GENERAL NOTES

1. CODE COMPLIANCE
ALL WORK SHALL COMPLY WITH THE 2021 IRC, 2021 WSEC, 2021 IMC, 2021 IFGC, 2021 IFC, 2021 UPC, 2021 IPMC, 2023 NEC, 2015 INTERNATIONAL ENERGY CONSERVATION CODE WITH WASHINGTON STATE AMENDMENTS, 2017 ICC A117.1, AND WITH ALL LOCAL CODES AND ORDINANCES.
2. DIMENSIONS
A. 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.
B. 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.
C. 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.
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.
ALL EXHAUST FANS/VENT HOODS OVER 400CFM SHALL HAVE A MAKE-UP AIR DEVICE W/ DAMPER STARTING AUTOMATICALLY AND RUNNING CONTINUOUSLY WITH THE FAN CAPABLE OF SUPPLYING AN EQUIVALENT AMOUNT OF AIR.
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 TO MATCH EXISTING.
19. EXHAUST DUCTS: PROVIDE BACKDRAFT DAMPERS AT ALL EXHAUST DUCTS.
20. PROVIDE COMBUSTION AIR OPENINGS INTO FURNACE ROOM PER UMC 703.
21. APPLIANCES:
CLEARANCES OF UL LISTED APPLIANCES FROM COMBUSTIBLE MATERIALS SHALL BE AS SPECIFIED IN UL LISTING.
22. WATER FLOW:
SHOWER SHALL BE EQUIPPED WITH FLOW CONTROL DEVICE TO LIMIT WATER FLOW TO 2.5 GALLONS PER MINUTE.
23. SMOKE DETECTORS: SMOKE & CARBON MONOXIDE DETECTORS THROUGHOUT NEW CONSTRUCTION.
24. NFPA 72 MONITORED FIRE ALARM SYSTEM:
A NFPA 72- CHAPTER 29 MONITORED FIRE ALARM SYSTEM IN COMPLIANCE WITH NFPA 72 AND COMI STANDARDS SHALL BE INSTALLED THROUGHOUT THE RESIDENCE. A SEPARATE FIRE PERMIT IS REQUIRED.
25. FIRE BLOCKING:
FIREBLOCKING SHALL BE PROVIDED IN WOOD-FRAMED CONSTRUCTION PER 2018 IRC SECTION R302.11: 1) IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, SPECIFICALLY VERTICALLY @ CEILING AND FLOOR LEVELS; AND HORIZONTALLY @ INTERVALS NOT EXCEEDING 10 FEET. 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.

ENERGY NOTES

CODE:	2021 W.S.E.C. & 2021 IRC, WAC 51-11R	
CLIMATIC ZONE:	ZONE #4C	
SPACE HEAT TYPE:	NEW HEAT PUMP W/ MIN HSPF 9.5	
INSULATION VALUES: PER TABLE R402.1,1		CODE MIN FROM R402.1.3:
PRESCRIPTIVE METHOD	WALLS:	R-20+5 OR 13+10
	FLAT ATTICS/CEILINGS:	R-60
	VAULTED CEILINGS:	R-38
	FLOORS (OVER UNHEATED SPACES):	R-30
	SLAB-ON-GRADE:	R-10
	BELOW GRADE WALLS:	R-10/15/21+5TB
	FENESTRATION U FACTOR:	.30
	SKYLIGHT U FACTOR:	.50
THERMAL STANDARDS FOR OPENINGS:	UNLIMITED OPTION	

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 4" OF CLOSED CELL SPRAY FOAM AGAINST EXTERIOR SHEATHING FOR INSULATION AND AIR SEALING.
FILL REMAINING CAVITY WITH BATT INSULATION TO MINIMUM R-38.

HEATING & COOLING: NEW ELECTRIC HEAT PUMP WITH MIN. HSPF OF 9.5

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 AND 7 DAY PROGRAMMABLE (MINIMUM 5+2).

DUCT INSULATION: THERMALLY INSULATE ALL PLENUMS, DUCTS AND ENCLOSURES IN ACCORDANCE WITH SECTION 403.3 OF THE 2021 WASHINGTON STATE ENERGY CODE.
a. ALL HEATING DUCTS OUTSIDE THE BUILDING THERMAL ENVELOPE SHALL BE INSULATED WITH A MIN. OF R-8. ALL SEAM JOINTS SHALL BE MASTICED OR 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.

PIPE INSULATION: NON RECIRCULATING HOT AND COLD WATER PIPES LOCATED IN UNCONDITIONED SPACE SHALL BE INSULATED TO R-6 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 105 CFM RUNNING CONTINUOUSLY PER 2018 IRC TABLES M1505.4.3 (162), FAN SHALL BE 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 OR BE PROVIDED WITH INTERLOCKED 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.

PROJECT DATA

PROJECT ADDRESS:	2411 60TH AVE SE MERCER ISLAND, WA 98040	
PROPERTY TAX ID NUMBER:	409950-0021	
JURISDICTION:	CITY OF MERCER ISLAND	
ZONING:	R-8.4	
LOT AREA:	13,932 SF PER SURVEY	
BUILDING HEIGHT LIMIT:	30FT	
SETBACKS: FRONT YARD SETBACK =	20 FT	
REAR YARD SETBACK =	25 FT	
SIDE YARD SETBACK =	15 FT COMBINED 5 FT EACH MIN.	
MAX LOT COVERAGE:	35%	= 4,876.2 SF
MAX HARDSCAPE COVERAGE:	9%	= 1,253.9 SF
FLOOR AREA RATIO:	MAX 5,000 SF OR 40% LOT AREA	= 5,000 SF
FIRE PROTECTION:	NFPA 72 MONITORED ALARM	
SCOPE OF WORK:	REMODEL OF EXISTING SINGLE FAMILY RESIDENCE, EXCAVATE AND UNDERPIN PORTION OF EXISTING BASEMENT FOR NEW SWIMSPA, REMOVE EXISTING ROOF AND INSTALL NEW LOW SLOPED ROOF RAFTERS, NEW SECOND STORY WORKSHOP OVER EXISTING GARAGE. ENCLOSE EXISTING OUTDOOR ROOM AND MINOR 14 SF ADDITION AT BATHROOM	

LEGAL DESCRIPTION

LOT A OF MERCER ISLAND SHORT PLATE NO. MI-83-06-21, ACCORDING TO THE SHORT PLAT THEREOF RECORDED OCTOBER 11, 1983 UNDER RECORDING NUMBER 8310119013, IN KING COUNTY, WASHINGTON.
TOGETHER WITH THE SECOND CLASS SHORELANDS ADJOINING AND ABUTTING THEREON.
AND TOGETHER WITH AN EASEMENT FOR INGRESS, EGRESS, & UTILITIES AS DELINEATED ON SAID SHORT PLAT.

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

SHEET INDEX

A1.0 PROJECT DATA, INDEX, GENERAL NOTES
A1.1 SITE PLAN
SURVEY
C-1 TESC PLAN
C-2 DRAINAGE PLAN
C-3 CIVIL DETAILS
A2.0 LOWER FLOOR PLAN
A2.1 MAIN FLOOR PLAN
A2.2 UPPER FLOOR PLAN
A2.3 ROOF PLAN
A2.4 FAR DIAGRAMS
A3.0 EXTERIOR ELEVATIONS
A3.1 EXTERIOR ELEVATIONS
A4.0 BUILDING SECTIONS
A4.1 BUILDING SECTIONS
A5.0 WALL SECTIONS
A6.0 EXTERIOR DETAILS
S1.0 GENERAL STRUCTURAL NOTES
S1.1 GENERAL STRUCTURAL NOTES AND SCHEDULES
S2.0 FOUNDATION PLAN
S2.1 MAIN FLOOR FRAMING PLAN
S2.2 MAIN ROOF & WORKSHOP FLOOR FRAMING PLAN
S2.3 UPPER ROOF FRAMING PLAN
S3.0 STRUCTURAL DETAILS
S3.1 STRUCTURAL DETAILS
S3.2 STRUCTURAL DETAILS
S3.3 STRUCTURAL DETAILS
S3.4 STRUCTURAL DETAILS 1

2021 WSEC CREDITS

CREDITS REQUIRED:
PROJECT IS AN ADDITION CREATING MORE THAN 500 SF BUT LESS THAN 1,500SF OF NEW CONDITIONED SPACE AND IS THUS A SMALL DWELLING UNIT REQUIRING 3 CREDITS

			5.0 CREDITS NEEDED
ENERGY EQUALIZATION CREDITS SYSTEM TYPE 4 (HEAT PUMP)			3.0 CREDITS
REMAINING CREDITS REQUIRED			2.0 CREDITS
CREDITS	OPTION	DESCRIPTION	
0.5	3.3	AIR SOURCE CENTRALLY DUCTED HEAT PUMP MIN HSPF 9.5	
0.5	3.11	ENERGY STAR CERTIFIED SMART CONNECTED THERMOSTAT	
4.5	6.1	RENEWABLE ENERGY SOLAR - 24,918 KWH PER YEAR SYSTEM .5 CREDIT PER 600KWH UP TO 4.5	
TOTAL CREDITS SELECTED 5.5			

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.

FIRE CODE ALTERNATE

FIRE CODE ALTERNATE ON FILE

1. NFPA 13D TO BE INSTALLED THROUGHOUT THE RESIDENCE. SEPARATE FIRE PERMIT REQUIRED.
2. NFPA 72- CHAPTER 29 MONITORED FIRE ALARM SYSTEM TO BE INSTALLED THROUGHOUT THE RESIDENCE. SEPARATE FIRE PERMIT REQUIRED.
3. SOLID CORE DOORS THROUGHOUT.
4. 1HR RATED TYPE X THROUGHOUT

1

NFPA 72 MONITORED FIRE ALARM

NFPA 72 MONITORED FIRE ALARM SYSTEM
A NFPA 72- CHAPTER 29 MONITORED FIRE ALARM SYSTEM IN COMPLIANCE WITH NFPA 72 AND COMI STANDARDS SHALL BE INSTALLED THROUGHOUT THE RESIDENCE. A SEPARATE FIRE PERMIT IS REQUIRED

EXISTING WALL INSULATION

EXISTING CEILING, WALL OR FLOOR CAVITIES EXPOSED DURING CONSTRUCTION PROVIDED THAT THESE CAVITIES ARE FILLED WITH INSULATION WHILE MAINTAINING CODE REQUIRED VENTILATION CLEARANCES. 2X4 FRAMED WALLS SHALL BE INSULATED TO A MINIMUM OF R-15 AND 2X6 FRAMED WALLS SHALL BE INSULATED TO A MINIMUM OF R-21.

WHOLE HOUSE VENTILATION

EQUATION 15-1	
BEDROOMS	4
HEATED SQUARE FOOTAGE	4,984.5 SF
CFM = (0.01* 4984.5 SF) + (7.5 * (4+1 BEDROOMS))	
AIRFLOW (CFM)	87.345 CFM MIN.

a. WHOLE HOUSE VENTILATION SHALL BE PROVIDED BY ERV/HRV W/ INTEGRAL FANS, PROVIDING MIN. 88 CFM RUNNING CONTINUOUSLY PER 2021 IRC TABLES M1505.4.3 (162) OR EQUATION 15-1. FAN SHALL BE LESS THAN .35 WATT PER CFM AND RUN CONTINUOUSLY, 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. ALL SUPPLY DUCTS IN CONDITIONED SPACE SHALL BE INSULATED TO MIN. R-4 PER IRC M1507.3.5.2.

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 VENTILATION FAN SHALL BE PROVIDED BY UNDERCUTTING INTERIOR DOORS 1/2" ABOVE FINISHED FLOOR, TYP.

f. WHOLE HOUSE VENTILATION SHALL BE TESTED, BALANCED AND VERIFIED AND A WRITTEN REPORT SHALL BE POSTED AND PROVIDED THE BUILDING OFFICIAL AND CERTIFICATION COMPLETED PER WSEC SECTIONS M1505.4.1.6 AND M1505.4.1.7.

g. AN EXHAUST FAN WHOLE HOUSE VENTILATION IS NOT ALLOWED WITH AN ERV SYSTEM.

h. HRV/ERV SHALL HAVE A MINIMUM HRE OF .80

PROJECT TEAM

OWNER: JODY AND STEPH BIGGS
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MERCER ISLAND, WA 98040
PHONE: 626.354.8927

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

STRUCTURAL: ANNÉE STRUCTURAL ENGINEERING
1801 187H AVENUE S
SEATTLE, WA98144
PHONE: 206.658.5169
CONTACT: MIKE ANNÉE

CONTRACTOR:

GEOTECH: GEOTECH CONSULTANTS INC.
2401 10TH AVE
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PHONE: 425.747.5618
CONTACT: MARC MCGINNIS

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

SURVEYOR: SITE SURVEYING, INC.
21923 NE 11TH ST
SAMMAMISH, WA 98074
PHONE: 425.298.4412

TREE RETENTION

TREE INVENTORY			
NUMBER	SPECIES	DBH (INCHES)	RETAINED
120	SOUTHERN MAGNOLIA	19.7	YES

NOTE ALL EXISTING TREES ON SITE WILL BE RETAINED. NO TREE REMOVAL PROPOSED AS PART OF THIS PERMIT. TREE RETENTION RATE OF 100% EXCEEDS RETENTION REQUIREMENT OF 30%

PLEASE SEE ARBORIST REPORT DATED APRIL 9TH, 2024 FOR ADDITIONAL INFORMATION ON EXISTING TREES.

TREE RETENTION

1 OF 1 EXISTING TREES ON SITE WILL BE RETAINED, 100% TREE RETENTION.

NO REPLACEMENT TREES ARE REQUIRED

PLEASE NOTE
SEE ARBORIST REPORT DATED APRIL 9TH, 2024 FOR ADDITIONAL INFORMATION ON EXISTING TREES.

SHORELINE IMPERV

IMPERVIOUS IN 10% ZONE (NO STRUCTURES):
NOTE NO NEW OR REPLACED HARDSCAPE IN THIS ZONE. EXISTING TO REMAIN ONLY.

AREA OF ZONE:	2,419.6 SF
MAX HARDSCAPE ALLOWED 10%	242 SF
EXISTING BULKHEAD	310.6 SF
EXISTING DOCK LANDWARD	19.4 SF
TOTAL	330.0 SF

IMPERVIOUS IN 30% ZONE (STRUCTURES ALLOWED):

AREA OF ZONE:	2,114.0 SF
MAX IMPERVIOUS 30%	634.2 SF
(E) DECK	83.0 SF
(E) CONCRETE	14.4 SF
(E) STEPS	14.4 SF
(E) HOUSE	288.9 SF
TOTAL	400.7 SF (25.0%)
PROPOSED:	
DECK	217.1 SF
CONCRETE	42.9 SF
STEPS	55.3 SF
HOUSE	307.1 SF
TOTAL	622.1 SF (29.4%)
STILL AVAILABLE	12.1 SF

BUILDING AREA

	BASEMENT	MAIN FLOOR	WORKSHOP	HEATED SUB-TOTAL	ATTACHED GARAGE	GRAND TOTAL
EXISTING HOUSE:	2,012.7 SF	2,217.3 SF	0.0 SF	**4,230.0 SF**	578.0 SF	4,808.0 SF
PROPOSED HOUSE:	1,996.6 SF	2,488.2 SF	499.7 SF	**4,984.5 SF**	517.8 SF	5,502.3 SF
CHANGE:	- 16.1 SF	+ 270.9 SF	+ 499.7 SF	**+ 754.5 SF**	- 60.2 SF	+ 694.3 SF

NOTE: BUILDING AREA IS USEABLE CONDITIONED FLOOR SPACE AND DOES NOT INCLUDE EXTERIOR WALLS, TWO STORY OPEN AREAS, AND SPACE ABOVE STAIRS.

LOT COVERAGE & HARDSCAPE

LOT COVERAGE	NET LOT S.F.	MAIN STRUCT. & ROOF S.F.	DRIVES/ PARKING	TOTAL LOT COVERAGE	% LOT COVERAGE
EXISTING IMPERVIOUS AREA	13,932 SF	3,837.3 SF	1,989.2 SF	5,818.5 SF	41.8 %
PROPOSED IMPERVIOUS AREA		3,736.4 SF	1,920.7 SF	5,657.1 SF	40.6 %
NET GAIN/ LOSS		-100.9 SF	-68.5 SF	-169.4 SF	-1.2 %
% ALLOWED IMPERVIOUS AREA				4,876.2 SF ALLOWABLE	35 %
REMAINING ALLOWED IMPERVIOUS AREA				780.9 SF OVER	

HIGHEST EL: +48.4' LOWEST EL: 18.6'
ELEVATION DIFFERENCE= 29.8

29.8' DIVIDED BY 178.2' (HORIZ. DIST. BTWN. HIGHEST & LOWEST ELEV.) = .167

LOT SLOPE IS 16.7%, WHICH IS GREATER THAN 15% AND LESS THAN 30% SO LOT COVERAGE ALLOWED IS 35%.

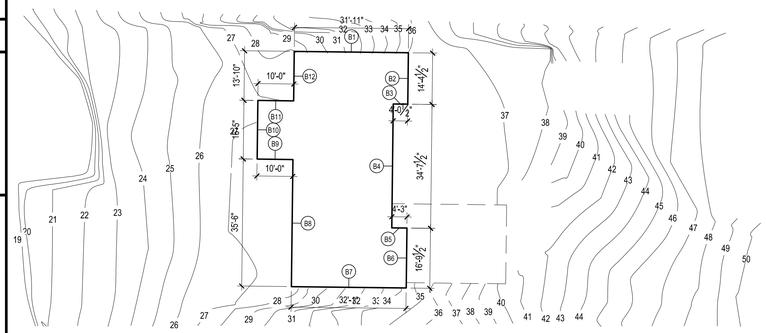
ADDITIONAL 9% OF LOT SIZE WILL DETERMINE ALLOWABLE HARDSCAPE SURFACE

NOTE: NO NEW ADDITIONAL LOT COVERAGE IN AREAS NOT PREVIOUSLY LOT COVERAGE

HARDSCAPE	DOCK	BULKHEAD	WALKS & STEPS	DECK	SLAB AND PATIO	RETAINING WALLS	TOTAL HARDSCAPE	% HARDSCAPE
EXISTING HARDSCAPE AREA	19.4 SF	310.6 SF	155.8 SF	255.1 SF	3.9 SF	146.7 SF	891.5 SF	6.4 %
PROPOSED HARDSCAPE AREA	19.4 SF	310.6 SF	290.4 SF	445.0 SF	2.5 SF	159.6 SF	1,227.5 SF	8.8 %
NET GAIN/ LOSS			+ 134.6 SF	+ 189.9 SF	- 1.4 SF	+ 12.9 SF	+ 336.0 SF	2.4 %
% ALLOWED HARDSCAPE AREA							1,253.9 SF ALLOWABLE	9 %
REMAINING ALLOWED HARDSCAPE AREA							26.4 SF	0.2 %

GROSS FLOOR AREA

SEE A2.4 FOR GROSS FLOOR AREA CALCULATIONS AND DIAGRAMS



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BASEMENT EXCLUSION PLAN

SCALE: 1" = 20'

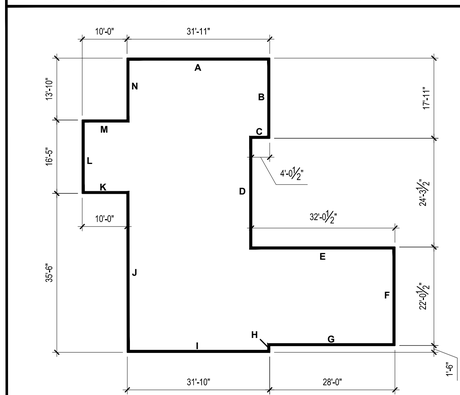
BASEMENT EXCLUSION CALCULATION

LOWER ELEV: 27.5' MAIN ELEV: 37.0'

BASEMENT AREA = 2125.29 SF

	LENGTH	COVERAGE	RESULT
B1	31.92	55.00%	17.556
B2	14.36	100.00%	14.36
B3	4.04	100.00%	4.04
B4	34.625	100.00%	34.625
B5	4.25	100.00%	4.25
B6	16.77	100.00%	16.77
B7	32.08	52.00%	16.6816
B8	35.5	0.00%	0
B9	10	0.00%	0
B10	16.42	0.00%	0
B11	10	0.00%	0
B12	13.83	0.00%	0
	223.795		**108.2826**
Portion of excluded Basement Floor Area = X SF			
2,125.50	X	108.2826	
		223.795	
2,125.50	X	0.483847271	
1,028.42	**SF EXCLUDED**		

AVERAGE BUILDING ELEVATION



AVERAGE BUILDING ELEVATION

	Wall Length	Elevation Pt.	Wall Length X Elev. Pt.
A	31.92	31.5	1005.48
B	17.92	36.5	654.08
C	4.04	36.9	149.076
D	24.29	36.8	893.872
E	32.04	36.7	1175.868
F	22.04	40.4	890.416
G	28.00	37.4	1047.2
H	1.50	34.5	51.75
I	31.83	31.3	996.279
J	35.50	27.2	965.6
K	10.00	27.3	273
L	16.42	27.1	444.982
M	10.00	26.9	269
N	13.83	27.3	377.559
	279.33	**457.8**	**9194.162**
9194.16	32.92	Average Building Elevation	
279.33			

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

PERMIT SUBMITTAL 6/25/24

STURMAN ARCHITECTS
9 - 103rd Ave NE Suite 203 Bellevue, WA 98004
TEL: 425.451.7003
REGISTERED ARCHITECT
BRADLEY J. STURMAN
STATE OF WASHINGTON
5982
www.sturmanarchitects.com

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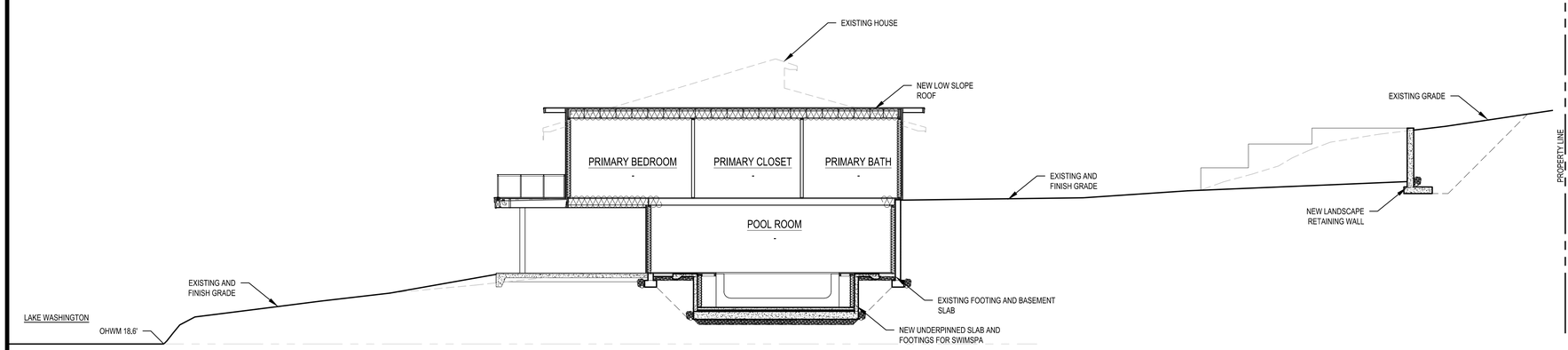
BIGGS RESIDENCE
PERMIT SUBMITTAL
2411 60TH AVE SE
MERCER ISLAND, WA 98040

PROJECT INFO

REVISIONS:
1 PERMIT CORRECTIONS 12/12/2024

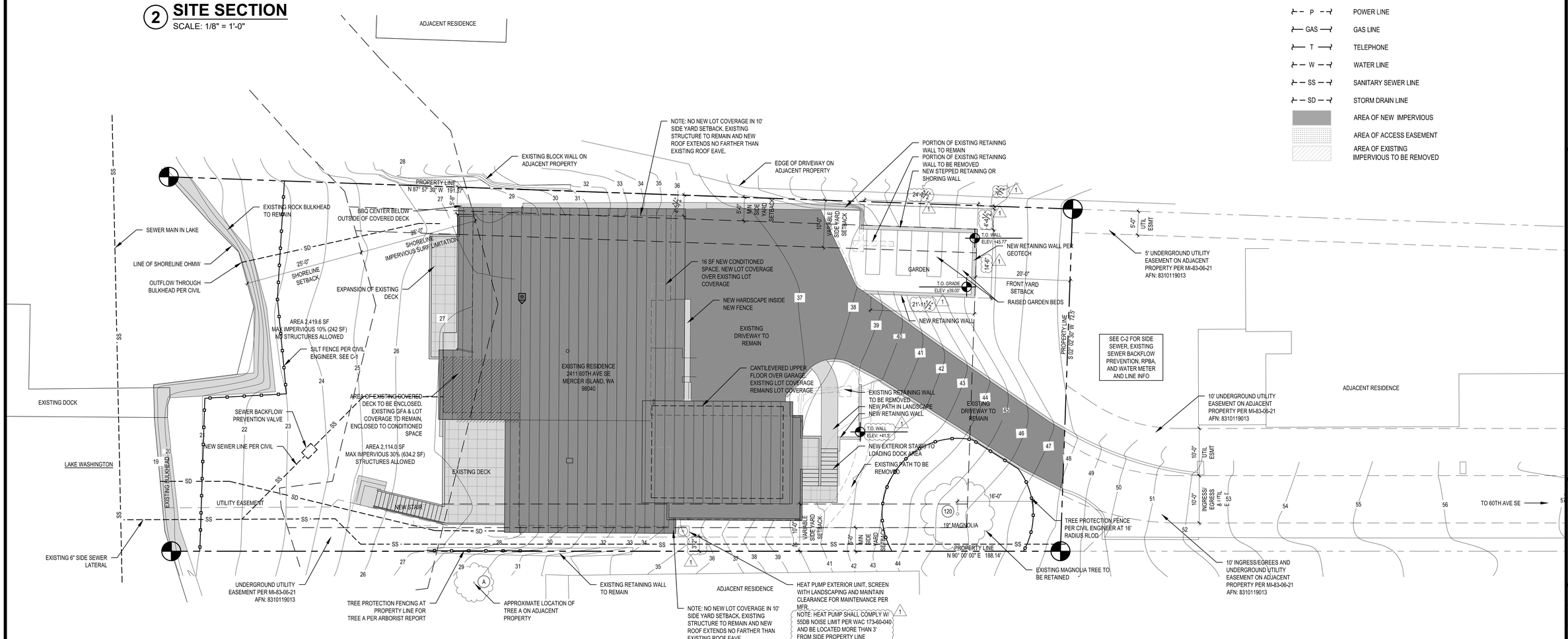
PLOT DATE: 12/13/2024
DRAWN BY: LG
CHECKED BY: BJS

SHEET
A1.0



2 SITE SECTION

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



1 SITE PLAN

SCALE: 1" = 10'

LEGEND:

- GRADE MAJOR CONTOUR
- GRADE MINOR CONTOUR
- SILT FENCE
- TREE PROTECTION FENCING
- P — POWER LINE
- GAS — GAS LINE
- T — TELEPHONE
- W — WATER LINE
- SS — SANITARY SEWER LINE
- SD — STORM DRAIN LINE
- AREA OF NEW IMPERVIOUS
- AREA OF ACCESS EASEMENT
- AREA OF EXISTING IMPERVIOUS TO BE REMOVED

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SITE PLAN

REVISIONS:
1 PERMIT CORRECTIONS 12/12/2024

PLOT DATE: 12/13/2024
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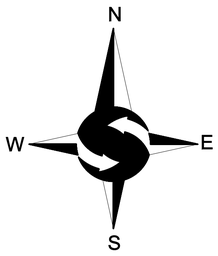
SHEET A1.1

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

PERMIT SUBMITTAL 6/25/24



GRAPHIC SCALE
5 0 5 10 20
1 INCH = 10 FT.

LEGEND

- FOUND MONUMENT IN CASE
- FOUND REBAR AS DESCRIBED
- SET 5/8" X 24" IRON ROD W/1" YELLOW PLASTIC CAP
- POWER METER
- GAS METER
- HVAC UNIT
- UTILITY POLE
- YARD DRAIN
- SANITARY SEWER MANHOLE
- WATER VALVE
- FIRE HYDRANT
- WATER METER
- SS — APPROXIMATE LOCATION SANITARY SEWER LINE
- G — APPROXIMATE LOCATION UNDERGROUND GAS LINE
- W — APPROXIMATE LOCATION UNDERGROUND WATER LINE
- UGE — APPROXIMATE LOCATION UNDERGROUND POWER LINE
- UGT — APPROXIMATE LOCATION UNDERGROUND TELEPHONE LINE
- OHU — OVERHEAD UTILITIES
- X — CHAINLINK FENCE
- WOOD FENCE
- WIRE FENCE
- TELEPHONE MANHOLE
- MAILBOX
- CONCRETE WALL
- ROCKERY
- ASPHALT SURFACE
- CONCRETE SURFACE
- GRAVEL SURFACE
- BRICK SURFACE
- DS DECIDUOUS

LEGAL DESCRIPTION

LOT A OF MERCER ISLAND SHORT PLAT NO. MI-83-06-21, ACCORDING TO THE SHORT PLAT THEREOF RECORDED OCTOBER 11, 1983 UNDER RECORDING NO. 8310119013, IN KING COUNTY, WASHINGTON.
TOGETHER WITH SECOND CLASS SHORELANDS ADJOINING AND ABUTTING THEREON.
AND TOGETHER WITH AN EASEMENT FOR INGRESS, EGRESS & UTILITIES AS DELINEATED ON SAID SHORT PLAT.

