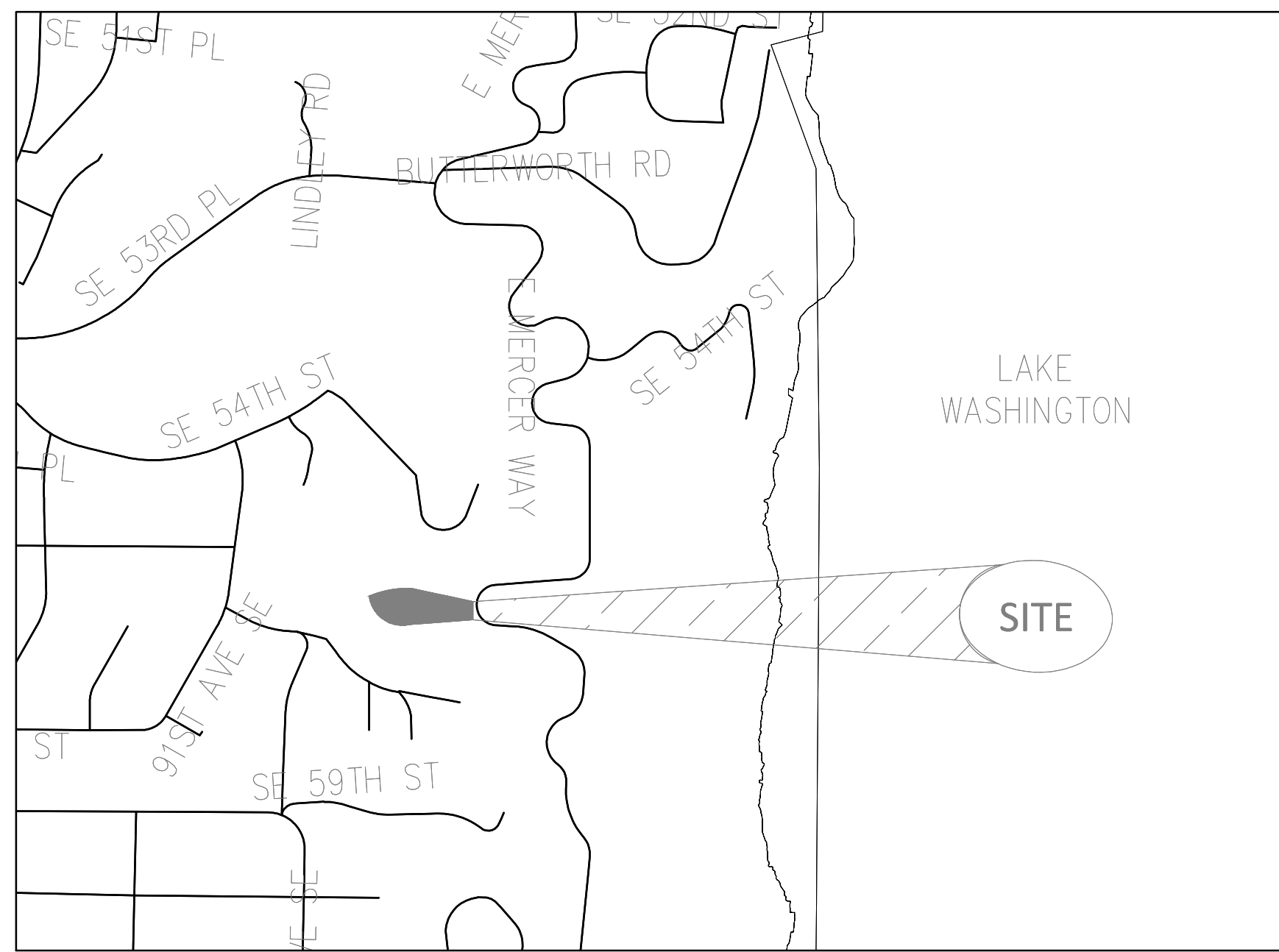


5637 MERCER WAY

5637 E MERCER WAY
MERCER ISLAND, WASHINGTON



VICINITY MAP

1" = 500'

BASIS OF BEARINGS

N00°01'20"W BETWEEN THE FOUND MONUMENTS ALONG THE CENTERLINE OF EAST MERCER WAY

REFERENCES

STATUTORY WARRANTY DEED RECORDED UNDER RECORDING NUMBER 20140929000870

LEGAL DESCRIPTION

LOT A OF CITY OF MERCER ISLAND SHORT PLAT NO. MI-77-1-010, AS RECORDED MARCH 31, 1977 UNDER RECORDING NO. 7703310851, RECORDS OF KING COUNTY AUDITOR;

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

RESTRICTIONS

1. THIS SITE IS SUBJECT TO THE TERMS AND CONDITIONS CONTAINED IN DEED RECORDED UNDER RECORDING NUMBER 1579699.
2. THIS SITE IS SUBJECT TO THE CONDITIONS, COVENANTS, RESTRICTIONS, EASEMENTS, NOTES, AND SETBACKS, IF ANY, AS SHOWN ON THE FACE OF CITY OF MERCER ISLAND SHORT PLAT NO. MI-77-1-010 AS RECORDED UNDER RECORDING NUMBER 7703310851
3. THIS SITE IS SUBJECT TO AN EASEMENT FOR SIDE SEWER SERVICE AND THE TERMS AND CONDITIONS THEREOF AS RECORDED UNDER RECORDING NUMBER 7804100820.
4. THIS SITE IS SUBJECT TO AN EASEMENT FOR STORMWATER/UTILITY FACILITIES & PEDESTRIAN TRAIL AND THE TERMS AND CONDITIONS THEREOF AS RECORDED UNDER RECORDING NUMBER 20070425001878.

BASIS OF BEARINGS

1. THIS SURVEY HAS BEEN PERFORMED WITHOUT THE BENEFIT OF A CURRENT TITLE REPORT. IN PREPARING THIS MAP, CORE DESIGN, INC. HAS CONDUCTED NO INDEPENDENT TITLE SEARCH NOR IS CORE DESIGN, INC. AWARE OF ANY TITLE ISSUES AFFECTING THE SURVEYED PROPERTY OTHER THAN THOSE SHOWN ON THE MAP AND DISCLOSED BY STATUTORY WARRANTY DEED RECORDED UNDER RECORDING NUMBER 20140929000870 AND THEREFORE CORE DESIGN, INC. QUALIFIES THE MAP'S ACCURACY AND COMPLETENESS TO THAT EXTENT.
2. THIS SURVEY REPRESENTS VISIBLE PHYSICAL IMPROVEMENT CONDITIONS EXISTING ON JUNE 8, 2018. ALL SURVEY CONTROL INDICATED AS "FOUND" WAS RECOVERED FOR THIS PROJECT IN JUNE, 2018.
3. PROPERTY AREA = 37,528± SQUARE FEET (0.8615± ACRES).
4. ALL DISTANCES ARE IN FEET.
5. THIS IS A FIELD TRAVERSE SURVEY. A LEICA ROBOTIC TOTAL STATION WAS USED TO MEASURE THE ANGULAR AND DISTANCE RELATIONSHIPS BETWEEN THE CONTROLLING MONUMENTATION AS SHOWN. CLOSURE RATIOS OF THE TRAVERSE MET OR EXCEEDED THOSE SPECIFIED IN WAC 332-130-090. ALL MEASURING INSTRUMENTS AND EQUIPMENT ARE MAINTAINED IN ADJUSTMENT ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
6. UTILITIES OTHER THAN THOSE SHOWN MAY EXIST ON THIS SITE. ONLY THOSE UTILITIES WITH EVIDENCE OF THEIR INSTALLATION VISIBLE AT GROUND SURFACE ARE SHOWN HEREON. UNDERGROUND UTILITY LOCATIONS SHOWN ARE APPROXIMATE ONLY. UNDERGROUND CONNECTIONS ARE SHOWN AS STRAIGHT LINES BETWEEN SURFACE UTILITY LOCATIONS BUT MAY CONTAIN BENDS OR CURVES NOT SHOWN. SOME UNDERGROUND LOCATIONS SHOWN HEREON MAY HAVE BEEN TAKEN FROM PUBLIC RECORDS. CORE DESIGN ASSUMES NO LIABILITY FOR THE ACCURACY OF PUBLIC RECORDS.

OWNER:

MI TREEHOUSE, LLC
11030 SE 30TH ST
BELLEVUE, WA 98004

ENGINEER/SURVEY:

CORE DESIGN INC.
14711 NE 29TH PL, SUITE 101
BELLEVUE, WASHINGTON 98007
(425) 885-7877
CONTACT: MICHAEL A. MOODY, P.E.
GLENN R. SPRAGUE, P.L.S.

VERTICAL DATUM

NAVD 88

BENCHMARKS

CITY OF MERCER ISLAND POINT "CASC 38"
ELEVATION=163.23

SHEET INDEX

C1.01	COVER SHEET
C1.02	TOPOGRAPHIC PLAN
C1.03	BMP NOTES
C2.01	EROSION CONTROL PLAN
C3.01	GRADING PLAN
C4.01	SITE & UTILITY PLAN
C4.31	STORM DRAINAGE DETAILS
C4.32	WATER AND SEWER DETAILS

SITE STATISTICS

ZONING:	R-15 (RESIDENTIAL-SINGLE FAMILY)
SITE AREA:	±37,554 SF (±0.862 ACRES)
NET LOT AREA:	35,823 SF (0.822 ACRES)
LOTS PROPOSED:	1
TAX PARCEL:	192405-9312
DWELLING UNITS:	1
LOT WIDTH:	153'
SIDE SETBACK:	26.01' COMBINED (17% OF TOTAL LOT WIDTH)
SIDE SETBACKS PROPOSED:	13.005' (NORTHERN SETBACK) 13.005' (SOUTHERN SETBACK)
IMPERVIOUS AREA:	3,739 SF (9.9%)
LOT SLOPE STATISTICS	
LOT 1:	24.5%

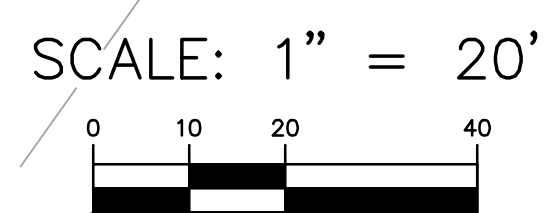
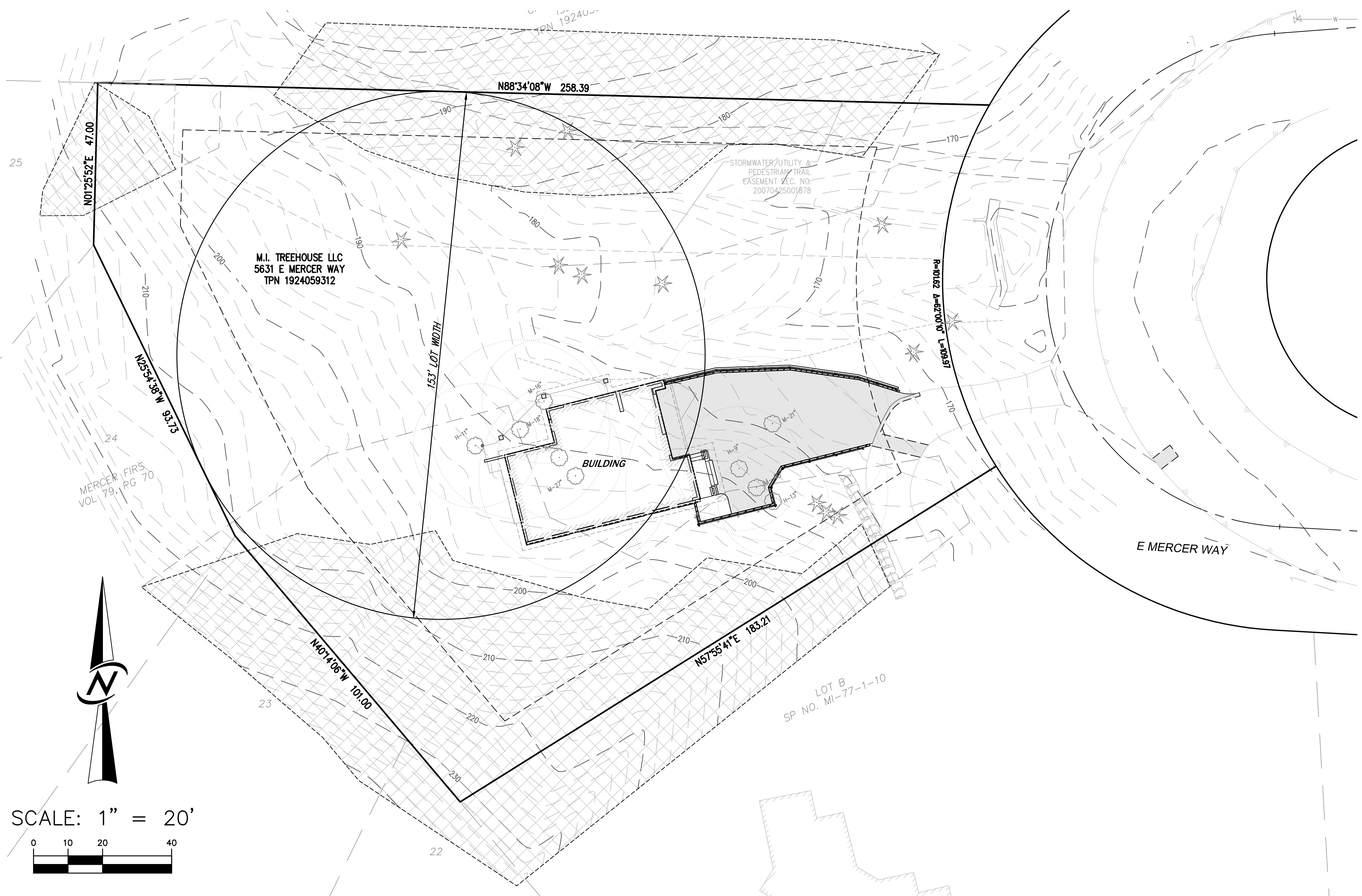
NOTE

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

UNDERGROUND LOCATOR SERVICE
CALL BEFORE YOU DIG!
811

UTILITY CONFLICT NOTE:

CAUTION:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT, CONTACTING ALL UTILITY COMPANIES, POTHOLES THE UTILITIES, AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE # 1-800-424-555 AND THEN POTHOLES ALL OF THE EXISTING UTILITIES AT LOCATIONS OF NEW UTILITY CROSSINGS TO PHYSICALLY VERIFY WHETHER OR NOT CONFLICTS EXIST. LOCATIONS OF SAID UTILITIES AS SHOWN ON THESE PLANS ARE BASED UPON THE UNVERIFIED PUBLIC INFORMATION AND ARE SUBJECT TO VARIATION. IF CONFLICTS SHOULD OCCUR, THE CONTRACTOR SHALL CONSULT CORE DESIGN, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.



