STANDARD ABBREVIATIONS AND SYMBOLS

ANGLE	∠
CENTERLINE	℄
CHANNEL	[
DIAMETER OR ROUND	ø
NUMBER OR POUND	#
PERPENDICULAR	⊥
PLATE	▭
ANCHOR BOLT	AB
ACOUSTICAL	AC
AIR CONDITIONING	A/
ACOUSTICAL TILE	ACT
AREA DRAIN	AD
ADDITIVE	ADD
ADHESIVE	ADH
ADJACENT	ADJ
ADJUSTABLE	ADJT
ACCESS FLOOR	AF
ABOVE FINISH FLOOR	AFF
AGGREGATE	AGG
ALUMINUM	AL
ALTERNATE	ALT
ACCESS PANEL	AP
APPROXIMATE	APPROX
ARCHITECTURAL	ARCH
ASPHALT	ASPH
ATTENUATION	ATT
ACOUSTICAL WALL FABRIC	AW
ACOUSTICAL WALL PANEL	AWP
BOARD	BD
BETWEE	BET
BITUMINOUS	BITUM
BUILDING	BLDG
BLOCK	BLK
BLOCKING	BLKG
BEAM	BM
BEARING	BRG
BOTTOM	BOT
BEDROCK	BR
BRICK	BRK
BASEMENT	BSMT
BUILT-UP ROOF	BUR
CABINET	CAB
CATCH BASIN	CB
CEMENT	CEM
CERAMIC	CER
CUBIC FEET PER SQUARE FOOT	CFM
CONDUCTIVE FLOOR TILE	CFT
CORNER GUARD	CG
CHALK BOARD	CHBD
CAST IRON	CI
CONTROL JOINT	CJT
CEILING	CLG
CONSTRUCTION JOINT	CJ
CUP SINK	CS
CAULKING	CLK
CLOSET	CLO
CLEAR	CLR
CERAMIC MOSAIC TILE	CMT
CONCRETE MASONRY UNIT	CMU
COUNTER	CNTR
CLEANOUT	CO
COLUMN	COL
CONCRETE	CONC
CONNECTION	CONN
CONSTRUCTION	CONSTR
CONTINUOUS	CONT
CORRIDOR	CORR
CARPET	CPT
CASEMENT	CSMT
CERAMIC TILE	CT
CENTER	CTR
COUNTER SINK	CTSK
CUBIC YARD	CY
DOUBLE	DBL
DEPARTMENT	DEPT
DETAIL	DET
DRINKING FOUNTAIN	DF
DEIONIZED WATER	DI
DIAMETER	DIA
DIAGONAL	DIAG
DIMENSION	DIM
DISPENSER	DISP
DAMPPROOFING	DMPF
DOWN	DN
DAMPER	DPR
DOWNSPOUT	DS
DISHWASHER	D
DRAWING	DWG
EAST	E
EACH	EA
EXPANSION BOLT	EB
EXPANSION JOINT	EJ
EXTERIOR INSULATED FINISH SYSTEM	EIFS
ELEVATION	EL
ELECTRIC	ELEC
ELEVATOR	ELEV
ENTRY	EM
EMERGENCY	EMER
ENCLOSURE OR ENCLOSED	ENCL
ELECTRIC PANEL BOARD	EP
EPOXY	EPX
EQUAL	EQ
EQUIPMENT	EQPT
EMERGENCY SHOWER/ EYE WASH	ESE
ESTIMATE	EST
EXHAUST	EX
EXPANSION	EXP
EXISTING	(E)
EMERGENCY EYE WASH	EE
EXTERIOR	EXT
FIRE ALARM	FA
FLAT	FB
FIBER BOARD	FBD
FURNISHED BY	FBO
FURNISHED BY CONTRACTOR INSTALL BY CONTRACTOR	FCIC
FACTORY	FCTY
FLOOR DRAIN	FD
FOUNDATION	FDN
FIRE EXTINGUISHER	FE
FIRE EXTINGUISHER CABINET	FEC
FIBERGLASS	FGL
FIRE HOSE CABINET	FHC
FINISH	FIN
FLOOR	FL
FLASHING	FLG
FLUORESCENT	FLUOR
FACE OF CONCRETE	FOC
FACE OF FINISH	FOF
FURNISH BY OWNER/INSTALL BY CONTRACTOR	FOIC
FURNISH BY OWNER/INSTALL BY CONTRACTOR	FOIO
FACE OF STUD	FOS
FIREPLACE	FP
FULL SIZE	FS
FEET	FT
FIRE PROOFING	FPRF
FOOTING	FTG
FURRING	FURR
FUTURE	FUT
FUTURE ROUGH-IN ONLY	FUT-RIO
GAUGE	F
GALVANIZED	X
GRAB BAR	GA
GENERAL CONTRACTOR	GALV
GLASS OR GLAZING	GB
GLU-LAM	GEN CONTR
GLASS MESH MORTAR	GL
GROUND	GLBM
GRADE	GMMU
GYPSUM WALL	GND
GYPSUM	GR
HOSE BIB	GW
HARD BOARD	GYP
HOLLOW CORE	HB
HAND DRYER	HBD
HEADER	HC
HARDWOOD	HD
HARDWARE	HDR
HOLLOW METAL	HDW
HORIZONTAL	HDWE
HOUR	HM
HEIGHT	HORIZ
HEATING	HR
HEATING, VENTILATING, AIR CONDITIONING	HT
HOT WATER	HTG
HEATER	HVAC
INSIDE DIAMETER (DIMENSION)	HW
INSULATED GLAZING	H
INSULATED HOLLOW CORE	ID
INCLUDE	IG
INSULATION	IHM
INTERIOR	INCL
JANITOR	INSUL
JOIST	INT
JOINT	JAN
KITCHEN	JST
KNEE SPACE	JT
LABORATORY	KIT
LAMINATE	KS
LAVATORY	LAB
LAG	LAM
LENGTH	LAV
LEFT	LB
LOCKER	LG
LIQUID MARKING SURFACE	LH
LIGHT	LKR
LIGHT WEIGHT CONCRETE	LMS
MACHINE	LT
MASONRY	LWC
MATERIAL	MACH
MAXIMUM	MAS
MEDICINE CABINET	MATL
MEDIUM DENSITY OVERLAY	MA
MECHANICAL	MC
MEMBRANE	MDO
METAL	MECH
MEZZANINE	MEMB
MANUFACTURER	MET OR
MANHOLE	MEZZ
MINIMUM	MFR
MIRROR	MH
MISCELLANEOUS	MIN
MOLDING	MIR
MASONRY OPENING	MISC
MOUNTED	MLD
MULLION	MO
NORTH	MTD
NON-FROST SUSCEPTIBLE	MULL
NOT IN CONTRACT	N
NUMBER	NFS
NOMINAL	NIC
NOISE REDUCTION COEFFICIENT	NO
NOT TO SCALE	NOM
OVERALL	NRC
OBSCURE	NTS
ON CENTER	OA
OUTSIDE DIAMETER (DIMENSION)	OBS
OFFICE	OC
OVERHEAD	OD
OPPOSITE HAND	OFF
OPENING	OH
OPPOSITE	OPH
PARTICLE BOARD	OPNG
PREFABRICATED	OPP
PREFINISHED	PBD
PLATE	PFB
PLASTIC LAMINATE	PFHB
PLYWOOD	PL
PANEL	P LAM
PAINT	PLYWD
POLISH	PNL
PAIR	PNT
PRE-CAST	POL
PRESSURE TREATED	PR
PAPER TOWEL	PRCST
PAPER TOWEL DISPENSER	PT
PAPER TOWEL RECEPTACLE	PTD
PARTITION	PTD/R
PAPER TOWEL RECEPTACLE	PTN
POLYVINYL CHLORIDE	PTR
PAVEMENT	PVC
QUARRY TILE	PVMT
RISER	QT
RETURN AIR	R
RADIUS	RA
RUBBER	RAD
RODS & SHELVES	RB
ROOF DRAIN	RBS
ROOF DRAIN, OVERFLOW	RD
REINFORCING BAR	RD/OF
REFERENCE	REBAR
REFRIGERATOR	REF
REINFORCED	REFR
REQUIRED	REINF
RESILIENT	REQ
REGISTER	RESIL
RIGHT HAND OR ROBE HOOK	RGTR
ROOM	RH
ROUGH OPENING OR REVERSE OSMOSIS WATER	RM
ROUGH	RO
RUBBER	RS
REVERSE	RUB
SOUTH	RVS
SOLID CORE	S
SEAT COVER DISPENSER	SC
SCHEDULE	SCD
SOAP DISPENSER	SCHD
SECTION	SD
SQUARE	SECT
SAFETY GLAZING	SF
SHOWER	SG
SHEET	SHR
SHEATHING	SHT
SOLAR INSULATED GLAZING	SHTH
SIMILAR	SIG
SINK	SIM
SEALER	SK
SANITARY NAPKIN DISPENSER	SLR
SANITARY NAPKIN RECEPTACLE	SND
SEALANT	SNR
STAND PIPE	SNT
SPECIFICATION	SP
SQUARE	SPEC
STAINLESS STEEL	SQ
SERVICE SINK	SST
SOUND TRANSMISSION CLASS	SSK
SHEET VINYL OR SEAMLESS	STC
SERVICE	SV
SYMMETRICAL	SVCE
SWITCHBOARD	SYM
SPECIAL WALL COVERING	SWB
TREAD	SWD
TOWEL	T
TERRAZZO	TB
TELEPHONE	TER
TOP AND BOTTOM	TEL
TEMPERED AND LAMINATED GLAZING	T & B
THRESHOLD	TG
TEMPERED INSULATED GLAZING	THR
TACKBOARD	TIG
TOP OF	TKBD
TOP OF CONCRETE	TO
TOP OF FOOTING	TOC
TOP OF PAVEMENT	TOF
TOP OF STEEL	TOP
TOP OF SLAB	TOS
TOILET PAPER DISPENSER	TOSL
TOILET PARTITION	TO
TELEVISION	TPD
TYPICAL	TPTN
UNDERWRITERS LABORATORY	TV
UNFINISHED	TYP
UNLESS OTHERWISE NOTED	UL
URINAL	UNF
VARIES	UON
VINYL BASE	UR
VINYL COMPOSITION TILE	VAR
VAPOR RETARDER	VB
VENTILATOR	VCT
VERTICAL	VR
VESTIBULE	VENT
VINYL	VERT
VENEER	VEST
VINYL TILE	VIN
VINYL WALL COVERING	VNR
WES	VT
WITH	VWC
WITHOUT	W
WATER	W/
WATER CLOSET	WD
WINDOW	WC
WIRE	W
WAINSCOT	WD
WATER PROOF	W
WORKING POINT	WSCT
WATER RESISTANT	W
WEIGHT	WP
WELDED WIRE FABRIC	WR
TRANSFORMER	W
	WWF
	XFMR

SHEET INDEX

SHEET NUMBER	SHEET NAME	CONTENTS
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G 1.0	COVER SHEET	SYM KEY, BLDG CODE NOTES, PROP INFO, GEN NOTES
G 1.1	WINDOW & DOOR SCH, ENERGY & MECH CODE NOTES, ASSEMBLIES	ENERGY CODE NOTES, MECH NOTES, SCHEDULES
SURVEY		
1 OF 1	SURVEY	SURVEY PROVIDED FOR REFERENCE ONLY
CIVIL		
C 1.0	TESC / TREE RETENTION PLAN	TEMPORARY EROSION AND SEDIMENT CONTROL PLAN AND DETAILS
C 1.2	TESC & CITY NOTES	TESC NOTES, CITY NOTES, TESC DETAILS
C 2.0	DRAINAGE / CIVIL PLAN	DRAINAGE PLANS, DETAILS, DRAINAGE NOTES
C 3.0	STORM PROFILE	STORM PROFILE DIAGRAM
C 3.5	BMP DETAILS	BMP DETAILS, NOTES
C 4.0	DETENTION PROFILE AND DETAIL	DETENTION PROFILE DIAGRAM, IMPERVIOUS CALCS, NOTES
ARCHITECTURAL		
A 1.0	SITE PLAN	SITE PLAN, ZONING NOTES
A 1.1	ZONING DIAGRAMS	AVG. GRADE, LOT COVG.
A 1.2	ARCH FOUNDATION & EXCAVATION PLAN	EXCAVATION PLAN AND DETAILS, CRAWLSPACE VENTILATION
A 2.0	MAIN LEVEL PLAN	MAIN LEVEL PLAN, FAR DIAGRAM, PLAN NOTES
A 2.1	UPPER LEVEL PLAN	UPPER LEVEL PLAN, FAR DIAGRAM, PLAN NOTES
A 2.2	ROOF PLAN	ROOF PLAN, VENTING INFORMATION
A 3.0	ELEVATIONS	NORTH ELEV, EAST ELEV, NOTES
A 3.1	ELEVATIONS	SOUTH ELEV, WEST ELEV, NOTES
A 4.0	SECTIONS	BUILDING SECTIONS, DETAILS
A 4.1	SECTIONS	BUILDING SECTIONS, DETAILS
A 5.0	TYPICAL DETAILS	STANDARD DETAILS
A 5.1	FRAMING DETAILS	FRAMING DETAILS @ ROOF, WALLS, CRAWLSPACE, ETC.
A 5.2	STAIR DETAILS	STANDARD STAIR DETAILS
A 6.0	INTERIOR ELEVATIONS	INTERIOR ELEVATIONS, MILLWORK
E 1.0	MAIN LEVEL RCP	MAIN LEVEL LIGHTING AND SWITCHING PLAN
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MECHANICAL		
M 1.0	HRV DIAGRAMS	VENTILATION DUCTING RUNS AND TERMINATIONS
STRUCTURAL		
S 1.0	GENERAL STRUCTURAL NOTES	
S 1.1	GENERAL STRUCTURAL NOTES AND SCHEDULES	
S 2.0	FOUNDATION & MAIN LEVEL FRAMING PLAN	
S 2.1	UPPER LEVEL FRAMING PLAN	
S 2.2	ROOF FRAMING PLAN	
S 3.0	STRUCTURAL DETAILS	
S 3.1	STRUCTURAL DETAILS	
S 3.2	STRUCTURAL DETAILS	

GENERAL NOTES

READ BEFORE BEGINNING ANY WORK

GENERAL

1. THESE DRAWINGS AND THE INFORMATION THEY DEPICT ARE INSTRUMENTS OF SERVICE FOR THE ARCHITECT AND ARE PROTECTED FULLY BY COPYRIGHT LAW. UNDER NO CIRCUMSTANCES SHALL THESE DRAWINGS BE REPRODUCED AND USED IN ANY CAPACITY WHATSOEVER TO CONSTRUCT ANY BUILDINGS OR PORTIONS OF BUILDINGS AT LOCATIONS OTHER THAN THOSE WHICH ARE DEPICTED EXPLICITLY HEREIN. IT IS THE FULL INTENTION OF THE ARCHITECT TO DEPICT A BUILDING WHICH IS COMPLIANT TO EVERY ASPECT OF CURRENT LOCAL BUILDING CODES.
2. ENERGY, MECHANICAL AND LAND USE CODE. UNDER NO CIRCUMSTANCES HAVE ANY VIOLATIONS OF SAID CODES BEEN REPRESENTED INTENTIONALLY, AND UNDER NO CIRCUMSTANCES SHOULD THESE DRAWINGS BE INTERPRETED AS SUCH. IF VIOLATIONS OF CODE ARISE THROUGH THE REVIEW AND CONSTRUCTION OF THE BUILDING(S) CONTAINED IN THIS DRAWING SET, CONTACT THE ARCHITECT IMMEDIATELY BEFORE BEGINNING OR CONTINUING WORK.
3. DO NOT SCALE DRAWINGS. CONTACT ARCHITECT IMMEDIATELY BEFORE SUBMITTING PROPOSALS, BIDS, OR PROCEEDING WITH ANY WORK IF AMBIGUITIES, DISCREPANCIES, OR A LACK OF INFORMATION EXIST IN DRAWINGS.
4. ALL DIMENSIONS REFER TO FACE OF ROUGH FRAMING MEMBER OR FACE OF CONCRETE UON.
5. THIS PLAN SET DOES NOT CONSTITUTE A FINAL CONSTRUCTION SET UNLESS STAMPED AND FINALED BY A CITY MUNICIPALITY.

SAFETY

6. RESPONSIBILITY FOR THE SAFETY OF ALL INDIVIDUALS PERFORMING FIELD WORK TO CONSTRUCT THE BUILDING DELINEATED IN THIS DRAWING SET RESTS SOLELY ON THE CONTRACTOR. BY INTENT, THESE DRAWINGS CONTAIN NO INFORMATION REGARDING THE SAFETY OF THE INDIVIDUALS PERFORMING SAID WORK AS THE CONSIDERATION OF SUCH LIES FULLY WITHIN THE DUTIES AND EXPERTISE OF THE CONTRACTOR.

INSTALLATION

7. ALL PRODUCTS, MATERIALS, AND APPLIANCES SHALL BE INSTALLED DIRECTLY ACCORDING TO THE MANUFACTURERS WRITTEN INSTRUCTIONS. IF SAID INSTRUCTIONS CALL FOR A LICENSED PERSON OF A SPECIFIC TRADE TO PERFORM INSTALLATION, WORK SHALL BE DONE AS SUCH.
8. ALL FASTENERS USED TO SECURE PRESSURE TREATED WOOD MATERIALS SHALL BE GALVANIZED OR TREATED WITH A SIMILAR CORROSION-RESISTANT COATING.

ZONING SUMMARY

GENERAL		
BASE ZONE		R-8.4
LOT COVERAGE		
LOT SIZE		10,158 SF
LOT COVERAGE ALLOWED	MICC 19.02.060.F.3	0.40 X 10,158 = 4,063 SF
LOT COVERAGE PROPOSED	SEE DIAGRAM A1.0	3,912 SF / 10,158 SF = **38.51%**
GROSS FLOOR AREA		
GROSS FLOOR AREA ALLOWED		0.40 X 10,158 = 4,063 SF
GROSS FLOOR AREA PROPOSED		3,950.11 SF
LEVEL 1 FLOOR AREA	SEE DIAGRAM A2.0	1,744.71 + 166 = 1,910.71 SF
LEVEL 1 GARAGE FLOOR AREA	SEE DIAGRAM A2.0	571.47 SF
LEVEL 2 FLOOR AREA	SEE DIAGRAM A2.1	1,467.94 SF
STRUCTURE HEIGHT		
MAXIMUM HEIGHT ALLOWED	MICC 19.02.020.E.1	30'-0"
MAXIMUM HEIGHT PROPOSED	SEE ELEVATIONS + CALCS ON A1.1	29' - 9 15/16"
YARDS		
FRONT	MICC 19.02.020.C.1.a	20' - 0"
SIDE (SUM)	MICC 19.02.020.C.1.c	(17 * 103' - 5 3/4") = 17' - 7 1/16"
REAR	MICC 19.02.020.C.1.b	25' - 0"
REQUIRED OFF-STREET PARKING		
PARKING STALLS REQUIRED	MICC 19.02.020.G.2.a	3
PARKING STALLS PROPOSED	SEE SITE PLAN	3

1 A NFPA 13D FIRE SPRINKLER SYSTEM IN COMPLIANCE WITH NFPA 13D AND CoMI STANDARDS SHALL BE INSTALLED THROUGHOUT THE RESIDENCE. A SEPARATE FIRE PERMIT IS REQUIRED.

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

PROJECT TEAM

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ISLAND CREST DEVELOPMENTS LLC
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CIVIL ENGINEERING SOLUTIONS
DUFFY ELLIS
203.930.0342
duffy@cesolutions.us

PROPERTY INFORMATION

PROJECT #	PARCEL #
2306-185	502190-0045

ADDRESS
3605 86TH AVE SE, MERCER ISLAND, WA, 98040

OWNER
ISLAND CREST BUILDERS

LEGAL DESCRIPTION

LOT 9 BLOCK 1 MADRONA CREST ADDITION, AS PER PLAT RECORDED IN VOLUME 42 OF PLATS, PAGE 12, RECORDS OF KING COUNTY AUDITOR;

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

BUILDING CODE NOTES

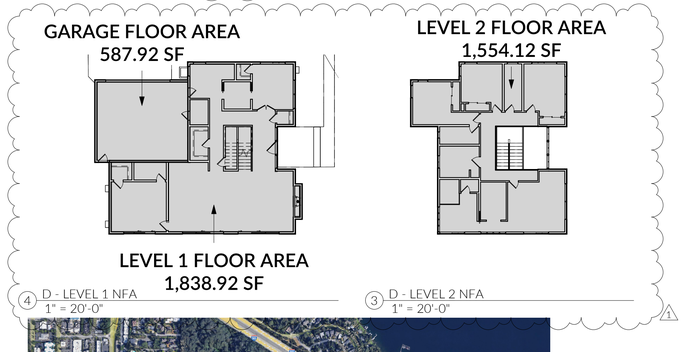
BUILDING OCCUPANCY	R-3
CONSTRUCTION TYPE	V-B
GOVERNING CODE	2018 IRC 2018 IMC 2018 UPC 2018 IFC 2018 WSEC-R

1

FLOOR AREA

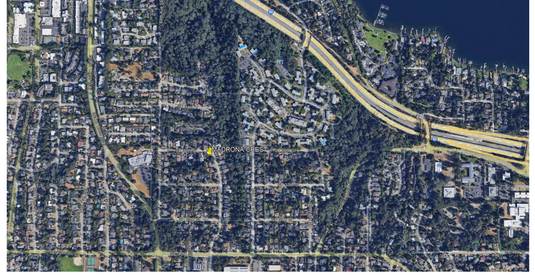
HEATED FLOOR AREA:	
MAIN LEVEL	1,838.92 SF
UPPER LEVEL	1,554.12 SF
TOTAL HEATED FLOOR AREA	**3,393.04 SF**
UNHEATED FLOOR AREA:	
GARAGE	587.92 SF

*SEE SHEET A1.1 FOR GROSS FLOOR AREA



4 D - LEVEL 1 NFA
1" = 20'-0"

3 D - LEVEL 2 NFA
1" = 20'-0"



2 VICINITY MAP
NTS

0
0 REFERENCE GRID

1 BUILDING SECTION
A101 DRAWING IDENTIFICATION
DRAWING SHEET LOCATION

1 DETAIL CALLOUT
A101

W01 WALL TYPE

F01 FLOOR TYPE

S/C SMOKE / CARBON DET.

0CFM CLG MOUNTED VENT FAN

WINDOW TAG

101 DOOR TAG

1 REVISION

PROJECT NORTH

12
6 ROOF PITCH

SPOT ELEVATION MARKER

SG SAFETY GLAZING
(ELEVATION VIEW)

1 EXTERIOR PERSPECTIVE
NTS - FOR REFERENCE ONLY

FIRST LAMP ARCHITECTS
206.414.9884
4915 RAINIER AVE S, STE 202
SEATTLE, WA 98118
INFO@FIRSTLAMP.NET

9547 REGISTERED ARCHITECT
TAYLOR BRIAN CALLAWAY
STATE OF WASHINGTON

MADRONA CREST
3605 86TH AVE SE
MERCER ISLAND, WA 98040

MUNICIPAL APPROVAL STAMPS

MERCER ISLAND #2306-185

CD || FL 2302

4 OCT 2023

REVISIONS

NO.	DESCRIPTION	DATE
1	Corrections #1	10/4/23

DRAWN BY: D. F. GONZALEZ

COVER SHEET

G 1.0

INSULATION INSTALLATION NOTES

FLOORS

1. FLOOR INSULATION SHALL BE INSTALLED TO MAINTAIN PERMANENT CONTACT WITH THE UNDERSIDE OF THE SUBFLOOR DECKING.

2. INSULATION SUPPORTS SHALL BE INSTALLED SO SPACING IS NO MORE THAN 24" OC.

3. FOUNDATION VENTS SHALL BE PLACED SO THAT THE TOP OF THE VENT IS BELOW THE LOWER SURFACE OF THE FLOOR INSULATION.

ACCESS HATCHES AND DOORS

1. ACCESS DOORS FROM CONDITIONED SPACES TO UNCONDITIONED SPACES SHALL BE WEATHERSTRIPPED AND INSULATED TO A LEVEL EQUIVALENT TO THE INSULATION ON THE SURROUNDING SURFACES.

2. A WOOD FRAMED OR EQUIVALENT BAFFLE OR RETAINER IS REQUIRED TO BE PROVIDED WHEN LOOSE FILL INSULATION IS INSTALLED, THE PURPOSE OF WHICH IS TO PREVENT THE LOOSE FILL INSULATION FROM SPILLING INTO THE LIVING SPACE WHEN THE ACCESS HATCH IS OPENED.

RECESSED LIGHTING

1. RECESSED LIGHTING FIXTURES INSTALLED IN THE BUILDING'S THERMAL ENVELOPE SHALL BE TYPE IC RATED UNDER ASTM E283 AS HAVING AN AIR LEAKAGE RATE OF NOT MORE THAN 2.0CFM WHEN TESTED AT 75PA AND SHALL HAVE A LABEL DEMONSTRATING THIS STANDARD.

2. ALL RECESSED FIXTURES SHALL BE SEALED WITH A GASKET OR CAULK BETWEEN THE HOUSING AND THE INTERIOR WALL OR CEILING COVERING.

WALLS

1. WALL, DOOR, AND WINDOW HEADERS SHALL BE INSULATED TO A VALUE OF R-10.

SOLAR-READY ZONE

PER 2018 IRC - APPENDIX T - NEW ONE AND TWO-FAMILY DWELLINGS SHALL BE PROVIDED WITH A SOLAR-READY ZONE OF NOT LESS THAN 300 SF. TOWNHOUSES SHALL BE PROVIDED WITH A SOLAR-READY ZONE OF NOT LESS THAN 150 SQUARE FEET FOR EACH DWELLING UNIT.

APPLICABLE CODE: 2018 WASHINGTON STATE RESIDENTIAL ENERGY CODE - APPENDIX T

T103.1 GENERAL:

THE SOLAR-READY ZONE SHALL COMPLY WITH SECTIONS T103.2 THROUGH T103.10

T103.4 CONSTRUCTION DOCUMENTS:

CONSTRUCTION DOCUMENTS SHALL INDICATE THE SOLAR-READY ZONE.

T103.3 SOLAR-READY ZONE AREA:

THE SOLAR-READY ZONE MAY BE COMPRISED OF ONE SINGLE AREA OR OF MULTIPLE SEPARATED AREAS. NO SOLAR-READY ZONE SHALL BE LESS THAN 5 FEET IN ANY DIMENSION NOR LESS THAN 80 SF OF CONTIGUOUS AREA. AREA SHALL BE NOT LESS THAN 300 SF EXCLUSIVE OF MANDATORY ACCESS.

T103.4 OBSTRUCTIONS & T103.5 SHADOWS:

THE SOLAR-READY ZONE SHALL BE FREE FROM OBSTRUCTIONS INCLUDING, BUT NOT LIMITED TO, VENTS, CHIMNEYS, AND ROOF-MOUNTED EQUIPMENT. PERMANENTLY INSTALLED OBJECTS ADJACENT TO THE SOLAR-READY ZONE SHALL BE LOCATED SO THAT THEY DO NOT CAST SHADOWS ON THE SOLAR-READY ZONE WHEN THE SUN IS DIRECTLY EAST, WEST, OR SOUTH OF THE SOLAR-READY ZONE AT A DISTANCE NOT LESS THAN TWO TIMES THE OBJECTS HEIGHT ABOVE THE NEAREST POINT ON THE ROOF SURFACE. SUCH OBJECTS INCLUDE, BUT ARE NOT LIMITED TO, TALLER PORTIONS OF THE BUILDING, PARAPETS, CHIMNEYS, ANTENNAS, ROOFTOP EQUIPMENT, TREES, AND ROOF PLANTINGS. SHADING FROM FUTURE TREE GROWTH NEED NOT BE CONSIDERED.

T103.6 CAPPED ROOF PENETRATION SLEEVE:

A CAPPED ROOF PENETRATION SLEEVE SHALL BE PROVIDED ADJACENT TO SOLAR-READY ZONE LOCATED ON A ROOF SLOPE OF NOT GREATER THAN 1:12. THE CAPPED ROOF PENETRATION SLEEVE SHALL BE SIZED TO ACCOMMODATE THE FUTURE PHOTOVOLTAIC SYSTEM CONDUIT, BUT SHALL HAVE DIAMETER NOT LESS THAN 1 1/4".

ADDITIONAL SOLAR-READY NOTES:

T103.9 - THE MAIN ELECTRICAL SERVICE OR FEEDER PANEL FOR EACH DWELLING UNIT SHALL HAVE A RESERVED SPACE TO ALLOW INSTALLATION OF A DUAL-POLE CIRCUIT BREAKER FOR FUTURE SOLAR ELECTRIC INSTALLATION AND SHALL BE LABELED 'FOR FUTURE SOLAR ELECTRIC'.

T103.10 - A PERMANENT CERTIFICATE, INDICATING THE BOUNDARIES AND STRUCTURAL PROVISIONS OF THE SOLAR-READY ZONE, SHALL BE POSTED NEAR THE ELECTRICAL DISTRIBUTION PANEL, WATER HEATER, OR OTHER CONSPICUOUS LOCATION.

ENERGY CODE COMPLIANCE

PER R101.43 - ALL NEW / ALTERED OR RENOVATED PORTIONS SHALL CONFORM TO THE 2018 WASHINGTON STATE ENERGY CODE

APPLICABLE CODE: 2018 WASHINGTON STATE RESIDENTIAL ENERGY CODE

CLIMATE: 4C

COMPLIANCE PATH: PRESCRIPTIVE

GROSS HEATED FLOOR AREA	3,393.04 SF
AREA OF GLAZING IN WALLS	888.0 SF
AREA OF SKYLIGHTS	55.9 SF (NOT IN CONDITIONED AREA)
GLAZING PERCENT	26.17%
COMPLIANCE PATH:	PRESCRIPTIVE - R402.1.1

1

REQUIREMENTS

VERTICAL GLAZING U FACTOR - EXCLUDES SKYLIGHTS	.28
OVERHEAD GLAZING U FACTOR	.50
DOOR U FACTOR	.30
CEILING	R-49
VAULTED CEILING	R-38
WALL - ABOVE GRADE	R-21
WALL - BELOW GRADE INTERIOR BATT	R-21
WALL - BELOW GRADE EXTERIOR RIGID	R-10
FLOOR	R-38
SLAB ON GRADE	R-10
STRUCTURAL HEADERS	R-10

ADDITIONAL REQUIREMENTS (WSEC SECTION R406)

TABLE R406.2 FUEL NORMALIZATION CREDITS

SYSTEM TYPE 2: HEAT PUMP THAT MEETS FEDERAL STANDARDS	1.0

TABLE R406.3 ENERGY CREDITS

CLASSIFICATION (4129 COND. SF) MEDIUM DWELLING UNIT	
CREDITS REQUIRED	6.0
CREDITS PROPOSED	6.0
1.3 EFFICIENT BUILDING ENVELOPE OPTION	0.5
2.2 REDUCE THE TESTED AIR LEAKAGE TO 2.0 AIR CHANGES PER HOUR MAXIMUM AT 50 PASCALS. WHOLE HOUSE VENTILATION TO BE MET WITH HRV W/EFFICIENCY OF 0.65 OR GREATER.	1.0
3.5 HIGH EFFICIENCY HVAC EQUIPMENT AIR-SOURCE, CENTRALLY DUCTED HEAT PUMP W/ MIN HSPF OF 9.5	1.5
4.1 HIGH EFFICIENCY HVAC DISTRIBUTION OPTIONS ALL SUPPLY/RETURN DUCTS LOCATED IN AN UNCONDITIONED ATTIC SHALL BE DEEPLY BURIED IN CEILING INSULATION IN ACCORDANCE W/SECTION R403.3.7	0.5
5.4 EFFICIENT WATER HEATING ELECTRIC HEAT PUMP WATER HEATER MEETING THE STANDARDS FOR TIER 1 OF NEEA'S ADVANCED WATER HEATING SPECIFICATION	1.5

1

ADDITIONAL ENERGY NOTES

1. A RESIDENTIAL ENERGY COMPLIANCE CERTIFICATE COMPLYING WITH SEC R401.3 IS REQUIRED TO BE COMPLETED BY THE DESIGN PROFESSIONAL OR BUILDER AND PERMANENTLY POSTED WITHIN 3' OF THE ELECTRICAL PANEL PRIOR TO FINAL INSPECTION.

2. EACH DWELLING UNIT IS REQUIRED TO BE PROVIDED WITH AT LEAST ONE PROGRAMMABLE THERMOSTAT FOR THE REGULATION OF TEMPERATURE.

3. PER WSEC R404.1, A MINIMUM OF 90 PERCENT OF LAMPS IN PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE HIGH-EFFICACY LAMPS.

4. U-FACTORS OF WINDOWS, DOORS AND SKYLIGHTS SHALL BE DETERMINED IN ACCORDANCE WITH NFRC 100 AND SHALL BE LABELED AS SUCH FROM THE MANUFACTURER.

5. SEC R402.4.1.2: AIR LEAKAGE SHALL NOT EXCEED 1.5 AIR CHANGES/HR AND SHALL BE TESTED AS SUCH. A WRITTEN REPORT OF THE TEST RESULTS SHALL BE SIGNED BE THE TESTING PARTY AND PROVIDED TO THE BLDG INSPECTOR, PRIOR TO CALL FOR FINAL INSPECTION.

1

ADDITIONAL ENERGY NOTES CONT.

6. A CERTIFICATE IS REQUIRED TO BE POSTED ON A WALL IN THE SPACE WHERE THE FURNACE IS LOCATED, A UTILITY ROOM, OR ON AN ELECTRICAL PANEL PER WSEC R401.3 AND INCLUDE THE FOLLOWING: PREDOMINATE R-VALUES, U-VALUES OF FENESTRATION, RESULTS FROM AIR LEAKAGE TESTING, WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM FLOW RATE TEST, AND THE TYPES AND EFFICIENCIES OF HEATING/COOLING/WHOLE-HOUSE MECHANICAL VENTILATION AND WATER HEATING EQUIPMENT.

7. A CONTINUOUS AIR BARRIER SHALL BE INSTALLED IN THE BUILDING ENVELOPE, AND ALL CAVITIES IN THE THERMAL ENVELOPE SHALL BE FILLED WITH INSULATION. REFER TO WSEC TABLE R402.4.1.1 FOR DETAILS.