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

BASIS OF BEARINGS

A BEARING OF S0°07'00"W FOR THE CENTERLINE OF 60TH AVENUE SE BASED ON FOUND MONUMENTS.

PROJECT INFORMATION

PROPERTY OWNER:	JODY & STEPHANIE BIGGS 2411 60TH AVENUE SE MERCER ISLAND, WA 98040
TAX PARCEL NUMBER:	409950-0021
PROJECT ADDRESS:	2411 60TH AVENUE SE MERCER ISLAND, WA 98040
ZONING:	R-8.4
JURISDICTION:	CITY OF MERCER ISLAND
PARCEL ACREAGE:	13,932 S.F. (0.320 ACRES) AS SURVEYED ABOVE OHWM

GENERAL NOTES

1. THIS SURVEY WAS COMPLETED WITHOUT BENEFIT OF A CURRENT TITLE REPORT. EASEMENTS AND OTHER ENCUMBRANCES MAY EXIST ON THIS PROPERTY THAT ARE NOT SHOWN HEREON.

2. INSTRUMENTATION FOR THIS SURVEY WAS A 3-SECOND SPECTRAPRECISION FOCUS 35 TOTAL STATION AND AN EMLID REACH RS2 GPS RECEIVER. PROCEDURES USED IN THIS SURVEY MEET OR EXCEED STANDARDS SET BY WAC 332-130-090.

3. THE INFORMATION ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE IN JUNE 2022 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.

4. UTILITIES SHOWN ON THIS SURVEY ARE BASED UPON ABOVE GROUND OBSERVATIONS AND AS-BUILT PLANS WHERE AVAILABLE. ACTUAL LOCATIONS OF UNDERGROUND UTILITIES MAY VARY AND UTILITIES NOT SHOWN ON THIS SURVEY MAY EXIST ON THIS SITE.

5. ALL MONUMENTS WERE LOCATED DURING THIS SURVEY UNLESS OTHERWISE NOTED.

VERTICAL DATUM & CONTOUR INTERVAL

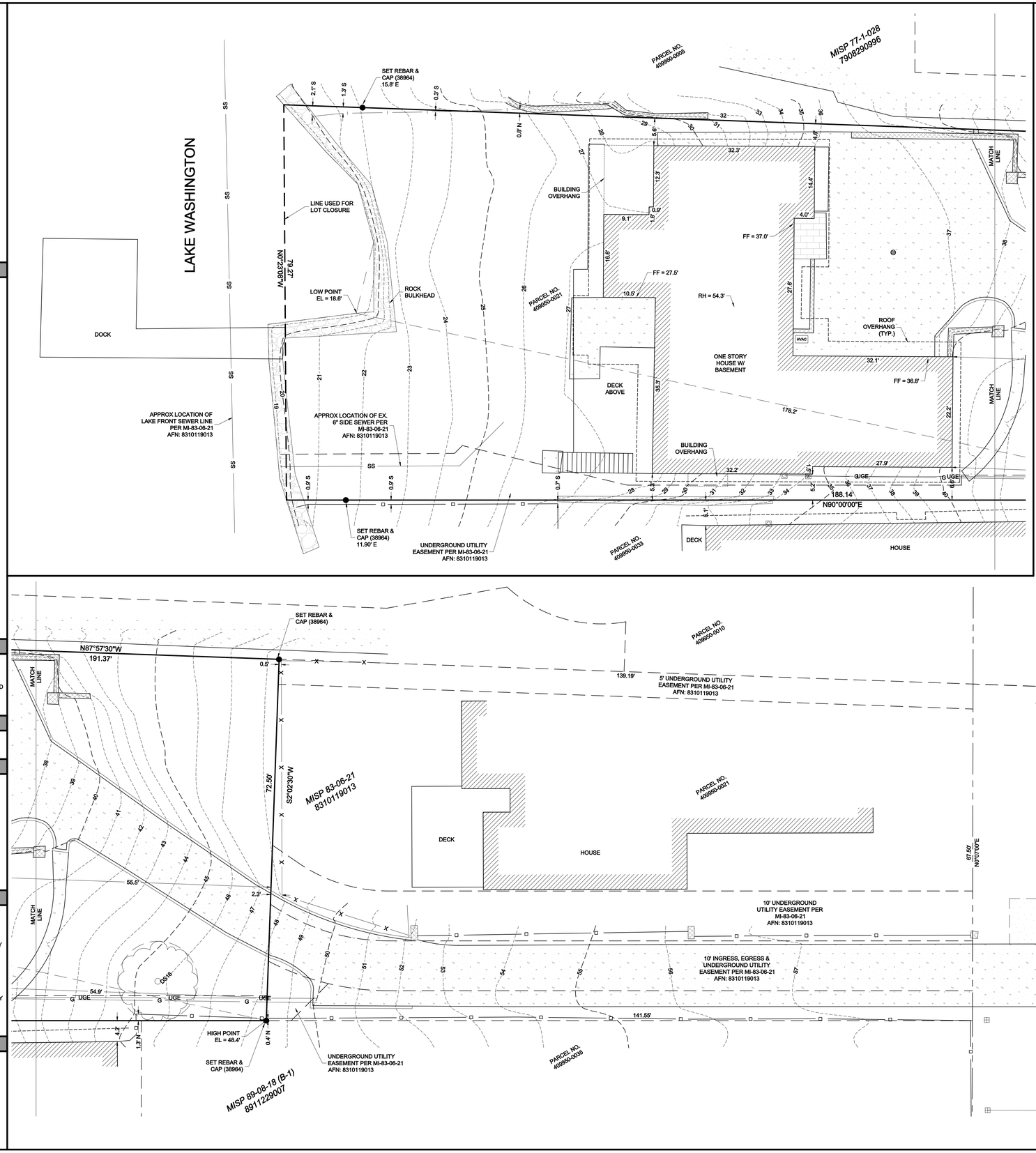
DATUM

ELEVATIONS SHOWN ON THIS DRAWING WERE DERIVED FROM INFORMATION PROVIDED BY WCCS SURVEY CONTROL DATABASE.

THE MARK IS A MONUMENT IN CASE AT THE INTERSECTION OF SE 24TH STREET AND 60TH AVENUE SE.

POINT ID NO. 1085;
ELEVATION: 56.956 FEET (17.36 METERS) NAVD 88

1.0' CONTOUR INTERVAL - THE EXPECTED VERTICAL ACCURACY IS EQUAL TO 1/2 THE CONTOUR INTERVAL OR PLUS / MINUS 0.5' FOR THIS PROJECT.



NW 1/4, NE 1/4, SEC 11, TWP 24N, RNG 4E, W.M.
NE 1/4, NE 1/4, SEC 11, TWP 24N, RNG 4E, W.M.

Site Surveying, Inc.
21923 NE 11th Street Sammamish, WA 98074
Phone: 425.298.4412
www.sitesurveymapping.com

NORTHWEST LAND SURVEYING WOLDENDORP WASHINGTON N. SWOHL PROFESSIONAL 38964 REGISTERED

DATE	REVISION	DRN

TOPOGRAPHIC SURVEY

JODY & STEPHANIE BIGGS
2411 60TH AVENUE SE
MERCER ISLAND, WA 98040

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PROJECT NO. 22-229

DRAWN BY: MTS
CHECKED BY: TNW
DATE: 6/17/2022

SHEET 1 OF 1

NW 1/4, NE 1/4, SEC 11, TWP 24N, RNG 4E, W.M.

BASIS OF BEARINGS

A BEARING OF S0°07'00"W FOR THE CENTERLINE OF 60TH AVENUE SE BASED ON FOUND MONUMENTS.

LEGAL DESCRIPTION

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

VERTICAL DATUM

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POINT ID NO. 1085;
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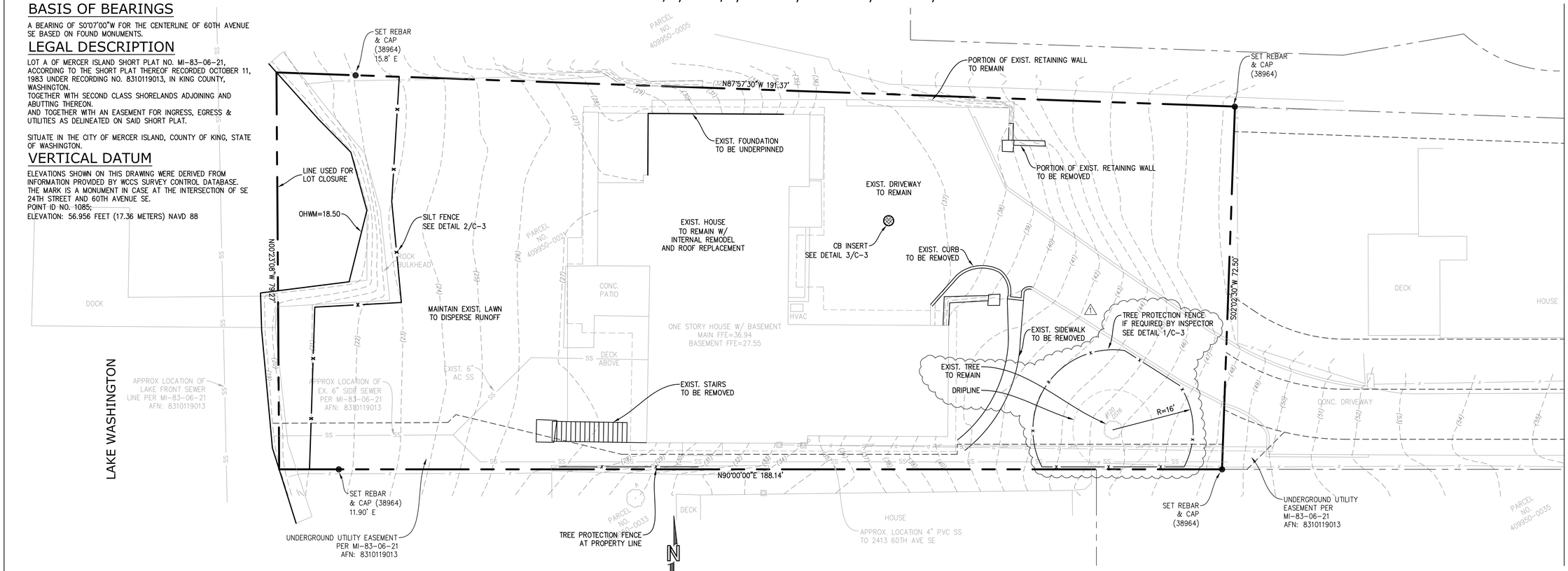

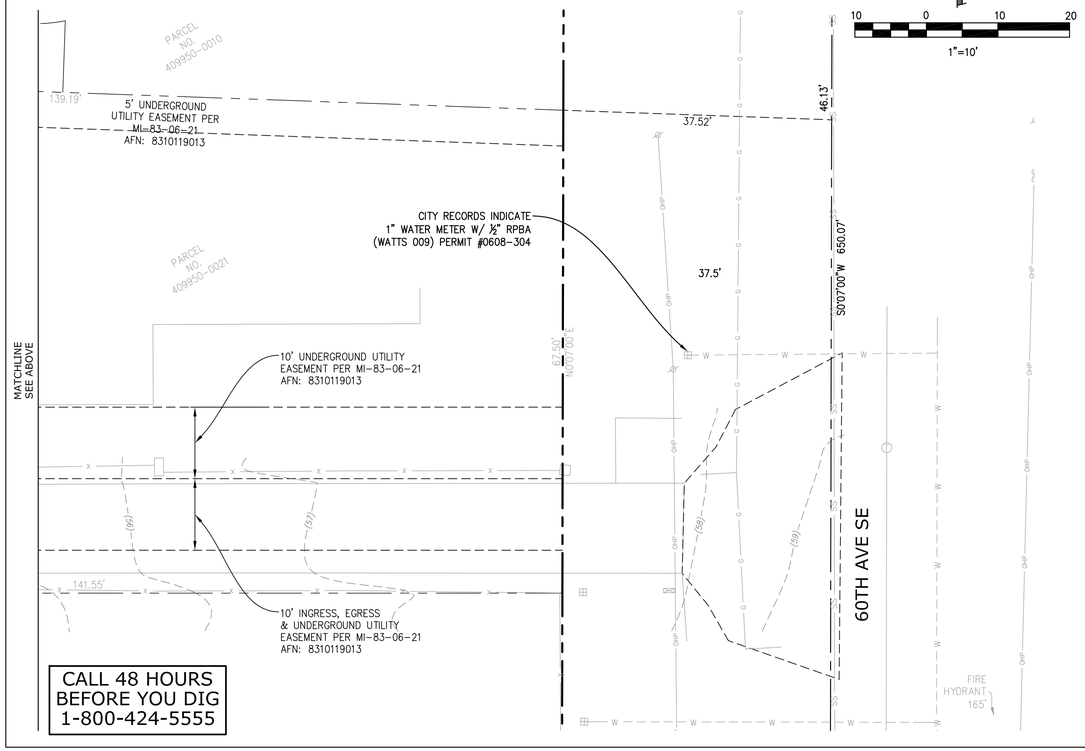

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EROSION AND SEDIMENT CONTROL NOTES

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 DDES INSPECTOR. THE DDES 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.

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

NICHOLAS BOSSOFF — STATE OF WASHINGTON — 29631 — REGISTERED PROFESSIONAL ENGINEER
EXPIRES 7/2/25

NO.	DATE	REVISION
1	06/19/24	PERMIT SUBMITTAL
2	10/29/24	CITY COMMENTS

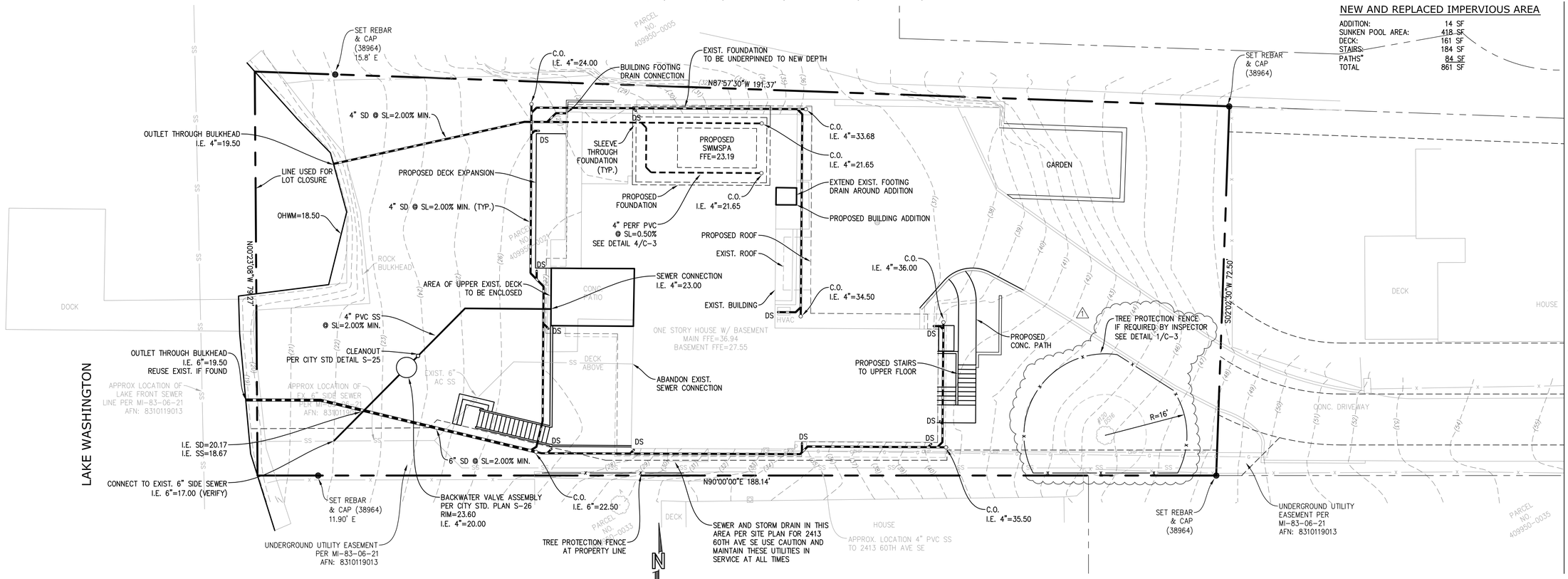
N. BOSSOFF, P.E.
PROJECT MANAGER: NB
DESIGNED: TKB
DRAWN: SARC-2401
JOB NUMBER: SARC-2401pln.dwg
FILE NAME:

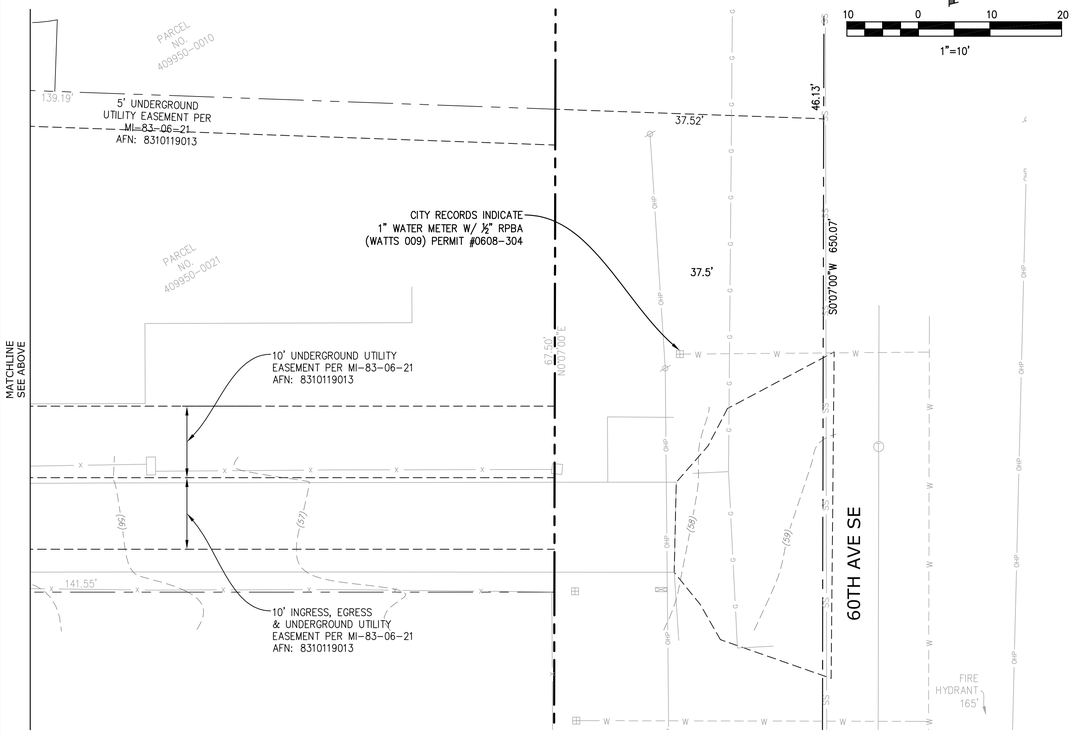
BIGGS RESIDENCE
2411 60TH AVENUE SE
MERCER ISLAND WASHINGTON

TITLE: T.E.S.C. PLAN

SHEET: C-1

NW 1/4, NE 1/4, SEC 11, TWP 24N, RNG 4E, W.M.





POST-CONSTRUCTION SOIL QUALITY AND DEPTH NOTES

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

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. GRANULAR BACKFILL SHALL BE PLACED AROUND AND ABOVE THE DRAIN TO A DEPTH OF 2/3 OF THE WALL HEIGHT. FILTER FABRIC (MIRAFI 140N OR EQUIVALENT) SHALL BE PLACED BETWEEN THE GRANULAR BACKFILL AND NATIVE SOILS. 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.
7. EXISTING SIDE SEWER DEPTH AND LOCATION SHALL BE DETERMINED PRIOR TO ANY CONSTRUCTION, INCLUDING BUILDING CONSTRUCTION. REPLACEMENT OF ALL OR PART OF THE SIDE SEWER MAY BE NECESSARY TO FACILITATE GRAVITY FLOW FROM THE MAIN FLOOR FIXTURES. A SEWER EJECTOR PUMP WILL BE NECESSARY TO SERVICE THE BASEMENT LEVEL FIXTURES.
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

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NICHOLAS BOSSOFF STATE OF WASHINGTON 29631 REGISTERED PROFESSIONAL ENGINEER
EXPIRES 7/2/25

NO.	DATE	REVISION
1	06/19/24	PERMIT SUBMITTAL
2	10/29/24	CITY COMMENTS

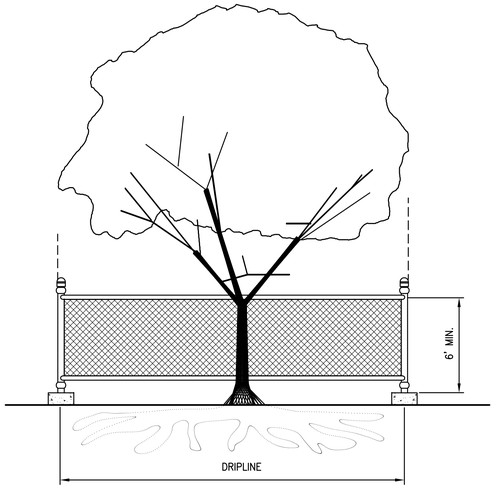
N. BOSSOFF, P.E.
PROJECT MANAGER: NB
DESIGNED: TKB
DRAWN: SARC-2401
JOB NUMBER: SARC-2401pln.dwg
FILE NAME:

BIGGS RESIDENCE
2411 60TH AVENUE SE
MERCER ISLAND WASHINGTON

TITLE: DRAINAGE PLAN

SHEET: C-2

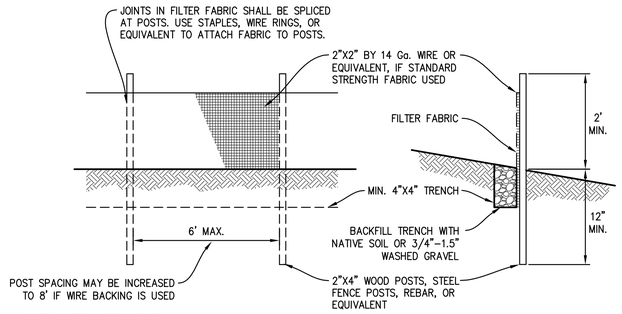
NW 1/4, NE 1/4, SEC 11, TWP 24N, RNG 4E, W.M.



TREE PROTECTION DURING CONSTRUCTION

1. SIX FOOT–HIGH TEMPORARY CHAINLINK FENCE SHALL BE PLACED AT DRIPLINE OF TREE TO BE SAVED. FENCE SHALL COMPLETELY ENCIRCLE TREE(S). INSTALL FENCE POSTS USING PIER BLOCKS ONLY. AVOID DRIVING POSTS OR STAKES INTO MAJOR ROOTS.
2. TREATMENT OF ROOTS EXPOSED DURING CONSTRUCTION: FOR ROOTS OVER 1" IN DIAMETER DAMAGED DURING CONSTRUCTION; MAKE A CLEAN, STRAIGHT CUT TO REMOVE DAMAGED PORTION OF ROOT. ALL EXPOSED ROOTS SHALL BE TEMPORARY COVERED WITH DAMP BURLAP TO PREVENT DRYING, AND COVERED WITH SOILS AS SOON AS POSSIBLE.
3. WORK WITHIN PROTECTION FENCE SHALL BE DONE MANUALLY. NO STOCKPILING OF MATERIALS, VEHICULAR TRAFFIC, OR STORAGE OR EQUIPMENT OR MACHINERY SHALL BE ALLOWED WITHIN THE LIMIT OF THE FENCING.

TREE PROTECTION — SCALE: NTS — 1

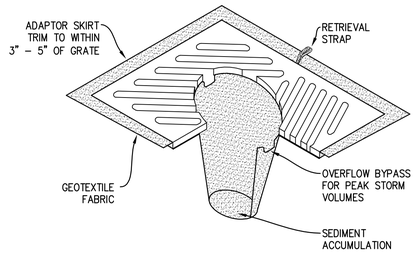


NOTE: FILTER FABRIC FENCE SHALL BE INSTALLED ALONG CONTOUR WHENEVER POSSIBLE.

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.

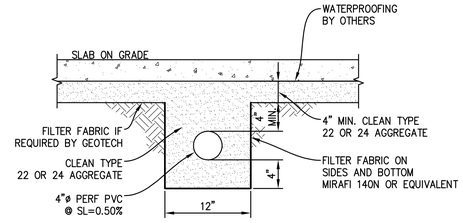
FILTER FABRIC FENCE — SCALE : NTS — 2



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 — SCALE: NTS — 3



SUBSOIL PIPE - INSIDE BUILDING — SCALE: NTS — 4

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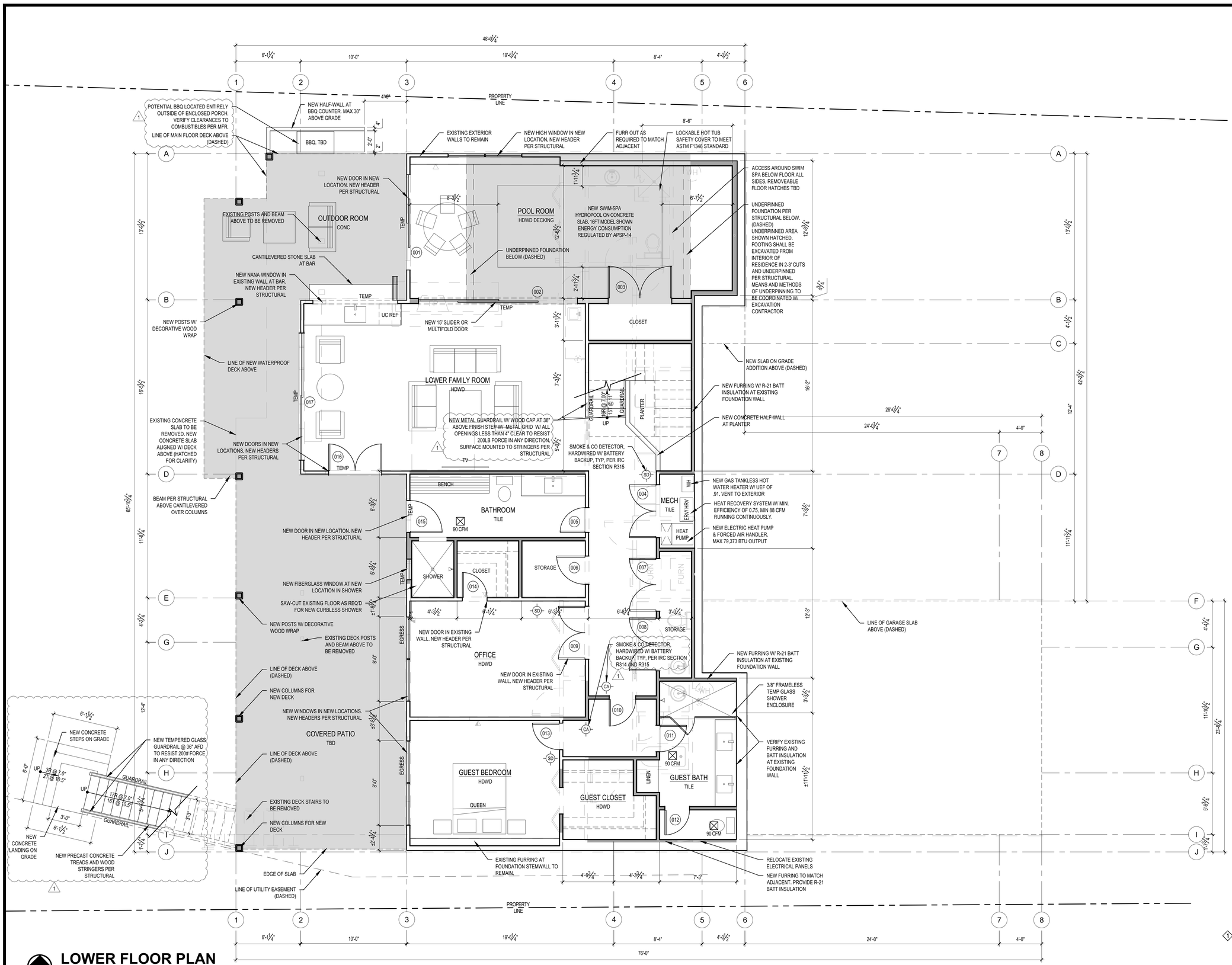
PROJECT MANAGER: N. BOSSOFF, P.E.
DESIGNED: NB
DRAWN: TKB
JOB NUMBER: SARC–2401
FILE NAME: SARC–2401pln.dwg

BIGGS RESIDENCE
2411 60TH AVENUE SE
MERCER ISLAND WASHINGTON

TITLE: DETAILS

SHEET: C-3



SMOKE DETECTOR PER IRC SECTION R314
SMOKE & CO DETECTOR PER IRC SECTIONS R314 AND R315
HEAT ALARM/ DETECTOR INTERCONNECTED W/ SMOKE ALARMS PER IRC SECTION R314.2.3

PLAN NOTES:

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- EXISTING CEILING, WALL, OR FLOOR CAVITIES EXPOSED DURING CONSTRUCTION SHALL BE FILLED WITH INSULATION WHILE MAINTAINING CODE REQUIRED VENTILATION CLEARANCES. 2X4 FRAMED WALLS SHALL BE INSULATED TO A MINIMUM OF R-15 AND 2X6 FRAMED WALLS SHALL BE INSULATED TO A MINIMUM OF R-21.
- ALL ROOMS WITHOUT GLAZING SHALL HAVE ARTIFICIAL LIGHTING ACROSS THE AREA OF THE ROOM PRODUCING AN AVERAGE 6 FOOTCANDLES AT 30" ABOVE THE FLOOR
- AIRFLOW FOR WHOLE HOUSE EXHAUST FAN SHALL BE PROVIDED BY UNDERCUTTING INTERIOR DOORS BY 1/2" TYP.