DATE	OCTOBER 2020	DESIGNED	FLAVIO BANOTTI	SHEET	OF
		DRAWN	CHUCK FEMLING	C1.01	8
		APPROVED	MICHAEL MOODY, PE	PROJECT NUMBER	
			MICHAEL MOODY, PE	18039	
			PROJECT MANAGER		

COVER SHEET
MERCER ISLAND TREEHOUSE
MI TREEHOUSE LLC
PO BOX 261
MEDINA, WA 98040

CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE
PLANNING
SURVEYING

12100 NE 195th St, Suite 300 Bothell, Washington 98011 425.885.7877

6/1/2025 4:59 PM A:\2018\18039\ENGINEERING\FINAL\SHEETS\18039_C1.01.DWG

BMP T5.13: Post-Construction Soil Quality and Depth

Purpose and Definition

Naturally occurring (undisturbed) soil and vegetation provide important stormwater functions including: water infiltration; nutrient, sediment, and pollutant adsorption; sediment and pollutant biofiltration; water interflow storage and transmission; and pollutant decomposition. These functions are largely lost when development strips away native soil and vegetation and replaces it with minimal topsoil and sod. Not only are these important stormwater functions lost, but such landscapes themselves become pollution generating pervious surfaces due to increased use of pesticides, fertilizers and other landscaping and household/industrial chemicals, the concentration of pet wastes, and pollutants that accompany roadside litter.

Establishing soil quality and depth regains greater stormwater functions in the post development landscape, provides increased treatment of pollutants and sediments that result from development and habitation, and minimizes the need for some landscaping chemicals, thus reducing pollution through prevention.

Applications and Limitations

Establishing a minimum soil quality and depth is not the same as preservation of naturally occurring soil and vegetation. However, establishing a minimum soil quality and depth will provide improved on-site management of stormwater flow and water quality.

Soil organic matter can be attained through numerous materials such as compost, composted woody material, biosolids, and forest product residuals. It is important that the materials used to meet the soil quality and depth BMP be appropriate and beneficial to the plant cover to be established. Likewise, it is important that imported topsoils improve soil conditions and do not have an excessive percent of clay fines.

This BMP can be considered infeasible on till soil slopes greater than 33 percent.

Design Guidelines

- Soil retention. Retain, in an undisturbed state, the duff layer and native topsoil to the maximum extent practicable. In any areas requiring grading remove and stockpile the duff layer and topsoil on site in a designated, controlled area, not adjacent to public resources and critical areas, to be reapplied to other portions of the site where feasible.
- Soil quality. All areas subject to clearing and grading that have not been covered by impervious surface, incorporated into a drainage facility or engineered as structural fill or slope shall, at project completion, demonstrate the following:
 - A topsoil layer with a minimum organic matter content of 10% dry weight in planting beds, and 5% organic matter content in turf areas, and a pH from 6.0

*2014 Stormwater Management Manual for Western Washington
Volume V - Chapter 5 - Page 911*

to 8.0 or matching the pH of the undisturbed soil. The topsoil layer shall have a minimum depth of eight inches except where tree roots limit the depth of incorporation of amendments needed to meet the criteria. Subsoils below the topsoil layer should be scarified at least 4 inches with some incorporation of the upper material to avoid stratified layers, where feasible.

- Mulch planting beds with 2 inches of organic material
- Use compost and other materials that meet these organic content requirements:
 - The organic content for "pre-approved" amendment rates can be met only using compost meeting the compost specification for [BMP T7.30: Bioretention Cells, Swales, and Planter Boxes \(p.959\)](#), with the exception that the compost may have up to 35% biosolids or manure.

The compost must also have an organic matter content of 40% to 65%, and a carbon to nitrogen ratio below 25:1.

The carbon to nitrogen ratio may be as high as 35:1 for plantings composed entirely of plants native to the Puget Sound Lowlands region.
- Calculated amendment rates may be met through use of composted material meeting (a.) above; or other organic materials amended to meet the carbon to nitrogen ratio requirements, and not exceeding the contaminant limits identified in Table 220-B, Testing Parameters, in [WAC 173-350-220](#).

The resulting soil should be conducive to the type of vegetation to be established.

- Implementation Options: The soil quality design guidelines listed above can be met by using one of the methods listed below:
 - Leave undisturbed native vegetation and soil, and protect from compaction during construction.
 - 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.
 - Import topsoil mix of sufficient organic content and depth to meet the requirements.

*2014 Stormwater Management Manual for Western Washington
Volume V - Chapter 5 - Page 912*

More than one method may be used on different portions of the same site. Soil that already meets the depth and organic matter quality standards, and is not compacted, does not need to be amended.

Planning/Permitting/Inspection/Verification Guidelines & Procedures

Local governments are encouraged to adopt guidelines and procedures similar to those recommended in Guidelines and Resources For Implementing Soil Quality and Depth BMP T5.13 in WDOE Stormwater Management Manual for Western Washington. This document is available at: http://www.soilsforsalmon.org/pdf/Soil_BMP_Manual.pdf

Maintenance

- 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.
- Plant vegetation and mulch the amended soil area after installation.
- Leave plant debris or its equivalent on the soil surface to replenish organic matter.
- Reduce and adjust, where possible, the use of irrigation, fertilizers, herbicides and pesticides, rather than continuing to implement formerly established practices.

Runoff Model Representation

Areas meeting the design guidelines may be entered into approved runoff models as "Pasture" rather than "Lawn."

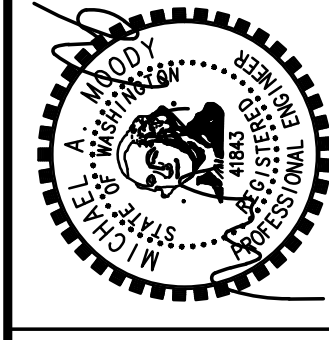

Flow reduction credits can be taken in runoff modeling when [BMP T5.13: Post-Construction Soil Quality and Depth](#) is used as part of a dispersion design under the conditions described in:

- [BMP T5.10B: Downspout Dispersion Systems \(p.905\)](#)
- [BMP T5.11: Concentrated Flow Dispersion \(p.905\)](#)
- [BMP T5.12: Sheet Flow Dispersion \(p.908\)](#)
- [BMP T5.18: Reverse Slope Sidewalks \(p.937\)](#)
- [BMP T5.30: Full Dispersion \(p.939\)](#) (for public road projects)

*2014 Stormwater Management Manual for Western Washington
Volume V - Chapter 5 - Page 913*

UNDERGROUND LOCATOR SERVICE
CALL BEFORE YOU DIG!
811

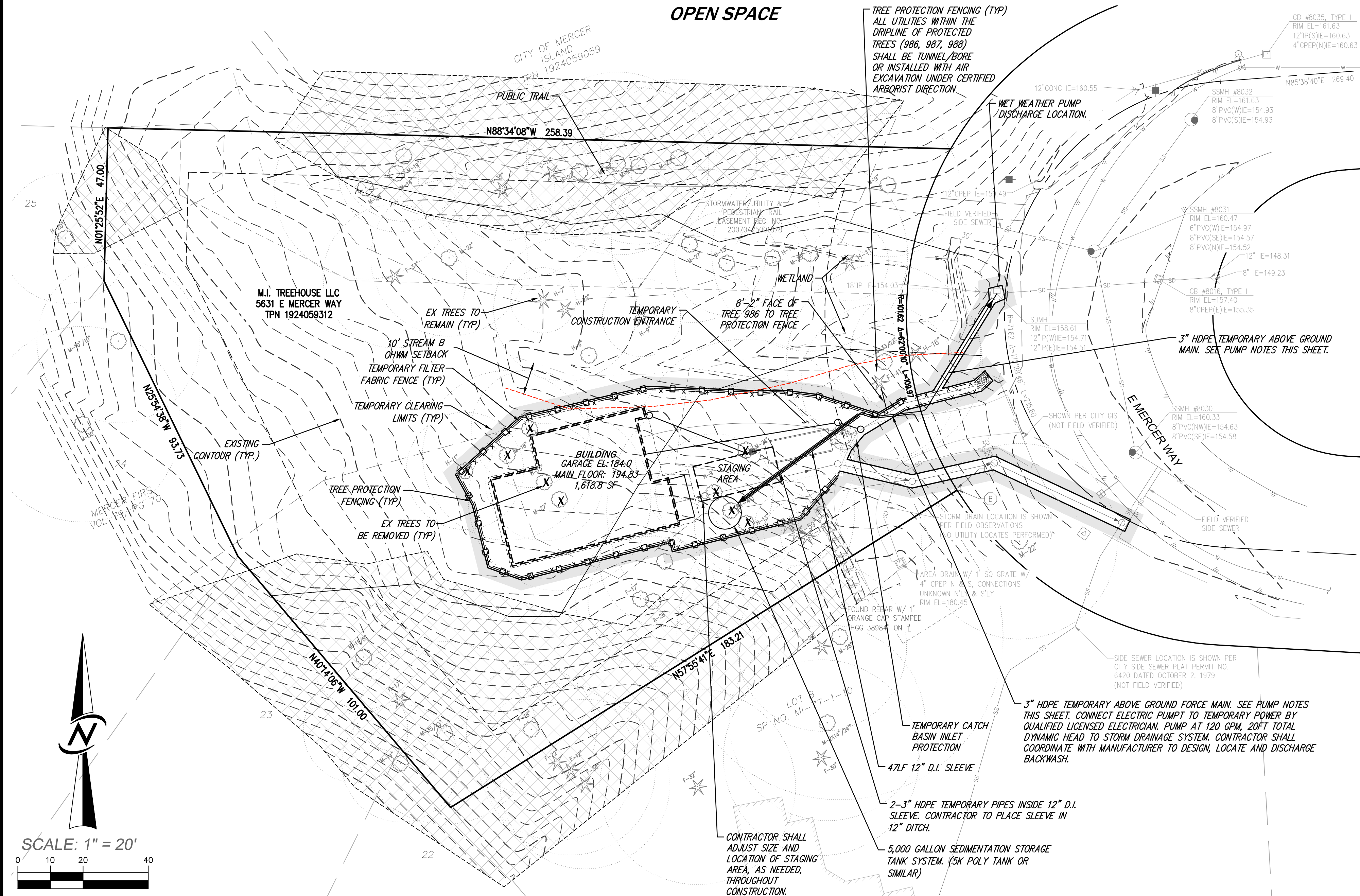
UTILITY CONFLICT NOTE:
CAUTION:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT, CONTACTING ALL UTILITY COMPANIES, POT-HOLING THE UTILITIES, AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE @ 1-800-424-555 AND THEN POT-HOLING ALL OF THE EXISTING UTILITIES AT LOCATIONS OF NEW UTILITY CROSSINGS TO PHYSICALLY VERIFY WHETHER OR NOT CONFLICTS EXIST. LOCATIONS OF SAID UTILITIES AS SHOWN ON THESE PLANS ARE BASED UPON THE UNVERIFIED PUBLIC INFORMATION AND ARE SUBJECT TO VARIATION. IF CONFLICTS SHOULD OCCUR, THE CONTRACTOR SHALL CONSULT CORE DESIGN, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.

DATE	OCTOBER 2020	DESIGNED	FLAVIO BANINDITI
DRAWN	CHUCK FEMLING	APPROVED	MICHAEL MOODY, PE
			MICHAEL MOODY, PE
			PROJECT MANAGER
DATE	10/01/20	NO.	1
REVISIONS	PER CITY COMMENTS	NO.	2
		NO.	3
		NO.	4
		NO.	5
		NO.	6
		NO.	7
			PER CONTRACTOR
			
			
CIVIL ENGINEERING LANDSCAPE ARCHITECTURE PLANNING SURVEYING			
12100 NE 195th St, Suite 300 Bothell, Washington 98011 425.885.7877			
BMP NOTES MERCER ISLAND TREEHOUSE MI TREEHOUSE LLC PO BOX 261 MEDINA, WA 98040			
SHEET	C1.03	OF	8
PROJECT NUMBER			
18039			

06-03-2025

OPEN SPACE

TREE PROTECTION FENCING (TYP)
ALL UTILITIES WITHIN THE
DRIFLINE OF PROTECTED
TREES (986, 987, 988)
SHALL BE TUNNEL/BORE
OR INSTALLED WITH AIR
EXCAVATION UNDER CERTIFIED
ARBORIST DIRECTION.



LEGEND

- BUILDING OVERHANG
- LOT LINES
- DRIVEWAY BOUNDARY
- PROPERTY BOUNDARY
- BUILDING EDGE
- SURVEY ALIGNMENT
- 41ST PAVEMENT EDGE
- ⊕ FOUND MONUMENT AS DESCRIBED
- FOUND PIPE/REBAR AS DESCRIBED
- M MADRONA O OAK
- FIG FIG
- D DOGWOOD
- CLF CHAIN LINK FENCE
- VBF VERTICAL BOARD FENCE
- RO ROCKERY
- ⊙ INLET FILTER (W.S.D.O.T. STD DTL. 1-40.20-00)
- SLT SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
DOE STD DTL. BMP 205
- CLEARING LIMITS
- ○ ○ ○ ○ TREE PROTECTION FENCE
- x x x x x FILTER FABRIC FENCE
- 110 --- EXISTING CONTOUR
- 110 --- PROPOSED CONTOUR
- ⊗ ONSITE TREE TO BE REMOVED

CONSTRUCTION SEQUENCE

- ① PRIOR TO ANY CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL SCHEDULE AND ATTEND A PRE-CONSTRUCTION CONFERENCE WITH THE CITY OF MERCER ISLAND BY PHONING (206)-275-7726.
- ② FLAG LIMITS OF CLEARING IN FIELD AS INDICATED ON SHEET C2.01.
- ③ CLEAR FOR AND CONSTRUCT THE ROCKED CONSTRUCTION ACCESS.
- ④ CONSTRUCT PERIMETER FILTER FABRIC FENCES.
- ⑤ CONSTRUCT DOWNSTREAM DISCHARGE SYSTEM, INTERCEPTOR SWALES, ROCK CHECK DAMS, STORM DRAINAGE PIPES, RIP RAP PADS.
- ⑥ CLEAR & GRADE SITE WHILE EXTENDING TEMPORARY INTERCEPTOR SWALE AS CONSTRUCTION PROCEEDS. ALL SILT-LADEN RUNOFF SHALL BE DIRECTED TO SEDIMENT RETENTION FACILITIES.
- ⑦ CLEAR FOR AND CONSTRUCT DETENTION TANK FOR USE FOR SEDIMENT RETENTION AND CONSTRUCT DISCHARGE SYSTEM.
- ⑧ CONSTRUCT SANITARY SEWER, WATER, & REMAINING STORM DRAINAGE FACILITIES PER THE APPROVED PLANS.
- ⑨ FINE GRADE AND PAVE THE DRIVEWAY.
- ⑩ UPON COMPLETION OF GRADING ACTIVITIES, STABILIZE ALL DISTURBED AREAS, REMOVE EXCESS SEDIMENT FROM THE TANK AND REMOVE ALL TEMPORARY EROSION/ SEDIMENTATION CONTROL FACILITIES.