DOOR SCHEDULE

MARK	TO ROOM: NAME	WIDTH	HEIGHT	DOOR TYPE	DOOR GLAZING	DOOR MATERIAL	DOOR FINISH	FRAME MATERIAL	FRAME FINISH	FIRE RATING	U-FACTOR	HARDWARE SET	HARDWARE OPERATION	COMMENTS
LEVEL 1														
101	ENTRY	3' - 6"	9' - 0"	FG	TEMPERED						0.28		ENTRY	
103	LIVING	11' - 6"	8' - 0"	SGD	TEMPERED					-	0.28		OXX SLIDER	
104	KITCHEN	11' - 6"	8' - 0"	SGD	TEMPERED					-	0.28		OXX SLIDER	
105	FAMILY ROOM	2' - 8"	6' - 8"	F	-					-			PASSAGE	
106	FAMILY ROOM	8' - 10"	8' - 0"	SGD	TEMPERED					-	0.28		OXX SLIDER	
107	FAMILY ROOM	2' - 8"	6' - 8"	F	-					-			PASSAGE	
108	BATH	2' - 6"	6' - 8"	F	-					-			PRIVACY	
109	HALL	2' - 6"	6' - 8"	F	-					-			PASSAGE	
110	PANTRY	2' - 6"	6' - 8"	F	-					-			PASSAGE	
111	MUD	2' - 6"	6' - 8"	F	-					20-MIN			PASSAGE	AUTO-CLOSING 20-MIN FIRE RATED DOOR
112	MECH	2' - 6"	6' - 8"	F	-					20-MIN			PASSAGE	AUTO-CLOSING 20-MIN FIRE RATED DOOR
113	2-CAR GARAGE	2' - 6"	6' - 8"	F	-					-			ENTRY	
114	2-CAR GARAGE	18' - 0"	8' - 0"	-	-					-			OVERHEAD	OVERHEAD GARAGE DOOR PER OWNER
115	MUD	2' - 4"	6' - 8"	FP	-					-			POCKET	
116	OFFICE	5' - 0"	6' - 8"	F/F	-					-			DBL PASSAGE	
117	OFFICE	2' - 4"	6' - 8"	FP	-					-			POCKET	
118	OFFICE	2' - 6"	6' - 8"	F	-					-			PASSAGE	
119	HALL	2' - 6"	6' - 8"	F	-					-			PASSAGE	
LEVEL 2														
201	M BED	2' - 6"	6' - 8"	F	-					-			PRIVACY	
202	M BATH	2' - 10"	6' - 8"	FP	-					-			POCKET	
203	WC	2' - 6"	6' - 8"	F	-					-			PRIVACY	
204	LAUNDRY	3' - 0"	6' - 8"	F	-					-			PASSAGE	
205	BED 2	2' - 6"	6' - 8"	F	-					-			PRIVACY	
206	BATH	2' - 6"	6' - 8"	F	-					-			PRIVACY	
207	BED 2	5' - 0"	6' - 8"	F/F	-					-			SLIDER	2-PANEL SLIDING CLOSET DOOR
208	BED 3	2' - 6"	6' - 8"	F	-					-			PRIVACY	
209	BED 3	5' - 0"	6' - 8"	F/F	-					-			SLIDER	2-PANEL SLIDING CLOSET DOOR
210	HALL	2' - 6"	6' - 8"	F	-					-			PASSAGE	
211	BED 4	2' - 6"	6' - 8"	F	-					-			PRIVACY	
212	BED 4	5' - 0"	6' - 8"	F/F	-					-			SLIDER	2-PANEL SLIDING CLOSET DOOR

DOOR NOTES

1. REFER TO A2.1 FLOOR PLAN FOR DOOR SWING DIRECTION.
2. CONTRACTOR TO FIELD VERIFY EXISTING ROUGH OPENINGS WHERE REPLACING EXISTING DOORS PRIOR TO ORDERING DOORS.
3. ALL DOORS IN PLANE WITH ADJACENT DOORS OR WINDOWS ARE INTENDED TO HAVE THE HEADERS ALIGNED; UON. PLEASE NOTIFY ARCHITECT IF THERE IS A DISCREPENCY IN HEADER HEIGHTS OR ALIGNMENTS.

DOOR TYPE DESIGNATIONS

F	FLUSH PANEL
F/F	DOUBLE FLUSH
FP	FLUSH POCKET
L	LOUVER
N	NARROW GLASS
G	GLASS
FG	FULL GLASS
FG/FG	DOUBLE FULL GLASS
SGD	SLIDING GLASS DOOR

DOOR MATERIAL

AL	ALUMINUM
FBGL	FIBERGLASS
SCWD	SOLID CORE WOOD DOOR

FRAME MATERIAL

AL	ALUMINUM
FBGL	FIBERGLASS
SCWD	SOLID CORE WOOD DOOR
KERF	METAL KERF

FINISH (REFER TO COMMENTS COLUMN FOR COLOR INFORMATION)

PAINT	PROVIDE EXTERIOR PRIMER AND PAINT AT EXTERIOR DOORS
ANOD	ANODIZED ALUMINUM FINISH
WD VENEER	SPECIES AND FINISH TBD

HARDWARE OPERATION

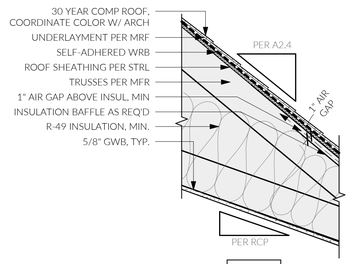
ENTRY	ENTRY LOCKSET
DEADBOLT	DEADBOLT
PRIVACY	LATCH AND LOCK FROM ONE SIDE
PASSAGE	LATCH ONLY

WINDOW SCHEDULE

PLAN TAG	QUANTITY	TYPE	WIDTH	HEIGHT	WINDOW MATERIAL	WINDOW FINISH	WINDOW GLAZING TYPE	U-VALUE	SILL HEIGHT	HEAD HEIGHT
Windows										
LEVEL 1										
A	2	FIXED	3' - 8"	9' - 0"	FBGL	BLACK		.28	0"	9' - 0"
D	1	CASEMENT	2' - 9"	5' - 6"	FBGL	BLACK		.28	2' - 6"	8' - 0"
E	1	FIXED	3' - 6"	5' - 6"	FBGL	BLACK		.28	2' - 6"	8' - 0"
F	1	SLIDER	7' - 0"	5' - 6"	FBGL	BLACK		.28	2' - 6"	8' - 0"
G	2	FIXED	4' - 0"	5' - 6"	FBGL	BLACK		.28	2' - 6"	8' - 0"
LEVEL 2										
D	2	CASEMENT	2' - 9"	5' - 6"	FBGL	BLACK		.28	2' - 6"	8' - 0"
E	2	FIXED	3' - 6"	5' - 6"	FBGL	BLACK		.28	2' - 6"	8' - 0"
F	2	SLIDER	7' - 0"	5' - 6"	FBGL	BLACK		.28	2' - 6"	8' - 0"
H	1	FIXED	3' - 6"	5' - 0"	FBGL	BLACK		.28	2' - 6"	7' - 6"
J	2	FIXED	3' - 8"	5' - 0"	FBGL	BLACK		.28	2' - 6"	7' - 6"
L	1	SLIDER	7' - 0"	4' - 6"	FBGL	BLACK		.28	3' - 6"	8' - 0"
M	8	SLIDER	1' - 9"	2' - 0"	FBGL	BLACK		.28	6' - 0"	8' - 0"
N	1	SLIDER	3' - 6"	2' - 0"	FBGL	BLACK		.28	5' - 5 1/2"	7' - 5 1/2"
P	1	AWNING	1' - 9"	2' - 0"	FBGL	BLACK		.28	5' - 5 1/2"	7' - 5 1/2"
R	1	CASEMENT	3' - 0"	3' - 0"	FBGL	BLACK		.28	5' - 0"	8' - 0"
S	4	FIXED	5' - 0"	7' - 0"	FBGL	BLACK		.28	1' - 0"	8' - 0"
Skylights										
LEVEL 2										
AA	4	SKYLIGHT	2' - 4"	6' - 0"	FBGL	BLACK		.50		

WINDOW NOTES:

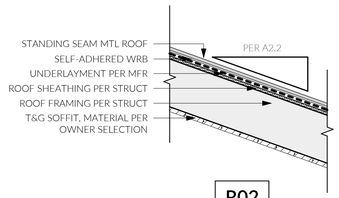
1. PLEASE REFER TO ELEVATIONS ON SHEET A3.0 & A3.1 FOR OPERATION, MULLING, SAFETY GLAZING, AND SIMULATED DIVIDED LITES.
2. ALL WINDOWS IN PLANE WITH ADJACENT DOORS OR WINDOWS ARE INTENDED TO HAVE THE HEADERS ALIGNED; UON. PLEASE NOTIFY ARCHITECT IF THERE IS A DISCREPENCY IN HEADER HEIGHTS OR ALIGNMENTS.
3. EGRESS WINDOWS BELOW 36" A.F.F. ARE REQUIRED TO BE PROVIDED WITH OPENING CONTROL DEVICES COMPLYING WITH IBC 1013.8.1. (EXCEPTION 4)
4. SKYLIGHTS 'AA' ARE OVER 12 FEET ABOVE WALKING SURFACE AND REQUIRE LAMINATED GLASS WITH NOT LESS THAN A 0.030 INCH POLYVINYL BUTYRAL INTERLAYER PER IRC R308.6



R01

TRUSSED ROOF O/ HEATED SPACE - VENTED

(ICE AND WATER SHIELD @ EAVES AND VALLEYS, TYP.)



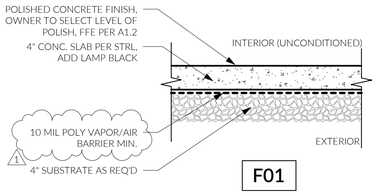
R02

STANDING SEAM MTL ROOF - VENTED

(ICE AND WATER SHIELD @ EAVES AND VALLEYS, TYP.)

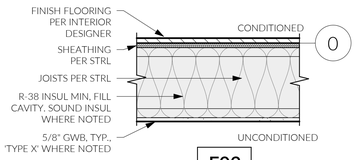
ROOF LEGEND
1" = 1'-0"

NOTE: GRIDLINES AND PLAN DIMENSIONS REFER TO FACE OF FRAMING MEMBER UON.



F01

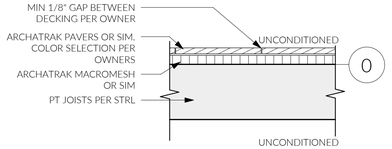
CONCRETE FLOOR - GARAGE



F02

FLOOR O/ UNCONDITIONED SPACE

FLOOR SIMILAR O/ CONDITIONED SPACE

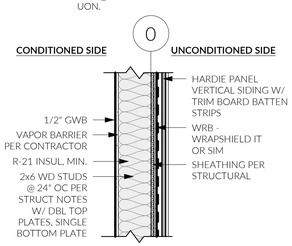


F03

DRIP-THRU PAVERS ON GRATE DECK

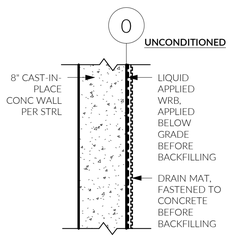
FLOOR LEGEND
1" = 1'-0"

NOTE: GRIDLINES AND PLAN DIMENSIONS REFER TO FACE OF FRAMING MEMBER UON.



W07

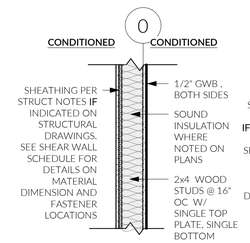
EXTERIOR WALL /W VERTICAL HARDIE PANEL BOARD AND BATTEN SIDING



W06

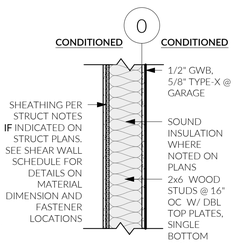
CONCRETE STEM WALL

8" TYPICAL, 6" IF NOTED REFER TO STRUCTURAL



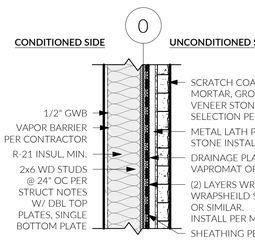
W05

2X4 INTERIOR PARTITION



W04

2X6 INTERIOR PARTITION

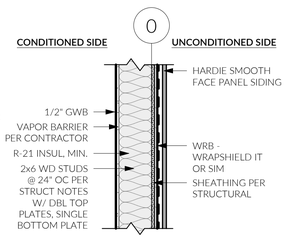


W03

EXTERIOR STONE WALL

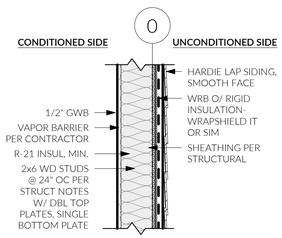
ADDITIONAL CLEARANCES ON 7 / A 5.0

1



W02

EXTERIOR WALL /W HARDIE PANEL SIDING



W01

EXTERIOR WALL /W HARDIE PLANK, SMOOTH FACE

MITER ALL OUTSIDE CORNERS OF HORZ. SIDING

WALL LEGEND
1" = 1'-0"

NOTE: GRIDLINES AND PLAN DIMENSIONS REFER TO FACE OF FRAMING MEMBER UON.

FIRST LAMP ARCHITECTS
206.414.9884
4915 RAINIER AVE S, STE 202
SEATTLE, WA 98118
INFO@FIRSTLAMP.NET

9547 REGISTERED ARCHITECT
TAYLOR BRIAN CALLAHY
STATE OF WASHINGTON

MADRONA CREST
3605 86TH AVE SE
MERCER ISLAND, WA 98040

MUNICIPAL APPROVAL STAMPS

SDCI PROJ. # XXXXXXX

CD || FL 2302

4 OCT 2023

REVISIONS

NO.	DESCRIPTION	DATE
1	Corrections #1	10/4/23

DRAWN BY: D. F. GONZALEZ

WINDOW & DOOR SCH, ENERGY & MECH CODE NOTES, ASSEMBLIES

G 1.1

TOPOGRAPHIC & BOUNDARY SURVEY

LEGAL DESCRIPTION

(PER STATUTORY WARRANTY DEED RECORDING# 20190815000691)

LOT 9, BLOCK 1, MADRONA CREST ADDITION, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 42 OF PLATS, PAGES 12, IN KING COUNTY, WASHINGTON.

SITUATED IN THE COUNTY OF KING, STATE OF WASHINGTON.

BASIS OF BEARINGS

HELD BEARING OF S 89°56'52" E ALONG THE CENTERLINE OF SE 37TH ST. AS SHOWN HEREON AND PER THE SAYAH SHORT PLAT, MERCER ISLAND FILE NO. SUB.04-001, PER KING COUNTY RECORDING NO. 20050517900024 (REF. 1) AND PER R2.

REFERENCES

1. RECORD OF SURVEY VOL 187 PG 13 RECORDING # 20050517900024
2. PARK RIDGE LANE, PER PLAT THEREOF RECORDED IN VOL. 94 OF PLATS, PG. 1, IN KING COUNTY WASHINGTON

VERTICAL DATUM

NAVD88 PER WGS SURVEY DATA WAREHOUSE
POINT DESIGNATION 509
CONCRETE MONUMENT IN CASE AT INT 84TH AVE. S.E. AND S.E. 36TH ST.
ELEV.=279.17'

SURVEYOR'S NOTES

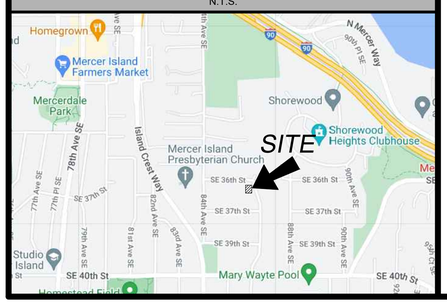
1. THE TOPOGRAPHIC SURVEY SHOWN HEREON WAS PERFORMED IN JANUARY OF 2023. THE FIELD DATA WAS COLLECTED AND RECORDED ON MAGNETIC MEDIA THROUGH AN ELECTRONIC THEODOLITE. THE DATA FILE IS ARCHIVED ON DISC OR CD. WRITTEN FIELD NOTES MAY NOT EXIST. CONTOURS ARE SHOWN FOR CONVENIENCE ONLY. DESIGN SHOULD RELY 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. 5021900045
5. SUBJECT PROPERTY AREA PER THIS SURVEY IS 10,158 S.F. (0.23 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. EXISTING STRUCTURE(S) LOCATION AND DIMENSIONS ARE MEASURED FROM THE FACE OF THE SIDING UNLESS OTHERWISE NOTED.
8. 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.

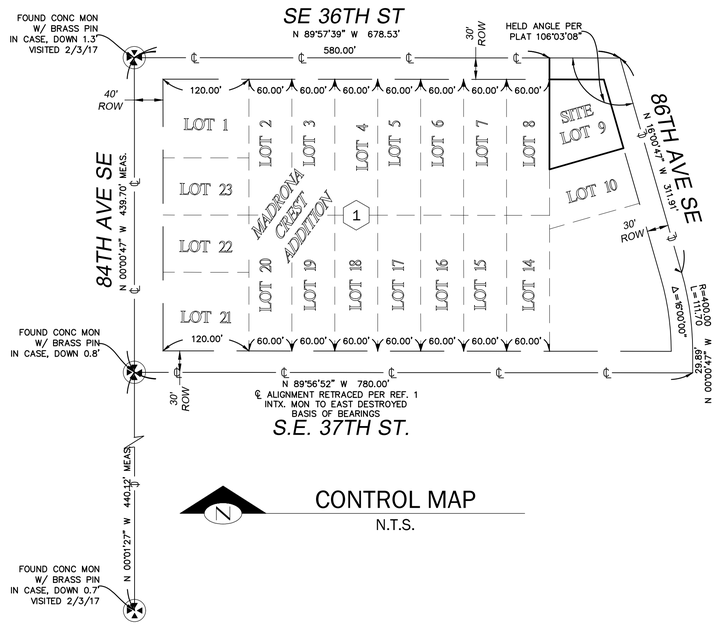
LEGEND

- ASPHALT SURFACE
- BENCHMARK
- BRASS DISC (FOUND)
- BRICK SURFACE
- BUILDING
- CENTERLINE ROW
- CONCRETE SURFACE
- FENCE LINE (CHAIN LINK)
- FENCE LINE (IRON)
- FIRE HYDRANT
- GAS METER
- GRAVEL SURFACE
- MB MAILBOX (RESIDENTIAL)
- OIL OIL FILL CAP
- POWER METER
- POWER (OVERHEAD)
- POWER POLE
- POWER POLE W/ LIGHT
- PROPERTY LINE (SUBJECT)
- PROPERTY LINES (ADJACENT)
- REBAR & CAP (SET)
- REBAR AS NOTED (FOUND)
- RETAINING WALL
- RIGHT-OF-WAY LINES
- ROCKERY
- SS SEWER LINE
- SEWER MANHOLE
- SIGN (AS NOTED)
- SD STORM DRAIN LINE
- TREE (AS NOTED)
- W WATER LINE
- WATER METER
- WV WATER VALVE

VICINITY MAP

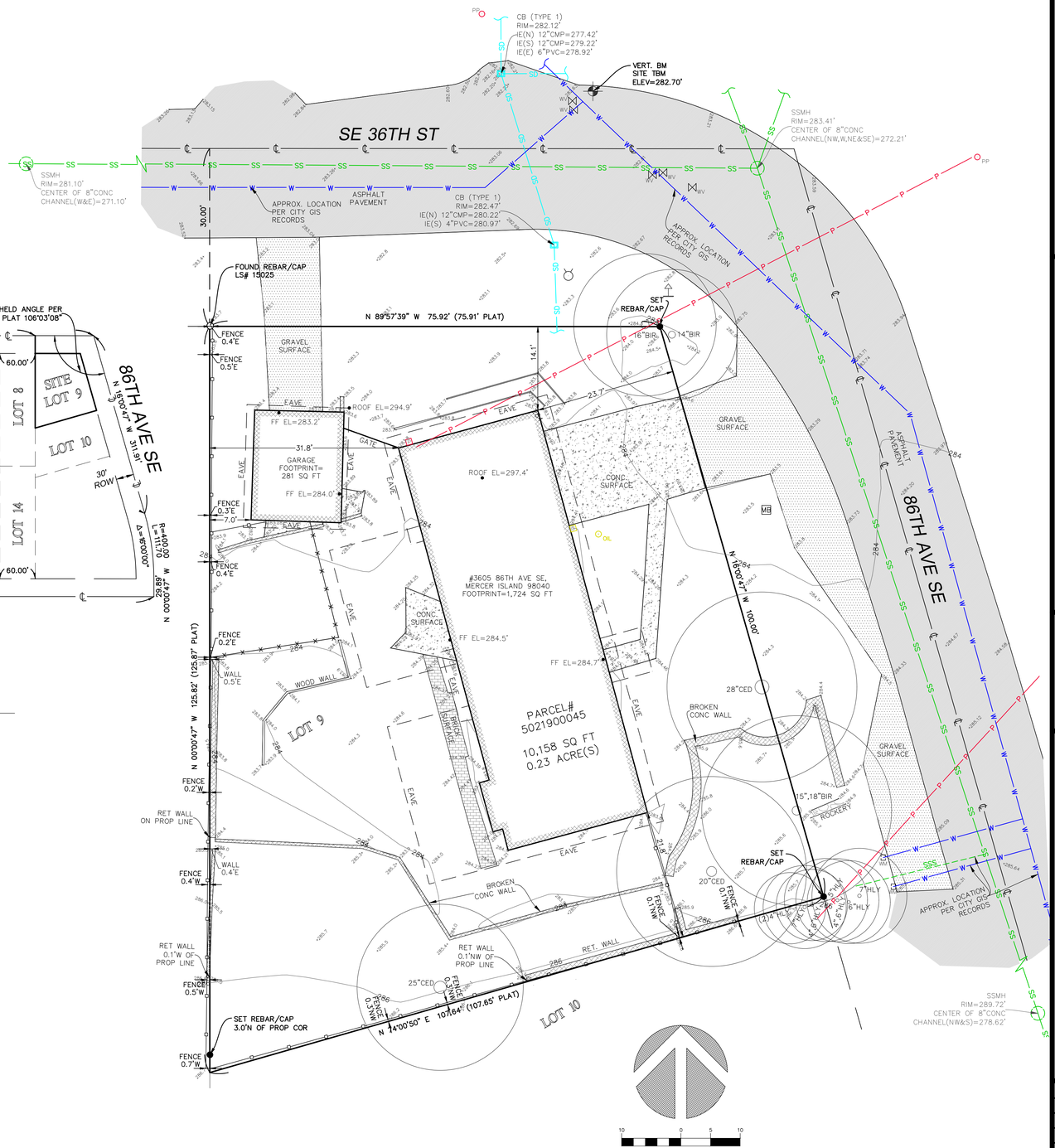
N.T.S.





CONTROL MAP

N.T.S.



10 0 5 10
(IN FEET)
1 INCH = 10 FT.

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.

INDEXING INFORMATION

SW 1/4 SW 1/4
SECTION: 07
TOWNSHIP: 24N
RANGE: 05E, W.M.
COUNTY: KING

We are the measure | terrane.net

TOPOGRAPHIC & BOUNDARY SURVEY
PARCEL NO. 5021900045

ISLAND CREST BUILDERS
3605 86TH AVE SE.,
MERCER ISLAND, WA 98040

TERRANE
10801 Main Street, Suite 102
Bellevue, WA 98004
p: 425-458-4488 | e: info@terrane.net

JOB NUMBER:	222202
DATE:	01/09/23
DRAFTED BY:	TGC
CHECKED BY:	EJG/TMM
SCALE:	1" = 10'

REVISION HISTORY

SHEET NUMBER
1 OF 1

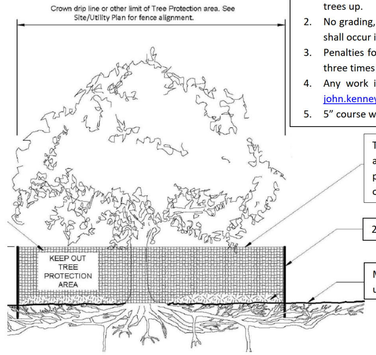
TREE PROTECTION AREA (TPZ)

KEEP OUT!

DO NOT REMOVE OR ADJUST THE APPROVED LOCATION OF THIS TREE PROTECTION AREA

Trees enclosed by this fence are protected and are subject to the conditions of the tree permit. Violation of tree conditions may lead to:

1. Correction Notices or Stop Work Orders until compliance is achieved
2. RE Inspection Fees/financial penalties
3. Arborist reports recommending mitigation



Notes

1. No pruning shall be performed unless under the direction of the Project Arborist. Including limbing trees up.
2. No grading, excavation, storage (materials, equipment, vehicles, etc.), or other unpermitted activity shall occur inside the protective fencing.
3. Penalties for damaging by root damage/compaction or removing a saved tree may be a fine up to three times the value of the tree plus restoration (MICC 19.10.160).
4. Any work in approved TPZ must be with the permission of the City Arborist (206) 275-7713, john.kenney@mercergov.org.
5. 5" course woodchips within the tree protection zone, but not against the tree trunk.

Tree protection fence: 6' **chain link** fence, solidly anchored into the ground, or if authorized High-density polyethylene fencing with 3.5" x 1.5" openings; color orange. Steel posts installed at 8' o.c.

2" x 6" steel posts or approved equal

Maintain existing grade with the tree protection fence unless otherwise indication on the plans

Any Work in the protected area must be with the permission of the City Arborist john.kenney@mercergov.org

EROSION CONTROL LEGEND

LIMITS OF DISTURBANCE		
FILTER FABRIC FENCE (SILT FENCE)	SF	
STABILIZED CONSTRUCTION ENTRANCE	CE	
CATCH BASIN INLET PROTECTION	IP	
INTERCEPTOR SWALE SEE COR DWG 504, TYPE A TEMPORARY SWALE	IS	
TREE PROTECTION FENCING	TP	
CHECK DAM	CD	
STRAW WATTLES	SW	USE AS NEEDED

PROJECT ARBORIST
TREE PROTECTION RECOMMENDATIONS

Protective fencing is required around the perimeters of the LOD for each retained or group of trees during grading and construction. Temporary chain-link fencing is recommended to preserve the trees from soil disturbance due to machines, foot traffic, and materials. Grading and construction should not be allowed within the LOD of retained trees, unless described in this report. Some of the trees have irregular root zones because of compacted surfaces, retaining walls, and structures.

I allow the protection fencing to cut across part of the LOD of retained trees 110 and 113 to provide room for building as shown on the map (page 10). This fencing plan results in less than 30% disturbance of the outer root zone area and protects the inner (critical) root zone area. The bottom branches (canopy) of trees 110 and 113 may be pruned up to 8 feet above the ground prior to fencing placement.

The radius of the Critical Root Zone (CRZ) depends on the species, dripline (branch length), and DSH of the tree. The CRZ is the area around the tree where the minimum biological capacity of roots are located for essential structural stability and health - a distance from the trunk where root growth can recover and still maintain stability. Generally, the CRZ ranges from ½ - ¾ of the LOD radius. The threshold for outer root zone disturbance of the LOD is no more than 30 % of the area, not including the CRZ area.

Retention walls within the root zones may be renovated with minimal effects to tree health. Installation of updated stone may be done with minimal impact to the root zone. Before fencing and demolition of the existing retention wall, 3-4 inches of mulch (i.e., bark or wood chips) shall be applied over the LOD to minimize root zone disturbance. Thick plywood (> ½ inch) shall be used over the mulch where foot traffic is needed to demo and build a new retention wall. A Certified Arborist is recommended during soil work (base work) within the CRZ to ensure root mitigation and report procedures. Orange barricade fencing may be used around the wall construction to protect the rest of the LOD. Tree protection placement during retention wall renovation is shown on the included map. No foot traffic or material staging within the LOD other than on plywood. Machinery used for wall demo and construction shall stage outside the LOD. Tree protection fencing shall be replaced back to its original placement as shown on the included map when the new retention wall is finished.

LEGAL DESCRIPTION

(PER STATUTORY WARRANTY DEED RECORDING # 20190815000691)

LOT 9, BLOCK 1, MADRONA CREST ADDITION, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 42 OF PLATS, PAGE 12, IN KING COUNTY, WASHINGTON.

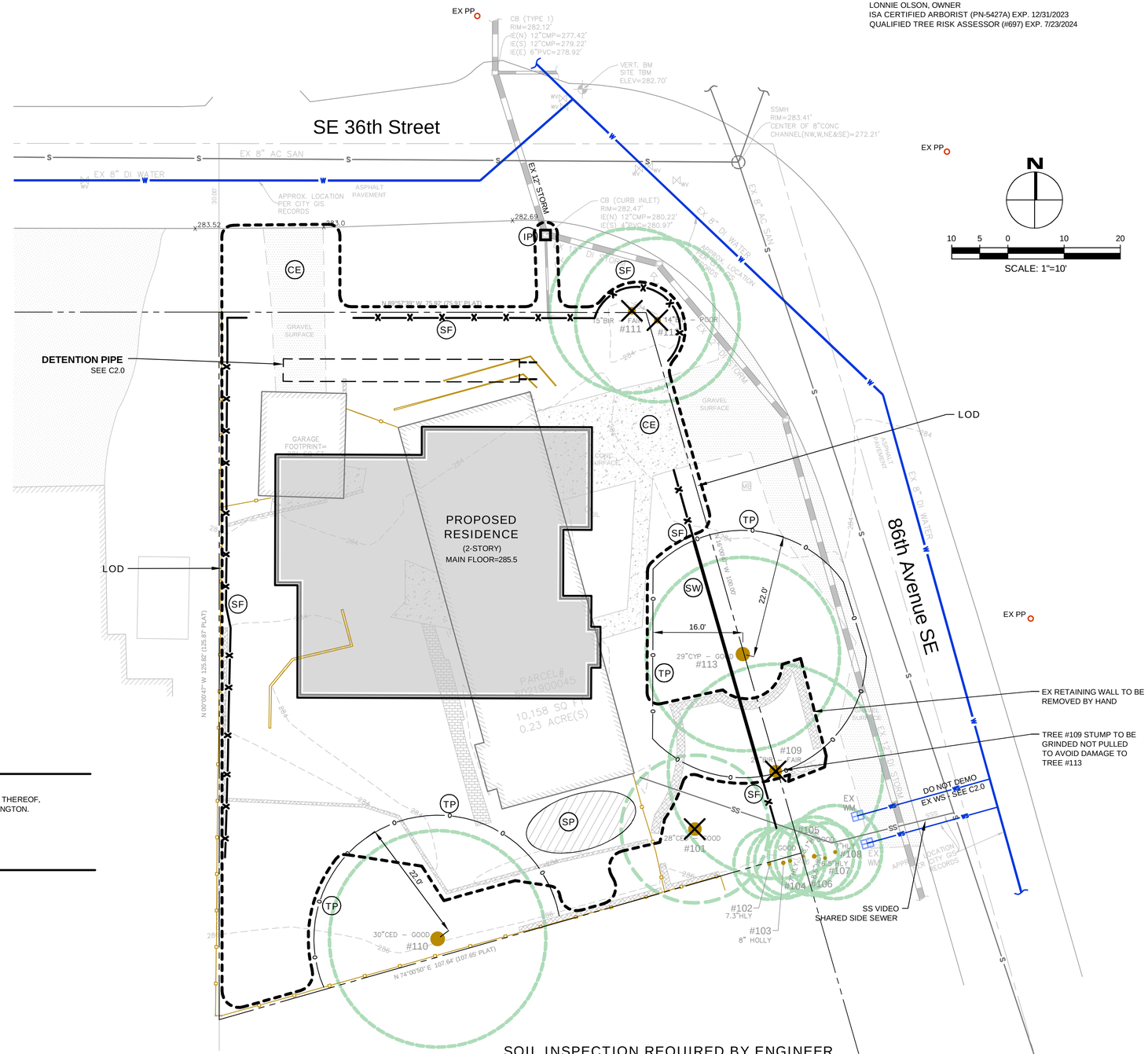
SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

ORGANIC SOIL REQUIREMENT

MINIMUM 10% ORGANIC MULCH & COMPOST SOIL REQUIRED

SOIL AMENDMENT REQUIRED

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



PROJECT ARBORIST

LONNSON ARBOR CARE
LONNIE OLSON, OWNER
ISA CERTIFIED ARBORIST (PN-5427A) EXP. 12/31/2023
QUALIFIED TREE RISK ASSESSOR (#697) EXP. 7/23/2024

SOIL INSPECTION REQUIRED BY ENGINEER

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

#2306-185

NO.	DATE	BY	REVISIONS

APPLICANT
JUSTIN DAVIS
ISLANDCREST BUILDERS

DATE: Sep 28, 2023
JOB# 2076
DRAFTED: SS DESIGN: SS
DIGITAL SIGNATURE

Sep 28, 2023
JEFFREY E. DUFFY
STATE OF WASHINGTON
20798
REGISTERED
PROFESSIONAL ENGINEER

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

TESC PLAN
TREE RETENTION PLAN

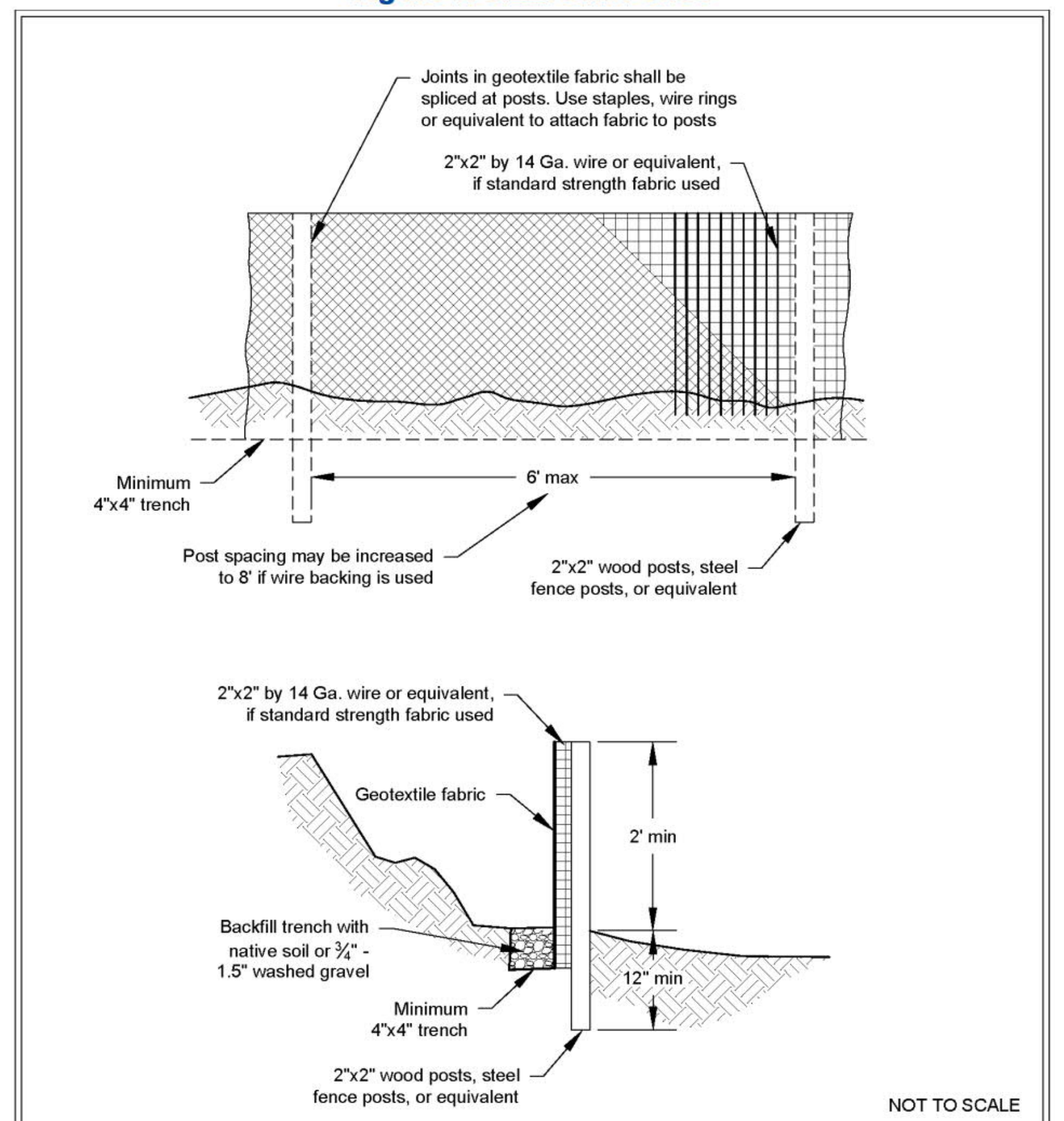
MADRONA CREST
3605 86th AVENUE SE, MERCER ISLAND, WA 98040

DRAWING NO:
C1.0

APN 502190-0045
2306-185

SILT FENCE DETAIL — DOE

Figure II-3.22: Silt Fence



DEPARTMENT OF ECOLOGY State of Washington

Silt Fence

Revised July 2017

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2019 Stormwater Management Manual for Western Washington

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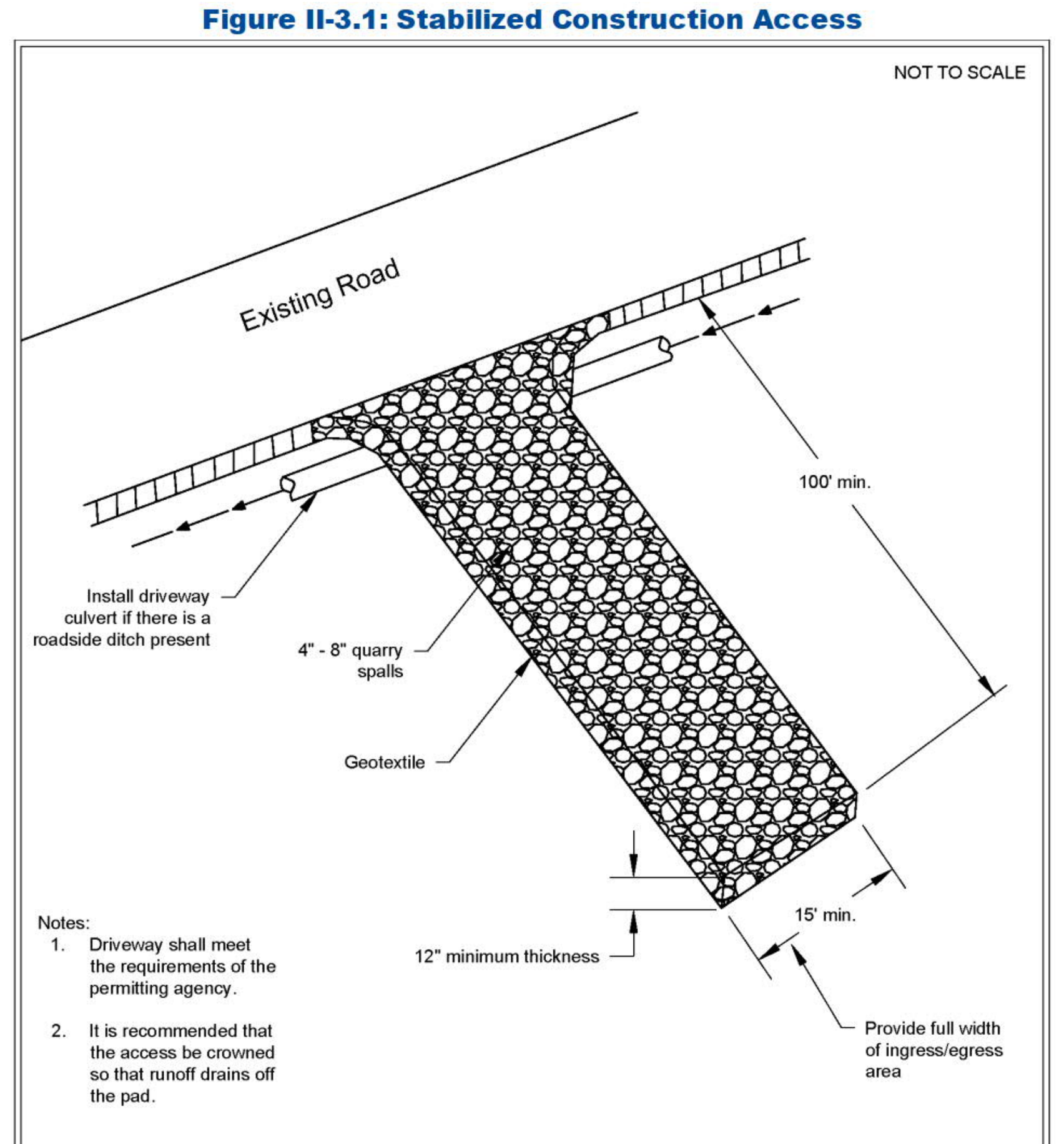
CONSTRUCTION ENTRANCE — DOE

Figure II-3.1: Stabilized Construction Access



DEPARTMENT OF ECOLOGY State of Washington

Stabilized Construction Access

Revised June 2018

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2019 Stormwater Management Manual for Western Washington

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RECOMMENDED CONSTRUCTION SEQUENCE

A DETAILED CONSTRUCTION SEQUENCE IS NEEDED TO ENSURE THAT EROSION AND SEDIMENT CONTROL MEASURES ARE APPLIED AT THE APPROPRIATE TIMES. A RECOMMENDED CONSTRUCTION SEQUENCE IS PROVIDED BELOW:

1. HOLD AN ONSITE PRE-CONSTRUCTION MEETING.

2. POST SIGN WITH NAME AND PHONE NUMBER OF ESC SUPERVISOR (MAY BE CONSOLIDATED WITH THE REQUIRED NOTICE OF CONSTRUCTION SIGN).