WALL PARTITION TYPES:

N.T.S. (SEE STRUCTURAL SHEETS FOR SHEARWALLS.

TYPICAL EXTERIOR WALL
EXTERIOR WALL FINISH O/ CONTINUOUS R-10 RIGID INSULATION O/ WRB OR (2) LAYERS 60# BLDG. PAPER O/ 1/2" PLYWOOD SHEATHING O/ 2X6 (OR 2x4) WOOD STUDS AT 16" O.C. PER STRUCTURAL W/ R-21 BATT INSULATION (OR R-13 FOR 2X4) EXCEPT AROUND GARAGE W/ 5/8" GYPSUM WALLBOARD AT INTERIOR.

TYPICAL INTERIOR PARTITION
U.N.O. ALL INTERIOR WALL SHALL BE 2x4 WOOD STUDS @ 16" O.C. W/ 5/8" GYPSUM WALLBOARD EACH SIDE.

TYPICAL FURRED WALL
2" AIRSPACE, 2x4 P.T. WOOD STUDS @ 16" O.C. w/ 1/2" GYPSUM WALLBOARD AT INTERIOR. PROVIDE R-21 BATT INSULATION.

1HR. FIRE RATED WALL
5/8" THK GWB. TYPE 'X' O/ 2X6 WD STUDS @ 16" O.C. PANELS NAILED 7" O.C.-1 7/8" CEM CTD NAILS-JOINTS EXP OR FIN - PERIM CAULKED- UL DES U305 & U314- JOINTS FIN

LOWER FLOOR PLAN

SCALE: 1/4" = 1'

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

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MERCER ISLAND, WA 98040

LOWER FLOOR PLAN

REVISIONS:
1 PERMIT CORRECTIONS 12/12/2024

PLOT DATE: 12/13/2024
DRAWN BY: JM
CHECKED BY: BJS

SHEET
A2.0

MAIN FLOOR PLAN

N

SCALE: 1/4" = 1'

LEGEND:

- EXISTING WALL TO REMAIN
- NEW WALL
- EXISTING WALL TO BE REMOVED
- EXISTING ITEM TO BE REMOVED
- OVERHEAD LINEWORK
- SD — SMOKE DETECTOR PER IRC SECTION R314
- CA — SMOKE & CO DETECTOR PER IRC SECTIONS R314 AND R315
- 1 HD — HEAT ALARM/ DETECTOR INTERCONNECTED W/ SMOKE ALARMS PER IRC SECTION R314.2.3

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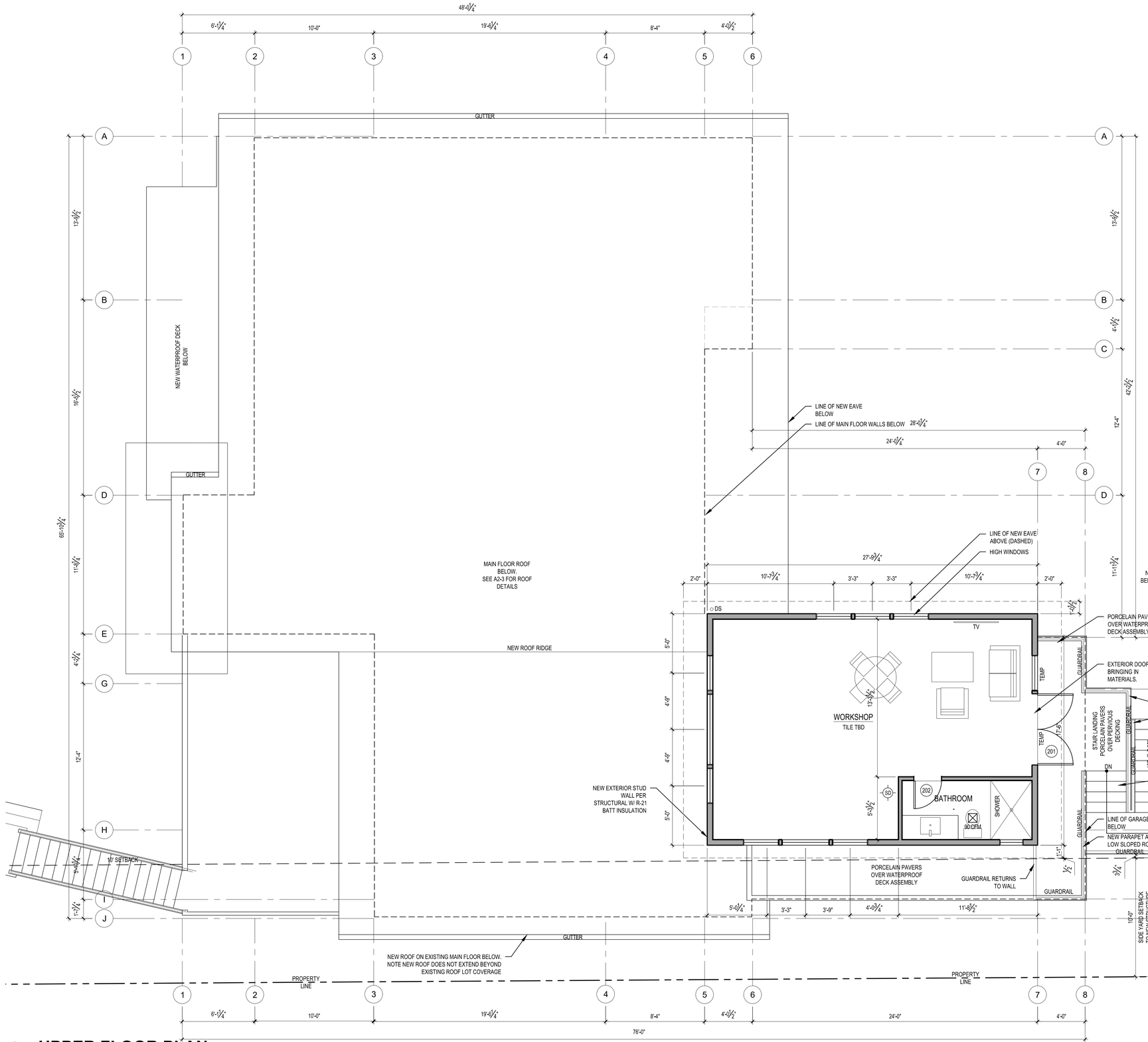
MERCER ISLAND, WA 98040

REVISIONS:
1 PERMIT CORRECTIONS 12/12/2024

PLOT DATE: 12/13/2024
DRAWN BY: JM
CHECKED BY: BJS

SHEET
A2.1

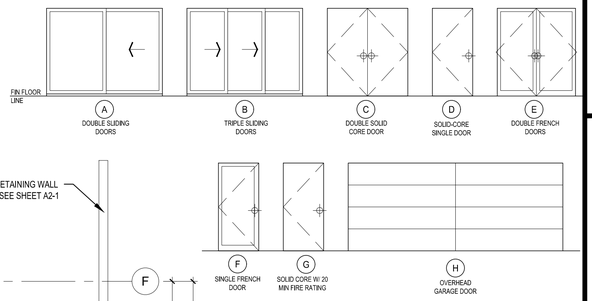


UPPER FLOOR PLAN

SCALE: 1/4" = 1'

DOOR SCHEDULE

DOOR NO.	LOCATION	SIZE WIDTH	SIZE HT	DOOR TYPE	TEMP. GLASS	DOOR FIN.	DOOR THK.	U-VAL. (MIN.)	OPENING	REMARKS
LOWER FLOOR										
001	POOL ROOM	9'-0"	7'-0"	A	Y	-	1-3/4"	.30	NEW	
002	LOWER FAMILY ROOM	15'-0"	7'-0"	B	Y	-	1-3/4"	-	NEW	MULTI-SLIDE OR MULTIFOLD
003	POOL CLOSET	PR 3'-0"	7'-0"	C	-	-	1-3/4"	-	NEW	
004	MECHANICAL	PR 2'-6"	7'-0"	C	-	-	1-3/4"	-	MODIFIED	SOLID CORE DOOR W/ SOUND GASKET
005	BEDROOM 2 CLOSET	2'-4"	7'-0"	D	-	-	1-3/4"	-	NEW	
006	STORAGE	2'-8"	7'-0"	D	-	-	1-3/4"	-	NEW	
007	STORAGE	PR 2'-6"	7'-0"	C	-	-	1-3/4"	-	NEW	
008	STORAGE	PR 2'-6"	7'-0"	C	-	-	1-3/4"	-	NEW	
009	OFFICE	PR 2'-6"	7'-0"	C	-	-	1-3/4"	-	NEW	
010	GUEST VESTIBULE	2'-6"	7'-0"	D	-	-	1-3/4"		NEW	
011	GUEST BATH	2'-6"	7'-0"	D	-	-	1-3/4"	-	NEW	
012	GUEST BATH WC	2'-4"	7'-0"	D	-	-	1-3/4"		NEW	
013	GUEST BEDROOM	2'-6"	7'-0"	D	-	-	1-3/4"		NEW	
014	OFFICE CLOSET	2'-4"	7'-0"	D	-	-	1-3/4"	-	NEW	
015	BATHROOM	3'-0"	7'-0"	F	Y	-	1-3/4"	.30	NEW	
016	LOWER FAMILY ROOM	PR 2'-6"	7'-0"	E	Y	-	1-3/4"	.30	NEW	
017	LOWER FAMILY ROOM	17'-0"	7'-0"	A	Y	-	1-3/4"	.30	NEW	
MAIN FLOOR										
101	PRIMARY BEDROOM	10'-0"	8'-0"	A	-	-	1-3/4"	.30	MODIFIED	
102	PRIMARY BEDROOM	3'-0"	8'-0"	D	-	-	1-3/4"	-	NEW	MULTI-SLIDE
103	PRIMARY BATH	2'-8"	8'-0"	D	-	-	1-3/4"	-	NEW	
104	PRIMARY BATH WC	2'-4"	8'-0"	D	-	-	1-3/4"	-	NEW	
105	ENTRY	PR 3'-0"	8'-0"	E	-	-	1-3/4"	.30	NEW	
106	PANTRY	2'-6"	8'-0"	D	-	-	1-3/4"	-	NEW	
107	MUDROOM	3'-0"	8'-0"	D	-	-	1-3/4"	-	NEW	
108	GARAGE	3'-0"	8'-0"	G	-	-	1-3/4"	.30	NEW	20 MIN DOOR W/ SMOKE GSKT & CLOSER
109	GARAGE OVERHEAD	18'-0"	8'-0"	H	-	-	1-3/4"	-	MODIFIED	OVERHEAD DOOR
110	POWDER	2'-4"	8'-0"	D	-		1-3/4"	-	NEW	
111	JR SUITE CLOSET	2'-6"	8'-0"	D	-	-	1-3/4"	-	NEW	
112	JR SUITE BATH	2'-6"	8'-0"	D	-	-	1-3/4"	-	NEW	
113	JR SUITE	10'-0"	8'-0"	A		-	1-3/4"	.30	NEW	
114	JR SUITE	2'-6"	8'-0"	D	-		1-3/4"	-	NEW	
115	DINING	12'-0"	8'-0"	A	-		1-3/4"	.30	NEW	
116	DINING	2'-6"	8'-0"	F	-	-	1-3/4"	.30	NEW	
117	FAMILY ROOM	8'-0"	8'-0"	A	Y	-	1-3/4"	.30	NEW	
118	LAUNDRY	2'-8"	8'-0"	D	-	-	1-3/4"	-	NEW	
UPPER FLOOR										
201	WORKSHOP	PR 3'-0"	7'-0"	E	Y	-	1-3/4"	.30	NEW	
202	WORKSHOP BATH	16'-0"	7'-0"	D	-	-	1-3/4"	-	NEW	
							1-3/4"			



PLAN NOTES:

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WALL PARTITION TYPES:

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UPPER FLOOR PLAN

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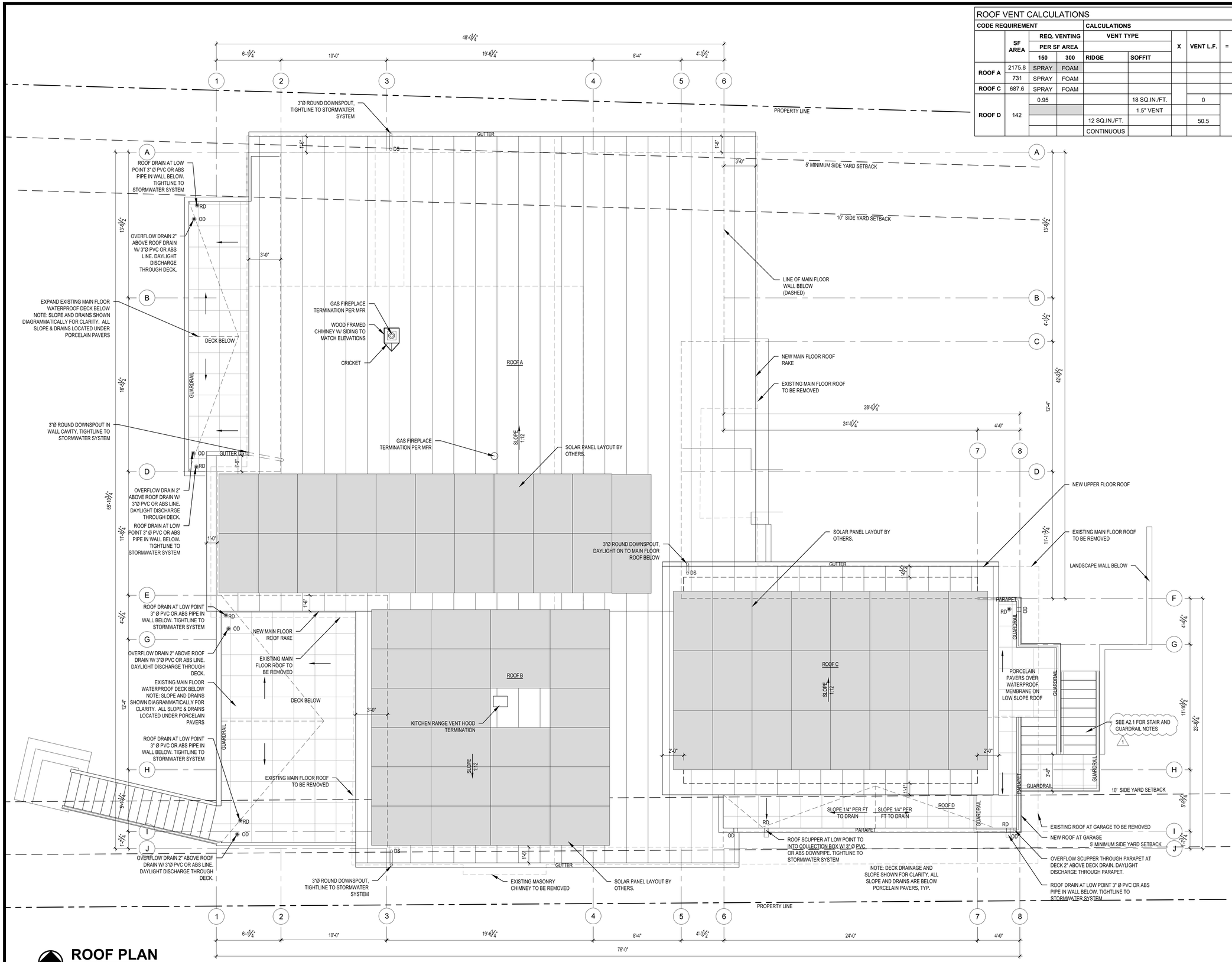
DRAWN BY: JM
CHECKED BY: BJS

SHEET
A2.2

ROOF VENT CALCULATIONS

CODE REQUIREMENT				CALCULATIONS								ACTUAL	
	SF AREA	REQ. VENTING PER SF AREA		VENT TYPE		X	VENT L.F.	=	TOTAL VENT AREA SQ. IN.	X	SF CNV. 1/144	X	80% EFF FACTOR	TOTAL
		150	300	RIDGE	SOFFIT									
ROOF A	2175.8	SPRAY	FOAM											
	731	SPRAY	FOAM											
ROOF C	687.6	SPRAY	FOAM											
ROOF D	142	0.95			18 SQ.IN./FT.		0		0		0.00		0.00	3.37
					1.5" VENT									
				12 SQ.IN./FT.			50.5		606		4.21		3.37	
				CONTINUOUS										



ROOF PLAN

SCALE: 1/4" = 1'

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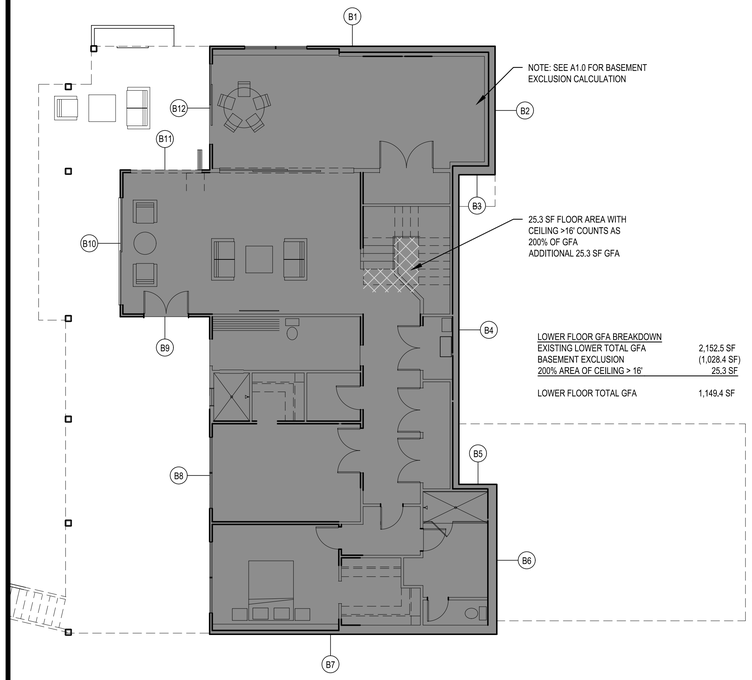
MERCER ISLAND, WA 98040

REVISIONS:
1 PERMIT CORRECTIONS 12/12/2024

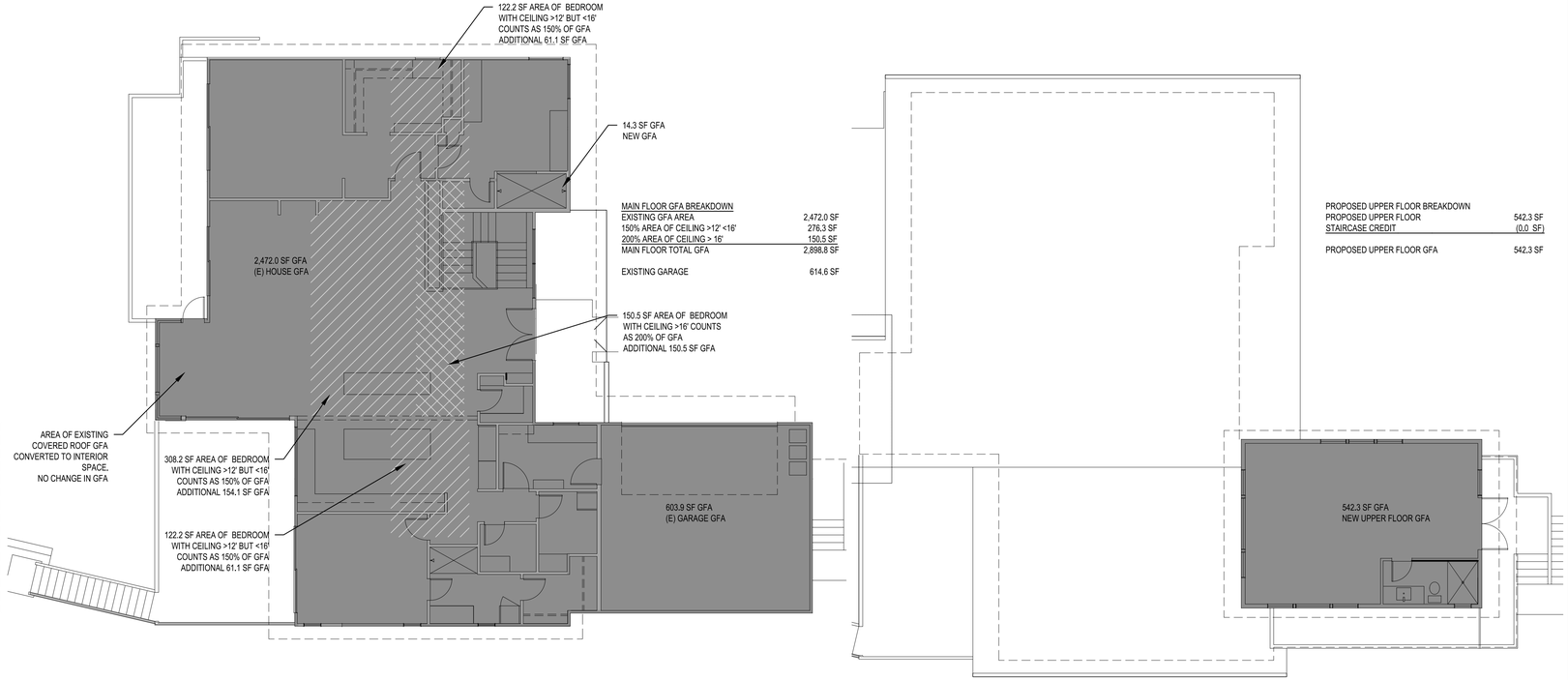
PLOT DATE: 12/13/2024
DRAWN BY: LG
CHECKED BY: BJS

SHEET
A2.3



1 LOWER FLOOR GFA DIAGRAM- PROPOSED

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



2 MAIN FLOOR GFA DIAGRAM - EXISTING CONDITION

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

3 UPPER FLOOR GFA DIAGRAM - PROPOSED

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

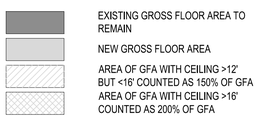
GROSS FLOOR AREA (GFA)

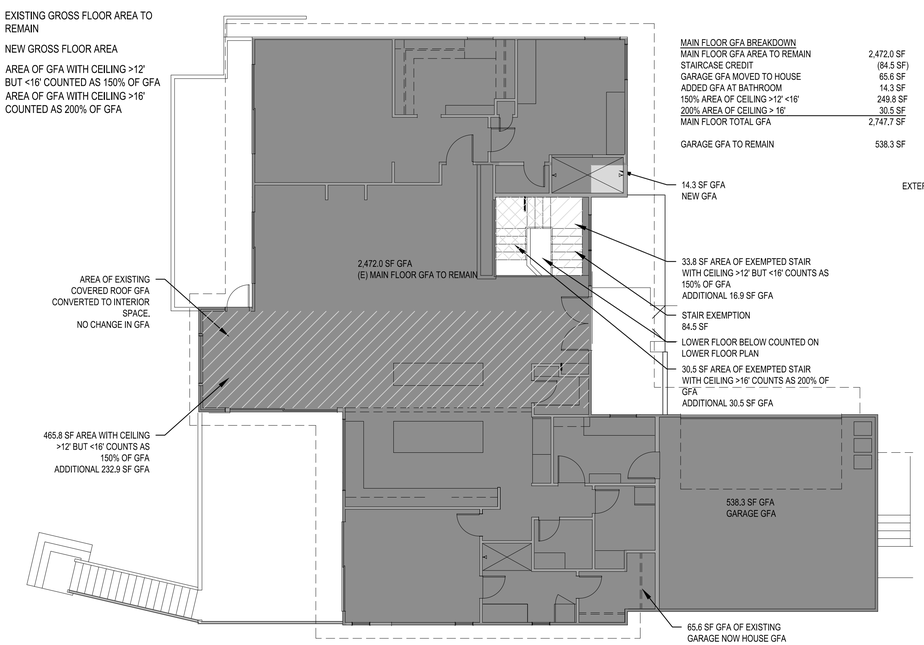
	EXISTING FLOOR AREA	ADDITIONAL FLOOR AREA	TOTAL
LOWER FLOOR	2,152.5 SF	0.0 SF	2,152.5 SF
BASEMENT EXCLUSION	-1,028.4 SF		-1,028.4 SF
MAIN FLOOR	2,387.5 SF	79.9 SF	2,467.4 SF
UPPER FLOOR SHOP	0 SF	542.3 SF	542.3 SF
12'-16' CEILING	276.3 SF	- 26.5 SF	249.8 SF
16'+ CEILING	150.5 SF	-94.7 SF	55.8 SF
GARAGE	603.9 SF	- 65.6 SF	538.3 SF
GROSS FLOOR AREA	4,542.3 SF	435.4 SF	4,977.7 SF

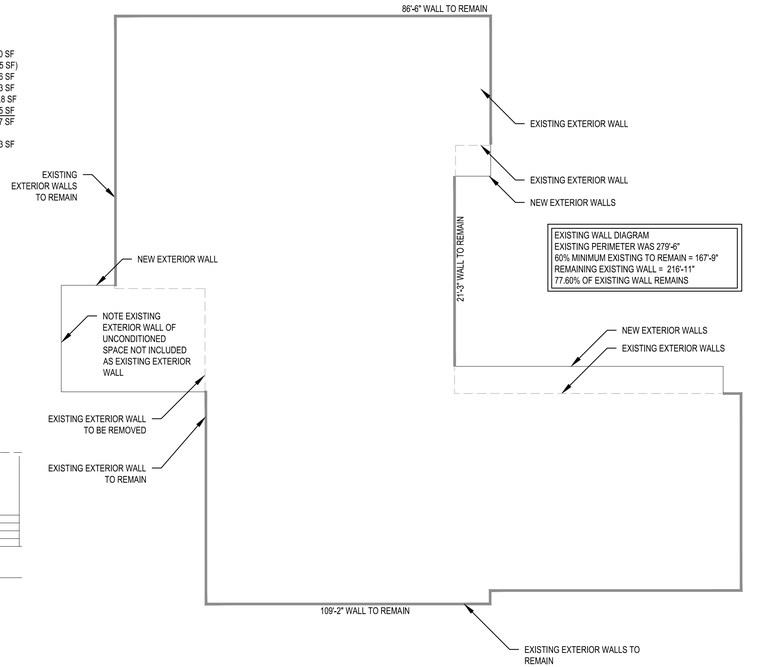
SEE A1.0 FOR BASEMENT EXCLUSION CALCULATION

NET LOT AREA	13,932 SF
ALLOWED MAX. % GFA COVERAGE	40.0 % OR 5000 SF
ALLOWED GROSS FLOOR AREA	5,000 SF
EXISTING GROSS FLOOR AREA	4,638.5 SF
EXISTING % GFA COVERAGE	33.3%
PROPOSED GROSS FLOOR AREA	4,977.7 SF
PROPOSED % GFA COVERAGE	35.7 %

GFA LEGEND:







5 MAIN FLOOR GFA DIAGRAM - PROPOSED

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

6 40% EXTERIOR WALL DIAGRAM

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

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

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GROSS FLOOR AREA DIAGRAMS AND 40% CALC

REVISIONS:

PLOT DATE: 6/25/2024
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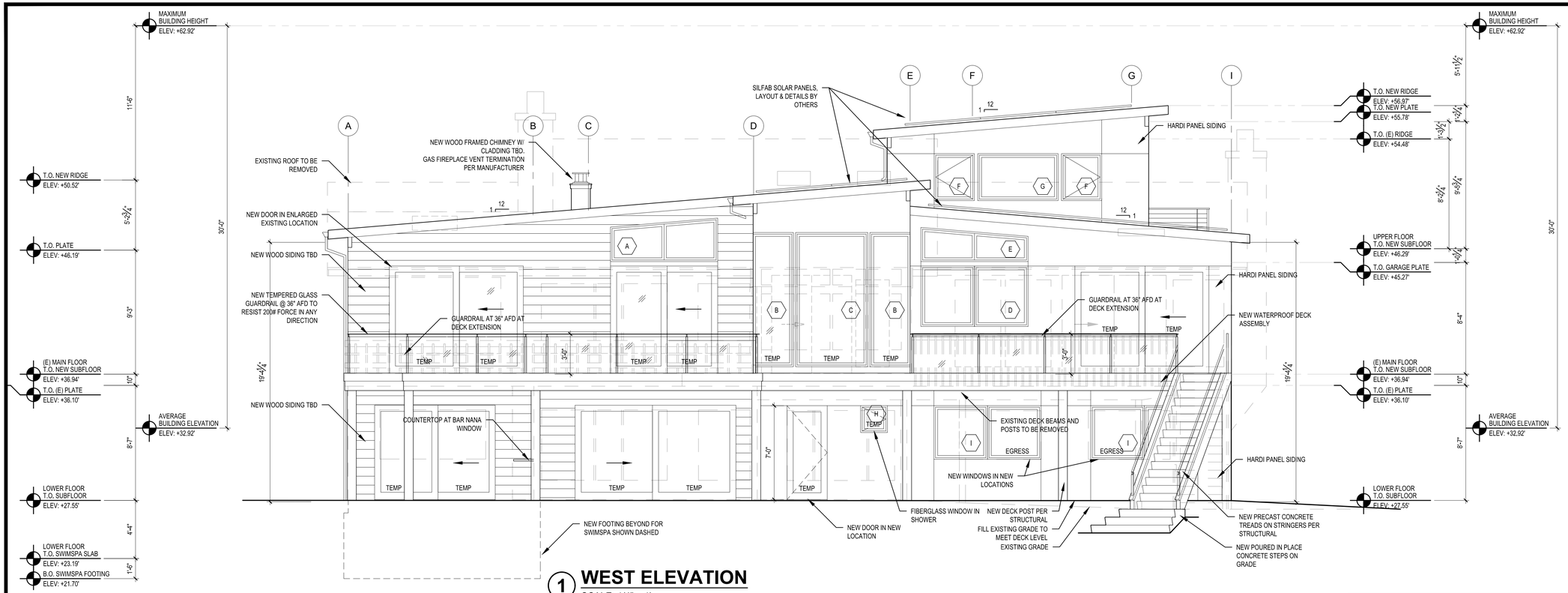
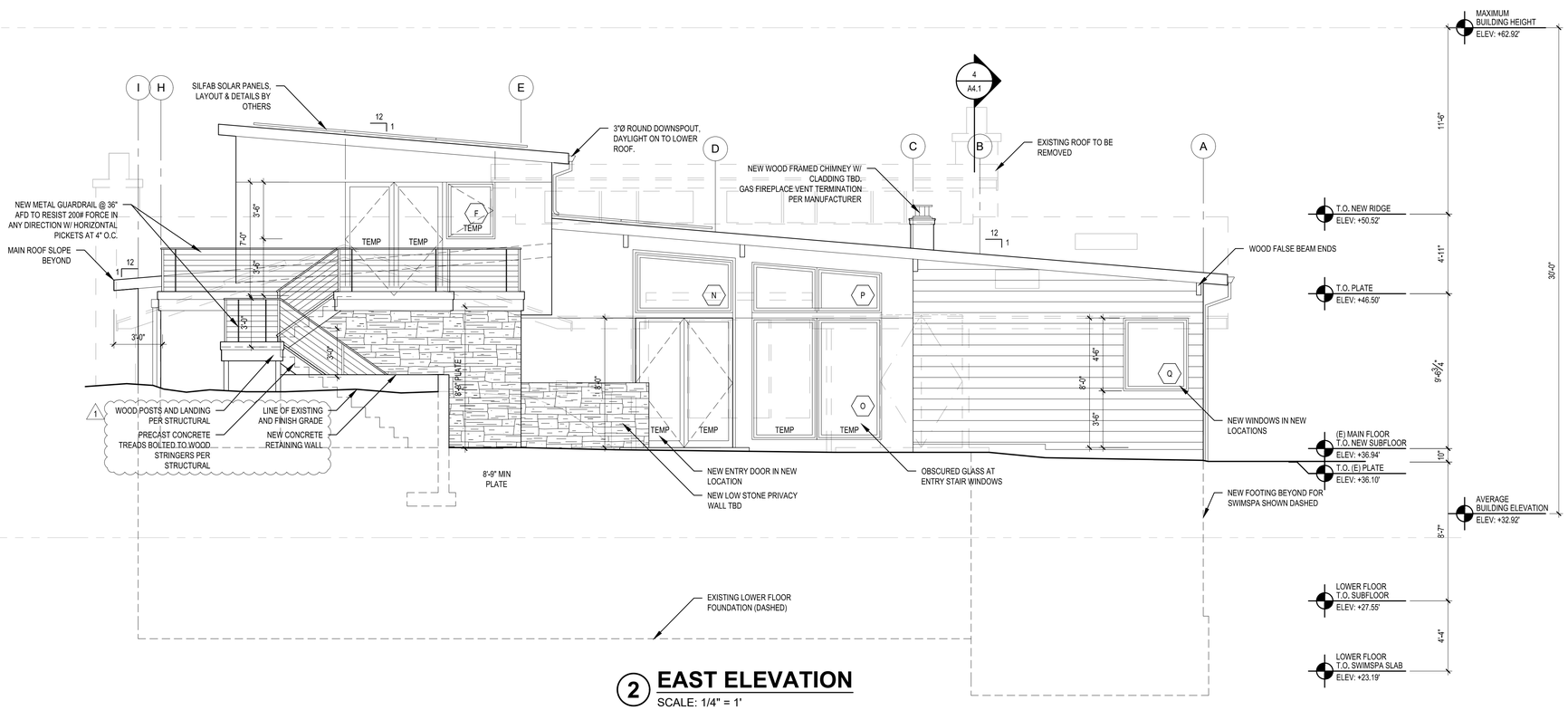
SHEET A2.4



1 WEST ELEVATION

SCALE: 1/4" = 1'



2 EAST ELEVATION

SCALE: 1/4" = 1'

WINDOW SCHEDULE

MARK	DESCRIPTION	R.O. SIZE WIDTH	R.O. SIZE HEIGHT	TEMP.	QTY.	U-VALUE (MIN.)	GLAZING	REMARKS & NOTES
A	FIXED TRANSOM	8' - 0"	3' - 3"	-	1	.30	LOW E / CLEAR	TRANSOM UNIT, MATCH DOOR 117
B	FIXED CORNER	3' - 0" EACH	10' - 0"	Y	2	.30	LOW E / CLEAR	
C	FIXED	5' - 4 1/2"	10' - 0"	Y	1	.30	LOW E / CLEAR	
D	FIXED ASSEMBLY	8' - 0"	4' - 6"	-	1	.30	LOW E / CLEAR	
E	FIXED TRANSOM	8' - 0"	2' - 6 1/2"	-	1	.30	LOW E / CLEAR	TRANSOM UNIT, MATCH WINDOW D
F	CASEMENT	3' - 0"	3' - 6"	-	5	.30	LOW E / CLEAR	
G	FIXED	6' - 0"	3' - 6"	-	1	.30	LOW E / CLEAR	
H	CASEMENT	2' - 0"	2' - 0"	Y	1	.30	LOW E / OBSCURED	FIBERGLASS WINDOW IN SHOWER
I	OPERABLE ASSEMBLY	8' - 0"	4' - 0"	-	2	.30	LOW E / CLEAR	EGRESS
J	CASEMENT	2' - 0"	4' - 0"	-	2	.30	LOW E / CLEAR	
K	CASEMENT	2' - 0"	3' - 0"	-	1	.30	LOW E / OBSCURED	
L	FIXED	4' - 0"	3' - 6"	-	1	.30	LOW E / CLEAR	(E) LOCATION
M	CASEMENT	2' - 0"	2' - 6"	Y	1	.30	LOW E / OBSCURED	FIBERGLASS WINDOW IN SHOWER
N	FIXED TRANSOM	6' - 0 "	3' - 8 1/2"	-	1	.30	LOW E / CLEAR	TRANSOM, MATCH DOOR 105, TRAPEZOIDAL
O	FIXED ASSEMBLY	8' - 0"	7' - 6"	-	1	.30	LOW E / OBSCURED	
P	FIXED TRANSOM	8' - 0"	3' - 1"	-	1	.30	LOW E / CLEAR	TRANSOM, MATCH WINDOW O, TRAPEZOIDAL
Q	FIXED	4' - 0"	4' - 6"	-	2	.30	LOW E / CLEAR	
R	FIXED	3' - 0"	4' - 0"	-	1	.30	LOW E / CLEAR	
S	FIXED ASSEMBLY	7' - 0"	2' - 6"	-	1	.30	LOW E / CLEAR	
T	NANA	8' - 0"	4' - 0"	Y	1	.30	LOW E / CLEAR	NANA OR SIM WINDOW W/ FLUSH COUNTERTOP
U	FIXED	3' - 0"	3' - 0"	-	3	.30	LOW E / CLEAR	

SCHEDULE NOTES:

1.) CONTRACTOR TO VERIFY ALL GLAZING SIZING, AND DOOR DIMENSIONS IN FIELD PRIOR TO ROUGH FRAMING & ORDERING OF GLAZING/WINDOW/DOOR MATERIALS. REVIEW SIZES AND ANY DISCREPANCIES W/ ARCHITECT.

2.) ALL GLAZING TO BE "LOW E", INSULATED GLASS UNLESS NOTED OTHERWISE.

3.) ALL OPERABLE WINDOWS TO HAVE SCREENS.

4.) GLAZING INDOORS AND/ OR WITHIN 24" OF A DOOR TO BE TEMPERED. SEE EXTERIOR ELEVATION FOR TEMP. GLASS LOCATION & EGRESS WINDOWS.

5.) 2015 WSEC & VIAQ RESIDENTIAL PRESCRIPTIVE OPTION 3 ADOPTED. GLAZING AREA INDICATED UNLIMITED. SEE ENERGY NOTE AT A1.0 SHEET FOR DETAILS.

6.) ALL SKYLIGHTS SHALL BE FULLY TEMPERED OVER LAMINATED GLASS

7.) ALL DOORS AND WINDOWS MARKED AS EXISTING SHALL REMAIN.

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

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BUILDING ELEVATIONS

REVISIONS:
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PLOT DATE: 12/13/2024
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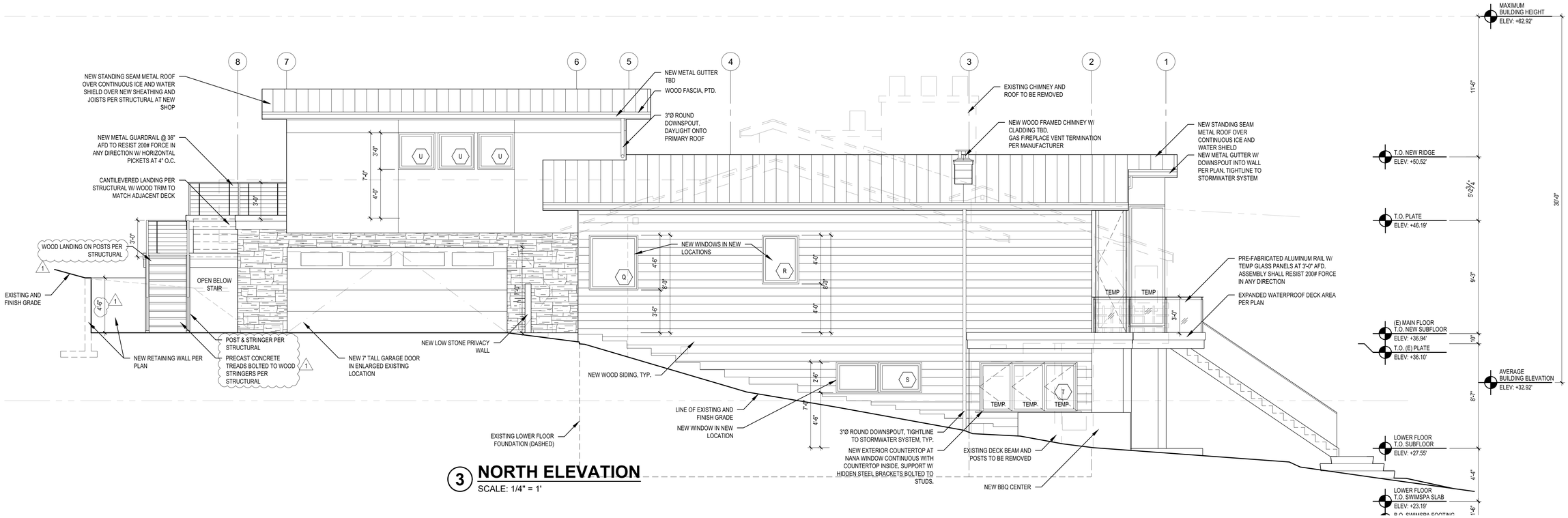
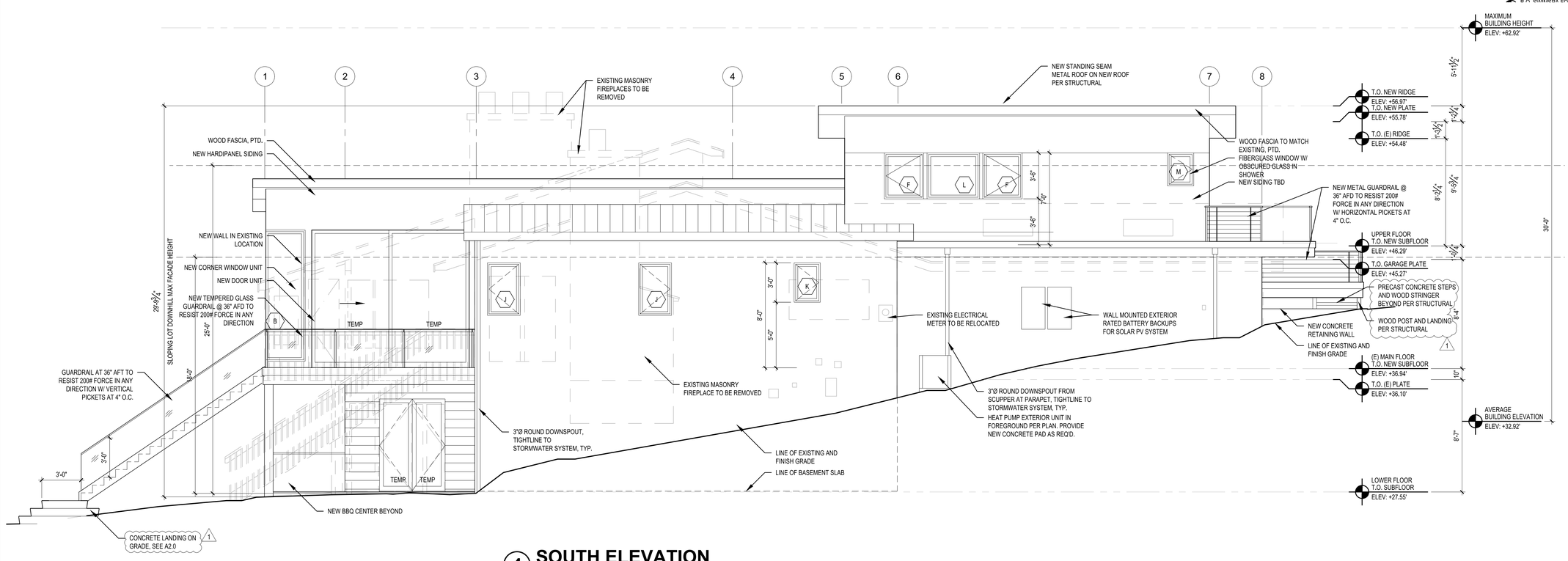
SHEET A3.0



3 NORTH ELEVATION

SCALE: 1/4" = 1'



4 SOUTH ELEVATION

SCALE: 1/4" = 1'

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

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BUILDING ELEVATIONS

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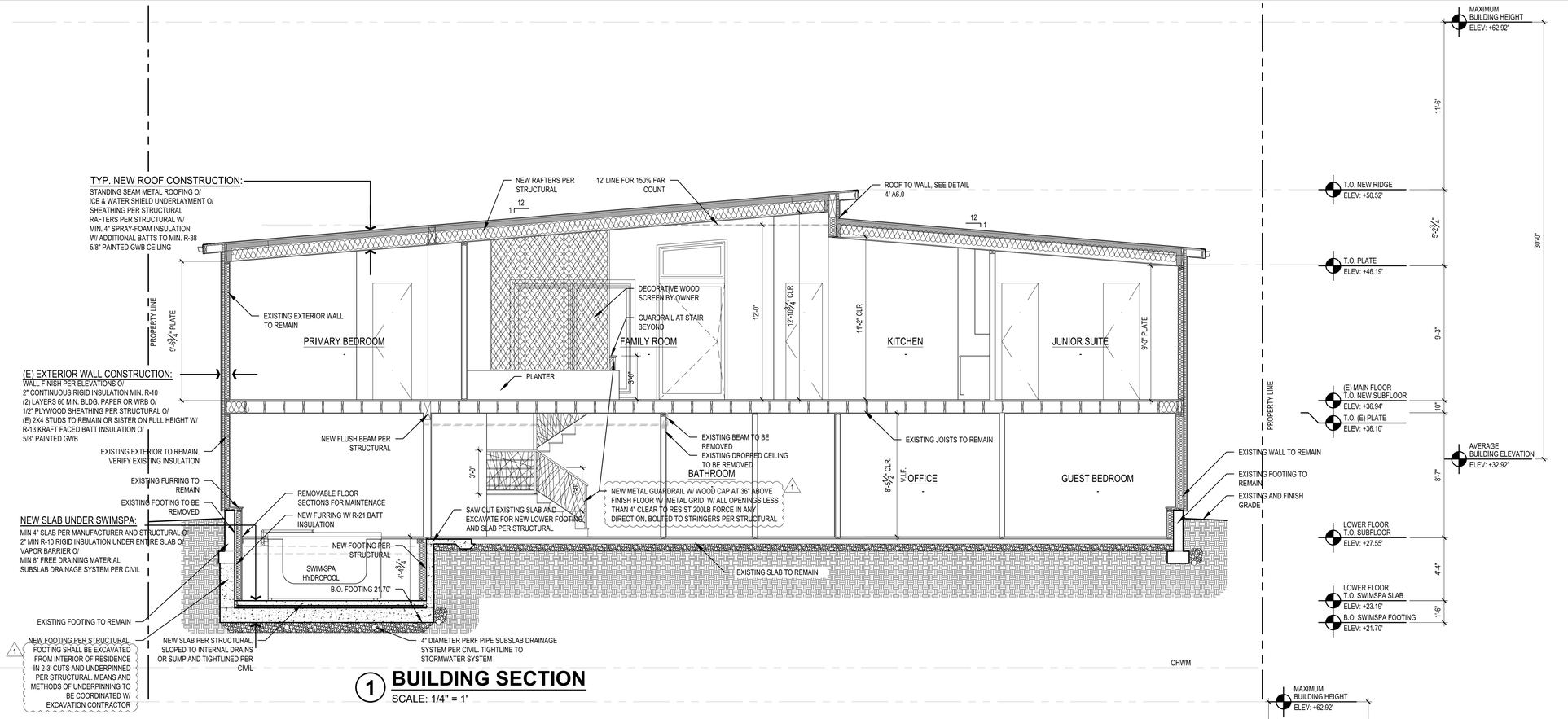
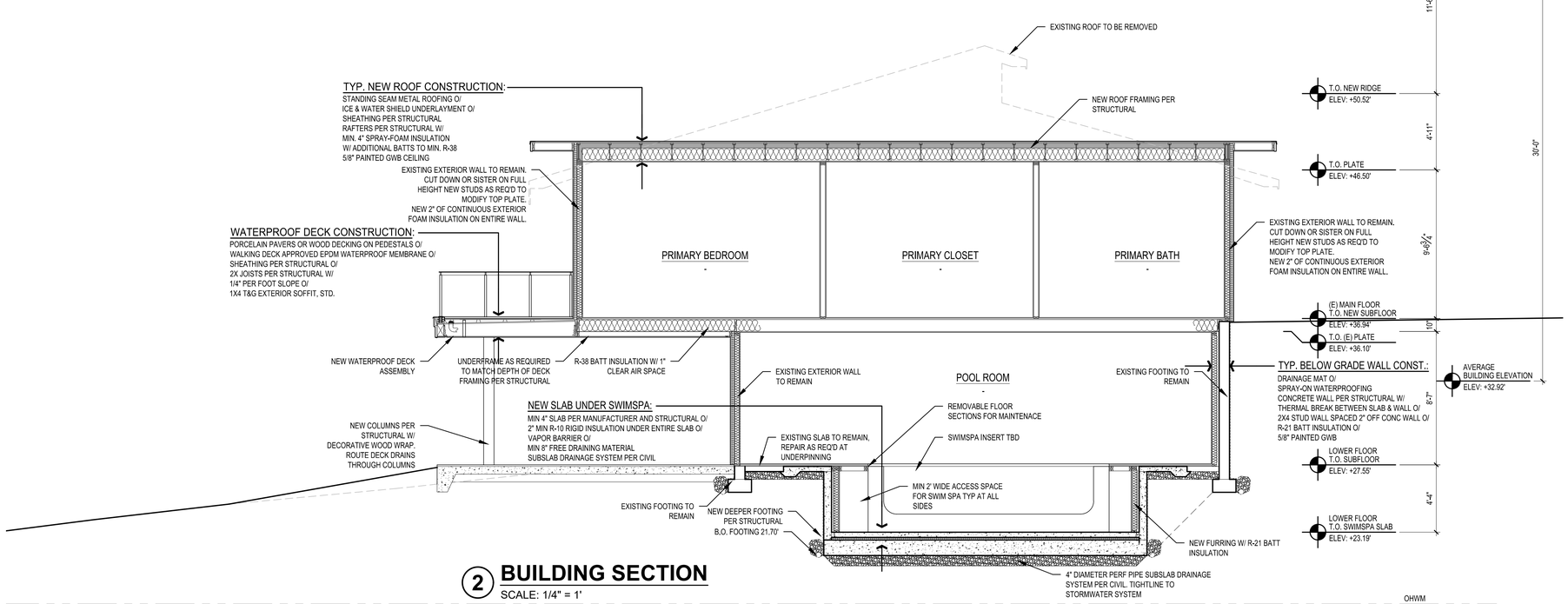
SHEET
A3.1



1 BUILDING SECTION

SCALE: 1/4" = 1'



2 BUILDING SECTION

SCALE: 1/4" = 1'

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BUILDING SECTIONS

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SHEET
A4.0

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

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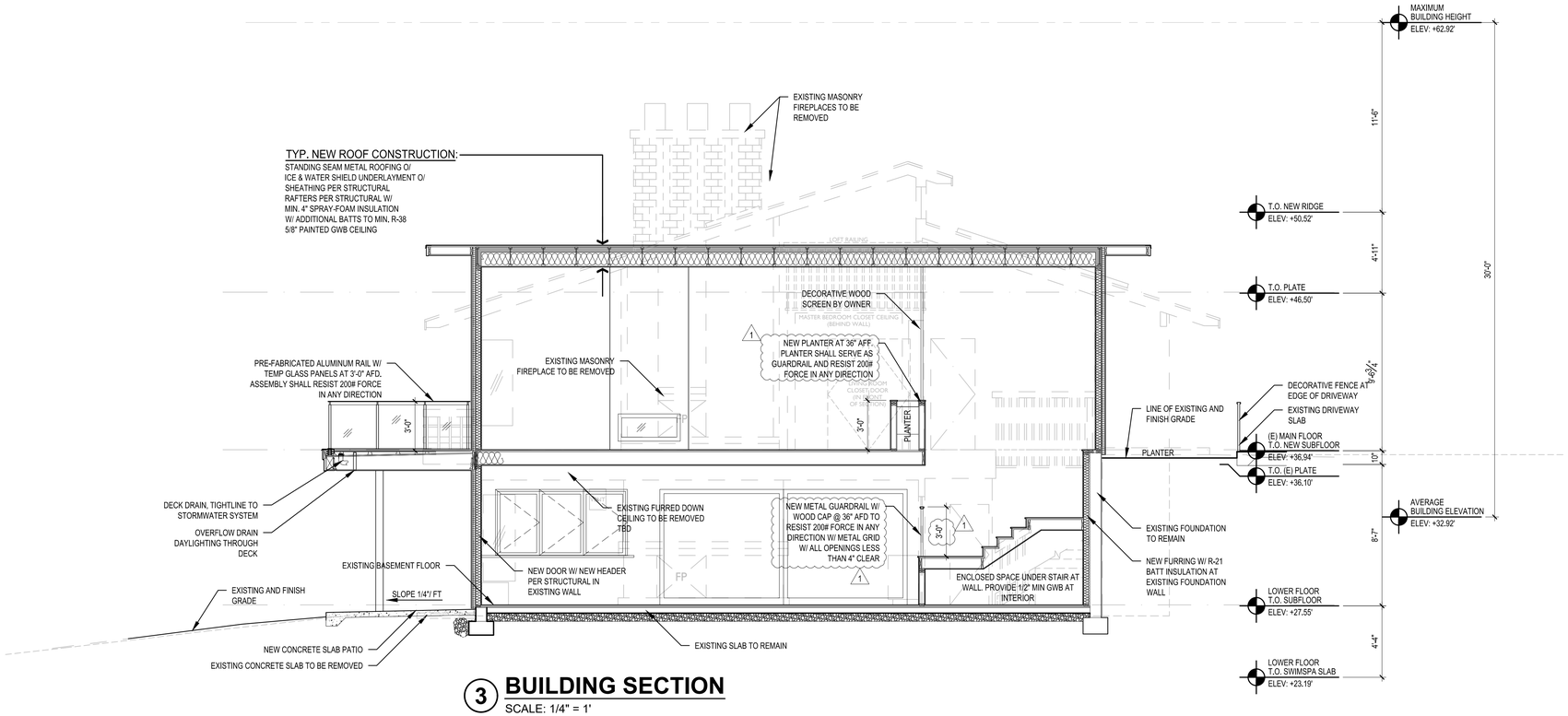
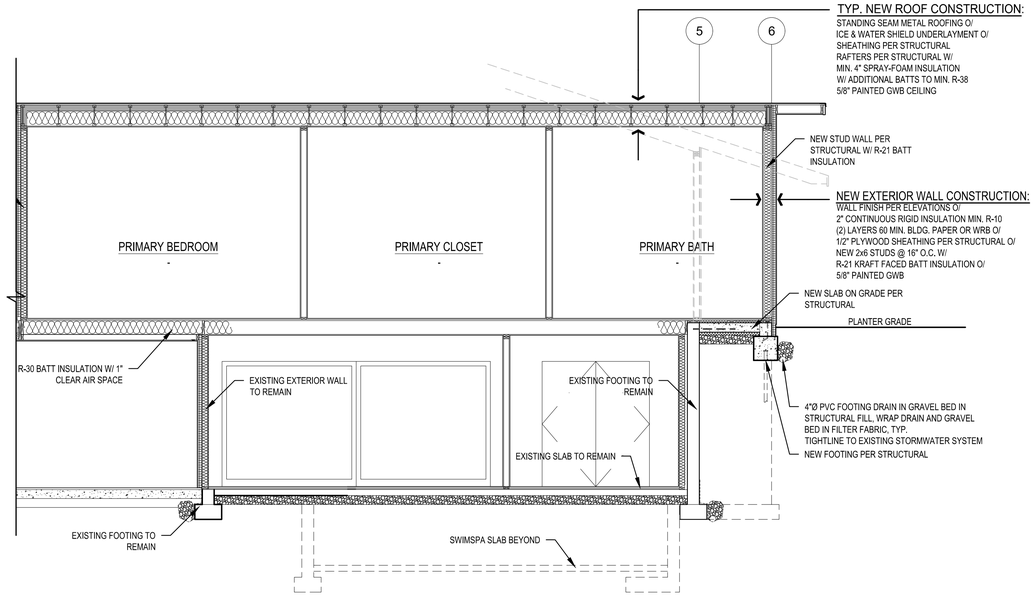


3 BUILDING SECTION

SCALE: 1/4" = 1'



4 PARTIAL BUILDING SECTION

SCALE: 1/4" = 1'

