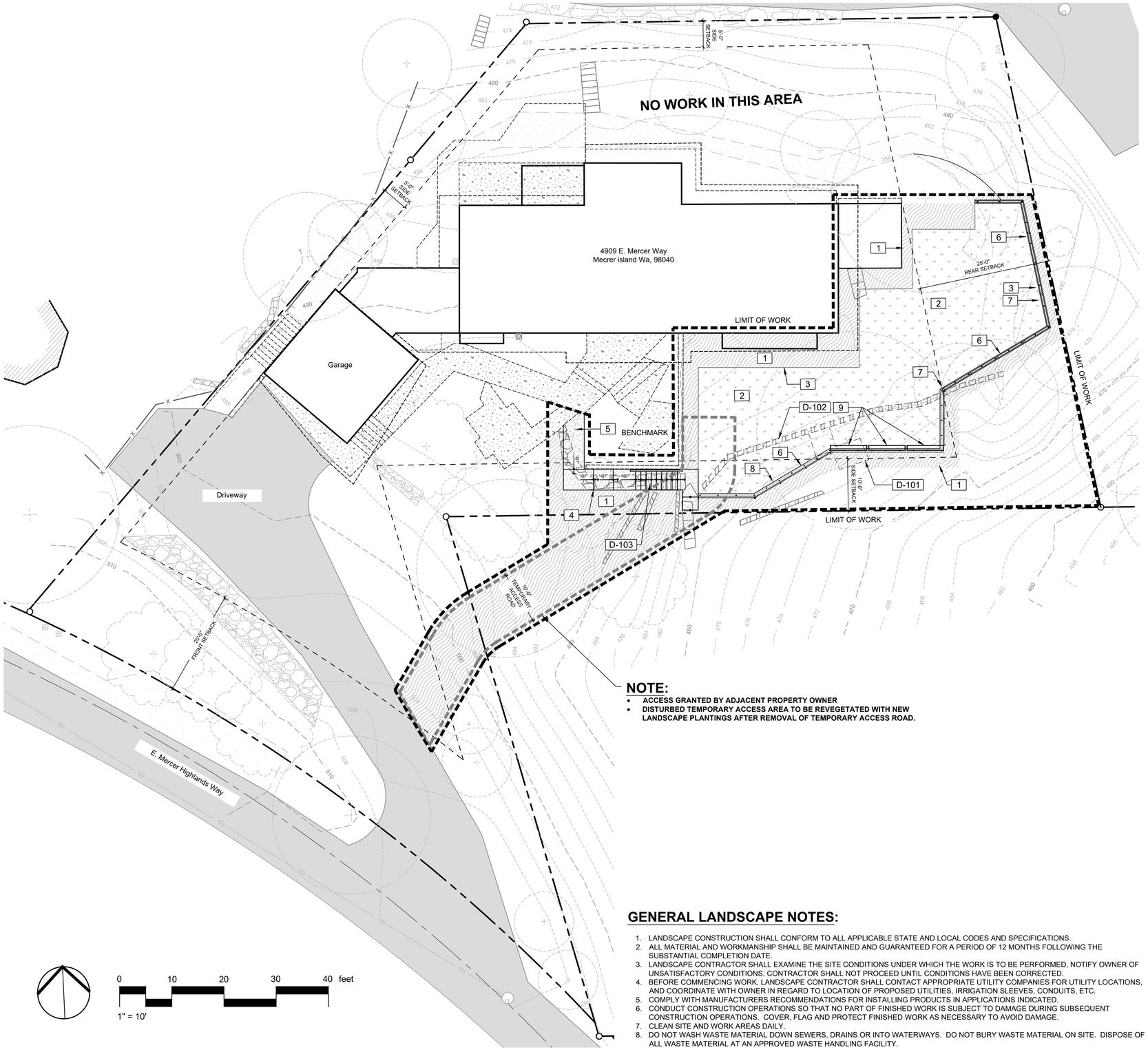

NOTE:

- **ACCESS GRANTED BY ADJACENT PROPERTY OWNER**
- **DISTURBED TEMPORARY ACCESS AREA TO BE REVEGETATED WITH NEW LANDSCAPE PLANTINGS AFTER REMOVAL OF TEMPORARY ACCESS ROAD.**

GENERAL LANDSCAPE NOTES:

1. LANDSCAPE CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE STATE AND LOCAL CODES AND SPECIFICATIONS.
2. ALL MATERIAL AND WORKMANSHIP SHALL BE MAINTAINED AND GUARANTEED FOR A PERIOD OF 12 MONTHS FOLLOWING THE SUBSTANTIAL COMPLETION DATE.
3. LANDSCAPE CONTRACTOR SHALL EXAMINE THE SITE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED, NOTIFY OWNER OF UNSATISFACTORY CONDITIONS. CONTRACTOR SHALL NOT PROCEED UNTIL CONDITIONS HAVE BEEN CORRECTED.
4. BEFORE COMMENCING WORK, LANDSCAPE CONTRACTOR SHALL CONTACT APPROPRIATE UTILITY COMPANIES FOR UTILITY LOCATIONS, AND COORDINATE WITH OWNER IN REGARD TO LOCATION OF PROPOSED UTILITIES, IRRIGATION SLEEVES, CONDUITS, ETC.
5. COMPLY WITH MANUFACTURERS RECOMMENDATIONS FOR INSTALLING PRODUCTS IN APPLICATIONS INDICATED.
6. CONDUCT CONSTRUCTION OPERATIONS SO THAT NO PART OF FINISHED WORK IS SUBJECT TO DAMAGE DURING SUBSEQUENT CONSTRUCTION OPERATIONS. COVER, FLAG AND PROTECT FINISHED WORK AS NECESSARY TO AVOID DAMAGE.
7. CLEAN SITE AND WORK AREAS DAILY.
8. DO NOT WASH WASTE MATERIAL DOWN SEWERS, DRAINS OR INTO WATERWAYS. DO NOT BURY WASTE MATERIAL ON SITE. DISPOSE OF ALL WASTE MATERIAL AT AN APPROVED WASTE HANDLING FACILITY.

PROJECT DATA:
PARCEL#: 2162000230
ZONING: R-15
SITE ADDRESS: 4909 E. MERCER WAY.
MERCER ISLAND, WA 98059
EAST MERCER HIGHLANDS
ADD LESS POR ELY OF LN BEG 18 FT W OF NE COR TH S
09-26-31 E 96.13 FT TO SE COR & UND INT IN PVT RD

LOT SLOPE CALCULATIONS:

HIGHEST ELEVATION OF LOT:	510'
LOWEST ELEVATION OF LOT:	454'
ELEVATION DIFFERENCE:	56'
HORIZONTAL DISTANCE:	238'
LOT SLOPE:	24%

LOT COVERAGE CALCULATIONS:

A.	ALLOWED LOT COVERAGE:	35%
B.	ALLOWED LOT COVERAGE AREA:	6,099 S.F.
C.	GROSS LOT AREA:	17,425 S.F.
D.	NET LOT AREA:	11,326 S.F.
E.	MAIN STRUCTURE ROOF AREA:	3,625 S.F.
F.	ACCESSORY BUILDING ROOF AREA:	0
G.	VEHICULAR USE AREA	1,830 S.F.
H.	TOTAL EXISTING LOT COVERAGE AREA:	5,455 S.F.
I.	TOTAL LOT COVERAGE AREA REMOVED:	0
J.	TOTAL NEW LOT COVERAGE AREA	0
K.	TOTAL PROJECT LOT COVERAGE AREA (H-I)+J	5,455 S.F.
L.	PROPOSED ADJUSTMENT FOR SINGLE STORY	0
M.	PROPOSED ADJUSTMENT FOR FLAG LOT	0
N.	PROPOSED LOT COVERAGE (K/D)X100	31%

HARDSCAPE COVERAGE CALCULATIONS:

ALLOWABLE HARDSCAPE AREA:	1,568 S.F. MAX
TOTAL EXISTING HARDSCAPE:	712 S.F.
HARDSCAPE TO BE REMOVED:	108 S.F.
PROPOSED HARDSCAPE :	232 S.F.
TOTAL EXISTING DECKS:	378 S.F. 1/8" PERVIOUS SPACING
PROPOSED DECKS:	0 S.F.
TOTAL HARDSCAPE AREA:	836 S.F.

REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION	QTY	DETAIL
1	PLANTING AREA	1,715 SF	
2	LAWN TERRACE	1,656 SF	
3	LANDSCAPE EDGING | PERMALOC CLEANLINE	104 LF	
4	MILD STEEL STEPS WITH CRUSHED GRANITE INFILL	152 LF	3/LA3.3
5	CRUSHED GRANITE PATH | 4" DEPTH	160 SF	3/LA3.3
6	PROPOSED C.I.P. CONCRETE RETAINING WALL | NATURAL COLOR AND FINISH | SEE SHEET LA3.1 & LA3.2 FOR DETAILS	237 LF	
7	CEDAR GUARD RAIL AND GATE | APPEARANCE GRADE CEDAR | SANDED | STAINED	55 LF	2/LA3.3
8	CABLE GUARD RAIL AND GATE | MILD STEEL | RUSTED FINISH | STAINLESS STEEL WIRE AND HARDWARE	39 LF	1/LA3.3
9	MILD STEEL PLANTER | 12"W X 37"H X 84"L | NATURAL FINISH		4/LA3.3

DEMOLITION

SYMBOL	DESCRIPTION	QTY	DETAIL
D-101	REMOVE EXISTING PLAY STRUCTURE		
D-102	REMOVE FAILING RAILROAD TIE RETAINING WALL		
D-103	REMOVE WOOD STAIRS		

SHEET INDEX

SHEET	DESCRIPTION
LA1.1	Site Plan
LA2.1	Wall Plan
LA3.1	Structural Notes
LA3.2	Structural Details
LA3.3	Permit Details

REVISIONS	DATE	BY
PERMIT PLAN	10/17/2019	KJ

SCJ STUDIO
LANDSCAPE ARCHITECTURE
1148 NW LEARY WAY, SEATTLE, WA 98107
P: 206-708-1862
SCJSTUDIO@A.COM

SHEET TITLE: Site Plan

PROJECT NAME: Maple Grove Residence
4909 E. Mercer Way
Mercer Island, WA 98040

SEAL:

STATE OF WASHINGTON
MARK S. GARFF
NO. 888 EXP. 01/08/21
LICENSED LANDSCAPE ARCHITECT

DESIGNER:	KJ
DRAWN BY:	JL
APPROVED BY:	MG
DATE:	OCTOBER 2019
JOB No:	2551
DRAWING FILE No:	
DRAWING No:	LA1.1
SHEET No:	1 OF 6

Nov 14, 2019 9:41:00am – User: keith.jankovsky
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Tree Inventory / Retention Schedule

Tree #	Species	Latin Name	DBH	Appr Ht.	Condition	Drip line Radius	Req'd Replacement Trees	Retain yes/no
DF1	Fir	*Pseudotsuga menziesii*	32"	110'	Fair	13'	N/A	YES
DF2	Fir	*Pseudotsuga menziesii*	44"	120'	Good	18'	N/A	YES
DF3	Fir	Pseudotsuga menziesii	43"	120'	Good	18'	6	NO
DF4	Fir	Pseudotsuga menziesii	17"	90'	Fair	10'	2	NO
DF5	Fir	Pseudotsuga menziesii	25"	95'	Fair	13'	3	NO
DF6	Fir	*Pseudotsuga menziesii*	13"	65'	Fair	11'	N/A	YES
DF7	Fir	*Pseudotsuga menziesii*	38"	120'	Good	18'	N/A	YES
DF8	Fir	*Pseudotsuga menziesii*	23"	95'	Fair	13'	N/A	YES
DF9	Fir	*Pseudotsuga menziesii*	16"	85'	Fair	11'	N/A	YES
DF10	Fir	*Pseudotsuga menziesii*	25"	80'	Good	13'	N/A	YES
DF11	Fir	*Pseudotsuga menziesii*	18"	85'	Fair	11'	N/A	YES
CE12	Cedar	*Thuja plicata*	16"	75'	Good	10'	N/A	YES
CE13	Cedar	*Thuja plicata*	18"	60'	Fair	8'	N/A	YES
CE14	Cedar	*Thuja plicata*	20"	70'	Good	10'	N/A	YES
CE15	Cedar	*Thuja plicata*	18"	60'	Fair	8'	N/A	YES
CE16	Cedar	*Thuja plicata*	16"	60'	Fair	8'	N/A	YES

Note: Replacement trees shall be conifers at least 6' tall and / or deciduous trees at least 1-1/2" Caliper
CE = CEDAR
DF= DOUGLAS FIR
MP=MAPLE
PL-PLUM

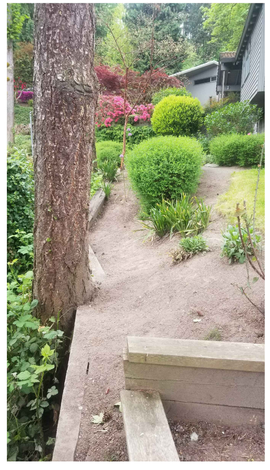
VISIBLE FAILURE OF SLOPE

NOTE:

- ACCESS GRANTED BY ADJACENT PROPERTY OWNER
- DISTURBED TEMPORARY ACCESS AREA TO BE REVEGETATED WITH NEW LANDSCAPE PLANTINGS AFTER REMOVAL OF TEMPORARY ACCESS ROAD.

TREES #3,#4, & #5

TREES #3



TREES #4,

TREES #5

REVISIONS	DATE	BY
PERMIT PLAN	10/17/2019	KJ

SCJ STUDIO
LANDSCAPE ARCHITECTURE
1148 NW LEARY WAY, SEATTLE, WA 98107
P: 206-708-1862
SCJSTUDIOLA.COM

SHEET TITLE: Tree Inventory / Retention Plan

PROJECT NAME: Maple Grove Residence
4909 E. Mercer Way
Mercer Island, WA 98040

SEAL:

STATE OF WASHINGTON · MARK S. GARFF · NO. 888 EXP. 01/05/21 · LICENSED LANDSCAPE ARCHITECT

DESIGNER:	KJ
DRAWN BY:	JL
APPROVED BY:	MG
DATE:	OCTOBER 2019
JOB No:	2551
DRAWING FILE No:	
DRAWING No:	LA1.2
SHEET No:	2 OF 6