3. FLAG OR FENCE CLEARING LIMITS.

4. INSTALL CATCH BASIN PROTECTION, IF REQUIRED.

5. GRADE AND INSTALL CONSTRUCTION ENTRANCE(S).

6. INSTALL PERIMETER PROTECTION (SILT FENCE, BRUSH BARRIER, ETC.).

7. CONSTRUCT SEDIMENT PONDS AND TRAPS.

8. GRADE AND STABILIZE CONSTRUCTION ROADS.

9. CONSTRUCT SURFACE WATER CONTROLS (INTERCEPTOR DIKES, PIPE SLOPE DRAINS, ETC.) SIMULTANEOUSLY WITH CLEARING AND GRADING FOR PROJECT DEVELOPMENT.

10. MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH CITY OF MERCER ISLAND STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.

11. RELOCATE SURFACE SURFACE WATER CONTROLS OR TESC MEASURES, OR INSTALL NEW MEASURES SO THAT AS SITE CONDITIONS CHANGE, THE TESC IS ALWAYS IN ACCORDANCE WITH CITY OF MERCER ISLAND TESC REQUIREMENTS.

12. COVER ALL AREAS THAT WILL BE UN-WORKED FOR MORE THAN SEVEN DAYS DURING THE DRY SEASON (MAY 1 TO SEPT 30) OR TWO DAYS DURING THE WET SEASON (OCT 1 TO APRIL 30) WITH STRAW, WOOD FIBER MULCH, COMPOST, PLASTIC SHEETING, OR EQUIVALENT.

13. STABILIZE ALL AREAS WITHIN SEVEN DAYS OF REACHING FINAL GRADE.

14. SEED, SOD, STABILIZE, OR COVER ANY AREAS TO REMAIN UNWORKED FOR MORE THAN 30 DAYS.

15. UPON COMPLETION OF THE PROJECT, STABILIZE ALL DISTURBED AREAS AND REMOVE BMPS IF APPROPRIATE.

DENUDED AREAS REQUIREMENTS

APRIL 1 TO SEPT 30
ALL DENUDED AREAS MUST BE STABILIZED WITHIN 7 DAYS OF CONSTRUCTION. PLEASE READ ALL CITY TESC NOTES ON SHEET C1.2.

OCT 1 TO MARCH 31
ALL DENUDED AREAS MUST BE STABILIZED WITHIN 2 DAYS OF GRADING. IF AN EROSION PROBLEM ALREADY EXISTS ON THE SITE, OTHER COVER PROTECTION AND EROSION CONTROL WILL BE REQUIRED.

EROSION CONTROL NOTES

D.8.2 STANDARD ESC PLAN NOTES
THE STANDARD ESC PLAN NOTES MUST BE INCLUDED ON ALL ESC PLANS. AT THE APPLICANT'S DISCRETION, NOTES THAT IN NO WAY APPLY TO THE PROJECT MAY BE OMITTED; HOWEVER, THE REMAINING NOTES MUST NOT BE RENUMBERED. FOR EXAMPLE, IF ESC NOTE #3 WERE OMITTED, THE REMAINING NOTES SHOULD BE NUMBERED 1, 2, 4, 5, 6, ETC.

1. APPROVAL OF THIS EROSION AND SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G., SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).

2. THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/ESC SUPERVISOR UNTIL ALL CONSTRUCTION IS APPROVED.

3. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED BY SURVEY TAPE OR FENCING, IF REQUIRED, PRIOR TO CONSTRUCTION (SWDM APPENDIX D). DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE CLEARING LIMITS SHALL BE PERMITTED. THE CLEARING LIMITS SHALL BE MAINTAINED BY THE APPLICANT/ESC SUPERVISOR FOR THE DURATION OF CONSTRUCTION.

4. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES, SUCH AS CONSTRUCTED WHEEL WASH SYSTEMS OR WASH PADS, MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN AND TRACK OUT TO ROAD RIGHT OF WAY DOES NOT OCCUR FOR THE DURATION OF THE PROJECT.

5. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED PRIOR TO OR IN CONJUNCTION WITH ALL CLEARING AND GRADING SO AS TO ENSURE THAT THE TRANSPORT OF SEDIMENT TO SURFACE WATERS, DRAINAGE SYSTEMS, AND ADJACENT PROPERTIES IS MINIMIZED.

6. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND MODIFIED TO ACCOUNT FOR CHANGING SITE CONDITIONS (E.G. ADDITIONAL COVER MEASURES, ADDITIONAL SUMP PUMPS, RELOCATION OF DITCHES AND SILT FENCES, PERIMETER PROTECTION ETC.) AS DIRECTED BY CITY OF MERCER ISLAND.

7. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/ESC SUPERVISOR AND MAINTAINED TO ENSURE CONTINUED PROPER FUNCTIONING. WRITTEN RECORDS SHALL BE KEPT OF WEEKLY REVIEWS OF THE ESC FACILITIES.

8. ANY AREAS OF EXPOSED SOILS, INCLUDING ROADWAY EMBANKMENTS, THAT WILL NOT BE DISTURBED FOR TWO CONSECUTIVE DAYS DURING THE WET SEASON OR SEVEN DAYS DURING THE DRY SEASON SHALL BE IMMEDIATELY STABILIZED WITH THE APPROVED ESC METHODS (E.G., SEEDING, MULCHING, PLASTIC COVERING, ETC.).

9. ANY AREA NEEDING ESC MEASURES THAT DO NOT REQUIRE IMMEDIATE ATTENTION SHALL BE ADDRESSED WITHIN SEVEN (7) DAYS.

10. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH DURING THE DRY SEASON, BI-MONTHLY DURING THE WET SEASON, OR WITHIN TWENTY FOUR (24) HOURS FOLLOWING A STORM EVENT.

11. AT NO TIME SHALL MORE THAN ONE (1) FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT-LADEN WATER INTO THE DOWNSTREAM SYSTEM.

12. ANY PERMANENT RETENTION/DETENTION FACILITY USED AS A TEMPORARY SETTLING BASIN SHALL BE MODIFIED WITH THE NECESSARY EROSION CONTROL MEASURES AND SHALL PROVIDE ADEQUATE STORAGE CAPACITY. IF THE FACILITY IS TO FUNCTION ULTIMATELY AS AN INFILTRATION SYSTEM, THE TEMPORARY FACILITY MUST BE ROUGH GRADED SO THAT THE BOTTOM AND SIDES ARE AT LEAST THREE FEET ABOVE THE FINAL GRADE OF THE PERMANENT FACILITY.

13. COVER MEASURES WILL BE APPLIED IN CONFORMANCE WITH APPENDIX D OF THE SURFACE WATER DESIGN MANUAL

14. PRIOR TO THE BEGINNING OF THE WET SEASON (OCT. 1), ALL DISTURBED AREAS SHALL BE REVIEWED TO IDENTIFY WHICH ONES CAN BE SEEDED IN PREPARATION FOR THE WINTER RAINS. DISTURBED AREAS SHALL BE SEEDED WITHIN ONE WEEK OF THE BEGINNING OF THE WET SEASON.

CITY NOTES

1. ANY CHANGES TO THE APPROVED PLANS REQUIRES CITY APPROVAL THROUGH A REVISION.

2. APPLICANT IS RESPONSIBLE FOR ANY DAMAGES TO UNDERGROUND UTILITIES CAUSED FROM THIS CONSTRUCTION.

3. CATCH BASIN FILTERS SHOULD BE PROVIDED FOR ALL STORM DRAIN CATCH BASINS/INLETS DOWNSLOPE AND WITHIN 500 FEET OF THE CONSTRUCTION AREA. CATCH BASIN FILTERS SHOULD BE DESIGNED BY THE MANUFACTURER FOR USE AT CONSTRUCTION SITES AND APPROVED BY THE CITY INSPECTOR. CATCH BASIN FILTERS SHOULD BE INSPECTED FREQUENTLY, ESPECIALLY AFTER STORM EVENTS. IF THE FILTER BECOMES CLOGGED, IT SHOULD BE CLEANED OR REPLACED.

4. CONTRACTORS SHALL VERIFY LOCATIONS AND DEPTHS OF UTILITES.

5. AT LEAST 48 HOURS PRIOR TO CONSTRUCTION, CALL "ONE CALL" AT 1.800.424.5555

6. DO NOT BACKFILL WITH NATIVE MATERIAL ON PUBLIC RIGHT-OF-WAY. ALL MATERIAL MUST BE IMPORTED

7. EROSION CONTROL: ALL "LAND DISTURBING ACTIVITY" IS SUBJECT TO PROVISIONS OF MERCER ISLAND ORDINANCE 95C-118 "STORM WATER MANAGEMENT." SPECIFIC ITEMS TO BE FOLLOWED AT YOUR SITE:

8. PROTECT ADJACENT PROPERTIES FROM ANY INCREASED RUNOFF OR SEDIMENTATION DUE TO THE CONSTRUCTION PROJECT THROUGH THE USE OF APPROPRIATE "BEST MANAGEMENT PRACTICES" (BMP) EXAMPLES INCLUDE, BUT ARE NOT LIMITED TO, SEDIMENT TRAPS, SEDIMENT PONDS, FILTER FABRIC FENCES, VEGETATIVE BUFFER STRIPS OR BIOENGINEERED SWALES.

9. CONSTRUCTION ACCESS TO THE SITE SHOULD BE LIMITED TO ONE ROUTE. STABILIZE ENTRANCE WITH QUARRY SPALLS TO PREVENT SEDIMENT FROM LEAVING THE SITE OR ENTERING THE STORM DRAINS.

10. PREVENT SEDIMENT, CONSTRUCTION DEBRIS, PAINTS, SOLVENTS, ETC., OR OTHER TYPES OF POLLUTION FROM ENTERING PUBLIC STORM DRAINS. KEEP ALL POLLUTION ON YOUR SITE.

11. ALL EXPOSED SOILS SHALL REMAIN DENUDED FOR NO LONGER THAN SEVEN (7) DAYS AND SHALL BE STABILIZED WITH MULCH, HAY, OR THE APPROPRIATE GROUND COVER. ALL EXPOSED SOILS SHALL BE COVERED IMMEDIATELY DURING ANY RAIN EVENT.

12. INSTALLATION OF CONCRETE DRIVEWAYS, TREES, SHRUBS, IRRIGATION, BOULDERS, BERMS, WALLS, GATES, AND OTHER IMPROVEMENTS ARE NOT ALLOWED IN THE PUBLIC RIGHT-OF-WAY WITHOUT PRIOR APPROVAL, AND AN ENCROACHMENT AGREEMENT AND RIGHT OF WAY PERMIT FROM THE SENIOR DEVELOPMENT ENGINEER.

13. OWNER SHALL CONTROL DISCHARGE OF SURFACE DRAINAGE RUNOFF FROM EXISTING AND NEW IMPERVIOUS AREAS IN A RESPONSIBLE MANNER. CONSTRUCTION OF NEW GUTTERS AND DOWNSPOUTS, DRY WELLS, LEVEL SPREADERS OR DOWNSTREAM CONVEYANCE PIPE MAY BE NECESSARY TO MINIMIZE DRAINAGE IMPACT TO YOUR NEIGHBORS. CONSTRUCTION OF MINIMUM DRAINAGE IMPROVEMENTS SHOWN OR CALLED OUT ON THIS PLAN DOES NOT IMPLY RELIEF FROM CIVIL LIABILITY FOR YOUR DOWNSTREAM DRAINAGE.

14. POT HOLING THE PUBLIC UTILITIES IS REQUIRED PRIOR TO ANY GRADING ACTIVITIES LESS THAN 6" OVER THE PUBLIC MAINS (WATER, SEWER AND STORM SYSTEMS). IF THERE IS A CONFLICT, THE APPLICANT IS REQUIRED TO SUBMIT A REVISION FOR APPROVAL PRIOR TO ANY GRADING ACTIVITIES OVER THE PUBLIC MAINS.

15. REMEMBER: EROSION CONTROL IS YOUR FIRST INSPECTION.

16. ROOF DRAINS MUST BE CONNECTED TO THE STORM DRAIN SYSTEM AND INSPECTED BY THE PUBLIC WORKS DEPARTMENT PRIOR TO ANY BACKFILLING OF PIPE.

17. SILENT FENCE: CLEAN AND PROVIDE REGULAR MAINTENANCE OF THE SILT FENCE. THE FENCE IS TO REMAIN VERTICAL AND IS TO FUNCTION PROPERLY THROUGHOUT THE TERM OF THE PROJECT.

18. WORK IN PUBLIC RIGHT OF WAY REQUIRES A RIGHT-OF-WAY USE PERMIT.

19. REFER TO WATER SERVICE PERMIT FOR ACTUAL LOCATION OF NEW WATER METER AND SERVICE LINE DETERMINED BY MERCER ISLAND WATER DEPARTMENT.

16\. THE TV INSPECTION OF THE EXISTING SIDE SEWER TO THE CITY SEWER MAIN IS REQUIRED. IF THE RESULT OF THE TV INSPECTION IS NOT IN SATISFACTORY CONDITION, AS DETERMINED BY THE CITY OF MERCER ISLAND INSPECTOR, THE REPLACEMENT OF THE EXISTING SIDE SEWER IS REQUIRED. ALTERNATELY, A PRESSURE TEST OF THE SIDE SEWER, FROM SEWER MAIN TO POINT OF CONNECTION, MAY BE SUBSTITUTED FOR THE VIDEO INSPECTION.

20. NEWLY INSTALLED SIDE SEWER REQUIRES A 4 P.S.I. AIR TEST OR PROVIDE 10' OF HYDROSTATIC HEAD TEST.

21. POT HOLING THE PUBLIC UTILITIES IS REQUIRED PRIOR TO ANY GRADING ACTIVITIES LESS THAN 6" OVER THE PUBLIC MAINS (WATER, SEWER AND STORM SYSTEMS). IF THERE IS A CONFLICT, THE APPLICANT IS REQUIRED TO SUBMIT A REVISION FOR APPROVAL PRIOR TO ANY GRADING ACTIVITIES OVER THE PUBLIC MAINS.

22. THE LIMITS AND EXTENDS OF THE PAVEMENT IN THE PUBLIC RIGHT OF WAY SHALL BE DETERMINED BY THE CITY ENGINEER PRIOR TO FINALIZE THE PROJECT.

#2306-185

NO.	DATE	BY	REVISIONS

APPLICANT
JUSTIN DAVIS
ISLANDCREST BUILDERS

DATE: Sep 22, 2023
JOB# 2076
DRAFTED: SS DESIGN: DE
DIGITAL SIGNATURE

Sep 22, 2023
JEFFREY E. ... STATE OF WASHINGTON ... 29796 REGISTERED PROFESSIONAL ENGINEER

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

TESC & CITY NOTES
TESC DETAILS

MADRONA CREST
3605 86th AVENUE SE, MERCER ISLAND, WA 98040

DRAWING NO:
C1.2

APN 502190-0045
2306-185

SANITARY SEWER IMPROVEMENTS

1 -

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

3 -

4 -

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

WATER IMPROVEMENTS

EX WS UPGRADED IN 2016 AND SHALL BE MAINTAINED - DO NOT DEMO

10 -

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

12 -

14 -NEW 1" METER DROP AT EXISTING LOCATION

STORM DRAIN PIPE KEY NOTES

20 -4" STORM DRAIN (3034 PVC) @ MIN 1 % GRADE

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

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

23 -8" STORM DRAIN. (SDR 35 PVC OR EQUAL). SEE PROFILE FOR GRADE

24 -

25 -

-

-

-

STORM STRUCTURE KEY NOTES

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

31 -

32 -

33 -

34 -

35 -PRIVATE 18" YARD DRAIN (OR EQUAL)

36 -6" WIDE NDS DURASLOPE CHANNEL DRAIN KIT OR EQUAL. CLASS B VEHICLE RATED GRATE.

36A -

37 -PRIVATE STORM CLEANOUT. PROVIDE PROTECTIVE COVER IF WARRANTED.

39 -

40 -

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

43 -

46 -

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

48 -

-

-

STORM BMP's

50 -COMPOST AMENDED SOIL TO ALL DISTURBED AREAS (SEE DETAIL SHEET C3.5). TILL 2-3" OF COMPOST INTO UPPER 8" OF SOIL. LOOSEN COMPACTED SUBSOIL, IF NEEDED BY RIPPING TO 12" DEPTH. MULCH LANDSCAPE BEDS AFTER PLANTING.

51 -

52 -

53 -

54 -

55 -

56 -

57 -

58 -

SOILS

SEE MAY 2023 REPORT BY RILEY GROUP
SMALL-SCALE PIT TEST PERFORMED
MEASURED INFILTRATION RATE = 1.56 IN/HR
DESIGN INFILTRATION RATE = 0.42 IN /HR

SURVEYOR

TOPOGRAPHIC SURVEY BY:
TERRANE
10801 MAIN STREET, SUITE 102
BELLEVUE, WA 98004
PHONE 425-458-4488
info@terrane.net

VERTICAL DATUM

NAVD 88 PER WGS SURVEY DATA WAREHOUSE
POINT DESIGNATION 509
SEE SURVEY

LEGAL DESCRIPTION

SEE C1.0

SOIL AMENDMENT REQUIRED

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

SOIL INSPECTION REQUIRED BY ENGINEER

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

TREE PLANTING PLAN

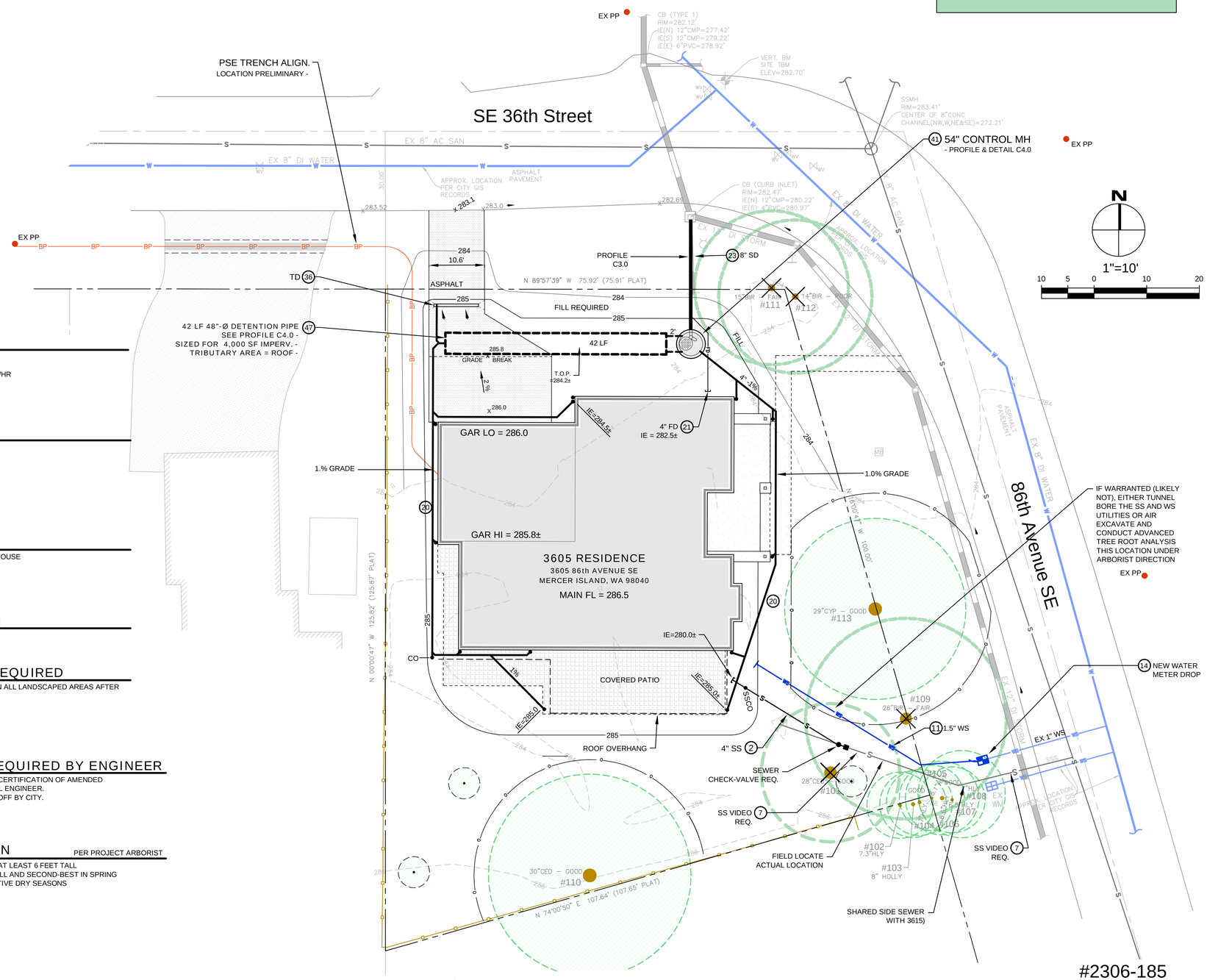
PER PROJECT ARBORIST

1. NEW CEDAR AND FIR TREES MUST BE AT LEAST 6 FEET TALL
2. NEW TREES WILL BEST PLANTED IN FALL AND SECOND-BEST IN SPRING
3. WATER DURING FIRST TWO CONSECUTIVE DRY SEASONS

TOPSOIL IMPORT

ESTIMATED TOPSOIL IMPORT= TBD

MINIMUM 10% ORGANIC - COMPOST & MULCH SOIL REQUIRED



#2306-185

NO.	DATE	BY	REVISIONS

APPLICANT
JUSTIN DAVIS
ISLANDCREST BUILDERS

DATE: Sep 28, 2023
JOB# 2076
DRAFTED: DE DESIGN: DE
DIGITAL SIGNATURE

Sep 28, 2023 JEFFREY E. RILEY 39766 REGISTERED PROFESSIONAL ENGINEER STATE OF WASHINGTON

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

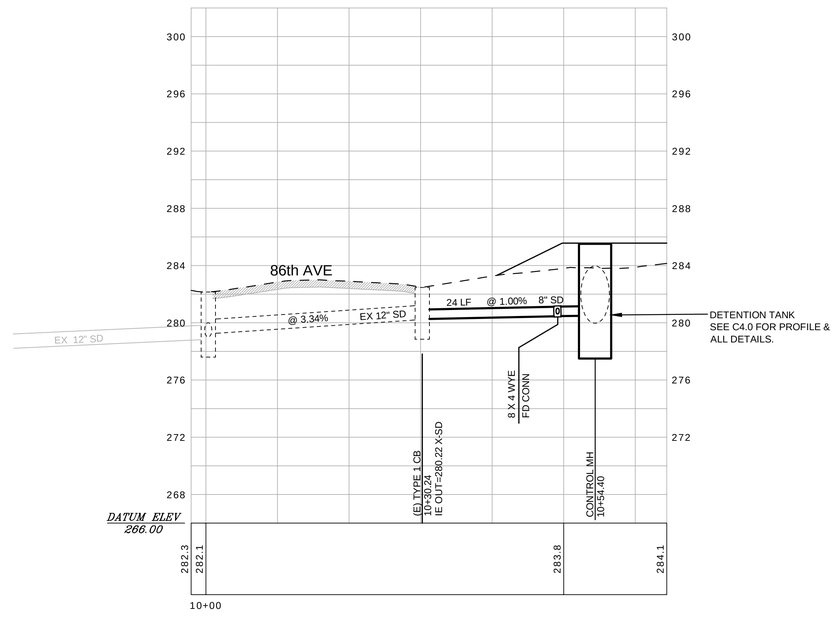
DRAINAGE / CIVIL PLAN

MADRONA CREST
3605 86th AVENUE SE, MERCER ISLAND, WA 98040

DRAWING NO: C2.0

APN 502190-0045
2306-185

STORM PROFILE



#2306-185

NO.	DATE	BY	REVISIONS

APPLICANT
JUSTIN DAVIS
ISLANDCREST BUILDERS

DATE: Sep 26, 2023
JOB# 2076
DRAFTED: DE DESIGN: DE
DIGITAL SIGNATURE

Sep 26, 2023
JEFFREY E. DUFFY
STATE OF WASHINGTON
39708
REGISTERED
PROFESSIONAL ENGINEER

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

STORM PROFILE

MADRONA CREST
3605 86th AVENUE SE, MERCER ISLAND, WA 98040

DRAWING NO:
C3.0

APN 502190-0045
2306-185

MINIMUM 10% ORGANIC - COMPOST SOIL REQUIRED

SOIL AMENDMENT REQUIRED

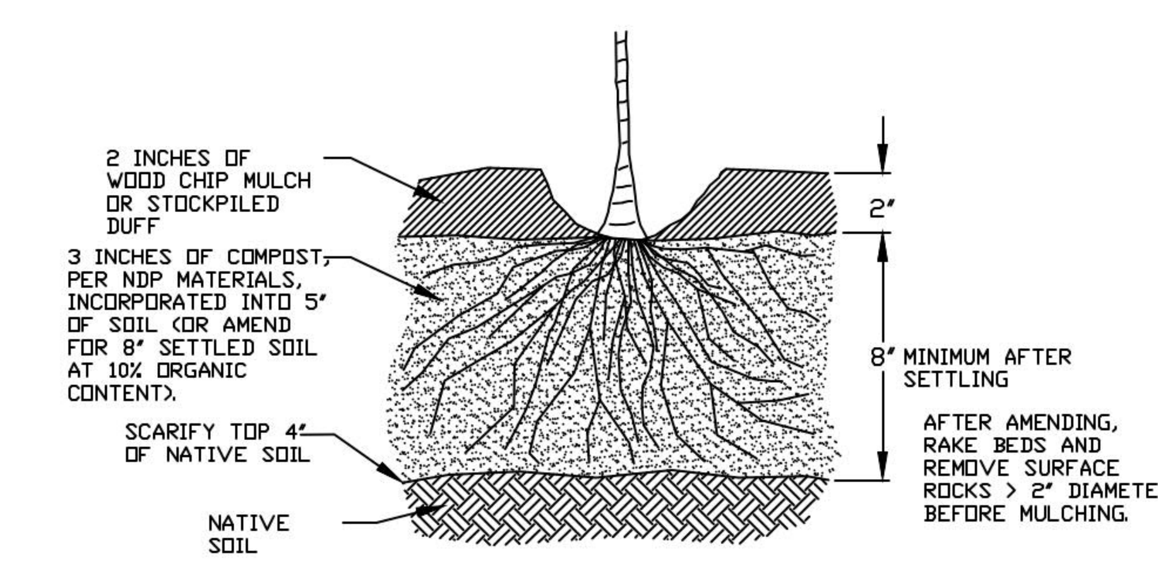
COMPOST AMENDED SOIL REQUIRED ON ALL LANDSCAPED AREAS AFTER CONSTRUCTION. SEE DETAIL BELOW.

SOIL INSPECTION REQUIRED BY ENGINEER

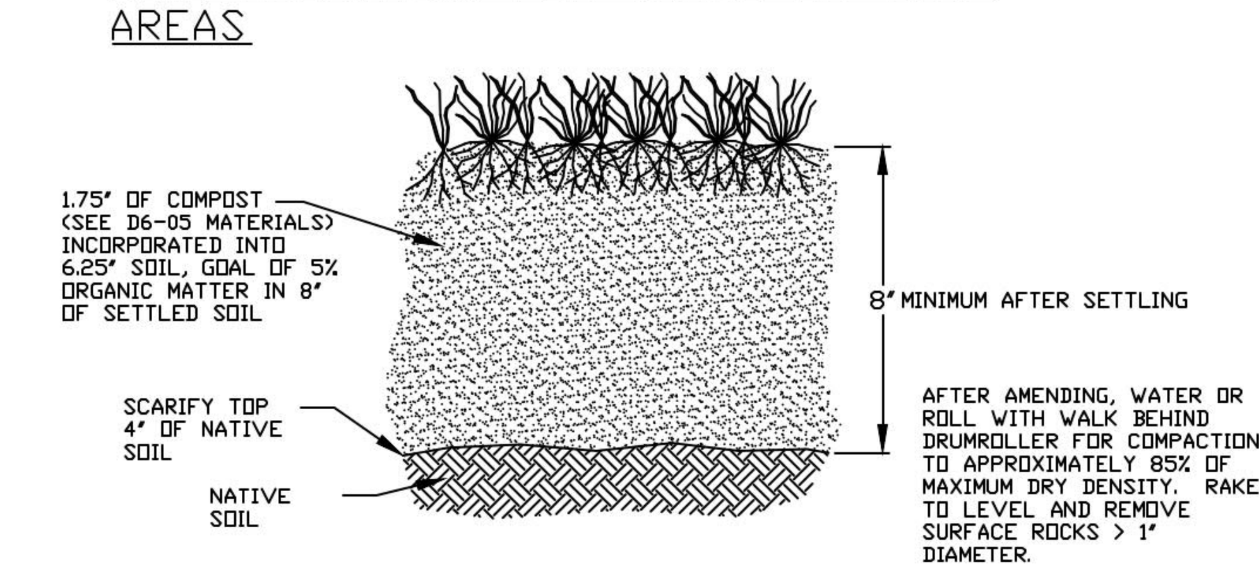
A POST CONSTRUCTION INSPECTION & CERTIFICATION OF AMENDED SOILS IS REQUIRED BY A LICENSED CIVIL ENGINEER.
THIS IS REQUIRED BEFORE FINAL SIGN-OFF BY CITY.

