



Received by Email

4/27/2023

NW 1/4, SEC 16, TWP 28N, RGE 4E

HARBOR GROVE

CIVIL PLANS

LEGAL DESCRIPTION

PARCEL B OF CITY OF MUKILTEO LOT LINE ADJUSTMENT NO. 201606305002, BEING A PORTION OF LOTS 159 AND 166, WEST & WHEELER'S SEA VIEW 5 ACRE TRACTS, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 7 OF PLATS, PAGES 12 AND 13, RECORDS OF SNOHOMISH COUNTY, WASHINGTON;

SITUATE IN CITY OF MUKILTEO, COUNTY OF SNOHOMISH, STATE OF WASHINGTON.

VERTICAL DATUM

ORIGINATING BENCHMARK:

FOUND CASED CONC. MON. ON CENTERLINE, 53RD AVE W

VERTICAL DATUM: NAVD 88

ELEVATION: 395.82' (PER GPS OBSERVATIONS)

SURVEY REFERENCES

(R1) CITY OF MUKILTEO SP - A.F.#9205200691

(R2) CITY OF MUKILTEO ROS - A.F.#201606305002

EQUIPMENT & PROCEDURES

METHOD OF SURVEY:
SURVEY PERFORMED BY FIELD TRAVERSE

INSTRUMENTATION:
LEICA TS15 ROBOTIC ELECTRONIC TOTAL STATION

PRECISION:
MEETS OR EXCEEDS STATE STANDARDS WAC 332-130-090

BASIS OF BEARING:
THE MONUMENTED CENTERLINE OF 53RD AVE. W.,
AS THE BEARING OF N 01°58'54" E.

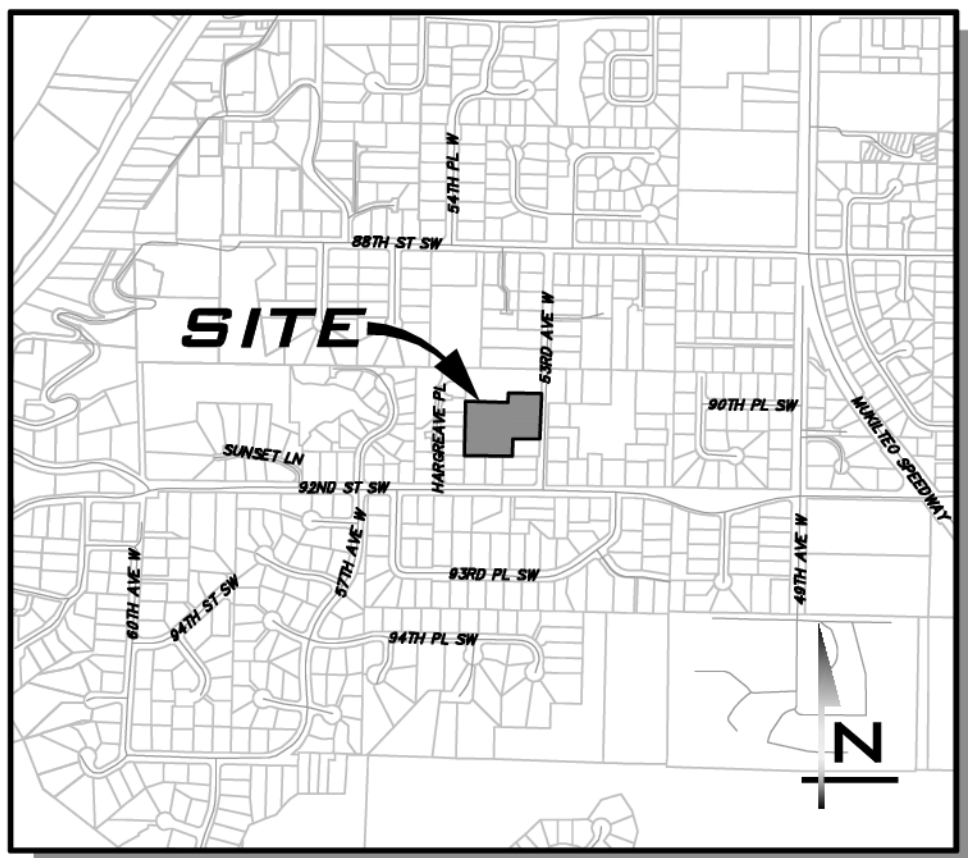
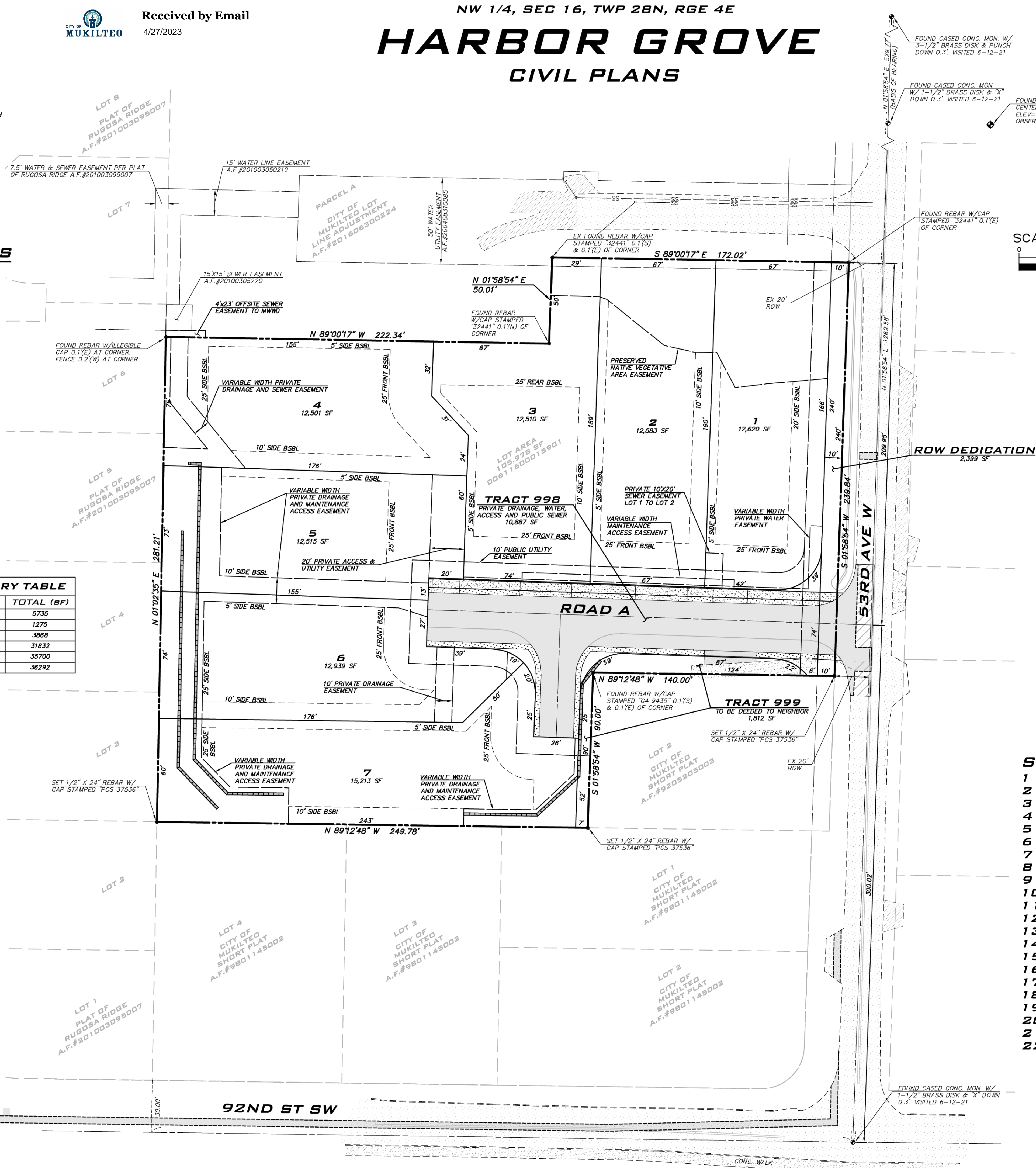
IMPERVIOUS AREA CALCULATIONS

ASSUMED IMPERVIOUS FOR EACH LOT:

LOT 1: 4,038 SF
LOT 2: 4,057 SF
LOT 3: 3,973 SF
LOT 4: 4,000 SF
LOT 5: 4,005 SF
LOT 6: 4,140 SF
LOT 7: 4,868 SF

TOTAL NEW LOT IMPERVIOUS = 29,081 SF

HARD SURFACE AREA SUMMARY TABLE			
	PGHS (SF)	NPGHS (SF)	TOTAL (SF)
EXISTING	4,222	1513	5735
REMOVED	760	515	1275
REPLACED	2870	998	3868
NEW	12201	19631	31832
NEW + REPLACED	15071	20629	35700
TOTAL HARD SURFACES	15663	20629	36292



VICINITY MAP

NOT TO SCALE

PROJECT TEAM

OWNER/APPLICANT

SEA-PAC HOME
120 SW EVERETT MALL WAY, STE 100
EVERETT, WA 98204
(425) 628-5353
CONTACT: NATE PERK

CIVIL ENGINEER

THE BLUELINE GROUP
25 CENTRAL WAY, SUITE 400
KIRKLAND, WA 98033
(425) 250-4704
CONTACT: TC COLLARAN, AICP, PLA

GEOTECHNICAL ENGINEER

EARTH SOLUTIONS NW LLC
15365 NE 90TH ST, SUITE 100
REDMOND, WA 98052
(425) 449-4704
CONTACT: HENRY WRIGHT, PE

UTILITY PURVEYORS

WATER SUPPLY: MUKILTEO WATER AND WASTEWATER DISTRICT
SANITARY SEWER: MUKILTEO WATER AND WASTEWATER DISTRICT
FIRE DISTRICT: MUKILTEO FIRE DISTRICT
SCHOOL DISTRICT: MUKILTEO SCHOOL DISTRICT NO 6

SITE DATA

SITE ADDRESS: 9110 53RD AVE W
MUKILTEO, WA 98275

TAX ACCOUNT NUMBER: 00611600015901

EXISTING ZONING: RD-12.5

GROSS SITE AREA: 2.43 ACRES (105,978 SF)

NEW SITE AREA: 2.38 ACRES (103,579 SF)

NUMBER OF LOTS PROPOSED: 7

MINIMUM LOT SIZE (REQUIRED): 12,500 SF

MAXIMUM LOT WIDTH: 60 FEET

SETBACKS:
FRONT: 25'
CORNER: 20'
SIDE: 5', WITH 15' OF TOTAL SIDE YARD
REAR: 25'

MAXIMUM LOT COVERAGE: 30%
MAXIMUM LOT HARD SURFACE COVERAGE: 55%
(SEE HARD SURFACE AREA SUMMARY, THIS SHEET)

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- GN-01 GENERAL NOTES & LEGEND
- EC-01 EXISTING CONDITIONS & DEMO PLAN
- SP-01 SITE PLAN
- TP-01 TESC PLAN
- TD-01 TESC NOTES & DETAILS
- TD-02 TESC NOTES & DETAILS
- HC-01 HORIZONTAL CONTROL PLAN
- GP-01 GRADING PLAN
- UT-01 COMPOSITE UTILITY PLAN
- RS-01 ROAD & STORM PLAN
- RP-01 ROAD & STORM PROFILES
- VT-01 VAULT PLANS & SECTIONS
- VT-02 VAULT DETAILS & NOTES
- PS-01 PUMP STATION DETAILS
- TR-01 TREE RETENTION PLANS
- TR-02 TREE RETENTION DETAILS
- LS-01 LANDSCAPE PLANS
- LS-02 LANDSCAPE DETAILS
- DT-01 STANDARD DETAILS
- DT-02 STANDARD DETAILS
- DT-03 STANDARD DETAILS

EXISTING UTILITY NOTE

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CITY OF MUKILTEO FILE NUMBERS
SD-2021-001/ENG-2021-019/SEPA-2021-010



BLUELINE

25 CENTRAL WAY, SUITE 400,
KIRKLAND, WA 98033
P: 425.216.4051 F: 425.216.4052
WWW.THEBLUELINEGROUP.COM

SCALE:

AS NOTED

PROJECT MANAGER:

T.C. COLLARAN, PLA, AICP

PROJECT ENGINEER:

LUCAS ZIROTTI

DESIGNER:

LEE M. TOMKINS

ISSUE DATE:

7/29/21

NO	DATE	BY	REVISIONS	
			DESCRIPTION	DATE
1	8/2/21	LCZ	REVISIONS PER CITY 1ST ROUND COMMENTS	
2	4/23/23	LCZ	REVISIONS PER CITY 2ND ROUND COMMENTS	

COVER SHEET

HARBOR GROVE

CIVIL PLANS

9110 53RD AVE W

SNOHOMISH COUNTY WASHINGTON



4/19/23

JOB NUMBER:

21-073

SHEET NAME:

CV-01

SHT 1 OF 22

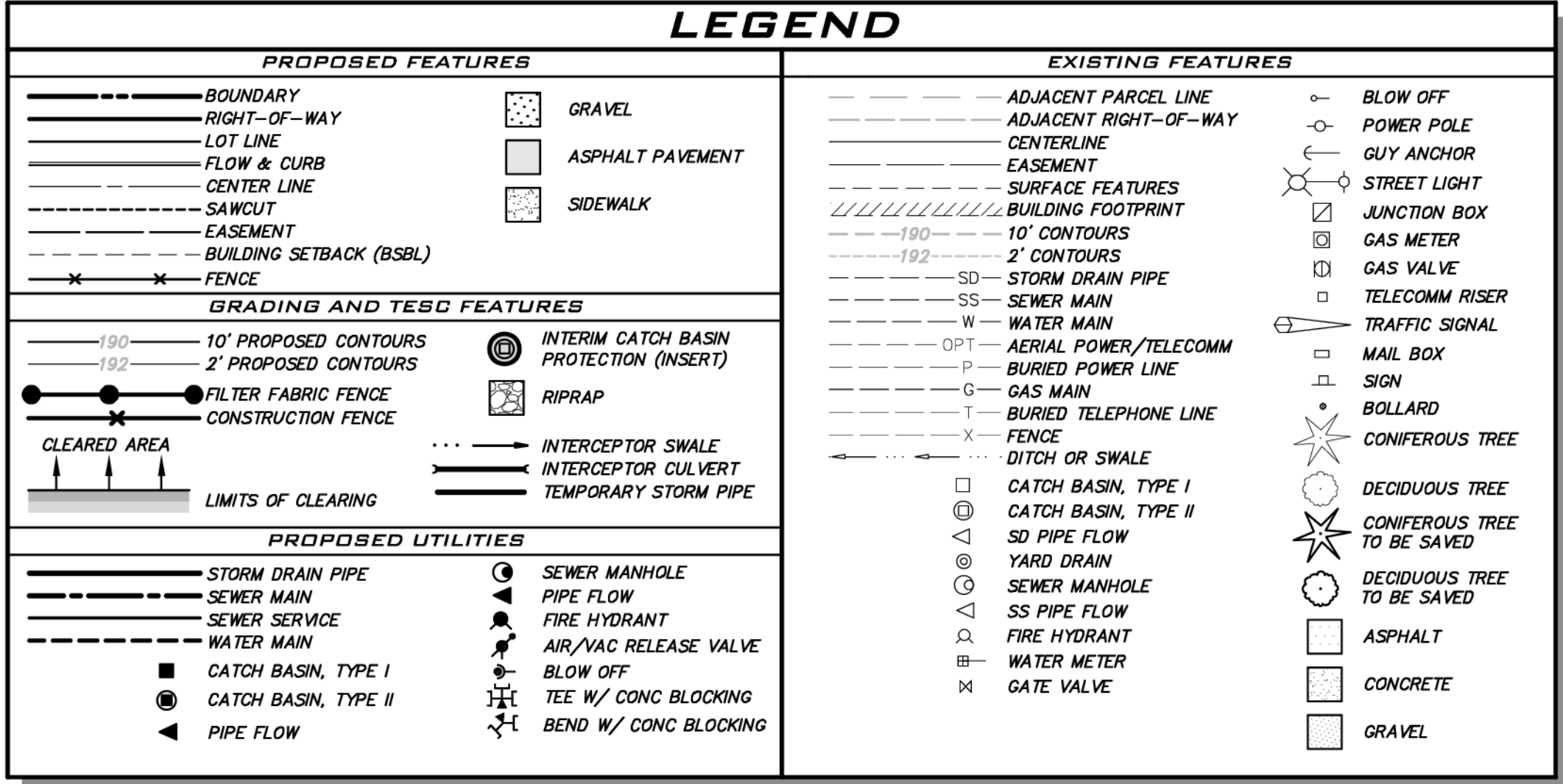
GENERAL NOTES

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT CITY OF MUKILTEO DEVELOPMENT STANDARDS, THE CURRENT EDITION OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, AND THE ADOPTED EDITION OF THE WASHINGTON STATE DEPARTMENT OF ECOLOGY STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON.
2. ALL WORK WITHIN THE PLAT AND CITY RIGHT-OF-WAY SHALL BE SUBJECT TO THE INSPECTION OF THE CITY.
3. PRIOR TO ANY SITE CONSTRUCTION INCLUDING CLEARING/LOGGING OR GRADING, THE SITE CLEARING LIMITS SHALL BE LOCATED AND FIELD IDENTIFIED BY THE PROJECT SURVEYOR (OR PROJECT ENGINEER) AS REQUIRED BY THESE PLANS. THE PROJECT SURVEYOR'S NAME AND PHONE NUMBER IS DARREN RIDDLE (425) 512-7099.
4. THE DEVELOPER, CONTRACTOR AND PROJECT ENGINEER SHALL BE RESPONSIBLE FOR WATER QUALITY AS DETERMINED BY THE MONITORING PROGRAM ESTABLISHED BY THE PROJECT ENGINEER. THE PROJECT ENGINEER'S NAME AND PHONE NUMBER IS KRISTAL KEATING, PE (425) 216-4051.
5. PRIOR TO ANY SITE WORK, THE CONTRACTOR SHALL CONTACT THE CITY OF MUKILTEO COMMUNITY DEVELOPMENT DEPARTMENT AT 425-263-8000 TO SCHEDULE A PRECONSTRUCTION CONFERENCE.
6. ENGINEERED AS-BUILT DRAWINGS IN ACCORDANCE WITH THE CURRENT ADOPTED INTERNATIONAL BUILDING CODE SHALL BE REQUIRED PRIOR TO FINAL SITE APPROVAL.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS FOR UTILITY, ROAD, AND RIGHT-OF-WAY CONSTRUCTION. THE CONTRACTOR FOR THIS PROJECT IS CONTACT PERSON: TBD
PHONE: TBD
MOBILE: TBD
24-HOUR EMERGENCY CONTACT AND PHONE: TBD
8. THE CONSTRUCTION STORMWATER POLLUTION PREVENTION (SWPP) FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED SWPPP PLANS PRIOR TO ANY GRADING OR LAND CLEARING. THESE FACILITIES MUST BE SATISFACTORILY MAINTAINED UNTIL CONSTRUCTION AND LANDSCAPING IS COMPLETED AND THE POTENTIAL FOR ON-SITE EROSION HAS PASSED. SEDIMENT LADEN WATERS SHALL NOT ENTER THE NATURAL DRAINAGE SYSTEM.
9. A CERTIFIED EROSION AND SEDIMENT CONTROL LEAD (CESCL) OR SWPPP SUPERVISOR SHALL BE RESPONSIBLE FOR MAINTAINING THE CONSTRUCTION SWPP FACILITIES, AS OUTLINED IN THE APPROVED SWPPP, OR AS MODIFIED FROM TIME TO TIME. CONTACT INFORMATION FOR THE CESCL (OR SWPPP SUPERVISOR) FOR THE PROJECT SHALL BE GIVEN TO THE CITY PRIOR TO THE START OF CONSTRUCTION.
10. NONCOMPLIANCE WITH THE REQUIREMENTS FOR EROSION CONTROLS, WATER QUALITY AND CLEARING LIMITS MAY RESULT IN REVOCATION OF PROJECT PERMITS, PLAN APPROVAL, AND BOND FORECLOSURES.
11. TRENCH BACKFILL OF NEW UTILITIES AND STORM DRAINAGE FACILITIES SHALL BE COMPACTED TO 95% MAXIMUM DENSITY (MODIFIED PROCTOR) UNDER ROADWAYS AND 90% MAXIMUM DENSITY (MODIFIED PROCTOR) OFF ROADWAYS. COMPACTION SHALL BE PERFORMED IN ACCORDANCE WITH SECTIONS Y-08.3(3) AND Z-3.3(14) D OF THE WSDOT STANDARD SPECIFICATIONS.
12. THE OWNER AND CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION. LOCATION OF UTILITIES SHOWN ON CONSTRUCTION PLANS ARE BASED ON BEST RECORDS AVAILABLE AND ARE SUBJECT TO VARIATION. FOR ASSISTANCE IN UTILITY LOCATION, CALL 811.
13. PRIOR TO CONSTRUCTION THE OWNER AND/OR CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND THE PUBLIC WORKS DIRECTOR WHEN CONFLICTS EXIST BETWEEN THE PLANS AND FIELD CONDITIONS. CONFLICTS SHALL BE RESOLVED (INCLUDING PLAN AND PROFILE REVISIONS) AND RESUBMITTED FOR APPROVAL PRIOR TO PROCEEDING WITH CONSTRUCTION.
14. THE CONTRACTOR SHALL KEEP TWO SETS OF PLANS ON SITE AT ALL TIMES FOR RECORDING AS-BUILT INFORMATION. ONE SET SHALL BE SUBMITTED TO THE PROJECT ENGINEER, AND ONE SET SHALL BE SUBMITTED TO THE CITY AT COMPLETION OF CONSTRUCTION AND PRIOR TO FINAL ACCEPTANCE OF WORK.
15. A GRADING PERMIT ISSUED PURSUANT TO THE CURRENT ADOPTED INTERNATIONAL BUILDING CODE, AND APPROVAL OF THE TEMPORARY EROSION AND SEDIMENTATION CONTROL PLAN SHALL BE OBTAINED FROM THE COMMUNITY DEVELOPMENT DEPARTMENT PRIOR TO ANY ON-SITE GRADING WORK NOT EXPRESSLY EXEMPT BY THE CURRENT ADOPTED INTERNATIONAL BUILDING CODE.

STORM DRAINAGE GENERAL NOTES

1. ALL PIPE SHALL BE PLACED ACCORDING DIVISION Y OF THE WSDOT STANDARD SPECIFICATIONS.
2. BACKFILL SHALL BE PLACED EQUALLY ON BOTH SIDES OF THE PIPE OR PIPE-ARCH IN 6" AVERAGE DEPTH LOOSE LIFTS. MAXIMUM LIFT DEPTH SHALL NOT EXCEED 9". EACH LIFT SHALL BE THOROUGHLY COMPACTED. COMPACTED LIFTS MUST EXTEND AT LEAST ONE PIPE DIAMETER ON EACH SIDE OF THE PIPE OR TO THE SIDE OF THE TRENCH. BACKFILL OVER THE PIPE SHALL BE PERFORMED IN ACCORDANCE WITH SECTIONS 7-08.3(3) THE WSDOT STANDARD SPECIFICATIONS.
3. ALL GRATES LOCATED IN THE GUTTER FLOW LINE (INLET AND CATCH BASIN) SHALL BE DEPRESSED 0.1 FEET BELOW PAVEMENT LEVEL.
4. ALL CATCH BASINS ARE TO BE TYPE I UNLESS OTHERWISE APPROVED BY THE CITY OR DESIGNATED REPRESENTATIVE. THE USE AND INSTALLATION OF INLETS IS NOT ALLOWED.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING ALL MANHOLE, INLET AND CATCH BASIN FRAMES AND GRATES TO GRADE JUST PRIOR TO CURB INSTALLATION AND/OR PAVING.
6. ALL CATCH BASINS WITH A DEPTH OF 5 FEET OR GREATER TO THE FLOW LINE SHALL BE TYPE II CATCH BASINS.
7. VANED GRATES ARE REQUIRED ON ALL STORM STRUCTURES. ALL CATCH BASINS AND MANHOLES SHALL HAVE LOCKING LIDS. ROLLED GRATES ARE NOT APPROVED FOR USE.
8. POLYPROPYLENE SAFETY STEPS AND LADDER STEPS SHALL BE PROVIDED IN ALL MANHOLES AND SHALL BE POSITIONED CORRECTLY WITH THE BOLT AREAS ON THE RIM.
9. CATCH BASIN FRAMES AND GRATES SHALL BE OLYMPIC FOUNDRY MODEL SM60, SMS-, OR SM 44. LOCKING TYPE OR EQUIVALENT. MODEL SM52 SHALL BE REFERRED TO AS A "THROUGH CURB INLET" ON THE PLANS.
10. DETENTION PONDS WITH SIDE SLOPES STEEPER THAN 3:1 OR WITH A MAXIMUM WATER DEPTH GREATER THAN 3 FEET SHALL REQUIRE A VINYL COATED CHAIN LINK PERIMETER FENCE. SIDE SLOPE AVERAGING SHALL NOT BE ALLOWED. ALL INLET AND OUTFALL PIPES SHALL HAVE A TRASH RACK INSTALLED AND A MORTARED RIPRAP HEADWALL.
11. PRIOR TO SIDEWALK CONSTRUCTION, LOT DRAINAGE SYSTEMS, STUB-OUTS AND ANY BEHIND SIDEWALK DRAINS MUST BE INSTALLED AS REQUIRED. PIPE SHALL BE PVC 3.34, OR SDR-35 STUB-OUTS SHALL BE MARKED WITH A 2" X 4" WITH 3 FEET VISIBLE ABOVE GRADE AND MARKED "STORM". LOCATIONS OF THESE INSTALLATIONS SHALL BE SHOWN ON THE AS-BUILT CONSTRUCTION PLANS SUBMITTED TO THE CITY.
12. STORM WATER RETENTION/DETENTION FACILITIES, STORM DRAINAGE PIPE AND CATCH BASINS SHALL BE FLUSHED AND CLEANED BY THE DEVELOPER PRIOR TO:
a. CITY OF MUKILTEO FINAL ACCEPTANCE OF THE PROJECT AND;
b. UPON COMMENCEMENT AND COMPLETION OF THE 2 YEAR WARRANTY PERIOD FOR THE STORM DRAINAGE SYSTEM. AN INVOICE DETAILING THE FLUSHING AND CLEANING SHALL BE PROVIDED TO THE CITY.
13. ALL PIPES SHALL BE INSTALLED WITH RUBBER GASKETS AS PER MANUFACTURER'S RECOMMENDATIONS.
14. CORRUGATED POLYETHYLENE PIPE (CPP):
a. ALL PIPE SHALL BE SMOOTH INTERIOR. CPP SHALL BE DOUBLE-WALLED. ALL PIPE SHALL MEET AASHTO AND ASTM SPECIFICATIONS.
b. UPON REQUEST BY THE CITY INSPECTOR, ALL PIPE RUNS SHALL PASS THE LOW PRESSURE AIR TEST REQUIREMENTS OF SECTION 7-04.3(1) E & F OF THE WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION. PIPE RUNS SHALL BE TESTED WITH PIPE LOADED AND COMPACTED TO FINISH GRADE.
c. UPON REQUEST BY THE CITY INSPECTOR, PIPE SHALL BE SUBJECT TO MANDREL TESTING (MANDREL SIZE = 90% OF NOMINAL PIPE DIAMETER).
d. PIPE SHALL BE STORED ON SITE IN SHIPPING BUNKS ON A FLAT LEVEL SURFACE. THIS REQUIREMENT WILL BE STRICTLY ENFORCED; FAILURE TO COMPLY MAY RESULT IN REJECTION OF THE PIPE AND/OR FUTURE RESTRICTION ON USE OF MATERIAL.
e. MINIMUM DEPTH OF COVER SHALL BE 2 FEET.
f. COUPLINGS SHALL BE INTEGRAL BELL AND SPIGOT OR DOUBLE BELL. SEPARATE COUPLINGS, SPLIT COUPLINGS WILL NOT BE ALLOWED.
g. BACKFILL SHALL COMPLY WITH SECTION Y-08.3(3) OF THE WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION WITH THE EXCEPTION THAT THE SECOND PARAGRAPH OF SECTION 7-08.3(3) IS DELETED AND REPLACED WITH:

THE MATERIAL USED FOR BACKFILLING AROUND AND TO A POINT 1 FOOT ABOVE THE TOP OF THE PIPE SHALL BE CLEAN EARTH OR SAND, FREE FROM CLAY. ANY GRAVEL OR STONES INCLUDED IN THE BACKFILL SHALL PASS THROUGH A 1 INCH SEVE.
15. CULVERT ENDS SHALL BE BEVELED TO MATCH SIDE SLOPES. FIELD CUTTING OF CULVERT ENDS IS PERMITTED WHEN APPROVED BY THE CITY.
16. ALL FIELD CUT CULVERT PIPE SHALL BE TREATED AS REQUIRED IN THE STANDARD SPECIFICATIONS OR GENERAL SPECIAL PROVISIONS.



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25 CENTRAL WAY, SUITE 400,
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P: 425.216.4051 F: 425.216.4052
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AS NOTED
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LUCAS ZIROTTI
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GENERAL NOTES & LEGEND
HARBOR GROVE
CIVIL PLANS
9110 53RD AVE W
SNOHOMISH COUNTY
WASHINGTON



4/19/23
JOB NUMBER:
21-073
SHEET NAME:
GN-01

SHT 2 OF 22

[illegible]

