGTON — 29631 — REGISTERED PROFESSIONAL ENGINEER

EXPIRES 7/2/23

NO.	DATE	REVISION
1	09/25/20	PERMIT SUBMITTAL
2	07/14/21	BLDG SCOPE CHANGE & CITY COMMENTS
3	10/18/21	WALL REVISION
4	02/07/22	CITY COMMENTS
5	04/29/22	REVISED BUILDING

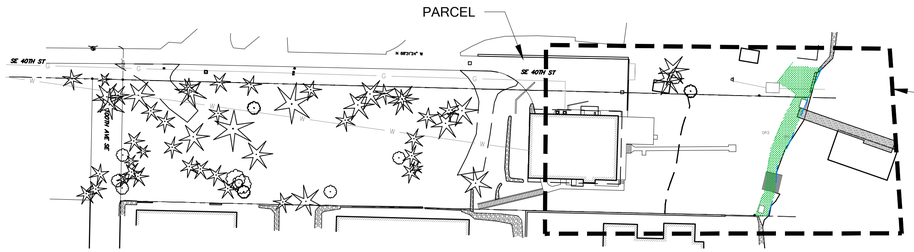
N. BOSSOFF, P.E.
PROJECT MANAGER:
NB
DESIGNED:
TKB
DRAWN:
SARC-2002
JOB NUMBER:
SARC-2002pln.dwg
FILE NAME:

MOUNGER RESIDENCE
4006 E MERCER WAY
MERCER ISLAND WASHINGTON

TITLE: DETAILS

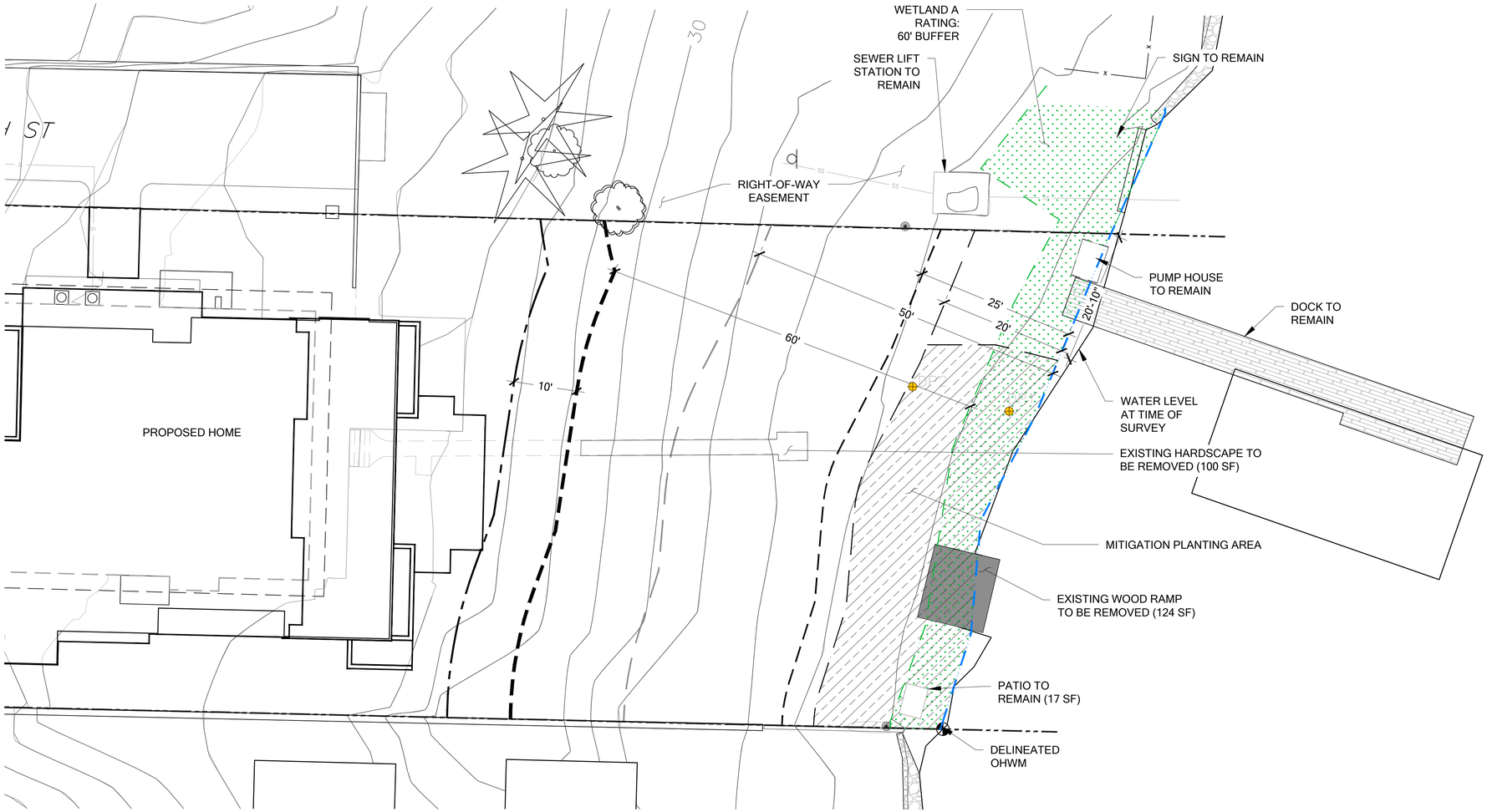
SHEET: C-3

MOUNGER RESIDENCE



PARCEL OVERVIEW

SCALE 1"= 50'



MITIGATION PLAN

SCALE 1:10

0' 5' 10' 20' 40'

LEGEND

- PARCEL BOUNDARY
- DELINEATED OHWM
- DP# DATA POINT
- WLA# WETLAND FLAGS
- DELINEATED WETLAND BOUNDARY
- SHORELINE SETBACK (50 FT)
- SHORELINE BUFFER (25 FT)
- WETLAND BUFFER (60 FT)
- WETLAND BUFFER BSBL

MITIGATION LEGEND

- PRE-EXISTING IMPACT IN WETLAND
- 20' SHORELINE ENHANCEMENT (770 SF)
- SHORELINE ENHANCEMENT OVER WETLAND (481 SF)

MITIGATION AREA NOTES

1. TOTAL AREA WITHIN 20 FT OF THE OHWM = 1,668 SF
2. TOTAL PLANTED SHORELINE AREA = 75% = 1,251 SF
3. TOTAL ACCESS AREA = 25% = 417 SF

SHEET INDEX

NOTES

1. WETLAND AND OHWM DELINEATED BY THE WATERSHED COMPANY ON MAY 19, 2020
2. SITE PLAN PROVIDED BY STURMAN ARCHITECTS; 103RD AVENUE NE, SUITE 203, BELLEVUE, WA 98004 (425) 451-7003

PERMIT SET

-

NOT FOR CONSTRUCTION

THE WATERSHED COMPANY

750 Sixth Street South
Kirkland WA 98033

p 425.822.5242
www.watershedco.com

Science & Design

MOUNGER RESIDENCE
SHORELINE MITIGATION PLAN
PREPARED FOR: BRAD STURMAN

4006 EAST MERCER WAY
MERCER ISLAND, WA 98040

SUBMITTALS & REVISIONS

NO.	DATE	DESCRIPTION	BY
1	08-20-2020	MITIGATION PLANTING PLAN	AS/MF
2	06-07-2021	MITIGATION PLANTING PLAN REVISED	AF
	04-28-2022	MITIGATION PLAN REVISED	AF

SHEET SIZE:
ORIGINAL PLAN IS 22" x 34".
SCALE ACCORDINGLY.

PROJECT MANAGER: RK
DESIGNED: RK/MF
DRAFTED: AS/MF/AF
CHECKED: RK

JOB NUMBER:
200509

SHEET NUMBER:
W1 OF 3

FILENAME
PRINTED BY
DATE

PLANT INSTALLATION SPECIFICATIONS

GENERAL NOTES

QUALITY ASSURANCE
1. PLANTS SHALL MEET OR EXCEED THE SPECIFICATIONS OF FEDERAL, STATE, AND LOCAL LAWS REQUIRING INSPECTION FOR PLANT DISEASE AND INSECT CONTROL.
2. PLANTS SHALL BE HEALTHY, VIGOROUS, AND WELL-FORMED, WITH WELL DEVELOPED, FIBROUS ROOT SYSTEMS, FREE FROM DEAD BRANCHES OR ROOTS. PLANTS SHALL BE FREE FROM DAMAGE CAUSED BY TEMPERATURE EXTREMES, LACK OR EXCESS OF MOISTURE, INSECTS, DISEASE, AND MECHANICAL INJURY. PLANTS IN LEAF SHALL BE WELL FOLIATED AND OF GOOD COLOR. PLANTS SHALL BE HABITUATED TO THE OUTDOOR ENVIRONMENTAL CONDITIONS INTO WHICH THEY WILL BE PLANTED (HARDENED-OFF).
3. TREES WITH DAMAGED, CROOKED, MULTIPLE OR BROKEN LEADERS WILL BE REJECTED. WOODY PLANTS WITH ABRASIONS OF THE BARK OR SUN SCALD WILL BE REJECTED.
4. NOMENCLATURE: PLANT NAMES SHALL CONFORM TO FLORA OF THE PACIFIC NORTHWEST BY HITCHCOCK AND CRONQUIST, UNIVERSITY OF WASHINGTON PRESS, 1973 AND/OR TO A FIELD GUIDE TO THE COMMON WETLAND PLANTS OF WESTERN WASHINGTON & NORTHWESTERN OREGON, ED. SARAH SPEAR COOKE, SEATTLE AUDUBON SOCIETY, 1997.

DEFINITIONS
1. PLANTS/PLANT MATERIALS. PLANTS AND PLANT MATERIALS SHALL INCLUDE ANY LIVE PLANT MATERIAL USED ON THE PROJECT. THIS INCLUDES BUT IS NOT LIMITED TO CONTAINER GROWN, B&B OR BAREROOT PLANTS; LIVE STAKES AND FASCINES (WATTLES); TUBERS, CORMS, BULBS, ETC..; SPRIGS, PLUGS, AND LINERS.
2. CONTAINER GROWN. CONTAINER GROWN PLANTS ARE THOSE WHOSE ROOTBALLS ARE ENCLOSED IN A POT OR BAG IN WHICH THAT PLANT GREW.

SUBSTITUTIONS
1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN SPECIFIED MATERIALS IN ADVANCE IF SPECIAL GROWING, MARKETING OR OTHER ARRANGEMENTS MUST BE MADE IN ORDER TO SUPPLY SPECIFIED MATERIALS.
2. SUBSTITUTION OF PLANT MATERIALS NOT ON THE PROJECT LIST WILL NOT BE PERMITTED UNLESS AUTHORIZED IN WRITING BY THE RESTORATION CONSULTANT.
3. IF PROOF IS SUBMITTED THAT ANY PLANT MATERIAL SPECIFIED IS NOT OBTAINABLE, A PROPOSAL WILL BE CONSIDERED FOR USE OF THE NEAREST EQUIVALENT SIZE OR ALTERNATIVE SPECIES, WITH CORRESPONDING ADJUSTMENT OF CONTRACT PRICE.
4. SUCH PROOF WILL BE SUBSTANTIATED AND SUBMITTED IN WRITING TO THE CONSULTANT AT LEAST 30 DAYS PRIOR TO START OF WORK UNDER THIS SECTION.

INSPECTION
1. PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE RESTORATION CONSULTANT FOR CONFORMANCE TO SPECIFICATIONS, EITHER AT TIME OF DELIVERY ON-SITE OR AT THE GROWER'S NURSERY. APPROVAL OF PLANT MATERIALS AT ANY TIME SHALL NOT IMPAIR THE SUBSEQUENT RIGHT OF INSPECTION AND REJECTION DURING PROGRESS OF THE WORK.
2. PLANTS INSPECTED ON SITE AND REJECTED FOR NOT MEETING SPECIFICATIONS MUST BE REMOVED IMMEDIATELY FROM SITE OR RED-TAGGED AND REMOVED AS SOON AS POSSIBLE.
3. THE RESTORATION CONSULTANT MAY ELECT TO INSPECT PLANT MATERIALS AT THE PLACE OF GROWTH. AFTER INSPECTION AND ACCEPTANCE, THE RESTORATION CONSULTANT MAY REQUIRE THE INSPECTED PLANTS BE LABELED AND RESERVED FOR PROJECT. SUBSTITUTION OF THESE PLANTS WITH OTHER INDIVIDUALS, EVEN OF THE SAME SPECIES AND SIZE, IS UNACCEPTABLE.

MEASUREMENT OF PLANTS
1. PLANTS SHALL CONFORM TO SIZES SPECIFIED UNLESS SUBSTITUTIONS ARE MADE AS OUTLINED IN THIS CONTRACT.
2. HEIGHT AND SPREAD DIMENSIONS SPECIFIED REFER TO MAIN BODY OF PLANT AND NOT BRANCH OR ROOT TIP TO TIP. PLANT DIMENSIONS SHALL BE MEASURED WHEN THEIR BRANCHES OR ROOTS ARE IN THEIR NORMAL POSITION.
3. WHERE A RANGE OF SIZE IS GIVEN, NO PLANT SHALL BE LESS THAN THE MINIMUM SIZE AND AT LEAST 50% OF THE PLANTS SHALL BE AS LARGE AS THE MEDIAN OF THE SIZE RANGE. (EXAMPLE: IF THE SIZE RANGE IS 12" TO 18", AT LEAST 50% OF PLANTS MUST BE 15" TALL.).

SUBMITTALS

PROPOSED PLANT SOURCES
1. WITHIN 45 DAYS AFTER AWARD OF THE CONTRACT, SUBMIT A COMPLETE LIST OF PLANT MATERIALS PROPOSED TO BE PROVIDED DEMONSTRATING CONFORMANCE WITH THE REQUIREMENTS SPECIFIED. INCLUDE THE NAMES AND ADDRESSES OF ALL GROWERS AND NURSERIES.

PRODUCT CERTIFICATES
1. PLANT MATERIALS LIST - SUBMIT DOCUMENTATION TO CONSULTANT AT LEAST 30 DAYS PRIOR TO START OF WORK UNDER THIS SECTION THAT PLANT MATERIALS HAVE BEEN ORDERED. ARRANGE PROCEDURE FOR INSPECTION OF PLANT MATERIAL WITH CONSULTANT AT TIME OF SUBMISSION.
2. HAVE COPIES OF VENDOR'S OR GROWERS' INVOICES OR PACKING SLIPS FOR ALL PLANTS ON SITE DURING INSTALLATION. INVOICE OR PACKING SLIP SHOULD LIST SPECIES BY SCIENTIFIC NAME, QUANTITY, AND DATE DELIVERED (AND GENETIC ORIGIN IF THAT INFORMATION WAS PREVIOUSLY REQUESTED).

DELIVERY, HANDLING, & STORAGE

NOTIFICATION
CONTRACTOR MUST NOTIFY CONSULTANT 48 HOURS OR MORE IN ADVANCE OF DELIVERIES SO THAT CONSULTANT MAY ARRANGE FOR INSPECTION.

PLANT MATERIALS
1. TRANSPORTATION - DURING SHIPPING, PLANTS SHALL BE PACKED TO PROVIDE PROTECTION AGAINST CLIMATE EXTREMES, BREAKAGE AND DRYING. PROPER VENTILATION AND PREVENTION OF DAMAGE TO BARK, BRANCHES, AND ROOT SYSTEMS MUST BE ENSURED.
2. SCHEDULING AND STORAGE - PLANTS SHALL BE DELIVERED AS CLOSE TO PLANTING AS POSSIBLE. PLANTS IN STORAGE MUST BE PROTECTED AGAINST ANY CONDITION THAT IS DETRIMENTAL TO THEIR CONTINUED HEALTH AND VIGOR.
3. HANDLING - PLANT MATERIALS SHALL NOT BE HANDLED BY THE TRUNK, LIMBS, OR FOLIAGE BUT ONLY BY THE CONTAINER, BALL, BOX, OR OTHER PROTECTIVE STRUCTURE, EXCEPT BAREROOT PLANTS SHALL BE KEPT IN BUNDLES UNTIL PLANTING AND THEN HANDLED CAREFULLY BY THE TRUNK OR STEM.
4. LABELS - PLANTS SHALL HAVE DURABLE, LEGIBLE LABELS STATING CORRECT SCIENTIFIC NAME AND SIZE. TEN PERCENT OF CONTAINER GROWN PLANTS IN INDIVIDUAL POTS SHALL BE LABELED. PLANTS SUPPLIED IN FLATS, RACKS, BOXES, BAGS, OR BUNDLES SHALL HAVE ONE LABEL PER GROUP.

WARRANTY

PLANT WARRANTY
PLANTS MUST BE GUARANTEED TO BE TRUE TO SCIENTIFIC NAME AND SPECIFIED SIZE, AND TO BE HEALTHY AND CAPABLE OF VIGOROUS GROWTH.

REPLACEMENT
1. PLANTS NOT FOUND MEETING ALL OF THE REQUIRED CONDITIONS AT THE CONSULTANT'S DISCRETION MUST BE REMOVED FROM SITE AND REPLACED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
2. PLANTS NOT SURVIVING AFTER ONE YEAR TO BE REPLACED AT THE CONTRACTOR'S EXPENSE.

PLANT MATERIAL

GENERAL
1. PLANTS SHALL BE NURSERY GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES UNDER CLIMATIC CONDITIONS SIMILAR TO OR MORE SEVERE THAN THOSE OF THE PROJECT SITE.
2. PLANTS SHALL BE TRUE TO SPECIES AND VARIETY OR SUBSPECIES. NO CULTIVARS OR NAMED VARIETIES SHALL BE USED UNLESS SPECIFIED AS SUCH.

QUANTITIES
SEE PLANT LIST ON ACCOMPANYING PLANS AND PLANT SCHEDULES.

ROOT TREATMENT
1. CONTAINER GROWN PLANTS (INCLUDES PLUGS): PLANT ROOT BALLS MUST HOLD TOGETHER WHEN THE PLANT IS REMOVED FROM THE POT, EXCEPT THAT A SMALL AMOUNT OF LOOSE SOIL MAY BE ON THE TOP OF THE ROOTBALL.
2. PLANTS MUST NOT BE ROOT-BOUND; THERE MUST BE NO CIRCLING ROOTS PRESENT IN ANY PLANT INSPECTED.
3. ROOTBALLS THAT HAVE CRACKED OR BROKEN WHEN REMOVED FROM THE CONTAINER SHALL BE REJECTED.

PLANT SCHEDULE

TREES	COMMON / BOTANICAL NAME	SIZE	QTY
	PAPER BIRCH / BETULA PAPYRIFERA	1.5" CAL	1
	OREGON ASH / FRAXINUS LATIFOLIA	5 GAL.	1
	SHORE PINE / PINUS CONTORTA	6 FT B&B	1

SHRUBS	COMMON / BOTANICAL NAME	SIZE	QTY
	VINE MAPLE / ACER CIRCINATUM	10 GAL.	1
	CORNUS SERICEA 'KELSEYI' / RED-TWIG DOGWOOD	1 GAL.	15
	PACIFIC BAYBERRY / MORELLA CALIFORNICA	5 GAL.	2
	MOCK ORANGE / PHILADELPHUS LEWISII	1 GAL.	6
	CLUSTERED WILD ROSE / ROSA PISOCARPA	1 GAL.	7
	ROSE SPIREA / SPIRAEA DENSIFLORA	1 GAL.	6
	VACCINIUM OVATUM / EVERGREEN HUCKLEBERRY	2 GAL.	3

GROUNDCOVER	COMMON / BOTANICAL NAME	SIZE	SPACING	QTY	REMARKS
	GOATSBEARD / ARUNCUS SYLVESTER	1 GAL.	24" O.C.	25	PLANT IN SAME-SPECIES GROUPINGS OF 3-9 PLANTS
	CAMAS / CAMASSIA QUAMASH	1 GAL.	24" O.C.	25	
	TUFTED HAIRGRASS / DESCHAMPSIA CESPITOSA	1 GAL.	24" O.C.	25	
	SMALL-FRUITED BULRUSH / SCIRPUS MICROCARPUS	4" POT/PLUG	24" O.C.	25	
	WESTERN COLUMBINE / AQUILEGIA FORMOSA	1 GAL.	24" O.C.	12	PLANT IN SAME SPECIES GROUPINGS 5-9 PLANTS IN CLUSTERS THROUGHOUT PLANTING BED
	SWORD FERN / POLYSTICHUM MUNITUM	1 GAL.	24" O.C.	24	
	OREGON STONECROP / SEDUM OREGONUM	4" POT	15" O.C.	32	
	TOUGH-LEAF IRIS / IRIS TENAX	1 GAL.	24" O.C.	12	

PLANTING PLAN AND SCHEDULE

SCALE 1:10

0' 5' 10' 20' 40'

NOTES
1. SEE SHEET W3 FOR SITE PREPARATION AND PLANTING DETAILS.

PERMIT SET

-

NOT FOR CONSTRUCTION

THE WATERSHED COMPANY
750 Sixth Street South
Kirkland WA 98033
p 425.822.5242
www.watershedco.com
Science & Design

MOUNGER RESIDENCE
SHORELINE MITIGATION PLAN
PREPARED FOR: BRAD STURMAN

4006 EAST MERCER WAY
MERCER ISLAND, WA 98040

SUBMITTALS & REVISIONS

NO.	DATE	DESCRIPTION	BY
1	08-20-2020	MITIGATION PLANTING PLAN	AS/MF
2	06-07-2021	MITIGATION PLANTING PLAN REVISED	AF
	04-28-2022	MITIGATION PLAN REVISED	AF

SHEET SIZE:
ORIGINAL PLAN IS 22" x 34".
SCALE ACCORDINGLY.

PROJECT MANAGER: RK
DESIGNED: RK/MF
DRAFTED: AS/MF/AF
CHECKED: RK
JOB NUMBER:
200509
SHEET NUMBER:
W2 OF 3

FILENAME
PRINTED BY
DATE

MITIGATION SPECIFICATIONS

OVERVIEW

A COMPREHENSIVE FIVE-YEAR MAINTENANCE AND MONITORING PLAN IS INCLUDED AS PART OF THE SHORELINE AND WETLAND/WETLAND BUFFER ENHANCEMENT. THE PLAN SPECIFIES APPROPRIATE SPECIES FOR PLANTING AND PLANTING TECHNIQUES, DESCRIBES PROPER MAINTENANCE ACTIVITIES, AND SETS FORTH PERFORMANCE STANDARDS TO BE MET YEARLY DURING MONITORING. THIS WILL ENSURE THAT ENHANCEMENT/RESTORATION PLANTINGS WILL BE MAINTAINED, MONITORED, AND SUCCESSFULLY ESTABLISHED WITHIN THE FIRST FIVE YEARS FOLLOWING IMPLEMENTATION.

PROPOSED RESTORATION BEGINS WITH INCORPORATING COMPOST INTO THE BUFFER ENHANCEMENT AREA. NO COMPOST SHALL BE APPLIED IN THE WETLAND. THIS WILL BE FOLLOWED BY INSTALLATION OF THREE NATIVE TREE SPECIES, SEVEN NATIVE SHRUB SPECIES, AND EIGHT NATIVE GROUNDCOVER SPECIES SUITABLE TO THE SITE. THE PLAN CALLS FOR NEW PLANTINGS WITHIN THE INNER 20-FOOT SHORELINE SETBACK AREA, INCLUDING WITHIN WETLAND A AND THE OVERLAPPING SHORELINE SETBACK/WETLAND A BUFFER. NATIVE PLANTINGS ARE INTENDED TO INCREASE NATIVE PLANT COVER, IMPROVE NATIVE SPECIES DIVERSITY, IMPROVE VEGETATIVE SCREENING, INCREASE VEGETATIVE STRUCTURE, AND PROVIDE FOOD AND OTHER HABITAT RESOURCES FOR WILDLIFE.

GOALS

ENHANCE SHORELINE BUFFERS.

a. REDUCE THE AMOUNT OF IMPERVIOUS SURFACE AREA WITHIN THE WETLAND BUFFER AND SHORELINE SETBACK.

b. ESTABLISH DENSE AND DIVERSE NATIVE TREE, SHRUB, AND GROUNDCOVER VEGETATION THROUGHOUT THE MITIGATION AREA.

PERFORMANCE STANDARDS

THE STANDARDS LISTED BELOW WILL BE USED TO JUDGE THE SUCCESS OF THE PLAN OVER TIME. IF THE STANDARDS ARE MET AT THE END OF THE FIVE-YEAR MONITORING PERIOD, THE CITY SHALL ISSUE RELEASE OF THE PERFORMANCE BOND.

1. SURVIVAL:

a. 100% SURVIVAL OF ALL INSTALLED TREES AND SHRUBS AT THE END OF YEAR-1. THIS STANDARD MAY BE MET THROUGH ESTABLISHMENT OF INSTALLED PLANTS OR BY REPLANTING AS NECESSARY TO ACHIEVE THE REQUIRED NUMBERS.

b. 80% SURVIVAL OF ALL INSTALLED TREES AND SHRUBS AT THE END OF YEAR 2. THIS STANDARD MAY BE MET THROUGH ESTABLISHMENT OF INSTALLED PLANTS OR BY REPLANTING AS NECESSARY TO ACHIEVE THE REQUIRED NUMBERS.

2. NATIVE VEGETATION COVER IN PLANTED AREAS:

a. ACHIEVE AT LEAST 60% COVER OF NATIVE TREES, SHRUBS, AND GROUNDCOVERS IN PLANTED AREAS BY THE END OF YEAR 3. VOLUNTEER SPECIES MAY COUNT TOWARD THIS STANDARD.

b. ACHIEVE AT LEAST 80% COVER OF NATIVE TREES, SHRUBS, AND GROUNDCOVERS IN PLANTED AREAS BY THE END OF YEAR 5. VOLUNTEER SPECIES MAY COUNT TOWARD THIS STANDARD.

3. DIVERSITY: A MINIMUM OF TWO TREE SPECIES, FIVE SHRUB SPECIES, AND FIVE EMERGENT SPECIES WILL BE PRESENT IN THE MITIGATION AREA IN YEARS 3 - 5.

4. INVASIVE SPECIES STANDARD: NO MORE THAN 10% COVER OF INVASIVE SPECIES IN THE PLANTING AREA IN ANY MONITORING YEAR. INVASIVE SPECIES ARE DEFINED AS ANY CLASS A, B, OR C NOXIOUS WEEDS AS LISTED BY THE KING COUNTY NOXIOUS WEED CONTROL BOARD.

MONITORING METHODS

THIS MONITORING PROGRAM IS DESIGNED TO TRACK THE SUCCESS OF THE MITIGATION SITE OVER TIME BY MEASURING THE DEGREE TO WHICH THE PERFORMANCE STANDARDS LISTED ABOVE ARE BEING MET. AN AS-BUILT PLAN WILL BE PREPARED WITHIN 30 DAYS OF SUBSTANTIALLY COMPLETE CONSTRUCTION OF THE MITIGATION AREAS. THE AS-BUILT PLAN WILL DOCUMENT CONFORMANCE WITH THESE PLANS AND WILL DISCLOSE ANY SUBSTITUTIONS OR OTHER NON-CRITICAL DEPARTURES. THE AS-BUILT PLAN WILL ESTABLISH BASELINE PLANT INSTALLATION QUANTITIES AND PHOTOPOINTS THAT WILL BE USED THROUGHOUT THE MONITORING PERIOD TO VISUALLY DOCUMENT SITE CHANGES OVER TIME.

MONITORING WILL OCCUR ANNUALLY FOR FIVE YEARS. THE INSPECTION WILL OCCUR IN LATE SUMMER OR FALL AND WILL RECORD THE FOLLOWING AND BE SUBMITTED IN AN ANNUAL REPORT TO THE CITY:

1. COUNTS OF SURVIVING AND DEAD/DYING PLANTS BY SPECIES IN THE PLANTING AREAS.
2. ESTIMATES OF NATIVE SPECIES COVER USING COVER CLASS METHOD.
3. ESTIMATES OF INVASIVE SPECIES COVER USING COVER CLASS METHOD.
4. PHOTOGRAPHIC DOCUMENTATION AT PERMANENT PHOTOPOINTS.
5. RECOMMENDATIONS FOR MAINTENANCE IN THE MITIGATION AREAS.
6. RECOMMENDATIONS FOR REPLACEMENT OF ALL DEAD OR DYING PLANT MATERIAL WITH SAME OR LIKE SPECIES AND NUMBER AS ON THE APPROVED PLAN.

CONSTRUCTION NOTES AND SPECIFICATIONS

GENERAL NOTES

THE RESTORATION SPECIALIST WILL OVERSEE THE FOLLOWING:

1. CLEARING, SOIL DECOMPACTION, AND COMPOST INCORPORATION;
2. INVASIVE WEED CLEARING; AND
3. PLANT MATERIAL INSPECTION.
   a) PLANT DELIVERY INSPECTION.
   b) 100% PLANT INSTALLATION INSPECTION.

WORK SEQUENCE

1. CLEAR THE PLANTING AREA OF ALL INVASIVE SPECIES USING HAND TOOLS.
2. ROTO-TILL THREE INCHES OF COMPOST INTO THE UPPER 9 INCHES OF THE SOIL IN BUFFER AREAS ONLY. DO NOT APPLY COMPOST WITHIN THE WETLAND AREA.
3. ALL PLANT INSTALLATION WILL TAKE PLACE DURING THE DORMANT SEASON (OCTOBER 15TH TO MARCH 1ST).
4. LAYOUT VEGETATION TO BE INSTALLED PER THE PLANTING PLAN AND PLANT SCHEDULE.
5. PREPARE A PLANTING PIT FOR EACH PLANT AND INSTALL PER THE PLANTING DETAILS.
6. MULCH EACH TREE AND SHRUB WITH A CIRCULAR WOOD CHIP MULCH RING, FOUR INCHES THICK AND EXTENDING SIX INCHES FROM THE BASE OF THE PLANT (12-INCH DIAMETER) IN THE BUFFER AREAS ONLY. DO NOT APPLY MULCH IN WETLAND AREA. ALTERNATIVELY, A BLANKET MULCH APPLICATION MAY BE APPLIED TO THE ENTIRE RESTORATION AREA.

MAINTENANCE

THIS SITE WILL BE MAINTAINED FOR FIVE YEARS FOLLOWING COMPLETION OF THE PLANT INSTALLATION.

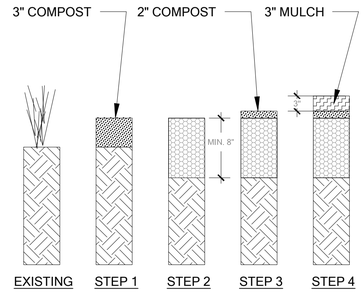
1. REPLACE EACH PLANT FOUND DEAD IN THE SUMMER MONITORING VISIT DURING THE UPCOMING FALL DORMANT SEASON (OCTOBER 15TH TO MARCH 1ST).
2. INVASIVE SPECIES MAINTENANCE PLAN: HIMALAYAN BLACKBERRY, ENGLISH IVY, ENGLISH LAUREL, AND OTHER INVASIVE WOODY VEGETATION WILL BE GRUBBED OUT BY HAND ON AN ONGOING BASIS, WITH CARE TAKEN TO GRUB OUT ROOTS EXCEPT WHERE SUCH WORK WILL JEOPARDIZE THE ROOTS OF INSTALLED OR VOLUNTEER NATIVE PLANTS.
3. AT LEAST TWICE YEARLY, REMOVE BY HAND ALL COMPETING WEEDS AND WEED ROOTS FROM BENEATH EACH INSTALLED PLANT AND ANY DESIRABLE VOLUNTEER VEGETATION TO A DISTANCE OF 12 INCHES FROM THE MAIN PLANT STEM. WEEDING SHOULD OCCUR AS NEEDED DURING THE SPRING AND SUMMER. FREQUENT WEEDING WILL RESULT IN LOWER MORTALITY AND LOWER PLANT REPLACEMENT COSTS.
4. DO NOT WEED THE AREA NEAR THE PLANT BASES WITH STRING TRIMMER (WEED WHACKER). NATIVE PLANTS ARE EASILY DAMAGED OR KILLED, AND WEEDS EASILY RECOVER AFTER TRIMMING.
5. MULCH THE WEEDED AREAS BENEATH EACH PLANT WITH WOOD CHIP MULCH AS NECESSARY TO MAINTAIN A MINIMUM 4-INCH-THICK, 12-INCH-DIAMETER MULCH RING.
6. THE TEMPORARY IRRIGATION SYSTEM WILL BE OPERATED TO ENSURE THAT PLANTS RECEIVE A MINIMUM OF ONE INCH OF WATER PER WEEK FROM JUNE 1ST THROUGH SEPTEMBER 30TH FOR THE FIRST TWO YEARS FOLLOWING INSTALLATION. IRRIGATION BEYOND THE SECOND YEAR MAY BE NEEDED BASED ON SITE PERFORMANCE OR SIGNIFICANT REPLANTING.