COMPOST AMENDED SOIL SPEC

AMENDMENT FOR LANDSCAPED AREAS



SOIL AMENDMENT FOR GRASS OR TURF AREAS



NOTES:

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

JANUARY 2023 NO SCALE

City of Bellevue — STORM AND SURFACE WATER UTILITY

TITLE: AMENDED SOILS

NO. NDP-1

#2306-185

NO.	DATE	BY	REVISIONS

APPLICANT
JUSTIN DAVIS
ISLANDCREST BUILDERS

DATE: Sep 22, 2023
JOB# 2076
DRAFTED: SS DESIGN: SS
DIGITAL SIGNATURE

Sep 22, 2023

JEFFREY E. ... STATE OF WASHINGTON ... 29766 REGISTERED PROFESSIONAL ENGINEER

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

BMP DETAILS

MADRONA CREST
3605 86th AVENUE SE, MERCER ISLAND, WA 98040

DRAWING NO: C3.5

APN 502190-0045
2306-185

MERCER ISLAND DETENTION "TABLE 1"

Table 1

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

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

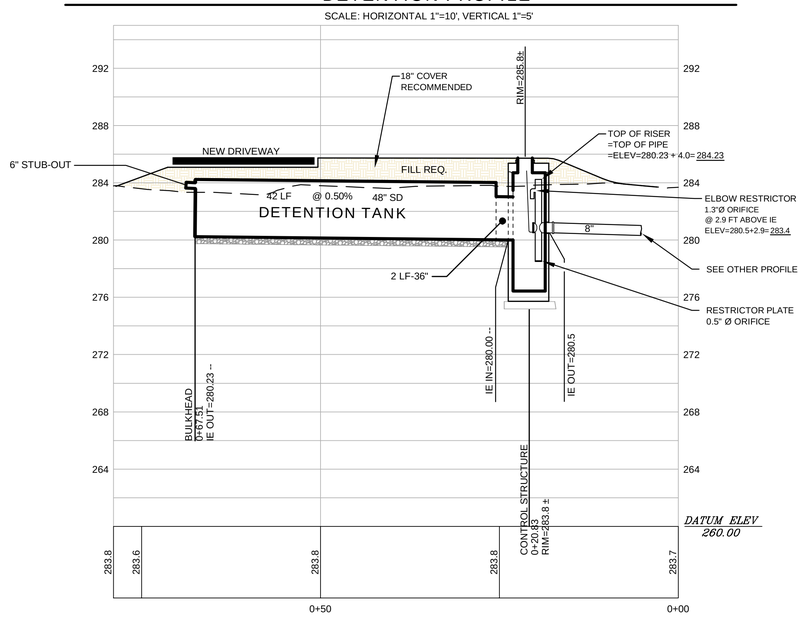
Notes:

• Minimum Requirement #7 (Flow Control) is required when the 100-year flow frequency causes a 0.15 cubic feet per second increase (when modeled in WWHM4 with a 15-minute timestep). Breakpoints shown in this table are based on a flat slope (0-5%). The 100-year flow frequency will need to be evaluated on a site-specific basis for projects on moderate (5-15%) or steep (> 15%) slopes.
• Soil type to be determined by geotechnical analysis or soil map.
• Sizing includes a Volume Correction Factor of 120%.
• Upper bound contributing area used for sizing.
[1] On Type B soils, new plus replaced impervious surface areas exceeding 8,500 sf trigger Minimum Requirement #7 (Flow Control)
[2] On Type C soils, new plus replaced impervious surface areas exceeding 9,500 sf trigger Minimum Requirement #7 (Flow Control)
[3] Minimum orifice diameter = 0.5 inches
in = inch
ft = feet
sf = square feet

Basis of Sizing Assumptions:
Sized per MR#5 in the Stormwater Management Manual for Puget Sound Basin (1992 Ecology Manual)
SBUH, Type 1A, 24-hour hydrograph
2-year, 24-hour storm = 2 in; 10-year, 24-hour storm = 3 in; 100-year, 24-hour storm = 4 in
Predeveloped = second growth forest (CN = 72 for Type B soils, CN = 81 for Type C soils)
Developed = impervious (CN = 98)
0.5 foot of sediment storage in detention pipe
Overland slope = 5%

DETENTION PROFILE

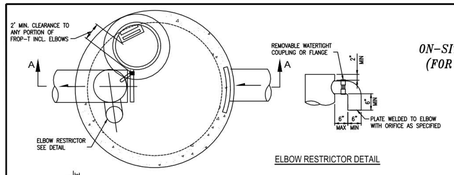
SCALE: HORIZONTAL 1"=10', VERTICAL 1"=5'



IMPERVIOUS TABLE - STORMWATER

Impervious Area Spreadsheet - Stormwater Version		
Madrona Crest - 3605 86th Avenue SE, Mercer Island, WA 98040		
Gross Site area	10,158	sf
	0.233	acres
Existing Impervious Area		
Existing to be demo-ed	3,829	sf
Existing to remain	0	sf
total existing =	3,829	sf
Proposed Impervious Area (on-site) (new + replaced)		
Roof	3,411	sf
Exposed driveway, on-site	380	sf
Exposed back patio	119	sf
Front walkway, exposed	117	sf
total on-site (new + replaced) proposed =	4,027	sf
total on-site replaced =	3,829	sf
total on-site new =	198	sf
total new + replaced impervious =	4,027	sf
total existing to remain =	0	sf
total proposed lawn/landscape =	6,131	sf

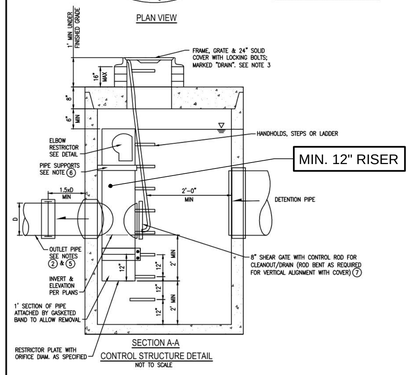
MERCER ISLAND DETENTION DETAIL

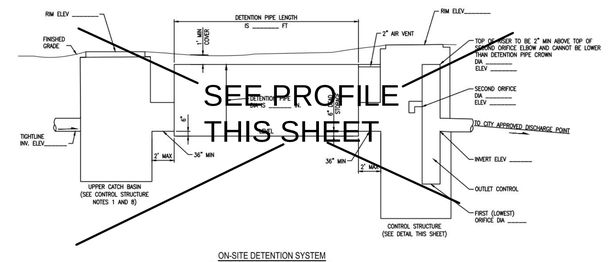


ATTACHMENT 1
CITY OF MERCER ISLAND
ON-SITE DETENTION SYSTEM WORKSHEET
(FOR NEW PLUS REPLACED IMPERVIOUS AREA OF 9,500 SF OR LESS)

OWNER: ISLAND CREST BUILDERS | ADDRESS: 3605 86th AVE SE, Mercer Island, WA 98040 | PREPARED BY: DUFFY ELLIS, P.E. | PHONE: 206.930.0342 | DATE: MAY 2023
PERMIT #: _____
NEW PLUS REPLACED IMPERVIOUS SURFACE AREA (SF): 3,411 SF | DETENTION PIPE DIA (INCH): 48" DIA | DETENTION PIPE LENGTH (FT): 42 LF | ORIFICE #1 DIA * INCH, ELEV *
SOIL TYPE: Type C per geotech report | PIPE MATERIAL: CMP OR HDPE | ORIFICE #2 DIA * INCH, ELEV *

*SEE TABLE 1, THIS SHEET





CONTROL STRUCTURE NOTES

1. USE A MINIMUM OF A 54 IN. DIAM. TYPE 2 CATCH BASIN. THE ACTUAL SIZE IS DEPENDENT ON CONNECTING PIPE MATERIAL AND DIAMETER.
2. OUTLET PIPE: MIN. 6 INCH.
3. METAL PARTS: CORROSION RESISTANT. NON-GALVANIZED PARTS PREFERRED. GALVANIZED PIPE PARTS TO HAVE ASPHALT TREATMENT 1.
4. FRAME AND LADDER OR STEPS OFFSET SO:
   A. CLEANOUT GATE IS VISIBLE FROM TOP;
   B. CLIMB-DOWN SPACE IS CLEAR OF RISER AND CLEANOUT GATE;
   C. FRAME IS CLEAR OF CURB.
5. IF METAL OUTLET PIPE CONNECTS TO CEMENT CONCRETE PIPE, OUTLET PIPE TO HAVE SMOOTH O.D. EQUAL TO CONCRETE PIPE I.D. LESS 1/4 IN.
6. PROVIDE AT LEAST ONE 3 X 0.090 GAUGE SUPPORT BRACKET ANCHORED TO CONCRETE WALL WITH 5/8 IN. STAINLESS STEEL EXPANSION BOLTS OR EMBEDDED SUPPORTS 2 IN. INTO CATCH BASIN WALL (MAXIMUM 3'-0" VERTICAL SPACING).
7. THE SHEAR GATE SHALL BE MADE OF ALUMINUM ALLOY IN ACCORDANCE WITH ASTM B 26M AND ASTM B 275, DESIGNATION 2G33A; OR CAST IRON IN ACCORDANCE WITH ASTM A 48, CLASS 30B. THE LIFT HANDLE SHALL BE MADE OF A SIMILAR METAL TO THE GATE (TO PREVENT GALVANIC CORROSION). IT MAY BE OF SOLID ROD OR HOLLOW TUBING, WITH ADJUSTABLE HOOK AS REQUIRED. A NEOPRENE RUBBER GASKET IS REQUIRED BETWEEN THE RISER MOUNTING FLANGE AND THE GATE FLANGE. INSTALL THE GATE SO THAT THE LEVEL-LINE MARK IS LEVEL WHEN THE GATE IS CLOSED. THE MATING SURFACES OF THE LID AND THE BODY SHALL BE MACHINED FOR PROPER FIT. ALL SHEAR GATE BOLTS SHALL BE STAINLESS STEEL.
8. THE UPPER CATCH BASIN IS REQUIRED IF THE LENGTH OF THE DETENTION PIPE IS GREATER THAN 50 FT.

ON-SITE DETENTION SYSTEM NOTES:

1. CALL DEVELOPMENT SERVICES (206-275-7605) 24 HOURS IN ADVANCE FOR A DETENTION SYSTEM INSPECTION BEFORE BACKFILLING AND FOR FINAL INSPECTIONS.
2. RESPONSIBILITY FOR OPERATION AND MAINTENANCE OF DRAINAGE SYSTEMS ON PRIVATE PROPERTY IS RESPONSIBILITY OF THE PROPERTY OWNER. MATERIAL ACCUMULATED IN THE STORAGE PIPE MUST BE REMOVED FROM CATCH BASINS TO ALLOW PROPER OPERATION. THE OUTLET CONTROL ORIFICE MUST BE KEPT OPEN AT ALL TIMES.
3. PIPE MATERIAL, JOINT, AND PROTECTIVE TREATMENT SHALL BE IN ACCORDANCE WITH SECTION 7.04 AND 9.05 OF THE WSDOT STANDARD SPECIFICATION FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, LATEST VERSION. SUCH MATERIALS INCLUDE THE FOLLOWING: LINED CORRUGATED POLYETHYLENE PIPE (LDPE), 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.

NO.	DATE	BY	REVISIONS

APPLICANT
JUSTIN DAVIS
ISLANDCREST BUILDERS

DATE: Sep 26, 2023
JOB# 2076
DRAFTED: SS DESIGN: SS
DIGITAL SIGNATURE

Sep 26, 2023 — JEFFREY E. ELLIS — STATE OF WASHINGTON — 39766 REGISTERED PROFESSIONAL ENGINEER

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

DETENTION PROFILE AND DETAIL

MADRONA CREST
3605 86th AVENUE SE, MERCER ISLAND, WA 98040

DRAWING NO: C4.0

APN 502190-0045
2306-185

PROPERTY INFORMATION

PROJECT #	PARCEL #
2306-185	502190-0045

ADDRESS
3605 86TH AVE SE, MERCER ISLAND, WA, 98040

OWNER
ISLAND CREST BUILDERS

LEGAL DESCRIPTION

LOT 9 BLOCK 1 MADRONA CREST ADDITION, AS PER PLAT RECORDED IN VOLUME 42 OF PLATS, PAGE 12, RECORDS OF KING COUNTY AUDITOR;

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

LOT COVERAGE CALCS REFERENCE A 1.1 FOR LOT COV DIAGRAM

LOT SIZE		10,158 SF
ALLOWABLE LOT COVERAGE		0.4 X 10,158 = 4,063 SF
PROPOSED LOT COVERAGE	FOOTPRINT	2,445 SF
	EAVE OVERHANGS	1,087 SF
	DRIVEWAY	380 SF
TOTAL PROPOSED		3,912 SF

3,912 / 10,158 = 38.51% < 40% **(COMPLIANT)** 1

ZONING SUMMARY

GENERAL		
BASE ZONE		R-8.4
LOT COVERAGE		
LOT SIZE		10,158 SF
LOT COVERAGE ALLOWED	MICC 19.02.060.F.3	0.40 X 10,158 = 4,063 SF
LOT COVERAGE PROPOSED	SEE DIAGRAM A1.0	3,912 SF / 10,158 SF = **38.51%**
GROSS FLOOR AREA		
GROSS FLOOR AREA ALLOWED		0.40 X 10,158 = 4,063 SF
GROSS FLOOR AREA PROPOSED		3,950.11 SF
LEVEL 1 FLOOR AREA	SEE DIAGRAM A2.0	1,744.71 + 166 = 1,910.71 SF
LEVEL 1 GARAGE FLOOR AREA	SEE DIAGRAM A2.0	571.47 SF
LEVEL 2 FLOOR AREA	SEE DIAGRAM A2.1	1,467.94 SF
STRUCTURE HEIGHT		
MAXIMUM HEIGHT ALLOWED	MICC 19.02.020.E.1	30'-0"
MAXIMUM HEIGHT PROPOSED	SEE ELEVATIONS + CALCS ON A1.1	29' - 9 15/16"
YARDS		
FRONT	MICC 19.02.020.C.1.a	20' - 0"
SIDE (SUM)	MICC 19.02.020.C.1.c	(.17 * 103' - 5 3/4") = 17' - 7 1/16"
REAR	MICC 19.02.020.C.1.b	25' - 0"
REQUIRED OFF-STREET PARKING		
PARKING STALLS REQUIRED	MICC 19.02.020.G.2.a	3
PARKING STALLS PROPOSED	SEE SITE PLAN	3

REFER TO CIVIL DRAWINGS AND ARBORIST REPORT FOR TREE INFORMATION.

SITE PLAN LEGEND

PROPOSED BLDG FOOTPRINT

EXISTING HOUSE TO BE DEMOLISHED

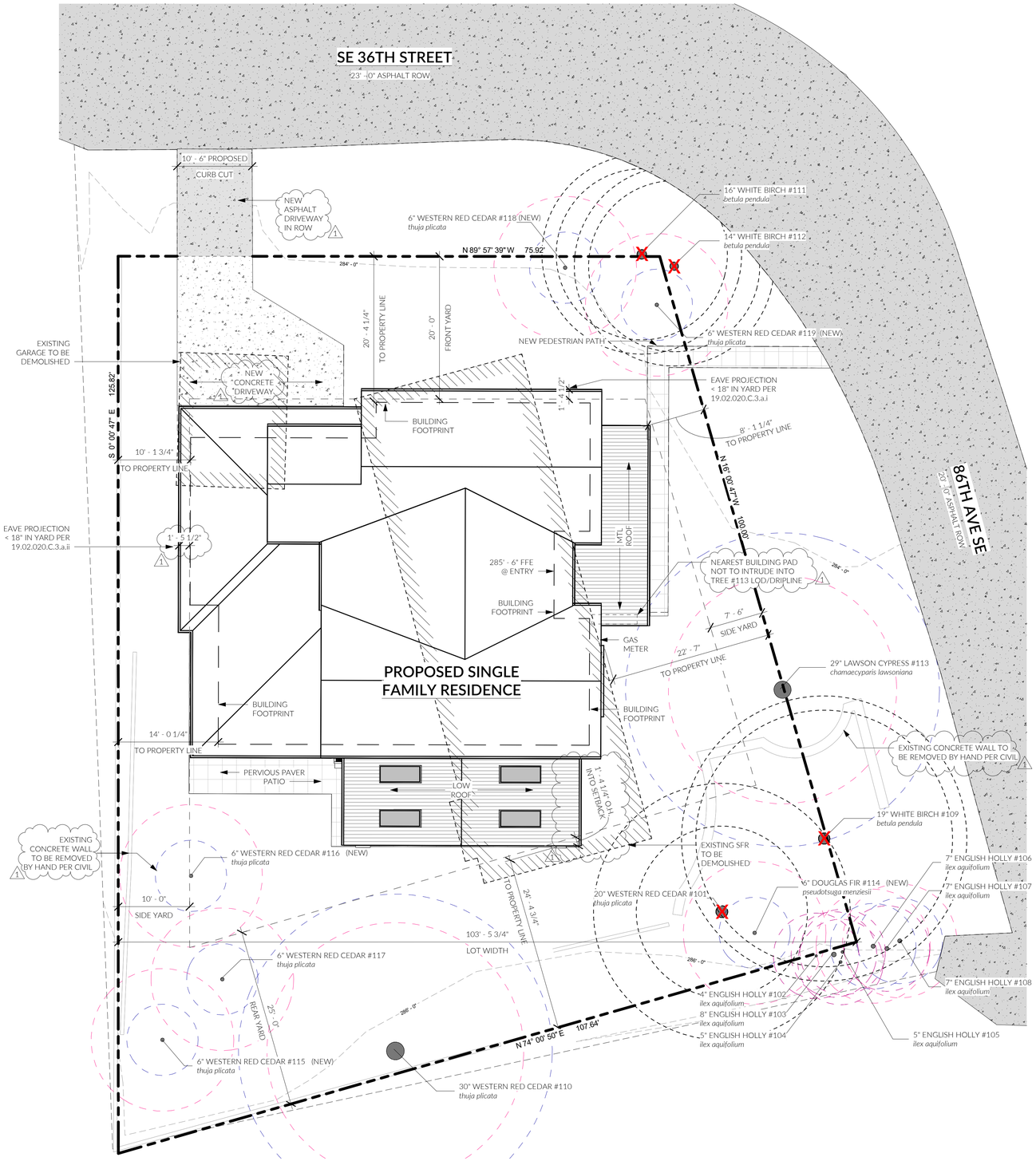
PROPOSED METAL CANOPY

PAVEMENT

PAVERS

SETBACKS

PROPERTY BOUNDARY



1 A - SITE PLAN
1/8" = 1'-0"

NORTH

FIRST LAMP ARCHITECTS
206.414.9884
4915 RAINIER AVE S, STE 202
SEATTLE, WA 98118
INFO@FIRSTLAMP.NET

9547 REGISTERED ARCHITECT
TAYLOR BRIAN CALLAHY
STATE OF WASHINGTON

MADRONA CREST
3605 86TH AVE SE
MERCER ISLAND, WA 98040

MUNICIPAL APPROVAL STAMPS

MI PROJ. # 2306-185

CD || FL 2302

4 OCT 2023

REVISIONS

NO.	DESCRIPTION	DATE
1	Corrections #1	10/4/23

DRAWN BY: D. F. GONZALEZ

SITE PLAN

A 1.0

ZONING SUMMARY

GENERAL		
BASE ZONE		R-8.4
LOT COVERAGE		
LOT SIZE		10,158 SF
LOT COVERAGE ALLOWED	MICC 19.02.060.F.3	0.40 X 10,158 = 4,063 SF
LOT COVERAGE PROPOSED	SEE DIAGRAM A1.0	3,912 SF / 10,158 SF = **38.51%**
GROSS FLOOR AREA		
GROSS FLOOR AREA ALLOWED		0.40 X 10,158 = 4,063 SF
GROSS FLOOR AREA PROPOSED		3,950.11 SF
LEVEL 1 FLOOR AREA	SEE DIAGRAM A2.0	1,744.71 + 166 = 1,910.71 SF
LEVEL 1 GARAGE FLOOR AREA	SEE DIAGRAM A2.0	571.47 SF
LEVEL 2 FLOOR AREA	SEE DIAGRAM A2.1	1,467.94 SF
STRUCTURE HEIGHT		
MAXIMUM HEIGHT ALLOWED	MICC 19.02.020.E.1	30'-0"
MAXIMUM HEIGHT PROPOSED	SEE ELEVATIONS + CALCS ON A1.1	29' - 9 15/16"
YARDS		
FRONT	MICC 19.02.020.C.1.a	20' - 0"
SIDE (SUM)	MICC 19.02.020.C.1.c	(.17 * 103' - 5 3/4") = 17' - 7 1/16"
REAR	MICC 19.02.020.C.1.b	25' - 0"
REQUIRED OFF-STREET PARKING		
PARKING STALLS REQUIRED	MICC 19.02.020.G.2.a	3
PARKING STALLS PROPOSED	SEE SITE PLAN	3

NOXIOUS WEED NOTES

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 HOMES SHALL NOT INCORPORATE ANY WEEDS IDENTIFIED ON THE KING COUNTY NOXIOUS WEED LIST, AS AMENDED. PROVIDED, THAT REMOVAL SHALL NOT BE REQUIRED IF THE REMOVAL WILL RESULT IN INCREASED SLOPE INSTABILITY OR RISK OF LANDSLIDE OR EROSION.

1

LOT COVERAGE CALCS

LOT SIZE		10,158 SF
ALLOWABLE LOT COVERAGE		0.4 X 10,158 = 4,063 SF
PROPOSED LOT COVERAGE	FOOTPRINT	2,445 SF
	EAVE OVERHANGS	1,087 SF
	DRIVEWAY	380 SF
TOTAL PROPOSED		3,912 SF
		3,912 / 10,158 = 38.51% < 40% (COMPLIANT)

GROSS FLOOR AREA RATIO

GROSS LOT AREA	10,158 SF
ALLOWED GROSS FLOOR AREA	0.40 X 10,158 SF = 4,063.20 SF
NEW FLOOR AREA (SEE DIAGRAMS A 2.0/2.1)	
MAIN LEVEL	1,755.68 SF
CEILING OVER 16' - 0" IN HEIGHT	163.28 SF
GARAGE	587.92 SF
UPPER LEVEL	1,554.12 SF
TOTAL FLOOR AREA	4,061.00 SF
FLOOR AREA RATIO CALCULATION	4,061.00 / 10,158.00 = 39.97%
	39.97 < 40% (COMPLIANT)

HARDSCAPE COVERAGE

GROSS LOT AREA	10,158 SF
ALLOWABLE HARD SURFACE COVERAGE	9% X 10,158 = 914.22 SF
NEW HARD SURFACE AREAS	
PROPOSED WALKWAY	117.07 SF
PROPOSED PATIO	120.59 SF
EXISTING RETAINING WALL	123.7 SF
TOTAL NEW HARD SURFACE	361.36 SF
ACTUAL HARD SURFACE COVERAGE	361.36 / 10,158.00 = 3.56%
	3.56% < 9% (COMPLIANT)

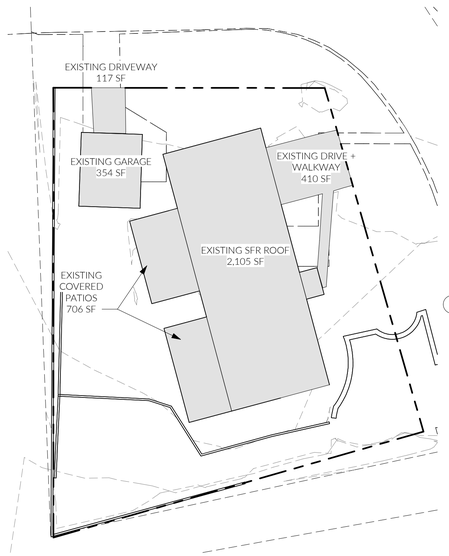
1

GREENSPACE AREA

GROSS LOT AREA	10,158 SF
MINIMUM REQUIRED LANDSCAPING AREA 60% (MICC 19.02.020.F.3)	0.60 X 10,158 SF = 6,094.80 SF
LANDSCAPING AREAS	
LAWN:	4,334.47 SF
PLANTING/LANDSCAPING AREAS:	1,867.01 SF
TOTAL GREENSPACE AREA:	6,201.48, 61.05%
	61.05% > 60% (COMPLIANT)

LOT SLOPE CALCULATIONS

HIGHEST ELEVATION POINT:	286' - 8 1/8"
LOWEST ELEVATION POINT:	283' - 1 7/8"
ELEVATION DIFFERENCE:	3' - 6 1/4"
HORIZONTAL DIFFERENCE:	126' - 2 1/4"
LOT SLOPE:	(3' - 6 1/4") / (126' - 2 1/4") * 100 = 2.79%

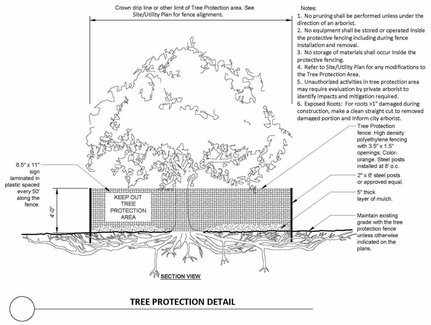


4 D - EXISTING LOT COVERAGE
1" = 20'-0"

PROJECT DATA

OWNER	ISLANDCREST DEVELOPMENTS LLC
PROJECT ADDRESS	3605 86TH AVE SE, MERCER ISLAND WA, 98040
LEGAL DESCRIPTION	LOT 9 BLOCK 1 MADRONA CREST ADDITION, AS PER PLAT RECORDED IN VOLUME 42 OF PLATS, PAGE 12, RECORDS OF KING COUNTY AUDITOR; SITUATE IN THE CITY OF MERCER ISLAND, COUNTY OF KING, STATE OF WASHINGTON.
ASSESOR'S TAX/PARCEL #	502190-0045
CURRENT ZONING	R-8.4
GROSS LOT AREA	10,158 SF
APPLICABLE CODES	2018 IRC 2018 IFC 2018 IMC 2018 UPC 2018 WSREC 2018 IFGC
PROJECT DESCRIPTION	DEMOLITION OF EXISTING SFR AND CONSTRUCTION OF NEW SFR WITH ADDITIONAL LANDSCAPING AND HARDSCAPE IMPROVEMENTS.

1



TREE PROTECTION DETAIL

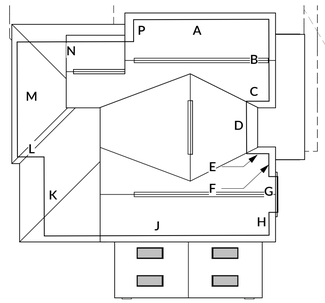
TREE PROTECTION NOTES

GENERAL

1.) FENCING MUST BE INSTALLED PRIOR TO DEMOLITION AND GROUND DISTURBANCE

2.) FENCING MUST BE KEPT IN PLACE FOR THE DURATION OF CONSTRUCTION.

3.) NO SOIL DISTURBANCE OR ACTIVITY ALLOWED WITHIN FENCED AREA, SUCH AS BUT NOT LIMITED TO : MATERIAL STORAGE / STOCKPILING, PARKING, DUMPING OR WASHING.

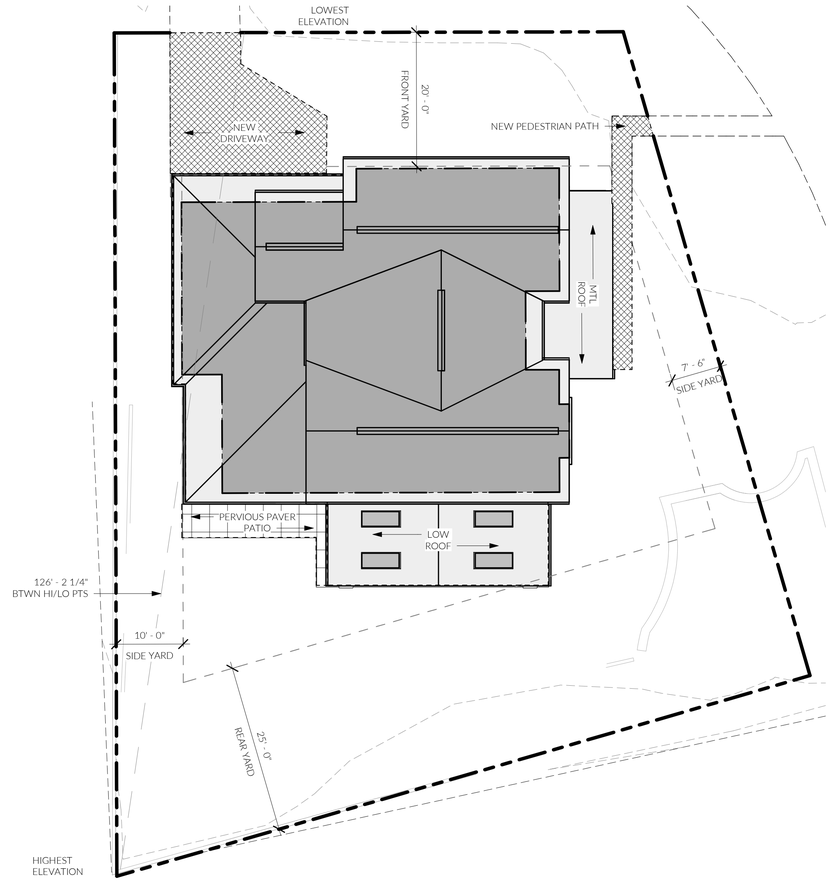


1 D - AVG GRADE
1/16" = 1'-0"

AVERAGE GRADE CALCS

	ELEVATION				WALL LENGTH	
	FT.	IN.	FRACTIONS	DECIMAL	LENGTH	FACTOR
A	283	11	0.940	283.995	30.250	8590.842
B	284	0	0.000	284.000	18.333	5206.572
C	284	0	0.000	284.000	5.000	1420.000
D	284	0	0.000	284.000	11.667	3313.428
E	284	0	0.000	284.000	5.000	1420.000
F	284	0	0.000	284.000	5.083	1443.657
G	284	0	0.000	284.000	8.000	2272.000
H	284	0	0.000	284.000	5.083	1443.657
J	284	0	0.000	284.000	50.25	14271.000
K	284	0	0.000	284.000	17.667	5017.428
L	284	0	0.000	284.000	6.000	1704.000
M	284	0	0.000	284.000	25.75	7313.000
N	283	9	0.940	283.828	26.083	7403.174
P	283	10	0.500	283.875	5.000	1419.375
				3975.698	219.167	62238.134
				TOTAL =		283' - 11 11/16"

3 D - AVG GRADE
1" = 10'-0"



2 D - LOT COVERAGE/SLOPE
3/32" = 1'-0"

PROPOSED BUILDING FOOTPRINT

PROPOSED HARDSCAPE/LOT COVERAGE

PROPOSED EAVE OUTLINE

PROPERTY BOUNDARY

SETBACKS

NORTH

FIRST LAMP ARCHITECTS
206.414.9884
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MERCER ISLAND, WA 98040

MUNICIPAL APPROVAL STAMPS

SDCI PROJ. # XXXXXXX

CD || FL 2302

4 OCT 2023

REVISIONS

NO.	DESCRIPTION	DATE
1	Corrections #1	10/4/23

DRAWN BY: D. F. GONZALEZ

ZONING DIAGRAMS

A 1.1

EXCAVATION AND SITE PREPARATION NOTES

1. IT IS THE INTENT OF THE ARCHITECTURAL DRAWINGS TO COMPLY WITH ALL STANDARDS IN THE LOCAL GOVERNING AUTHORITY MUNICIPAL CODE DEVELOPMENT STANDARDS. PLEASE NOTIFY THE ARCHITECT IMMEDIATELY IF THERE IS A DISCREPANCY OR CONFLICT WITH COMPLIANCE IN THE DRAWINGS.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW, PLAN, AND IMPLEMENT EXCAVATION AND SITE WORK BASED ON SITE CONDITIONS AND GEOTECHNICAL RECOMMENDATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY AND DETERMINE THE EXACT EXCAVATION NEEDED. NOTIFY ARCHITECT IMMEDIATELY IF DEVIATIONS IN THE DRAWINGS ARE REQUIRED OR HAVE OCCURRED. DEVIATIONS MAY REQUIRE ADDITIONAL REVIEW AND PERMITTING.
3. REFER TO STRUCTURAL GENERAL NOTES, PLANS, AND DETAILS FOR SIZING AND SPACING OF ALL FOOTINGS, STEM WALLS, AND STRUCTURAL REINFORCING
4. PLEASE REFER TO LOCAL GOVERNING AUTHORITY RECOMMENDATIONS FOR EXCAVATION, FILL, & SITE PREPARATION FOR FOUNDATIONS PRIOR TO BREAKING GROUND. ARCHITECT AND STRUCTURAL ENGINEER REQUIRED TO BE CONSULTED ON ANY DISCREPANCIES IN EXCAVATION AND SOIL INFORMATION. LOCAL GOVERNING AUTHORITY MAY BE REQUIRED TO BE PRESENT DURING EXCAVATION.
5. BOTTOM OF WALL CALLOUTS ARE ESTIMATES BASED OFF SURVEY TOPOGRAPHICAL DATA. THE CONTRACTOR AND EXCAVATOR ARE REQUIRED TO VERIFY FINAL EXCAVATION NEEDED AND FINAL FOOTING ELEVATIONS PER MEANS AND METHODS AND SOIL CONDITIONS. NOTIFY ARCHITECT AND STRUCTURAL ENGINEER TO ANY CHANGES TO FOOTING ELEVATIONS BASED ON SOIL CONDITIONS.
6. ALL DIMENSIONS REFER TO FACE OF ROUGH FRAMING OR FACE OF CONCRETE UON. ALL DIMENSIONS ON THIS PLAN SHALL BE REFERENCED WITH ARCHITECTURAL AND STRUCTURAL PLANS. PLEASE CONTACT ARCHITECT IMMEDIATELY IF THERE ARE DISCREPANCIES.

ARCHITECTURAL FOUNDATION PLAN NOTES

1. REFER TO STRUCTURAL GENERAL NOTES, PLANS, AND DETAILS FOR SIZING AND SPACING OF ALL FOOTINGS, STEM WALLS, AND STRUCTURAL REINFORCING
2. ALL DIMENSIONS REFER TO FACE OF ROUGH FRAMING OR FACE OF CONCRETE UON. ALL DIMENSIONS ON THIS PLAN SHALL BE REFERENCED WITH ARCHITECTURAL AND STRUCTURAL PLANS. PLEASE CONTACT ARCHITECT IMMEDIATELY IF THERE ARE DISCREPANCIES.
3. IF PROJECT INCLUDES SLAB ON GRADE , USE 4" PERFORATED PIPE SPACED @ 15 FOOT INTERVALS UNDER THE SLAB TO PROVIDE ADDITIONAL UNDERSLAB DRAINAGE. 4" PERFORATED DRAIN PIPES SHOULD BE PLACED IN NARROW, 12" WIDE BY 18" DEEP TRENCHES WITH CLEAN, FREE DRAINING 3/8" PEA GRAVEL OR CLEAN 5/8" CRUSHED ROCK. TIE UNDER SLAB PERFORATED PIPE TO FOOTING TIGHTLINES AND DRAIN TO APPROVED LOCATION PER LOCAL GOVERNING AUTHORITY.
4. IF FINISHED CONCRETE IS CHOSEN AS A FINISHED FLOORING CONDITION, COORDINATE WITH ARCHITECT AND OWNER TO INCLUDE A PERCENTAGE OF LAMP BLACK IN SLAB CONCRETE MIX. FINAL PERCENTAGE OF LAMP BLACK TO BE DETERMINED BY CONCRETE SUBCONTRACTOR TO PRODUCE THE DESIRED CONCRETE COLOR.

GENERAL EXCAVATION AND GRADING NOTES

1. ALL TEMPORARY GRADE CUTS SHALL BE 1V : 1H PER LOCAL GOVERNING AUTHORITY RECOMMENDATIONS. STEEPER EXCAVATION CUTS MAY BE USED WITH PRIOR REVIEW & APPROVAL FROM LOCAL GOVERNING AUTHORITY.
2. EXCAVATION DIAGRAM DEPICTS THE EXCAVATION NEEDED BASED ON THE ARCHITECTURE DRAWINGS AND SURVEY. CONTRACTOR AND SUB CONTRACTORS TO VERIFY AND DETERMINE EXACT EXCAVATION NEEDED FOR THE FOUNDATION BASED ON FIELD CONDITIONS. NOTIFY THE ARCHITECT IMMEDIATELY IF DEVIATIONS IN THE DRAWINGS ARE REQUIRED OR HAVE OCCURRED.
3. NO TEMPORARY GRADE CUTS SHALL BE ALLOWED TO CROSS ANY PROPERTY LINE.
4. SLOPES FOR PERMANENT EXCAVATIONS OR FILLS WITHOUT RETAINING WALLS SHALL NOT BE STEEPER THAN TWO HORIZONTAL TO ONE VERTICAL UNLESS EXPLICIT APPROVAL FROM LOCAL GOVERNING AUTHORITY.
5. DURING DEVELOPMENT, IMPROVEMENT, USE OR CONSTRUCTION ALL NATURAL CONTOURS SHALL BE MAINTAINED TO THE EXTENT THAT NATURAL DRAINAGE FLOW FROM OR ONTO ADJACENT PUBLIC OR PRIVATE PROPERTY SHALL NOT BE DISRUPTED, BLOCKED, INCREASED, REDIRECTED, OR OTHERWISE MADE DETRIMENTAL TO THE USE OR MAINTENANCE OF ADJACENT PROPERTIES.