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BUILDING SECTIONS

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SHEET
A4.1

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

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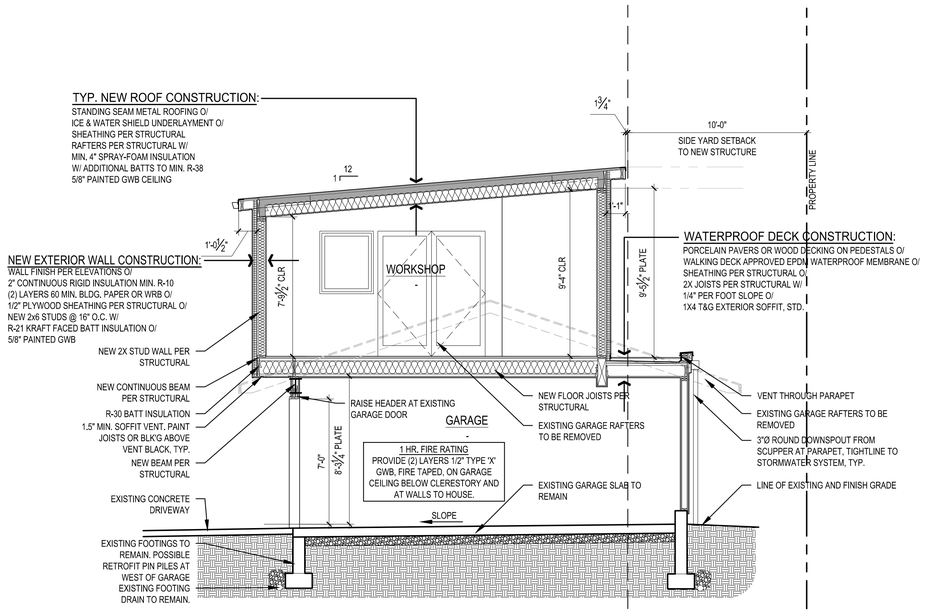
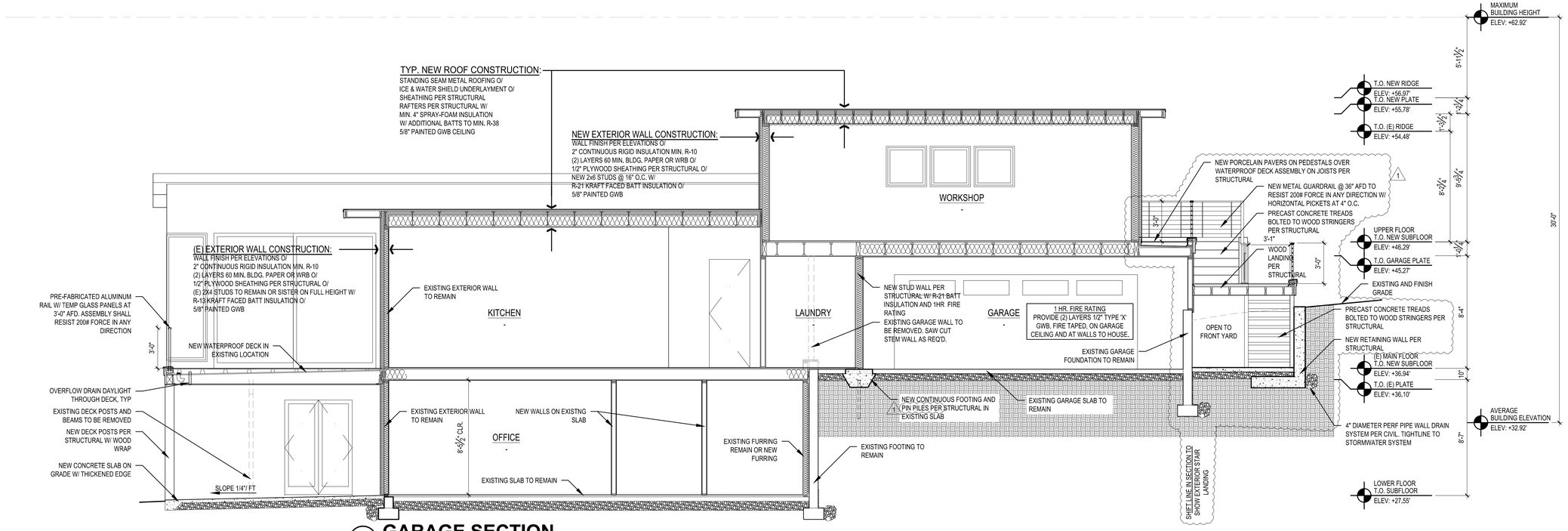


5 GARAGE SECTION

SCALE: 1/4" = 1'



6 GARAGE SECTION

SCALE: 1/4" = 1'

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

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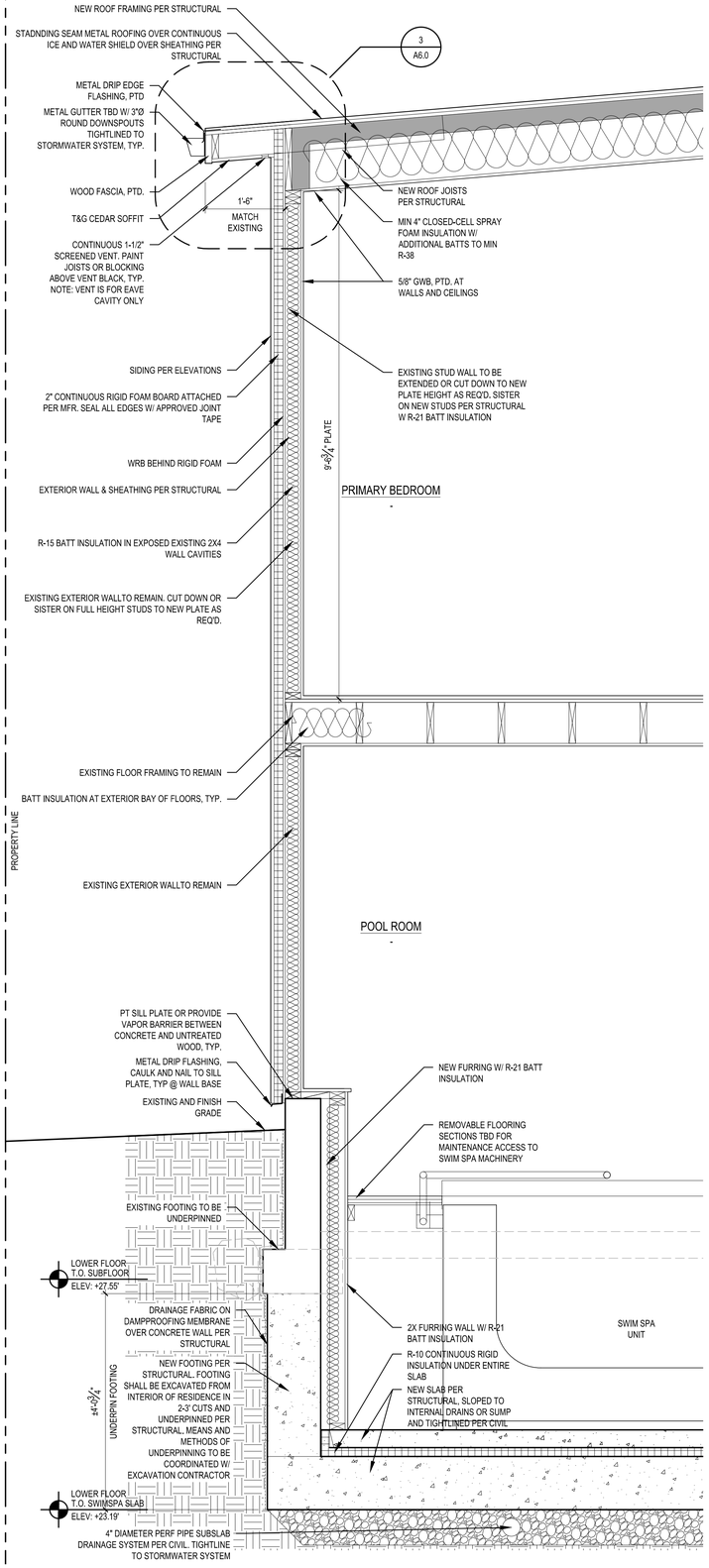
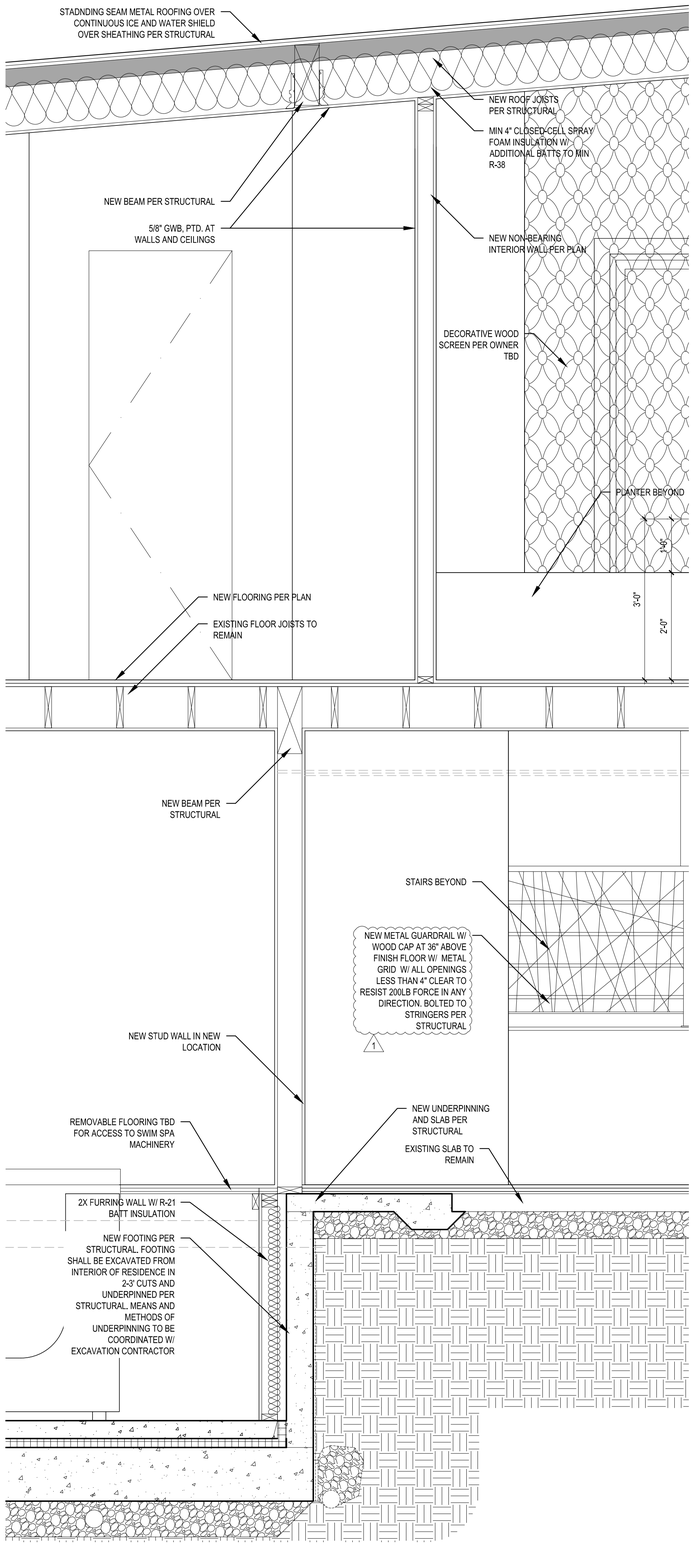
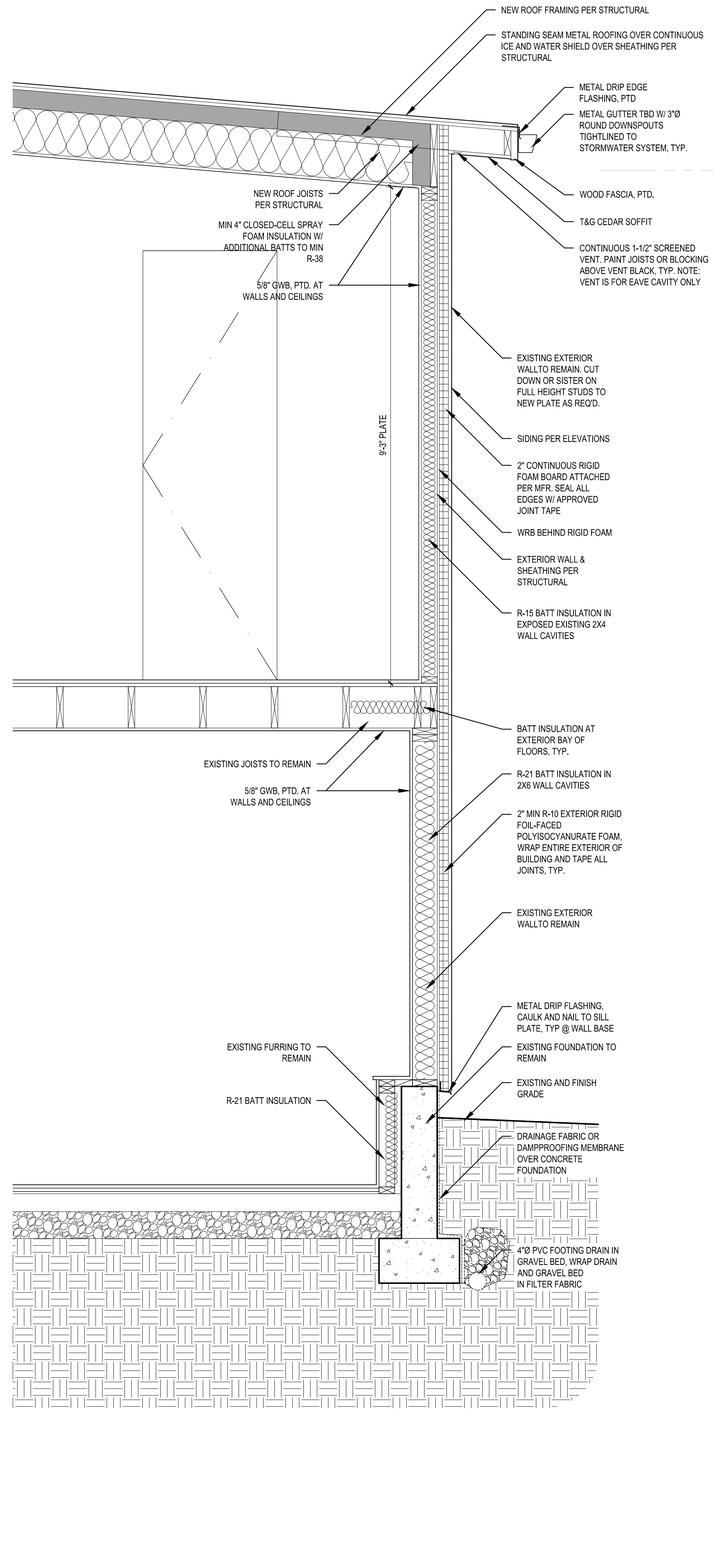
SHEET
A4.2



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



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



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

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

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WALL SECTIONS

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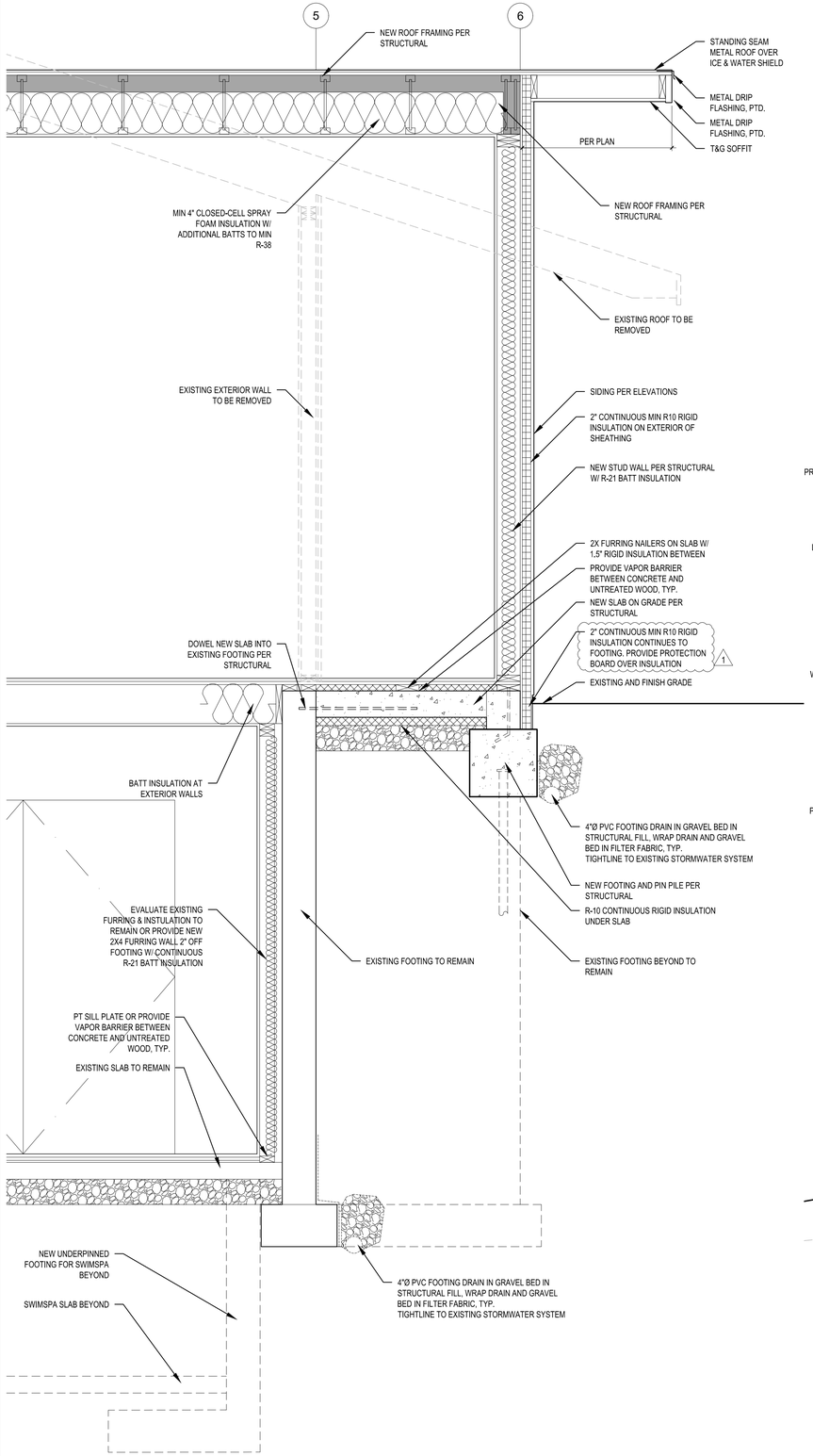
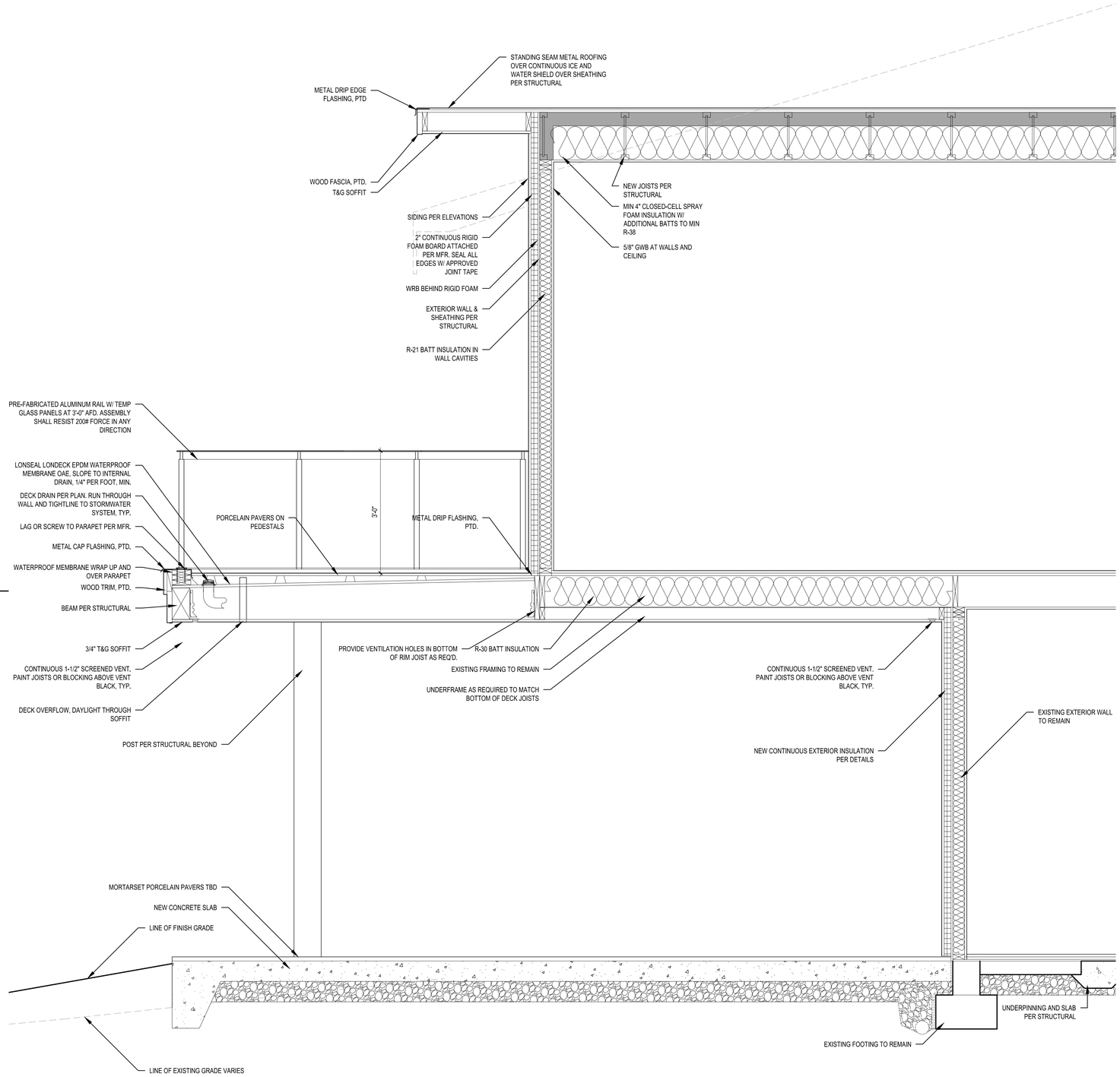
SHEET
A5.0



1 WALL SECTION @ PRIMARY BATH ADDITION

SCALE: 3/4" = 1'



2 WALL SECTION @ DECK

SCALE: 3/4" = 1'

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

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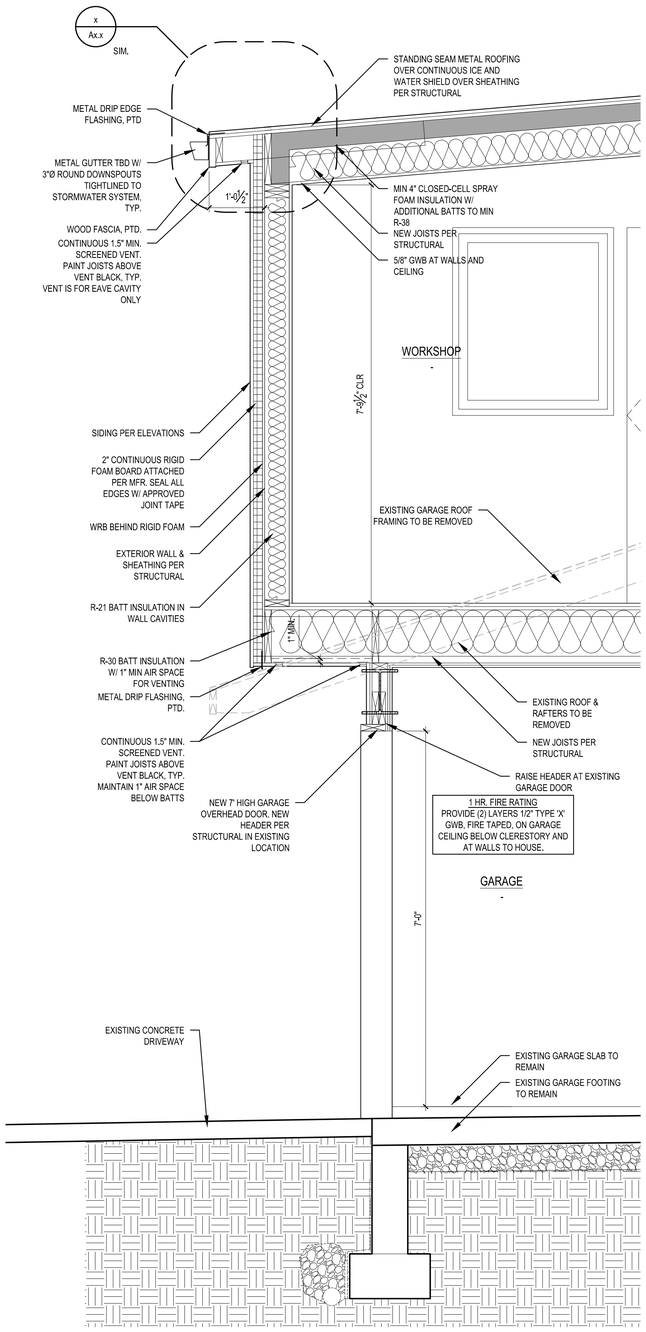
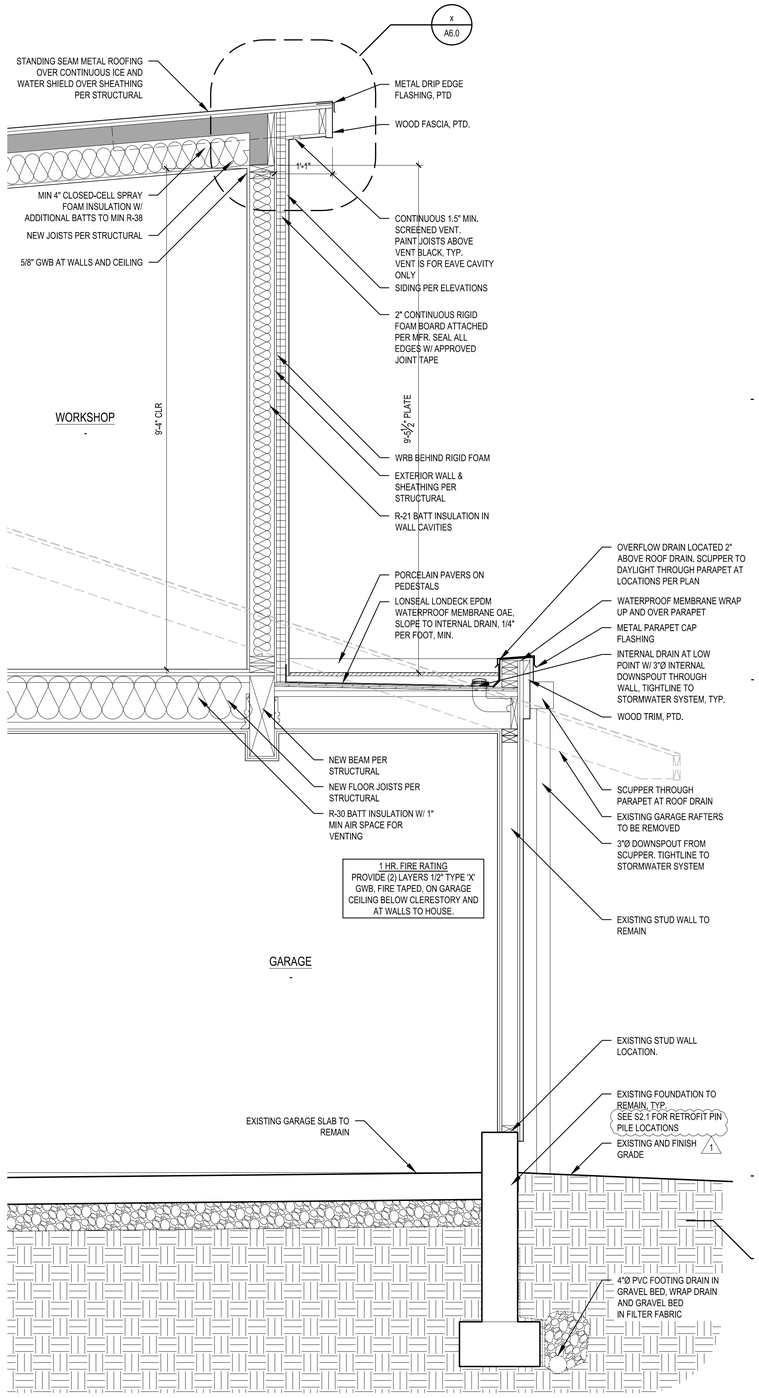
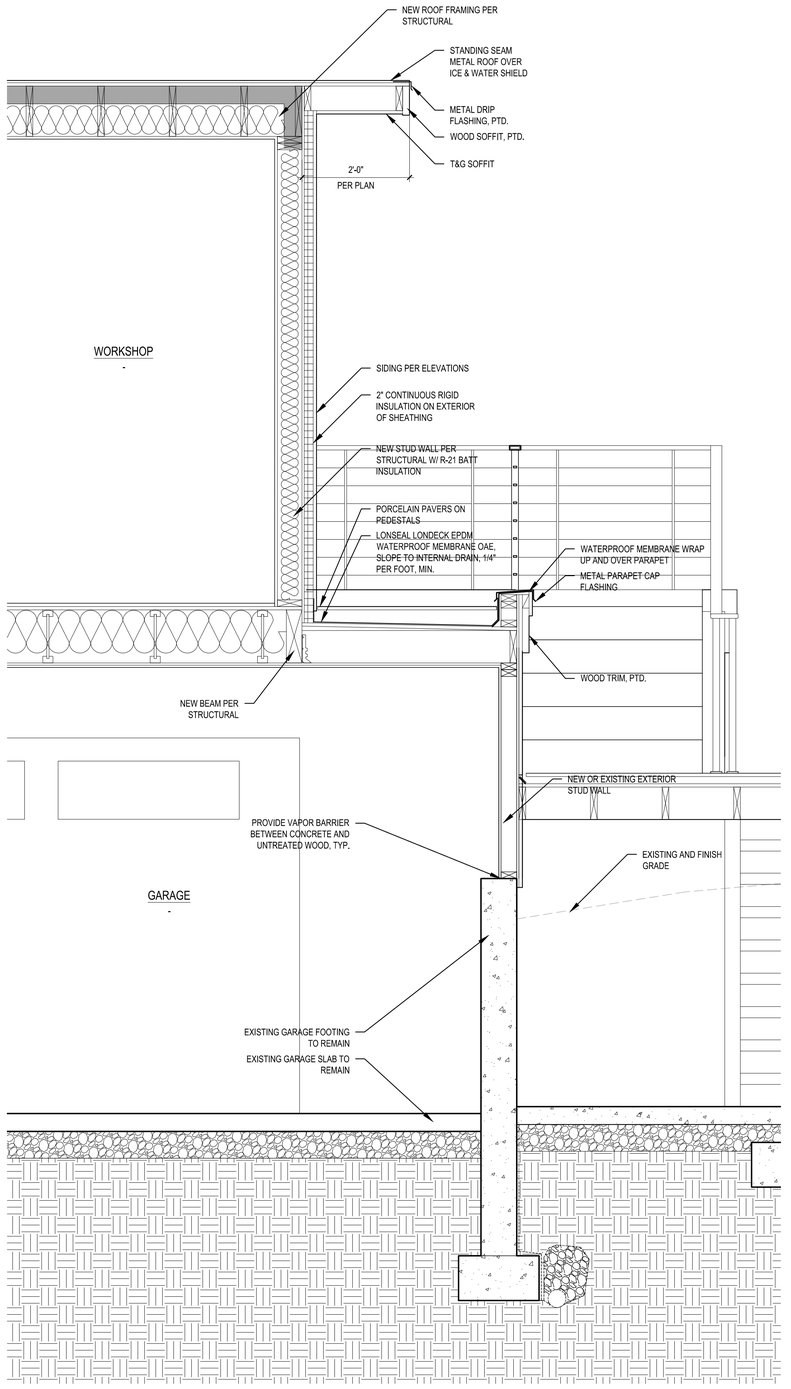
SHEET
A5.1