**EXISTING CONDITIONS & DEMO
PLAN**

HARBOR GROVE

CIVIL PLANS

9110 53RD AVE W

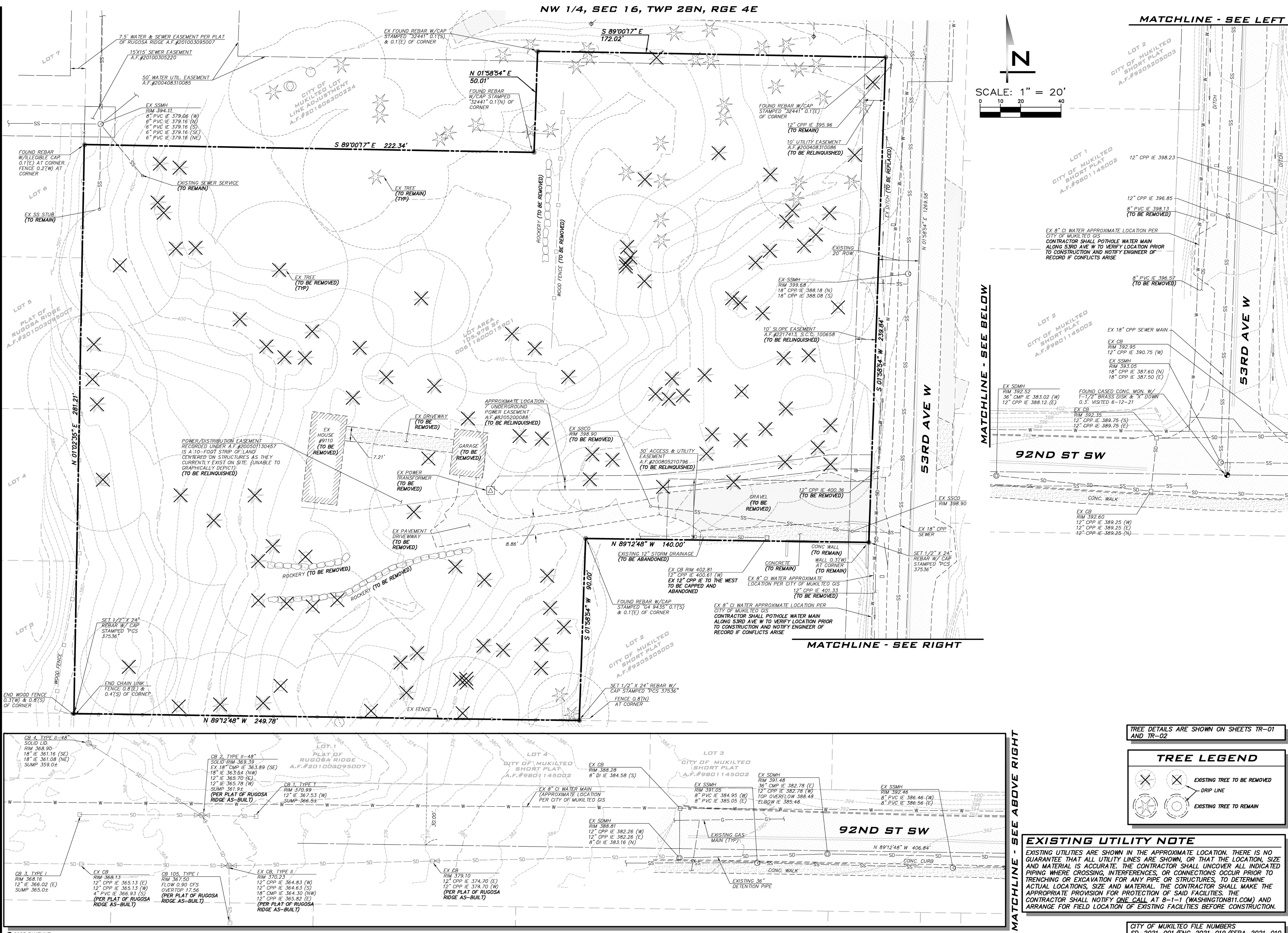


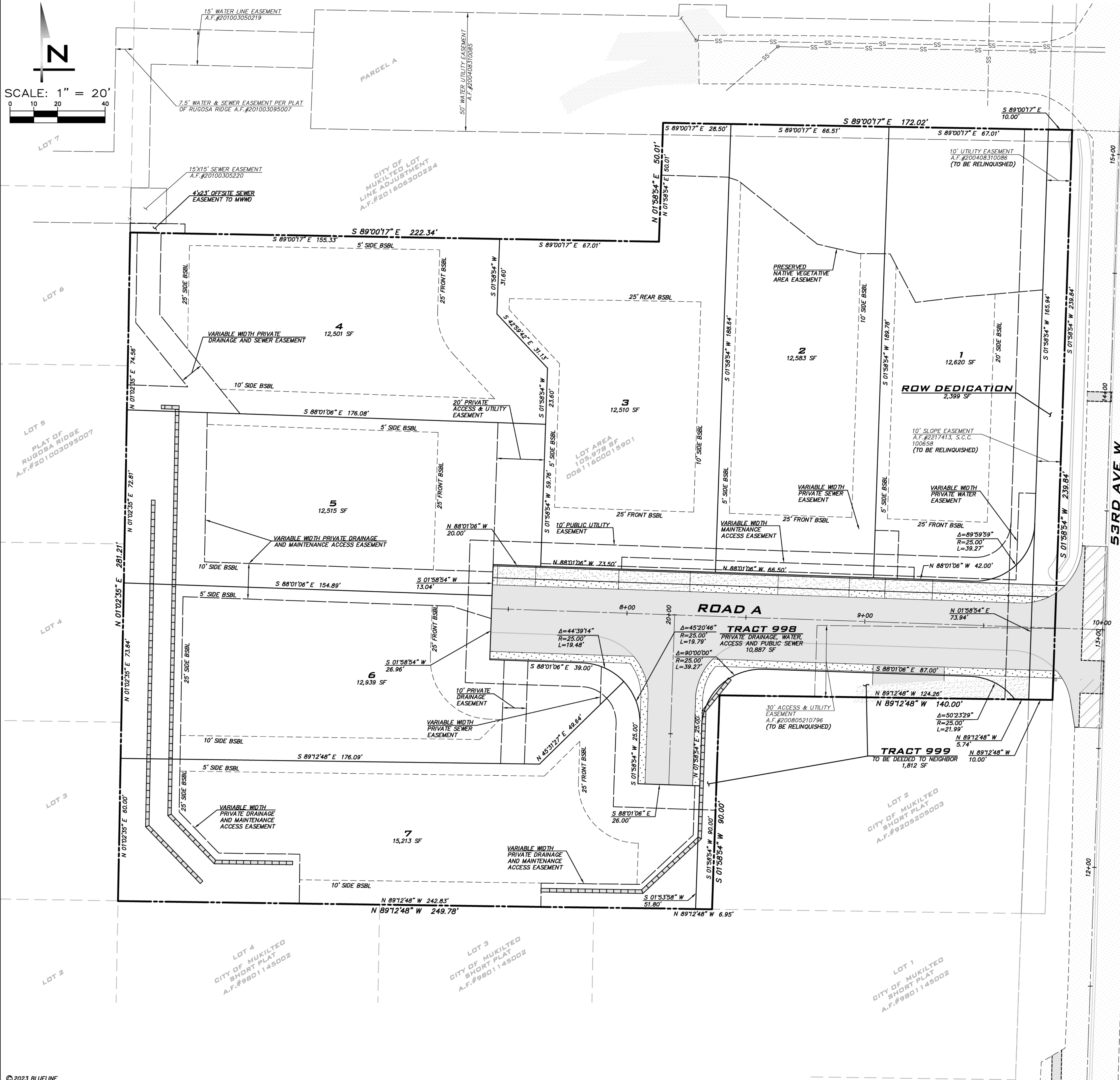
4/19/23

JOB NUMBER:
21-073

SHEET NAME:
EC-01

SHT **3** OF **22**





TRACT 999 COVENANT NOTE

COVENANT SHALL BE PREPARED AT FINAL PLAT TO ALLOW ACCESS FOR PARCEL #00611600015902 DRIVEWAY AND ALLOW ACCESS WITHIN TRACT 999 TO MAINTAIN PROPOSED RETAINING WALL & STORM SYSTEM

DRAINAGE FACILITY MAINTENANCE NOTE

I, THE OWNER AND CONTRACT PURCHASERS OF THE LANDS HEREIN PLATTED (GRANTOR), AGREE THAT THE OBLIGATIONS OF GRANTOR SHALL INURE TO THE BENEFIT OF AND BE BINDING UPON THE HEIRS, SUCCESSORS, AND ASSIGNS. GRANTOR AGREES THAT THIS COVENANT TOUCHES AND CONCERNS THE LAND DESCRIBED HEREIN AND SHALL RUN WITH THE LAND.

GRANTOR BY EXECUTION OF THIS COVENANT ACKNOWLEDGES THAT THE BENEFITS OF THIS COVENANT INURE TO GRANTOR, DOWNSTREAM PROPERTY OWNERS, AND THE GENERAL PUBLIC, AND THAT THE CITY OF MUKILTEO (CITY) AS THIRD-PARTY BENEFICIARY OF THIS COVENANT HAS THE RIGHT, BUT NOT THE OBLIGATION, TO ENFORCE THIS COVENANT ON BEHALF OF DOWNSTREAM PROPERTY OWNERS AND THE GENERAL PUBLIC. CITY REQUIRES THIS COVENANT TO PROTECT PUBLIC AND PUBLIC PROPERTY, PRIVATE AND PUBLIC DRAINAGE INFRASTRUCTURE, AND NATURAL RESOURCES OF DOWNSTREAM PROPERTY OWNERS AND THE GENERAL PUBLIC.

GRANTOR, IN CONSIDERATION OF THE APPROVAL OF THIS SUBDIVISION, HEREBY COVENANTS TO PERFORM REGULAR MAINTENANCE UPON THE DRAINAGE FACILITIES INSTALLED, OR TO BE INSTALLED, UPON GRANTOR'S PROPERTY. REGULAR MAINTENANCE SHALL INCLUDE, AT A MINIMUM, ANNUAL INSPECTION OF THE STORMWATER DRAINAGE SYSTEM, AS APPLICABLE, THE SYSTEM SHALL INCLUDE THE STORMWATER CONVEYANCE SYSTEM PIPES, DITCHES, SWALES, AND CATCH BASINS; STORMWATER FLOW REGULATION SYSTEM DETENTION PONDS, VAULTS, PIPES, RETENTION PONDS; FLOW REGULATION AND CONTROL STRUCTURES; INFILTRATION SYSTEMS AND WATER QUALITY CONTROL SYSTEM.

THE SCOPE OF THIS COVENANT AND RIGHT OF ENTRY SHALL BE ADEQUATE TO PROVIDE FOR THE ACCESS, INSPECTION, AND MAINTENANCE OF THE STORMWATER DRAINAGE SYSTEM, AND SHALL BE SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS:

- CITY SHALL HAVE THE PERPETUAL RIGHT OF ENTRY ACROSS ADJACENT LANDS OF THE GRANTOR FOR PURPOSES OF INSPECTING, AUDITING, OR CONDUCTING REQUIRED MAINTENANCE OF THE DRAINAGE FACILITY.
- IF CITY INSPECTION DETERMINES THAT MAINTENANCE IS NOT BEING PERFORMED, CITY SHALL ENDEAVOR TO PROVIDE GRANTOR REASONABLE ADVANCE NOTIFICATION OF THE NEED TO PERFORM THE MAINTENANCE AND A REASONABLE OPPORTUNITY FOR GRANTOR TO PERFORM IT. IN THE EVENT THAT GRANTOR FAILS TO COMPLETE THE REQUIRED MAINTENANCE WITHIN A REASONABLE TIME PERIOD, CITY SHALL HAVE THE RIGHT TO OTHERS TO CONTRACT WITH OTHERS TO PERFORM IT AT THE SOLE EXPENSE OF THE GRANTOR. IF CITY IN ITS SOLE DISCRETION DETERMINES THAT AN IMMINENT OR PRESENT DANGER EXISTS, REQUIRED MAINTENANCE AND/OR REPAIR MAY BEGIN IMMEDIATELY AT GRANTOR'S EXPENSE WITHOUT PRIOR NOTICE TO GRANTOR. IN SUCH EVENT, CITY SHALL PROVIDE GRANTOR WITH A WRITTEN STATEMENT AND ACCOUNTING OF ALL WORK PERFORMED AND THE FEES, CHARGES, AND EXPENSES INCURRED IN MAKING SUCH REPAIRS. GRANTOR SHALL AGREE TO REIMBURSE CITY OR PAY CITY'S VENDORS DIRECTLY FOR ALL REASONABLE FEES, CHARGES, AND EXPENSES IDENTIFIED IN CITY'S STATEMENT.
- IF CITY IS REQUIRED TO ACT AS A RESULT OF GRANTOR'S FAILURE TO COMPLY WITH THIS COVENANT, CITY MAY REMOVE ANY OBSTRUCTIONS AND/OR INTERFERENCES THAT IN THE SOLE OPINION OF COUNTY IMPAIR THE OPERATION OF THE DRAINAGE FACILITY OR THE MAINTENANCE THEREOF. GRANTOR AGREES TO HOLD CITY, ITS OFFICERS, EMPLOYEES, AND AGENTS HARMLESS FROM ANY AND ALL CLAIMS, ACTIONS, SUITS, LIABILITY, LOSS, EXPENSES, DAMAGES AND JUDGMENTS OF ANY NATURE WHATSOEVER, INCLUDING COSTS AND ATTORNEY'S FEES, INCURRED BY THE REMOVAL OF VEGETATION OR PHYSICAL INTERFERENCE FROM THE DRAINAGE FACILITY.
- WHEN EXERCISING THE MAINTENANCE PROVISIONS OF THE COVENANT, IN THE EVENT OF NONPAYMENT, CITY MAY BRING SUIT TO RECOVER SUCH COSTS, INCLUDING ATTORNEY'S FEES, AND UPON OBTAINING A JUDGMENT, SUCH AMOUNT SHALL BECOME A LIEN AGAINST THE PROPERTY OF GRANTOR AS PROVIDED IN RCW 4.56.190.
- GRANTOR COVENANTS THAT ALL OF THE OWNERS, CONTRACT PURCHASERS AND LIEN HOLDERS OF THE PROPERTY DESCRIBED HEREIN HAVE SIGNED THE DEDICATION AND/OR DECLARATION OF THIS SUBDIVISION, THAT THEY HAVE THE RIGHT TO GRANT THIS COVENANT ON THE PROPERTY, AND THAT THE TITLE TO THE PROPERTY IS FREE AND CLEAR OF ANY ENCUMBRANCES WHICH WOULD INTERFERE WITH THE ABILITY TO GRANT THIS COVENANT.

DRAFT EASEMENT LANGUAGE

- SUBJECT TO A PRIVATE WATER EASEMENT FOR THE PURPOSES SHOWN THEREIN AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT RECORDED UNDER SNOHOMISH COUNTY AUDITOR'S FILE NUMBER _____ (SHOWN ON MAP).
- SUBJECT TO A PRIVATE SEWER EASEMENT FOR THE PURPOSE SHOWN THEREIN AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT RECORDED UNDER SNOHOMISH COUNTY AUDITOR'S FILE NUMBER _____ (SHOWN ON MAP).
- SUBJECT TO A PUBLIC MAINTENANCE ACCESS EASEMENT FOR THE PURPOSE SHOWN THEREIN AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT RECORDED UNDER SNOHOMISH COUNTY AUDITOR'S FILE NUMBER _____ (SHOWN ON MAP).
- SUBJECT TO A PRIVATE ACCESS & UTILITY EASEMENT FOR THE PURPOSE SHOWN THEREIN AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT RECORDED UNDER SNOHOMISH COUNTY AUDITOR'S FILE NUMBER _____ (SHOWN ON MAP).
- SUBJECT TO A PRIVATE DRAINAGE AND MAINTENANCE ACCESS EASEMENT FOR THE PURPOSE SHOWN THEREIN AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT RECORDED UNDER SNOHOMISH COUNTY AUDITOR'S FILE NUMBER _____ (SHOWN ON MAP).
- SUBJECT TO A PRIVATE EXISTING DRIVEWAY EASEMENT FOR THE PURPOSE SHOWN THEREIN AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT RECORDED UNDER SNOHOMISH COUNTY AUDITOR'S FILE NUMBER _____ (SHOWN ON MAP).
- SUBJECT TO A PUBLIC UNDERGROUND AND/OR OVERHEAD ELECTRIC TRANSMISSION AND/OR DISTRIBUTION SYSTEM EASEMENT FOR THE PURPOSE SHOWN THEREIN AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT RECORDED UNDER SNOHOMISH COUNTY AUDITOR'S FILE NUMBER _____ (SHOWN ON MAP).
- SUBJECT TO A NATIVE GROWTH PROTECTION EASEMENT FOR THE PURPOSE SHOWN THEREIN AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT RECORDED UNDER SNOHOMISH COUNTY AUDITOR'S FILE NUMBER _____ (SHOWN ON MAP).