CRAWL SPACE VENTILATION

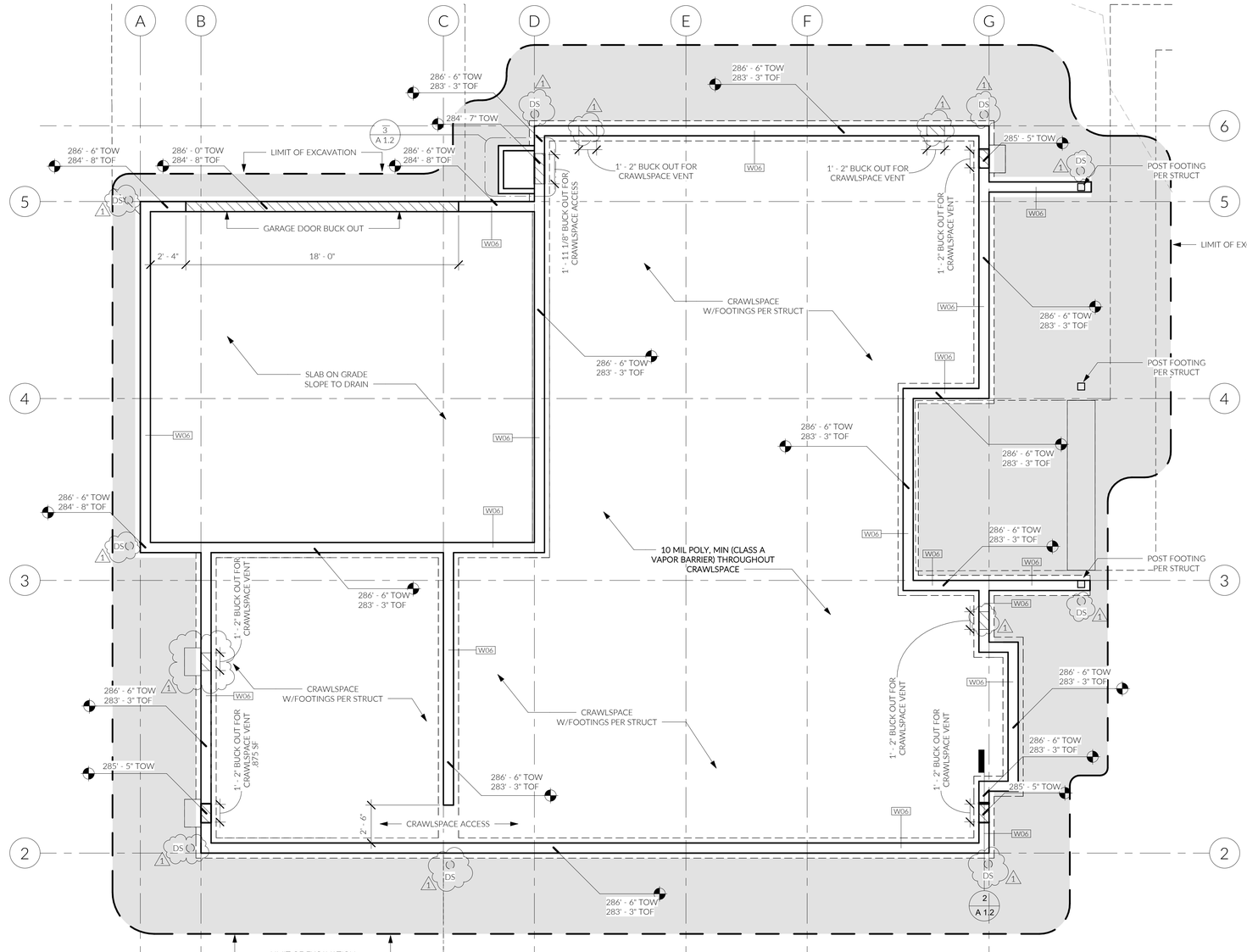
CRAWL SPACE VENTILATION COMPLIANCE

IRC R408.1 - VENTILATION - THE UNDER-FLOOR SPACE BETWEEN THE BOTTOM OF THE FLOOR JOISTS AND THE EARTH UNDER ANY BUILDING (EXCEPT SPACE OCCUPIED BY A BASEMENT) SHALL HAVE VENTILATION OPENINGS THROUGH FOUNDATION WALLS OR EXTERIOR WALLS.

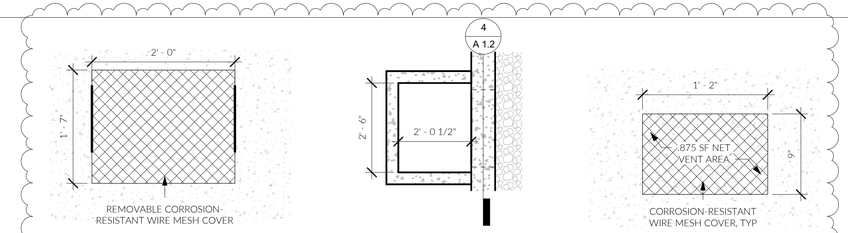
IRC R408.2 - OPENINGS - THE MINIMUM NET AREA OF VENTILATION OPENINGS SHALL NOT BE LESS THAN 1 SQUARE FOOT FOR EACH 150 SQUARE FEET OF UNDER-FLOOR AREA. THE TOTAL AREA OF VENTILATION OPENINGS SHALL BE PERMITTED TO BE REDUCED TO 1/1,500 OF THE UNDER-FLOOR AREA WHERE THE GROUND SURFACE IS COVERED WITH AN APPROVED CLASS I VAPOR RETARDER MATERIAL AND THE REQUIRED OPENINGS ARE PLACED TO PROVIDE CROSS VENTILATION OF THE SPACE. THE INSTALLATION OF OPERABLE LOUVERS SHALL NOT BE PROHIBITED.

CRAWL SPACE VENTILATION CALCULATIONS

CRAWL SPACE AREA:	1624 SF
MIN NET VENTILATION AREA:	1624 SF / 300 SF = 5.413 SF
NET VENT AREA PROPOSED:	.875 SF X 7 = 6.125 SF



1 A - FOUNDATION PLAN
1/4" = 1'-0"



4 CRAWLSPACE ACCESS OPENING
1" = 1'-0"

3 CRAWLSPACE ACCESS PLAN
1/2" = 1'-0"

2 TYP CRAWLSPACE VENT
1 1/2" = 1'-0"

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MUNICIPAL APPROVAL STAMPS

SDCI PROJ. # XXXXXXX

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REVISIONS

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1	Corrections #1	10/4/23

DRAWN BY: D. F. GONZALEZ

ARCH FOUNDATION & EXCAVATION PLAN

A 1.2

FLOOR PLAN NOTES

GENERAL

1. DO NOT SCALE DRAWINGS. CONTACT ARCHITECT IMMEDIATELY BEFORE PROCEEDING WITH ANY WORK IF AMBIGUITIES, DISCREPANCIES, OR A LACK OF INFORMATION EXIST IN DRAWINGS.
2. ALL DIMENSIONS REFER TO FACE OF ROUGH FRAMING MEMBER OR FACE OF CONCRETE UON.
3. SMOKE ALARMS ARE REQUIRED TO BE HARDWIRED AND INTERCONNECTED WITH A BATTERY BACKUP. PER R315.4,COMBINATION CARBON MONOXIDE AND SMOKE ALARMS SHALL BE PERMITTED TO BE USED IN LIEU OF CARBON MONOXIDE ALARMS.

FOUNDATION

4. FOUNDATION CONCRETE DAMPPROOFING SHALL BE INSTALLED AT BELOW-GRADE CONCRETE WALLS WHICH ENCLOSE HABITABLE SPACE.
5. ALL FOUNDATION FOOTINGS THAT ENCLOSE HABITABLE SPACE SHALL BE DRAINED WITH CONTINUOUS 4" PERFORATED PIPE SURROUNDED BY CRUSHED ROCK, SLOPED @ 1/4" PER FT. MIN. TO DRAIN

CRAWL SPACE

6. IF CRAWL SPACES ARE VENTED, THEY SHALL BE VENTED THROUGH OPENINGS IN THE PERIMETER WALLS. OPENINGS SHALL BE PROVIDED WITHIN 3' OF EACH CORNER OF THE BUILDING AND BE COVERED WITH SHEET METAL PLATES, CAST-IRON GRILLING OR GRATING, LOAD-BEARING BRICK, HARDWARE CLOTH, OR CORROSION-RESISTANT WIRE MESH. SEE IRC (OR SRC) R408.2 FOR MORE SPECIFICS ON APPROVED COVERING MATERIALS.
7. IN ALL CRAWL SPACES, EXPOSED EARTH SHALL BE COVERED WITH A CONTINUOUS CLASS I VAPOR RETARDER WITH JOINTS OVERLAPPING BY 6" AND SEALED OR TAPED. THE EDGES OF THE VAPOR RETARDER SHALL EXTEND AT LEAST 6" UP THE STEM WALL AND SHALL BE ATTACHED AND SEALED TO THE STEM WALL. A RADON SYSTEM SHALL BE INSTALLED THAT MEETS THE REQUIREMENTS OF IRC APPENDIX F.
8. ACCESS SHALL BE PROVIDED TO ALL UNDER-FLOOR SPACES. OPENINGS THROUGH A PERIMETER WALL SHALL BE NOT LESS THAN 16" X 24". WHEN ANY PORTION OF THE THROUGH-WALL ACCESS IS BELOW GRADE, AN AREAWAY NOT LESS THAN 16" X 24" SHALL BE PROVIDED. THE BOTTOM OF THE AREAWAY SHALL BE BELOW THE THRESHOLD OF THE ACCESS OPENING. THROUGH WALL ACCESS OPENINGS SHALL NOT BE LOCATED UNDER A DOOR TO THE RESIDENCE.

FRAMING

9. ALL INTERIOR WALLS SHALL BE FRAMED USING 2X4 STUDS UON.
10. ATTIC SPACES GREATER THAN 30 SF IN AREA MUST BE PROVIDED AN ACCESS HATCH WITH A MINIMUM OPENING DIMENSION OF 22" X 30" AND A MINIMUM HEADROOM OF 30"
11. ALL CEILINGS ARE FLAT UON.
12. ALL WOOD SIDING, SHEATHING AND WALL FRAMING ON THE EXTERIOR OF A BUILDING HAVING A CLEARANCE OF LESS THAN 6" FROM THE GROUND SHALL BE PRESERVATIVE TREATED.
13. ALL WOOD FRAMING THAT RESTS ON CONCRETE OR MASONRY EXTERIOR FOUNDATION WALLS AND ARE LESS THAN 8" ABOVE EXPOSED GRADE SHALL BE PRESERVATIVE TREATED.
14. STUD BAYS AT LOCATIONS TO RECEIVE TOWEL BARS, TP HOLDERS, OR OTHER SUCH WALL-MOUNTED FIXTURES SHALL BE FILLED IN WITH HORIZONTAL BLOCKING 12" ABOVE AND BELOW THE ESTIMATED FUTURE MOUNTING HEIGHT.

PROTECTION FROM BUILDING-BORNE MOISTURE

15. IN ALL FRAMED WALLS, FLOORS, AND ROOF/CEILINGS INCLUDED IN THE BUILDING ENVELOPE, A PVA PRIMER SHALL BE APPLIED TO THE FACE OF DRYWALL PRIOR TO PAINTING.
16. GWB USED TO FINISH THE WALLS AND CEILINGS OF ALL BATHROOM SPACES SHALL BE MOISTURE RESISTANT. MATERIAL THICKNESS OF 1/2" SHALL BE INSTALLED IN LOCATIONS WHERE CEILING FRAMING DOES NOT EXCEED 12" OC., 5/8" SHALL BE INSTALLED IN LOCATIONS WHERE CEILING FRAMING DOES NOT EXCEED 16" OC.

FIRE SAFETY

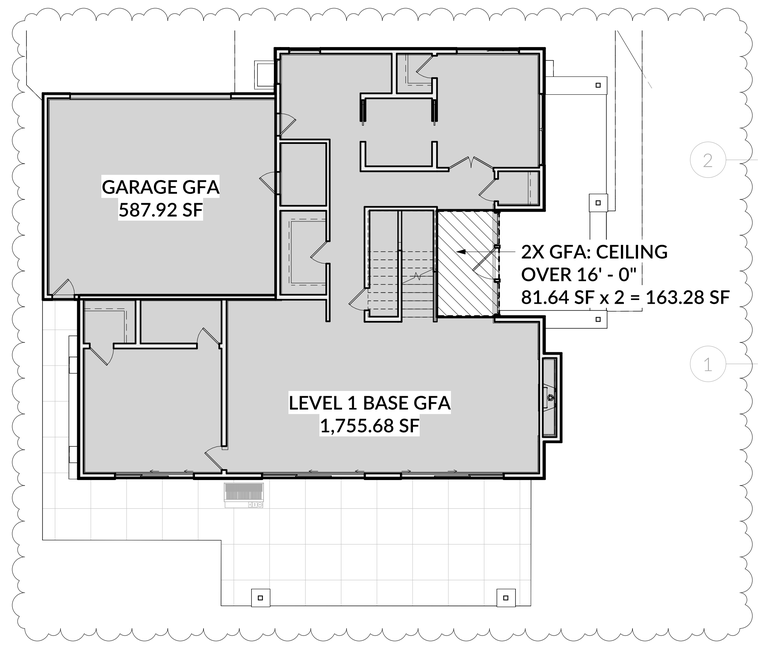
17. ALL ENCLOSED AND ACCESSIBLE UNDERSTAIR SPACES SHALL BE FINISHED WITH 1/2" MINIMUM THICKNESS GWB.
18. GARAGE SPACES ADJOINED TO THE REMAINING PORTION OF THE BUILDING SHALL BE FINISHED WITH 5/8" TYPE X GWB.
19. ALL SMOKE/CARBON DETECTORS TO BE INTERCONNECTED PER IRC R314.4 AND R315.5.

OCCUPANT SAFETY

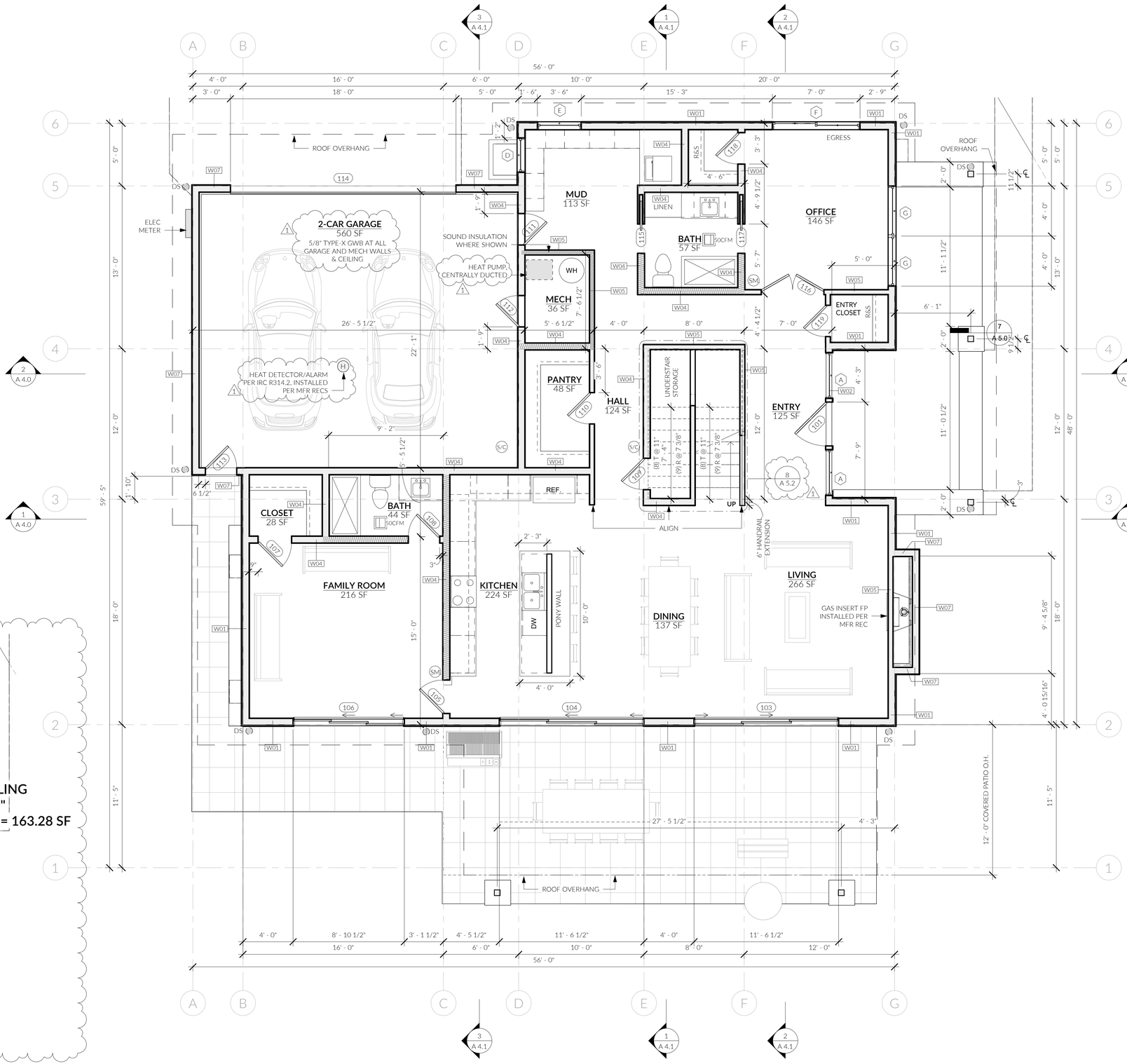
20. ALL HANDRAILS FOR STAIRS WITH A CHANGE IN HEIGHT GREATER THAN 30" SHALL BE BETWEEN 34" AND 38" IN HEIGHT, MEASURED VERTICALLY FROM THE NOSING OF THE TREAD. THE BOTTOM RAIL OF THE HANDRAIL SHALL BE POSITIONED SO AS NOT TO ALLOW A 6" SPHERE FROM PASSING BETWEEN IT AND THE TREADS BELOW. BALUSTERS SHALL BE PLACED SO AS NOT TO ALLOW THE PASSAGE OF A 4" SPHERE.
21. ALL HANDRAILS SHALL BE CONTINUOUS FOR THE RUN OF THE STAIRS AND SHALL TERMINATE INTO A NEWELL OR SAFETY TERMINAL.
22. ALL GUARDS AT ALL PORCHES, BALCONIES LANDINGS, AND STAIRS SHALL HAVE A MINIMUM HEIGHT OF 36" MEASURED VERTICALLY ABOVE THE ADJACENT WALKING SURFACE. THE OPENING BETWEEN THE BOTTOM SURFACE OF THE GUARD AND THE WALKING SURFACE SHALL BE SMALLER THAN THAT WHICH ALLOWS THE PASSAGE OF A SPHERE WITH A DIAMETER OF 4".
23. AN APPROVED CARBON MONOXIDE ALARM SHALL BE INSTALLED OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS.

APPLIANCES

24. ALL APPLIANCES SHALL BE INSTALLED PER MANUFACTURERS WRITTEN INSTRUCTIONS UNLESS A CONFLICT WITH LOCAL CODE EXISTS, IN WHICH CASE LOCAL CODE SHALL GOVERN APPLIANCE INSTALLATION.
25. GAS FIREPLACES SHALL BE LISTED AND LABELED FOR ITS APPLICATION AND USE.
26. PRIOR TO BEGINNING WORK, CONTRACTOR SHALL VERIFY CHIMNEY FRAMING DIMENSIONS ALLOW FOR REQUIRED CLEARANCES TO COMBUSTIBLE MATERIALS ESTABLISHED BY APPLIANCE INSTALLATION REQUIREMENTS.
27. APPLIANCES HAVING AN IGNITION SOURCE LOCATED IN GARAGE SPACES SHALL BE ELEVATED SUCH THAT THE SOURCE OF IGNITION IS NOT LESS THAN 18" ABOVE THE GARAGE FLOOR.



2 D - LEVEL 1 GFA
1/8" = 1'-0"



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

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MUNICIPAL APPROVAL STAMPS

PROJ. # 6534202
CD || FL 2302
4 OCT 2023

REVISIONS

NO.	DESCRIPTION	DATE
1	Corrections #1	10/4/23

DRAWN BY: D. F. GONZALEZ

MAIN LEVEL PLAN

A 2.0

NORTH

FLOOR PLAN NOTES

GENERAL

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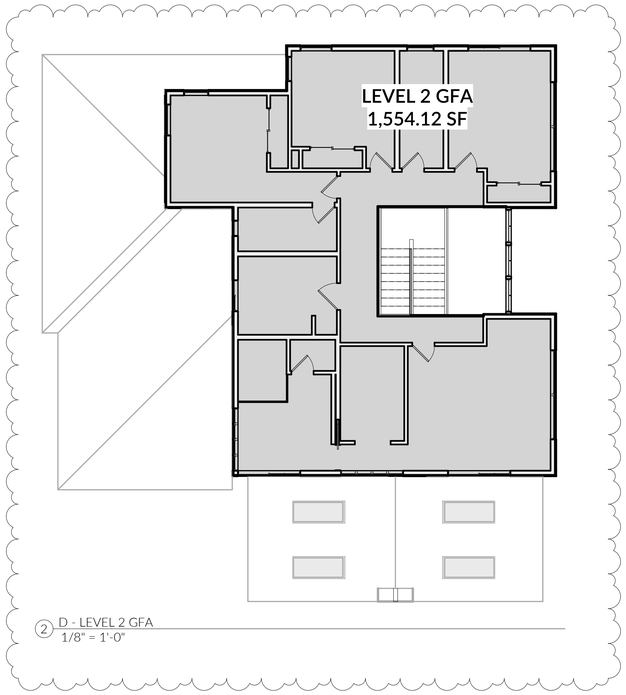
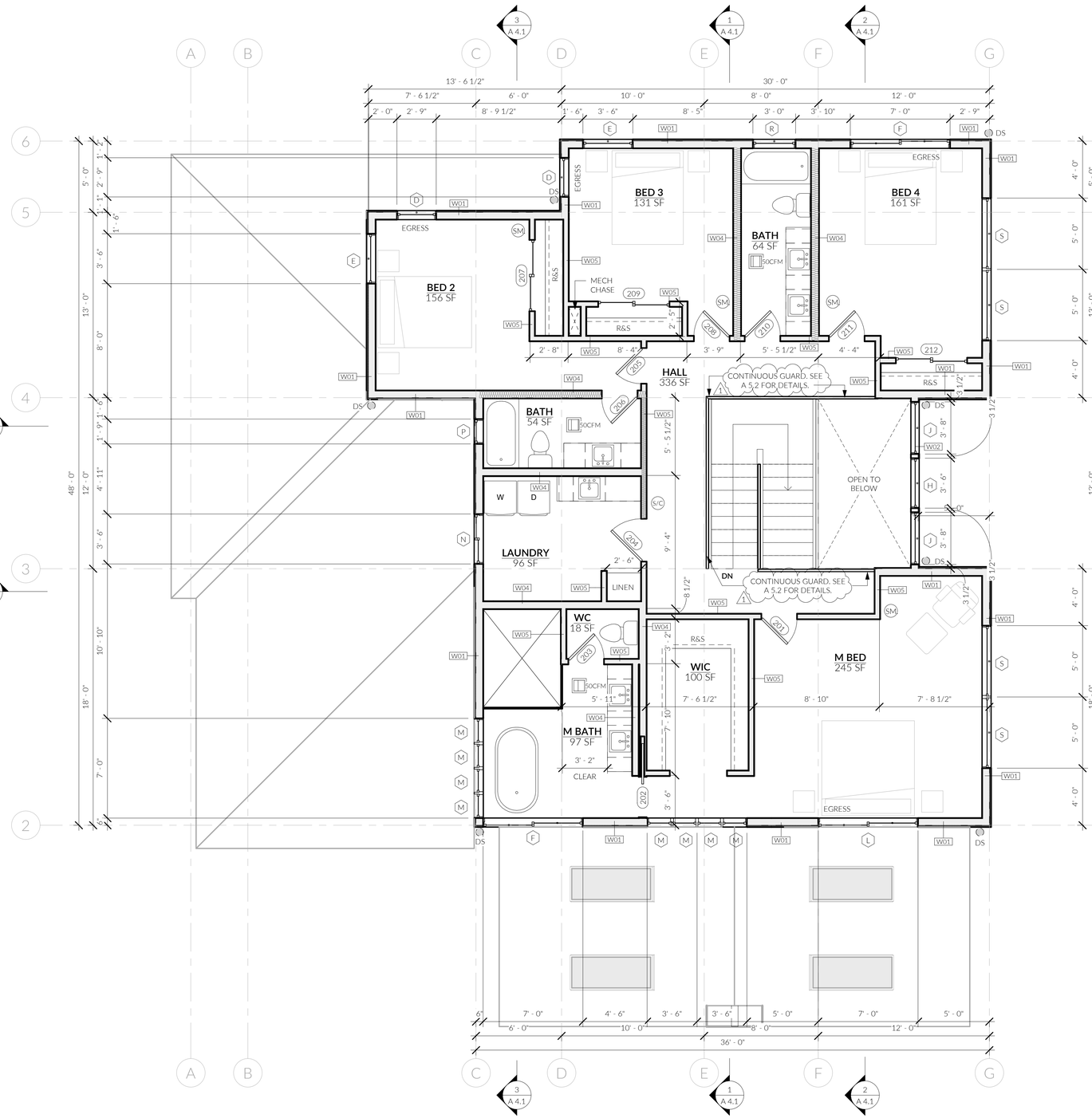


2 D - LEVEL 2 GFA
1/8" = 1'-0"



1 A - LEVEL 2
1/4" = 1'-0"

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MUNICIPAL APPROVAL STAMPS

SDCI PROJ. # XXXXXXX

CD || FL 2302

4 OCT 2023

REVISIONS

NO.	DESCRIPTION	DATE
1	Corrections #1	10/4/23

DRAWN BY: D. F. GONZALEZ

UPPER LEVEL PLAN

A 2.1

NORTH

ROOF PLAN NOTES

1. DO NOT SCALE DRAWINGS. CONTACT ARCHITECT IMMEDIATELY BEFORE PROCEEDING WITH ANY WORK IF AMBIGUITIES OR DISCREPANCIES EXIST IN DRAWINGS.
2. ALL DIMENSIONS REFER TO FACE OF ROUGH FRAMING MEMBER UON.
3. VALLEY FLASHING SHALL EXTEND 24" BEYOND EITHER SIDE OF VALLEY LINES UON.
4. SIDEWALL FLASHING SHALL EXTEND 24" ABOVE ALL ROOF-TO-WALL TERMINATIONS UON.
5. FLASH, COUNTER FLASH, CAULK AND SEAL ALL PLUMBING AND MECHANICAL PENETRATIONS THROUGH ROOF MEMBRANES. WATERPROOFING SHALL EXTEND FROM PENETRATION FLANGE 24" IN ALL DIRECTIONS BEYOND PENETRATION EDGE.
6. ALL TYPE L CHIMNEYS AND VENTS SHALL TERMINATE NOT LESS THAN 2' ABOVE ANY PORTION OF THE BUILDING WITHIN 10' MEASURED HORIZONTALLY FROM ALL SIDE OF CHIMNEY.
7. ALL CRICKET FRAMING FOR CHIMNEYS SHALL MATCH THE SLOPE OF THE HOST ROOF. WATERPROOF ENTIRE CRICKET SURFACE AND FLASH CHIMNEY INTERSECTION.
8. FIREPLACE FLUE SHALL TERMINATE ABOVE FRAMING AND FINISHED CHIMNEY CAP WITH UL TESTED AND LISTED TERMINATION CAP PER FIREPLACE INSTALLATION INSTRUCTIONS.
9. ALL MATERIALS SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURERS PRINTED INSTALLATION INSTRUCTIONS.

IRC R806 COMPLIANCE NOTES FOR ROOF VENTILATION

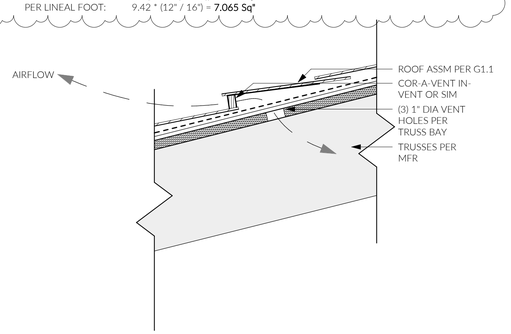
ITEM:	VALUE:	COMMENT:
MAIN ROOF AREA	1,737 S.F.	CAD GENERATED VALUE
REQUIRED VENTING AREA	1,667.52 Sq"	1,737 S.F./ 150 * 144 Sq"/S.F. (per R806.2)
PROPOSED SQ" OF RIDGE VENTING	1,670 Sq"	83.5' X 20 Sq" PER LINEAL FT PER MFR
PROPOSED SQ" OF EAVE VENTING	183.78 Sq"	103.83' X 1.77 Sq" PER LINEAL FT**
TOTAL PROPOSED SQ"	1,853.78 Sq"	

ITEM:	VALUE:	COMMENT:
GARAGE ROOF AREA	682 S.F.	CAD GENERATED VALUE
REQUIRED VENTING AREA	654.72 Sq"	682 S.F./ 150 * 144 Sq"/S.F. (per R806.2)
PROPOSED SQ" OF POP VENTING	209.25 Sq"	31' X 6.75 Sq" PER LINEAL FT PER MFR
PROPOSED SQ" OF EAVE VENTING	600.95 Sq"	85' X 7.07 Sq" PER LINEAL FT**
TOTAL PROPOSED SQ"	810.2 Sq"	

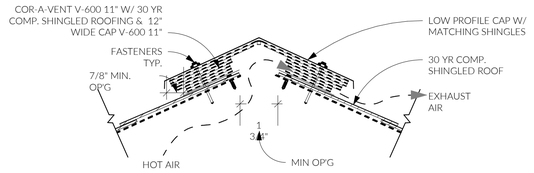
ITEM:	VALUE:	COMMENT:
ENTRY ROOF AREA	288 S.F.	CAD GENERATED VALUE
REQUIRED VENTING AREA	276.48 Sq"	288 S.F./ 150 * 144 Sq"/S.F. (per R806.2)
PROPOSED SQ" OF STRIP VENTING	390 Sq"	39' X 10 Sq" PER LINEAL FT PER MFR*
TOTAL PROPOSED SQ"	390 Sq"	

ITEM:	VALUE:	COMMENT:
PATIO ROOF AREA	466 S.F.	CAD GENERATED VALUE
REQUIRED VENTING AREA	447.36 Sq"	466 S.F./ 150 * 144 Sq"/S.F. (per R806.2)
PROPOSED SQ" OF STRIP VENTING	520 Sq"	52' X 10 Sq" PER LINEAL FT PER MFR*
TOTAL PROPOSED SQ"	520 Sq"	

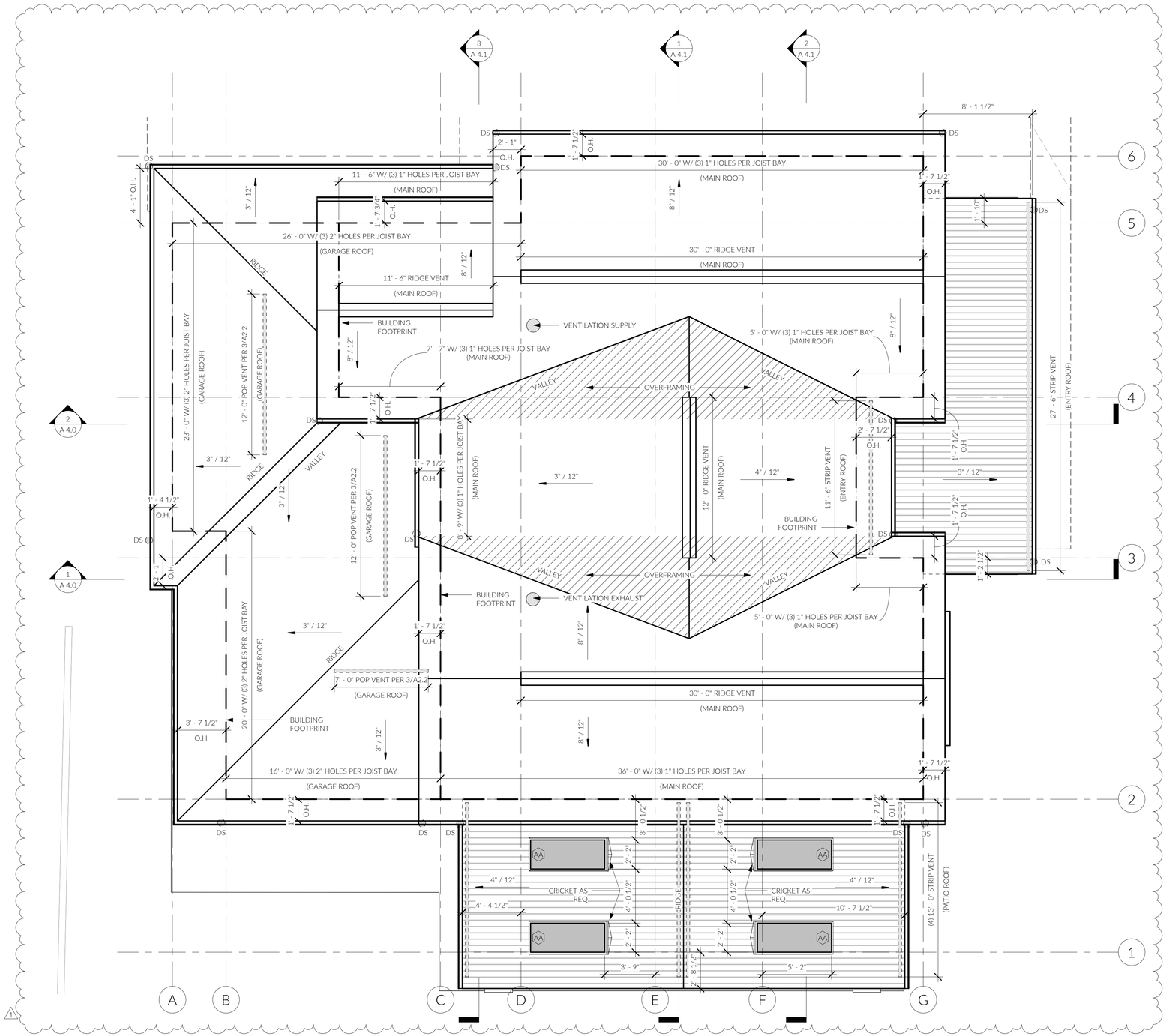
*STRIP VENTS TO BE COR-A-VENT S-400 OR SIM
**NFVA CALC FOR 1" DIA VENT HOLES:
PER 16": 3 x (3.14 * (1/2" ^ 2)) = 2.36 Sq"
PER LINEAL FOOT: 2.36 * (12" / 16") = **1.77 Sq"**
**NFVA CALC FOR 2" DIA VENT HOLES AT GARAGE ROOF:
PER 16": 3 x (3.14 * (1" ^ 2)) = 9.42 Sq"
PER LINEAL FOOT: 9.42 * (12" / 16") = **7.065 Sq"**



3 GARAGE ROOF POP VENT
3" = 1'-0"



2 RIDGE VENT, SHINGLES, TYP.
3" = 1'-0"



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

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MUNICIPAL APPROVAL STAMPS

SDCI PROJ. # XXXXXXX
CD || FL 2302
4 OCT 2023

REVISIONS

NO.	DESCRIPTION	DATE
1	Corrections #1	10/4/23

DRAWN BY: D. F. GONZALEZ

ROOF PLAN

A 2.2

NORTH

ELEVATION NOTES

1. ALL WINDOWS SHALL BE MOUNTED WITH A HEAD HEIGHT ACCORDING TO WINDOW SCHEDULE ABOVE SUBFLOOR UON.
2. ALL WINDOWS IN THE FOLLOWING LOCATIONS SHALL BE CONSTRUCTED WITH SAFETY GLAZING:
   WINDOWS IN SWINGING AND SLIDING DOORS.
   WINDOWS ADJACENT TO TUB OR SHOWER.
   WINDOWS OR SIDELIGHTS WITHIN A 24 INCH ARC OF A DOOR JAMB.
   WINDOWS AT STAIR LANDINGS, WITHIN THE WIDTH OF STAIRS AND WITHIN 36" BEYOND THE BOTTOM AND TOP FLIGHTS OF STAIRS, WHERE THE SILL IS LESS THAN 60" ABOVE THE WALKING SURFACE.
3. SEE SHEET G1.1 FOR WINDOW U-FACTOR AND ADDITIONAL ENERGY INFORMATION.
4. ALL SIDEWALL FLASHING SHALL EXTEND 24" ABOVE ROOF SURFACE AT ROOF-TO-WALL LOCATIONS.
5. ALL SHIM SPACES BETWEEN WINDOW / DOOR FRAMES AND ROUGH OPENINGS SHALL BE FULLY INSULATED WITH SPRAY APPLIED EXPANDING FOAM PRIOR TO APPLICATION OF EXTERIOR SIDING AND INTERIOR DRYWALL OR FINISH.
6. CONTRACTOR TO FIELD LOCATE TIE-INS TO STORMWATER DRAINAGE SYSTEM.
7. CONTRACTOR TO FIELD VERIFY ALL TOP OF FOUNDATION WALL ELEVATIONS ARE LOCATED 6" MINIMUM ABOVE PROPOSED FINISHED GRADE.
8. FINISHED GRADE SHALL BE GRADED SO AS TO PROVIDE A 1/2" PER FOOT SLOPE AWAY FROM ALL EXTERIOR WALLS FOR A MINIMUM OF 10' AROUND THE ENTIRE PERIMETER OF THE BUILDING.