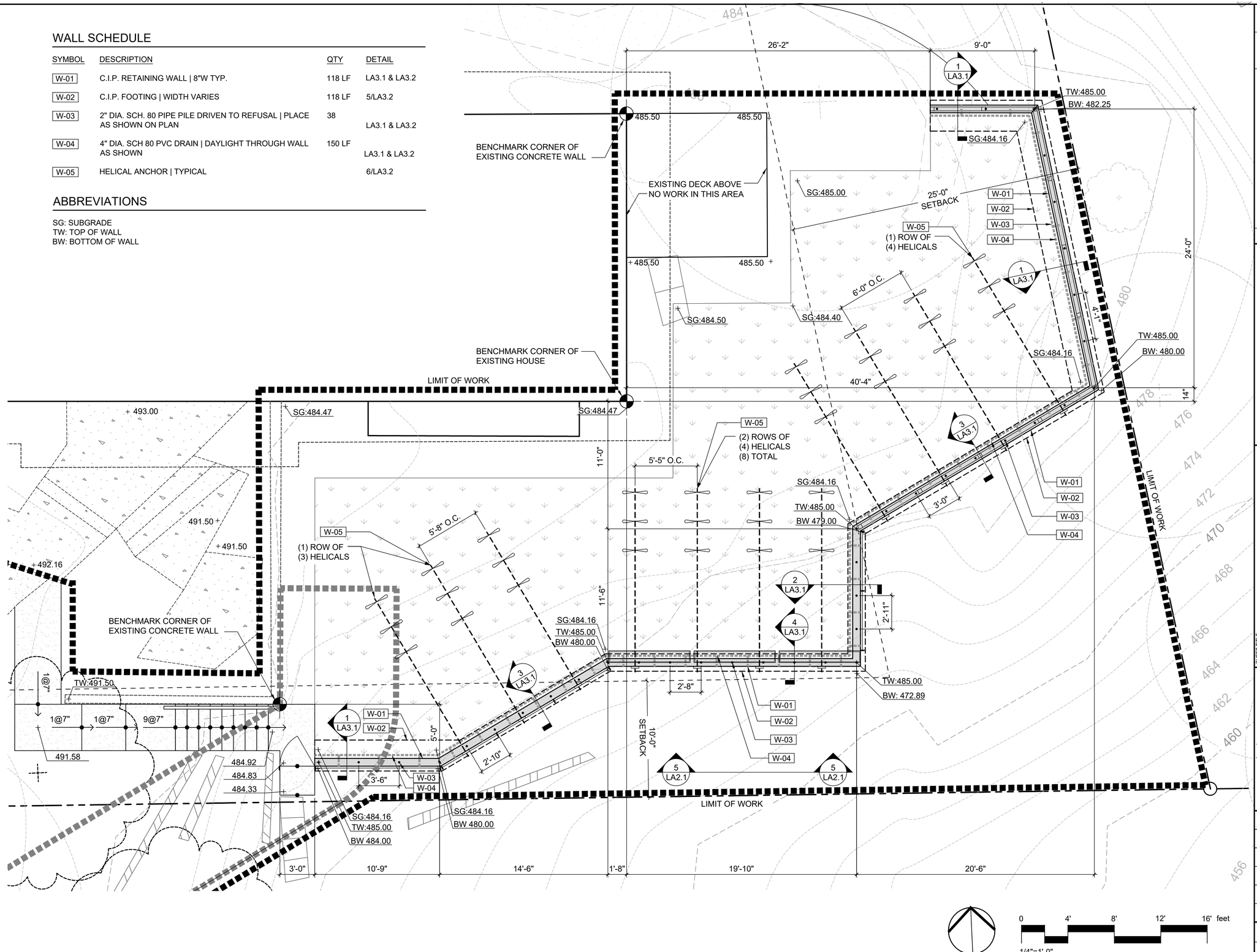
Nov 14, 2019 11:50:04am – User keith.jonkovsky
N:\PROJECTS\2551 SARAH & AMIR BASTAMIROUS\2551.01 THE MAPLE GROVE RESIDENCE\PHASE 03 – PERMIT ASSISTANCE\CAD\2551-LA1.2 TREE RETENTION PLAN-MAPLE PERMIT.DWG

WALL SCHEDULE

SYMBOL	DESCRIPTION	QTY	DETAIL
W-01	C.I.P. RETAINING WALL | 8"W TYP.	118 LF	LA3.1 & LA3.2
W-02	C.I.P. FOOTING | WIDTH VARIES	118 LF	5/LA3.2
W-03	2" DIA. SCH. 80 PIPE PILE DRIVEN TO REFUSAL | PLACE AS SHOWN ON PLAN	38	LA3.1 & LA3.2
W-04	4" DIA. SCH 80 PVC DRAIN | DAYLIGHT THROUGH WALL AS SHOWN	150 LF	LA3.1 & LA3.2
W-05	HELICAL ANCHOR | TYPICAL		6/LA3.2

ABBREVIATIONS

SG: SUBGRADE
TW: TOP OF WALL
BW: BOTTOM OF WALL



REVISIONS	DATE	BY
PERMIT PLAN	10/17/2019	KJ

SCJ STUDIO
LANDSCAPE ARCHITECTURE
1148 NW LEARY WAY, SEATTLE, WA 98107
P: 206-708-1862
SCJSTUDIOLA.COM

SHEET TITLE: Wall Plan

PROJECT NAME: Maple Grove Residence
4909 E. Mercer Way
Mercer Island, WA 98040

SEAL:

STATE OF WASHINGTON
MARK S. GARFF
NO. 888 EXP. 01/05/21
LICENSED LANDSCAPE ARCHITECT

DESIGNER:	KJ
DRAWN BY:	JL
APPROVED BY:	MG
DATE:	OCTOBER 2019
JOB No:	2551
DRAWING FILE No:	
DRAWING No:	LA2.1
SHEET No:	3 OF 6

Nov 14, 2019 9:41:26am – User: keith.jankovsky
N:\PROJECTS\2551 SARAH & AMIR BASTAWROUS\2551.01 THE MAPLE GROVE RESIDENCE\PHASE 03 - PERMIT ASSISTANCE\CAD\2551-LA2.1 WALL PLAN-MAPLE PERMIT.DWG

GENERAL NOTES

(The following apply unless shown otherwise on the plan)

1. **CODE REQUIREMENTS:**

ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, THE 2015 IBC, AND THE LATEST EDITION OF THE PTI DOCUMENT, "RECOMMENDATIONS FOR PRE-STRESSED ROCK AND SOIL ANCHORS".

2. **REFERENCE DOCUMENTS:**

TOPOGRAPHIC AND BOUNDARY SURVEY INFORMATION BY SCJ STUDIO.
REPORT ON GEOTECHNICAL INVESTIGATION BY EARTH SOLUTIONS NW, ES-6510 DATED 10-3-19.

3. **GENERAL REQUIREMENTS:**

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE CONTRACTOR'S WORK. THE STRUCTURAL ENGINEER HAS NO OVERALL OR ACTUAL SUPERVISORY AUTHORITY 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 AT THE PROJECT SITE.

UTILITY LOCATION: THE SHORING CONTRACTOR SHALL DETERMINE THE HORIZONTAL AND VERTICAL LOCATION OF ALL ADJACENT UNDERGROUND UTILITIES PRIOR TO DRIVING PILES OR TIEBACK ANCHORS. THE UTILITIES INFORMATION SHOWN ON THE PLANS MAY NOT BE COMPLETE. THIS INCLUDES CALLING UTILITY LOCATE AT 1-800-424-5555 AND THEN POTHOLING ALL UTILITIES PRIOR TO CONSTRUCTION TO CONFIRM DEPTHS AND LOCATIONS AND TO VERIFY THAT THERE ARE NO CONFLICTS WITH THE PILE AND TIEBACK CROSSING ELEVATIONS. PILES AND TIEBACKS SHALL MAINTAIN A MINIMUM OF 12" CLEARANCE TO ANY EXISTING UTILITIES TO REMAIN. CONTRACTOR SHALL RESOLVE ANY PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.

CONTRACTOR SHALL VERIFY ALL DIMENSIONS OF EXISTING STRUCTURES IN THE FIELD AND SHALL NOTIFY THE ENGINEER OF ALL FIELD CHANGES PRIOR TO FABRICATION AND INSTALLATION OF ANY STRUCTURAL MEMBER.

ANY DISCREPANCIES FOUND AMONG THE DRAWINGS, THE SPECIFICATIONS, THESE GENERAL NOTES AND THE SITE CONDITIONS SHALL BE REPORTED TO THE ENGINEER AND ARCHITECT, WHO SHALL CORRECT SUCH DISCREPANCY IN WRITING. SHOULD ANY DISCREPANCIES BE FOUND IN THE PROJECT DOCUMENTS, THE CONTRACTOR WILL BE DEEMED TO HAVE INCLUDED IN THE PRICE THE MOST EXPENSIVE WAY OF COMPLETING THE WORK, UNLESS PRIOR TO SUBMISSION OF THE PRICE THE CONTRACTOR ASKS FOR A DECISION FROM THE ENGINEER AND ARCHITECT AS TO WHICH SHALL GOVERN. ANY WORK DONE BY THE GENERAL CONTRACTOR AFTER DISCOVERY OF SUCH DISCREPANCY SHALL BE DONE AT THE GENERAL CONTRACTOR'S RISK.

4. **GEOTECHNICAL INFORMATION AND CRITERIA:**

INSTALLATION OF PILES AND TIEBACKS, SUBGRADE PREPARATION INCLUDING DRAINAGE, EXCAVATION, COMPACTION AND FILLING REQUIREMENTS SHALL CONFORM WITH THE RECOMMENDATIONS CONTAINED IN THE SOILS REPORT AND/OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER. THE SUBSURFACE CHARACTERIZATIONS USED TO DESIGN THE SHORING ARE CONTAINED IN THE SOILS REPORT AS REFERENCED ABOVE.