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CITY OF MUKILTEO FILE NUMBERS
SD-2021-001/ENG-2021-019/SEPA-2021-010

BLUELINE
25 CENTRAL WAY, SUITE 400,
HUNTSVILLE, AL 35893
P: 256.216.4051 F: 256.216.4052
WWW.THEBLUELINEGROUP.COM

SCALE:
AS NOTED
PROJECT MANAGER:
T.C. COLLIERAN, P.E., AICP
PROJECT ENGINEER:
LUCAS ZIOTI
DESIGNER:
LEE M. TOMKINS
ISSUE DATE:
7/29/21

REVISIONS		BY	DATE	NO
REVISIONS FOR CITY 1ST ROUND COMMENTS		CC	8/9/21	1
REVISIONS FOR CITY 2ND ROUND COMMENTS		LM	4/12/23	2

SITE PLAN
HARBOR GROVE
CIVIL PLANS
9110 53RD AVE W
SNOHOMISH COUNTY WASHINGTON



4/19/23
JOB NUMBER:
21-073
SHEET NAME:
SP-01

SHT **4** OF **22**

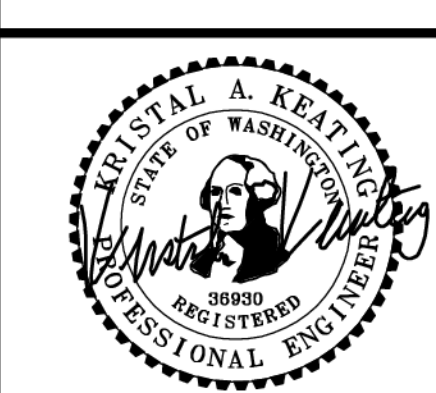
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TESC PLAN

HARBOR GROVE

CIVIL PLANS

9110 53RD AVE W

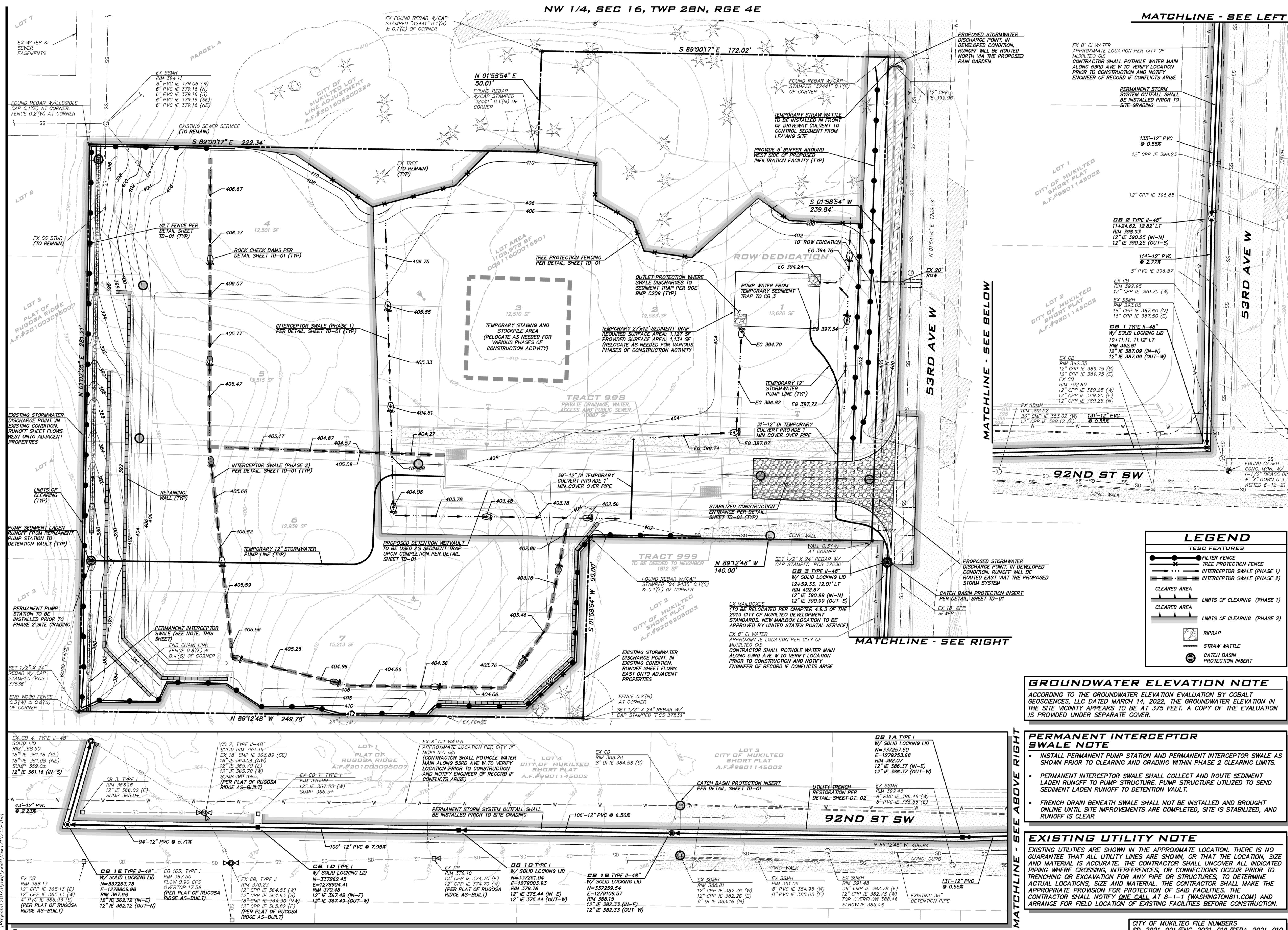


4/19/23

JOB NUMBER:
21-073

SHEET NAME:
TP-01

SHT **5** OF **22**



SITE GRADING AND CONSTRUCTION SWPPP NOTES

- PRIOR TO ANY SITE WORK, INCLUDING CLEARING, LOGGING OR GRADING, THE SITE CLEARING LIMITS SHALL BE LOCATED AND FIELD IDENTIFIED BY THE PROJECT SURVEYOR (OR PROJECT ENGINEER) AS REQUIRED BY THESE PLANS. THE PROJECT SURVEYOR'S NAME AND PHONE NUMBER IS DARREN RIDDLE (425) 512-7099.
- SOILS IN MUKILTEO OFTEN CONTAIN FINER PARTICLES WHICH WILL PASS THROUGH SEDIMENT TRAPS UNTREATED AND HAVE EXTREMELY LONG SETTLING TIMES. THEREFORE, THE NEED TO CONTROL EROSION FROM THE SITE IS THE FIRST PRIORITY AND SHALL BE EMPHASIZED.
- THE CONSTRUCTION STORMWATER POLLUTION PREVENTION FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED SWPPP PRIOR TO ANY GRADING OR EXTENSIVE LAND CLEARING. AN INSPECTION BY THE CITY OF THESE FACILITIES SHALL BE ARRANGED BY THE CONTRACTOR PRIOR TO ANY GRADING. THESE FACILITIES MUST BE SATISFACTORILY MAINTAINED UNTIL CONSTRUCTION AND LANDSCAPING IS COMPLETED AND THE POTENTIAL FOR ON-SITE EROSION HAS PASSED.
- STOCKPILES SHALL BE LOCATED IN SAFE AREAS AND ADEQUATELY PROTECTED BY TEMPORARY SEEDING AND MULCHING. HYDROSEEDING IS PREFERRED.
- THE DEVELOPER (OR PROJECT ENGINEER) IS RESPONSIBLE FOR WATER QUALITY AS DETERMINED BY THE MONITORING PROGRAM ESTABLISHED BY THE PROJECT ENGINEER. THE PROJECT ENGINEER'S NAME AND PHONE NUMBER IS KRISTAL KEATING, PE (425) 216-4051.
- IF THE PROJECT WILL DISTURB MORE THAN ONE (1) ACRE OF LAND, THEN A CONSTRUCTION NPDES PERMIT IS REQUIRED AND A CERTIFIED EROSION AND SEDIMENT CONTROL LEAD (CESCL) SHALL BE ASSIGNED TO THE SITE. THE CESCL'S NAME, PHONE NUMBER, AND CESCL CERTIFICATE NUMBER SHALL BE GIVEN TO THE CITY PRIOR TO THE START OF CONSTRUCTION.
- ALL SITE WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT CITY ADOPTED INTERNATIONAL BUILDING CODE.
- ALL EARTH WORK SHALL BE PERFORMED IN ACCORDANCE WITH CITY STANDARDS. A PRECONSTRUCTION SOILS INVESTIGATION MAY BE REQUIRED TO EVALUATE SOILS STABILITY.
- IF CUT AND FILL SLOPES EXCEED A MAXIMUM OF TWO FEET HORIZONTAL TO ONE FOOT VERTICAL, A ROCK OR CONCRETE RETAINING WALL MAY BE REQUIRED. ALL ROCK RETAINING WALLS GREATER THAN FOUR (4) FEET IN HEIGHT SHALL BE DESIGNED AND CERTIFIED BY A PROFESSIONAL ENGINEER EXPERIENCED IN SOIL MECHANICS.
- THE SURFACE OF ALL SLOPES SHALL BE COMPACTED. THIS MAY BE ACCOMPLISHED BY OVER-BUILDING THE SLOPES, THEN CUTTING BACK TO FINAL GRADES; OR BY COMPACTING EACH LIFT AS THE SLOPE IS BEING CONSTRUCTED. ALL SLOPES SHALL BE COMPACTED BY THE END OF EACH WORKING DAY.
- ALL STRUCTURAL FILLS SHALL BE COMPACTED TO A MINIMUM 0+ 95% MAXIMUM DENSITY IN THE UPPER 4 FEET & 60% MAXIMUM DENSITY BELOW 4 FEET AS DETERMINED BY MODIFIED PROCTOR.
- NONCOMPLIANCE WITH THE EROSION CONTROL REQUIREMENTS, WATER QUALITY REQUIREMENTS AND CLEARING LIMITS VIOLATIONS MAY RESULT IN REVOCATION OF PROJECT PERMITS AND PLAN APPROVAL AND BOND FORECLOSURES.
- UPON COMPLETION OF WORK, FINAL REPORTS SHALL BE SUBMITTED TO THE CITY IN CONFORMANCE WITH THE CURRENT CITY ADOPTED INTERNATIONAL BUILDING CODE.
- A WET WEATHER EROSION CONTROL PLAN SHALL BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL ON OR BEFORE SEPTEMBER 1, IF THE PROJECT IS PROPOSING TO ACTIVELY CLEAR, GRADE, OR OTHERWISE DISTURB 1,000 SQUARE FEET OR MORE OF SOIL DURING THE PERIOD BETWEEN OCTOBER 1 AND APRIL 3. OTHER THRESHOLDS FOR A WET WEATHER EROSION CONTROL PLAN INCLUDE PROJECTS THAT:
 - HAVE AREA(S) THAT DRAIN, BY PIPE, OPEN DITCH, SHEET FLOW, OR A COMBINATION OF THESE TO A TRIBUTARY WATER, AND THE TRIBUTARY WATER IS ONE-QUARTER MILE OR LESS DOWNSTREAM, OR
 - HAVE SLOPES STEEPER THAN 15 PERCENT ADJACENT OR ON-SITE, OR
 - HAVE HIGH POTENTIAL FOR SEDIMENT TRANSPORT, AS DETERMINED BY THE CONSTRUCTION SITE SEDIMENT TRANSPORT POTENTIAL WORKSHEET, OR
 - HAVE A CRITICAL AREA OR CRITICAL AREA BUFFER ON-SITE, OR WITHIN 50 FEET OF THE SITE, OR
 - HAVE HIGH GROUNDWATER TABLE OR SPRINGS.

TEMPORARY SEEDING GENERAL NOTES

- USE SEEDING THROUGHOUT THE PROJECT ON DISTURBED AREAS THAT HAVE REACHED FINAL GRADE OR THAT WILL REMAIN UNWORKED FOR MORE THAN 30 DAYS.
- THE OPTIMUM SEEDING WINDOWS ARE: APRIL 1 THROUGH JUNE 30 AND SEPTEMBER 1 THROUGH OCTOBER 1.
- BETWEEN OCTOBER 1 AND MARCH 30 SEEDING REQUIRES A COVER OF MULCH WITH STRAW OR AN EROSION CONTROL BLANKET UNTIL 75 PERCENT GRASS COVER IS ESTABLISHED.
- REVIEW ALL DISTURBED AREAS IN LATE AUGUST TO EARLY SEPTEMBER AND COMPLETE ALL SEEDING BY THE END OF SEPTEMBER.
 - MULCH IS REQUIRED AT ALL TIMES FOR SEEDING. MULCH CAN BE APPLIED ON TOP OF THE SEED OR SIMULTANEOUSLY BY HYDROSEEDING (SEE ECOLOGY BMP C121 MULCHING FOR SPECIFICATIONS).
 - SEED AND MULCH ALL DISTURBED AREAS NOT OTHERWISE VEGETATED AT FINAL SITE STABILIZATION.

MAINTENANCE OF SILTATION BARRIERS

- SILTATION BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED EROSION CONTROL ELEMENTS, ESPECIALLY END-RUNS AND SEDIMENT BUILD-UP. NECESSARY REPAIRS TO BARRIERS SHALL BE ACCOMPLISHED THE SAME DAY.
- SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH RAINFALL. SEDIMENT DEPOSITS MUST BE REMOVED WHEN THE SEDIMENT LEVEL REACHES APPROXIMATELY ONE-HALF THE SILTATION BARRIER HEIGHT.
- ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE CHECK DAM IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDDED.

SEDIMENT TRAP GENERAL NOTES

- SEDIMENT TRAPS ARE ONLY EFFECTIVE IN REMOVING SEDIMENT DOWN TO ABOUT THE MEDIUM SILT SIZE FRACTION. SOILS IN MUKILTEO OFTEN CONTAIN FINE SILT AND MAY NOT BE ADEQUATELY TREATED WITH SEDIMENT PONDS. THEREFORE, EROSION CONTROL PRACTICES SHALL BE EMPHASIZED AND PRIORITIZED.
- THE POND SHALL BE CHECKED AFTER EACH RAIN EVENT, OR WEEKLY, WHICHEVER IS SOONER, TO INSURE THAT IT THE WALLS ARE STRUCTURALLY SOUND, THE POND HAS NOT BEEN DAMAGED BY EROSION OR CONSTRUCTION EQUIPMENT, AND TO DETERMINE MAINTENANCE NEEDS.
- ANY DAMAGE TO THE POND EMBANKMENTS OR SLOPES SHALL BE REPAIRED IMMEDIATELY.
- THE EMERGENCY SPILLWAY SHALL BE CHECKED REGULARLY TO INSURE THAT THE LINING IS WELL ESTABLISHED AND EROSION RESISTANT. THE SILTATION BASIN SHALL BE CHECKED FOR SEDIMENT CLEANOUT AFTER EACH RAINFALL WHICH PRODUCES RUNOFF.
- WHEN THE SEDIMENT REACHES THE CLEANOUT LEVEL (TYPICALLY 1-FOOT IN DEPTH), IT SHALL BE REMOVED AND PROPERLY DISPOSED OF OFF-SITE.
- SECONDARY TREATMENT MAY BE NECESSARY IF THE SEDIMENT POND CANNOT EFFECTIVELY REMOVE THE FINE GRAIN SOILS.

SOURCE CONTROL BMP'S

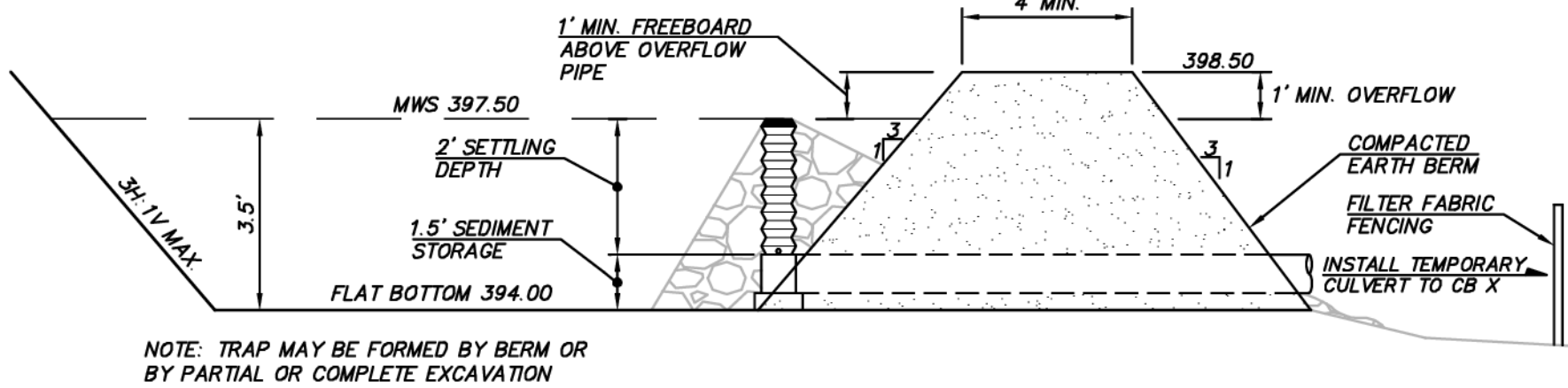
- VEHICLE/EQUIPMENT WASHING & STEAM CLEANING (BMP S1.20 - NO WASHING OF VEHICLES ON SITE (BMP S1.10))
- EMERGENCY SPILL CLEANUP PLANS (BMP S1.80) - NO CHANGE VEHICLE OIL OR OTHER VEHICLE MAINTENANCE ON SITE.
- VEGETATION MANAGEMENT/INTEGRATED PEST MANAGEMENT (BMP S1.90) - CERTIFIED PROFESSIONAL IS TO MANAGE PEST CONTROL.
- MAINTENANCE OF STORM DRAINAGE FACILITIES (BMP S2.00) - CLEAN GRATE, ETC.
- STREET SWEEPING (BMP S20.20) - KEEP STREETS CLEAN & FREE OF DEBRIS.