CONTINGENCY PLAN

IF ALL OR PART OF THE MITIGATION AREA FAILS TO ESTABLISH ACCORDING TO THE GOALS AND PERFORMANCE STANDARDS, A CONTINGENCY PLAN SHALL BE DEVELOPED. CONTINGENCY MEASURES MAY INCLUDE, BUT ARE NOT LIMITED TO, PLANT SPECIES SUBSTITUTIONS, SOIL AMENDMENTS, HERBIVORE EXCLUSION FENCING, MODIFIED IRRIGATION SCHEDULE, AND ADAPTIVE WEED MANAGEMENT.

MATERIAL SPECIFICATIONS AND DEFINITIONS

1. IRRIGATION SYSTEM: AUTOMATED SYSTEM CAPABLE OF DELIVERING AT LEAST ONE INCH OF WATER PER WEEK FROM JUNE 1 THROUGH SEPTEMBER 30 FOR THE FIRST TWO YEARS FOLLOWING INSTALLATION.
2. RESTORATION PROFESSIONAL: WATERSHED COMPANY [(425) 822-5242)] PERSONNEL, OR OTHER PERSONS QUALIFIED TO EVALUATE ENVIRONMENTAL RESTORATION PROJECTS.
3. WOOD CHIP MULCH: ARBORIST CHIPS (CHIPPED WOODY MATERIAL) APPROXIMATELY 1 TO 3 INCHES IN MAXIMUM DIMENSION (NOT SAWDUST OR COARSE HOG FUEL). THIS MATERIAL IS COMMONLY AVAILABLE IN LARGE QUANTITIES FROM ARBORISTS OR TREE-PRUNING COMPANIES. THIS MATERIAL IS SOLD AS "ANIMAL FRIENDLY HOG FUEL" AT PACIFIC TOPSOILS [(800) 884-7645]. MULCH MUST NOT CONTAIN APPRECIABLE QUANTITIES OF GARBAGE, PLASTIC, METAL, SOIL, AND DIMENSIONAL LUMBER OR CONSTRUCTION/DEMOLITION DEBRIS. QUANTITY REQUIRED: 17 CUBIC YARDS.
4. COMPOST: CEDAR GROVE COMPOST OR EQUIVALENT "COMPOSTED MATERIAL" PER WASHINGTON ADMIN. CODE 173-350-220. QUANTITY REQUIRED: 28 CUBIC YARDS.



PLANTING AREA PREPARATION

STEP 1
IF LAWN REMOVE LAWN AND UNDESIRABLE SPECIES.
IF PATIO REMOVE PATIO AND ANY GRAVEL DRAINAGE LAYER. WORK WITHIN EXISTING ROOT ZONES SHALL BE DONE BY HAND.

IF LAWN PLACE THREE (3) INCHES COMPOST.
IF IN PATIO REMOVAL AREA, FIRST BRING GRADE UP TO MATCH ADJACENT GRADE USING IMPORT TOPSOIL PRIOR TO PLACING COMPOST.

STEP 2
INCORPORATE COMPOST TO AN EIGHT (8) INCH DEPTH.

STEP 3
PLACE TWO (2) INCH LAYER OF COMPOST.

STEP 4
INSTALL MULCH LAYER THREE (3) INCHES DEEP AND INSTALL PLANTS. (SEE PLANTING **DETAIL.)**

A BUFFER MITIGATION AREA SITE PREPARATION

SEE SHEET W1

Scale: NTS

PLANTING AREA PREPARATION

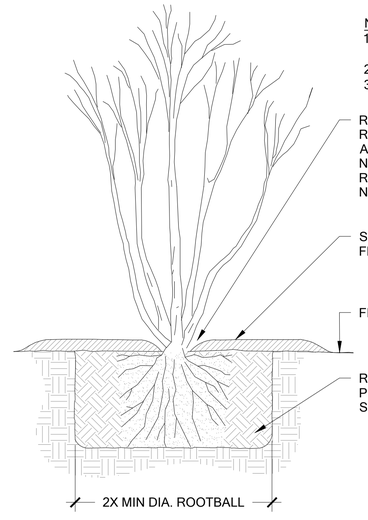
STEP 1
CUT OR MOW ABOVE GROUND INVASIVE PLANT MATERIAL. REMOVE CLIPPINGS OFFSITE.

STEP 2
INSTALL PLANTS. (SEE PLANTING DETAIL.)

B WETLAND MITIGATION AREA SITE PREPARATION

SEE SHEET W1

Scale: NTS



NOTES:
1. PLANTING PIT SHALL NOT BE LESS THAN (2) TIMES THE WIDTH OF THE ROOT BALL DIA.
2. LOOSEN SIDES AND BOTTOMS OF PLANTING PIT
3. SOAK PLANTING PIT AFTER PLANTING

REMOVE FROM POT OR BURLAP & ROUGH-UP ROOT BALL BEFORE INSTALLING. UNTANGLE AND STRAIGHTEN CIRCLING ROOTS - PRUNE IF NECESSARY. IF PLANT IS EXCEPTIONALLY ROOT-BOUND, DO NOT PLANT AND RETURN TO NURSERY FOR AN ACCEPTABLE ALTERNATIVE

SPECIFIED MULCH LAYER, HOLD BACK MULCH FROM TRUNK/STEMS

FINISH GRADE

REMOVE DEBRIS AND LARGE ROCKS FROM PLANTING PIT AND SCARIFY SIDES AND BASE. BACKFILL WITH SPECIFIED SOIL. FIRM UP SOIL AROUND PLANT.

C CONTAINER PLANTING DETAIL

Scale: NTS

PERMIT SET

-

NOT FOR CONSTRUCTION

MITIGATION DETAILS AND NOTES

THE WATERSHED COMPANY
750 Sixth Street South
Kirkland WA 98033
p 425.822.5242
www.watershedco.com
Science & Design

MOUNGER RESIDENCE
SHORELINE MITIGATION PLAN
PREPARED FOR: BRAD STURMAN

4006 EAST MERCER WAY
MERCER ISLAND, WA 98040

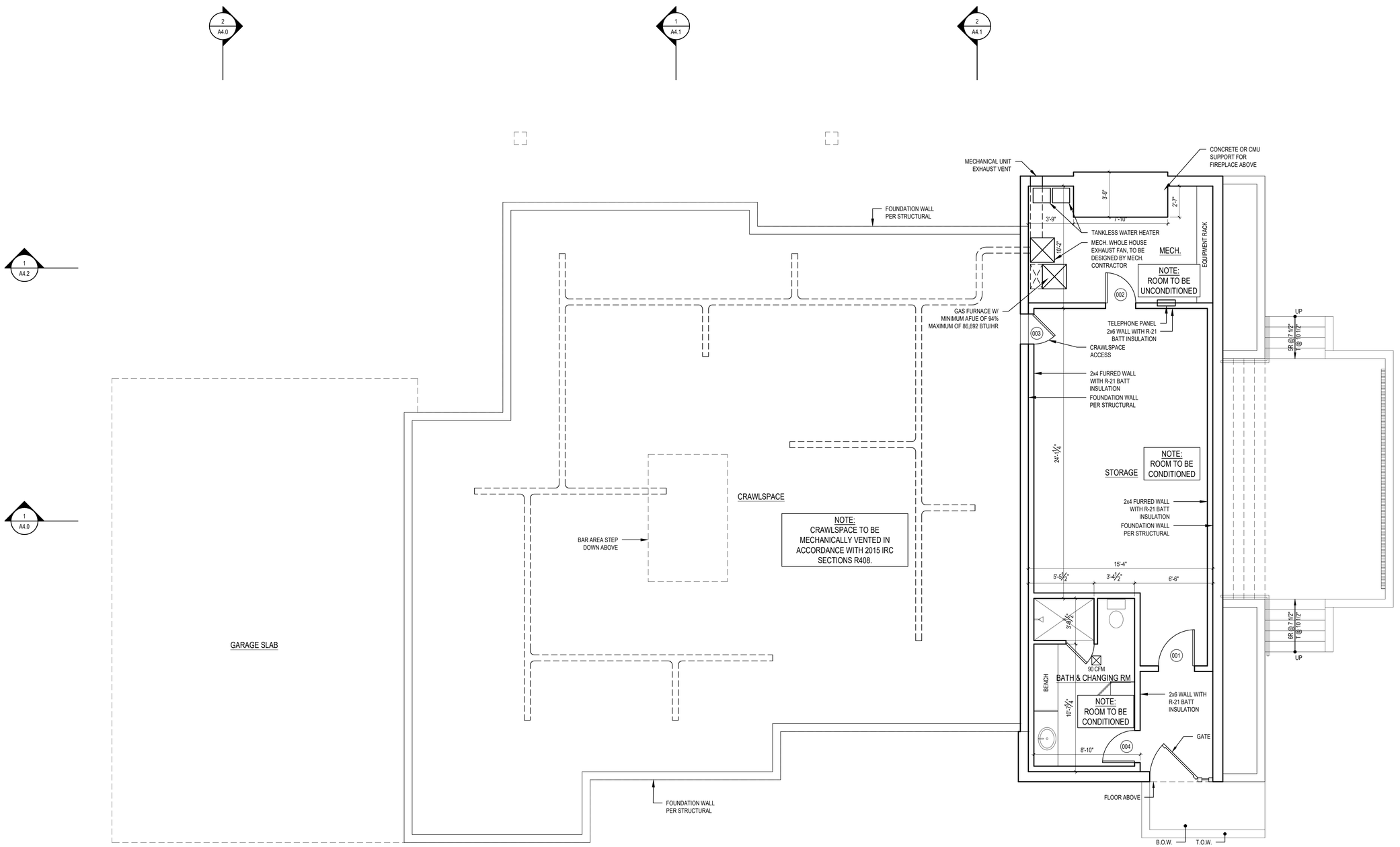
SUBMITTALS & REVISIONS

NO.	DATE	DESCRIPTION	BY
1	08-20-2020	MITIGATION PLANTING PLAN	AS/MF
2	06-07-2021	MITIGATION PLANTING PLAN REVISED	AF
	04-28-2022	MITIGATION PLAN REVISED	AF

SHEET SIZE:
ORIGINAL PLAN IS 22" x 34".
SCALE ACCORDINGLY.

PROJECT MANAGER: RK
DESIGNED: RK/MF
DRAFTED: AS/MF/AF
CHECKED: RK
JOB NUMBER:
200509
SHEET NUMBER:
W3 OF 3

FILENAME
PRINTED BY
DATE



1 LOWER FLOOR/CRAWLSPACE

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

SCALE: IF SHEET IS LESS THAN 24" x 36", IT IS A REDUCED PRINT, REDUCE SCALE ACCORDINGLY

PERMIT SET 5/2/2022

STURMAN ARCHITECTS
9- 103rd Ave NE Suite 203 Bellevue, WA 98004
TEL: 425.457.7003

REGISTERED ARCHITECT
BRADLEY J. STURMAN
STATE OF WASHINGTON
5582

4006 RESIDENCE

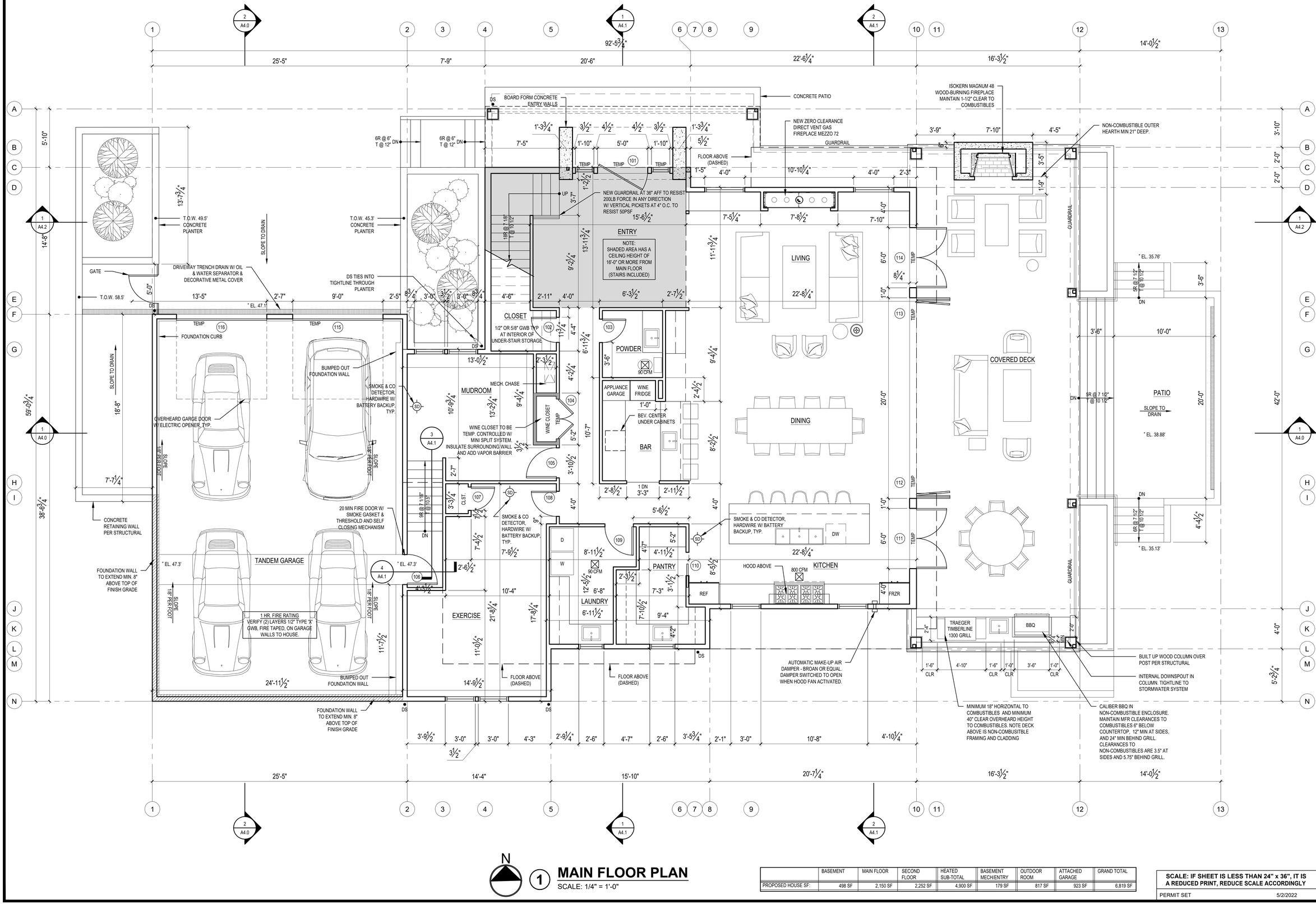
4006 E MERCER WAY
MERCER ISLAND, WA 98040

LOWER FLOOR PLAN
CRAWLSPACE

REVISIONS:

PLOT DATE: 5/2/2022
DRAWN BY: JM
CHECKED BY: BJS

SHEET A2.0



1 MAIN FLOOR PLAN

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

	BASEMENT	MAIN FLOOR	SECOND FLOOR	HEATED SUB-TOTAL	BASEMENT MECH/ENTRY	OUTDOOR ROOM	ATTACHED GARAGE	GRAND TOTAL
PROPOSED HOUSE SF:	498 SF	2,150 SF	2,252 SF	4,900 SF	179 SF	817 SF	923 SF	6,819 SF

SCALE: IF SHEET IS LESS THAN 24" x 36", IT IS A REDUCED PRINT, REDUCE SCALE ACCORDINGLY

PERMIT SET 5/2/2022

STURMAN ARCHITECTS
9 - 103rd Ave NE Suite 203 Bellevue, WA 98004
TEL: 425.457.7003
REGISTERED ARCHITECT
BRADLEY J. STURMAN
STATE OF WASHINGTON
5563
www.sturmanarchitects.com

4006 RESIDENCE

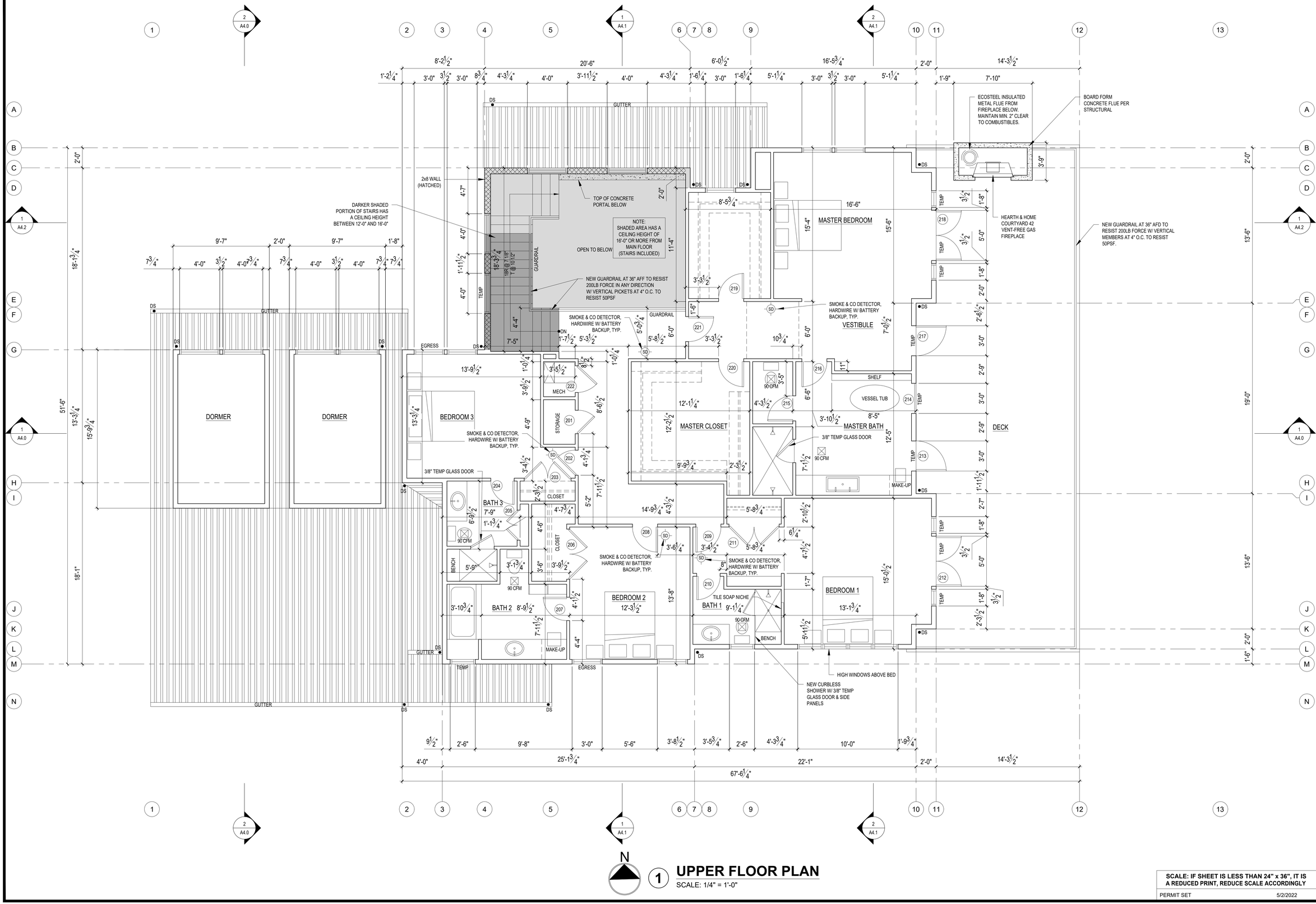
4006 E MERCER WAY
MERCER ISLAND, WA 98040

MAIN FLOOR PLAN

REVISIONS:

PLOT DATE: 5/2/2022
DRAWN BY: JM
CHECKED BY: BJS

SHEET A2.1



N

1 UPPER FLOOR PLAN

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

SCALE: IF SHEET IS LESS THAN 24" x 36", IT IS A REDUCED PRINT, REDUCE SCALE ACCORDINGLY

PERMIT SET 5/2/2022

STURMAN ARCHITECTS
TEL: 425.457.7003 9 - 103rd Ave NE Suite 203 Bellevue, WA 98004
REGISTERED ARCHITECT 5563 BRADLEY J. STURMAN STATE OF WASHINGTON
www.sturmanarchitects.com

4006 RESIDENCE

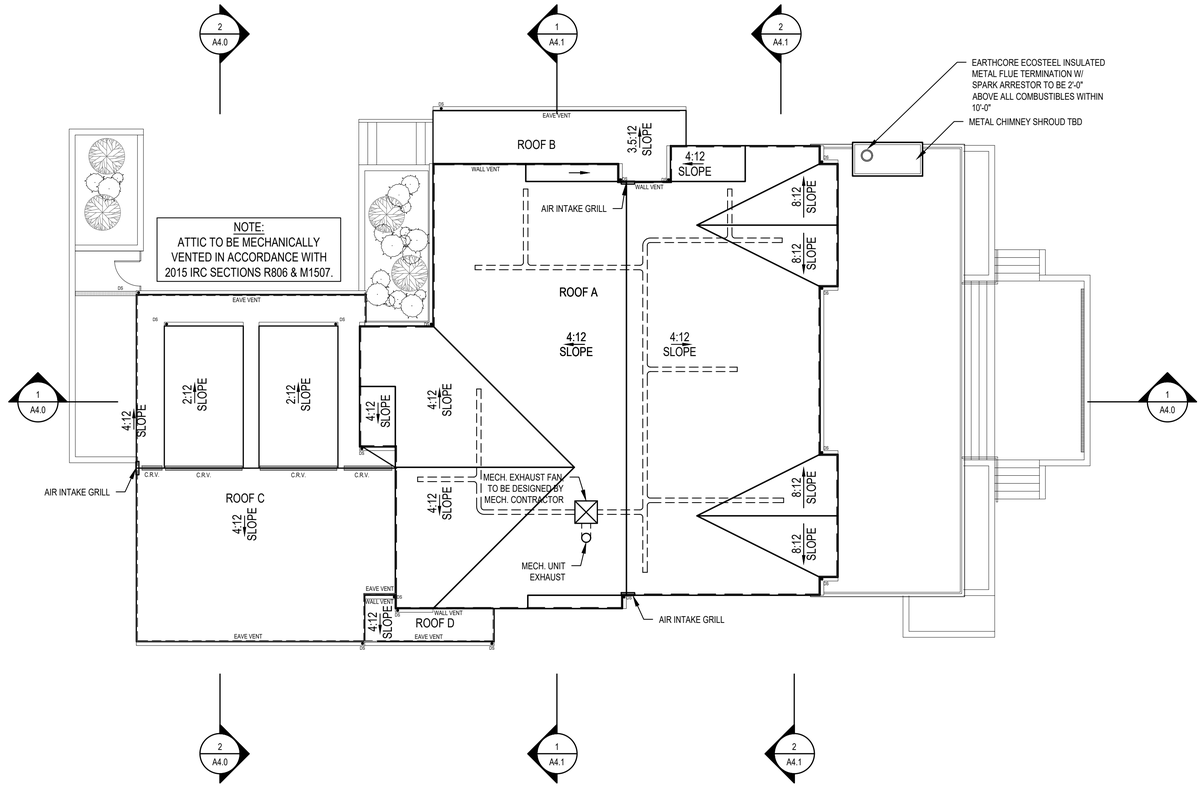
4006 E MERCER WAY
MERCER ISLAND, WA 98040

UPPER FLOOR PLAN

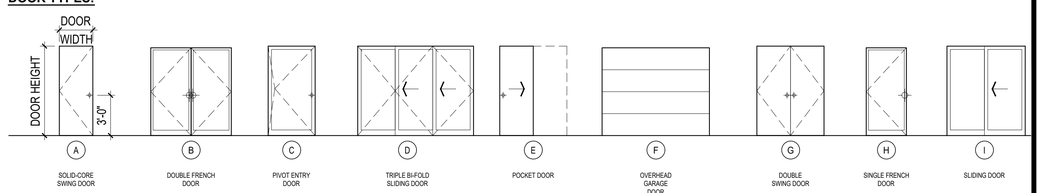
REVISIONS: 1 2 3 4 5 6

PLOT DATE: 5/2/2022
DRAWN BY: JM
CHECKED BY: BJS

SHEET A2.2



DOOR TYPES:



DOOR SCHEDULE

DOOR NO.	LOCATION	SIZE WIDTH	SIZE HEIGHT	DOOR TYPE	TEMP. GLASS	DOOR FIN.	DOOR THK.	U-VAL. (MIN.)	NFRC CERT.	REMARKS
LOWER FLOOR										
001	STORAGE	3'-0"	7'-0"	A	-	-	1-3/4"	.30	Y	
002	MECHANICAL	2'-6"	7'-0"	A	-	-	1-3/4"	.30	Y	
003	CRAWLSPACE	2'-6"	4'-0"	A	-	-	1-3/4"	.30	Y	CRAWLSPACE ACESS
004	BATH & CHANGING ROOM	2'-8"	7'-0"	A	-	-	1-3/4"	.30	Y	
MAIN FLOOR										
101	ENTRY	5'-0"	9'-0"	C	Y	-	1-3/4"	.30	Y	
102	ENTRY CLOSET	2'-6"	7'-0"	A	-	-	1-3/4"	-	Y	
103	POWDER	2'-4"	7'-0"	A	-	-	1-3/4"	-	Y	
104	WINE CLOSET	4'-0"	7'-0"	G	-	-	1-3/4"	-	Y	
105	MUDROOM	2'-6"	7'-0"	A	Y	-	1-3/4"	-	Y	
106	GARAGE	3'-0"	7'-0"	A	-	-	1-3/4"	-	Y	
107	EXERCISE	2'-4"	7'-0"	A	-	-	1-3/4"	-	Y	
108	EXERCISE	2'-6"	7'-0"	A	-	-	1-3/4"	-	Y	
109	LAUNDRY	2'-10"	7'-0"	A	-	-	1-3/4"	-	Y	
110	PANTRY	2'-4"	7'-0"	E	-	-	1-3/4"	-	Y	
111	KITCHEN	6'-0"	9'-0"	B	Y	-	1-3/4"	.30	Y	
112	DINING	10'-0"	9'-0"	D	Y	-	1-3/4"	.30	Y	
113	DINING	10'-0"	9'-0"	D	Y	-	1-3/4"	.30	Y	
114	LIVING	6'-0"	9'-0"	B	Y	-	1-3/4"	.30	Y	
115	GARAGE	9'-0"	8'-0"	F	-	-	1-3/4"	-	Y	OVERHEAD DOOR
116	GARAGE	9'-0"	8'-0"	F	-	-	1-3/4"	-	Y	OVERHEAD DOOR
UPPER FLOOR										
201	HALLWAY	2'-4"	6'-8"	A	-	-	1-3/4"	-	Y	
202	BEDROOM 3	2'-6"	6'-8"	A	-	-	1-3/4"	-	Y	
203	BEDROOM 3	4'-8"	6'-8"	G	-	-	1-3/4"	-	Y	
204	BEDROOM 3 BATH	2'-4"	6'-8"	E	-	-	1-3/4"	-	Y	
205	BEDROOM 3 BATH	3'-0"	6'-8"	G	-	-	1-3/4"	-	Y	
206	BEDROOM 2	5'-0"	6'-8"	G	-	-	1-3/4"	-	Y	
207	BEDROOM 2	2'-4"	6'-8"	A	-	-	1-3/4"	-	Y	
208	BEDROOM 2	2'-6"	6'-8"	A	-	-	1-3/4"	-	Y	
209	BEDROOM 1	2'-6"	6'-8"	A	-	-	1-3/4"	-	Y	
210	BEDROOM 1	2'-4"	6'-8"	A	-	-	1-3/4"	-	Y	
211	BEDROOM 1	5'-0"	6'-8"	G	-	-	1-3/4"	-	Y	
212	BEDROOM 1	5'-0"	6'-8"	B	Y	-	1-3/4"	.30	Y	
213	MASTER BATH	3'-0"	6'-8"	H	Y	-	1-3/4"	.30	Y	
214	MASTER BATH	3'-0"	6'-8"	H	Y	-	1-3/4"	-	Y	NON OPERABLE
215	MASTER BATH	2'-4"	6'-8"	A	-	-	1-3/4"	-	Y	
216	MASTER BATH	2'-6"	6'-8"	A	-	-	1-3/4"	-	Y	
217	VESTIBULE	3'-0"	6'-8"	H	Y	-	1-3/4"	.30	Y	
218	MASTER BEDROOM	5'-0"	6'-8"	B	Y	-	1-3/4"	.30	Y	
219	MASTER CLOSET	2'-6"	6'-8"	A	-	-	1-3/4"	-	Y	
220	MASTER CLOSET	2'-6"	6'-8"	A	-	-	1-3/4"	-	Y	
221	VESTIBULE	2'-6"	6'-8"	A	-	-	1-3/4"	-	Y	
222	HALLWAY	2'-8"	6'-8"	A	-	-	1-3/4"	-	Y	

WINDOW SCHEDULE

WINDOW MARK	DESCRIPTION	R.O. SIZE WIDTH	R.O. SIZE HEIGHT	TEMP.	QTY.	TOTAL AREA (SF)	U-VALUE (MIN.)	NFRC CERT.	GLAZING	REMARKS & NOTES
A	FIXED	1'- 10"	9'- 0"	Y	2	33.0'	.30	Y	LOW E / CLEAR	-
B	CASEMENT/FIXED CASEMENT	4'- 0"	5'- 8"	-	2	45.2'	.30	Y	LOW E / CLEAR	EGRESS WINDOW IN SOME LOCATIONS
C	CASEMENT/FIXED CASEMENT	3'- 8"	5'- 0"	-	9	99.0'	.30	Y	LOW E / CLEAR	EGRESS WINDOW IN SOME LOCATIONS
D	FIXED	4'- 0"	4'- 6"	Y	4	72.0'	.30	Y	LOW E / CLEAR	-
E	FIXED	4'- 0"	1'- 0"	-	4	16.0'	.30	Y	LOW E / CLEAR	-
F	CASEMENT	2'- 6"	4'- 10"	Y	2	24.0'	.30	Y	LOW E / CLEAR	EGRESS
G	CASEMENT/FIXED	3'- 0"	4'- 10"	-	4	58.0'	.30	Y	LOW E / CLEAR	EGRESS WINDOW IN SOME LOCATIONS
H	FIXED	2'- 6"	1'- 6"	-	2	7.5'	.30	Y	LOW E / CLEAR	-
I	FIXED	2'- 6"	2'- 0"	-	4	20.0'	.30	Y	LOW E / CLEAR	-
J	FIXED	1'- 8"	1'- 0"	-	4	6.7'	.30	Y	LOW E / CLEAR	-
K	FIXED	5'- 0"	1'- 8"	-	2	16.6'	.30	Y	LOW E / CLEAR	-
L	FIXED	1'- 8"	6'- 8"	Y	4	44.4'	.30	Y	LOW E / CLEAR	-

ROOF VENT CALCULATIONS

CODE REQUIREMENT				CALCULATIONS										ACTUAL	
DESCRIPTION	SF AREA	REQ. VENTING PER SF AREA		VENT TYPE			X	VENT L.F.	=	TOTAL VENT AREA	X	SF CONVERT.	X	80% EFF FACTOR	TOTAL
		150	300	RIDGE	EAVE	WALL				SQ. IN.		1/144			
ROOF A	2,357	MECHANICALLY VENTED													
ROOF B	181	1.21			10 SQ.IN./FT.			27.5		495		3.44		2.75	4.55
					1.5x1.0" VENT										
				12 SQ.IN/FT.				0		0		0.00		0.00	
				CONTINUOUS											
						6.75 SQ.IN./FT.		27		324		2.25		1.80	
						CONTINUOUS									
ROOF C	1,181	7.87			10 SQ.IN./FT.			61.4		1105.2		7.68		6.14	8.11
					1.5x1.0" VENT										
				12 SQ.IN/FT.				29.5		354		2.46		1.97	
				CONTINUOUS											
						6.75 SQ.IN./FT.		0		0		0.00		0.00	
						CONTINUOUS									
ROOF D	61	0.41			10 SQ.IN./FT.			14.3		257.4		1.79		1.43	2.38
					1.5x1.0" VENT										
				12 SQ.IN/FT.				0		0		0.00		0.00	
				CONTINUOUS											
						6.75 SQ.IN./FT.		14.3		171.6		1.19		0.95	
						CONTINUOUS									

1 ROOF PLAN

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

SCALE: IF SHEET IS LESS THAN 24" x 36", IT IS A REDUCED PRINT, REDUCE SCALE ACCORDINGLY

PERMIT SET 5/2/2022

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9 - 103rd Ave NE Suite 203 Bellevue, WA 98004
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BRADLEY J. STURMAN
STATE OF WASHINGTON
5563