EXCAVATIONS FOR FOUNDATIONS SHALL BE PER PLAN DOWN PER THE GEOTECHNICAL ENGINEERING RECOMMENDATIONS. OVER EXCAVATED AREAS SHALL BE BACKFILLED WITH LEAN CONCRETE OR PER GEOTECHNICAL RECOMMENDATIONS AT THE CONTRACTOR'S EXPENSE. EXCAVATION SLOPES SHALL BE SAFE AND SHALL NOT BE GREATER THAN THE LIMITS SPECIFIED BY LOCAL, STATE, AND NATIONAL SAFETY REGULATIONS. CONTRACTOR SHALL PROTECT CUT SLOPES AS NECESSARY IF CONSTRUCTION OCCURS DURING WET WEATHER, AND SHALL CONTROL AND MANAGE RUNOFF TO MINIMIZE EFFECTS ON CONSTRUCTION.

DESIGN LOADS ARE DETERMINED BY THE GEOTECHNICAL ENGINEER. THE SOIL PRESSURES INDICATED ON THE SOIL PRESSURE DIAGRAM WERE USED FOR DESIGN, IN ADDITION TO THE DEAD AND LIVE LOADS. SEE REPORT OF GEOTECHNICAL INVESTIGATION FOR MORE COMPLETE INFORMATION, INCLUDING RECOMMENDATIONS FOR PILES AND TIEBACKS IN GENERAL, MONITORING, EXCAVATION, AND DRAINAGE.

DESIGN PARAMETERS AS APPR0VED BY THE GEOTECHNICAL ENGINEER ARE AS FOLLOWS:

LATERAL EARTH PRESSURES (EQUIVALENT FLUID PRESSURE)	E.F.P.
ACTIVE EARTH PRESSURE (YIELDING)	35 PCF
ACTIVE EARTH PRESSURE (AT-REST)	55 PCF
SEISMIC SURCHARGE PRESSURE (UNIFORM LOAD)	6H PSF
PASSIVE EARTH PRESSURE (4:1SLOPE/2:1SLOPE)	250 PCF/100 PCF
HELICAL ANCHORS: REFER SECTION ON HELICAL ANCHORS	
PILE CAPACITY: 2IN DIAMETER SCHEDULE 80 PIPE	3 TON

PILE AND TIEBACK DURATION: THE PILES AND TIEBACKS ARE PERMANENT.

5. **SHOP DRAWINGS:**

SHOP DRAWINGS ARE REQUIRED FOR THE FOLLOWING ITEMS:

STRUCTURAL STEEL
MISCELLANEOUS METALS
HELICAL ANCHORS

CONTRACTOR SHALL ALSO COORDINATE APPROVED SHORING SUBMITTALS WITH BUILDING DEPARTMENT REQUIREMENTS.

SHOP DRAWING REVIEW: DIMENSIONS AND QUANTITIES ARE NOT REVIEWED BY THE ENGINEER OF RECORD, THEREFORE MUST BE VERIFIED BY THE CONTRACTOR. CONTRACTOR SHALL REVIEW AND STAMP DRAWINGS PRIOR TO REVIEW BY ENGINEER OF RECORD. CONTRACTOR SHALL REVIEW DRAWINGS FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND OPERATIONS OF CONSTRUCTION, AND ALL SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO. SUBMITTALS SHALL INCLUDE A REPRODUCIBLE AND ONE COPY; REPRODUCIBLE WILL BE MARKED AND RETURNED WITHIN TWO WEEKS OF RECEIPT WITH A NOTATION INDICATING THAT THE SUBMITTAL HAS BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE STRUCTURAL DESIGN. THE SUBMITTED ITEMS SHALL NOT BE INSTALLED UNTIL THEY HAVE BEEN APPROVED BY THE DESIGN TEAM AND/OR THE OWNER'S REPRESENTATIVE. ELECTRONIC SUBMISSIONS MAY ALSO BE DEEMED TO MEET THE SUBMITTAL REQUIREMENTS NOTED ABOVE.

SHOP DRAWING SUBMITTALS PROCESSED BY THE ENGINEER ARE NOT CHANGE ORDERS. THE PURPOSE OF SHOP DRAWING SUBMITTALS BY THE CONTRACTOR IS TO DEMONSTRATE TO THE ENGINEER THAT THE CONTRACTOR UNDERSTANDS THE DESIGN CONCEPT, BY INDICATING WHICH MATERIAL IS INTENDED TO BE FURNISHED AND INSTALLED AND BY DETAILING THE INTENDED FABRICATION AND INSTALLATION METHODS.

6. **INSPECTIONS:**

THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ALL INSPECTIONS REQUIRED BY THE LOCAL BUILDING DEPARTMENT. IN ADDITION TO INSPECTIONS REQUIRED BY THE LOCAL BUILDING DEPARTMENT, THE OWNER OR A REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE ACTING AS THE OWNER'S AGENT SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS TO PROVIDE INSPECTIONS FOR ITEMS NOTED IN THE SPECIFICATIONS AND IBC SECTIONS 108 AND 1704. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THE DISCREPANCIES ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND THE STRUCTURAL ENGINEER IMMEDIATELY AND PRIOR TO COMPLETION OF THAT PHASE OF WORK.

SOILS INSPECTION: INSPECTION BY THE SOILS ENGINEER SHALL BE PERFORMED FOR PILE PLACEMENT, EXCAVATION, AND TIEBACK PLACING AND STRESSING. THE GEOTECHNICAL ENGINEER SHALL ALSO ADVISE ON WATER CONTROL AND SLAB ON GRADE CONSTRUCTION.

PILE AND ANCHOR INSTALLATION AS WELL AS REQUIRED TESTING SHALL BE PERFORMED UNDER DIRECT AND CONTINUOUS OBSERVATION OF THE GEOTECHNICAL SPECIAL INSPECTOR.

TESTING AND SPECIAL INSPECTION REPORTS ARE TO BE DISTRIBUTED TO THE ARCHITECT, OWNER, BUILDING DEPARTMENT AND STRUCTURAL ENGINEER WITHIN TWO WEEKS OF COMPLETION OF EACH PHASE OF WORK UNLESS DISCREPANCIES ARE NOT CORRECTED AS NOTED ABOVE.

THE FOLLOWING ITEMS REQUIRE SPECIAL INSPECTIONS:

CONSTRUCTION TYPE	TYPE OF INSPECTION
CONCRETE CONSTRUCTION	PER TABLE 1704.4
STRUCTURAL STEEL FABRICATION AND ERECTION	PER TABLE 1704.3
DRIVEN PILE INSTALLATION	PERIODIC
TIEBACK CONSTRUCTION	CONTINUOUS
EXCAVATION AND GRADING	PERIODIC

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

7. **CONCRETE:**

CONCRETE CONSTRUCTION SHALL CONFORM TO ALL REQUIREMENTS OF IBC CHAPTER 19 AND THE ACI STANDARD 318-02 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE".

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 IBC SECTION 1904. DESIGN STRENGTH IS f'c = 2,500 PSI.

8. **REINFORCING STEEL** SHALL CONFORM TO ASTM A615, GRADE 60, FY = 60,000 PSI.

9. **STEEL:**

STEEL SPECIFICATIONS: DESIGN, FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AISC MANUAL, AISC 360 AND IBC SECTION 2205.

STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

TYPE OF MEMBER	ASTM SPECIFICATION	Fy
OTHER SHAPES, PLATES, AND RODS	A36	36 KSI
PIPE COLUMNS	A53 (E OR S, GR.B)	35 KSI
CONNECTION BOLTS	A307	

ALL WELDING SHALL BE IN CONFORMANCE WITH A.I.S.C. AND A.W.S. STANDARDS AND SHALL BE PERFORMED BY W.A.B.O. CERTIFIED WELDERS USING E70 XX ELECTRODES. ONLY PREQUALIFIED WELDS (AS DEFINED BY A.W.S.) SHALL BE USED. ALL COMPLETE JOINT PENETRATION GROOVE WELDS SHALL BE MADE WITH A FILLER MATERIAL THAT HAS A MINIMUM CVN TOUGHNESS OF 20 FT-LBS AT 20 DEGREES F AND 40 FT-LBS AT 70 DEGREES F, AS DETERMINED BY AWS CLASSIFICATION OR MANUFACTURER CERTIFICATION.