CONSTRUCTION SEQUENCE

- PRIOR TO CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL SCHEDULE AND ATTEND PRE-CONSTRUCTION CONCERENCE WITH THE CITY OF MUKILTEO INSPECTION UNIT AND EROSION CONTROL SPECIALIST.
- FLAG CLEARING LIMITS AND INSTALL SILT FENCE AS SHOWN.
- INSTALL ROCK CONSTRUCTION ENTRANCES.
- INSTALL PERMANENT STORMWATER OUTFALL ALONG 53RD AVE W AND 92ND ST SW.
- CONSTRUCT TEMPORARY SEDIMENT TRAP AND INSTALL TEMPORARY INTERCEPTOR SWALES (PHASE 1) TO DIRECT SURFACE FLOW TO SEDIMENT TRAP AS SHOWN ON TESC PLAN.
- CLEAR AND GRUB ROAD AREAS AND STOCKPILE AREAS (PHASE 1 LIMITS OF CLEARING). CONSTRUCT DETENTION VAULT AND USE AS SEDIMENT STORAGE. INSTALL PHASE 2 EROSION CONTROL BMP'S SUCH AS INTERCEPTOR SWALES, ETC. AND DIRECT RUNOFF TO THE VAULT.
- INSTALL PERMANENT INTERCEPTOR SWALE RUNNING PARALLEL ALONG WEST PARCEL BOUNDARY AND PERMANENT PUMP STATION.
- CLEAR AND GRUB REMAINING AREAS WITHIN PHASE 2 CLEARING LIMITS DELINEATED ON THE TESC PLAN.
- GRADE AND STABILIZE ROAD AND GRAVEL BASE. COVER EXPOSED SOILS WITH MULCH, HOG FUEL OR HYDROSEED.
- CONSTRUCT SEWER, WATER AND STORM UTILITIES. INSTALL GAS, POWER, TELEPHONE AND CABLE UTILITIES AS REQUIRED.
- PLACE AND POUR CURBS AND GUTTERS.
- PAVE ROADS WITH ATB AND PLACE DETENTION SYSTEM INTO FULL OPERATION.
- HYDROSEED REMAINING EXPOSED SOILS AND STABILIZE PROJECT.
- FLUSH STORM DRAINAGE SYSTEM AND REMOVED SEDIMENTATION IN ALL CATCH BASINS AND THE VAULT.
- STABILIZE ALL DISTURBED AREAS AND REMOVE ALL T.E.S.C. MEASURES.

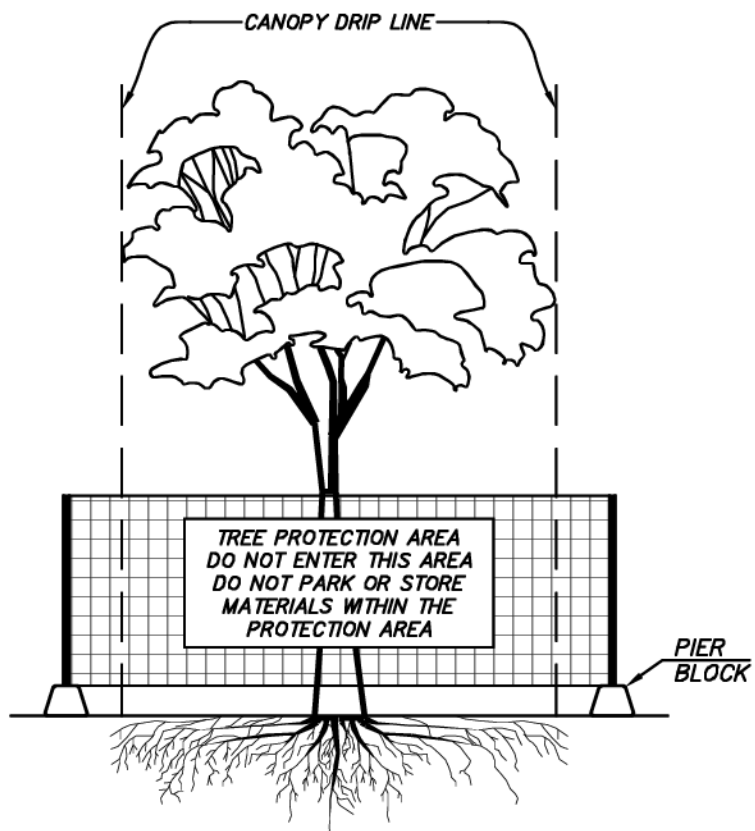
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TEMPORARY SEDIMENT TRAP

NOT TO SCALE

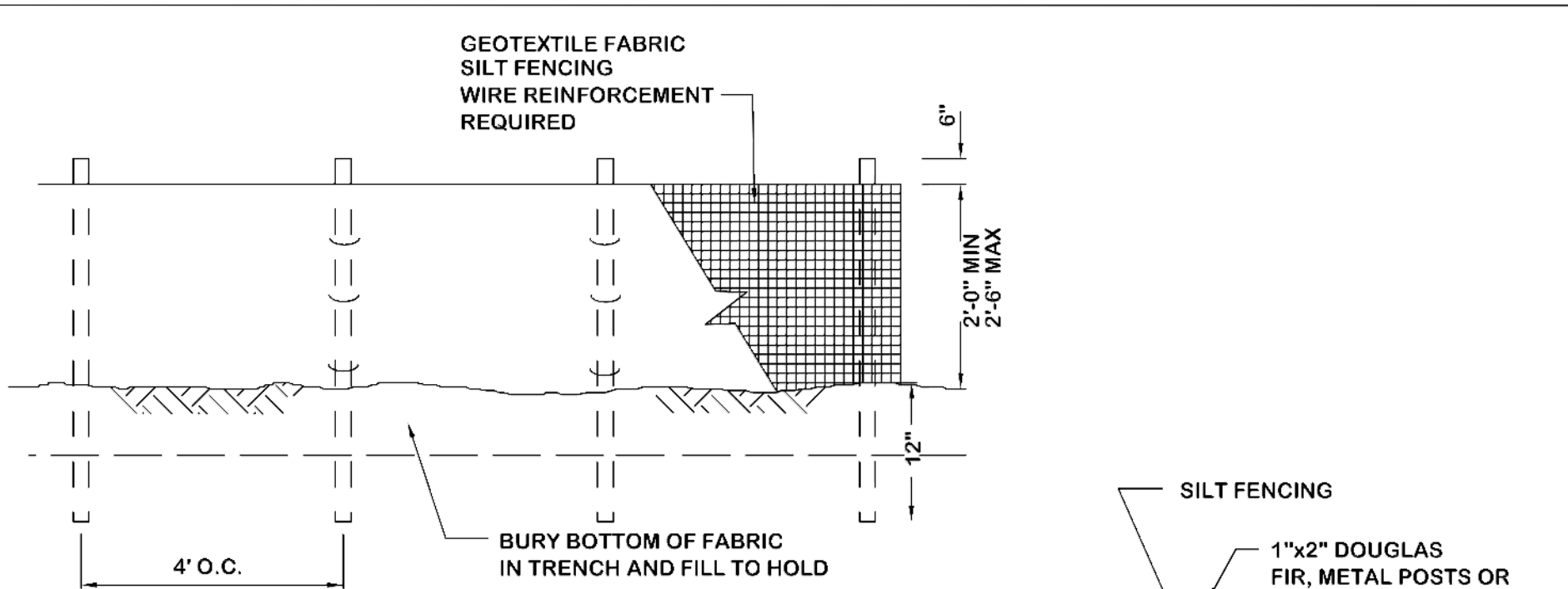


NOTES:

- PLACE TREE PROTECTION FENCES AROUND EACH TREE OR GROUP OF TREES TO BE RETAINED. PLACE FOUR TO SIX-FOOT HIGH TEMPORARY CHAIN LINK OR POLYETHYLENE LAMINAR FENCING FIVE FEET (IF POSSIBLE) OUTSIDE THE DRIP LINE(S) OF THE TREE OR GROUP OF TREES. INSTALL FENCE POSTS USING PIER BLOCKS ONLY. AVOID DRIVING POSTS OR STAKES INTO MAJOR ROOTS.
- INSTALL TREE PROTECTION FENCES PRIOR TO BEGINNING CONSTRUCTION.
 - WORK WITHIN THE PROTECTION FENCING SHALL BE DONE MANUALLY. DO NOT STOCKPILE CONSTRUCTION MATERIALS, SUPPLIES, SOILS OR DEBRIS WITHIN THE TREE PROTECTION FENCES. NOR ALLOW VEHICLE PARKING OR EQUIPMENT STORAGE.
 - CEMENT TRUCKS MUST NOT BE ALLOWED TO DEPOSIT WASTE OR WASH OUT MATERIALS FROM THEIR TRUCKS WITHIN THE TREE PROTECTION FENCES.
 - THE AREA WITHIN THE TREE PROTECTION FENCING SHALL BE MULCHED WITH WOOD CHIPS, HOG FUEL, OR SIMILAR MATERIALS TO A DEPTH OF 8 TO 10 INCHES. THE MATERIALS SHALL BE PLACED PRIOR TO BEGINNING OF CONSTRUCTION AND REMAIN UNTIL THE FENCING IS TAKEN DOWN.
 - THE TREE PROTECTION FENCES NEED TO BE CLEARLY MARKED AS "TREE PROTECTION AREAS" WITH FOUR-INCH OR LARGER LETTERS

TREE PROTECTION FENCE

NOT TO SCALE



NOTES:

- SEE BMP C233 OF THE ECOLOGY MANUAL FOR FABRIC SPECIFICATIONS.
- MAXIMUM SHEET OR OVERLAND FLOW PATH LENGTH = 100' TO FENCE.
- NO FLOWS GREATER THAN 0.5 CFS.
- PREFAB FENCE ALLOWED IF REINFORCED AND APPROVED BY CITY INSPECTOR.
- JOINTS IN FILTER FABRIC SHALL BE OVERLAPPED 6" AT POST.
- USE STAPLES, WIRE RINGS, OR EQUIVALENT TO ATTACH FABRIC TO FENCE.

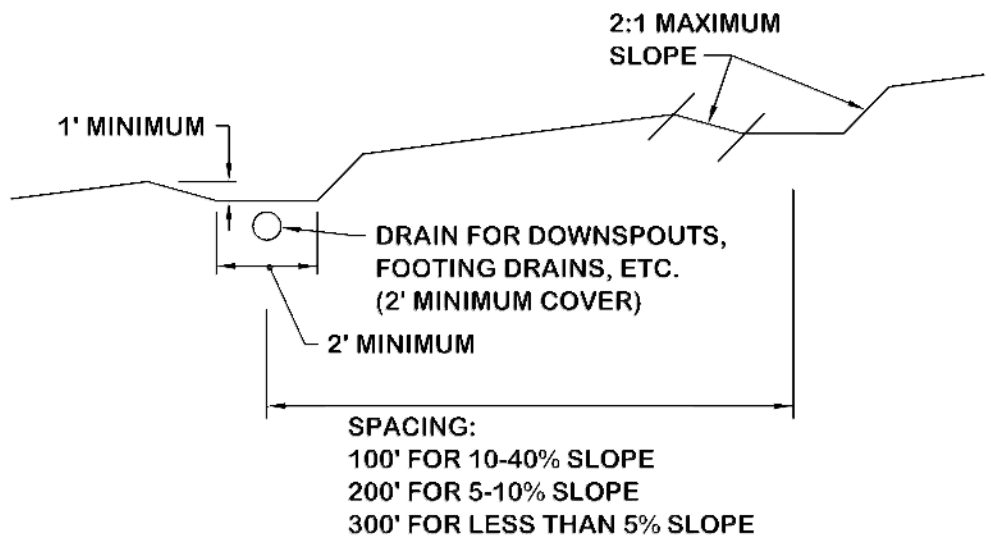


REVISION
DATE
11/18/2016
DATE

APPROVED FOR PUBLICATION
CITY ENGINEER
11/22/2016
DATE

SILT FENCE DETAIL

STANDARD PLAN NO. EC-001



MAINTENANCE STANDARDS:

- DAMAGE RESULTING FROM RUNOFF OR CONSTRUCTION ACTIVITY SHALL BE REPAIRED IMMEDIATELY
- IF THE FACILITIES DO NOT REGULARLY RETAIN STORM RUNOFF, THE CAPACITY AND/OR FREQUENCY OF THE DIKES/ SWALES SHALL BE INCREASED
- MAINTENANCE SHALL BE PERFORMED BY PROPERTY OWNER
- INSPECT DIVERSION DIKES AND INTERCEPTOR SWALES ONCE A WEEK AFTER EVERY RAINFALL.

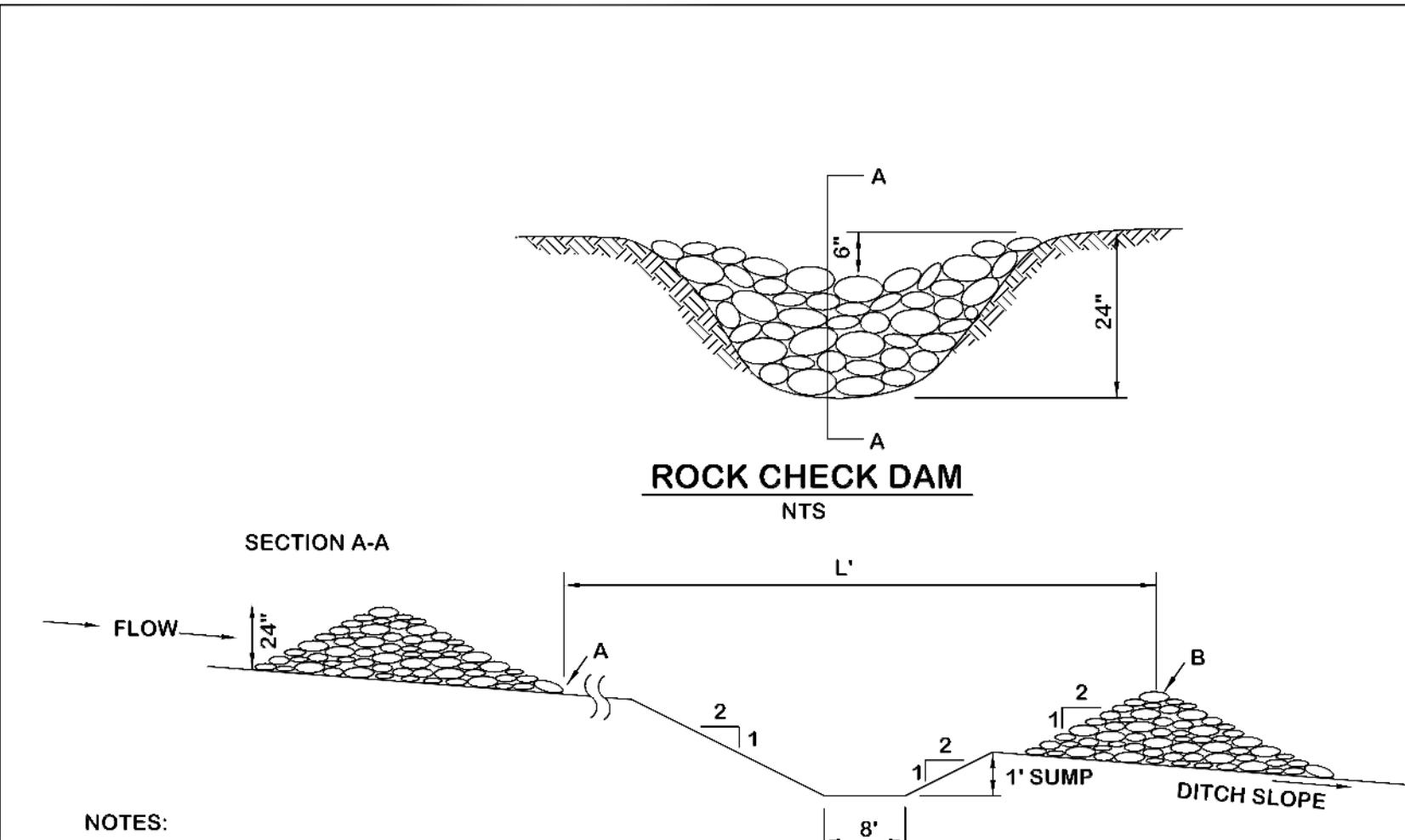


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11/22/2016
DATE

INTERCEPTOR SWALE DETAIL

STANDARD PLAN NO. EC-002



NOTES:

- THE DISTANCE SUCH THAT POINTS 'A' AND 'B' ARE OF EQUAL ELEVATION.
- CONSTRUCT ROCK DAMS FROM ROCK LARGE ENOUGH TO STAY IN PLACE GIVEN EXPECTED FLOW. PLACE ROCK BY HAND OR MECHANICAL MEANS.