4006 RESIDENCE

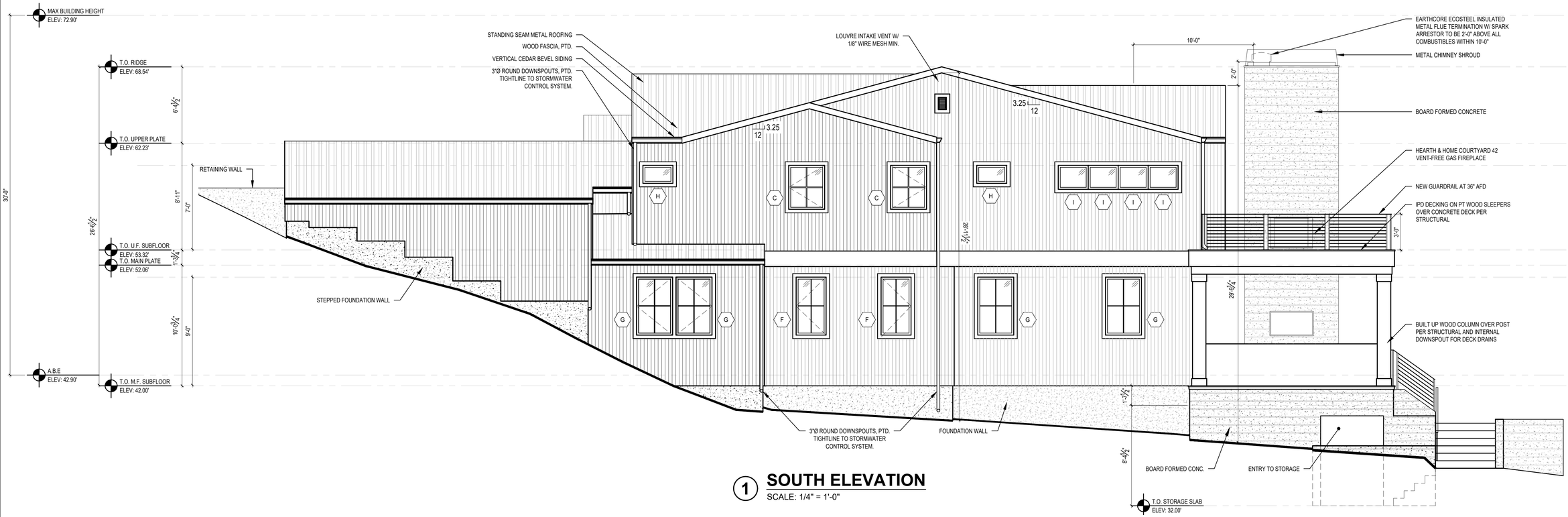
4006 E MERCER WAY
MERCER ISLAND, WA 98040

ROOF PLAN
ROOF VENTILATION CALCS
DOOR & WINDOW SCHEDULE

REVISIONS:

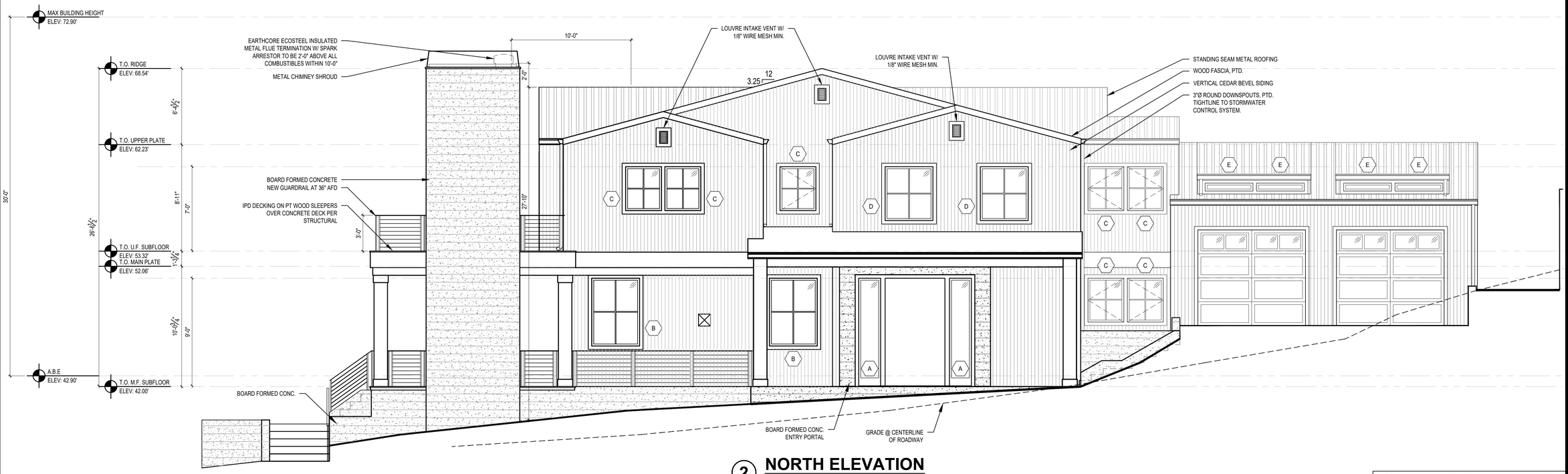
PLOT DATE: 5/2/2022
DRAWN BY: JM
CHECKED BY: BJS

SHEET **A2.3**



1 SOUTH ELEVATION

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



2 NORTH ELEVATION

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

SCALE: IF SHEET IS LESS THAN 24" x 36", IT IS A REDUCED PRINT, REDUCE SCALE ACCORDINGLY

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REGISTERED ARCHITECT
BRADLEY J. STURMAN
STATE OF WASHINGTON
5062

MOUNGER REMODEL

4006 E MERCER WAY
MERCER ISLAND, WA 98040

EXTERIOR ELEVATIONS

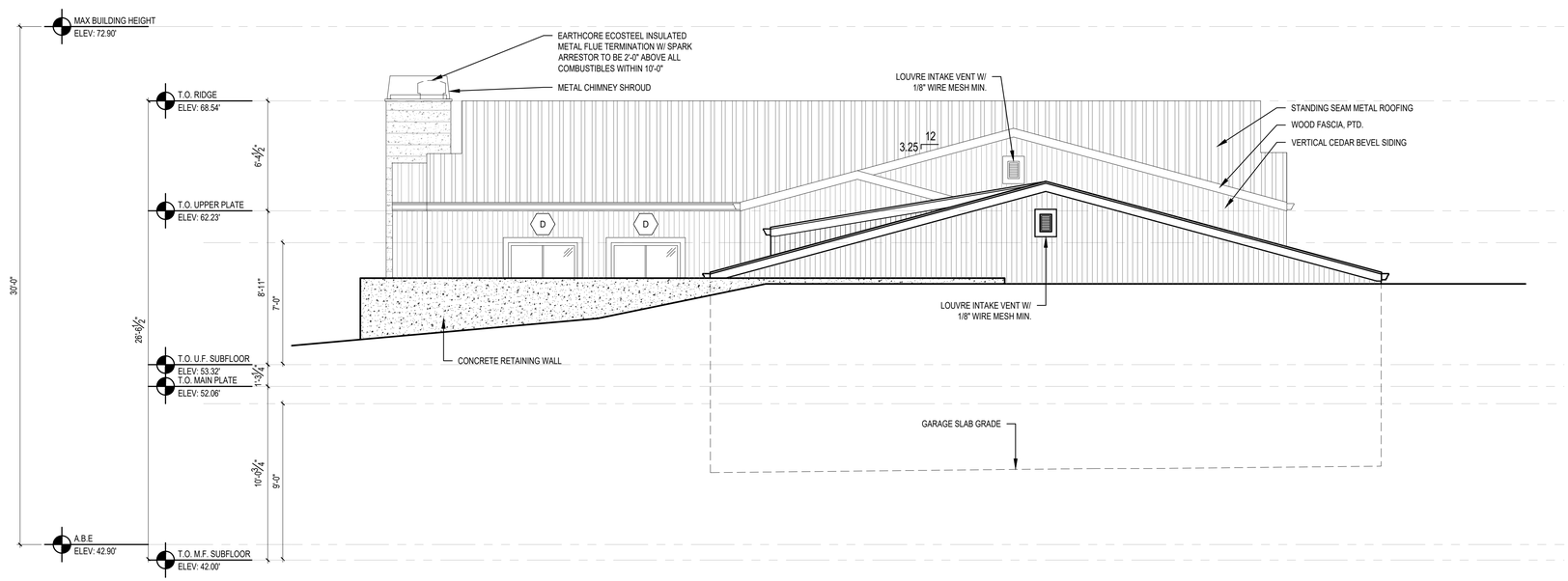
REVISIONS:

PLOT DATE: 5/2/2022
DRAWN BY: JM
CHECKED BY: BJS

SHEET
A3.0

1 EAST ELEVATION

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



2 WEST ELEVATION

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

SCALE: IF SHEET IS LESS THAN 24" x 36", IT IS A REDUCED PRINT, REDUCE SCALE ACCORDINGLY

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STATE OF WASHINGTON
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MOUNGER REMODEL

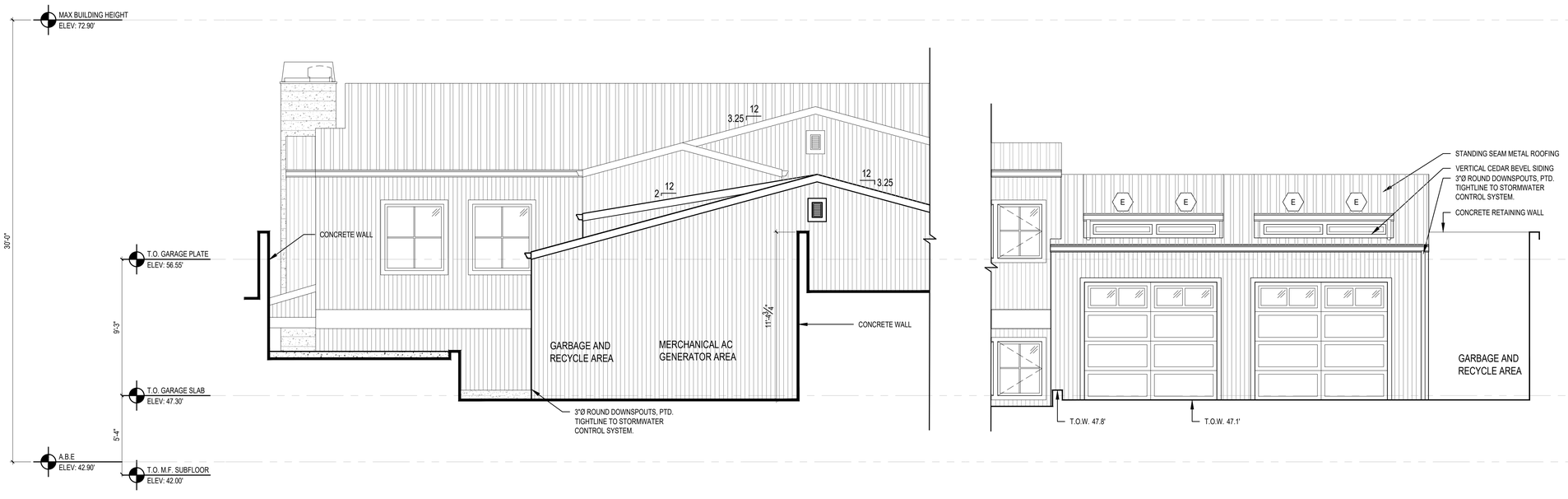
4006 E MERCER WAY
MERCER ISLAND, WA 98040

EXTERIOR ELEVATIONS

REVISIONS:

PLOT DATE: 5/2/2022
DRAWN BY: JM
CHECKED BY: BJS

SHEET A3.1



1 **GARAGE AND GARBAGE/RECYCLING AREA**
WEST ELEVATION
SCALE: 1/4" = 1'-0"

2 **GARAGE AND GARBAGE/RECYCLING AREA**
NORTH ELEVATION
SCALE: 1/4" = 1'-0"

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9 - 103rd Ave NE Suite 203 Bellevue, WA 98004
TEL: 425.451.7003

REGISTERED ARCHITECT
BRADLEY J. STURMAN
STATE OF WASHINGTON
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MOUNGER REMODEL

4006 E MERCER WAY
MERCER ISLAND, WA 98040

EXTERIOR ELEVATIONS

REVISIONS:

PLOT DATE: 5/2/2022
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CHECKED BY: BJS

SHEET
A3.2

SCALE: IF SHEET IS LESS THAN 24" x 36", IT IS A REDUCED PRINT, REDUCE SCALE ACCORDINGLY

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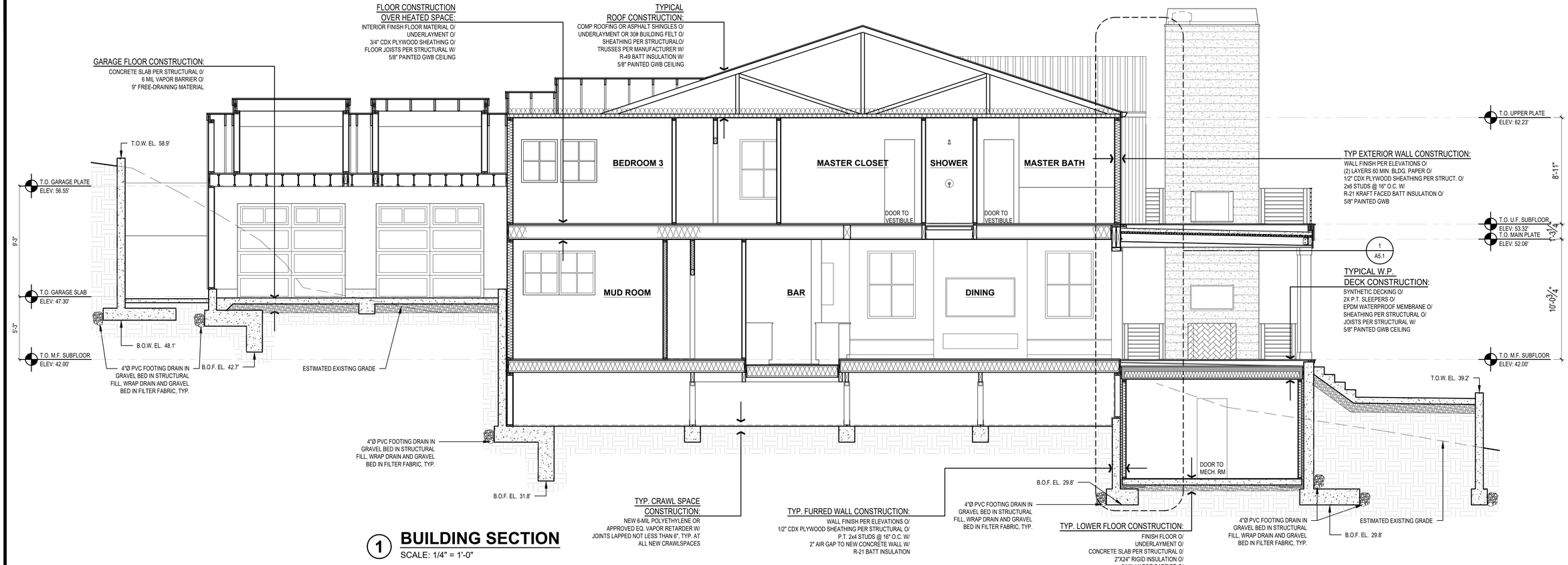
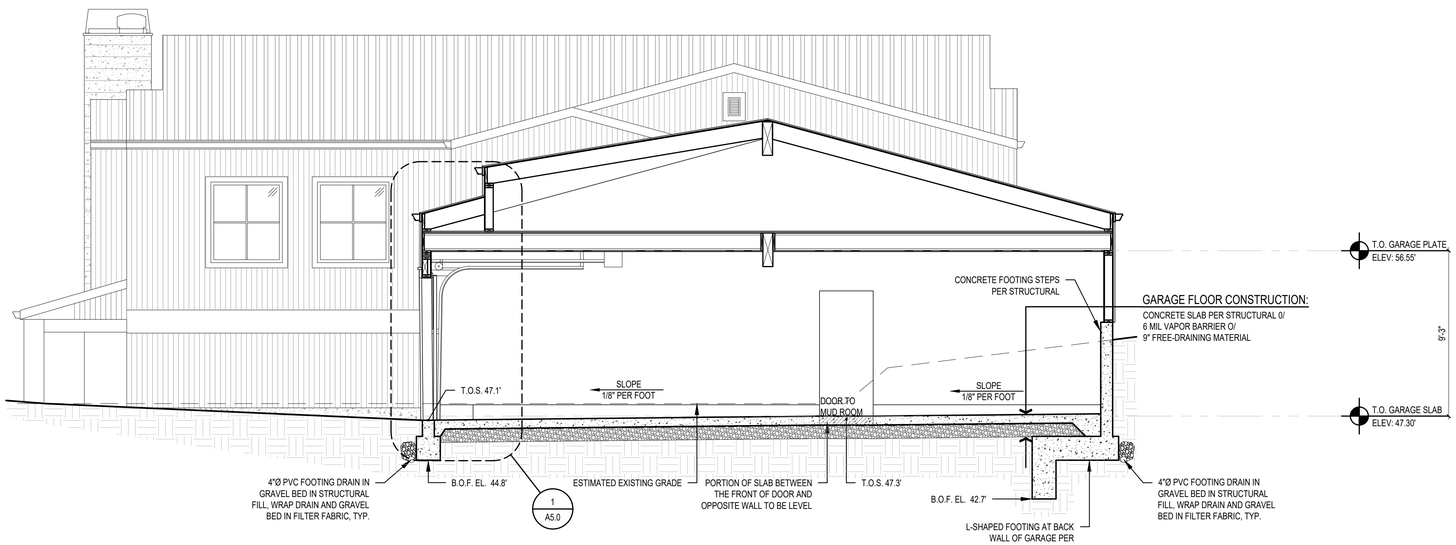


1 BUILDING SECTION

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



2 BUILDING SECTION

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

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MOUNGER REMODEL

4006 E MERCER WAY
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BUILDING SECTIONS

REVISIONS:

PLOT DATE: 5/2/2022
DRAWN BY: JM
CHECKED BY: BJS

SHEET
A4.0

SCALE: IF SHEET IS LESS THAN 24" x 36", IT IS A REDUCED PRINT, REDUCE SCALE ACCORDINGLY

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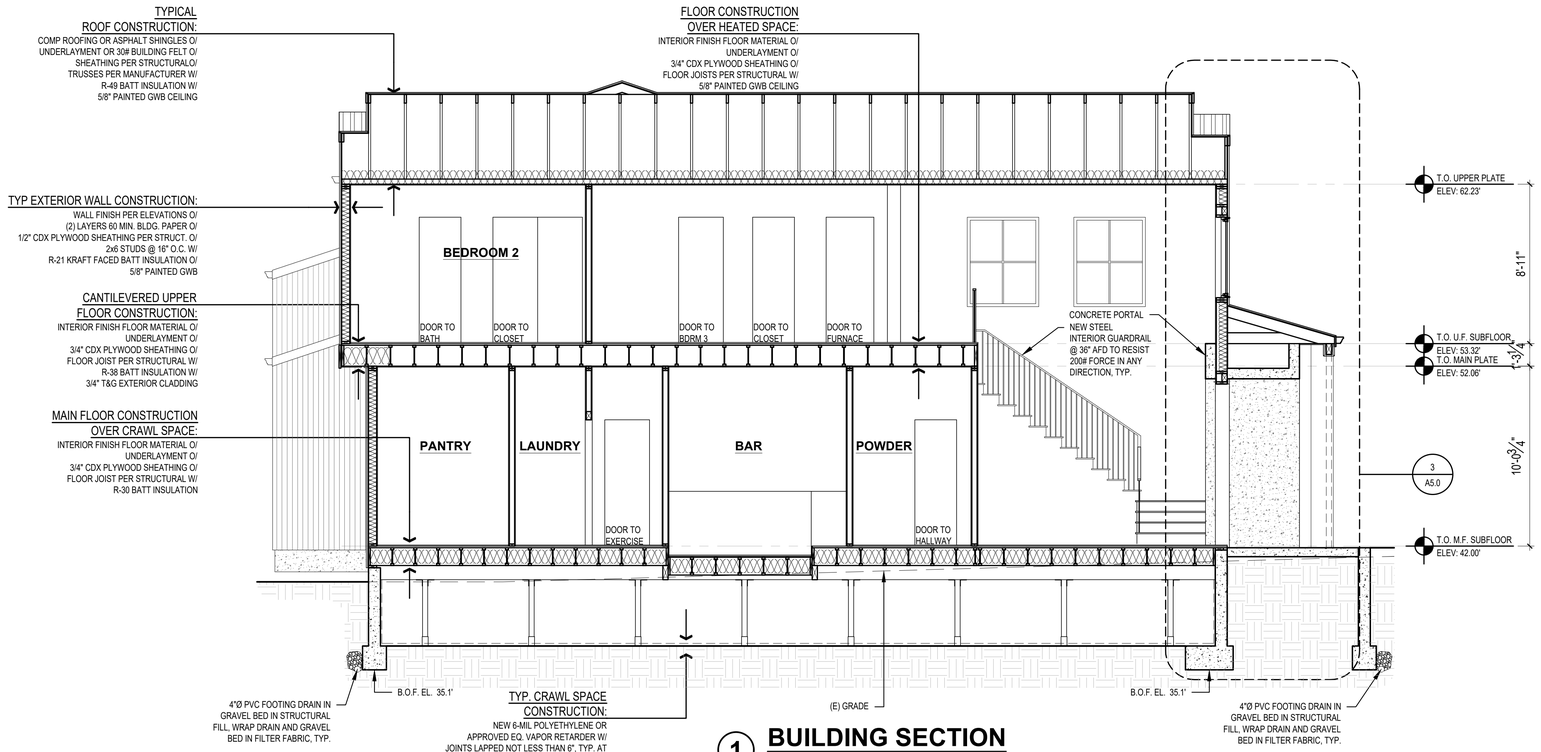
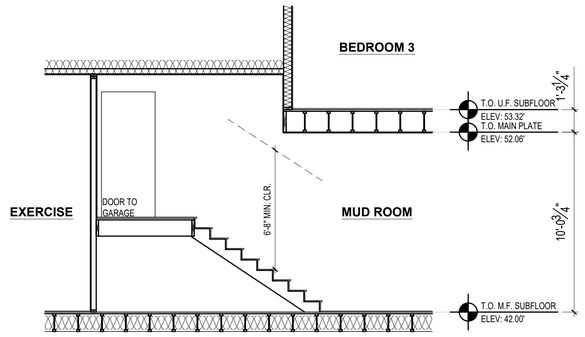
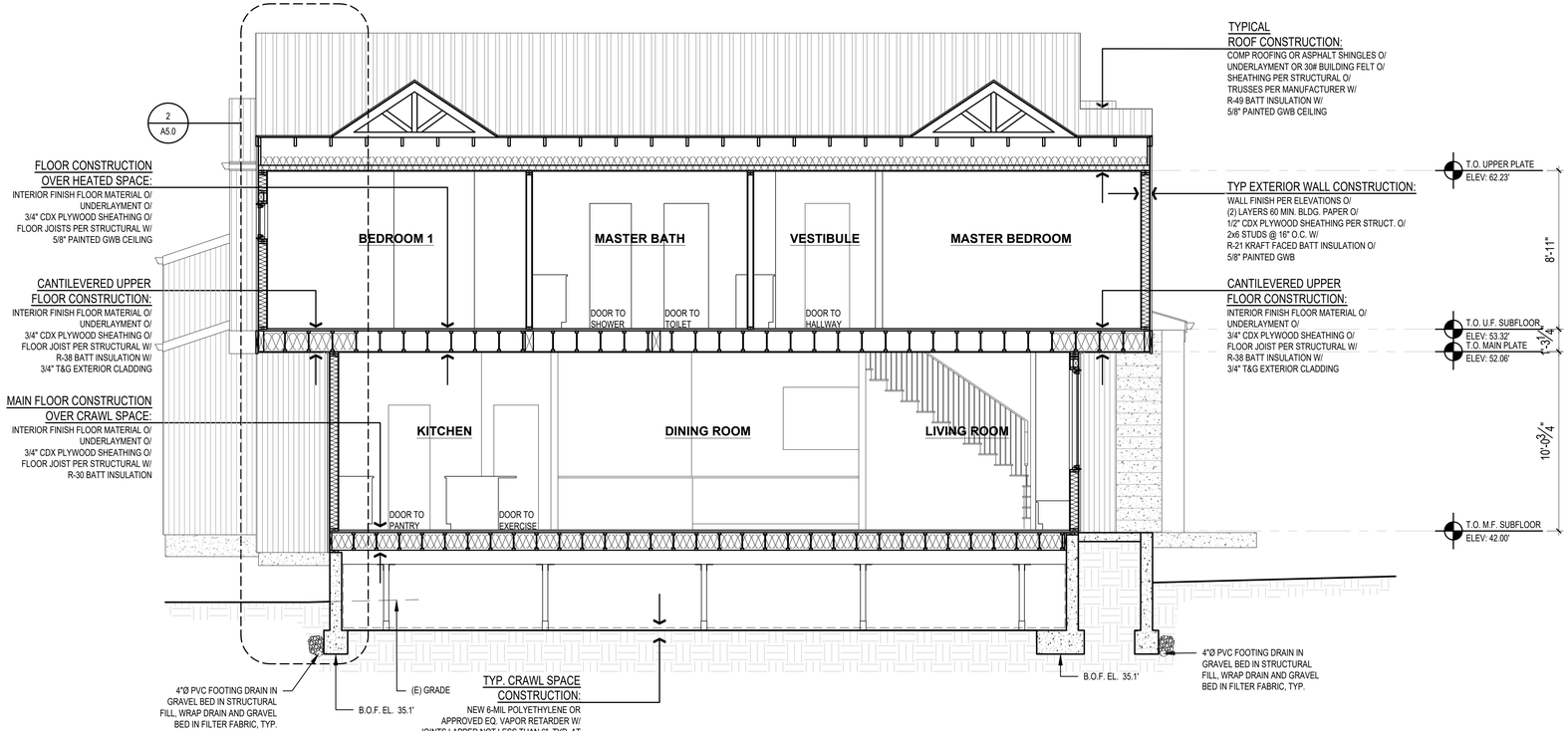


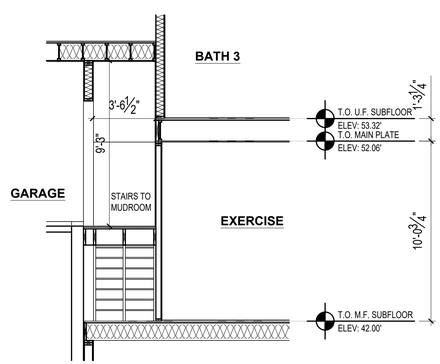
1 BUILDING SECTION
SCALE: 1/4" = 1'-0"



3 MUDROOM/GARAGE STAIR SECTION
SCALE: 1/4" = 1'-0"



2 BUILDING SECTION
SCALE: 1/4" = 1'-0"



4 MUDROOM/GARAGE STAIR SECTION
SCALE: 1/4" = 1'-0"

SCALE: IF SHEET IS LESS THAN 24" x 36", IT IS A REDUCED PRINT, REDUCE SCALE ACCORDINGLY

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MOUNGER REMODEL

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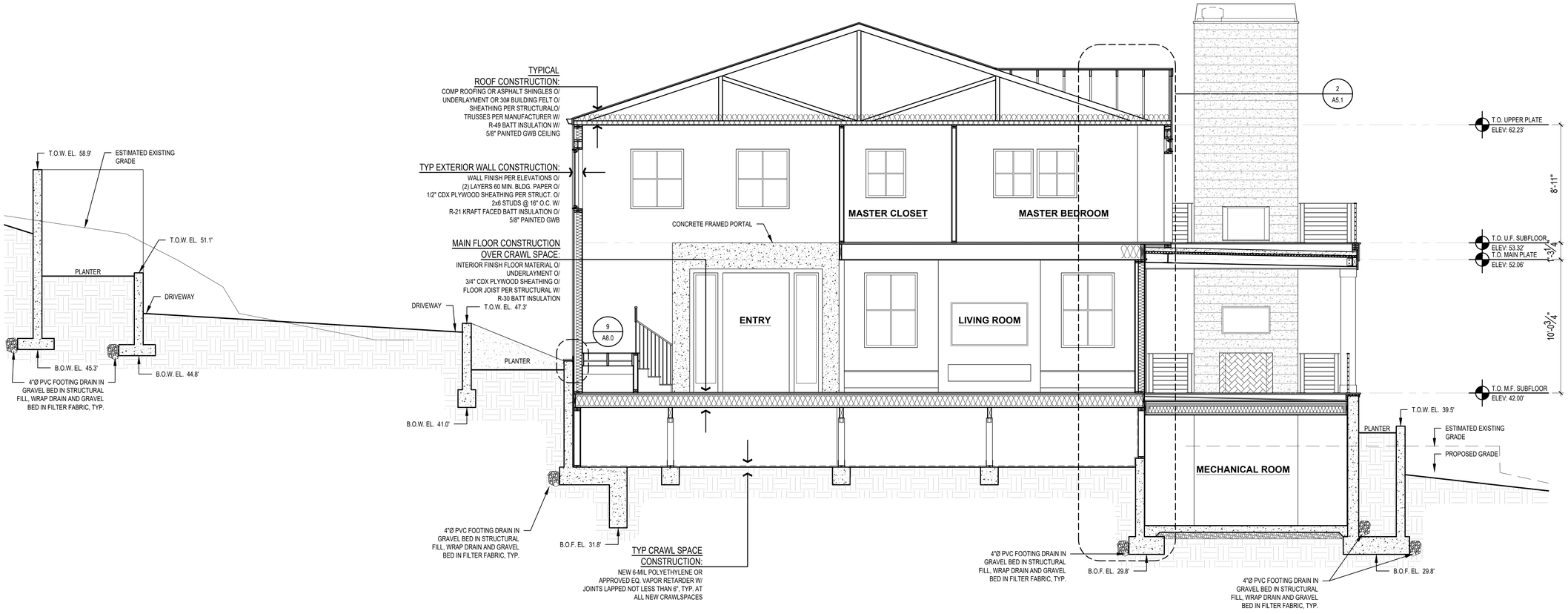
MERCER ISLAND, WA 98040

BUILDING SECTIONS

REVISIONS:

PLOT DATE: 5/2/2022
DRAWN BY: JM
CHECKED BY: BJS

SHEET
A4.1



1 BUILDING SECTION

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MOUNGER REMODEL

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BUILDING SECTIONS

REVISIONS:

PLOT DATE: 5/2/2022
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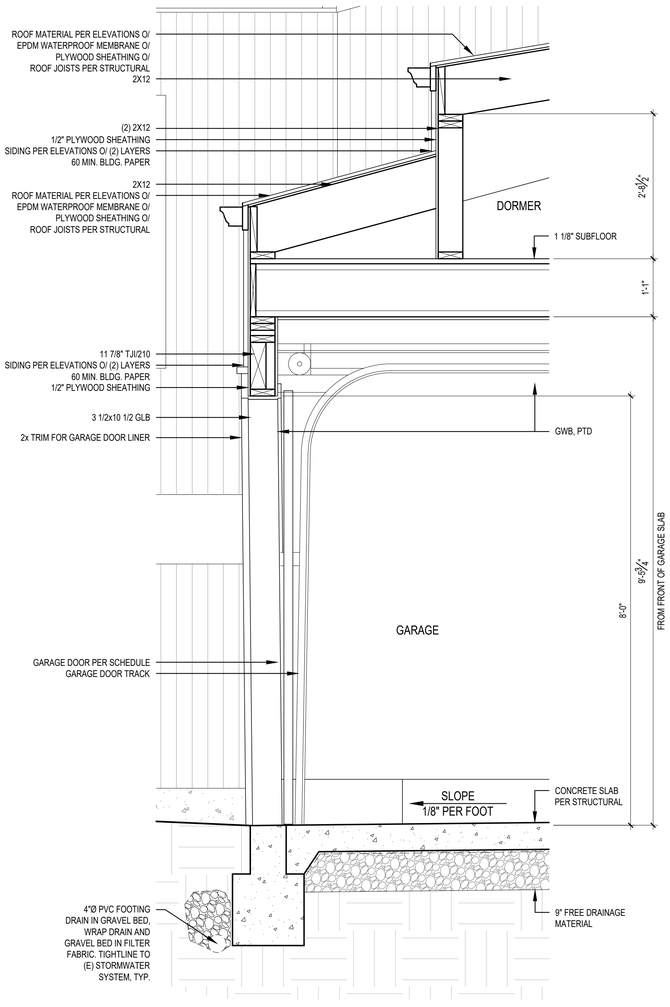
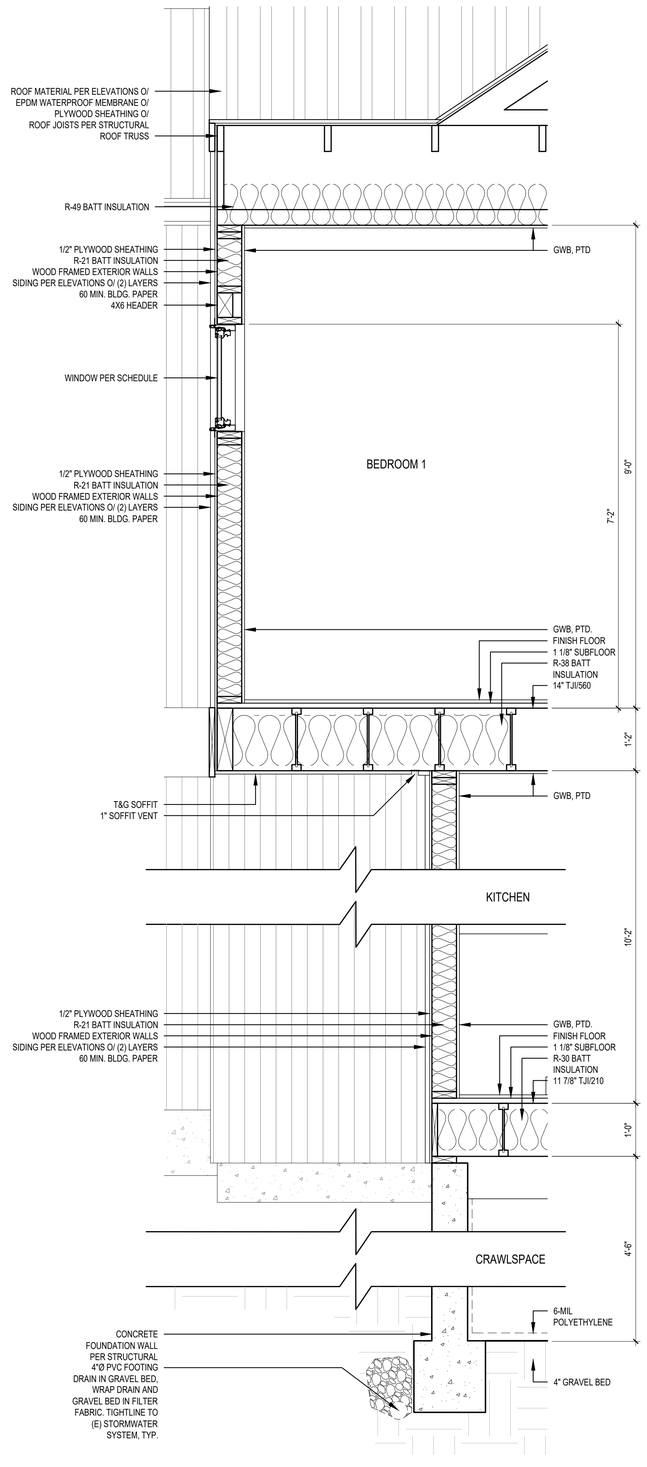
CHECKED BY: BJS

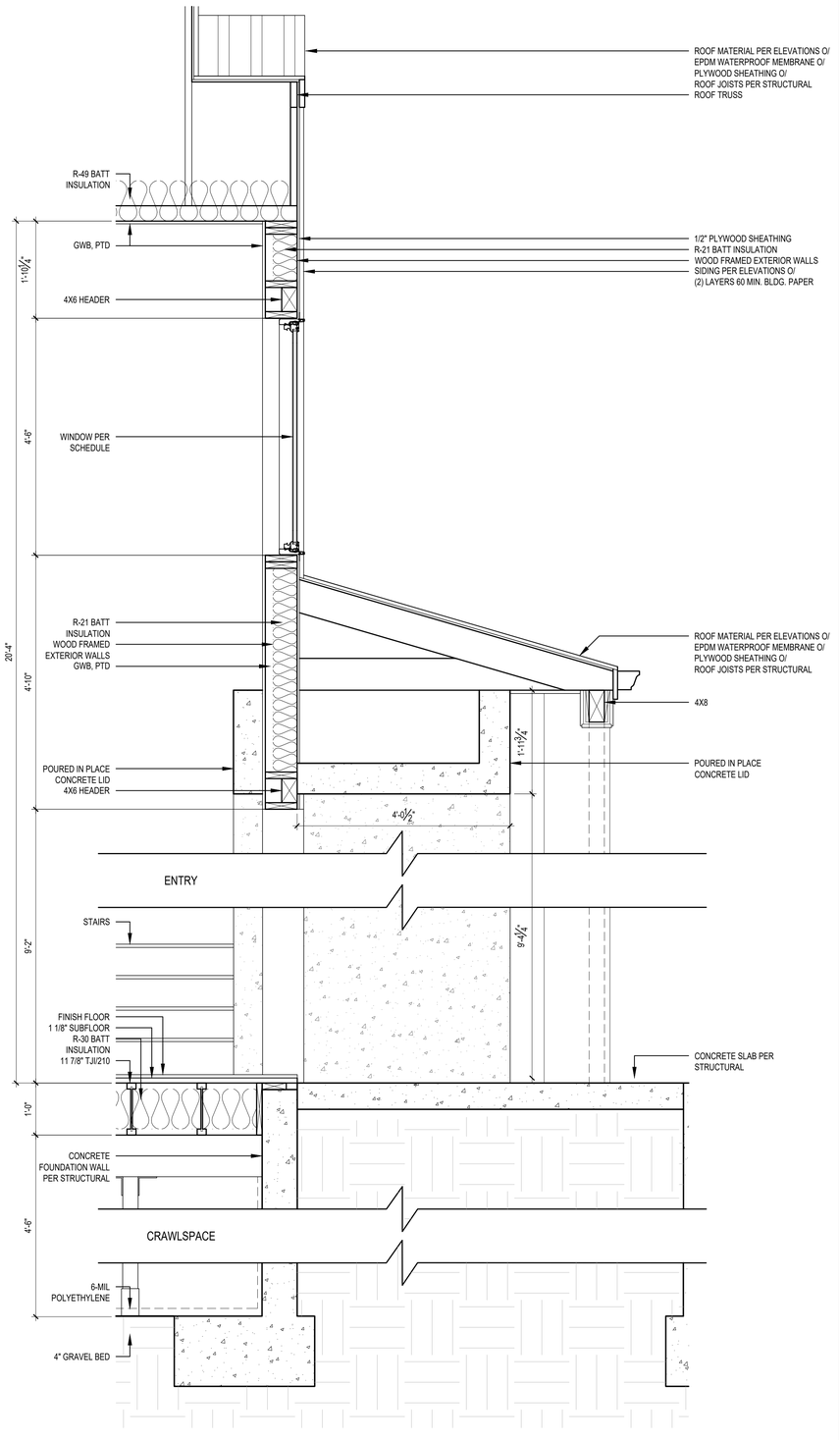
SHEET
A4.2



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



2 WALL SECTION
SCALE: 3/4" = 1'-0"



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

SCALE: IF SHEET IS LESS THAN 24" x 36", IT IS A REDUCED PRINT, REDUCE SCALE ACCORDINGLY

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5583

4006 RESIDENCE

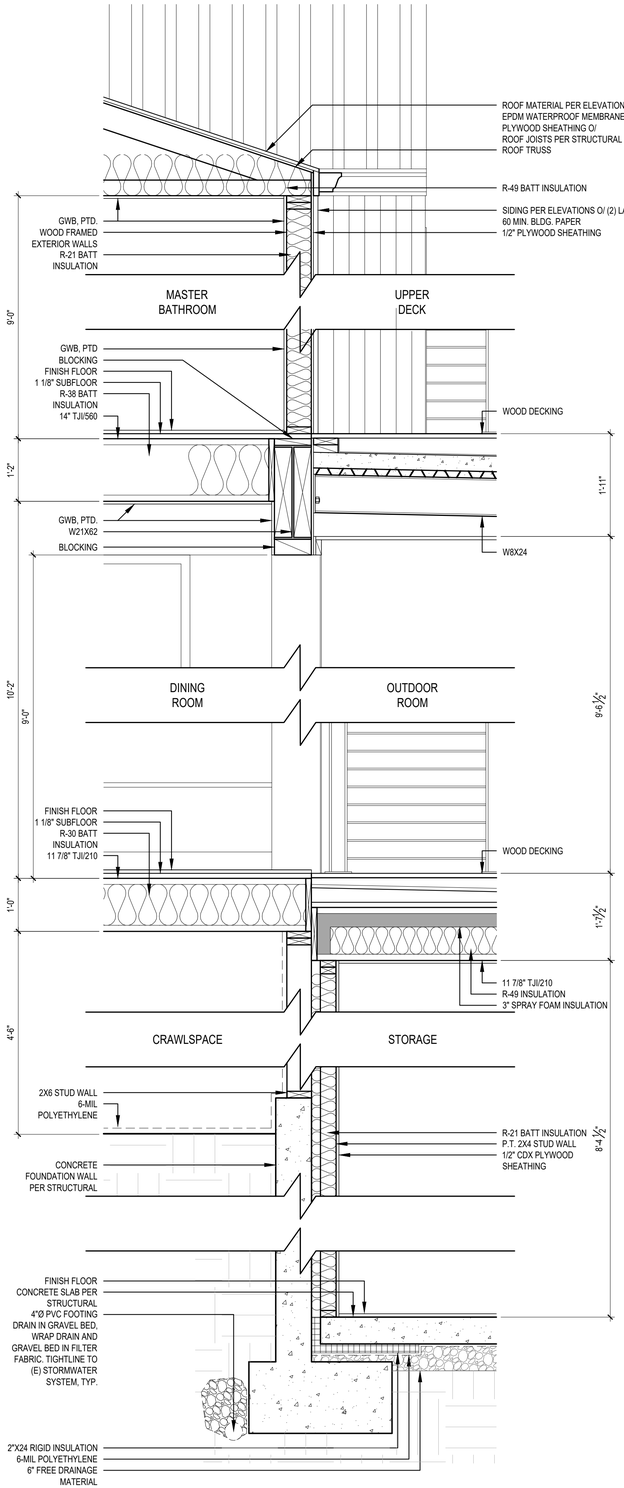
4006 E MERCER WAY
MERCER ISLAND, WA 98040

WALL SECTIONS

REVISIONS:

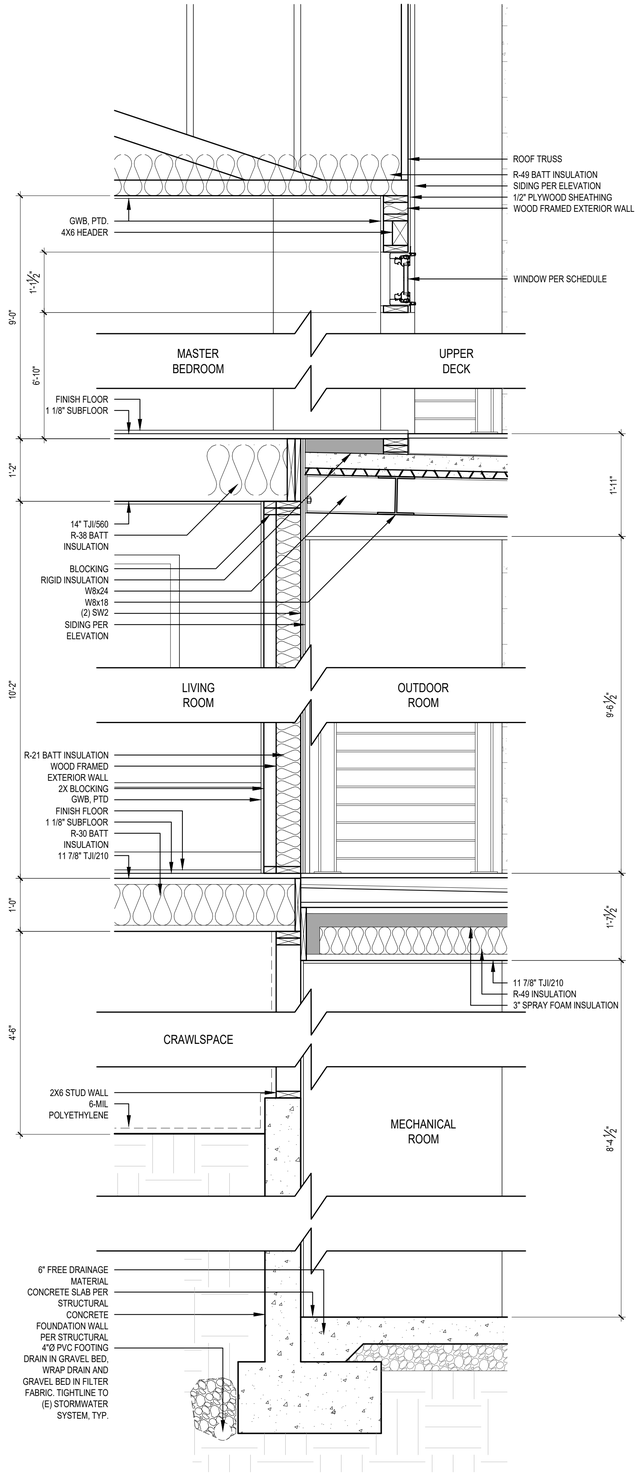
PLOT DATE: 5/2/2022
DRAWN BY: JM
CHECKED BY: BJS

SHEET
A5.0



1 WALL SECTION

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



2 WALL SECTION

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

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STATE OF WASHINGTON

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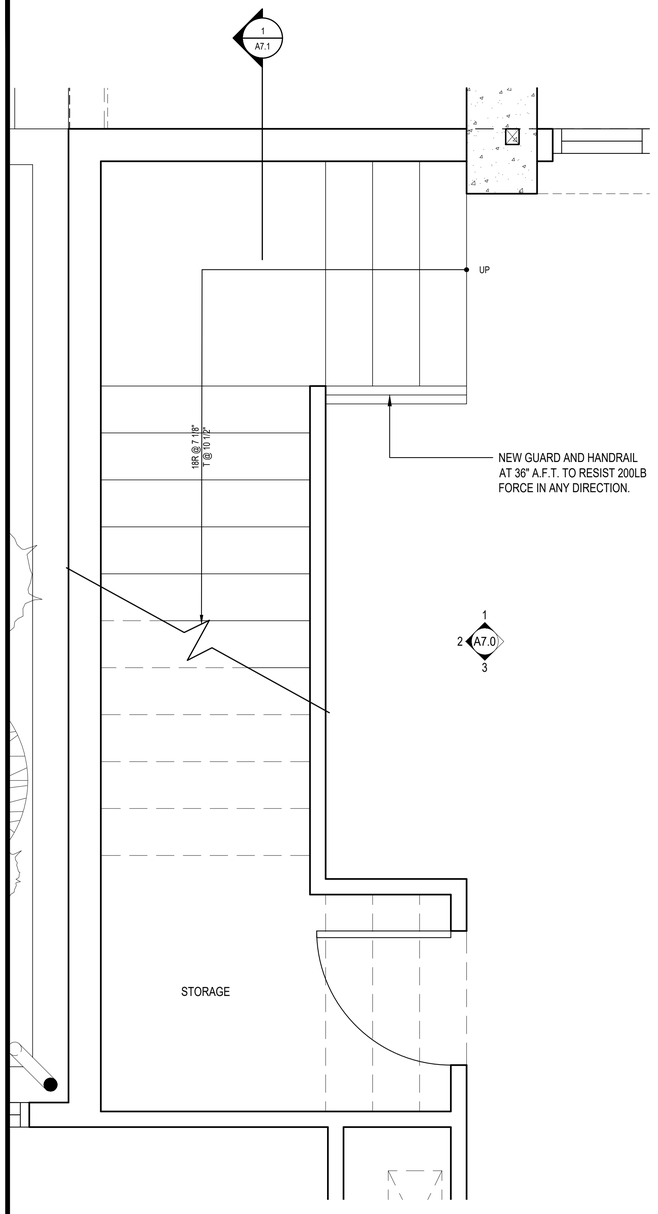
4006 E MERCER WAY
MERCER ISLAND, WA 98040

WALL SECTIONS

REVISIONS:

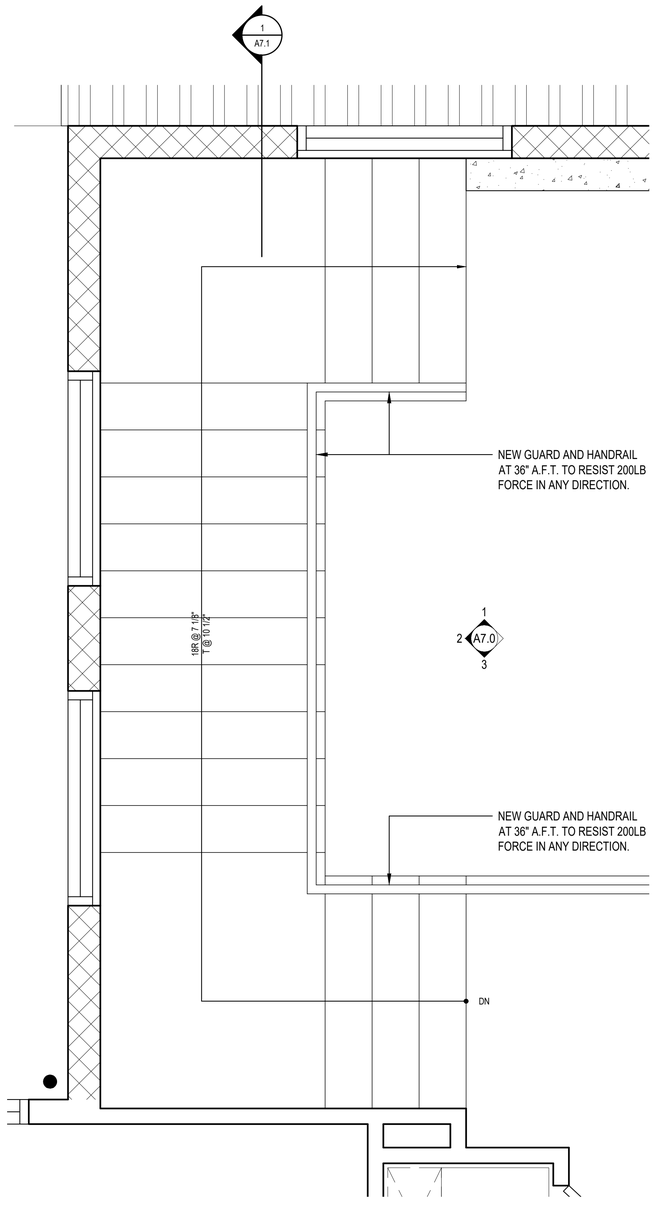
PLOT DATE: 5/2/2022
DRAWN BY: JM
CHECKED BY: BJS

SHEET
A5.1



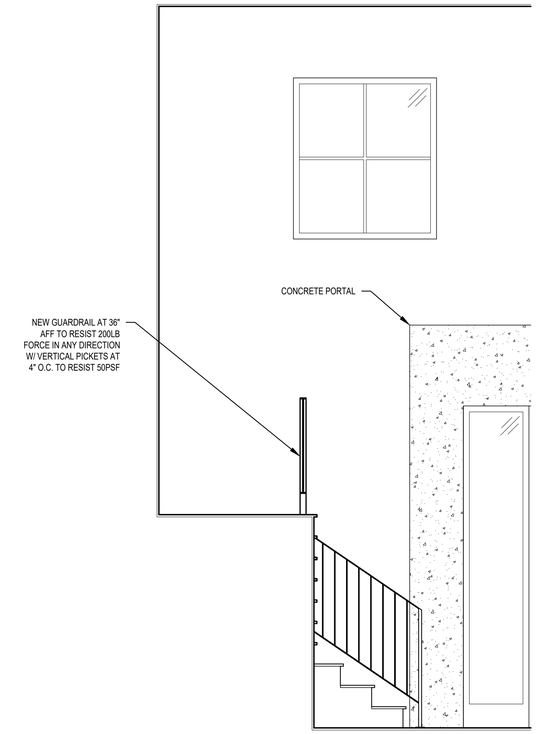
PARTIAL MAIN FLOOR PLAN

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



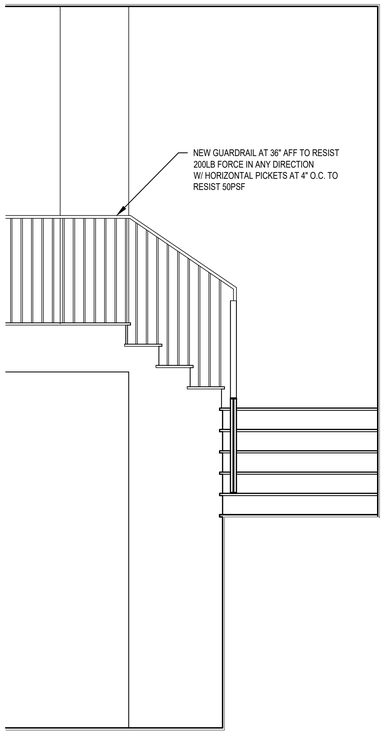
PARTIAL UPPER FLOOR PLAN

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



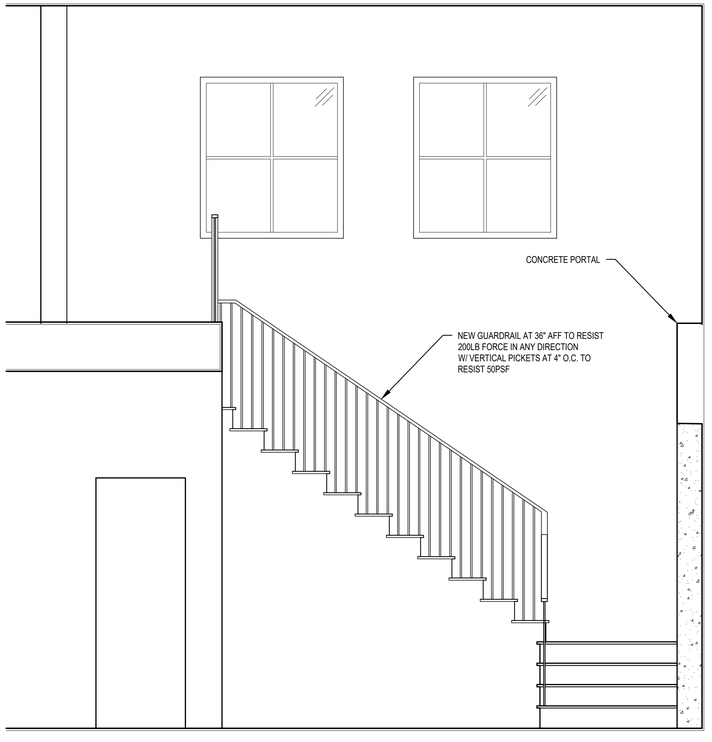
1 STAIR ELEVATION

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



3 STAIR ELEVATION

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



2 STAIR ELEVATION

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

SCALE: IF SHEET IS LESS THAN 24" x 36", IT IS A REDUCED PRINT, REDUCE SCALE ACCORDINGLY

PERMIT SET 5/2/2022

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BRADLEY J. STURMAN
STATE OF WASHINGTON
5563

4006 RESIDENCE

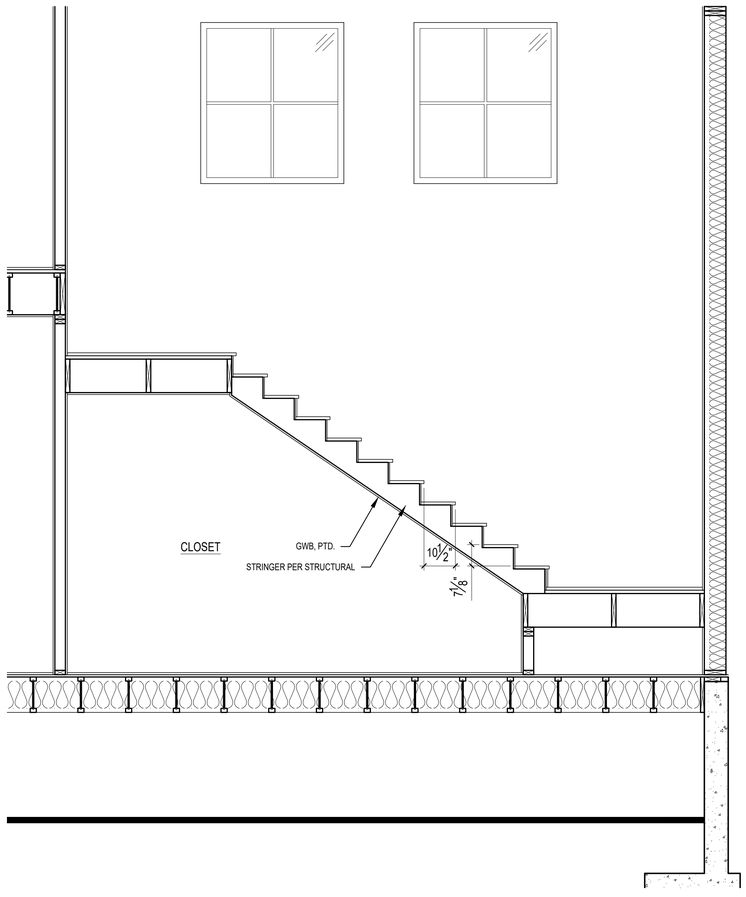
4006 E MERCER WAY
MERCER ISLAND, WA 98040

INTERIOR STAIR PLAN

REVISIONS:

PLOT DATE: 5/2/2022
DRAWN BY: JM
CHECKED BY: BJS

SHEET
A7.0



1 STAIR SECTION

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

SCALE: IF SHEET IS LESS THAN 24" x 36", IT IS A REDUCED PRINT, REDUCE SCALE ACCORDINGLY

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4006 RESIDENCE

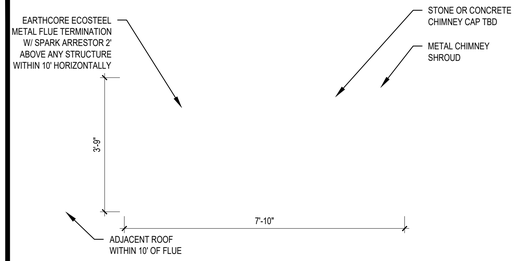
4006 E MERCER WAY
MERCER ISLAND, WA 98040

INTERIOR STAIR PLAN

REVISIONS:
1
2
3
4
5
6

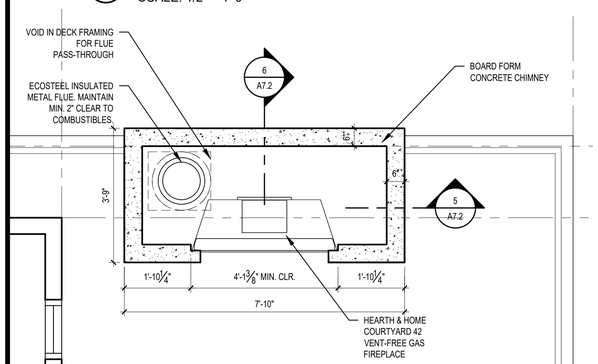
PLOT DATE: 5/2/2022
DRAWN BY: JM
CHECKED BY: BJS

SHEET
A7.1



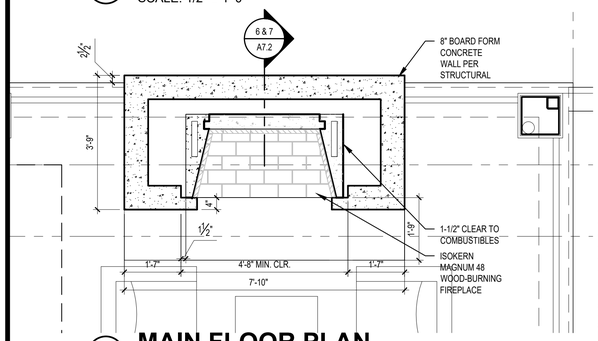
1 UPPER FLUE PLAN

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



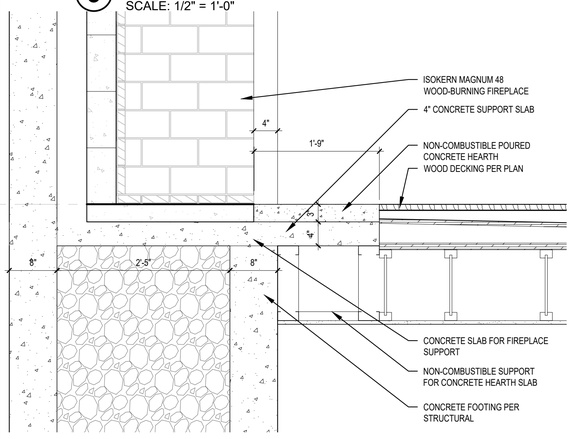
2 UPPER FLOOR PLAN

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



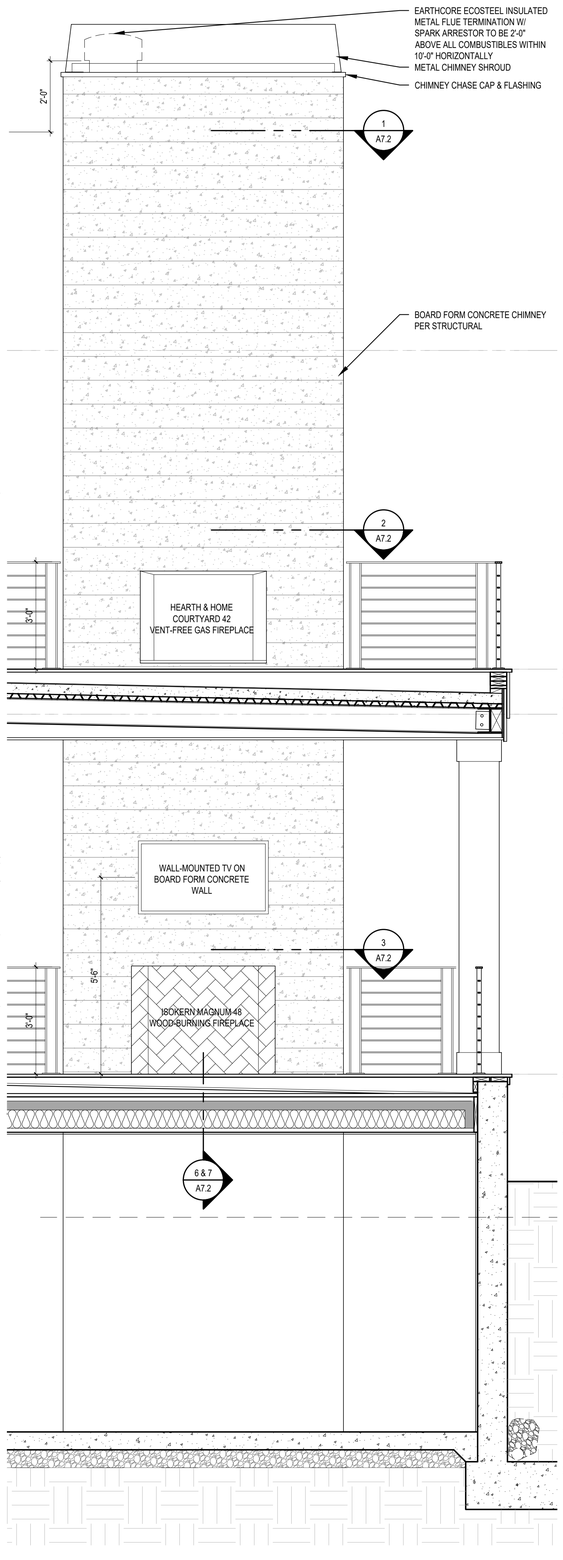
3 MAIN FLOOR PLAN

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



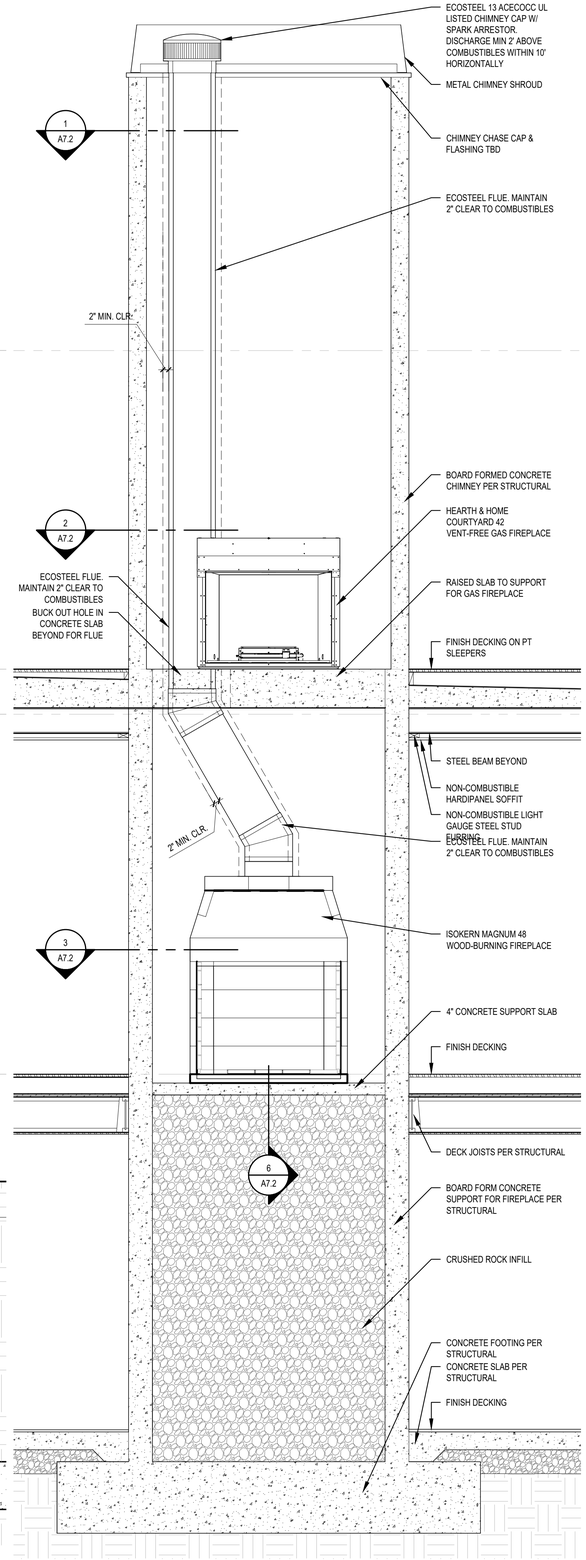
7 HEARTH DETAIL

SCALE: 1" = 1'-0"



