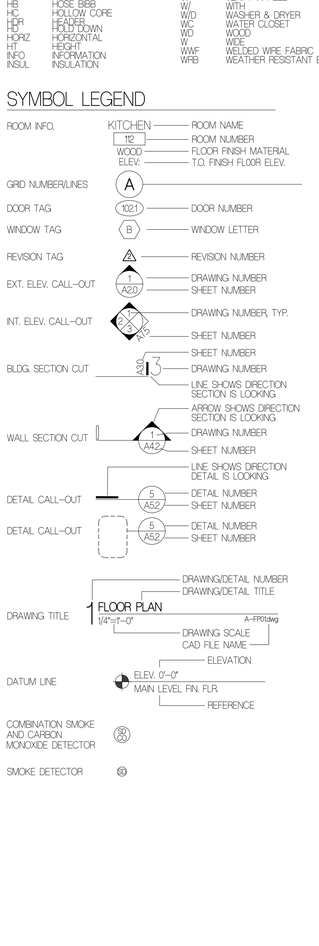
ABBREVIATIONS

#	NUMBER	LB	LOW BEAM
@	AT	LJ	LOWER JOIST
AB	ANCHOR BOLT	LN	LINE
ADJ	ADJUSTABLE	LWR	LOWER
AFF	ABOVE FINISH FLOOR	MAX	MAXIMUM
ALT	ALTERNATE	MFR	MANUFACTURER
ARCHIL	ARCHITECTURAL	MLB	MICRO-LAM BEAM
BD	BOARD	MTL	METAL
BTWN	BETWEEN	NTS	REFERS TO ACTUAL SIZE
BLKG	BLOCKING	NIC	NOT IN CONTRACT
BM	BEAM	NTS	NOT TO SCALE
BO	BOTTOM OF	OV	OVER
BOB	BOTTOM OF BEAM	OC	ON CENTER
BOT	BOTTOM	OD	OVERFLOW DRAIN
BOW	BOTTOM OF WALL	OH	OVERHANG
BRG	BEARING	OS	OUTSIDE
BSMT	BASEMENT	OSCI	OWNER-SUPPLIED, CONTRACTOR-INSTALLED
CABT	CABINET/CASEWORK	P	PAINT
C	CENTERLINE	PL	PLATE
CTRD	CENTERED	P-LAM	PLASTIC LAMINATE
CLG	CEILING	PLY	PLYWOOD
CMU	CONCRETE MASONRY UNIT	PT	PRESSURE TREATED
COL	COLUMN	PTD	PAINTED
CONC	CONCRETE	R	RADIUS/RISER
CONN	CONNECT	RD	ROOF DRAIN
CONST	CONSTRUCTION	REINF	REINFORCEMENT
CONT	CONTINUOUS	REQD	REQUIRED
CPT	CARPET	RF	RESILIENT FLOORING
CTRSINK	COUNTERSINK	RM	ROOM
CTOP	COUNTERTOP	RO	ROUGH OPENING
DB	DROPPED BEAM	R/R	RISE OVER RUN (STAIR)
DBL	DOUBLE	S&S	SHOID & SHELF
DET/DTL	DETAIL	SBC	SEATTLE BLDG CODE
DIA	DIAMETER	SC	SOLID CORE
DIM	DIMENSION	SF	SQUARE FEET
DP	DEEP	SI	SQUARE INCHES
DS	DOWNSPOUT	SHT	SHEET
DW	DISHWASHER	SHTG	SHEATHING
EA	EACH	SOG	SLAB ON GRADE
ELEC	ELECTRICAL	SP	SPRING POINT
EL ELEV	ELEVATION	SQ	SQUARE
EQ	EQUAL	SS	STAINLESS STEEL
ESMT	EASEMENT	ST	STAINED
EW	EACH WAY	STL	STEEL
EXIST, (E)	EXISTING	STRUCT	STRUCTURAL
EXP	EXPANSION	SUBFLR	SUBFLOOR
EXT	EXTERIOR	SW	SHEAR WALL
FC	FACE	T	TREAD
FD	FLOOR DRAIN	TB	THROUGH BOLT
FDN	FOUNDATION	TBR	TO BE REMOVED
FF	FLUSH FACE	TEMP	TEMPERED
FFR	FLUSH FRAMED	TO	TOP OF
FLR	FLOOR	TOC	TOP OF CONCRETE
FOB	FACE OF BRICK	TOP	TOP OF PLATE
FOC	FACE OF CONCRETE	TOS	TOP OF SLAB
FOCMU	FOC MASONRY UNIT	TOW	TOP OF WALL
FOF	FACE OF FRAMING	TPH	TOILET PAPER HOLDER
FOFIN	FACE OF FINISH	TR	TO REMAIN
FB	FLUSH BEAM	TS	TUBE STEEL
FP	FIREPLACE	TYP	TYPICAL
FTG	FOOTING	T&G	TONGUE AND GROOVE
GALV	GALVANIZED	UBC	UNIFORM BLDG CODE
GEN	GENERAL	UNO	UNLESS NOTED OTHERWISE
GFI	GROUND FAULT INTERRUPTOR	UPR	UPPER
GL	GLASS	VB	VAPOR BARRIER
GR	GRID	VERT	VERTICAL
GLB	GLU-LAM BEAM	VG	VERTICAL GRAIN
GWB	GYPSUM WALL BOARD	VIF	VERIFY IN FIELD
HB	HOSE BIBB	W/	WITH
HC	HOLLOW CORE	W/D	WASHER & DRYER
HDR	HEADER	WC	WATER CLOSET
HD	HOLD DOWN	WD	WOOD
HORZ	HORIZONTAL	W	WIDE
HT	HEIGHT	WWF	WELDED WIRE FABRIC
INFO	INFORMATION	WRB	WEATHER RESISTANT BARRIER
INSUL	INSULATION		

SYMBOL LEGEND



GENERAL NOTES

1. IF ERRORS, OMISSIONS OR CONFLICTS IN THESE DOCUMENTS ARE FOUND OR SUSPECTED, NOTIFY THE ARCHITECT IMMEDIATELY AT THE ADDRESS OR TELEPHONE NO. SHOWN.
2. CONTRACTOR TO VERIFY ALL DIMENSIONS AT THE SITE.
3. CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS, LOCATION, AND DISPOSITION OF EXISTING UTILITIES AND EASEMENTS.
4. FOR ACCURATE DIMENSIONS, DO NOT SCALE DRAWINGS.
5. INFORMATION, INCLUDING NOTES AND DIMENSIONS, ON REPETITIOUS DETAILS MAY BE INDICATED IN ONLY ONE LOCATION. AT OTHER LOCATIONS WHERE DETAILING OR CONSTRUCTION IS SIMILARLY IMPLIED, PROVIDE SAME CONSTRUCTION.
6. UNLESS NOTED OTHERWISE (UNO):
   - DIMENSIONS FOR CONC. ARE TO FACE OF CONC.
   - DIMENSIONS FOR WOOD AND METAL STUD FRAMING ARE TO FACE OF STUD.
   - DIMENSIONS FOR CABINETS ARE TO FACE OF FINISH WALL AND CABINET BOXES

APPLICABLE CODES

MERCER ISLAND LAND USE & ZONING CODE
2018 INTERNATIONAL RESIDENTIAL CODE W/ STATEWIDE AND CITY AMENDMENTS
2018 WASHINGTON STATE ENERGY CODE
2018 INTERNATIONAL FIRE CODE W/ STATEWIDE AND CITY AMENDMENTS
2018 INTERNATIONAL MECHANICAL CODE W/ STATEWIDE AND CITY AMENDMENTS
NFPA 70 NATIONAL ELECTRICAL CODE
2018 UNIFORM PLUMBING CODE

FIRE PROTECTION REQUIREMENTS

FIRE AREA SQUARE FOOTAGE CALCULATION		
MAIN FLOOR INTERIOR MEASUREMENT	=	1642 SF
LOWER FLOOR INTERIOR MEASUREMENT	=	878 SF
OTHER FLOOR INTERIOR MEASUREMENT	=	756 SF
ATTACHED CARPORT INTERIOR MEASUREMENT	=	670 SF
MAIN FLOOR COVERED DECK MEASUREMENT	=	130 SF
LOWER LEVEL COVERED EXTERIOR DECK MEASUREMENT	=	197 SF
TOTAL GROSS SQUARE FEET	=	4273 GSF

1. PROVIDE NEW NFPA 13-R FIRE SPRINKLER SYSTEM FOR ENTIRE HOUSE AS REQUIRED BY MERCER ISLAND FIRE DEPARTMENT; TO BE MONITORED AND COMBINED WITH MONITORED SMOKE DETECTION SYSTEM.
2. FIRE SPRINKLER SYSTEM TO BE BIDDER DESIGN; ALL PERMIT DOCUMENTS SHALL BE SUBJMITTED BY BIDDER-DESIGN FOR APPROVAL BY CITY OF MERCER ISLAND FIRE MARSHAL.
3. PROVIDE NEW NFPA 72 HOUSEHOLD MONITORED FIRE ALARM PER MERCER ISLAND STANDARDS
4. PROVIDE SOLID CORE DOORS THROUGHOUT IN NEW STRUCTURE
5. PROVIDE 5/8" TYPE X SHEETROCK THROUGHOUT
6. SMOKE DETECTORS PROVIDED PER IRC R314, UNLESS NOT REQUIRED DUE TO FIRE ALARM; SMOKE DETECTION SYSTEM TO BE MONITORED AND COMBINED WITH MONITORED FIRE SPRINKLER SYSTEM
7. CARBON MONOXIDE DETECTORS PROVIDED PER IRC R315

UTILITIES NOTES

1. PROVIDE NEW WATER SERVICE METER PER FIRE SAFETY REQUIREMENTS. PROVIDE NEW PIPING TO DESIGNATED LOCATIONS PER PLAN. NEW SERVICE TO ACCOMMODATE REQUIREMENTS FOR DOMESTIC & FIRE SPRINKLER WATER. IRRIGATION TO BE PROVIDED BY EXISTING SERVICE.
2. ELECTRICAL PANEL: PROVIDE NEW ELECTRICAL SERVICE TO SUPPLEMENT EXISTING SERVICE AS REQ'D FOR NEW LOADS. SIZE T.B.D.
3. GAS: PROVIDE NEW GAS SERVICE AS REQUIRED. PROVIDE NEW PIPING TO DESIGNATED LOCATIONS PER PLAN.
4. PRIOR TO CONSTRUCTION, PROVIDE TV INSPECTION OF EXISTING PRIVATE SIDE SEWER BETWEEN THE RESIDENCE AND THE PUBLIC SEWER MAIN AND REPLACE IF FOUND TO BE DEFECTIVE.
5. FINAL LOCATION OF WATER SERVICE, METER BOX AND RPBA SHALL BE DETERMINED BY THE WATER DEPARTMENT PRIOR TO CONSTRUCTION.
6. REFER TO CIVIL DRAWINGS FOR ADDITIONAL REQUIREMENTS

ENERGY CODE NOTES

1. COMPLIANCE IS SHOWN THROUGH PRESCRIPTIVE APPROACH
   2018 WASHINGTON STATE ENERGY CODE PRESCRIPTIVE REQUIREMENTS FOR GROUP R-3 OCCUPANCY CLIMATE ZONE 4C

COMPONENT	MIN. REQUIREMENT
FENESTRATION U-VALUE	0.30
OVERHEAD GLAZING U-VALUE	0.50
CEILING	R-49
VAULTED CEILING	R-38, IF UNCOMPRESSED FULL DEPTH AT PLATE
WALL ABOVE GRADE	R-21 INT
WALL BELOW GRADE	10/15/21 INT + 5TB
FLOOR	R-30
SLAB ON GRADE	R-10, 2FT
SLAB ON GRADE, HEATED	R-10 , ENTIRE AREA

2 VICINITY MAP
N.T.S. 2002A-SITE.dwg

ENERGY CODE NOTES CONTINUED

2. EXTERIOR JOINTS AROUND WINDOW AND DOOR FRAME OPENINGS BETWEEN WALLS AND FOUNDATIONS, BETWEEN WALLS AND ROOF, OPENINGS AT PENETRATIONS OF UTILITY SERVICES THROUGH WALLS, FLOORS, AND ROOFS; AND ALL OTHER SUCH OPENINGS IN THE BUILDING ENVELOPE SHALL BE SEALED, CAULKED, GASKETED, OR WEATHER-STRIPED TO LIMIT AIR LEAKAGE.
3. WINDOW AND DOOR HEADERS SHALL BE INSULATED WITH A MINIMUM OF R-10 INSULATION
4. CONFORM TO AIR BARRIER REQUIREMENTS PER TABLE R402.4.1.1
5. CONFORM TO AIR LEAKAGE REQUIREMENTS IN SECTIONS R402.4.1 THROUGH R402.4.5
6. PROVIDE TESTING PER R402.4.1.2
7. TEST MECHANICAL SYSTEM PER R1014.3.1
8. **TOTAL ENERGY CREDITS REQUIRED (MEDIUM DWELLING UNIT): 6 CREDITS**

HEATING OPTION 1 COMBUSTION HEATING MINIMUM NAECA		0 CREDIT
OPTION 1.3: EFFICIENT BUILDING ENVELOPE –REFER TO BLDG SECTIONS FOR ASSEMBLY R-VALUES & WINDOW/DOOR SCHEDULE FOR U-VALUES		0.5 CREDITS
OPTION 2.2: AIR LEAKAGE CONTROL & WHOLE HOUSE PER R402.4.1.2: TESTED AIR LEAKAGE TO BE 2.0 AIR CHANGES/HR MAX @ 50 PASCALS		1.0 CREDITS
OPTION 3.1: HIGH EFFICIENCY HVAC EQUIPMENT ENERGY STAR RATED GAS BOILER, MIN AFUE 90%		1.0 CREDITS
OPTION 4.2: HIGH EFFICIENCY HVAC DISTRIBUTION SYSTEM HVAC EQUIPMENT AND DUCT INSTALLATION COMPLY W/REQUIREMENT PER R403.3.7		1.0 CREDITS
OPTION 5.3: EFFICIENT WATER HEATING ENERGY STAR RATED GAS WATER HEATER W/MIN UEF OF 0.91; REFER TO SHEET A3.1		1.0 CREDITS
OPTION 6.1: RENEWABLE ELECTRIC ENERGY 1200kWh SOLAR ARRAY; REFER TO SHEET A1.2		1.0 CREDITS
OPTION 7.1: APPLIANCE PACKAGE SEE APPLIANCE SCHEDULE ON SHEET A2.3		0.5 CREDITS
TOTAL CREDITS:		**6.0 CREDITS**

ZONING INFORMATION

ZONING: R-15

CONSTRUCTION TYPE: V-B (NON-RATED)

OCCUPANCY: SINGLE-FAMILY DWELLING

CONDITIONED AREA SUMMARY:

CONDITIONED LOWER LEVEL	878 SF
CONDITIONED MAIN LEVEL	+ 1642 SF
TOTAL CONDITIONED AREA	2,520 SF
UNCONDITIONED LOWER LEVEL	756 SF
UNCONDITIONED CARPORT	+ 670 SF
TOTAL UNCONDITIONED AREA	1426 SF
TOTAL CONDITONED & UNCONDITONED AREA	3,946 SF

LOT COVERAGE: 3603 SF PROPOSED NEW / 11,600 SF LOT AREA = 31% LOT COVERAGE = OK
35% MAX
(REFER TO 2/TS-2)

HARDSCAPE AREA: (REFER TO 3/TS-2)

HEIGHT LIMIT: MAX BUILDING HEIGHT (REFER TO 1/TS-2) — 30' ABOVE AVERAGE BUILDING ELEVATION

SETBACKS:
FRONT YARD: 20'-0"
SIDE YARD: 15'-0" MIN. SUM, 5'-0" MIN. MIN 10'-0" @ ADJOINING SIDE YARD, IF GABLE ROOF HT >25'-0"
REAR YARD: 25'-0"

TREE REQUIREMENTS: REFER TO C2.5 FOR TREE RETENTION AND REPLANTING INFORMATION, AS WELL AS, THE ARBORIST REPORT

ON SITE TREE INVENTORY: #201, #204, #206, #208, #213, #214(E), # 215, #216, #217, #218, #219, #220, #221, #222, #223, #224, #225, #226, #227, #228, #229, #230(E), #231, #233(E), #234, #235, #236

OFF SITE TREE INVENTORY: #202, #203, #205, #207, #209, #210, #211, #212, #232, #237(E)

MECHANICAL CODE NOTES

1. MECHANICAL PERMIT WILL BE SUBMITTED AND OBTAINED BY BIDDER-DESIGNER.
2. PROVIDE VENTILATION SYSTEM PER SECTION R403
3. WHOLE HOUSE VENTILATION SYSTEM TO BE PER M1507.3

PROJECT INFORMATION

ASSESSOR'S PARCEL: 2948900022

QUARTER-SECTION-TOWNSHIP-RANGE: NE-24-24-4

PROJECT ADDRESS:
5401 W MERCER
MERCER ISLAND, WA 98040

PROJECT DESCRIPTION:
DEMOLITION OF EXISTING SINGLE FAMILY RESIDENCE; CONSTRUCTION OF NEW SINGLE-FAMILY RESIDENCE W/ ATTACHED (2)-CAR CARPORT.

LEGAL DESCRIPTION:
GROVELAND PARK ADD S 70 FT OF 20-21-22 & S 70 FT OF E 25 FT OF 19 & N 10 FT OF VAC BONNEY ST ADJ
Plat Block: 2
Plat Lot: 19 THRU 22

IMPERVIOUS CALCULATIONS (MICC 19.02.060)

EXISTING IMPERVIOUS SURFACE	AREA (SF)	NEW IMPERVIOUS SURFACE	AREA (SF)
EXISTING ROOF	1449	NEW ROOF, MAIN	2221
EXISTING CARPORT ROOF	520	NEW ROOF: CARPORT	794
EXISTING DRIVEWAY	426	NEW DRIVEWAY	400
EXISTING SHED	127	NEW UNCOVERED DECK #1	99
EXISTING UNCOVERED DECK	373		
EXISTING UNCOVERED PATIO	228		
EXISTING WALKWAY	191		
EXISTING STAIR #1	44		
EXISTING STAIR #2	40		
EXISTING TOTAL IMPERVIOUS SURFACE TO BE REMOVED	3398	NEW + REPLACED IMPERVIOUS SURFACE	3514
TOTAL NET AREA CHANGE IN PROJECT IMPERVIOUS SURFACE AREA = (EXISTING TO REMAIN + EXISTING TO BE REMOVED) + NEW			116

NET NEW = 116 SF IMPERVIOUS SURACE < 500 SF

PROJECT DIRECTORY

OWNER
TOMOKO LUMPKIN
5401 W MERCER WAY
MERCER ISLAND, WA 98040

ARCHITECT:
JAY DEGUCHI
SUYAMA PETERSON DEGUCHI
8601 8TH AVE S
SEATTLE, WA 98108
PHONE: (206) 256-0809
EMAIL: jay@s-pd.com

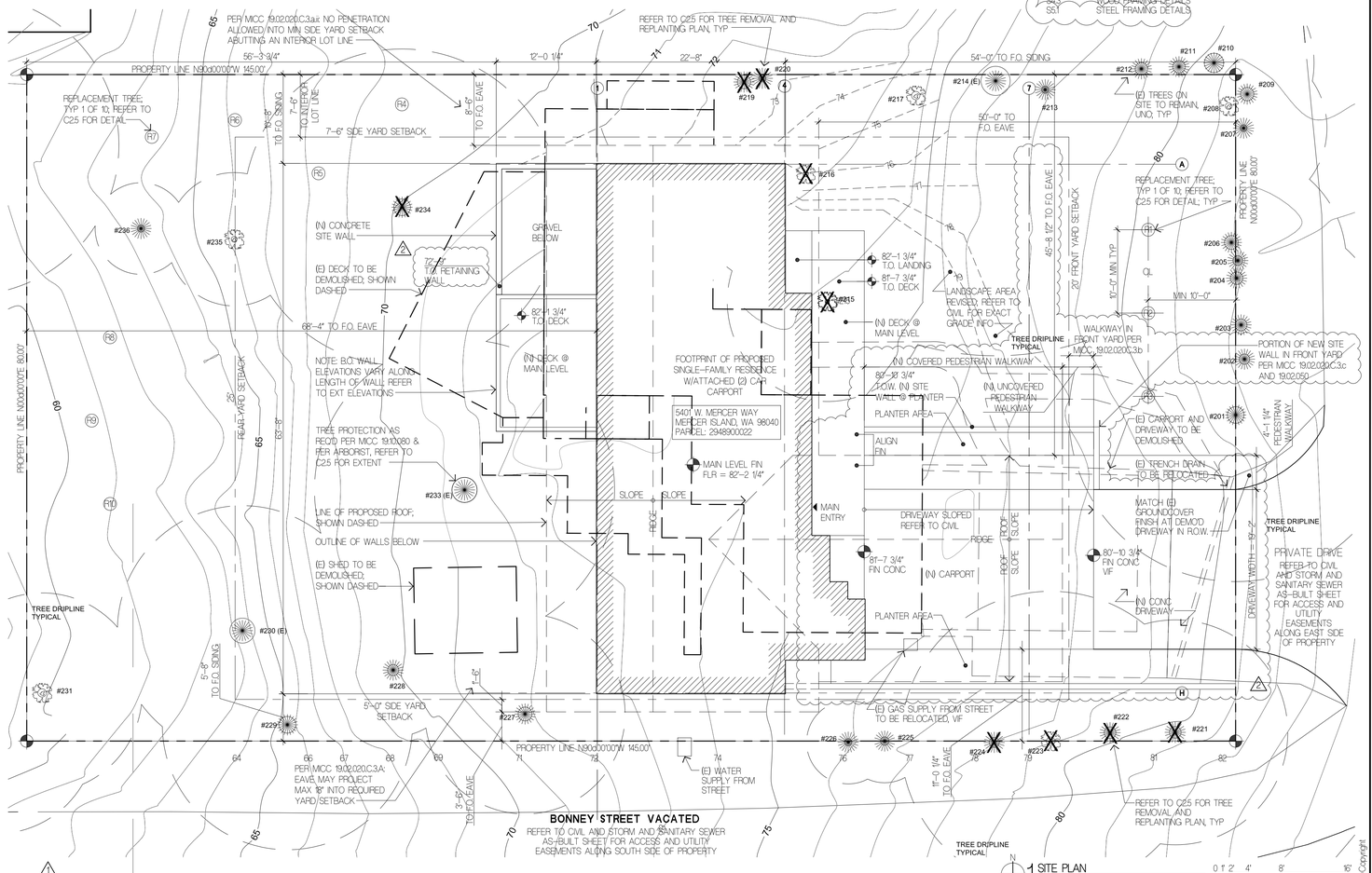
GEOTECHNICAL ENGINEER
KEITH JOHNSON
GEO GROUP NORTHWEST, INC.
13705 BEL-RED ROAD
BELLEVUE, WA 98005
PHONE: (425) 649-8757

STRUCTURAL ENGINEER
RYAN ANDERSON
SWENSON SAY FAGET
2124 3RD AVENUE SUITE #100
SEATTLE, WA 98121
PHONE: (206) 443-6212
EMAIL: randerson@sssfengineers.com

ARBORIST:
THOMAS QUIGLEY
OLYMPIC NURSERY, INC
P.O. BOX 2013
WOODINVILLE, WA 98072
PHONE: (206) 850-2643

CIVIL ENGINEER
REBEKAH WESTON
RED BARN ENGINEERING, INC.
6610 NE 181ST STREET
KENMORE, WA 98028
PHONE: (425) 419-4979

DRAWING LIST



Suyama Peterson Deguchi
8601 8th Avenue South Seattle, Washington 98108
P 2062560809

Project Title
LUMPKIN RESIDENCE
5401 W. MERCER WAY
MERCER ISLAND, WA, 98040

7173 REGISTERED ARCHITECT JAY T. DEGUCHI STATE OF WASHINGTON

Drawing Title
TITLE SHEET, PROJECT INFO, SITE + VICINITY PLAN

Date
03/17/2021

Job No.
2002

ISSUE	DATE
DD PRICING SET	09/28/2020
PERMIT SET	03/17/2021
1 PERMIT CORRECTION #1	09/01/2021
PERMIT CORRECTION #2	10/21/2021
2 PERMIT REVISION #1	04/28/2022

PERMIT REVISION #1
Sheet No.

TS-1

SHEET 1 OF 1

SITE PLAN
5401 WEST MERCER WAY
MERCER ISLAND, WASHINGTON
APN: 294890-0022
ZONE: R-15 CITY OF MERCER ISLAND

CONTROLLING BENCHMARK + DATUM
CITY OF KIRKLAND BENCHMARK No. 89
ELEVATION = 516.41 FEET / NAVD 88

LAND DESCRIPTION

THE SOUTH 70 FEET OF THE EAST 25 FEET OF LOT 19 AND THE SOUTH 70 FEET OF LOTS 20, 21 AND 22, BLOCK 2, GROVELAND PARK ADDITION, A VACATED PLAT AND ADJOINING NORTH 10 FEET OF VACATED BONNEY STREET, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 8 OF PLATS, PAGE 36, IN KING COUNTY, WASHINGTON;

TOGETHER WITH A PERPETUAL NON-EXCLUSIVE EASEMENT FOR DRIVEWAY OVER A STRIP OF LAND 30 FEET IN WIDTH, SOUTH LINE IS COINCIDENT WITH THE CENTER LINE OF VACATED BONNEY STREET, AND SAID EASEMENT OR RIGHT OF WAY EXTENDING TO THE WESTERLY LINE OF WEST MERCER WAY ALSO KNOWN AS MERCER ISLAND BOULEVARD, THE WESTERLY END OF SAID EASEMENT OR RIGHT OF WAY BEING THE EAST LINE OF THE ABOVE DESCRIBED TRACT AND SAID EAST LINE EXTENDED SOUTH 20 FEET TO THE CENTER LINE OF SAID VACATED BONNEY STREET.

SURVEY LEGEND

SET REBAR & CAP PLS No. 29536	●	08/6/2019
FOUND REBAR & CAP LS# 34144 AT PROPERTY CORNER	○	08/06/2019
FOUND TACK IN CONCRETE MONUMENT	⊗	8/24/2017
FOUND STONE MONUMENT WITH BRASS TACK	⊗	8/24/2017
FOUND MAGNETIC NAIL	△	
SET LINE HUB, TACK & DISC PLS No. 29536	⊡	
SET LEAD & TACK WITH DISC PLS No. 29536	▲	
CALCULATION POINT	⊕	

LINE LEGEND

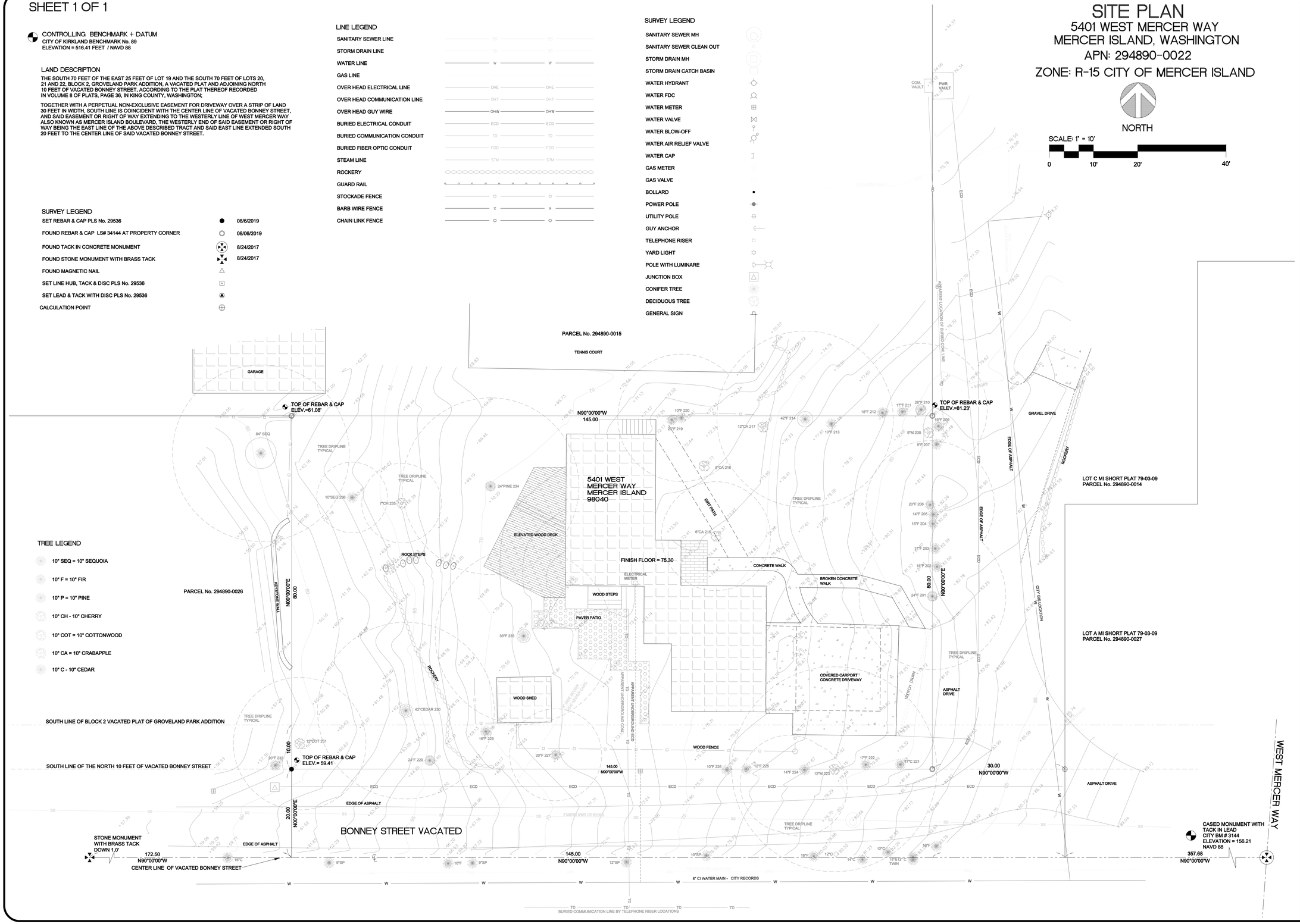
SANITARY SEWER LINE	SS
STORM DRAIN LINE	SD
WATER LINE	W
GAS LINE	
OVER HEAD ELECTRICAL LINE	OHE
OVER HEAD COMMUNICATION LINE	OHT
OVER HEAD GUY WIRE	OHW
BURIED ELECTRICAL CONDUIT	ECD
BURIED COMMUNICATION CONDUIT	TD
BURIED FIBER OPTIC CONDUIT	FOD
STEAM LINE	STM
ROCKERY	
GUARD RAIL	
STOCKADE FENCE	
BARB WIRE FENCE	X
CHAIN LINK FENCE	

SURVEY LEGEND

SANITARY SEWER MH	
SANITARY SEWER CLEAN OUT	
STORM DRAIN MH	
STORM DRAIN CATCH BASIN	
WATER HYDRANT	
WATER FDC	
WATER METER	
WATER VALVE	
WATER BLOW-OFF	
WATER AIR RELIEF VALVE	
WATER CAP	
GAS METER	
GAS VALVE	
BOLLARD	
POWER POLE	
UTILITY POLE	
GUY ANCHOR	
TELEPHONE RISER	
YARD LIGHT	
POLE WITH LUMINARE	
JUNCTION BOX	
CONIFER TREE	
DECIDUOUS TREE	
GENERAL SIGN	

TREE LEGEND

- 10" SEQ = 10" SEQUOIA
- 10" F = 10" FIR
- 10" P = 10" PINE
- 10" CH - 10" CHERRY
- 10" COT = 10" COTTONWOOD
- 10" CA = 10" CRABAPPLE
- 10" C - 10" CEDAR



DATE SEALED

THOMAS J. COLETTI
STATE OF WASHINGTON
AUGUST 14, 2019
29536
REGISTERED
PROFESSIONAL LAND SURVEYOR

REV NO	REVISION DESCRIPTION	DATE	BY

SURVEYED TJC
DRAWN TJC
CHECKED TJC
SEC 24 T 24N R 04E WM
DISC NO 2019-26
DATE AUGUST 14, 2019
SCALE 1"=10'

TITLE SITE PLAN
5401 WEST MERCER WAY
MERCER ISLAND, WASHINGTON

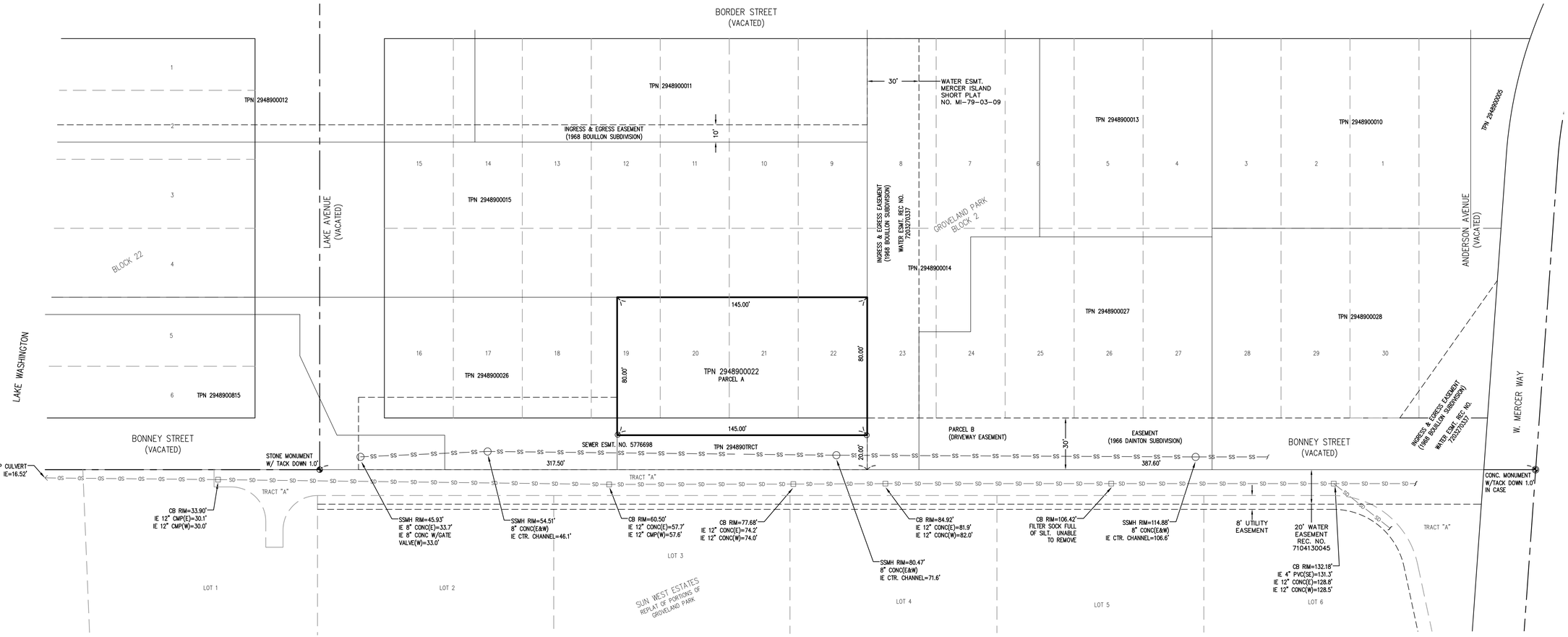
CLIENT TRAVIS + RACHEL LUMPKIN

TJC LAND SURVEYING + MAPPING
1189 MCKINLEY STREET
PO BOX 366, ENUMCLAW, WA. 98022
PH: 206-940-0253
www.tjclandsurveying.com
tjcsurveying@gmail.com

SHEET 1 OF 1
FILE NO 2019-26

STORM AND SANITARY SEWER AS-BUILT

NE 1/4 OF SECTION 24, TOWNSHIP 24 NORTH, RANGE 4 EAST, W.M.
KING COUNTY, WASHINGTON



LEGAL DESCRIPTION

(PER FIRST AMERICAN TITLE INSURANCE COMPANY COMMITMENT NO. 4209-3803268, DATED AUGUST 5, 2021 8:00 AM)

REAL PROPERTY IN THE COUNTY OF KING, STATE OF WASHINGTON, DESCRIBED AS FOLLOWS:

PARCEL A:
THE SOUTH 70 FEET OF EAST 25 FEET OF LOT 19 AND SOUTH 70 FEET OF LOTS 20, 21 AND 22, BLOCK 2, GROVELAND PARK, A VACATED PLAT AND ADJOINING 10 FEET OF VACATED BONNEY STREET, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 8 OF PLATS, PAGE 36, IN KING COUNTY, WASHINGTON;

PARCEL B:
A PERPETUAL NON-EXCLUSIVE EASEMENT FOR DRIVEWAY OVER A STRIP OF LAND 30 FEET IN WIDTH, SOUTH LINE THEREOF IS COINCIDENT WITH THE CENTER LINE OF VACATED BONNEY STREET, AND SAID EASEMENT OR RIGHT OF WAY EXTENDING TO THE WESTERLY LINE OF WEST MERCER WAY ALSO KNOWN AS MERCER ISLAND BOULEVARD, THE WESTERLY END OF SAID EASEMENT OR RIGHT OF WAY BEING THE EAST LINE OF ABOVE DESCRIBED TRACT AND SAID EAST LINE EXTENDED SOUTH 20 FEET TO THE CENTER LINE OF SAID VACATED BONNEY STREET;

EXCEPT ANY PORTION THEREOF LYING WITHIN THE MAIN TRACT.

HORIZONTAL DATUM

ASSUMED

VERTICAL DATUM

NAVD 88 BASED ON TIES TO BENCHMARKS SHOWN ON A TOPOGRAPHIC MAP PROVIDED BY THE CLIENT, PERFORMED BY THOMAS J. COLETTI, DATED AUGUST 14, 2019.

SURVEY NOTES

1. DATA FOR THIS SURVEY WAS GATHERED BY FIELD TRAVERSE UTILIZING ELECTRONIC DATA COLLECTION, AND MEETS OR EXCEEDS ACCURACY REQUIREMENTS CONTAINED IN W.A.C. 332-130-090. ALL MEASURING INSTRUMENTS EMPLOYED IN THIS SURVEY HAVE BEEN MAINTAINED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. THIS MAP GRAPHICALLY REPRESENTS CONDITIONS AND FEATURES EXISTING AT THE TIME OF THIS SURVEY ONLY, WHICH WAS PERFORMED ON AUGUST 17, 2021
3. THE CERTIFICATION OF THIS SURVEY AND MAP IS EXCLUSIVE TO THE NAMED CLIENT WHO REQUESTED THIS SURVEY. IT WAS SPECIFICALLY DESIGNED TO MEET THEIR STATED NEED(S). THAT CERTIFICATION DOES NOT EXTEND TO ANY OTHER PARTIES OR FOR ANY ALTERNATIVE USE OF THIS MAP WITHOUT THE EXPRESS RECERTIFICATION BY THE SURVEYOR NAMING THOSE PARTIES.
4. THE PURPOSE OF THIS SURVEY IS TO PROVIDE A UTILITY MAP OF THE EXISTING STORM AND SANITARY SEWER WITHIN THE RIGHT-OF-WAY OF VACATED BONNEY STREET FOR PLANNING, DESIGN AND CONSTRUCTION.
5. UTILITIES OTHER THAN SHOWN MAY EXIST ON THE SITE. THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY, AND RELIABLY DEPICTED. WHERE ADDITIONAL OR MORE DETAILED INFORMATION IS REQUIRED, THE CLIENT IS ADVISED THAT EXCAVATION MAY BE NECESSARY. THE SURVEYOR DOES CERTIFY THAT THEY ARE SHOWN AS ACCURATELY AS POSSIBLE FROM FIELD SURVEY INFORMATION.
6. KING COUNTY PARCEL NO. 2948900022
7. ALL DISTANCES AND DIMENSIONS SHOWN ARE U.S. SURVEY FEET GROUND MEASUREMENTS.
8. THE PROPERTY AND PUBLIC RIGHT-OF-WAY LINES SHOWN HEREON ARE BASED ON A TOPOGRAPHIC SURVEY PROVIDED BY THE CLIENT BY THOMAS J. COLETTI, DATED AUGUST 14, 2019. THEY ARE NOT THE RESULT OF AN OFFICIAL BOUNDARY SURVEY BY APEX ENGINEERING.
9. WE HAVE USED GRAPHIC SYMBOLS TO REPRESENT SOME FEATURES ON THIS MAP, SUCH AS UTILITIES, TREES AND FENCES. THE DEFAULT SIZE OF THOSE SYMBOLS MAY NOT REFLECT THE TRUE SIZE OF THE FEATURE THAT WAS MAPPED.
10. THE SURFACE UTILITIES SHOWN HEREON WERE FIELD LOCATED AS SHOWN BY APEX ENGINEERING, LLC. ONLY THOSE THAT WERE SURFACE-VISIBLE AT THE TIME OF THE SURVEY WERE LOCATED. THE MATERIAL TYPE, DIAMETER AND INVERT ELEVATION OF FLOW LINES WITHIN FOUND UTILITY STRUCTURES ARE BASED ON OBSERVATIONS FROM THE TOP OF THE UTILITY COVER AND ARE APPROXIMATE ONLY. FOR SAFETY REASONS NO PHYSICAL ENTRY INTO THE UTILITY STRUCTURE WAS PERFORMED DURING THE COURSE OF THIS SURVEY. FLOW LINE CONNECTIONS BETWEEN STRUCTURES ASSUME A STRAIGHT LINE BETWEEN STRUCTURES AND ARE CONNECTED TO THE BEST EXTENT THAT THOSE CONNECTIONS COULD BE DETERMINED.

EASEMENTS

SEWER EASEMENT RECORDING NO. 5776698:

A 10 FT. STRIP OF LAND 5 FT. ON EITHER SIDE OF SIDE SEWER AS INSTALLED FROM SEWER MAIN NORTH A DISTANT OF 8 FT. AND ALSO THE SOUTH 12 FT. OF THE FOLLOWING DESCRIBED TRACT: SOUTH 70 FT. OF LOTS 16, 17, 18 AND WEST 15 FT. OF LOT 19 AND NORTH 30 FT. OF VACATED BONNEY STREET ADJOINING AND EAST 15 FT. OF VACATED LAKE AVENUE ADJOINING ALSO SOUTH 20 FT. OF NORTH 30 FT. OF VACATED BONNEY STREET ADJOINING LOTS 20 TO 22 AND EAST 25 FT. OF LOT 19 – GROVELAND PARK.

WATER EASEMENT RECORDING NO. 7104130045:

AN EASEMENT OVER, UNDER AND UPON THE NORTH 20 FEET OF THAT PORTION OF SUNWEST ESTATES AS RECORDED IN VOLUME 93 OF PLATS, PAGE 35 RECORDS OF KING COUNTY, WASHINGTON LYING EASTERLY OF THE EAST LINE OF LOT 1 OF SAID PLAT.

WATER EASEMENT RECORDING NO. 7203270337:

THAT PORTION OF VACATED BLOCK 2 AND BORDER STREET, GROVELAND PARK ACCORDING TO PLAT RECORDED IN VOLUME 8 OF PLATS, PAGE 36, RECORDS OF KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS;

THE WEST 30 FEET OF LOTS 8 AND 23 IN SAID BLOCK 2 AND THE NORTH 30 FEET OF THAT PORTION OF VACATED BONNEY STREET LYING BETWEEN THE WEST LINE OF SAID LOT 23 BLOCK 2 PRODUCED SOUTH AND THE WESTERLY LINE OF WEST MERCER WAY AND THAT PORTION OF VACATED ANDERSON AVENUE AND SAID BLOCK 2 WITHIN THE FOLLOWING DESCRIBED TRACT: BEGINNING AT A POINT ON THE SOUTHERLY MARGIN OF THE NORTH 30 FEET OF THE VACATED BONNEY STREET 70 FEET WEST OF THE WESTERLY MARGIN OF WEST MERCER WAY; THENCE EAST ALONG SAID SOUTHERLY MARGIN TO THE WESTERLY MARGIN OF WEST MERCER WAY; THENCE NORTHERLY ALONG THE WEST MARGIN OF WEST MERCER WAY A DISTANCE OF 110 FEET AND THENCE IN A STRAIGHT LINE TO THE POINT OF BEGINNING.

TRACT "A"

PER THE PLAT OF SUN WEST ESTATES:

TRACT "A" SHALL BE A PRIVATE ROAD WITH EACH LOT HAVING AN UNDIVIDED INTEREST THEREIN. TRACT "A" SHALL BE SUBJECT TO EASEMENTS FOR PUBLIC AND PRIVATE UTILITIES INCLUDING CITY OF MERCER ISLAND, MERCER ISLAND SEWER DISTRICT, PUGET SOUND POWER AND LIGHT CO., PACIFIC NORTHWEST BELL CO. AND WASHINGTON NATURAL GAS CO.

