GENERAL NOTES

1. CODE COMPLIANCE:
ALL WORK SHALL COMPLY WITH THE 2018 IRC, 2018 IMC, 2018 IFGC, 2018 IFC, 2018 UPC, 2018 IPMC, 2008 NEC, 2018 INTERNATIONAL ENERGY CONSERVATION CODE WITH WASHINGTON STATE AMENDMENTS, 2009 ICC A117.1, AND WITH ALL LOCAL CODES AND ORDINANCES.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

18. ROOFING:
PROVIDE NEW ROOFING TO MATCH EXISTING.

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

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

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

22. SMOKE DETECTORS:
SMOKE & CARBON MONOXIDE THROUGHOUT NEW CONSTRUCTION. TO BE MONITORED PER FIRE DEPARTMENT REQUIREMENTS. NFPA 72 CHAPTER 29 MONITORED FIRE ALARM SYSTEM PER CoMI STANDARDS.

23. FIREBLOCKING:
FIREBLOCKING SHALL BE PROVIDED IN WOOD-FRAMED CONSTRUCTION PER 2018 IRC SECTION R302.11, SPECIFICALLY: 1) IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, 2) AT INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES, 3) IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT T.O. & B.O. RUN, 4) AT OPENINGS AROUND VENTS, PIPES, ETC. AT CEILING AND FLOOR LEVEL.

24. ADDITIONAL FIRE CODE ALTERNATES:
INSTALLATION OF 1 HOUR RATED GYPSUM IN ALL AREAS PROVIDE SOLID CORE OR FIRE-RATED DOORS

ENERGY NOTES

CLIMATIC ZONE: ZONE #4C -MARINE

THERMAL STANDARDS FOR OPENINGS: UNLIMITED OPTION

CODE: 2018 W.S.E.C. & 2018 IRC, WAC 51-11R

SPACE HEAT TYPE: NATURAL GAS, FORCED AIR SYSTEM

INSULATION VALUES: PRESCRIPTIVE METHOD

WALLS:	R-21
FLAT ATTICS/CEILINGS:	R-49
VAULTED CEILINGS:	R-38
FLOORS (OVER UNHEATED SPACES):	R-38
SLAB-ON-GRADE:	R-10

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

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

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

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

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

CRAWL SPACE: 6 MIL POLYETHELENE

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

HEATING & COOLING:
GAS FURNACE & AIR SOURCE HEAT PUMP

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

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

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

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

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

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

PLUMBING FIXTURES:
ALL PLUMBING FIXTURES SHALL CONFORM TO RCW 19.27.170

ALL TOILETS 1.6 GPM MAX	URINALS 1.0 GPF MAX
SHOWERHEADS <1.75 GPM	KITCHEN FAUCETS <1.75 GPM
LAVATORIES < 1.0 GPM	

WHOLE HOUSE VENTILATION

a. WHOLE HOUSE VENTILATION SHALL BE PROVIDED BY ERV/HRV W/ INTEGRAL FANS, PROVIDING MIN. 90 CFM RUNNING CONTINUOUSLY PER 2018 IRC TABLES M1505.4.2 (1&2). 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. ADU WHOLE HOUSE VENTILATION SHALL BE PROVIDED BY LOCAL EXHAUST FAN, PROVIDING MIN. 90 CFM RUNNING INTERMITTENTLY ON A 24 HR TIMER, AT 30% OF A 4 HOUR PERIOD.

c. 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.

d. SHALL HAVE A FILTER WITH A MERV OF AT LEAST 6 INSTALLED IN AN EASILY ACCESSIBLE LOCATION.

e. 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.

f. AIRFLOW FOR WHOLE HOUSE VENTILATION SHALL BE PROVIDED BY UNDERCUTTING INTERIOR DOORS 1/2" ABOVE FINISHED FLOOR, TYP.

g. 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.

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

	HOUSE	ADU
BEDROOMS	5	0
HEATED SQUARE FOOTAGE	3175 SF	460 SF
AIRFLOW (CFM)	90 CFM	30 CFM

PROJECT DATA

PROJECT ADDRESS:	4603 89TH AVE SE MERCER ISLAND 98040
PROPERTY TAX ID NUMBER:	019110-0645
SCOPE OF WORK:	CONSTRUCTION OF NEW TWO-STORY SINGLE FAMILY RESIDENCE WITH ATTACHED GARAGE, DETACHED ADU
ZONING:	R-9.6
CONSTRUCTION TYPE:	TYPE V B
SEISMIC ZONE:	3
NUMBER OF STORIES:	2 STORIES
FIRE PROTECTION:	NFPA 13R FIRE SPRINKLER SYSTEM
BUILDING HEIGHT	MAX. 30 FT ABOVE AVERAGE BUILDING ELEV.
GROSS FLOOR AREA	40 % LOT AREA ADDITIONAL 5% LOT AREA FOR ADU
LOT AREA:	9525 SF
SETBACKS:	FRONT: 20' SIDE: 15' TOTAL, MIN. 5' REAR: 25'

PROJECT TEAM

OWNER:	CONTRACTOR:
ADAM KOCH 6983 24TH AVE SW SEATTLE, WA 98106 PHONE: 206.251.7771 CONTACT: ADAM KOCH	BUILD MODERN HOMES CORP. 6983 24TH AVE SW SEATTLE, WA 98106 PHONE: 206.251.7771 CONTACT: ADAM KOCH
ARCHITECT:	**STRUCTURAL:**
STURMAN ARCHITECTS, INC. 9 - 103RD AVE NE SUITE 203 BELLEVUE, WA 98004 PHONE: 425.451.7003 CONTACT: BRAD STURMAN	ANNÉE STRUCTURAL ENGINEERING 1801 18TH AVENUE S SEATTLE, WA 98144 PHONE: 206.658.5169 CONTACT: MIKE ANNÉE

LEGAL DESCRIPTION

PER FIDUCIARY BARGAIN AND SALE DEED RECORDING #20090922000431

LOT 1, BLOCK 9, ALLVIEW HEIGHTS ADDITION TO SEATTLE, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 16 OF PLATS, PAGE 20, IN KING COUNTY, WA.

2018 WSEC CREDITS

PROJECT IS A NEW RESIDENCE GREATER THAN 1,500 SQ FT AND LESS THAN 5,000 SQ FT CONDITIONED AREA, AND SO IS A MEDIUM DWELLING UNIT REQUIRING 6 CREDITS

OPTION	CREDITS	DESCRIPTION
2	1.0	-HEAT PUMP EFFICIENCY (AIR COOLED) 14.0 SEER, 11 HSPF
1.3	0.5	-VERTICAL FENESTRATION U = .28, FLOOR=R-38 -R-10 RIGID INSULATION ENTIRE PERIMETER AND UNDER ENTIRE SLAB IN HEATED SPACE
2.3	1.5	-REDUCE TESTED AIR LEAKAGE TO 1.5 AIR CHANGES PER HOUR MAX. AT 50 PASCALS -WHOLE HOUSE VENTILATION REQS MET W/ HEAT RECOVERY SYSTEM W/ MIN. EFFICIENCY OF 0.75, 125 CFM
3.5	1.5	-AIR SOURCE, CENTRALLY DUCTED HEAT PUMP W/ MIN. HSPF OF 11.0
4.2	1.0	-HVAC EQUIP. & AND ITS DUCT SYSTEM INSTALLATION SHALL COMPLY W/ R403.3.7. ALL EQUIP. & DUCTS SHALL BE IN CONDITIONED SPACE. W/I CONTINUOUS AIR BARRIER & BUILDING THERMAL ENVELOPE.
5.2	0.5	-ENERGY STAR RATED GAS OR PROPANE WATER HEATER W/ A MIN. UEF OF 0.80
TOTAL CREDITS	6	

PROJECT IS A NEW ADU LESS THAN 1,500 SF OF CONDITIONED AREA, WITH LESS THAN 300 SF FENESTRATION, AND SO IS A SMALL DWELLING REQUIRING 3 CREDITS.

OPTION	CREDITS	DESCRIPTION
2	1.0	-HEAT PUMP EFFICIENCY (AIR COOLED) 14.0 SEER, 11 HSPF
1.3	0.5	-VERTICAL FENESTRATION U = .28, FLOOR=R-38 -R-10 RIGID INSULATION ENTIRE PERIMETER AND UNDER ENTIRE SLAB IN HEATED SPACE
3.6	2.0	-DUCTLESS SPLIT SYSTEM HEAT PUMP W/ NO ELECTRIC RESISTANCE HEATING IN THE PRIMARY LIVING AREAS, W/ MIN HSPF OF 10
TOTAL CREDITS	3.5	

*PLEASE NOTE: ALL APPLIANCES SHALL BE INSTALLED WITH SUPPORTING DOCUMENTATION ON SITE PRIOR TO FINAL INSPECTION. NO DRYER DUCTS OR DRYER VENT CAPS SHALL NOT BE INSTALLED

NOXIOUS WEEDS

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

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 WILL RELIEVE STURMAN ARCHITECTS FROM ANY RESPONSIBILITY FOR THE CONSEQUENCES.

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

BUILDING AREA

	MAIN FLOOR	UPPER FLOOR	HEATED HOUSE SUB-TOTAL	ATTACHED GARAGE	HOUSE GRAND TOTAL	ATTACHED ADU	UNCOVERED DECKS
PROPOSED HOUSE:	1387 SF	1788 SF	3175 SF	608 SF	3783 SF	455 SF	211 SF

LOT COVERAGE & HARDSCAPE

LOT COVERAGE	GROSS LOT S.F.	MAIN ROOF STRUCT	NOT USED	DRIVES/ PARKING	TOTAL LOT COVERAGE	% LOT COVERAGE
PROPOSED LOT COVERAGE	9525 SF	3129 SF		654 SF	3783 SF	39.7 %
NET GAIN/LOSS LOT COVERAGE		+3129 SF		+ 654 SF	+3783 SF	+39.7 %
% ALLOWED LOT COVERAGE					3810 SF ALLOWABLE	40 %

HIGHEST EL: 362.0'
LOWEST EL: 357.5'
ELEVATION DIFFERENCE= 4.5'
4.5' DIVIDED BY 147.45' (HORIZ. DIST. BTWN. HIGHEST & LOWEST ELEV.) = .03

LOT SLOPE IS 3%, WHICH IS LESS THAN 15% SO LOT COVERAGE ALLOWED IS 40%.

HARDSCAPE	FRONT WALK	HOUSE PATIO	SPA PATIO	SIDE WALK	REAR WALK	TOTAL HARDSCAPE	% HARDSCAPE
PROPOSED HARDSCAPE	167 SF	105 SF	465 SF	39 SF	33 SF	809 SF	8.5 %
NET GAIN/LOSS HARDSCAPE	+167 SF	+105 SF	+465 SF	+39 SF	+33 SF	809 SF	8.5 %
% ALLOWED HARDSCAPE						857.25 SF ALLOWABLE	9 %

ADDITIONAL 9% OF LOT SIZE WILL DETERMINE ALLOWABLE HARDSCAPE SURFACE

GROSS FLOOR AREA

	BASEMENT EXCLUSION	NEW FLOOR AREA
ADU		455 SF
MAIN FLOOR		1387 SF
UPPER FLOOR		1788 SF
GARAGE		608 SF
ROOF DECK		10.5 SF
GROSS FLOOR AREA		4248.5 SF

NET LOT AREA	9525 SF
ALLOWED MAX. % GFA COVERAGE	40.0 %
ALLOWED GROSS FLOOR AREA	3810 SF
W/ ALLOWED ADU INCREASE	4270 SF
TOTAL GFA COVERAGE	4248.5 SF
PROPOSED % GFA COVERAGE	44.6 %

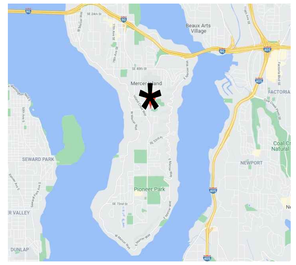
PER 19.02.020(D)(3)(b)
B.IF AN ACCESSORY DWELLING UNIT IS PROPOSED, THE 40 PERCENT ALLOWED GROSS FLOOR AREA MAY BE INCREASED BY THE LESSER OF FIVE PERCENTAGE POINTS OR THE ACTUAL FLOOR AREA OF THE PROPOSED ACCESSORY DWELLING UNIT, PROVIDED:

I.THE ALLOWED GROSS FLOOR AREA OF ACCESSORY BUILDINGS THAT ARE NOT PARTIALLY OR ENTIRELY USED FOR AN ACCESSORY DWELLING UNIT SHALL NOT BE INCREASED THROUGH THE USE OF THIS PROVISION;

II.THE LOT WILL CONTAIN AN ACCESSORY DWELLING UNIT ASSOCIATED WITH THE APPLICATION FOR A NEW OR REMODELED SINGLE-FAMILY HOME; AND

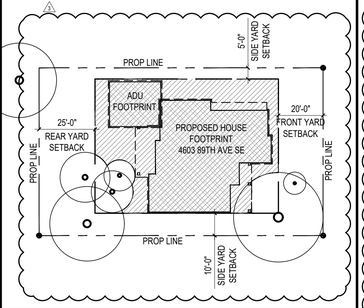
III.THE TOTAL GROSS FLOOR AREA SHALL NOT EXCEED 4,500 SQUARE FEET OR 45 PERCENT OF THE LOT AREA, WHICHEVER IS LESS.

VICINITY MAP

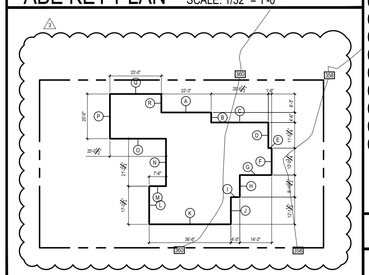


SHEET INDEX

BUILDING PAD DIAGRAM SCALE: 1/32" = 1'-0"



ABE KEY PLAN SCALE: 1/32" = 1'-0"



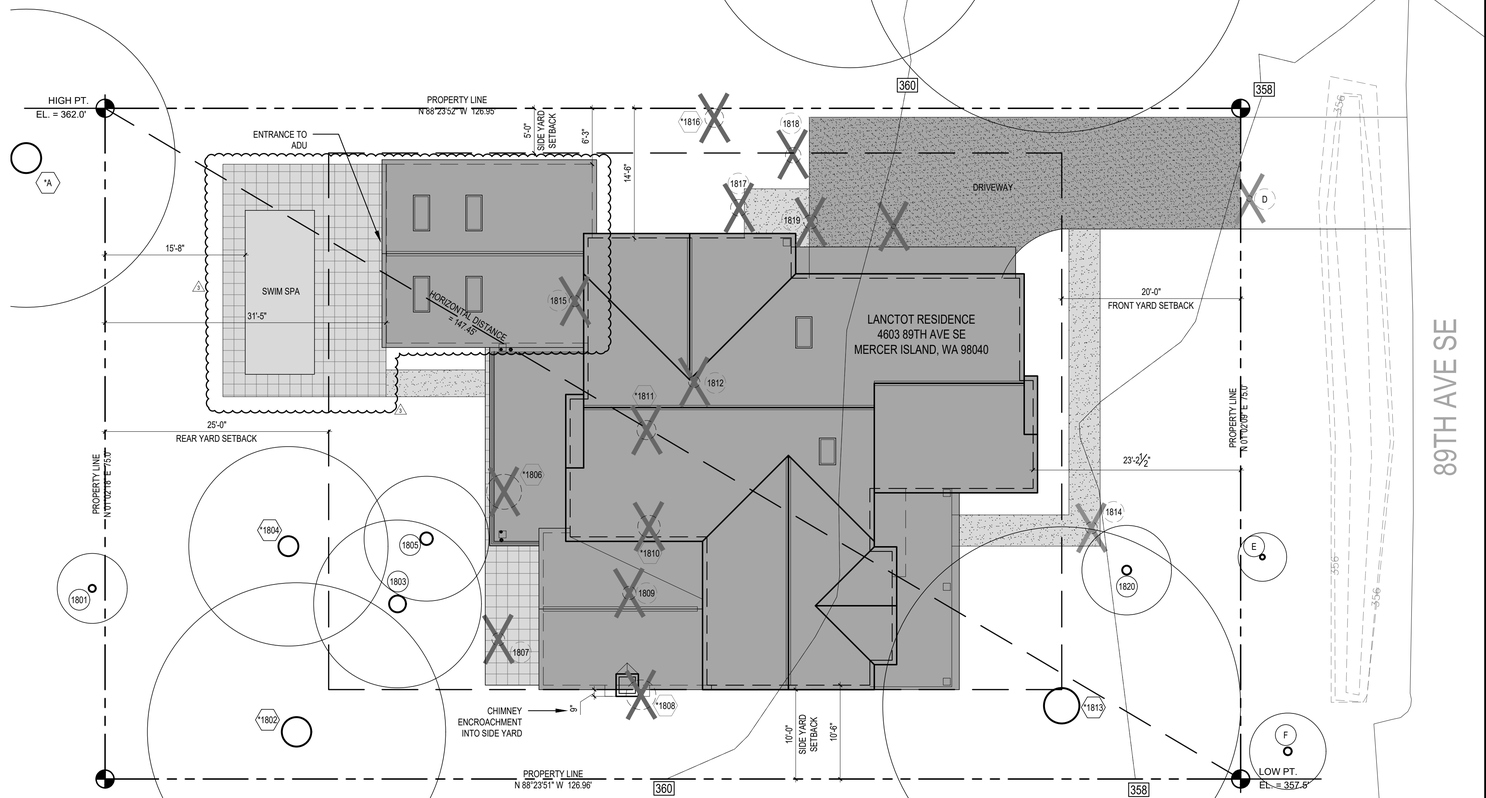
AVERAGE BUILDING ELEV.

AVERAGE BUILDING ELEVATION

HOUSE	Wall Length	Elevation Pt.	Wall Length X Elev. Pt.
A	22.25	361.0	8032.25
B	4.5	360.5	1622.25
C	25.54	360.0	9194.4
D	11.44	359.0	4106.96
E	1.5	359.0	538.5
F	12.08	359.0	4336.72
G	14.25	359.0	5115.75
H	9.875	360.0	3555
I	4	360.0	1440
J	12.125	360.0	4365
K	36.5	360.0	13140
L	17.08	361.0	6165.88
M	7.5	361.0	2707.5
N	21.21	361.0	7656.81
O	25.08	361.0	9053.88
P	20	361.0	7220
Q	23	361.0	8303
R	8.25	361.0	2978.25
	276.18	**6484.5**	**99532.15**
99532.15	**360.39**	Average Building Elevation	
276.18			

TREE PROTECTION

A TREE PROTECTION INSPECTION IS REQUIRED BEFORE START OF WORK



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

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

REVISION SET 08/22/23

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

REGISTERED ARCHITECT
BRADLEY J. STURMAN
STATE OF WASHINGTON
5662

KOCH RESIDENCE
PERMIT SET
4603 89TH AVE SE
MERCER ISLAND, WA 98040

SITE CALCS
GENERAL NOTES
SITE PLAN

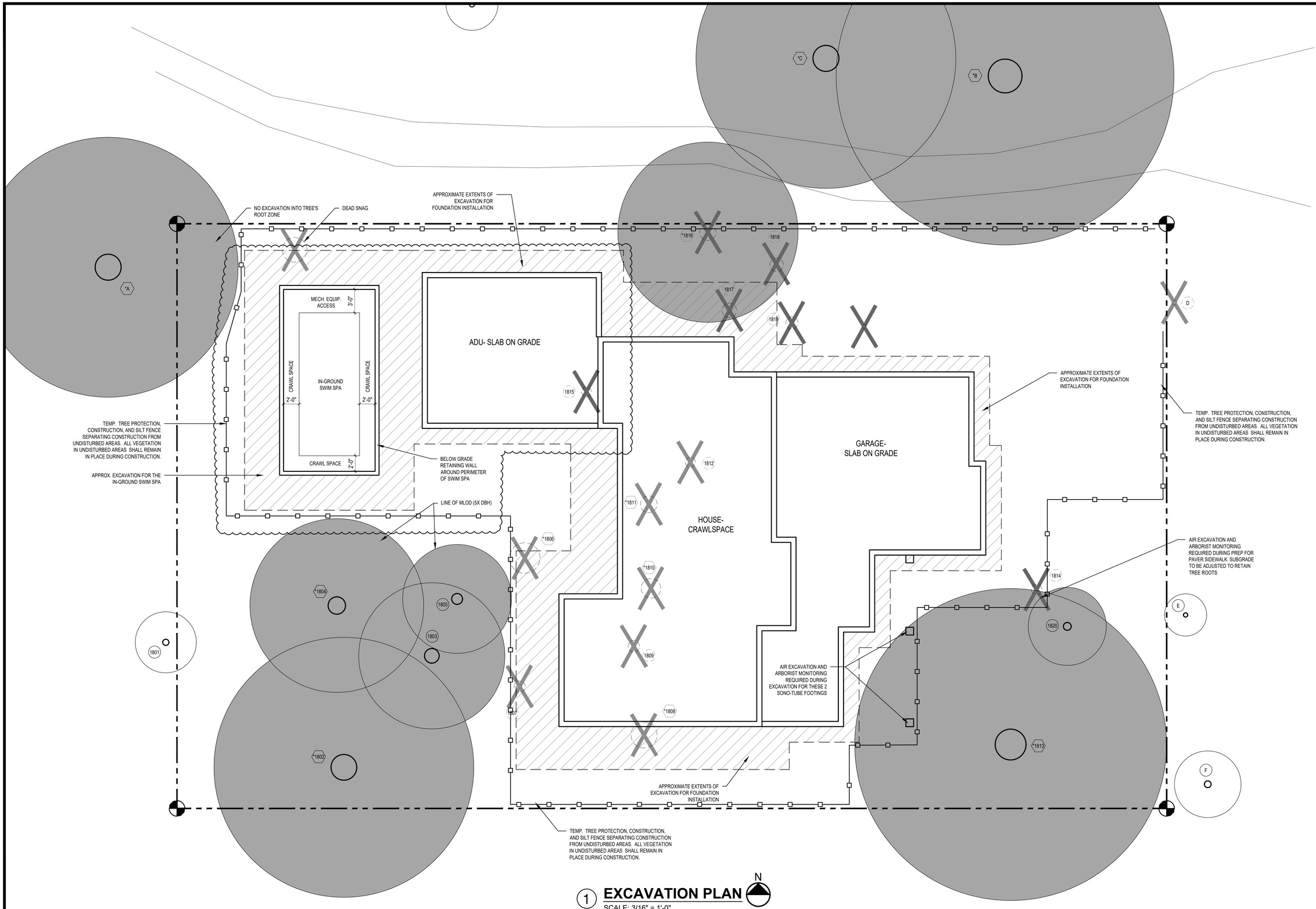
REVISIONS:
1 2022-11-29 Corrections #1
2 2023-2-15 Corrections #2
3 2023-4-22 Design Revisions