10. **HELICAL ANCHORS:**

HELICAL ANCHORS MAY BE PROVIDED BY EARTH CONTACT PRODUCTS, MACLEAN DIXIE, GRIP-TITE, OR EQUAL. HELICAL ANCHORS SHALL BE DESIGNED TO MEET THE LOADING REQUIREMENTS SHOWN ON THE DRAWINGS AND SHALL INCLUDE A MINIMUM SAFETY FACTOR OF 2. INSTALLATION SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS OF THE ANCHOR MANUFACTURER AND INSTRUCTIONS OF THE GEOTECHNICAL ENGINEER BASED ON THE EMPIRICAL RELATIONSHIP THAT THE 200 PERCENT LOAD MEASURED IN POUNDS IS APPROXIMATELY EQUAL TO 10 TIMES THE INSTALLATION TORQUE AS MEASURED IN FOOT POUNDS. THE CAPACITY OF THE INSTALLED ANCHORS SHALL BE VERIFIED BY FIELD TESTING ANCHORS TO THE SPECIFIED ANCHOR CAPACITY MULTIPLIED BY THE SAFETY FACTOR USED FOR DESIGN.

THE CENTRAL STEEL SHAFT, CONSISTING OF LEAD SECTIONS, HELICAL EXTENSIONS, AND PLAIN EXTENSIONS, SHALL BE SOLID SQUARE SHAFT.

SOLID SQUARE SHAFT MATERIAL (1.5"x1.5") SHALL BE HOT ROLLED ROUND-CORNERED-SQUARE(RCS) SOLID STEEL BARS MEETING DIMENSIONAL AND WORKMANSHIP REQUIREMENTS OF ASTM A29. THE BAR SHALL BE MODIFIED MEDIUM CARBON STEEL GRADE WITH IMPROVED STRENGTH DUE TO FINE GRAIN SIZE AS FOLLOWS:

RCS 1.5"x1.5"
MINIMUM TORSIONAL STRENGTH RATING = 5,500 FT-LB
MINIMUM YIELD STRENGTH = 70 KSI
MINIMUM ULTIMATE CAPACITY = 55 KIPS

SEE PLANS FOR ACTUAL DESIGN LOAD REQUIREMENTS.

HELIX PLATE MATERIAL SHALL BE HOT ROLLED CARBON STEEL SHEET, STRIP, OR PLATE FORMED ON MATCHING METAL DIES TO TRUE HELICAL SHAPE AND UNIFORM PITCH. BEARING PLATE MATERIAL SHALL CONFORM TO ASTM A572 WITH MINIMUM YIELD STRENGTH OF 50 KSI.

THE SIZE AND TYPE OF BOLTS USED TO CONNECT THE CENTRAL STEEL SHAFT SECTIONS TOGETHER SHALL CONFORM TO 3/4" MINIMUM DIAMETER BOLTS PER ASTM A325 AND AS REQUIRED TO MEET THE DESIGN LOAD REQUIREMENTS.

COUPLINGS SHALL BE CAPABLE OF TRANSMITTING BOTH THE MAXIMUM INSTALLATION TORQUE FROM THE TOOL STRING TO THE HELIX PLATES, AND THE MAXIMUM AXIAL LOAD FROM THE END OF THE ANCHOR TO THE HELICAL BEARING PLATES.

HELICAL TIEBACK ANCHOR THREAD BAR SHALL BE EITHER A THREADED STUD ADAPTER, OR A COMBINATION OF PRESTRESSING STEEL THREAD BAR AND ADAPTER, BOTH OF WHICH ARE ATTACHED TO THE PREVIOUSLY INSTALLED CENTRAL STEEL SHAFT VIA A COUPLING AS DESCRIBED ABOVE.

STRESSING ANCHORAGES SHALL BE A STEEL BEARING PLATE WITH A THREADED ANCHOR NUT. ANCHORAGE DEVICES SHALL BE CAPABLE OF DEVELOPING 95 PERCENT OF THE GUARANTEED ULTIMATE TENSILE STRENGTH OF THE THREAD BAR.

ANCHOR NUTS AND OTHER THREADABLE HARDWARE SHALL BE DESIGNED TO COMPLY WITH THE LOAD CARRYING REQUIREMENTS OF THE ANCHORAGE.

THE BEARING PLATE SHALL BE FABRICATED FROM STEEL CONFORMING TO ASTM A36, A588, A709 OR A572 SPECIFICATIONS OR SUITABLE EQUIVALENT.

ALL HELICAL ANCHORS AND RELATED HELICAL HARDWARE SHALL BE HOT DIP GALVANIZED.

11. **HELICAL ANCHOR PERFORMANCE VERIFICATION TESTS (200% TESTS):**

TENSION VERIFICATION TESTING SHALL BE PERFORMED ON AT LEAST ONE PERFORMANCE ANCHOR SELECTED BY THE GEOTECHNICAL ENGINEER. ALL REQUIRED TEST DATA SHALL BE RECORDED BY THE GEOTECHNICAL SPECIAL INSPECTOR.

A. VERIFICATION TESTS SHALL BE PERFORMED TO 200% OF THE ALLOWABLE DESIGN LOAD.
B. THE ANCHOR SHALL BE SEATED BY APPLYING AN ALIGNMENT LOAD. THE ALIGNMENT LOAD SHALL BE BETWEEN 2% AND 15% OF THE DESIGN LOAD. THE LOAD SHALL THEN BE HELD AND ZERO DEFLECTION READING TAKEN.
C. VERIFICATION TESTS SHALL BE PERFORMED BY INCREMENTALLY LOADING THE ANCHOR IN ACCORDANCE THE SCHEDULE BELOW. THE ANCHOR MOVEMENT SHALL BE MEASURED, RECORDED TO THE NEAREST .001 INCH WITH RESPECT TO AN INDEPENDENT FIXED REFERENCE POINT AT THE ALIGNMENT LOAD AND AT EACH INCREMENT OF LOAD. THE SCHEDULE OF HOLD TIMES SHALL BE AS FOLLOWS:

AL	2 MINUTES*
.25 DL	2 MINUTES*
.50 DL	2 MINUTES*
.75 DL	2 MINUTES*
1.0 DL	2 MINUTES*
1.25 DL	2 MINUTES*
1.50 DL	2 MINUTES*
1.75 DL	2 MINUTES*
2.00 DL	10 MINUTES*

AL = ALIGNMENT LOAD
DL = DESIGN LOAD
*AND STABLE

THE LOAD-HOLD PERIOD SHALL START AS SOON AS THE LOAD IS APPLIED AND THE ANCHOR MOVEMENT SHALL BE MEASURED AND RECORDED AT EACH LOAD INCREMENT.

AFTER ACCEPTANCE BY THE GEOTECHNICAL ENGINEER, THE ANCHOR MAY THEN BE UNLOADED AND ATTACHED TO THE FINAL CONDITION BY THE SNUG TIGHT METHOD, HOWEVER, THE LOCK-OFF LOAD NEED NOT EXCEED 50 PERCENT OF THE TIEBACK ANCHOR DESIGN LOAD TO MINIMIZE WALL DEFLECTIONS.

D. AN ANCHOR SHOULD BE DEEMED ACCEPTABLE IF IT MEETS THE FOLLOWING CRITERIA:

THE TOTAL ELASTIC MOVEMENT OBTAINED FROM THE VERIFICATION AND PROOF TESTS EXCEEDS 80 PERCENT OF THE THEORETICAL ELASTIC ELONGATION OF THE LENGTH.

TOTAL ANCHOR MOVEMENT BETWEEN THE 2 AND THE 10 MINUTE INTERVALS SHOULD NOT EXCEED 0.05 INCHES MORE THAN THE THEORETICAL ELASTIC MOVEMENT, REGARDLESS OF THE LENGTH OR LOAD.

ANCHOR MOVEMENT AT THE VERIFICATION LOAD SHALL NOT EXCEED .08 TIMES THE LARGEST HELIX DIAMETER.

THE LIFT-OFF MEASUREMENT INDICATES AN ANCHOR LOAD WITHIN 5 PERCENT OF THE DESIGN LOCK-OFF LOAD.