APEX

30 0 15 30
(IN FEET)
1 inch = 30ft.
GRAPHIC SCALE

LEGEND

- FOUND MONUMENT
- FOUND REBAR & CAP
- TPN TAX PARCEL NUMBER
- STORM CATCH BASIN
- SD — SD — SD — BURIED STORM DRAIN LINE
- SANITARY SEWER MANHOLE
- SS — SS — SS — BURIED SANITARY SEWER LINE
- IE INVERT ELEVATION
- PVC PLASTIC PIPE
- CONC CONCRETE PIPE
- CMP CORRUGATED METAL PIPE
- BOUNDARY LINE
- ADJOINER PROPERTY BOUNDARY
- RIGHT OF WAY LINE
- ROAD CENTERLINE
- EASEMENT LINE
- PLAT LOT LINE

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT THIS MAP CORRECTLY REPRESENTS A UTILITY SURVEY MADE BY ME OR UNDER MY DIRECTION AND TO THE BEST OF MY KNOWLEDGE REPRESENTS THE STORM AND SANITARY SEWER FEATURES AS THEY EXIST ON THE GROUND AS OF 08/17/2021

KURT A. PARCHER P.L.S. NO. 49286 DATE

REV NO	REVISION DESCRIPTION	DATE	BY

Apex Engineering PLLC
2601 South 35th Street, Suite 200
Tacoma, Washington 98409-7479
(253) 473-4494 FAX: (253) 473-0599

TITLE
STORM AND SANITARY SEWER AS-BUILT

CLIENT
TOMOKO LUMPKIN
5401 WEST MERCER WAY
MERCER ISLAND, WA 98040

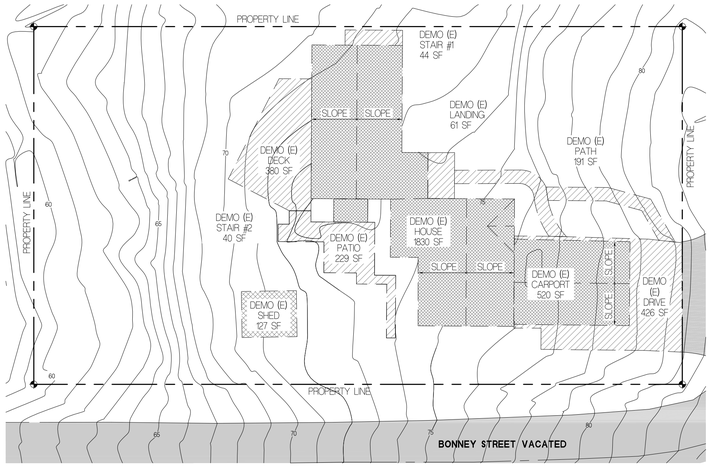
DATE SEALED

KURT A. PARCHER
STATE OF WASHINGTON
49286
REGISTERED
PROFESSIONAL LAND SURVEYOR

PROJECT MANAGER KAP
DESIGN
DRAWN KAP
CHECKED
SEC 24 T 24 R 4E
FILE NO 35805
DATE 9/3/2021
SCALE

SHEET 1 OF 1
FILE NO 35805

I:\35805\Survey\35805-sv.dwg



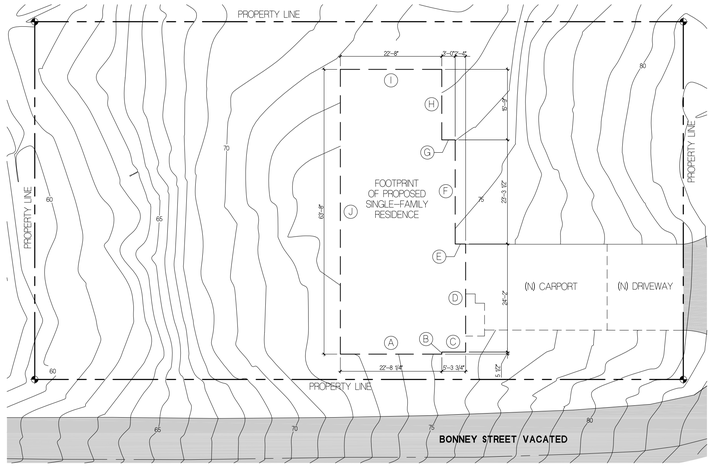
LEGEND

(E) HOUSE TO BE REPLACED

(E) HARDSCAPE TO BE DEMO'D

N 6 DEMOLITION PLAN
1/16"=1'-0" 2002A-SITE.dwg

0 2' 4' 8' 16' 32'



N 5 AVERAGE BUILDING ELEVATION CALCULATION
1/16"=1'-0" 2002A-SITE.dwg

0 2' 4' 8' 16' 32'

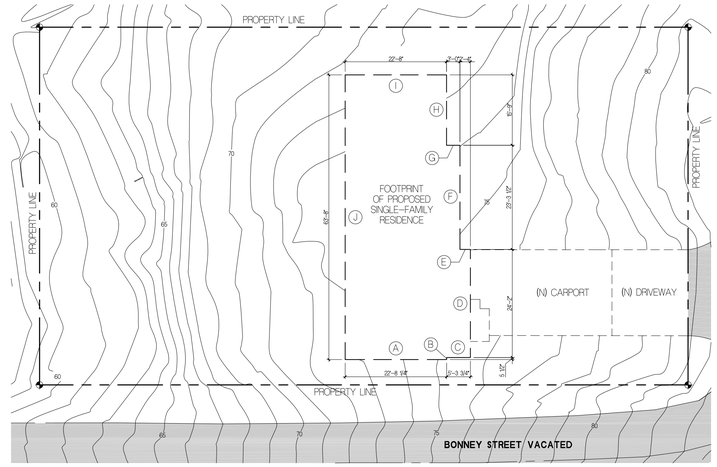
AVERAGE BUILDING ELEVATION (ABE) CALCULATION (MICC 19.02.020.E)

WALL SEGMENT	MID-POINT ELEV (ME)	SEGMENT LENGTH (SL)	ME x SL
A	73.80	22.70	1675.26
B	75.00	0.46	34.50
C	75.40	5.30	399.62
D	75.50	24.20	1827.10
E	75.00	2.30	172.50
F	75.60	23.30	1761.48
G	73.75	3.00	221.25
H	73.00	15.75	1149.75
I	72.00	22.70	1634.40
J	74.00	63.70	4713.80
SUBTOTAL		183.41	13589.66

AVERAGE BUILDING ELEVATION = 13591.40 / 183.41 = **74.09**

(74.09' OR 74'-1")

MAXIMUM BUILDING ELEVATION ALLOWED = ABE + 30' = **104.09**



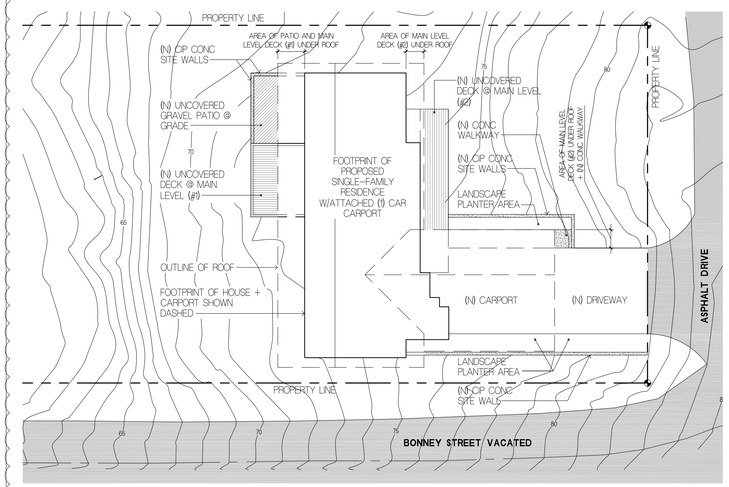
N 4 BASEMENT FLOOR AREA CALCULATION
1/16"=1'-0" 2002A-SITE.dwg

0 2' 4' 8' 16' 32'

EXCLUDED BASEMENT AREA CALCULATION (MICC 19.02.020.A & APPENDIX B)

WALL SEGMENT	LENGTH (FT)	MID-POINT ELEVATION	MID-POINT HT	FLR HT	MID-PT HT x FLR HT	COVERAGE	RESULT
A	22.70	73.80	1.05	9.44	0.11	11.12	11%
B	0.46	75.00	2.25	9.44	0.24	23.83	24%
C	5.30	75.40	2.65	9.44	0.28	28.07	28%
D	24.20	75.50	2.75	9.44	0.29	29.13	29%
E	2.30	75.00	2.25	9.44	0.24	23.83	24%
F	23.30	75.60	2.85	9.44	0.30	30.19	30%
G	3.00	73.75	1.00	9.44	0.11	10.59	11%
H	15.75	73.00	0.25	9.44	0.03	2.65	3%
I	22.70	72.00	0.00	9.44	0.00	0.00	0%
J	63.70	74.00	1.25	9.44	0.13	13.24	13%
SUBTOTAL	183.41					172.67	
AVERAGE COVERAGE						17.27	

BASEMENT AREA SF INCLUDING CONDITIONED AND UNCONDITIONED) =	1634.00
BASEMENT AREA (BA) x AVERAGE COVERAGE (AC) =	28214.19
BC x AC / TOTAL OF ALL WALL SEGMENT LENGTHS =	153.83

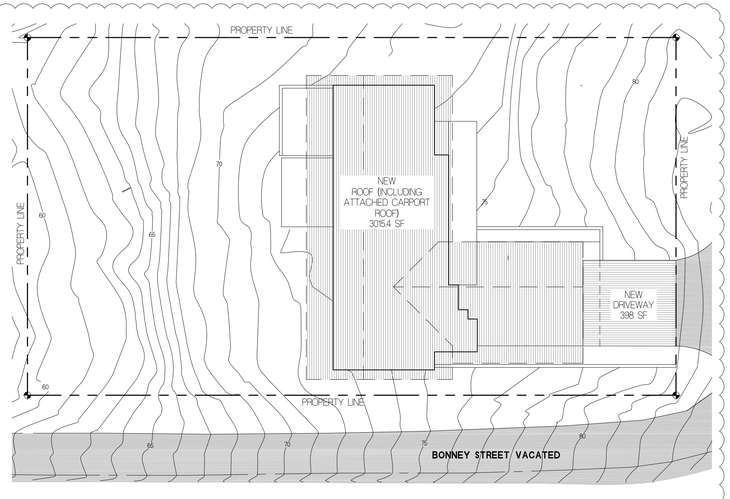


N 3 HARDSCAPE CALCULATION
1/16"=1'-0" 2002A-SITE.dwg

0 2' 4' 8' 16' 32'

HARDSCAPE CALCULATIONS (MICC 19.02.020.3.B)

EXISTING HARDSCAPE SURFACE	AREA (SF)	NEW HARDSCAPE SURFACE	AREA (SF)
EXISTING UNCOVERED DECK	373	NEW UNCOVERED DECK #1	99
EXISTING UNCOVERED PATIO	228	NEW UNCOVERED DECK #2	147
EXISTING WALKWAY	191	NEW UNCOVERED GRAVEL PATIO	81
EXISTING STAIR #1	44	WALKWAY	15.4
EXISTING STAIR #2	40	NEW SITE WALLS	70.7
EXISTING TOTAL HARDSCAPE SURFACE TO BE REMOVED	876	NEW + REPLACED HARDSCAPE SURFACE	413.1
TOTAL PROJECT HARDSCAPE AREA = (EXISTING TO REMAIN - EXISTING TO BE REMOVED) + NEW			413.1
HARDSCAPE % = NEW / 11,600 (LOT AREA) x 100			3.6



N 2 LOT COVERAGE + GFA CALCULATION
1/16"=1'-0" 2002A-SITE.dwg

0 2' 4' 8' 16' 32'

LOT COVERAGE CALCULATION

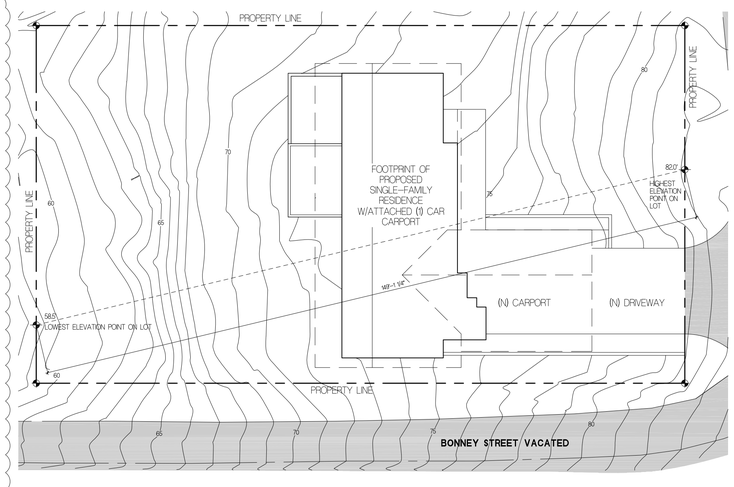
EXISTING:	
MAIN ROOF STRUCTURE:	1449
ACCESSORY BUILDING ROOF:	647
VEHICULAR USE:	426
COVERED PATIOS AND DECKS:	0
TOTAL EXISTING LOT COVERAGE:	2522
TOTAL PROPOSED LOT AREA TO BE REMOVED:	2522
NEW:	
TOTAL ROOF STRUCTURE:	2221
ACCESSORY BUILDING ROOF:	794
VEHICULAR USE:	400
COVERED PATIOS AND DECKS:	0
TOTAL NEW LOT COVERAGE:	3415
3415 / 11,600 x 100 =	29.4%

29.4% COVERAGE < 35% : OK

GROSS FLOOR AREA CALCULATION

	EXISTING:	NEW:
UPPER FLOOR:	560	0
MAIN FLOOR:	1370	1644
BASEMENT FLOOR:	0	1634
CARPORT:	520	520
ACCESSORY BUILDINGS:	127	0
ADU:	0	0
DECKS:	0	169
BASEMENT AREA EXCLUDED:	0	154
150% GFA MODIFIER (+12):	0	577
STAIRCASE GFA MODIFIER:	0	0
TOTAL AREA REMOVED:	2577	0
TOTAL GFA:	0	4390
4390 / 11,600 X 100 =		37.8%

37.8% GFA < 40% : OK



N 1 LOT SLOPE CALCULATION
1/16"=1'-0" 2002A-SITE.dwg

0 2' 4' 8' 16' 32'

LOT SLOPE CALCULATION

HIGHEST ELEVATION	82.0'
LOWEST ELEVATION	-59.5'
DIFFERENCE IN HT	23.5'
SHORTEST HORIZONTAL DISTANCE BETWEEN PTS.	149.1'
LOT SLOPE: 23.5' / 149.1' x 100 =	15.7%

15.7% SLOPE = MAXIMUM LOT COVERAGE OF 35%; REQUIRED LANDSCAPING AREA = 65%

GROSS/NET LOT AREA:	11,600
ALLOWED LOT COVERAGE:	4060

Suyama Peterson Deguchi
8601 8th Avenue South Seattle, Washington 98108
P 2062560809

Project Title
LUMPKIN RESIDENCE
5401 W. MERCER WAY
MERCER ISLAND, WA, 98040

7173 REGISTERED ARCHITECT JANET DEGUCHI STATE OF WASHINGTON

Drawing Title
LAND USE AND BUILDING CODE DIAGRAMS

Date
03/17/2021

Job No.
2002

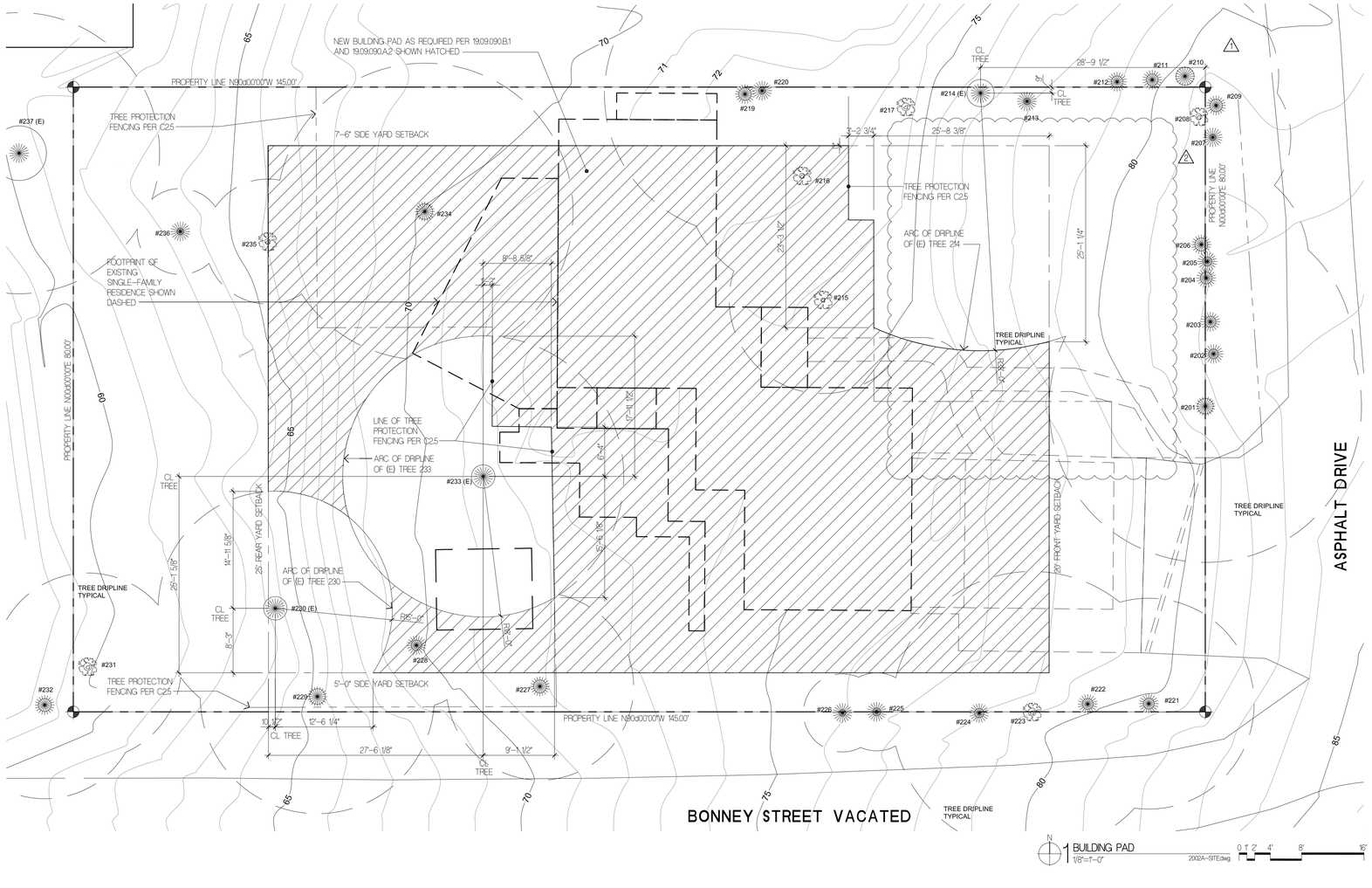
ISSUE	DATE
PERMIT SET	03/17/2021
PERMIT CORRECTION #1	09/01/2021
PERMIT CORRECTION #2	10/21/2021
⚠ PERMIT REVISION #1	04/28/2022

PERMIT REVISION #1

Sheet No.

TS-2

Suyama Peterson Deguchi
8601 8th Avenue South Seattle, Washington 98108
P: 2062560809



Project Title
LUMPKIN RESIDENCE
5401 W. MERCER WAY
MERCER ISLAND, WA. 98040

7173 REGISTERED ARCHITECT JAMES T. DEGUCHI STATE OF WASHINGTON

Drawing Title
LAND USE AND BUILDING CODE DIAGRAMS

Date
09/01/2021

Job No.
2002

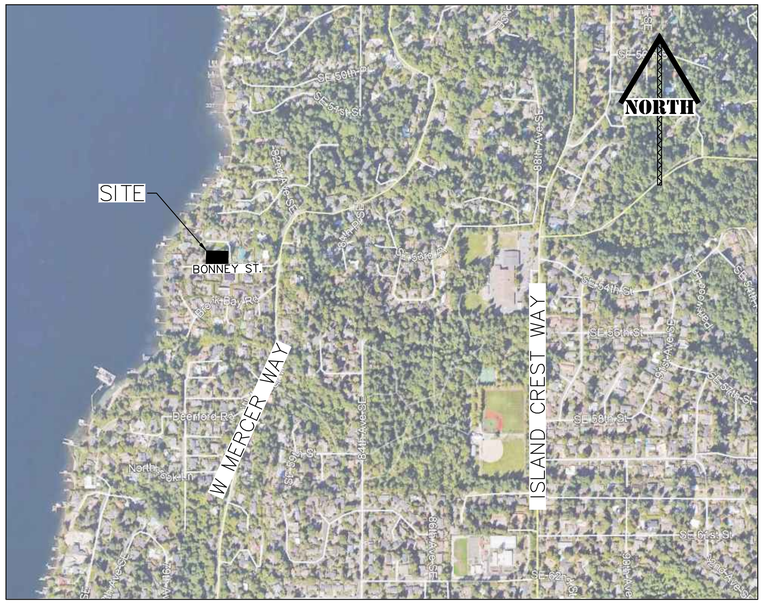
ISSUE	DATE
PERMIT CORRECTION #1	09/01/21
1 PERMIT CORRECTION #2	10/21/2021
2 PERMIT REVISION #1	04/28/2022

PERMIT REVISION #1

Sheet No.

TS-2.1

LUMPKIN RESIDENCE



VICINITY MAP

SCALE: 1" = 1,000' APPROX.

LEGAL DESCRIPTION

PARCEL #: 294890-0022

(PER FIRST AMERICAN TITLE INSURANCE COMPANY COMMITMENT NO. 4209-3803268,
DATED AUGUST 5, 2021 8:00 AM)
REAL PROPERTY IN THE COUNTY OF KING, STATE OF WASHINGTON, DESCRIBED AS FOLLOWS:

PARCEL A:
THE SOUTH 70 FEET OF EAST 25 FEET OF LOT 19 AND SOUTH 70 FEET OF LOTS 20, 21 AND 22, BLOCK 2, GROVELAND PARK, A VACATED PLAT AND ADJOINING 10 FEET OF VACATED BONNEY STREET, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 8 OF PLATS, PAGE 36, IN KING COUNTY, WASHINGTON;

PARCEL B:
A PERPETUAL NON-EXCLUSIVE EASEMENT FOR DRIVEWAY OVER A STRIP OF LAND 30 FEET IN WIDTH, SOUTH LINE THEREOF IS COINCIDENT WITH THE CENTER LINE OF VACATED BONNEY STREET, AND SAID EASEMENT OR RIGHT OF WAY EXTENDING TO THE WESTERLY LINE OF WEST MERCER WAY ALSO KNOWN AS MERCER ISLAND BOULEVARD, THE WESTERLY END OF SAID EASEMENT OR RIGHT OF WAY BEING THE EAST LINE OF ABOVE DESCRIBED TRACT AND SAID EAST LINE EXTENDED SOUTH 20 FEET TO THE CENTER LINE OF SAID VACATED BONNEY STREET;

EXCEPT ANY PORTION THEREOF LYING WITHIN THE MAIN TRACT.

EASEMENTS

SEWER EASEMENT RECORDING NO. 5776698:
A 10 FT. STRIP OF LAND 5 FT. ON EITHER SIDE OF SIDE SEWER AS INSTALLED FROM SEWER MAIN NORTH A DISTANT OF 8 FT. AND ALSO THE SOUTH 12 FT. OF THE FOLLOWING DESCRIBED TRACT: SOUTH 70 FT. OF LOTS 16, 17, 18 AND WEST 15 FT. OF LOT 19 AND NORTH 30 FT. OF VACATED BONNEY STREET ADJOINING AND EAST 15 FT. OF VACATED LAKE AVENUE ADJOINING ALSO SOUTH 20 FT. OF NORTH 30 FT. OF VACATED BONNEY STREET ADJOINING LOTS 20 TO 22 AND EAST 25 FT. OF LOT 19 – GROVELAND PARK.

WATER EASEMENT RECORDING NO. 7104130045:
AN EASEMENT OVER, UNDER AND UPON THE NORTH 20 FEET OF THAT PORTION OF SUNWEST ESTATES AS RECORDED IN VOLUME 93 OF PLATS, PAGE 35 RECORDS OF KING COUNTY, WASHINGTON LYING EASTERLY OF THE EAST LINE OF LOT 1 OF SAID PLAT.

WATER EASEMENT RECORDING NO. 7203270337:
THAT PORTION OF VACATED BLOCK 2 AND BORDER STREET, GROVELAND PARK ACCORDING TO PLAT RECORDED IN VOLUME 8 OF PLATS, PAGE 36, RECORDS OF KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS;
THE WEST 30 FEET OF LOTS 8 AND 23 IN SAID BLOCK 2 AND THE NORTH 30 FEET OF THAT PORTION OF VACATED BONNEY STREET LYING BETWEEN THE WEST LINE OF SAID LOT 23 BLOCK 2 PRODUCED SOUTH AND THE WESTERLY LINE OF WEST MERCER WAY AND THAT PORTION OF VACATED ANDERSON AVENUE AND SAID BLOCK 2 WITHIN THE FOLLOWING DESCRIBED TRACT: BEGINNING AT A POINT ON THE SOUTHERLY MARGIN OF THE NORTH 30 FEET OF THE VACATED BONNEY STREET 70 FEET WEST OF THE WESTERLY MARGIN OF WEST MERCER WAY; THENCE EAST ALONG SAID SOUTHERLY MARGIN TO THE WESTERLY MARGIN OF WEST MERCER WAY; THENCE NORTHERLY ALONG THE WEST MARGIN OF WEST MERCER WAY A DISTANCE OF 110 FEET AND THENCE IN A STRAIGHT LINE TO THE POINT OF BEGINNING.

PER THE PLAT OF SUN WEST ESTATES: TRACT "A" SHALL BE A PRIVATE ROAD WITH EACH LOT HAVING AN UNDIVIDED INTEREST THEREIN. TRACT "A" SHALL BE SUBJECT TO EASEMENTS FOR PUBLIC AND PRIVATE UTILITIES INCLUDING CITY OF MERCER ISLAND, MERCER ISLAND SEWER DISTRICT, PUGET SOUND POWER AND LIGHT CO., PACIFIC NORTHWEST BELL CO. AND WASHINGTON NATURAL GAS CO.

LEGEND AND ABBREVIATIONS

PROPOSED

- COM — COMMUNICATION LINE
- OHC — OVERHEAD COMMUNICATION LINE
- E — ELECTRIC LINE
- OHE — OVERHEAD ELECTRIC LINE
- FO — FIBER OPTIC LINE
- G — NATURAL GAS LINE
- S — SANITARY SEWER LINE
- D — STORM DRAIN LINE
- T — TELEPHONE LINE
- W — WATER LINE
- FM — FORCE MAIN
- EDGE OF ASPHALT
- X — X — FENCE LINE
- TO BE REMOVED
- PROPERTY LINE
- RIGHT OF WAY LINE
- STREET CENTERLINE
- LIMIT OF DISTURBANCE/CLEARNING LIMIT
- DITCH LINE
- SECURITY FENCE
- FILTER FABRIC FENCE
- EDGE OF VEGETATION
- EDGE OF WETLAND
- ASPHALT SURFACE
- CONCRETE SURFACE
- STABILIZED CONSTRUCTION ENTRANCE

- COMM MANHOLE
- COMM BOX
- COMM POLE
- ANCHOR
- GUY POLE
- ELEC BOX
- LIGHT
- YARD LIGHT
- LUMINAIRE
- METER
- ELEC MANHOLE
- POLE
- TRANSFORMER
- GAS METER
- GAS VALVE
- SEWER MANHOLE
- CLEANOUT
- CB MANHOLE
- STORM MANHOLE
- CATCH BASIN (CB)
- CULVERT
- CLEANOUT
- YARD DRAIN
- AIR RELEASE
- BLOW OFF
- FIRE DEPT CONN (FDC)
- HYDRANT
- METER
- MANHOLE
- POST INDICATOR
- THRUST BLOCK
- VAULT
- VALVE
- WELL
- IRR METER
- SPRINKLER
- IRR VALVE
- PUMP
- INLET PROTECTION
- REMOVE TREE
- COMPOST SOCK
- FLAG
- MONITOR WELL
- SIGN
- TEST PIT
- WETLAND FLAG
- BUSH
- SHRUB
- CONIFER TREE
- DECIDUOUS TREE
- STOCK PILE

SURVEY LINE LEGEND

- SANITARY SEWER LINE — SS
- STORM DRAIN LINE — SD
- WATER LINE — W
- GAS LINE — GAS
- OVER HEAD ELECTRICAL LINE — OHE
- OVER HEAD COMMUNICATION LINE — OHT
- OVER HEAD GUY WIRE — OHW
- BURIED ELECTRICAL CONDUIT — ECD
- BURIED COMMUNICATION CONDUIT — TD
- BURIED FIBER OPTIC CONDUIT — FOD
- STEAM LINE — STM
- ROCKERY
- GUARD RAIL
- STOCKADE FENCE
- BARB WIRE FENCE
- CHAIN LINK FENCE

SURVEY LEGEND

SET REBAR & CAP PLS No. 29536	08/6/2019
FOUND REBAR & CAP LS# 34144 AT PROPERTY CORNER	08/06/2019
FOUND TACK IN CONCRETE MONUMENT	8/24/2017
FOUND STONE MONUMENT WITH BRASS TACK	8/24/2017
FOUND MAGNETIC NAIL	
SET LINE HUB, TACK & DISC PLS No. 29536	
SET LEAD & TACK WITH DISC PLS No. 29536	
CALCULATION POINT	

ABBREVIATIONS

@	AT
AC	ACRES
ADA	AMERICANS W/ DISABILITIES ACT
BC	BACK OF CURB
BW	BOTTOM OF WALL
CC	CURB CUT
CL	CENTERLINE
CO	CLEAN OUT
COMI	CITY OF MERCER ISLAND
CY	CUBIC YARDS
DS	DOWNSPOUT
E	EAST
ESC	EROSION AND SEDIMENT CONTROL
EX	EXISTING
FDCO	FOUNDATION DRAIN CLEAN OUT
FH	FIRE HYDRANT
FL	FLOWLINE
FM	FORCE MAIN
N	NORTH
NTS	NOT TO SCALE
OHWM	ORDINARY HIGH WATER MARK
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE PIPE
ROW	RIGHT OF WAY
S	SOUTH
SCH	SCHEDULE
SD	STORM DRAIN
SDCO	STORM DRAIN CLEAN OUT
SL	SLOPE
SSCO	SANITARY SEWER CLEAN OUT
STD	STANDARD
S/W	SIDEWALK
TC	TOP OF CURB
TS	TOP OF STAIRS
TW	TOP OF WALL
W	WEST

SHEET INDEX

SHEET #	SHEET TITLE
C0.0	COVER SHEET
C0.1	NOTES
C1.0	TESC PLAN
C1.1	TESC DETAIL
C2.0	GRADING & UTILITY PLAN
C2.1	GRADING & UTILITY SECTIONS
C2.2	DETAILS
C2.3	DETAILS
C2.4	STORMWATER OVERVIEW
C2.5	TREE & CIVIL COMPOSITE PLAN

OWNER/APPLICANT:
TOMOKO S LUMPKIN
5401 W MERCER WAY
MERCER ISLAND, WA 98040
TOMOKOLUMPKIN@GMAIL.COM
206-499-0160

CIVIL ENGINEER/CONTACT:
RED BARN ENGINEERING INC.
6610 NE 181ST ST STE 2
KENMORE, WA 98028
CONTACT: REBEKAH WESTON, PE
REBEKAH@REDBARN-ENGINEERING.COM
206-200-7174

ARCHITECT:
JAY DEGUCHI, ARCHITECT
8601 8TH AVE S
SEATTLE, WA 98108
206-256-0809
JAY@S-PD.COM

GEOTECHNICAL ENGINEER:
KEITH JOHNSON
GROUP NORTHWEST, INC.
13705 BEL-RED ROAD
BELLEVUE, WA 98005
425-649-8757

PARCEL #: 294890-0022
LOT SIZE: 11,600 SF±
ZONE: R-15

EXISTING IMPERVIOUS: 3,744 SF

TOTAL NEW AND REPLACED IMPERVIOUS AREA: 4,156 SF

DISTURBED AREA: APPROX. 5,000 SF±

HORIZONTAL DATUM:

ASSUMED

VERTICAL DATUM:

NAVD '88 TIED TO BM'S

BENCH MARK:

CASED MONUMENT TACK IN LEAD
CITY BENCHMARK #3144
ELEVATION = 156.21'

DATUM

FLOODPLAIN ELEVATIONS:

SITE IS WITHIN ZONE 'X', AREA DETERMINED TO BE OUTSIDE 500-YEAR FLOOD PER FEMA PANEL 53033C0685F

WATER DISTRICT: MERCER ISLAND PUBLIC WORKS

CONSTRUCTION SEQUENCE:

1. FLAG CLEARING LIMITS.
2. INSTALL CSC.
3. PERFORM ROUGH GRADING.
4. CONSTRUCT BUILDING ADDITION.
5. PERFORM FINAL GRADING.
6. INSTALL PLANTINGS.
7. REMOVE CSC.

QUANTITIES (FOR PERMITTING ONLY)	CY
CUT	50
FILL	150
NET CUT/FILL	+100

DISCLAIMER:
RED BARN ENGINEERING INC. SHALL NOT BE HELD RESPONSIBLE FOR DISCREPANCIES IN THE SITE DIMENSIONS AND ELEVATIONS PREPARED BY OTHERS. IN THE EVENT THAT A DISCREPANCY OCCURS THAT AFFECTS THE DESIGN, CONTACT RED BARN ENGINEERING INC. TO PROVIDE A SITE VISIT AND DESIGN UPDATE.

Clearing / Grading Approval

Signature: _____

Date: _____

Engineering / Drainage Approval

Signature: _____

Date: _____

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CALL BEFORE YOU DIG

REBEKAH J WESTON
STATE OF WASHINGTON
45286
REGISTERED PROFESSIONAL ENGINEER
05/02/2022

DESIGN	RJW
DRAWN	EJW
CHECKED	RJW

REV/SUBMITTAL	DATE
1 CITY COMMENTS	9/07/21
2 CITY COMMENTS	10/21/21
3 DESIGN REVISION	05/02/22

PROJECT NAME:
LUMPKIN RESIDENCE

PROJECT ADDRESS:
5401 W MERCER WAY
MERCER ISLAND, WA 98040

SHEET TITLE:
COVER

SHEET NO.:
C0.0

RB PROJECT NO.:
21-0035

GENERAL NOTES

1. ALL IMPROVEMENTS SHALL BE INSTALLED PURSUANT TO PLANS APPROVED BY THE CITY IN ACCORDANCE WITH THE APPROVED CONSTRUCTION SCHEDULE.
2. ALL CONSTRUCTION SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE CITY OF MERCER ISLAND, CONDITIONS OF PERMITS ISSUED, THE GEOTECHNICAL EVALUATION RECOMMENDATIONS AND CONSTRUCTION PLANS ACCEPTED BY THE CITY. THE ENGINEER OF RECORD MAY BE REQUIRED TO MONITOR THE CONSTRUCTION, EROSION CONTROL, SITE STABILIZATION MEASURES AND PROVIDE INSPECTION REPORTS TO THE CITY ENGINEER THAT DOCUMENT ALL OF THE WORK PERFORMED.
3. THE SEASON FOR CLEARING, GRADING, AND THE CONSTRUCTION OF UTILITIES, STORM DRAINAGE FACILITIES, ROADWAYS AND RETAINING WALLS SHALL NOT BEGIN UNTIL APRIL 1, AND SHALL END BY OCTOBER 1 OF ANY YEAR, UNLESS OTHERWISE APPROVED BY THE CODE OFFICIAL AND CITY ENGINEER.
4. ALL IMPROVEMENTS SHALL BE CONSTRUCTED IN A MANNER THAT RETAINS AS MUCH NATURAL VEGETATION AS POSSIBLE.
5. THE TYPE OF EQUIPMENT TO BE USED FOR LAND CLEARING AND ROADWAY AND UTILITIES CONSTRUCTION SHALL BE DEFINED AT THE PRE-CONSTRUCTION CONFERENCE WITH THE CITY. THE NECESSARY DEVELOPMENT AND ROW USE PERMITS SHALL BE OBTAINED PRIOR TO MOVING EQUIPMENT ONTO THE SITE.
6. THE CITY ENGINEER MAY REQUIRE THAT CERTAIN IMPROVEMENTS BE HAND DUG.
7. THE CITY MAY REQUIRE THAT SPECIFIC CLEARING, GRADING, EXCAVATION, OR SENSITIVE CONSTRUCTION WORK BE EVALUATED AND DETAILED BY A GEOTECHNICAL ENGINEER. AS A CONDITION FOR COMPLETION OF THE WORK, THE CITY MAY REQUIRE THAT THE ENGINEER BE PRESENT DURING THE WORK TO MONITOR AND REVIEW SITE CONDITIONS, AND TO RECOMMEND APPROPRIATE SPECIAL CONSTRUCTION TECHNIQUES OR MITIGATING MEASURES.
8. ALL DAMAGE TO ADJACENT PROPERTIES OR PUBLIC RIGHTS-OF-WAY RESULTING FROM CONSTRUCTION (E.G., SILTATION, MUD, WATER, RUNOFF, ROADWAY DAMAGE CAUSED BY CONSTRUCTION EQUIPMENT OR HAULING) SHALL BE EXPEDITIOUSLY MITIGATED AND REPAIRED BY THE CONTRACTOR, AT THEIR EXPENSE. FAILURE TO MITIGATE AND REPAIR SAID DAMAGE, OR TO COMPLY WITH THE ACCEPTED CONSTRUCTION PLANS, THE PERMITS ISSUED BY THE CITY, OR THE CITY REQUIREMENT FOR CORRECTIVE ACTION SHALL BE CAUSE FOR THE ISSUANCE OF A "STOP WORK" ORDER, FORECLOSURE ON THE PLAT PERFORMANCE GUARANTEE, AND/OR OTHER MEASURES DEEMED APPROPRIATE BY THE CITY ENGINEER.
9. FOLLOWING CONSTRUCTION, THE GEOTECHNICAL ENGINEER SHALL SUBMIT A LETTER TO THE CITY CONTAINING THE FOLLOWING STATEMENTS:
   THIS CONSTRUCTION HAS BEEN COMPLETED SUBSTANTIALLY IN ACCORDANCE WITH RECOMMENDATIONS CONTAINED WITHIN THE GEOTECHNICAL INVESTIGATION AND EVALUATION REPORT AND MADE IN CONNECTION WITH OUR ON-SITE MONITORING OF THE ACTIVITIES.
10. FOLLOWING CONSTRUCTION, THE PROJECT CIVIL ENGINEER SHALL SUBMIT A LETTER TO THE CITY CONTAINING THE FOLLOWING STATEMENT:
    THIS CONSTRUCTION HAS BEEN COMPLETED SUBSTANTIALLY IN ACCORDANCE WITH RECOMMENDATIONS CONTAINED WITHIN THE STORM DRAINAGE TECHNICAL INFORMATION REPORT, APPROVED PLAN SET, AND OUR ONSITE MONITORING OF THE ACTIVITIES.
11. IF THE DEVELOPER WISHES TO DEFER CERTAIN ON-SITE OR OFF-SITE IMPROVEMENTS, (I.E. LANDSCAPING, CURBS OR SIDEWALKS), WRITTEN APPLICATION WITH FULL AND COMPLETE ENGINEERING DRAWINGS SHALL BE SUBMITTED TO THE CITY ENGINEER. THE APPLICANT SHALL STATE THE REASONS WHY SUCH DELAY IS NECESSARY. IF APPROVAL IS GRANTED, SECURITY IN THE FORM OF A BOND OR ASSIGNMENT OF FUNDS SHALL BE FURNISHED TO THE CITY OF MERCER ISLAND IN AN AMOUNT EQUAL TO A MINIMUM OF 150 PERCENT OF THE ESTIMATED COST OF THE REQUIRED IMPROVEMENTS. THE CITY ENGINEER MUST ACCEPT AND ESTABLISH THE BOND AMOUNT. SUCH SECURITY SHALL LIST THE EXACT WORK THAT SHALL BE PERFORMED BY THE APPLICANT AND SHALL SPECIFY THAT ALL OF THE DEFERRED IMPROVEMENTS SHALL BE COMPLETED WITHIN THE TIME SPECIFIED BY THE CITY ENGINEER, AND IF NO TIME IS SO SPECIFIED, THEN NOT LATER THAN ONE YEAR. ALL PLAT IMPROVEMENTS SHALL BE INSTALLED PRIOR TO THE ISSUANCE OF A BUILDING PERMIT FOR RESIDENTIAL CONSTRUCTION. REQUESTS TO CONCURRENTLY COMPLETE PLAT IMPROVEMENTS WITH BUILDING CONSTRUCTION PERMITS MUST BE MADE IN WRITING FOR REVIEW AND APPROVED BY THE CODE OFFICIAL IN CONSULTATION WITH CITY ENGINEER.
12. THE DEVELOPER SHALL SUBMIT AS-BUILT DRAWINGS SURVEYED BY A WASHINGTON STATE LICENSED PROFESSIONAL LAND SURVEYOR OF ALL UTILITY LINES, STORM DRAIN STUBS, WATER SERVICE LINES, AND DETAILED SIDE SEWER STUBS OR CONNECTIONS TO THE MUNICIPAL SEWAGE COLLECTION SYSTEM FOR EACH LOT PRIOR TO FINAL INSPECTION. AS-BUILT PLAN SHOULD BE PROVIDED IN HARDCOPY, AUTOCAD, DXF, AND PDF FORMAT TO BE INCORPORATED INTO THE CITY'S GIS SYSTEM.
13. A BILL OF SALE FOR ANY IMPROVEMENTS TO BE TRANSFERRED TO PUBLIC OWNERSHIP AND MAINTENANCE SHALL BE SUBMITTED TO THE CITY PRIOR TO FINAL INSPECTION OF PLAT IMPROVEMENT.

ON-SITE STORMWATER MANAGEMENT PLANTINGS

PLANTING GENERAL NOTES:

1. PLANTS SHALL BE SITED ACCORDING TO SUN, SOIL, WIND AND MOISTURE REQUIREMENTS.
2. AT A MINIMUM, PROVISIONS MUST BE MADE FOR SUPPLEMENTAL IRRIGATION DURING THE FIRST TWO GROWING SEASONS.

BIORETENTION CELLS, PLANTERS AND RAIN GARDEN NOTES:

1. FOR A LIST OF APPROVED PLANTS FOR BIORETENTION/RAIN GARDEN FACILITIES – SEE LANDSCAPE PLANS.
2. VEGETATION COVERAGE OF SELECTED PLANS MUST ACHIEVE 90-PERCENT COVERAGE WITHIN 2 YEARS OR ADDITIONAL PLANTINGS SHALL BE PROVIDED. UNLESS DESIGNED BY A LICENSED LANDSCAPE ARCHITECT, PROVIDE A MINIMUM OF 1 PLANT PER EVERY 2 SQUARE FEET OF BIORETENTION BOTTOM AND SLOPED SIDE AREA.
3. PROVIDE A MINIMUM OF THREE DIFFERENT SPECIES OF SHRUBS AND HERBACEOUS PLANTS IN EACH FACILITY.

STORMWATER FACILITIES/CONTROL OPERATIONS & MAINTENANCE REQUIREMENTS:

ALL STORMWATER FACILITIES/CONTROLS SHALL BE OPERATED AND MAINTAINED IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2016 SEATTLE STORMWATER MANUAL, APPENDIX G.

WATER NOTES:

1. CONTRACTOR TO COORDINATE EXACT LOCATION OF THE NEW WATER METER WITH THE CITY WATER DEPARTMENT DURING CONSTRUCTION.

EROSION & SEDIMENT CONTROL (ESC) NOTES:

A. PRIOR TO BEGINNING EARTH DISTURBING ACTIVITIES, INCLUDING CLEARING AND GRADING, ALL CLEARING LIMITS, EASEMENTS, SETBACKS, TREES AND DRAINAGE COURSES SHALL BE CLEARLY DEFINED AND MARKED IN THE FIELD TO PREVENT DAMAGE AND OFFSITE IMPACTS.

B. CONSTRUCTION VEHICLE ACCESS AND EXIT SHALL BE LIMITED TO ONE ROUTE IF POSSIBLE. ACCESS POINTS SHALL BE STABILIZED WITH QUARRY SPALLS OR CRUSHED ROCK TO MINIMIZE THE TRACKING OF SEDIMENTS ONTO PUBLIC STREETS. WHEEL WASH OR TIRE BATHS SHALL BE LOCATED ON-SITE. IF SEDIMENT IS TRANSPORTED ONTO A ROAD SURFACE, THE PAVEMENT SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE PAVEMENT BY SHOVELING OR SWEEPING AND BE TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.

C. PROPERTIES AND WATERWAYS DOWNSTREAM FROM THE DEVELOPMENT SITE SHALL BE PROTECTED FROM EROSION DUE TO INCREASES IN THE VOLUME, VELOCITY, AND PEAK FLOW RATE OF STORMWATER RUNOFF FROM THE PROJECT SITE.

D. PRIOR TO LEAVING THE SITE, STORMWATER RUNOFF SHALL PASS THROUGH A SEDIMENT POND, SEDIMENT TRAP, OR OTHER APPROVED SEDIMENT REMOVAL FACILITY. SEDIMENT PONDS AND TRAPS, VEGETATED BUFFER STRIPS, SEDIMENT BARRIERS OR FILTERS, DIKES, OR ANY OTHER APPROVED FACILITY INTENDED TO TRAP SEDIMENT ON-SITE SHALL BE CONSTRUCTED AS ONE OF THE FIRST STEPS IN GRADING. THESE FACILITIES SHALL BE FUNCTIONAL BEFORE ANY OTHER LAND DISTURBING ACTIVITY TAKES PLACE. EARTHEN STRUCTURES SUCH AS DAMS, DIKES, AND DIVERSIONS SHALL BE SEEDED AND MULCHED ACCORDING TO THE TIMING INDICATED UNDER ITEM E.

E. ALL EXPOSED AND UNWORKED SOILS SHALL BE STABILIZED BY THE PLACEMENT OF SOD OR OTHER VEGETATION, PLASTIC COVERING, MULCHING, APPLICATION OF BASE ROCK WITHIN AREAS TO BE PAVED, OR SOME OTHER APPROVED MEANS, TO PROTECT THE SOIL FROM THE EROSIVE FORCES OF RAINDROP IMPACT AND FLOWING WATER. FROM OCTOBER 1 THROUGH APRIL 30, NO SOILS SHALL REMAIN EXPOSED AND UNWORKED FOR MORE THAN 2 DAYS. FROM MAY 1 THROUGH SEPTEMBER 30, NO SOIL SHALL REMAIN EXPOSED AND UNWORKED FOR MORE THAN 7 DAYS. THIS CONDITION APPLIES TO ALL SOILS ON SITE, WHETHER AT FINAL GRADE OR NOT. THE SOIL STABILIZATION MEASURES SELECTED SHOULD BE APPROPRIATE FOR THE TIME OF YEAR, SITE CONDITIONS, ESTIMATED DURATION OF USE, AND THE POTENTIAL WATER QUALITY IMPACTS THAT THE STABILIZATION MEASURES MAY HAVE ON THE DOWNSTREAM WATERS. SOIL STOCKPILES SHALL BE STABILIZED AND PROTECTED WITH SEDIMENT TRAPPING MEASURES.

F. CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. CONSIDER SOIL TYPE AND ITS POTENTIAL FOR EROSION. REDUCE SLOPE RUNOFF VELOCITIES BY (1) REDUCING THE LENGTH OF CONTINUOUS SLOPES BY USING TERRACING AND DIVERSIONS, (2) REDUCING THE GRADE OF THE SLOPE, AND (3) ROUGHEN SLOPE SURFACE. CONTAIN DOWNSLOPE COLLECTED WATER IN PIPES OR PROTECTED CHANNELS.

G. ALL STORM DRAIN INLETS MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT STORMWATER RUNOFF SHALL NOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR TREATED TO REMOVE SEDIMENTS.