TREE PROTECTION NOTES

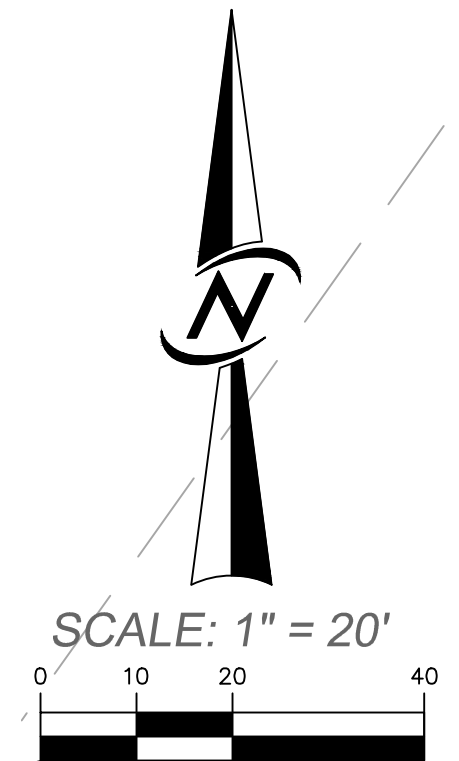
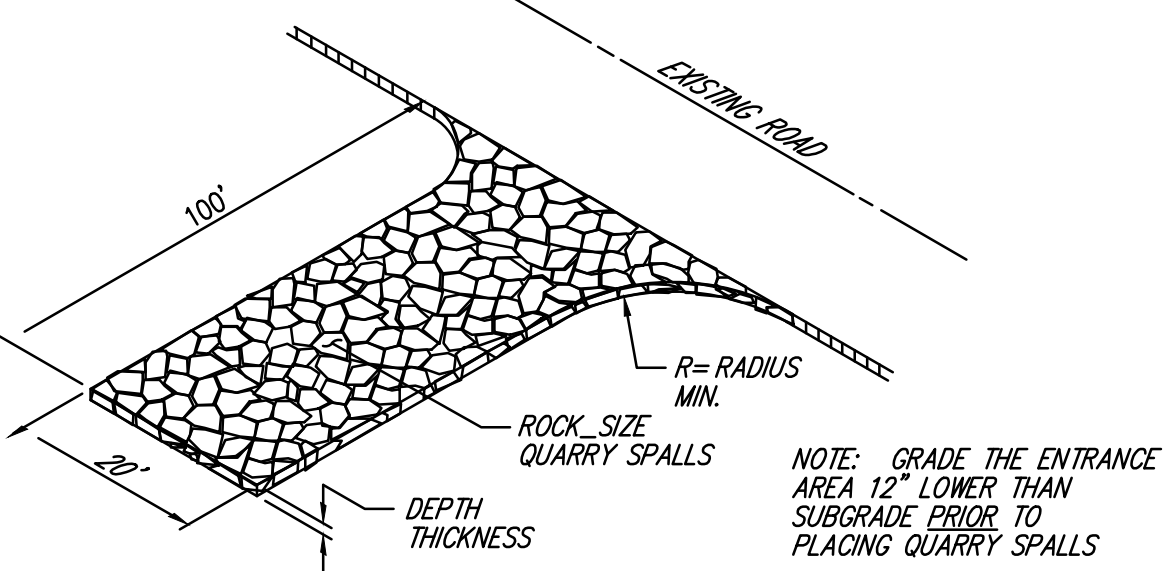
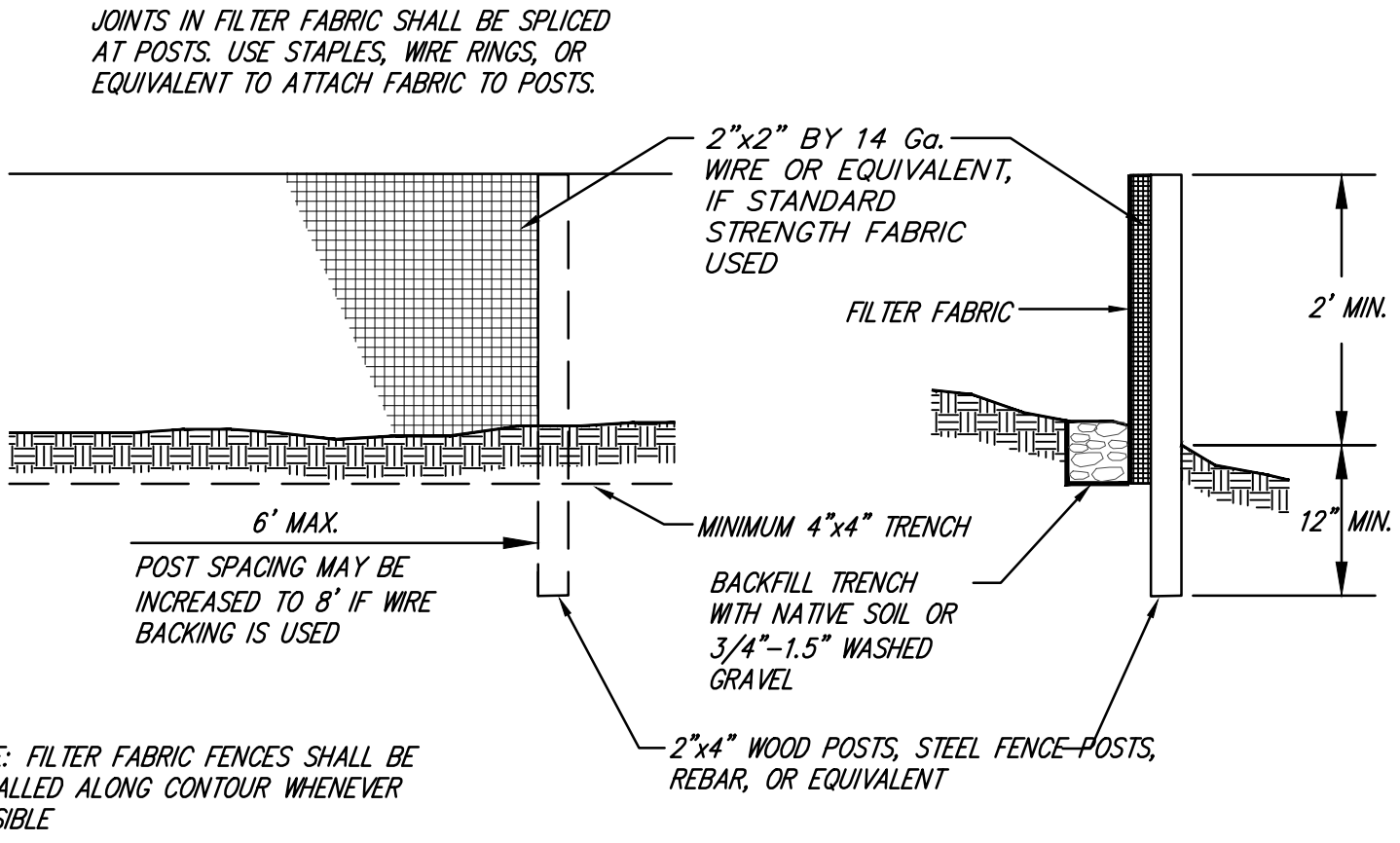
1. CONTRACTOR SHALL COORDINATE WITH ARBORIST ON GRADING AROUND RETAINED TREES AND ROOTS.
2. ARBORIST TO BE ONSITE TO VERIFY PRESERVATION OF RETAINED TREES

PUMP NOTES

1. PROVIDE TEMPORARY PUMP POWER WITH GODWIN G 20KW-S GENERATOR (OR APPROVED EQUIVALENT)
2. PUMP AT 120 GPM, 20 FT TOTAL DYNAMIC HEAD
3. FIELD ADJUST FORCE MAIN ROUTE AND CROSSING AS NECESSARY

UNDERGROUND LOCATOR SERVICE
CALL BEFORE YOU DIG!
811

UTILITY CONFLICT NOTE:
CAUTION:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT, CONTACTING ALL UTILITY COMPANIES, POTHOLES THE UTILITIES, AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE @ 1-800-424-555 AND THEN POTHOLES ALL OF THE EXISTING UTILITIES AT LOCATIONS OF NEW UTILITY CROSSINGS TO PHYSICALLY VERIFY WHETHER OR NOT CONFLICTS EXIST. LOCATIONS OF SAID UTILITIES AS SHOWN ON THESE PLANS ARE BASED UPON THE UNVERIFIED PUBLIC INFORMATION AND ARE SUBJECT TO VARIATION. IF CONFLICTS SHOULD OCCUR, THE CONTRACTOR SHALL CONSULT CORE DESIGN, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.



DATE	OCTOBER 2020	DESIGNED	FLAVIO BANOTTI
DRAWN	CHUCK FEMLING	APPROVED	MICHAEL MOODY, PE
			MICHAEL MOODY, PE
			PROJECT MANAGER

NO.	REVISIONS PER CITY COMMENTS	DATE
1	REVISIONS PER CITY COMMENTS	10/01/20
2	REVISIONS PER CITY COMMENTS	07/30/23
3	REVISIONS PER CITY COMMENTS	07/30/23
4	REVISIONS PER CITY COMMENTS	07/21/23
5	REVISIONS TO WALLS AND DRIVEWAY	07/21/23
6	REVISIONS PER CITY COMMENTS	11/12/24
7	REVISIONS PER CONTRACTOR	10/03/25

CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE
PLANNING
SURVEYING

CORE DESIGN

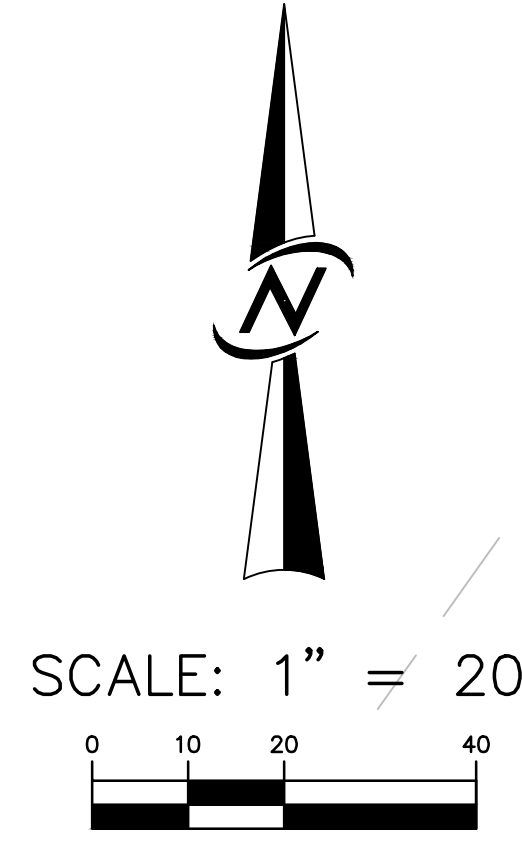
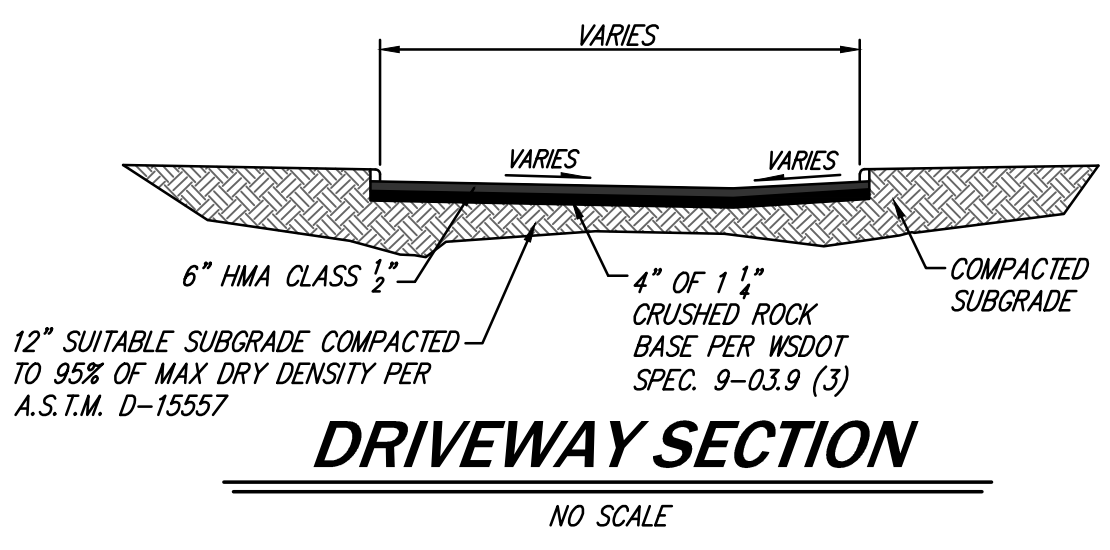
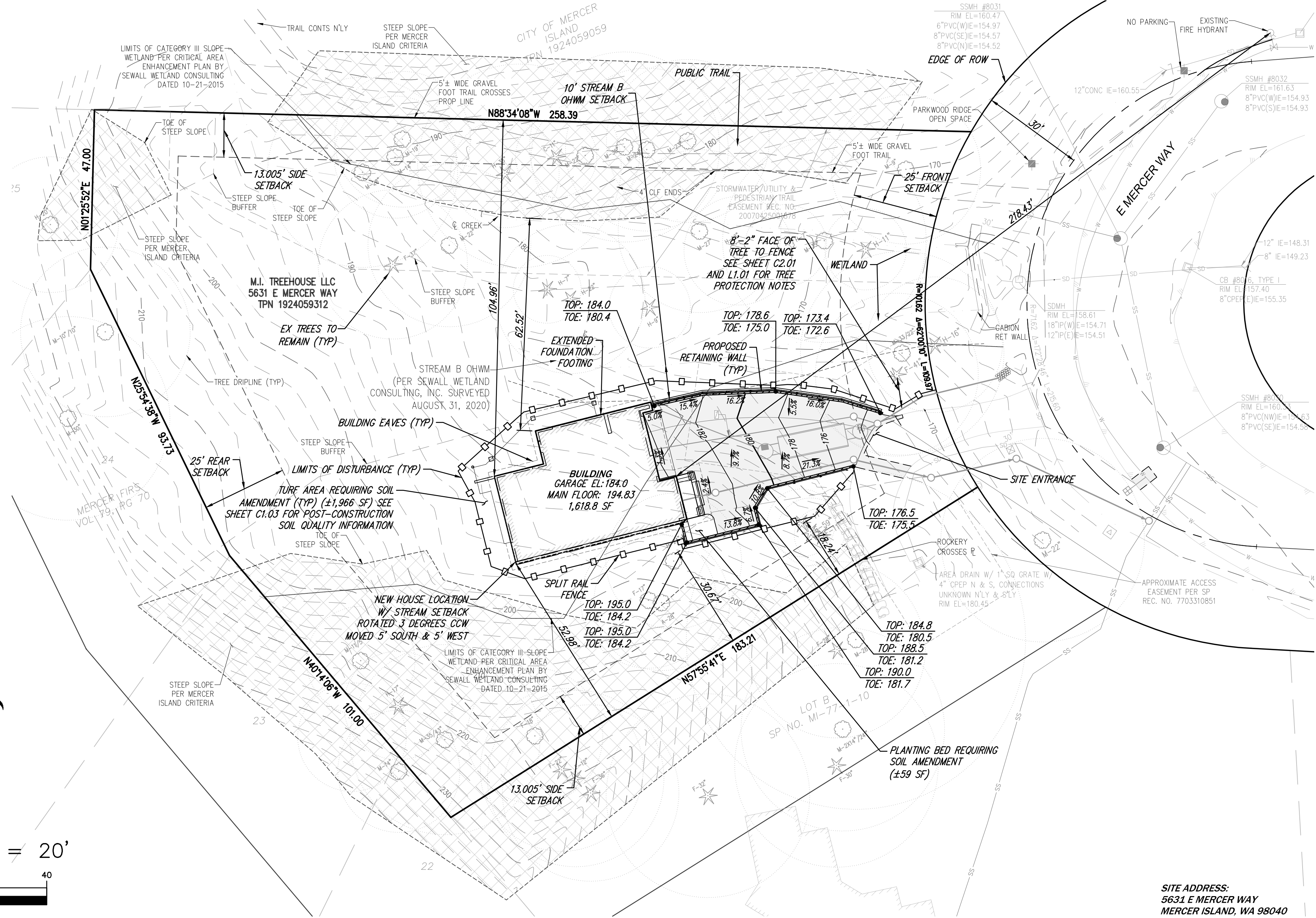
12100 NE 195th St, Suite 300 Bothell, Washington 98011 425.885.7877