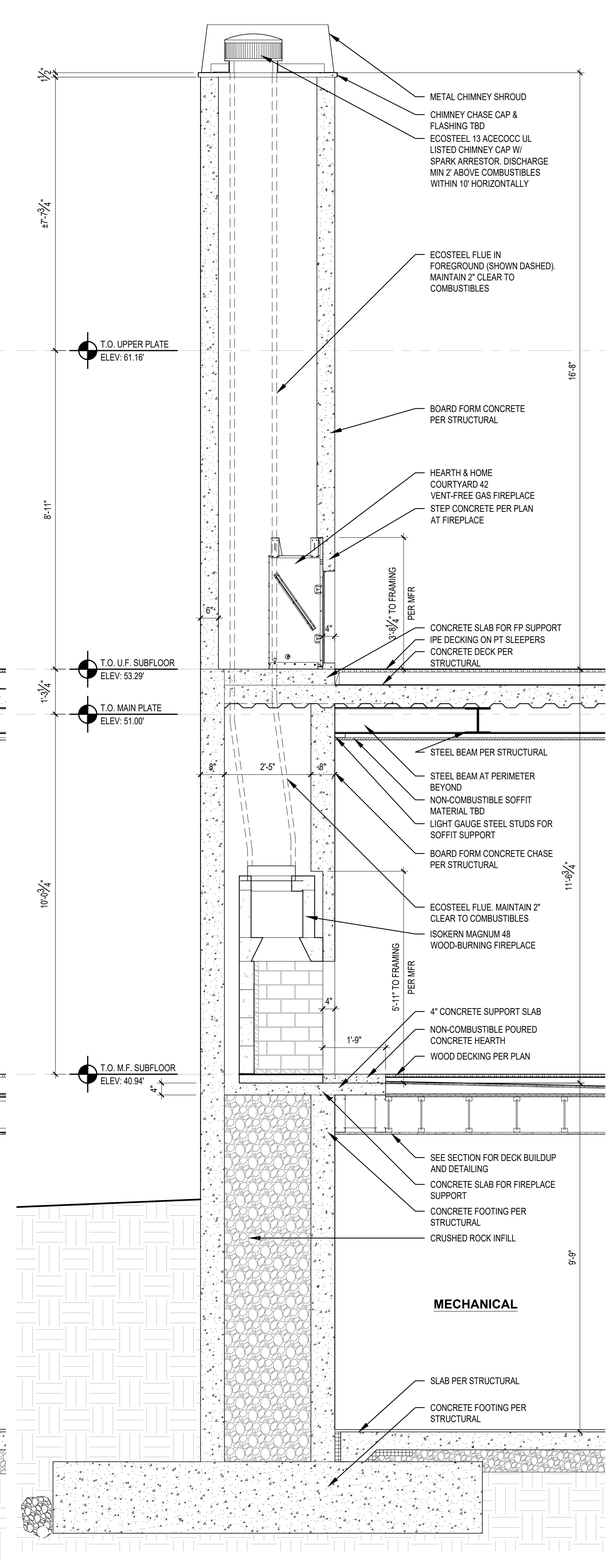
4 FIREPLACE ELEVATION

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



5 FIREPLACE SECTION

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



6 FIREPLACE SECTION

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

SCALE: IF SHEET IS LESS THAN 24" x 36", IT IS A REDUCED PRINT, REDUCE SCALE ACCORDINGLY

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TEL: 425.457.7003

REGISTERED ARCHITECT
BRADLEY J. STURMAN
STATE OF WASHINGTON
5563

4006 RESIDENCE

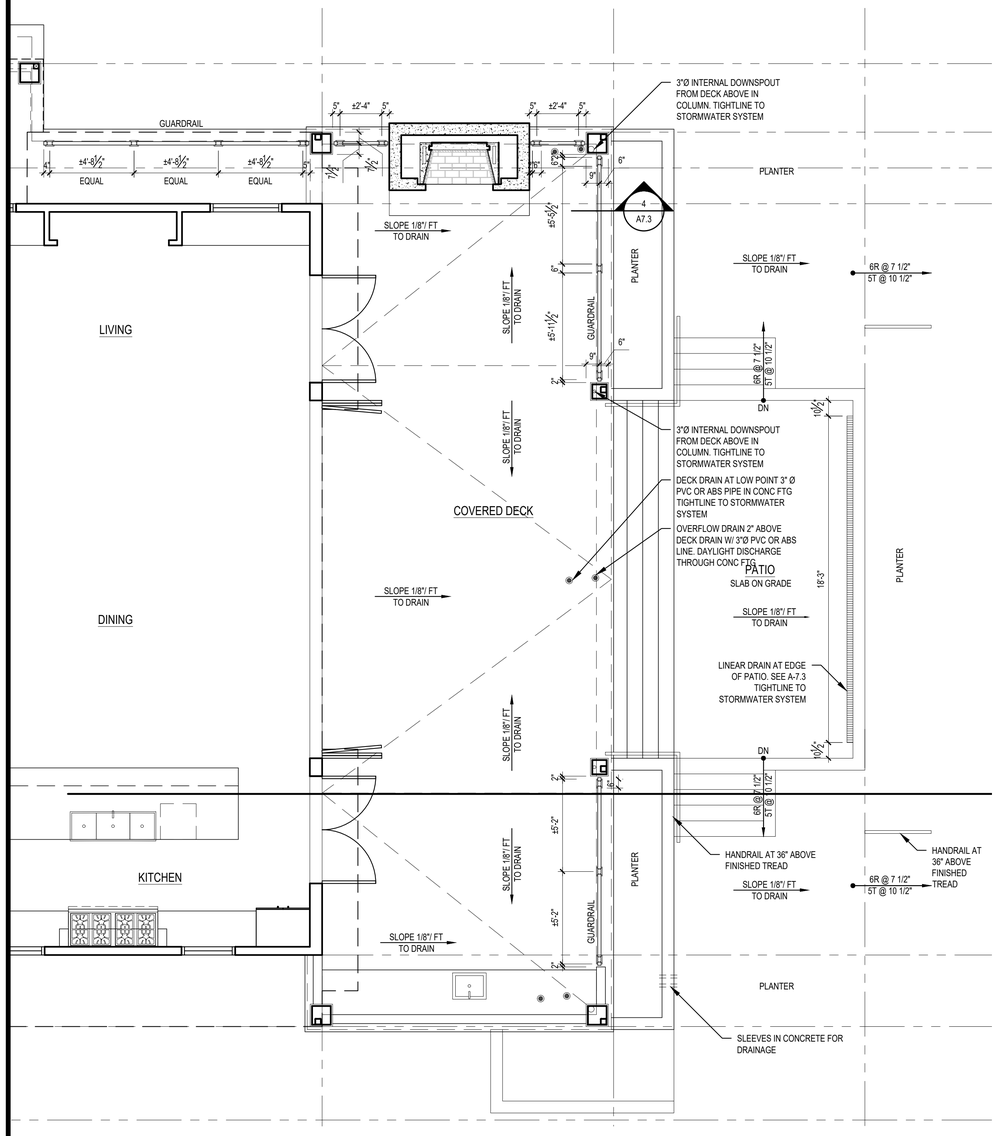
4006 E MERCER WAY
MERCER ISLAND, WA 98040

FIREPLACE DETAILS

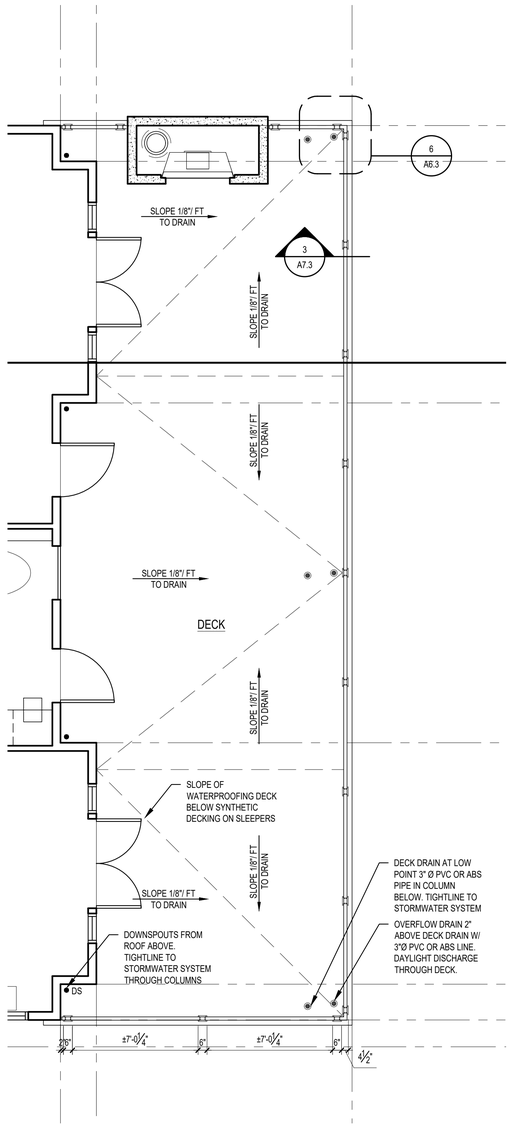
REVISIONS:

PLOT DATE: 5/2/2022
DRAWN BY: LG
CHECKED BY: BJS

SHEET A7.2



1 MAIN FLOOR DECK DRAINAGE & RAILING PLAN
SCALE: 1/4" = 1'-0"



2 UPPER FLOOR DECK DRAINAGE & RAILING PLAN
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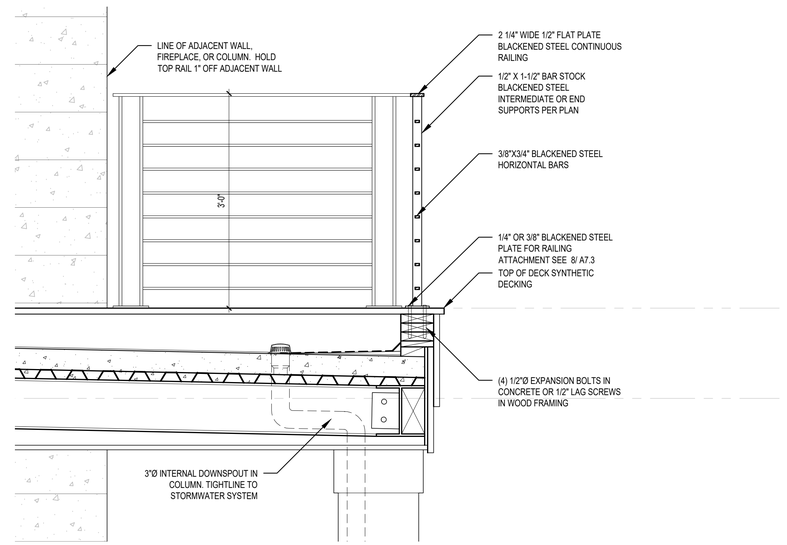

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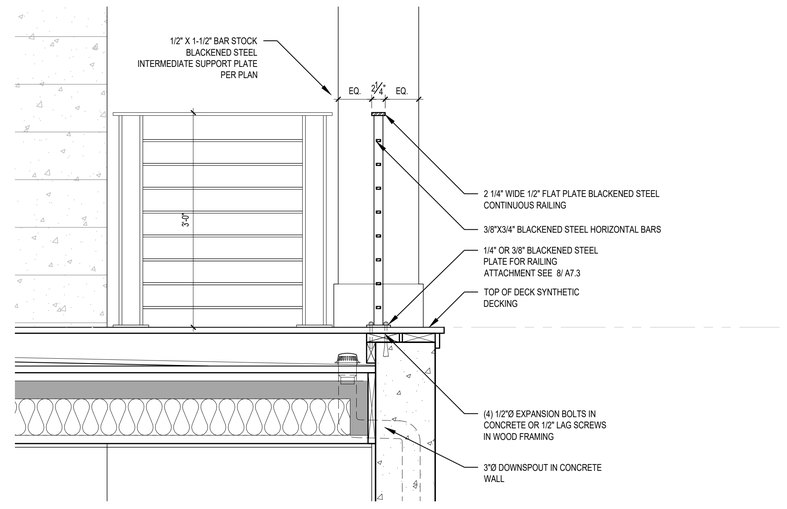

4 MAIN FLOOR DECK RAILING SECTION
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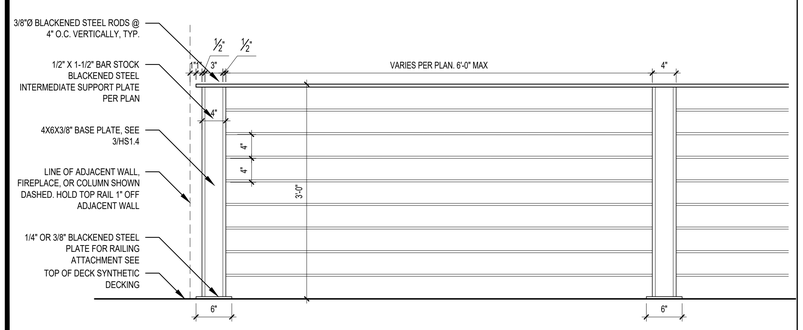

5 TYP DECK RAILING ELEVATION
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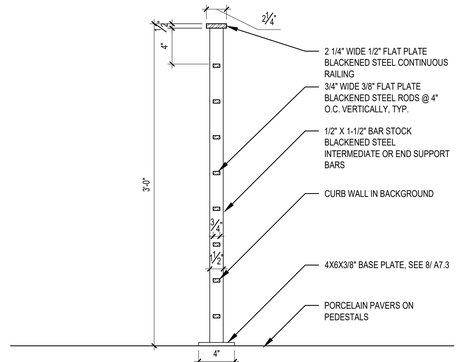

6 TYPICAL GUARDRAIL DETAIL SECTION
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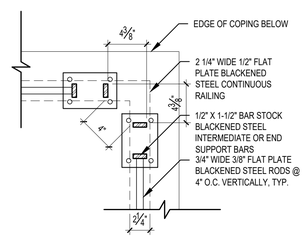
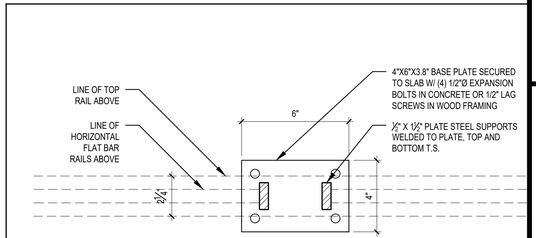


CORNER PLAN

7 GUARDRAIL CORNER AT UPPER FLOOR
SCALE: 1 1/2" = 1'-0"



8 GUARDRAIL BASE PLATE DETAIL
SCALE: 3" = 1'-0"

SCALE: IF SHEET IS LESS THAN 24" x 36", IT IS A REDUCED PRINT, REDUCE SCALE ACCORDINGLY

PERMIT SET 5/2/2022

STURMAN ARCHITECTS
9 - 103rd Ave NE Suite 203 Bellevue, WA 98004
TEL: 425.457.7023

REGISTERED ARCHITECT
BRADLEY J. STURMAN
STATE OF WASHINGTON
9460

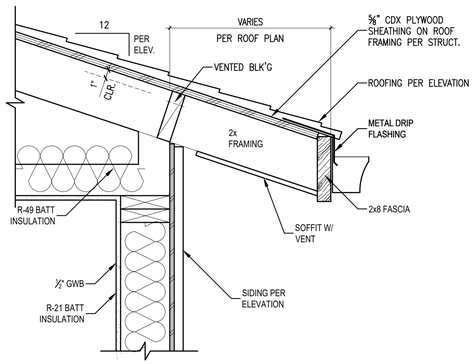
4006 RESIDENCE
4006 E MERCER WAY
MERCER ISLAND, WA 98040

DECK DRAINAGE AND EXTERIOR RAILINGS

REVISIONS:

PLOT DATE: 5/2/2022
DRAWN BY: JM
CHECKED BY: BJS

SHEET
A7.3



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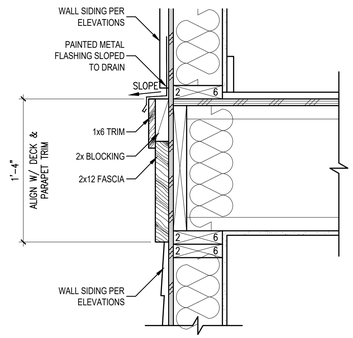
SCALE: 1 1/2" = 1'-0"



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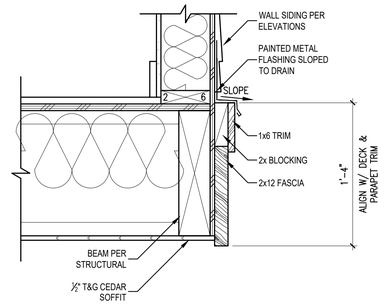

3 BAND TRIM DETAIL AT SOFFIT
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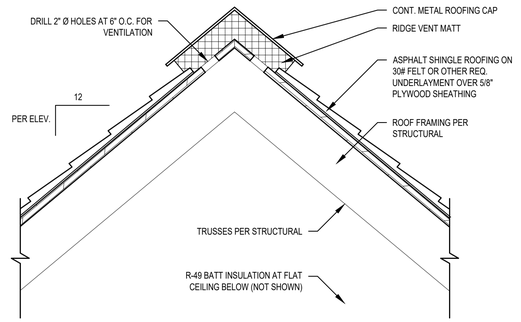

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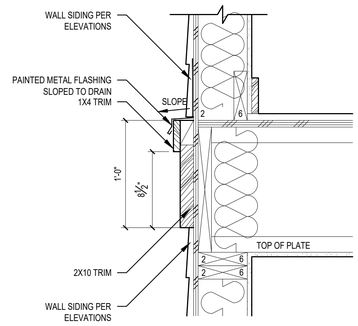

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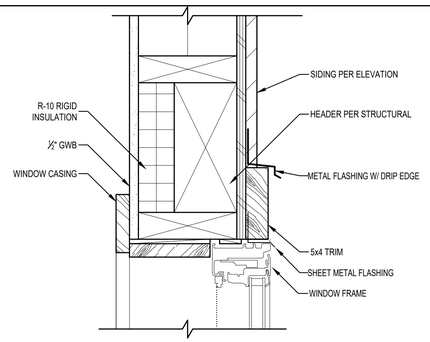
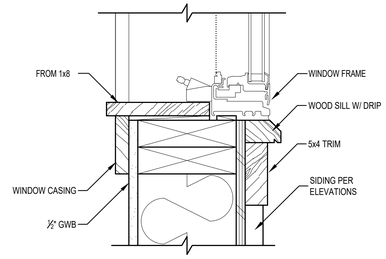


6 TYPICAL WINDOW HEAD DETAIL
SCALE: 3" = 1'-0"



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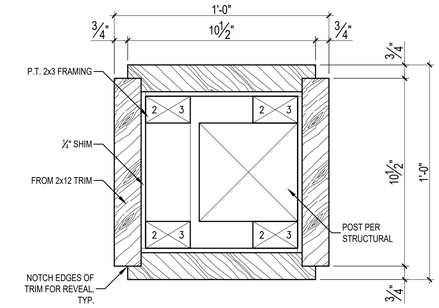
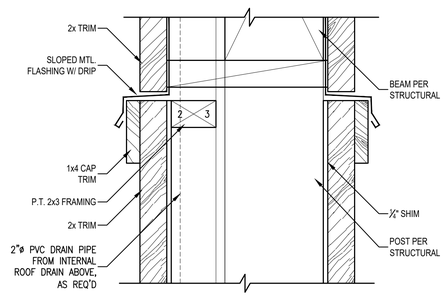
SCALE: 3" = 1'-0"



8 TYP. COLUMN PLAN DETAIL
SCALE: 3" = 1'-0"



9 TYP. COLUMN CAP SECTION DETAIL
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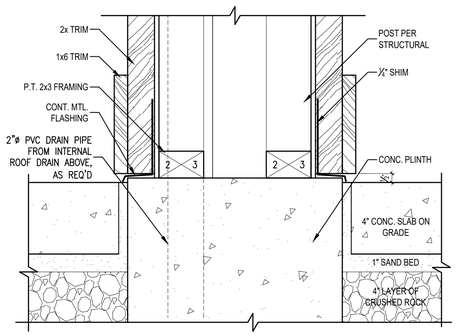
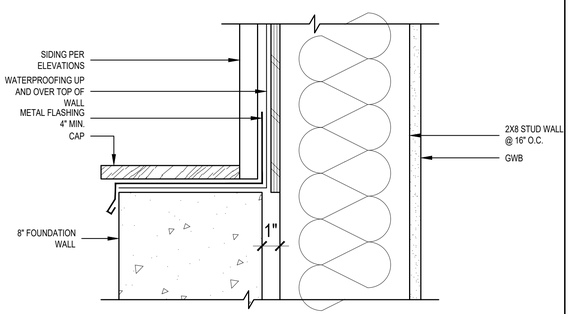
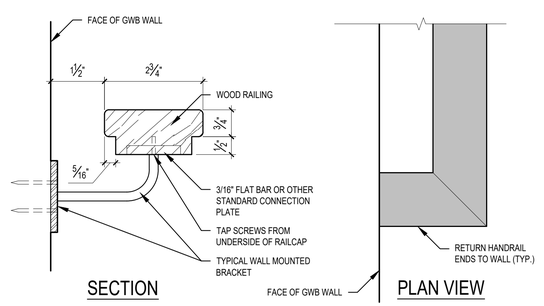


10 COLUMN BASE DTL. WITH CONC. PLINTH
SCALE: 3" = 1'-0"



11 PLANTER FOUNDATION @ EXT. WALL
SCALE: 3" = 1'-0"



12 HANDRAIL DETAIL
SCALE: 6" = 1'-0"

SCALE: IF SHEET IS LESS THAN 24" x 36", IT IS A REDUCED PRINT, REDUCE SCALE ACCORDINGLY

PERMIT SET 5/2/2022

STURMAN ARCHITECTS
TEL: 425-457-7003 9 - 103rd Ave NE Suite 203 Bellevue, WA 98004

REGISTERED ARCHITECT
BRADLEY J. STURMAN
STATE OF WASHINGTON
5482

4006 RESIDENCE
4006 E MERCER WAY
MERCER ISLAND, WA 98040

DETAILS

REVISIONS:

PLOT DATE: 5/2/2022
DRAWN BY: JM
CHECKED BY: BJS

SHEET
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General Requirements

All materials, workmanship, design and construction shall conform to the 2018 International Building Code (IBC) and local jurisdiction amendments.

Definitions: The following definitions are used throughout these structural notes:
IBC - Governing code including local amendments
SER - Structural Engineer of Record per these Contract Documents
UNO - Unless otherwise noted

Drawings indicate general and typical details of construction. Typical details and general notes shall apply even if not specifically denoted on plans, UNO. Where conditions are not specifically indicated similar details of construction shall be used, subject to review and approval by the Architect and the SER.

Reference to ASTM and other standards shall refer to the latest edition designated by IBC Chapter 35. Refer to the specifications for information in addition to that covered by these structural notes and drawings.

Warranty: The SER has used that degree of care and skill ordinarily exercised under similar circumstances by members of the profession in this locale and no other warranty, either expressed or implied, is made in connection with rendering professional services.

Design Criteria

BUILDING CATEGORY: Structural Occupancy Category II (Importance factors listed below)

LIVE LOADS:

Roof snow load, Pf = 25 psf

Residential:

Uninhabitable attics without storage	10 psf
Habitable attics and sleeping areas	30 psf
Residential floor	40 psf
Residential decks	60 psf

LATERAL LOADS-WIND: Per IBC Section 1609.6 "Alternate All-Heights Method"
Iw = 1.0; Kzt = 1.00; Kz = 0.92; Crsm < 0.66 (MWFRS); V = 25.9 kips

Numbering below is per IBC Section 1603.1.4:
1. Basic Wind Speed (3-second gust) = 110 mph
2. Importance Factor = 1.0
3. Exposure = C
4. Internal pressure coefficient = +/- 0.18
5. Components and Cladding: The following working loads may be used in lieu of calculations:

(Uplift at roof)	in field;	15.7 psf
	at edges;	19.9 psf
	at corner;	31.5 psf
(Overhangs)	in field;	23.2 psf
	at edges;	31.9 psf
	at corner;	36.3 psf
(Walls)	at field;	18.4 psf
	at edge;	22.7 psf

LATERAL LOADS-EARTHQUAKE:
Numbering below is per IBC Section 1603.1.5:
1. Importance Factor = 1.0
2. Mapped Spectral Response Accelerations, Ss = 1.392 g; S1 = 0.534 g
3. Site Class = D; Fa = 1.00, Fv = 1.50
4. Spectral Response Coefficients, Sds = 0.928 g, Sd1 = 0.534 g
5. Seismic Design Category = D
6. Basic Seismic Force Resisting System is:
   Vertical Elements = Wood Structural Panel Shear Walls
   Diaphragms = Wood Structural Panel Diaphragms:
7. Design Base Shear = 20.8 kips
8. Seismic Response Coefficient Cs = 0.143
9. Response Modification Factor R = 6.5
10. Analysis Procedure = Equivalent Lateral Force Procedure

Additional Items:
Building Location 47.574 N, 122.205 W
Building Height = 22 feet
Redundancy Factors:
North/South Direction = 1.0 East/West Direction = 1.0

Contractor Execution Requirements

Contractor shall verify all dimensions and all conditions at the job site, including building and site conditions before commencing work, and be responsible for same. All discrepancies shall be reported to the Architect/SER before proceeding with work. Any errors, ambiguities and/or omissions in the contract documents shall be reported to the Architect/SER immediately, in writing. No work is to be started before correction is made.

Contractor shall coordinate all dimensioned openings and slab edges shown on the contract documents. Some dimensions, openings and embedded items are shown on the structural drawings, others may be required. Refer to architectural drawings for all dimensions, wall and floor openings, architectural treatment, embeds required for architectural items, etc. Refer to mechanical, plumbing, electrical, fire protection and civil drawings for size and location of all openings for ducts, piping, conduits, etc.

Do not scale drawings. Use only field verified dimensions. When electronic plan files are provided for the contractor's detailing convenience, it shall be noted that the electronic files are not guaranteed to be dimensionally accurate; the contractor uses them at their own risk. The published paper documents are the controlling Contract Documents. Electronic files of detail sheets and notes will not be provided.

Contract Documents and any materials used in preparation of them, including calculations, are the exclusive property of the SER and can be reproduced only with the permission of the SER.

Contractor initiated changes shall be submitted in writing to the Architect/SER for review and acceptance prior to fabrication/construction. Changes shown on shop drawings only will not satisfy this requirement.

The contractor shall provide temporary bracing as required until all permanent connections have been installed. The contractor is responsible for the strength and stability of all partially completed structures including but not limited to concrete or masonry walls, steel framing and erection aids. The contractor shall be responsible for all required safety standards, safety precautions and the methods, techniques, sequences or procedures required in performing his work. The contractor shall coordinate with the building department for all building department required inspections.

Shop Drawing & Submittal Review

The contractor shall review and stamp the shop drawings & submittals for review. SER will only review submittals for items shown on SER documents. Submittals for Deferred Structural Components will receive cursory review by SER for loads imposed on primary structure. SER will review shop drawings for general conformance with design concept of the project and general compliance with the information given in the Structural Contract Documents. Review of submittals does not constitute approval or acceptance of unauthorized deviation from Contract Documents.

Shop Drawing & Submittal Review (including Deferred Structural Components)

The contractor shall review and stamp the shop drawings & submittals for review. SER will only review submittals for items shown on SER documents. Submittals for Deferred Structural Components will receive cursory review by SER for loads imposed on primary structure. SER will review shop drawings for general conformance with design concept of the project and general compliance with the information given in the Structural Contract Documents. Review of submittals does not constitute approval or acceptance of unauthorized deviation from Contract Documents.

Corrections or comments made on shop drawings during this review do not relieve contractor from compliance with the requirements of the plans and specifications.

Contractor responsible for:
* Reviewing, approving, stamping and signing submittals prior to submittal to Architect and SER
* Timing submittals to allow 10 days of review time for the SER and time for corrections and resubmittal
* Conformance to requirements of the Contract Documents
* Dimensions and quantities
* Verifying information to be confirmed or coordinated
* Information solely for fabrication, safety, means, methods, techniques and sequences of construction
* Coordination of all trades

Resubmittals shall be clouded and dated for all changes to the submittal. Only clouded portions of resubmittal will be reviewed and SER's review stamp applies to only these areas.

Substitutions
Substitutions shall be submitted in writing prior to submittal of shop drawings. Shop drawings bearing substitutions will be rejected. Submit engineering data to substantiate the equivalence of the proposed items. The SER's basic services contract does not include review of substitutions that require re-engineering of the item or adjacent structure. Nor does the SER's contract cover excessive review of proposed substitutions. The fees for making these reviews and/or redesign shall be paid by the contractor. Reviews and approvals shall not be made until authorization is received.

Submittals
Shop drawings and material submittals shall be submitted to the Architect and SER prior to any fabrication or construction for the following structural items. Submittals shall include one reproducible and one copy; reproducible will be marked and returned. If deviations, discrepancies, or conflicts between shop drawings submittals and the contract documents are discovered either prior to or after shop drawing submittals are processed by the SER, the Contract Documents control and shall be followed.

* Structural steel shop and erection drawings
* Engineered wood beams (certificates to be on-site and available upon request)
* I-joist and engineered wood beam floor framing layout & materials list

Inspection
The building official, upon notification, shall make structural inspections as required by local ordinance. The inspection by the building official per IBC Section 109 will be separate from and in addition to the special inspection and structural observation mentioned subsequently.

Special Inspections
The owner shall retain a Special Inspector to perform the special inspection requirements required by the building official as outlined in IBC Section 1704. See the specifications for additional requirements for special inspection and testing. The architect, structural engineer, and building department shall be furnished with copies of all inspection reports and test results.

The following inspections are required and shall be performed per the building code:
* Steel construction per 1704.3 and Table 1704.3
* Special cases (1704.13): See Special Inspection Requirements Anchorage for additional requirements.

Structural Observation
Structural observation is defined as the visual observation of the structural system for general conformance to the Contract Documents at significant construction stages and at completion of the structural system. Structural observation does not include or waive the responsibility for the inspection required by Section 109 or other sections of the IBC.

The owner shall employ a registered design professional to perform structural observation when required by IBC 1709. Observed deficiencies shall be reported in writing to the Architect, special inspector, and contractor. The contractor shall respond to these items in writing indicating how they have been resolved. At the end of the project, the structural observer shall submit to the building official a written statement that the site visits have been made and identify any reported deficiencies that, to the best of the structural observer's knowledge, have not been resolved.

Construction observation by the SER is for general conformance with structural portions of the permit documents only and is not intended in any way to review the Contractor's construction procedures. The SER has no overall supervisory authority or actual/direct responsibility for the specific working conditions at the site and for any hazards resulting from the action of any trade contractor. The SER 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.