H. ALL TEMPORARY ON-SITE CONVEYANCE CHANNELS SHALL BE DESIGNED, CONSTRUCTED AND STABILIZED TO PREVENT EROSION. STABILIZATION, INCLUDING ARMORING MATERIAL, ADEQUATE TO PREVENT EROSION AT ALL DISCHARGE POINTS, ADJACENT STREAM BANKS, SLOPES AND DOWNSTREAM REACHES, SHALL BE PROVIDED.

I. ALL POLLUTANTS, INCLUDING WASTE MATERIALS AND DEMOLITION DEBRIS, THAT OCCUR ON-SITE DURING CONSTRUCTION SHALL BE HANDLED AND DISPOSED OF IN A MANNER THAT DOES NOT CAUSE CONTAMINATION OF STORMWATER. MAINTENANCE AND REPAIR OF HEAVY EQUIPMENT AND VEHICLES INVOLVING OIL CHANGES, HYDRAULIC SYSTEM DRAIN DOWN, SOLVENT AND DE-GREASING CLEANING OPERATIONS AND OTHER ACTIVITIES WHICH MAY RESULT IN DISCHARGE OR SPILLAGE OF POLLUTANTS TO THE GROUND OR INTO STORMWATER RUNOFF, MUST BE CONDUCTED UNDER COVER AND ON IMPERVIOUS SURFACES. THESE SURFACES SHALL BE CLEANED IMMEDIATELY FOLLOWING ANY DISCHARGE OR SPILLAGE INCIDENT. WHEEL WASH, OR TIRE BATH WASTEWATER, SHALL NOT BE DISCHARGED TO THE STORM DRAIN, OR ON-SITE STORMWATER TREATMENT SYSTEM.

J. ALL FOUNDATION, VAULT, AND TRENCH DE-WATERING WATER, WHICH HAS SIMILAR CHARACTERISTICS TO STORMWATER RUNOFF AT THE SITE, SHALL BE DISCHARGED INTO A CONTROLLED CONVEYANCE SYSTEM, PRIOR TO DISCHARGE TO A SEDIMENT TRAP OR SEDIMENT POND. CHANNELS MUST BE STABILIZED.

K. ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL FACILITIES SHALL BE MAINTAINED AND REPAIRED AS NEEDED TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION.

BIORETENTION SOIL MIX FOR COMPOST AMENDED AREAS:

PROJECTS WHICH USE THE FOLLOWING REQUIREMENTS FOR THE BIORETENTION SOIL MEDIA DO NOT HAVE TO TEST THE MEDIA FOR ITS SATURATED HYDRAULIC CONDUCTIVITY (AKA. INFILTRATION RATE). THEY MAY ASSUME THE RATES SPECIFIED IN THE SUBSECTION TITLED "DETERMINING BIORETENTION SOIL MIX INFILTRATION RATE."

MINERAL AGGREGATE

PERCENT FINES: A RANGE OF 2 TO 4 PERCENT PASSING THE #200 SIEVE IS IDEAL AND FINES SHOULD NOT BE ABOVE 5 PERCENT FOR A PROPER FUNCTIONING SPECIFICATION ACCORDING TO ASTM D422.

AGGREGATE GRADATION

THE AGGREGATE PORTION OF THE BSM SHOULD BE WELL-GRADED. ACCORDING TO ASTM D 2487-98 (CLASSIFICATION OF SOILS FOR ENGINEERING PURPOSES (UNIFIED SOIL CLASSIFICATION SYSTEM)), WELL-GRADED SAND SHOULD HAVE THE FOLLOWING GRADATION COEFFICIENTS:

- COEFFICIENT OF UNIFORMITY (CU = D60/D10) EQUAL TO OR GREATER THAN 4, AND
- COEFFICIENT OF CURVE (CC = (D30)2/D60 X D10) GREATER THAN OR EQUAL TO 1 AND LESS THAN OR EQUAL TO 3.

TABLE V-7.4.1 GENERAL GUIDELINE FOR MINERAL AGGREGATE GRADATION PROVIDES A GRADATION GUIDELINE FOR THE AGGREGATE COMPONENT OF A BIORETENTION SOIL MIX SPECIFICATION IN WESTERN WASHINGTON (HINMAN, ROBERTSON, 2007). THE SAND GRADATION BELOW IS OFTEN SUPPLIED AS A WELL-GRADED UTILITY OR SCREENED. WITH COMPOST THIS BLEND PROVIDES ENOUGH FINES FOR ADEQUATE WATER RETENTION, HYDRAULIC CONDUCTIVITY WITHIN RECOMMENDED RANGE (SEE BELOW), POLLUTANT REMOVAL CAPABILITY, AND PLANT GROWTH CHARACTERISTICS FOR MEETING DESIGN GUIDELINES AND OBJECTIVES.

TABLE V-7.4.1 GENERAL GUIDELINE FOR MINERAL AGGREGATE GRADATION

SIEVE SIZE	PERCENT PASSING
3/8"	100
#4	95-100
#10	75-90
#40	25-40
#100	4-10
#200	2-5

WHERE EXISTING SOILS MEET THE ABOVE AGGREGATE GRADATION, THOSE SOILS MAY BE AMENDED RATHER THAN IMPORTING MINERAL AGGREGATE.

COMPOST TO AGGREGATE RATIO, ORGANIC MATTER CONTENT, CATION EXCHANGE CAPACITY

- COMPOST TO AGGREGATE RATIO: 60-65 PERCENT MINERAL AGGREGATE, 35 – 40 PERCENT COMPOST BY VOLUME.
- ORGANIC MATTER CONTENT: 5 – 8 PERCENT BY WEIGHT.
- CATION EXCHANGE CAPACITY (CEC) MUST BE > 5 MILLIEQUIVALENTS/100 G DRY SOIL NOTE: SOIL MIXES MEETING THE ABOVE SPECIFICATIONS DO NOT HAVE TO BE TESTED FOR CEC. THEY WILL READILY MEET THE MINIMUM CEC.

COMPOST

TO ENSURE THAT THE BSM WILL SUPPORT HEALTHY PLANT GROWTH AND ROOT DEVELOPMENT, CONTRIBUTE TO BIOFILTRATION OF POLLUTANTS, AND NOT RESTRICT INFILTRATION WHEN USED IN THE PROPORTIONS CITED HEREIN, THE FOLLOWING COMPOST STANDARDS ARE REQUIRED.

- MEETS THE DEFINITION OF "COMPOSTED MATERIAL" IN WAC 173-350-100 AND COMPLIES WITH TESTING PARAMETERS AND OTHER STANDARDS IN WAC 173-350-220.
- PRODUCED AT A COMPOSTING FACILITY THAT IS PERMITTED BY THE JURISDICTIONAL HEALTH AUTHORITY. PERMITTED COMPOST FACILITIES IN WASHINGTON ARE INCLUDED ON A LIST AVAILABLE AT HTTP://WWW.ECY.WA.GOV/PROGRAMS/SWFA/ORGANICS/SOIL.HTML
- THE COMPOST PRODUCT MUST ORIGINATE A MINIMUM OF 65 PERCENT BY VOLUME FROM RECYCLED PLANT WASTE COMPRISED OF "YARD DEBRIS," "CROP RESIDUES," AND "BULKING AGENTS" AS THOSE TERMS ARE DEFINED IN WAC 173-350-100. A MAXIMUM OF 35 PERCENT BY VOLUME OF "POST-CONSUMER FOOD WASTE" AS DEFINED IN WAC 173-350-100, BUT NOT INCLUDING BIOSOLIDS, MAY BE SUBSTITUTED FOR RECYCLED PLANT WASTE.
- STABLE (LOW OXYGEN USE AND CO2 GENERATION) AND MATURE (CAPABLE OF SUPPORTING PLANT GROWTH) BY TESTS SHOWN BELOW. THIS IS CRITICAL TO PLANT SUCCESS IN A BIORETENTION SOIL MIXES.
- MOISTURE CONTENT RANGE: NO VISIBLE FREE WATER OR DUST PRODUCED WHEN HANDLING THE MATERIAL.
- TESTED IN ACCORDANCE WITH THE U.S. COMPOSTING COUNCIL "TEST METHOD FOR THE EXAMINATION OF COMPOST AND COMPOSTING" (TMECC), AS ESTABLISHED IN THE COMPOSTING COUNCIL'S "SEAL OF TESTING ASSURANCE" (STA) PROGRAM. MOST WASHINGTON COMPOST FACILITIES NOW USE THESE TESTS.
- SCREENED TO THE FOLLOWING SIZE GRADATIONS FOR FINE COMPOST WHEN TESTED IN ACCORDANCE WITH TMECC TEST METHOD 02.02-B, SAMPLE SIEVING FOR AGGREGATE SIZE CLASSIFICATION." FINE COMPOST SHALL MEET THE FOLLOWING GRADATION BY DRY WEIGHT
  - MINIMUM PERCENT PASSING 2": 100%
  - MINIMUM PERCENT PASSING 1": 99%
  - MINIMUM PERCENT PASSING 5/8": 90%
  - MINIMUM PERCENT PASSING ¼": 75%
- PH BETWEEN 6.0 AND 8.5 (TMECC 04.11-A). "PHYSICAL CONTAMINANTS" (AS DEFINED IN WAC 173-350-100) CONTENT LESS THAT 1% BY WEIGHT (TMECC 03.08-A) TOTAL, NOT TO EXCEED 0.25 PERCENT FILM PLASTIC BY DRY WEIGHT.
- MINIMUM ORGANIC MATTER CONTENT OF 40% (TMECC 05.07-A "LOSS ON IGNITION)
- SOLUBLE SALT CONTENT LESS THAN 4.0 DS/M (MMHOS/CM) (TMECC 04.10-A "ELECTRICAL CONDUCTIVITY, 1:5 SLURRY METHOD, MASS BASIS")
- MATURITY INDICATORS FROM A CUCUMBER BIOASSAY (TMECC 05.05-A "SEEDLING EMERGENCE AND RELATIVE GROWTH) MUST BE GREATER THAN 80% FOR BOTH EMERGENCE AND VIGOR")
- STABILITY OF 7 MG CO2-C/G OM/DAY OR BELOW (TMECC 05.08-B "CARBON DIOXIDE EVOLUTION RATE")
- CARBON TO NITROGEN RATIO (TMECC 05.02A " CARBON TO NITROGEN RATIO" WHICH USES 04.01 "ORGANIC CARBON" AND 04.02D "TOTAL NITROGEN BY OXIDATION") OF LESS THAN 25:1. THE C:N RATIO MAY BE UP TO 35:1 FOR PLANTINGS COMPOSED ENTIRELY OF PUGET SOUND LOWLAND NATIVE SPECIES AND UP TO 40:1 FOR COARSE COMPOST TO BE USED AS A SURFACE MULCH (NOT IN A SOIL MIX).

DESIGN CRITERIA FOR CUSTOM BIORETENTION SOIL MIXES

PROJECTS WHICH PREFER TO CREATE A CUSTOM BIORETENTION SOIL MIX RATHER THAN USING THE DEFAULT REQUIREMENTS ABOVE MUST DEMONSTRATE COMPLIANCE WITH THE FOLLOWING CRITERIA USING THE SPECIFIED TEST METHOD:

- CEC ≥ 5 MEQ/100 GRAMS OF DRY SOIL; USEPA 9081
- PH BETWEEN 5.5 AND 7.0
- 5 – 8 PERCENT ORGANIC MATTER CONTENT BEFORE AND AFTER THE SATURATED HYDRAULIC CONDUCTIVITY TEST; ASTM D2974 (STANDARD TEST METHOD FOR MOISTURE, ASH, AND ORGANIC MATTER OF PEAT AND OTHER ORGANIC SOILS)
- 2-5 PERCENT FINES PASSING THE 200 SIEVE; TMECC 04.11-A
- MEASURED (INITIAL) SATURATED HYDRAULIC CONDUCTIVITY OF LESS THAN 12 INCHES PER HOUR; ASTM D 2434 (STANDARD TEST METHOD FOR PERMEABILITY OF GRANULAR SOILS (CONSTANT HEAD)) AT 85% COMPACTION PER ASTM D 1557 (STANDARD TEST METHOD S FOR LABORATORY COMPACTION CHARACTERISTICS OF SOIL USING MODIFIED EFFORT). ALSO, USE APPENDIX V-B: RECOMMENDED MODIFICATIONS TO ASTM D 2434 WHEN MEASURING HYDRAULIC CONDUCTIVITY FOR BIORETENTION SOIL MIXES.
- DESIGN (LONG-TERM) SATURATED HYDRAULIC CONDUCTIVITY OF MORE THAN 1 INCH PER HOUR. NOTE: DESIGN SATURATED HYDRAULIC CONDUCTIVITY IS DETERMINED BY APPLYING THE APPROPRIATE INFILTRATION CORRECTION FACTORS AS EXPLAINED ABOVE UNDER "DETERMINING BIORETENTION SOIL MIX INFILTRATION RATE."
- IF COMPOST IS USED IN CREATING THE CUSTOM MIX, IT MUST MEET ALL OF THE SPECIFICATIONS LISTED ABOVE FOR COMPOST EXCEPT FOR THE GRADATION SPECIFICATION. AN ALTERNATIVE GRADATION SPECIFICATION MUST INDICATE THE MINIMUM PERCENT PASSING FOR A RANGE OF SIMILAR PARTICLE SIZES.

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STATE OF WASHINGTON
45286
REGISTERED PROFESSIONAL ENGINEER
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3 DESIGN REVISION	05/02/22

PROJECT NAME:
LUMPKIN RESIDENCE

PROJECT ADDRESS:
5401 W MERCER WAY
MERCER ISLAND, WA 98040

SHEET TITLE:
NOTES

SHEET NO.:
C0.1

RB PROJECT NO.:
21-0035

PROJECT SPECIFIC TESC NOTES:

1. MARK CLEARING LIMITS AND ENVIRONMENTALLY CRITICAL AREAS. WITHIN THE BOUNDARIES OF THE PROJECT SITE AND PRIOR TO BEGINNING LAND DISTURBING ACTIVITIES, CLEARLY MARK ALL CLEARING LIMITS, EASEMENTS, SETBACKS, ALL ENVIRONMENTALLY CRITICAL AREAS AND THEIR BUFFERS, AND ALL TREES, AND DRAINAGE COURSES THAT ARE TO BE PRESERVED WITHIN THE CONSTRUCTION AREA.

2. RETAIN TOP LAYER AND/OR AMEND ALL DISTURBED SOILS. WITHIN THE BOUNDARIES OF THE PROJECT SITE, THE DUFF LAYER, TOP SOIL, AND NATIVE VEGETATION, IF THERE IS ANY, SHALL BE RETAINED IN AN UNDISTURBED STATE TO THE MAXIMUM EXTENT FEASIBLE. IF IT IS NOT FEASIBLE TO RETAIN THE TOP LAYER IN PLACE, IT SHALL BE STOCKPILED ON-SITE AND COVERED TO PREVENT EROSION. SOIL SHALL THEN BE AMENDED AND REPLACED IMMEDIATELY UPON COMPLETION OF THE GROUND DISTURBING ACTIVITIES.

3. ESTABLISH CONSTRUCTION ENTRANCE. LIMIT CONSTRUCTION VEHICLE ACCESS TO ONE ROUTE. STABILIZE ACCESS POINTS AND PREVENT TRACKING SEDIMENT ONTO PUBLIC ROADS. PROMPTLY REMOVE ANY SEDIMENT TRACKED OFFSITE.

4. PROTECT DOWNSTREAM PROPERTIES AND RECEIVING WATERS. PROTECT PROPERTIES AND RECEIVING WATERS DOWNSTREAM FROM THE DEVELOPMENT SITES FROM EROSION DUE TO INCREASES IN THE VOLUME, VELOCITY, AND PEAK FLOW RATE OF DRAINAGE WATER FROM THE PROJECT SITE.

5. PREVENT EROSION AND SEDIMENT TRANSPORT FROM THE SITE. PASS ALL DRAINAGE WATER FROM DISTURBED AREAS THROUGH A SEDIMENT TRAP OR OTHER APPROPRIATE SEDIMENT REMOVAL BEST MANAGEMENT PRACTICES BEFORE DISCHARGING FROM THE SITE. SEDIMENT CONTROLS INTENDED TO TRAP SEDIMENT ON-SITE SHALL BE CONSTRUCTED AS ONE OF THE FIRST STEPS IN GRADING AND SHALL BE FUNCTIONAL BEFORE OTHER LAND DISTURBING ACTIVITIES TAKE PLACE.ONE OF THE FOLLOWING SHALL BE USED TO PREVENT THE TRANSPORT OF SEDIMENT FORM THE SITE: COMPOST SOCKS, BERMS OR BLANKETS, FILTER FENCE, STRAW BALE BARRIER, BRUSH BARRIER, GRAVEL FILTER BERM, SEDIMENT POND OR SEDIMENT TRAP. SANDBAGS MAY ALSO BE UTILIZED TO PREVENT SEDIMENT FROM BEING DISCHARGED OFFSITE. RETAINING NATURAL VEGETATION AND BUFFER ZONES ARE ENCOURAGED, BUT MAY NOT BE USED AS A SUBSTITUTE.

6. PREVENT EROSION AND SEDIMENT TRANSPORT FROM THE SITE BY VEHICLES. LIMIT CONSTRUCTION VEHICLE ACCESS, WHENEVER POSSIBLE, TO ONE LOCATION. STABILIZE ALL ACCESS POINTS. PROVIDE PERIODIC STREET CLEANING BY SWEEPING OR SHOVELING ANY SEDIMENT THAT MAY HAVE BEEN TRACKED OUT. PLACE SEDIMENT IN A SUITABLE DISPOSAL AREA WHERE IT WILL NOT ERODE ANY FURTHER.

7. STABILIZE SOILS. PREVENT ON-SITE EROSION BY STABILIZING ALL EXPOSED AND UNWORKED SOILS, INCLUDING STOCK PILES. FROM OCTOBER 1 TO APRIL 30, NO SOILS SHALL REMAIN EXPOSED AND UNWORKED FOR MORE THAN TWO DAYS. FROM MAY 1 TO SEPTEMBER 30, NO SOILS SHALL REMAIN EXPOSED FOR MORE THAN SEVEN DAYS. SOILS SHALL BE STABILIZED AT THE END OF THE SHIFT BEFORE A HOLIDAY OR WEEKEND IF NEEDED BASED ON THE WEATHER FORECAST. SOIL STOCKPILES SHALL BE STABILIZED FROM EROSION, PROTECTED WITH SEDIMENT TRAPPING MEASURES, AND BE LOCATED AWAY FROM STORM DRAIN INLETS, WATERWAYS, AND DRAINAGE CHANNELS. BEFORE THE COMPLETION OF THE PROJECT, PERMANENTLY STABILIZE ALL EXPOSED SOILS THAT HAVE BEEN DISTURBED DURING CONSTRUCTION. SOME EXAMPLES OF BMPS TO USE TO STABILIZE SOILS, INCLUDING STOCKPILES ARE: COMPOST BLANKETS, SEEDING AND MULCHING, OR MATTING/ROLLED EROSION CONTROL PRODUCTS. COMPOST BLANKETS CAN BE USED AS TEMPORARY EROSION CONTROL AND THEN BE MIXED INTO THE SOIL TO HELP MEET THE POST CONSTRUCTION SOIL AMENDMENT REQUIREMENTS.

8. PROTECT SLOPES. EROSION FROM SLOPES SHALL BE MINIMIZED. CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. OFFSITE STORMWATER RUN-ON OR GROUNDWATER SHALL BE DIVERTED AWAY FROM SLOPES AND UNDISTURBED AREAS.

9. PROTECT STORM DRAINS. PREVENT SEDIMENT FROM ENTERING ALL STORM DRAINS, INCLUDING DITCHES, THAT RECEIVE DRAINAGE WATER FROM THE PROJECT. STORM DRAIN INLET PROTECTION DEVICES SHALL BE CLEANED OR REMOVED AND REPLACED AS RECOMMENDED BY THE PRODUCT MANUFACTURER, OR MORE FREQUENTLY IF REQUIRED TO PREVENT FAILURE OF THE DEVICE OR FLOODING. STORM DRAIN INLETS MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT DRAINAGE WATER DOES NOT ENTER THE DRAINAGE SYSTEM WITHOUT FIRST BEING FILTERED OR TREATED TO REMOVE SEDIMENTS. STORM DRAIN INLET PROTECTION DEVICES SHALL BE REMOVED AT THE CONCLUSION OF THE PROJECT.

10. STABILIZE CHANNELS AND OUTLETS. ALL TEMPORARY ON-SITE DRAINAGE SYSTEMS SHALL BE DESIGNED, CONSTRUCTED, AND STABILIZED TO PREVENT EROSION. STABILIZATION SHALL BE PROVIDED AT THE OUTLETS OF ALL DRAINAGE SYSTEMS THAT IS ADEQUATE TO PREVENT EROSION OF OUTLETS, ADJACENT STREAM BANKS, SLOPES, AND DOWNSTREAM REACHES.

11. CONTROL POLLUTANTS. MEASURES SHALL BE TAKEN TO CONTROL POTENTIAL POLLUTANTS. COMPLY WITH THE REQUIREMENTS OF WASHINGTON STATE DEPARTMENT OF ECOLOGY'S 2014 STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON (SWMMWW) VOLUME IV FOR EACH OF THE FOLLOWING CONSTRUCTION RELATED ACTIVITIES: POLLUTANT DISPOSAL (INCLUDING SEDIMENT, WASTE MATERIALS, AND DEMOLITION DEBRIS; CHEMICAL STORAGE; ON-SITE FUELING; MAINTENANCE, FUELING AND REPAIR OF HEAVY EQUIPMENT AND VEHICLES; CLEANUP OF CONTAMINATED SURFACES; DISCHARGE OF WHEEL WASH WASTEWATER; FERTILIZER AND PESTICIDE APPLICATION; PH-MODIFYING SOURCES.

12. CONTROL DEWATERING. WHEN DEWATERING DEVICES DISCHARGE ON-SITE OR TO A PUBLIC DRAINAGE SYSTEM, DEWATERING DEVICES SHALL DISCHARGE INTO A SEDIMENT TRAP TO REMOVE SEDIMENT CONTAMINATION, OR OTHER SEDIMENT REMOVAL BMP.

13. MAINTAIN AND INSPECT BMPS. ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL BMPS SHALL BE INSPECTED, MAINTAINED, AND REPAIRED AS NEEDED TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. ALL TEMPORARY EROSION AND SEDIMENT CONTROLS SHALL BE REMOVED WITHIN FIVE (5) DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY CONTROLS ARE NO LONGER NEEDED, WHICHEVER IS LATER. TRAPPED SEDIMENT SHALL BE REMOVED OR STABILIZED ON-STIE. DISTURBED SOIL AREAS RESULTING FROM REMOVAL SHALL BE PERMANENTLY STABILIZED.

14. EXECUTE CONSTRUCTION STORMWATER CONTROL PLAN. CONSTRUCTION SITE OPERATORS SHALL MAINTAIN, UPDATE, AND IMPLEMENT THEIR CONSTRUCTION STORMWATER CONTROL PLAN. CONSTRUCTION SITE OPERATORS SHALL MODIFY THEIR CONSTRUCTION STORMWATER CONTROL PLAN TO MAINTAIN COMPLIANCE.

15. MINIMIZE OPEN TRENCHES. IN THE CONSTRUCTION OF UNDERGROUND UTILITY LINES, WHERE FEASIBLE, NO MORE THAN ONE HUNDRED FIFTY (150) FEET OF TRENCH SHALL BE OPENDED AT ONE TIME.

16. PHASE THE PROJECT. DEVELOPMENT PROJECTS SHALL BE PHASED IN ORDER TO MINIMIZE THE AMOUNT OF LAND DISTURBING ACTIVITY OCCURRING AT THE SAME TIME AND SHALL TAKE INTO ACCOUNT SEASONAL WORK LIMITATIONS.

17. INSTALL PERMANENT FLOW CONTROL FACILITIES. AFTER CONSTRUCTION BUT BEFORE THE PROJECT IS CONSIDERED COMPLETED, PERMANENTLY STABILIZE ALL EXPOSED SOILS THAT HAVE BEEN DISTURBED DURING CONSTRUCTION. USE ONE OF THE FOLLOWING TO PERMANENTLY STABILIZE SOILS: PERMANENT SEEDING, PLANTING, OR SODDING.

NOTES:

1. THE BMPS SHOWN IN THE PLAN VIEW OF THIS PLAN ARE THE MINIMUM REQUIRED. ADDITIONAL BMPS ARE REQUIRED WHEN MINIMUM CONTROLS ARE NOT SUFFICIENT TO PREVENT EROSION OR TRANSPORT OF SEDIMENT OR OTHER POLLUTANTS FROM THE SITE.

EXCEPTIONAL TREE LIST:
#214, #230, #233, #237
FOR COMPLETE TREE INFORMATION SEE SHEET C2.5

NOTE:
CONTRACTOR TO FIELD VERIFY UTILITIES PRIOR TO CONSTRUCTION.
BASEMAP WAS PROVIDED BY OWNER AND CITY AS-BUILTS. SURVEY SHOULD BE INDEPENDENTLY VERIFIED

NOTES

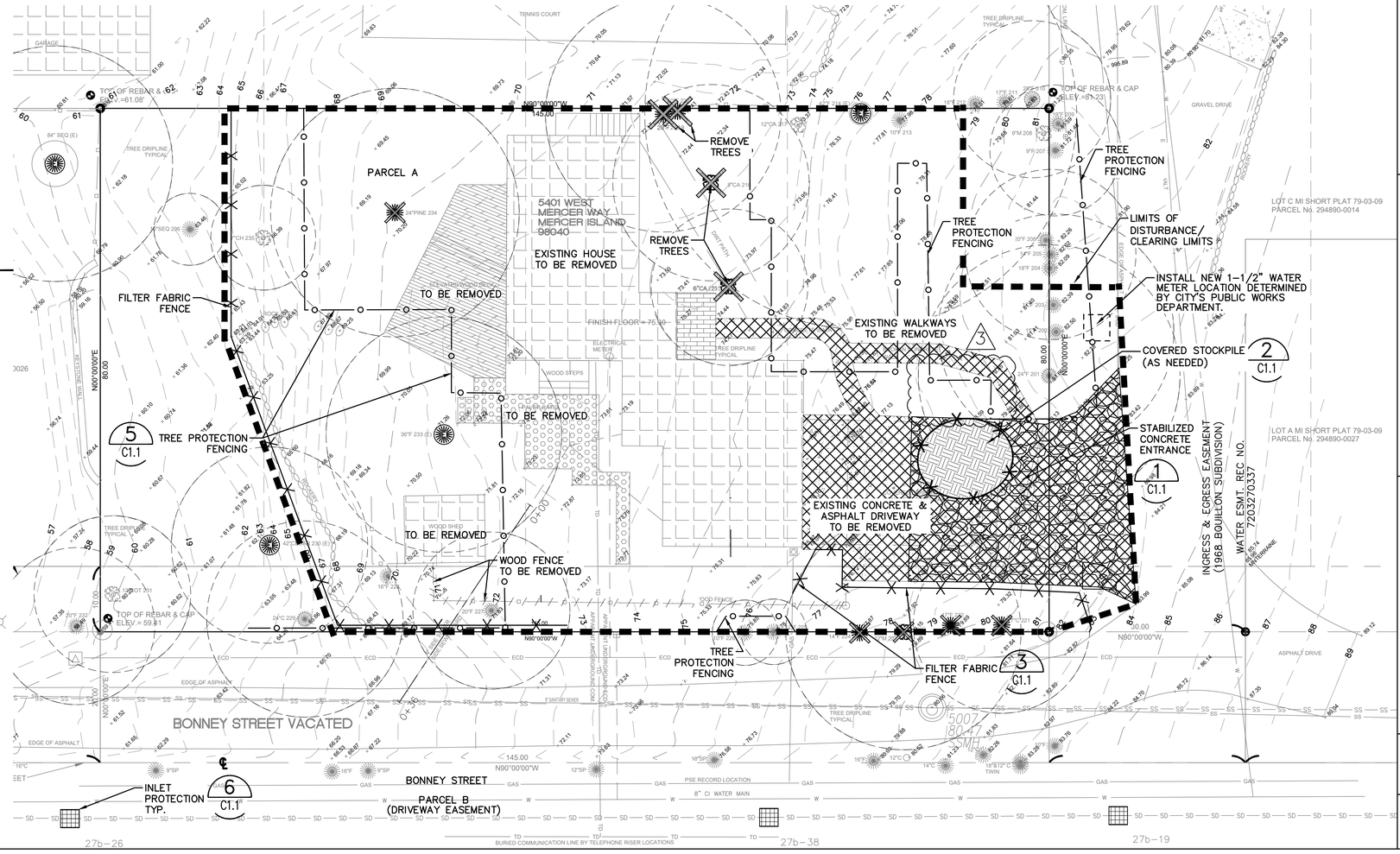
1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH WSDOT CURRENT STANDARD SPECIFICATIONS.
2. CONTRACTOR TO NOT DISTURB MORE THAN 1 AC ON-SITE. IF MORE THAN 1 AC WILL BE DISTURBED, STABILIZE A PORTION OF THE SITE AND NOTIFY RED BARN ENGINEERING INC.

LEGEND:

- FILTER FABRIC FENCE — 3 C1.1
- LIMITS OF DISTURBANCE/ CLEARING LIMITS
- PROPERTY LINE
- GRASS-LINED SWALE
- COMPOST SOCK — 4 C1.1
- REMOVE UTILITY/ FENCE
- TREE PROTECTION FENCING CHAIN LINK FENCE (PER ARBORIST, TREE FENCING HAS BEEN ADDRESSED IN THE ARBORIST REPORT FOR BEST LOCATION.) — 5 C1.1
- STABILIZED CONSTRUCTION ENTRANCE — 1 C1.1
- REMOVE CONCRETE/ ASPHALT
- FLOW DIRECTION
- PLYWOOD
- STOCKPILE (NETS AND BLANKETS) SEE NOTE 8. — 2 C1.1
- REMOVE TREE
- INLET PROTECTION — 6 C1.1

EXISTING

- SANITARY SEWER MH
- SANITARY SEWER CLEAN OUT
- STORM DRAIN MH
- STORM DRAIN CATCH BASIN
- WATER HYDRANT
- WATER FDC
- WATER METER
- WATER VALVE
- WATER BLOW-OFF
- WATER AIR RELIEF VALVE
- WATER CAP
- GAS METER
- GAS VALVE
- BOLLARD
- POWER POLE
- UTILITY POLE
- GUY ANCHOR
- TELPHONE RISER
- YARD LIGHT
- POLE WITH LUMINARE
- JUNCTION BOX
- CONIFER TREE
- DECIDUOUS TREE
- GENERAL SIGN



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REBEKAH J. WESTON — STATE OF WASHINGTON — 45286 — REGISTERED PROFESSIONAL ENGINEER
05/02/2022

DESIGN	RJW
DRAWN	EJW
CHECKED	RJW

REV/SUBMITTAL	DATE
1 CITY COMMENTS	9/07/21
2 CITY COMMENTS	10/21/21
3 DESIGN REVISION	05/02/22

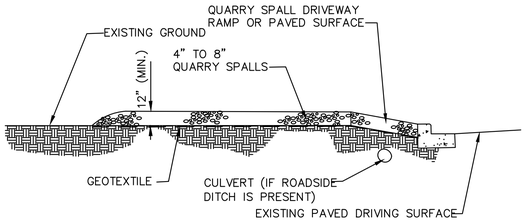
PROJECT NAME: LUMPKIN RESIDENCE

PROJECT ADDRESS: 5401 W MERCER WAY MERCER ISLAND, WA 98040

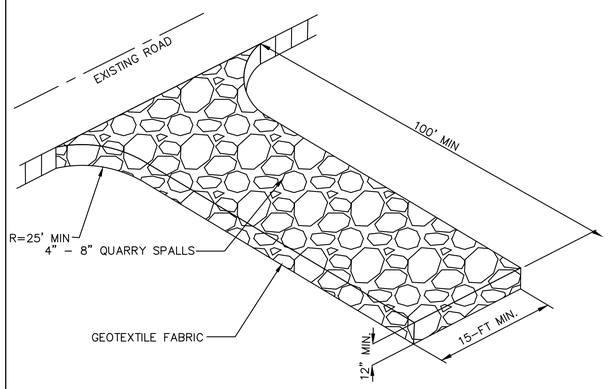
SHEET TITLE: TESC PLAN

SHEET NO.: C1.0

RB PROJECT NO.: 21-0035



SECTION



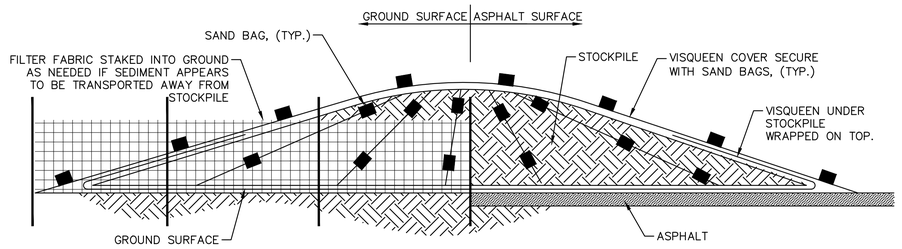
MAINTENANCE STANDARD:

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

NOTES:

1. STABILIZED ACCESS SHALL BE USED IN ALL AREAS OF THE SITE WITH VEHICLE TRAFFIC AND PARKING, INCLUDING PLANTING STRIPS.
2. SEE SECTION 9–37.2 (TABLE 3) FOR GEOTEXTILE REQUIREMENTS. GEOTEXTILE MODIFICATIONS BASED ON SPECIFIC PROJECT SITE CONDITIONS MUST BE APPROVED BY THE ENGINEER.
3. 100–FT MIN FOR LARGE SITES. UPON INSPECTOR APPROVAL LENGTH FOR SMALL SITES MAY BE REDUCED TO 50–FT OR LESS.

1 STABILIZED CONSTRUCTION ENTRANCE
NTS

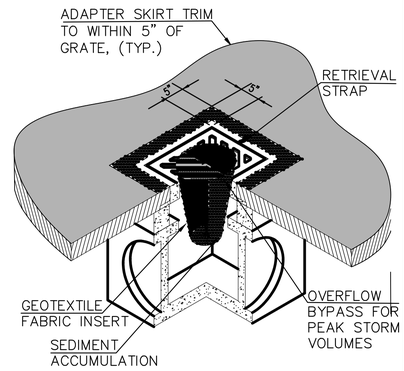


NOTS:

1. CLEAR PLASTIC SHEETING SHALL HAVE A MINIMUM THICKNESS OF 6 MIL AND SHOULD MEET THE REQUIREMENTS OF THE SDOT STANDARD SPECIFICATIONS SECTION 9–14.5.
2. PLACE PLASTIC INTO A SMALL (12–INCH WIDE BY 6–IN DEEP) SLOT TRENCH AT THE TOP OF THE SLOPE AND BACKFILL WITH SOIL TO KEEP WATER FROM FLOWING UNDERNEATH.
3. INSTALL COVERING AND MAINTAIN TIGHTLY IN PLACE BY USING SANDBAGS OR TIRES ON ROPES WITH A MAXIMUM 10 FOOT GRID SPACING IN ALL DIRECTIONS. TAPE OR WEIGH DOWN ALL SEAMS FULL LENGTH WITH AT LEAST A 1– TO 2–FT OVERLAP OF ALL SEAMS. THEN ROLL, STAKE OR TIE ALL SEAMS.
4. IMMEDIATELY INSTALL COVERING ON AREAS SEEDED FROM NOVEMBER 1 TO MARCH 1, AND KEEP COVERING IN PLACE UNTIL VEGETATION IS FIRMLY ESTABLISHED.
5. WHEN THE COVERING IS USED ON UNSEEDED SLOPES, LEAVE IN PLACE UNTIL THE NEXT SEEDING PERIOD.
6. TOE IN SHEETING AT THE TOP OF THE SLOPE TO PREVENT SURFACE FLOW BENEATH THE PLASTIC. IF EROSION AT THE TOP OF SLOPE IS LIKELY, INSTALL A GRAVEL BERM, RIPRAP, OR OTHER SUITABLE PROTECTION AT THE TOE OF THE SLOPE IN ORDER TO REDUCE THE VELOCITY OF RUNOFF.
7. REMOVE SHEETING AS SOON AS IS POSSIBLE ONCE VEGETATION IS WELL GROWN TO PREVENT BURNING THE VEGETATION THROUGH THE PLASTIC SHEETING, WHICH ACTS AS A GREENHOUSE.

MAINTENANCE:
CHECK REGULARLY FOR RIPS AND PLACES WHERE THE PLASTIC MAY BE DISLODGED. CONTACT BETWEEN THE PLASTIC AND THE GROUND SHOULD ALWAYS BE MAINTAINED. ANY AIR BUBBLES FOUND SHOULD BE REMOVED IMMEDIATELY OR THE PLASTIC MAY RIP DURING THE NEXT WINDY PERIOD. RE–ANCHOR OR REPLACE THE PLASTIC AS NECESSARY.

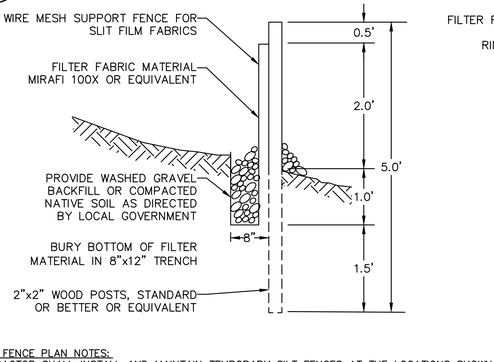
2 STOCKPILE AND PLASTIC COVERING
NTS

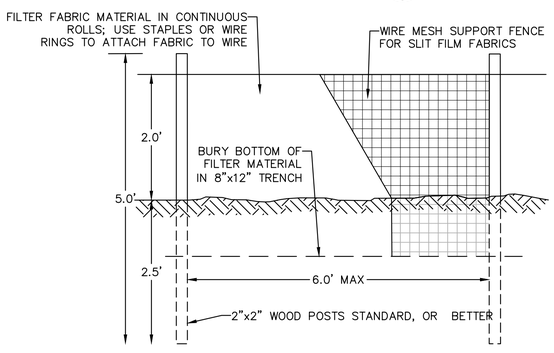


NOTES:

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

6 INLET PROTECTION
NTS



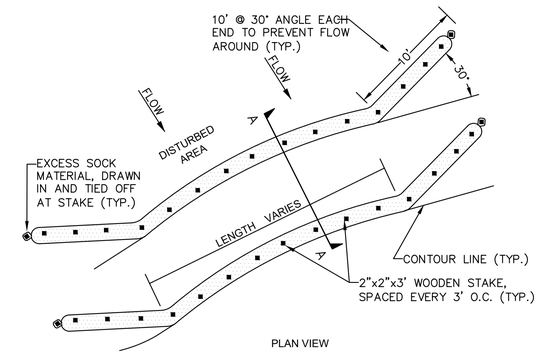


FILTER FABRIC FENCE PLAN NOTES:

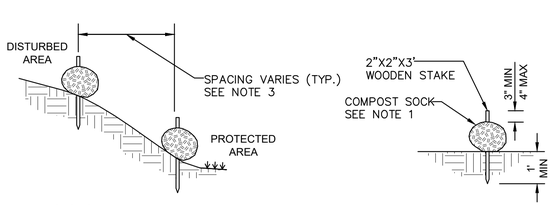
1. THE CONTRACTOR SHALL INSTALL AND MAINTAIN TEMPORARY SILT FENCES AT THE LOCATIONS SHOWN IN THE PLANS.
2. CONSTRUCT SILT FENCES IN AREAS OF CLEARING, GRADING, OR DRAINAGE PRIOR TO STARTING THOSE ACTIVITIES.
3. THE SILT FENCE SHALL HAVE A 2–FEET MIN. AND A 2½–FEET MAX. HEIGHT ABOVE THE ORIGINAL GROUND SURFACE.
4. THE FILTER FABRIC SHALL BE SEWN TOGETHER AT THE POINT OF MANUFACTURE TO FORM FILTER FABRIC LENGTHS AS REQUIRED. LOCATE ALL SEWN SEAMS AT SUPPORT POSTS. ALTERNATIVELY, TWO SECTIONS OF SILT FENCE CAN BE OVERLAPPED, PROVIDED THE CONTRACTOR CAN DEMONSTRATE, TO THE SATISFACTION OF THE ENGINEER, THAT THE OVERLAP IS LONG ENOUGH AND THAT THE ADJACENT FENCE SECTIONS ARE CLOSE ENOUGH TOGETHER TO PREVENT SILT LADEN WATER FROM ESCAPING THROUGH THE FENCE AT THE OVERLAP.
5. ATTACH THE FILTER FABRIC ON THE UP–SLOPE SIDE OF THE POSTS AND SECURE WITH STAPLES, WIRE, OR IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ATTACH THE FILTER FABRIC TO THE POSTS IN A MANNER THAT REDUCES THE POTENTIAL FOR TEARING.
6. SUPPORT THE FILTER FABRIC WITH WIRE OR PLASTIC MESH, DEPENDENT ON THE PROPERTIES OF THE GEOTEXTILE SELECTED FOR USE. IF WIRE OR PLASTIC MESH IS USED, FASTEN THE MESH SECURELY TO THE UP–SLOPE SIDE OF THE POSTS WITH THE FILTER FABRIC UP–SLOPE OF THE MESH.
7. MESH SUPPORT, IF USED, SHALL CONSIST OF STEEL WIRE WITH A MAXIMUM MESH SPACING OF 2–INCHES, OR A PREFABRICATED POLYMERIC MESH. THE STRENGTH OF THE WIRE OR POLYMERIC MESH SHALL BE EQUIVALENT TO OR GREATER THAN 180 LBS. GRAB TENSILE STRENGTH. THE POLYMERIC MESH MUST BE AS RESISTANT TO THE SAME LEVEL OF ULTRAVIOLET RADIATION AS THE FILTER FABRIC IT SUPPORTS.
8. BURY THE BOTTOM OF THE FILTER FABRIC 4–INCHES MIN. BELOW THE GROUND SURFACE. BACKFILL AND TAMP SOIL IN PLACE OVER THE BURIED PORTION OF THE FILTER FABRIC, SO THAT NO FLOW CAN PASS BENEATH THE FENCE AND SCOURING CANNOT OCCUR. WHEN WIRE OR POLYMERIC BACK–UP SUPPORT MESH IS USED, THE WIRE OR POLYMERIC MESH SHALL EXTEND INTO THE GROUND 3–INCHES MIN.
9. DRIVE OR PLACE THE FENCE POSTS INTO THE GROUND 18–INCHES MIN. A 12–INCH MIN. DEPTH IS ALLOWED IF TOPSOIL OR OTHER SOFT SUBGRADE SOIL IS NOT PRESENT AND 18–INCHES CANNOT BE REACHED. INCREASE FENCE POST MIN. DEPTHS BY 6 INCHES IF THE FENCE IS LOCATED ON SLOPES OF 3H:1V OR STEEPER AND THE SLOPE IS PERPENDICULAR TO THE FENCE. IF REQUIRED POST DEPTHS CANNOT BE OBTAINED, THE POSTS SHALL BE ADEQUATELY SECURED BY BRACING OR GUYING TO PREVENT OVERTURNING OF THE FENCE DUE TO SEDIMENT LOADING.
10. USE WOOD, STEEL OR EQUIVALENT POSTS. THE SPACING OF THE SUPPORT POSTS SHALL BE A MAXIMUM OF 6–FEET. POSTS SHALL CONSIST OF EITHER:
    - O WOOD WITH DIMENSIONS OF 2–INCHES BY 2–INCHES WIDE MIN. AND A 3–FEET MIN. LENGTH. WOOD POSTS SHALL BE FREE OF DEFECTS SUCH AS KNOTS, SPLITS, OR GOUGES.
    - O NO. 6 STEEL REBAR OR LARGER.
    - O ASTM A 120 STEEL PIPE WITH A MINIMUM DIAMETER OF 1–INCH.
    - O U, T, L, OR C SHAPE STEEL POSTS WITH A MINIMUM WEIGHT OF 1.35 LBS./FT.
    - O OTHER STEEL POSTS HAVING EQUIVALENT STRENGTH AND BENDING RESISTANCE TO THE POST SIZES LISTED ABOVE.
11. LOCATE SILT FENCES ON CONTOUR AS MUCH AS POSSIBLE, EXCEPT AT THE ENDS OF THE FENCE, WHERE THE FENCE SHALL BE TURNED UPHILL SUCH THAT THE SILT FENCE CAPTURES THE RUNOFF WATER AND PREVENTS WATER FROM FLOWING AROUND THE END OF THE FENCE.
12. IF THE FENCE MUST CROSS CONTOURS, WITH THE EXCEPTION OF THE ENDS OF THE FENCE, PLACE GRAVEL CHECK DAMS PERPENDICULAR TO THE BACK OF THE FENCE TO MINIMIZE CONCENTRATED FLOW AND EROSION. THE SLOPE OF THE FENCE LINE WHERE CONTOURS MUST BE CROSSED SHALL NOT BE STEEPER THAN 3H:1V.
    - O GRAVEL CHECK DAMS SHALL BE APPROXIMATELY 1–FOOT DEEP AT THE BACK OF THE FENCE. GRAVEL CHECK DAMS SHALL BE CONTINUED PERPENDICULAR TO THE FENCE AT THE SAME ELEVATION UNTIL THE TOP OF THE CHECK DAM INTERCEPTS THE GROUND SURFACE BEHIND THE FENCE.
    - O GRAVEL CHECK DAMS SHALL CONSIST OF CRUSHED SURFACING BASE COURSE, GRAVEL BACKFILL FOR WALLS, OR SHOULDER BALLAST. GRAVEL CHECK DAMS SHALL BE LOCATED EVERY 10 FEET ALONG THE FENCE WHERE THE FENCE MUST CROSS CONTOURS.

FILTER FABRIC SPECIFICATIONS	
AOS (ASTM D4751)	30–100 SIEVE SIZE (0.60–0.15 mm) FOR SLIT FILM 50–100 SIEVE SIZE (0.30–0.15 MM) FOR OTHER FABRIC
WATER PERMITTIVITY (ASTM D4491)	0.02 SEC^{-1} MINIMUM
GRAB TENSILE STRENGTH (ASTM D4632)	180 LBS MIN. FOR EXTRA STRENGTH 100 LBS MIN. FOR STD. STRENGTH FABRIC
GRAB TENSILE ELONGATION (ASTM D4632)	30% MAX.
ULTRAVIOLET RESISTANCE (ASTM D4355)	70% MAX.