06-03-2025

TESC & TREE RETENTION PLAN
MERCER ISLAND TREEHOUSE
MI TREEHOUSE LLC
PO BOX 261
MEDINA, WA 98040

SHEET	OF
C2.01	8

PROJECT NUMBER
18039



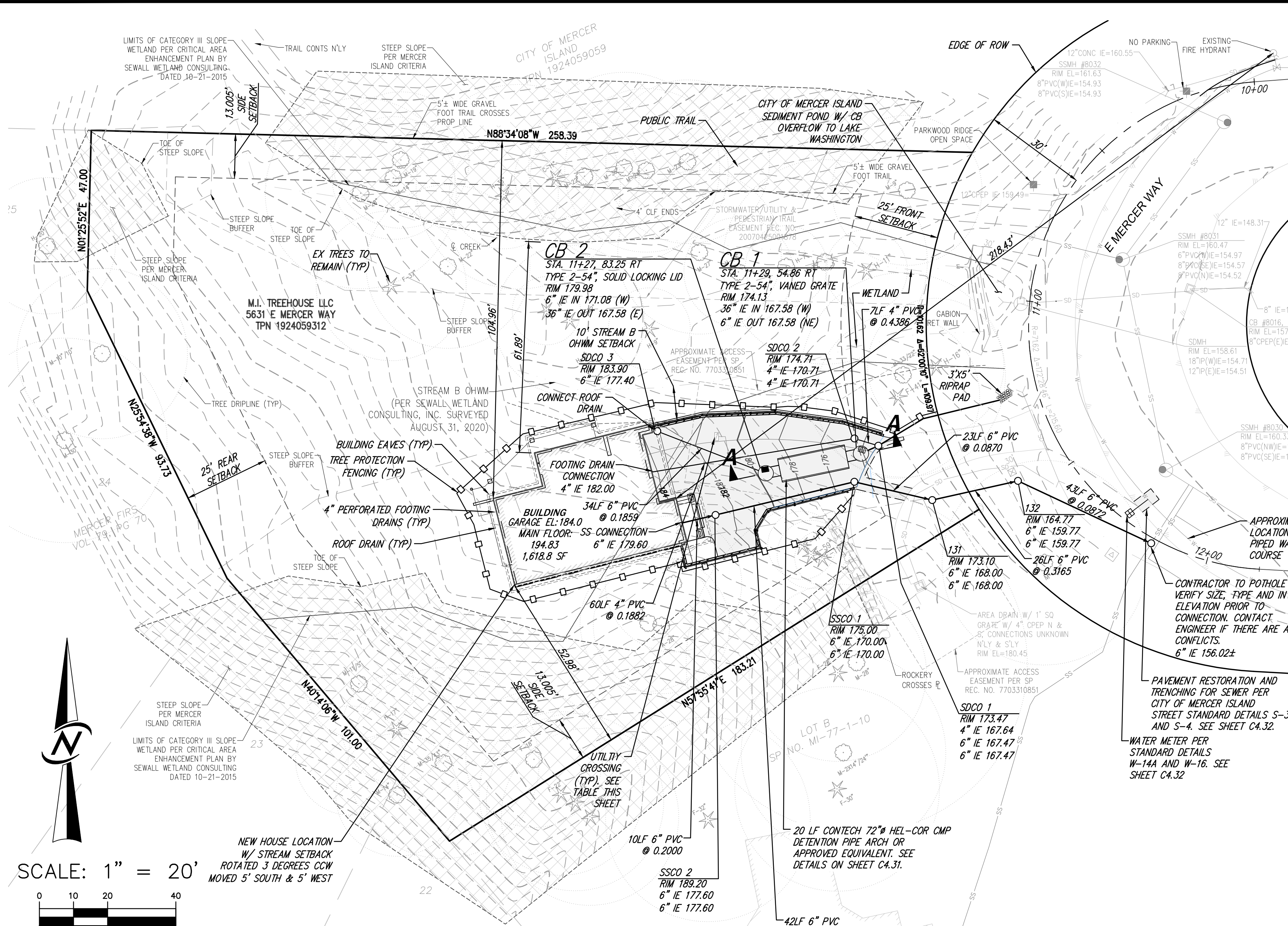
SITE ADDRESS:
5631 E MERCER WAY
MERCER ISLAND, WA 98040

UNDERGROUND LOCATOR SERVICE
CALL BEFORE YOU DIG!
811

UTILITY CONFLICT NOTE:
CAUTION:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT, CONTACTING ALL UTILITY COMPANIES, POT-HOLING THE UTILITIES, AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE @ 1-800-424-555 AND THEN POT-HOLING ALL OF THE EXISTING UTILITIES AT LOCATIONS OF NEW UTILITY CROSSINGS TO PHYSICALLY VERIFY WHETHER OR NOT CONFLICTS EXIST. LOCATIONS OF SAID UTILITIES AS SHOWN ON THESE PLANS ARE BASED UPON THE UNVERIFIED PUBLIC INFORMATION AND ARE SUBJECT TO VARIATION. IF CONFLICTS SHOULD OCCUR, THE CONTRACTOR SHALL CONSULT CORE DESIGN, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.

DATE	OCTOBER 2020	DESIGNED	FLAVIO BAINOTTI
		DRAWN	CHUCK FEMLING
		APPROVED	MICHAEL MOODY, PE
			MICHAEL MOODY, PE
			PROJECT MANAGER
NO.	REVISIONS PER CITY COMMENTS	DATE	REVISIONS PER CITY COMMENTS
1	REVISIONS PER CITY COMMENTS	10/01/20	REVISIONS PER CITY COMMENTS
2	REVISIONS PER CITY COMMENTS	07/30/23	REVISIONS PER CITY COMMENTS
3	REVISIONS PER CITY COMMENTS	07/30/23	REVISIONS PER CITY COMMENTS
4	REVISIONS PER CITY COMMENTS	08/21/23	REVISIONS PER CITY COMMENTS
5	REVISIONS TO WALLS AND DRIVEWAY	02/01/24	REVISIONS TO WALLS AND DRIVEWAY
6	REVISIONS PER CITY COMMENTS	11/12/24	REVISIONS PER CITY COMMENTS
7	REVISIONS PER CONTRACTOR	10/03/25	REVISIONS PER CONTRACTOR
PROJECT NUMBER		SHEET OF	
18039		C3.01 8	
CIVIL ENGINEERING LANDSCAPE ARCHITECTURE PLANNING SURVEYING CORE DESIGN 12100 NE 195th St, Suite 300 Bothell, Washington 98011 425.885.7877			
GRADING PLAN MERCER ISLAND TREEHOUSE MI TREEHOUSE LLC PO BOX 261 MEDINA, WA 98040			

6/3/2025 5:00 PM: (2018)18039 (ENGINEERING) (FINAL) (SHEETS) 18039 C3.01.DWG



SEWER GENERAL NOTES

- 1 ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE DEVELOPER EXTENSION AGREEMENT, THE STANDARD SPECIFICATIONS, STANDARD DETAILS OF THE CITY OF MERCER ISLAND.
UTILITY LOCATES
2 THE APPROXIMATE LOCATIONS OF EXISTING UTILITIES ARE SHOWN ON PLANS AND PROFILES FOR CONVENIENCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF UTILITY LOCATIONS SHOWN AND FOR DISCOVERY OF POSSIBLE ADDITIONAL UTILITIES NOT SHOWN ON PLANS.
3 IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE LOCATED, BY APPROPRIATE UTILITY DISTRICTS OR COMPANIES, ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
4 FOR UTILITY LOCATES IN KING COUNTY, CALL 1-800-424-5555 PRIOR TO DIGGING.
PERMITS
5 THE DEVELOPER IS RESPONSIBLE FOR OBTAINING ALL REGULATORY PERMITS.
6 ALL WORK IN RIGHTS-OF-WAY SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE PERMITTING AGENCY.
PRE-CON
7 A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD AT THE CITY OF MERCER ISLAND'S OFFICE PRIOR TO THE START OF CONSTRUCTION. DISTRICT STAFF WILL NOTIFY THE APPROPRIATE AGENCIES OR REPRESENTATIVES.
SURVEYING
8 PRIOR TO CONSTRUCTING ANY SEWER MAINS, THE STREET CENTERLINES OF THE DEVELOPMENT, CENTER OF CUL-DE-SACS, ALL SEWER LINE EASEMENTS AND ALL LOT CORNERS SHALL BE STAKED. THE MAXIMUM STATIONING INTERVAL SHALL BE 50 FEET WITH THE STATION NUMBER ON EACH STAKE.
9 HORIZONTAL CONTROL DATA SHALL BE NAD '83/'91. VERTICAL CONTROL SHALL BE NAVD-88 DATUM.
10 AT THE CONCLUSION OF CONSTRUCTION, THE DEVELOPER'S REGISTERED PROFESSIONAL SURVEYOR SHALL PREPARE A DRAWING BASED ON THE SURVEYED LOCATIONS OF ALL APPURTENANCES INSTALLED, INCLUDING BUT NOT LIMITED TO, LOCATION OF EXISTING MANHOLES INCLUDING RIM & ALL INVERT ELEVATIONS AND NEW MANHOLE LOCATIONS INCLUDING RIM & ALL INVERT ELEVATIONS. THE DRAWING SHALL BE PROVIDED TO THE DISTRICT IN AUTOCAD FORMAT, R 2000 OR NEWER. IN ADDITION, ALL SEWER EASEMENTS SHALL BE STAKED AND FLAGGED AT THEIR INTERSECTION WITH PROPERTY LINES AND AT 25 FOOT STATIONS ALONG THE EASEMENT LINES.

- CONSTRUCTION
11 THE SEWER MAIN SHALL BE PLACED FIVE (5) FEET SOUTH OR WEST FROM THE CENTERLINE OF THE ROADWAY, UNLESS OTHERWISE SHOWN ON THE PLAN.
12 A MINIMUM TEN (10) FOOT HORIZONTAL SEPARATION MUST BE MAINTAINED BETWEEN THE SANITARY SEWER LINE AND THE WATER MAIN.
13 AFTER TRENCH BACKFILL AND COMPACTION, PVC SANITARY SEWER MAINS SHALL BE TESTED FOR DEFLECTION AS SPECIFIED IN SECTION 7-17.3(2)G OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION TEST OBSERVATION AND INSPECTION BY NORTHSHORE.
UTILITY DISTRICT
14 WHENEVER SANITARY SEWER CROSSES BELOW A WATER MAIN, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE TOP OF THE SEWER LINE IS AT LEAST EIGHTEEN (18) INCHES BELOW THE BOTTOM OF THE WATER MAIN.
15 ALL MANHOLES SHALL HAVE A MINIMUM DROP OF ONE-TENTH (0.10) FOOT AND FIVE-TENTHS (0.50) FOOT MAXIMUM DROP BETWEEN INVERT IN AND INVERT OUT.
16 MANHOLES IN THE PUBLIC RIGHT-OF-WAY SHALL BE A MINIMUM OF EIGHT (8) FEET IN DEPTH OR PER APPROVED PLANS.
17 MANHOLES NOT IN PAVED PUBLIC RIGHT-OF-WAY TO HAVE LOCKING LIDS AND ALL FRAMES SHALL BE LOCKING TYPE PER THE STANDARD DETAILS.
18 FOR PIPE SLOPES GREATER THAN 20% RESTRAINED-JOINT DUCTILE IRON PIPE SHALL BE USED FOR EVERY JOINT.
19 SIDE SEWER STUBS SHALL HAVE A MINIMUM OF TWO (2) PERCENT SLOPE AND MAXIMUM OF FORTY-FIVE (45) DEGREE SLOPE. STUBS SHALL BE 6" MINIMUM DIAMETER. FOR ALL STUBS LESS THAN EIGHT (8) FEET IN DEPTH: INSTALL A THREE (3) INCH WIDE GREEN METALLIC DETECTOR TAPE 12" ABOVE THE PIPE, THE ENTIRE LENGTH OF THE STUB CONTINUING UP THE 2X4 SIDE SEWER MARKER POST. IDENTIFICATION ON THE TAPE SHALL INCLUDE THE WORDS "SANITARY SEWER".
MATERIALS
20 SANITARY SEWER PIPE LESS THAN EIGHTEEN (18) FEET IN DEPTH AND LESS THAN 20% SLOPE SHALL BE PVC CONFORMING TO ASTM D-3034, SDR-35 AND SHALL BE BEDDED WITH CLEAN, GRANULAR MANUFACTURED PEA GRAVEL FROM 4" UNDER TO 6" OVER THE PIPE. SANITARY SEWER PIPE EIGHTEEN (18) FEET DEEP AND GREATER, OR ON A SLOPE OF 20% DUCTILE-IRON PIPE MUST MEET THE REQUIREMENTS OF AWWA C-151.
21 HIGH-DENSITY POLYETHYLENE (HDPE) SHALL BE SDR-11 MINIMUM.