DRAWN BY: KE

CHECKED BY: BJS

SHEET **A1.0**

PLOT DATE: 8/22/2023



1 EXCAVATION PLAN

SCALE: 3/16" = 1'-0"

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

EXCAVATION PLAN

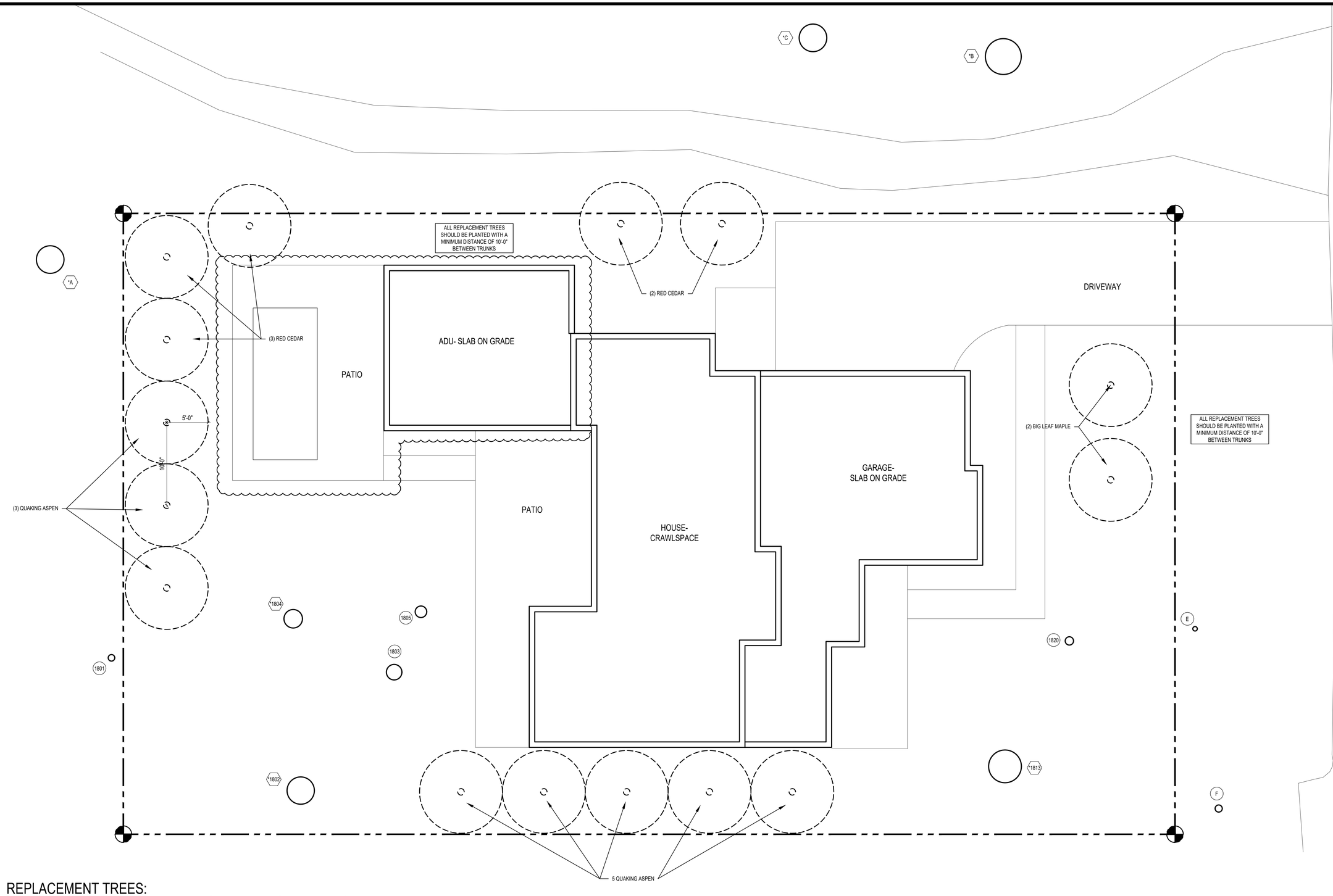
REVISIONS:
- 2022-11-28 Corrections #1
- 2023-2-15 Corrections #2
- 2023-8-22 Design Revisions

DRAWN BY: KE

CHECKED BY: BJS

SHEET **A1.1**

PLOT DATE: 8/22/2023



REPLACEMENT TREES:

QUAKING ASPEN = 8
BIG LEAF MAPLE = 2
RED CEDAR = 5
TOTAL REPLACEMENT TREES = 15

REQUIRED REPLACEMENT TREES
EQUALS 79
A FEE IN LIEU OF IS BEING REQUESTED
FOR THE REMAINING 64 REPLACEMENT
TREES WHICH CANNOT FIT ON THIS SITE.

1 REPLANTING PLAN

SCALE: 3/16" = 1'-0"

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

REVISION SET 08/22/23

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PERMIT SET
4603 89TH AVE SE
MERCER ISLAND, WA 98040

TREE PLAN
REPLANTING PLAN

REVISIONS:
2022-11-29 Corrections #1
2023-2-15 Corrections #2
2023-8-22 Design Revisions

DRAWN BY: KE
CHECKED BY: BJS

SHEET
A1.2

PLOT DATE: 8/22/2023

TOPOGRAPHIC & BOUNDARY SURVEY

LEGAL DESCRIPTION

(PER FIDUCIARY BARGAIN AND SALE DEED RECORDING# 20090922000431)

LOT 1, BLOCK 9, ALLVIEW HEIGHTS ADDITION TO SEATTLE, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 16 OF PLATS, PAGE 20, IN KING COUNTY, WASHINGTON.

BASIS OF BEARINGS

N01°02'28"E BETWEEN SURVEY MONUMENT FOUND ON THE CENTERLINE OF 88TH AVE. S.E., PER GPS OBSERVATIONS, WASHINGTON STATE PLANE COORDINATE SYSTEM, NORTH ZONE.

REFERENCES

R1 ALLVIEW HEIGHTS ADDITION TO SEATTLE, RECORDED IN VOLUME 16 OF PLATS, PAGE 20, RECORDS OF KING COUNTY, WASHINGTON.

R2 RECORD OF SURVEY, RECORDED IN BOOK 165 OF SURVEYS, PAGE 162, RECORDS OF KING COUNTY, WASHINGTON.

VERTICAL DATUM

NAVD88, PER GPS OBSERVATIONS.

SURVEYOR'S NOTES

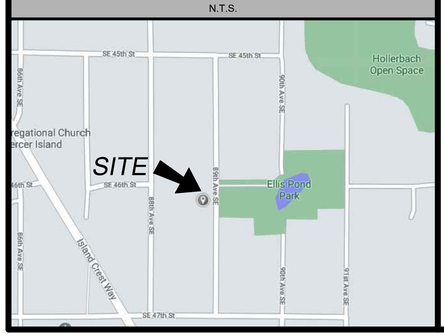
1. THE TOPOGRAPHIC SURVEY SHOWN HEREON WAS PERFORMED IN SEPTEMBER OF 2020. THE FIELD DATA WAS COLLECTED AND RECORDED ON MAGNETIC MEDIA THROUGH AN ELECTRONIC THEODOLITE. THE DATA FILE IS ARCHIVED ON DISC OR CD. WRITTEN FIELD NOTES MAY NOT EXIST. CONTOURS ARE SHOWN FOR CONVENIENCE ONLY. DESIGN SHOULD RELY ON SPOT ELEVATIONS.
2. ALL MONUMENTS SHOWN HEREON WERE LOCATED DURING THE COURSE OF THIS SURVEY UNLESS OTHERWISE NOTED.
3. THE TYPES AND LOCATIONS OF ANY UTILITIES SHOWN ON THIS DRAWING ARE BASED ON INFORMATION PROVIDED TO US, BY OTHERS OR GENERAL INFORMATION READILY AVAILABLE IN THE PUBLIC DOMAIN INCLUDING, AS APPLICABLE, IDENTIFYING MARKINGS PLACED BY UTILITY LOCATE SERVICES AND OBSERVED BY TERRANE IN THE FIELD. AS SUCH, THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS ARE FOR INFORMATIONAL PURPOSES ONLY AND SHOULD NOT BE RELIED ON FOR DESIGN OR CONSTRUCTION PURPOSES; TERRANE IS NOT RESPONSIBLE OR LIABLE FOR THE ACCURACY OR COMPLETENESS OF THIS UTILITY INFORMATION. FOR THE ACCURATE LOCATION AND TYPE OF UTILITIES NECESSARY FOR DESIGN AND CONSTRUCTION, PLEASE CONTACT THE SITE OWNER AND THE LOCAL UTILITY LOCATE SERVICE (800-424-5555).
4. SUBJECT PROPERTY TAX PARCEL NO. 019110-0645.
5. SUBJECT PROPERTY AREA PER THIS SURVEY IS 9,521 ±S.F. (0.22 ACRES)
6. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT. EASEMENTS AND OTHER ENCUMBRANCES MAY EXIST THAT ARE NOT SHOWN HEREON.
7. FIELD DATA FOR THIS SURVEY WAS OBTAINED BY DIRECT FIELD MEASUREMENTS WITH A CALIBRATED ELECTRONIC 5-SECOND TOTAL STATION AND/OR SURVEY GRADE GPS OBSERVATIONS. ALL ANGULAR AND LINEAR RELATIONSHIPS ARE ACCURATE AND MEET THE STANDARDS SET BY WAC 332-130-090.

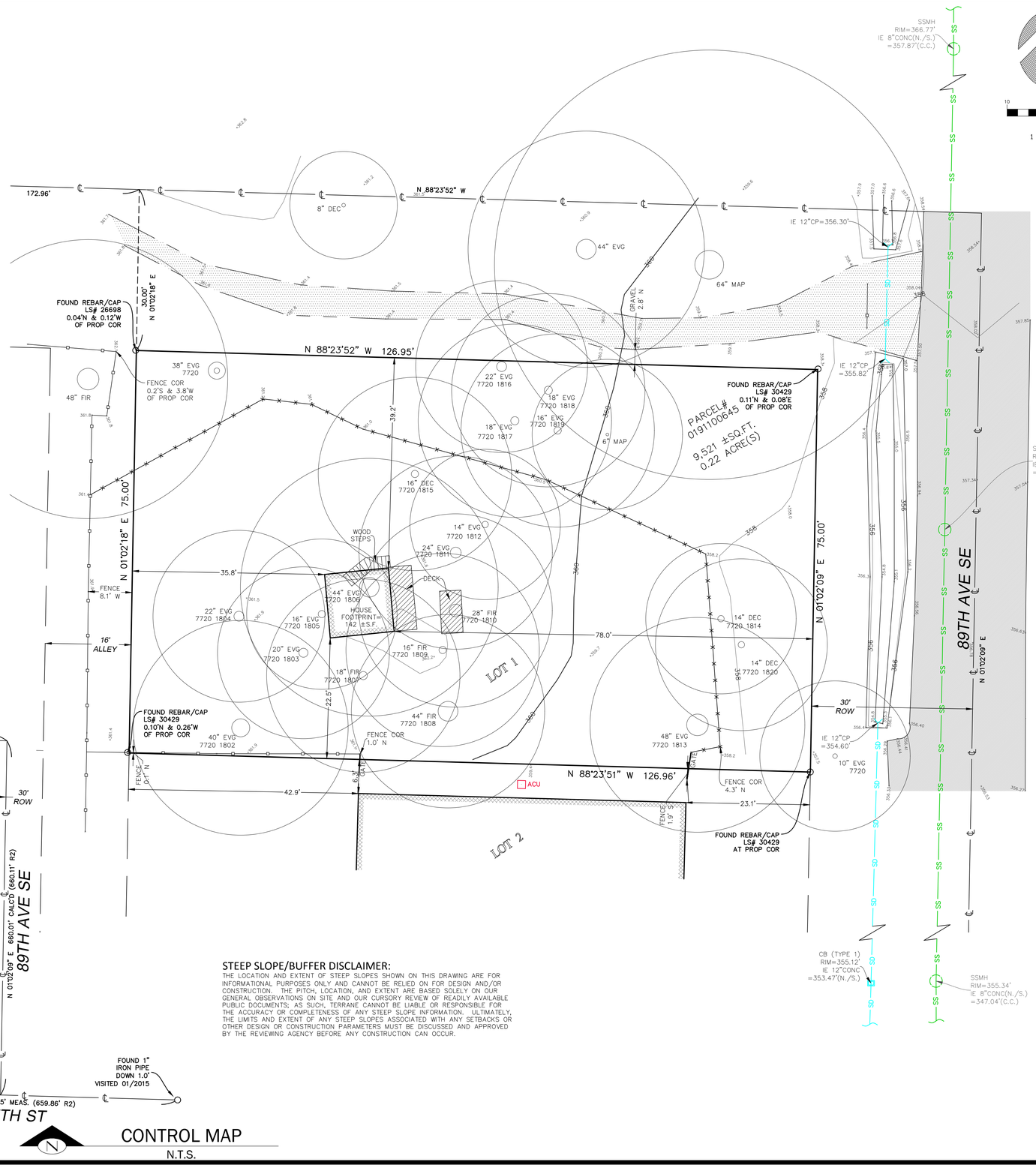
LEGEND

ACU	AC UNIT		FENCE LINE (WOOD)
	ASPHALT SURFACE		GRAVEL SURFACE
	BUILDING		INLET (TYPE 1)
	CENTERLINE ROW		REBAR AS NOTED (FOUND)
	CULVERT PIPE	SS	SEWER LINE
	DECK		SEWER MANHOLE
	FENCE LINE (CHAIN LINK)	SD	STORM DRAIN LINE
	MONUMENT IN CASE (FOUND) SIZE TYPE		TREE (AS NOTED)
	MONUMENT (SURFACE, FOUND)		

VICINITY MAP

N.T.S.





STEEP SLOPE/BUFFER DISCLAIMER:

THE LOCATION AND EXTENT OF STEEP SLOPES SHOWN ON THIS DRAWING ARE FOR INFORMATIONAL PURPOSES ONLY AND CANNOT BE RELIED ON FOR DESIGN AND/OR CONSTRUCTION. THE PITCH, LOCATION, AND EXTENT ARE BASED SOLELY ON OUR GENERAL OBSERVATIONS ON SITE AND OUR CURSORY REVIEW OF READILY AVAILABLE PUBLIC DOCUMENTS; AS SUCH, TERRANE CANNOT BE LIABLE OR RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY STEEP SLOPE INFORMATION. ULTIMATELY, THE LIMITS AND EXTENT OF ANY STEEP SLOPES ASSOCIATED WITH ANY SETBACKS OR OTHER DESIGN OR CONSTRUCTION PARAMETERS MUST BE DISCUSSED AND APPROVED BY THE REVIEWING AGENCY BEFORE ANY CONSTRUCTION CAN OCCUR.

measure success

TOPOGRAPHIC & BOUNDARY SURVEY
SE 1/4 OF SW 1/4 SEC 18, TWP. 24N., RGE 05E., W.M.
PARCEL NO. 0191100645

JAYMARC HOMES
4XXX 89TH AVE SE
MERCER ISLAND, WA 98040

GOODMAN MILLER NORTHWEST PROFESSIONAL LAND SURVEYOR STATE OF WASHINGTON 21810 09/28/20

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

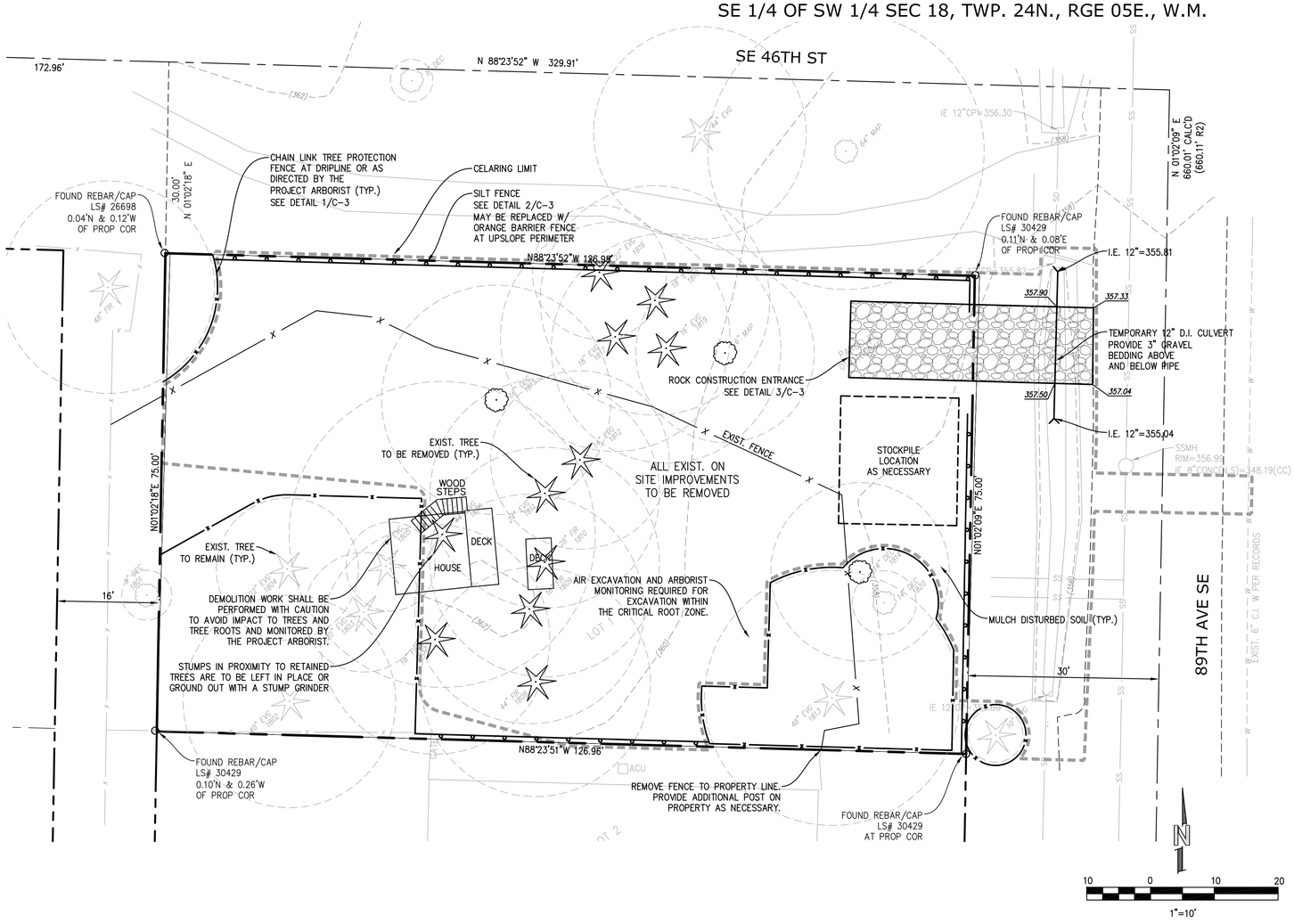
JOB NUMBER:	201809
DATE:	09/28/20
DRAFTED BY:	IDV-GKD
CHECKED BY:	JGM
SCALE:	1" = 10'

REVISION HISTORY

SHEET NUMBER

1 OF 1

SE 1/4 OF SW 1/4 SEC 18, TWP. 24N., RGE 05E., W.M.



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.

BASIS OF BEARINGS

N01°02'28"E BETWEEN SURVEY MONUMENT FOUND ON THE CENTERLINE OF 88TH AVE. S.E., PER GPS OBSERVATIONS, WASHINGTON STATE PLANE COORDINATE SYSTEM, NORTH ZONE.

LEGAL DESCRIPTION

(PER FIDUCIARY BARGAIN AND SALE DEED RECORDING# 20090922000431)

LOT 1, BLOCK 9, ALLVIEW HEIGHTS ADDITION TO SEATTLE, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 16 OF PLATS, PAGE 20, IN KING COUNTY, WASHINGTON.

VERTICAL DATUM

NAVD88, PER GPS OBSERVATIONS.