② NORTH
1/4" = 1'-0"

① EAST
1/4" = 1'-0"

WINDOW NOTE:

WINDOWS BELOW 36" A.F.F. REQUIRED EMERGENCY EGRESS WINDOWS ARE TO BE PROVIDED WITH OPENING CONTROL DEVICES COMPLYING WITH SBC 1013.8.1 (EXCEPTION 4).

NOTE:

EACH DWELLING UNIT TO BE EQUIPPED WITH TRICKLE VENTS TO MEET THE SEATTLE MECHANICAL CODE REQUIREMENTS WITH A MIN. VENTING SPACE OF 4 SQ. INCHES OF NET FREE AREA IN EACH OCCUPIABLE SPACE. WINDOWS WITH OPENINGS LESS THAN 36" ABOVE FINISH FLOOR TO BE EQUIPPED WITH OPENING CONTROL DEVICES COMPLYING WITH SBC 1013.8.1 (EXCEPTION 4).

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ELEVATIONS

A 3.0

ELEVATION NOTES

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2. ALL WINDOWS IN THE FOLLOWING LOCATIONS SHALL BE CONSTRUCTED WITH SAFETY GLAZING:
   WINDOWS IN SWINGING AND SLIDING DOORS.
   WINDOWS ADJACENT TO TUB OR SHOWER.
   WINDOWS OR SIDELIGHTS WITHIN A 24 INCH ARC OF A DOOR JAMB.
   WINDOWS AT STAIR LANDINGS, WITHIN THE WIDTH OF STAIRS AND WITHIN 36" BEYOND THE BOTTOM AND TOP FLIGHTS OF STAIRS, WHERE THE SILL IS LESS THAN 60" ABOVE THE WALKING SURFACE.
3. SEE SHEET G1.1 FOR WINDOW U-FACTOR AND ADDITIONAL ENERGY INFORMATION.
4. ALL SIDEWALL FLASHING SHALL EXTEND 24" ABOVE ROOF SURFACE AT ROOF-TO-WALL LOCATIONS.
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6. CONTRACTOR TO FIELD LOCATE TIE-INS TO STORMWATER DRAINAGE SYSTEM.
7. CONTRACTOR TO FIELD VERIFY ALL TOP OF FOUNDATION WALL ELEVATIONS ARE LOCATED 6" MINIMUM ABOVE PROPOSED FINISHED GRADE.
8. FINISHED GRADE SHALL BE GRADED SO AS TO PROVIDE A 1/2" PER FOOT SLOPE AWAY FROM ALL EXTERIOR WALLS FOR A MINIMUM OF 10' AROUND THE ENTIRE PERIMETER OF THE BUILDING.

2 WEST
1/4" = 1'-0"

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

WINDOW NOTE:

WINDOWS BELOW 36" A.F.F. REQUIRED EMERGENCY EGRESS WINDOWS ARE TO BE PROVIDED WITH OPENING CONTROL DEVICES COMPLYING WITH SBC 1013.8.1 (EXCEPTION 4).

NOTE:

EACH DWELLING UNIT TO BE EQUIPPED WITH TRICKLE VENTS TO MEET THE SEATTLE MECHANICAL CODE REQUIREMENTS WITH A MIN. VENTING SPACE OF 4 SQ. INCHES OF NET FREE AREA IN EACH OCCUPIABLE SPACE. WINDOWS WITH OPENINGS LESS THAN 36" ABOVE FINISH FLOOR TO BE EQUIPPED WITH OPENING CONTROL DEVICES COMPLYING WITH SBC 1013.8.1 (EXCEPTION 4).

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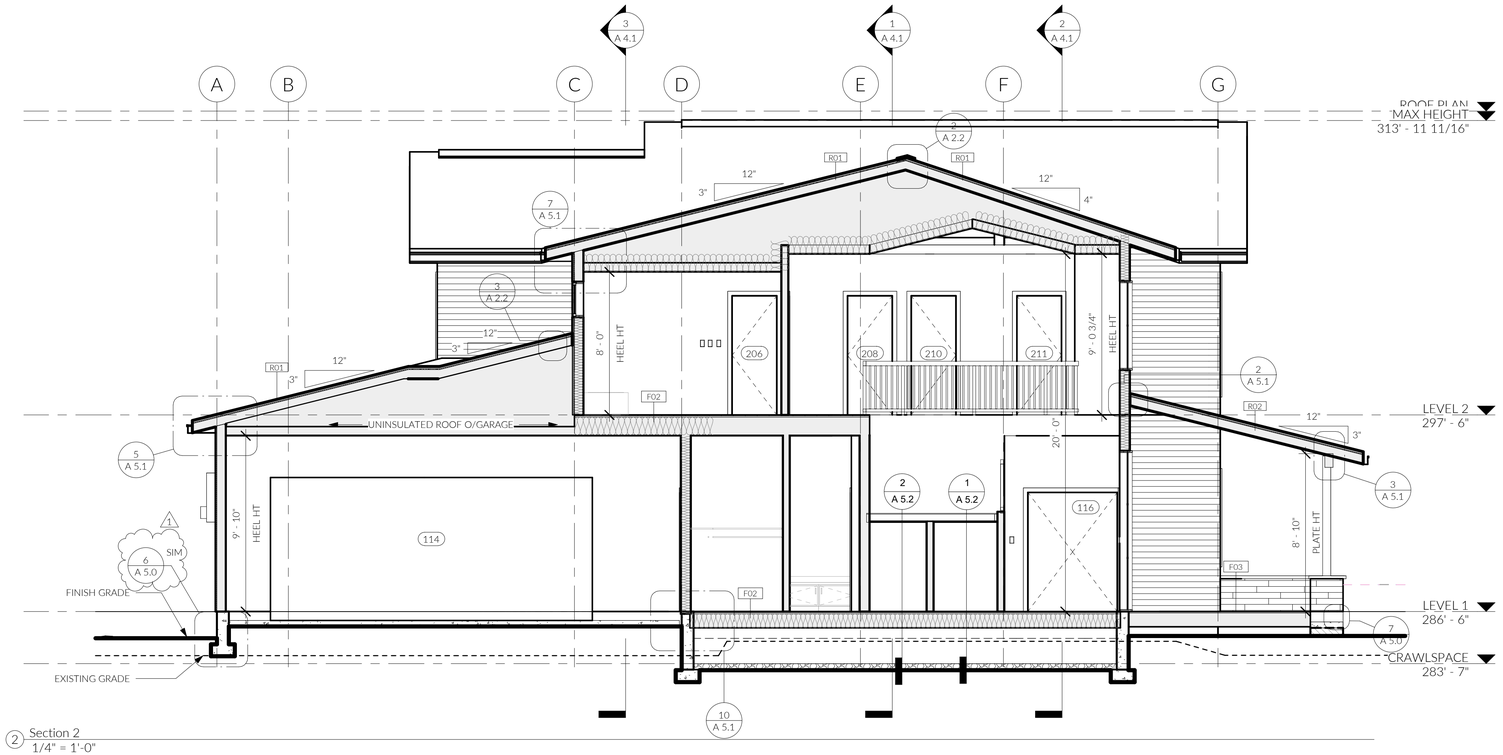
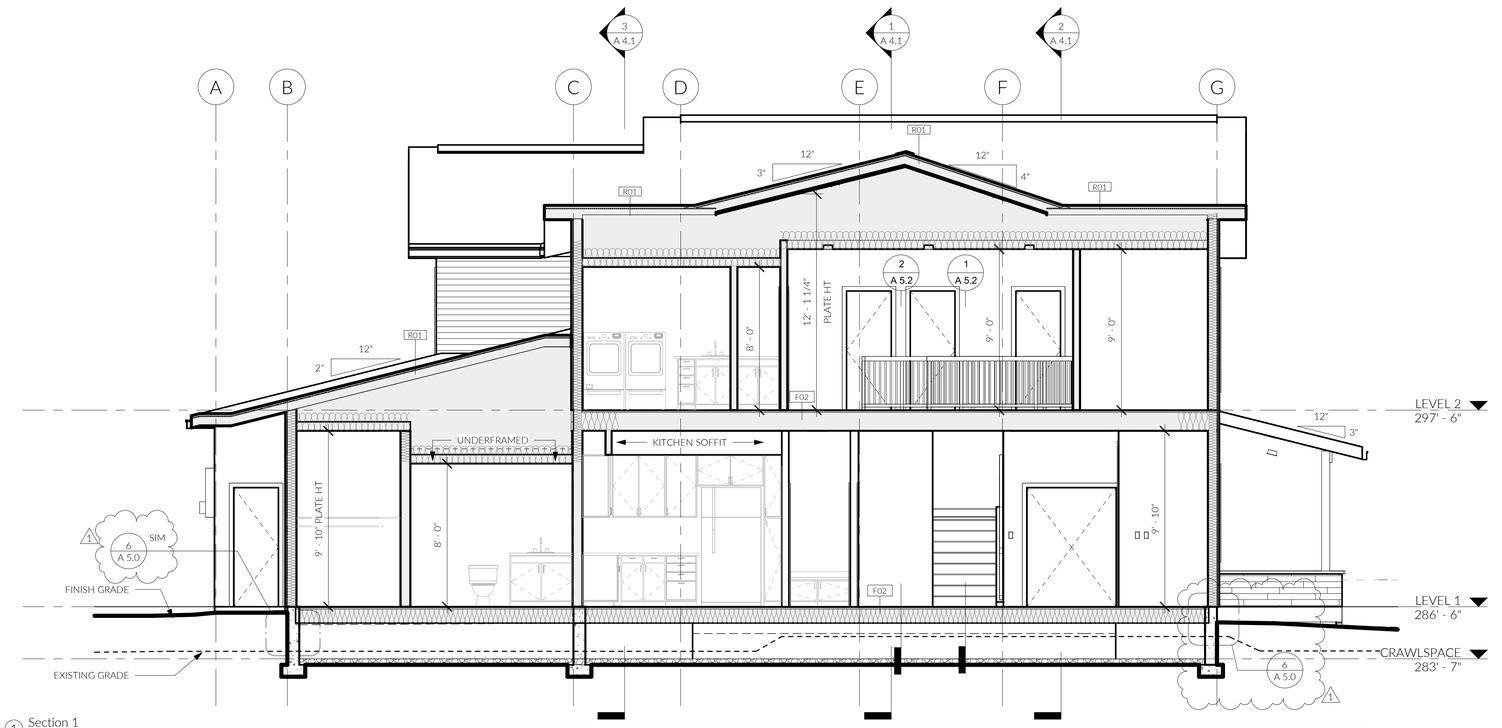
ELEVATIONS

A 3.1



2 Section 2
1/4" = 1'-0"



1 Section 1
1/4" = 1'-0"

NOTE: 1) SRC R312.1.2 - GUARDRAILS MUST BE A MINIMUM HEIGHT OF 36"
2) SRC R312.1.3 - ALL GUARDRAILS MUST HAVE A MAX. OPENING SUCH THAT A 4" SPHERE CANNOT PASS THROUGH.
3) SRC R301.5 - ALL GUARDRAILS MUST BE DESIGNED TO RESIST A 200 LB CONCENTRATED LOAD ON THE TOP RAIL AND 50 PSF ON ALL GUARDRAIL INFILL COMPONENTS

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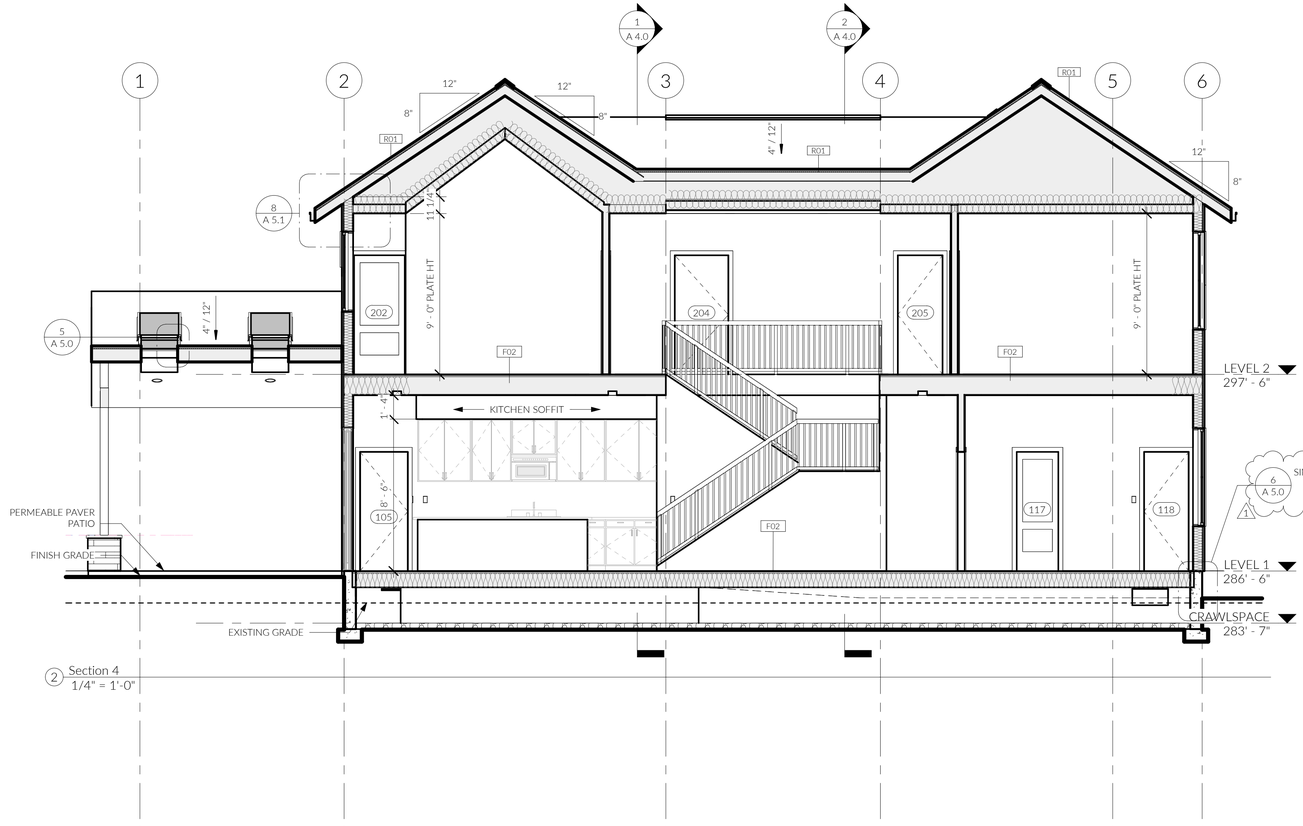
SECTIONS

A 4.0



2 Section 4
1/4" = 1'-0"

3 Section 5
1/4" = 1'-0"

1 Section 3
1/4" = 1'-0"

NOTE: 1) SRC R312.1.2 - GUARDRAILS MUST BE A MINIMUM HEIGHT OF 36"
2) SRC R312.1.3 - ALL GUARDRAILS MUST HAVE A MAX. OPENING SUCH THAT A 4" SPHERE CANNOT PASS THROUGH.
3) SRC R301.5 - ALL GUARDRAILS MUST BE DESIGNED TO RESIST A 200 LB CONCENTRATED LOAD ON THE TOP RAIL AND 50 PSF ON ALL GUARDRAIL INFILL COMPONENTS

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SECTIONS

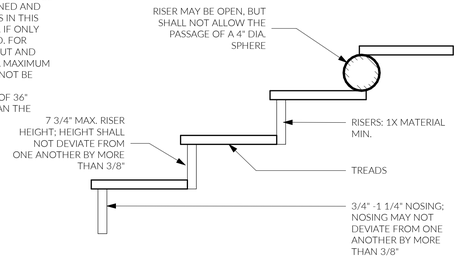
A 4.1

PRESCRIPTIVE RESIDENTIAL WOOD DECK CONSTRUCTION GUIDE

STAIR REQUIREMENTS

STAIRS, STAIR STRINGERS, AND STAIR GUARDS SHALL MEET THE REQUIREMENTS SHOWN IN FIGURE 02. ALL STRINGERS SHALL BE A MINIMUM OF 2X12. STAIR STRINGERS SHALL NOT SPAN MORE THAN THE DIMENSIONS SHOWN IN ***FIGURE XX***. IF THE STRINGER SPAN EXCEEDS THESE DIMENSIONS, THEN A 4X4 POST SHALL BE NOTCHED AND BOLTED TO THE STRINGER WITH (2) 1/2" DIA. THROUGH-BOLTS WITH WASHERS. THE POST SHALL BE CENTERED ON A 12" DIA OR 10" SQUARE, 6" THICK FOOTING. IF THE TOTAL VERTICAL HEIGHT OF THE STAIRWAY EXCEEDS 12'-0", THEN AN INTERMEDIATE LANDING SHALL BE REQ'D. ALL INTERMEDIATE STAIR LANDINGS MUST BE DESIGNED AND CONSTRUCTED AS A NON-LEDGER DECK USING THE DETAILS IN THIS DOCUMENT. STAIRS SHALL BE A MINIMUM OF 36" IN WIDTH. IF ONLY CUT STRINGERS ARE USED, A MINIMUM OF THREE ARE REQ'D. FOR STAIRS GREATER THAN 36" IN WIDTH, A COMBINATION OF CUT AND SOLID STRINGERS CAN BE USED, BUT SHALL BE PLACED AT A MAXIMUM SPACING OF 18" O.C. THE WIDTH OF EACH LANDING SHALL NOT BE LESS THAN THE WIDTH OF THE STAIRWAY SERVED. EVERY RECTANGULAR LANDING SHALL HAVE A MINIM DIMENSION OF 36" MEASURED IN THE DIRECTION OF TRAVEL AND NO LESS THAN THE WIDTH OF THE STAIRWAY SERVED.

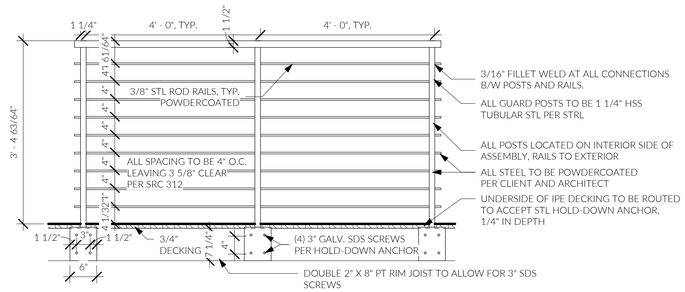
FIGURE 01 - TREAD AND RISER DETAIL



GUARDRAIL REQUIREMENTS

ALL DECKS GREATER THAN 30" ABOVE GRADE ARE REQUIRED TO HAVE A GUARDRAIL - ONE EXAMPLE IS SHOWN IN FIGURE 03. OTHER METHODS AND MATERIALS MAY BE USED FOR GUARDRAIL CONSTRUCTION WHEN APPROVED BY SDCI.

FIGURE 02 - GUARDRAIL DETAIL



NOTE: SHOWING INTERIOR OF RIM JOIST FOR CLARITY; POST CONNECTION (HOLD-DOWN ANCHOR) TO BE CONCEALED FROM EXTERIOR (BY FASCIA)

GUARDRAIL POST ATTACHMENTS FOR REQ'D GUARDRAILS

DECK GUARD POSTS FOR REQ'D GUARDS SHALL BE A MINIMUM 4X4 (NOMINAL) WITH AN ADJUSTED BENDING DESIGN VALUE NOT LESS THAN 1,100 PSI. OUTSIDE - JOISTS AND RIM JOISTS TO WHICH GUARD POSTS ARE ATTACHED SHALL BE A MINIMUM OF 2X8 (NOMINAL).

GUARD POSTS FOR REQ'D GUARDS WHICH RUN PARALLEL TO THE DECK JOISTS SHALL BE ATTACHED TO THE OUTSIDE PER FIGURE 04. GUARD POSTS FOR REQ'D GUARDS THAT RUN PERPENDICULAR TO THE DECK JOISTS SHALL BE ATTACHED TO THE RIM JOIST IN ACCORDANCE WITH FIGURE 01. ONLY HOLD-DOWN ANCHOR MODELS MEETING THESE MINIMUM REQUIREMENTS SHALL BE USED. HOLD-DOWN ANCHORS SHALL HAVE A MINIMUM ALLOWABLE TENSION OF 1,800 POUNDS FOR A 36" MAX. GUARD HEIGHT AND BE INSTALLED IN ACCORDANCE WITH THE ARCHITECTS AND ENGINEERS INSTRUCTIONS.

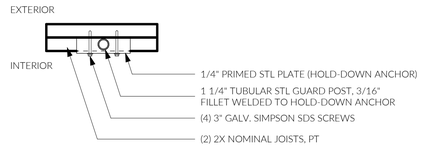
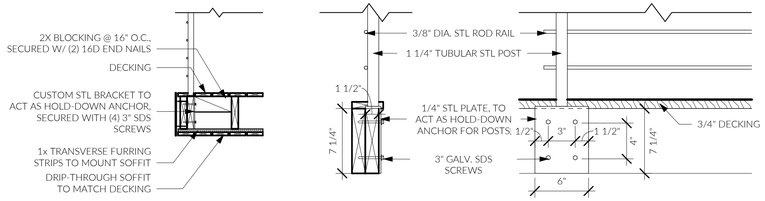
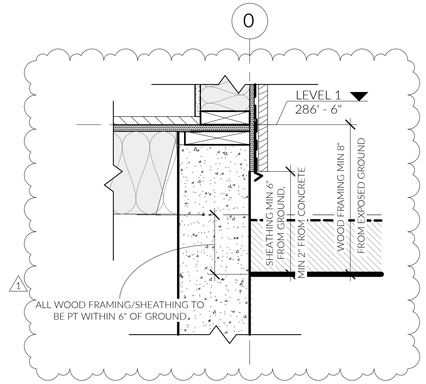


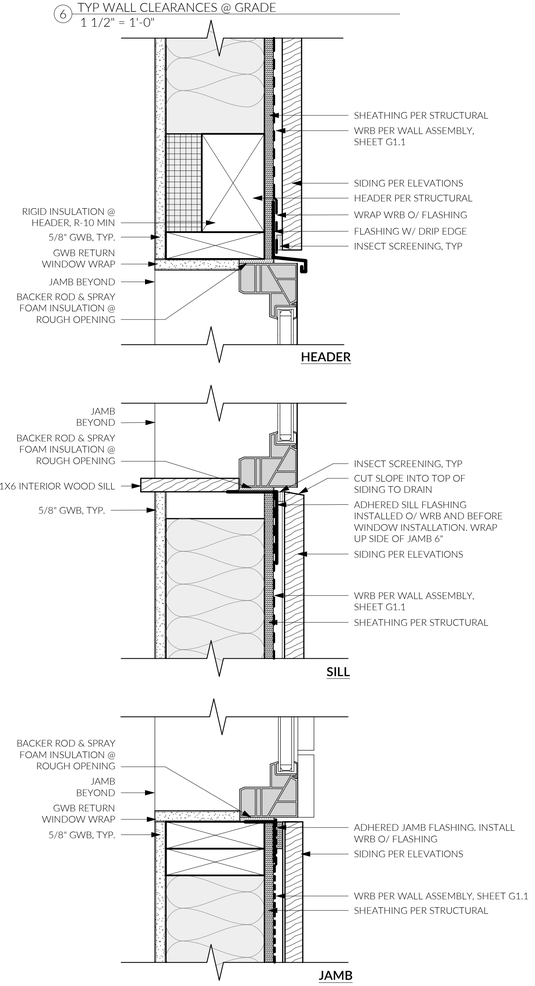
FIGURE 03 - GUARDRAIL POST TO RIM JOIST EXAMPLE



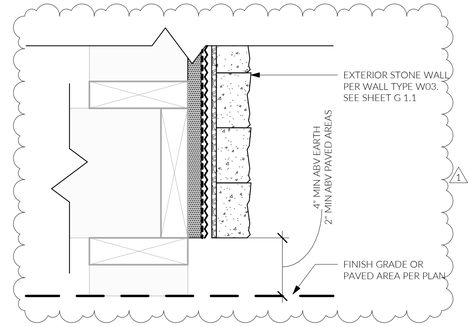
3 STAIR / GUARDRAIL STANDARDS
3/8" = 1'-0"



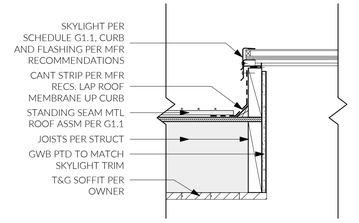
6 TYP WALL CLEARANCES @ GRADE
1 1/2" = 1'-0"



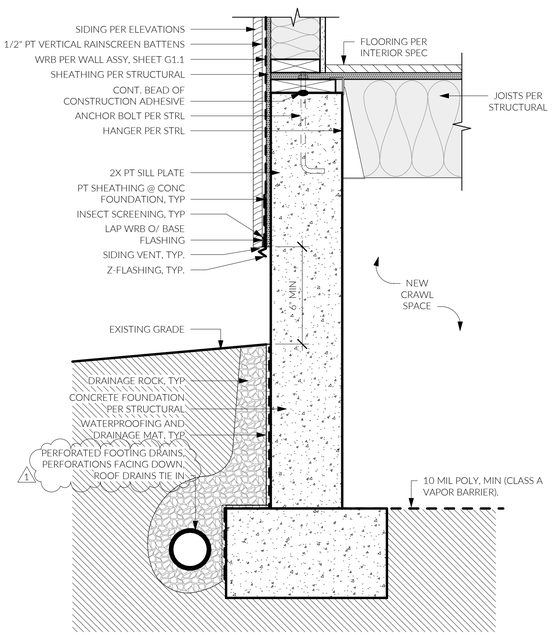
2 WNDW FLASHING @ RAINSCREEN, TYP.
3" = 1'-0"



7 TYP MASONRY CLEARANCES
3" = 1'-0"



5 SKYLIGHT CURB DETAIL
1 1/2" = 1'-0"



1 INS. FOOTING DTL, TO SILL TYP.
1 1/2" = 1'-0"

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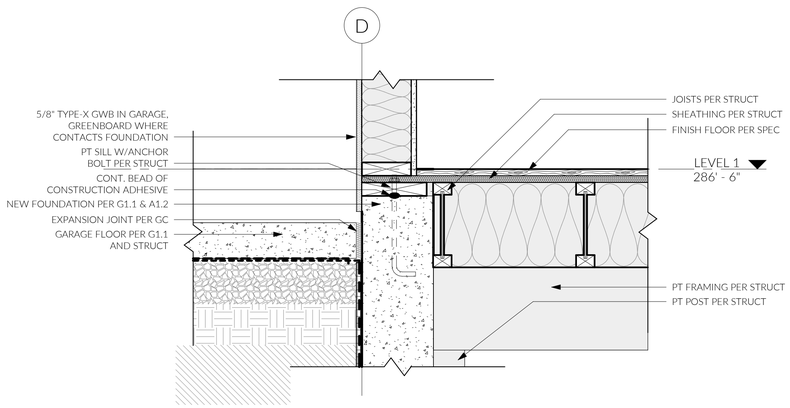
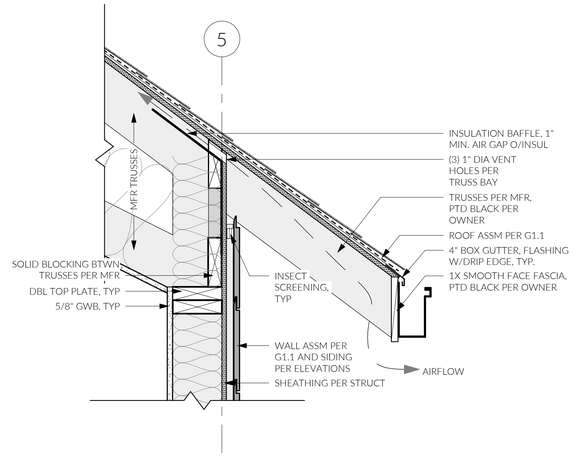
TYPICAL DETAILS

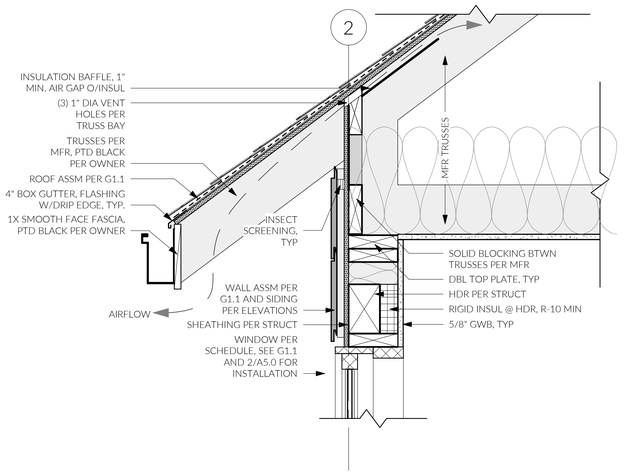
A 5.0



10 SLAB TO CRAWLSPACE TRANSITION
1 1/2" = 1'-0"



9 SCISSOR TRUSS HEEL DETAIL
1 1/2" = 1'-0"



8 PARALLEL CHORD TRUSS HEEL DETAIL
1 1/2" = 1'-0"

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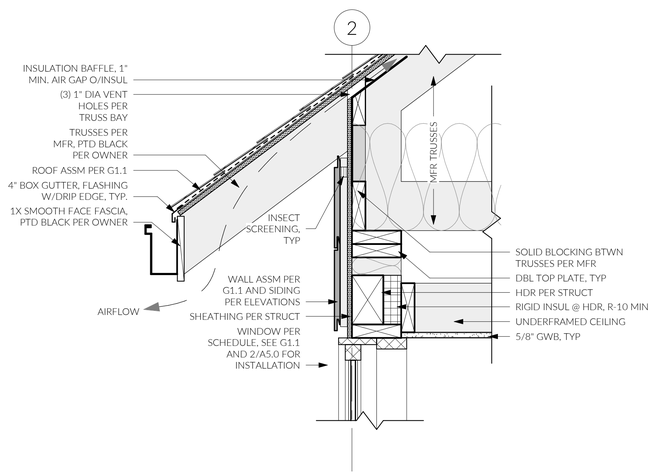
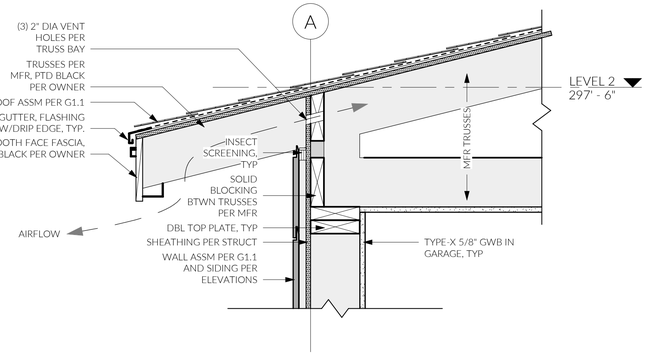
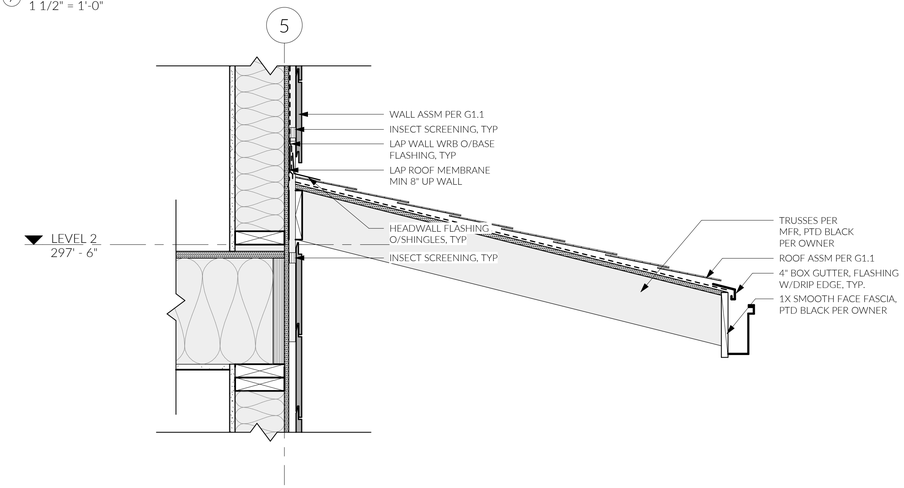
7 LAUNDRY ROOF @ WINDOW HDR
1 1/2" = 1'-0"



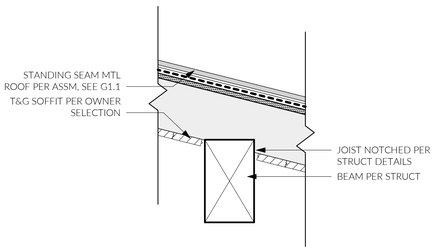
6 HDR @ M BATH DETAIL
1 1/2" = 1'-0"



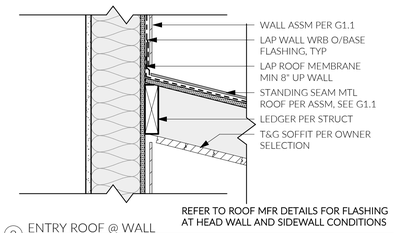
5 GARAGE ROOF HEEL DETAIL
1 1/2" = 1'-0"



4 GARAGE OVERHANG DETAIL
1 1/2" = 1'-0"



3 ENTRY ROOF BEAM DETAIL
1 1/2" = 1'-0"



2 ENTRY ROOF @ WALL
1 1/2" = 1'-0"

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MUNICIPAL APPROVAL STAMPS

SDCI PROJ. # XXXXXXX

CD || FL 2302

4 OCT 2023

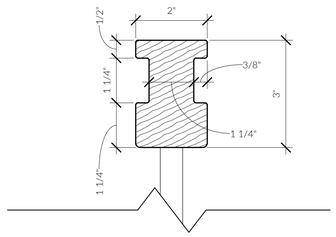
REVISIONS

NO.	DESCRIPTION	DATE

DRAWN BY: D. F. GONZALEZ

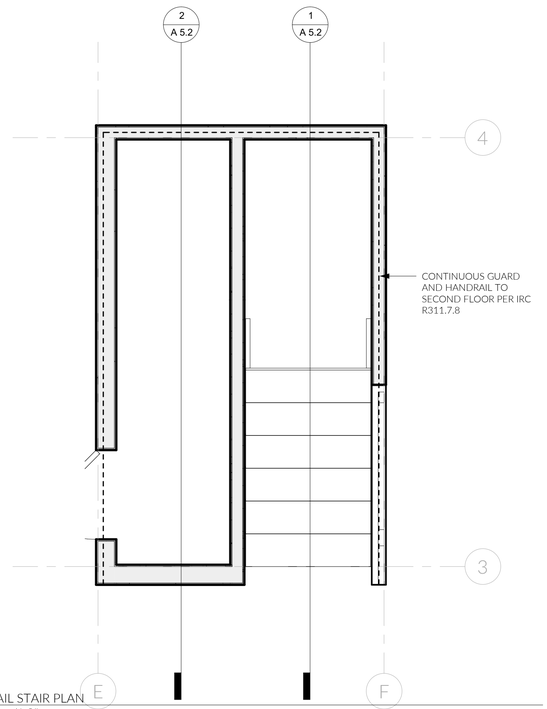
FRAMING DETAILS

A 5.1

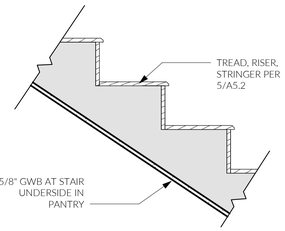


9 HANDRAIL PROFILE
6" = 1'-0"

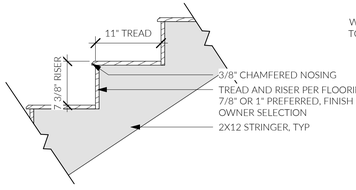
HANDRAIL PROFILE TO CONFORM TO IRC R311.7.8.5 - TYPE II HANDRAIL



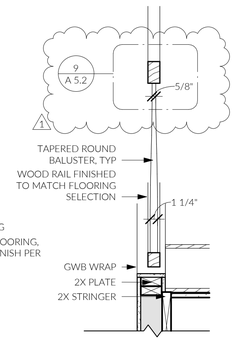
8 DETAIL STAIR PLAN
1/2" = 1'-0"