12. **PROOF TESTS:**

ALL ANCHORS NOT PERFORMANCE TESTED SHALL BE INSTALLED TO 200 PERCENT OF THE DESIGN LOAD AS PERFORMED BY THE TORQUE METHOD WHEN APPROVED BY THE STRUCTURAL AND GEOTECHNICAL ENGINEERS.

13. **TORQUE METHOD INSTALLATION:**

ANCHORS INSTALLED BY THE TORQUE METHOD MUST FIRST MEET THE EMBEDMENT REQUIREMENTS NOTED ON THE STRUCTURAL DRAWINGS OR APPROVED BY BOTH THE STRUCTURAL AND GEOTECHNICAL ENGINEER IN WRITING. ONCE THE REQUIRED MINIMUM EMBEDMENT HAS BEEN MET, THE CONTRACTOR SHALL PROVIDE GAUGES OR SHEAR BOLTS TO DETERMINE THAT THE ANCHOR HAS BEEN TORQUED TO A MINIMUM OF 200 PERCENT OF THE DESIGN LOAD BASED ON THE EMPIRICAL RELATIONSHIP THAT THE 200 PERCENT LOAD MEASURED IN POUNDS IS APPROXIMATELY EQUAL TO 10 TIMES THE INSTALLATION TORQUE AS MEASURED IN FOOT POUNDS. THE CONTRACTOR SHALL BE PREPARED TO PROVIDE EXTENSIONS TO ADVANCE HELICALS DEEPER INTO THE SOILS UNTIL THE REQUIRED INSTALLATION TORQUE HAS BEEN MET. INSTALLATION SHALL BE CONDUCTED UNDER THE OBSERVATION OF THE GEOTECHNICAL SPECIAL INSPECTOR.

14. **PIN PILES:**

PIN PILES SHOWN ON THE PLAN SHALL BE 2" DIAMETER SCHEDULE 80. 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 LB JACK HAMMER UNDER THE FULL WEIGHT AND EFFORT OF THE OPERATOR OR THE CONVENTIONAL DRIVING OF A RHINO PD-140. PILES 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 IS REQUIRED.

15. **ANCHORAGE**

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. 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.

REVISIONS	DATE	BY
PERMIT PLAN	10/17/2019	KJ

SCJ STUDIO
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P: 206-708-1862
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SHEET TITLE: Structural Notes

PROJECT NAME: Maple Grove Residence
4909 E. Mercer Way
Mercer Island, WA 98040

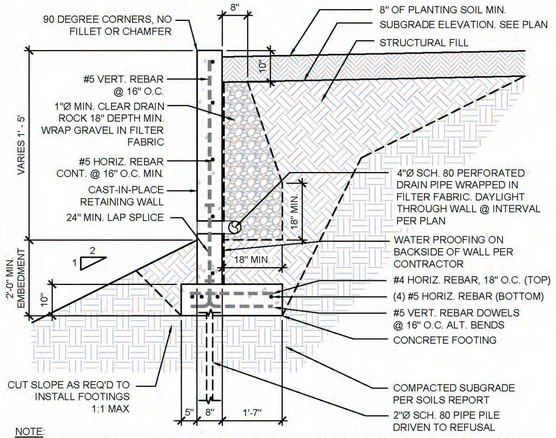
SEAL:

KATE BRESKO — 31726 — REGISTERED PROFESSIONAL ENGINEER — STRUCTURAL ENGINEER

10-17-19

DESIGNER:	KJ
DRAWN BY:	JL
APPROVED BY:	MG
DATE:	OCTOBER 2019
JOB No:	2551
DRAWING FILE No:	
DRAWING No:	LA3.1
SHEET No:	4 OF 6

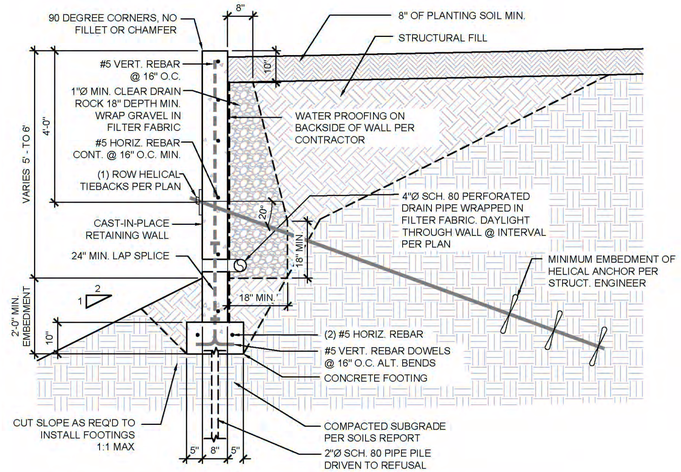
Oct 17, 2019 3:57:22pm – User: keith.jankovsky
N:\PROJECTS\2551 SARAH & AMIR BASTAMROUS\2551.01 THE MAPLE GROVE RESIDENCE\PHASE 03 – PERMIT ASSISTANCE\CAD\2551-LA3.1 DETAILS MAPLE PERMIT.DWG



NOTE:
- CONTRACTOR TO CALL LANDSCAPE ARCHITECT TO INSPECT FORMS TWO WORKING DAYS PRIOR TO POURING CONCRETE AT 206.708.1862

1 CAST-IN-PLACE RETAINING WALL - SECTION-1

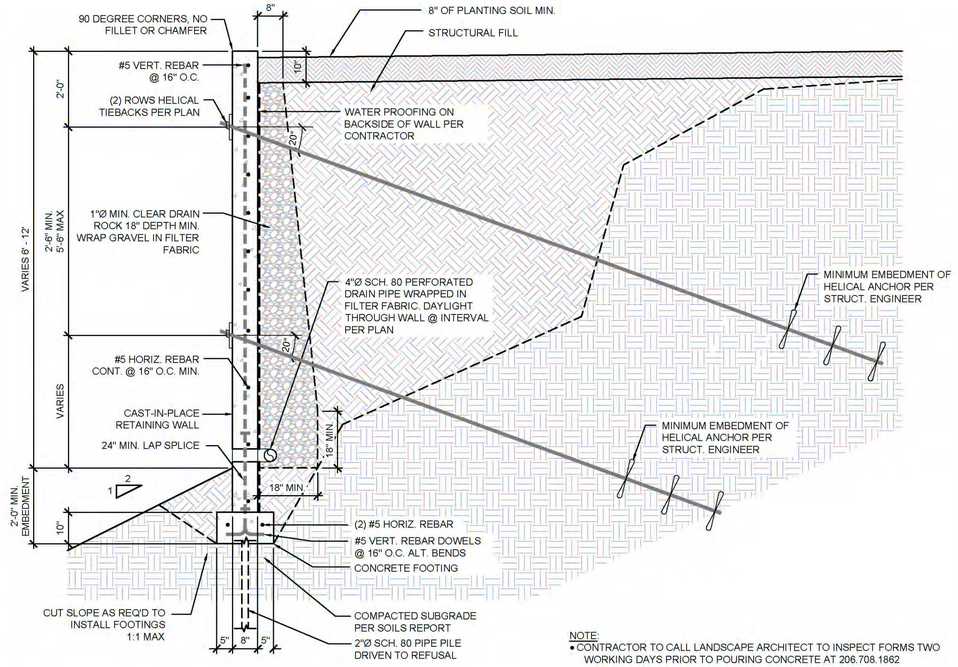
1/2" = 1'-0" P-RE-MAP1-01



NOTE:
- CONTRACTOR TO CALL LANDSCAPE ARCHITECT TO INSPECT FORMS TWO WORKING DAYS PRIOR TO POURING CONCRETE AT 206.708.1862