3 FILTER FABRIC FENCE
NTS



PLAN VIEW



SECTION A

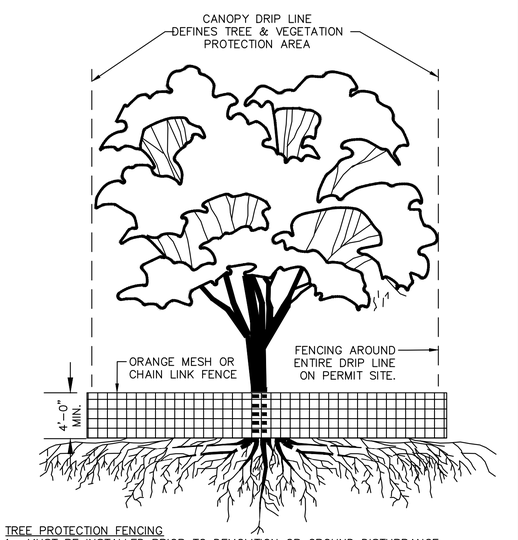
DETAIL

(SHOWN AS SLOPE PROTECTION)

NOTES:

1. COMPOST SOCK SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATION 9.14.4(9). COMPOST SOCK SHALL BE A MINIMUM OF 10" IN DIAMETER OR SIZED TO SUIT CONDITIONS AS SPECIFIED BY THE ENGINEER.
2. ALWAYS INSTALL COMPOST SOCK PERPENDICULAR TO SLOPE AND ALONG CONTOUR LINES.
3. REMOVE SEDIMENT FROM THE UP SLOPE SIDE OF THE COMPOST SOCK WHEN ACCUMULATION HAS REACHED 1/2 OF THE EFFECTIVE HEIGHT OF THE COMPOST SOCK.
4. MAY BE USED IN PLACE OF FILTER FENCE FOR PREMIER CONTROL.

4 COMPOST SOCK
NTS



TREE PROTECTION FENCING

1. MUST BE INSTALLED PRIOR TO DEMOLITION OR GROUND DISTURBANCE.
2. KEPT IN PLACE FOR THE DURATION OF CONSTRUCTION.
3. NO SOIL DISTURBANCE OR ACTIVITY ALLOWED WITHIN FENCED AREA, SUCH AS MATERIAL STORAGE/STOCKPILING, PARKING, EXCAVATION, DUMPING, OR WASHING.
4. MODIFICATIONS OF THESE REQUIREMENTS BY APPROVAL OF COMI PLANNER ONLY.
5. IF ROOTS GREATER THAN 2 INCH FOUND OUTSIDE OF FENCING, PROTECT BY HAND EXCAVATION AND, IF NECESSARY, CUT CLEANLY AND KEEP MOIST
6. USE 3 INCHES OR DEEPER WOOD CHIP MULCH OUTSIDE FENCED AREAS TO PROTECT FEEDER ROOTS

VEGETATION PROTECTION

1. MINIMIZE CONSTRUCTION ZONE
2. PROTECT VEGETATION OUTSIDE CONSTRUCTION ZONE WITH FENCING AS SHOWN
3. USE 3 INCHES OR DEEPER WOOD CHIP MULCH OUTSIDE FENCED AREAS TO PROTECT FEEDER ROOTS

5 TREE PROTECTION
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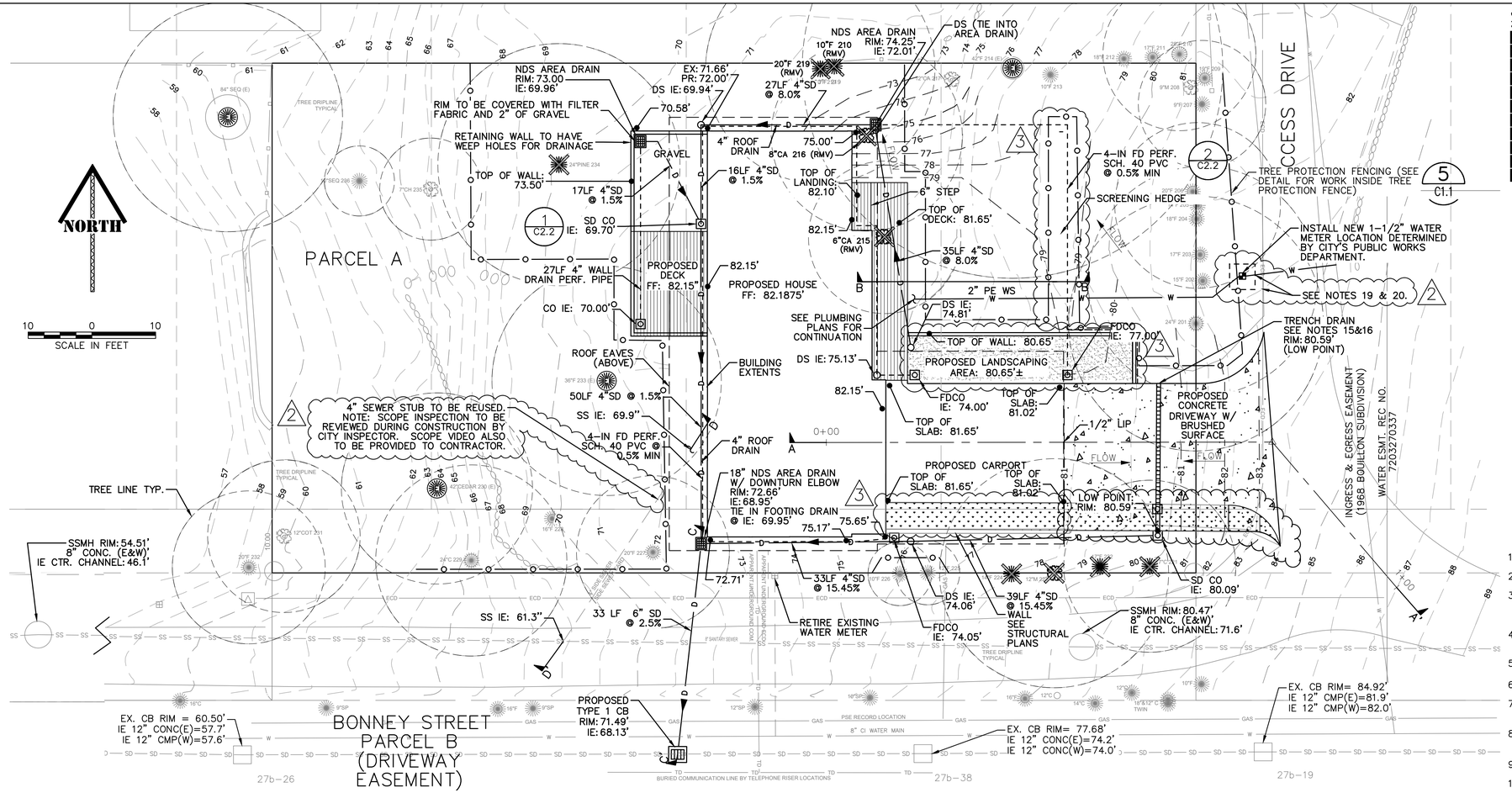
PROJECT NAME:
LUMPKIN RESIDENCE

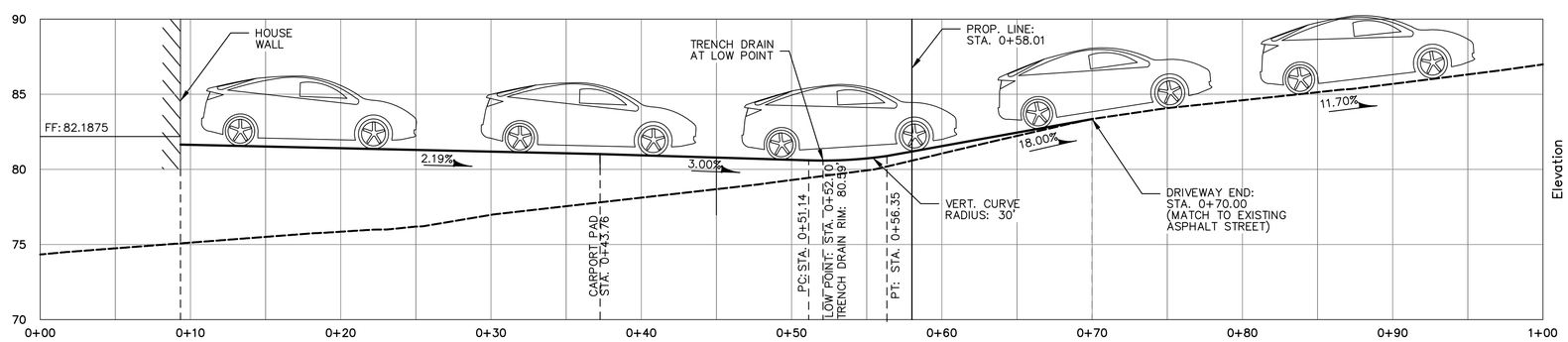
PROJECT ADDRESS:
5401 W MERCER WAY
MERCER ISLAND, WA 98040

SHEET TITLE:
TESC DETAILS

SHEET NO.:
C1.1

RB PROJECT NO.:
21–0035





A DRIVEWAY CNRTL PROFILE A-A'
1" = 5'(H), 1" = 5'(V)

PROFILE LEGEND:

EXISTING GRADE

PROPOSED GRADE

SURFACE AREA TABLE

PROJECT NAME:	Lumpkin Residence		
TOTAL LOT AREA (SF)		11,600	0.27
Clearing Area		-	0.00
SURFACE	DESCRIPTION	AREA (SF)	AREA (AC)
S1	ROOF (HOUSE)	3,105	0.07
S2	UNCOVERED WOODEN DECK	224	0.01
S3	RETAINING WALL SURFACE	40	0.00
S4	CONCRETE DRIVEWAY	787	0.02
	IMPERVIOUS TOTAL	*4,156*	0.10

LEGEND:

- TYPE 1 CATCH BASIN PER WSDOT STD SPEC 9-05.50(3)
- STORM DRAIN CLEANOUT
- DOWNSPOUT
- SCH 40 PVC PERF PIPE (PER WSDOT STD. SPEC 9-05.2(6))
- SD (SMOOTH-WALLED PVC ASTM 3034 SDR 35)
- NDS YARD DRAIN (COLOR TO BE DETERMINED BY LANDSCAPE ARCHITECT)
- 6" CONC OVER 6" CSBC W/ #4 REBAR 16"O.C. EACH WAY CENTERED IN SLAB. SEE NOTE 4

NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH CITY OF MERCER ISLAND CURRENT STANDARD SPECIFICATIONS.
2. CONTRACTOR TO AS-BUILT STORM AND SAN. SEWER SYSTEM UPON COMPLETION.
3. CONTRACTOR SHALL NOT SURCHARGE SAN. SEWER LINE. DOWNSPOUTS AND/OR ROOF LEADER LINES SHALL BE CONNECTED TO AN AREA DRAIN PRIOR TO DISCHARGING TO THE LAKE WASHINGTON.
4. PLACE REBAR ON BRICKS AS NEEDED TO CENTER REBAR WITHIN SLAB. CONTRACTOR SHALL SUBMIT JOINTING PLAN TO ENGINEER PRIOR TO CONCRETE POUR.
5. ROUTE DOWNSPOUTS TO FACE OF ROCKERY, BUT DO NOT EXTEND PAST BULKHEAD. DISCHARGE ABOVE OHWM AT 18.7'.
6. UNLESS OTHERWISE NOTED, SD SHALL BE 6" PE PIPE RIGID W/ SMOOTH WALL INTERIOR. SD SHALL BE AT 2.0% MINIMUM.
7. CONTRACTOR TO CCTV SAN SEWER PRIOR TO CONNECTION. CONTRACTOR TO PROVIDE TO CITY TO REVIEW AND OBTAIN APPROVAL.
8. 8" WATER MAIN AND HYDRANT LOCATED ON OPPOSITE SIDE OF 77TH AVE SE. HYDRANT IS APPROXIMATELY 140' FROM THE SOUTHEAST CORNER OF RESIDENCE.
9. SUB-SLAB DRAINAGE (PIPE SIZE, TYPE, SPACING, BEDDING) TO BE DETERMINED WITH GEOTECHNICAL AND STRUCTURAL ENGINEER.
10. THE LAWN AND LANDSCAPE AREAS ARE REQUIRED TO PROVIDE POST-CONSTRUCTION SOIL QUALITY AND DEPTH IN ACCORDANCE WITH BMP T5.13. THE PROJECT CIVIL ENGINEER MUST PROVIDE A LETTER OF CERTIFICATION TO ENSURE THAT THE LAWN AND LANDSCAPE AREAS ARE MEETING THE POST-CONSTRUCTION SOIL QUALITY AND DEPTH REQUIREMENTS SPECIFIED ON THE APPROVED PLAN AND BMP T5.13 (2014 DOE MANUAL) SET PRIOR TO FINAL INSPECTION OF THE PROJECT.
11. SD SHALL BE SDR 35 ASTM 3034 SMOOTH-WALLED PIPE. SS SHALL BE SCH 40 PVC
12. CONTRACTOR TO TUNNEL BORE OR AIR EXCAVATE W/ PROJECT ARBORIST OVER-SITE FOR SD AND SS WITHIN DRIPLINES OF TREES.
13. CONTRACTOR TO ENGAGE ARBORIST WHILE PERFORMING GRADING WITHIN DRIPLINE OF TREES.
14. ANY ROOT GREATER THAN 2" IN DIAMETER TO BE CUT SHOULD BE SUPERVISED BY ARBORIST.
15. CONTRACTOR TO INSTALL TRENCH DRAIN CKG100-23 4" WIDE K100 GALVANIZED EDGE POLYMER CONCRETE TRENCH DRAIN KIT (23 FOOT COMPLETE) WITH LINEAR FALL, OR EQUIVALENT TRENCH DRAIN.
16. KIT INCLUDES 7 1-METER TRENCH DRAIN CHANNELS, 7 1-METER GRATES (A CLASS GALVANIZED REINFORCED SLOTTED STANDARD OR EQUIVALENT), AND 2 UNIVERSAL INLET/OUTLET END CAPS.
17. FOR ALL ACCESS ROADS AND DRIVEWAYS WITH A GRADIENT EXCEEDING 15%, THE SURFACE SHALL BE CEMENT CONCRETE PAVEMENT WITH A BRUSHED SURFACE FOR TRACTION. ACCESS ROADS AND DRIVEWAYS WITH GRADIENTS OF 15% OR LESS MAY HAVE ASPHALT SURFACE.
18. EXISTING SEWER LINE HAS BEEN INSPECTED. CONCLUSION OF REPORT STATES RECOMMENDATION THAT "THE LINE NEEDS TO BE CLEANED/JETTED TO REMOVE THE DEBRIS AND ROOTS FROM LINE."

2
19. DIRECTIONALLY BORE WATER LINE USING HDPE PIPE DR 17. BORING SHALL BE DIRECTIONALLY DRILLED TO MINIMIZE ROOT DAMAGE. CONTRACTOR TO FIELD VERIFY ALIGNMENT PRIOR TO INSTALLING.
20. BORE PIT SHALL BE APPROXIMATELY 4'X4', AND AIR SPADED PRIOR TO EXCAVATION FOR INSTALLATION OF WATER LINE. CONTRACTOR TO FIELD VERIFY CONDITIONS AND CONSULT WITH ARBORIST PRIOR TO DIGGING.

EXCEPTIONAL TREE LIST:
#214, #230, #233, #237
FOR COMPLETE TREE INFORMATION SEE SHEET C2.5

RED BARN GROUP INC.
6610 NE 181ST ST, STE 2
KENMORE, WA 98028
PH. (206) 200-7174
REDBARN-ENGINEERING.COM

811 CALL BEFORE YOU DIG

REBEKAH J WESTON
STATE OF WASHINGTON
45286
REGISTERED PROFESSIONAL ENGINEER
05/02/2022

DESIGN RJW
DRAWN EJW
CHECKED RJW

REV/SUBMITTAL	DATE
1 CITY COMMENTS	9/07/21
2 CITY COMMENTS	10/21/21
3 DESIGN REVISION	05/02/22

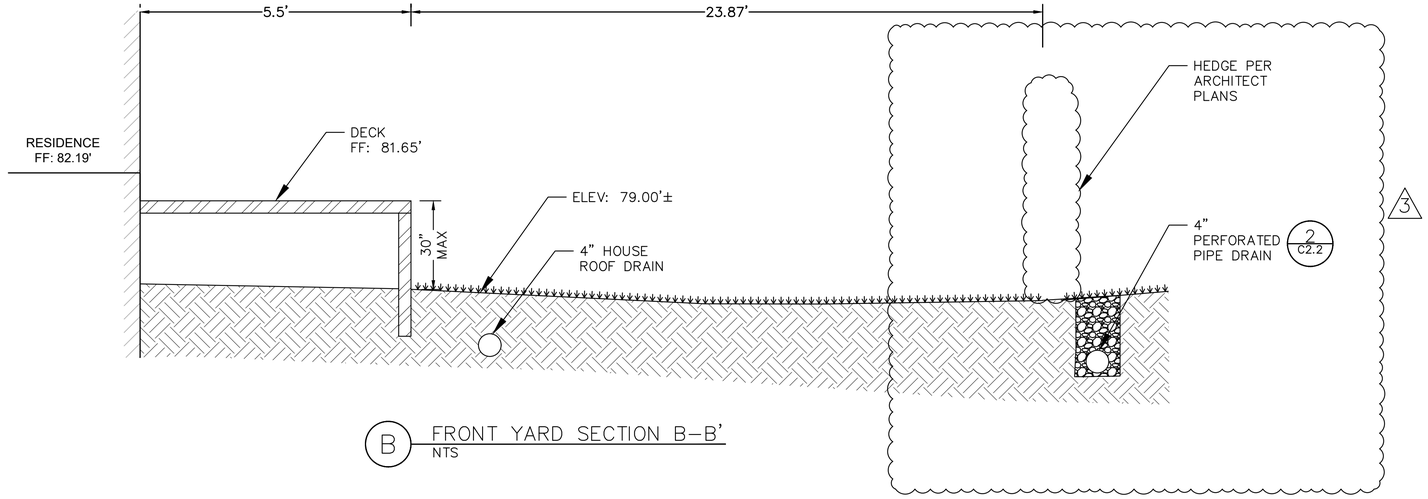
PROJECT NAME: LUMPKIN RESIDENCE

PROJECT ADDRESS: 5401 W MERCER WAY MERCER ISLAND, WA 98040

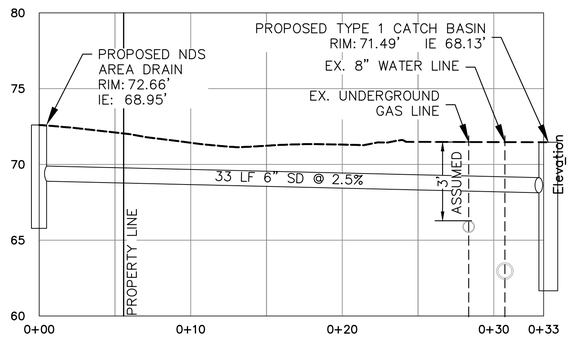
SHEET TITLE: GRADING AND UTILITY PLAN

SHEET NO.: C2.0

RB PROJECT NO.: 21-0035



B FRONT YARD SECTION B–B'
NTS

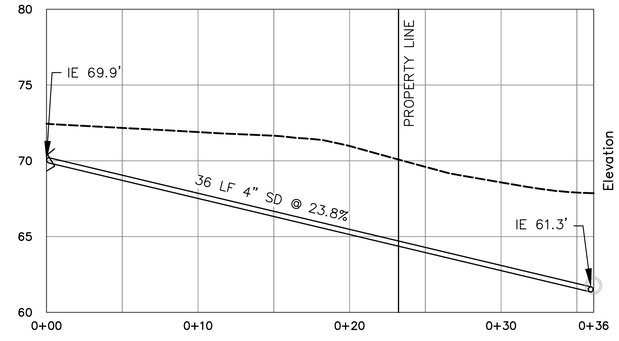


C STORM DRAIN SECTION C–C'
NTS

LEGEND:

EXISTING GRADE

PROPOSED GRADE



D SANITARY SEWER CONNECTION SECTION D–D'
NTS

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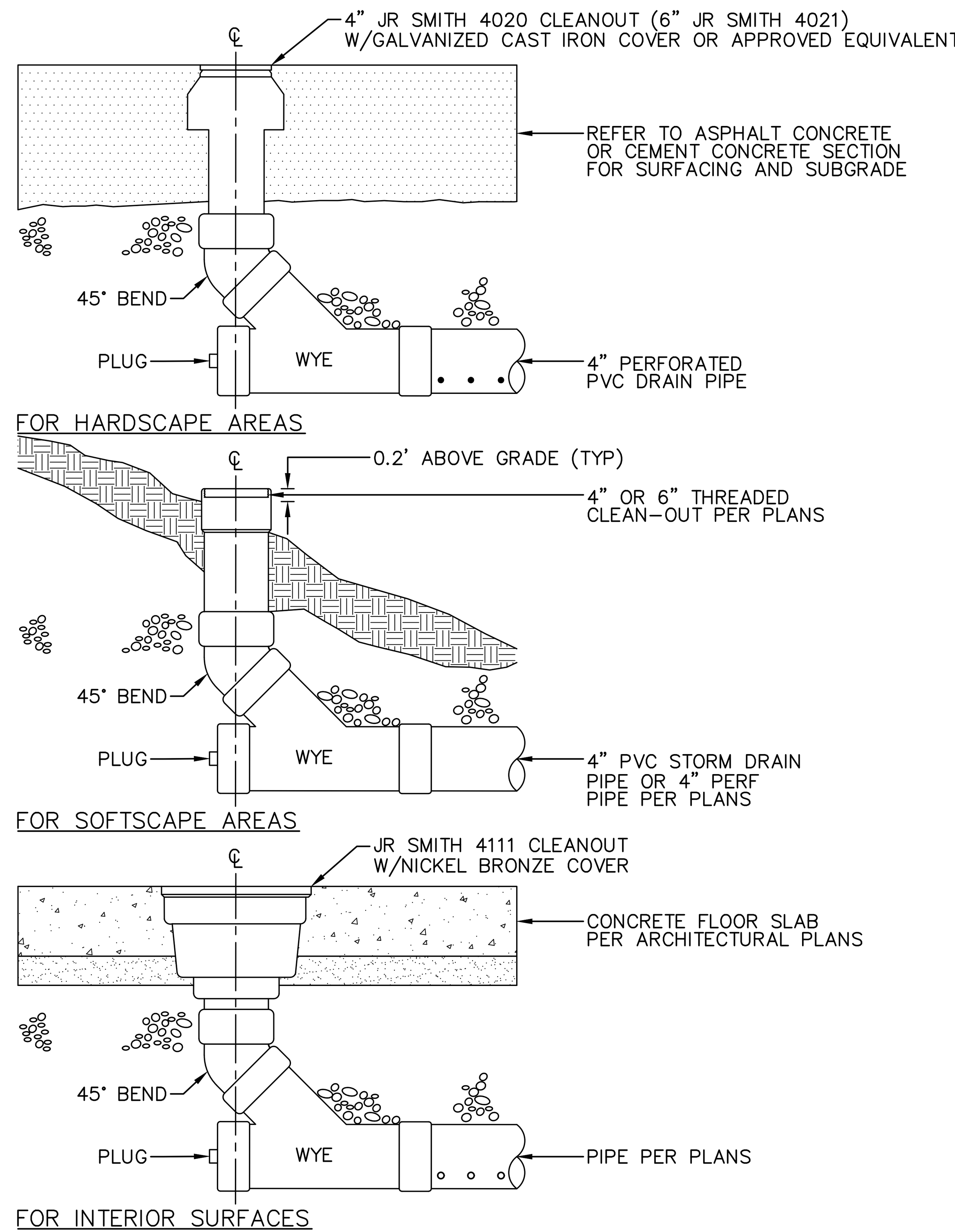
PROJECT NAME:
LUMPKIN RESIDENCE

PROJECT ADDRESS:
5401 W MERCER WAY
MERCER ISLAND, WA 98040

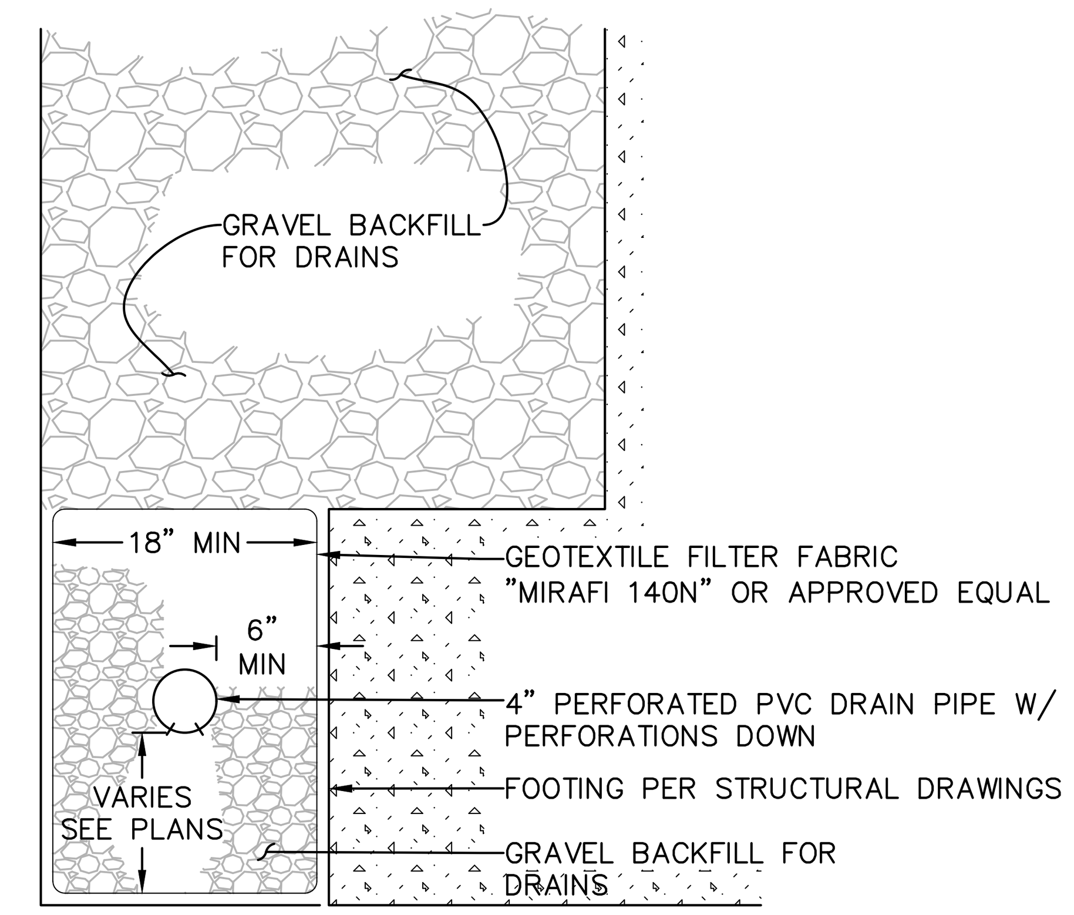
SHEET TITLE:
GRADING & UTILITY SECTIONS

SHEET NO.:
C2.1

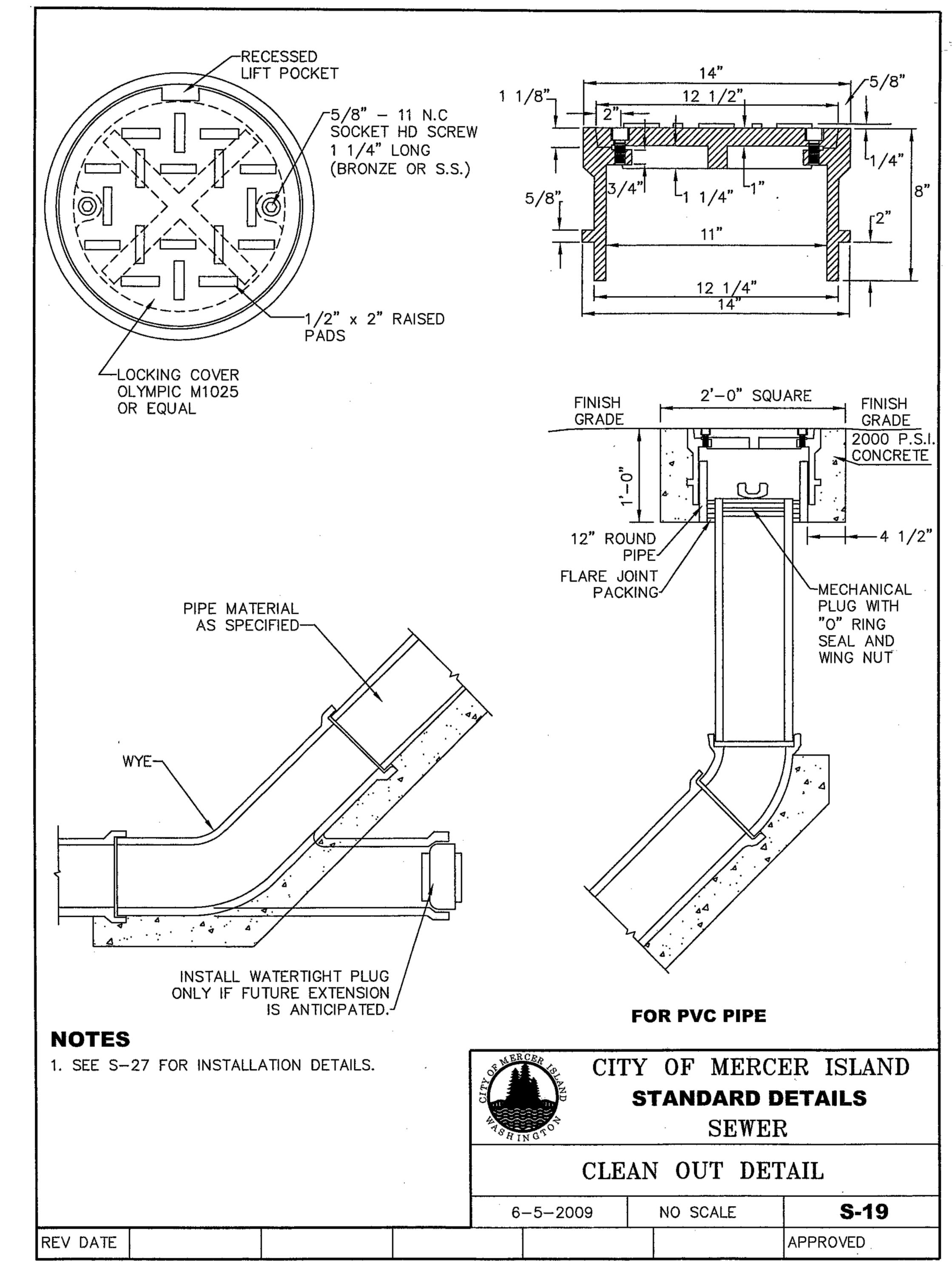
RB PROJECT NO.:
21-0035



1 STORM DRAIN CLEANOUT
NTS

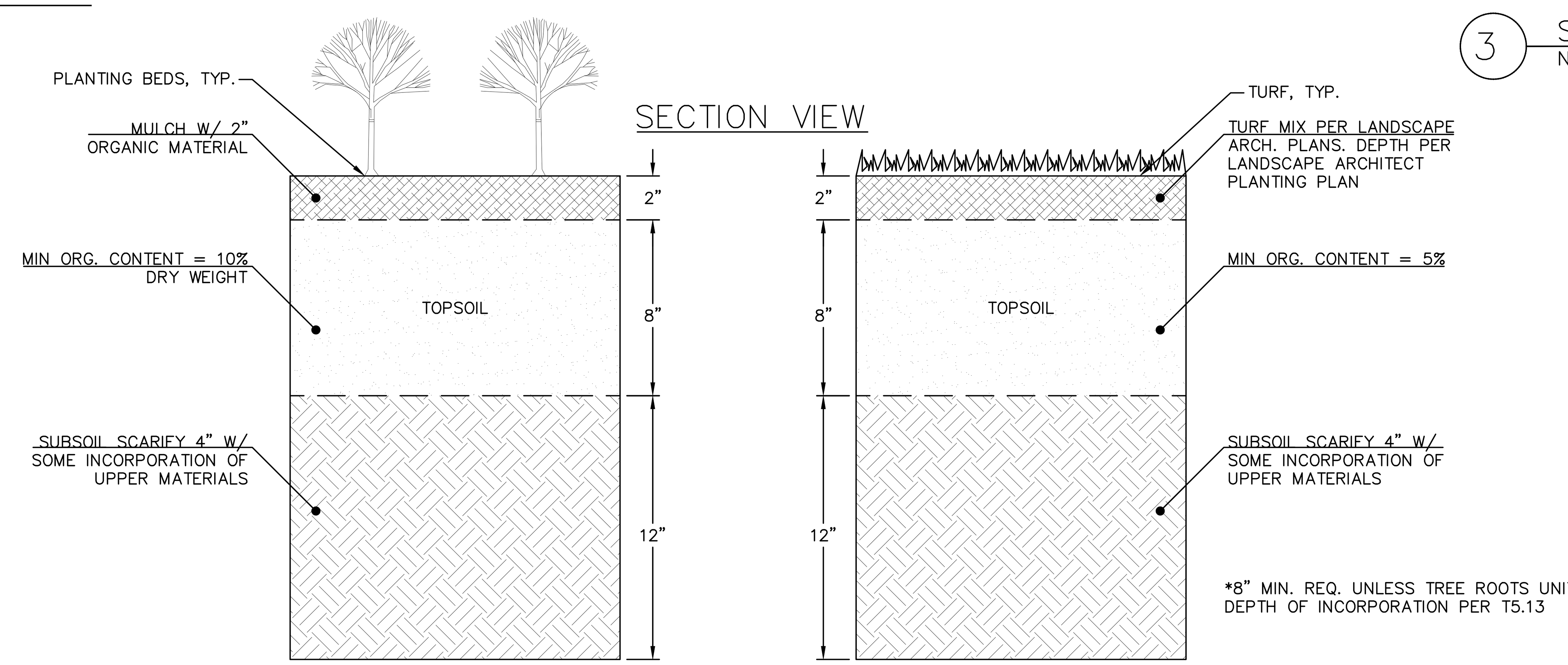


2 FOOTING DRAIN
NTS



3 SANITARY SEWER CLEANOUT
NTS

NOTE:
CONNECT HOUSE TO SEWER PER COMI STD. PLAN S-18



1. pH OF TOP SOIL SHALL BE BETWEEN 6.0 AND 8.0 OR MATCH THE pH OF UNDISTURBED SOIL.
2. USE COMPOST AND OTHER MATERIALS THAT MEET THESE ORGANIC CONTENT REQUIREMENTS:
   A. THE ORGANIC CONTENT FOR "PRE-APPROVED" AMENDMENT RATES CAN BE MET ONLY USING COMPOST MEETING THE COMPOST SPECIFICATION FROM BMP T7.30 (SEE NOTE 3) WITH THE EXCEPTION THAT THE COMPOST MAY HAVE UP TO 35% BIOSOLIDS OR MANURE.
      THE COMPOST MUST ALSO HAVE AN ORGANIC MATTER CONTENT OF 40% TO 65%, AND A CARBON TO NITROGEN RATIO BELOW 25:1.
      THE CARBON TO NITROGEN RATIO MAY BE AS HIGH AS 35:1 FOR PLANTINGS COMPOSED ENTIRLEY OF PLANTS NATIVE TO THE PUGET SOUND LOWLANDS REGION.
   B. THE RESULTING SOIL SHOULD BE CONDUCIVE TO THE TYPE OF VEGETATION TO BE ESTABLISHED.
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      - AMEND EXISTING SITE TOPSOIL OR SUBSOIL EITHER AT DEFAULT "PRE-APPROVED" RATES, OR AT CUSTOM CALCULATED RATES BASED ON TESTS OF THE SOIL AND AMENDMENT.
      - STOCKPILE EXISTING TOPSOIL DURING GRADING, AND REPLACE IT PRIOR TO PLANTING. STOCKPILED TOPSOIL MUST ALSO BE AMENDED IF NEEDED TO MEET THE ORGANIC MATTER OR DEPTH REQUIREMENTS, EITHER AT A DEFAULT "PRE-APPROVED" RATE OR AT A CUSTOM CALCULATED RATE.
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3. BIORETENTION SOIL MIX SEE C0.1 GENERAL NOTES. USED FOR PRE-APPROVED AMENDMENT RATES AS NEEDED.
4. MAINTENANCE:
   A. ESTABLISH SOIL QUALITY AND DEPTH TOWARD THE END OF CONSTRUCTION AND ONCE ESTABLISHED, PROTECT FROM COMPACTION, SUCH AS FROM LARGE MACHINERY USE, AND FROM EROSION.
   B. PLANT VEGETATION AND MULCH THE AMENDED SOIL AREA AFTER INSTALLATION.
   C. LEAVE PLANT DEBRIS OR ITS EQUIVALENT ON THE SOIL SURFACE TO REPLENISH ORGANIC MATTER.
   D. REDUCE AND ADJUST, WHERE POSSIBLE, THE USE OF IRRIGATION, FERTILIZERS, HERBICIDES AND PESTICIDES, RATHER THAN CONTINUING TO IMPLEMENT FORMERLY ESTABLISHED PRACTICES.

4 BMP T5.13: POST-CONSTRUCTION SOIL QUALITY AND DEPTH
NTS

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PROJECT NAME:
LUMPKIN RESIDENCE

PROJECT ADDRESS:
5401 W MERCER WAY
MERCER ISLAND, WA 98040

SHEET TITLE:
DETAILS

SHEET NO.:
C2.2

RB PROJECT NO.:
21-0035

DISCONNECTION

WHEN DEMOLISHING AN EXISTING BUILDING, THE BUILDING SIDE SEWER SHALL BE DISCONNECTED PRIOR TO REMOVAL OF BUILDING FOUNDATIONS. THE CONTRACTOR SHALL INSTALL A MECHANICAL PLUG WITH NON-SHRINK GROUT AT THE END OF THE SIDE SEWER TO REMAIN IN PLACE. DISCONNECTION'S SHALL BE PERFORMED IN THE PRESENCE OF THE CITY'S UTILITY INSPECTOR. THE CONTRACTOR SHALL PROVIDE AN AS-BUILT DRAWING DEPICTING THE DISCONNECTED SIDE SEWER UPON COMPLETION OF THE WORK.

RECONNECTION

WHEN RECONNECTING TO AN EXISTING SIDE SEWER, THE POINT OF RECONNECTION WILL BE DETERMINED BASED ON THE MAGNITUDE OF THE CONSTRUCTION ON THE PROPERTY.

1. PARTIAL INTERIOR REMODEL AND/OR BUILDING ADDITION WITH NO ADDITIONAL PLUMBING FIXTURES – NO SIDE SEWER REPLACEMENT REQUIRED UNLESS A KNOWN PROBLEM EXISTS IN THE SIDE SEWER.
2. PARTIAL INTERIOR REMODEL AND/OR BUILDING ADDITION WITH ADDITIONAL PLUMBING FIXTURES– ASSESS CONDITION OF EXISTING SIDE SEWER THROUGH VIDEO INSPECTION FROM BUILDING TO PROPERTY LINE AND REPLACE AS NEEDED.
3. COMPLETE INTERIOR REMODEL OF RESIDENCE – ASSESS CONDITION OF EXISTING SIDE SEWER THROUGH VIDEO INSPECTION FROM BUILDING TO PROPERTY LINE AND REPLACE AS NEEDED. IF EXISTING SIDE SEWER IS ASBESTOS CEMENT OR CONCRETE, SIDE SEWER SHALL BE REPLACED FROM BUILDING TO PROPERTY LINE, UNLESS THE APPLICANT PROVES, TO THE SATISFACTION OF THE CITY ENGINEER, THAT THE SIDE SEWER IS WATER TIGHT AND IN SOUND CONDITION.*
4. COMPLETE INTERIOR REMODEL AND BUILDING ADDITION – NEW SIDE SEWER FROM BUILDING TO PROPERTY LINE.*
5. CONSTRUCTION OF A NEW SINGLE FAMILY RESIDENCE – NEW SIDE SEWER FROM BUILDING TO PROPERTY LINE.*

BACK WATER VALVE INSTALLATION PER CITY ENGINEER, IF SCENARIO 2, 3, 4, OR 5 IS DIRECTLY ATTACHED TO THE LAKE LINE OR THE ELEVATION OF THE LOWEST DRAIN IN THE RESIDENCE IS LOWER THAN THE RIM ELEVATION OF THE UPSTREAM SEWER MANHOLE ON THE MAIN.

VIDEO INSPECTION OF THE EXISTING SIDE SEWER, BETWEEN THE PROPERTY LINE AND THE SEWER MAIN SHALL BE PERFORMED FOR SCENARIOS NUMBER 4 AND 5.

PROVIDE A COPY OF THE VIDEO DOCUMENTATION (VIDEO AND HARDCOPY REPORT) TO THE CITY ENGINEER.

REPLACEMENT OR REPAIR OF THAT PORTION OF THE SIDE SEWER BETWEEN THE PROPERTY LINE AND THE SEWER MAIN, WILL BE DETERMINED BY THE CITY ENGINEER, BASED ON THE VIDEO INSPECTION.

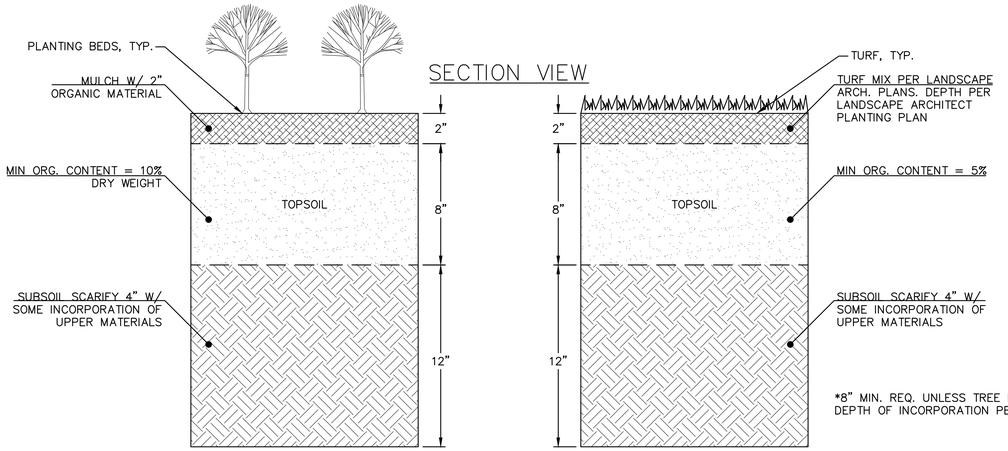
*IF THE EXISTING SIDE SEWER IS PVC AND IS LESS THAN TEN YEARS OLD, THE SIDE SEWER DOES NOT HAVE TO BE REPLACED IF A VIDEO INSPECTION AND/OR HYDROSTATIC PRESSURE TEST CONFIRMS THAT THE SIDE SEWER IS IN PROPER WORKING CONDITION. THESE TESTS SHALL BE PERFORMED AFTER ALL HEAVY EQUIPMENT THAT COULD DAMAGE THE SIDE SEWER IS OFF OF THE SITE.

CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER
RESIDENTIAL SIDE SEWER DISCONNECTION & RECONNECTION

6-5-2009	NO SCALE	S-22

REV	DATE						APPROVED

4 RESIDENTIAL SIDE SEWER – NTS
DISCONNECTION & RECONNECTION



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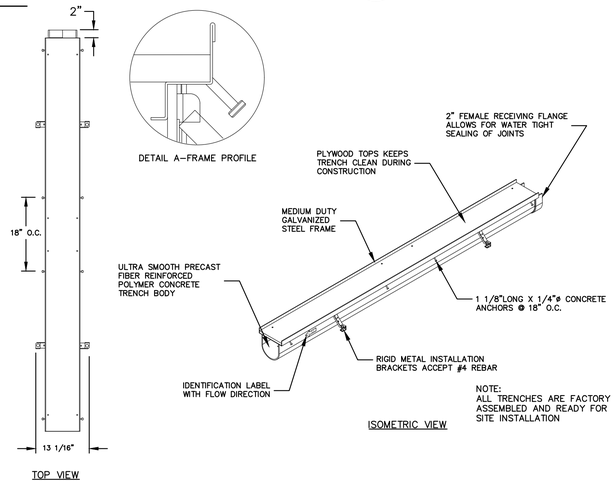
5 BMP T5.13: POST-CONSTRUCTION SOIL QUALITY AND DEPTH
NTS



6 TRENCH DRAIN DETAIL
NTS

RED BARN GROUP INC.
6610 NE 181ST ST, STE 2
KENMORE, WA 98028
PH. (206) 200-7174
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STATE OF WASHINGTON
45286
REGISTERED
PROFESSIONAL ENGINEER
05/02/2022

DESIGN	RJW
DRAWN	EJW
CHECKED	RJW

REV/SUBMITTAL	DATE
1 CITY COMMENTS	9/07/21
2 CITY COMMENTS	10/21/21
3 DESIGN REVISION	05/02/22

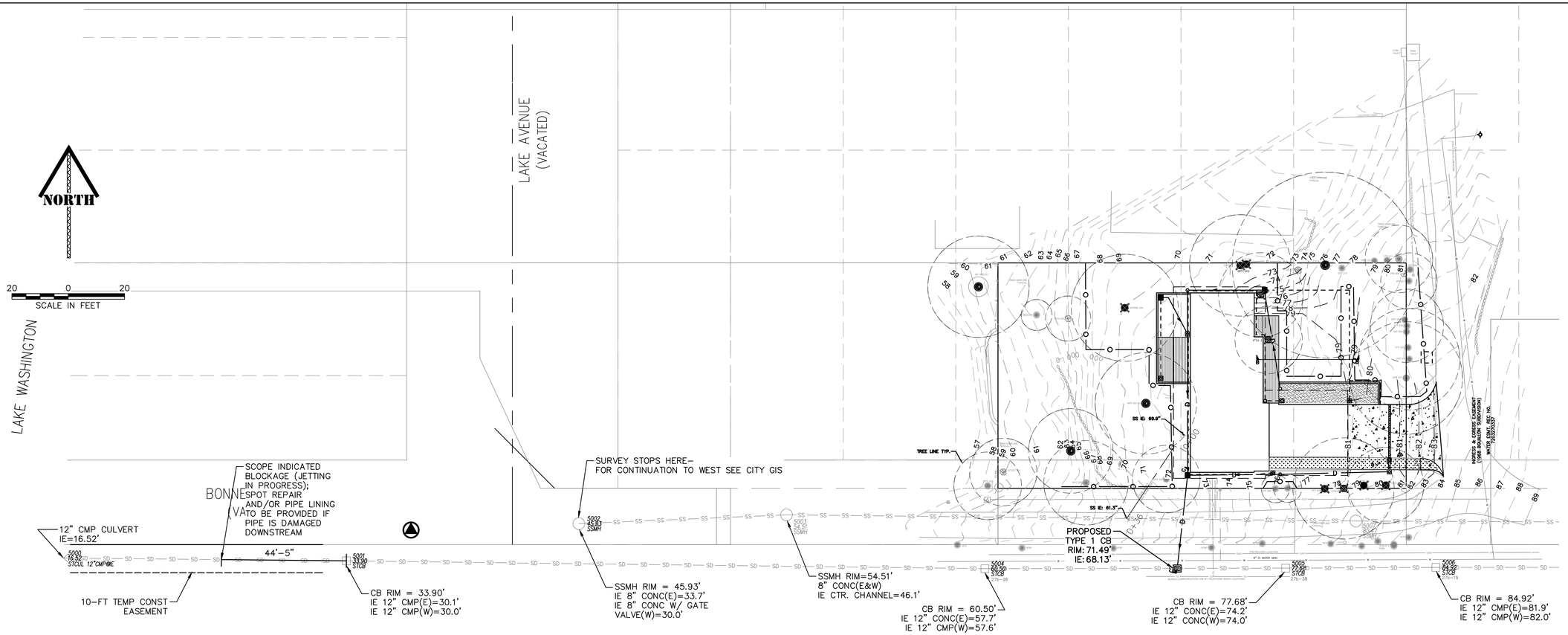
PROJECT NAME:
LUMPKIN RESIDENCE

PROJECT ADDRESS:
5401 W MERCER WAY
MERCER ISLAND, WA 98040

SHEET TITLE:
DETAILS

SHEET NO.:
C2.3

RB PROJECT NO.:
21-0035



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14. ANY ROOT GREATER THAN 2" IN DIAMETER TO BE CUT SHOULD BE SUPERVISED BY ARBORIST.