1 WALL SECTION @ GARAGE
SCALE: 3/4" = 1'

2 WALL SECTION @ GARAGE
SCALE: 3/4" = 1'

2 WALL SECTION @ GARAGE
SCALE: 3/4" = 1'

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

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WALL SECTIONS GARAGE

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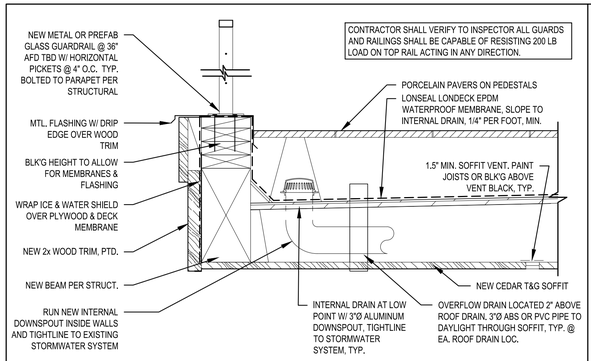
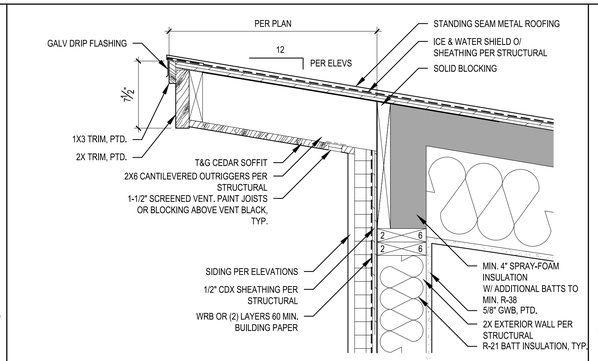
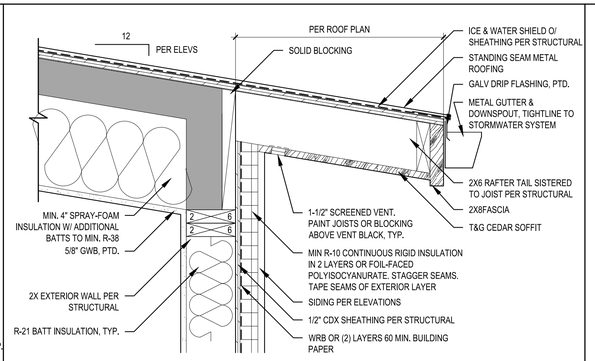
A5.2



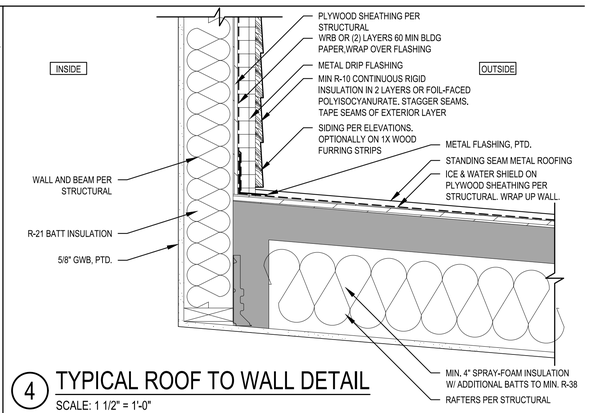
1 DECK PARAPET, RAILING ATTACHMENT & DRAIN
SCALE: 1-1/2" = 1'-0"



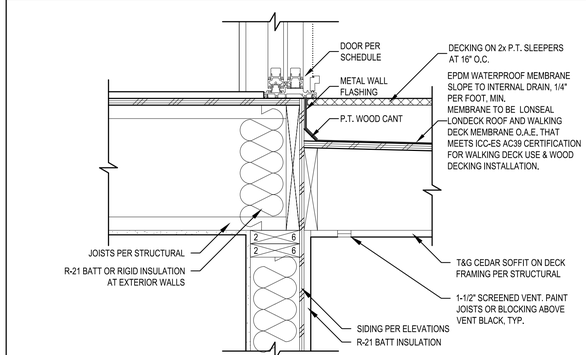
2 TYPICAL ROOF EAVE DETAIL HIGH SIDE
SCALE: 1 1/2" = 1'-0"



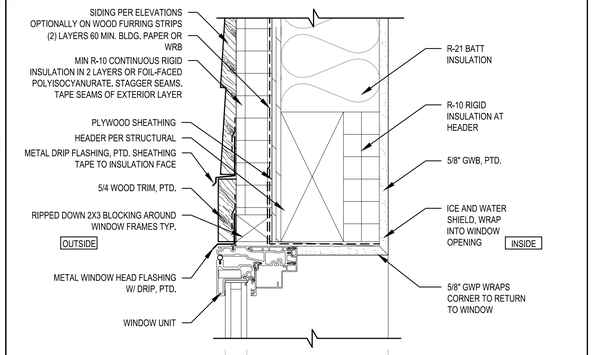
3 TYPICAL EAVE DETAIL AT ROOF LOW SIDE
SCALE: 1 1/2" = 1'-0"



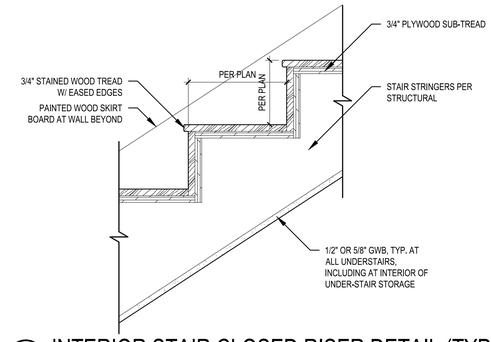
4 TYPICAL ROOF TO WALL DETAIL
SCALE: 1 1/2" = 1'-0"



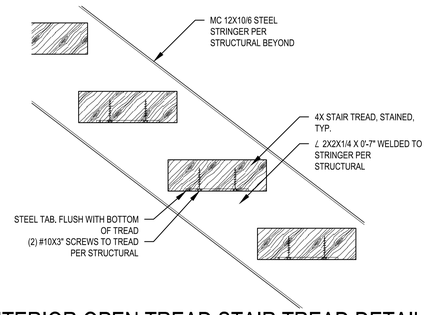
5 TYP. EAVE RAKE
SCALE: 1 1/2" = 1'-0"



6 TRIM AT GARAGE OVERHANG
SCALE: 1 1/2" = 1'-0"



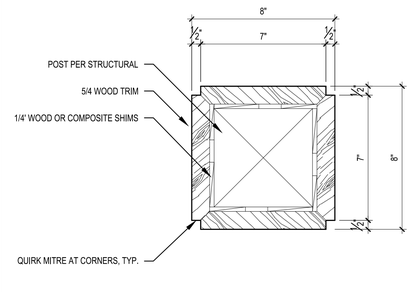
7 INTERIOR STAIR CLOSED RISER DETAIL (TYP.)
SCALE: 1 1/2" = 1'-0"



8 INTERIOR OPEN TREAD STAIR TREAD DETAIL
SCALE: 1 1/2" = 1'-0"

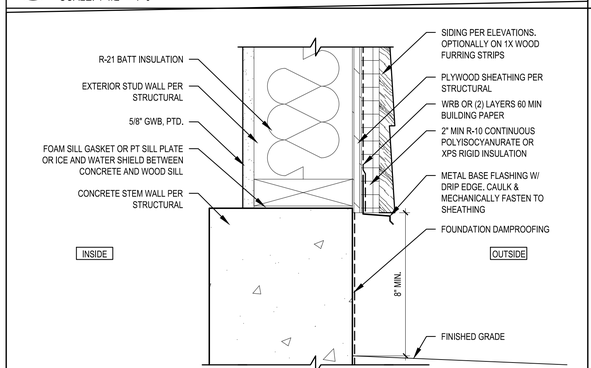
5 TYP. DECK DETAIL AT DOOR
SCALE: 1 1/2" = 1'-0"

7 TYPICAL WINDOW HEAD DETAIL
SCALE: 3" = 1'-0" SIM. AT WINDOW JAMB

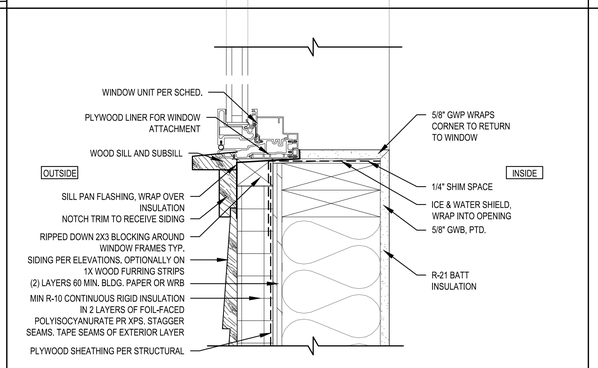


13 TYP. COLUMN PLAN DETAIL
SCALE: 3" = 1'-0"

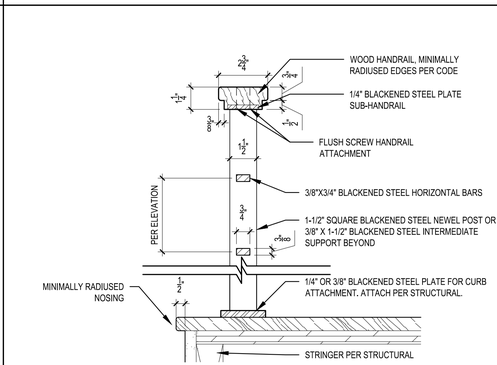
12 LANDSCAPE CONCRETE STAIR TREAD DETAIL
SCALE: 1 1/2" = 1'-0"



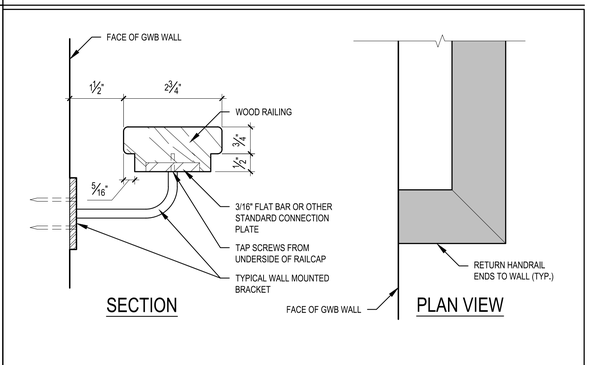
13 TYPICAL WALL BOTTOM PLATE DETAIL
SCALE: 3" = 1'-0"



9 TYPICAL WINDOW SILL DETAIL
SCALE: 3" = 1'-0"



15 TYP. INTERIOR STAIR GUARDRAIL
SCALE: 3" = 1'-0"



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

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

PERMIT SUBMITTAL 4/17/24

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EXTERIOR DETAILS

REVISIONS:

PLOT DATE: 6/25/2024
DRAWN BY: LG
CHECKED BY: BJS

SHEET
A6.0

General Requirements

All materials, workmanship, design and construction shall conform to the 2021 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 & 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

LATERAL LOADS-WIND: Per ASCE 7-16, Section 27.5
Iw = 1.0; Kzt = 1.00; V = 20.3 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)	Zone 1;	19.9 psf
	Zone 1';	14.6 psf
100 sq. ft.	Zone 2;	26.5 psf
	Zone 3;	31.5 psf
(Roof overhangs)	Zone 1,1';	22.7 psf
20 sq. ft.	Zone 2;	28.3 psf
	Zone 3;	38.4 psf
(Walls)	Zone 4;	16.6 psf
20 sq. ft.	Zone 5;	20.0 psf

LATERAL LOADS-EARTHQUAKE: Per ASCE 7-16, Chapter 11 & IBC 1613

Numbering below is per IBC Section 1603.1.5:
1. Importance Factor = 1.0
2. Mapped Spectral Response Accelerations, Ss = 1.398 g; S1 = 0.487 g
3. Site Class = D; Fa = 1.200, Fv = 1.813
4. Spectral Response Coefficients, Sds = 1.118 g, Sd1 = 0.589 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 = 21.0 kips
8. Seismic Response Coefficient Cs = 0.172
9. Response Modification Factor R = 6.5
10. Analysis Procedure = Equivalent Lateral Force Procedure

Additional Items:
Building Location 47.589 N, 122.254 W
Building Height = 19 feet
Redundancy Factors:
North/South Direction = 1.3 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.

GENERAL STRUCTURAL NOTES
(TYPICAL UNLESS NOTED OTHERWISE ON DRAWINGS)

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
* I-joist and engineered wood beam floor & roof framing layout & materials list
* Glued laminated members (certificates to be on-site and available upon request)
* Engineered wood beams (certificates to be on-site and available upon request)

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 1705.2 and AISC 360
* Epoxy installed anchor bolts and holdowns rods: Continuous per Table 1703.3 - #4

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 Remodel/Expansion of Existing Residence, 2411 – 60th Avenue S.E., Mercer Island, Washington, dated January 4, 2024 and prepared by Geotech Consultants

Contractor shall be familiar with recommendations in the above-mentioned report prior to start of construction. Allowable soil pressure and 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 Geotechnical Report.

All prepared soil-bearing surfaces shall be inspected by the owners Geotechnical Inspector (or building official) prior to placement of reinforcing steel and concrete. Inspections shall be made per IBC Table 1705.6.

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

Bearing Values
Allowable soil pressure = 2,500 psf

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.

Piles and Piers General Criteria
Pile or pier 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/pier 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 drilling or driving operations. Hole drilling shall be performed without loss of ground and without endangering previously installed piles. Refer to the Geotechnical Report for recommended drilling or driving procedure. Alternate piles shall be placed and completed so that at least 24 hours are allowed for the concrete to set prior to drilling adjacent piers.

Pile or pier 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 1705.7.

Pin Piles
Pin piles shall be driven to refusal in bearing strata. For 2" pin piles, refusal shall be defined as less than 1" penetration in 60 seconds during continuous driving with a 90 lb jackhammer under the full effort of the operator. The maximum pile eccentricity shall be 4" unless otherwise noted as 'battered' on the plans for lateral resistance. Pile placement shall be within a 2" tolerance at the top of the pile.

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 (restrained/unrestrained) = 50/40 pcf (+8H seismic, FOS = 1.2)
Passive earth pressure = 300 pcf
Coefficient of friction (factor of safety of 1.5 included) = 0.40

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

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/thawing in a moist condition 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 % per ACI 318 for other coarse aggregate sizes. Air-entrainment shall not be used at slabs that will receive a smooth, dense, 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 specifications and/or 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 and all other Contract Documents and 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.

Refer to Architectural documents for waterstops, dampproofing & soil retaining wall drainage requirements at concrete and 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
8" or less	#4 @ 12"oc	#4 @ 12"oc	@ cl of wall
10" or less	#4 @ 16"oc	#4 @ 16"oc	each face

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.

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.

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) and "Code of Standard Practice for Steel Buildings and Bridges" AISC 303 (latest edition) amended by the deletion of paragraph 4.4.1.

Fabricators
Fabricators for structural steel must have a quality assurance program in place. The quality assurance program must meet 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, and the owner or owner's designee.

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	
Plates, Channels, Angles	A-36, Grade 36	36 ksi
Square & Rectangular HSS Section	A-500, Grade B	46 ksi
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, and other aids; welding procedures; required root openings; root face dimensions; groove angles; backing bars; copes; surface roughness values; tapers of unequal parts.

Bolts
All ASTM A-307 bolts shall be provided with lock washers under nuts or self-locking nuts.

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43889
STRUCTURAL ENGINEER
PROFESSIONAL ENGINEER
5-9-2024

Biggs Residence
2411 60th Ave SE, Mercer Island, WA 98040

Revision	Issue Date	Drawing Set
	5/9/2024	Permit Set
1	12/12/2024	Review Corrections

General Structural Notes

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, 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. Welding procedures shall be submitted to the owner's testing agency for review prior to commencement of fabrication or erection. Field welds shown are engineer's recommendation. Contractor is responsible for actual welds used to support specific means and methods.

Shop Painting/Finishing
All steel to be shop primed. 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).

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 flatwise & edgewise blocking	HF standard
2x studs	HF kd stud
2x plates	HF kd15 standard
2x 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. Excessive changes in moisture content during construction may result in swelling and shrinkage of a single story level in the magnitude of 1/2".

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 15/32" with span rating 32/16
Floor sheathing shall be 23/32" with span rating 48/24
Wall sheathing shall be 15/32" with span rating 24/0

Plywood Web Joists
Prefabricated plywood web joist design shown on plans is based on ILevel/Trus-Joist products manufactured by the Weyerhaeuser Corporation. All joist hangers, hardware shall be compatible in size with plywood web joist provided. All necessary bridging, blocking, blocking panels, stiffeners, etc., shall be detailed and furnished by the manufacturer. The following deflection criteria shall be maintained:

Floor live load deflections shall be limited to span/480 (span/360 at 100 psf live load).
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.

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 (2.2E)	Beams	Fb = 2,900 psi,	E = 2,200 ksi, Fv = 290 psi
LVL (2.0E)	Beams	Fb = 2,600 psi,	E = 2,000 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.

Glu Laminated Material
Glued laminated members shall be fabricated in conformance with AITC 117 and APA-EWS Y117, Stress Class 24F-1.8E. Each member shall bear an AITC identification mark and shall be accompanied by an AITC certificate of conformance. All simple span beams shall be douglas fir combination 24F-V4, fb = 2,400 psi, fv =265 psi and all cantilevered beams and columns shall be Douglas fir combination 24F-V8, fb = 2,400 psi, fv = 265 psi unless otherwise noted. Camber all simple span glu laminated beams to 3,500' radius or zero camber, unless shown otherwise on the plans.

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.

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-2021. Equivalent devices by other manufacturers may be substituted, provided they have ICBO approval for equal or greater load capacities. Provide number and size of fasteners as specified by manufacturer. Connectors shall be installed in accordance with the manufacturer's recommendations. Where connector straps connect two members, place one-half of the nails or bolts in each member. All bolts in wood members shall conform to ASTM A307. Provide washers under the heads and nuts of all bolts and lag screws bearing on wood. Unless otherwise noted, all nails shall be as called out below. Unless otherwise noted on the drawings use the following hangers:

2x or 2-2x member to flush wood beam/ledger	LUS
2x member to sill plate or steel/flush wood beam	LB
2-2x member to sill plate or steel/flush wood beam	B
TJI member to flush wood beam/ledger	ITS
2-TJI member to flush wood beam/ledger	MIU
TJI member to sill plate or steel/flush wood beam	ITS
2-TJI member to sill plate or steel/flush wood beam	MIT
4x, LSL/LVL/PSL beam to flush wood beam/ledger	MIU max
4x, LSL/LVL/PSL beam to sill plate or steel beam	HWU
Interior 4x or 6x post to concrete below	ABU w/ 5/8" dia. anchor rod w/ 7" embed
Treated 4x or 6x post to concrete below	CBSQ-SDS2HDG
4x or 6x post to wood beam above	PC/EPC
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 & welded nut)	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 direct to studs		0.148 x 1-1/2"
MSTC holdown straps over shear wall sheathing to studs		0.148 x 2-1/4"
CS collector straps		0.131 x 2-1/2"
hangers w/ 16d or 10d options		0.162 x 3-1/2"
floor sheathing	typical	0.131 deformed shank x 2-1/2"
roof sheathing	typical	0.131 x 2-1/2"
stud wall APA sheathing	15/32 sheathing	0.148 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" minimum 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 top of wood floor framing below, provide (2) LS70 clip at bottom 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 Mechanical and 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 @ 16"oc at interior walls and 2x6 @ 16"oc at exterior 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 and at mid-height of walls with sheathing on one side only (i.e. Each side of party walls).

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 @ 6'-0"oc for structures not exceeding 2 stories and @ 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.

Refer to the plans and shear wall schedule for required sheathing and nailing. 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.

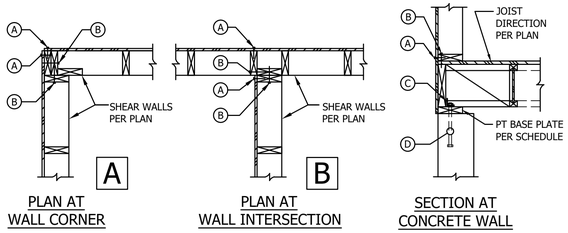
Unless otherwise noted on the plans, APA sub-flooring and roof sheathing shall be laid up with grain (strength axis) perpendicular to supports (joists, trusses, etc.) and in a staggered pattern. Nails shall be @ 6"oc to framed panel edges, @ 4"oc over shear walls and @ 12"oc to intermediate supports. See notes above for nail sizes. All sub-flooring edges shall have approved tongue-and-groove joints or shall be supported with solid blocking/framing. Plywood clips are recommended at all roof sheathing edges (solid blocking/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 conforming to APA spec. AFG-01 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 and roof diaphragms are indicated, provide flat 2x blocking at all unframed panel edges and nail with edge nailing specified.

GENERAL STRUCTURAL NOTES
(TYPICAL UNLESS NOTED OTHERWISE ON DRAWINGS)

SHEAR WALL SCHEDULE

MARK	SHEATHING	PANEL EDGE NAILING (A)	TOP PLATE NAILING (B)	A35 CLIPS (C)	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	223	270
SW2 [5]	½" PLYWOOD	0.131" @ 2"oc	(2) ROWS 0.131" @ 3"oc	A35 @ 7"oc	⅝"Ø AB @ 16"oc	⅝"Ø AB @ 16"oc	544	895
SW2* [5]	½" OSB/STRUCT-I, DOUG-FIR	0.148" @ 2"oc	(2) ROWS 0.131" @ 3"oc	A35 @ 6"oc	⅝"Ø AB @ 12"oc	⅝"Ø AB @ 16"oc	809	1080

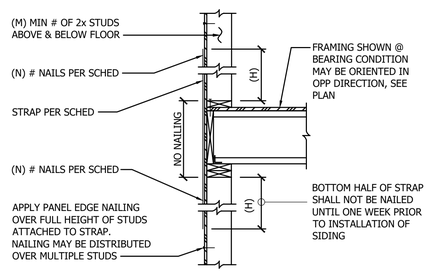
NOTES:
1. ALL EXTERIOR WALLS SHALL BE SW6 (TYP, UNO). WALL FRAMING SHALL BE 2x HF (UNO) STUDS @ 16"oc BLOCK ALL PANEL EDGES WITH 2x LAID FLAT. ALL STUDS ATTACHED TO STRAPS OR HOLDOWNS SHALL BE PANEL-EDGE NAILED. NAIL TO ALL INTERMEDIATE SUPPORTS WITH 0.131"Ø @ 12"oc SHEATHING SHALL BE MIN. 7/16" OSB OR PLYWOOD.
2. PANEL EDGE NAILS SHALL BE A MINIMUM OF 2½" IN LENGTH, PLATE 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.



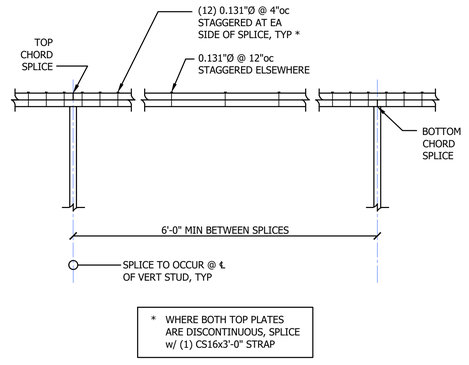
1 Shear Wall Schedule
3/4" = 1'-0"

STRAP SCHEDULE

MARK	H	N	M	HF CAPACITY
CS16	14"	(13) 0.131"	1	1,705#
MSTC40	12"	(14) 0.148"	2	2,325#
MSTC66	24"	(32) 0.148"	2	5,505#



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

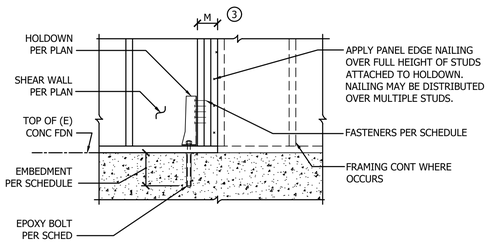


3 Top Plate Splice, Typ.
3/4" = 1'-0"

HOLDOWN SCHEDULE (1)(2)(4)

MARK	FASTENERS	M (3)	STEM WALL		FOOTING/STRUCT. SLAB		
			ANCHOR ROD	EMBEDMENT	EDGE DISTANCE	EMBEDMENT	EDGE DISTANCE	CAPACITY
HDU2	(6) SDS¼"x2½"	3"	⅝"Ø	12"	3"	5"	7"	2,645#
HDU5	(14) SDS¼"x2½"	3"	⅝"Ø	12"	3"	7"	10"	4,855#

1. PLACEMENT OF ANCHOR ROD IS BASED ON SIMPSON SET-3G EPOXY.
2. INSTALL ALL HOLDOWNS AND EPOXY 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 REQUIRED
5. SEE X/SX.X FOR HOLDOWN TO BEAM APPLICATIONS



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

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5-9-2024

Biggs Residence
2411 60th Ave SE, Mercer Island, WA 98040

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General Structural Notes & Schedules

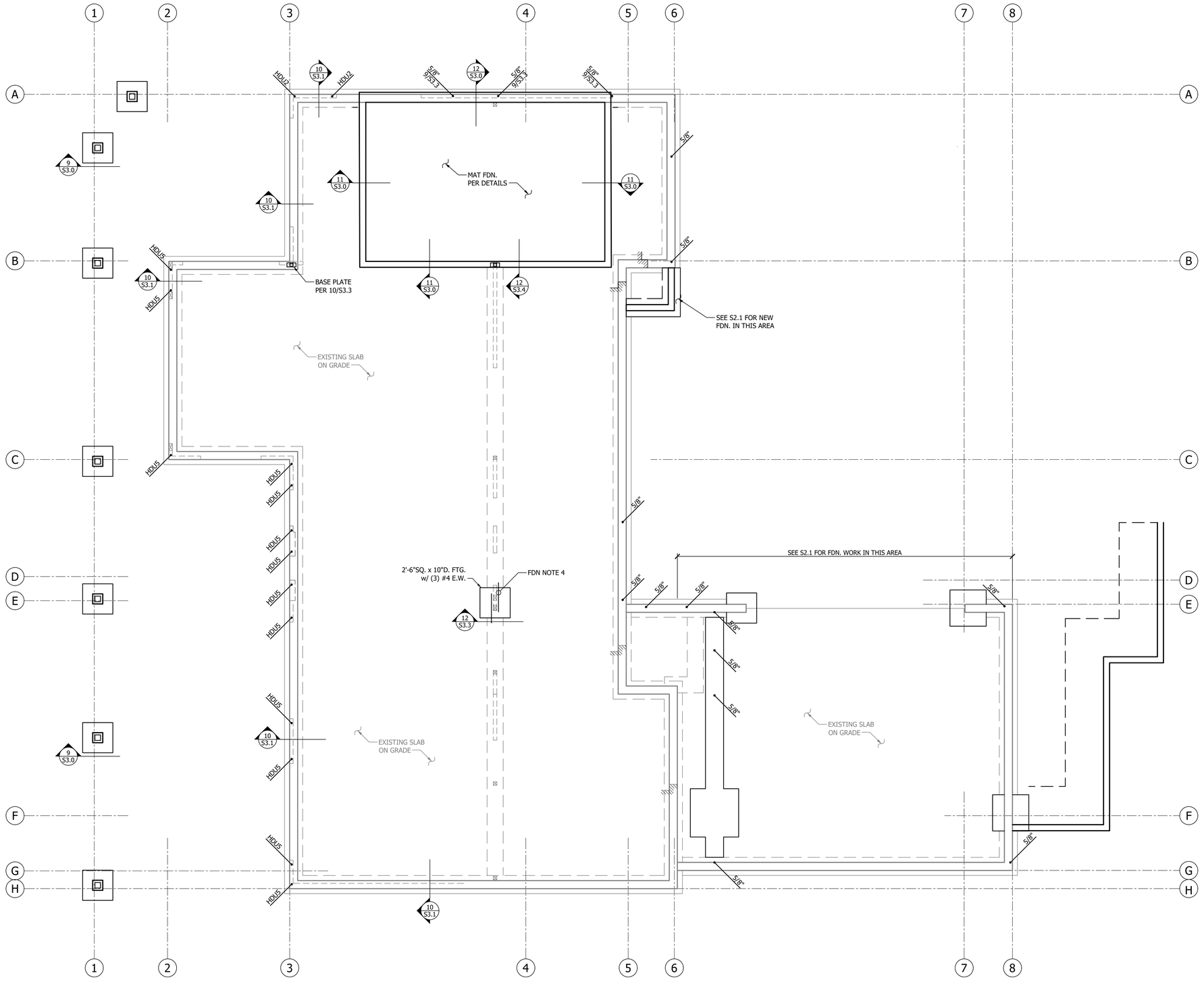
S1.1

GENERAL FRAMING NOTES:

1. ALL LSL/PSL BEAMS SHALL BE FLUSH AND ALL HEADERS DROPPED, UNO. SEE 3/S3.3 FOR TYPICAL POST-TO-BEAM CONNECTIONS
2. TYP. HEADERS SHALL BE 4x6 DF#2, UNO, SEE 4/S3.3 FOR 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. SWX - 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.