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

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NICHOLAS T. BOSSOFF 29631 REGISTERED PROFESSIONAL ENGINEER STATE OF WASHINGTON

EXPIRES 7/2/23

NO.	DATE	REVISION
1	06/08/22	PERMIT SUBMITTAL
2	11/28/22	CITY COMMENTS
3	02/06/23	CITY COMMENTS
4	08/22/23	POST PERMIT REVISION

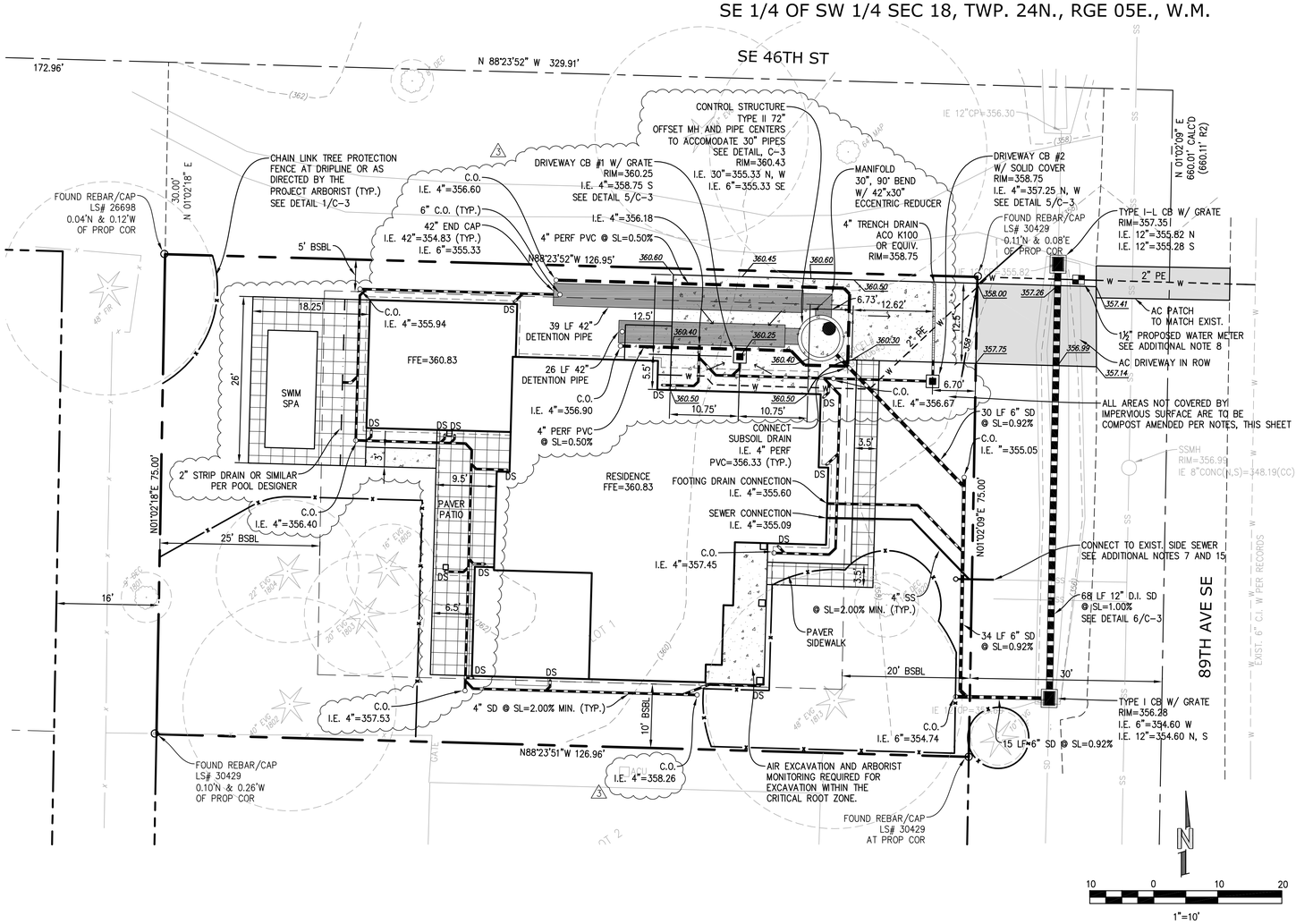
PROJECT MANAGER: N. BOSSOFF, P.E.
DESIGNED: NB
DRAWN: TKB
JOB NUMBER: SARC-2202
FILE NAME: SARC-2202pln.dwg

LANCTOT RESIDENCE

4603 89TH AVE SE
MERCER ISLAND WASHINGTON

TITLE: T.E.S.C. PLAN

SHEET: C-1



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 AND STORM DRAIN DEPTH AND LOCATION SHALL BE DETERMINED PRIOR TO ANY CONSTRUCTION, INCLUDING BUILDING CONSTRUCTION. REPORT CONFLICTS WITH PROPOSED CONSTRUCTION TO ENGINEER. NEW SIDE SEWER CONNECTION TO MAIN OR SEWER EJECTOR PUMP MAY BE NECESSARY FOR BASEMENT.
8. PROPOSED METER LOCATION, IF SHOWN, IS APPROXIMATE. CONTRACTOR TO COORDINATE EXACT LOCATION OF NEW SERVICE/METER/ SUPPLY LINE WITH CITY WATER DEPARTMENT DURING CONSTRUCTION. SERVICE SIZE IS PRELIMINARY, VERIFY WITH PLUMBING AND SPRINKLER DESIGNER.
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. EXISTING DOWNSPOUTS AND COLLECTOR PIPES SHALL BE PRESERVED AND NOT DISCONNECTED FROM THE SYSTEM. CONNECT EXISTING DOWNSPOUTS TO NEW STORM SYSTEM AS NECESSARY.
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.
15. THE TV INSPECTION OF THE EXISTING SIDE SEWER TO THE CITY SEWER MAIN ON 89TH AVE SE IS REQUIRED PRIOR TO ANY WORK RELATED TO THE SIDE SEWER. IF THE RESULT OF THE TV INSPECTION IS NOT IN SATISFACTORY CONDITION, AS DETERMINED BY THE CITY OF MERCER ISLAND INSPECTOR, THE REPLACEMENT OF THE EXISTING SIDE SEWER IS REQUIRED.

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191 NE Tarl Lane
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Phone: (425) 881-5904

EXPIRES 7/2/25

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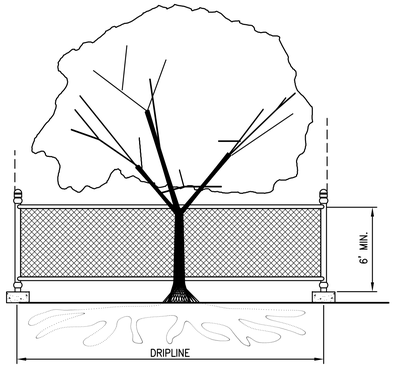
DESIGNED:
TKB
DRAWN:
SARC-2202
JOB NUMBER:
SARC-2202pln.dwg
FILE NAME:

LANCTOT RESIDENCE
4603 89TH AVE SE
MERCER ISLAND WASHINGTON

TITLE:
DRAINAGE PLAN

SHEET:
C-2

SE 1/4 OF SW 1/4 SEC 18, TWP. 24N., RGE 05E., W.M.

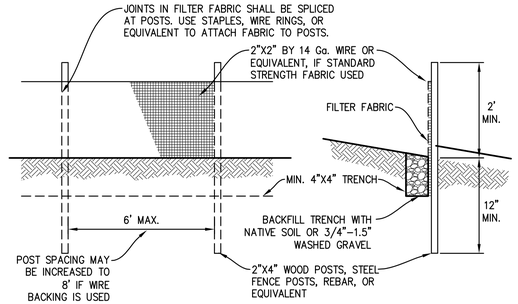


TREE PROTECTION DURING CONSTRUCTION

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

TREE PROTECTION 1

SCALE: NTS



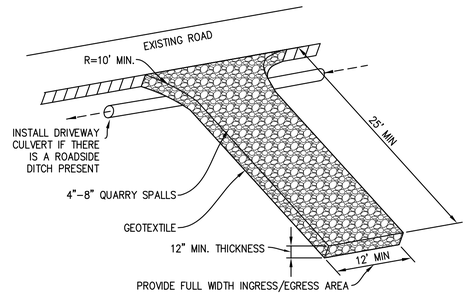
NOTE: FILTER FABRIC FENCE SHALL BE INSTALLED ALONG CONTOUR WHENEVER POSSIBLE.

MAINTENANCE STANDARDS

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

SILT FENCE 2

SCALE: NTS

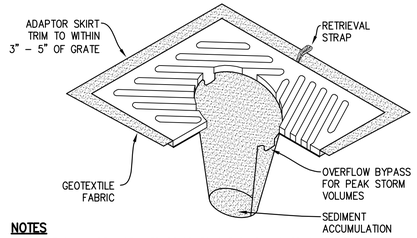


MAINTENANCE STANDARDS

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

ROCK CONSTRUCTION ENTRANCE 3

SCALE: NTS

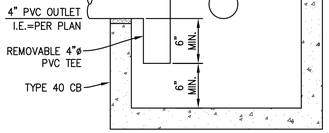


NOTES

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

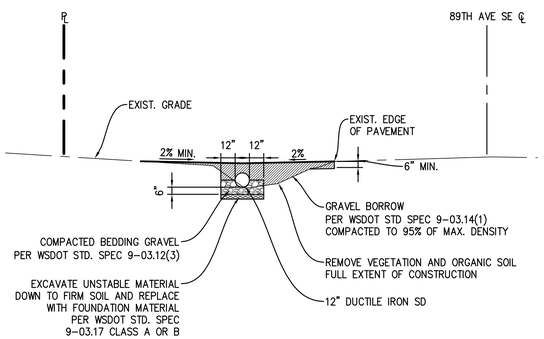
CB INSERT 4

SCALE: NTS



OIL SEPARATOR CB 5

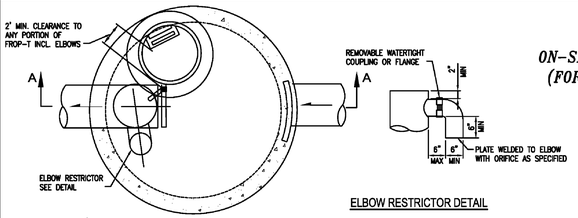
SCALE: NTS



PIPE SECTION 6

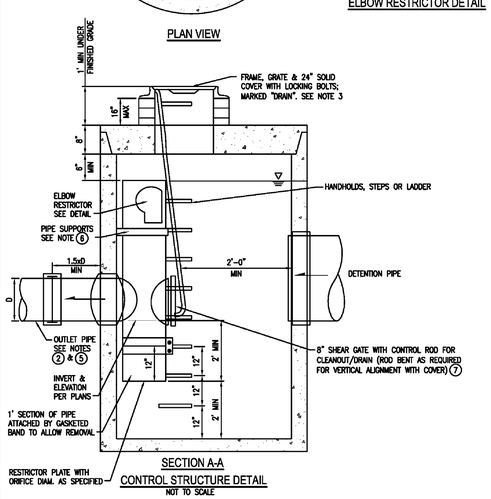
SCALE: 1"=5'

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



PLAN VIEW

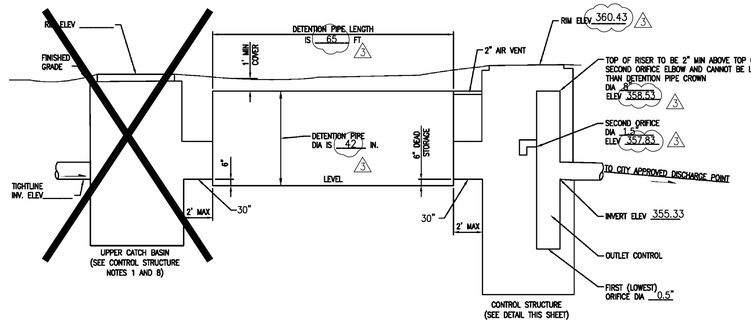
ELBOW RESTRICTOR DETAIL



SECTION A-A

CONTROL STRUCTURE DETAIL
NOT TO SCALE

OWNER: LANCTOT
PERMIT #:
ADDRESS: 4603 89TH AVE SE
MERCER ISLAND
PREPARED BY: NICK BOSSOFF ENG
PHONE: (425) 881-5904
DATE: 3
NEW PLUS REPLACED IMPERVIOUS SURFACE AREA (SF): 4,619 3
SOIL TYPE: C
DETENTION PIPE DIA (INCH): 42" 3
PIPE MATERIAL: ADS N-12
DETENTION PIPE LENGTH (FT): 65 3
ORIFICE #1 DIA 0.5 INCH, ELEV 353.33
ORIFICE #2 DIA 1.5 INCH, ELEV 357.83 3



ON-SITE DETENTION SYSTEM
NOT TO SCALE (ENGINEER TO FILL IN BLANKS)

CONTROL STRUCTURE NOTES:

1. USE A MINIMUM OF A 54 IN. DIAM. TYPE 2 CATCH BASIN. THE ACTUAL SIZE IS DEPENDENT ON CONNECTING PIPE MATERIAL AND DIAMETER.
2. OUTLET PIPE: MIN. 6 INCH.
3. METAL PARTS: CORROSION RESISTANT. NON-GALVANIZED PARTS PREFERRED. GALVANIZED PIPE PARTS TO HAVE ASPHALT TREATMENT 1.
4. FRAME AND LADDER OR STEPS OFFSET SO:
   A. CLEANOUT GATE IS VISIBLE FROM TOP;
   B. CLIMB-DOWN SPACE IS CLEAR OF RISER AND CLEANOUT GATE;
   C. FRAME IS CLEAR OF CURB.
5. IF METAL OUTLET PIPE CONNECTS TO CEMENT CONCRETE PIPE, OUTLET PIPE TO HAVE SMOOTH O.D. EQUAL TO CONCRETE PIPE I.D. LESS 1/4 IN.
6. PROVIDE AT LEAST ONE 3 X 0.090 GAUGE SUPPORT BRACKET ANCHORED TO CONCRETE WALL WITH 5/8 IN. STAINLESS STEEL EXPANSION BOLTS OR EMBEDDED SUPPORTS 2 IN. INTO CATCH BASIN WALL (MAXIMUM 3'-0" VERTICAL SPACING).
7. THE SHEAR GATE SHALL BE MADE OF ALUMINUM ALLOY IN ACCORDANCE WITH ASTM B 26M AND ASTM B 275, DESIGNATION Z0324; OR CAST IRON IN ACCORDANCE WITH ASTM A 48, CLASS 30B. THE LIFT HANDLE SHALL BE MADE OF A SIMILAR METAL TO THE GATE (TO PREVENT GALVANIC CORROSION). IT MAY BE OF SOLID ROD OR HOLLOW TUBING, WITH ADJUSTABLE HOOK AS REQUIRED. A NEOPRENE RUBBER GASKET IS REQUIRED BETWEEN THE RISER MOUNTING FLANGE AND THE GATE FLANGE. INSTALL THE GATE SO THAT THE LEVEL-LINE MARK IS LEVEL WHEN THE GATE IS CLOSED. THE MATING SURFACES OF THE LID AND THE BODY SHALL BE MACHINED FOR PROPER FIT. ALL SHEAR GATE BOLTS SHALL BE STAINLESS STEEL.
8. THE UPPER CATCH BASIN IS REQUIRED IF THE LENGTH OF THE DETENTION PIPE IS GREATER THAN 50 FT.

ON-SITE DETENTION SYSTEM NOTES:

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

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

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

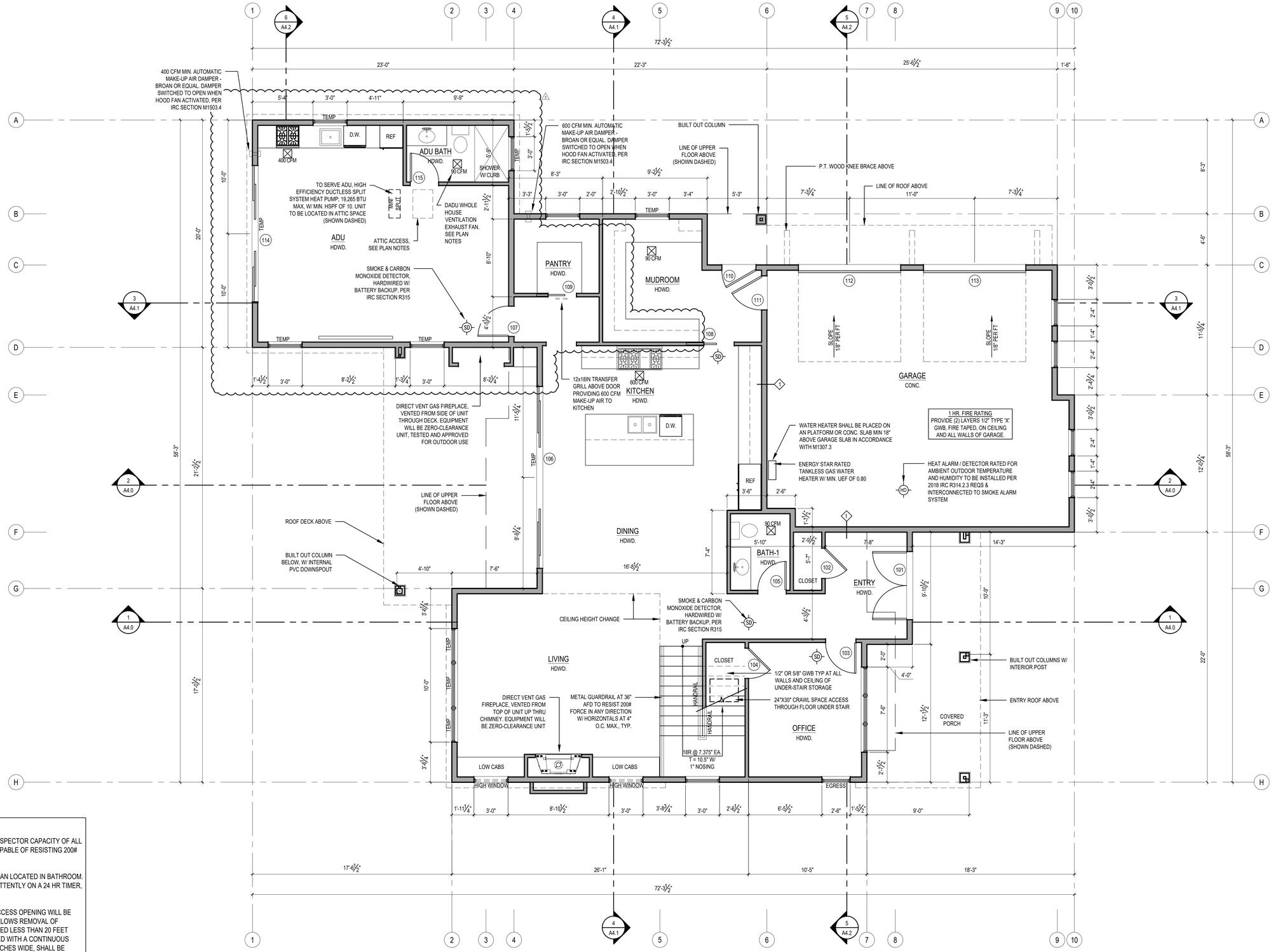
NO.	DATE	REVISION
1	06/08/22	PERMIT SUBMITTAL
2	11/28/22	CITY COMMENTS
3	02/06/23	CITY COMMENTS
4	08/22/23	POST PERMIT REVISION

PROJECT MANAGER: N. BOSSOFF, P.E.
DESIGNED: NB
DRAWN: TKB
JOB NUMBER: SARC-2202
FILE NAME: SARC-2202pln.dwg

LANCTOT RESIDENCE
4603 89TH AVE SE
MERCER ISLAND WASHINGTON

TITLE: DETAILS

SHEET: C-3



PLAN NOTES:

1. CONTRACTOR SHALL CONFIRM TO INSPECTOR CAPACITY OF ALL GUARDS AND HANDRAILS SHALL BE CAPABLE OF RESISTING 200# FORCE IN ANY DIRECTION.

2. DADU WHOLE HOUSE VENTILATION FAN LOCATED IN BATHROOM. FAN WILL BE 90 CFM RUNNING INTERMITTENTLY ON A 24 HR TIMER, AT 30% OF A 4 HOUR PERIOD.

3. ATTIC ACCESS PER IRC R807. THE ACCESS OPENING WILL BE REQUIRED TO BE A MIN. SIZE WHICH ALLOWS REMOVAL OF LARGEST APPLIANCE, SHALL BE LOCATED LESS THAN 20 FEET FROM APPLIANCES, SHALL BE PROVIDED WITH A CONTINUOUS SOLID FLOORING NOT LESS THAN 24 INCHES WIDE, SHALL BE PROVIDED WITH A LUMINAIRE CONTROLLED BY A SWITCH LOCATED AT THE ACCESS OPENING, SHALL HAVE A RECEPTACLE OUTLET LOCATED AT OR NEAR THE APPLIANCES, PER IRC M1305.1.3 & M1305.1.3.1.