The contractor shall provide the SER adequate notice to schedule appropriate site visits for structural observation.

Geotechnical

Report & General Criteria
Criteria outlined in the report listed below was used for the design of the foundations:

"Geotechnical Engineering Report, Proposed Mounger Residence, 4006 East Mercer Way, Mercer Island, WA", #20-174, dated July 7, 2020 & prepared by PanGEO.

Contractor shall be familiar with recommendations in the above-mentioned report prior to start of construction. Allowable soil pressure & lateral earth pressure are assumed and therefore must be verified by a Geotechnical Inspector or the building official. If soils are found to be other than assumed, notify the structural engineer for possible foundation redesign. For wet weather work, see the Geotech Report.

All prepared soil-bearing surfaces shall be inspected by the Geotechnical Inspector (or building official) prior to placement of reinforcing steel and concrete. Inspections shall be made per IBC Table 1704.7.

Unless otherwise noted, footings shall be centered below columns or walls.

Bearing Values
Allowable soil pressure = 2,000 psf (where applicable)

All footings shall bear on undisturbed soil and shall be lowered to firm bearing if suitable soil is not found at elevations shown. Exterior footings shall bear a minimum of 18" below the finished ground surface. Footing elevations shown on plans (or in details) are minimum depths and for guidance only; the actual elevations of footings must be established by the contractor in the field working with the Geotechnical Inspector.

Subgrade Preparation
Prepare subgrade per the Geotechnical Report, summarized as follows: All footings shall be cast on undisturbed firm natural soils that are free of organic materials. Footing excavation shall be free of loose soils, sloughs, debris and free of water at all times. If organic silt and/or fill material is encountered at subgrade elevations, over-excavate a minimum of 2'-0" below the design foundation subgrade elevation prior to placing footings. The over-excavated areas shall be backfilled with structural fill compacted to 95% proctor per ASTM D-1557 or a lean concrete mix.

Drainage
Drainage systems, including foundation, roof and surface drains, shall be installed as directed by the Geotechnical Report and IBC Section 1807. Vapor retarder placed below slab on grade shall conform to ASTM E 1643 and ASTM E 745.

Retaining Walls
Grade on either side of concrete walls shall not vary by more than 12", UNO. Slope of backfill shall not exceed 2H to 1V, UNO. Backfill behind all retaining walls with free draining, granular fill installed per the Geotechnical Report. Provide for subsurface drainage. Design pressures used for the design of retaining walls are based on drained conditions.

Active earth pressure (unrestrained/restrained) = 35 pcf / 55 pcf + 8H seismic
Passive earth pressure (factor of safety of 1.5 included) = 250 pcf
Coefficient of friction (factor of safety of 1.5 included) =0.35

Provide temporary shoring for tops of walls if backfill is placed prior to the floor framing and sheathing being completely installed and attached to perpendicular walls.

Piles General Criteria
Pile lengths indicated on drawings are estimated; actual length shall be determined in field by Geotechnical Inspector. For bidding purposes, the contractor shall provide an add/deduct value per foot of pile length. This value shall be applied to variations in actual lengths as compared to estimated lengths.

The contractor shall determine the location of all adjacent underground utilities prior to driving operations. Refer to the Geotechnical Report for recommended driving procedure.

Pile types other than those indicated on the drawings may be submitted as a Substitution. Optional piles must be supported on the same soil strata as the piles shown on the drawings. If the configuration of the piles is different from the contract documents, the modification to the pile caps must also be designed by the contractor and submitted with the Substitution. A 2-week minimum time allowance must be made for the engineer to review all optional pile and pile-cap design.

Inspections shall be made by the Geotechnical Inspector per IBC Table 1704.8 or 1704.9.

Pin Piles
Pin piles shall be driven to refusal in bearing strata. For 3" and larger pin piles, refusal shall be defined as less than 16 seconds per inch of penetration driving with an 850-pound pneumatic hammer mounted on a backhoe. The maximum pile eccentricity shall be 4" unless otherwise noted as 'battered' on the plans for lateral resistance. A minimum of 3% of the piles shall receive an ASTM Standard D-1143 Quick Load Test.

Pile placement shall be within a 2" tolerance at the top of the pile.

Existing Utilities
The contractor shall determine the location of all adjacent underground utilities prior to any excavation, shoring, pile driving, or pier drilling. Any utility information shown on the plans and details are approximate and not verified by the SER. Contractor is to provide protection of any utilities or underground structures during construction.

Concrete

Cast-in-Place Concrete
Concrete materials shall conform to the following:
Portland cement: Type 1, ASTM C150
Fly ash (if used): ASTM C618 class F or C, quantity less than (by weight) 25% of cement content, and maximum loss on ignition = 1%
Lightweight aggregates: shall not be used without prior approval of SER and building department
Normal weight aggregates: ASTM C33
Sand equivalent: ASTM C33
Water: Potable per ASTM C94
Air entraining admixtures: ASTM C260
Chemical admixtures: ASTM C494
Flowable concrete admixtures: ASTM C1017

Durability requirements of concrete mixes shall conform to building code. These requirements include water-cementitious material ratios, minimum compressive strengths, air entrainment, type of cement, and maximum chloride ion content.

Concrete strength requirements: Strength at 28 days and normal weight concrete, UNO.

Location	Strength f'c (psi)	Max. Aggr. size (inch)	Max. W/C ratio or min cement *
Lean mix soil replacement under fdns	1,500	sand	1-1/2 sack cement
Foundations, grade beams, stem walls	3,000**	1"	per design
Slab on grade, topping slab, stair tread	3,000**	3/4"	0.42 (.45)

** Design strength shown is for weathering purposes only; 2,500 psi strength was used for purposes of structural design. Mixes shall be proportioned to accommodate placement. Slump, W/C ratio, admixtures and aggregate size will be determined by the contractor in accordance with ACI. Mixes will be approved by one of the following criteria.

Mix design is submitted in accordance with ACI 318 Section 5.3.
Mix design is submitted in accordance with ACI 318 Section 5.4.

Admixtures: all concrete, including slab on ground, shall contain an acceptable water-reducing admixture conforming to ASTM C494 and be used in strict accordance with the manufacturer's recommendations.

All concrete which is exposed to freezing and thawing or exposed to deicing chemicals shall contain an air entraining agent, conforming to ASTM C260. The amount of entrained air shall be 5% +/- 1% by volume. Air % is based on 3/4" coarse aggregate; adjust air % per ACI 318 for other coarse aggregate sizes. Air-entrainment shall not be used at slabs that will receive a smooth, dense, hard-troweled finish.

Trucks hauling plant-mixed concrete shall arrive on-site with a field ticket indicating the maximum gallons of water that can be added at the site not to exceed the total water content in the approved mix design.

Concrete shall be deposited as nearly as practicable in its final position to avoid segregation due to rehandling or flowing. Concrete shall be thoroughly consolidated by suitable means during placement and shall be thoroughly worked around reinforcement, embedded items, and into corners of forms.

Formwork and Accessories
Concrete construction shall conform to ACI 301 "Specifications for Structural Concrete" and the Building Code, including testing procedures. See architectural documents for formwork requirements. Installation shall adhere to ACI 301. Conduits and pipes of aluminum shall not be embedded in concrete construction.

See architectural drawings for exact locations and dimensions of door and window openings in all concrete walls and for all grooves, notches, chamfers, feature strips, color, texture, and other finish details at all exposed concrete surfaces. Concrete accessories and embedded items shall be coordinated with Architectural documents and all other suppliers' drawings before placing concrete. Anchor rods, reinforcing, hardware, etc. shall be firmly tied in place prior to concrete placement; wet-setting of these items are not permitted in concrete.

Construction Joints
Contractor shall submit the proposed locations of construction joints to the Architect for acceptance before starting construction. All construction joints in walls and footings shall be keyed with 1-1/2" thick x 6" long x 3-1/2" wide keys placed in alternate reinforcing spaces. All construction, control, and isolation joints for slabs on ground shall be in accordance with the typical slab on ground details.

Refer to Architectural documents for waterstops, dampproofing, and retaining wall drainage requirements at concrete and at concrete joints (construction joints, slab to wall joints, curb to slab joints, etc).

Curing and Finishes
Protect and cure freshly placed concrete per ACI 305 in hot conditions, ACI 306 in cold conditions, and ACI 308 "standard specification for curing concrete". All exposed edges and corners shall have 3/4" chamfer, UNO. Concrete flatwork shall be sloped to provide positive drainage. Coordinate finish with architectural contract documents.

At the time of application of finish materials or special treatment to concrete, moisture content of concrete shall conform to requirements in finish material specifications. Where vapor sensitive coverings are to be placed on slabs on grade, conform strictly to slab covering manufacturer's recommendations regarding vapor retarder and granular fill requirements below the slab.

Reinforcing in Cast-in-Place Walls
See Reinforcement General Notes for more information. Uppermost and lowermost horizontal reinforcing in walls shall be placed within 1/2 of specified spacing from the top and bottom of the wall.

Concrete wall reinforcing - typical UNO:

Wall thickness	horizontal bars	vertical bars	location
6" or less	#4 @ 16"oc	#4 @ 16"oc	@ cl of wall
8" or less	#4 @ 12"oc	#4 @ 12"oc	@ cl of wall
10" or less	#4 @ 10"oc	#4 @ 10"oc	@ cl of wall

Concrete protection; provide edge cover as follows. When a thickness of cover required for fire protection is greater than that specified in this section, such greater thickness shall be used:

- Unformed surfaces cast against and permanently exposed to earth = 3"
- Formed surfaces exposed to earth or weather: #6 bars or larger = 2"; #5 bars or smaller = 1-1/2"
- Clear spacing between 2 or more parallel layers = 1"

Concrete Crack Maintenance
Cracking occurs in concrete structures due to inherent shrinkage, creep, and the restraining effects of walls and other structural elements. Most cracking due to shrinkage and creep will likely occur over the first two years of the life of the structure; further concrete movement due to variations in temperature may persist. Cracks that result in water penetration will need to be repaired to protect reinforcing. Other cracking may be repaired at the owner's discretion for aesthetical reasons or performance of applied finishes. Prior to repairing cracks, a structural engineer should be consulted to provide direction on which cracks to repair and on whether observed cracks may affect the strength of the structure.

Reinforcement in Concrete

Materials
Reinforcing steel shall conform to ASTM A615 (including supplement S1), Grade 60, Fy = 60,000 psi, except any bars specifically so noted on the drawings shall be Grade 40, Fy = 40,000 psi.

Welded Wire Reinforcing (WWR) shall conform to ASTM A185. Lap splice adjacent mats of welded wire fabric a minimum of 8" at sides and ends. In equipment pads, use minimum WWR 6x6-W2.1xW2.1, UNO.

Procedures
Reinforcing steel shall be detailed (including hooks and bends) in accordance with ACI 315 "Details and Detailing of Concrete Reinforcement". Lap all reinforcement in accordance with "The Reinforcing Splice and Development Length Schedule" on these documents. If table is not provided, lap all reinforcing by 40 bar diameters. Provide corner bars at all wall and footing intersections.

Reinforcing steel shall be adequately supported to prevent displacement during concrete and grout placement. Bars shall be bent cold. Bars partially embedded in concrete shall not be field bent, unless specifically so detailed or approved by the SER.

Welding or tack welding of reinforcing bars to other bars or to plates, angles, etc, is prohibited, except where specifically approved by the SER.

Structural Steel

Reference Standards
Steel construction shall conform to the latest editions of the AISC Specifications and Codes. "Specification for Structural Steel Buildings" ANSI/AISC 360 (latest edition), "Specification for Structural Joints Using ASTM A-325 or A-490 Bolts" AISC 348 (latest edition)..

Fabricators
Fabricators for structural steel must have a quality assurance program in place meeting the requirements of one of the following methods:

A. Participation in the AISC quality certification program.

B. Meeting the requirements of AISC seismic provisions for structural steel buildings, appendix Q and submitting plan documentation to the authority having jurisdiction, the engineer of record.

Structural Steel Members
Structural Steel shall conform to the following requirements (unless otherwise shown on plans):

Type of Member	ASTM Specification	Fy
Rolled Wide Flange Shapes	A 992	50 ksi
Plates, Channels, Angles	A-36, Grade 36	36 ksi
Square & Rectangular HSS Section	A-500, Grade B	46 ksi
Structural framing bolts	A-325 (Type 1)	
Anchor Rods (Hooked, Headed & Threaded & Nutted)	F-1554, Grade 36	36 ksi
Threaded Rods	A-36	36 ksi
Washers	F-436	
Hex Nuts	A-563	
Common Bolts	A-307, Grade A	

Steel Framing
The contractor shall be responsible for all erection aids and joint preparations that include, but are not limited to: erection angles, lift holes & other aids; welding procedures; required root openings; root face dimensions; groove angles; backing bars; copes; surface roughness values; and tapers of unequal parts.

Bolts
All A-325N connection bolts, not part of the Seismic Load Resisting System (SLRS), need only be tighten to snug-tight (ST) conditions, defined as the tightness that exists when all plies in a joint are in firm contact. This may be attained by a few impacts of an impact wrench or the full effort of a man using an ordinary spud wrench. All bolt holes shall be standard size, unless otherwise noted. All ASTM A-307 bolts shall be provided with lock washers under nuts or self-locking nuts.

Finishing
The terms finish, finish column, finishing, milled, milled surface or milling are intended to include surfaces which have been accurately sawed or finished to a true plane as defined by AISC. Grind surface value equal to or less than 1,000 as defined by ANSI B46.2 (4-inch and thinner).

GENERAL STRUCTURAL NOTES
(TYPICAL UNLESS NOTED OTHERWISE ON DRAWINGS)

SCALE: IF SHEET IS LESS THAN 24" x 36", IT IS A REDUCED PRINT, REDUCE SCALE ACCORDINGLY

PERMIT SET 5/2/2022

STURMAN ARCHITECTS
9 - 103rd Ave NE Suite 203 Bellevue, WA 98004
TEL: 425.457.7003

MICHAEL THOMAS STURMAN
STATE OF WASHINGTON
43880
REGISTERED PROFESSIONAL ENGINEER

4006 RESIDENCE
4006 E MERCER WAY
MERCER ISLAND, WA 98040

STRUCTURAL NOTES

REVISIONS:

PLOT DATE: 5/2/2022
DRAWN BY: JM
CHECKED BY: BJS

SHEET **S1.0**

Welding
All welding shall be in conformance with AISC and AWS standard and shall be performed by AWS/WABO certified welders in accordance with AWS D1.1. Only Prequalified welders, as defined by AWS, shall be used.

Shop drawings shall show all welding with AWS D1.4 symbols. Welds shown on the drawings are the minimum sizes. Increase weld size to AWS minimum sizes, based on plate thickness. Minimum welding shall be 3/16" UNO. All welds shall be made using low-hydrogen electrodes with minimum tensile strength of 70 ksi and a Charpy V-Notch (CVN) toughness of at least 20 foot-pounds at -20 degrees Fahrenheit.

Low hydrogen SMAW electrodes shall be used within 4 hours of opening their hermetically sealed containers, or shall be re-dried per AWS D1.1. Electrodes shall be re-dried no more than one time, and electrodes that have been wet shall not be used.

Contractor is responsible for actual welds used to support specific means and methods.

Anchorage

Post installed anchors shall not be installed without prior approval of engineer of record unless otherwise noted on the plans.

Epoxy-Grouted Items
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 I.C.C. Report No. ESR 2508. Special inspection of installation is required. Rods shall be ASTM A-307 unless otherwise noted.

Expansion Bolts
Expansion bolts into concrete and concrete masonry units shall be "Strong Bolt" as manufactured by the Simpson Strong Tie Company, installed in strict accordance with I.C.C. Report No. ESR-1771, including minimum embedment requirements. Bolts into concrete masonry or brick masonry units shall be into fully grouted cells. Substitutes proposed by contractor shall be submitted for review with ICC reports indicating equivalent or greater load capacities. Special inspection is required for all expansion bolt installation.

Wood

Material Criteria
Framing lumber shall be kiln dried or mc-19 (unless more stringent criteria are required in these notes or on the drawings) and graded and marked in conformance with the latest WCLIB standard grading rules for west coast lumber no. 17. Furnish to the following minimum standards:

4x beams & posts	DF #2
6x beams & posts	DF #1
4x treated beams & posts, 6x treated posts	HF kdat #2
2x joists, rafters, built-up beams, headers	HF #2
2x, 3x flatwise & edgewise blocking	HF standard
2x4, 2x6 studs	HF kd stud
2x4, 2x6 plates	HF kd15 standard
2x, 3x, 4x treated plates/ledgers	HF kdat #2

Moisture Content and Care of Material During Construction
All 2x studs and plates shall be kiln dried. The Contractor shall take measures to minimize exposure of sawn lumber and engineered wood products to moisture during construction.

Wood Structural Panels
Wood structural panels shall be APA rated sheathing. Plywood shall be grade C-D or Structural II, exterior glue, exposure 1 durability classification, in conformance with USDOC PS 1 or PS 2, ASTM D 5457 and IBC 2304.7 and table 2304.7(2). Oriented strand board (OSB), shall be in accordance with USDOC PS 2, and of equivalent thickness, exposure rating and span rating and may be used in lieu of plywood pending OSB substitution approval by Architect. See plans for thickness, panel identification index and nailing requirements. Unless otherwise noted on plans:

Roof sheathing shall be 23/32" with span rating 48/24
Floor sheathing shall be 23/32" with span rating 48/24
Wall sheathing shall be 15/32" with span rating 24/0

Structural Composite Lumber
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 board number, and the quality control agency. All PSL, LVL and LSL lumber shall be manufactured in accordance ICC Report ESR-1387. LVL lumber shall be manufactured using veneer glued with a waterproof the requirements of ASTM D2559 with all grain parallel with the length of the member. The members shall have the following minimum properties:

PSL (2.0E)	Beams	Fb = 2,900 psi,	E = 2,000 ksi, Fv = 290 psi
LVL (1.9E)	Beams	Fb = 2,600 psi,	E = 1,900 ksi, Fv = 285 psi
LSL (1.55E)	Beams	Fb = 2,325 psi,	E = 1,550 ksi, Fv = 310 psi

Design shown on plans is based on ILevel/Trus-Joist products manufactured by the Weyerhaeuser Corporation. Alternate manufacturers may be used subject to review and approval by the Architect and Structural Engineer of Record, 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.

Plywood Web Joists
Prefabricated plywood web joist design shown on plans is based on ILevel/Trus-Joist products manufactured by the Weyerhaeuser Corporation. Alternate plywood web joist manufacturers may be used provided they conform with the ICC evaluation service reports ESR-1387 and ESR-1153 and are subject to review and approval by the Architect and Structural Engineer of Record. Alternate plywood web joists must have equivalent section properties and allowable stresses to those previously specified to be considered. All permanent and temporary bridging shall be installed in conformance with manufacturer's specifications. The following deflection criteria shall be maintained with all alternates.

Floor live load deflections shall be limited to span/480
Roof total load deflections shall be limited to span/240.

Specified plywood web joists at floors have been designed for a minimum TJ-Pro rating of 40 in addition to the maximum allowable deflections noted above.

Treated Wood
All wood framing in direct contact with concrete or masonry, exposed to weather, or that rest on exterior foundation walls and are located within 8" of earth, shall be pressure-treated with an approved preservative per IBC section 2303.1.8. Cut or drilled sections of treated material shall be treated with an approved preservative per IBC section 2303.1.8. See IBC section 2304.11 for additional requirements.

Metal Products in Contact with Treated Lumber
Simpson hardware in contact with ACQ, CA, or CBA pressure-preservative treated wood shall have a Zmax finish (G185 HDG per ASTM A653) or shall be post hot-dip galvanized (per ASTM A123 for connectors and ASTM A153 for fasteners) unless otherwise noted. Exception: type 304 or 316 stainless steel connectors and fasteners are required for the following applications:

- ACQ, CA, or CBA treatments with ammonia where members are used in exterior applications.
- all ACZA treatments
- retention levels greater than 0.40 pcf for ACQ, 0.41 pcf for CBA-A, or 0.21 pcf for CA-B treatments.

Stainless steel connectors require matching stainless steel fasteners. Zmax and post hot-dip galvanized connectors require fasteners galvanized per ASTM A153. Thru-bolts and anchor rods used in dry conditions shall be permitted to be of mechanically deposited zinc coated steel with coating weights in accordance with ASTM B 695, class 55 minimum. See IBC section 2304.9.5 and "framing connectors" notes on this sheet for additional requirements.

GENERAL STRUCTURAL NOTES
(TYPICAL UNLESS NOTED OTHERWISE ON DRAWINGS)

Framing Connectors
Timber connectors called out by letters and numbers shall be "strong-tie" by Simpson company, as specified in their catalog number C-C-2019. Equivalent devices by other manufacturers may be substituted, provided they have ICBO approval for equal or greater load capacities. Connectors shall be installed in accordance with the manufacturer's recommendations. Where connector straps connect two members, place ½ of the nails or bolts in each member. UNO on the drawings use the following hangers:

2x or 2-2x member to flush wood beam/ledger	LUS (LUS z)
2x or 2-2x member to sill plate or steel/flush wood beam	B (B hdg)
TJI member to sill plate or flush wood beam/ledger	IUS or ITS
2-TJI member to flush wood beam/ledger	MIU (HUS z)
2-TJI member to sill plate or steel/flush wood beam	MIT (LBY z)
4x, LSL/LVL/PSL beam to flush wood beam/ledger	MIU max (HHUS z)
4x, LSL/LVL/PSL beam to sill plate or steel beam	HWU (HWU hdg)
Interior 4x or 6x post to concrete below	ABU w/ 5/8" dia. anchor rod w/ 7" embed
Treated 4x/6x post to concrete below	CBSQ-HDG
4x or 6x post to wood beam above	PC/EPC (PC/PCE zmax)
wood beam to wood beam that bears on post	HUCTF

Fasteners
Shall conform to the following requirements, UNO. Splitting shall be avoided at all wood fasteners:

Steel to wood or wood to wood connection bolts	ASTM A307
Anchor rods (w/ threaded ends and welded nut at end)	ASTM F1554 grade 36 (typical UNO)
Lag screws	NDS section 11.1.3
Wood screws	NDS section 11.1.4
Nails	NDS section 11.1.5

Nail sizes are specified as follows. If the contractor proposes the use of alternate nails, they shall submit nail specifications to the Structural Engineer of Record (prior to construction) for review and acceptance.

Simpson hardware	typical UNO	see catalog
MSTC holdown straps over shear wall sheathing to studs		0.148 x 2-1/4"
hangers w/ 16d or 10d options		0.162 x 3-1/2"
floor sheathing	typical	0.113 deformed shank x 2-1/2"
roof sheathing	typical	0.131 x 2-1/2"
stud wall APA sheathing	15/32 sheathing	0.131 x 2-1/4"
member to member face nailing	typical UNO	0.131 x 3"
bottom plate to framing below		0.131 x 3-1/4"
toe nailing	typical UNO	0.131 x 3"

Sheathing fasteners shall be driven so that head or crown is flush with sheathing surface. 3/8" min. edge distance shall be maintained on sheathing fasteners.

Spaced fasteners specified on the drawings shall begin at 1/2 specified spacing from the ends of the members, unless otherwise noted. Provide (2) fasteners minimum each member, typ. Anchor rods from sill plates to concrete shall begin a min. of 6" and a max. of 12" from each end of each piece of sill plate.

Thru-bolt and anchor rod holes shall be at least 1/32" but no more than 1/16" larger than bolt/rod diameter. Clearance holes for lag screw shanks shall have the same diameter as the lag shank and the same penetration depth as the length of the unthreaded shank. Lead holes for threaded portion of lag screws shall have a diameter of 55 to 60% of lag screw shank diameter and shall extend the length of the threaded portion of the lag screw.

Stair and Stair Landing Framing Requirements
4'-0" maximum width UNO

Landings: span 2x6 joists @ 16"oc in short direction of landing. At full height wood studs, provide 2x6 continuous ledger w/ (3) 0.131 x 3-1/4" nails to each stud. At concrete walls, provide treated 2x6 continuous ledger w/ 5/8" diameter anchor rods @ 16"oc. Embed 5". Where landing edge is not supported by beam, full height stud wall, or full height concrete wall, provide 2x4 @ 16" cripple wall from landing edge to slab on grade below.

Stringers 9'-0" in length or less: provide 2x12 stringers at center and sides of stair. Notch to 5-1/2" minimum depth and provide HUS26 hangers to supporting beams. At center stringer, sister 2x6 ea. side of stringer and at side stringers, sister 2x6 one side of stringer. End sistered 2x6's short of hangers.

Stringers 11'-6" to 14'-0" in length: provide 1-3/4 x14 LVL 1.9E stringers at center and sides of stair. Notch to 8" min. depth and provide HU7 hangers to supporting beams. At center stringer, sister 2x8 ea. side of stringer and at side stringers, sister 2x8 one side of stringer. End sistered 2x8's short of hangers.

Where stringers bear on wood framing below, provide (2) LS70 clip at btm. of stringer. Where stringers bear on concrete slab, provide 2x treated sill plate w/ 5/8" exp. bolt at each stringer (embed 3-1/8").

General Wood Framing Criteria (UNO in previous sections)
All wood framing details not shown otherwise shall be constructed to the minimum standards of section 2308 of the IBC. Minimum nailing, unless otherwise noted, shall conform to table 2304.9.1 of the IBC. Unless otherwise noted, all nails shall be common. Coordinate the size and location of all openings with Architectural drawings. Provide washers under the heads and nuts of all bolts, anchor rods, and lag screws bearing on wood, unless otherwise noted. Installation of lag screws shall conform to NDS section 11.1.3. Bolts, anchor rods, and lag screws shall be centered in members, uno.

All structural stud walls (bearing or shear walls) shown and not otherwise noted shall be 2x4 studs @ 24"oc at non-bearing interior walls and 2x6 @ 24"oc at exterior and bearing walls. See Architectural drawings for differing wall widths and for framing at nonstructural walls. Two studs minimum shall be provided at the end of all walls and at each side of all openings, and below beam bearing points. Solid blocking for 4x/6x wood posts and multi-stud posts shall be provided through intermediate levels to supports below. Provide continuous solid blocking at mid-height of all stud walls over 10'-0" in height.

All stud walls shall have their lower wood plates attached to wood framing below with 0.131 x 3-1/4" nails @ 8"oc or bolted to concrete with 5/8" diameter anchor rods @ 4'-0" for all other structures unless otherwise noted. Embed anchor rods 7" unless otherwise noted. Individual members of built-up posts shall be nailed to each other with 0.131 x 3" nails @ 8"oc staggered.

When not otherwise noted, provide gypsum wallboard on interior surfaces nailed to all studs, top and bottom plates and blocking with nails at 7" oc. Use #6 x 1-5/8" screws for 1/2" GWB and #6 x 1-7/8" screws for 5/8" GWB. Provide 15/32" APA rated sheathing on exterior surfaces nailed at all panel edges (block unsupported edges), top and bottom plates with 0.148 x 2-1/4" nails @ 6"oc and to all intermediate studs and blocking @ 12"oc. Allow 1/8" gap at all APA sheathing panel edges and ends. (see details where larger gap is required).

At exterior walls, provide flat wise 2x6 at all door heads and window sills and heads, unless otherwise noted. (provide flat wise 2-2x6 where opening width is greater than 6'-0" and less than 9'-6", unless otherwise noted). Provide (3) 0.131 x 3" toenails each end of each 2x6 member.

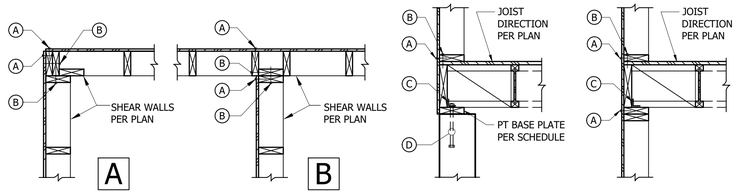
Provide double joists under all parallel partitions that extend over more than half the joist length and around all openings in floors or roofs unless otherwise noted. Provide solid blocking at all bearing points.

Toenail joists to supports with (3) 0.131 x 3" nails. Attach timber joists to flush headers or beams with Simpson metal joist hangers in accordance with notes above. Individual members of multi-joist beams shall be nailed to each other with (2) rows of 0.131 x 3" nails @ 12"oc.

Unless otherwise noted on the plans, APA sub-flooring and roof sheathing shall be laid up with grain (strength axis) perpendicular to supports (joists, trusses, etc.) and in a staggered pattern. Nails shall be @ 6"oc to framed panel edges, @ 4"oc over shear walls and @ 12"oc to intermediate supports. All sub-flooring edges shall have approved T&G joints or shall be supported with solid blocking/framing. Plywood clips are recommended at all roof sheathing edges (solid blk'g/framing is not required at panel edges unless specifically noted in the structural drawings ore required by the roofing manufacturer). Glue sub-flooring to all supports with adhesive in accordance with the manufacturer's recommendations. Allow 1/8" gap at all panel edges and ends of floor and roof sheathing. Where blocked floor & roof diaphragms are indicated, provide flat 2x blocking at all unframed panel edges and nail with edge nailing specified.

SHEAR WALL SCHEDULE								
MARK	SHEATHING	PANEL EDGE (A) NAILING	TOP PLATE (B) NAILING	A35 (C) CLIPS	MUDSILL TO CONCRETE (D)		CAPACITY (PLF)	
					2x6 P.T.	3x6 P.T.	SEISMIC	WIND
SW6	½" PLYWOOD	0.131" @ 6"oc	0.131" @ 6"oc	A35 @ 24"oc	⅝"ø AB @ 48"oc	⅝"ø AB @ 64"oc	260	270
SW4	½" PLYWOOD	0.131" @ 4"oc	0.131" @ 4"oc	A35 @ 16"oc	⅝"ø AB @ 32"oc	⅝"ø AB @ 48"oc	350	400
SW3 [5]	½" PLYWOOD	0.131" @ 3"oc	0.131" @ 3"oc	A35 @ 12"oc	⅝"ø AB @ 16"oc	⅝"ø AB @ 32"oc	512	540
SW2 [5]	½" PLYWOOD	0.131" @ 2"oc	(2) ROWS 0.131" @ 3-½"oc	A35 @ 8"oc	⅝"ø AB @ 12"oc	⅝"ø AB @ 16"oc	600	860
SW2-2 DF [6]	½" PLYWOOD, BOTH SIDES	0.131" @ 2"oc	(2) ROWS 0.131" @ 2-½"oc	A35 @ 5-½"oc	N/A	⅝"ø AB @ 12"oc	1255	1255

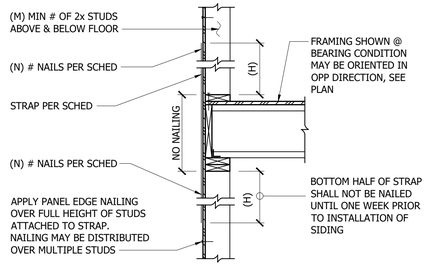
NOTES:
1. ALL EXTERIOR WALLS SHALL BE SW6 (TYP, UNO). WALL FRAMING SHALL BE 2x HF (UNO) STUDS @ 16"oc BLOCK ALL PANEL EDGES WITH 2x LAID FLAT. ALL STUDS ATTACHED TO STRAPS OR HOLDOWNS SHALL BE PANEL-EDGE NAILED. NAIL TO ALL INTERMEDIATE SUPPORTS WITH 0.113"ø @ 12"oc SHEATHING SHALL BE 1⅛2" STRUCT-1 OR ⅞" OSB.
2. 0.113"ø NAILS SHALL BE A MINIMUM OF 2¾" IN LENGTH, 0.131"ø NAILS SHALL BE A MINIMUM OF 3" IN LENGTH.
3. LTP4 OR LS50 CLIPS MAY BE SUBSTITUTED FOR A35 CLIPS.
4. EMBED ANCHOR BOLTS 7" MIN. ALL BOLTS SHALL HAVE 3x3x¼" PLATE WASHERS (EDGE OF WASHER SHALL BE WITHIN ½" OF SHEATHING). EACH MUDSILL SHALL HAVE A MINIMUM OF (2) ANCHOR BOLTS WITH (1) BOLT LOCATED NOT MORE THAN 12" OR LESS THAN 4½" TO EACH END. SIMPSON TITEN HD SCREWS, SIMPSON STRONG-BOLT OR HILTI KWIK-BOLT TZ EXPANSION BOLTS MAY BE SUBSTITUTED FOR ANCHOR BOLTS W/ 5" MIN EMBED.
5. FOR SW2/SW3:
AT (2) ROWS NAILING/CLIPS: USE DOUBLE RIM, JOIST OR BLOCKING. FRAMING AT ABUTTING PANEL EDGES SHALL BE 3x MINIMUM OR (2) 2x STITCHED TOGETHER w/ PLATE NAILING PER APA FORM #TT-076. ALL PANEL EDGE NAILING TO BE STAGGERED. 3x SILL PLATES ARE REQUIRED AT ANCHOR BOLT CONNECTIONS.
6. FOR SW2-2DF:
FRAMING AT ABUTTING PANEL EDGES SHALL BE 3x DF MINIMUM. ALL PANEL EDGE NAILING TO BE STAGGERED. 3x SILL PLATES ARE REQUIRED AT ANCHOR BOLT CONNECTIONS. 3-1/2" OF SOLID LSL RIM MATERIAL REQ'D UNDER SW FOR NAILING.