FOUNDATION NOTES:

1. TYPICAL SLAB ON GRADE AT INTERIOR SHALL BE 4" THICK. REINFORCE ALL SLABS w/ WWF 6x6 - W2.9xW2.9 AT CENTERLINE.
2. HD/ - INDICATES HOLDOWN LOCATED AT END OF SHEAR WALL ABOVE, SEE SCHEDULE ON 4/S1.1. SEE S2.1 FOR HOLDOWN CALL-OUTS AT RODS.
3. TYPICAL PAD FOOTINGS SHALL BE 2'-6" SQ. x 10" D. w/ (3) #4 EW, 3" CLR. OF BTM, SEE DETAIL 9/S3.0.
4. EMBED ALL HORIZONTAL REINFORCEMENT MIN OF 4" INTO (E) CONCRETE w/ SIMPSON SET-XP EPOXY. EXTEND REINFORCEMENT 24" OR HOOK.
5. ⊙ - INDICATES 2" DIAMETER, SCHEDULE 80, GALVANIZED PIN PILE (3 TON). THE GEOTECHNICAL INSPECTOR SHALL BE CONTINUOUSLY PRESENT DURING PIN PILE INSTALLATION AND TESTING.



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

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Foundation Plan

S2.0

GENERAL FRAMING NOTES:

1. ALL PSL/LSL BEAMS SHALL BE FLUSH AND ALL HEADERS DROPPED, UNO. SEE 3/S3.3 FOR TYPICAL POST-TO-BEAM CONNECTIONS
2. TYP. HEADERS SHALL BE 4x6 DF#2, UNO, SEE 4/S3.3 FOR 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. SWX - 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.

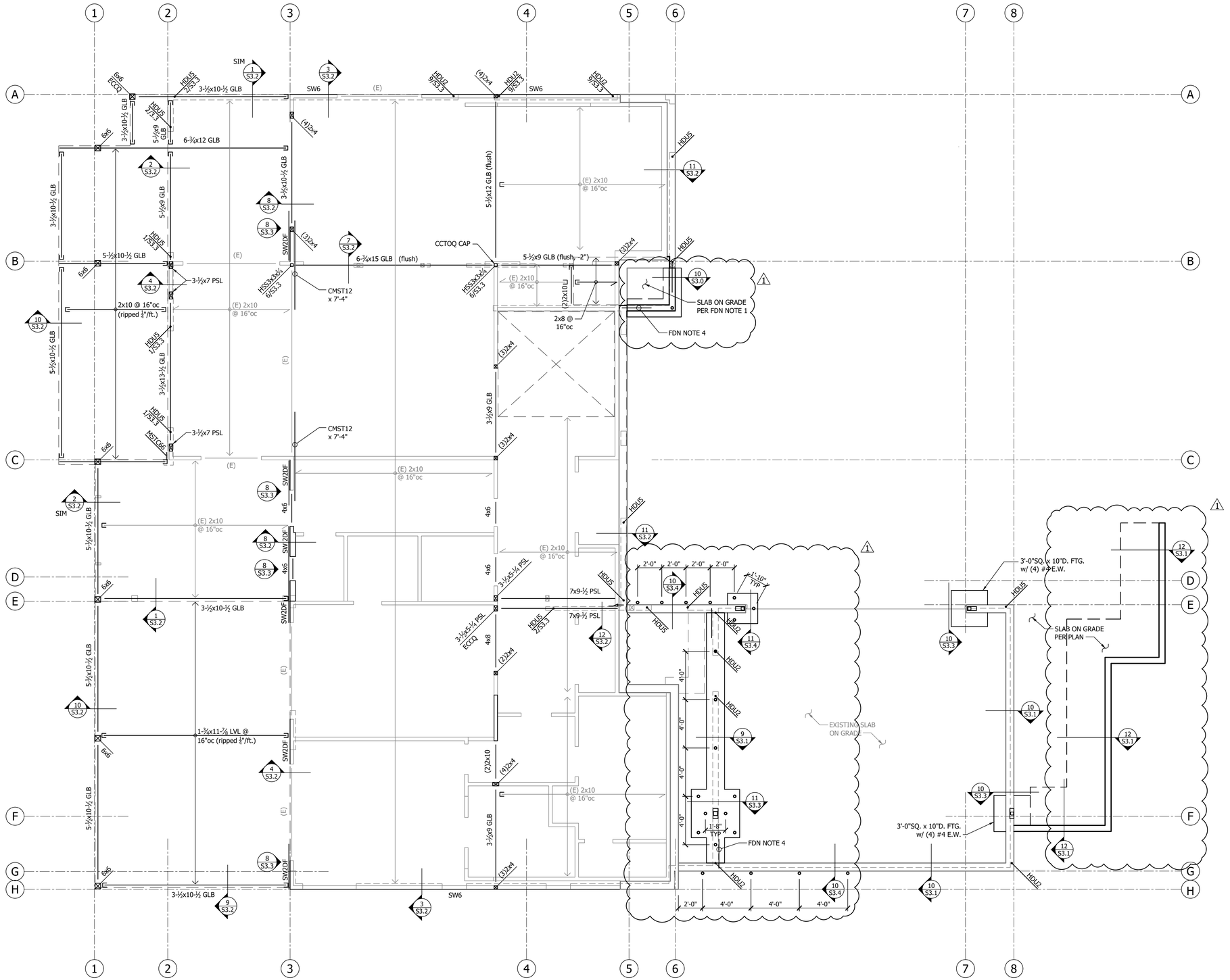
FLOOR FRAMING NOTES:

1. NEW FLOOR SHEATHING (where required) 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. EXISTING FLOOR FRAMING IS 2x10 JOISTS @ 16"oc, DIRECTION PER PLAN.
3. LSL - INDICATES FLUSH-FRAMED 1-¾"x9-¼" LSL BEAM. ALL JOISTS AND 9-¼" DEEP BEAMS SHALL BE FLUSH-FRAMED & ALL 4x HEADERS/GLULAM BEAMS SHALL BE DROPPED UNO.
4. DS - INDICATES 1-¾"x9-¼" LSL DRAG STRUT UNO; ATTACH SHEATHING ALONG ENTIRE LENGTH w/ 0.131"ø @ 4"oc
5. ST - INDICATES STRAP AT END OF SHEAR WALL ABOVE, SEE SCHEDULE ON 2/S1.1.
6. HD - INDICATES HOLDOWN LOCATED AT END OF SHEAR WALL ABOVE, SEE SCHEDULE ON 4/S1.1.

FOUNDATION NOTES:

1. TYPICAL SLAB ON GRADE AT INTERIOR SHALL BE 4" THICK. REINFORCE ALL SLABS w/ WWF 6x6 - W2.9xW2.9 AT CENTERLINE.
2. HD - INDICATES HOLDOWN LOCATED AT END OF SHEAR WALL ABOVE, SEE SCHEDULE ON 4/S1.1. SEE S2.1 FOR HOLDOWN CALL-OUTS AT RODS.
3. TYPICAL PAD FOOTINGS SHALL BE 2'-6" SQ. x 10" D. w/ (3) #4 EW, 3" CLR. OF BTM, SEE DETAIL 9/S3.0.
4. EMBED ALL HORIZONTAL REINFORCEMENT MIN OF 4" INTO (E) CONCRETE w/ SIMPSON SET-XP EPOXY. EXTEND REINFORCEMENT 24" OR HOOK.
5. ○ - INDICATES 2" DIAMETER, SCHEDULE 80, GALVANIZED PIN PILE (3 TON). THE GEOTECHNICAL INSPECTOR SHALL BE CONTINUOUSLY PRESENT DURING PIN PILE INSTALLATION AND TESTING.

HANGER SCHEDULE	
MEMBER	HANGER
PT 2x8	LUSZ28
PT 4x8	HUCZ48
2x8/2x10	LUS210
(2)2x8/(2)2x10	LUS210-2
2x12	LUS210
4x12	HUCQ410
11-⅞" TJI/360	IUS/IUT2.37/11.88
1-¾x11-⅞ LSL/LVL	IUS1.81/11.88
3-½x11-⅞ LSL	HUCQ412
3-½x11-⅞ PSL	HHUS410
14" TJI/360	LSSR2.37
14" TJI/560	LSSR410
1-¾x14 LSL	U14
3-½x10-½ GLB	HUCQ410
5-½x10-½ GLB	HUCQ610
6-¾x12 GLB	HGUS6.88/10



Main Floor Framing & Foundation Plan

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

ANNÉE STRUCTURAL ENGINEERING, LLC

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MICHAEL THOMAS ANNÉE — STATE OF WASHINGTON — 43889 — STRUCTURAL ENGINEER — PROFESSIONAL ENGINEER

5-9-2024

Biggs Residence

2411 60th Ave SE, Mercer Island, WA 98040

Revision	Issue Date	Drawing Set
	5/9/2024	Permit Set
1	12/12/2024	Review Corrections

Main Floor Framing Plan

S2.1

GENERAL FRAMING NOTES:

1. ALL PSL/LSL BEAMS SHALL BE FLUSH AND ALL HEADERS DROPPED, UNO. SEE 3/S3.3 FOR TYPICAL POST-TO-BEAM CONNECTIONS
2. TYP. HEADERS SHALL BE 4x6 DF#2, UNO, SEE 4/S3.3 FOR 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. SWX - 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.

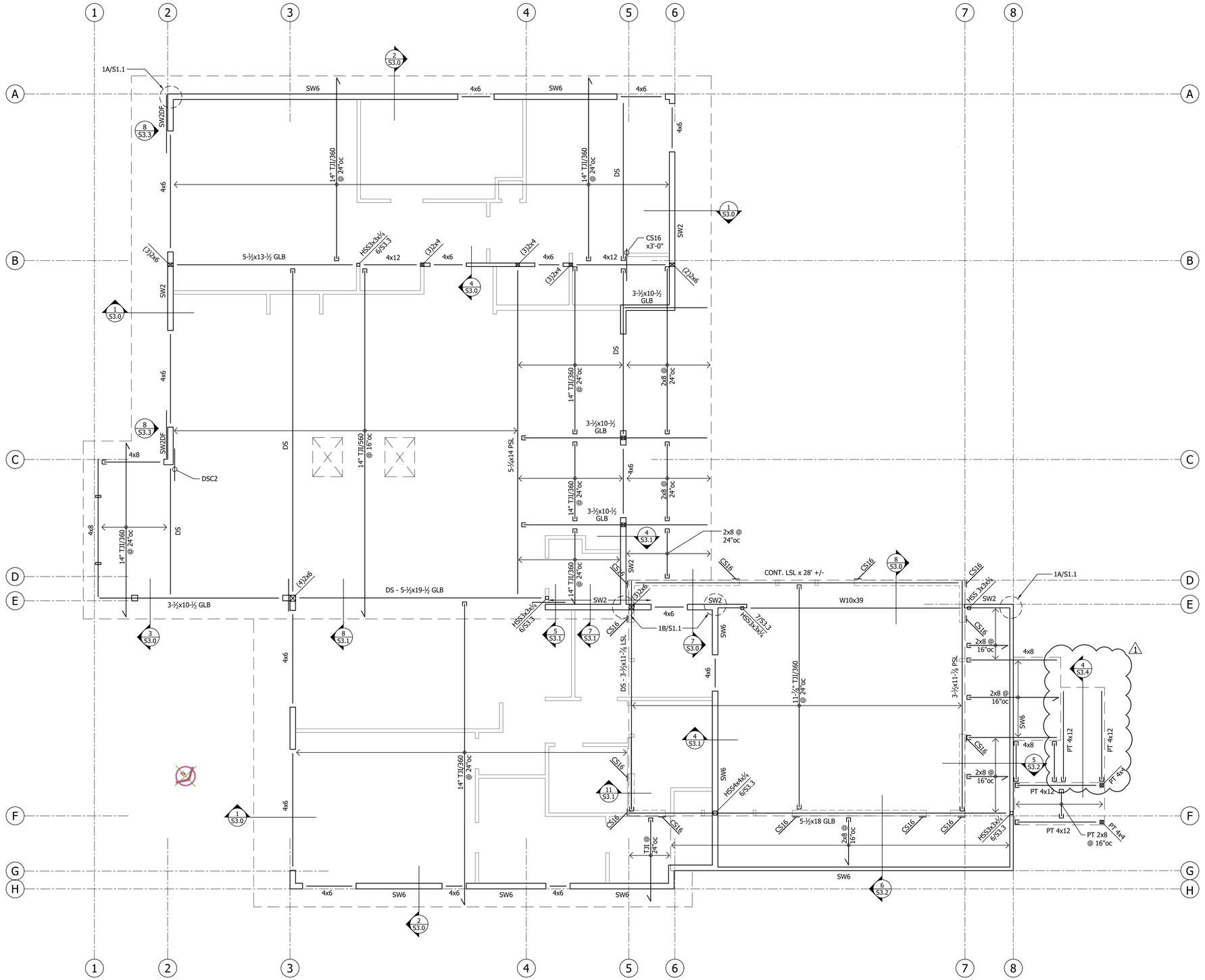
ROOF FRAMING NOTES:

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 14" TJI/360 RAFTERS @ 24"oc UNO.
3. - INDICATES 4x4 DF#2 KING POST w/ CCQ POST CAP AT TOP & BTM.
4. - INDICATES CS16x 2'-4" STRAP FROM BEAM TO COLUMN OR BUILT-UP STUDS.

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 11-⅞" TJI/360 @ 16"oc, DIRECTION PER PLAN. JOIST TO SPAN CONTINUOUS AS INDICATED ON PLAN.
3. LSL - INDICATES FLUSH-FRAMED 1-¾"x11-⅞" LSL BEAM. ALL JOISTS AND 11-⅞" & 14" DEEP BEAMS SHALL BE FLUSH-FRAMED & ALL 4x HEADERS/GLULAM BEAMS SHALL BE DROPPED UNO.
4. DS - INDICATES 1-¾"x14" LSL DRAG STRUT UNO; ATTACH SHEATHING ALONG ENTIRE LENGTH w/ 0.131"ø @ 4"oc
5. - INDICATES STRAP AT END OF SHEAR WALL ABOVE, SEE SCHEDULE ON 2/S1.1.

HANGER SCHEDULE	
MEMBER	HANGER
PT 2x8	LUSZ28
PT 4x8	HUCZ48
2x8/2x10	LUS210
(2)2x8/(2)2x10	LUS210-2
2x12	LUS210
4x12	HUCQ410
11-⅞" TJI/360	IUS/IUT2.37/11.88
1-¾x11-⅞ LSL/LVL	IUS1.81/11.88
3-½x11-⅞ LSL	HUCQ412
3-½x11-⅞ PSL	HHUS410
14" TJI/360	LSSR2.37
14" TJI/560	LSSR410
1-¾x14 LSL	U14
3-½x10-½ GLB	HUCQ410
5-½x10-½ GLB	HUCQ610
6-¾x12 GLB	HGUS6.88/10



Main Roof & Workshop Floor Framing Plan

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

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Biggs Residence

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1	12/12/2024	Review Corrections

Main Roof & Workshop Floor Framing Plan

S2.2

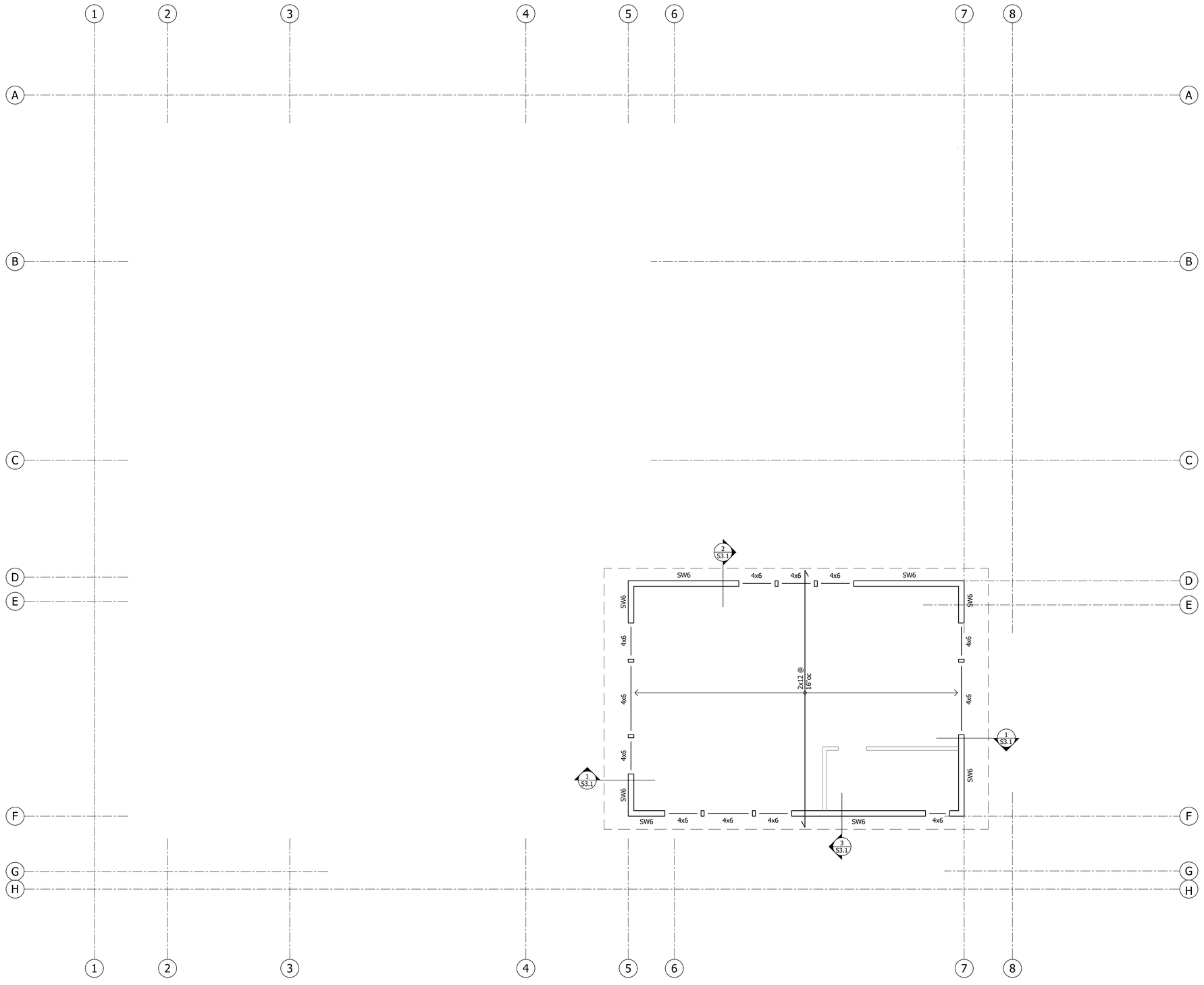
GENERAL FRAMING NOTES:

1. ALL PSL/LSL BEAMS SHALL BE FLUSH AND ALL HEADERS DROPPED, UNO. SEE 3/S3.3 FOR TYPICAL POST-TO-BEAM CONNECTIONS
2. TYP. HEADERS SHALL BE 4x6 DF#2, UNO, SEE 4/S3.3 FOR 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. SWX - 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.

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 2x12 HF#2 RAFTERS @ 16"oc UNO.
3. ⊘ - INDICATES 4x4 DF#2 KING POST w/ CCQ POST CAP AT TOP & BTM.
4. ⊘ - INDICATES CS16x 2'-4" STRAP FROM BEAM TO COLUMN OR BUILT-UP STUDS.

HANGER SCHEDULE	
MEMBER	HANGER
PT 2x8	LUSZ28
PT 4x8	HUCZ48
2x8/2x10	LUS210
(2)2x8/(2)2x10	LUS210-2
2x12	LUS210
4x12	HUCQ410
11-7/8" TJI/360	IUS/IUT2.37/11.88
1-3/4x11-7/8 LSL/LVL	IUS1.81/11.88
3-1/2x11-7/8 LSL	HUCQ412
3-1/2x11-7/8 PSL	HHUS410
14" TJI/360	LSSR2.37
14" TJI/560	LSSR410
1-3/4x14 LSL	U14
3-1/2x10-1/2 GLB	HUCQ410
5-1/2x10-1/2 GLB	HUCQ610
6-3/4x12 GLB	HGUS6.88/10



Upper Roof Framing Plan
SCALE: 1/4" = 1'-0"

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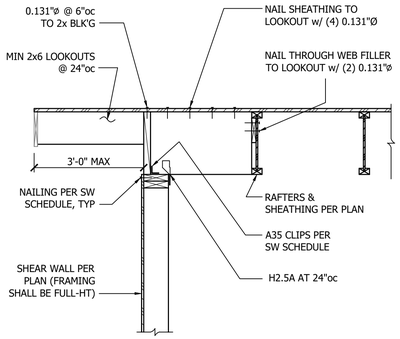
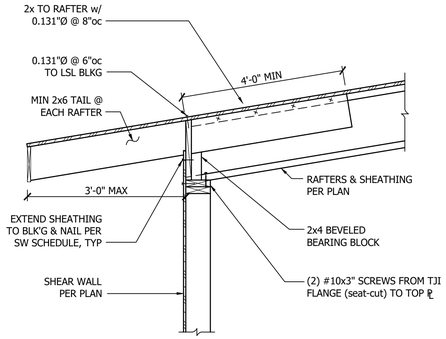
Upper Roof Framing Plan

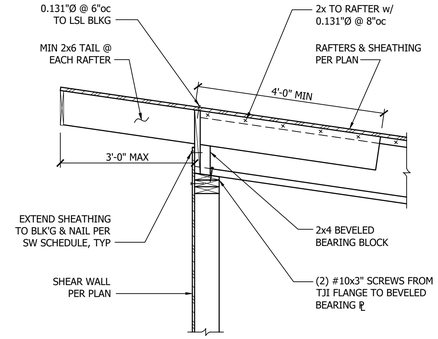
S2.3



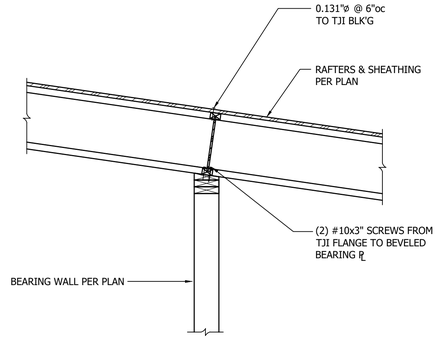
1 TJI Rafters Parallel to Exterior Wall
3/4" = 1'-0"



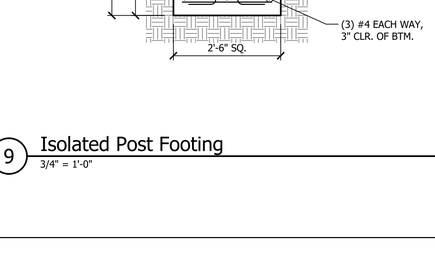
2 TJI Rafters Perp. to Wall (Low End)
3/4" = 1'-0"



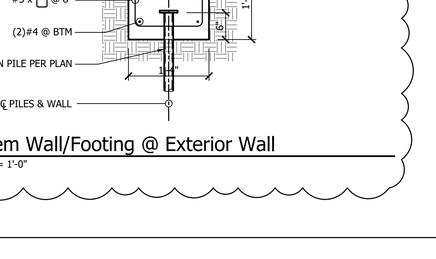
3 TJI Rafters Perp. to Wall (High End)
3/4" = 1'-0"



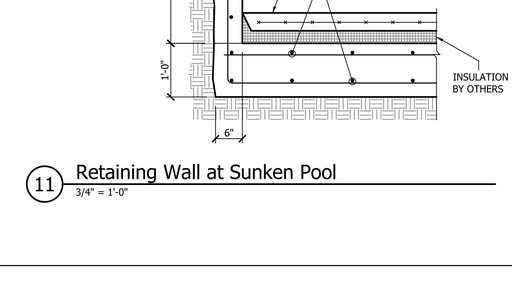
4 TJI Rafters Perp. to Interior Bearing Wall
3/4" = 1'-0"



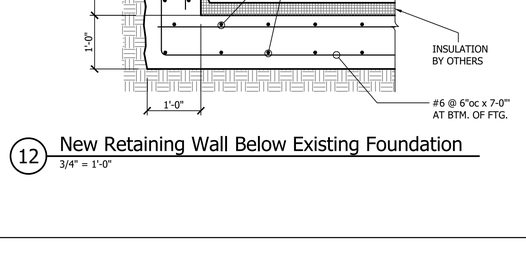
5 I-Joists Parallel to Exterior Wall
3/4" = 1'-0"



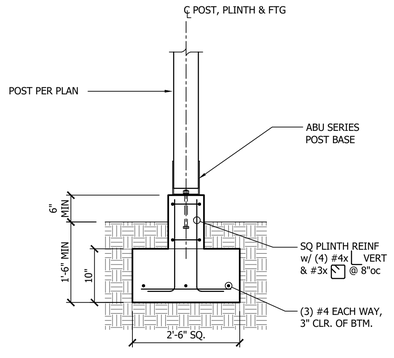
6 I-Joists Perpendicular to Exterior Wall
3/4" = 1'-0"



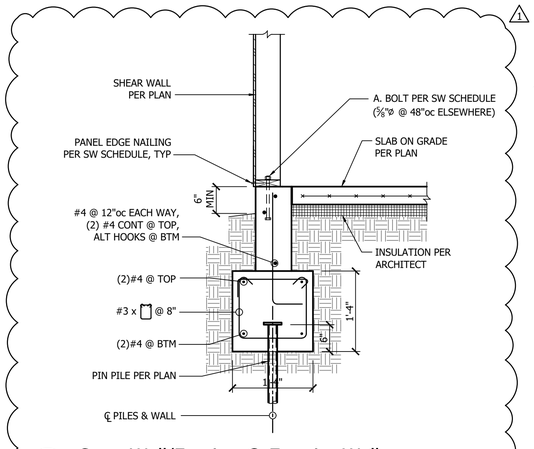
7 Cantilevered I-Joists at Exterior Wall
3/4" = 1'-0"