1 MAIN FLOOR PLAN

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

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

REGISTERED ARCHITECT
BRADLEY J. STURMAN
STATE OF WASHINGTON
3662

KOCH RESIDENCE
PERMIT SET
4603 89TH AVE SE
MERCER ISLAND, WA 98040

MAIN FLOOR PLAN

REVISIONS:
- 2022-11-28 Corrections #1
- 2023-3-15 Corrections #2
- 2023-8-22 Design Revisions

DRAWN BY: KE

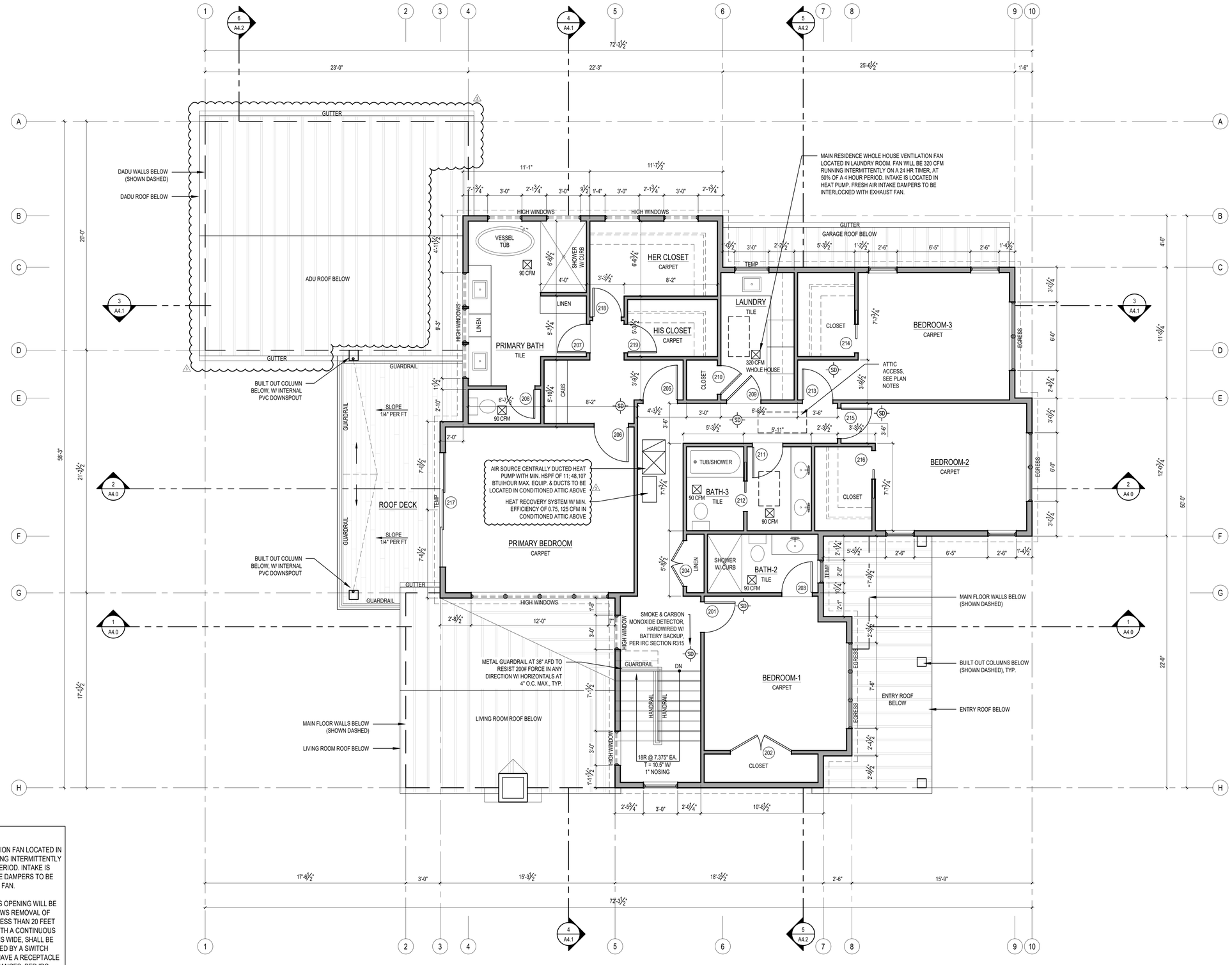
CHECKED BY: BJS

SHEET **A2.0**

PLOT DATE: 8/22/2023

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

REVISION SET 08/22/23



PLAN NOTES:

1. MAIN RESIDENCE WHOLE HOUSE VENTILATION FAN LOCATED IN LAUNDRY ROOM. FAN WILL BE 320 CFM RUNNING INTERMITTENTLY ON A 24 HR TIMER, AT 50% OF A 4 HOUR PERIOD. INTAKE IS LOCATED IN HEAT PUMP. FRESH AIR INTAKE DAMPERS TO BE INTERLOCKED WITH EXHAUST FAN.

3. ATTIC ACCESS PER IRC R807. THE ACCESS OPENING WILL BE REQUIRED TO BE A MIN. SIZE WHICH ALLOWS REMOVAL OF LARGEST APPLIANCE, SHALL BE LOCATED LESS THAN 20 FEET FROM APPLIANCES, SHALL BE PROVIDED WITH A CONTINUOUS SOLID FLOORING NOT LESS THAN 24 INCHES WIDE, SHALL BE PROVIDED WITH A LUMINAIRE CONTROLLED BY A SWITCH LOCATED AT THE ACCESS OPENING, SHALL HAVE A RECEPTACLE OUTLET LOCATED AT OR NEAR THE APPLIANCES, PER IRC M1305.1.3 & M1305.1.3.1.

1 UPPER FLOOR PLAN

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

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

REVISION SET 08/22/23

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9 - 103rd Avenue NE Suite 203
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REGISTERED ARCHITECT
BRADLEY J. STURMAN
STATE OF WASHINGTON
5562

KOCH RESIDENCE
PERMIT SET
4603 89TH AVE SE
MERCER ISLAND, WA 98040

UPPER FLOOR PLAN

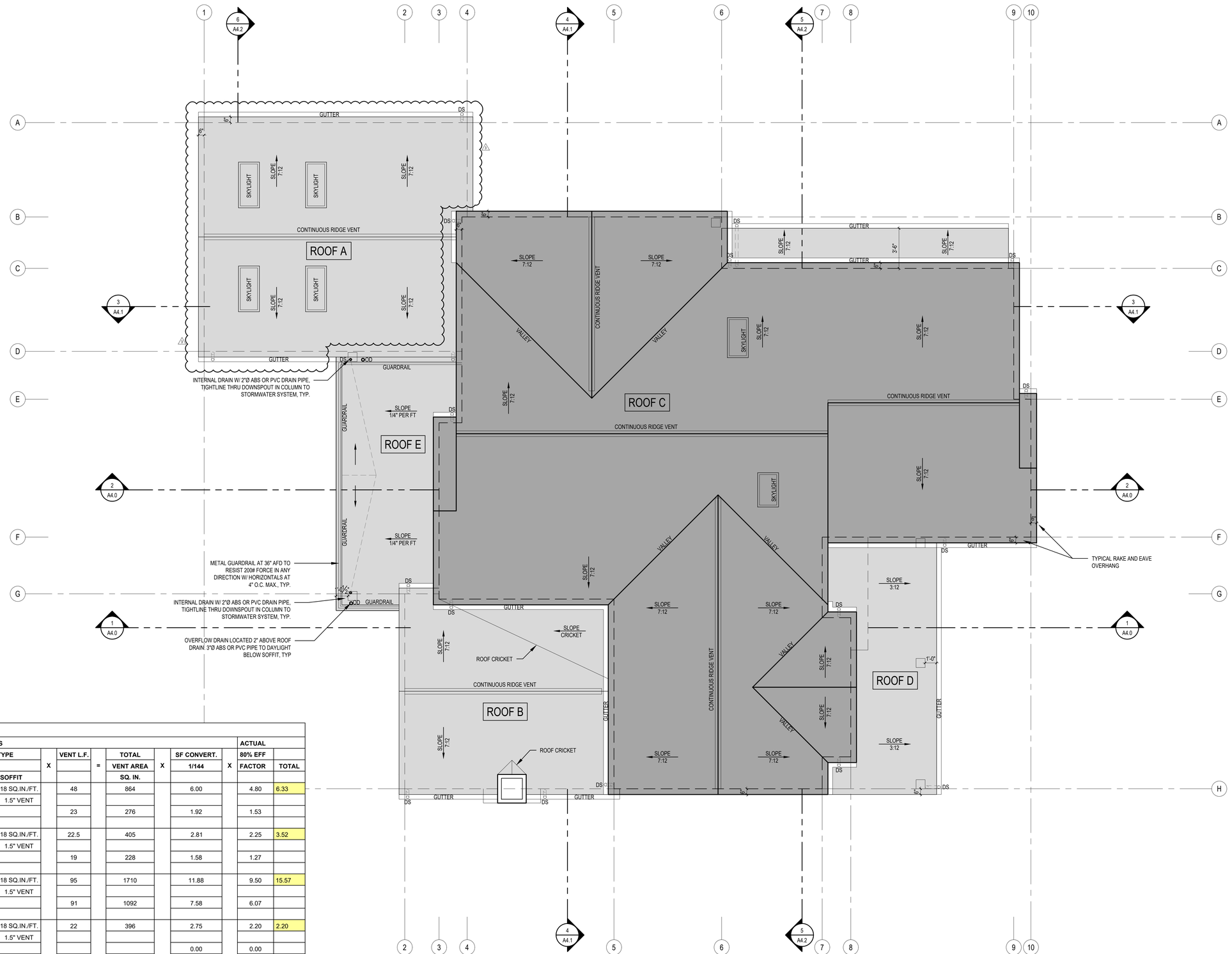
REVISIONS:
- 2022-11-28 Corrections #1
- 2023-3-15 Corrections #2
- 2023-8-22 Design Revisions

DRAWN BY: KE

CHECKED BY: BJS

SHEET A2.1

PLOT DATE: 8/22/2023



ROOF VENT CALCULATIONS

CODE REQUIREMENT				CALCULATIONS								ACTUAL	
DESCRIPTION	SF AREA	REQ. VENTING PER SF AREA		VENT TYPE		X	VENT L.F.	=	TOTAL VENT AREA	X	SF CONVERT. 1/144	X	80% EFF FACTOR	TOTAL
		150	300	RIDGE	SOFFIT				SQ. IN.					
ROOF A	460				18 SQ.IN./FT.		48		864		6.00		4.80	6.33
		3.07			1.5" VENT									
				12 SQ.IN/FT.			23		276		1.92		1.53	
				CONTINUOUS										
ROOF B	305				18 SQ.IN./FT.		22.5		405		2.81		2.25	3.52
		2.03			1.5" VENT									
				12 SQ.IN/FT.			19		228		1.58		1.27	
				CONTINUOUS										
ROOF C	1,788				18 SQ.IN./FT.		95		1710		11.88		9.50	15.57
		11.92			1.5" VENT									
				12 SQ.IN/FT.			91		1092		7.58		6.07	
				CONTINUOUS										
ROOF D	158				18 SQ.IN./FT.		22		396		2.75		2.20	2.20
		1.05			1.5" VENT									
				12 SQ.IN/FT.							0.00		0.00	
				CONTINUOUS										
ROOF E	212				18 SQ.IN./FT.		33		594		4.13		3.30	3.30
		1.41			1.5" VENT									
				12 SQ.IN/FT.							0.00		0.00	
				CONTINUOUS										

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

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

REVISION SET 08/22/23

STURMAN ARCHITECTS
9 - 103rd Avenue NE Suite 203
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TEL: 425.451.7003

REGISTERED ARCHITECT
BRADLEY J. STURMAN
STATE OF WASHINGTON
5662

KOCH RESIDENCE
PERMIT SET
4603 89TH AVE SE
MERCER ISLAND, WA 98040

ROOF PLAN VENT CALCS

REVISIONS:
2022-11-26 Corrections #1
2023-4-15 Corrections #2
2023-8-22 Design Revisions

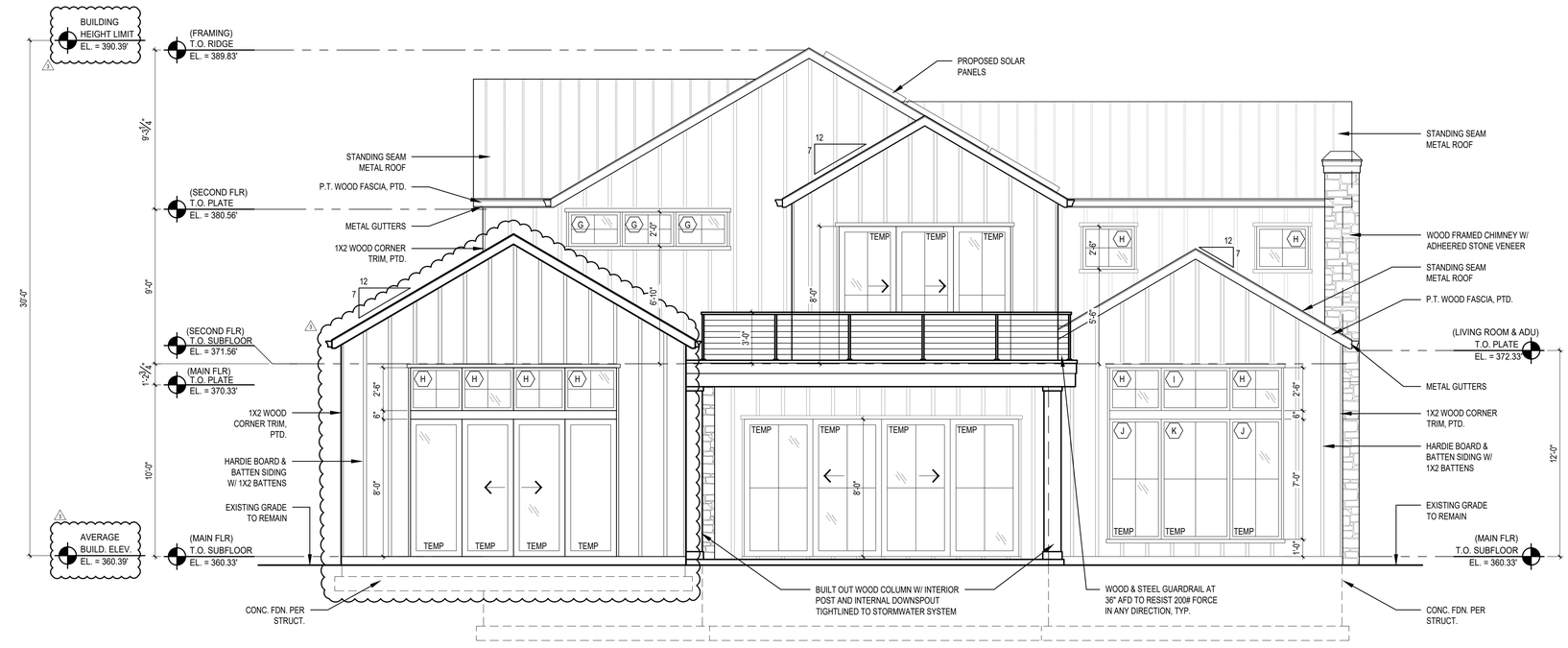
DRAWN BY: KE
CHECKED BY: BJS

SHEET **A2.2**

PLOT DATE: 8/22/2023

1 **EAST ELEVATION**

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



2 **WEST ELEVATION**

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

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REVISION SET 08/22/23

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

REGISTERED ARCHITECT BRADLEY J. STURMAN STATE OF WASHINGTON 5662

KOCH RESIDENCE
PERMIT SET
4603 89TH AVE SE
MERCER ISLAND, WA 98040

EXTERIOR ELEVATIONS

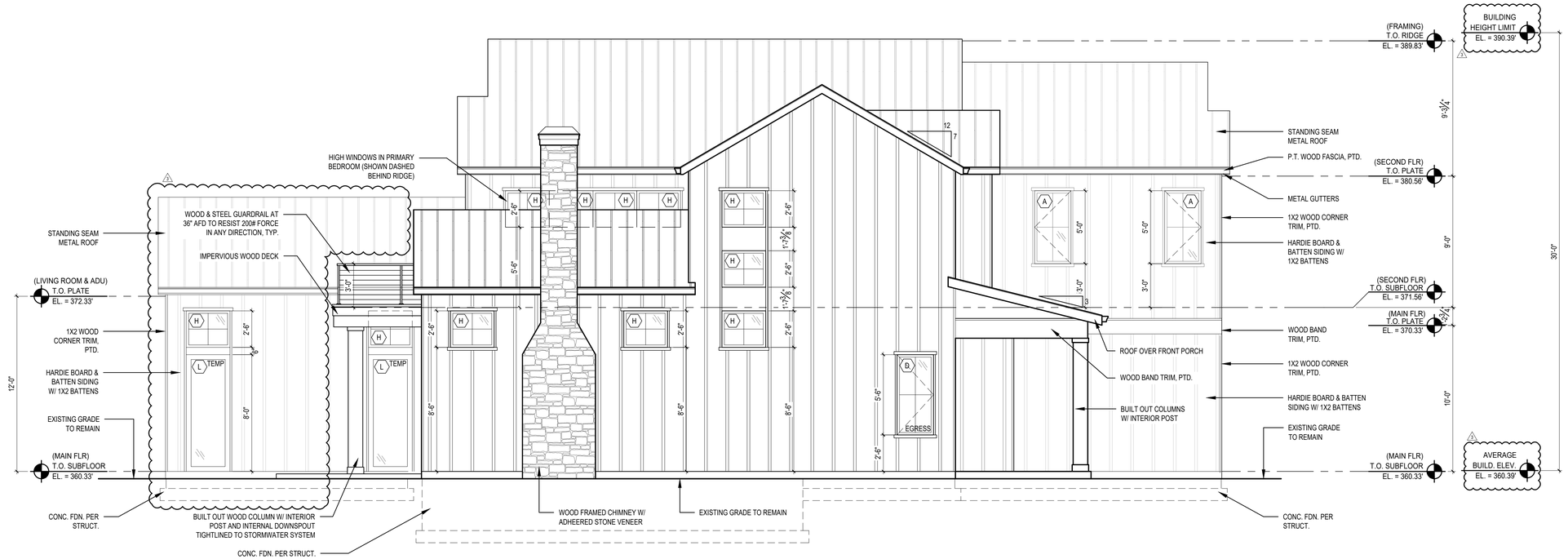
REVISIONS:
1 2022-11-29 Corrections #1
2 2023-1-15 Corrections #2
3 2023-8-22 Design Revisions
4
5

DRAWN BY: KE

CHECKED BY: BJS

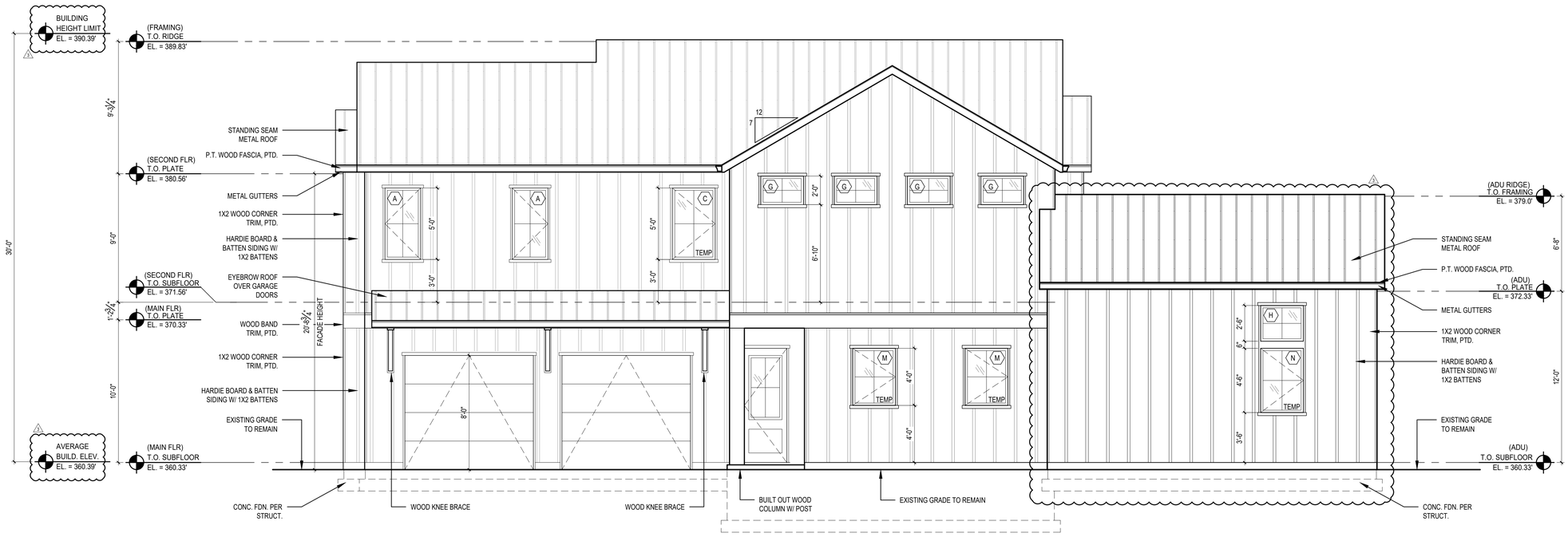
SHEET
A3.0

PLOT DATE: 8/22/2023



3 SOUTH ELEVATION

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



4 NORTH ELEVATION

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

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

REVISION SET 08/22/23

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

REGISTERED ARCHITECT
BRADLEY J. STURMAN
STATE OF WASHINGTON
5562

KOCH RESIDENCE
PERMIT SET
4603 89TH AVE SE
MERCER ISLAND, WA 98040

EXTERIOR ELEVATIONS

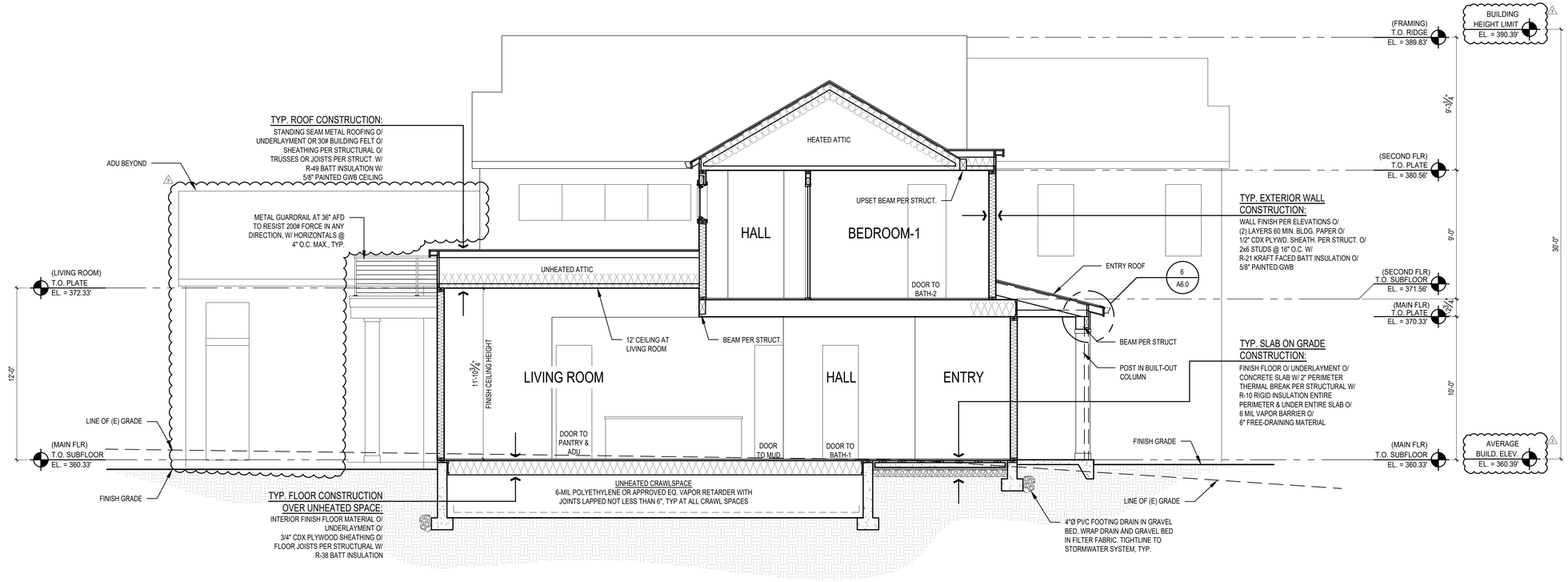
REVISIONS:
- 1 2022-11-29 Corrections #1
- 2 2023-2-15 Corrections #2
- 3 2023-8-22 Design Revisions
- 4
- 5