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DATE
11/18/2016
DATE

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CITY ENGINEER
11/22/2016
DATE

ROCK CHECK DAMS

STANDARD PLAN NO. EC-005



25 CENTRAL WAY, SUITE 400,
KIRKLAND, WA 98033
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WWW.THEBLUELINEGROUP.COM

SCALE:

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PROJECT MANAGER:

T.C. COLLIERAN, P.E., AICP

PROJECT ENGINEER:

LUCAS ZIROTTI

DESIGNER:

LEE M. TOMKINS

ISSUE DATE:

7/29/21

NO	DATE	BY	REVISIONS	
			REVISIONS PER CITY 1ST ROUND COMMENTS	REVISIONS PER CITY 2ND ROUND COMMENTS
1	8/9/21	LCZ		
2	4/19/23	LCZ		

TESC NOTES & DETAILS
HARBOR GROVE
CIVIL PLANS
9110 53RD AVE W
SNOHOMISH COUNTY
WASHINGTON



4/19/23

JOB NUMBER:

21-073

SHEET NAME:

TD-01

SHT 6 OF 22

CITY OF MUKILTEO FILE NUMBERS
SD-2021-001/ENG-2021-019/SEPA-2021-010

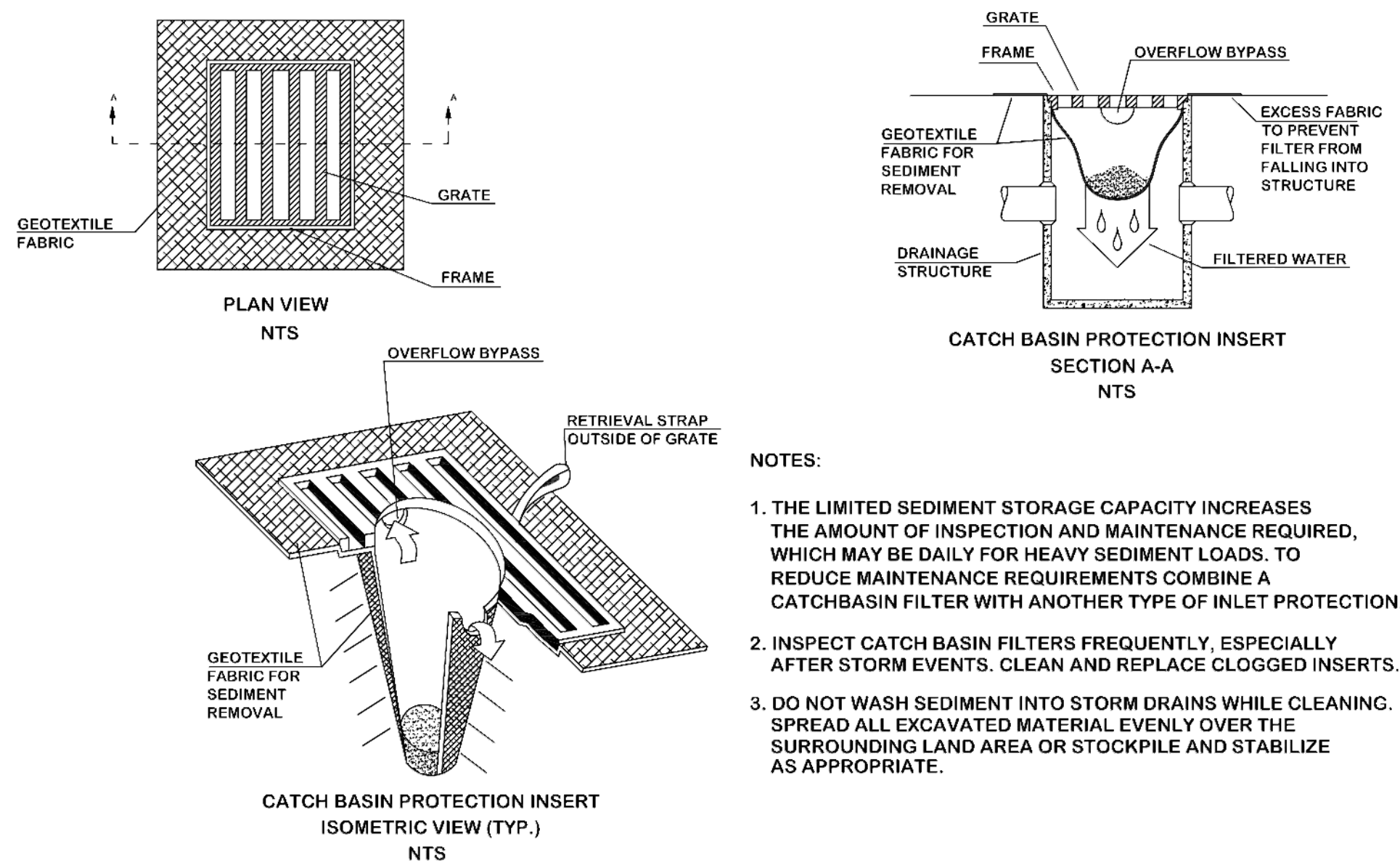
SCALE:
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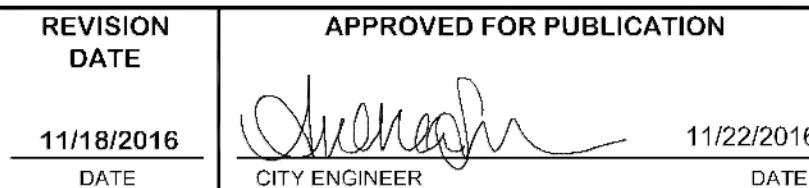
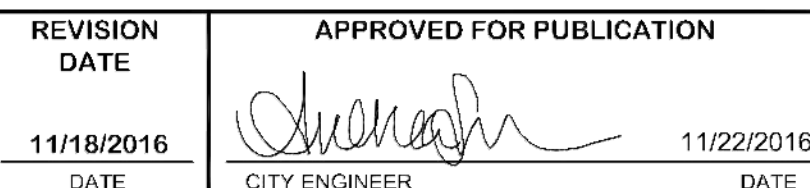
PROJECT ENGINEER:
LUCAS ZIROTTI

DESIGNER:
LEE M. TOMKINS

ISSUE DATE:
7/29/21



- NOTES:
1. THE TEMPORARY CONSTRUCTION ENTRANCE SHALL BE CLEARED OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL. ANY DRAINAGE FACILITIES REQUIRED BECAUSE OF WASHING SHOULD BE CONSTRUCTED ACCORDING TO SPECIFICATIONS IN THE PLAN. IF WASH RACKS ARE USED, THEY SHOULD BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
2. GRAVEL SHALL BE CRUSHED BALLAST ROCK, 4" TO 8" IN DIAMETER, INSTALLED 8" TO 12" IN DEPTH ACROSS THE FULL WIDTH OF THE VEHICLE INGRESS AND EGRESS AREA. THE LENGTH OF ENTRANCE SHALL BE A MINIMUM OF 100 FEET FOR COMMERCIAL SITES, AND 60 FEET FOR RESIDENTIAL SITES. CRUSHED CONCRETE IS NOT ALLOWED AS BALLAST.
3. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY AND ANY STORM DRAINAGE FACILITIES. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 2" STONE. AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEAN OUT ANY
- STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAY OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
4. ANY SEDIMENT THAT IS TRACKED ON PAVEMENT SHALL BE REMOVED BY SHOVELING OR STREET SWEEPING. THE SEDIMENT COLLECTED BY SWEEPING SHALL BE REMOVED OR STABILIZED ON SITE. THE PAVEMENT SHALL NOT BE CLEARED BY WASHING DOWN THE STREET, EXCEPT WHEN HIGH EFFICIENCY SWEEPING IS INEFFECTIVE AND THERE IS A THREAT TO PUBLIC SAFETY. IT IS NECESSARY TO WASH THE STREET, THE CONSTRUCTION OF A SMALL SUMP TO CONTAIN THE WASH WATER SHALL BE CONSIDERED. THE SEDIMENT WASHED THEN BE WASHED INTO THE SUMP WHERE IT CAN BE CONTROLLED.
5. PERFORM STREET SWEEPING BY HAND OR WITH A HIGH EFFICIENCY SWEEPER. DO NOT USE A NON-HIGH EFFICIENCY MECHANICAL SWEEPER BECAUSE THIS CREATES DUST AND THROWS SOILS INTO STORM SYSTEMS OR CONVEYANCE



NO	DATE	BY	REVISIONS
1	6/9/22	LCC	REVISIONS PER CITY 1ST ROUND COMMENTS
2	4/12/23	LMT	REVISIONS PER CITY 2ND ROUND COMMENTS

TESTC NOTES & DETAILS

HARBOR GROVE

CIVIL PLANS

9110 53RD AVE W

**WASHINGTON
SNOHOMISH COUNTY**



4/19/23

JOB NUMBER:

SHEET NAME:

TD-02

SHT 7 OF 22

EXISTING UTILITY NOTE

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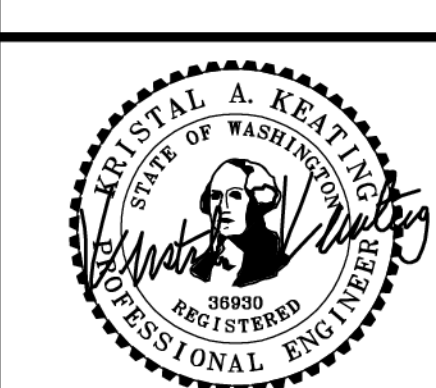
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HORIZONTAL CONTROL PLAN

HARBOR GROVE

CIVIL PLANS

9110 53RD AVE W

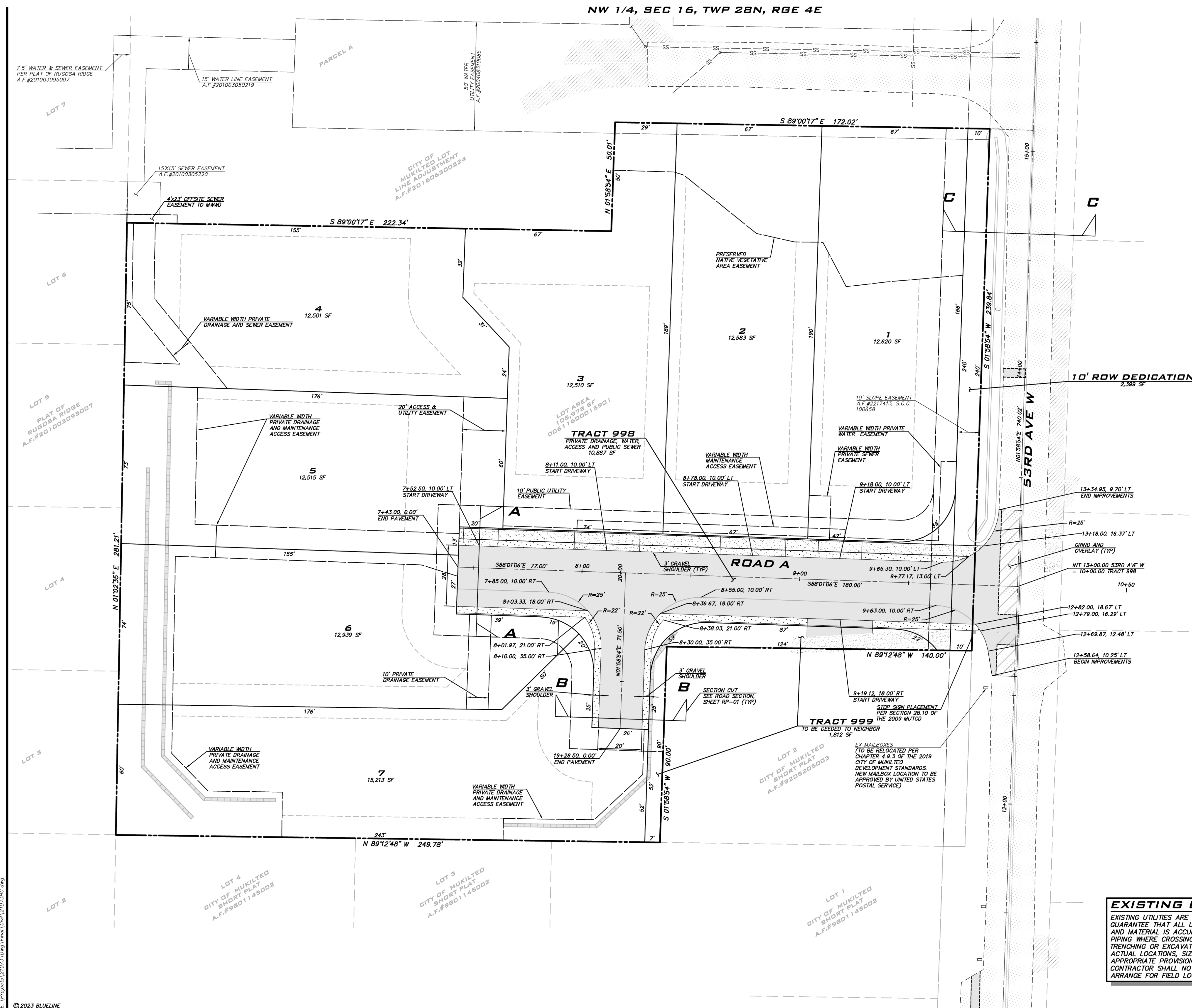


4/19/23

JOB NUMBER:
21-073

SHEET NAME:
HC-01

SHT **8** OF **22**



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BLUELINE

 25 CENTRAL WAY, SUITE 400,
 KIRKLAND, WA 98033
 P: 425.216.4051 F: 425.216.4052
 WWW.THEBLUELINEGROUP.COM

SCALE:

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PROJECT MANAGER:

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PROJECT ENGINEER:

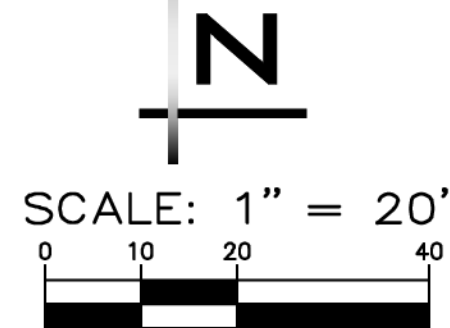
LUCAS ZIROTTI

DESIGNER:

LEE M. TOMKINS

ISSUE DATE:

7/29/21



SCALE: 1" = 20'