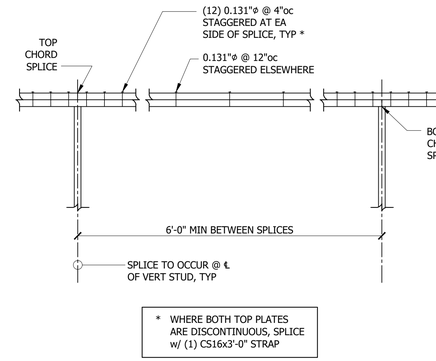
PLAN AT WALL CORNER | PLAN AT WALL INTERSECTION | SECTION AT CONCRETE WALL | SECTION AT EXTERIOR WALL

1 Shear Wall Schedule
3/4" = 1'-0"

STRAP SCHEDULE				
MARK	H	N	M	HF CAPACITY
CS16	14"	(13) 0.131"	1	1,705#
MSTC40	11"	(14) 0.148"	2	2,325#



2 Strap Schedule
3/4" = 1'-0"

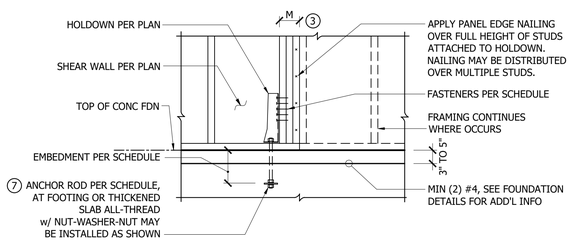


* WHERE BOTH TOP PLATES ARE DISCONTINUOUS, SPLICE w/ (1) CS16x3'-0" STRAP

3 Top Plate Splice, Typ.
3/4" = 1'-0"

HOLDOWN SCHEDULE (1) (2)										
MARK	FASTENERS	M (3)	FOOTING / STRUCTURAL SLAB				TOP OF STEM WALL (4)			
			ANCHOR ROD	EMBEDMENT	EDGE DISTANCE	CAPACITY	ANCHOR ROD (7)	EMBEDMENT (7)	CAPACITY (SEISMIC / WIND)	
									CONTINUOUS (5)	CORNER (5) / END (6)
HDU2	(6) SDS¼"x2½"	3"	⅝"ø	7"	9"	2,645#	SB⅝x24	18"	2,645#	
HDU5	(14) SDS¼"x2½"	3"	⅝"ø	7"	9"	4,855#	SB⅝x24	18"	4,855#	
HDU8	(20) SDS¼"x2½"	4-½" DF	⅞"ø	8"	11"	7,870#	SB⅞x24	18"	7,870#	7,855# / 7,870# / 5,730# / 6,820#
HDU14	(30) SDS¼"x2½"	5-½" DF	PAB8	11"	16-½"	15,996#	PAB8	N/A	N/A	

(1) PLACEMENT OF ANCHOR ROD IS BASED ON CAST-IN-PLACE INSTALLATION.
(2) INSTALL ALL HOLDOWNS PER MANUFACTURER'S INSTRUCTIONS.
(3) DEPTH OF WOOD FRAMING MEMBER ATTACHED TO HOLDOWN. MEMBERS SHALL BE HEM-FIR UNLESS NOTED OTHERWISE NOTED.
(4) MIN 6" CONCRETE WALL THICKNESS REQ'D, MIN EDGE DISTANCE OF 1¾".
(5) BASED ON MIN 27" DISTANCE FROM END/CORNER OF WALL.
(6) BASED ON MIN 4¼" DISTANCE FROM END OF WALL.
(7) AT RETROFIT CONDITIONS USE ⅝" THREADED ROD w/ EPOXY PER GENERAL STRUCTURAL NOTES, MIN. 12" EMBED.



4 Holdown Schedule
3/4" = 1'-0"

SCALE: IF SHEET IS LESS THAN 24" x 36", IT IS A REDUCED PRINT, REDUCE SCALE ACCORDINGLY

PERMIT SET 5/2/2022

STURMAN ARCHITECTS
9 - 103rd Ave NE Suite 203 Bellevue, WA 98004
TEL: 425.457.7003

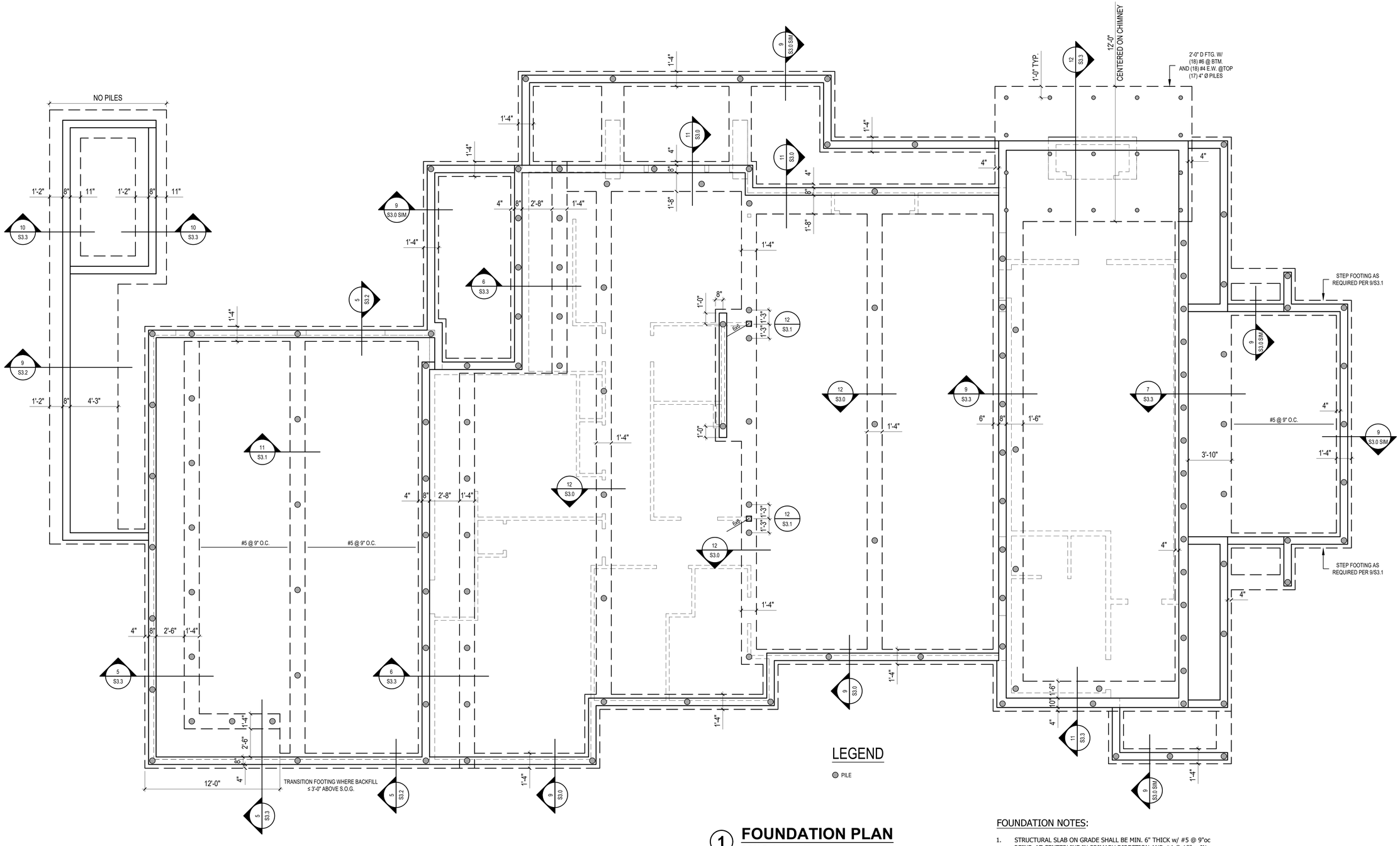
4006 RESIDENCE
4006 E MERCER WAY
MERCER ISLAND, WA 98040

STRUCTURAL NOTES

REVISIONS:

PLOT DATE: 5/2/2022
DRAWN BY: JM
CHECKED BY: BJS

SHEET S1.1



LEGEND

- PILE

1 FOUNDATION PLAN

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

FOUNDATION NOTES:

1. STRUCTURAL SLAB ON GRADE SHALL BE MIN. 6" THICK w/ #5 @ 9'oc REINF. AT CENTERLINE IN PRIMARY DIRECTION AND #4 @ 18"oc IN TRANSVERSE DIR.
2. HD - INDICATES ANCHOR ROD/HOLDOWN LOCATED AT END OF SHEAR WALL ABOVE, SEE SCHEDULE ON 4/S1.1.
3. - INDICATES 4" DIAMETER, SCHEDULE 40, GALVANIZED PIN PILE (10 TON), WITH AN ESTIMATED TOTAL LENGTH BETWEEN 20'-25'. TESTING SHALL BE IN ACCORDANCE WITH ASTM D 1143-81. LOAD TEST A MINIMUM OF 3% OR ONE PILE, WHICHEVER IS GREATER, TO 200% OF THE DESIGN CAPACITY. THE GEOTECHNICAL INSPECTOR SHALL BE CONTINUOUSLY PRESENT DURING PIN PILE INSTALLATION AND TESTING.
4.

SCALE: IF SHEET IS LESS THAN 24" x 36", IT IS A REDUCED PRINT, REDUCE SCALE ACCORDINGLY

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9 - 103rd Ave NE Suite 203 Bellevue, WA 98004
TEL: 425.457.7003

REGISTERED ARCHITECT
BRADLEY J. STURMAN
STATE OF WASHINGTON
5582

4006 RESIDENCE

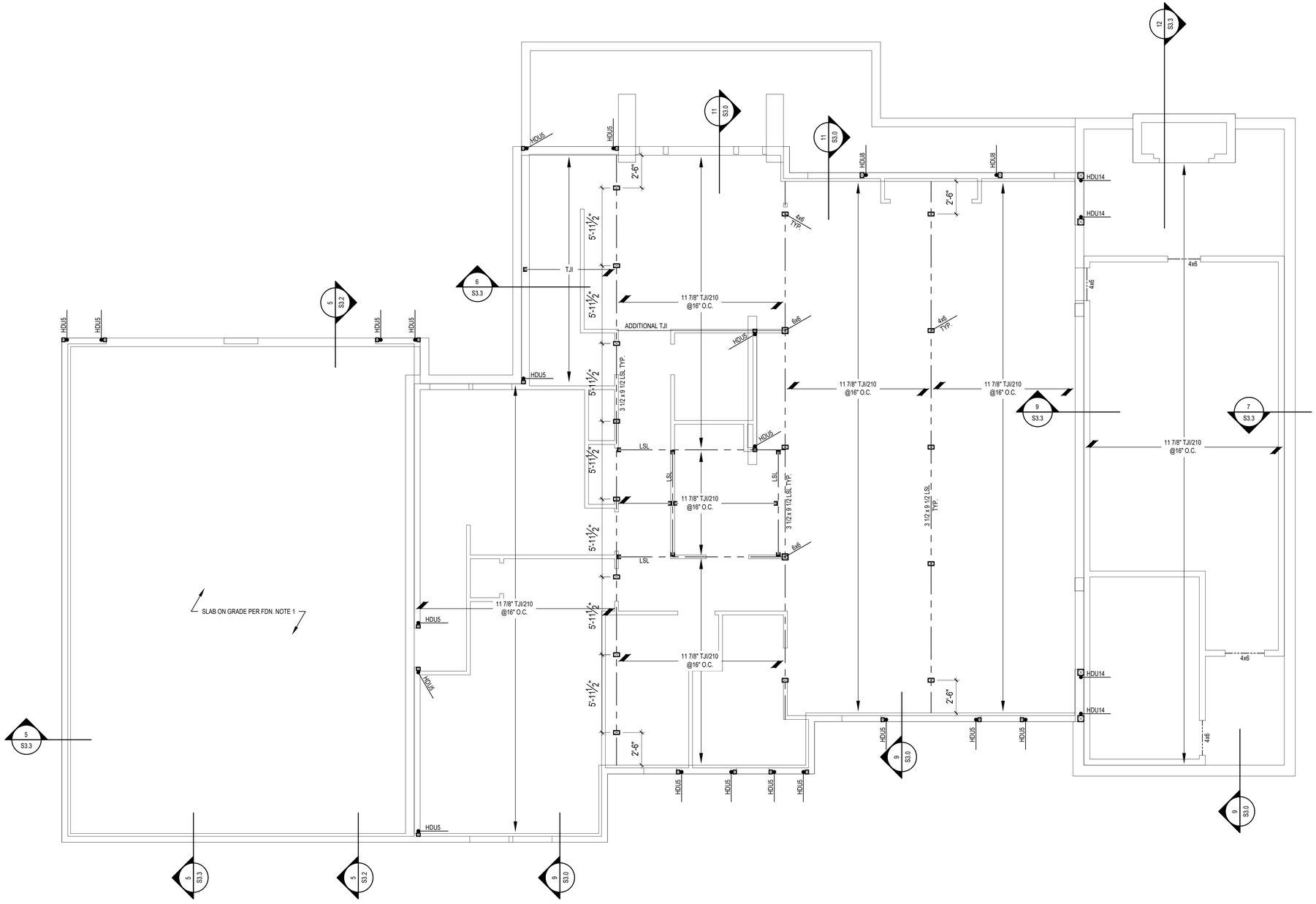
4006 E MERCER WAY
MERCER ISLAND, WA 98040

FOUNDATION PLAN

REVISIONS:

PLOT DATE: 5/2/2022
DRAWN BY: JM
CHECKED BY: BJS

SHEET **S2.0**



GENERAL FRAMING NOTES:

1. ALL BEAMS SHALL BE FLUSH AND ALL HEADERS DROPPED, UNO. TYPICAL POST-TO-BEAM CONNECTIONS SHALL BE AC/BC/PC POST CAP AND/OR POST BASE.
2. TYPICAL HEADERS SHALL BE 4x6 DF#2, UNO. SEE 2/S3.2 FOR TYPICAL INSTALLATION.
3. PROVIDE (2) BEARING STUDS UNDER EACH END OF ALL BEAMS AND (1) 2x TRIMMER (BEARING) STUD AND (1) 2x KING (FULL-HEIGHT) STUD AT EACH END OF ALL HEADERS, UNO. NAIL STUDS TOGETHER PER GENERAL STRUCTURAL NOTES.
4. PROVIDE SOLID BEARING BELOW ALL POINT LOADS ABOVE.
5. STUD WALLS SHALL BE 2x HF STUDS @ 16"oc, UNO. SEE SHEAR WALL, HOLDOWN AND STRAP SCHEDULES ON S1.1 FOR ADDITIONAL REQUIREMENTS AT SHEAR WALL FRAMING.
6. AT BREAKS IN DOUBLE TOP PLATE OF ALL EXTERIOR WALLS AND ALL SHEAR WALLS SEE DETAIL 3/S1.1.
7. SW-X INDICATES SHEAR WALL PER SCHEDULE 1/S1.1. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION. ALL NEW, EXTERIOR WALLS SHALL BE SHEATHED PER SW6, UNO.
8. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN.
9. REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

FLOOR FRAMING NOTES:

1. FLOOR SHEATHING SHALL BE MIN.$^{23}/_{32}$" APA RATED SHEATHING (48/24). NAIL @ ALL PANEL EDGES AND OVER ALL SHEAR WALLS w/0.113"ø @ 6"oc AND 12"oc TO ALL INTERMEDIATE FRAMING. PLACE LONG DIRECTION OF PLYWOOD PERPENDICULAR TO JOISTS DIRECTION, STAGGER PANEL JOINTS.
2. TYPICAL FLOOR FRAMING SHALL BE 11-7/8" TJI/210 @ 16"oc, DIRECTION PER PLAN. JOIST TO SPAN CONTINUOUS AS INDICATED ON PLAN.
3. LSL - INDICATES FLUSH-FRAMED 1-¾x11-⅞ LSL BEAM. ALL JOISTS AND 11-⅞" DEEP BEAMS SHALL BE FLUSH-FRAMED & ALL 4x HEADERS/GLULAM BEAMS SHALL BE DROPPED UNO.
4. HD - INDICATES HOLDOWN LOCATED AT END OF SHEAR WALL ABOVE, SEE SCHEDULE ON 4/S1.1.
5. ST - INDICATES STRAP AT END OF SHEAR WALL ABOVE, SEE SCHEDULE ON 2/S1.1.

HANGER SCHEDULE	
MEMBER	HANGER
2x8/2x12	LUS
14" TJI/210	IUS/ITS2.06/14
14" TJI/560	IUS/ITS3.56/14
1-¾x14 LSL/LVL	HUS1.81/10
3-½x14 LSL/PSL	HHUS410
5-¼x14 PSL	HGUS5.510
11-⅞" TJI/210	IUS/ITS2.06/11.88
1-¾x11-⅞ LSL/LVL	HUS1.81/10
3-½x11-⅞ LSL/PSL	HHUS410

1 MAIN FLOOR FRAMING

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

SCALE: IF SHEET IS LESS THAN 24" x 36", IT IS A REDUCED PRINT, REDUCE SCALE ACCORDINGLY

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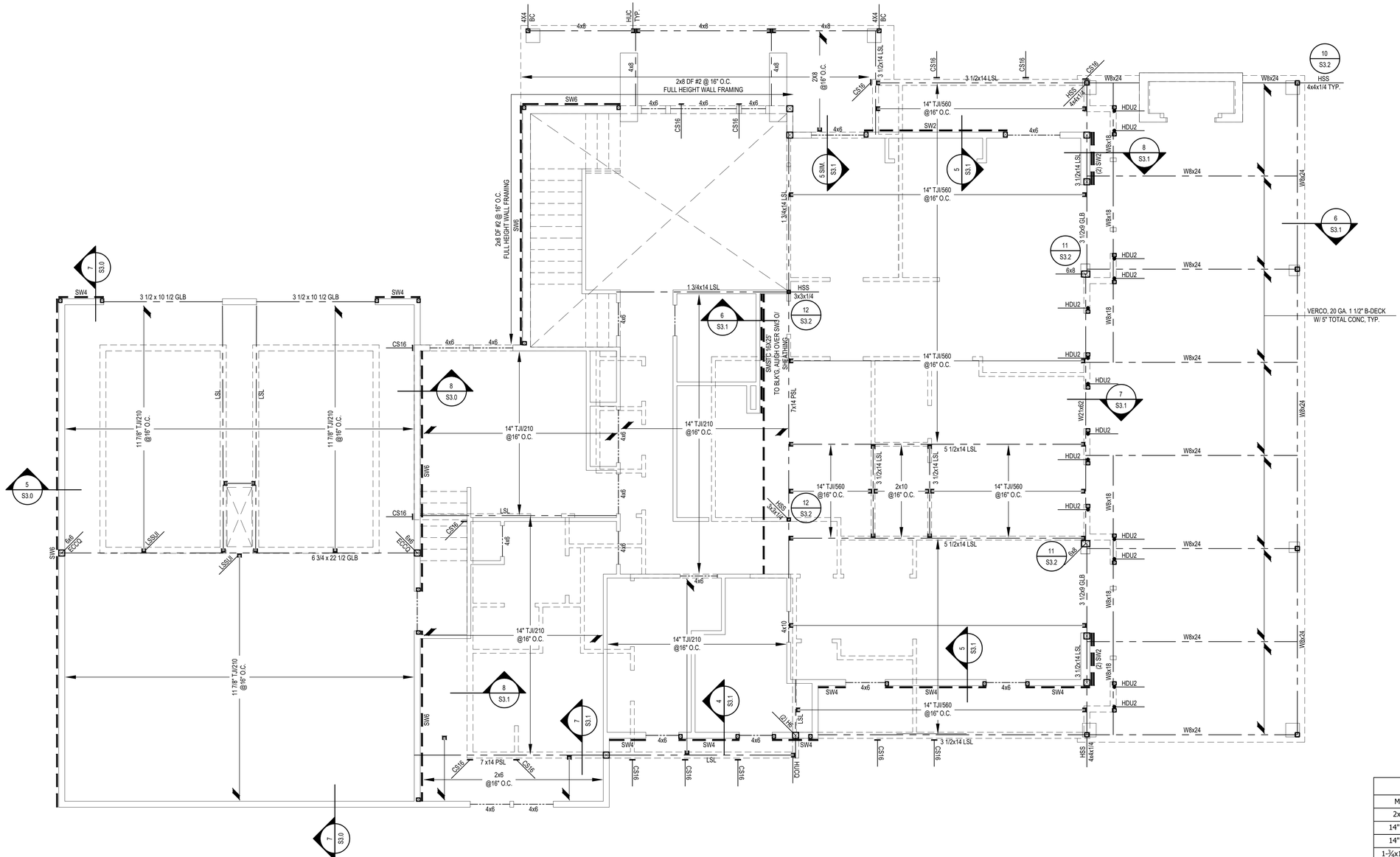
4006 E MERCER WAY
MERCER ISLAND, WA 98040

MAIN FLOOR FRAMING

REVISIONS:

PLOT DATE: 5/2/2022
DRAWN BY: JM
CHECKED BY: BJS

SHEET S2.1



1 UPPER FLOOR FRAMING

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

HANGER SCHEDULE	
MEMBER	HANGER
2x8/2x12	LUS
14" TJI/210	IUS/ITS2.06/14
14" TJI/560	IUS/ITS3.56/14
1-¾x14 LSL/LVL	HUS1.81/10
3-½x14 LSL/PSL	HHUS410
5-¼x14 PSL	HGUS5.510
11-⅞" TJI/210	IUS/ITS2.06/11.88
1-¾x11-⅞ LSL/LVL	HUS1.81/10
3-½x11-⅞ LSL/PSL	HHUS410

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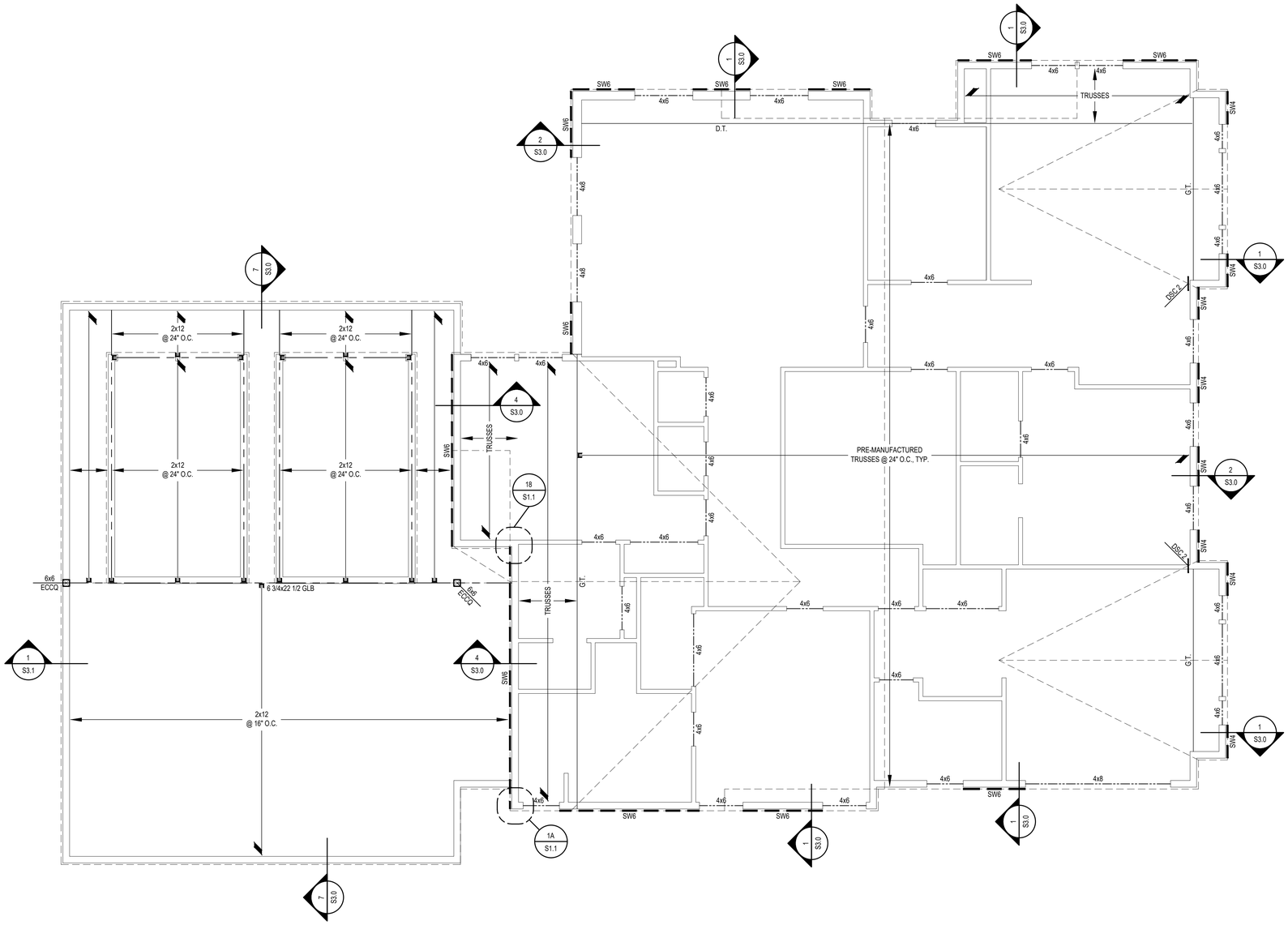
UPPER FLOOR FRAMING

REVISIONS:

PLOT DATE: 5/2/2022
DRAWN BY: JM
CHECKED BY: BJS

SHEET **S2.2**



ROOF FRAMING NOTES:

1. ROOF SHEATHING SHALL BE 1/2" APA RATED SHEATHING (32/16). NAIL @ ALL FRAMED PANEL EDGES AND OVER ALL SHEAR WALLS w/0.131"ø @ 6"oc AND 12"oc TO ALL INTERMEDIATE FRAMING. PLACE LONG DIRECTION OF PLYWOOD PERPENDICULAR TO JOISTS DIRECTION, STAGGER PANEL JOINTS.
2. TYPICAL ROOF FRAMING SHALL BE PRE-MANUFACTURED MENDING PLATE TRUSSES @ 24"oc UNO.
3. DT - INDICATES DRAG TRUSS. TRUSS SHALL BE ENGINEERED TO TRANSFER LATERAL FORCE NOTED ON PLANS FROM ENTIRE LENGTH OF TOP CHORD TO SHEAR WALL ALIGNED AT BOTTOM CHORD. NAIL SHEATHING OVER ENTIRE LENGTH w/0.131"ø NAILS @ 6"oc.
4. GT - INDICATED GIRDER TRUSS PER MANUFACTURER.
5. CONTRACTOR TO SUBMIT COPY OF FINAL TRUSS DESIGN SHOP DRAWINGS TO STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO FABRICATION.

HANGER SCHEDULE	
MEMBER	HANGER
2x8/2x12	LUS
14" TJI/210	IUS/ITS2.06/14
14" TJI/560	IUS/ITS3.56/14
1-¾x14 LSL/LVL	HUS1.81/10
3-½x14 LSL/PSL	HHUS410
5-¼x14 PSL	HGUS5.510
11-⅞" TJI/210	IUS/ITS2.06/11.88
1-¾x11-⅞ LSL/LVL	HUS1.81/10
3-½x11-⅞ LSL/PSL	HHUS410

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

Prefabricated Connector Plate Wood Roof Trusses

Prefabricated wood trusses shall be metal plate connected wood trusses designed and fabricated in accordance with the current ANSI/TPI.1 The trusses shall be designed to support their own weight plus superimposed dead, live, uplift and lateral loads including, but not limited to the loads below:

top chord snow load	25 psf unless otherwise noted in the load criteria
top chord dead load	10 psf
bottom chord dead load	10 psf
bottom chord live load	10 psf (uninhabitable attics w/o storage)
bottom chord live load	20 psf (uninhabitable attics w/light storage or uninhabitable attics w/o storage, but containing areas where the clear distance between the top and bottom chords is greater than or equal to 42" for a horizontal distance of 24" involving (2) or more trusses)

The bottom chord live load does not act concurrently with the roof live or snow load.

See Architectural and mechanical drawings for sprinkler and mechanical equipment loading and for wind uplift (top chord) per ASCE 7-10, use components and cladding loads, see loading criteria.

All top and bottom chord splices shall be connected with approved metal press plates and tension tested to a minimum of 1.2 times the allowable tension parallel to the grain per NDS specifications. Dead load combined with live load deflections shall be limited to span/240 (span/120 at cantilevered members). Live load deflections of members shall be limited to span/360 (span/180 at cantilevered members). Truss load duration factor shall be per the current edition of the NDS.

The truss manufacturer shall be responsible for the complete design, fabrication and erection procedures for all trusses, blocking, incidental framing, framing for openings, temporary and permanent member lateral restraint and bracing, bridging, connections, holdown anchors, and all other items required for a complete and safe installation of the truss system. Truss Configurations are shown on the Architectural or structural drawings. The truss manufacturer shall have at least 3 years experience in the fabrication of prefabricated wood trusses.

Design of trusses shall consider deflection of trusses relative to adjacent parallel supports and include design of bridging, bracing, additional trusses or other means necessary to alleviate problems resulting from differential deflections.

Contractor shall submit design calculations and truss design drawings (sealed by a licensed Engineer in the governing jurisdiction) and a truss placement diaphragm in accordance with the Deferred Submittal Section to the Architect and Structural Engineer of Record. Design calculations and truss design drawings shall be approved by the Architect and the building official prior to manufacturing the trusses. The truss placement diagram shall identify the proposed location for each individually designated truss and reference the corresponding truss design drawing. The diagram shall be provided as part of the truss submittal package and included with the shipment of trusses delivered to the job site. The location, direction and span of the trusses shall match the permit documents or a separate Substitution request shall be made to the Architect/SER prior to the issuance of the Deferred Submittal.

Truss design drawings are the written, graphic and pictorial depiction of each individual truss. Truss design drawings shall be provided with the shipment of trusses delivered to the job site. Truss design drawings shall include, at a minimum, the following:

A. Truss profiles showing slope or depth, span and spacing;
B. Location of joints;
C. Required bearing widths;
D. Design loads as applicable;
E. Top chord live load, (including snow loads);
F. Top chord dead load;
G. Bottom chord live load;
H. Bottom chord dead load;
I. Concentrated loads and their points of application as applicable;
J. Controlling wind and earthquake loads as applicable;
K. Adjustments to lumber and metal connector plate design value for conditions if used;
L. Each reaction force and direction;
M. Metal connector plate type, size, thickness or gage, and the dimensioned location of each metal connector plate except where symmetrically located relative to the joist interface. Provide the ICC report for plates used;
N. Lumber size, species and grade for each member;
O. Connection details for all truss to truss (including any combination of truss, girder truss, hip truss and hip girders); truss ply to ply; truss to column/beam, and field assembly of a truss when the truss shown on the individual truss design drawing is supplied in separate pieces that will be field connected.
P. Calculated deflection ratio and maximum vertical and horizontal deflection for live and total load as applicable;
Q. Maximum axial tension and compression forces in the truss members; and
R. Required permanent individual truss member lateral restraint and bracing per 2006 IBC section 2303.4.1.2, unless a specific truss member permanent bracing plan and details for the roof or floor structural system are provided by a registered design professional.

Where permanent individual member lateral restraint and bracing of truss members is required on the truss design drawings, it shall be
accomplished by one of the following methods:

A. The trusses shall be designed so that the buckling of any individual truss member can be resisted internally by the structure (e.g. Buckling member T-bracing, I-bracing, etc.) of the individual truss. The truss individual member buckling reinforcement shall be installed as shown on the truss design drawing or on supplemental truss member buckling reinforcement diagrams provided by the truss designer.
B. Permanent individual member lateral restraint and bracing shall be installed by the contractor using standard industry bracing details that conform to generally accepted engineering practice. Individual truss member continuous lateral bracing locations(s) shall be shown on the truss design drawing(s).

Erection bracing and bridging sizes and spacing shall be as required by the truss manufacturer in accordance with the latest recommendations of the Truss Plate Institute (TPI). Install and lap bracing and bridging per latest TPI recommendations.