LEGEND:

- TYPE 1 CATCH BASIN PER WSDOT STD SPEC 9-05.50(3)
- STORM DRAIN CLEANOUT
- DOWNSPOUT
- SCH 40 PVC PERF PIPE (PER WSDOT STD. SPEC 9-05.2(6))
- SD (SMOOTH-WALLED PVC ASTM 3034 SDR 35)
- NDS YARD DRAIN (COLOR TO BE DETERMINED BY LANDSCAPE ARCHITECT)
- 6" CONC OVER 6" CSBC W/ #4 REBAR 16"O.C. EACH WAY CENTERED IN SLAB. SEE NOTE 4

SURFACE AREA TABLE

PROJECT NAME:	Lumpkin Residence		
TOTAL LOT AREA (SF)		11,600	0.27
Clearing Area		-	0.00
SURFACE	DESCRIPTION	AREA (SF)	AREA (AC)
S1	ROOF (HOUSE)	3,105	0.07
S2	UNCOVERED WOODEN DECK	224	0.01
S3	RETAINING WALL SURFACE	40	0.00
S4	CONCRETE DRIVEWAY	787	0.02
	IMPERVIOUS TOTAL	*4,156*	0.10

EXCEPTIONAL TREE LIST:
#214, #230, #233, #237
FOR COMPLETE TREE INFORMATION SEE SHEET C2.5

LEGAL DESCRIPTION

(PER FIRST AMERICAN TITLE INSURANCE COMPANY COMMITMENT NO. 4209-3803268, DATED AUGUST 5, 2021 8:00 AM)

REAL PROPERTY IN THE COUNTY OF KING, STATE OF WASHINGTON, DESCRIBED AS FOLLOWS:

PARCEL A:
THE SOUTH 70 FEET OF EAST 25 FEET OF LOT 19 AND SOUTH 70 FEET OF LOTS 20, 21 AND 22, BLOCK 2, GROVELAND PARK, A VACATED PLAT AND ADJOINING 10 FEET OF VACATED BONNEY STREET, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 8 OF PLATS, PAGE 36, IN KING COUNTY, WASHINGTON;

PARCEL B:
A PERPETUAL NON-EXCLUSIVE EASEMENT FOR DRIVEWAY OVER A STRIP OF LAND 30 FEET IN WIDTH, SOUTH LINE THEREOF IS COINCIDENT WITH THE CENTER LINE OF VACATED BONNEY STREET, AND SAID EASEMENT OR RIGHT OF WAY EXTENDING TO THE WESTERLY LINE OF WEST MERCER WAY ALSO KNOWN AS MERCER ISLAND BOULEVARD, THE WESTERLY END OF SAID EASEMENT OR RIGHT OF WAY BEING THE EAST LINE OF ABOVE DESCRIBED TRACT AND SAID EAST LINE EXTENDED SOUTH 20 FEET TO THE CENTER LINE OF SAID VACATED BONNEY STREET;

EXCEPT ANY PORTION THEREOF LYING WITHIN THE MAIN TRACT.

HORIZONTAL DATUM

ASSUMED

VERTICAL DATUM

NAVD 88 BASED ON TIES TO BENCHMARKS SHOWN ON A TOPOGRAPHIC MAP PROVIDED BY THE CLIENT, PERFORMED BY THOMAS J. COLETTI, DATED AUGUST 14, 2019.

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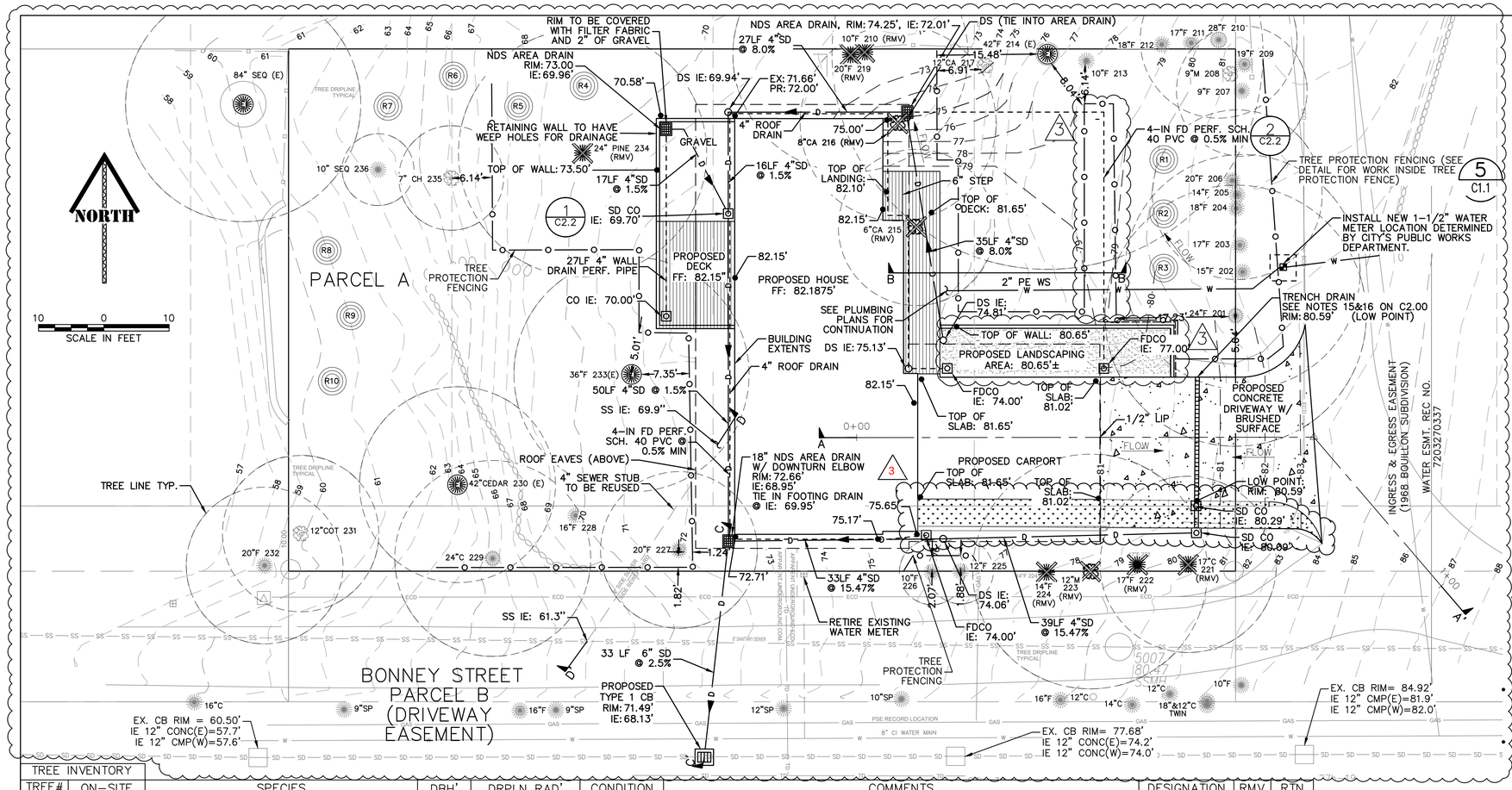
PROJECT NAME:
LUMPKIN RESIDENCE

PROJECT ADDRESS:
5401 W MERCER WAY
MERCER ISLAND, WA 98040

SHEET TITLE:
STORMWATER OVERVIEW

SHEET NO.:
C2.4

RB PROJECT NO.:
21-0035



LEGEND:

- TYPE 1 CATCH BASIN PER WSDOT STD SPEC 9-05.50(3)
- STORM DRAIN CLEANOUT
- DOWNSPOUT
- SCH 40 PVC PERF PIPE (PER WSDOT STD. SPEC 9-05.2(6))
- SD (SMOOTH-WALLED PVC ASTM 3034 SDR 35)
- NDS YARD DRAIN (COLOR TO BE DETERMINED BY LANDSCAPE ARCHITECT)
- 6" CONC OVER 6" CSBC W/ #4 REBAR 16"O.C. EACH WAY CENTERED IN SLAB. SEE NOTE 4
- TREE TO BE REMOVED
- TREE TO BE PLANTED/REPLACED
- EXCEPTIONAL TREE
- TREE PROTECTION FENCING- CHAIN LINK FENCE (PER ARBORIST, TREE FENCING HAS BEEN ADDRESSED IN THE ARBORIST REPORT FOR BEST LOCATION.)

NOTES

TREE PROTECTION MEASURES (TPM) SHOULD BE 4' TALL ORANGE POLY FENCING, OR EQUIVALENT, STAKED INTO PLACE AT THE LIMITS OF DISTURBANCES (LOD), EXCEPT THAT TPM FOR THE TREES LOCATED ALONG THE ROW SHALL BE 6' TALL CHAIN-LINK PANELS SECURED IN PLACE.

SIGNAGE SHALL BE PROVIDED EVERY 20' ALONG THE SECTIONS OF TPM STATING THE FENCE PROVIDES A "TREE PROTECTION ZONE" – "NO SOILS, BUILDING MATERIALS OR EQUIPMENT ALLOWED IN PROTECTION ZONE". THESE SIGNS SHOULD BE 8.5" BY 11.0" AND MADE TO BE WEATHER RESISTANT.

- SITE CLEARING, GRADING AND EXCAVATION SHOULD BE MONITORED BY A PROFESSIONAL TREE PERSON. ANY ROOTS ENCOUNTERED SHOULD BE SHOULD BE CLEANLY CUT AS-IF IT WERE A ROOT FROM A TREE SCHEDULED FOR RETENTION. ANY STUMP REMOVAL SHOULD BE CONSIDERED FOR ITS POTENTIAL IMPACT OF NEARBY PROTECTED TREES.
- ROOT PRUNING, AS NEEDED, SHOULD BE UNDERTAKEN WITH CARE. ADDITIONAL PRUNING STANDARDS ARE DETAILED IN ANSI STANDARD A300 (PART8)-2013 ROOT MANAGEMENT.
- AN ASSESSMENT OF THE ENCOUNTERED ROOTS SHOULD BE UNDERTAKEN TO DETERMINE IF ANY OF THE RETAINED TREES INCUR ROOT IMPACTS AND THE EXTENT OF THE ROOT IMPACTS.
- ALL EXPOSED ROOTS SHOULD BE COVERED WITH MOST NATIVE SOIL OR A COMMERCIAL COMPOST OR MULCH PRODUCT, SUFFICIENT TO COVER THE FRESHLY CUT ROOTS AS SOON AS IS REASONABLE.
- ALL BARE SOILS AROUND THE RETAINED TREES SHOULD BE COVERED WITH 3" OF ARBORIST WOOD CHIPS OR A COMMERCIAL MULCH MATERIAL.
- IF LIMB REMOVAL IS NEEDED IN ORDER TO PROVIDE BUILDING CLEARANCE, SUCH PRUNING SHOULD BE UNDERTAKEN BY A TREE PROFESSIONAL AND SHOULD BE DONE WITH PROPER PRUNING EQUIPMENT
- THE TREES WOULD BENEFIT FROM ADDITIONAL SUMMER-TIME HYDRATION, AS MAY BE POSSIBLE
- REPLACEMENT TREES TO BE PLANTED AT LEAST 10-FEET AWAY FROM EACH OTHER, STRUCTURES, FENCES, AND UTILITIES. REFER TO MICC19.10 FOR TREE CODE REQUIREMENTS.

TREE REPLACEMENT LIST

TREE#	SPECIES	SIZE AT PLANTING	NATIVE
R1	THUJA PLICATA, EXCELSA	6'+	YES
R2	ACER CIRCINITUM, VINE MAPLE	2" CALIPER	YES
R3	THUJA PLICATA, EXCELSA	6'+	YES
R4	ACER PALMATUM, JAPANESE MAPLE	2" CALIPER	NO
R5	STEWARTIA MONODELPHA	2" CALIPER	NO
R6	PINUS CONTORTA, SHORE PINE	6'+	YES
R7	PINUS CONTORTA, SHORE PINE	6'+	YES
R8	CORNUS KOUSA, KOUSA DOGWOOD	2" CALIPER	NO
R9	ACER PALMATUM, JAPANESE MAPLE	2" CALIPER	NO
R10	ACER CIRCINITUM, VINE MAPLE	2" CALIPER	YES
			60% NATIVE

TREE INVENTORY

TREE#	ON-SITE	SPECIES	DBH'	DRPLN RAD'	CONDITION	COMMENTS	DESIGNATION	RMV	RTN
201	X	PSEUDOTSUGA MENZIESII, DOUGLAS FIR	24.1	20' W	GOOD	CANOPY VER TREE #202,203. DEADWOOD TYPICAL STRESS	LARGE		X
202	ROW	PSEUDOTSUGA MENZIESII, DOUGLAS FIR	15.3	18' W	GOOD	OFF-SITE DEAD WOOD, SIGNIFICANT	LARGE		X
203	ROW	PSEUDOTSUGA MENZIESII, DOUGLAS FIR	17.2	15' W	GOOD	OFF-SITE, DEADWOOD, SIGNIFICANT, COMBINED CANOPIES	LARGE		X
204	X	PSEUDOTSUGA MENZIESII, DOUGLAS FIR	17.2	12' W	GOOD	DEADWOOD, PLANTED VERY CLOSE TO 205, 206	LARGE		X
205	ROW	PSEUDOTSUGA MENZIESII, DOUGLAS FIR	13.4	13	FAIR	OFF-SITE, 8" FROM 205, 6" FROM 206	LARGE		X
206	X	PSEUDOTSUGA MENZIESII, DOUGLAS FIR	18.7	SHARED CANOPY	FAIR	LIMBED HIGH, SHARED CANOPY	LARGE		X
207	ROW	PSEUDOTSUGA MENZIESII, DOUGLAS FIR	9.6	10' W	FAIR	OFF-SITE, RUNTED BY NEARBY TREES	NON-REG		X
208	X	ACER MACROPHYLLUM, BIG LEAF MAPLE	7.6	SHARED CANOPY	GOOD	SHARED CANOPY	NON-REG		X
209	ROW	PSEUDOTSUGA MENZIESII, DOUGLAS FIR	16.4	SHARED CANOPY	GOOD	OFF-SITE, SHARED CANOPY THAT IS PRIMARILY EAST	LARGE		X
210	OFF-SITE	PSEUDOTSUGA MENZIESII, DOUGLAS FIR	24.8	12' NORTH	GOOD	OFF-SITE, IVY INFESTED, SHARED CANOPY	LARGE		X
211	OFF-SITE	PSEUDOTSUGA MENZIESII, DOUGLAS FIR	14.1	15' NORTH	FAIR	OFF-SITE, IVY, MAY HAVE BEEN TOPPED	LARGE		X
212	OFF-SITE	PSEUDOTSUGA MENZIESII, DOUGLAS FIR	19.1	12' NORTH	GOOD	OFF-SITE, MINOR IVY, RESPONSE WOOD 'NB' ON BUTTRESS SOUTH	LARGE		X
213	X	PSEUDOTSUGA MENZIESII, DOUGLAS FIR	9.9	SHARED CANOPY	FAIR	RUNT IN CANPY OF OTHER TREES	NON-REG		X
214	X	PSEUDOTSUGA MENZIESII, DOUGLAS FIR	41.3	33' SOUTH	GOOD	EXCEPTIONAL TREE BY SIZE DEFINITION	EXCEPTIONAL		X
215	X	STYRAX JAPONICA, JAPANESE SNOWBALL	6.1	12' AVERAGE	GOOD	CLOSE TO EXISTING HOUSE	NON-REG	X	
216	X	PRUNUS BLIERIANNA, FLOWERING PLUM	6.5	15' S & W	FAIR/POOR	LEANS TOWARDS HOUSE, POOR VIGOR, POOR STRUCTURE	NON-REG	X	
217	X	PRUNUS BLIERIANNA, FLOWERING PLUM	10.7	15' N & S	POOR	LEANS WEST OVER EXISTING HOME	LARGE		X
219	X	PSEUDOTSUGA MENZIESII, DOUGLAS FIR	18.7	12' S, 18' W	GOOD	SWEEPING TRUNK, SELF RIGHTED, TOPPED?	LARGE	X	
220	X	PSEUDOTSUGA MENZIESII, DOUGLAS FIR	9.6	SHARED CANOPY	POOR	RUNT, MAY BE ATTACHED AT BASE OF #219	NON-REG	X	
221	X	THUJA PLICATA, WESTERN RED CEDAR	15.3	12-15' AVG	FAIR	ENEMIC, PARTIAL ROOT COLLAR BURIED, POOR SOIL CONDITIONS	LARGE	X	
222	X	PSEUDOTSUGA MENZIESII, DOUGLAS FIR	15.3	10' NORTH	FAIR/POOR	ENEMIC, GIRDLING ROOT(S), POOR SOIL CONDITIONS	LARGE	X	
223	X	ACER MACROPHYLLUM, BIG LEAF MAPLE	12.6	18' NORTH	GOOD	ROOTS EXPOSED W/ IMPACTS FROM FOOT TRAFFIC, POOR SOIL CONDITION.	LARGE	X	
224	X	PSEUDOTSUGA MENZIESII, DOUGLAS FIR	9.9	6' NORTH	POOR	IN CANOPY OF MAPLE #223, 15% DEADWOOD	NON-REG	X	
225	X	PSEUDOTSUGA MENZIESII, DOUGLAS FIR	13.4	5' NORTH	FAIR	SIGNIFICANT DEADWOOD ON EAST AND NORTH.	LARGE		X
226	X	PSEUDOTSUGA MENZIESII, DOUGLAS FIR	11.8	5' NORTH	FAIR/POOR	SIGNIFICANT DEADWOOD ON EAST AND NORTH.	LARGE		X
227	X	PSEUDOTSUGA MENZIESII, DOUGLAS FIR	21.0	12' NORTH	GOOD	UN-REMARKABLE	LARGE		X
228	X	PSEUDOTSUGA MENZIESII, DOUGLAS FIR	14.5	8' NORTH	GOOD	LIMBED HIGH ON NORTH SIDE	LARGE		X
229	X	THUJA PLICATA, WESTERN RED CEDAR	24.0	15' EAST	FAIR	SPARSE CANOPY, DROUGHT STRESS?	LARGE		X
230	X	THUJA PLICATA, WESTERN RED CEDAR	30.7	15' N, 12' E	FAIR	3 STEM CEDAR. USED SQ ROOTS TO DETERMINE DBH	EXCEPTIONAL		X
231	X	ALNUS, RED ALDER	12.6	12' N, 10' E	GOOD	TYPICAL	LARGE		X
232	OFF-SITE	PSEUDOTSUGA MENZIESII, DOUGLAS FIR	20.0	12' N, 8' E	GOOD	OFF-SITE, UNREMARKABLE	LARGE		X
233	X	PSEUDOTSUGA MENZIESII, DOUGLAS FIR	33.6	18' AVG	GOOD	EXCEPTIONAL BY SIZE, LOCATED CLOSE TO DECKS AND HOME	EXCEPTIONAL		X
234	X	PINUS	23.3	19' AVG	GOOD	LIMBS HANG OVER HOUSE AND DECK	LARGE	X	
235	X	PINUS, FLOWERING CHERRY	6.9	8'	GOOD	LANDSCAPING TREE	NON-REG		X
236	X	CALOCEDRUS DECURRENS, INCENSE CEDAR	9.6	5.5' AVG	EXCELLENT	UNREMARKABLE	NON-REG		X
237	OFF-SITE	GIANT SEQUOIA	EST 96"	18'	EXCELLENT	OFF-SITE, NO PROPOSED IMPACTS.	EXCEPTIONAL		X

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STATE OF WASHINGTON
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REGISTERED PROFESSIONAL ENGINEER
05/02/2022

DESIGN	RJW
DRAWN	EJW
CHECKED	RJW

REV/SUBMITTAL	DATE
1 CITY COMMENTS	9/07/21
2 CITY COMMENTS	10/21/21
3 DESIGN REVISION	05/02/22

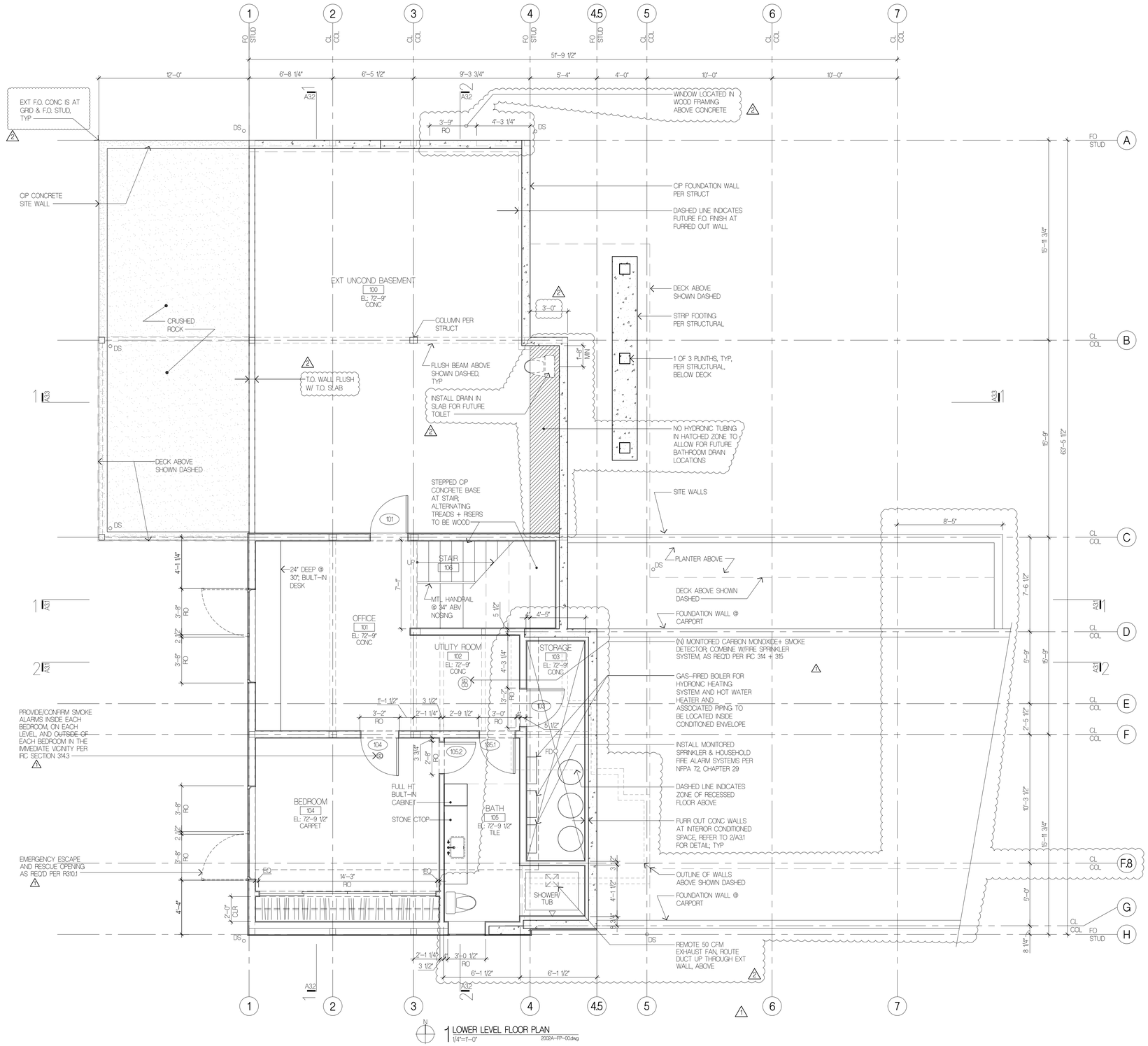
PROJECT NAME:
LUMPKIN RESIDENCE

PROJECT ADDRESS:
5401 W MERCER WAY
MERCER ISLAND, WA 98040

SHEET TITLE:
TREE AND CIVIL COMPOSITE PLAN

SHEET NO.:
C2.5

RB PROJECT NO.:
21-0035



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Project Title
LUMPKIN RESIDENCE
5401 W. MERCER WAY
MERCER ISLAND, WA, 98040

7173 REGISTERED ARCHITECT JAMES T. DEGUCHI STATE OF WASHINGTON

Drawing Title
LOWER LEVEL FLOOR PLAN

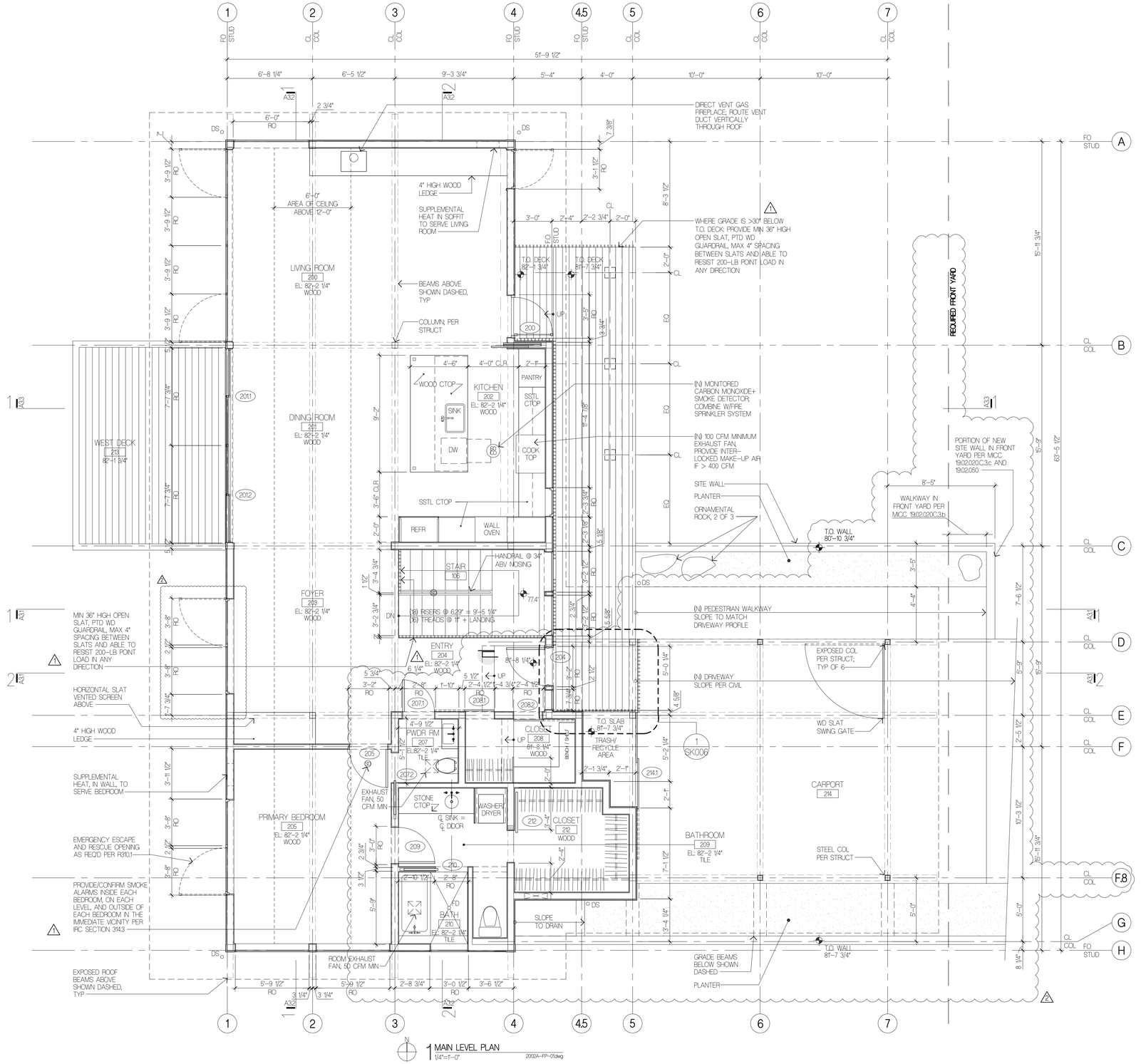
Date
03/17/2021

Job No.
2002

ISSUE	DATE
DD PRICING SET	09/28/2020
PERMIT SET	03/17/2021
1 PERMIT CORRECTION #1	09/01/2021
2 PERMIT REVISION #1	04/28/2022

PERMIT REVISION #1
Sheet No.

A1.0



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Project Title
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5401 W. MERCER WAY
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7173 REGISTERED ARCHITECT JANET DEGUCHI STATE OF WASHINGTON

Drawing Title
MAIN LEVEL FLOOR PLAN

Date
03/17/2021

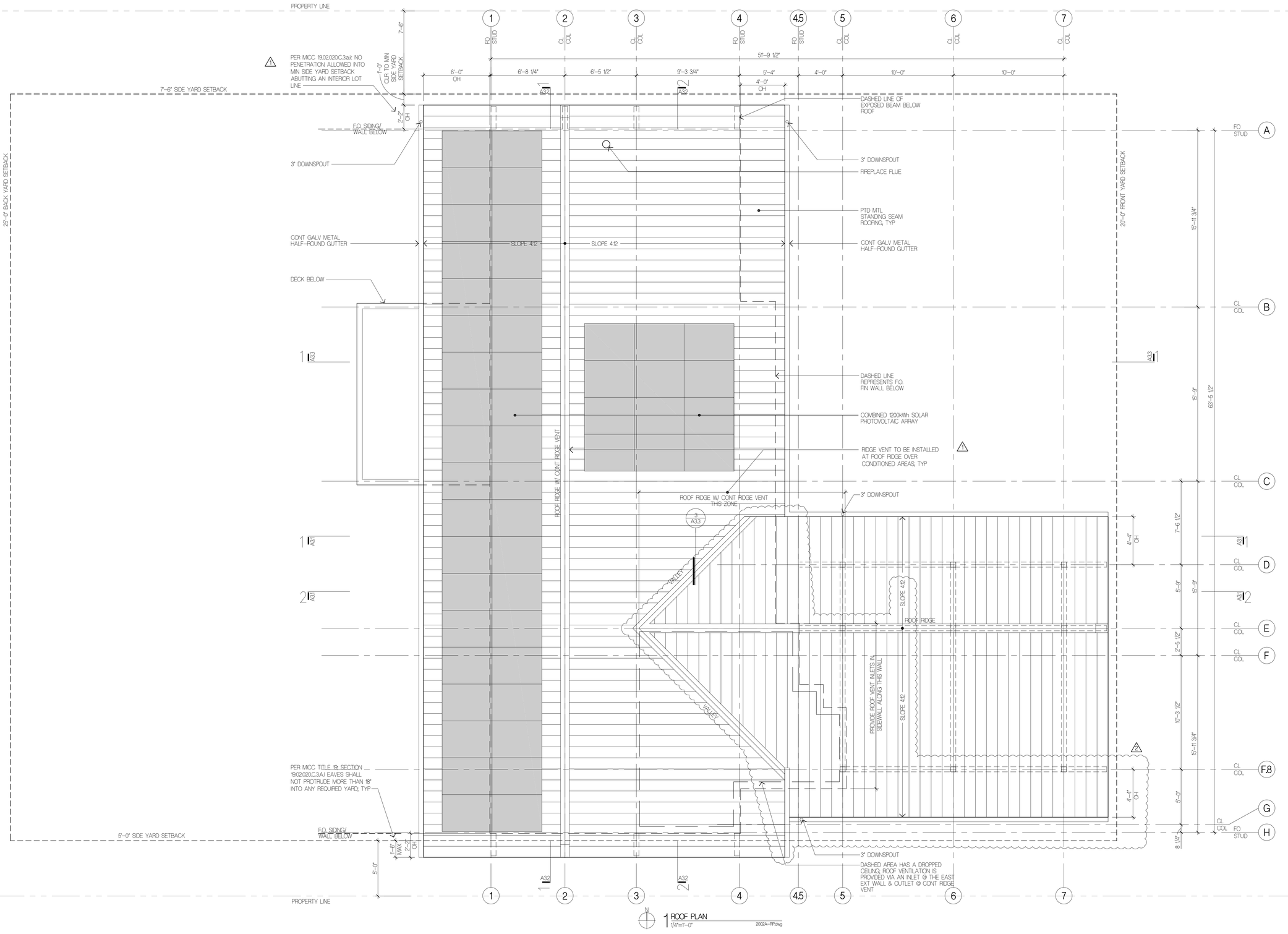
Job No.
2002

ISSUE	DATE
DD PRICING SET	09/28/2020
PERMIT SET	03/17/2021
⚠1 PERMIT CORRECTION #1	09/01/2021
⚠2 PERMIT REVISION #1	04/28/2022

PERMIT REVISION #1

Sheet No.

A1.1



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

2002A-RP.dwg

Suyama Peterson Deguchi
8601 8th Avenue South Seattle, Washington 98108
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Project Title
LUMPKIN RESIDENCE
5401 W. MERCER WAY
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7173
REGISTERED ARCHITECT
JAY T. DEGUCHI
STATE OF WASHINGTON

Drawing Title
ROOF PLAN

Date
03/17/2021

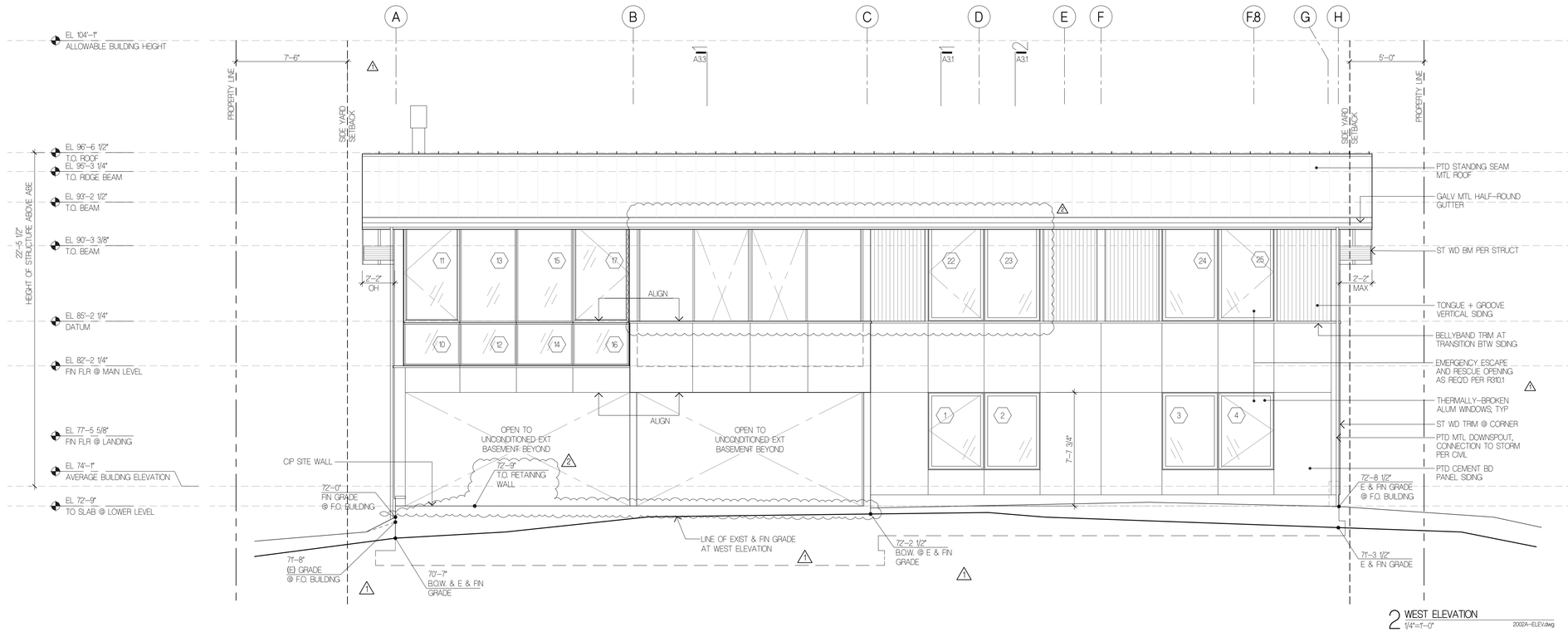
Job No.
2002

ISSUE		DATE
	PERMIT SET	03/17/2021
△1	PERMIT CORRECTION #1	09/01/2021
	PRICING SET	11/19/2021
△2	PERMIT REVISION #1	04/28/2022

PERMIT REVISION #1

Sheet No.

A1.2



2 WEST ELEVATION
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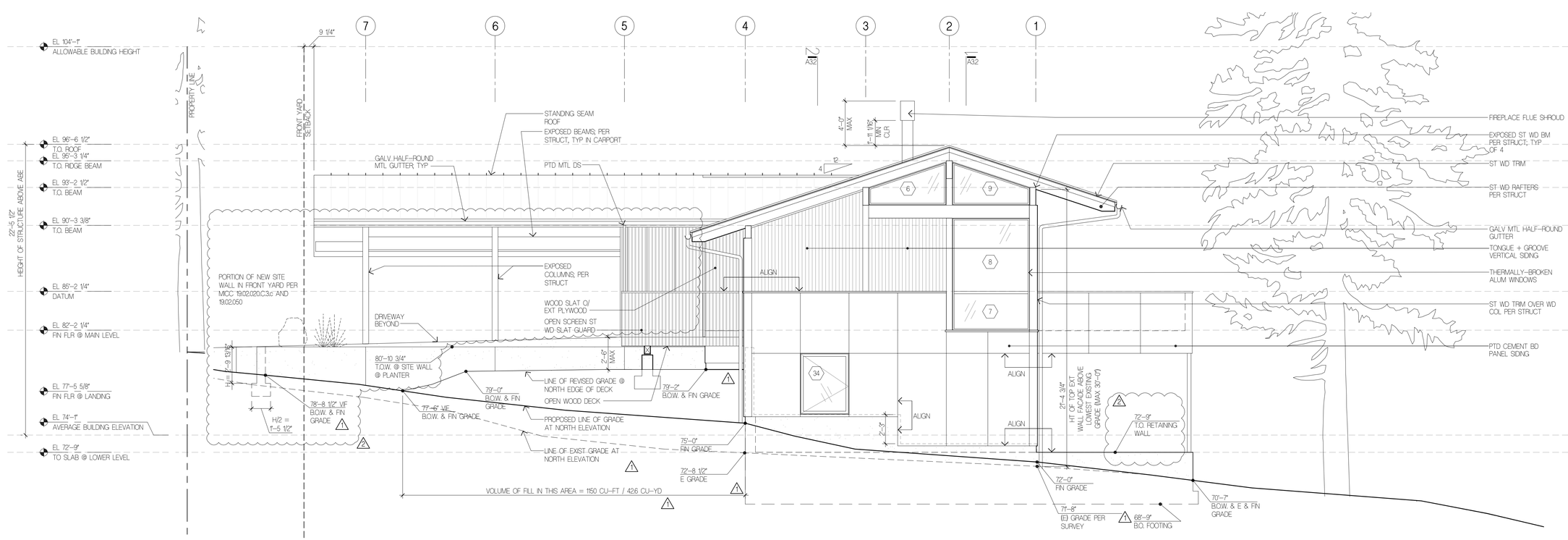

1 NORTH ELEVATION
1/4" = 1'-0" 2002A-ELEV.dwg

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Project Title
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7173 REGISTERED ARCHITECT JAMES DEGUCHI STATE OF WASHINGTON

Drawing Title
BUILDING ELEVATIONS

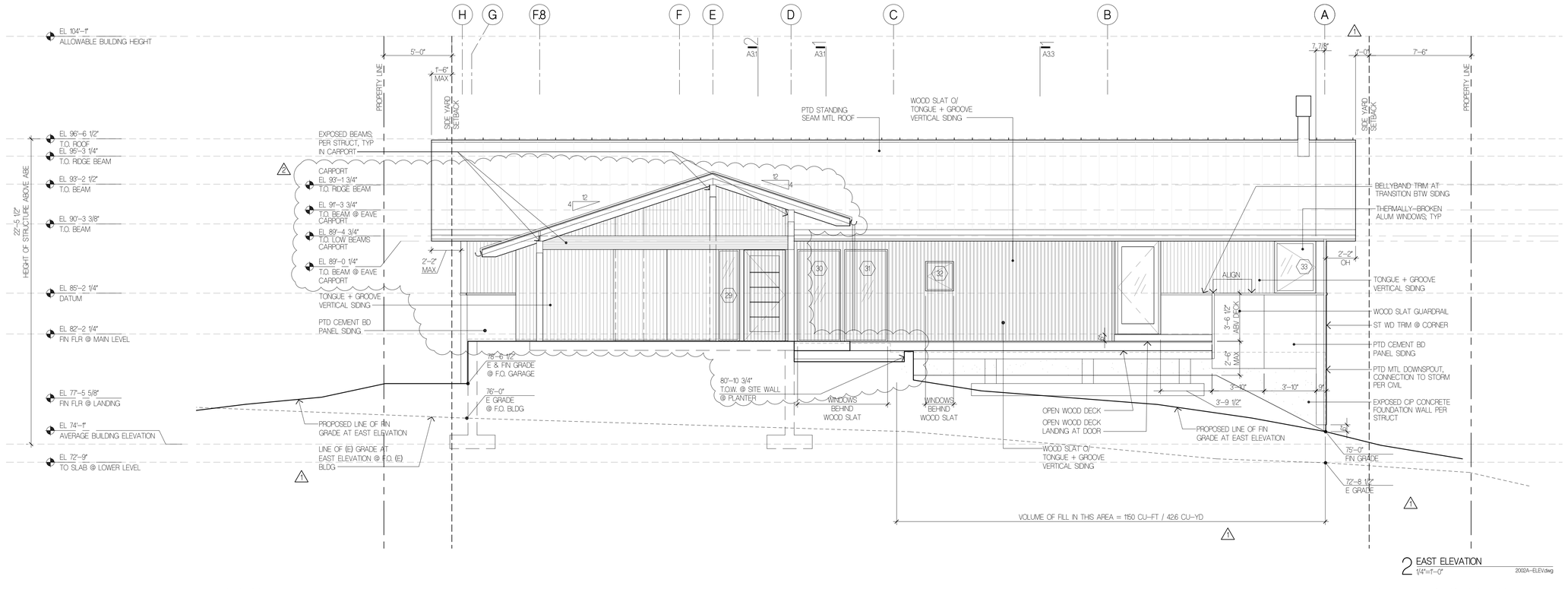
Date
03/17/2021

Job No.
2002

ISSUE	DATE
DD PRICING SET	09/28/2020
PERMIT SET	03/17/2021
1 PERMIT CORRECTION #1	09/01/2021
2 PERMIT REVISION #1	04/28/2022

PERMIT REVISION #1
Sheet No.

A2.1



2 EAST ELEVATION
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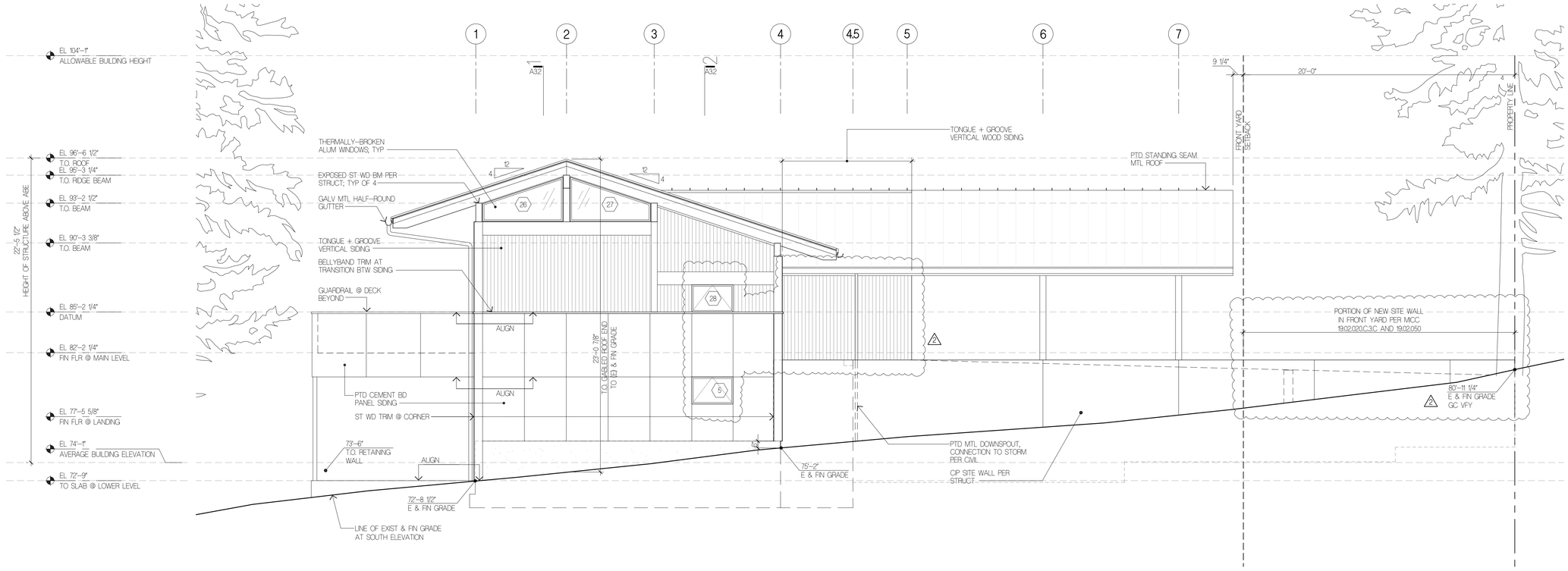

1 SOUTH ELEVATION
1/4" = 1'-0" 2002A-ELEV.dwg

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7173 REGISTERED ARCHITECT JAMY DEGUCHI STATE OF WASHINGTON

Drawing Title
BUILDING ELEVATIONS

Date
03/17/2021

Job No.
2002

ISSUE	DATE
DD PRICING SET	09/28/2020
PERMIT SET	03/17/2021
1 PERMIT CORRECTION #1	09/01/2021
2 PERMIT REVISION #1	04/28/2022

PERMIT REVISION #1
Sheet No.