REVISIONS

BY

DATE

NO

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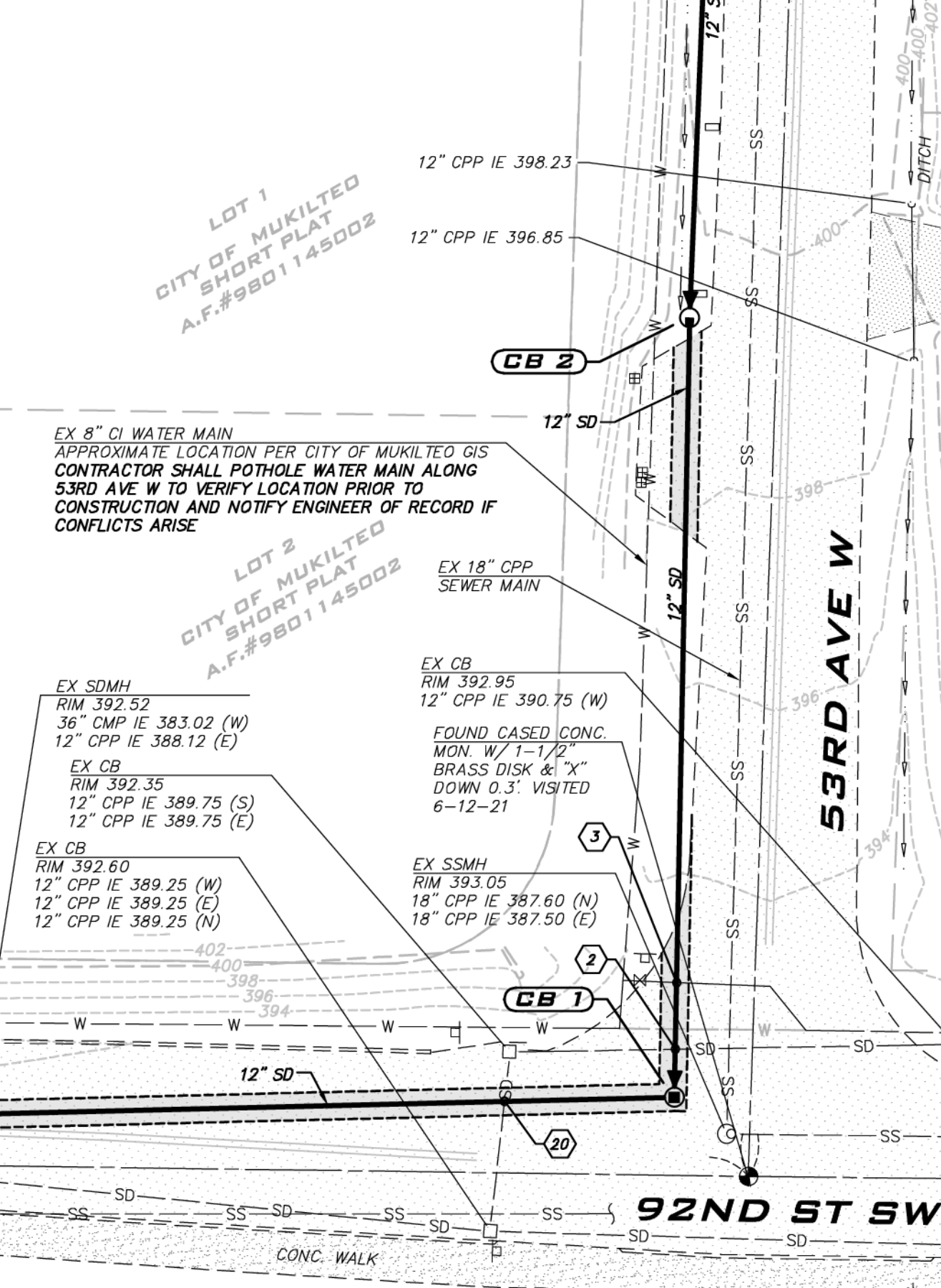
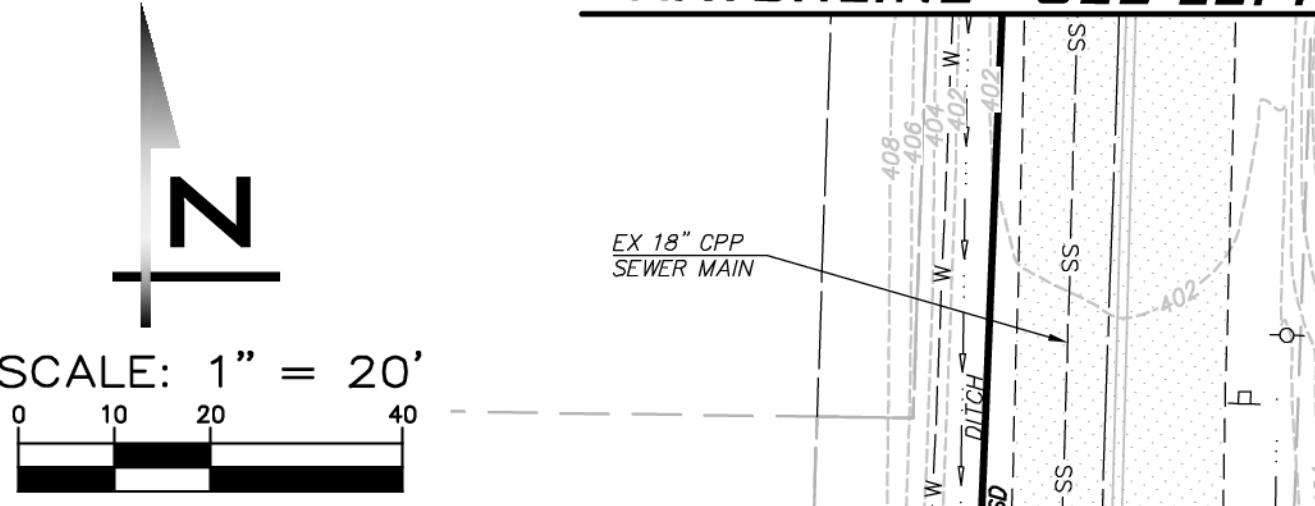
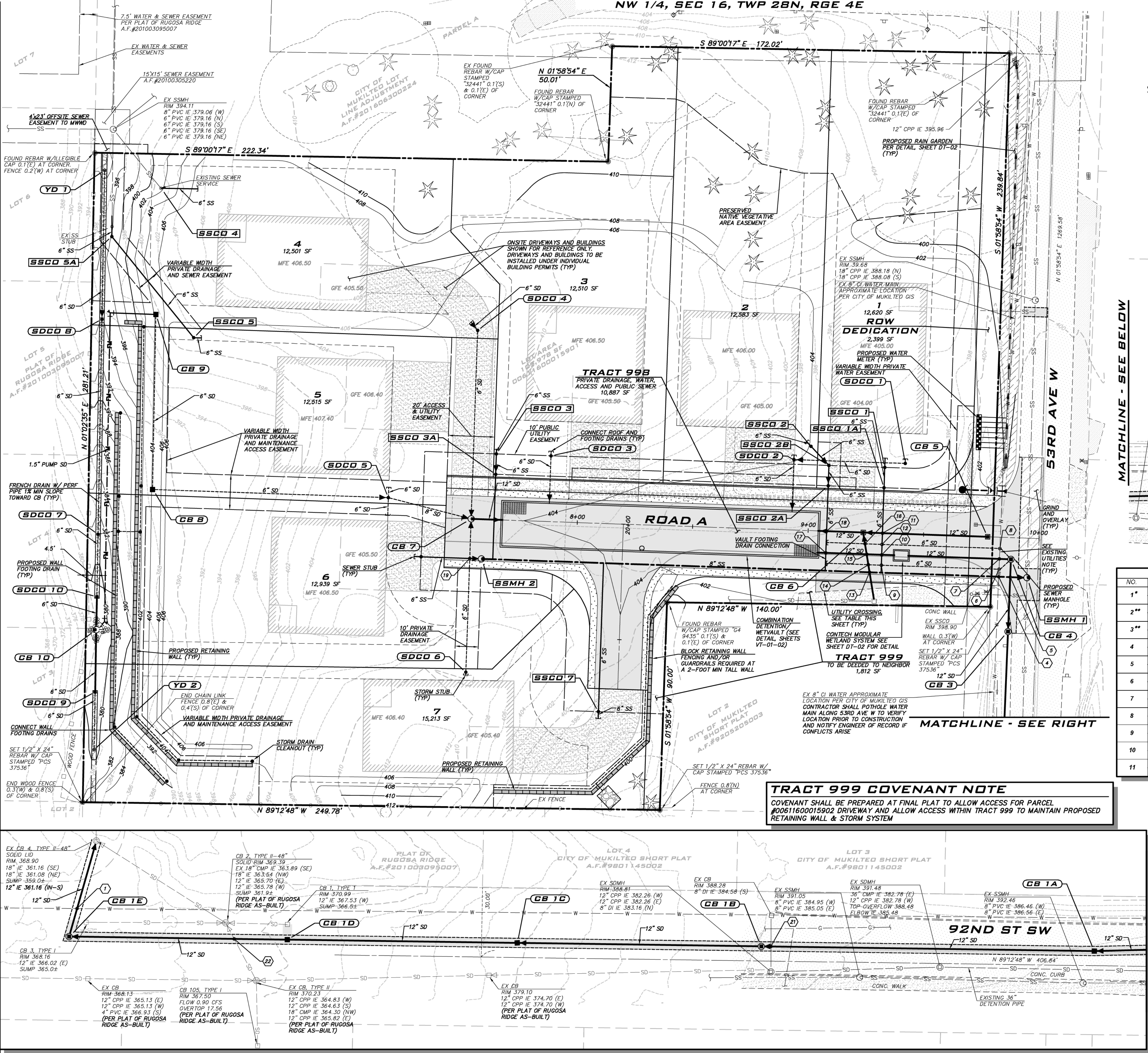
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UTILITY CROSSING TABLE			
NO.	PIPE ELEVATIONS (FT)	CLEARANCE (FT)	
1*	EX 8" WA IE 363.90 12" SD CE 362.84	1.06	
2**	EX 12" SD IE 390.12 12" SD CE 386.61	0.51	
3**	EX 8" WA IE 386.37 12" SD CE 386.56	0.81	
4	EX 8" WA IE 399.11 8" SS CE 386.02	10.09	
5	12" SD IE 391.11 8" SS CE 386.85	2.26	
6	8" WA IE 399.05 6" SD CE 392.26	6.79	
7	EX 8" WA IE 398.96 12" SD CE 392.18	6.78	
8	8" WA IE 398.87 6" SD CE 392.53	6.62	
9	6" SD IE 392.53 6" SS CE 390.91	1.62	
10	12" SD IE 392.75 6" SS CE 391.17	1.58	
11	12" SD IE 398.09 6" SS CE 391.71	7.38	

12	6" SD IE 392.53	1.10
13	6" SS CE 391.43	8.96
14	12" SD IE 399.94	6.64
15	6" SD CE 393.12	5.74
16	12" SD IE 399.52	6.12
17	6" SD CE 393.15	0.54
18	12" SD IE 392.88	5.64
19	6" SS CE 392.34	2.71
20**	EX 12" SD IE 399.61	1.66
21**	12" SD CE 387.95	1.14
22*	EX 18" SD IE 396.16	0.93

* ASBUILT INFORMATION USED TO ASSUME UTILITY SEPARATION
** GIS SURFACE USED TO ASSUME DEPTH OF EXISTING UTILITY

CROSSING NOTES

- VERTICAL CLEARANCE FOR CROSSINGS WITH WATER MAINS PER MUKILTEO WATER AND WASTEWATER DISTRICT STANDARDS. MINIMUM 18" OF SEPARATION REQUIRED FOR CROSSINGS WITH WATER AND SANITARY SEWER. REFER TO SEWER AND WATER PLANS PREPARED FOR MUKILTEO WATER AND WASTEWATER DISTRICT (UNDER SEPARATE COVER)
- WHERE VERTICAL CLEARANCE IS LESS THAN 1'. CONTRACTOR SHALL PROVIDE ETHA-FOAM PAD.

EXISTING UTILITIES NOTE

- CONTRACTOR SHALL VERIFY LOCATION OF EX UTILITIES AT POINT OF CROSSING OR CONNECTION PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF RECORD IF CONFLICTS ARISE.
- CROSSINGS WERE DETERMINED ASSUMING 3' OF COVER OVER EXISTING WATER MAIN.

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25 CENTRAL WAY, SUITE 400,
HUNTSVILLE, WA 98033
P: 425.216.4051 F: 425.216.4052
WWW.THEBLUELINEGROUP.COM

SCALE:
AS NOTED

PROJECT MANAGER:
T.C. COLLIERAN, P.E., AICP

PROJECT ENGINEER:
LUCAS ZROTTI

DESIGNER:
LEE M. TOMKINS

ISSUE DATE:
7/29/21

NO.	DATE	BY	REVISIONS
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2	4/19/23	LM	REVISIONS FOR CITY 2ND ROUND COMMENTS

COMPOSITE UTILITY PLAN

HARBOR GROVE

CIVIL PLANS

9110 53RD AVE W

SNOHOMISH COUNTY

WASHINGTON

4/19/23

JOB NUMBER:
21-073

SHEET NAME:
UT-01

SHT **10** OF **22**

24:56
Apr 19, 2023 4:19pm User: tomkins
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NO	DATE	BY	REVISIONS
1	8/9/21	LCZ	REVISIONS PER CITY 1ST ROUND COMMENTS
2	4/19/23	LCZ	REVISIONS PER CITY 2ND ROUND COMMENTS

ROAD & STORM PLAN

HARBOR GROVE
CIVIL PLANS

9110 53RD AVE W
SNOHOMISH COUNTY



4/19/23

JOB NUMBER:
21-073

SHEET NAME:
RS-01

SHT 11 OF 22

SCALE: 1" = 20'

MATCHLINE - SEE BELOW

MATCHLINE - SEE ABOVE RIGHT

EXISTING 8" CI WATER (APPROXIMATE LOCATION PER CITY OF MUKILTEO GIS). CONTRACTOR SHALL POTHOLE WATER MAIN ALONG 53RD AVE W TO VERIFY LOCATION PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF RECORD IF CONFLICTS ARISE

PUMP STATION NOTES

CONTROL PANEL AND POWER SOURCE PER MANUFACTURER'S RECOMMENDATIONS (DESIGN BY OTHERS).

PROVIDE EXTERNAL VISUAL AND AUDIBLE ALARM SYSTEM NEAR PRIVATE ACCESS ROAD VISIBLE TO MAJORITY OF PROPERTY OWNERS.

GROUNDWATER ELEVATION NOTE

ACCORDING TO THE GROUNDWATER ELEVATION EVALUATION BY COBALT GEOSCIENCES, LLC DATED MARCH 14, 2022, THE GROUNDWATER ELEVATION IN THE SITE VICINITY APPEARS TO BE AT 375 FEET. A COPY OF THE EVALUATION IS PROVIDED UNDER SEPARATE COVER.

SDCO/YARD DRAIN NOTE

ALL YARD DRAINS AND SDCO INSTALLED IN ANY DRIVEWAY OR ROAD AREAS SHALL BE INSTALLED WITH TRAFFIC RATED LIDS. DETAILS PROVIDED ON DT-02.

LOT HARD SURFACE NOTE

HARD SURFACE IS DEFINED AS AN IMPERVIOUS SURFACE, A PERMEABLE PAVEMENT, A DECK OR A VEGETATED ROOF. THE MAXIMUM HARD SURFACE ALLOWED FOR EACH LOT IS AS FOLLOWS:

LOT 1: 4,038 SF
LOT 2: 4,057 SF
LOT 3: 3,973 SF
LOT 4: 4,000 SF
LOT 5: 4,005 SF
LOT 6: 4,140 SF
LOT 7: 4,868 SF
TOTAL: 29,081

NO ADDITIONAL HARD SURFACE IS ALLOWED FOR THESE LOTS OR THE PLAT WITHOUT ADDITIONAL STORMWATER MITIGATION.

FOOTING DRAIN NOTE

FOOTING DRAINS THAT DRAIN TO STORMWATER DETENTION SYSTEM SHALL BE INSTALLED AT ELEVATION 400.40 OR HIGHER.