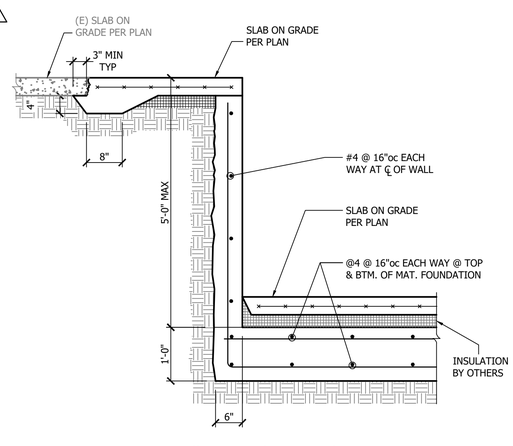
8 Cantilevered I-Joists over Steel Beam
3/4" = 1'-0"



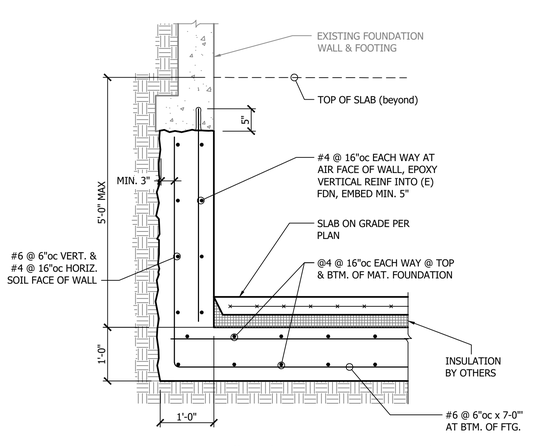
9 Isolated Post Footing
3/4" = 1'-0"



10 Stem Wall/Footing @ Exterior Wall
3/4" = 1'-0"



11 Retaining Wall at Sunken Pool
3/4" = 1'-0"



12 New Retaining Wall Below Existing Foundation
3/4" = 1'-0"

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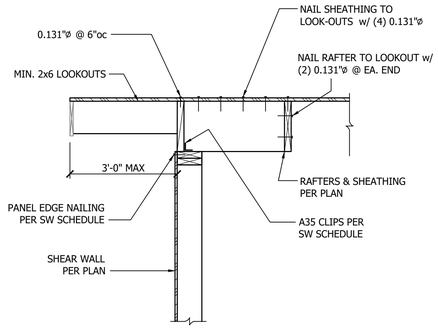
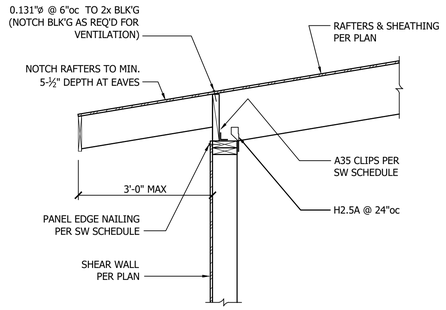
Structural Details

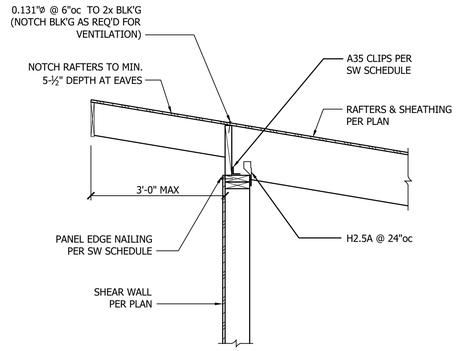
S3.0



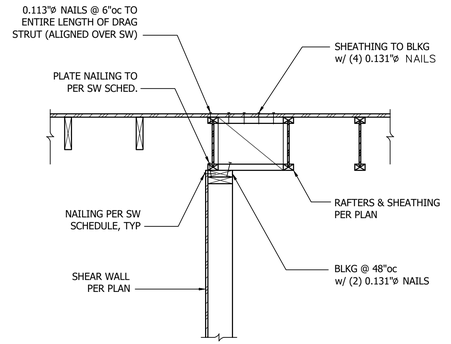
1 2x Rafter Parallel to Exterior Wall
3/4" = 1'-0"



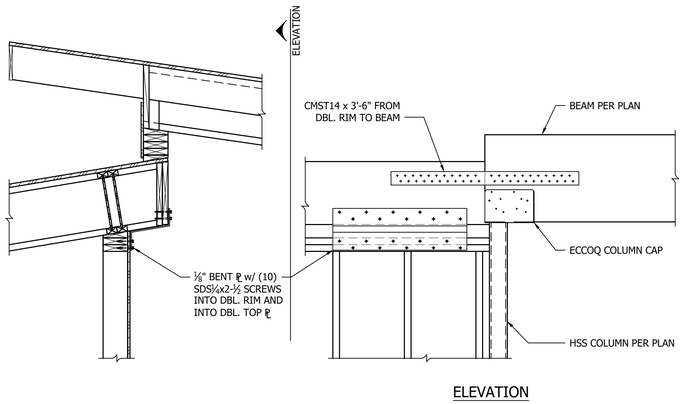
2 2x Rafters Perp. to Low Wall
3/4" = 1'-0"



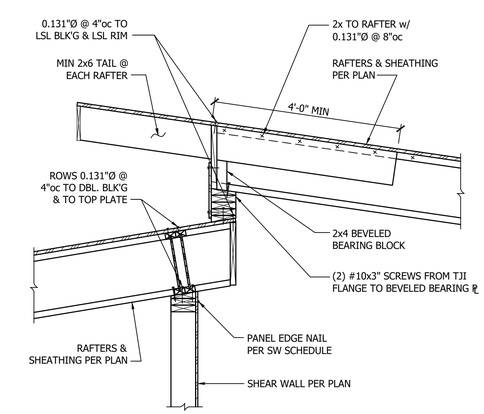
3 2x Rafters Perp. to High Wall
3/4" = 1'-0"



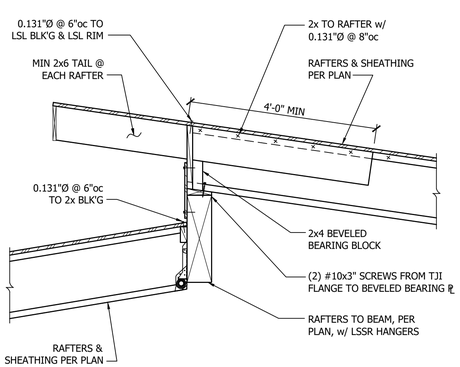
4 Interior Shear Wall ll to I-Joists Above
3/4" = 1'-0"



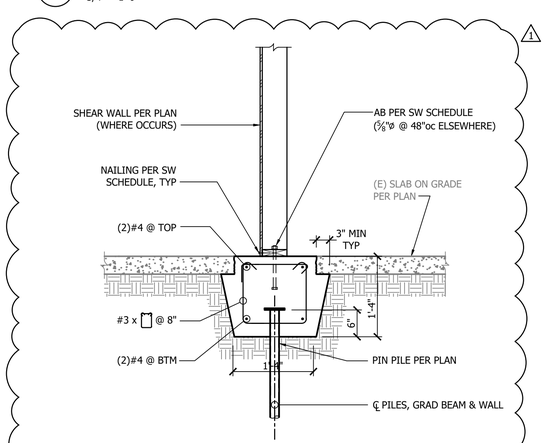
5 Drag Strut Connection at Step in Roof
3/4" = 1'-0"



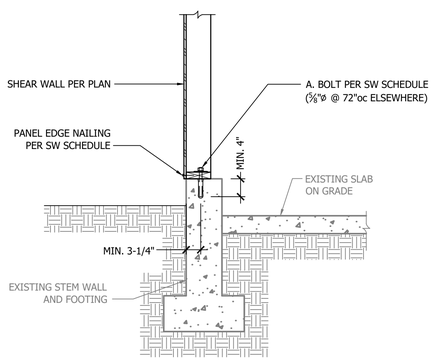
7 I-Joist Rafters at Step in Roof
3/4" = 1'-0"



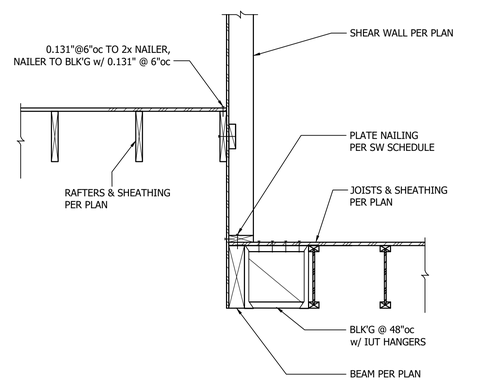
8 Beam Supporting Rafters at Step in Roof
3/4" = 1'-0"



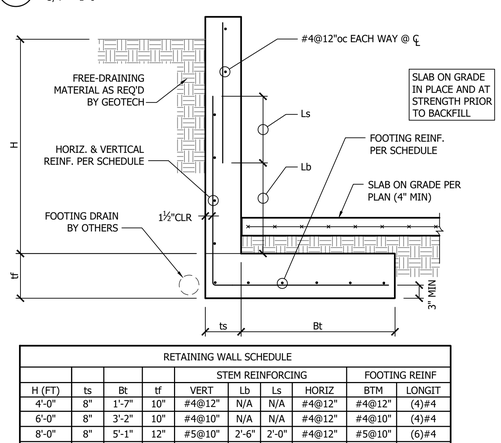
9 Continuous Footing at Existing Slab on Grade
3/4" = 1'-0"



10 Shear Wall to Existing Foundation Wall
3/4" = 1'-0"



11 I-Joists Parallel to Exterior Wall
3/4" = 1'-0"



RETAINING WALL SCHEDULE									
				STEM REINFORCING				FOOTING REINF	
H (FT)	ts	Bt	tf	VERT	Ld	Ls	HORIZ	BTM	LONGIT
4'-0"	8"	1'-7"	10"	#4@12"	N/A	N/A	#4@12"	#4@12"	(4)#4
6'-0"	8"	3'-2"	10"	#4@10"	N/A	N/A	#4@12"	#4@10"	(4)#4
8'-0"	8"	5'-1"	12"	#5@10"	2'-6"	2'-0"	#4@12"	#5@10"	(6)#4
10'-0"	8"	7'-3"	12"	#5@6"	4'-6"	2'-0"	#4@12"	#5@6"	(7)#5

12 Site Retaining Wall Schedule at Parking
3/4" = 1'-0"

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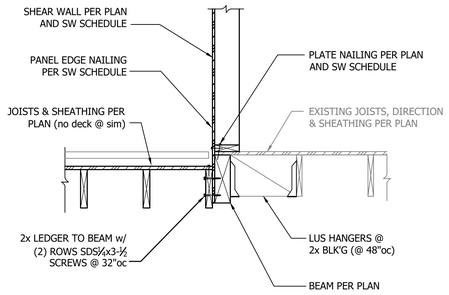
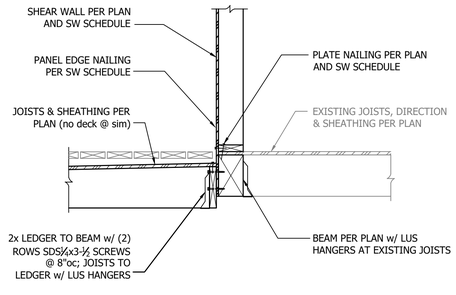
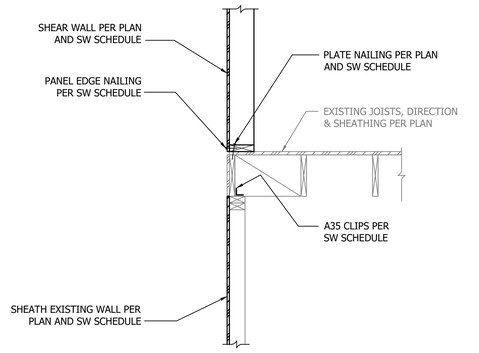
S3.1



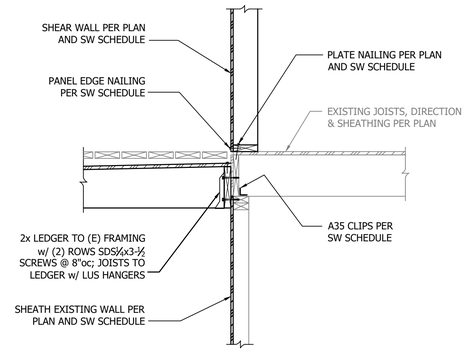
1 Deck Framing at Beam ll to (E) Joists
3/4" = 1'-0"



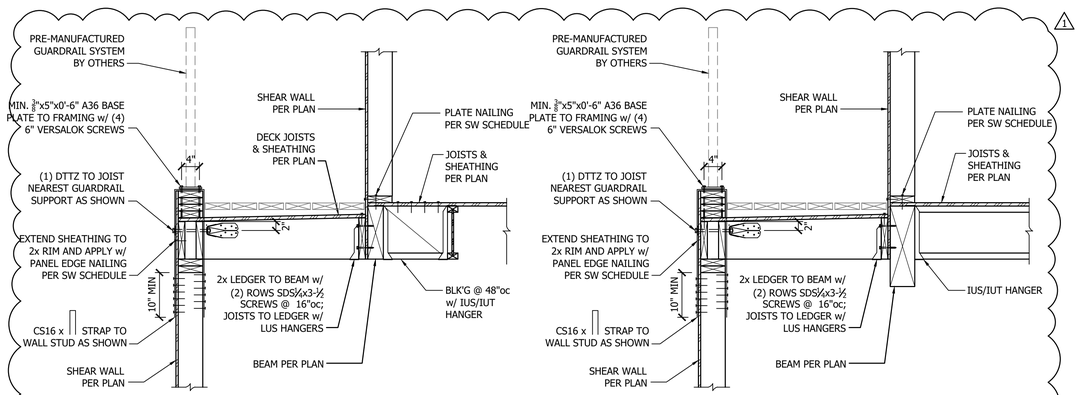
2 Deck Framing at Beam Perp. to (E) Joists
3/4" = 1'-0"



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

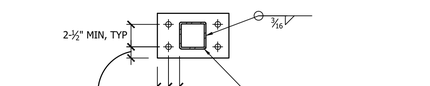


4 Existing 2x Joist Perp. to Exterior Wall
3/4" = 1'-0"

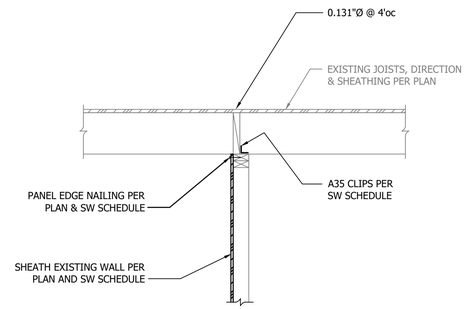


5 I-Joist to Deck Framing Transition
3/4" = 1'-0"

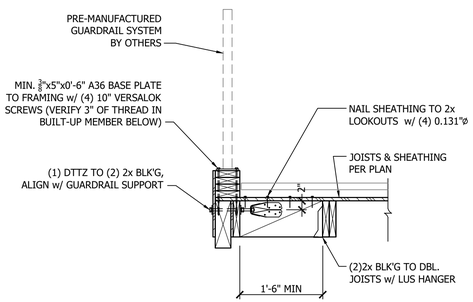
6 I-Joist to Deck Framing Transition
3/4" = 1'-0"



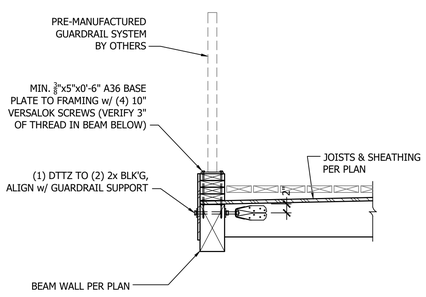
7 HSS Column to Steel Beam Below
3/4" = 1'-0"



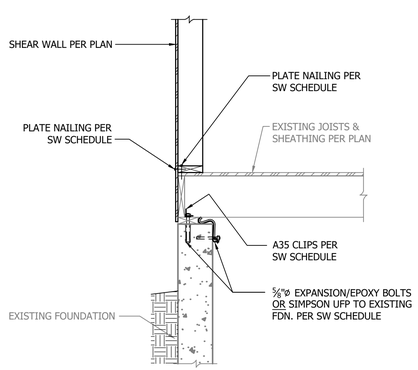
8 Shear Wall Below Existing Floor Joists
3/4" = 1'-0"



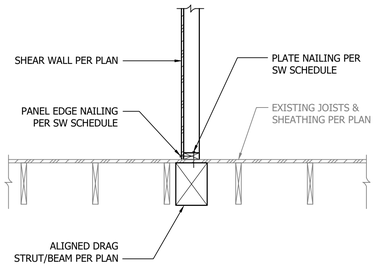
9 Guardrail at Edge of Deck ll to Joists
3/4" = 1'-0"



10 Guardrail at Deck Beam
3/4" = 1'-0"



11 Existing 2x Joist Parallel to Existing Foundation
3/4" = 1'-0"



12 Interior Shear Wall ll to (E) Joists Below
3/4" = 1'-0"

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5-9-2024

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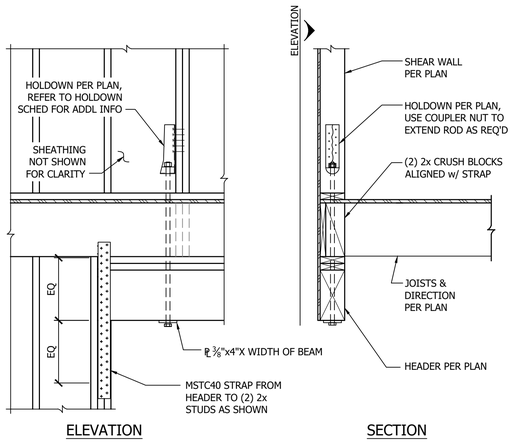
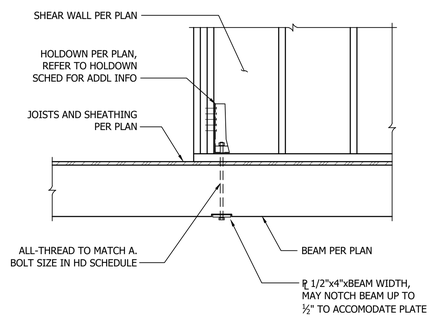
Revision	Issue Date	Drawing Set
	5/9/2024	Permit Set
1	12/12/2024	Review Corrections

Structural Details

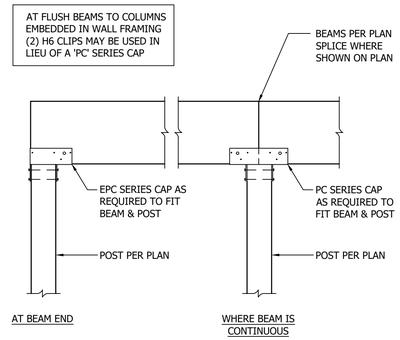
S3.2



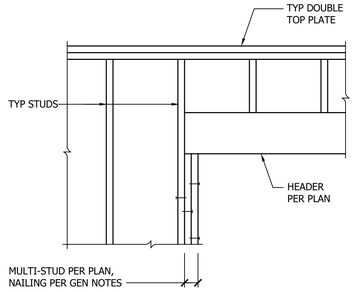
1 Holdown to Header
3/4" = 1'-0"



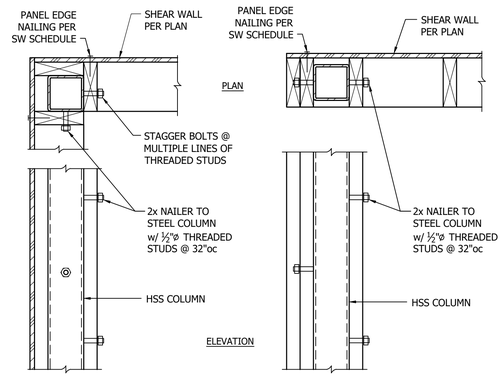
2 HD-to-Beam
3/4" = 1'-0"



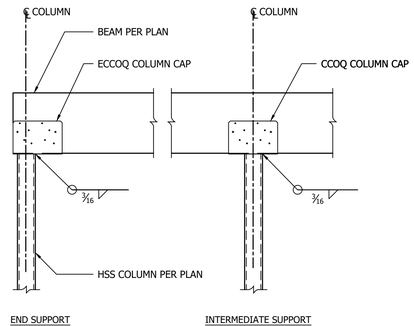
3 Wood Beam to Wood Column, Typ.
3/4" = 1'-0"



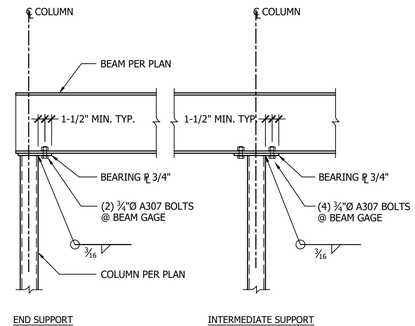
4 Header Support, Typ.
3/4" = 1'-0"



5 Nailer-to-HSS Column, Typ.
1-1/2" = 1'-0"

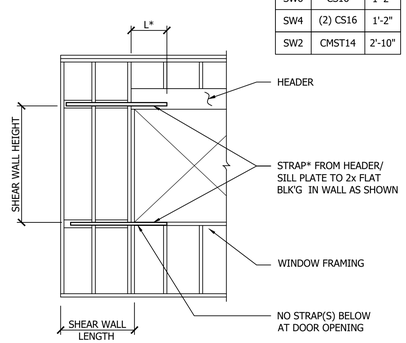


6 Wood Beam to HSS Column, Typ.
3/4" = 1'-0"

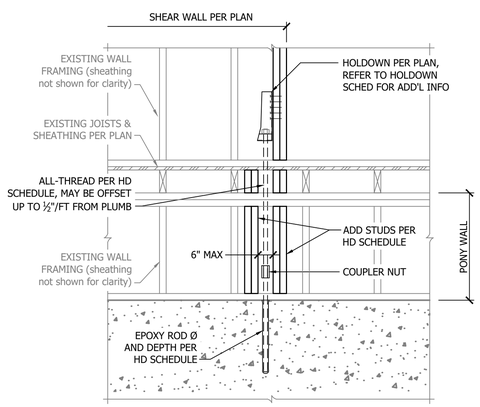


7 WF Beam to HSS Column, Typ.
3/4" = 1'-0"

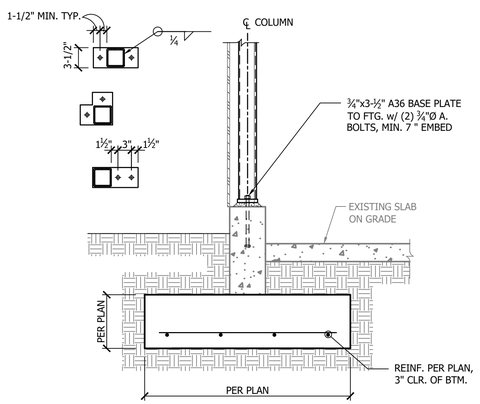
SW	* - STRAP	* - L
SW6	CS16	1'-2"
SW4	(2) CS16	1'-2"
SW2	CMST14	2'-10"



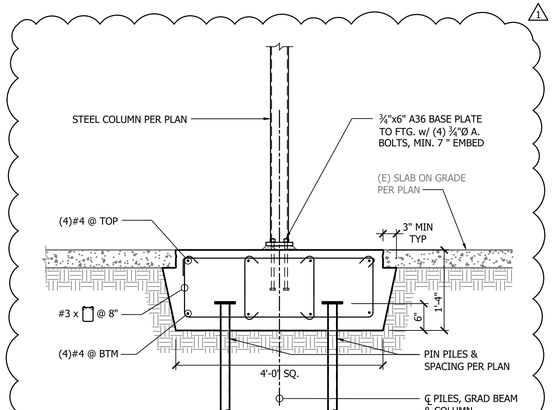
8 Force Transfer at Opening
3/8" = 1'-0"



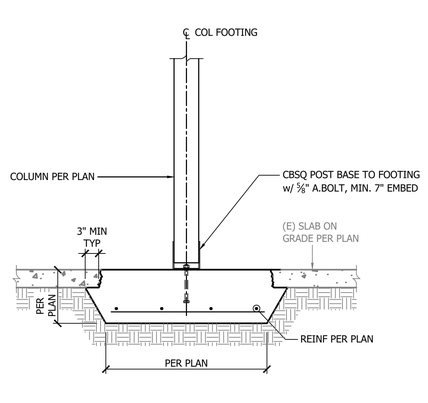
9 Retrofit Holdown at Exist. Pony Wall (Elevation)
3/4" = 1'-0"



10 HSS Column to Existing Foundation Wall
3/4" = 1'-0"



11 Pile Cap Supporting Steel Column Above
3/4" = 1'-0"



12 Isolated Post Footing @ Existing SOG
1-1/2" = 1'-0"

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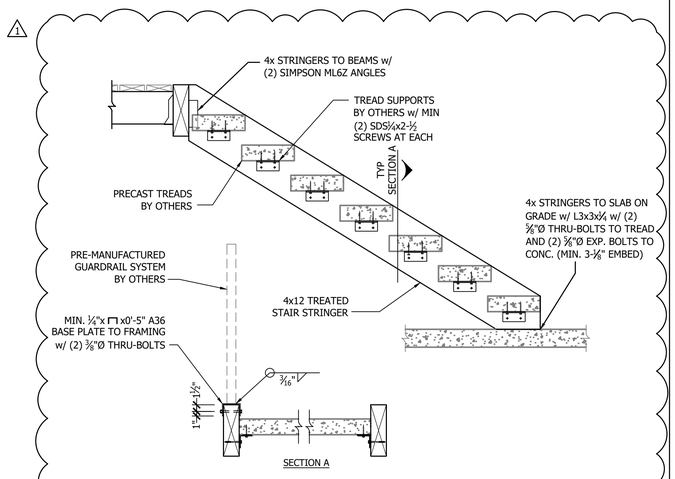
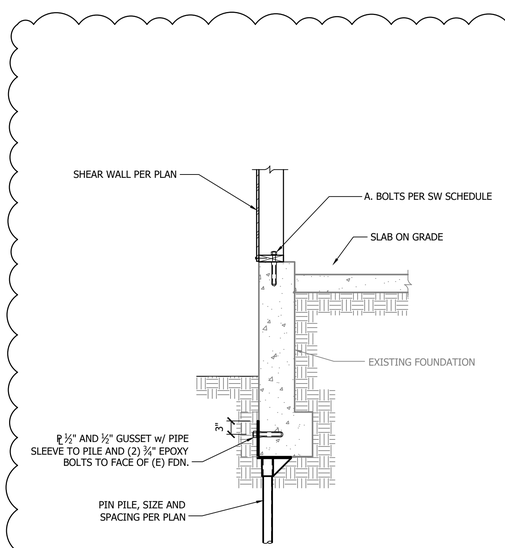
Structural Details

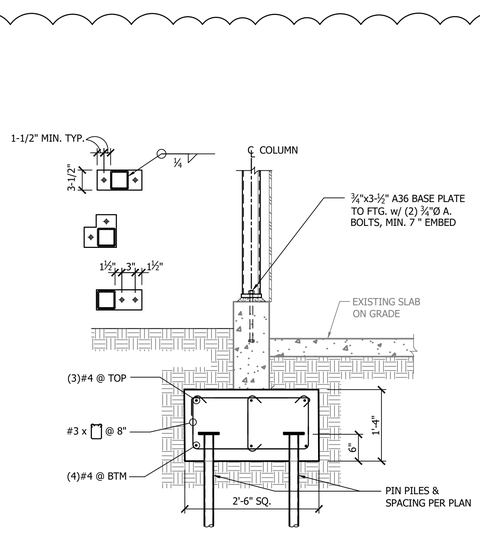
S3.3



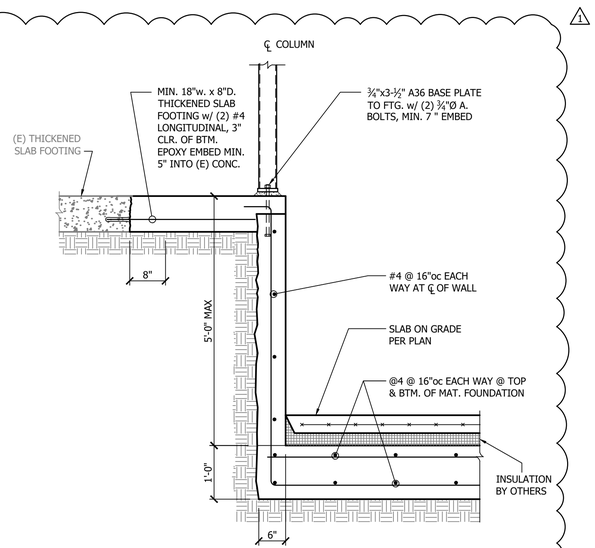
4 Typical Wood-Framed Exterior Stair
3/4" = 1'-0"



10 Pin Piles at Existing Foundation Wall
3/4" = 1'-0"



11 Pile Cap below Existing Foundation Wall
3/4" = 1'-0"



12 Retaining Wall at Sunken Pool
3/4" = 1'-0"

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S3.4