A2.2

APPLIANCE PACKAGE SCHEDULE
(WSEC TABLE 406.3 OPTION 7)

APPLIANCE	MFR	MODEL #	SIZE	FINISH	ENERGY STAR
DISHWASHER	MIELE	G 4993 SCVi AM	24" W	PANEL READY	Y
REFRIGERATOR	MIELE	KFNF 9955 iDE	36" W	SSTL	Y
WASHING MACHINE	FISHER PAYKEL	WH2424P2	24" W	WHITE	Y
DRYER - VENTLESS	FISHER PAYKEL	DE4024P2	24" W	WHITE	Y

2 APPLIANCE SCHEDULE
2002A-ELEV.dwg

2018 WASHINGTON STATE ENERGY CODE COMPLIANCE METHOD: CHAPTER 4 PRESCRIPTIVE REQUIREMENTS APPROACH, CLIMATE ZONE 4C, UNLIMITED GLAZING AREA (REFER TO TABLE 402.1.1)

WINDOW SCHEDULE

I.D.	MANUF.	DESCRIPTION	U-VAL.	SHGC	NFRC	R.O. WIDTH FT.	R.O. WIDTH IN.	R.O. HEIGHT FT.	R.O. HEIGHT IN.	AREA SF	UxA	ORIEN-TATION	OPERATION	FRAME MATERIAL	SAFETY GLASS	NOTES
1	FLEETWOOD	ALUMINUM CASEMENT	0.28	0.29	FLE-M-111-00044-00001	3	9 1/4	5	1 1/4	19.2	5.4	W	SWING	ALUM.		
2	FLEETWOOD	ALUMINUM PICTURE	0.28	0.35	FLE-M-113-00044-00001	3	9 1/4	5	1 1/4	19.2	5.4	W	FIXED	ALUM.		
3	FLEETWOOD	ALUMINUM PICTURE	0.28	0.35	FLE-M-113-00044-00001	3	9 1/4	5	1 1/4	19.2	5.4	W	FIXED	ALUM.		
4	FLEETWOOD	ALUMINUM CASEMENT	0.28	0.35	FLE-M-111-00044-00001	3	9 1/4	5	1 1/4	19.2	5.4	W	SWING	ALUM.		EMERGENCY EGRESS
5	FLEETWOOD	ALUMINUM PICTURE	0.28	0.35	FLE-M-113-00044-00001	3	1/2	2	1/2	6.2	1.7	S	FIXED	ALUM.		
6	FLEETWOOD	ALUMINUM PICTURE	0.28	0.35	FLE-M-113-00044-00001	6	0	3	3 1/2	19.8	5.5	N	FIXED	ALUM.		6
7	FLEETWOOD	ALUMINUM PICTURE	0.28	0.35	FLE-M-113-00044-00001	6	0	3	0	18.0	5.0	N	FIXED	ALUM.	YES	
8	FLEETWOOD	ALUMINUM PICTURE	0.28	0.35	FLE-M-113-00044-00001	6	0	5	7 7/8	33.9	9.5	N	FIXED	ALUM.		
9	FLEETWOOD	ALUMINUM PICTURE	0.28	0.35	FLE-M-113-00044-00001	6	0	3	3 1/2	19.8	5.5	N	FIXED	ALUM.		6
10	FLEETWOOD	ALUMINUM PICTURE	0.28	0.35	FLE-M-113-00044-00001	3	9 1/2	3	0	11.4	3.2	W	FIXED	ALUM.	YES	
11	FLEETWOOD	ALUMINUM CASEMENT	0.28	0.29	FLE-M-111-00044-00001	3	9 1/2	6	7 3/4	25.2	7.1	W	SWING	ALUM.		
12	FLEETWOOD	ALUMINUM PICTURE	0.28	0.35	FLE-M-113-00044-00001	3	9 1/2	3	0	11.4	3.2	W	FIXED	ALUM.	YES	
13	FLEETWOOD	ALUMINUM PICTURE	0.28	0.35	FLE-M-113-00044-00001	3	9 1/2	6	7 3/4	25.2	7.1	W	FIXED	ALUM.		
14	FLEETWOOD	ALUMINUM PICTURE	0.28	0.35	FLE-M-113-00044-00001	3	9 1/2	3	0	11.4	3.2	W	FIXED	ALUM.	YES	
15	FLEETWOOD	ALUMINUM PICTURE	0.28	0.35	FLE-M-113-00044-00001	3	9 1/2	6	7 3/4	25.2	7.1	W	FIXED	ALUM.		
16	FLEETWOOD	ALUMINUM PICTURE	0.28	0.35	FLE-M-113-00044-00001	3	9 1/2	3	0	11.4	3.2	W	FIXED	ALUM.	YES	
17	FLEETWOOD	ALUMINUM CASEMENT	0.28	0.29	FLE-M-111-00044-00001	3	9 1/2	6	7 3/4	25.2	7.1	W	FIXED	ALUM.		
18		*NOT USED*														
19		*NOT USED*														
20		*NOT USED*														
21		*NOT USED*														
22	FLEETWOOD	ALUMINUM CASEMENT	0.28	0.29	FLE-M-111-00044-00001	3	9 1/4	6	7 3/4	25.1	7.0	W	FIXED	ALUM.		
23	FLEETWOOD	ALUMINUM PICTURE	0.28	0.35	FLE-M-113-00044-00001	3	9 1/4	6	7 3/4	25.1	7.0	W	FIXED	ALUM.		
24	FLEETWOOD	ALUMINUM PICTURE	0.28	0.35	FLE-M-113-00044-00001	3	9 1/4	6	7 3/4	25.1	7.0	W	FIXED	ALUM.		
25	FLEETWOOD	ALUMINUM CASEMENT	0.28	0.29	FLE-M-111-00044-00001	3	9 1/4	6	7 3/4	25.1	7.0	W	SWING	ALUM.		EMERGENCY EGRESS
26	FLEETWOOD	ALUMINUM PICTURE	0.28	0.35	FLE-M-113-00044-00001	6	0	3	3 1/2	19.8	5.5	S	FIXED	ALUM.		6
27	FLEETWOOD	ALUMINUM PICTURE	0.28	0.35	FLE-M-113-00044-00001	6	0	3	3 1/2	19.8	5.5	S	FIXED	ALUM.		6
28	FLEETWOOD	ALUMINUM PICTURE	0.28	0.35	FLE-M-113-00044-00001	3	1/2	2	11 1/4	8.9	2.5	S	FIXED	ALUM.		
29	FLEETWOOD	ALUMINUM PICTURE	0.28	0.35	FLE-M-113-00044-00001	1	7 1/4	6	9 1/4	10.9	3.0	E	FIXED	ALUM.	YES	
30	FLEETWOOD	ALUMINUM PICTURE	0.28	0.35	FLE-M-113-00044-00001	3	2 1/2	6	9 1/4	21.7	6.1	E	FIXED	ALUM.		
31	FLEETWOOD	ALUMINUM PICTURE	0.28	0.35	FLE-M-113-00044-00001	3	2 1/2	6	9 1/4	21.7	6.1	E	FIXED	ALUM.		
32	FLEETWOOD	ALUMINUM CASEMENT	0.28	0.29	FLE-M-111-00044-00001	2	3 3/4	2	3 1/4	5.3	1.5	E	FIXED	ALUM.		
33	FLEETWOOD	ALUMINUM CASEMENT	0.28	0.29	FLE-M-111-00044-00001	3	1 1/2	4	1 1/4	12.8	3.6	E	SWING	ALUM.		
34	FLEETWOOD	ALUMINUM CASEMENT	0.28	0.29	FLE-M-111-00044-00001	3	9	4	8 1/2	17.7	4.9	N	SWING	ALUM.		

WINDOW SUBTOTAL	559.6	156.7

GLAZED EXTERIOR DOOR SCHEDULE

I.D.	MANUF.	DESCRIPTION	U-VAL.	SHGC	NFRC	R.O. WIDTH FT	R.O. WIDTH IN	R.O. HEIGHT FT	R.O. HEIGHT IN	AREA SF	UxA	ORIEN-TATION	OPERATION	FRAME MATERIAL	SAFETY GLASS	NOTES
200	FLEETWOOD	ALUMINUM DOOR, SINGLE LITE	0.30	0.27	FLE-M-106-00329-00001	3	5	7	0	23.9	7.2	E	SWING	ALUM	YES	
201.1	FLEETWOOD	ALUMINUM DOOR, XO SLIDER	0.30	0.32	FLE-M-75-00208-00001	7	7 3/4	9	9 1/4	74.7	22.4	W	SLIDER	ALUM	YES	
201.2	FLEETWOOD	ALUMINUM DOOR, OX SLIDER	0.30	0.32	FLE-M-75-00208-00001	7	7 3/4	9	9 1/4	74.7	22.4	W	SLIDER	ALUM	YES	

GLAZED DOOR SUBTOTAL	173.3	52.0

OPAQUE EXTERIOR DOOR SCHEDULE

101	TBD	SOLID CORE WOOD DOOR				3	2	6	9	21.4		N	SWING	WOOD	-	
204	TBD	SOLID CORE WOOD DOOR				3	2	6	9	21.4		E	SWING	WOOD	-	

GLAZED DOOR SUBTOTAL	173.3	52.0	
WINDOW SUBTOTAL	559.6	156.7	SEE WINDOW SCHEDULE ABOVE
FENESTRATION TOTAL	733.0	208.7	
GLAZING AREA-WEIGHTED U-FACTOR		**0.28**	≤ 0.30 MAXIMUM ALLOWED FENESTRATION U-FACTOR PER 2018 WSEC TABLE 402.1.1

OPAQUE DOOR TOTAL	21.4	0.0	
OPAQUE DOOR AREA-WEIGHTED U-FACTOR		**0.00**	

NOTES:
1. WINDOWS ARE REFERENCED ON EXTERIOR ELEVATIONS. DOORS ARE REFERENCED ON FLOOR PLANS.
2. BOD IS FLEETWOOD SERIES 450-T. ALL WINDOWS TO MEET U-FACTOR AS STATED ABOVE, TO MEET THE 2018 PRESCRIPTIVE ENERGY CODE FOR CLIMATE ZONE MARINE 4.
3. ALL WINDOWS WITHIN A 2-FOOT ARC OF A DOOR AND 60" OR LESS ABOVE FLOOR MUST HAVE TEMPERED GLASS.
4. ALL WINDOWS 18" OR LESS ABOVE FLOOR MUST HAVE TEMPERED GLASS.
5. TYPICAL RO = UNIT SIZE + 1/2"; CONTRACTOR TO VERIFY ALL R.O.'s AFTER FRAMING IS COMPLETE AND PRIOR TO ORDERING DOORS AND WINDOWS.
6. THESE UNITS ARE POLYGON; REFER TO EXTERIOR ELEVATIONS FOR EXACT R.O. DIMENSIONS

1 WINDOW AND DOOR SCHEDULE
2002A-ELEV.dwg

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MERCER ISLAND, WA, 98040

7173 REGISTERED ARCHITECT JAMES T. DEGUCHI STATE OF WASHINGTON

Drawing Title
SCHEDULES

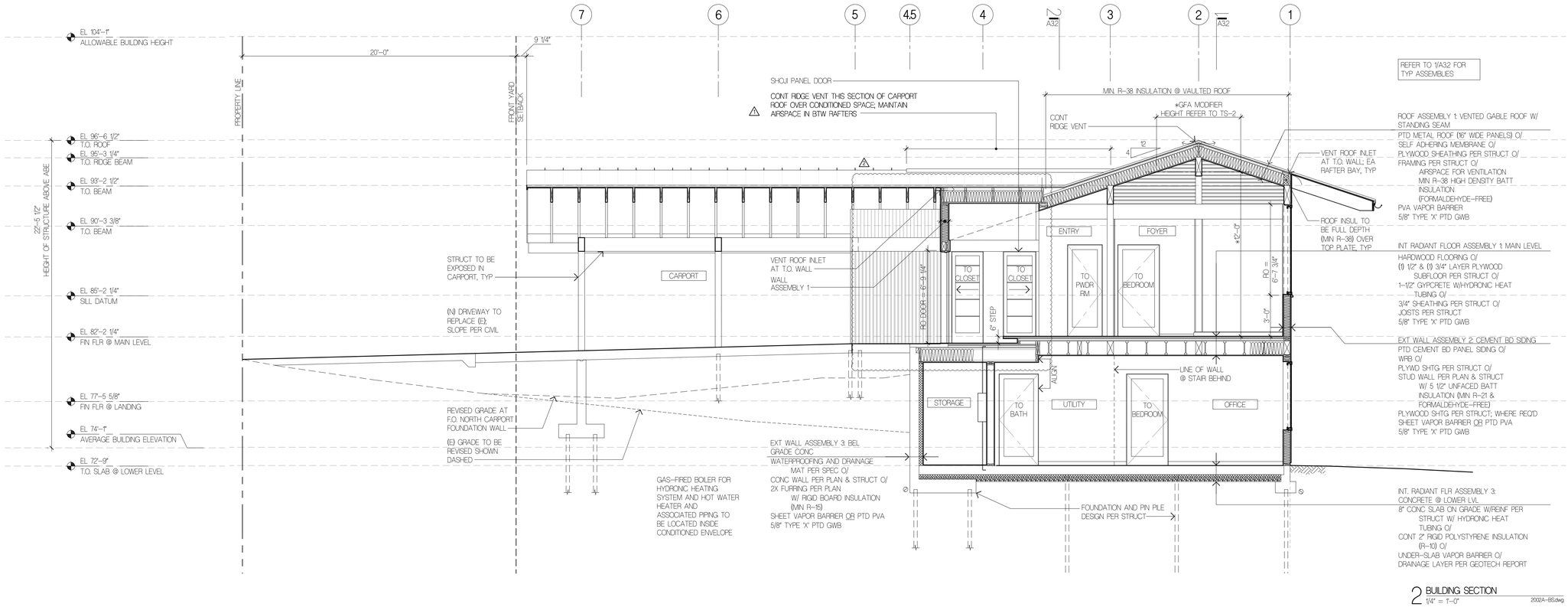
Date
03/17/2021

Job No.
2002

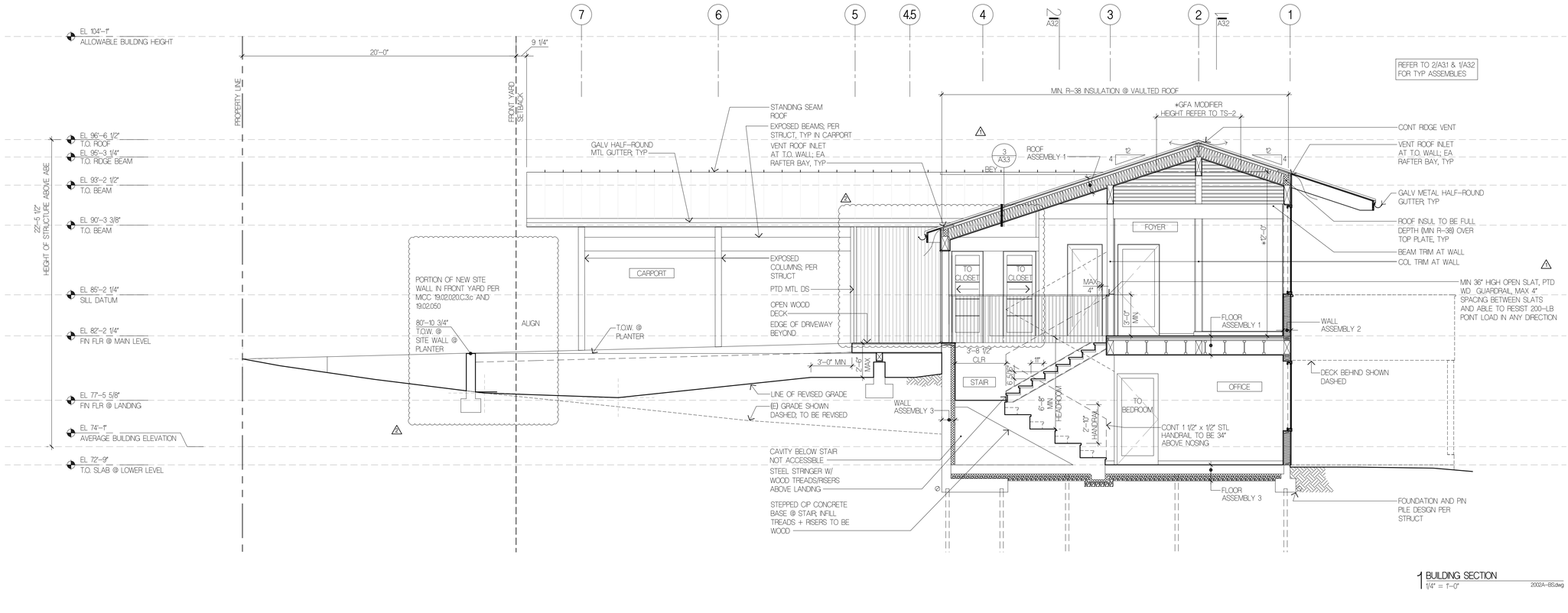
ISSUE	DATE
PERMIT SET	03/17/2021
1 PERMIT CORRECTION #1	09/01/2021
2 PERMIT REVISION #1	04/28/2022

PERMIT REVISION #1
Sheet No.

A2.3



2 BUILDING SECTION
1/4" = 1'-0"
2002A-BS.dwg



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1/4" = 1'-0"
2002A-BS.dwg

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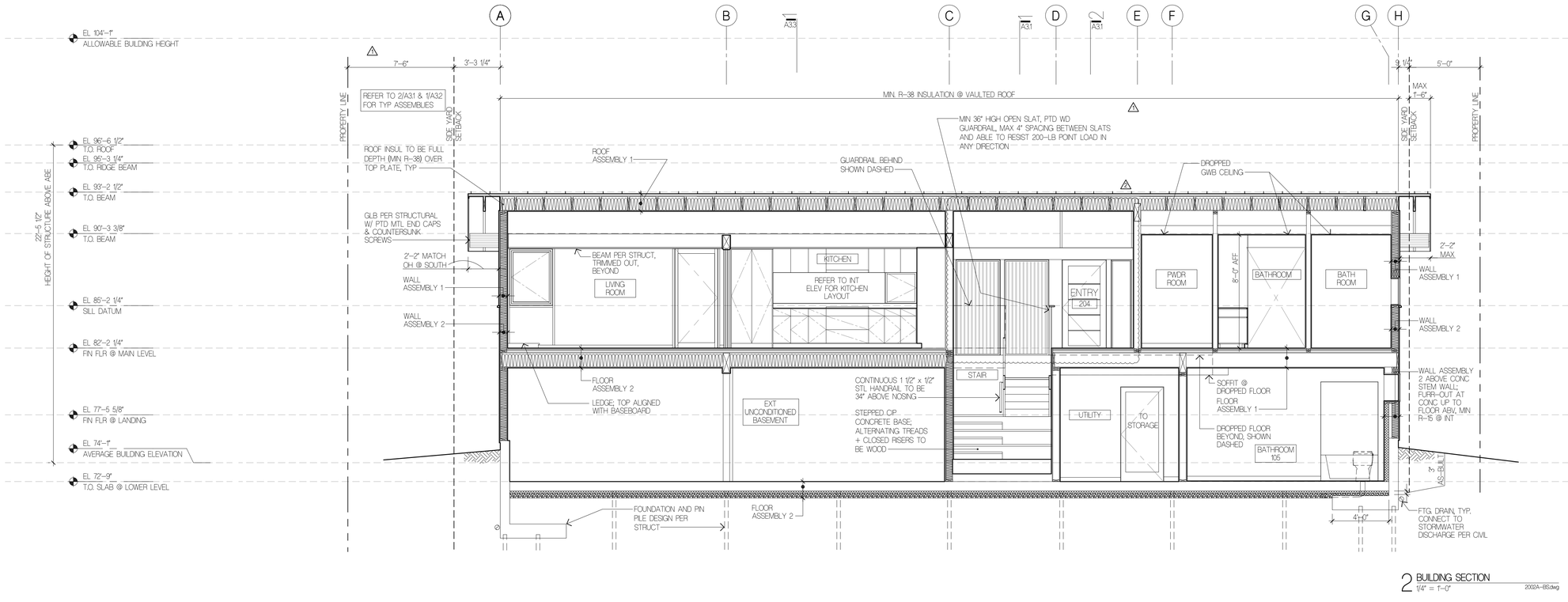
PERMIT CORRECTION #2	10/21/2021
⚠ PERMIT REVISION #1	04/28/2022

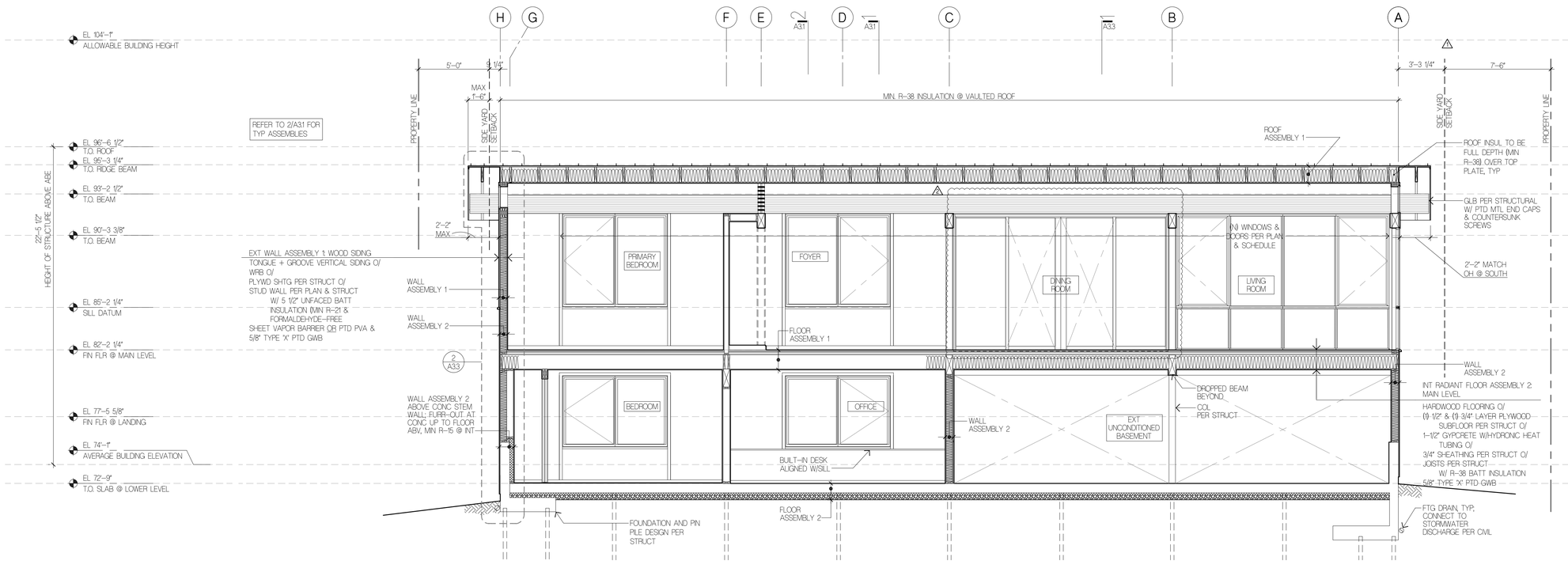
PERMIT REVISION #1

Sheet No.

A3.1



2 BUILDING SECTION
1/4" = 1'-0"
2002A-BS.dwg



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1/4" = 1'-0"
2002A-BS.dwg

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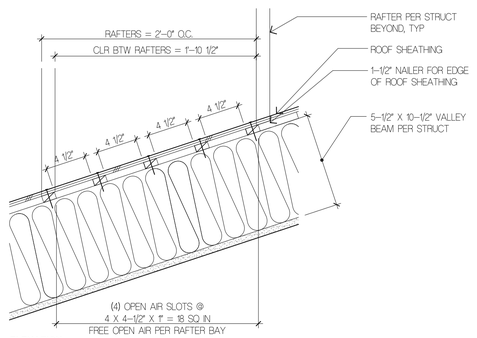
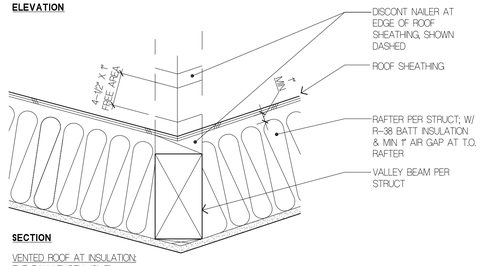
PERMIT REVISION #1

Sheet No.

A3.2



ELEVATION



SECTION

VENTED ROOF AT INSULATION
TYP BAY LENGTH: 19'-7"
BAY WIDTH: 1'-10 1/2"

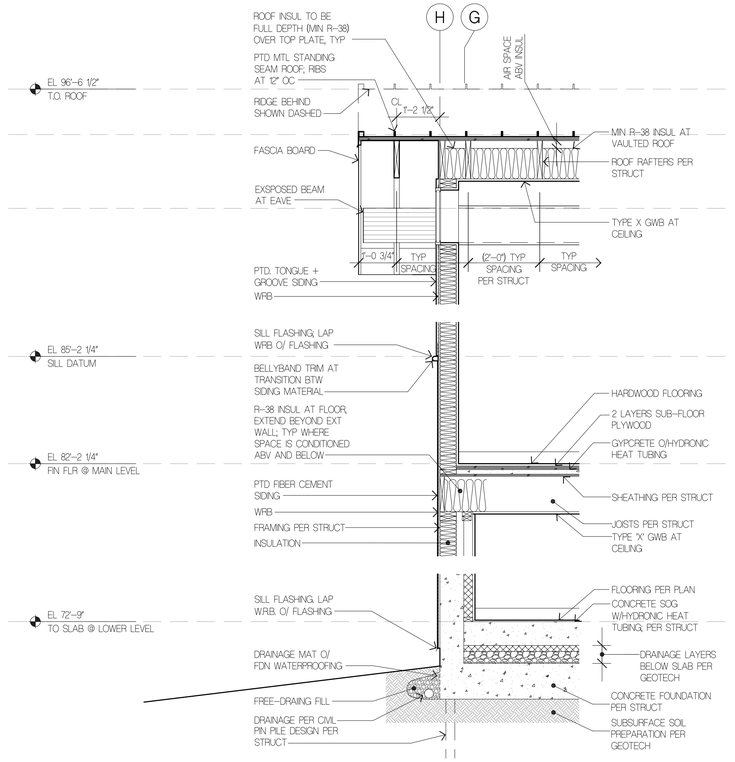
AREA PER BAY TO BE VENTED: 36.72 SQFT.

TOTAL REQUIRED OPENING PER VENTED BAY:
36.72 / 300 = .1224 SQFT.

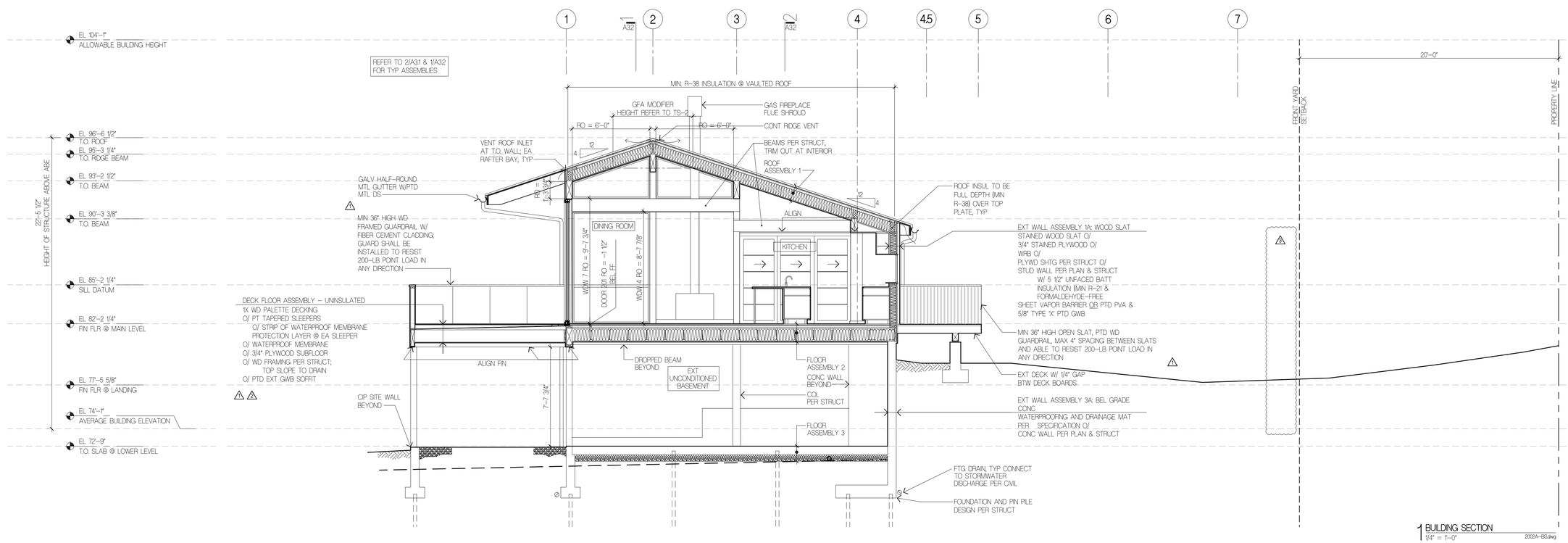
TOTAL REQUIRED OPENING PER VENTED BAY, PER SIDE:
.1224 / 2 = .06 SQFT. x 144 = 8.8128 SQIN.

VENTILATION PROVIDED @ BLOCKING
18 SQIN. (SEE DIAGRAM)

3 ROOF VENT DIAGRAM AT VALLEY
1 1/2" = 1'-0" 2002A-BS.dwg



2 WALL SECTION
1/2" = 1'-0" 2002A-BS.dwg



1 BUILDING SECTION
1/4" = 1'-0" 2002A-BS.dwg

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Sheet No.

A3.3

General Structural Notes

THE FOLLOWING APPLY UNLESS SHOWN OTHERWISE ON THE DRAWINGS

CRITERIA

1. ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE INTERNATIONAL BUILDING CODE (2018 EDITION).

2. DESIGN LOADING CRITERIA:
RESIDENTIAL - ONE AND TWO-FAMILY DWELLINGS
FLOOR LIVE LOAD . . . . 40 PSF
ROOF
ROOF LIVE LOAD . . . . 25 PSF
ENVIRONMENTAL LOADS
RAIN . . . . 1.5 IN/HR
SNOW . . . . . . Ce=1.0, Is=1.0, Ct=1.1, Cs=1.0, Pg=25 PSF, Pf=20 PSF
WIND . . . . GCpi=0.18, 98 MPH, RISK CATEGORY II, EXPOSURE "C"
EARTHQUAKE . ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE
LATERAL SYSTEM: LIGHT FRAMED SHEAR WALLS
SITE CLASS=D, Ss=150, Sds=1.457, S1=0.506, SD1=0.573, Cs=0.154
SDC D (DEFAULT), Ie=1.0, R=6.5
SEE PLANS FOR ADDITIONAL LOADING CRITERIA

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

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

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

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

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

8. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND THE STRUCTURAL ENGINEER. ALL TYPICAL NOTES AND DETAILS SHOWN ON DRAWINGS SHALL APPLY, UNLESS NOTED OTHERWISE. TYPICAL DETAILS MAY NOT NECESSARILY BE INDICATED ON THE PLANS BUT SHALL STILL APPLY AS SHOWN OR DESCRIBED IN THE DETAILS. WHERE TYPICAL DETAILS ARE NOTED ON THE PLANS, THE SPECIFIED TYPICAL DETAIL SHALL BE USED. WHERE NO TYPICAL DETAIL IS NOTED, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CHOOSE THE APPROPRIATE TYPICAL DETAIL FROM THOSE PROVIDED OR REQUEST ADDITIONAL INFORMATION. THE CONTRACTOR SHALL SUBMIT ALL PROPOSED ALTERNATE TYPICAL DETAILS TO THOSE PROVIDED WITH RELATED CALCULATIONS TO THE ENGINEER FOR APPROVAL PRIOR TO SHOP DRAWING PRODUCTION AND FIELD USE.

9. ALL STRUCTURAL SYSTEMS, WHICH ARE TO BE COMPOSED OF COMPONENTS TO BE FIELD ERECTED, SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE AND ERECTION IN ACCORDANCE WITH INSTRUCTIONS PREPARED BY THE SUPPLIER.

QUALITY ASSURANCE

10. SPECIAL INSPECTION SHALL BE PROVIDED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND SECTIONS 110 AND 1705 OF THE INTERNATIONAL BUILDING CODE BY A QUALIFIED TESTING AGENCY DESIGNATED BY THE ARCHITECT, AND RETAINED BY THE BUILDING OWNER. THE ARCHITECT, STRUCTURAL ENGINEER, AND BUILDING DEPARTMENT SHALL BE FURNISHED WITH COPIES OF ALL INSPECTION AND TEST RESULTS. SPECIAL INSPECTION OF THE FOLLOWING TYPES OF CONSTRUCTION IS REQUIRED UNLESS NOTED OTHERWISE.

CONCRETE CONSTRUCTION	PER TABLE 1705.3
SOIL CONDITIONS, FILL PLACEMENT, AND DENSITY	PER TABLE 1705.6
DRIVEN DEEP FOUNDATION	PER TABLE 1705.7
EXPANSION BOLTS AND THREADED EXPANSION INSERTS	PER MANUFACTURER
EPOXY GROUTED INSTALLATIONS	PER MANUFACTURER

PERIODIC INSPECTION: INSPECTION SHALL BE PERFORMED AT INTERVALS NECESSARY TO CONFIRM THAT WORK REQUIRING SPECIAL INSPECTION IS IN COMPLIANCE WITH REQUIREMENTS.
CONTINUOUS INSPECTION: INSPECTOR SHALL BE ONSITE AND OBSERVE THE WORK REQUIRING INSPECTION AT ALL TIMES THAT WORK IS PERFORMED.

11. UNLESS OTHERWISE NOTED, THE FOLLOWING ELEMENTS COMPRISE THE SEISMIC-FORCE-RESISTING SYSTEM AND ARE SUBJECT TO SPECIAL INSPECTION FOR SEISMIC RESISTANCE IN ACCORDANCE WITH SECTION 1705.12 OF THE INTERNATIONAL BUILDING CODE.

    A. STRUCTURAL WOOD SHEAR WALL SYSTEMS REQUIRE PERIODIC INSPECTION FOR FIELD GLUEING, NAILING, BOLTING, ANCHORING AND OTHER FASTENING OF COMPONENTS WITHIN THE SEISMIC FORCE, RESISTING SYSTEM INCLUDING SHEAR WALLS, DIAPHRAGMS, DRAG STRUTS, BRACES AND HOLDOWNS.

GEOTECHNICAL

12. FOUNDATION NOTES: SUBGRADE PREPARATION INCLUDING DRAINAGE, EXCAVATION, COMPACTION, AND FILLING REQUIREMENTS, SHALL CONFORM STRICTLY WITH RECOMMENDATIONS GIVEN IN THE SOILS REPORT OR AS DIRECTED BY THE SOILS ENGINEER. FOOTINGS SHALL BEAR ON SOLID UNDISTURBED EARTH OR COMPACTED STRUCTURAL FILL AT LEAST 18" BELOW LOWEST ADJACENT FINISHED GRADE. FOOTING DEPTHS/ELEVATIONS SHOWN ON PLANS (OR IN DETAILS) ARE MINIMUM AND FOR GUIDANCE ONLY; THE ACTUAL ELEVATIONS OF FOOTINGS MUST BE ESTABLISHED BY THE CONTRACTOR IN THE FIELD WORKING WITH THE TESTING LAB AND SOILS ENGINEER. BACKFILL BEHIND ALL RETAINING WALLS WITH FREE DRAINING GRANULAR FILL AND PROVIDE FOR SUBSURFACE DRAINAGE AS NOTED IN THE SOILS REPORT.

LATERAL EARTH PRESSURE (RESTRAINED/UNRESTRAINED).	50 PCF/35 PCF
ALLOWABLE PASSIVE EARTH PRESSURE (FS OF 1.5 INCLUDED).	300 PCF
COEFFICIENT OF FRICTION (FS OF 1.5 INCLUDED).	0.35
TRAFFIC SURCHARGE PRESSURE (UNIFORM LOAD)	75 PSF
SEISMIC SURCHARGE PRESSURE (UNIFORM LOAD)	7H PSF
3" DIA. PILE CAPACITY (COMPRESSION)	6 T

SOILS REPORT REFERENCE: GEO GROUP NORTHWEST, #G-5244

13. PIN PILES SHOWN ON THE PLAN SHALL BE 3" DIAMETER SCHEDULE 40, GRADE A, GALVANIZED, UNLESS OTHERWISE NOTED. THE MAXIMUM CAPACITY OF 3" PILES SHALL BE 6 TONS. ALL PILES SHALL BE DRIVEN TO REFUSAL IN ACCORDANCE WITH THE GEOTECHNICAL REPORT. AS A MINIMUM, PILE REFUSAL SHALL BE DEFINED AS 1 INCH OF PENETRATION IN 12 SECONDS DURING CONTINUOUS DRIVING OF A 650 LB HYDRAULIC HAMMER (TELEDYNE TB225 OR EQUIVALENT) UNDER THE FULL WEIGHT AND EFFORT OF THE OPERATOR. PILES USED IN COMMON TO RESIST LATERAL EARTH PRESSURES SHALL HAVE THE ADDITIONAL REQUIREMENT OF BEING EMBEDDED A MINIMUM OF 10 FEET BELOW RETAINED GRADE. THE MAXIMUM PILE ECCENTRICITY SHALL BE 2 INCHES. GEOTECHNICAL SPECIAL INSPECTION SHALL BE SUBJECT TO THE DISCRETION OF THE GEOTECHNICAL ENGINEER AND THE BUILDING DEPARTMENT. SEE PLANS FOR OTHER SIZES AND CRITERIA.

3

14. PIN PILES SHOWN ON THE PLAN SHALL BE 2" DIAMETER SCHEDULE 80, GRADE A, GALVANIZED, UNLESS OTHERWISE NOTED. THE MAXIMUM CAPACITY OF 2" PILES SHALL BE 3 TONS. ALL PILES SHALL BE DRIVEN TO REFUSAL IN ACCORDANCE WITH THE GEOTECHNICAL REPORT. AS A MINIMUM, PILE REFUSAL SHALL BE DEFINED AS 1 INCH OF PENETRATION IN 60 SECONDS DURING CONTINUOUS DRIVING OF A 90-140 LB JACK-HAMMER UNDER THE FULL WEIGHT AND EFFORT OF THE OPERATOR. PILES USED IN COMMON TO RESIST LATERAL EARTH PRESSURES SHALL HAVE THE ADDITIONAL REQUIREMENT OF BEING EMBEDDED A MINIMUM OF 10 FEET BELOW RETAINED GRADE. THE MAXIMUM PILE ECCENTRICITY SHALL BE 2 INCHES. GEOTECHNICAL SPECIAL INSPECTION SHALL BE SUBJECT TO THE DISCRETION OF THE GEOTECHNICAL ENGINEER AND THE BUILDING DEPARTMENT. SEE PLANS FOR OTHER SIZES AND CRITERIA.

CONCRETE

15. CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH ACI 301, INCLUDING TESTING PROCEDURES. CONCRETE SHALL ATTAIN A 28-DAY STRENGTH OF f'c = 3,000 PSI AND MIX SHALL CONTAIN NOT LESS THAN 5-1/2 SACKS OF CEMENT PER CUBIC YARD AND SHALL BE PROPORTIONED TO PRODUCE A SLUMP OF 5" OR LESS. REQUIRED CONCRETE STRENGTH IS BASED ON THE DURABILITY REQUIREMENTS OF SECTION 1904 OF THE IBC. DESIGN STRENGTH IS f'c = 2,500 PSI.

16. ALL CONCRETE WITH SURFACES EXPOSED TO WEATHER OR STANDING WATER SHALL BE AIR-ENTRAINED WITH AN AIR-ENTRAINING AGENT CONFORMING TO ASTM C260, C494, AND C618. TOTAL AIR CONTENT FOR FROST-RESISTANT CONCRETE SHALL BE IN ACCORDANCE WITH ACI 318-14, TABLE 19.3.2.1 MODERATE EXPOSURE, F1.

17. REINFORCING STEEL SHALL CONFORM TO ASTM A615 (INCLUDING SUPPLEMENT S1), GRADE 60, FY = 60,000 PSI. EXCEPTIONS: ANY BARS SPECIFICALLY SO NOTED ON THE DRAWINGS SHALL BE GRADE 40, FY = 40,000 PSI. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185. SPIRAL REINFORCEMENT SHALL BE DEFORMED WIRE CONFORMING TO ASTM A615, GRADE 60, FY = 60,000 PSI.

18. DETAILING OF REINFORCING STEEL (INCLUDING HOOKS AND BENDS) SHALL BE IN ACCORDANCE WITH ACI 315R-18 AND 318-14. LAP ALL CONTINUOUS REINFORCEMENT #5 AND SMALLER 40 BAR DIAMETERS OR 2'-0" MINIMUM. PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP CORNER BARS #5 AND SMALLER 40 BAR DIAMETERS OR 2'-0" MINIMUM. LAPS OF LARGER BARS SHALL BE MADE IN ACCORDANCE WITH ACI 318-14, CLASS B. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 8" AT SIDES AND ENDS.

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

19. CONCRETE PROTECTION (COVER) FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

FOOTINGS AND OTHER UNFORMED SURFACES CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
FORMED SURFACES EXPOSED TO EARTH OR WEATHER (#6 BARS OR LARGER)	2"
FORMED SURFACES EXPOSED TO EARTH OR WEATHER (#5 BARS OR SMALLER). .	1-1/2"
COLUMN TIES OR SPIRALS AND BEAM STIRRUPS	1-1/2"
SLABS AND WALLS (INT. FACE). . .	GREATER OF BAR DIAMETER PLUS 1/8" OR 3/4"

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

8" WALLS	#4 @ 12 HORIZ.	#4 @ 18 VERTICAL	1 CURTAIN
10" WALLS	#4 @ 18 HORIZ.	#4 @ 18 VERTICAL	2 CURTAINS

21. CAST-IN-PLACE CONCRETE: SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND DIMENSIONS OF DOOR AND WINDOW OPENINGS IN ALL CONCRETE WALLS. SEE MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF MISCELLANEOUS MECHANICAL OPENINGS THROUGH CONCRETE WALLS. SEE ARCHITECTURAL DRAWINGS FOR ALL GROOVES, NOTCHES, CHAMFERS, FEATURE STRIPS, COLOR, TEXTURE, AND OTHER FINISH DETAILS AT ALL EXPOSED CONCRETE SURFACES, BOTH CAST-IN-PLACE AND PRECAST.

22. NON-SHRINK GROUT SHALL BE FURNISHED BY AN APPROVED MANUFACTURER AND SHALL BE MIXED AND PLACED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED RECOMMENDATIONS. GROUT STRENGTH SHALL BE AT LEAST EQUAL TO THE MATERIAL ON WHICH IT IS PLACED (3000 PSI MINIMUM).

ANCHORAGE

23. EXPANSION BOLTS INTO CONCRETE SHALL BE "STRONG-BOLT 2" WEDGE ANCHORS AS MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY AND INSTALLED IN STRICT CONFORMANCE TO ICC-ES REPORT NUMBER ESR-3037, INCLUDING MINIMUM EMBEDMENT REQUIREMENTS. BOLTS INTO CONCRETE MASONRY OR BRICK MASONRY UNITS SHALL BE INTO FULLY GROUTED CELLS. PERIODIC SPECIAL INSPECTION IS REQUIRED TO VERIFY ANCHOR TYPE, ANCHOR DIMENSIONS, ANCHOR LOCATION, TIGHTENING TORQUE, HOLE DIMENSIONS, ANCHOR EMBEDMENT, AND ADHERENCE TO THE INSTALLATION INSTRUCTIONS.

24. EPOXY-GROUTED ITEMS (THREADED RODS OR REINFORCING BAR) SPECIFIED ON THE DRAWINGS SHALL BE INSTALLED USING "SET-XP" HIGH STRENGTH EPOXY AS MANUFACTURED BY THE SIMPSON STRONG, TIE COMPANY. INSTALL IN STRICT ACCORDANCE WITH ICC-ES REPORT NO. ESR-2508. MINIMUM BASE MATERIAL TEMPERATURE IS 50 DEGREES, F. RODS SHALL BE ASTM A-36 UNLESS OTHERWISE NOTED. PERIODIC SPECIAL INSPECTION OF INSTALLATION IS REQUIRED TO VERIFY ANCHOR OR EMBEDED BAR TYPE AND DIMENSIONS, LOCATION, ADHESIVE IDENTIFICATION AND EXPIRATION, HOLE DIMENSIONS, HOLE CLEANING PROCEDURE, ANCHOR EMBEDMENT, AND ADHERENCE TO THE INSTALLATION INSTRUCTIONS. CONTINUOUS SPECIAL INSPECTION IS REQUIRED FOR HORIZONTAL AND OVERHEAD INSTALLATIONS.

25. CONCRETE SCREW ANCHORS INTO CONCRETE AND CONCRETE MASONRY UNITS SHALL BE "TITEN HD" HEAVY DUTY SCREW ANCHOR AS MANUFACTURED BY THE SIMPSON STRONG-TIE COMPANY, INSTALLED IN STRICT ACCORDANCE WITH ICC-ES REPORT NO. ESR-2713 (CONCRETE), NO. ESR-1056 (CMU), INCLUDING MINIMUM EMBEDMENT REQUIREMENTS. SCREW ANCHORS INTO CONCRETE MASONRY UNITS SHALL BE INTO FULLY GROUTED CELLS. SPECIAL INSPECTION IS REQUIRED.