DRAWN BY: KE

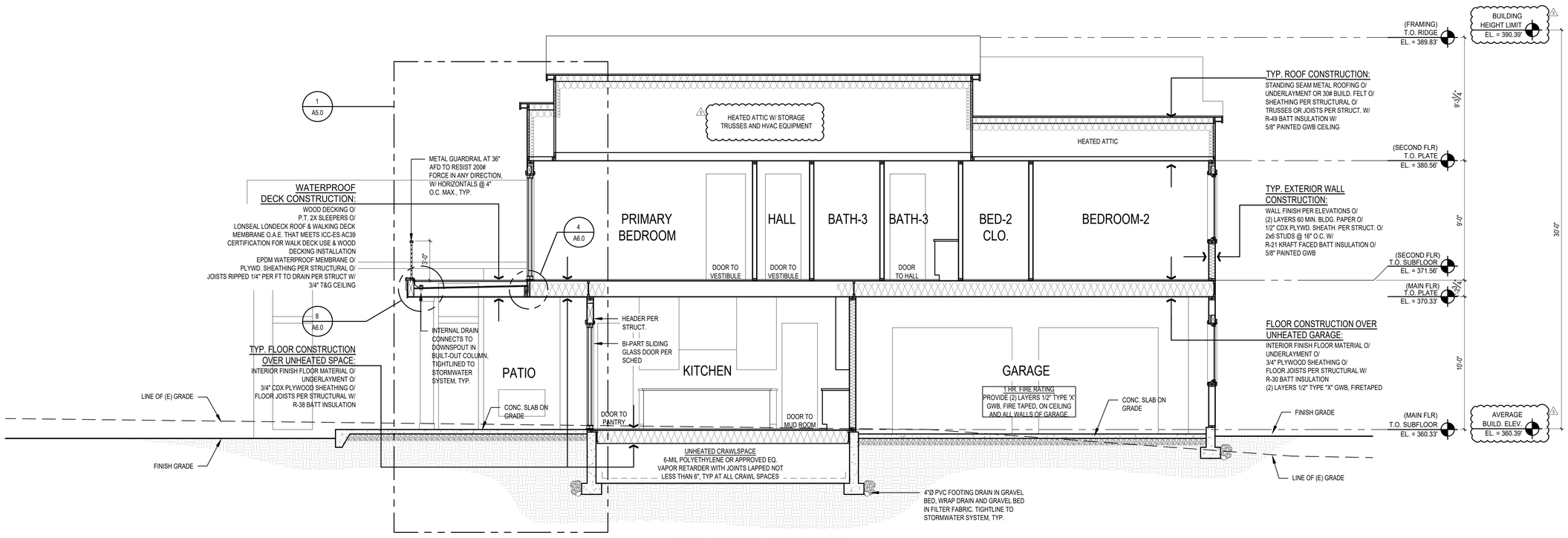
CHECKED BY: BJS

SHEET **A3.1**

PLOT DATE: 8/22/2023



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



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

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

REGISTERED ARCHITECT
BRADLEY J. STURMAN
STATE OF WASHINGTON
5662

KOCH RESIDENCE
PERMIT SET
4603 89TH AVE SE
MERCER ISLAND, WA 98040

BUILDING SECTIONS

REVISIONS:
2022-11-29 Corrections #1
2023-1-15 Corrections #2
2023-5-22 Design Revisions

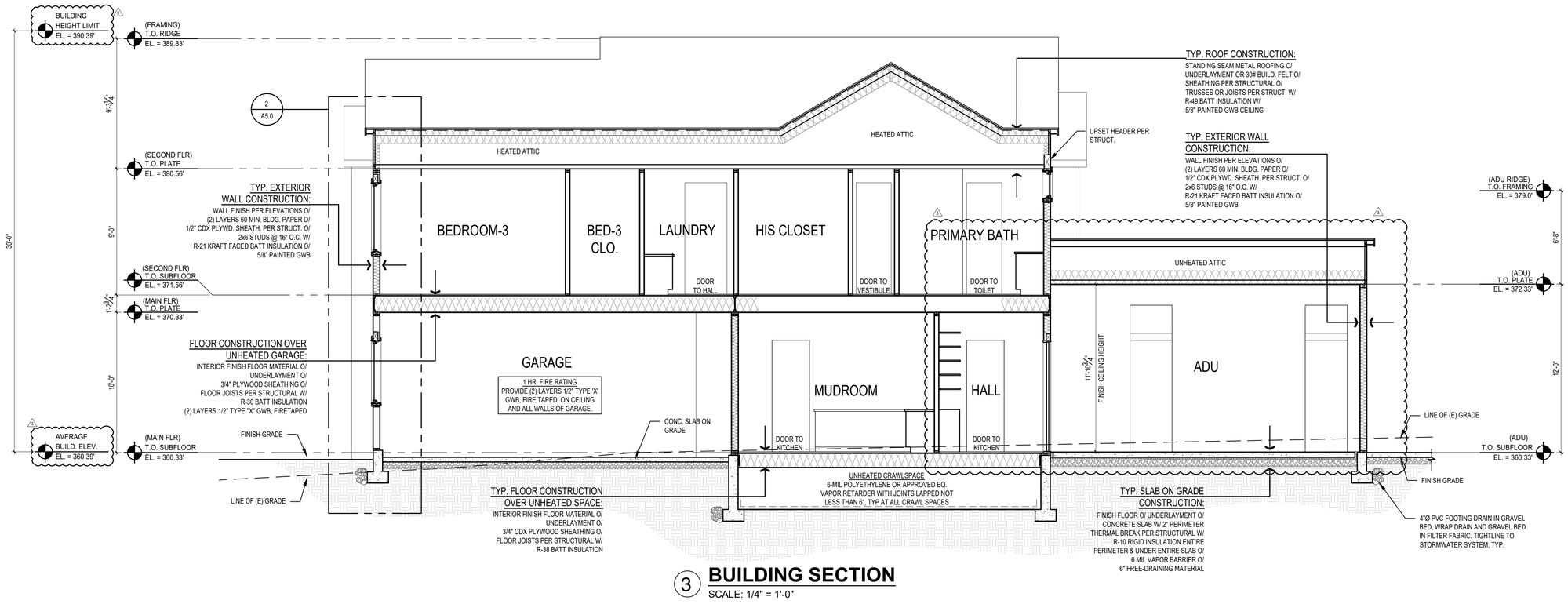
DRAWN BY: KE
CHECKED BY: BJS

SHEET
A4.0

PLOT DATE: 8/22/2023

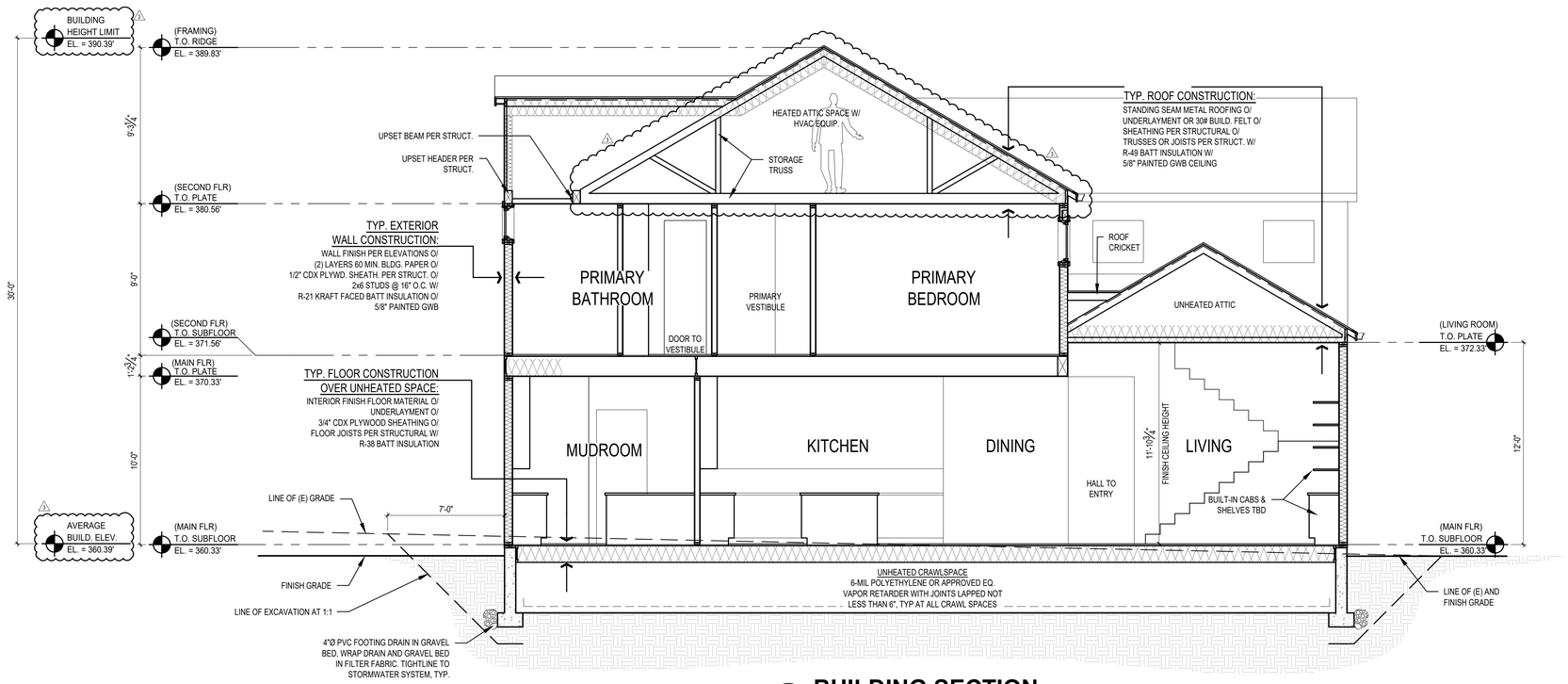
SCALE: IF SHEET IS LESS THAN 24" X 36", IT IS A REDUCED PRINT; REDUCE SCALE ACCORDINGLY

REVISION SET 08/22/23



3 BUILDING SECTION

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



4 BUILDING SECTION

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

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

REGISTERED ARCHITECT BRADLEY J. STURMAN STATE OF WASHINGTON 5662

KOCH RESIDENCE
PERMIT SET
4603 89TH AVE SE
MERCER ISLAND, WA 98040

BUILDING SECTIONS

REVISIONS:
1 2022-11-29 Corrections #1
2 2023-1-15 Corrections #2
3 2023-6-22 Design Revisions
4
5

DRAWN BY: KE
CHECKED BY: BJS

SHEET
A4.1

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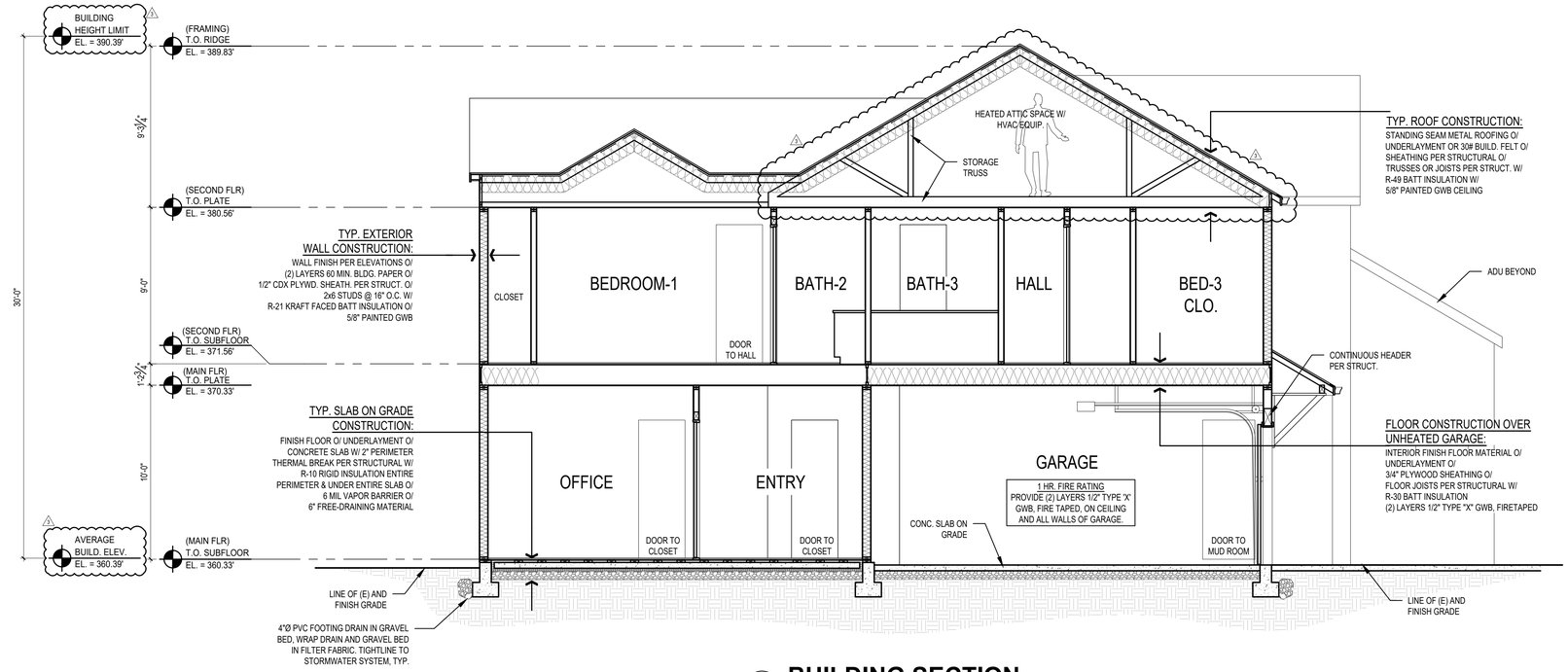
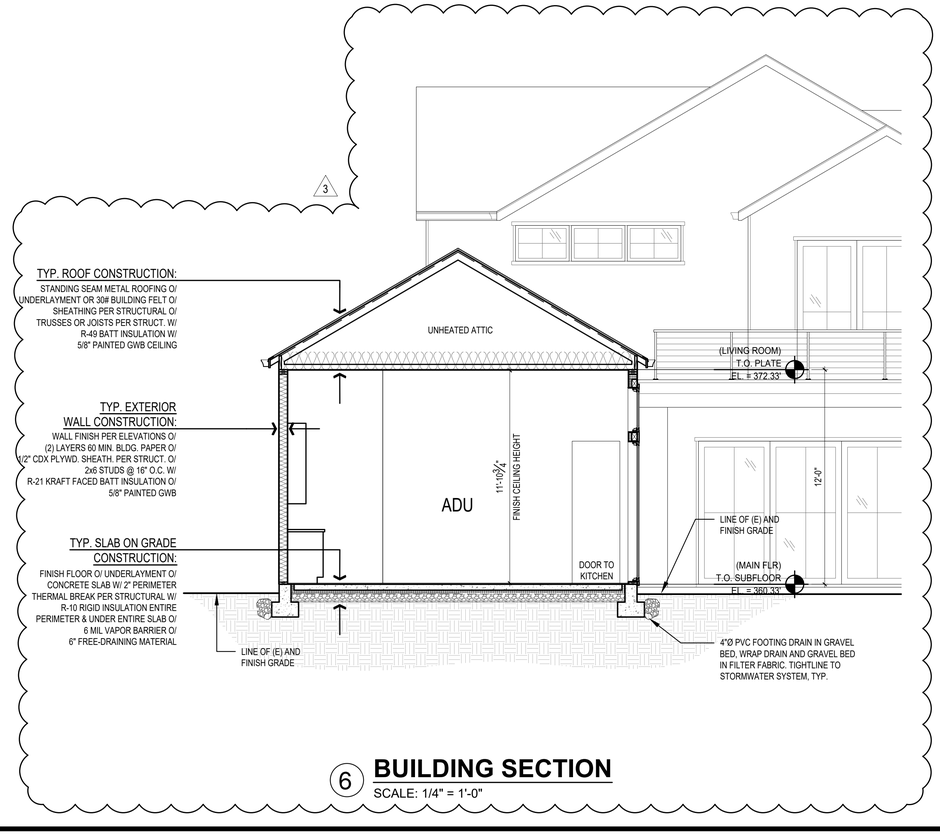
REVISION SET 08/22/23

PLOT DATE: 8/22/2023



5 BUILDING SECTION

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



6 BUILDING SECTION

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

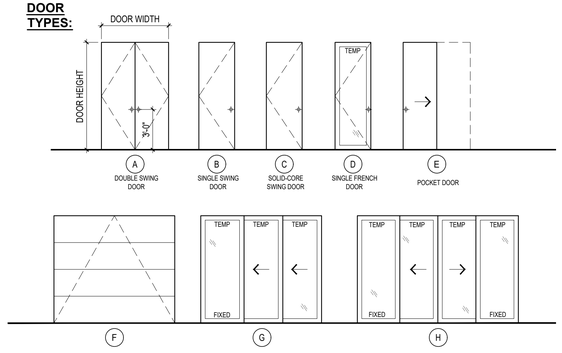
DOOR SCHEDULE

DOOR NO.	LOCATION	SIZE WIDTH	SIZE HEIGHT	DOOR TYPE	TEMP. GLASS	DOOR FIN.	DOOR THK.	U-VAL. (MIN.)	REMARKS
MAIN FLOOR									
101	ENTRY	PR 3'-0"	8'-0"	A	Y	-	1-3/4"	.28	TEMPERED GLASS
102	ENTRY CLOSET	2'-8"	8'-0"	B	-	-	1-3/4"	-	
103	OFFICE	2'-8"	8'-0"	B	-	-	1-3/4"	-	
104	OFFICE	2'-6"	8'-0"	B	-	-	1-3/4"	-	
105	BATH-1	2'-6"	8'-0"	C	-	-	1-3/4"	-	
106	KITCHEN	16'-0"	8'-0"	H	Y	-	1-3/4"	.28	TEMPERED GLASS
107	PANTRY	2'-6"	8'-0"	E	-	-	1-3/4"	-	POCKET
108	MUD ROOM	2'-8"	8'-0"	E	-	-	1-3/4"	-	POCKET
109	MECHANICAL	3'-0"	8'-0"	C	-	-	1-3/4"	-	GASKET
110	MUD ROOM	3'-0"	8'-0"	D	Y	-	1-3/4"	.28	TEMPERED GLASS
111	GARAGE	3'-0"	8'-0"	C	-	-	1-3/4"	-	20 MIN FIRE RATED SOLID CORE, SELF-CLOSING
112	GARAGE	9'-0"	8'-0"	F	-	-	1-3/4"	-	OVERHEAD DOOR
113	GARAGE	9'-0"	8'-0"	F	-	-	1-3/4"	-	OVERHEAD DOOR
114	ADU	3'-0"	8'-0"	D	Y	-	1-3/4"	.28	TEMPERED GLASS
115	ADU	12'-0"	8'-0"	H	Y	-	1-3/4"	.28	TEMPERED GLASS
116	ADU BATH	2'-6"	8'-0"	C	-	-	1-3/4"	-	
					-	-	1-3/4"	-	
UPPER FLOOR									
201	BEDROOM-1	2'-8"	8'-0"	B	-	-	1-3/4"	-	
202	BEDROOM-1 CLOSET	PR 2'-8"	8'-0"	A	-	-	1-3/4"	-	
203	BEDROOM-1	2'-8"	8'-0"	B	-	-	**1-3/4"**	-	
204	LINEN CLOSET	PR 2'-0"	8'-0"	A	-	-	1-3/4"	-	
205	PRIMARY VESTIBULE	3'-0"	8'-0"	B	-	-	1-3/4"	-	
206	PRIMARY BEDROOM	3'-0"	8'-0"	C	-	-	1-3/4"	-	
207	PRIMARY BATH	2'-6"	8'-0"	B	-	-	1-3/4"	-	
208	PRIMARY BATH	2'-6"	8'-0"	C	-	-	1-3/4"	-	
209	LAUNDRY	3'-0"	8'-0"	C	-	-	1-3/4"	-	SOUND GASKET
210	LAUNDRY	2'-6"	8'-0"	B	-	-	1-3/4"	-	
211	BATH-3	2'-8"	8'-0"	B	-	-	1-3/4"	-	
212	BATH-3	2'-8"	8'-0"	E	-	-	1-3/4"	-	POCKET
213	BEDROOM-3	2'-8"	8'-0"	B	-	-	1-3/4"	-	
214	BEDROOM-3	2'-6"	8'-0"	E	-	-	1-3/4"	-	POCKET
215	BEDROOM-2	2'-8"	8'-0"	B	-	-	1-3/4"	-	
216	BEDROOM-2	2'-6"	8'-0"	E	-	-	1-3/4"	-	POCKET
217	PRIMARY BEDROOM	10'-0"	8'-0"	G	Y	-	1-3/4"	.28	TEMPERED GLASS
218	PRIMARY CLOSET	2'-6"	8'-0"	B	-	-	1-3/4"	-	
219	PRIMARY CLOSET	2'-6"	8'-0"	B	-	-	1-3/4"	-	