NOTES

- 1. CONTRACTOR SHALL FIELD VERIFY HORIZONTAL & VERTICAL LOCATION OF EXISTING WATER MAIN PRIOR TO CONSTRUCTION. NOTIFY ENGINEER IF ANY CONFLICTS ARISE. EXISTING LOCATION & ELEVATION DETERMINED BY GROUND PENETRATING RADAR.
2. CONTRACTOR SHALL FIELD VERIFY HORIZONTAL & VERTICAL LOCATION OF EXISTING STORM LINE PRIOR TO CONSTRUCTION. NOTIFY ENGINEER IF ANY CONFLICTS ARISE.

SITE ADDRESS

5631 E MERCER WAY
MERCER ISLAND, WA 98040

STORM DRAINAGE GENERAL NOTES

- 1. ALL NEW CATCH BASINS SHALL CONFORM TO THE APWA WSDOT STANDARD DETAILS.
2. THE FOOTING DRAINAGE SYSTEM AND THE ROOF DOWNSPOUT SYSTEM SHALL NOT BE INTERCONNECTED.
3. PROVIDE AND MAINTAIN TEMPORARY SEDIMENTATION FILTER AND SILT REMOVAL FACILITIES TO ENSURE THAT SEDIMENT OR OTHER HAZARDOUS MATERIALS DO NOT ENTER THE STORM DRAINAGE SYSTEM. FOR ALL CONSTRUCTION DURING THE RAINY SEASON, DOWNHILL BASINS AND INLETS MUST BE PROTECTED WITH CATCH BASINS INSERTS. PLACEMENT OF FILTER FABRIC UNDER GRATE IS NOT ACCEPTABLE.
4. PRIOR TO FINAL INSPECTION AND ACCEPTANCE OF STORM DRAINAGE WORK, PIPES AND STORM DRAIN STRUCTURES SHALL BE CLEANED AND FLUSHED. ANY OBSTRUCTIONS TO FLOW WITHIN THE STORM DRAINAGE SYSTEM (SUCH AS RUBBLE, MORTAR, AND WEDGED DEBRIS) SHALL BE REMOVED AT THE NEAREST STRUCTURE. WASH WATER OF ANY SORT SHALL NOT BE DISCHARGED TO THE STORM DRAIN SYSTEM OR SURFACE WATER.
5. ON-SITE DRAINAGE SYSTEM WILL BE PRIVATELY OWNED AND MAINTAINED.
6. SEE FOUNDATION PLAN FOR FOOTING DRAIN LOCATIONS.
7. EXCAVATION OF ON-SITE CATCH BASINS WILL NOT IMPACT NEIGHBORING PROPERTY AND WILL BE CONTAINED BY WALL.

TREE PROTECTION NOTES

- 1. CONTRACTOR SHALL COORDINATE WITH ARBORIST ON GRADING AROUND RETAINED TREES AND ROOTS.
2. ARBORIST TO BE ON-SITE TO VERIFY PRESERVATION OF RETAINED TREES

WATER GENERAL NOTES

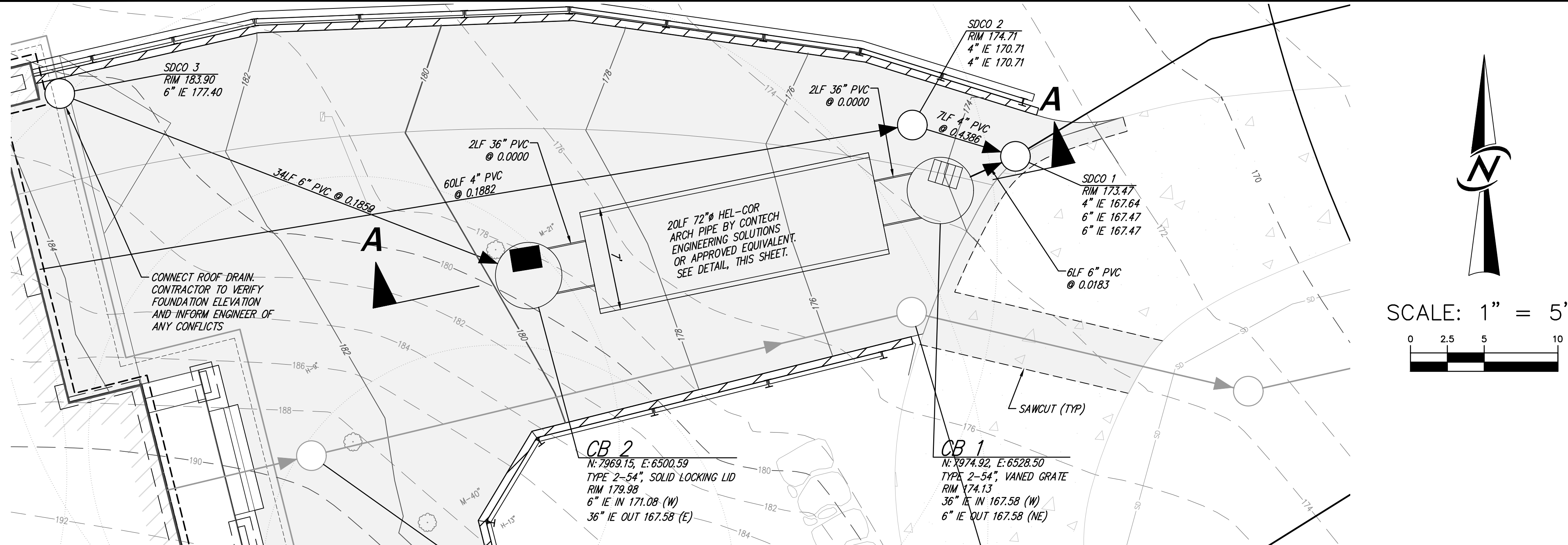
- 1 ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE DEVELOPER EXTENSION AGREEMENT, THE STANDARD SPECIFICATIONS AND THE STANDARD DETAILS OF THE CITY OF MERCER ISLAND.
UTILITY LOCATES
2 THE APPROXIMATE LOCATIONS OF EXISTING UTILITIES ARE SHOWN ON PLANS AND PROFILES FOR CONVENIENCE. THE CONTRACTOR SHALL POT-HOLE AND VERIFY LOCATION AND ELEVATION OF EXISTING WATER LINE PRIOR TO CONSTRUCTION AND INFORM ENGINEER OF ANY CONFLICTS.
3 IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE LOCATED BY APPROPRIATE UTILITY DISTRICTS OR COMPANIES, ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
4 FOR UTILITY LOCATES IN KING COUNTY, CALL 1-800-424-5555 PRIOR TO DIGGING.
PERMITS
5 THE DEVELOPER IS RESPONSIBLE FOR OBTAINING ALL REGULATORY PERMITS.
6 ALL WORK IN RIGHTS-OF-WAY SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF PERMITTING AGENCY.
PRE-CON
7 A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD AT THE CITY OF MERCER ISLAND'S OFFICE PRIOR TO THE START OF CONSTRUCTION. CITY STAFF WILL NOTIFY THE APPROPRIATE AGENCIES OR REPRESENTATIVES.
SURVEYING
8 PRIOR TO CONSTRUCTING ANY WATER MAINS, THE STREET CENTERLINES OF THE DEVELOPMENT, CENTER OF CUL-DE-SACS, ALL WATER LINE EASEMENTS AND ALL LOT CORNERS SHALL BE STAKED. THE MAXIMUM STATIONING INTERVAL WILL BE 50 FEET WITH THE STATION NUMBER ON EACH STAKE.
9 HORIZONTAL CONTROL DATA SHALL BE NAD '83/'91. VERTICAL CONTROL SHALL BE NAVD-88 DATUM.
10 AT THE CONCLUSION OF CONSTRUCTION, THE DEVELOPER'S REGISTERED PROFESSIONAL SURVEYOR SHALL PREPARE A DRAWING BASED ON THE SURVEYED LOCATIONS OF ALL APPURTENANCES INSTALLED, INCLUDING BUT NOT LIMITED TO, WATER MAIN, METER BOXES, BLOWOFFS, VALVES BOXES, HYDRANTS AND BENDS. THE DISTRICT WILL PROVIDE LOCATES TO ASSIST THE SURVEYOR IN LOCATING THE WATER MAIN BETWEEN APPURTENANCES AND LOCATING THE BENDS. THE DRAWING SHALL BE PROVIDED TO THE DISTRICT IN AUTOCAD FORMAT, R 2000 OR NEWER. IN ADDITION, ALL WATER EASEMENTS SHALL BE STAKED AND FLAGGED AT THEIR INTERSECTION WITH PROPERTY LINES AND AT 25 FOOT STATIONS ALONG THE EASEMENT LINES.
CONSTRUCTION
11 THE WATER MAIN SHALL BE PLACED AS SHOWN ON PLAN.
12 A MINIMUM TEN (10) FOOT HORIZONTAL SEPARATION MUST BE MAINTAINED BETWEEN THE SANITARY SEWER LINE AND THE WATER MAIN.
13 A FIVE (5) FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN ALL WATER FACILITIES AND UNDERGROUND POWER AND TELEPHONE FACILITIES, UNLESS OTHERWISE APPROVED BY THE DISTRICT.
14 DISTRICT VALVES SHALL ONLY BE OPERATED BY DISTRICT PERSONNEL.
MATERIALS
15 ALL WATER MAIN PIPING SHALL BE DUCTILE-IRON MINIMUM THICKNESS CLASS 52, CEMENT-MORTAR LINED AND TYTON JOINT. ALL WATER MAIN PIPING TO MEET THE REQUIREMENTS OF AWWA C-151.
16 ALL WATER MAIN FITTINGS SHALL BE CEMENT-MORTAR LINED AND MEET THE REQUIREMENTS OF AWWA C-153.
17 POLYETHYLENE ENCASEMENT TO MEET THE AWA STANDARD C-105. ANY TEARS OR OPENINGS MADE FOR SERVICE OR TAPS SHALL BE REPAIRED WITH AN ADHESIVE TAPE.
18 ALL WATER MAIN PIPES AND SERVICES SHALL BE INSTALLED WITH A 14 (FOURTEEN) GAUGE, CONTINUOUS, SOLID-CORE, NEOPRENE COATED LOCATING WIRE. ANY CONNECTIONS OR SPLICES SHALL BE MADE WITH SPLIT-BOLT WIRE CONNECTORS.
PLACEMENT
19 FIRE HYDRANT LOCATIONS TO BE APPROVED BY THE FIRE MARSHAL OF JURISDICTION.
20 WATER SERVICE LINE AND METER LOCATIONS WILL BE COORDINATED WITH THE DEVELOPER'S ENGINEER AFTER A THOROUGH REVIEW OF ALL UTILITY FACILITIES.
20-1 THE METER LOCATION SHALL BE WITHIN THREE (3) FEET OF THE PROPERTY LINE THAT IS PERPENDICULAR TO THE RIGHT-OF-WAY AND WITHIN ONE (1) FOOT OF THE EDGE OF PROPERTY ON THE RIGHT-OF-WAY SIDE UNLESS OTHERWISE APPROVED IN WRITING BY THE DISTRICT.
20-2 AFTER INSTALLATION OF THE METER AND BOX, A 2X4 BOARD PAINTED WHITE WITH "WATER SERVICE" STENCILED ONTO IT WILL BE DRIVEN INTO THE GROUND BEHIND THE METER BOX.

UTILITY CROSSING TABLE with columns: CROSSING #, UPPER NETWORK, UPPER PIPE IE, LOWER PIPE CROWN, LOWER NETWORK, CLEARANCE. Rows 1 and 2.

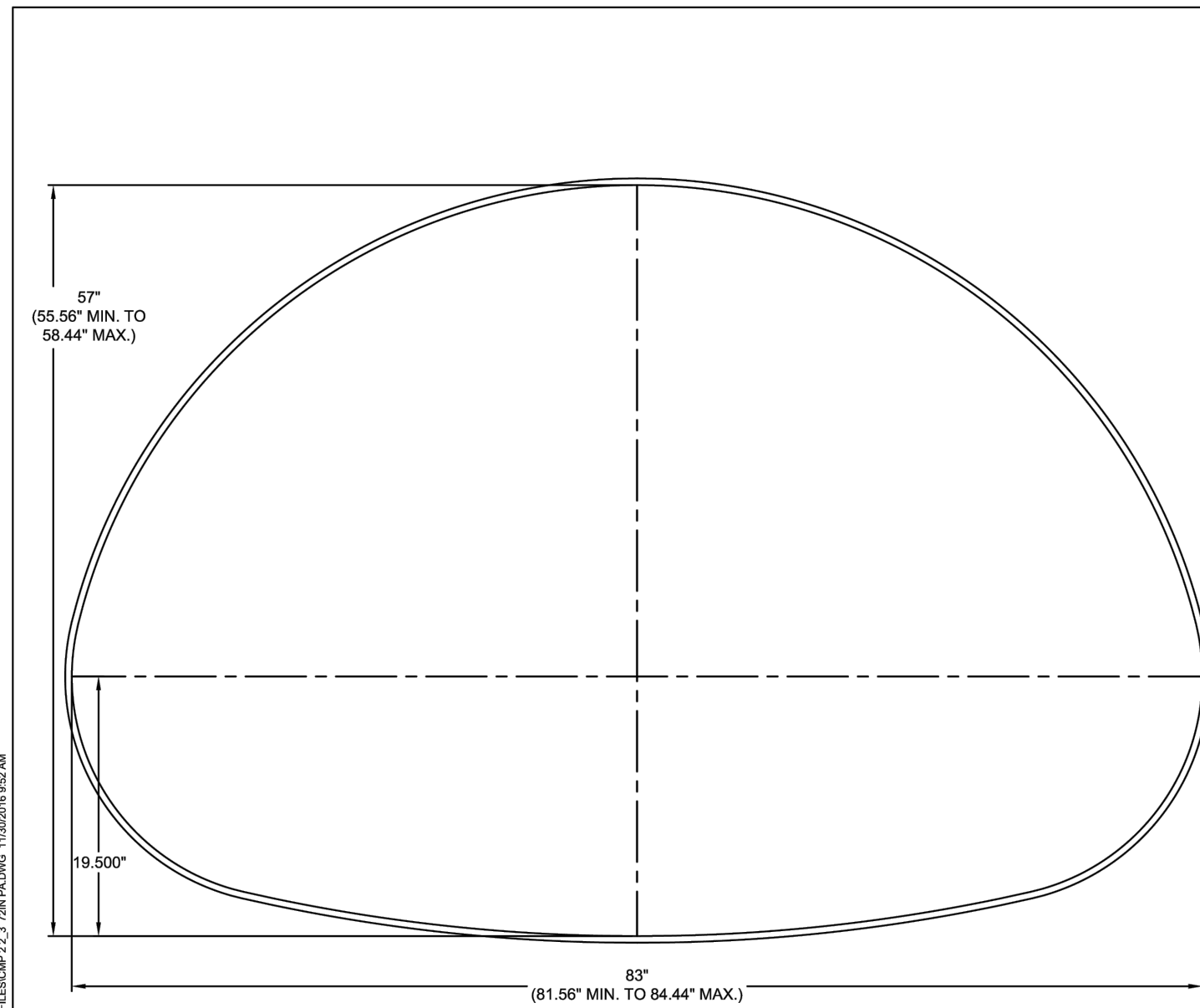
UNDERGROUND LOCATOR SERVICE
CALL BEFORE YOU DIG!
811

UTILITY CONFLICT NOTE:
CAUTION:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT, CONTACTING ALL UTILITY COMPANIES, POT-HOLES THE UTILITIES, AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE # 1-800-424-555 AND THEN POT-HOLE ALL OF THE EXISTING UTILITIES AT LOCATIONS OF NEW UTILITY CROSSINGS TO PHYSICALLY VERIFY WHETHER OR NOT CONFLICTS EXIST. LOCATIONS OF SAID UTILITIES AS SHOWN ON THESE PLANS ARE BASED UPON THE UNVERIFIED PUBLIC INFORMATION AND ARE SUBJECT TO VARIATION. IF CONFLICTS SHOULD OCCUR, THE CONTRACTOR SHALL CONSULT CORE DESIGN, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.