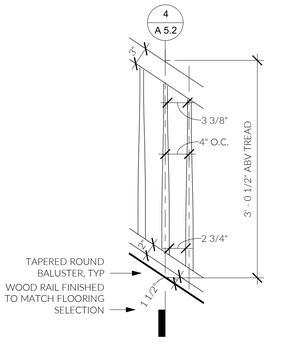
6 TREAD DETAIL @ PANRTY
1" = 1'-0"



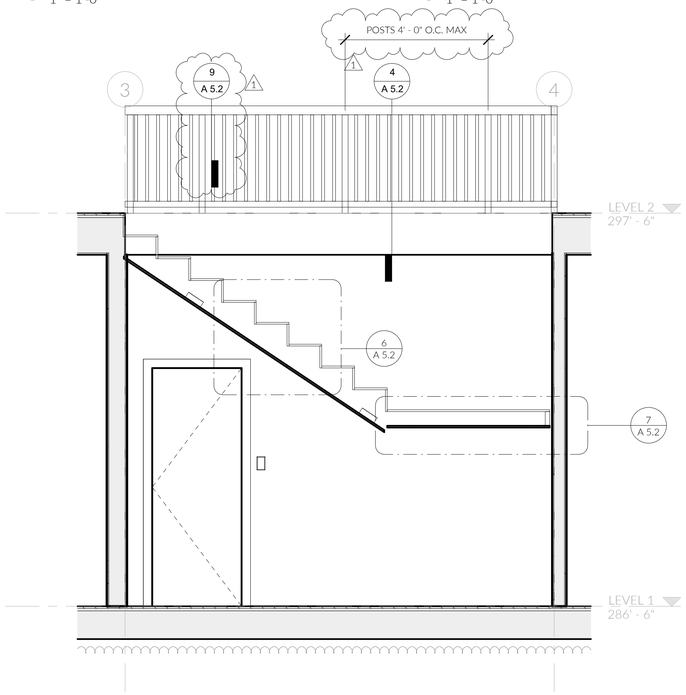
5 TYP TREAD DETAIL
1" = 1'-0"



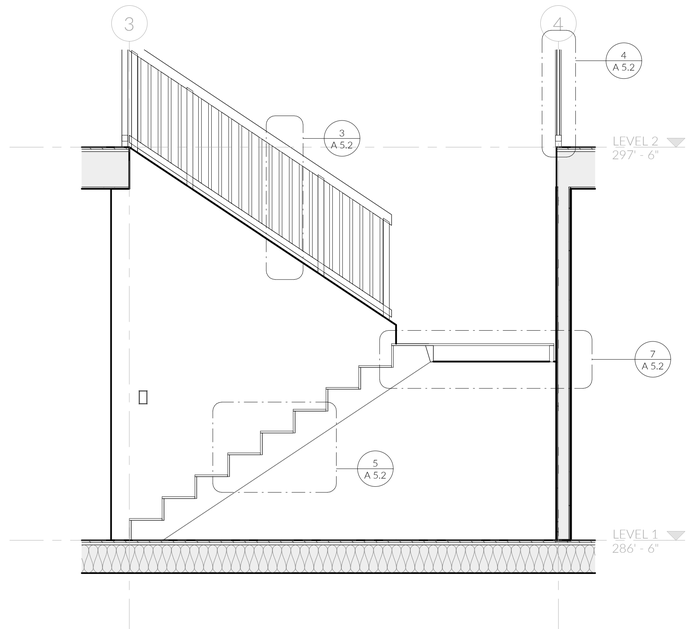
4 BALUSTER DETAIL
1" = 1'-0"



3 HANDRAIL DETAIL
1" = 1'-0"



2 STAIR SECTION 2
1/2" = 1'-0"



1 STAIR SECTION 1
1/2" = 1'-0"

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STAIR DETAILS

A 5.2

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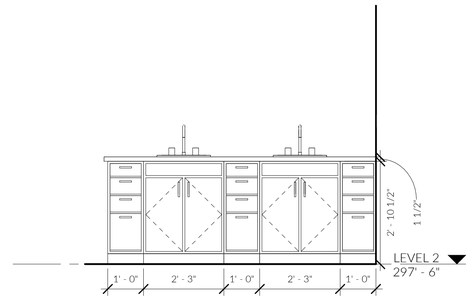
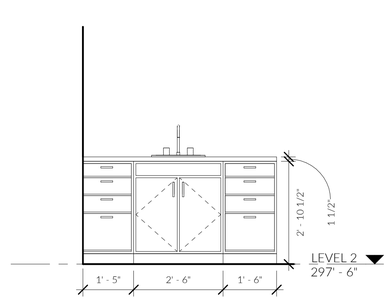
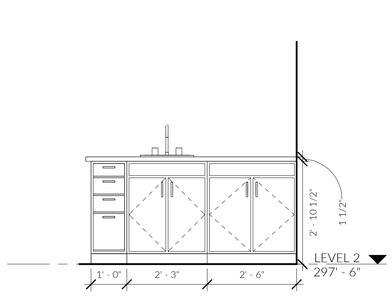


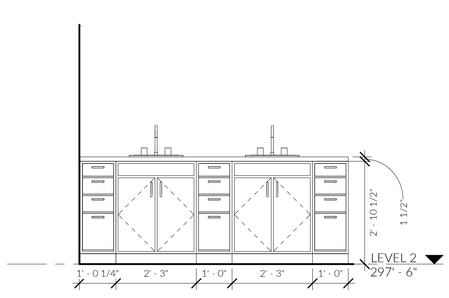
8 BATH @ LV2 ELEVATION E
1/2" = 1'-0"



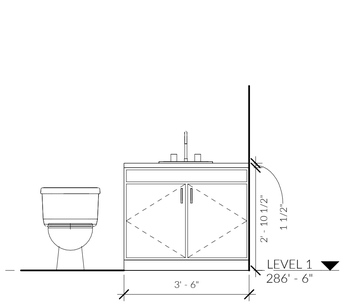
7 BATH @ BED 2 ELEVATION S
1/2" = 1'-0"



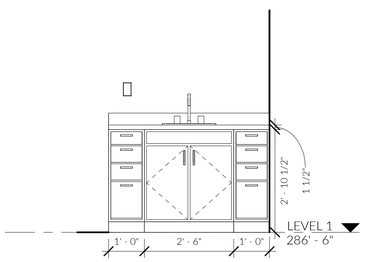
6 LAUNDRY ELEVATION N
1/2" = 1'-0"



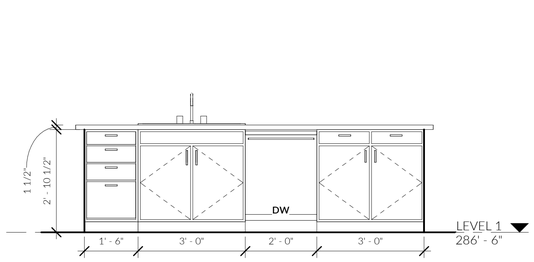
5 M BATH ELEVATION E
1/2" = 1'-0"



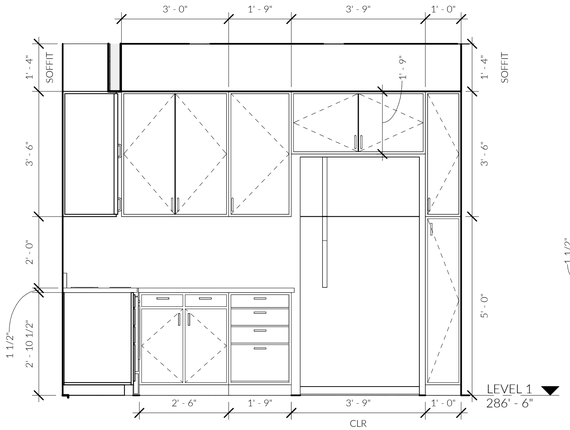
4 FAMILY ROOM BATH ELEVATION N
1/2" = 1'-0"



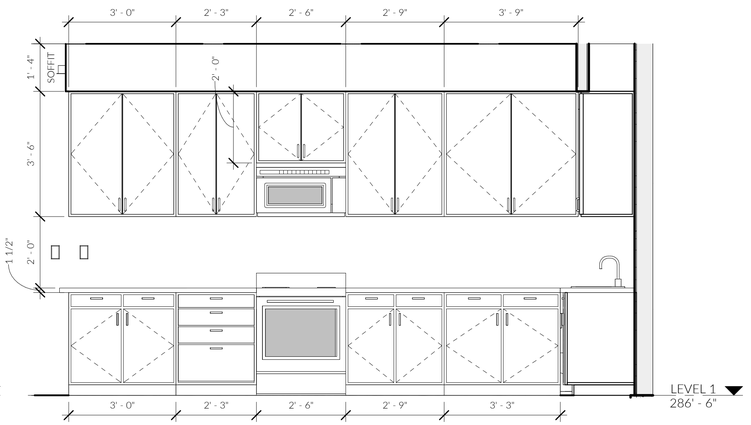
3 BATH @ MUD ELEVATION N
1/2" = 1'-0"



2 ISLAND ELEVATION E
1/2" = 1'-0"



9 KITCHEN ELEVATION N
1/2" = 1'-0"



1 KITCHEN ELEVATION W
1/2" = 1'-0"

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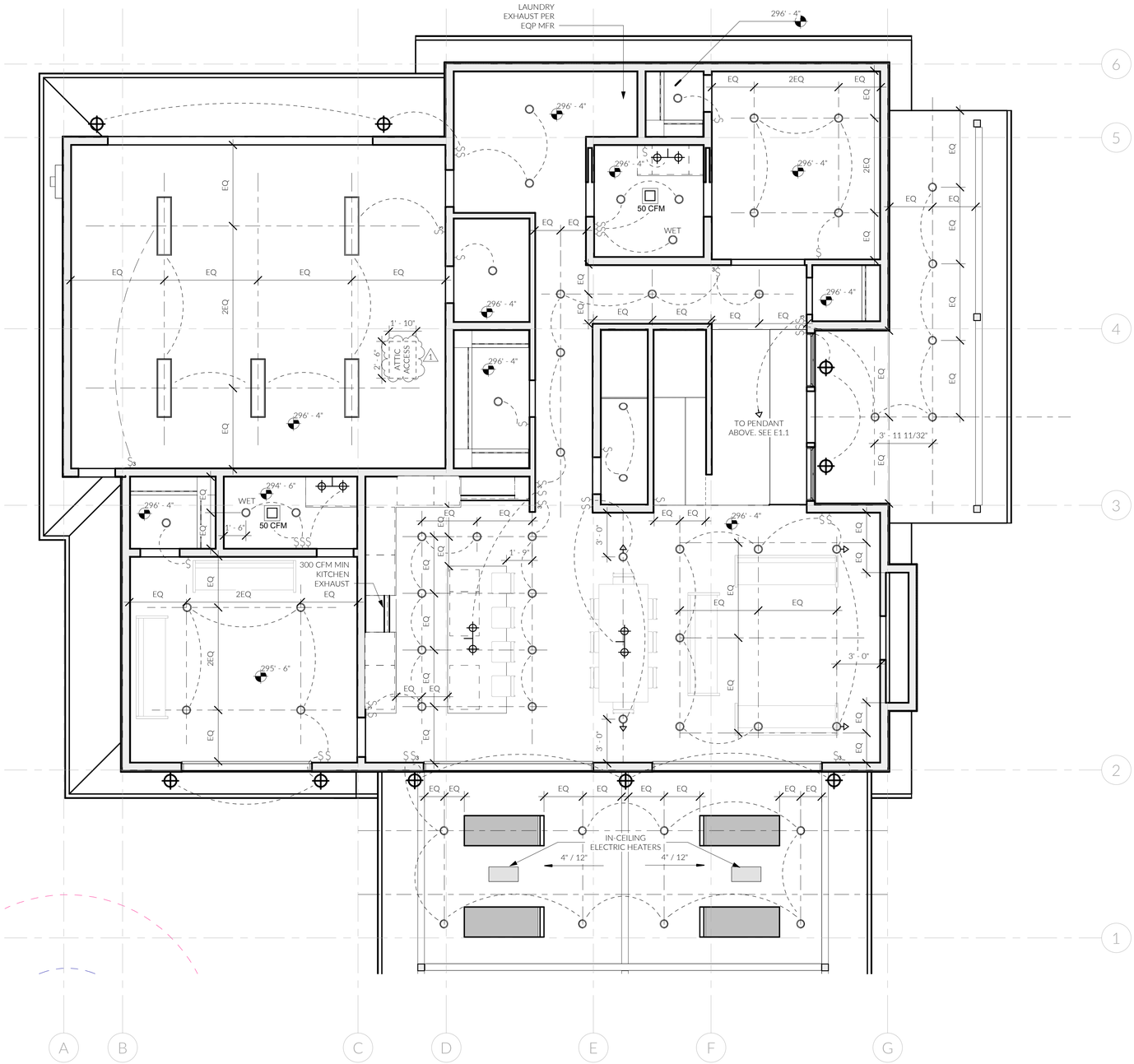
INTERIOR ELEVATIONS

A 6.0

LIGHTING LEGEND

- SURFACE MOUNTED 2 TUBE T-8 FLUORESCENT
- SURFACE MOUNTED 2' X 4' 4 TUBE FLUORESCENT
- 6" X 2' WALL MOUNT FLUORESCENT 2 TUBE T-5
- VENT FAN (50 CFM)
- SMOKE DETECTOR + CARBON MONOXIDE DETECTOR (S/C)
- PENDANT
- IN-CEILING SPEAKER, FLUSH
- VANITY SCONCE
- COVE LIGHTING
- TRACK LIGHTING
- SURFACE MOUNTED FLUORESCENT
- RECESSED CAN - DIRECTIONAL
- WALL MOUNTED SCONCE
- 6" SURFACE MOUNTED CAN
- MOTION SENSOR SECURITY LIGHT



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

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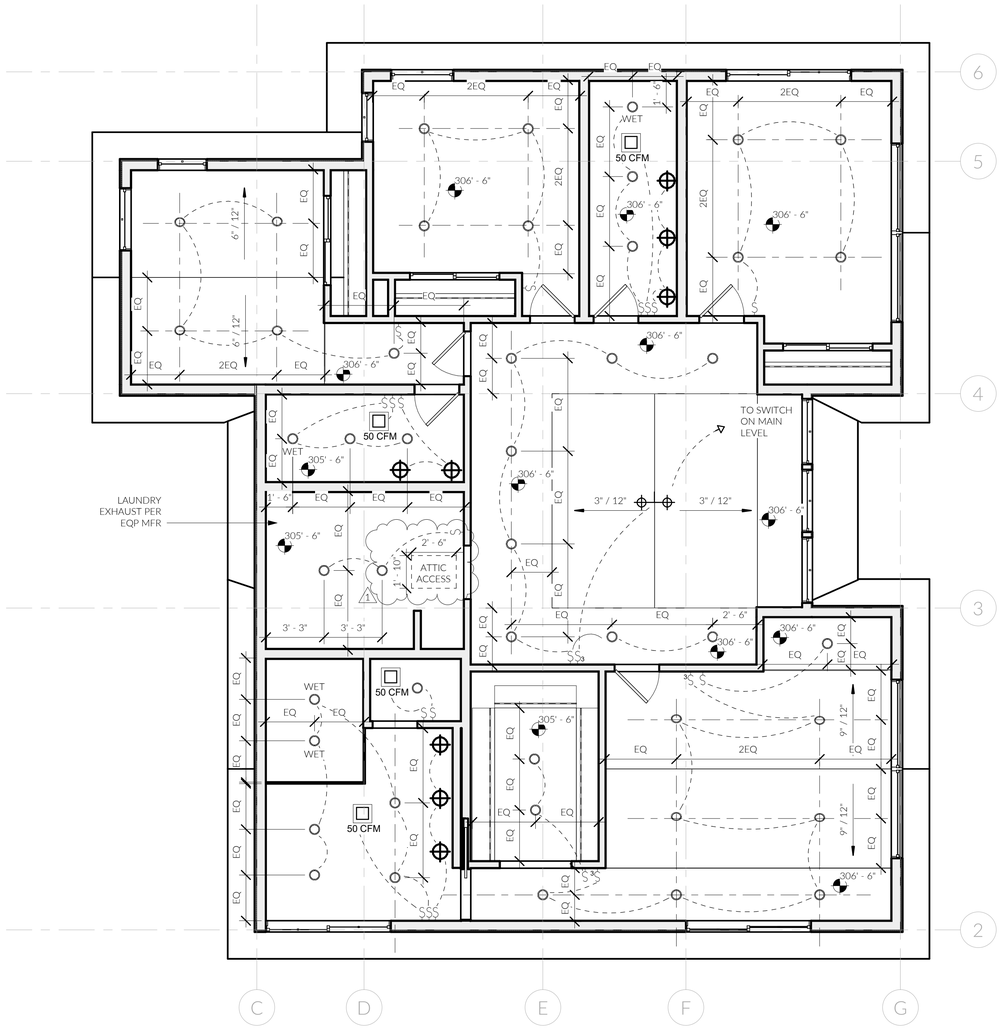
MAIN LEVEL RCP

E 1.0

LIGHTING LEGEND

- SURFACE MOUNTED 2 TUBE T-8 FLUORESCENT
- SURFACE MOUNTED 2' X 4' 4 TUBE FLUORESCENT
- 6" X 2' WALL MOUNT FLUORESCENT 2 TUBE T-5
- VENT FAN (50 CFM)
- SMOKE DETECTOR + CARBON MONOXIDE DETECTOR (S/C)
- PENDANT
- IN-CEILING SPEAKER, FLUSH
- VANITY SCONCE
- COVE LIGHTING
- TRACK LIGHTING
- SURFACE MOUNTED FLUORESCENT
- RECESSED CAN - DIRECTIONAL
- WALL MOUNTED SCONCE
- 6" SURFACE MOUNTED CAN
- MOTION SENSOR SECURITY LIGHT



1 LEVEL 2 RCP
1/4" = 1'-0"

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UPPER LEVEL RCP

NORTH

E 1.1

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CONTINUOUSLY OPERATING LOCAL EXHAUST AND WHOLE HOUSE VENTILATION USING HEAT RECOVERY VENTILATOR (HRV) - IRC M1505.4

VENTILATION NOTES

1. LOCAL EXHAUST VENTILATION AIR FLOW RATE IS BASED ON CONTINUOUS OPERATION PER IRC TABLE M1505.4.3(2)
2. WHOLE HOUSE VENTILATION IS PROVIDED VIA HEAT RECOVERY VENTILATOR (HRV) THAT OPERATES CONTINUOUSLY, PER SRC TABLE M1505.4.3(2)
3. FRESH OUTDOOR AIR INTAKE LOCATION SHALL BE PER SRC SECTION R303.5.1. SEE ROOF PLAN A2.2.
4. EXHAUST OUTLET LOCATION SHALL BE PER SRC SECTION R303.5.2 AND M1504.3. SEE ROOF PLAN A2.2.
5. THE HRV SHALL OPERATE CONTINUOUSLY AT A SPEED TO PROVIDE A VENTILATION RATE OF 105 CFM PER IRC TABLE M1505.4.3(1).
6. KITCHEN RANGE EXHAUST AND DRYER EXHAUST ARE DUCTED AND VENTED **SEPARATELY** FROM HRV.
7. ALL SUPPLY DUCTS TO HAVE R4 INSULATION MINIMUM AFTER EXITING THE HRV.
8. INSTALLATION OF HRV AND CONTROLS TO COMPLY WITH IRC M1505.4.2.3.

DUCTING

SUPPLY, FROM OUTDOOR TO HRV	6" ROUND
SUPPLY, FROM HRV TO BLDG.	6" ROUND
EXHAUST, FROM BLDG. TO HRV	6" ROUND
EXHAUST, HRV TO OUTDOOR	6" ROUND
DRAIN CONN, HRV TO DRAIN	PER MFR SPECS, 1/2"
FILTERS, F1 & F2	(2) MERV 7/8 (CLASS G4)

EQUIPMENT SCHEDULE

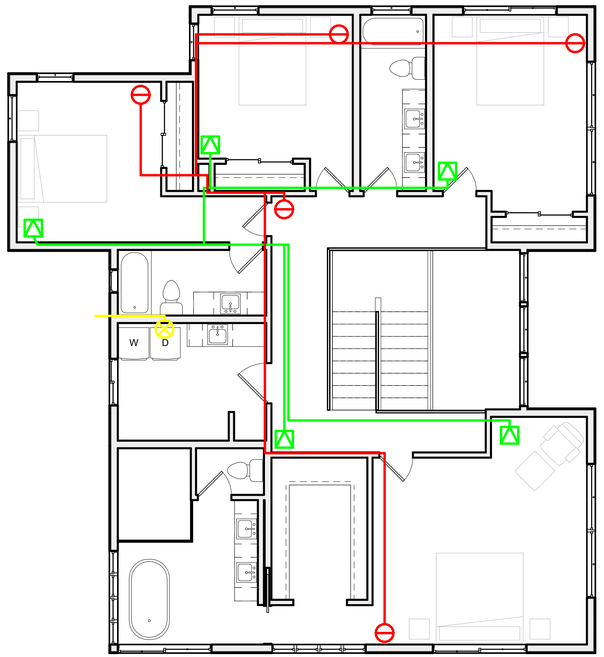
MAKE:	ZEHNDER
MODEL:	COMFOAIR 350 (CA350)
MIN FLOW:	29 CFM @ 0.8" WC
MAX. FLOW:	218 CFM @ 0.8" WC
MAX. TEMP. RECOVERY:	84%
OPER. MODES:	INTERMITTENT / CONTINUOUS

SUPPLY / EXHAUST

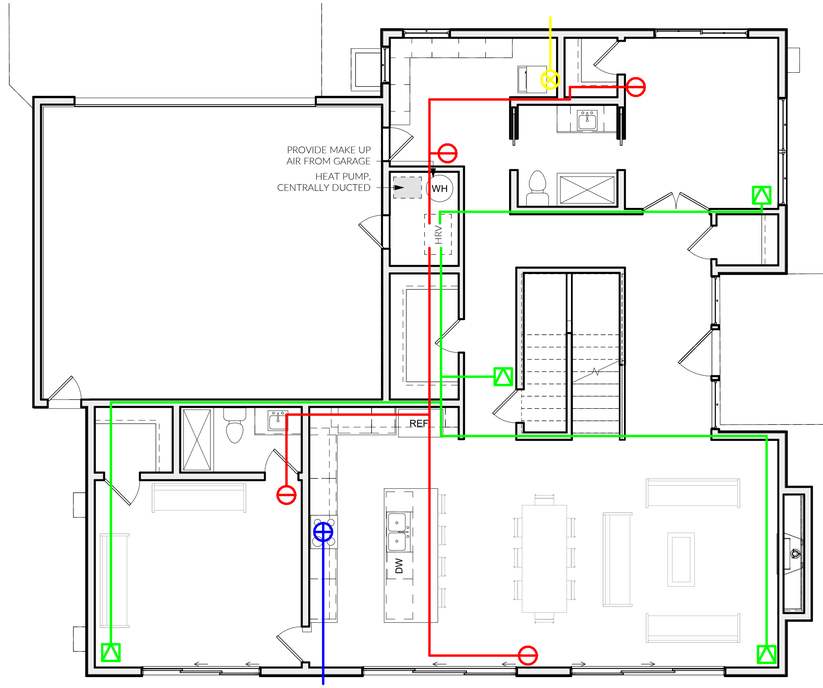
300 CFM MIN.	INTERMITTENT - KITCHEN	EXHAUST
20 CFM	CONTINUOUS	EXHAUST
PER MFR.	INTERMITTENT - DRYER	EXHAUST
20 CFM	CONTINUOUS	SUPPLY

EXHAUST DUCTING RUNS — RANGE HOOD DUCTING RUNS

INTAKE / SUPPLY DUCTING RUNS — DRYER DUCTING RUNS



2 M - HRV LEVEL 2
3/16" = 1'-0"



1 M - HRV LEVEL 1
3/16" = 1'-0"

PROJECT NORTH
NORTH

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HRV DIAGRAMS

M 1.0

General Requirements

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

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

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

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

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

Design Criteria

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

LIVE LOADS:

Roof;
Snow load, Pf = 25 psf

Residential:

Uninhabitable attics without storage	10 psf
Uninhabitable attics with storage	20 psf
Habitable attics and sleeping areas	30 psf
Residential floor	40 psf
Residential decks	60 psf

LATERAL LOADS-WIND: per ASCE 7-16 Simplified Wind Load Design
Iw = 1.0; Kzt = 1.30; Crsm < 0.66 (MWFRS); V = 16.7 kips

1

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)	Zones 1, 2e, 2r;	22.9 psf
100 sq. ft.	Zones 2n, 3r;	26.6 psf
	Zone 3e;	32.3 psf
(Overhangs)	Zones 1, 2e, 2r;	23.2 psf
20 sq. ft.	Zones 2n, 3r;	27.7 psf
	Zone 3e;	31.1 psf
(Walls)	Zone 4;	16.7 psf
20 sq. ft.	Zone 5;	20.1 psf

LATERAL LOADS-EARTHQUAKE:
Numbering below is per IBC Section 1603.1.5:
1. Importance Factor = 1.0
2. Mapped Spectral Response Accelerations, Ss = 1.405 g; S1 = 0.489 g
3. Site Class = D ; Fa = 1.200, Fv = 1.811
4. Spectral Response Coefficients, Sds = 1.124 g, Sd1 = 0.590 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 = 14.0 kips
8. Seismic Response Coefficient Cs = 0.173
9. Response Modification Factor R = 6.5
10. Analysis Procedure = Equivalent Lateral Force Procedure

Additional Items:
Building Location 47.578 N, 122.224 W
Building Height = 25 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.

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.
*

GENERAL STRUCTURAL NOTES
(TYPICAL UNLESS NOTED OTHERWISE ON DRAWINGS)

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

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

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

Geotechnical

General Criteria
Allowable soil pressure and lateral earth pressure are assumed and therefore must be verified by a Geotechnical Inspector or the building official. If soils are found to be other than assumed, notify the structural engineer for possible foundation redesign.

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

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

Bearing Values
Allowable soil pressure = 2,000 psf

All footings shall bear on undisturbed soil and shall be lowered to firm bearing if suitable soil is not found at elevations shown. Exterior footings shall bear a minimum of 12" 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 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. Provide for subsurface drainage. Design pressures used for the design of retaining walls are based on drained conditions.

Active earth pressure (restrained/unrestrained) = 55/35 pcf
Passive equivalent pressure (factor of safety of 1.5 included) = 300 pcf
Coefficient of friction (factor of safety of 1.5 included) = 0.35

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

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

Concrete

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

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

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

Location	Strength f'c (psi)	Max. Aggr. size (inch)	Max. W/C ratio or min cement *
Lean mix soil replacement under ftdns	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 carries continuous approval from City of Seattle.
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 in a moist condition or exposed to deicing chemicals shall contain an air entraining agent, conforming to ASTM C260. The amount of entrained air shall be 5% +/- 1% by volume. Air % is based on 3/4" coarse aggregate; adjust 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 specifications and/or architectural documents for formwork requirements. Installation shall adhere to ACI 301. Conduits and pipes of aluminum shall not be embedded in concrete construction.

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

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.

Styrofoam or Rigid Foam specified on the drawings for filling voids shall be as manufactured by the Dow Chemical Company (NER-699) or approved equal and shall be installed in strict accordance with the manufacturer's recommendations.

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

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

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

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

Concrete wall reinforcing - typical UNO:

Wall thickness	horizontal bars	vertical bars	location
6" or less	#4 @ 16"oc	#4 @ 16"oc	@ cl of wall
8" or less	#4 @ 12"oc	#4 @ 12"oc	@ cl of wall
10" or less	#4 @ 16"oc	#4 @ 16"oc	(2) layers, (1) at each face
12" or less	#4 @ 12"oc	#4 @ 12"oc	each face

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

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

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

Reinforcement in Concrete

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

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

Procedures
Reinforcing steel shall be detailed (including hooks and bends) in accordance with ACI 315 "Details and Detailing of Concrete Reinforcement". Lap all 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.

SHEET INDEX

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Revision	Issue Date	Drawing Set
	6/9/2023	Permit Set
1	9/21/2023	Review Corrections

General Structural Notes

S1.0

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 plates	HF kd15 standard
2x6 plates	HF kd15 #2
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. Excessive changes in moisture content during construction may result in swelling and shrinkage of a single story level in the magnitude of 1/2".

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

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

Glu Laminated Material
Glu 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. Certificates of conformance must be made available to building inspectors. City inspection is required prior to covering glued laminated members. 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 a 3,500' radius or zero camber, unless shown otherwise.

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-2019. Equivalent devices by other manufacturers may be substituted, provided they have ICBO approval for equal or greater load capacities. Provide number and size of fasteners as specified by manufacturer. Connectors shall be installed in accordance with the manufacturer's recommendations. Where connector straps connect two members, place one-half of the nails or bolts in each member. All bolts in wood members shall conform to ASTM A307.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.

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

Provide washers under the heads and nuts of all bolts and lag screws bearing on wood. Unless otherwise noted, all nails shall be as called out below. Unless otherwise noted on the drawings use the following hangers:

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

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 9'-0"to 11'-6" in length: provide 1-3/4 x11-7/8 LVL 1.9E stringers at center and sides of stair. Notch to 6" minimum depth and provide HU1.81/5 hangers to supporting beams. At center stringer, sister 2x6 ea. side of stringer and at side stringers, sister 2x6 one side of stringer. End sistered 2x6's short of hangers.

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

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

Exterior stair applications shall consist of treated lumber.

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

All structural stud walls (bearing or shear walls) shown and not otherwise noted shall be 2x4 studs @ 16"oc at interior walls and 2x6 @ 16"oc at exterior walls. See Architectural drawings for differing wall widths and for framing at nonstructural walls. Two studs minimum shall be provided at the end of all walls and at each side of all openings, and below beam bearing points. Solid blocking for 4x/6x wood posts and multi-stud posts shall be provided through intermediate levels to supports below. Provide continuous solid blocking at mid-height of all stud walls over 10'-0" in height and at mid-height of walls with sheathing on one side only (i.e. Each side of party walls).

All stud walls shall have their lower wood plates attached to wood framing below with 0.131 x 3-1/4" nails @ 8"oc or bolted to concrete with 5/8" diameter anchor rods @ 6'-0"oc for structures not exceeding 2 stories and @ 4'-0" for all other structures unless otherwise noted. Embed anchor rods 7" unless otherwise noted. Individual members of built-up posts shall be nailed to each other with 0.131 x 3" nails @ 8"oc staggered.

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

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

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

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

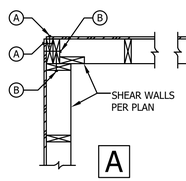
Unless otherwise noted on the plans, APA sub-flooring and roof sheathing shall be laid up with grain (strength axis) perpendicular to supports (joists, trusses, etc.) and in a staggered pattern. Nails shall be @ 6"oc to framed panel edges, @ 4"oc over shear walls and @ 12"oc to intermediate supports. See notes above for nail sizes. All sub-flooring edges shall have approved tongue-and-groove joints or shall be supported with solid blocking/framing. Plywood clips are recommended at all roof sheathing edges (solid blocking/framing is not required at panel edges unless specifically noted in the structural drawings ore required by the roofing manufacturer). Glue sub-flooring to all supports with adhesive conforming to APA spec. AFG-01 in accordance with the manufacturer's recommendations. Allow 1/8" gap at all panel edges and ends of floor and roof sheathing. Where blocked floor and roof diaphragms are indicated, provide flat 2x blocking at all unframed panel edges and nail with edge nailing specified.

GENERAL STRUCTURAL NOTES
(TYPICAL UNLESS NOTED OTHERWISE ON DRAWINGS)

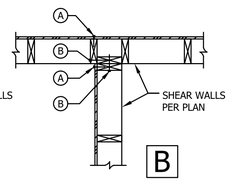
SHEAR WALL SCHEDULE

MARK	SHEATHING	PANEL EDGE (A) NAILING	TOP PLATE (B) NAILING	A35 CLIPS (C)	MUDSILL TO CONCRETE (D) 2x6 P.T.	MUDSILL TO CONCRETE (D) 3x6 P.T.	CAPACITY (PLF) SEISMIC	CAPACITY (PLF) 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	398
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

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. (1)
2. PANEL EDGE NAILING SHALL BE A MINIMUM OF 2½" IN LENGTH,AND PLATE NAILING SHALL BE A MINIMUM OF 3" IN LENGTH.
3. LTP4 OR LS50 CLIPS MAY BE SUBSTITUTED FOR A35 CLIPS.
4. EMBED ANCHOR BOLTS 7" MIN. ALL BOLTS SHALL HAVE 3x3x¼" PLATE WASHERS (EDGE OF WASHER SHALL BE WITHIN ½" OF SHEATHING). EACH MUDSILL SHALL HAVE A MINIMUM OF (2) ANCHOR BOLTS WITH (1) BOLT LOCATED NOT MORE THAN 12" OR LESS THAN 4½" TO EACH END. SIMPSON TITEN HD SCREWS, SIMPSON STRONG-BOLT OR HILTI KWIK-BOLT TZ EXPANSION BOLTS MAY BE SUBSTITUTED FOR ANCHOR BOLTS w/ 5" MIN EMBED.



PLAN AT WALL CORNER



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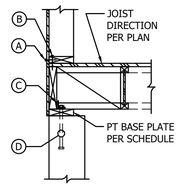
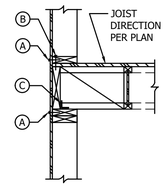


SECTION AT CONCRETE WALL

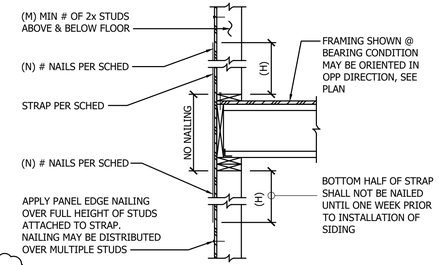


SECTION AT EXTERIOR WALL

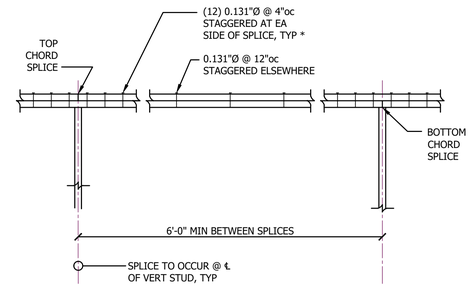
1 Shear Wall Schedule (A)
3/4" = 1'-0"

STRAP SCHEDULE

MARK	H	N	M	HF CAPACITY
CS16	14"	(13) 0.131"	1	1,705#
MSTC40	12"	(14) 0.148"	2	2,215#



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



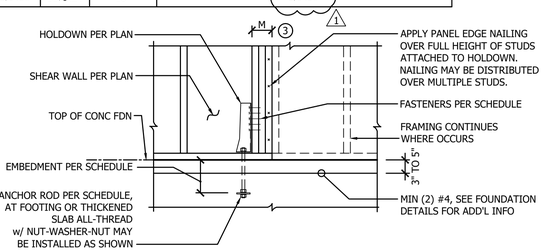
* WHERE BOTH TOP PLATES ARE DISCONTINUOUS, SPLICE w/ (1) CS16x3'-0" STRAP

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

HOLDOWN SCHEDULE (1) (2)

MARK	FASTENERS	M (3)	FOOTING / STRUCTURAL SLAB: ANCHOR ROD	EMBEDMENT	EDGE DISTANCE	CAPACITY	TOP OF STEM WALL (4): ANCHOR ROD (7)	EMBEDMENT (7)	CAPACITY (SEISMIC / WIND): CONTINUOUS (5)	CORNER (5)	END (6)
HDU2	(6) SDS¼"x2½"	3"	⅝"Ø	7"	9"	2,215#	SB⅝x24	18"		2,215#	
HDU5	(14) SDS¼"x2½"	3" DF	⅞"Ø	7"	9"	5,645#	SB⅞x24	18"		5,645#	

1
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 4½" 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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Madrona Crest
3608 86th Ave SE, Mercer Island, WA 98040

Revision	Issue Date	Drawing Set
	6/9/2023	Permit Set
1	9/21/2023	Review Corrections

General Structural Notes & Schedules

S1.1

GENERAL FRAMING NOTES:

1. ALL 9-½" BEAMS SHALL BE FLUSH AND ALL HEADERS DROPPED, UNO.
2. TYP. 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 4x6/4x8 HEADERS, UNO. PROVIDE PT (2)2x TRIMMER STUDS AE EACH END OF EACH GLB HEADER, TYP, 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 ADD'L INFORMATION. ALL EXTERIOR WALLS SHALL BE SHEATHED PER SW6, UNO

.