WINDOW SCHEDULE

WINDOW MARK	DESCRIPTION	R.O. SIZE WIDTH	R.O. SIZE HEIGHT	TEMP.	QTY.	TOTAL AREA (SF)	U-VALUE (MIN.)	NFRC CERT.	GLAZING	REMARKS & NOTES
A	CASEMENT	2'- 6"	5'- 0"	-	6	-	.28	Y	LOW E / CLEAR	EGRESS
A1	FIXED	2'- 6"	5'- 0"	-	1		.28	Y	LOW E / CLEAR	
B	CASEMENT	2'- 0"	4'- 0"	-	1		.28	Y	LOW E / CLEAR	
C	CASEMENT	3'- 0"	5'- 0"	-	5		.28	Y	LOW E / CLEAR	
D	CASEMENT	2'- 6"	5'- 6"	-	3		.28	Y	LOW E / CLEAR	
D1	FIXED	2'- 6"	5'- 6"	-	1		.28	Y	LOW E / CLEAR	
E	FIXED	2'- 4"	4'- 6"	-	4		.28	Y	LOW E / CLEAR	
F	FIXED	3'- 0"	3'- 0"	-	1		.28	Y	LOW E / CLEAR	
G	FIXED	3'- 0"	2'- 0"	-	7		.28	Y	LOW E / CLEAR	
H	FIXED	3'- 0"	2'- 6"	-	20		.28	Y	LOW E / CLEAR	
I	FIXED	4'- 0"	2'- 6"	-	1		.28	Y	LOW E / CLEAR	
J	FIXED	3'- 0"	7'- 0"	Y	2		.28	Y	LOW E / CLEAR	TEMPERED GLASS
K	FIXED	4'- 0"	7'- 0"	Y	1		.28	Y	LOW E / CLEAR	TEMPERED GLASS
L	FIXED	3'- 0"	8'- 0"	Y	1		.28	Y	LOW E / CLEAR	TEMPERED GLASS
M	CASEMENT	3'- 0"	4'- 0"	Y	2		.28	Y	LOW E / CLEAR	TEMPERED GLASS
N	CASEMENT	3'- 0"	4'- 6"	Y	1		.28	Y	LOW E / CLEAR	TEMPERED GLASS

DOOR TYPES:



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.) 2018 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

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REVISION SET 08/22/23

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9- 103rd Avenue NE Suite 203
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TEL: 425-451-7003

REGISTERED ARCHITECT 5962 BRADLEY J. STURMAN STATE OF WASHINGTON

KOCH RESIDENCE
PERMIT SET
4603 89TH AVE SE
MERCER ISLAND, WA 98040

BUILDING SECTIONS DOOR & WINDOW SCHEDULES

REVISIONS:
2022-11-29 Corrections #1
2023-2-15 Corrections #2
2023-8-22 Design Revisions

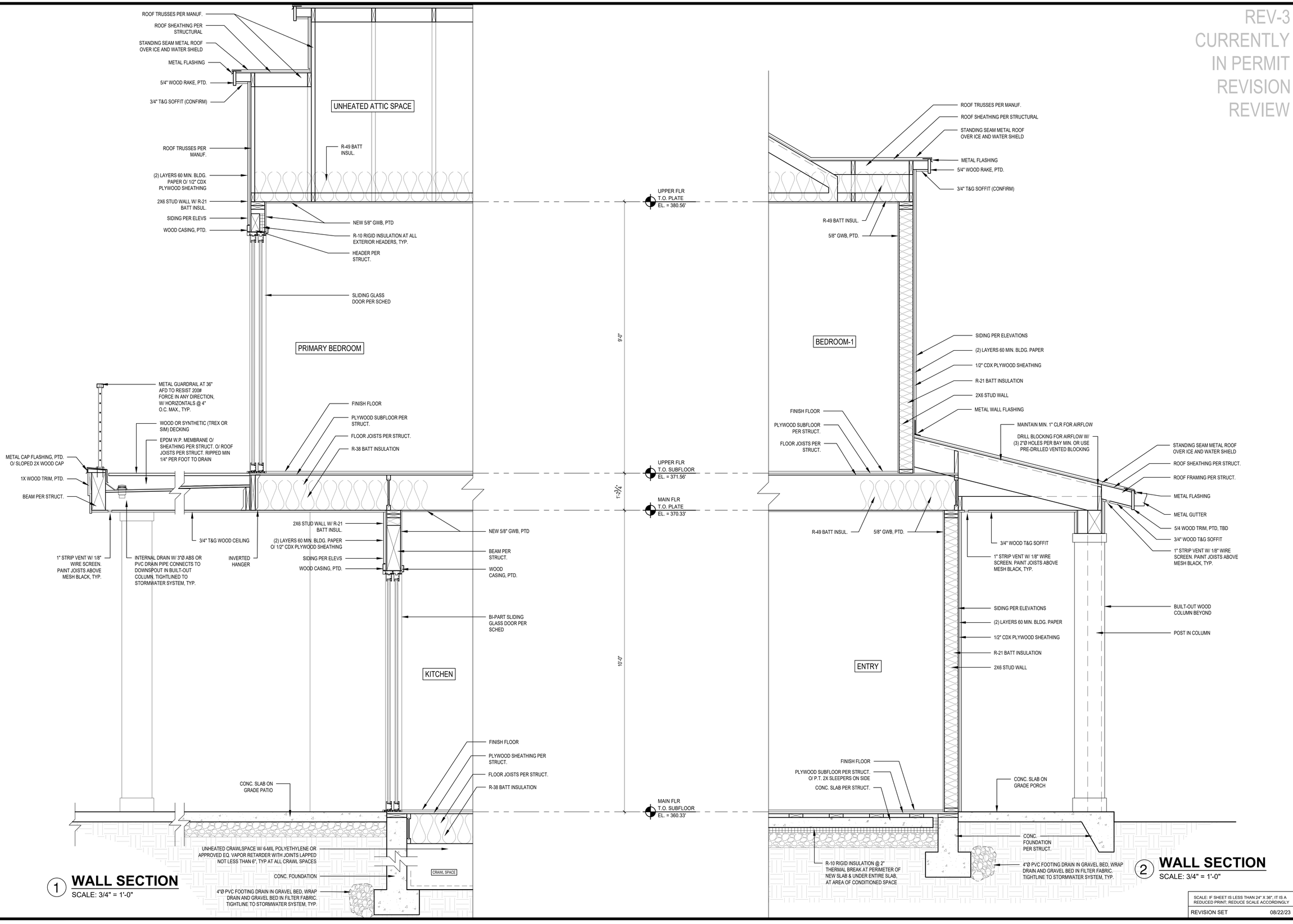
DRAWN BY: KE

CHECKED BY: BJS

SHEET
A4.2

PLOT DATE: 8/22/2023

REV-3
CURRENTLY
IN PERMIT
REVISION
REVIEW



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

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

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MERCER ISLAND, WA 98040

WALL SECTIONS

REVISIONS:
- 2022-11-28 Corrections #1
- 2023-2-15 Corrections #2
- 2023-8-22 Design Revisions

DRAWN BY: KE

CHECKED BY: BJS

SHEET
A5.0

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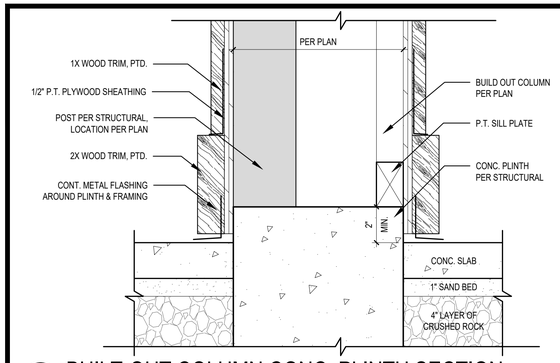
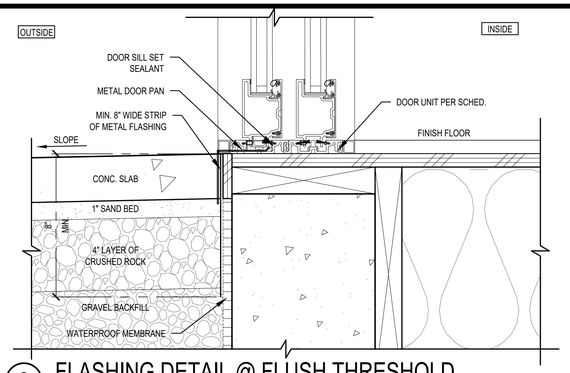
REVISION SET 08/22/23



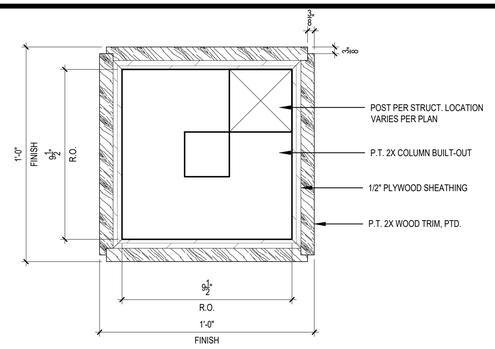
1 BUILT-OUT COLUMN CONC. PLINTH SECTION

SCALE: 3" = 1'-0"



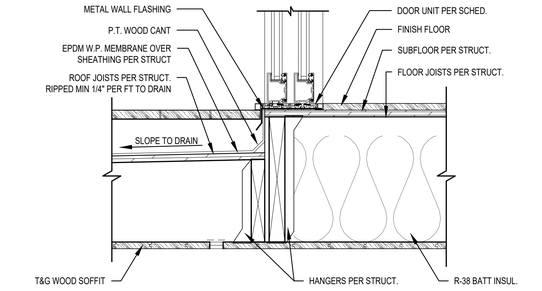
2 FLASHING DETAIL @ FLUSH THRESHOLD

SCALE: 3" = 1'-0"



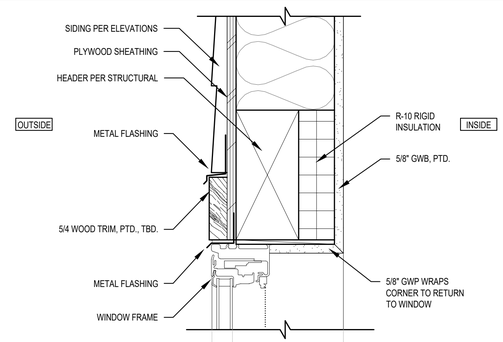
3 BUILT-OUT WOOD COLUMN PLAN

SCALE: 3" = 1'-0"



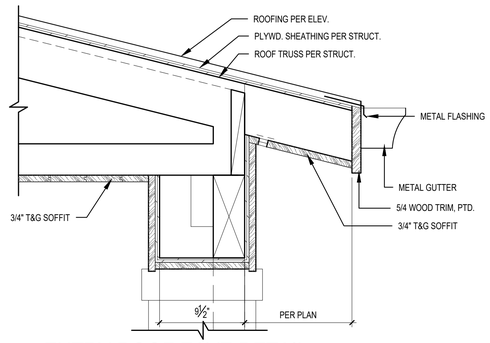
4 THRESHOLD @ DECK SECTION DETAIL

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



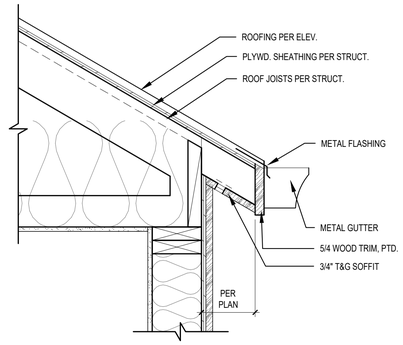
5 TYP. WINDOW HEAD DETAIL

SCALE: 3" = 1'-0" SIM. AT WINDOW JAMB



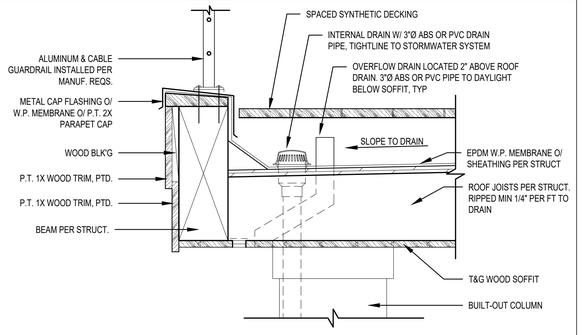
6 ENTRY ROOF EAVE DETAIL

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



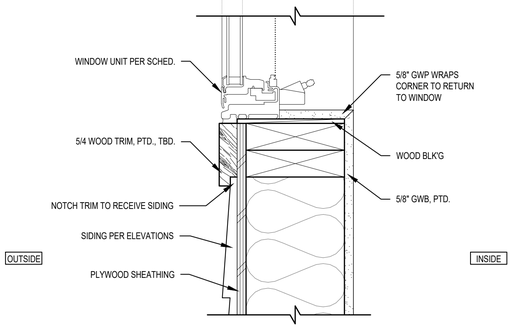
7 TYPICAL EAVE DETAIL

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



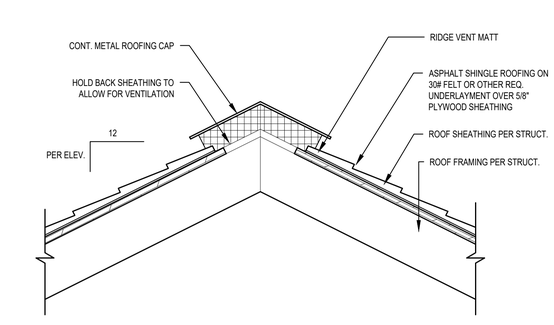
8 THRESHOLD @ DECK SECTION DETAIL

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



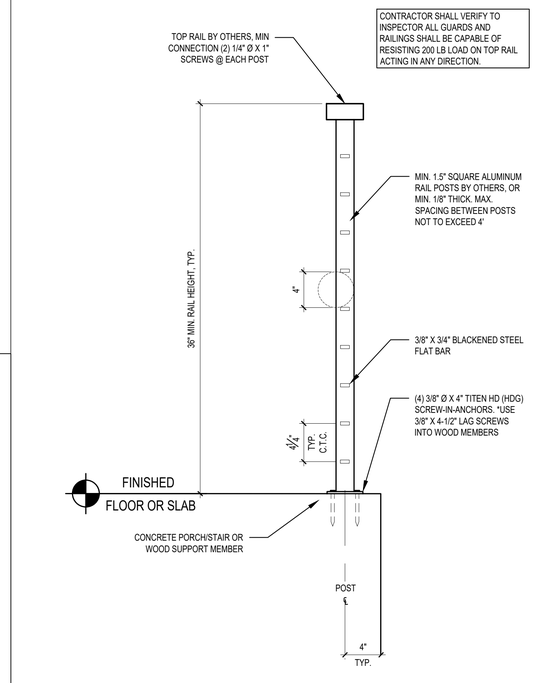
9 TYP. WINDOW SILL DETAIL

SCALE: 3" = 1'-0"



10 TYP. ROOF RIDGE VENT DETAIL

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

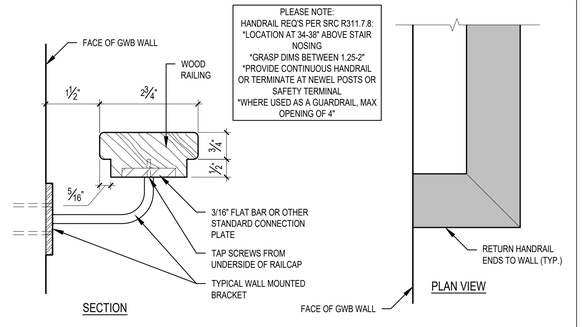


14 RAILING ATTACHMENT - TOP-MOUNTED

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

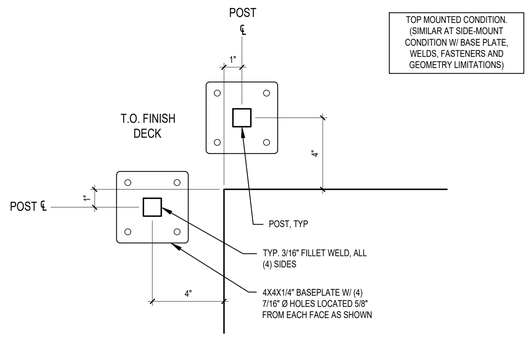
11 NOT USED

SCALE: 6" = 1'-0"



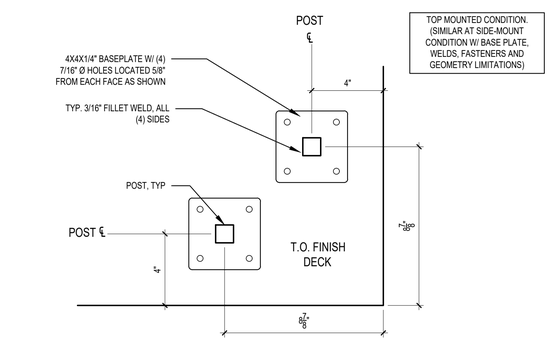
15 HANDRAIL DETAIL

SCALE: 6" = 1'-0"



12 GUARDRAIL PLATE ATTACHMENT

SCALE: 3" = 1'-0" SIM. AT SIDE-MOUNTED



13 GUARDRAIL PLATE ATTACHMENT

SCALE: 3" = 1'-0" SIM. AT SIDE-MOUNTED

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ARCH DETAILS

REVISIONS:
2022-11-29 Corrections #1
2023-2-15 Corrections #2
2023-4-22 Design Revisions

DRAWN BY: KE

CHECKED BY: BJS

SHEET
A6.0

PLOT DATE: 8/22/2023

GENERAL STRUCTURAL NOTES
(TYPICAL UNLESS NOTED OTHERWISE ON DRAWINGS)

General Requirements

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

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

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

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

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

Design Criteria

BUILDING CATEGORY: Structural Occupancy Category II
Importance factors for snow, wind and seismic are listed with the loading criteria.

LIVE LOADS:

Roof; Snow load, Pf = 25 psf

Residential:

Uninhabitable attics without storage	10 psf
Uninhabitable attics with storage	20 psf
Uninhabitable attics portions over 4'-0" high	20 psf
Habitable attics and sleeping areas	30 psf
Residential floor	40 psf
Residential decks	60 psf

LATERAL LOADS-WIND: Per ASCE 7-16, Section 27.5
Iw = 1.0; Kzt = 1.60; V = 9.2 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 = B
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 1,2e,2r;	16.9 psf
100 sq. ft.	Zone 2n,3r;	24.3 psf
	Zone 3e;	19.4 psf
(Roof overhangs)	Zone 1,2e,2r;	35.4 psf
20 sq. ft.	Zone 2n,3r;	44.4 psf
	Zone 3e;	51.6 psf
(Walls)	Zone 4;	21.1 psf
20 sq. ft.	Zone 5;	25.5 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 = 1.430 g; S1 = 0.497 g
3. Site Class = D; Fa = 1.000, Fv = 1.803
4. Spectral Response Coefficients, Sds = 0.953 g, Sd1 = 0.597 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 = 10.0 kips
8. Seismic Response Coefficient Cs = 0.147
9. Response Modification Factor R = 6.5
10. Analysis Procedure = Equivalent Lateral Force Procedure

Additional Items:
Building Location 47.563 N, 122.220 W
Building Height = 28 feet
Redundancy Factors:
North/South Direction = 1.0 East/West Direction = 1.0

Contractor Execution Requirements

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

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

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

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

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

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

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.

Shop Drawing & Submittal Review

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

Shop Drawing & Submittal Review (including Deferred Structural Components)

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

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

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

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

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

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

* I-joist and engineered wood beam floor framing layout & materials list
* Engineered wood beams (certificates to be on-site and available upon request)
* Deferred Structural Components (see below)

Deferred Structural Components
These elements have not been permitted under the base building application. The contractor will be required to submit the component system documents to the building official for approval. The documents shall be stamped and signed by an engineer licensed by the state where the project is located. The deferred structural components shall not be installed until the design and submittal documents have been approved by the building official.