Truss members and components shall not be cut, notched, drilled, spliced or otherwise altered in any way without written consent and approval of a registered design professional. New load or changes in loads resulting in the addition of loads to any truss (e.g., HVAC equipment, water heater, piping, ducts, etc.) shall not be permitted without verification that the truss is capable of supporting such additional loading.

A special inspector approved by the building official shall verify that the truss manufacturer maintains detailed fabrication and quality control procedures that provide a basis for inspection control of the workmanship and the fabricator's ability to conform to approved construction documents and referenced standards. The special inspector shall review the procedures for completeness and adequacy relative to the code requirements for the fabricator's scope of work. Each wood truss member shall carry a grading stamp.

STURMAN ARCHITECTS
9 - 103rd Ave NE Suite 203 Bellevue, WA 98004
TEL: 425.457.7003
RICHARD THOMAS STURMAN
STATE OF WASHINGTON
43880
REGISTERED ENGINEER
PROFESSIONAL ENGINEER
www.sturmanarchitects.com

4006 RESIDENCE
4006 E MERCER WAY
MERCER ISLAND, WA 98040

ROOF FRAMING

REVISIONS:

PLOT DATE: 5/2/2022
DRAWN BY: JM
CHECKED BY: BJS

SHEET S2.3

SCALE: IF SHEET IS LESS THAN 24" x 36", IT IS A REDUCED PRINT, REDUCE SCALE ACCORDINGLY

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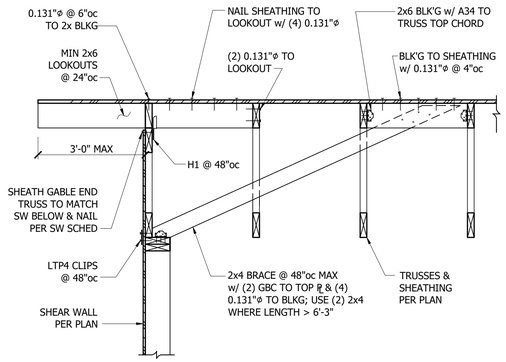
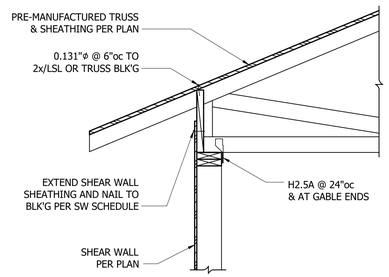
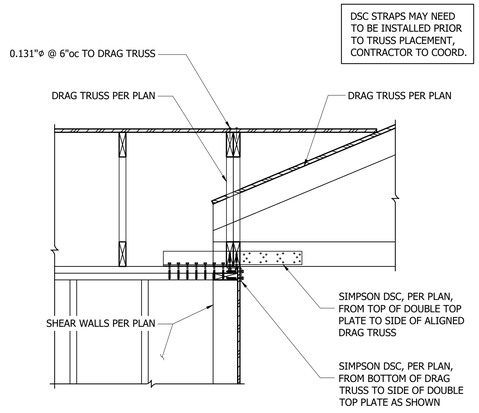


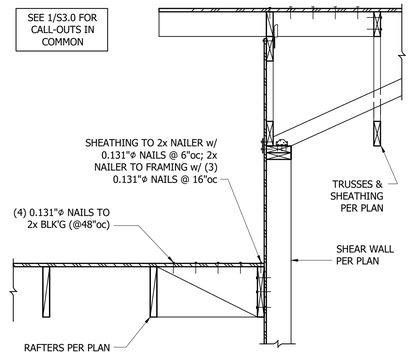
1 Trusses Parallel to Exterior Wall
3/4" = 1'-0"



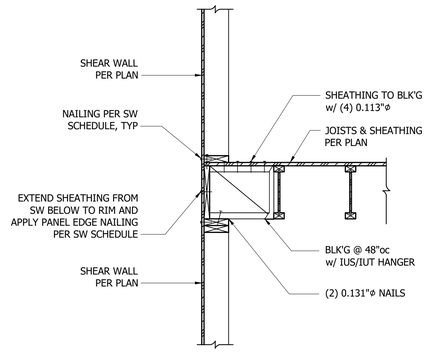
2 Trusses Perpendicular to Exterior Wall
3/4" = 1'-0"



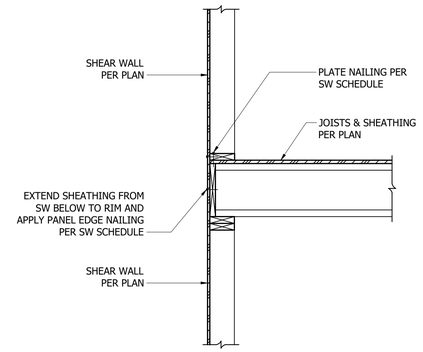
3 Drag Struts to Shear Walls
3/4" = 1'-0"



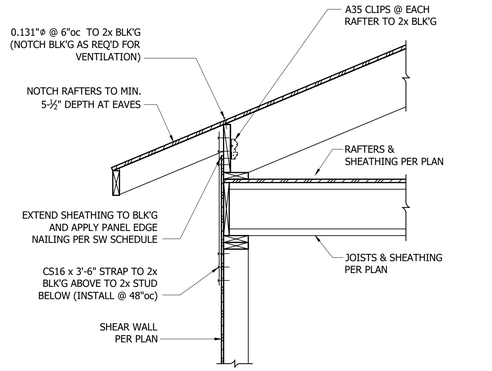
4 Trusses Parallel to Exterior Wall
3/4" = 1'-0"



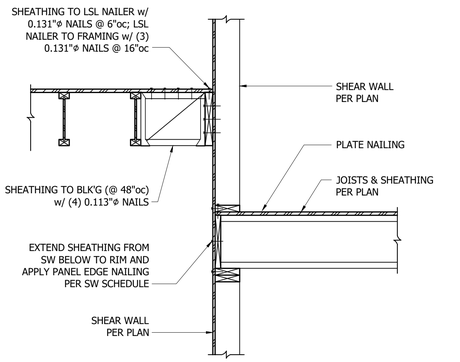
5 TJI Joists Parallel to Exterior Wall
3/4" = 1'-0"



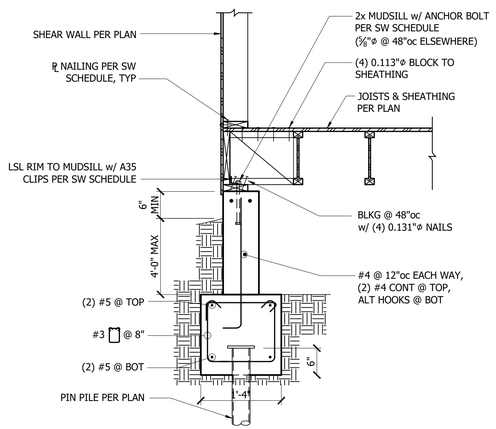
6 TJI Joists Perpendicular to Exterior Wall
3/4" = 1'-0"



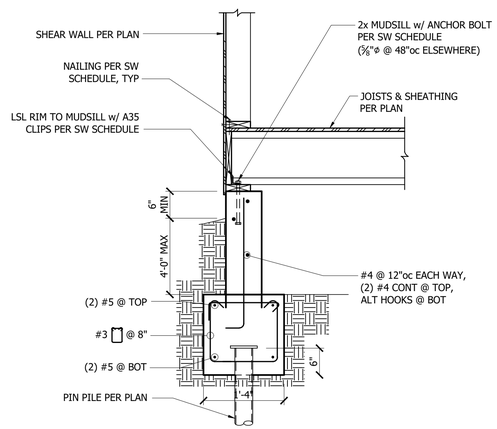
7 Low Roof over Floor Framing
3/4" = 1'-0"



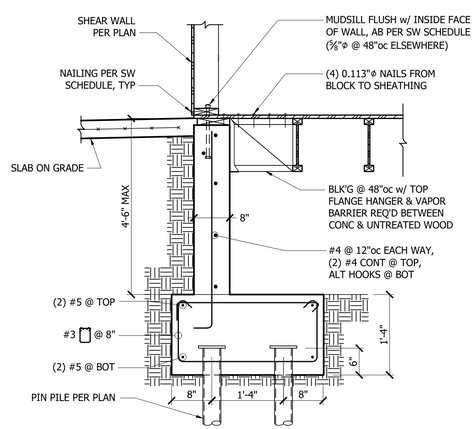
8 Change in Elevation/Direction of Floor Joist
3/4" = 1'-0"



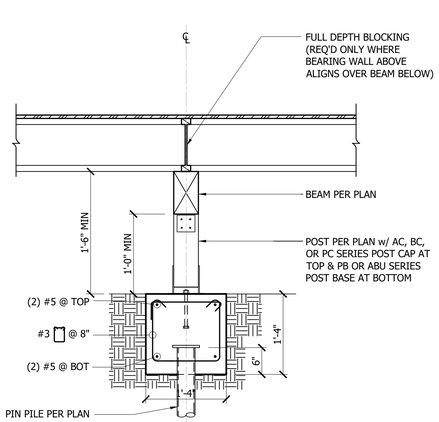
9 Grade Beam Foundation, Parallel to TJI Joists
3/4" = 1'-0"



10 Grade Beam Foundation, Perp. to TJI Joists
3/4" = 1'-0"



11 Grade Beam at Flush Foundation Wall
3/4" = 1'-0"



12 Crawlspace Post & Footing at Grade Beam
3/4" = 1'-0"

4'-0" MIN

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MERCER ISLAND, WA 98040

STRUCTURAL DETAILS

REVISIONS:

PLOT DATE: 5/2/2022
DRAWN BY: JM
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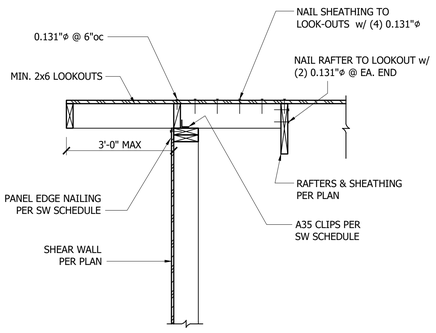
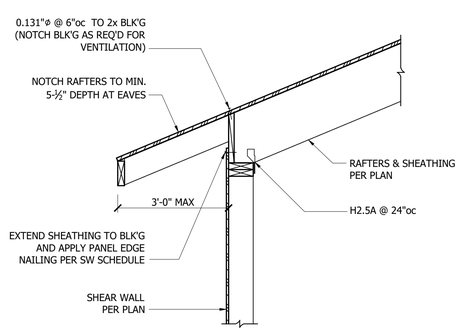
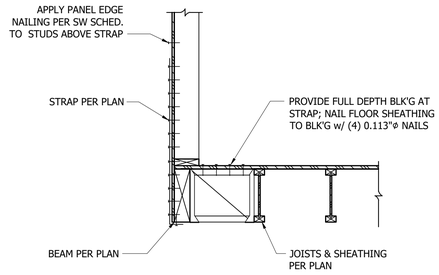
SHEET **S3.0**



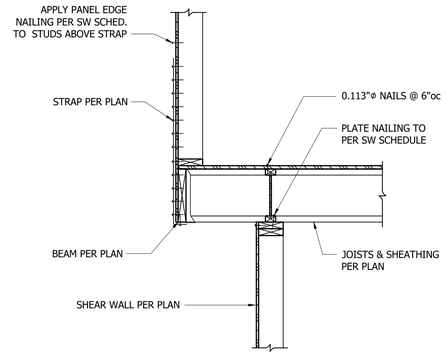
1 2x Rafter Parallel to Exterior Wall
3/4" = 1'-0"



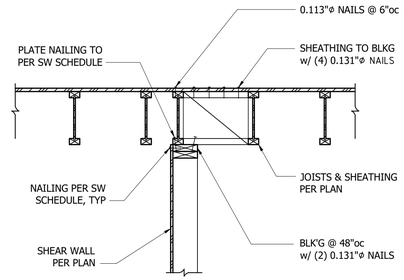
2 2x Rafters Perp. to Exterior Wall
3/4" = 1'-0"



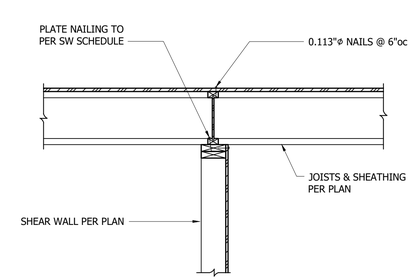
3 Strap to Beam Below
3/4" = 1'-0"



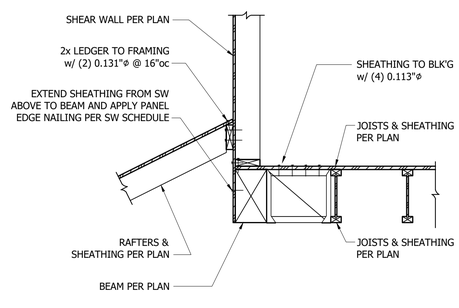
4 Strap to Beam Below
3/4" = 1'-0"



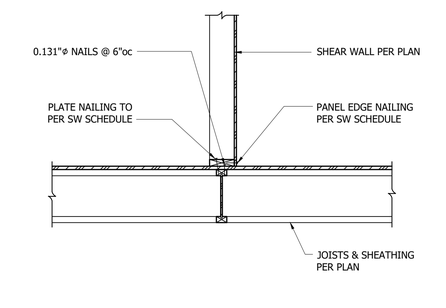
5 TJI Joists Parallel to Interior Shear Wall
3/4" = 1'-0"



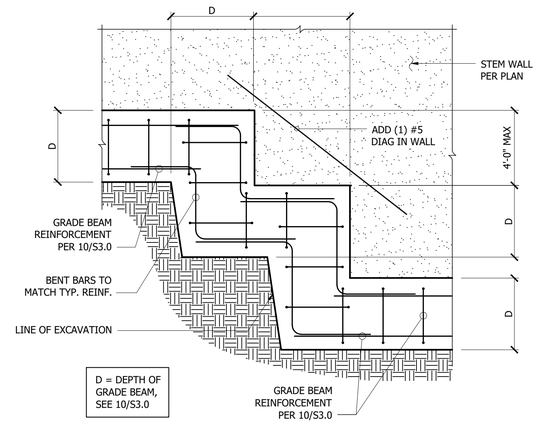
6 TJI Joists Perp. to Interior Shear Wall
3/4" = 1'-0"



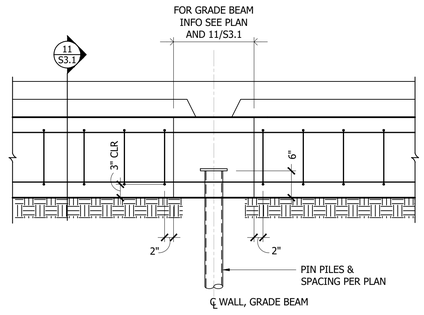
7 Offset Shear Walls at Floor Framing
3/4" = 1'-0"



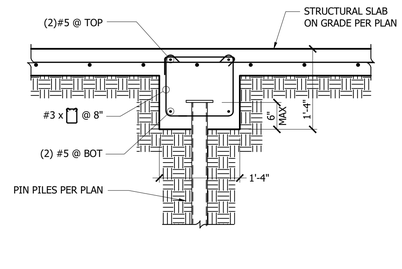
8 SW Supported by Perp. Joists
3/4" = 1'-0"



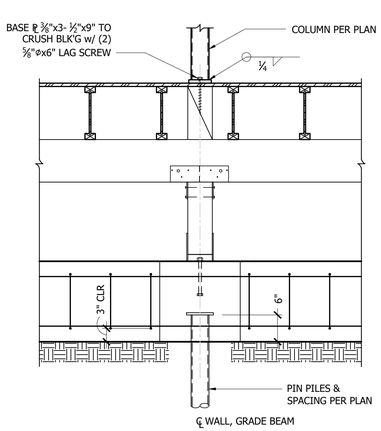
9 Stepped Grade Beam, Typ.
3/4" = 1'-0"



10 Grade Beam Intersection, Typ.
3/4" = 1'-0"



11 Grade Beam at Structural Slab
3/4" = 1'-0"



12 HSS Column Aligned over Grade Beam
3/4" = 1'-0"

SCALE: IF SHEET IS LESS THAN 24" x 36", IT IS A REDUCED PRINT, REDUCE SCALE ACCORDINGLY

PERMIT SET 5/2/2022

STURMAN ARCHITECTS
9 - 103rd Ave NE Suite 203 Bellevue, WA 98004
TEL: 425.457.7003
www.sturmanarchitects.com

4006 RESIDENCE

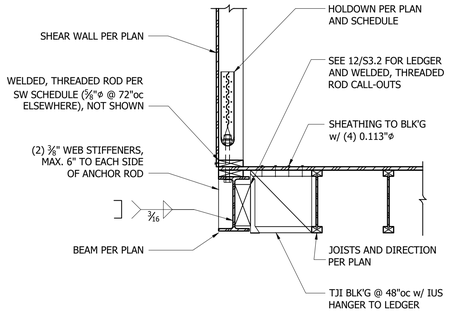
4006 E MERCER WAY
MERCER ISLAND, WA 98040

STRUCTURAL DETAILS

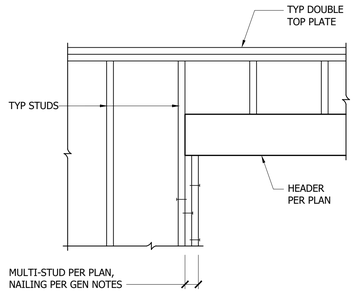
REVISIONS:

PLOT DATE: 5/2/2022
DRAWN BY: JM
CHECKED BY: BJS

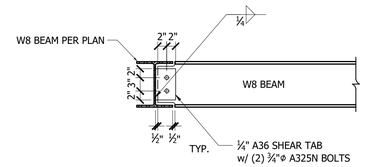
SHEET **S3.1**



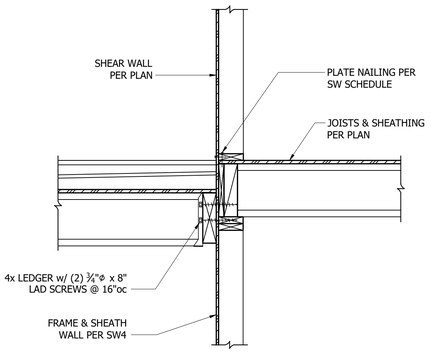
1 Holdown to Steel Beam
3/4" = 1'-0"



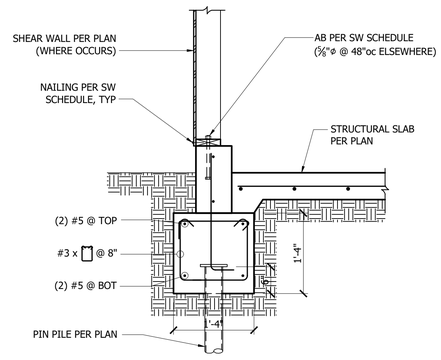
2 Header Support, Typ.
3/4" = 1'-0"



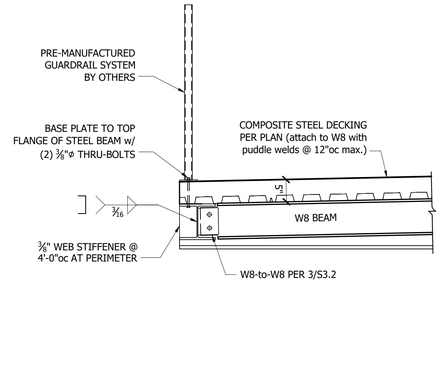
3 Steel Beam to Steel Beam
3/4" = 1'-0'



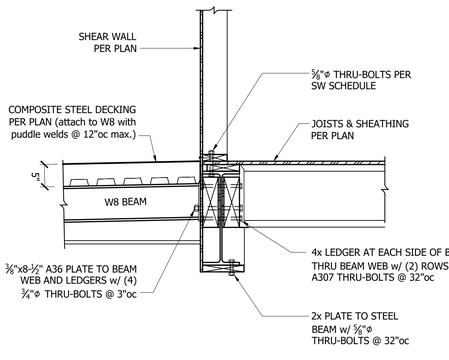
4 Main Floor Deck at Floor Framing
3/4" = 1'-0"



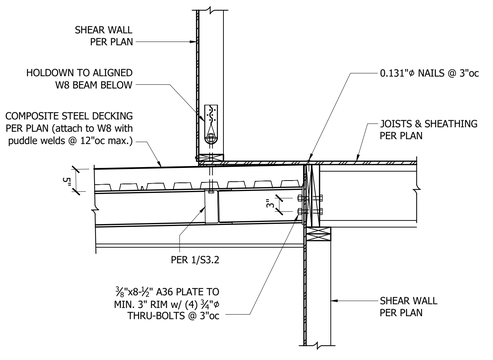
5 Grade Beam at Garage
3/4" = 1'-0"



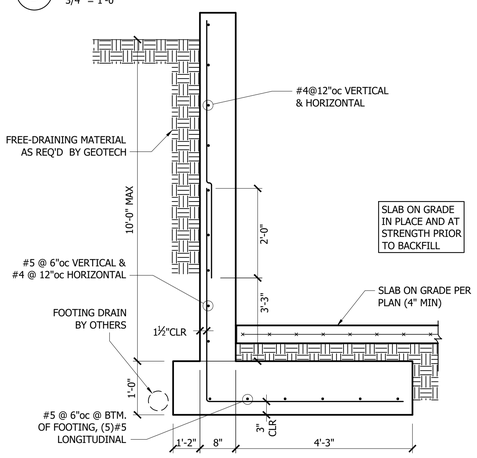
6 Guardrail Support to Steel Beam
3/4" = 1'-0"



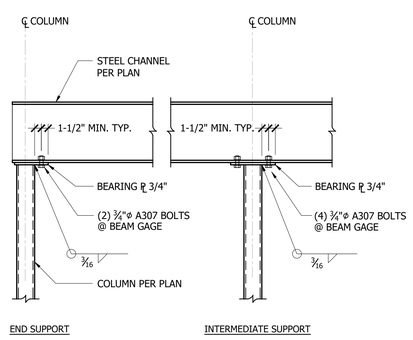
7 Non-Combustible Deck at Steel Header
3/4" = 1'-0"



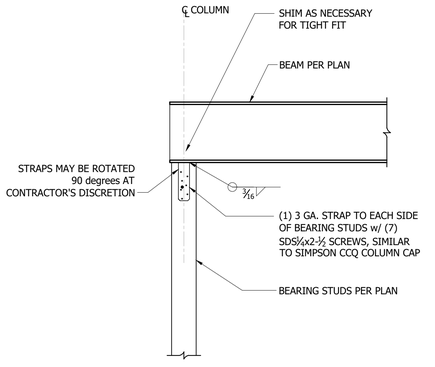
8 Non-Combustible Deck under Bay
3/4" = 1'-0"



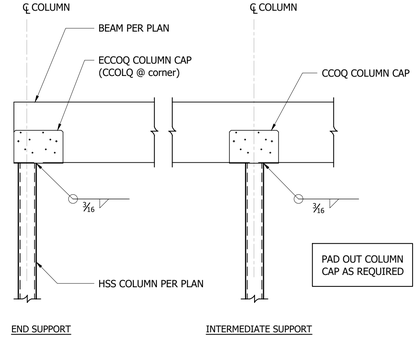
9 10' Landscape Wall
3/4" = 1'-0"



10 Steel Beam to HSS Column, Typ.
3/4" = 1'-0"



11 Steel Beam to Wood Column
3/4" = 1'-0'



12 Wood Beam to HSS Column, Typ.
3/4" = 1'-0"

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PERMIT SET 5/2/2022

STURMAN ARCHITECTS
9 - 103rd Ave NE Suite 203 Bellevue, WA 98004
TEL: 425-457-7003

MICHAEL THOMAS CARLILE — STATE OF WASHINGTON — 43880 — PROFESSIONAL ENGINEER

4006 RESIDENCE

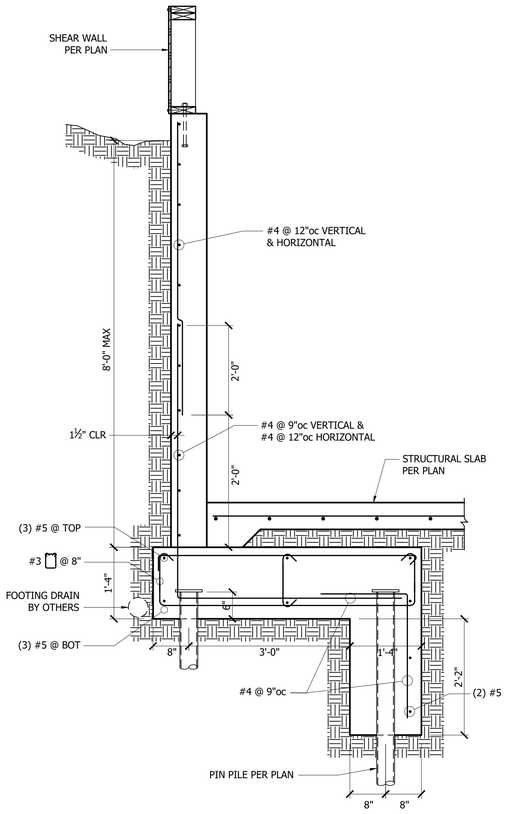
4006 E MERCER WAY
MERCER ISLAND, WA 98040

STRUCTURAL DETAILS

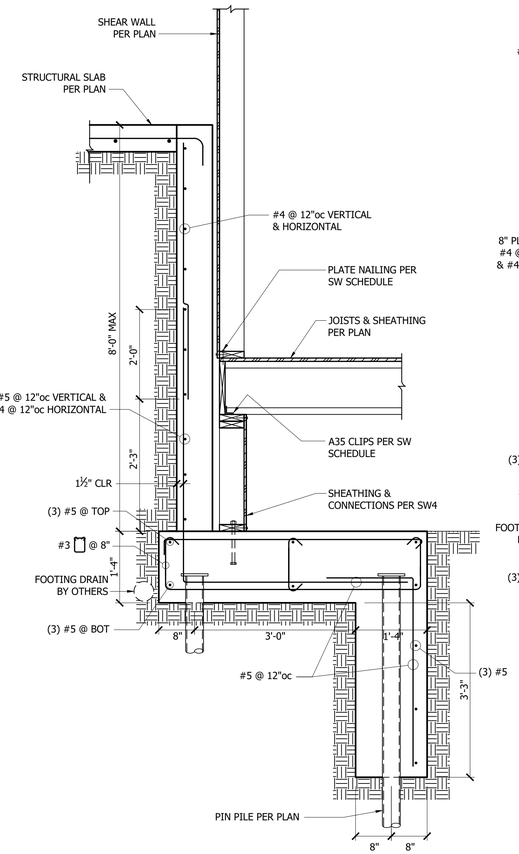
REVISIONS: 1 2 3 4 5 6 7

PLOT DATE: 5/2/2022
DRAWN BY: JM
CHECKED BY: BJS

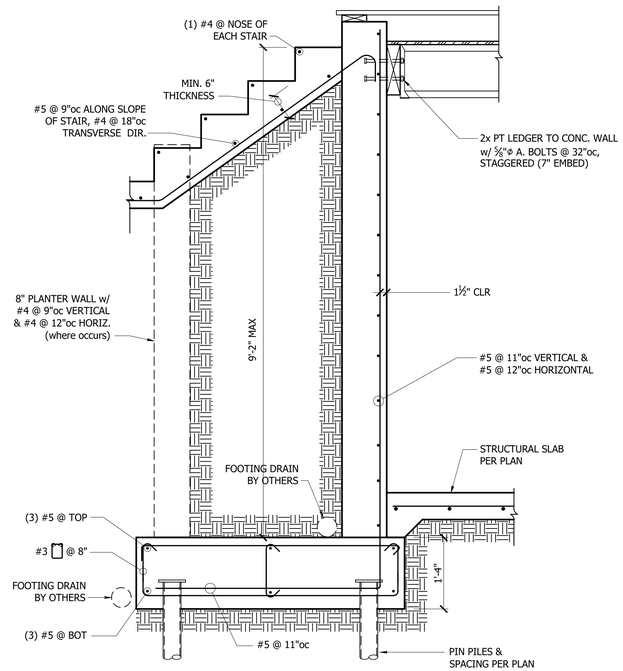
SHEET **S3.2**



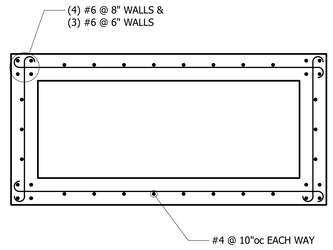
5 Gird 1 Retaining Wall
3/4" = 1'-0"

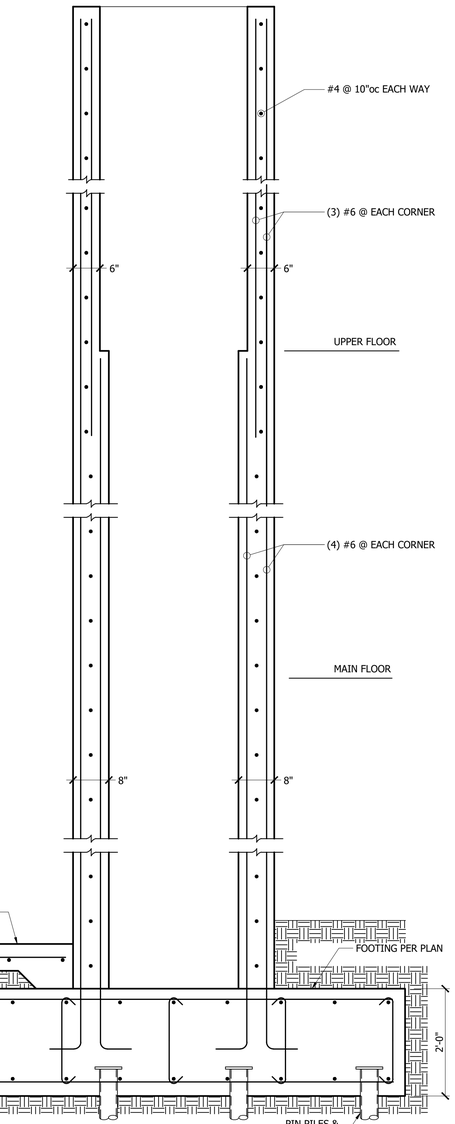


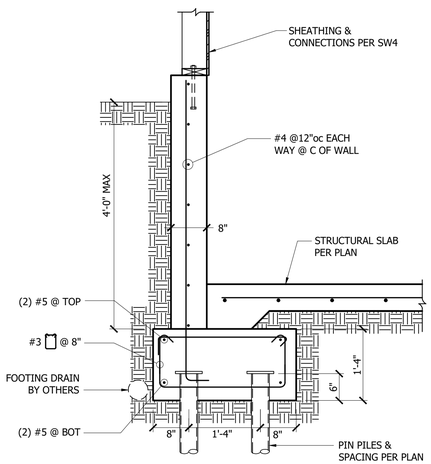
6 Grid 2,4 Retaining Wall
3/4" = 1'-0"



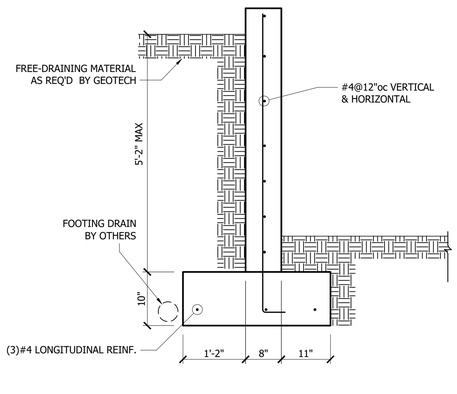
7 Grid 11 Retaining Wall
3/4" = 1'-0"



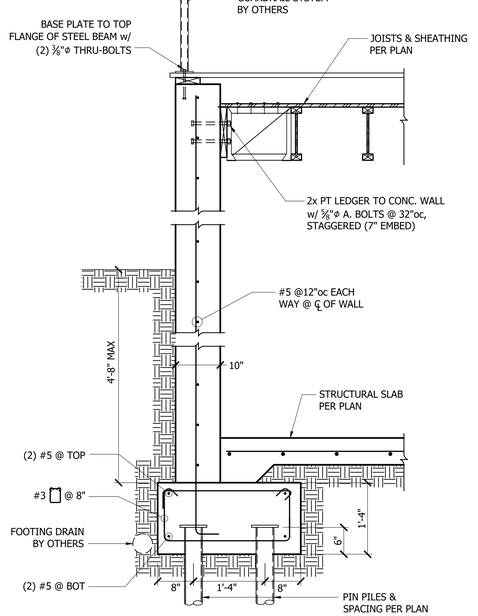




9 Grid 9 Retaining Wall
3/4" = 1'-0"



10 5' Landscape Wall
3/4" = 1'-0"



11 Grid L Retaining Wall
3/4" = 1'-0"

12 Structural Concrete Chimney
3/4" = 1'-0"

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SHEET
S3.3