Project information sidebar including: DATE (OCTOBER 2020), DESIGNED (FLAVIO BIANOTTI), DRAWN (CHUCK FEMLING), APPROVED (MICHAEL MOODY, PE), PROJECT MANAGER (MICHAEL MOODY, PE), SHEET (C4.01) OF (8), PROJECT NUMBER (18039), and logos for CORE DESIGN and MI TREEHOUSE LLC.



DETENTION PIPE PLAN VIEW
SCALE 1"=5'



NOMINAL 83" X 57" (72" ROUND EQUIVALENT)

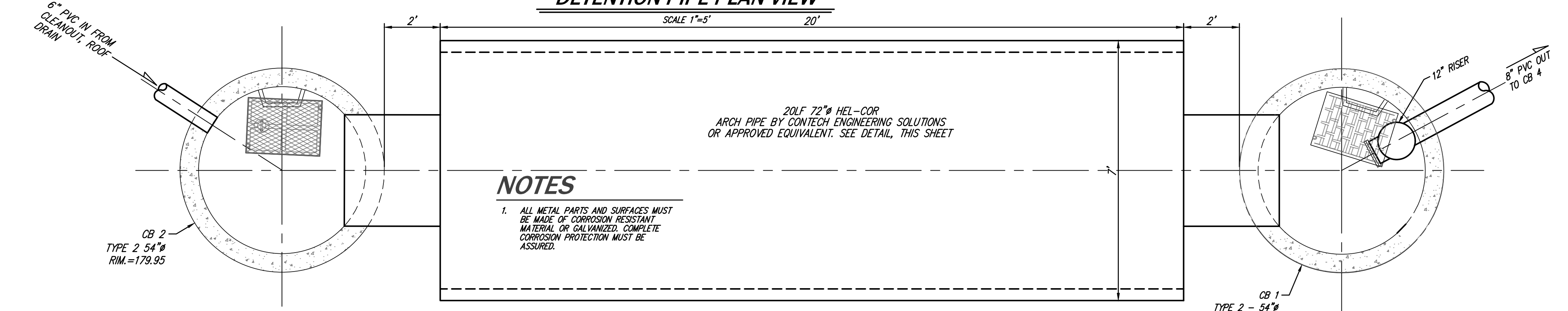
AREA= 26.0 SF

- NOTES:
1. ALL DIMENSIONS ARE TO THE INSIDE CORRUGATION CREST UNLESS NOTED OTHERWISE.
 2. ALL DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.
 3. RISE AND SPAN DIMENSIONS ACCOUNT FOR SPECIFICATION TOLERANCES FROM NOMINAL DIMENSIONS. (AASHTO M 36 STEEL, M 196 ALUMINUM, ASTM A 760 STEEL, B 745 ALUMINUM).

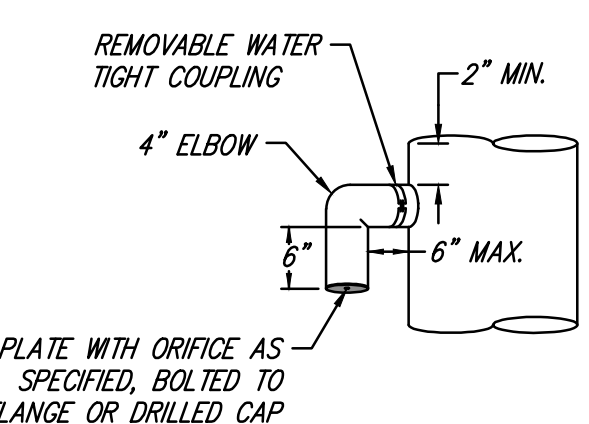
CMP 2 2 3 72IN PA

CONTECH ENGINEERED SOLUTIONS LLC www.ContechES.com 9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069 800-338-1122 513-645-7000 513-645-7993 FAX	CONTECH PIPE SOLUTIONS DATE DRAWN: 6/16/16 REV #:	SHAPE DRAWING 2 2/3" x 1/2" CMP PIPE ARCH 72" EQ DIA 83"x57" SCALE: N.T.S. DRAWING TYPE:
--	--	---

- NOTES**
1. ALL METAL PARTS AND SURFACES MUST BE MADE OF CORROSION RESISTANT MATERIAL OR GALVANIZED. COMPLETE CORROSION PROTECTION MUST BE ASSURED.



DETENTION PIPE SECTION A-A
SCALE: 1"=2'



ELBOW DETAIL
NOT TO SCALE

UNDERGROUND LOCATOR SERVICE
CALL BEFORE YOU DIG!
811

UTILITY CONFLICT NOTE:
CAUTION:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT, CONTACTING ALL UTILITY COMPANIES, POT-HOLING THE UTILITIES, AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE @ 1-800-424-555 AND THEN POT-HOLING ALL OF THE EXISTING UTILITIES AT LOCATIONS OF NEW UTILITY CROSSINGS TO PHYSICALLY VERIFY WHETHER OR NOT CONFLICTS EXIST. LOCATIONS OF SAID UTILITIES AS SHOWN ON THESE PLANS ARE BASED UPON THE UNVERIFIED PUBLIC INFORMATION AND ARE SUBJECT TO VARIATION. IF CONFLICTS SHOULD OCCUR, THE CONTRACTOR SHALL CONSULT CORE DESIGN, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.

DATE	DESIGNED	DRAWN	APPROVED	PROJECT MANAGER
OCTOBER 2020	FLAVIO BANHOTI	CHUCK FEMLING	MICHAEL MOODY, PE	MICHAEL MOODY, PE
REVISIONS	NO.	REVISIONS PER CITY COMMENTS	DATE	
	1	REVISIONS PER CITY COMMENTS	10/6/20	
	2	REVISIONS PER CITY COMMENTS	5/20/23	
	3	REVISIONS PER CITY COMMENTS	6/29/23	
	4	REVISIONS PER CITY COMMENTS	8/2/23	
	5	REVISIONS TO WALLS AND DRIVEWAY	2/6/24	
	6	REVISIONS PER CITY COMMENTS	11/12/24	
	7	REVISIONS PER CONTRACTOR	16/03/25	

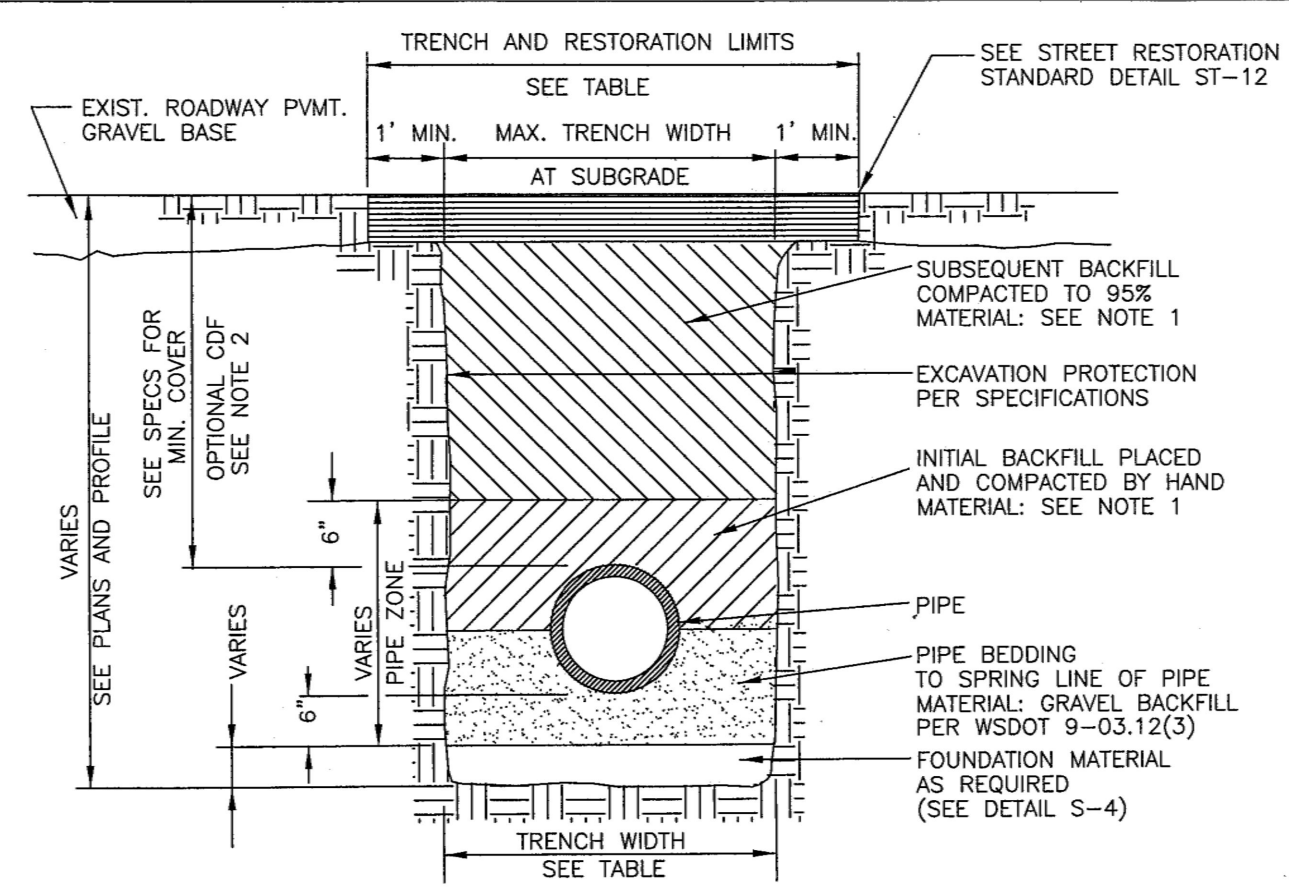
CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE
PLANNING
SURVEYING

CORE DESIGN

12100 NE 195th St, Suite 300, Bothell, Washington 98011 425.885.7877

STORM DRAINAGE DETAILS
MERCER ISLAND TREEHOUSE
MI TREEHOUSE LLC
PO BOX 261
MEDINA, WA 98040

DATE: OCTOBER 2020
SHEET: C4.31 OF 8
PROJECT NUMBER: 18039

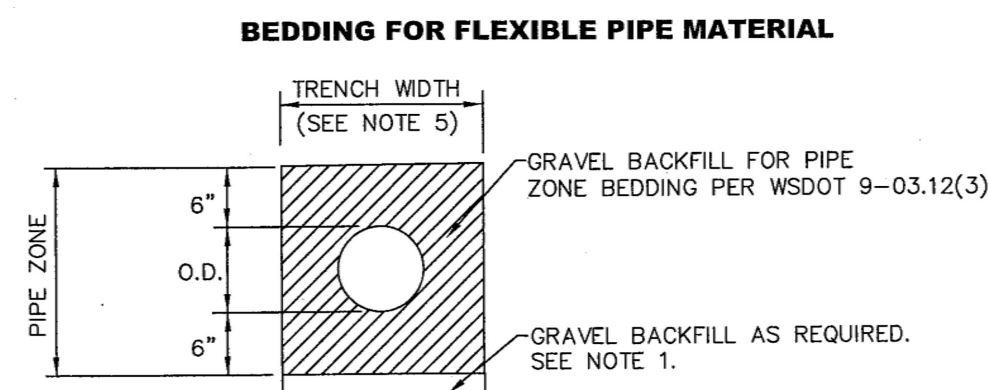
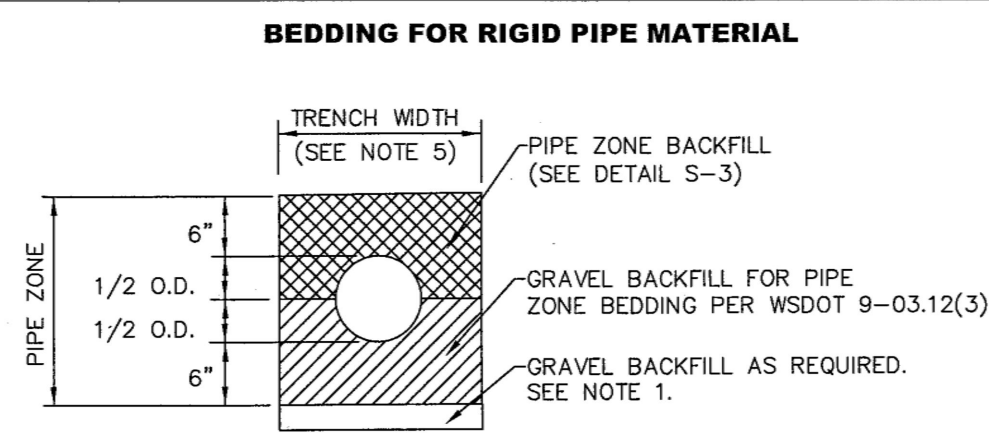


TRENCH WIDTH			
PIPE SIZE	PIPE ZONE MAX. TRENCH WIDTH AT SUBGRADE	MAX. RESTORATION WIDTH AT SURFACE	MAX. RESTORATION WIDTH AT SURFACE
4" OR 6"	2'-2"	3'-0"	8'-0"
8"	2'-4"	4'-0"	8'-0"
10"	2'-6"	4'-0"	8'-0"
12"	2'-8"	4'-6"	8'-6"

- NOTES**
- ALL TRENCH BACKFILL IN PUBLIC RIGHT-OF-WAY OR ROADWAY AREAS SHALL BE CRUSHED SURFACING PER WSDOT 9-09.9(3) OR BANK RUN GRAVEL PER WSDOT 9-03.19, COMPACTED IN 6" LIFTS.
 - CDF FOR BACKFILL MAY BE REQUIRED BY CITY ENGINEER WHEN PROPER COMPACTION AROUND EXISTING UTILITIES MAY NOT BE POSSIBLE. CDF SHALL BE PER WSDOT 2-09.3(1).
 - SEE S-4 FOR PIPE BEDDING DETAILS.

**CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER
SEWER
TRENCH DETAIL**

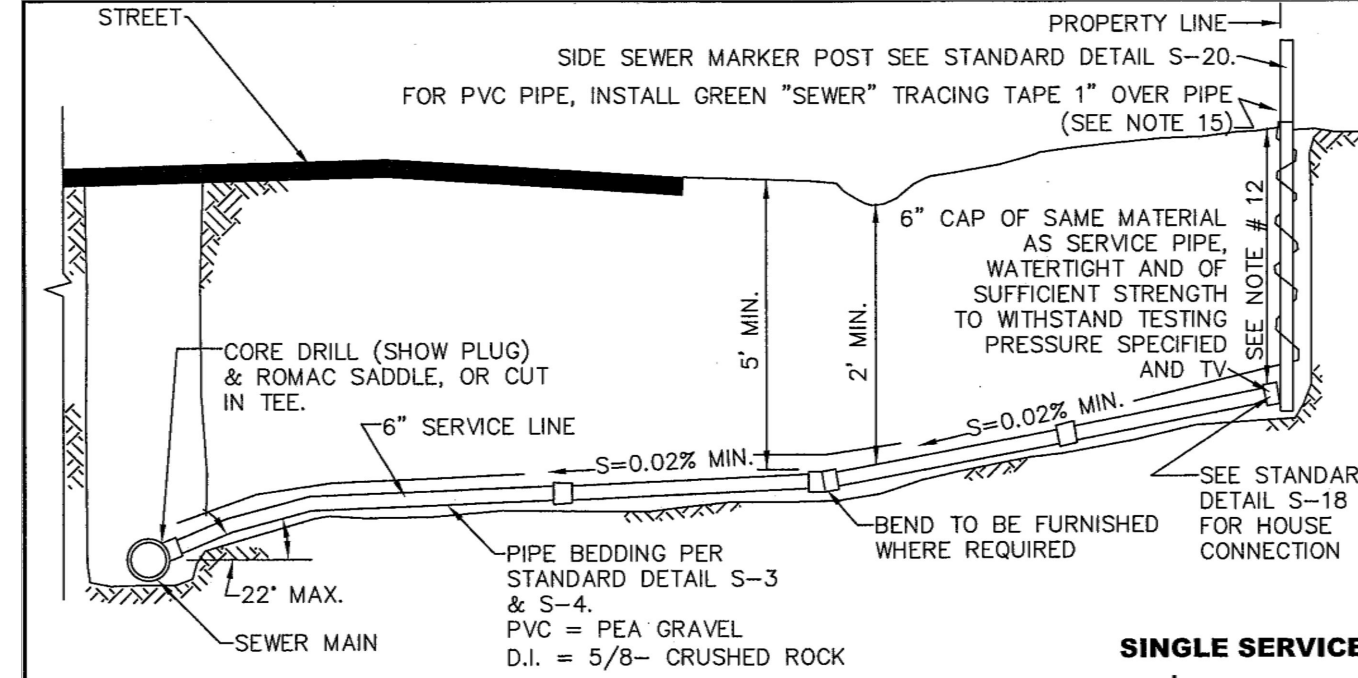
6-5-2009 NO SCALE **S-3**



- NOTES**
- EXCAVATE UNSTABLE MATERIAL DOWN TO FIRM SOIL. REPLACE WITH GRAVEL BACKFILL PER WSDOT 9-03.12(3) AS DIRECTED BY THE CITY ENGINEER.
 - PROVIDE UNIFORM SUPPORT UNDER BARREL.
 - HAND TAMP UNDER HAUNCHES.
 - COMPACT BEDDING AND BACKFILL MATERIAL TO 95% MAX. DENSITY EXCEPT DIRECTLY OVER PIPE. HAND TAMP ONLY UNTIL MINIMUM 6" ABOVE TOP OF PIPE.
 - 30" MAXIMUM TRENCH WIDTH FOR PIPE UP TO AND INCLUDING 12", FOR PIPE LARGER THAN 12", USE O.D. PLUS 16".

**CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER
PIPE
BEDDING**

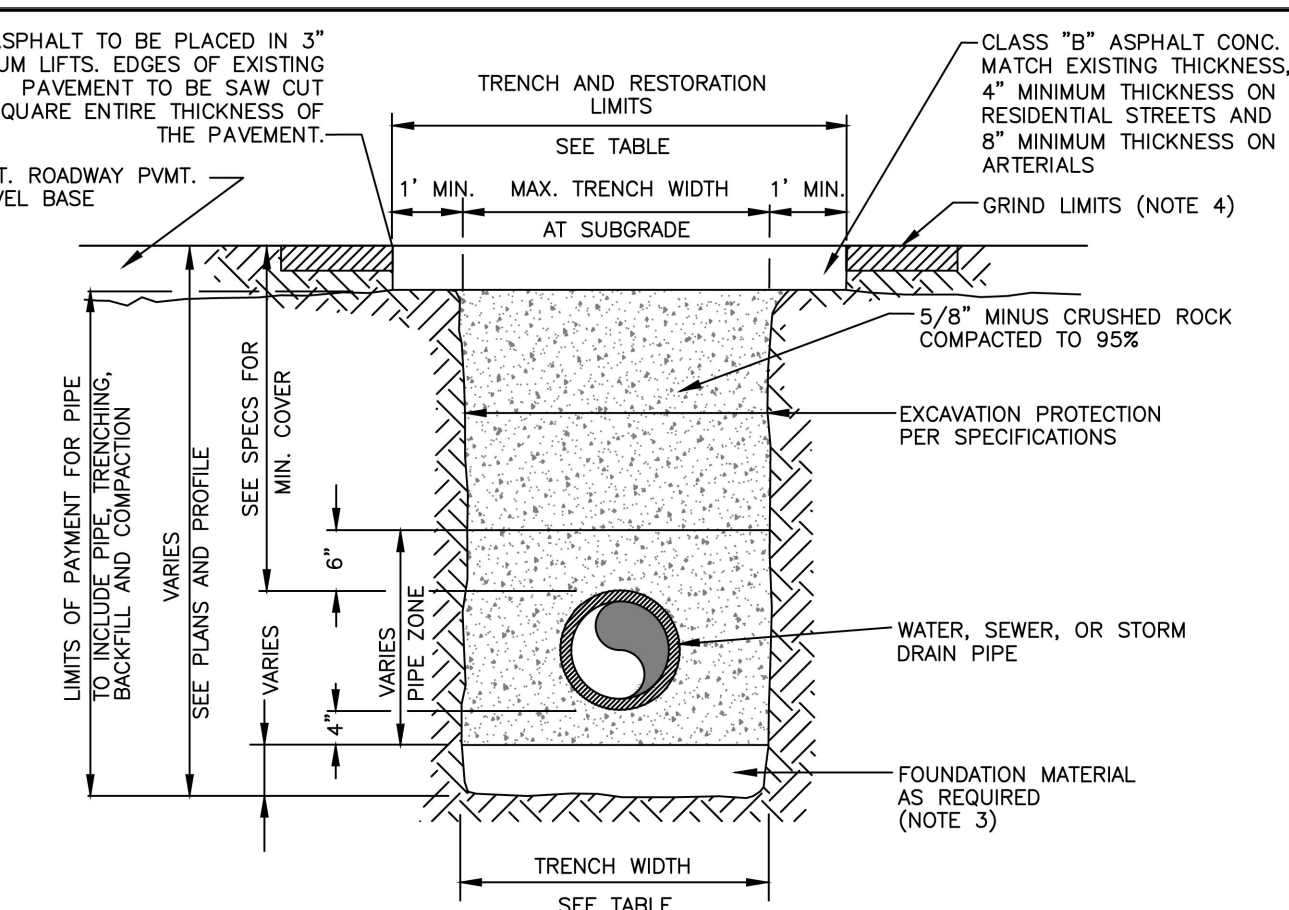
6-5-2009 NO SCALE **S-4**



- NOTES**
- ELBOWS SHALL NOT BE GREATER THAN 45 DEGREES.
 - CLEAN OUT IS REQUIRED FOR EACH PIPE LENGTH GREATER THAN 100' AND FOR EACH 90° ACCUMULATED ELBOW/100'.
 - RIGHT-OF-WAY RESTORATION SHALL MATCH OR EXCEED THE ORIGINAL CONDITION AND BE IN ACCORDANCE WITH CITY STANDARDS.
 - ALL TRENCH BACKFILL IN PUBLIC RIGHT-OF-WAY OR ROADWAY AREAS SHALL BE CRUSHED SURFACING PER WSDOT 9-09.9(3) OR BANK RUN GRAVEL PER WSDOT 9-03.19, COMPACTED IN 6" LIFTS OR MAY BE CDF WHEN DIRECTED BY THE CITY ENGINEER (SEE DETAIL S-3).
 - LAY PIPE IN STRAIGHT LINE BETWEEN BENDS. MAKE ALL CHANGES IN GRADE OR LINE WITH 1/8 BEND OR WYE. 90° CHANGE WITH 1/8 BEND AND WYE.
 - 6" SEWER PIPE MINIMUM SIZE IN RIGHT-OF-WAY, AND ELSEWHERE AS DIRECTED BY ENGINEER. 2" MIN. GRADE (UNLESS DIRECTED BY ENGINEER), 50% MAXIMUM.
 - ALL A.C. MAINS TO BE TAPPED IN ACCORDANCE WITH WAC 9-02-00775 STATE/FEDERAL GUIDELINES AND CERTIFICATION.
 - CONSTRUCTION IN RIGHT-OF-WAY MUST BE DONE BY A REGISTERED AND LICENSED CONTRACTOR.
 - ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT CITY SEWER ORDINANCES.
 - WHERE CITY ENGINEER ALLOWS SIDE SEWER CONNECTIONS TO MANHOLE, INVERT OF SIDE SEWER SHALL BE EQUAL TO OR ABOVE MAIN SEWER CROWN, BUT NOT TO EXCEED 18" ABOVE INVERT OF MAIN SEWER.
 - UNLESS OTHERWISE INDICATED ON PLAN, SIDE SEWER SHALL BE MIN. OF 6" DEEP AT PROPERTY LINE, OR 5' LOWER THAN THE LOWEST ELEVATION, WHICH EVER IS LOWER.
 - ALL PIPE MATERIALS NOT TO STANDARDS WILL BE ABANDONED AND REPLACED WITH DUCTILE IRON OR PVC PIPE OF THE SAME SIZE.
 - IF A BUILDING SEWER IS TO SERVE MORE THAN ONE PROPERTY, BY JOINT AGREEMENT OF THE OWNERS, AN APPROVED EASEMENT INSURING THAT ALL PROPERTIES INVOLVED SHALL HAVE PERPETUAL USE OF THE SIDE SEWER, HAVING PROVISIONS FOR OPERATION, MAINTENANCE, RECONSTRUCTION AND FOR ACCESS FOR REPAIR PURPOSES, SHALL BE SIGNED BY THE OWNERS. THIS EASEMENT SHALL BE RECORDED WITH THE COUNTY AUDITOR. A SIX INCH (MINIMUM) DIAMETER PIPE SHALL BE USED FOR THE COMMON LINE AND A SIX INCH CLEANOUT EXTENDING TO WITHIN 12 INCHES OF THE GROUND SURFACE SHALL BE PROVIDED AT THE WYE WHERE THE UPPER GRADE CONNECTIONS ARE MADE. BACKWATER VALVES SHALL BE INSTALLED ON SERVICE LINES UPSTREAM OF THE CONNECTION TO THE SHARED SIDE SEWER.
 - THE CITY ENGINEER MAY REQUIRE BACKWATER VALVES ON SIDE SEWERS WHEN DEEMED NECESSARY. THE EFFECTIVE OPERATION AND MAINTENANCE OF ANY BACKWATER VALVE SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE SIDE SEWER.
 - UTILITY PIPE TRACER TAPE SHALL BE DETECTABLE BELOW GROUND SURFACE, COLOR CODED, WITH UTILITY NAME PRINTED ON TAPE. CONDUCTIVE WARNING TAPE REQUIRED OVER ALL WATER PIPE. TAPE SHALL BE MANUFACTURER'S STANDARD PERMANENT, BRIGHT-COLORED, CONTINUOUS PRINTED PLASTIC TAPE, ALUMINUM BACKED, INTENDED FOR DIRECT-BURIAL SERVICE. TAPE SHALL BE NOT LESS THAN 6" WIDE X 4 MILS THICK.

**CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER
SIDE SEWER CONNECTION
AND STUB**

6-5-2009 NO SCALE **S-17**

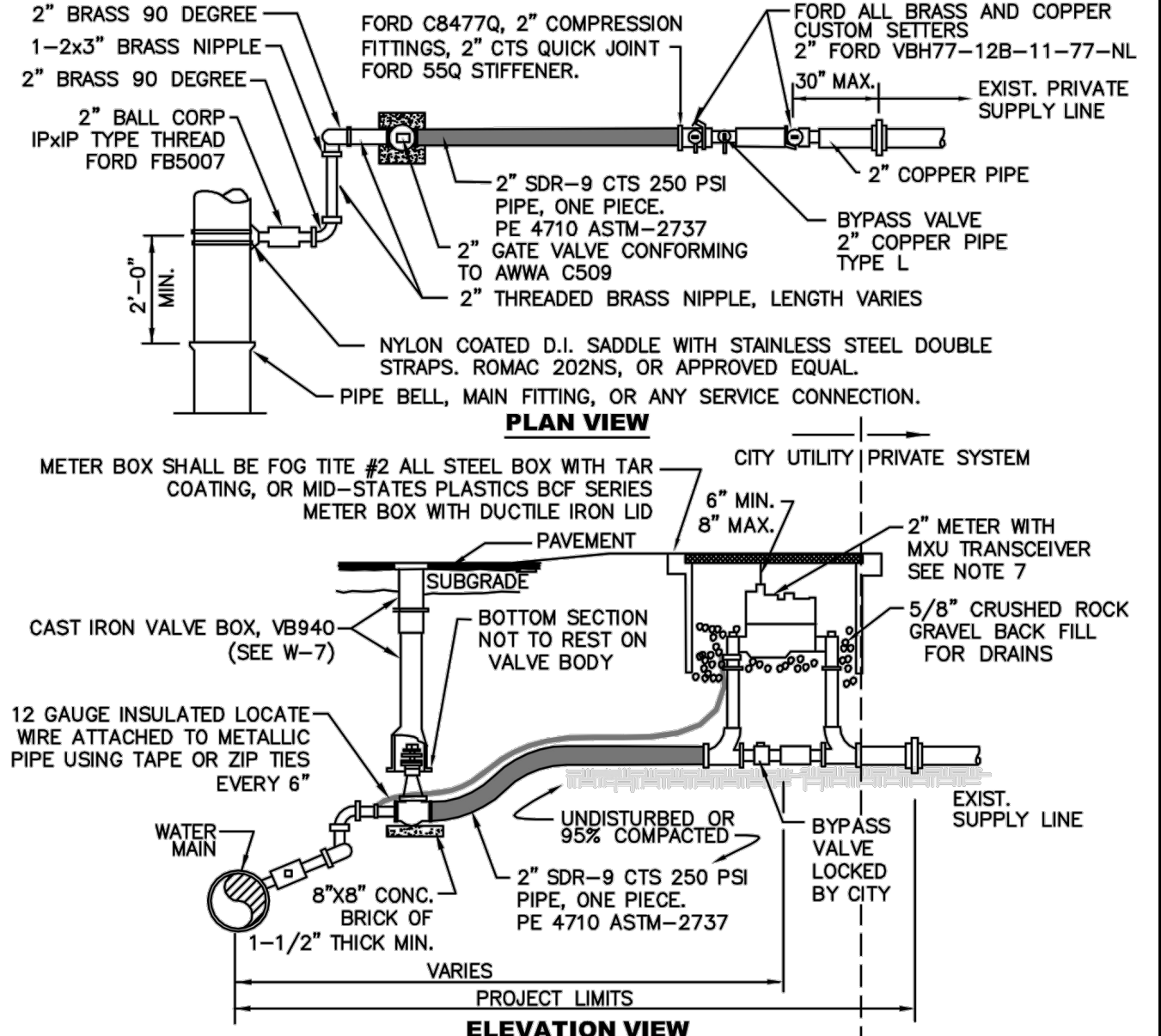


WIDTH TRENCH			
PIPE SIZE	PIPE ZONE MAX. TRENCH WIDTH AT SUBGRADE	MAX. RESTORATION WIDTH AT SURFACE	MAX. RESTORATION WIDTH AT SURFACE
WATER SERVICES	2'-0"	2'-0"	4'-0"
4" OR 6"	2'-2"	3'-0"	5'-0"
8"	2'-4"	4'-0"	6'-0"
10"	2'-6"	4'-0"	6'-0"
12"	2'-8"	4'-6"	6'-6"
16"	3'-0"	5'-0"	7'-0"