8. REFER TO ARCHITECTURAL DRAWINGS FOR DIM'S NOT SHOWN.
9. REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

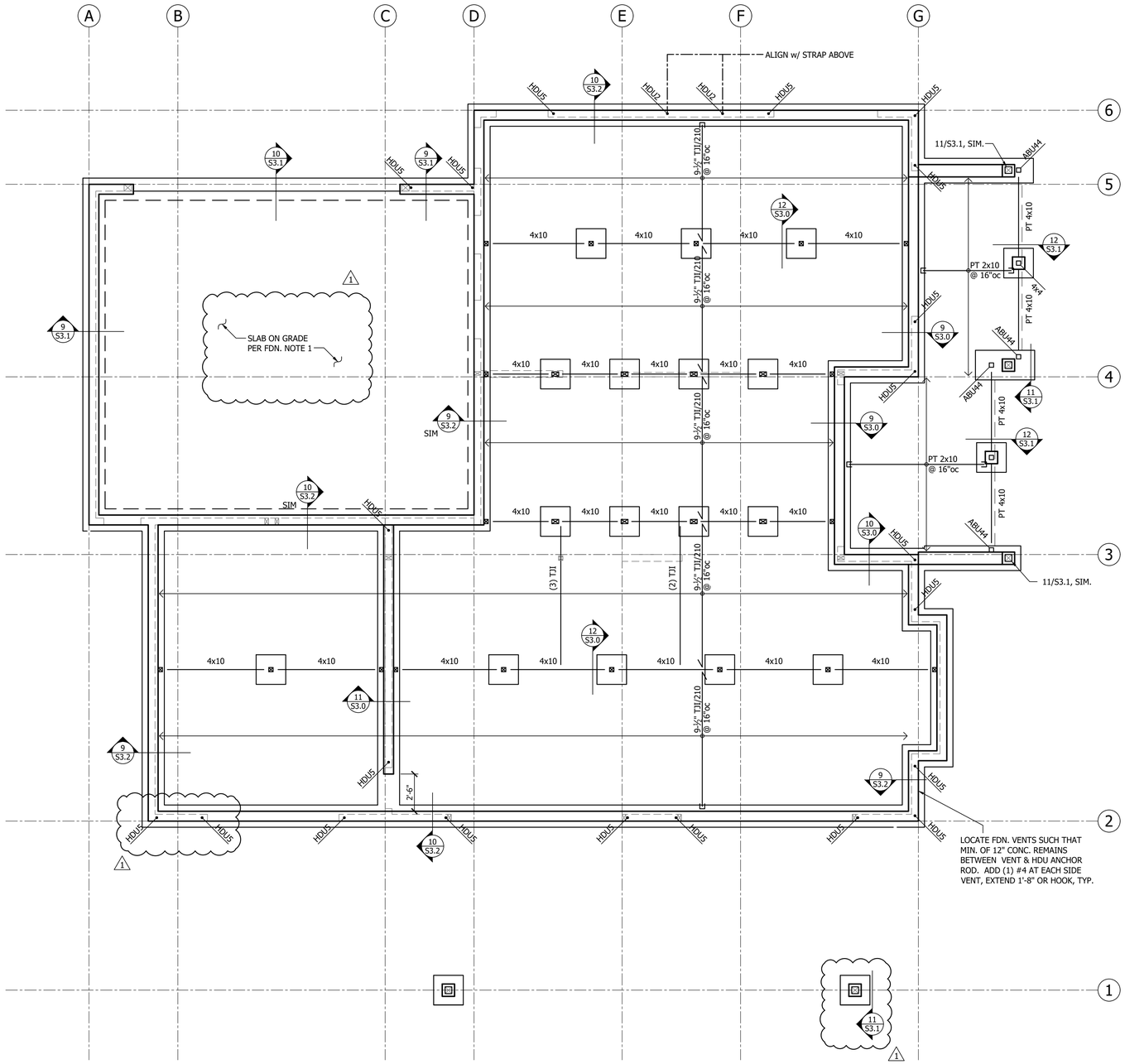
FOUNDATION NOTES:

1. TYPICAL SLAB ON GRADE AT INTERIOR SHALL BE 4" THICK. REINFORCE ALL SLABS w/ WWF 6x6 - W2.9xW2.9 AT CENTERLINE.
2. HDU - INDICATES HOLDOWN LOCATED AT END OF SHEAR WALL ABOVE, SEE SCHEDULE ON 4/S1.1. HDU5 HOLDOWNS SHALL BE ATTACHED TO MIN. (2)2x DF MEMBERS ABOVE.

FLOOR FRAMING NOTES:

1. FLOOR SHEATHING SHALL BE MIN. ¾" 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 9-½" TJI/210 @ 16"oc (continuous), DIRECTION PER PLAN.
3. LSL - INDICATES FLUSH-FRAMED 1-¾"x9-½" LSL BEAM.
4. DS - INDICATES 1-¾"x9-½" LSL DRAG STRUT UNO; ATTACH SHEATHING ALONG ENTIRE LENGTH w/ 0.131"ø @ 4"oc.
5. ST - INDICATES STRAP AT END OF SHEAR WALL ABOVE, SEE SCHEDULE ON 2/S1.1.

HANGER SCHEDULE	
MEMBER	HANGER
2x8	LUS28
PT 2x10	LUS210Z
6x10	HUCQ610
9-½" TJI/210	IUS/ITS2.06/9.5
(2) 9-½" TJI/210	MIU/MIT4.28
11-⅞" TJI/210	IUS/ITS2.06/11.88
(2) 11-⅞" TJI/210	MIU/MIT4.28
1-¾x11-⅞ LSL	HUS/HUCQ1.81
3-½x11-⅞ LSL	HU/WP11



Foundation & Main Level Framing Plan

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

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Foundation & Main Level Framing Plan

S2.0

GENERAL FRAMING NOTES:

1. ALL 11-⅞" BEAMS SHALL BE FLUSH AND ALL HEADERS DROPPED, UNO.
2. TYP. 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 4x6/4x8 HEADERS, UNO. PROVIDE PT (2)2x TRIMMER STUDS AE EACH END OF EACH GLB HEADER, TYP, 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 ADD'L INFORMATION. ALL EXTERIOR WALLS SHALL BE SHEATHED PER SW6, UNO
8. REFER TO ARCHITECTURAL DRAWINGS FOR DIM'S NOT SHOWN.
9. REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

FLOOR FRAMING NOTES:

1. FLOOR SHEATHING SHALL BE MIN. ¾" APA RATED SHEATHING (48/24). NAIL @ ALL PANEL EDGES AND OVER ALL SHEAR WALLS w/0.113"ø @ 6"oc AND 12"oc TO ALL INTERMEDIATE FRAMING. PLACE LONG DIRECTION OF PLYWOOD PERPENDICULAR TO JOISTS DIRECTION, STAGGER PANEL JOINTS.
2. TYPICAL FLOOR FRAMING SHALL BE 11-⅞" TJI/210 @ 16"oc (continuous), DIRECTION PER PLAN.
3. LSL - INDICATES FLUSH-FRAMED 1-¾"x11-⅞" LSL BEAM.
4. DS - INDICATES 1-¾"x11-⅞" LSL DRAG STRUT UNO; ATTACH SHEATHING ALONG ENTIRE LENGTH w/ 0.131"ø @ 4"oc.
5. ST - INDICATES STRAP AT END OF SHEAR WALL ABOVE, SEE SCHEDULE ON 2/S1.1.

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 PRE-MANUFACTURED MENDING PLATE TRUSSES @ 24"oc UNO. SEE ARCHITECTURAL PLANS FOR ROOF PITCHES AND TRUSS PROFILES.
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.
6. KP - INDICATES 6x6 KING POST w/ CC CAP @ TOP & BTM.

HANGER SCHEDULE	
MEMBER	HANGER
2x8	LUS28
PT 2x10	LUS210Z
6x10	HUCQ610
9-½" TJI/210	IUS/ITS2.06/9.5
(2) 9-½" TJI/210	MIU/MIT4.28
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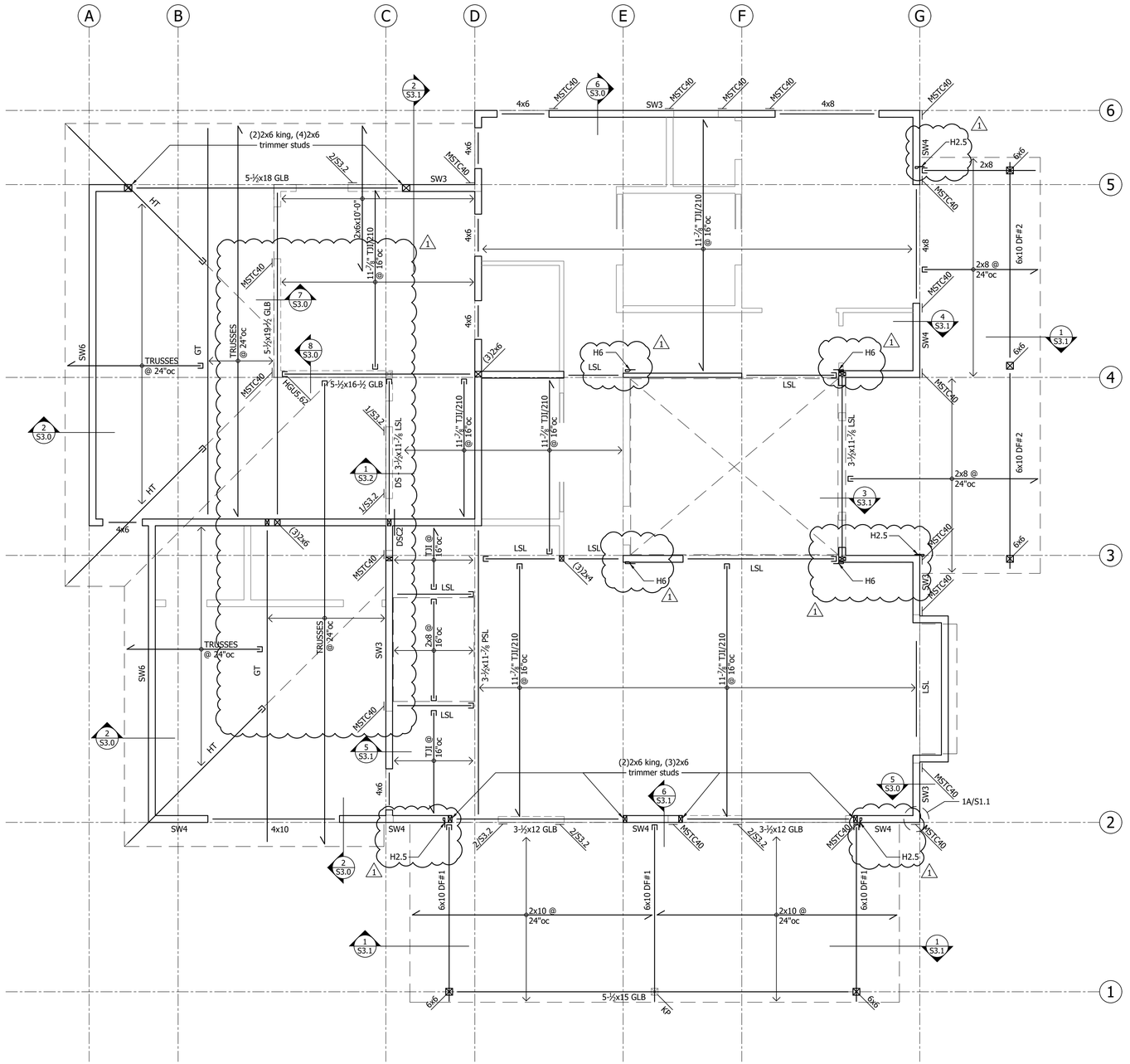
1-¾x11-⅞ LSL	HUS/HUCQ1.81
3-½x11-⅞ LSL	HU/WP11



Upper Floor Framing Plan

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

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6-9-2023

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Upper Level Framing Plan

S2.1

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
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 7-16, 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;
R. Required permanent individual truss member lateral restraint and bracing per 2018 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:

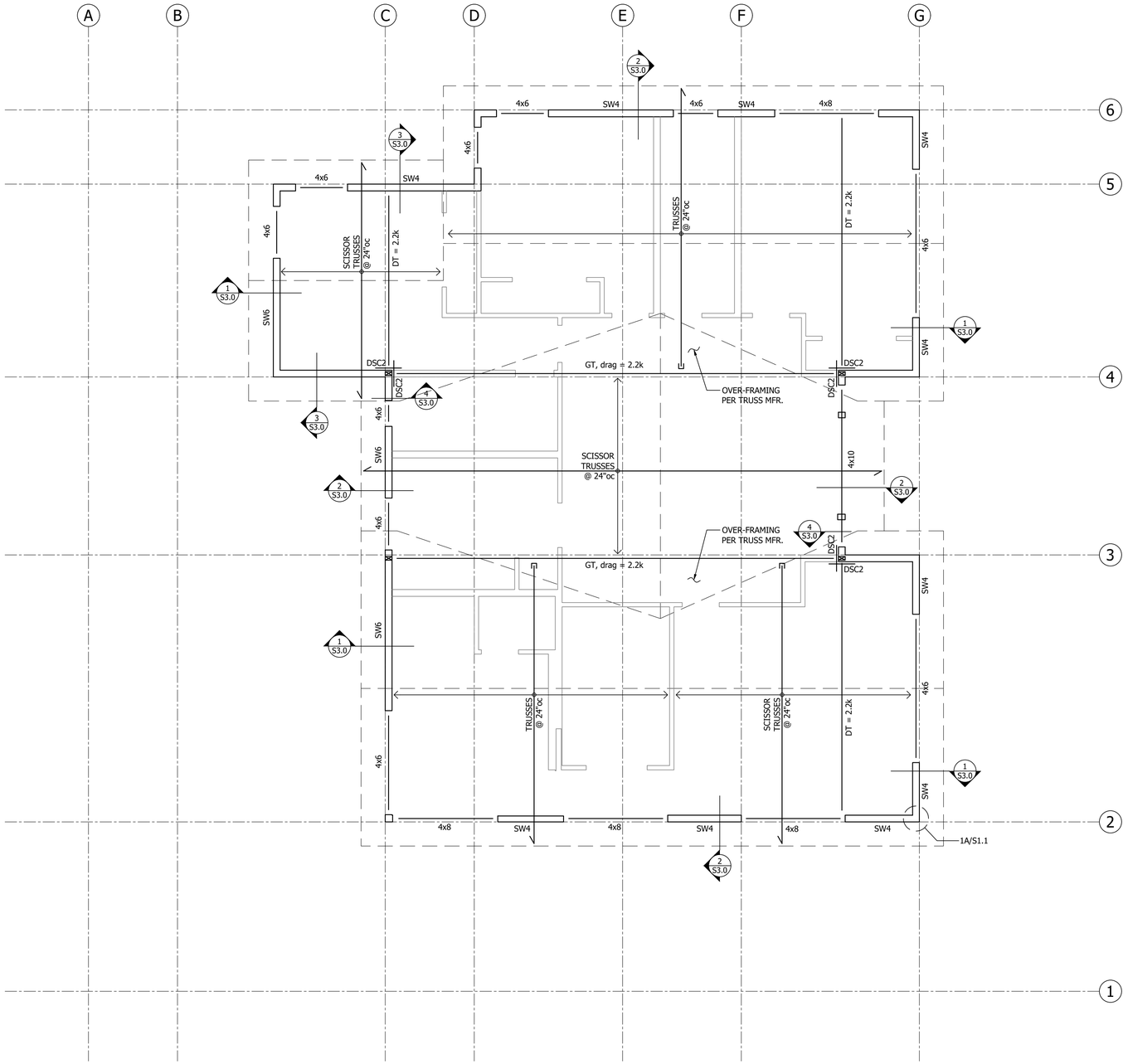
A. The trusses shall be designed so that the buckling of any individual truss member can be resisted internally by the structure (e.g. Buckling member T-bracing, I-bracing, etc.) of the individual truss. The truss individual member buckling reinforcement shall be installed as shown on the truss design 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.

SEE S2.1 FOR GENERAL FRAMING NOTES AND HANGER SCHEDULE AS APPLICABLE



Roof Framing Plan

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

DSC STRAPS MAY NEED TO BE INSTALLED PRIOR TO TRUSS PLACEMENT, CONTRACTOR TO COORDINATE, REF. 4/S3.0.

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 PRE-MANUFACTURED MENDING PLATE TRUSSES @ 24"oc UNO. SEE ARCHITECTURAL PLANS FOR ROOF PITCHES AND TRUSS PROFILES.
3. DT - INDICATES DRAG TRUSS; ENGINEERED TO TRANSFER LATERAL FORCE NOTED ON PLANS FROM ENTIRE LENGTH OF TOP CHORD TO SHEAR WALL BELOW. NAIL SHEATHING OVER ENTIRE TOP CHORD 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.
6. KP - INDICATES 6x6 KING POST w/ CC CAP @ TOP & BTM.

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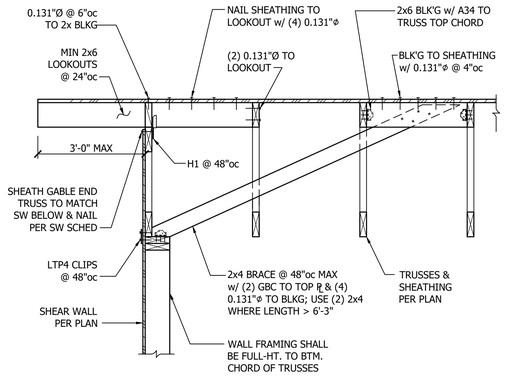
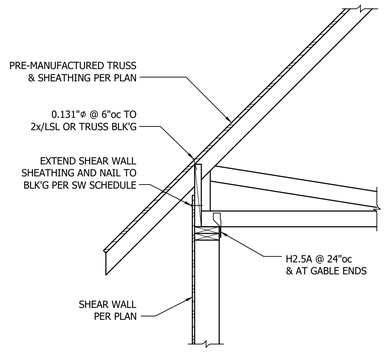
Roof Framing Plan

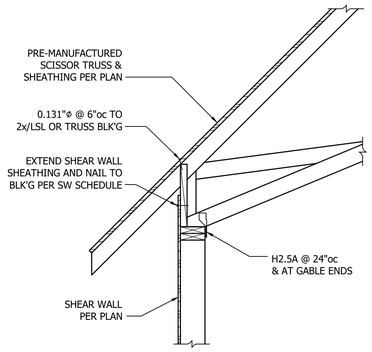
S2.2



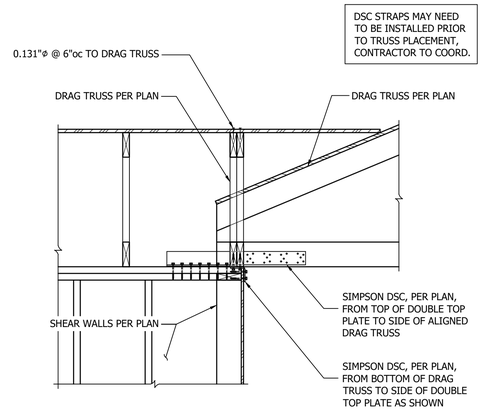
1 Trusses Parallel to Exterior Wall
3/4" = 1'-0"



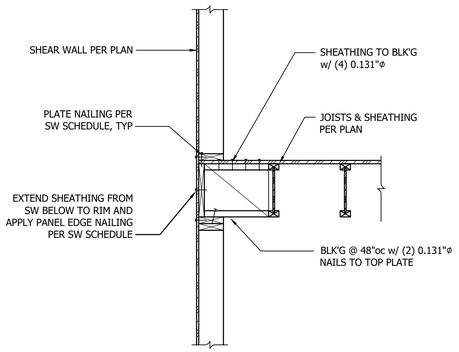
2 Common/Attic Trusses Perp. to Exterior Wall
3/4" = 1'-0"



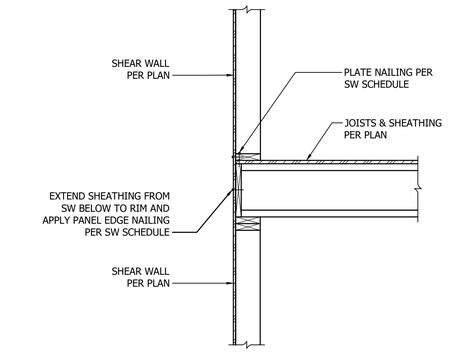
3 Scissor Trusses Perp. to Exterior Wall
3/4" = 1'-0"



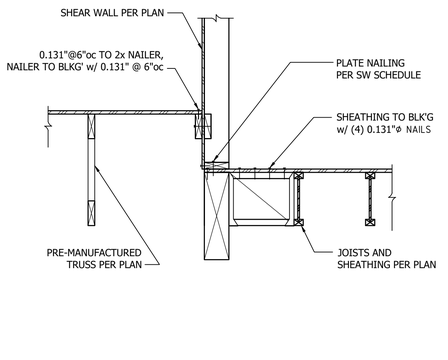
4 Drag Struts to Shear Walls
3/4" = 1'-0"



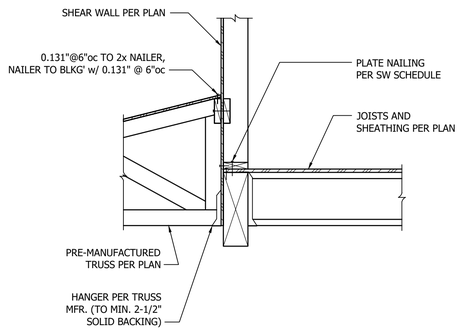
5 I-Joists Parallel to Exterior Wall
3/4" = 1'-0"



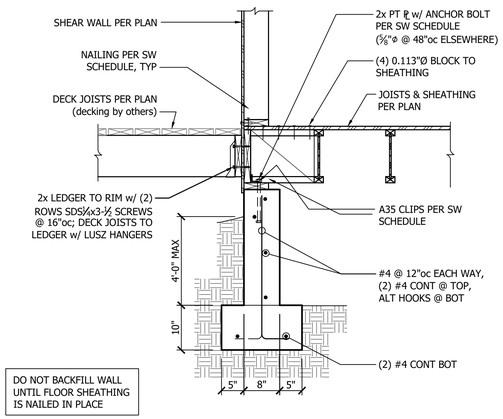
6 I-Joists Perpendicular to Exterior Wall
3/4" = 1'-0"



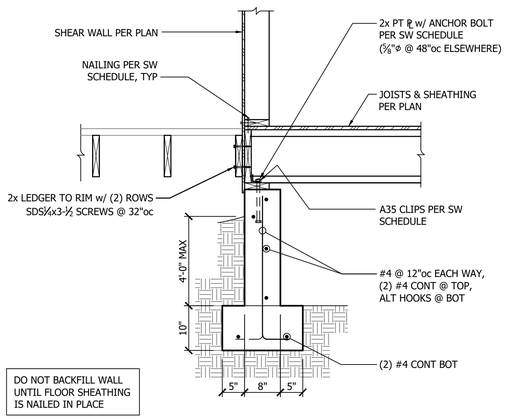
7 Roof Trusses to Parallel I-Joist Transition
3/4" = 1'-0"



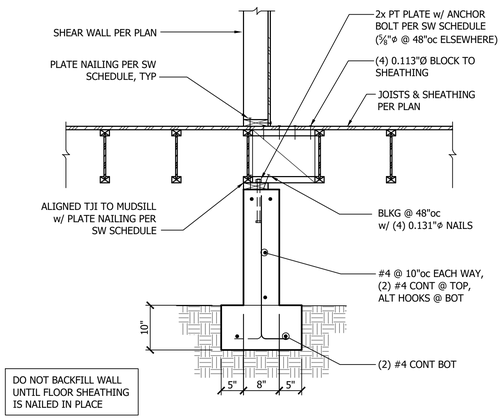
8 Roof Trussess to Perp. I-Joist Transition
3/4" = 1'-0"



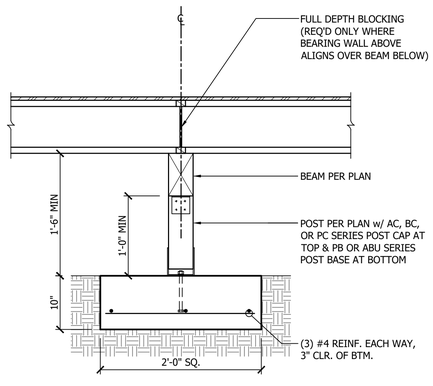
9 Foundation Parallel to I-Joists
3/4" = 1'-0"



10 Foundation Perp. to I-Joists
3/4" = 1'-0"



11 Interior SW, Parallel to I-Joists
3/4" = 1'-0"



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

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43889
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PROFESSIONAL ENGINEER
6-9-2023

Madrona Crest

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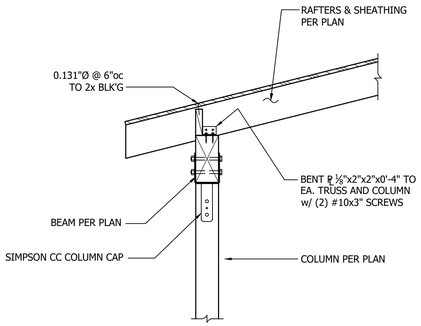
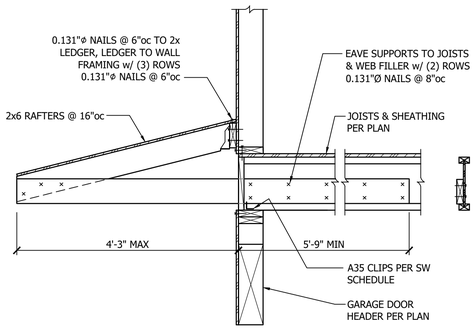
Revision	Issue Date	Drawing Set
	6/9/2023	Permit Set

Structural Details

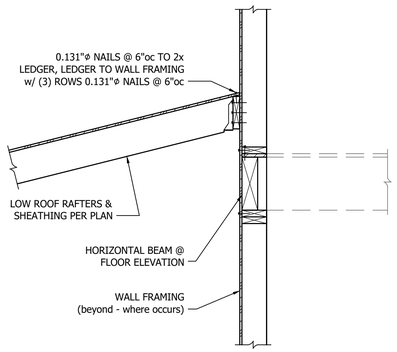
S3.0



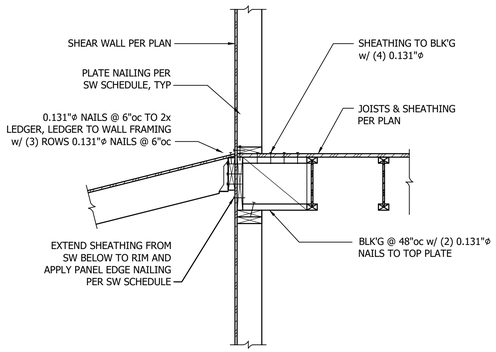
1 Porch Beam-to-Column
3/4" = 1'-0"



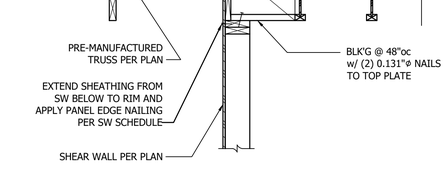
2 Roof Eaves above Garage
3/4" = 1'-0"



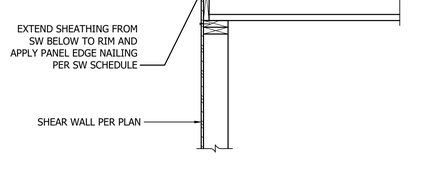
3 Low Roof Rafters at Entry Wall Framing
3/4" = 1'-0"



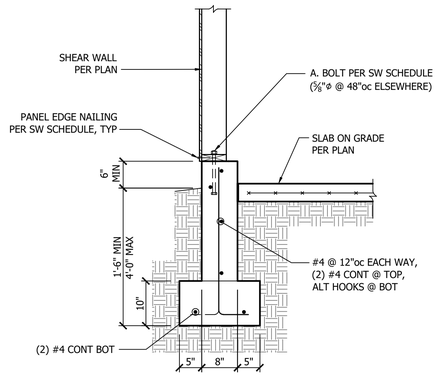
4 Low Roof Rafters at Floor Framing
3/4" = 1'-0"



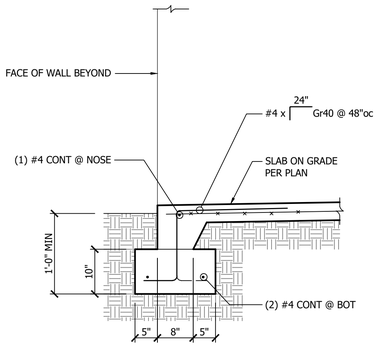
5 Low Roof Trusses Parallel to Floor Framing
3/4" = 1'-0"



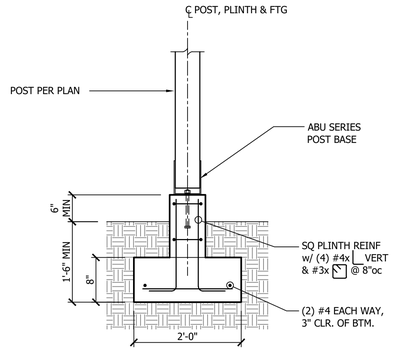
6 Low Roof Rafters Parallel to Floor Framing
3/4" = 1'-0"



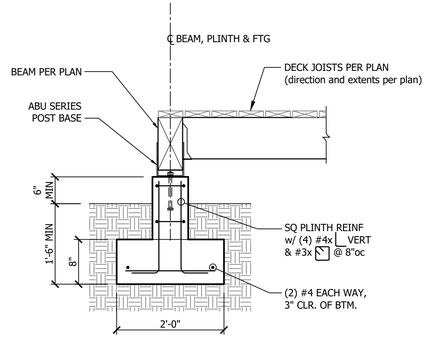
9 Stem Wall/Footing @ Exterior Garage Wall
3/4" = 1'-0"



10 Footing @ Garage Opening
3/4" = 1'-0"



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



12 Isolated Footing at Beam Adjacent to Grade
3/4" = 1'-0"

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Revision	Issue Date	Drawing Set
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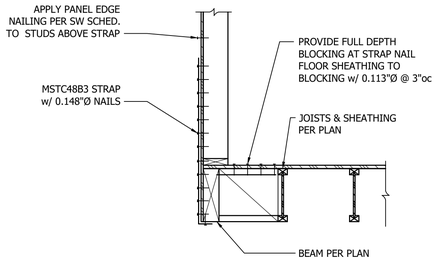
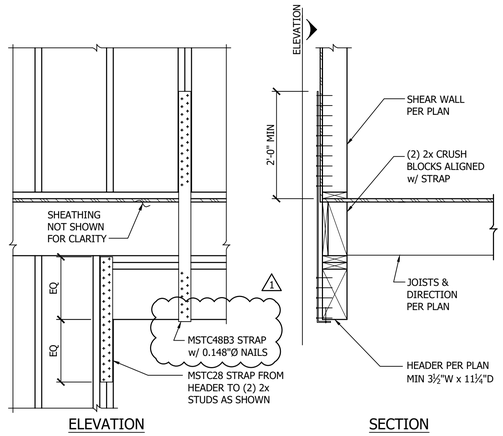
Structural Details

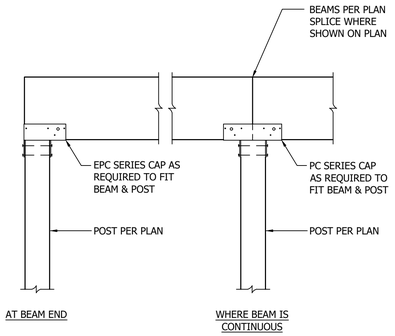
S3.1



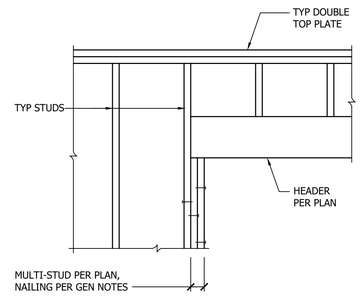
1 Strap to Beam Below
3/4" = 1'-0"



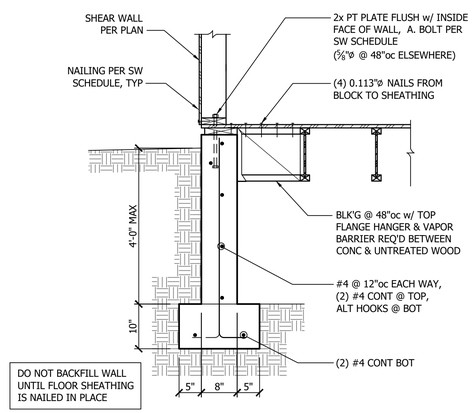
2 Strap to Header, Typ.
3/4" = 1'-0"



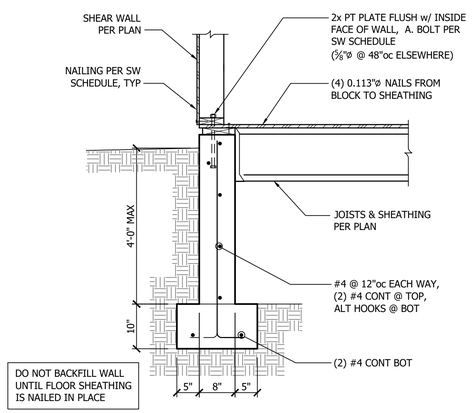
3 Wood Beam to Wood Column, Typ.
3/4" = 1'-0"



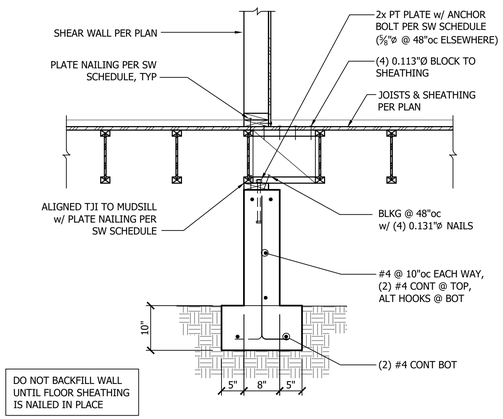
4 Header Support, Typ.
3/4" = 1'-0"



9 I-Joists Parallel to Tall Crawlspace Stem Wall
3/4" = 1'-0"



10 I-Joists to Tall Crawlspace Stem Wall
3/4" = 1'-0"



11 Interior SW, Parallel to I-Joists
3/4" = 1'-0"

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	6/9/2023	Permit Set
1	9/21/2023	Review Corrections

Structural Details

S3.2