3 CAST-IN-PLACE RETAINING WALL - SECTION-3

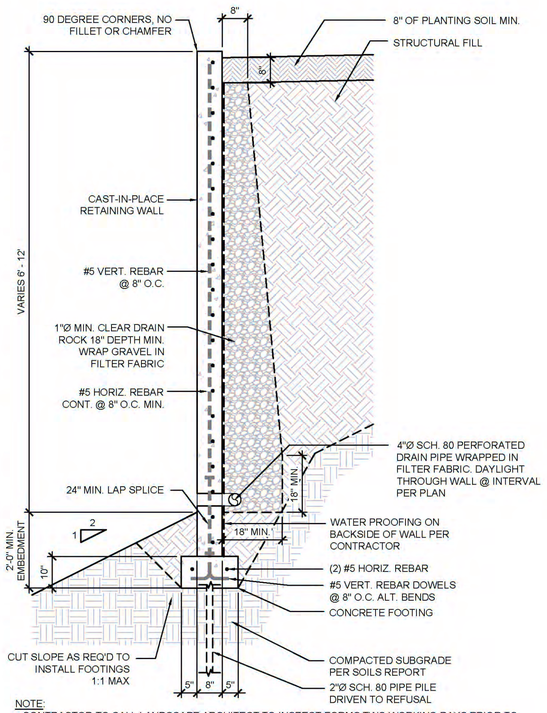
1/2" = 1'-0" P-RE-MAP1-03



NOTE:
- CONTRACTOR TO CALL LANDSCAPE ARCHITECT TO INSPECT FORMS TWO WORKING DAYS PRIOR TO POURING CONCRETE AT 206.708.1862

4 CAST-IN-PLACE RETAINING WALL - SECTION-4

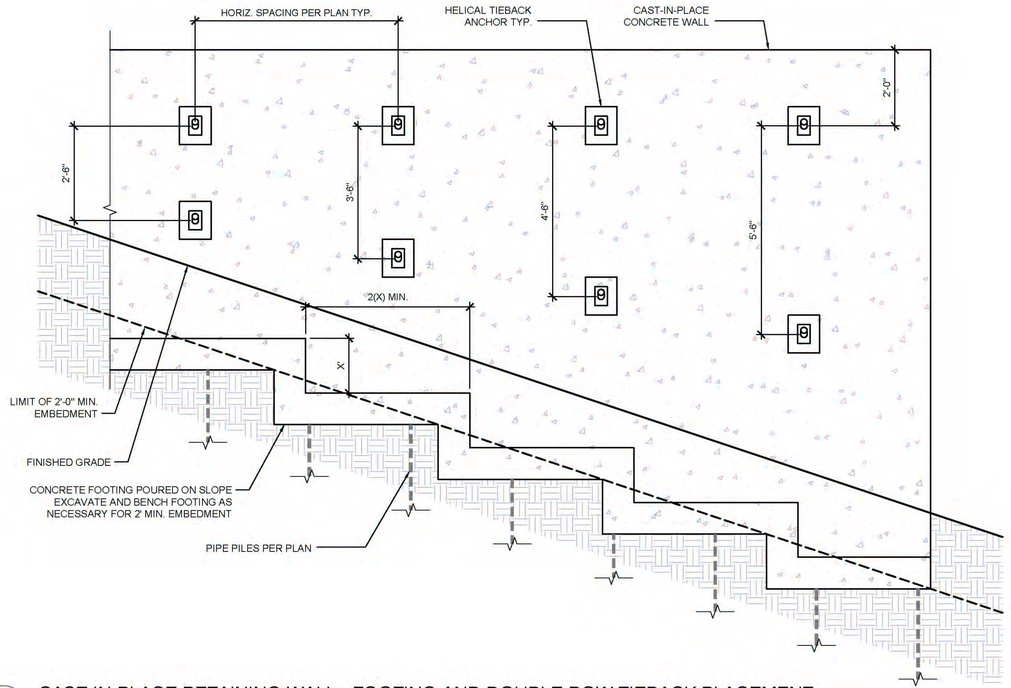
1/2" = 1'-0" P-RE-MAP1-04



NOTE:
- CONTRACTOR TO CALL LANDSCAPE ARCHITECT TO INSPECT FORMS TWO WORKING DAYS PRIOR TO POURING CONCRETE AT 206.708.1862

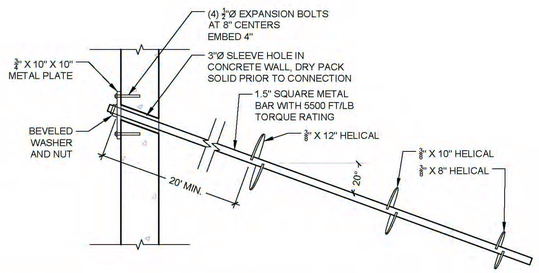
2 CAST-IN-PLACE RETAINING WALL - SECTION-2

1/2" = 1'-0" P-RE-MAP1-02



5 CAST-IN-PLACE RETAINING WALL - FOOTING AND DOUBLE-ROW TIEBACK PLACEMENT

1/2" = 1'-0" P-RE-MAP1-05



HELICAL ANCHOR NOTES:
- TRANSITION KIT TO BE RATED FOR 25K ULTIMATE CAPACITY.
- ONE ANCHOR SHALL BE TESTED TO 200% OF DESIGN LOAD.
- HELICAL DESIGN LOAD (DL) EQUALS 10k
- ALL STEEL TO BE HOT-DIP GALVANIZED (HDG).

6 HELICAL ANCHOR

3/4" = 1'-0" P-RE-MAP1-15

REVISIONS	DATE	BY
PERMIT PLAN	10/17/2019	KJ

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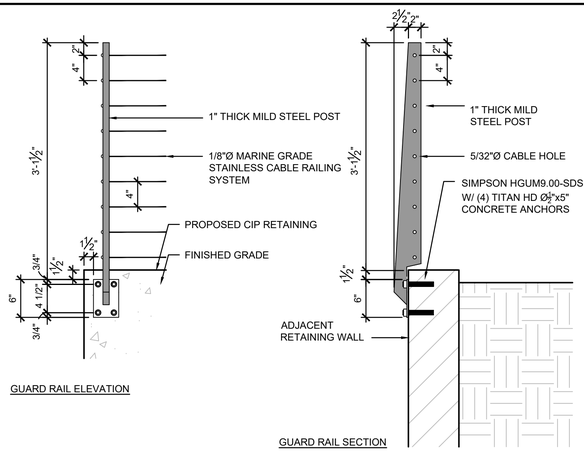
SHEET TITLE: Structural Details

PROJECT NAME: Maple Grove Residence
4909 E. Mercer Way
Mercer Island, WA 98040

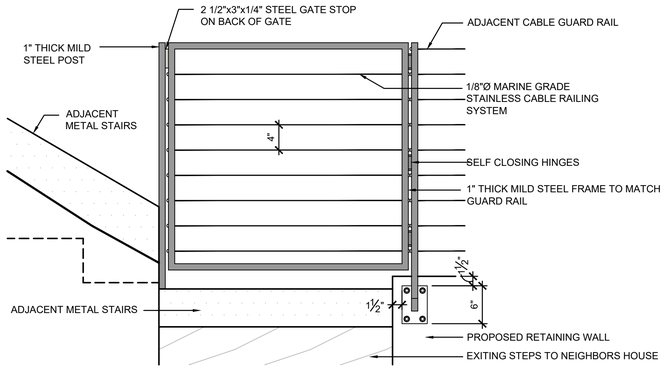
SEAL:

DESIGNER:	KJ
DRAWN BY:	JL
APPROVED BY:	MG
DATE:	OCTOBER 2019
JOB No:	2551
DRAWING FILE No:	
DRAWING No:	LA3.2
SHEET No:	5 OF 6