- NOTES**
- CALL IN LOCATES TWO BUSINESS DAYS BEFORE YOU DIG. (1-800-424-5555)
 - IN RIGHT-OF-WAY USE 100% 5/8 MINUS CRUSHED ROCK FOR BEDDING, PIPE ZONE AND BACKFILL.
 - FOUNDATION MATERIAL SHALL BE 1 1/2" MINUS CRUSHED ROCK OR OTHER AGGREGATE AS APPROVED BY CITY ENGINEER.
 - GRIND AND OVERLAY LIMITS SHALL EXTEND A MINIMUM OF 10' PAST THE END OF TRENCH AREAS.
 - SEAL ALL FINAL PATCHING AND PAVING SEAMS WITH LIQUID ASPHALT, SQUEEGEE OR MOP THE SEALER. COVER WITH DRY SAND.

**CITY OF MERCER ISLAND
STANDARD DETAILS
WATER
TRENCH SECTION**

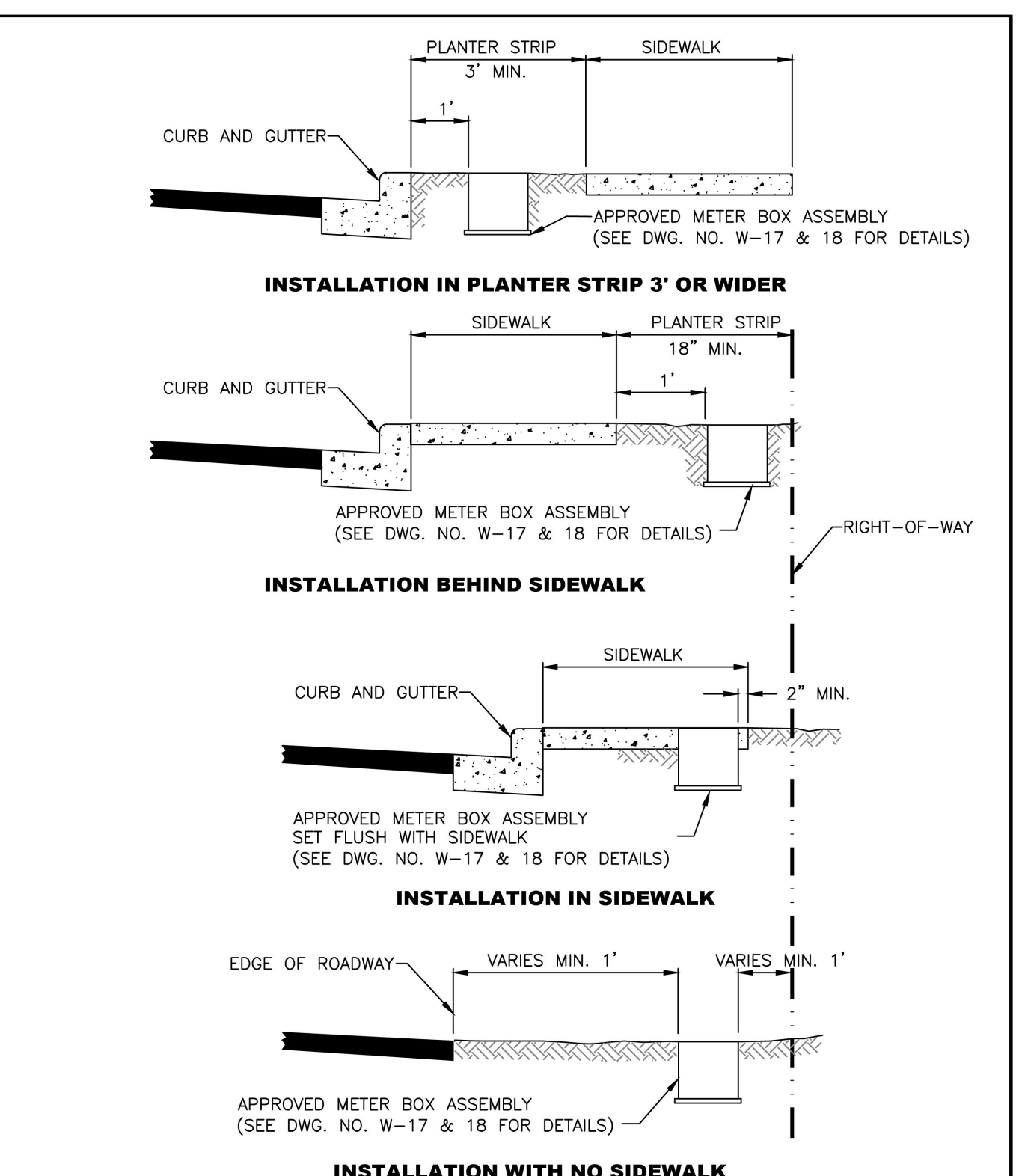
3-29-2021 NO SCALE **W-3**



- NOTES**
- WATER SERVICES SHALL COMPLY WITH THE REDUCTION OF LEAD IN DRINKING WATER ACT DATED 01/04/2014.
 - MINIMUM DISTANCE BETWEEN CORP STOPS SHALL BE 18" MINIMUM DISTANCE BETWEEN TAPS, BETWEEN CORP STOP AND PIPE ENDS SHALL BE 24", ALL HORIZONTALLY STAGGERED.
 - PLASTIC METER BOXES SHALL NOT BE INSTALLED WITHIN ROADWAY, SIDEWALK, OR DRIVEWAYS.
 - UPON CITY ENGINEER'S APPROVAL, METER BOXES ARE ALLOWED TO BE INSTALLED IN PORTLAND CEMENT CONCRETE PAVEMENT OR SIDEWALK.
 - WHEN CONNECTING TO EXISTING PRIVATE SUPPLY LINE CONTAINING FERROUS METAL, PROVIDE INSULATING COUPLING (DD SERIES WITH C21 SERIES ADAPTERS) AND PROVIDE REDUCER AS NECESSARY TO MATCH EXISTING PRIVATE SUPPLY LINE DIAMETER.
 - SERVICE LINE SHALL BE PERPENDICULAR TO THE WATER MAIN AND STRAIGHT TO WATER METER, UNLESS OTHERWISE APPROVED BY CITY ENGINEER. PROVIDE WINDING SLACK IN THE SERVICE LINE BETWEEN THE MAIN AND WATER METER.
 - WATER METER SUPPLIED BY CITY.
 - ALL FITTINGS TO BE BRASS COMPRESSION TYPE, FORD QUICK JOINT OR EQUAL.
 - NO SERVICE CONNECTIONS BETWEEN BLOW-OFF AND END OF MAIN.

**CITY OF MERCER ISLAND
STANDARD DETAILS
WATER
2" WATER METER INSTALLATION**

02-05-2021 NO SCALE **W-14A**



**CITY OF MERCER ISLAND
STANDARD DETAILS
WATER
WATER METER PLACEMENT**

3-20-2006 NO SCALE **W-16**

POST CONSTRUCTION SOIL QUALITY AND DEPTH NOTES

- SOIL RETENTION**
RETAIN, IN AN UNDISTURBED STATE, THE DUFF LAYER AND NATIVE TOPSOIL TO THE MAXIMUM EXTENT PRACTICABLE. IN ANY AREAS REQUIRING GRADING REMOVE AND STOCKPILE THE DUFF LAYER AND TOPSOIL ON SITE IN A DESIGNATED, CONTROLLED AREA, NOT ADJACENT TO PUBLIC RESOURCES AND CRITICAL AREAS, TO BE REAPPLIED TO OTHER PORTIONS OF THE SITE WHERE FEASIBLE.
- SOIL QUALITY**
ALL AREAS SUBJECT TO CLEARING AND GRADING THAT HAVE NOT BEEN COVERED BY IMPERVIOUS SURFACE, INCORPORATED INTO A DRAINAGE FACILITY OR ENGINEERED AS STRUCTURAL FILL OR SLOPE SHALL, AT PROJECT COMPLETION, DEMONSTRATE THE FOLLOWING:
- A TOPSOIL LAYER WITH A MINIMUM ORGANIC MATTER CONTENT OF 10% DRY WEIGHT IN PLANTING BEDS, AND 5% ORGANIC MATTER CONTENT IN TURF AREAS, AND A pH FROM 6.0 TO 8.0 OR MATCHING THE pH OF THE UNDISTURBED SOIL. THE TOPSOIL LAYER SHALL HAVE A MINIMUM DEPTH OF EIGHT INCHES EXCEPT WHERE TREE ROOTS LIMIT THE DEPTH OF THE INCORPORATION OF AMENDMENTS NEEDED TO MEET THE CRITERIA. SUBSOILS BELOW THE TOPSOIL LAYER SHOULD BE SCAFFED AT LEAST 4 INCHES WITH SOME INCORPORATION OF THE UPPER MATERIAL TO AVOID STRATIFIED LAYER, WHERE FEASIBLE.
 - MULCH PLANTING BEDS WITH 2 INCHES OF ORGANIC MATERIAL.
 - USE COMPOST AND OTHER MATERIALS THAT MEET THESE ORGANIC CONTENT REQUIREMENTS:
 - THE ORGANIC CONTENT FOR "PRE-APPROVED" AMENDMENT RATES CAN BE MET ONLY USING COMPOST MEETING THE COMPOST SPECIFICATION FOR BMP 17.30: BIODETENTION CYVILLS, SWALES, AND PLANTER BOXES (P.959 OF THE 2014 SWMMWW), WITH THE EXCEPTION THAT THE COMPOST MAY HAVE UP TO 35% BIOSOLIDS OR MANURE. THE COMPOST MUST ALSO HAVE AN ORGANIC MATTER CONTENT OF 40% TO 65% AND A CARBON TO NITROGEN RATIO BELOW 25:1. THE CARBON TO NITROGEN RATIO MAY BE AS HIGH AS 35:1 FOR PLANTINGS COMPOSED ENTIRELY OF PLANTS NATIVE TO THE PUGET SOUND LOWLANDS REGION.
 - CALCULATED AMENDMENT RATES MAY BE MET THROUGH USE OF COMPOSTED MATERIAL MEETING (A) ABOVE, OR OTHER ORGANIC MATERIALS AMENDED TO MEET THE CARBON TO NITROGEN RATIO REQUIREMENTS, AND NOT EXCEEDING THE COTAMINANT LIMITS IDENTIFIED IN TABLE 220-B, TESTING PARAMETERS, IN WAC 173-350-220.
 - IMPLEMENTATION OPTIONS THE SOIL QUALITY DESIGN GUIDELINES LISTED CAN BE MET BY USING ONE OF THE METHODS LISTED BELOW:
 - LEAVE UNDISTURBED NATIVE VEGETATION AND SOIL, AND PROTECT FROM COMPACTION DURING CONSTRUCTION.
 - AMEND EXISTING SITE TOPSOIL OR SUBSOIL EITHER AT DEFAULT "PRE-APPROVED" RATES, OR AT CUSTOM CALCULATED RATES BASED ON TESTS OF SOIL AND AMENDMENT.
 - STOCKPILE EXISTING TOPSOIL DURING GRADING, AND REPLACE IT PRIOR TO PLANTING. STOCKPILED TOPSOIL MUST 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.
 - IMPORT TOPSOIL MIX OF SUFFICIENT ORGANIC CONTENT AND DEPTH TO MEET THE REQUIREMENTS.

NO.	REVISIONS PER CITY COMMENTS	DATE
1	REVISIONS PER CITY COMMENTS	10/01/22
2	REVISIONS PER CITY COMMENTS	5/20/23
3	REVISIONS PER CITY COMMENTS	6/29/23
4	REVISIONS PER CITY COMMENTS	8/21/23
5	REVISIONS PER CITY COMMENTS	8/21/24
6	REVISIONS PER CITY COMMENTS	11/12/24
7	REVISIONS PER CITY COMMENTS	10/03/25

CORE DESIGN

CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE
PLANNING
SURVEYING

12100 NE 195th St, Suite 300
Bellevue, Washington 98011 425.885.7877

MI TREEHOUSE LLC
PO BOX 261
MEDINA, WA 98040

UNDERGROUND LOCATOR SERVICE
CALL BEFORE YOU DIG!
811

UTILITY CONFLICT NOTE:
CAUTION:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT, CONTACTING ALL UTILITY COMPANIES, POTHOLES THE UTILITIES, AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE @ 1-800-424-555 AND THEN POTHOLES ALL OF THE EXISTING UTILITIES AT LOCATIONS OF NEW UTILITY CROSSINGS TO PHYSICALLY VERIFY WHETHER OR NOT CONFLICTS EXIST. LOCATIONS OF SAID UTILITIES AS SHOWN ON THESE PLANS ARE BASED UPON THE UNVERIFIED PUBLIC INFORMATION AND ARE SUBJECT TO VARIATION. IF CONFLICTS SHOULD OCCUR, THE CONTRACTOR SHALL CONSULT CORE DESIGN, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.

DATE	OCTOBER 2020
DESIGNED	FLAVIO BANOTTI
DRAWN	CHUCK FEMLING
APPROVED	MICHAEL MOODY, PE
	MICHAEL MOODY, PE
	PROJECT MANAGER