WOOD

26. FRAMING LUMBER SHALL BE S-DRY, KD, OR MC-19, AND GRADED AND MARKED IN CONFORMANCE WITH WCLIB STANDARD No. 17, GRADING RULES FOR WEST COAST LUMBER, 2018, OR WWPA STANDARD, WESTERN LUMBER GRADING RULES 2017. FURNISH TO THE FOLLOWING MINIMUM STANDARDS:

JOISTS AND BEAMS	(2X & 3X MEMBERS)	DOUGLAS FIR-LARCH NO. 1 MINIMUM BASE VALUE, Fb = 900 PSI
	(4X MEMBERS)	DOUGLAS FIR-LARCH NO. 1 MINIMUM BASE VALUE, Fb = 1000 PSI
BEAMS	(INCL. 6X AND LARGER)	DOUGLAS FIR-LARCH NO. 1 MINIMUM BASE VALUE, Fb = 1350 PSI
POSTS	(4X MEMBERS)	DOUGLAS FIR-LARCH NO. 2 MINIMUM BASE VALUE, Fc = 1350 PSI
	(6X AND LARGER)	DOUGLAS FIR-LARCH NO. 1 MINIMUM BASE VALUE, Fc = 1000 PSI
STUDS, PLATES & MISC. FRAMING:		DOUGLAS FIR-LARCH NO. 2

27. GLUED LAMINATED MEMBERS SHALL BE FABRICATED IN CONFORMANCE WITH ASTM AND ANSI/AITC STANDARDS. EACH MEMBER SHALL BEAR AN AITC OR APA IDENTIFICATION MARK AND SHALL BE ACCOMPANIED BY AN AITC OR APA CERTIFICATE OF CONFORMANCE. ALL SIMPLE SPAN BEAMS SHALL BE DOUGLAS FIR COMBINATION 24F-V4, Fb = 2,400 PSI, Fv =265 PSI. ALL CANTILEVERED BEAMS SHALL BE DOUGLAS FIR COMBINATION 24F-V8, Fb = 2400 PSI, Fv = 265 PSI. CAMBER ALL SIMPLE SPAN GLULAM BEAMS, WITH SPANS OVER 30', TO 3,500' RADIUS, UNLESS SHOWN OTHERWISE ON THE PLANS.

28. MANUFACTURED LUMBER, PSL, LVL, AND LSL SHOWN ON PLAN ARE BASED PRODUCTS MANUFACTURED BY THE WEYERHAEUSER CORPORATION IN ACCORDANCE WITH ICC-ES REPORT ESR-1387. MEMBERS SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:

PSL (2.0E WS)	Fb = 2900 PSI,	E = 2000 KSI,	Fv = 290 PSI
LSL (1.55E)	Fb = 2325 PSI,	E = 1550 KSI,	Fv = 310 PSI

ALTERNATE MANUFACTURED LUMBER MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER. ALTERNATE MANUFACTURER'S PRODUCTS SHALL BE COMPATIBLE WITH THE JOIST HANGERS AND OTHER HARDWARE SPECIFIED ON PLANS, OR ALTERNATE HANGERS AND HARDWARE SHALL SUBMITTED FOR REVIEW AND APPROVAL. SUBSTITUTED ITEMS SHALL HAVE ICC-ES REPORT APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES.

MANUFACTURED LUMBER PRODUCTS SHALL BE INSTALLED WITH A MOISTURE CONTENT OF 12% OR LESS. THE CONTRACTOR SHALL MAKE PROVISIONS DURING CONSTRUCTION TO PREVENT THE MOISTURE CONTENT OF INSTALLED BEAMS FROM EXCEEDING 12%. EXCESSIVE DEFLECTIONS MAY OCCUR IF MOISTURE CONTENT EXCEEDS THIS VALUE.

29. PREFABRICATED PLYWOOD WEB JOIST DESIGN SHOWN ON PLANS IS BASED ON JOISTS MANUFACTURED BY THE WEYERHAEUSER CORPORATION, IN ACCORDANCE WITH ICC-ES REPORT ESR-1157. ALTERNATE PLYWOOD WEB JOIST MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER. ALTERNATE MANUFACTURER'S PRODUCTS SHALL BE COMPATIBLE WITH THE JOIST HANGERS AND OTHER HARDWARE SPECIFIED ON PLANS, OR ALTERNATE HANGERS AND HARDWARE SHALL SUBMITTED FOR REVIEW AND APPROVAL. SUBSTITUTED ITEMS SHALL HAVE ICC-ES REPORT APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES.

30. PLYWOOD SHEATHING SHALL BE GRADE C-D, EXTERIOR GLUE OR STRUCTURAL II, EXTERIOR GLUE IN CONFORMANCE WITH DOC PS 1 OR PS 2. ORIENTED STRAND BOARD OF EQUIVALENT THICKNESS, EXPOSURE RATING AND PANEL INDEX MAY BE USED IN LIEU OF PLYWOOD.

ROOF SHEATHING SHALL BE 1/2" (NOMINAL) WITH SPAN RATING 32/16.

FLOOR SHEATHING SHALL BE 3/4" (NOMINAL) WITH SPAN RATING 48/24.

WALL SHEATHING SHALL BE 1/2" (NOMINAL) WITH SPAN RATING 24/0.

PROVIDE APPROVED PLYWOOD EDGE CLIPS CENTERED BETWEEN JOISTS/TRUSSES AT UNBLOCKED ROOF SHEATHING EDGES. ALL FLOOR SHEATHING EDGES SHALL HAVE APPROVED T&G JOINTS OR SHALL BE SUPPORTED WITH SOLID BLOCKING. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS OF FLOOR AND ROOF SHEATHING.

REFER TO WOOD FRAMING NOTES BELOW FOR TYPICAL NAILING REQUIREMENTS.

31. ALL WOOD IN DIRECT CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE-TREATED WITH AN APPROVED PRESERVATIVE OR (2) LAYERS OF ASPHALT IMPREGNATED BUILDING PAPER SHALL BE PROVIDED BETWEEN UNTREATED WOOD AND CONCRETE OR MASONRY.

32. PRESERVATIVE TREATED WOOD SHALL BE TREATED PER AWPA STANDARD U1 TO THE USE CATEGORY EQUAL TO OR HIGHER THAN THE INTENDED APPLICATION. TREATED WOOD FOR ABOVE GROUND USE SHALL BE TREATED TO AWPA UC3B. WOOD IN CONTINUOUS CONTACT WITH FRESH WATER OR SOIL SHALL BE TREATED TO AWPA UC4A. WOOD FOR USE IN PERMANENT FOUNDATIONS SHALL BE TREATED TO AWPA UC4B.

33. FASTENERS AND TIMBER CONNECTORS USED WITH TREATED WOOD SHALL HAVE CORROSION RESISTANCE AS INDICATED IN THE FOLLOWING TABLE, UNLESS OTHERWISE NOTED.

WOOD TREATMENT	CONDITION	PROTECTION
HAS NO AMMONIA CARRIER	INTERIOR DRY	G90 GALVANIZED
CONTAINS AMMONIA CARRIER	INTERIOR DRY	G185 OR A185 HOT DIPPED OR CONTINUOUS HOT-GALVANIZED PER ASTM A653
CONTAINS AMMONIA CARRIER	INTERIOR WET	TYPE 304 OR 316 STAINLESS
CONTAINS AMMONIA CARRIER	EXTERIOR	TYPE 304 OR 316 STAINLESS
AZCA	ANY	TYPE 304 OR 316 STAINLESS

INTERIOR DRY CONDITIONS SHALL HAVE WOOD MOISTURE CONTENT LESS THAN 19%. WOOD MOISTURE CONTENT IN OTHER CONDITIONS (INTERIOR WET, EXTERIOR WET, AND EXTERIOR DRY) IS EXPECTED TO EXCEED 19%. CONNECTORS AND THEIR FASTENERS SHALL BE THE SAME MATERIAL. COMPLY WITH THE TREATMENT MANUFACTURERS RECOMMENDATIONS FOR PROTECTION OF METAL.

34. 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 ICC-ES APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. PROVIDE NUMBER AND SIZE OF FASTENERS AS SPECIFIED BY MANUFACTURER FOR MAXIMUM LOAD CARRYING CAPACITY. CONNECTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

ALL 2X JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "LUS" SERIES JOIST HANGERS. ALL TJI JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "ITS" SERIES JOIST HANGERS. ALL DOUBLE-JOIST BEAMS SHALL BE CONNECTED TO FLUSH BEAMS WITH "MIT" SERIES JOIST HANGERS.

WHERE CONNECTOR STRAPS CONNECT TWO MEMBERS, PLACE ONE-HALF OF THE NAILS OR BOLTS IN EACH MEMBER.

ALL SHIMS SHALL BE SEASONED AND DRIED AND THE SAME GRADE (MINIMUM) AS MEMBERS CONNECTED.

35. WOOD FASTENERS

    A. NAIL SIZES SPECIFIED ON DRAWINGS ARE BASED ON THE FOLLOWING SPECIFICATIONS:

SIZE	LENGTH	DIAMETER
8d	2-1/2"	0.131"
16d BOX	3-1/2"	0.135"

IF CONTRACTOR PROPOSES THE USE OF ALTERNATE NAILS, THEY SHALL SUBMIT NAIL SPECIFICATIONS TO THE STRUCTURAL ENGINEER (PRIOR TO CONSTRUCTION) FOR REVIEW AND APPROVAL.

NAILS - PLYWOOD (APA RATED SHEATHING) FASTENERS TO FRAMING SHALL BE DRIVEN FLUSH TO FACE OF SHEATHING WITH NO COUNTERSINKING PERMITTED. TOE-NAILS SHALL BE DRIVEN AT AN ANGLE OF 30 DEGREES WITH THE MEMBER AND STARTED 1/3 THE LENGTH OF THE NAIL FROM THE MEMBER END.

    B. ALL BOLTS IN WOOD MEMBERS SHALL CONFORM TO ASTM A307. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG BOLTS BEARING ON WOOD. INSTALLATION OF LAG BOLTS SHALL CONFORM TO THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION WITH A LEAD BORE HOLE OF 60 TO 70 PERCENT OF THE SHANK DIAMETER. LEAD HOLES ARE NOT REQUIRED FOR 3/8" AND SMALLER LAG SCREWS.

35. NOTCHES AND HOLES IN WOOD FRAMING:

    A. NOTCHES ON THE ENDS OF SOLID SAWN JOISTS AND RAFTERS SHALL NOT EXCEED ONE-FOURTH THE JOIST DEPTH. NOTCHES IN THE TOP OR BOTTOM OF SOLID SAWN JOISTS SHALL NOT EXCEED ONE-SIXTH THE DEPTH AND SHALL NOT BE LOCATED IN THE MIDDLE THIRD OF THE SPAN. HOLES BORED IN SOLID SAWN JOISTS AND RAFTERS SHALL NOT BE WITHIN 2 INCHES OF THE TOP OR BOTTOM OF THE JOIST, AND THE DIAMETER OF ANY SUCH HOLE SHALL NOT EXCEED ONE-THIRD THE DEPTH OF THE JOIST.

    B. IN EXTERIOR WALLS AND BEARING PARTITIONS, ANY WOOD STUD IS PERMITTED TO BE CUT OR NOTCHED TO A DEPTH NOT EXCEEDING 25 PERCENT OF ITS WIDTH. A HOLE NOT GREATER IN DIAMETER THAN 40 PERCENT OF THE STUD WIDTH IS PERMITTED TO BE BORED IN ANY WOOD STUD. IN NO CASE SHALL THE EDGE OF THE BORED HOLE BE NEARER THAN 5/8 INCH TO THE EDGE OF THE STUD. BORED HOLES SHALL NOT BE LOCATED AT THE SAME SECTION OF STUD AS A CUT OR NOTCH.

    C. NOTCHES AND HOLES IN MANUFACTURED LUMBER AND PREFABRICATED PLYWOOD WEB JOISTS SHALL BE PER THE MANUFACTURERS RECOMMENDATIONS UNLESS OTHERWISE NOTED.

36. WOOD FRAMING NOTES--THE FOLLOWING APPLY UNLESS OTHERWISE SHOWN ON THE PLANS:

    A. ALL WOOD FRAMING DETAILS NOT SHOWN OTHERWISE SHALL BE CONSTRUCTED TO THE MINIMUM STANDARDS OF THE INTERNATIONAL BUILDING CODE, THE AITC "TIMBER CONSTRUCTION MANUAL" AND THE AWC "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION". MINIMUM NAILING, UNLESS OTHERWISE NOTED, SHALL CONFORM TO IBC TABLE 2304.10.1. COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH MECHANICAL AND ARCHITECTURAL DRAWINGS.

    B. WALL FRAMING: REFER ARCHITECTURAL DRAWINGS FOR THE SIZE OF ALL WALLS. ALL STUDS SHALL BE SPACED AT 16" O.C. UNO. TWO STUDS MINIMUM SHALL BE PROVIDED AT THE END OF ALL WALLS AND AT EACH SIDE OF ALL OPENINGS, AND AT BEAM OR HEADER BEARING LOCATIONS. TWO 2x8 HEADERS SHALL BE PROVIDED OVER ALL OPENINGS NOT OTHERWISE NOTED. SOLID BLOCKING FOR WOOD COLUMNS SHALL BE PROVIDED THROUGH FLOORS TO SUPPORTS BELOW. PROVIDE CONTINUOUS SOLID BLOCKING AT MID-HEIGHT OF ALL STUD WALLS OVER 10'-0" IN HEIGHT.

    ALL WALLS SHALL HAVE A SINGLE BOTTOM PLATE AND A DOUBLE TOP PLATE. END NAIL TOP PLATE TO EACH STUD WITH TWO 16d NAILS, AND TOENAIL OR END NAIL EACH STUD TO BOTTOM PLATE WITH TWO 16d NAILS. FACE NAIL DOUBLE TOP PLATE WITH 16d @ 12" O.C. AND LAP MINIMUM 4'-0" AT JOINTS AND PROVIDE EIGHT 16d NAILS @ 4" O.C. EACH SIDE JOINT.

    ALL STUD WALLS SHALL HAVE THEIR LOWER WOOD PLATES ATTACHED TO WOOD FRAMING BELOW WITH TWO ROWS OF 16d NAILS @ 12" ON-CENTER, OR ATTACHED TO CONCRETE BELOW WITH 5/8" DIAMETER ANCHOR BOLTS @ 4'-0" ON-CENTER EMBEDDED 7" MINIMUM, UNLESS INDICATED OTHERWISE. INDIVIDUAL MEMBERS OF BUILT-UP POSTS SHALL BE NAILED TO EACH OTHER WITH TWO ROWS OF 16d @12" ON-CENTER. UNLESS OTHERWISE NOTED, GYPSUM WALLBOARD SHALL BE FASTENED TO THE INTERIOR SURFACE OF ALL STUDS AND PLATES WITH NO. 6 X 1-1/4" TYPE S OR W SCREWS @ 8" ON-CENTER. UNLESS INDICATED OTHERWISE, 1/2" (NOMINAL) APA RATED SHEATHING (SPAN RATING 24/0) SHALL BE NAILED TO ALL EXTERIOR SURFACES WITH 8d NAILS @ 6" ON-CENTER AT PANEL EDGES AND TOP AND BOTTOM PLATES (BLOCK UN-SUPPORTED EDGES) AND TO ALL INTERMEDIATE STUDS AND BLOCKING WITH 8d NAILS @ 12" ON-CENTER ALLOW 1/8" SPACING AT ALL PANEL EDGES AND PANEL ENDS.

    C. FLOOR AND ROOF FRAMING: PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS THAT EXTEND OVER MORE THAN HALF THE JOIST LENGTH AND AROUND ALL OPENINGS IN FLOORS OR ROOFS UNLESS OTHERWISE NOTED. PROVIDE SOLID BLOCKING AT ALL BEARING POINTS. TOE-NAIL JOISTS TO SUPPORTS WITH TWO 16d NAILS. ATTACH TIMBER JOISTS TO FLUSH HEADERS OR BEAMS WITH SIMPSON METAL JOIST HANGERS IN ACCORDANCE WITH NOTES ABOVE. NAIL ALL MULTI JOIST BEAMS TOGETHER WITH TWO ROWS 16d @ 12" ON-CENTER.

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

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REVISIONS:

1	Permit Corrections #1	Sep. 1, 2021
2	Pin Pile Layout Revision	Jan. 21, 2022
3	Permit Revision #1	Apr. 28, 2022

JURISDICTIONAL APPROVAL STAMP:

PROJECT TITLE:

Lumpkin Residence
5401 West Mercer Way
Mercer Island, WA 98040

ARCHITECT:

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ISSUE:

Permit

SHEET TITLE:

General Structural Notes

SCALE:

DATE: March 17, 2021

PROJECT NO: 00043-2020-04

SHEET NO:

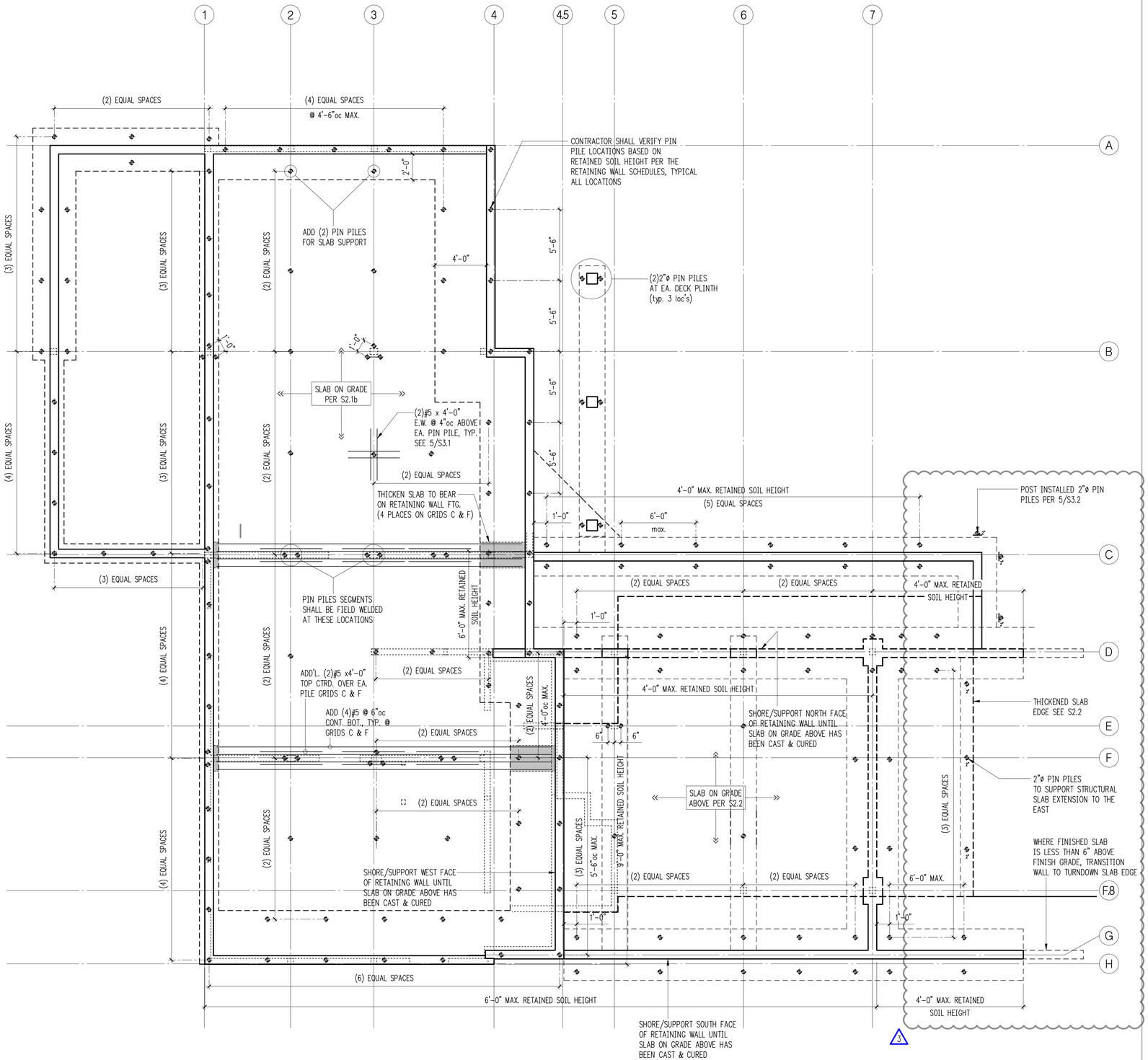
S1.1

Plan Notes

1. DO NOT SCALE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.
2. PIPE PILES SHALL BE A COMBINATION OF 2" EXTRA-STRONG SCHEDULE 80 GALVANIZED PIPE, AND 3" DIAMETER SCHEDULE 40 GALVANIZED PIPE.
3. 2" PIN PILES SHALL BE DRIVEN TO REFUSAL. REFUSAL FOR 2" PILES IS DEFINED AS LESS THAN 1" OF PILE PENETRATION DURING 1 MINUTE OF CONTINUOUS DRIVING WITH A 90-POUND (MIN.) JACKHAMMER.
4. 2" PIN PILES HAVE BEEN DESIGNED WITH AN ALLOWABLE AXIAL COMPRESSIVE CAPACITY OF 6,000-POUNDS AS PER THE GEOTECHNICAL REPORT. 3
5. 3" PIN PILES SHALL BE DRIVEN TO REFUSAL. REFUSAL FOR 3" PILES IS DEFINED AS LESS THAN 1" OF PILE PENETRATION DURING 12 SECONDS OF CONTINUOUS DRIVING WITH A 650-POUND (MIN.) HYDRAULIC HAMMER. MAXIMUM PENETRATION RATE FOR 3" PIN PILES SHALL BE SUSTAINED THROUGH AT LEAST (3) TIME CYCLES OF CONTINUOUS DRIVING.
6. 3" PIN PILES HAVE BEEN DESIGNED WITH AN ALLOWABLE AXIAL COMPRESSIVE CAPACITY OF 12,000-POUNDS AS PER THE GEOTECHNICAL REPORT.
7. MINIMUM EMBEDMENT: ALL PILES SHALL BE DRIVEN COMPLETELY THROUGH LOOSE FILL MATERIAL INTO THE UNDERLYING COMPETENT NATURAL SEDIMENTS AS DETERMINED IN THE FIELD. SEE THE GEOTECHNICAL REPORT FOR ADDITIONAL REQUIREMENTS.
8. MONITORING: CONTINUOUS INSPECTION SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER. SEE THE GEOTECHNICAL REPORT FOR ADDITIONAL REQUIREMENTS.
9. LOAD TESTING: PIN PILES SHALL BE LOAD TESTED AS DETERMINED BY THE GEOTECHNICAL ENGINEER. SEE THE GEOTECHNICAL REPORT FOR ADDITIONAL REQUIREMENTS.
10. REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

Legend

- STEM WALL & FOOTING SEE S2.1b
- STRUCTURAL WALL OR POST ABOVE
- GALVANIZED PIN PILE, 3"ø SCHEDULE 40 U.N.O.
- GALVANIZED PIN PILE, 2"ø SCHEDULE 80 U.N.O. 3



Pin Pile Layout Plan
Scale: 1/4"=1'-0"

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DRAWN: SJB
DESIGN: VMB
CHECKED: RJA
APPROVED: DJS

REVISIONS:

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JURISDICTIONAL APPROVAL STAMP:

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ISSUE: Permit

SHEET TITLE: Pin Pile Layout Plan

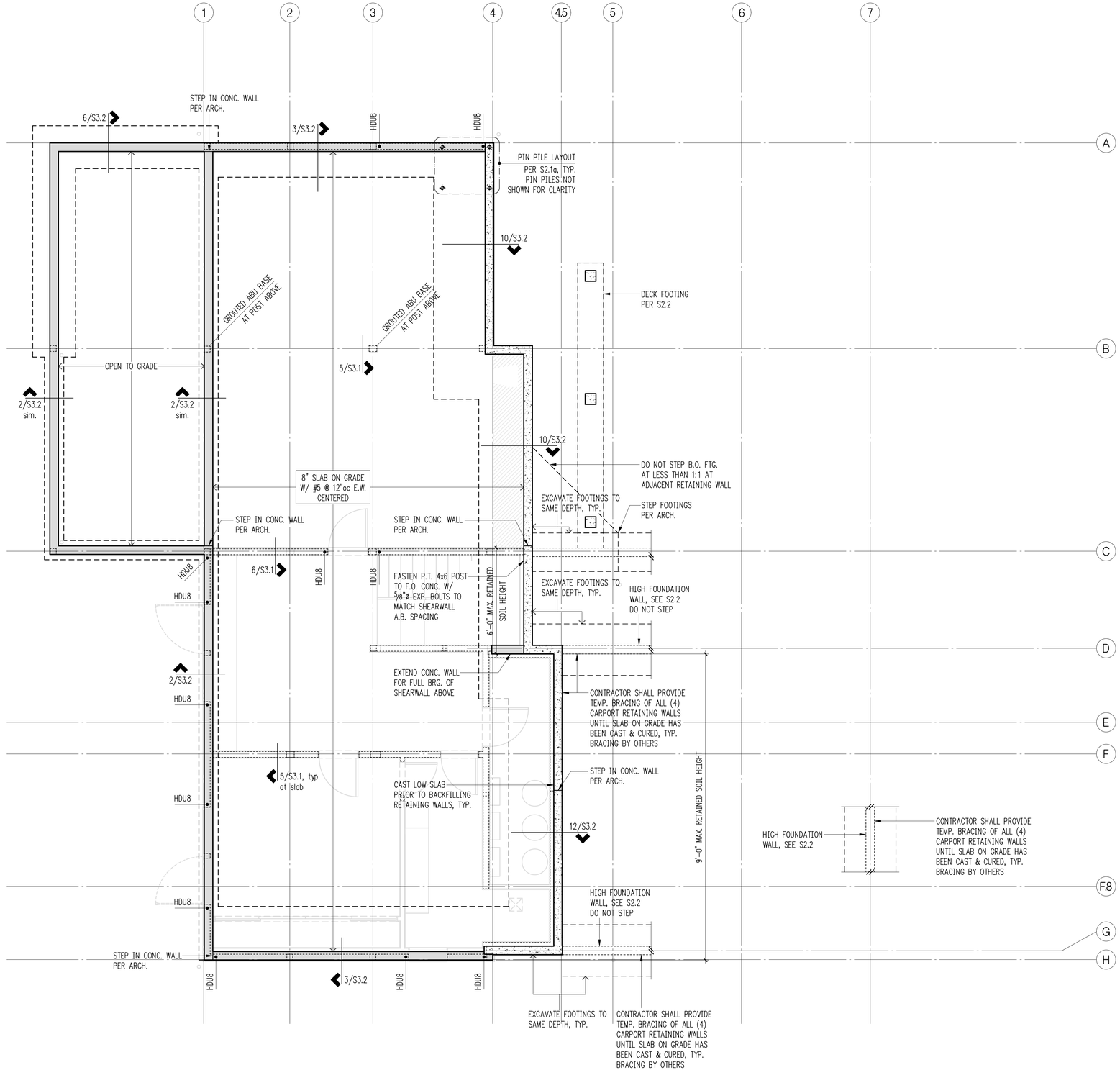
SCALE: 1/4" = 1'-0"
DATE: March 17, 2021
PROJECT NO: 00043-2020-04
SHEET NO: S2.1a

Plan Notes

1. DO NOT SCALE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.
2. THE BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE 18" MINIMUM BELOW GRADE.
3. 8" CONCRETE SLAB OVER 6 MIL VAPOR BARRIER ON 4" OF GRAVEL OR CRUSHED ROCK OVER FIRM UNDISTURBED SOIL OR ENGINEERED COMPACTED BACK-FILL. REINFORCE WITH #5 REBAR @ 12"oc MID-DEPTH.
4. PROVIDE EPOXY GROUTED #4 x 2'-6" DOWELS EMBEDDED A MINIMUM OF 6" IN TO EXISTING CONCRETE TO MATCH NEW HORIZONTAL REINFORCING. TYPICAL WHERE NEW CONCRETE WALL OR FOOTING TERMINATES AT EXISTING CONCRETE. EPOXY GROUT PER GENERAL STRUCTURAL NOTES.
5. ALL POSTS ABOVE SHALL BEAR FULLY ON BEAMS OR POSTS BELOW AND SHALL HAVE CONTINUOUS FULL BEARING THROUGH FLOORS TO THE FOUNDATION.
6. REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

Legend

- STRUCTURAL WALL OR POST BELOW
- STEM WALL & FOOTING
- FULL HEIGHT CONCTETE WALL & FOOTING
- STRUCTURAL WALL OR POST ABOVE
- NON-STRUCTURAL WALL BELOW
- Wx — SHEARWALL PER 12/S4.1
- XX — HOLDOWN PER 4 & 12/S3.1



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

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DESIGN: VMB
CHECKED: RJA
APPROVED: DJS

REVISIONS:

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3	Permit Revision #1	Apr. 28, 2022

JURISDICTIONAL APPROVAL STAMP:

PROJECT TITLE:
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ISSUE: Permit

SHEET TITLE: Foundation Plan

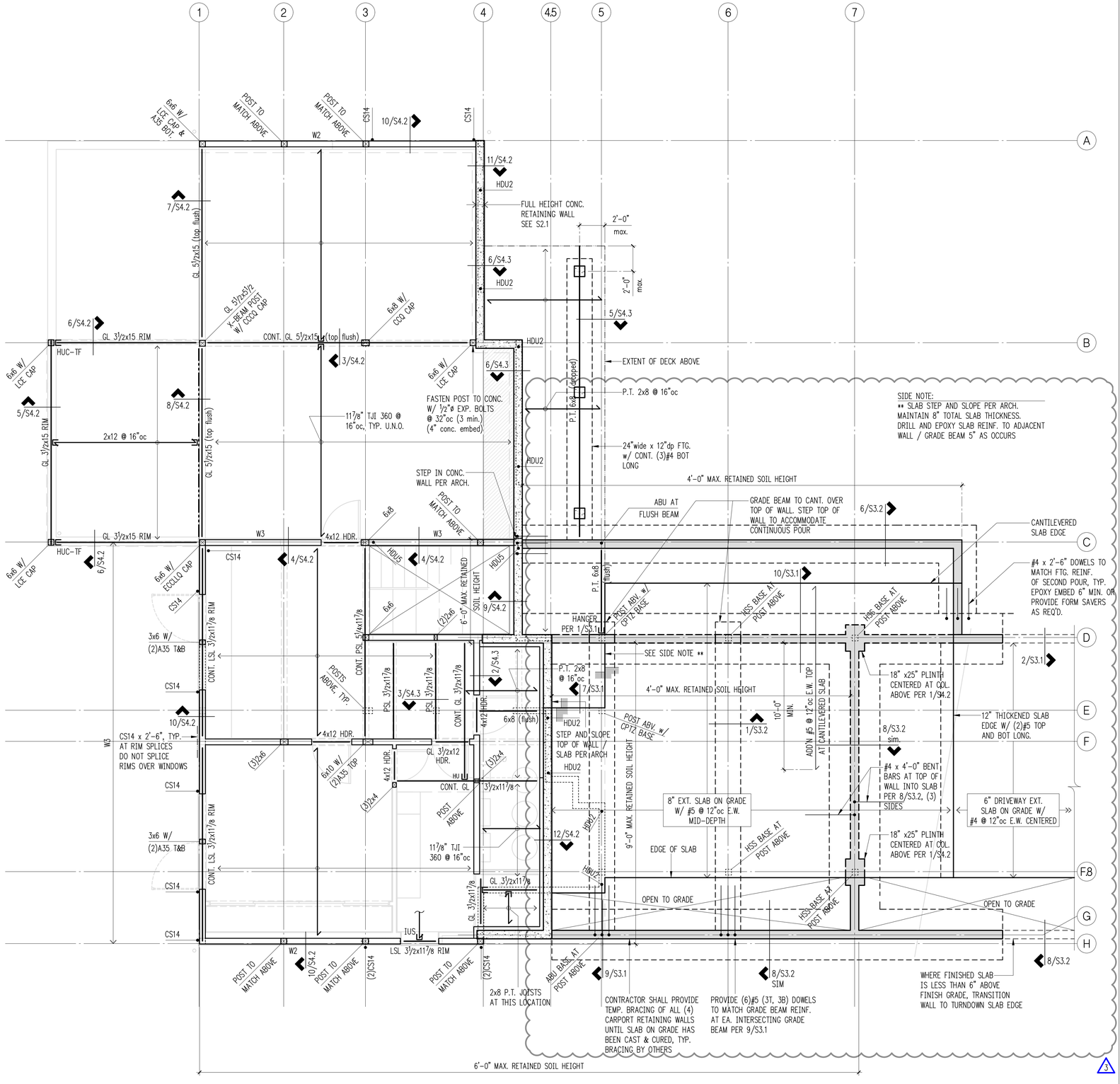
SCALE: 1/4" = 1'-0"
DATE: March 17, 2021
PROJECT NO: 00043-2020-04
SHEET NO: S2.1b

Plan Notes

1. DO NOT SCALE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.
2. FLOOR SHEATHING SHALL BE 3/4" A.P.A. RATED PANELS (EXPOSURE 1, SPAN RATING 48/24), FACE GRAIN PERPENDICULAR TO FLOOR FRAMING PER PLAN. NAIL AT ALL FRAMED PANEL EDGES WITH 8d AT 6"oc AND TO ALL INTERMEDIATE FRAMING AT 12"oc.
3. MAIN FLOOR JOISTS SHALL BE 11⅞" TJI 360 SPACED PER PLAN.
4. DECK FLOOR JOISTS SHALL BE 2x12 SPACED PER PLAN.
5. HEADERS OVER DOOR AND WINDOW OPENINGS SHALL BE (2)2x8/4x8 MINIMUM. PROVIDE (2) JACK STUDS AND (1) KING STUD (MINIMUM) AT EACH END OF ALL HEADERS UNLESS NOTED OTHERWISE ON PLANS.
6. W# INDICATES SHEARWALL. SEE SHEARWALL SCHEDULE FOR CONSTRUCTION REQUIREMENTS.
7. (X)CS16 INDICATES VERTICAL HOLDOWN STRAP AT END OF SHEAR WALL ABOVE. (X) INDICATES STRAP QUANTITY.
8. MANUFACTURED LUMBER PRODUCTS (LSL, LVL, PSL, GL) SHALL BE INSTALLED WITH A MOISTURE CONTENT OF 12% OR LESS. THE CONTRACTOR SHALL MAKE PROVISIONS DURING CONSTRUCTION TO PREVENT THE MOISTURE CONTENT OF INSTALLED BEAMS FROM EXCEEDING 12%.
9. ALL POSTS ABOVE SHALL BEAR FULLY ON BEAMS OR POSTS BELOW AND SHALL HAVE CONTINUOUS FULL BEARING THROUGH FLOORS TO THE FOUNDATION.
10. REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

Legend

- STRUCTURAL WALL OR POST BELOW
- CONCRETE WALL BELOW
- STRUCTURAL WALL OR POST ABOVE
- NON-STRUCTURAL WALL BELOW
- Wx — SHEARWALL PER 12/S4.1
- SPAN DIRECTION
- EXTENT OF JOISTS
- HEADER/BEAM PER PLAN
- HANGER
- XX — HOLDOWN PER 12/S3.1, STRAP PER 10/S4.1



Upper Floor Framing Plan

Scale: ¼"=1'-0"

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CHECKED: RJA
APPROVED: DJS

REVISIONS:

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2	Pin Pile Layout Revision	Jan. 21, 2022
3	Permit Revision #1	Apr. 28, 2022

JURISDICTIONAL APPROVAL STAMP:

PROJECT TITLE:

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ISSUE: Permit

SHEET TITLE: Upper Floor Framing Plan

SCALE: 1/4" = 1'-0"
DATE: March 17, 2021
PROJECT NO: 00043-2020-04

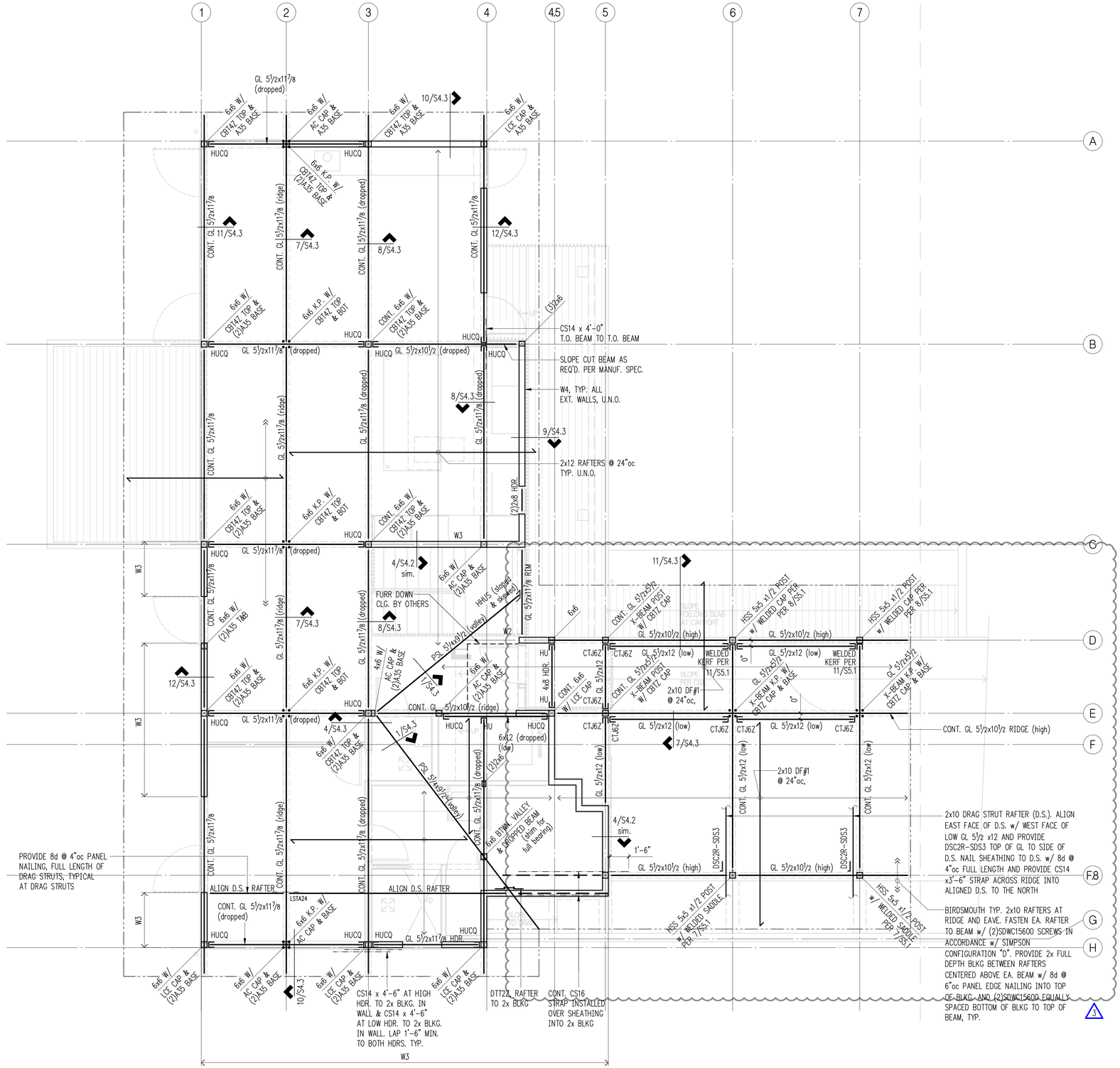
SHEET NO: S2.2

Plan Notes

1. DO NOT SCALE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.
2. ROOF SHEATHING SHALL BE 1/2" A.P.A. RATED PANELS (EXPOSURE 1, SPAN RATING 32/16), FACE GRAIN PERPENDICULAR TO ROOF FRAMING PER PLAN. NAIL SHEATHING AT ALL FRAMED PANEL EDGES WITH 8d AT 6"oc AND TO ALL INTERMEDIATE FRAMING AT 12"oc.
3. ROOF FRAMING SHALL BE 2x12 HEMFIR NO. 2 SPACED PER PLAN.
4. HEADERS OVER DOOR AND WINDOW OPENINGS SHALL BE (2)2x8/4x8 MINIMUM. PROVIDE (2) JACK STUDS AND (1) KING STUD (MINIMUM) AT EACH END OF ALL HEADERS UNLESS NOTED OTHERWISE ON PLANS.
5. W# INDICATES SHEARWALL. SEE SHEARWALL SCHEDULE FOR CONSTRUCTION REQUIREMENTS.
6. PROVIDE H6 HURRICANE TIE AT EACH TRUSS/RAFTER WHERE IT BEARS ON EXTERIOR WALL.
7. MANUFACTURED LUMBER PRODUCTS (LSL, LVL, PSL, GL) SHALL BE INSTALLED WITH A MOISTURE CONTENT OF 12% OR LESS. THE CONTRACTOR SHALL MAKE PROVISIONS DURING CONSTRUCTION TO PREVENT THE MOISTURE CONTENT OF INSTALLED BEAMS FROM EXCEEDING 12%.
8. ALL POSTS ABOVE SHALL BEAR FULLY ON BEAMS OR POSTS BELOW AND SHALL HAVE CONTINUOUS FULL BEARING THROUGH FLOORS TO THE FOUNDATION.
9. REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.
10. ALL INTERIOR EXPOSED GLULAM BEAMS SHALL BE ARCHITECTURAL GRADE ROSBORO X-BEAM GLULAMS (24F-V4), TYPICAL. REFER TO ARCHITECTURE FOR ADDITIONAL REQUIREMENTS.

Legend

- STRUCTURAL WALL OR POST BELOW
- NON-STRUCTURAL WALL BELOW
- Wx — SHEARWALL PER 12/S4.1
- SPAN DIRECTION
- EXTENT OF JOISTS
- HEADER/BEAM PER PLAN
- HANGER



Roof Framing Plan

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

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DAN J. SAY — STATE OF WASHINGTON — 23000 — REGISTERED PROFESSIONAL ENGINEER

DRAWN: SJB
DESIGN: VMB
CHECKED: RJA
APPROVED: DJS

REVISIONS:

1	Permit Corrections #1	Sep. 1, 2021
2	Pin Pile Layout Revision	Jan. 21, 2022
3	Permit Revision #1	Apr. 28, 2022

JURISDICTIONAL APPROVAL STAMP:

PROJECT TITLE:

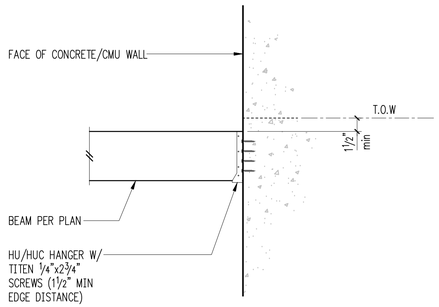
Lumpkin Residence
5401 West Mercer Way
Mercer Island, WA 98040

ARCHITECT:
Suyama Peterson Deguchi
2324 2nd Ave.
Seattle, WA 98121
PH 206.256.0809
FX 206.256.0810

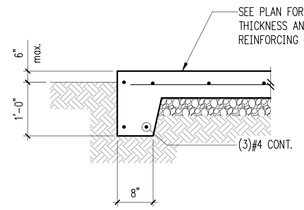
ISSUE: Permit

SHEET TITLE: Roof Framing Plan

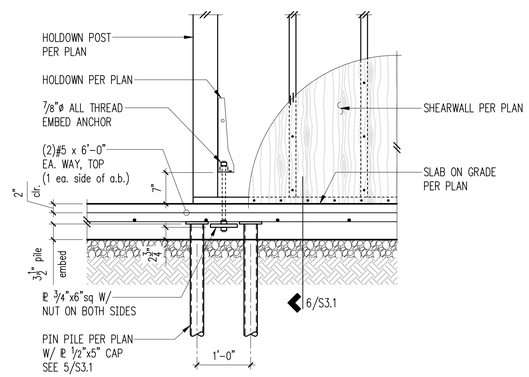
SCALE: 1/4" = 1'-0"
DATE: March 17, 2021
PROJECT NO: 00043-2020-04
SHEET NO: S2.3



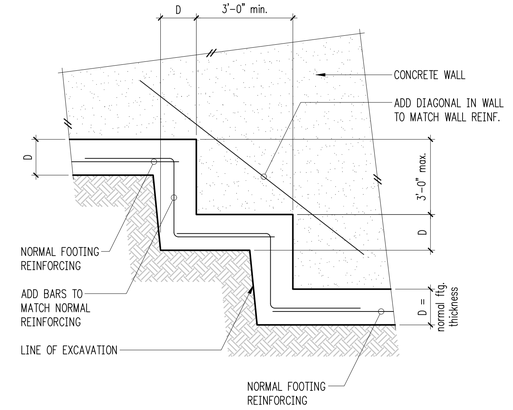
HU Beam Connection to Concrete Wall 1



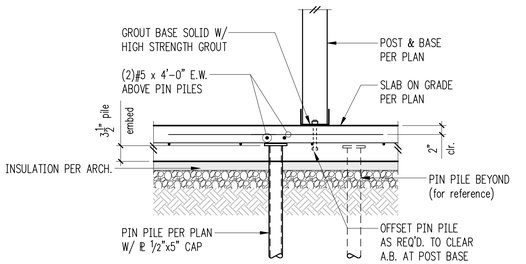
Typical Slab Edge 2



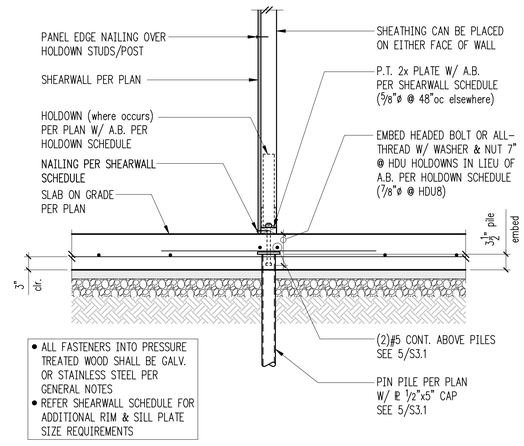
Typical Holdown at Interior Slab 3



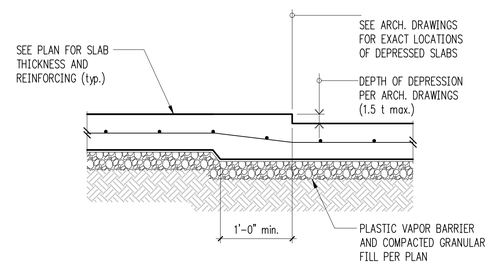
Typical Stepped Footing 4



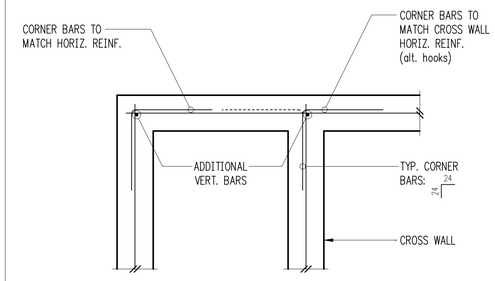
Typical Pin Pile at Slab 5



Interior Shearwall at Slab 6

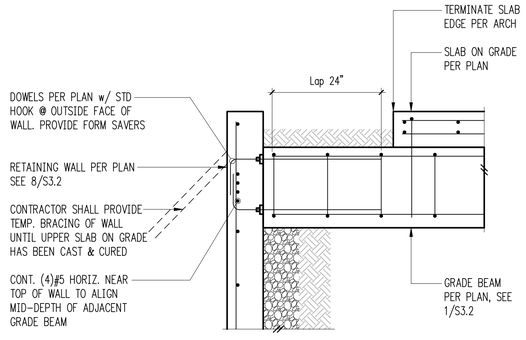


Slab Step Detail 3 7

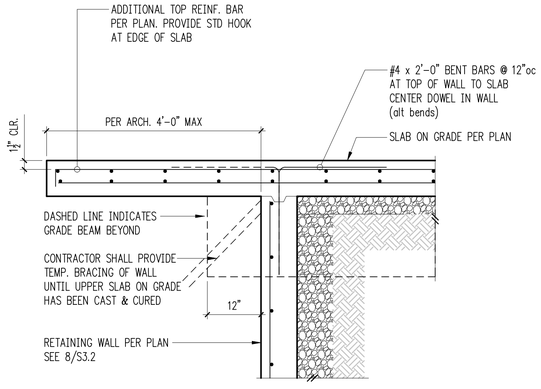


Single Curtain

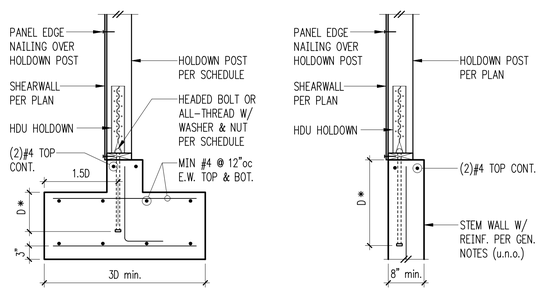
Typical Corner Bars at Concrete Walls and Footings 8



Grade Beam to Retaining Wall 3 9



Cantilever Carport Slab 3 10



HDU Into Footing Option

HDU Into Stem Wall Option

* SEE DETAIL 3/S3.1 WHERE ANCHOR IS SET IN SLAB

Holdown Schedule

Plan Mark	Screws	Anchor Bolt	Min. A.B. Embed (D)		Holdown Post ①	
			Stem Wall	Footing	if 2x4	if 2x6
HDU2-SDS2.5	(6)SDS ¼"x2½"	⅝"ø	12"	4"	(2) 2x4	(2) 2x6
HDU4-SDS2.5	(10)SDS ¼"x2½"	⅝"ø	18"	6"	4x4	4x6
HDU5-SDS2.5	(14)SDS ¼"x2½"	⅝"ø	SB⅝x24	7"	4x4	4x6
HDU8-SDS2.5	(20)SDS ¼"x2½"	⅞"ø	SSTB28	8"	4x6	6x6
HDU11-SDS2.5	(30)SDS ¼"x2½"	1"ø	SB1x30	10"	4x8	6x6

① MINIMUM SIZE OF POST AT END OF WALL UNLESS OTHERWISE NOTED ON FRAMING PLANS.