Prior to building department submittal, the deferred structural components submittals shall receive cursory review by SER for loads imposed on primary structure and 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. Submittals of contractor-designed components shall include the designing professional engineer's stamp and signature, as noted above. The submittal shall be approved by the component vendor prior to review by the SER. The designing professional is responsible for code conformance and all necessary connections not specifically called out on architectural or structural contract documents.

Submittals shall include details of connections to primary structure that indicate magnitude and direction of all loads imposed at point of connection. Design criteria shall be provided with submittal and calculations shall be made available upon request.

The following list includes the items that are defined as Deferred Structural Components. Refer to other discipline's contract documents for additional deferred components that may require structural design and details. Connections of these elements shall not induce torsion on structural members. Deferred Structural Components shall be manufactured, delivered, handled, stored, and field erected in conformance with instructions prepared by the component vendor.

Deferred structural components:
Pre-manufactured wood trusses

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:
* Epoxy installed anchor bolts and holdowns rods: Continuous per Section1705.12.2 (as req'd)

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:

"Foundation Design Criteria and Evaluation of Infiltration Feasibility", Proposed Lanctot Residence, 4603 - 89th Ave SE, Mercer Island, WA", #JN 22040, dated January 28, 2022 & prepared by Geotech Consultants, Inc.

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

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

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

Bearing Values
Allowable soil pressure = 2,500 psf
Passive earth pressure = 300 pcf
Coefficient of friction =0.40

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 min. of 18" below the finished ground surface. Footing elevations shown on plans (or in details) are minimum depths and for guidance only; the actual elevations of footings must be established by the contractor in the field working with the Geotechnical Inspector.

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

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

Retaining Walls
Grade on either side of concrete walls shall not vary by more than 12", UNO. Slope of backfill shall not exceed 2H to 1V, UNO. Backfill behind all retaining walls with free draining, granular fill installed per the Geotechnical Report. Provide for subsurface drainage. Design pressures used for the design of retaining walls are based on drained conditions. Provide temporary shoring for tops of walls if backfill is placed prior to the floor framing and sheathing being completely installed and attached to perpendicular walls.

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

Concrete

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Concrete wall reinforcing - typical UNO:

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

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.

Wood

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

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

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

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

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

KOCH RESIDENCE
PERMIT SET
4603 89TH AVE SE
MERCER ISLAND, WA 98040

STRUCTURAL NOTES

REVISIONS:
2022-11-26 Corrections #1
2023-2-15 Corrections #2
2023-4-22 Design Revisions

DRAWN BY: KE
CHECKED BY: BJS
SHEET S1.0
PLOT DATE: 8/22/2023

SCALE: IF SHEET IS LESS THAN 24" X 36", IT IS A REDUCED PRINT: REDUCE SCALE ACCORDINGLY
REVISION SET 08/22/23

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

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.

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.

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

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

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

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

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

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

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

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. Connectors shall be installed in accordance with the manufacturer's recommendations. Where connector straps connect two members, place ½ of the nails or bolts in each member. UNO on the drawings use the following hangers:

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

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

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

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

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

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

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

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

GENERAL STRUCTURAL NOTES
(TYPICAL UNLESS NOTED OTHERWISE ON DRAWINGS)

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

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

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

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

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

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

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

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

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

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

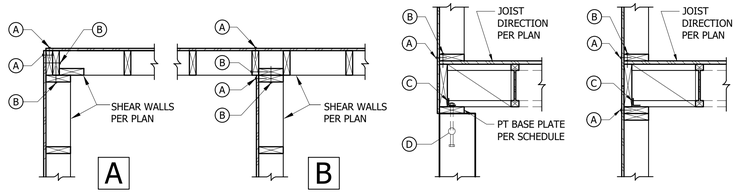
Provide double joists under all parallel partitions that extend over more than half the joist length and around all openings in floors or roofs unless otherwise noted. Provide solid blocking at all bearing points.

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

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

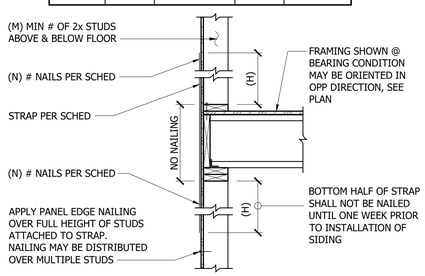
SHEAR WALL SCHEDULE								
MARK	SHEATHING	PANEL EDGE (A) NAILING	TOP PLATE (B) NAILING	A35 (C) CLIPS	MUDSILL TO CONCRETE (D)		CAPACITY (PLF)	
					2x6 P.T.	3x6 P.T.	SEISMIC	WIND
SW6	½" PLYWOOD	0.131" @ 6"oc	0.131" @ 6"oc	A35 @ 24"oc	⅝"ø AB @ 48"oc	⅝"ø AB @ 64"oc	260	270
SW4	½" PLYWOOD	0.131" @ 4"oc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

NOTES:
1. ALL EXTERIOR WALLS SHALL BE SW6 (TYP, UNO). WALL FRAMING SHALL BE 2x HF (UNO) STUDS @ 16"oc BLOCK ALL PANEL EDGES WITH 2x LAID FLAT. ALL STUDS ATTACHED TO STRAPS OR HOLDOWNS SHALL BE PANEL-EDGE NAILED. NAIL TO ALL INTERMEDIATE SUPPORTS WITH 0.113"ø @ 12"oc SHEATHING SHALL BE 15/32" STRUCT-1 OR 7/16" OSB.
2. 0.113"ø NAILS SHALL BE A MINIMUM OF 2⅜" IN LENGTH, 0.131"ø NAILS SHALL BE A MINIMUM OF 3" IN LENGTH.
3. LTP4 OR LS50 CLIPS MAY BE SUBSTITUTED FOR A35 CLIPS.
4. EMBED ANCHOR BOLTS 7" MIN. ALL BOLTS SHALL HAVE 3x3x¼" PLATE WASHERS (EDGE OF WASHER SHALL BE WITHIN ½" OF SHEATHING). EACH MUDSILL SHALL HAVE A MINIMUM OF (2) ANCHOR BOLTS WITH (1) BOLT LOCATED NOT MORE THAN 12" OR LESS THAN 4½" TO EACH END. SIMPSON TITEN HD SCREWS, SIMPSON STRONG-BOLT OR HILTI KWIK-BOLT TZ EXPANSION BOLTS MAY BE SUBSTITUTED FOR ANCHOR BOLTS w/ 3-⅛" MIN EMBED.
5. FOR SW2:
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.

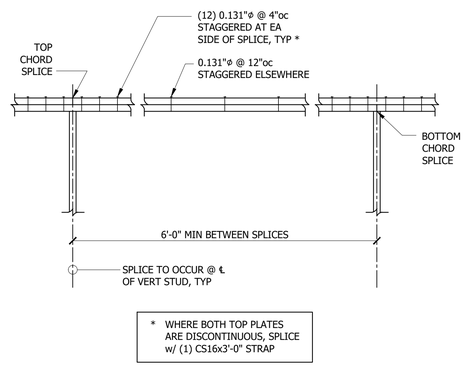


1 Shear Wall Schedule
3/4" = 1'-0"

STRAP SCHEDULE				
MARK	H	N	M	HF CAPACITY
CS16	14"	(13) 0.131"	1	1,705#
MSTC40	12"	(14) 0.148"	2	2,325#
MSTC52	17"	(22) 0.148"	2	3,650#



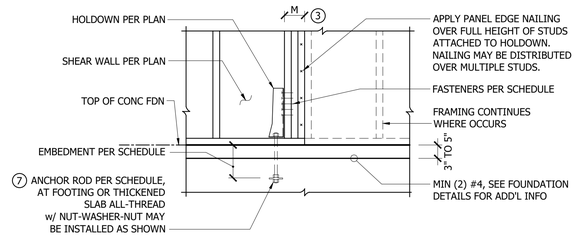
2 Strap Schedule
3/4" = 1'-0"



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

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

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



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

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STRUCTURAL NOTES

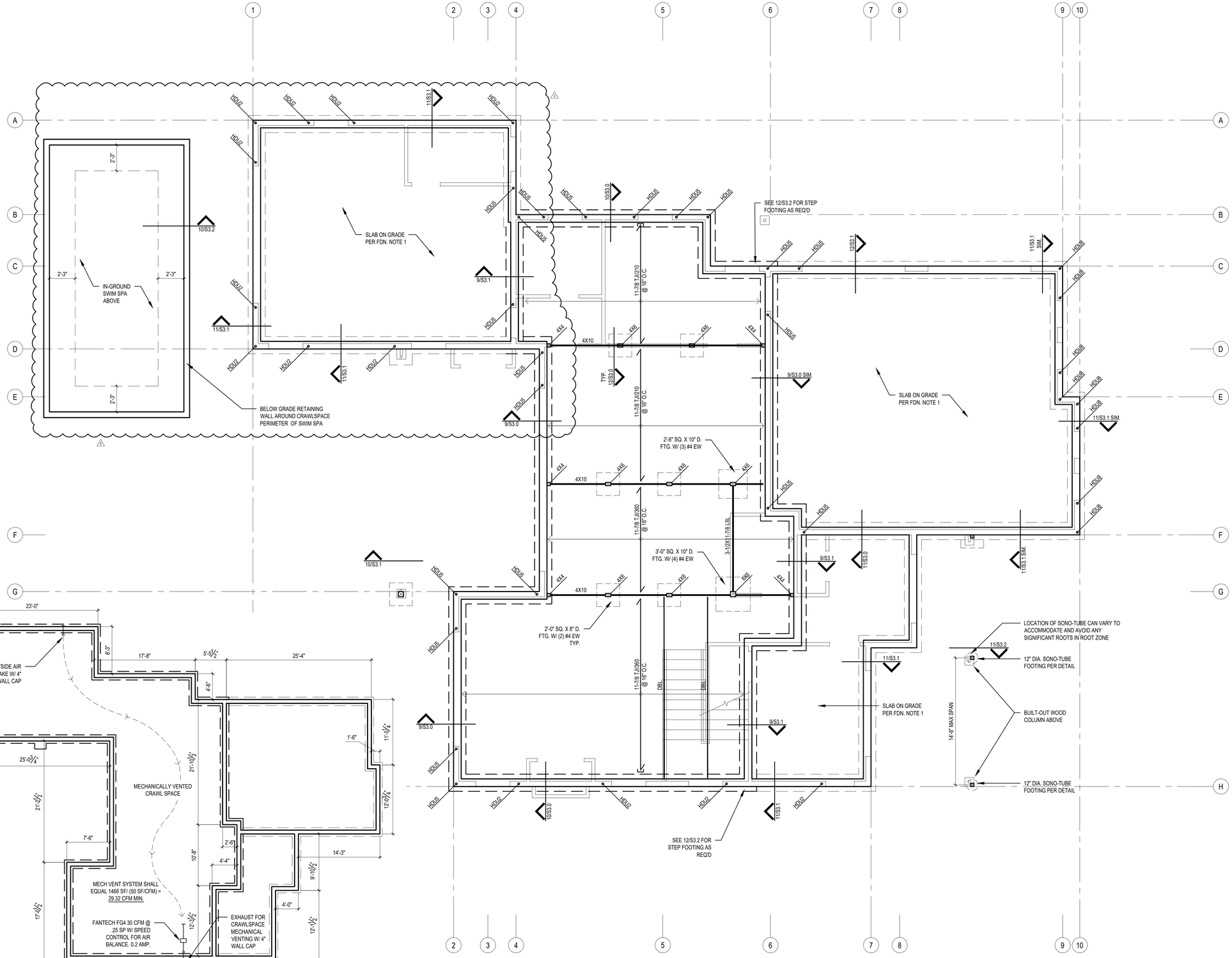
REVISIONS:
2022-11-28 Corrections #1
2023-2-15 Corrections #2
2023-8-22 Design Revisions

DRAWN BY: KE
CHECKED BY: BJS

SHEET
S1.0

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

REVISION SET 08/22/23
PLOT DATE: 8/22/2023



GENERAL FRAMING NOTES:

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

FOUNDATION NOTES:

1. TYPICAL SLAB ON GRADE AT INTERIOR SHALL BE 4" THICK. REINFORCE ALL SLABS w/ WWF6x6-W2.9xW2.9 AT CENTERLINE.
2. HD - INDICATES HOLDOWN LOCATED AT END OF SHEAR WALL ABOVE, SEE HOLDOWN SCHEDULES ON 4/S1.1.

MAIN FLOOR FRAMING NOTES:

1. FLOOR SHEATHING SHALL BE MIN.23/32" APA RATED SHEATHING (48/24). NAIL @ ALL PANEL EDGES AND OVER ALL SHEAR WALLS w/0.113"ø @ 6"oc AND 12"oc TO ALL INTERMEDIATE FRAMING. PLACE LONG DIRECTION OF PLYWOOD PERPENDICULAR TO JOISTS DIRECTION, STAGGER PANEL JOINTS.
2. TYPICAL FLOOR FRAMING SHALL BE 11-7/8" TJI/210 @ 16"oc, DIRECTION PER PLAN. JOIST TO SPAN CONTINUOUS AS INDICATED ON PLAN.
3. LSL - INDICATES FLUSH-FRAMED 1-3/8x11-1/4 LSL BEAM. ALL JOISTS AND 11-7/8" DEEP BEAMS SHALL BE FLUSH-FRAMED & ALL 4x HEADERS/GLULAM BEAMS SHALL BE DROPPED UNO.
4. DS - INDICATES FLUSH-FRAMED 1-3/8x11-1/4 LSL DRAG STRUT. NAIL SHEATHING OVER ENTIRE LENGTH w/ 0.131"ø NAILS @ 4"oc.
5. HD - INDICATES HOLDOWN LOCATED AT END OF SHEAR WALL ABOVE, SEE SCHEDULE ON 4/S1.1.

HANGER SCHEDULE	
MEMBER	HANGER
2x JOISTS	LUS
14" TJI/230	IUS/ITS2.37/14
14" TJI/560	IUS/ITS3.56/14
1-3/8x14 LSL/LVL	HUS1.81/10
3-1/2x14 LSL/PSL	HHUS410
5-1/8x14 PSL	HGUS5.510
11-7/8" TJI/210	IUS/ITS2.06/11.88
3-1/8x11-1/4 LSL/PSL	HHUS410

2 CRAWL SPACE VENTING PLAN

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

1 FOUNDATION & MAIN FLOOR FRAMING PLAN

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

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

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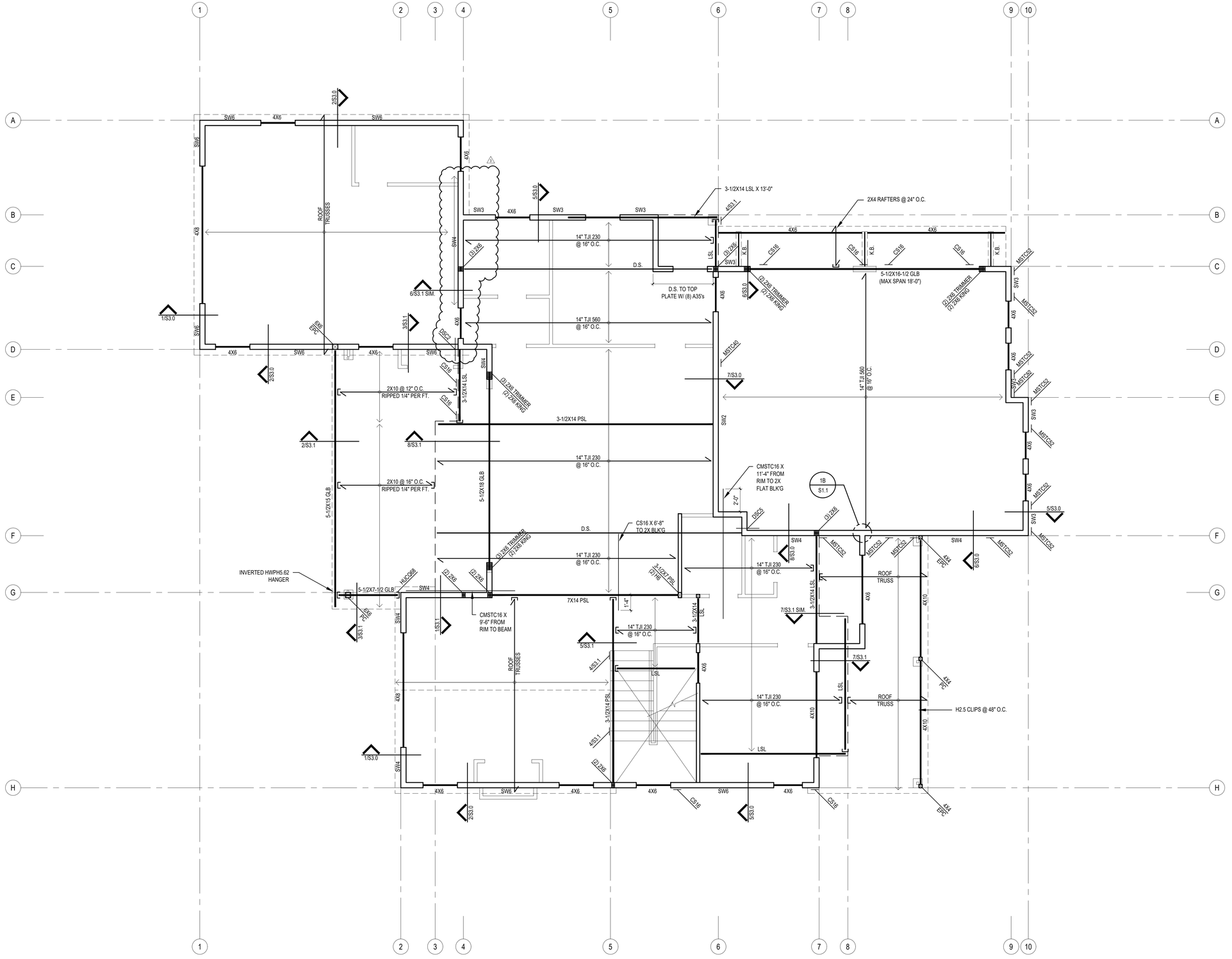
FOUNDATION & MAIN FLOOR FRAMING PLAN
CRAWL SPACE VENTING PLAN

REVISIONS:
1 2022-11-29 Corrections #1
2 2023-2-15 Corrections #2
3 2023-8-22 Design Revisions

DRAWN BY: KE
CHECKED BY: BJS

SHEET
S2.0

PLOT DATE: 8/22/2023



1 UPPER FLOOR FRAMING PLAN

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

GENERAL FRAMING NOTES:

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

UPPER 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 14" TJI/230 @ 16"oc, DIRECTION PER PLAN. JOIST TO SPAN CONTINUOUS AS INDICATED ON PLAN.
3. LSL - INDICATES FLUSH-FRAMED 1-$^3/_4$x14 LSL BEAM. ALL JOISTS AND 14" DEEP BEAMS SHALL BE FLUSH-FRAMED & ALL 4x HEADERS/GLULAM BEAMS SHALL BE DROPPED UNO.
4. DS - INDICATES FLUSH-FRAMED 1-$^3/_4$x14 LSL DRAG STRUT. NAIL SHEATHING OVER ENTIRE LENGTH w/ 0.131"Ø NAILS @ 4"oc.
5. S - INDICATES STRAP AT END OF SHEAR WALL ABOVE, SEE SCHEDULE ON 2/S1.1.