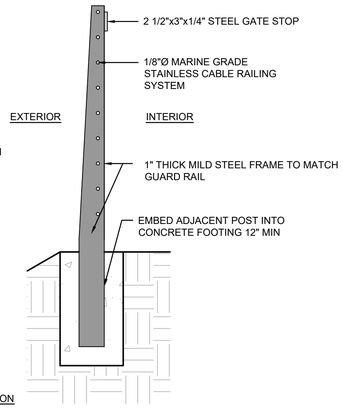


GUARD RAIL ELEVATION

GUARD RAIL SECTION



GATE ELEVATION

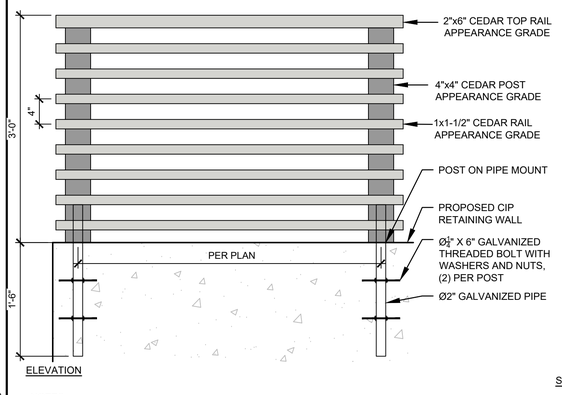


GATE POST SECTION

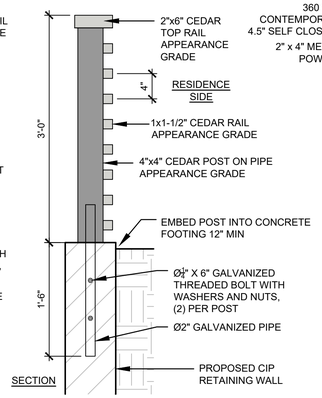
1 CABLE GUARD RAIL AND GATE

1" = 1'-0"

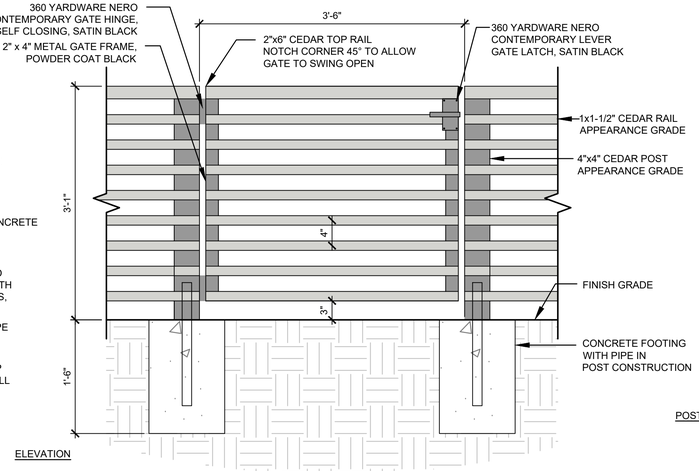
P-RE-MAP1-12



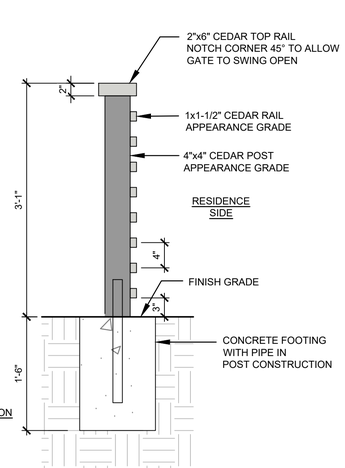
ELEVATION



SECTION



ELEVATION



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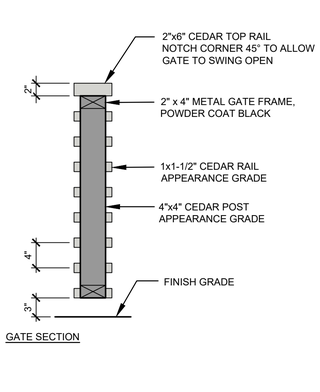


GATE SECTION

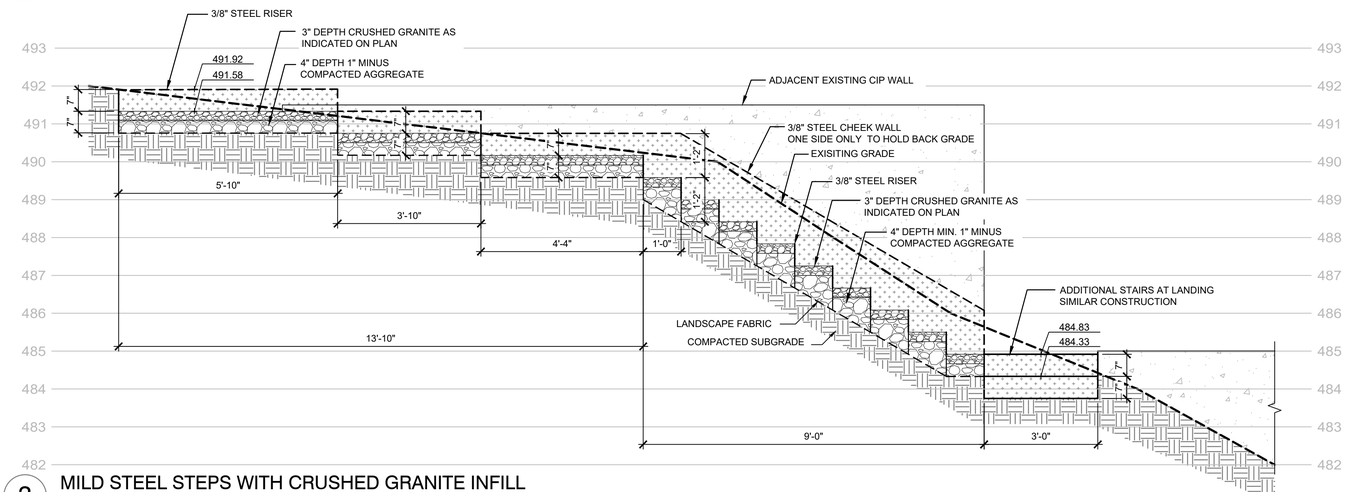
NOTES:

- POSTS ARE TO BE 4" SQ. APPEARANCE GRADE TREATED LUMBER.
- METAL GATE FRAME TO BE HIDDEN, POWDER COATED BLACK.
- ALL FENCE AND GATE HARDWARE TO BE HIDDEN WHERE PRACTICAL.
- DO NOT DIRECT BURY POSTS IN CONCRETE. USE POST-ON-PIPE OR POST-ON-BRACKET CONSTRUCTION.
- ALL FENCE AND GATE BOARDS TO BE APPEARANCE GRADE CEDAR, STAINED AND SEALED. COLOR: NATURAL OR APPROVED EQUAL.

2 CEDAR GUARD RAIL AND GATE

1" = 1'-0"

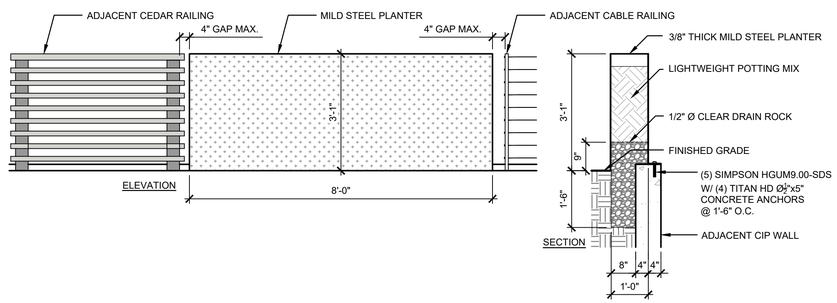
P-RE-MAP1-13



3 MILD STEEL STEPS WITH CRUSHED GRANITE INFILL

1/2" = 1'-0"

P-RE-MAP1-11



ELEVATION

SECTION

4 MILD STEEL PLANTER

1/2" = 1'-0"

P-RE-MAP1-14

REVISIONS	DATE	BY
PERMIT PLAN	10/17/2019	KJ

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SHEET TITLE: Permit Details

PROJECT NAME: Maple Grove Residence
4909 E. Mercer Way
Mercer Island, WA 98040

SEAL:

STATE OF WASHINGTON
MARK S. GARFF
LICENSED LANDSCAPE ARCHITECT
NO. 888 EXP. 01/09/21

DESIGNER:	KJ
DRAWN BY:	JL
APPROVED BY:	MG
DATE:	OCTOBER 2019
JOB No:	2551
DRAWING FILE No:	
DRAWING No:	LA3.3
SHEET No:	6 OF 6

Nov 14, 2019 9:42:19pm – User: keith.jankovsky
N:\PROJECTS\2551 SARAH & AMIR BASTAMROUS\2551.01 THE MAPLE GROVE RESIDENCE\PHASE 03 – PERMIT ASSISTANCE\CAD\2551-LA3.1 DETAILS–MAPLE PERMIT.DWG