Typical HDU Holdown 12

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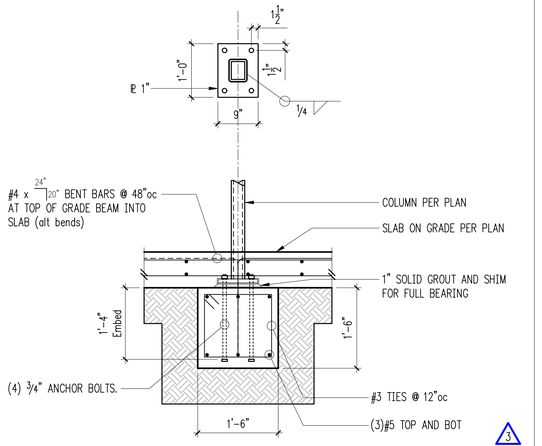
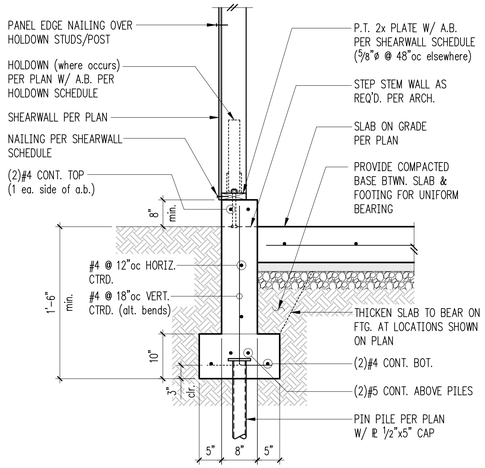
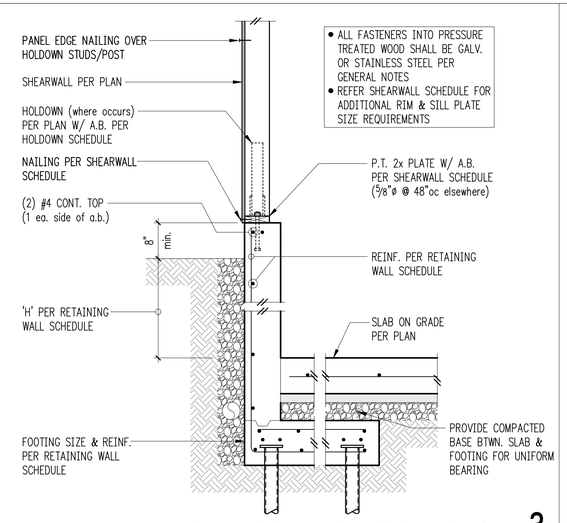
PROJECT NO: 00043-2020-04
SHEET NO: S3.1



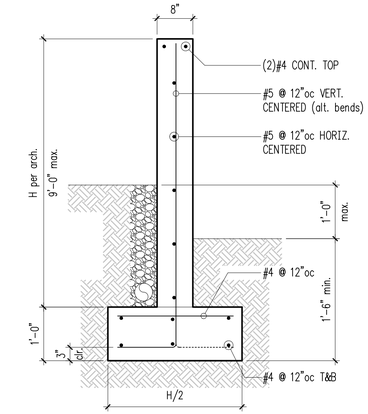
Typical Grade Beam and Column Baseplate 1



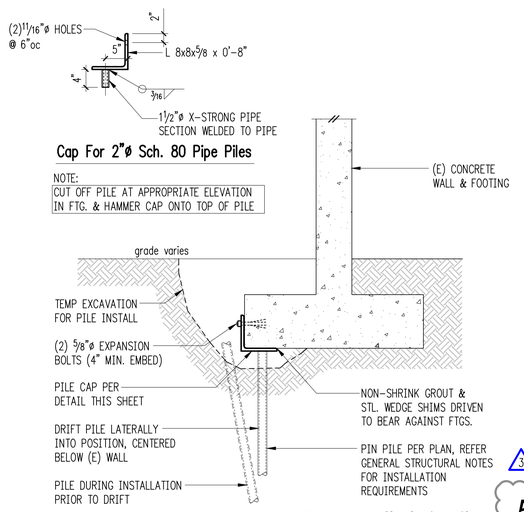
Typical Exterior Wall at Level Grade 2



Exterior Retaining Wall w/ Slab on Grade 3



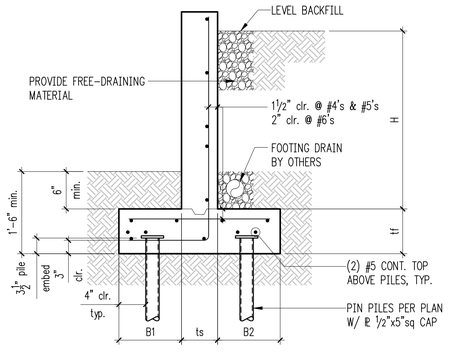
Typical Site Retaining Wall at Level Grade 4



Cap For 2"ø Sch. 80 Pipe Piles

NOTE:
CUT OFF PILE AT APPROPRIATE ELEVATION IN FTG. & HAMMER CAP ONTO TOP OF PILE

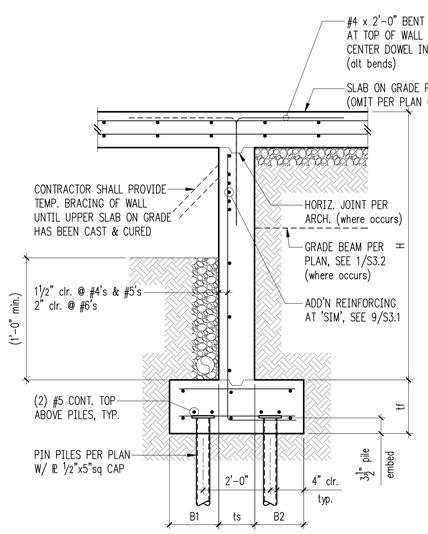
Post-Installed Pin Pile 5



Free-Standing Site Retaining Wall Schedule

H (ft.)	B1	ts	B2	tf	Stem Reinforcing		Footing Reinforcing	
					Vert.	Horiz.	Top	Longit.
3'-0"	1'-4"	8"	1'-4"	12"	#4 @ 18"oc	#4 @ 12"oc	–	(2)#4
4'-0"	1'-4"	8"	1'-4"	12"	#4 @ 18"oc	#4 @ 12"oc	#4 @ 18"oc	(2)#4

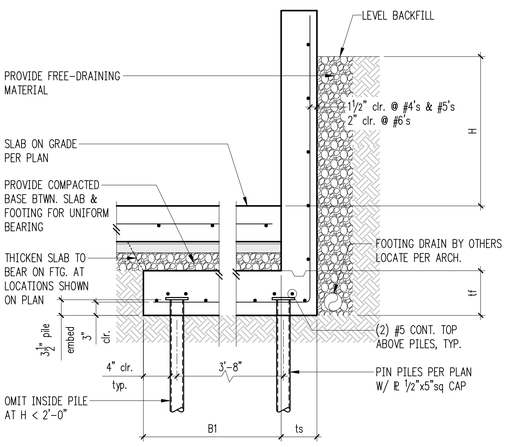
Retaining Wall at Stepped Grade 6



Carport Retaining Wall Schedule W/ Slab

H (ft.)	B1	ts	B2	tf	Stem Reinforcing		Footing Reinforcing	
					Vert.	Horiz.	Top	Longit.
3'-0"	1'-4"	8"	1'-4"	12"	#4 @ 18"oc	#4 @ 12"oc	–	(2)#4
4'-0"	1'-4"	8"	1'-4"	12"	#4 @ 18"oc	#4 @ 12"oc	–	(2)#4
6'-0"	1'-4"	8"	1'-4"	12"	#4 @ 12"oc	#4 @ 12"oc	–	(4)#4
8'-0"	1'-4"	8"	1'-4"	12"	#5 @ 12"oc	#4 @ 12"oc	#4 @ 18"oc	(6)#5
10'-0"	1'-4"	8"	1'-4"	12"	#7 @ 12"oc	#4 @ 12"oc	#4 @ 18"oc	(8)#5

Typical Retaining Wall at Carport 8

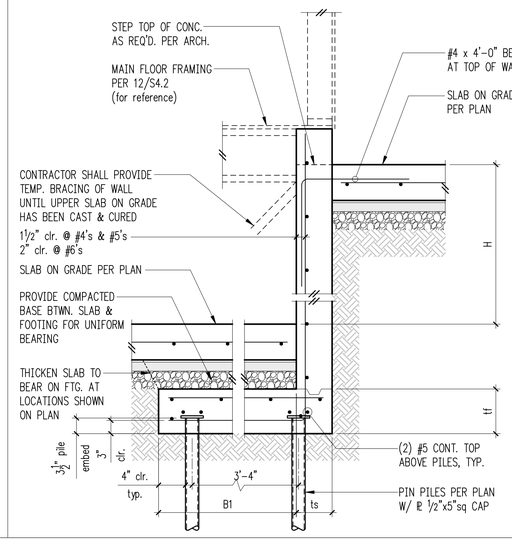


Residence Wall Schedule

H (ft.)	B1	ts	tf	Stem Reinforcing		Footing Reinforcing	
				Vert.	Horiz.	Bot.	Longit.
UP TO 2'-0"	2'-0"	8"	12"	#4 @ 18"oc	#4 @ 12"oc	–	(3)#5
4'-0"	3'-6"	8"	12"	#4 @ 18"oc	#4 @ 12"oc	–	(3)#5
8'-0"	4'-0"	8"	12"	#5 @ 12"oc	#4 @ 12"oc	–	(4)#5

NOTE: CAST AND CURE SLAB PRIOR TO BACKFILLING WALL

Typical Residence Retaining Wall 10



Carport Retaining Wall Schedule W/ Slab

H (ft.)	B1	ts	tf	Stem Reinforcing		Footing Reinforcing	
				Vert.	Horiz.	Top	Longit.
3'-0"	3'-6"	8"	12"	#4 @ 18"oc	#4 @ 12"oc	–	(2)#4
4'-0"	3'-6"	8"	12"	#4 @ 18"oc	#4 @ 12"oc	–	(2)#4
6'-0"	3'-6"	8"	12"	#4 @ 12"oc	#4 @ 12"oc	–	(4)#4
8'-0"	3'-6"	8"	12"	#5 @ 12"oc	#4 @ 12"oc	#4 @ 18"oc	(6)#5
UP TO 9'-0"	3'-6"	8"	12"	#5 @ 6"oc	#4 @ 12"oc	#4 @ 18"oc	(8)#5

Typical Retaining Wall at Carport/Residence Connection 12

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DAN J. SAY — STATE OF WASHINGTON — 53000 — REGISTERED PROFESSIONAL ENGINEER

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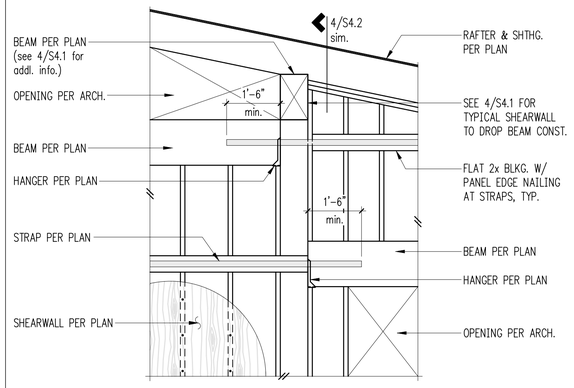
ISSUE: Permit

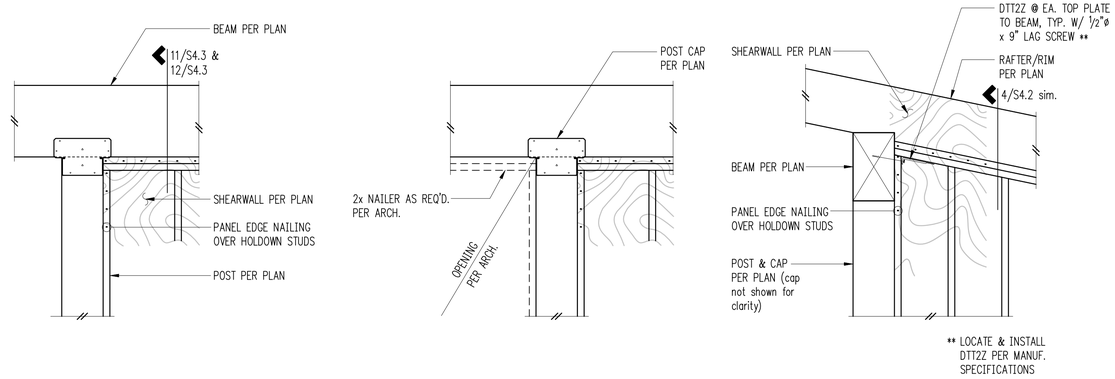
SHEET TITLE: Concrete Details

SCALE: 3/4" = 1'-0" U.N.O.
DATE: March 17, 2021
PROJECT NO: 00043-2020-04
SHEET NO: S3.2

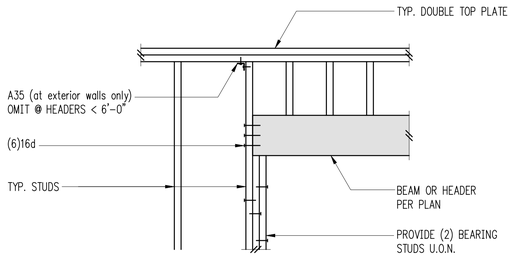


1/2" = 1'-0"

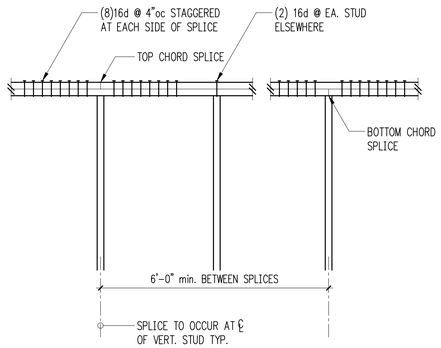
Typical Strapping Across Staggered Openings 2



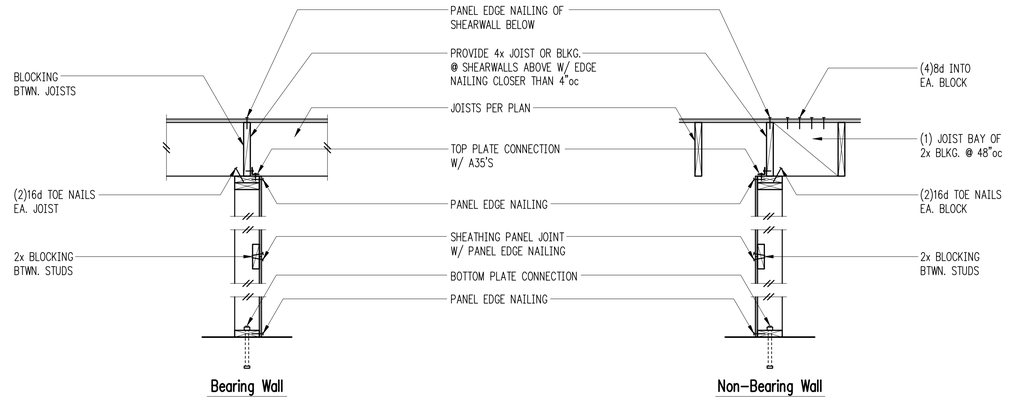
Typical Shearwall to Drop Beam Construction 4



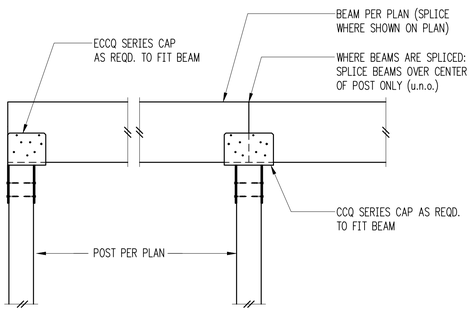
Typical Header Support w/2 Bearing Studs 5



Typical Top Plate Splice 6



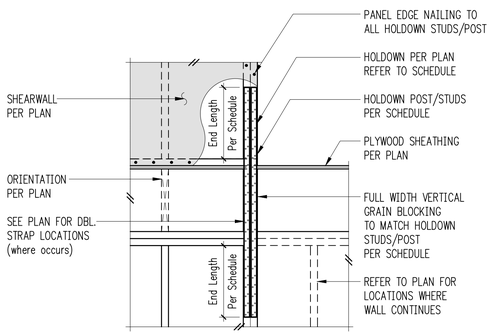
Typical Shearwall Construction 8



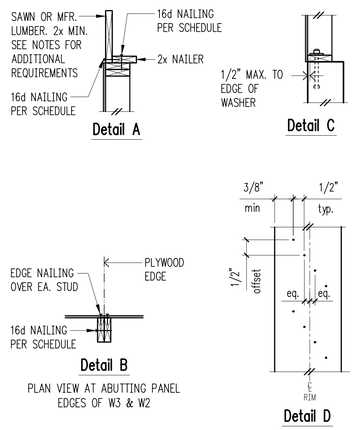
CC/CCQ Series Connection 9

Holdown Strap Schedule

Plan Mark	End Length	#Nails Ea. End Length	Holdown Studs/Post	
			if 2x4	if 2x6
CS16	1'-2"	(13) 8d	(1) 2x4	(1) 2x6
CS14	1'-7"	(18) 8d	(1) 2x4	(1) 2x6



Typical Holdown Schedule 10



Shearwall Schedule ①②③⑥⑦⑧

Mark	Sheathing	Panel Edge Nailing	Top Plate Connection		Base Plate Connection	
			if TJI	if Wood ⑨	at Wood ⑪⑫	at Concrete
W6	15/32" CDX PLYWOOD	8d @ 6"oc	16d @ 6"oc	A35 @ 24"oc ⑩	16d @ 6"oc	5/8"ø A.B. @ 48"oc
W4	15/32" CDX PLYWOOD	8d @ 4"oc	16d @ 4"oc	A35 @ 16"oc ⑩	(2)rows 16d @ 6"oc	5/8"ø A.B. @ 32"oc
W3 ④	15/32" CDX PLYWOOD	8d @ 3"oc	(2)rows 16d @ 4"oc	A35 @ 12"oc ⑩	(2)rows 16d @ 6"oc	5/8"ø A.B. @ 24"oc
W2 ④	15/32" CDX PLYWOOD	8d @ 2"oc	(2)rows 16d @ 4"oc	A35 @ 9"oc ⑩	(2)rows 16d @ 4"oc ⑬	5/8"ø A.B. @ 16"oc
2W3 ⑤	15/32" CDX PLYWD. EA. SIDE	8d @ 3"oc EA. SIDE	n/a	A35 @ 6"oc	(3)rows 16d @ 4"oc ⑭	5/8"ø A.B. @ 16"oc
2W2 ⑤	15/32" CDX PLYWD. EA. SIDE	8d @ 2"oc EA. SIDE	n/a	HGA10KT @ 8"oc	(3)rows 16d @ 4"oc ⑭	5/8"ø A.B. @ 12"oc
2W2-10 ⑤	15/32" CDX PLYWD. EA. SIDE	10d @ 2"oc EA. SIDE	n/a	HGA10KT @ 6"oc	(4)rows 16d @ 4"oc ⑭	5/8"ø A.B. @ 12"oc

① BLOCK PANEL EDGES WITH 2x MIN. LAID FLAT AND NAIL PANELS TO INTERMEDIATE SUPPORTS WITH 8d @ 12"o.c.
② 8d NAILS SHALL BE 0.131"ø x 2 1/2" (common) – 16d NAILS SHALL BE 0.135"ø x 3 1/2" (box) – 10d NAILS SHALL BE 0.148"ø x 3" (common).
③ EMBED ANCHOR BOLTS AT LEAST 7". EXPANSION BOLTS MAY BE SUBSTITUTED FOR ANCHOR BOLTS WITH 4" EMBEDMENT. TITEN HD SCREW ANCHORS MAY BE SUBSTITUTED FOR ANCHOR BOLTS W/ 4" EMBEDMENT. ALL BOLTS SHALL HAVE 3" x 3" x 1/4" MIN. PLATE WASHERS. PLATE WASHERS SHALL EXTEND TO WITHIN 1/2" OF THE EDGE OF THE BOTTOM PLATE ON THE SIDE WITH SHEATHING. SEE DETAIL C.
④ 3x STUDS OR DOUBLE STUDS NAILED TOGETHER W/ BASE PLATE NAILING ARE REQUIRED AT ABUTTING PANEL EDGES OF W3 AND W2. SEE DETAIL B. WHERE 3x STUDS ARE USED FOR W2, STAGGER NAILS AT ADJOINING PANEL EDGES.
⑤ 3x FOUNDATION SILL PLATES ARE REQUIRED FOR 2W3 AND 2W2. 3x STUDS ARE REQUIRED AT ABUTTING PANEL EDGES AND PANEL JOINTS SHALL BE OFFSET EACH SIDE OF WALL. STAGGER NAILS AT ADJOINING PANEL EDGES. 3x STUD, MIN., REQUIRED AT END OF SHEARWALL.
⑥ TWO STUDS MINIMUM ARE REQUIRED AT EACH END OF ALL SINGLE-SIDED SHEARWALLS. ALL END STUDS SHALL RECEIVE PANEL EDGE NAILING. SEE PLANS AND HOLDOWN SCHEDULE FOR ALTERNATE REQUIREMENTS.
⑦ ALL EXTERIOR WALLS SHALL BE W6, UNLESS NOTED OTHERWISE.
⑧ 7/16" O.S.B. MAY BE SUBSTITUTED FOR 15/32" CDX, EXCEPT AT 10d PANEL EDGE NAILING.
⑨ LTP4's (HORIZONTAL ORIENTATION) W/ 8d COMMON MAY BE SUBSTITUTED FOR A35's AT CONTRACTORS OPTION.
⑩ A 2x NAILER ATTACHED W/ BASE PLATE NAILING PER DETAIL A MAY BE SUBSTITUTED FOR A35's AT CONTRACTORS OPTION.
⑪ AT MULTI-ROW NAILING, MINIMUM OFFSET BETWEEN ROWS AND ROW SPACING 1/2", SEE DETAIL D.
⑫ LVL RIMS PERMITTED AT SINGLE SIDED SHEAR WALLS ONLY.
⑬ PROVIDE (3) ROWS 16d @ 6"oc AT LVL RIMS.
⑭ MINIMUM RIM OR JOIST 3 1/2" WIDE BELOW SHEARWALL.

Shearwall Schedule - (Sheathed One & Two Sides) 12

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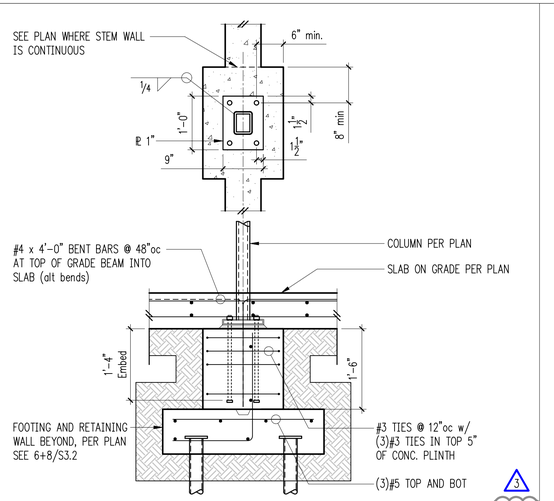
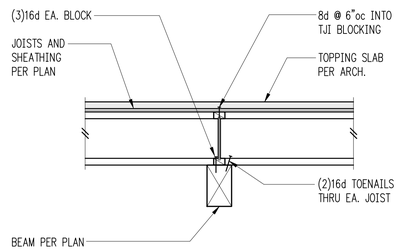
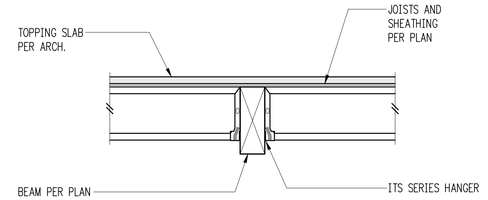


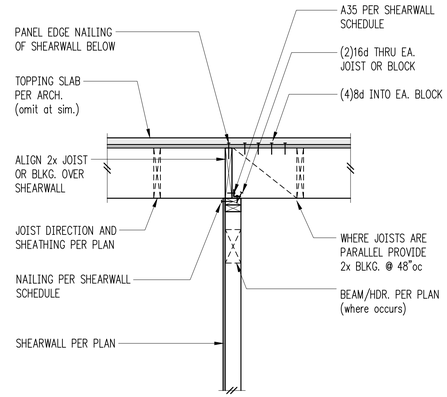
Typical Plinth at Stem Wall / Column Baseplate 1



Typical Header Beam 2

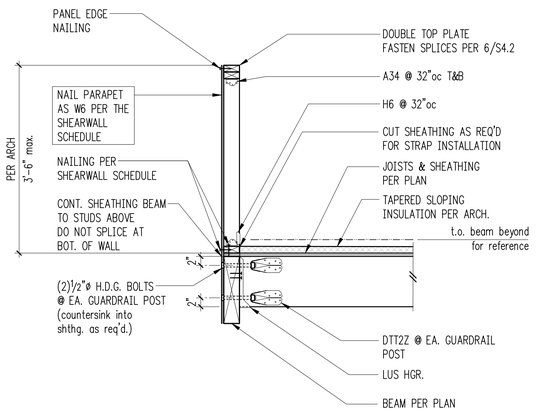


Typical Flush Beam 3

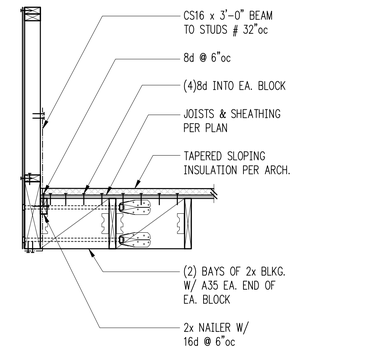


FLOOR, RAFTERS AT SIM.

Interior Shearwall Below 4

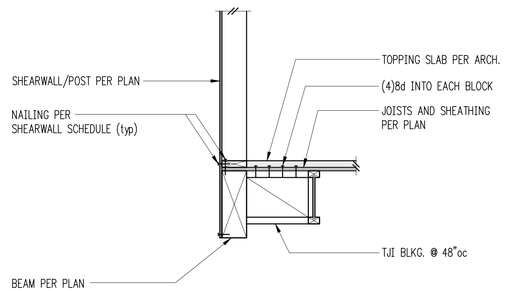


Exterior Deck Parapet (Perpendicular) 5

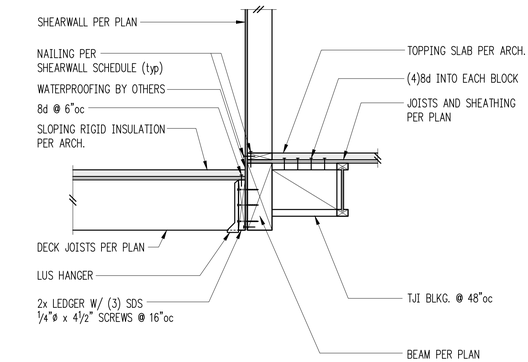


FOR CALLOUTS IN COMMON REFER 5/S4.2

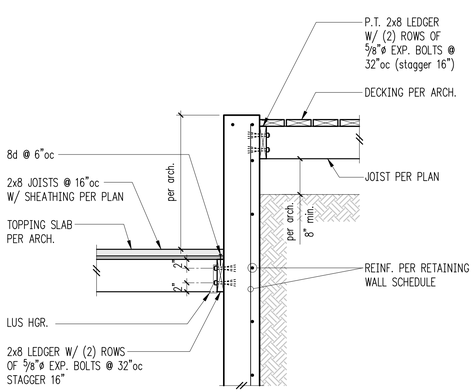
Exterior Deck Parapet (Parallel) 6



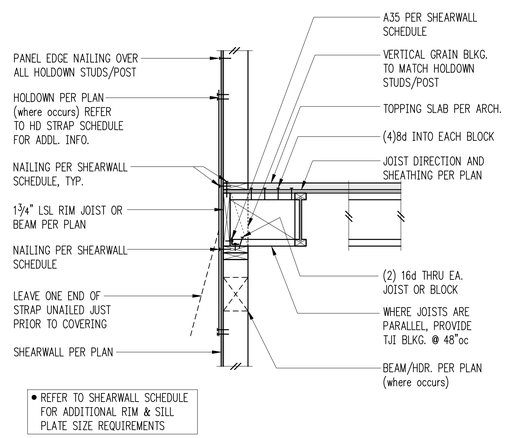
Exterior Floor Beam (w/TJIs) 7



Exterior Beam (w/ TJI) w/ Deck 8

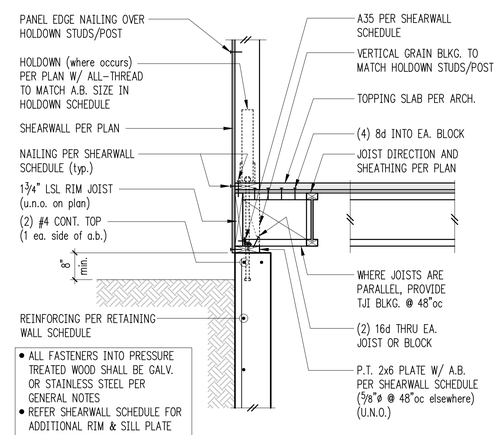


Stair Landing to Retaining Wall 9



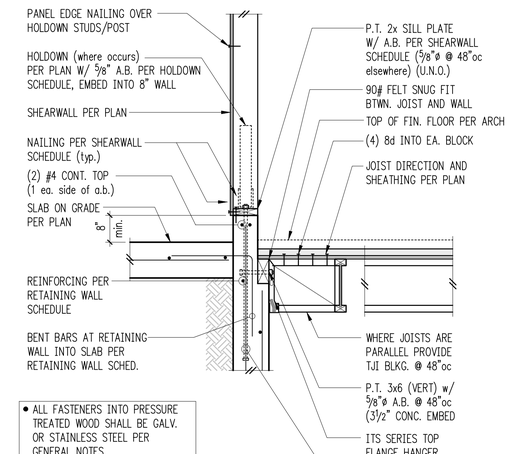
- REFER TO SHEARWALL SCHEDULE FOR ADDITIONAL RIM & SILL PLATE SIZE REQUIREMENTS

Exterior Floor Framing 10



- ALL FASTENERS INTO PRESSURE TREATED WOOD SHALL BE GALV. OR STAINLESS STEEL PER GENERAL NOTES
- REFER SHEARWALL SCHEDULE FOR ADDITIONAL RIM & SILL PLATE SIZE REQUIREMENTS

Exterior Framing (w/TJI) at Basement 11



- ALL FASTENERS INTO PRESSURE TREATED WOOD SHALL BE GALV. OR STAINLESS STEEL PER GENERAL NOTES
- REFER SHEARWALL SCHEDULE FOR ADDITIONAL RIM & SILL PLATE SIZE REQUIREMENTS

Exterior Framing (w/TJI) at Basement (High Grade) 12

STRUCTURAL ENGINEERING
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DAN J. SAY — STATE OF WASHINGTON — 53000 — REGISTERED PROFESSIONAL ENGINEER

DRAWN: SJB
DESIGN: VMB
CHECKED: RJA
APPROVED: DJS

REVISIONS:

1	Permit Corrections #1	Sep. 1, 2021
2	Pin Pile Layout Revision	Jan. 21, 2022
3	Permit Revision #1	Apr. 28, 2022

JURISDICTIONAL APPROVAL STAMP:

PROJECT TITLE:

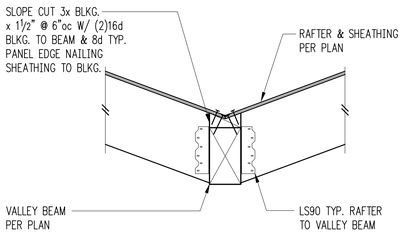
Lumpkin Residence
5401 West Mercer Way
Mercer Island, WA 98040

ARCHITECT:
Suyama Peterson Deguchi
2324 2nd Ave.
Seattle, WA 98121
PH 206.256.0809
FX 206.256.0810

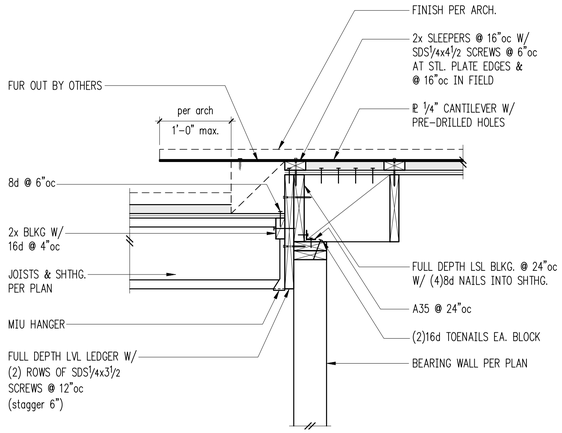
ISSUE: Permit

SHEET TITLE: Wood Framing Details

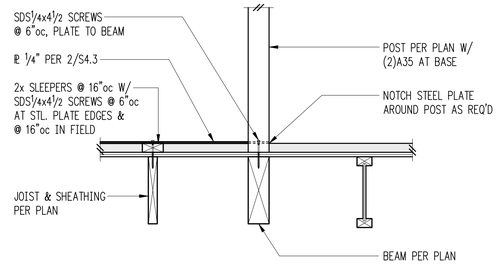
SCALE: 3/4" = 1'-0" U.N.O.
DATE: March 17, 2021
PROJECT NO: 00043-2020-04
SHEET NO: S4.2



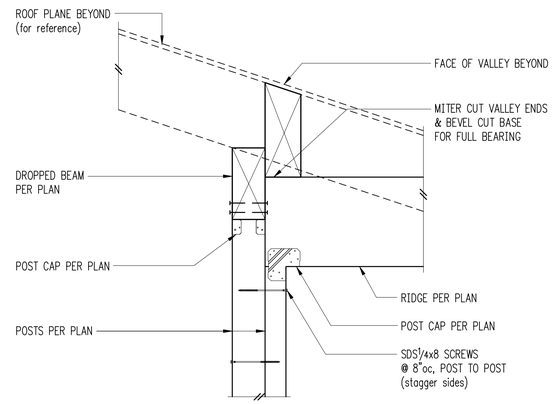
Rafter at Valley 1



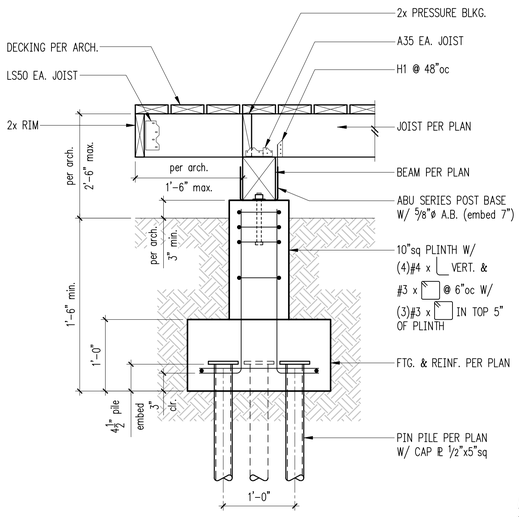
Dropped Floor Framing at Steel Plate 2



Steel Plate Backspan to Flush Beam 3



Sistered Post Connection at Valley 4



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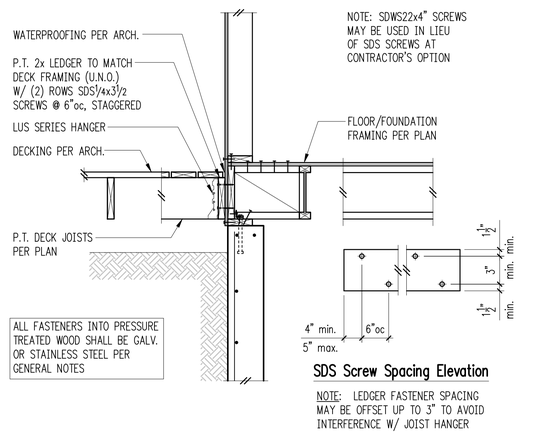
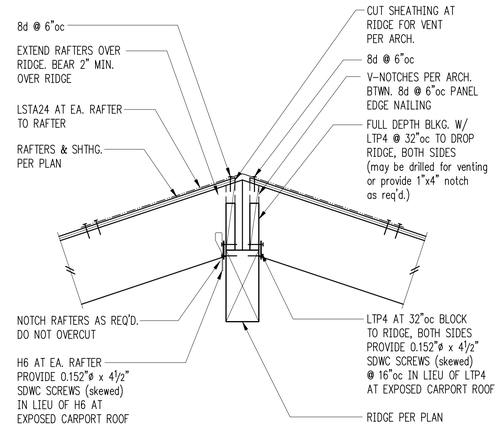


SDS Screw Spacing Elevation

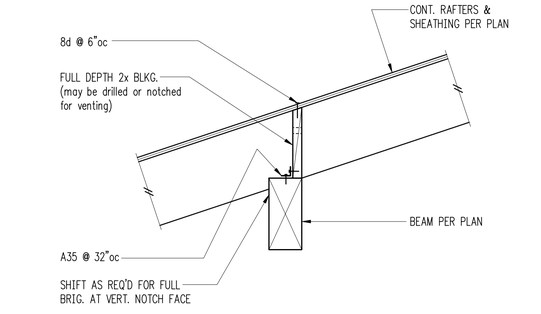
NOTE: LEDGER FASTENER SPACING MAY BE OFFSET UP TO 3" TO AVOID INTERFERENCE W/ JOIST HANGER

¾" = 1'-0"

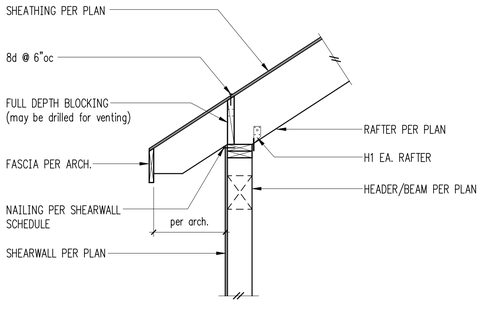
Typical Deck Ledger Detail (w/TJI's) 6



Dropped Ridge Connection 7

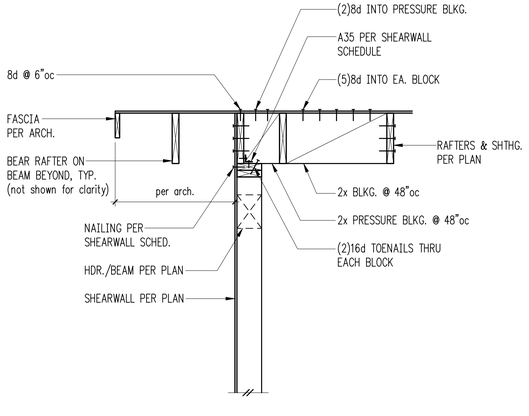


Continuous Rafters Over Dropped Beam 8



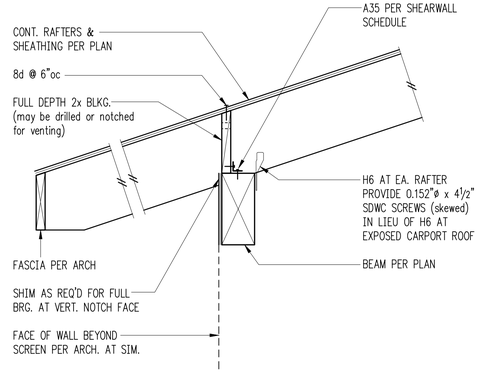
¾" = 1'-0"

Exterior Bearing Wall 9

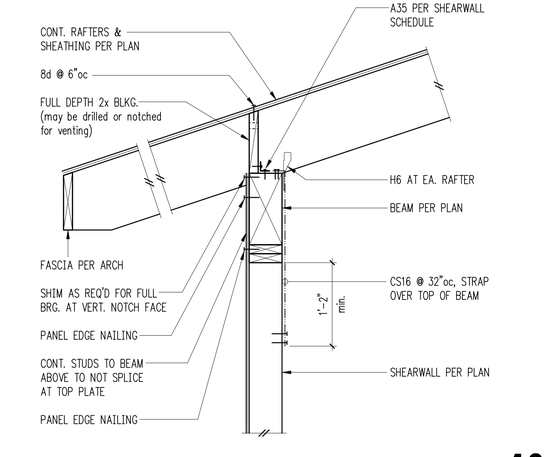


¾" = 1'-0"

Exterior Non-Bearing Wall 10



Rafters at Dropped Header 11



Rafters at Exterior Shearwalls 12

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DRAWN: SJB
DESIGN: VMB
CHECKED: RJA
APPROVED: DJS

REVISIONS:

1	Permit Corrections #1	Sep. 1, 2021
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3	Permit Revision #1	Apr. 28, 2022

JURISDICTIONAL APPROVAL STAMP:

PROJECT TITLE:

Lumpkin Residence
5401 West Mercer Way
Mercer Island, WA 98040

ARCHITECT:
Suyama Peterson Deguchi
2324 2nd Ave.
Seattle, WA 98121
PH 206.256.0809
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ISSUE: Permit

SHEET TITLE: Wood Framing Details

SCALE: 1" = 1'-0" U.N.O.
DATE: March 17, 2021
PROJECT NO: 00043-2020-04
SHEET NO: S4.3

1

2

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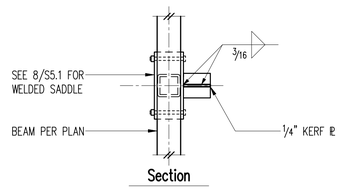
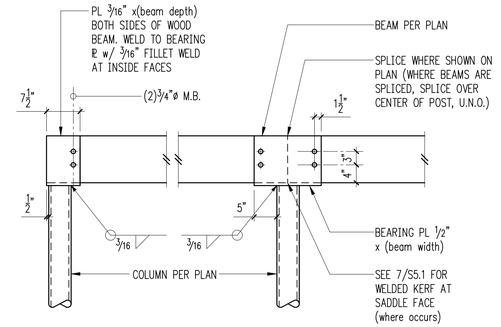


Section

Welded Kerf to Fabricated Saddle 7



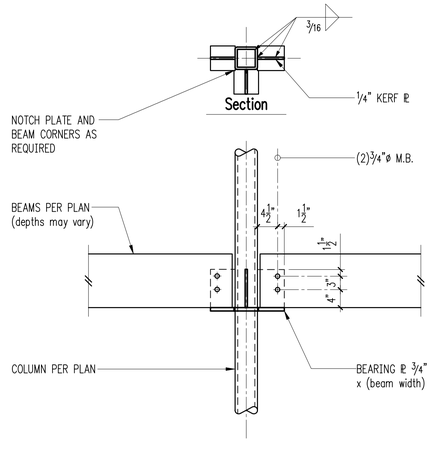
Custom Fabricated CC/ ECC Connection at Steel Column 8

5

6

9

10



Section

Beam/Plate Connection - Wood 11

12

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