HANGER SCHEDULE	
MEMBER	HANGER
2x JOISTS	LUS
14" TJI/230	IUS/ITS2.37/14
14" TJI/560	IUS/ITS3.56/14
1-$^3/_4$x14 LSL/LVL	HUS1.81/10
3-$^1/_2$x14 LSL/PSL	HHUS410
5-$^1/_2$x14 PSL	HGUS5.510
11-$^7/_8$" TJI/210	IUS/ITS2.06/11.88
3-$^1/_2$x11-$^7/_8$ LSL/PSL	HHUS410

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

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UPPER FLOOR FRAMING PLAN

REVISIONS:
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3 2023-8-22 Design Revisions

DRAWN BY: KE

CHECKED BY: BJS

SHEET
S2.1

PLOT DATE: 8/22/2023

HANGER SCHEDULE	
MEMBER	HANGER
2x JOISTS	LUS
14" TJI/230	IUS/ITS2.37/14
14" TJI/560	IUS/ITS3.56/14
1-¾x14 LSL/LVL	HUS1.81/10
3-½x14 LSL/PSL	HHUS410
5-½x14 PSL	HGUS5.510
11-⅞" TJI/210	IUS/ITS2.06/11.88
3-½x11-¼ LSL/PSL	HHUS410

GENERAL FRAMING NOTES:

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

ROOF FRAMING NOTES:

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

Prefabricated Connector Plate Wood Roof Trusses

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

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

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

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

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

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

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

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

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

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

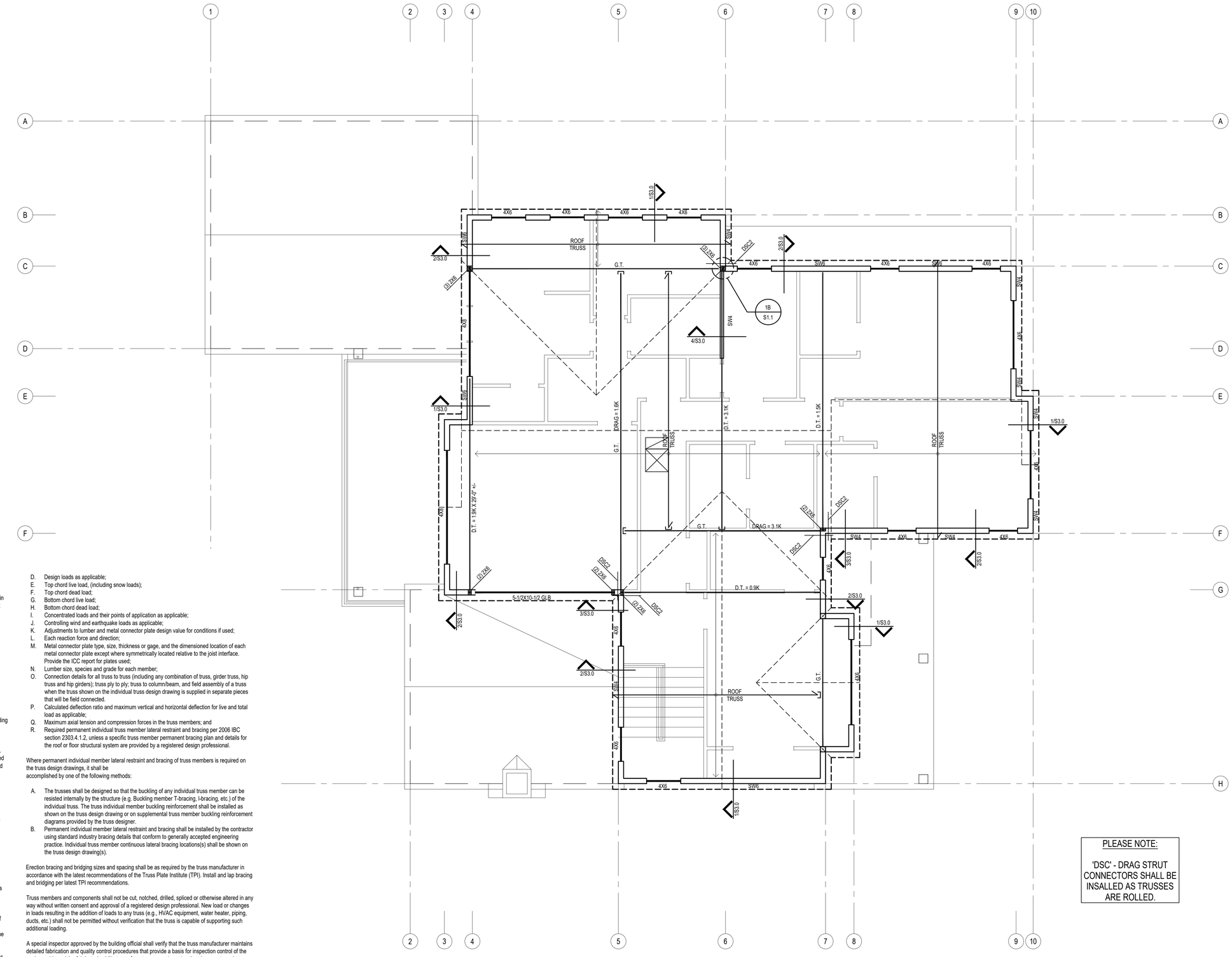
Where permanent individual member lateral restraint and bracing of truss members is required on the truss design drawings, it shall be accomplished by one of the following methods:

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

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

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

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



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

PLEASE NOTE:

'DSC' - DRAG STRUT CONNECTORS SHALL BE INSALLED AS TRUSSES ARE ROLLED.

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

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UPPER ROOF FRAMING PLAN

REVISIONS:
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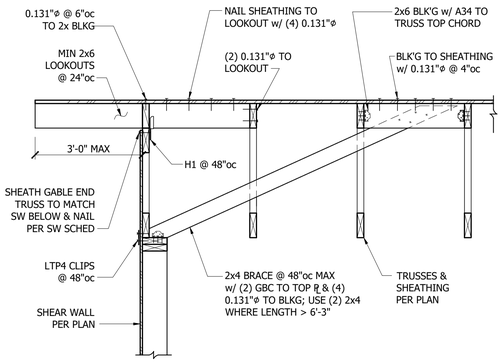
3 2023-8-22 Design Revisions
4
5

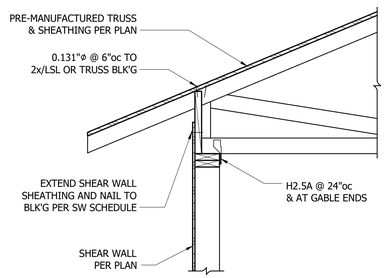
DRAWN BY: KE
CHECKED BY: BJS

SHEET
S2.2

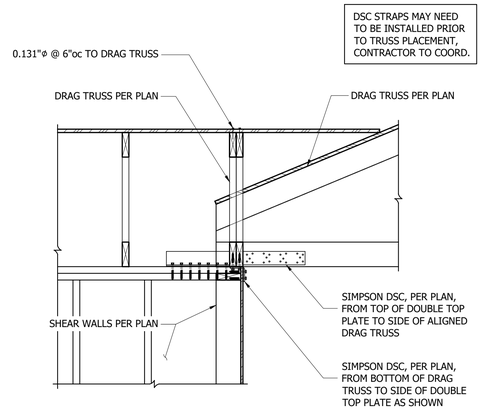
PLOT DATE: 8/22/2023



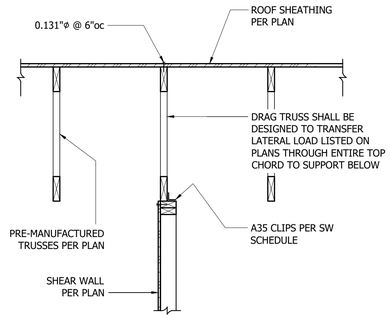
1 Trusses Parallel to Exterior Wall
3/4" = 1'-0"



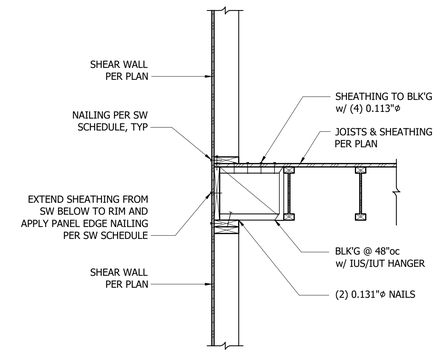
2 Trusses Perpendicular to Exterior Wall
3/4" = 1'-0"



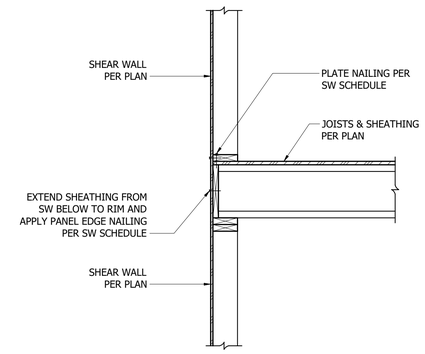
3 Perp. Drag Struts to Shear Walls
3/4" = 1'-0"



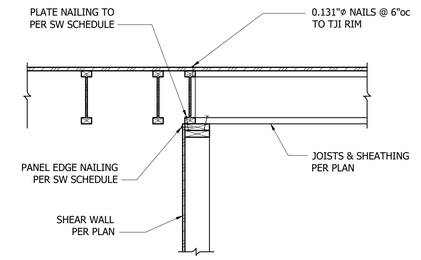
4 Drag Truss Parallel to Interior SW
3/4" = 1'-0"



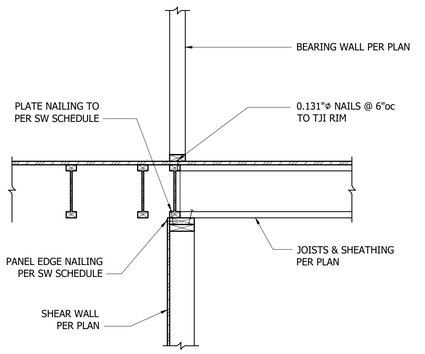
5 TJI Joists Parallel to Exterior Wall
3/4" = 1'-0"



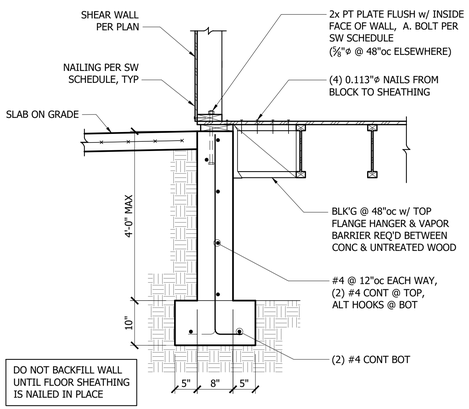
6 TJI Joists Perpendicular to Exterior Wall
3/4" = 1'-0"



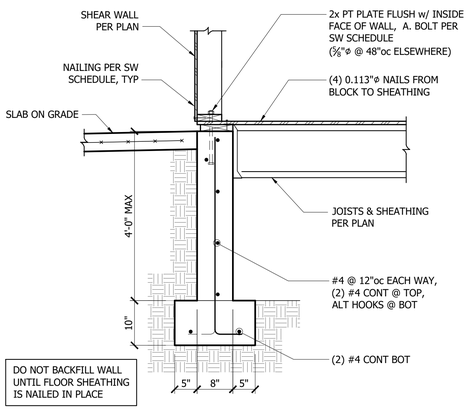
7 TJI Joists Parallel to Interior Shear Wall
3/4" = 1'-0"



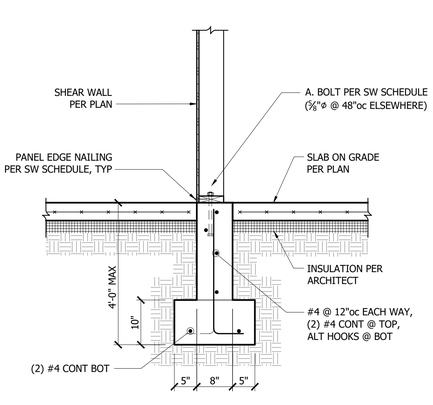
8 TJI Joists Parallel to Interior Shear Wall
3/4" = 1'-0"



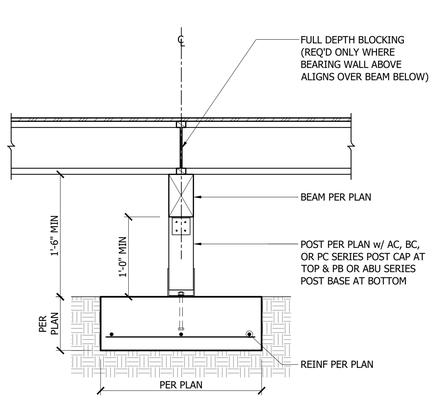
9 TJI Parallel to Crawlspace Stem Wall
3/4" = 1'-0"



10 TJI Parallel to Crawlspace Stem Wall
3/4" = 1'-0"



11 Stem Wall/Footing @ Interior Partition Wall
3/4" = 1'-0"



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

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

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STRUCTURAL DETAILS

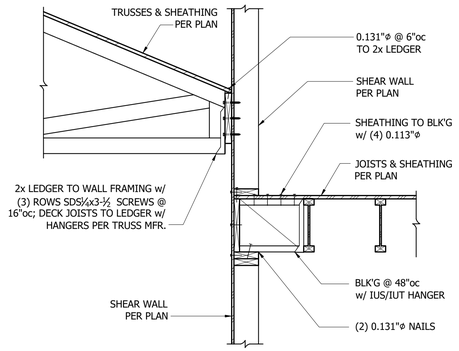
REVISIONS:
1 2022-11-28 Corrections #1
2 2023-1-15 Corrections #2
3 2023-8-22 Design Revisions

DRAWN BY: KE

CHECKED BY: BJS

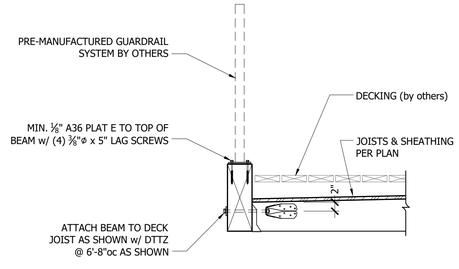
SHEET
S3.0

PLOT DATE: 8/22/2023



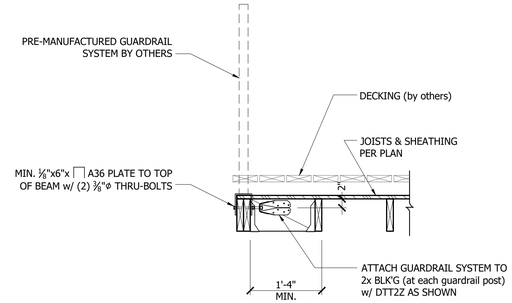
1 Low Roof Perp. to Exterior Wall

3/4" = 1'-0"



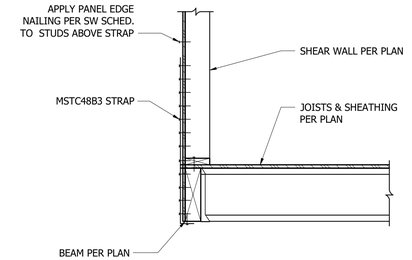
2 Guardrail Support at Deck Beam

3/4" = 1'-0"



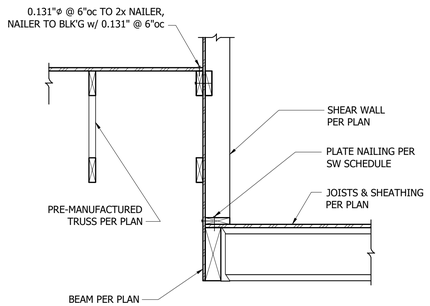
3 Guardrail Support at Parallel Deck Joists

3/4" = 1'-0"



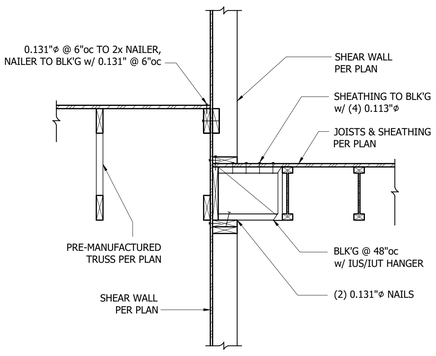
4 Strap to Beam Below

3/4" = 1'-0"



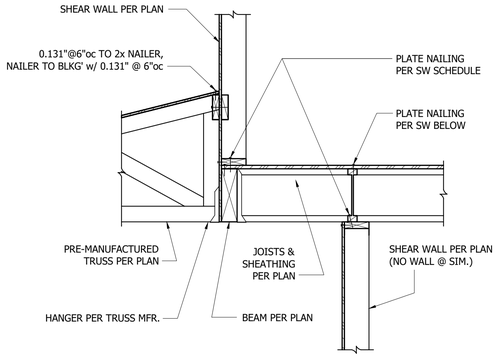
5 Low Roof Parallel to Exterior Wall

3/4" = 1'-0"



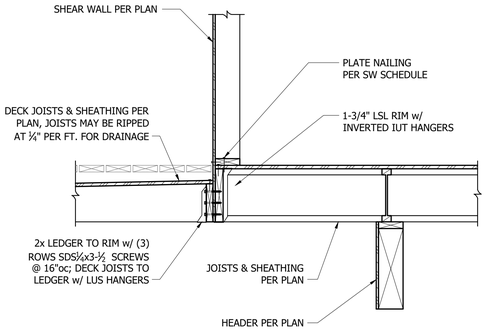
6 Low Roof Parallel to Floor Framing

3/4" = 1'-0"



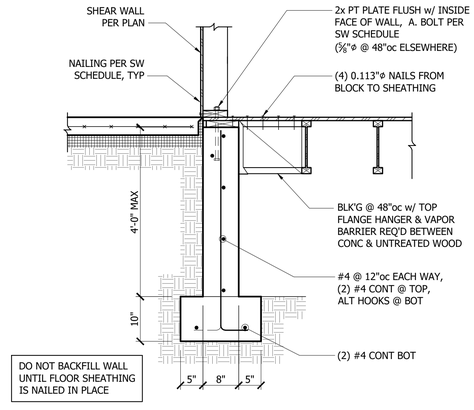
7 Trusses at Cantilevered Floor Framing

3/4" = 1'-0"



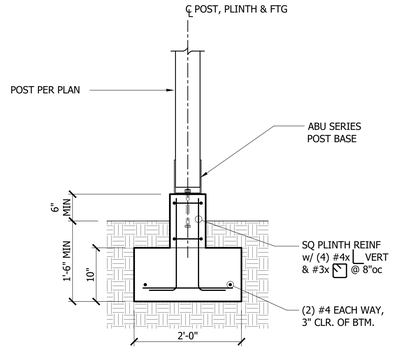
8 Deck Joists at Cantilevered Floor Framing

3/4" = 1'-0"



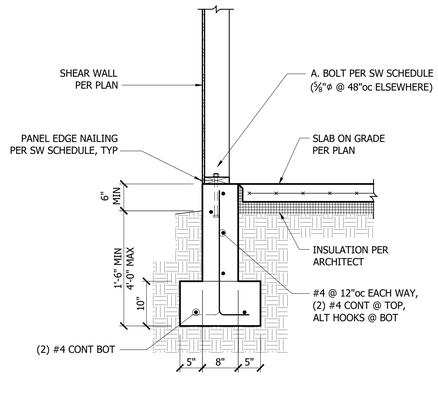
9 Transition at Crawlspace to Slab on Grade

3/4" = 1'-0"



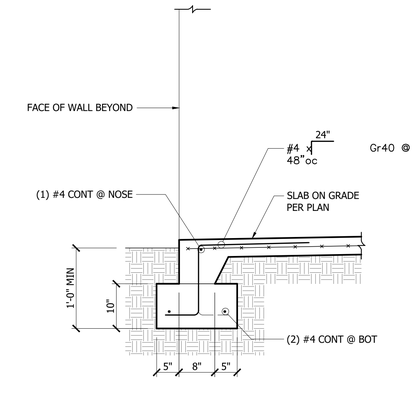
10 Isolated Post Footing

3/4" = 1'-0"



11 Stem Wall/Footing @ Exterior Wall

3/4" = 1'-0"



12 Footing @ Garage Opening

3/4" = 1'-0"

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2023-8-22 Design Revisions

DRAWN BY: KE

CHECKED BY: BJS

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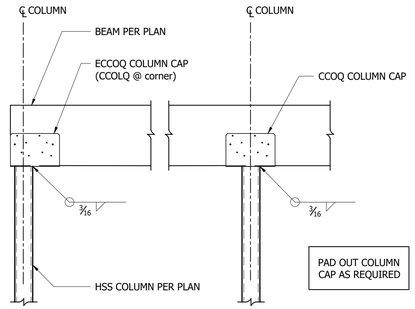
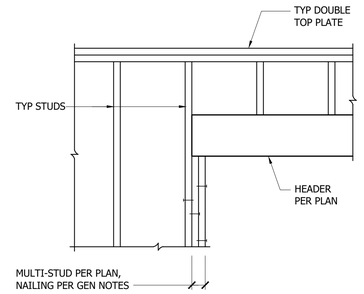
S3.1

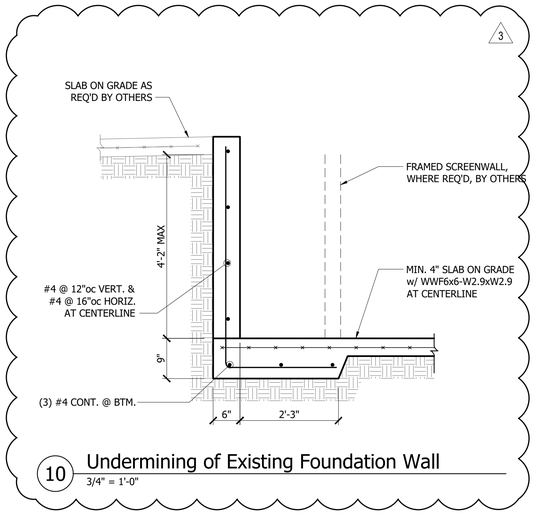
PLOT DATE: 8/22/2023



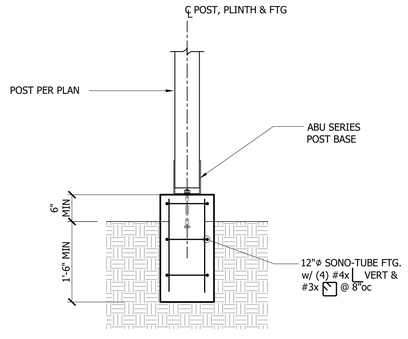
3 Wood Beam to HSS Column, Typ.
3/4" = 1'-0"



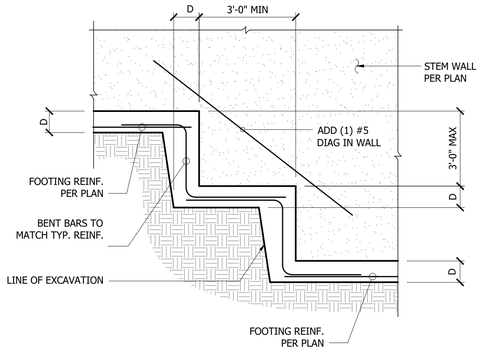
4 Header Support, Typ.
3/4" = 1'-0"



10 Undermining of Existing Foundation Wall
3/4" = 1'-0"



11 Sono Tube Post Footing
3/4" = 1'-0"



12 Stepped Footing, Typ.
3/4" = 1'-0"

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