EXISTING UTILITY NOTE

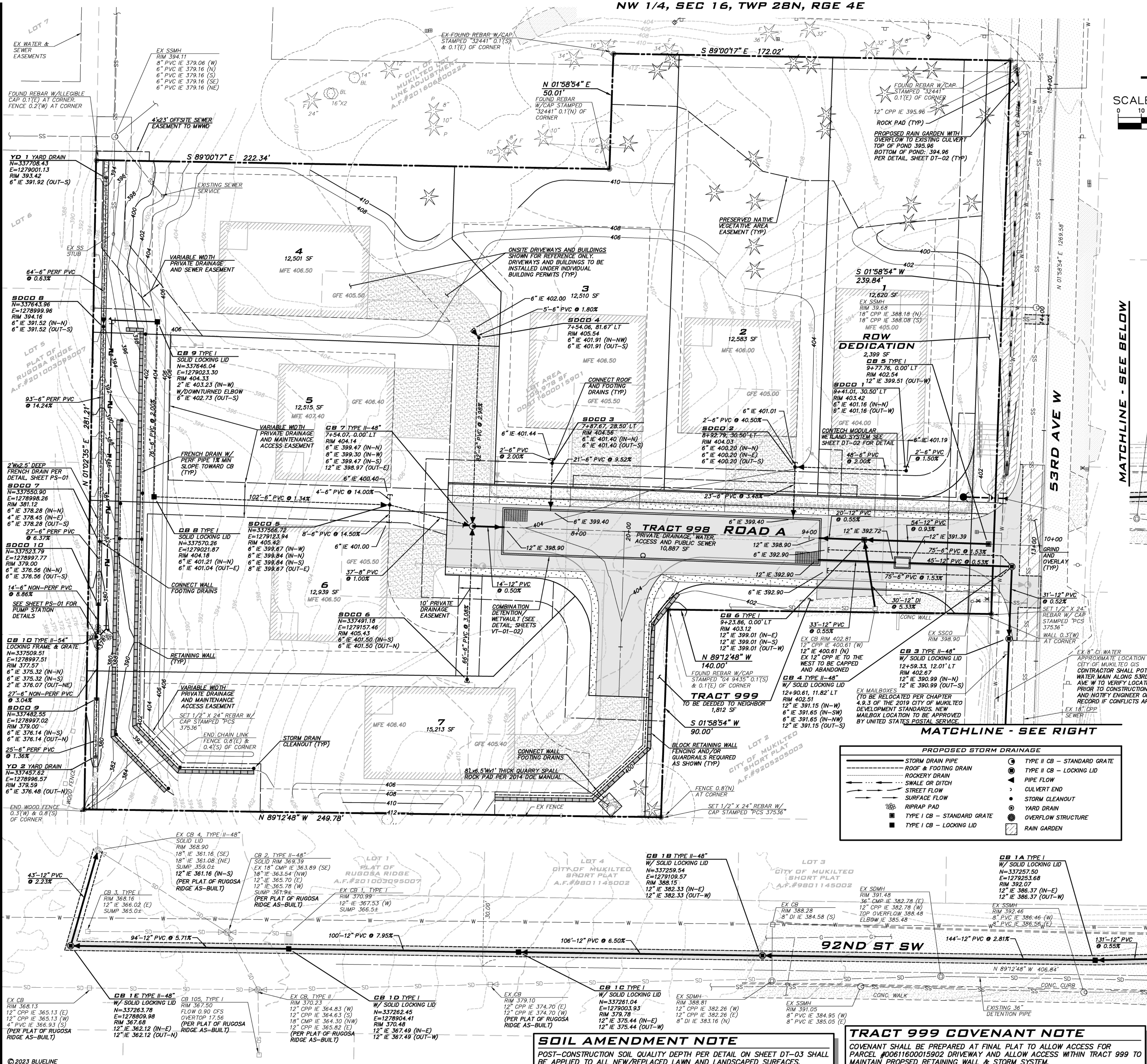
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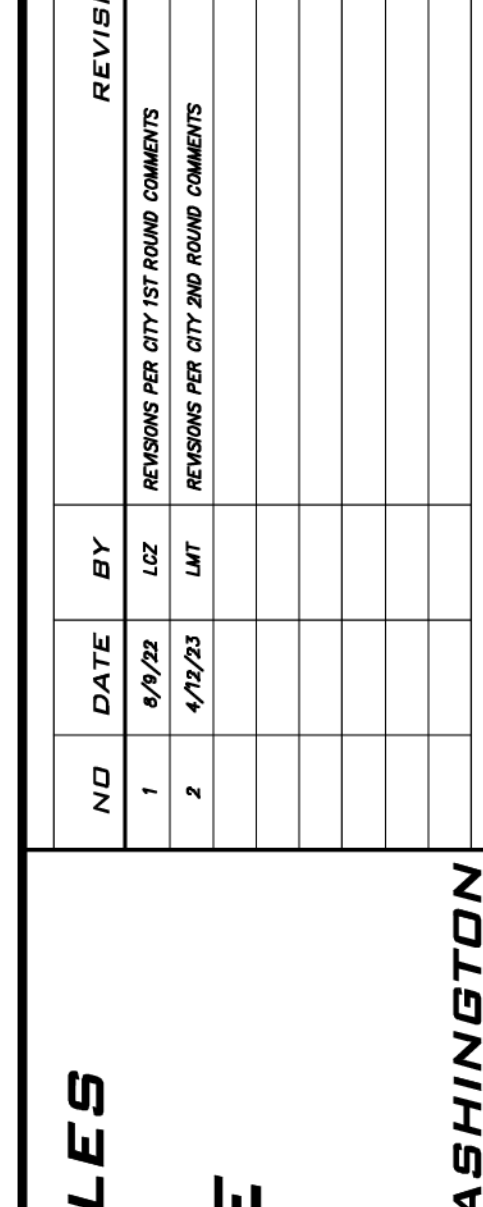
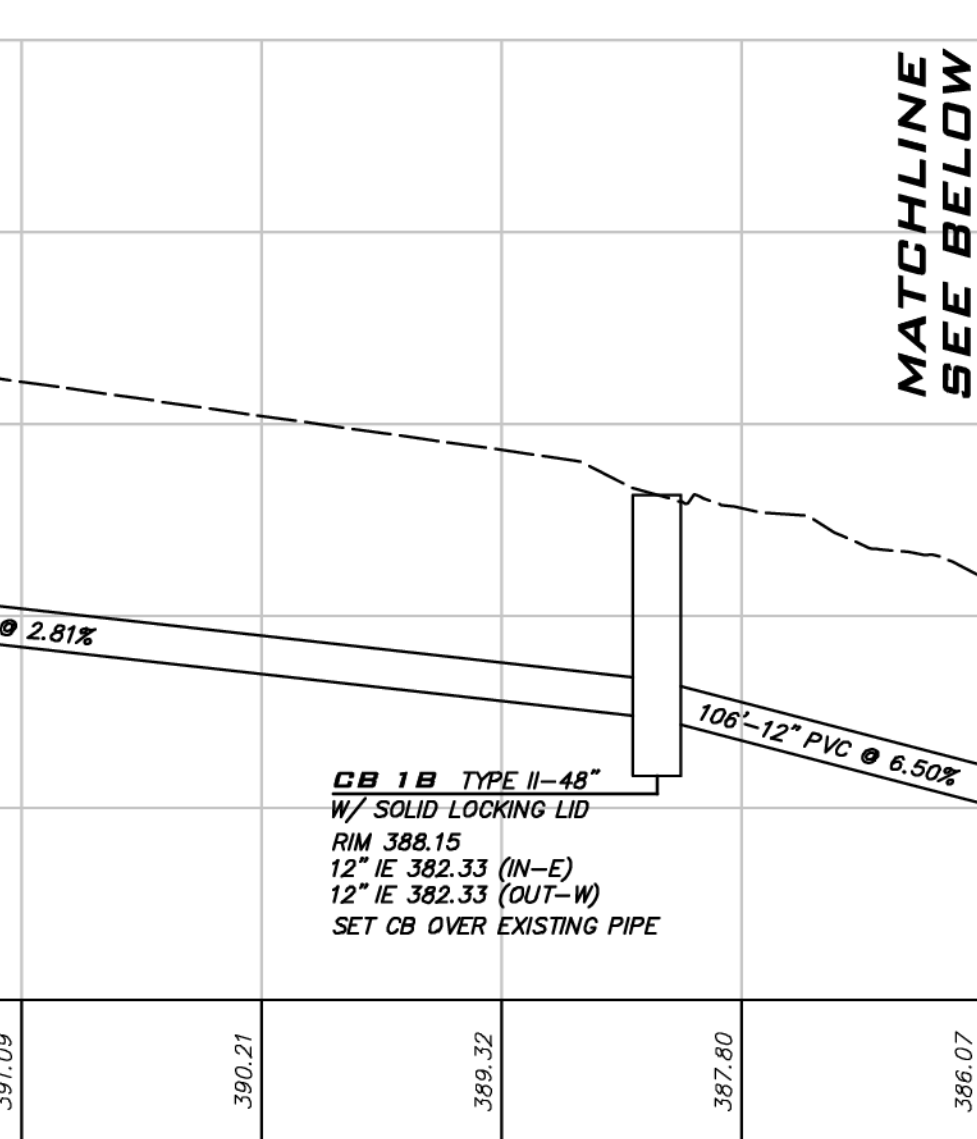
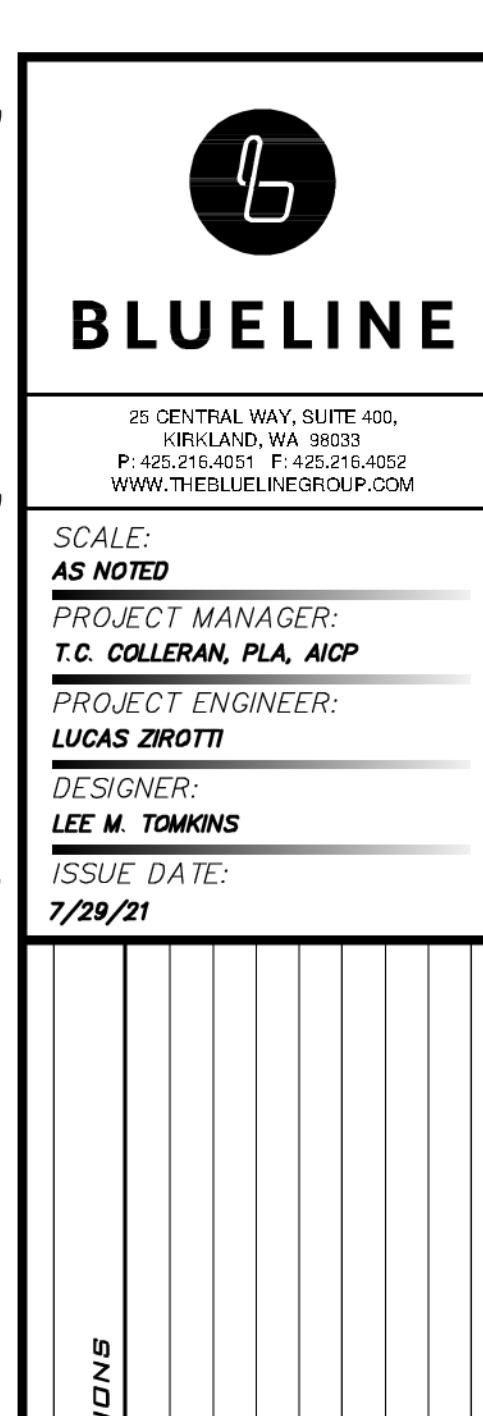
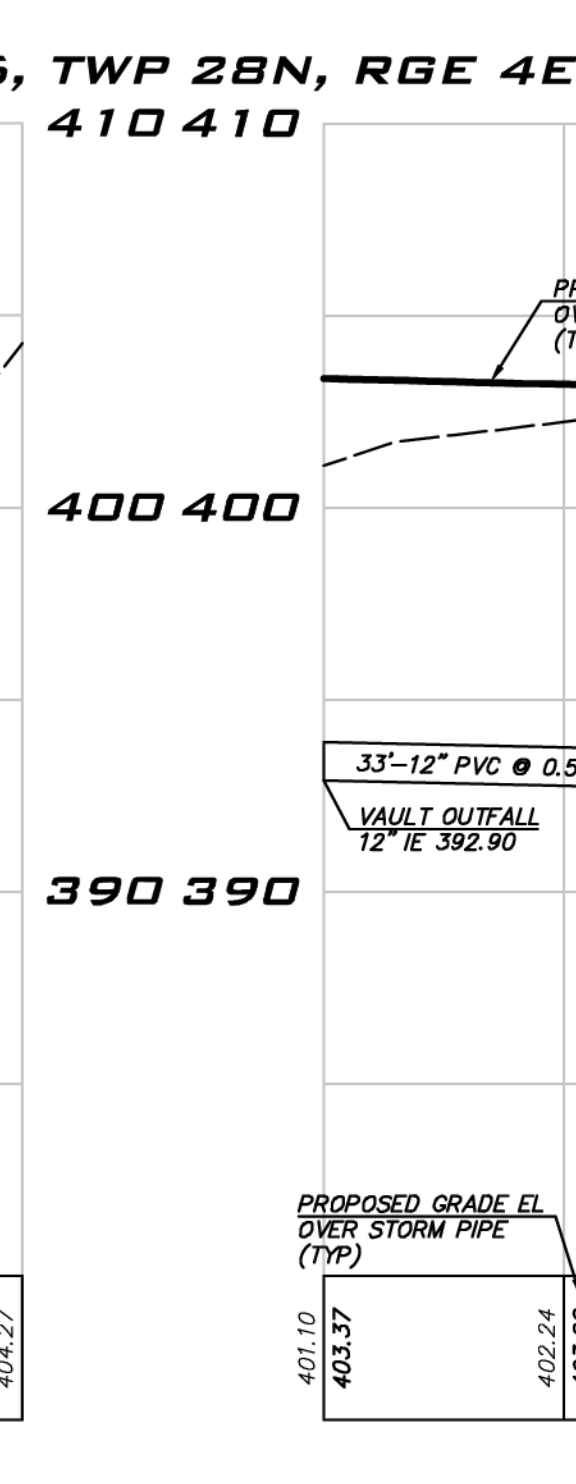
TRACT 999 COVENANT NOTE

COVENANT SHALL BE PREPARED AT FINAL PLAT TO ALLOW ACCESS FOR PARCEL #0061600015902 DRIVEWAY AND ALLOW ACCESS WITHIN TRACT 999 TO MAINTAIN PROPOSED RETAINING WALL & STORM SYSTEM.

SOIL AMENDMENT NOTE

POST-CONSTRUCTION SOIL QUALITY DEPTH PER DETAIL ON SHEET DT-03 SHALL BE APPLIED TO ALL NEW/REPLACED LAWN AND LANDSCAPED SURFACES.





20'00

40' TRACT

18.5' ROW

21.5' ROW

3' GRAVEL SHOULDER

5' CONCRETE WALK

10' TRAVEL LANE

10' TRAVEL LANE

8' PARKING LANE

3' GRAVEL SHOULDER

0.5'

0.5'

2-1 MAX

2-1 MAX

2-1 MAX

2-1 MAX

1.5%

2%

2%

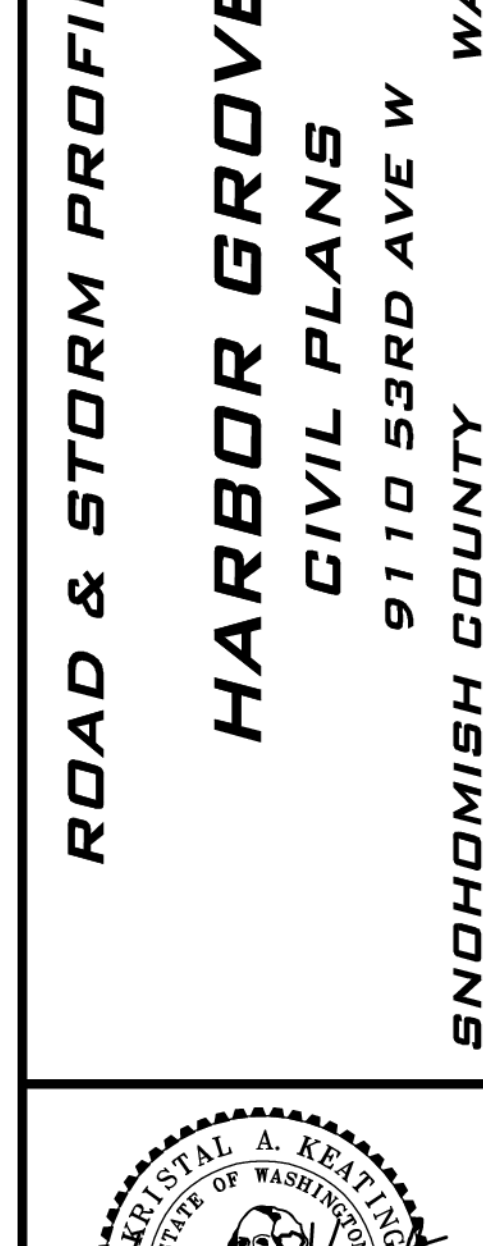
2" BUMP DEPTH MIN


2" ATB

6" CRUSHED SURFACING BASE COURSE

SECTION A-A

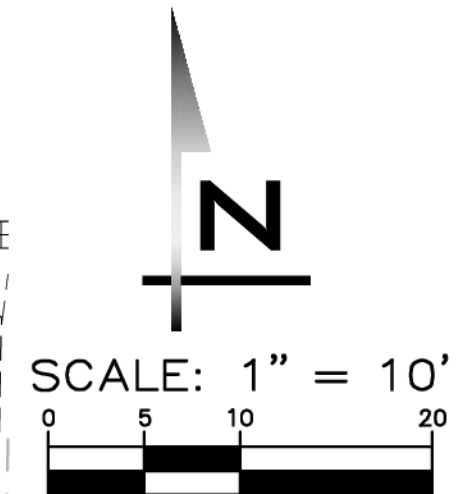
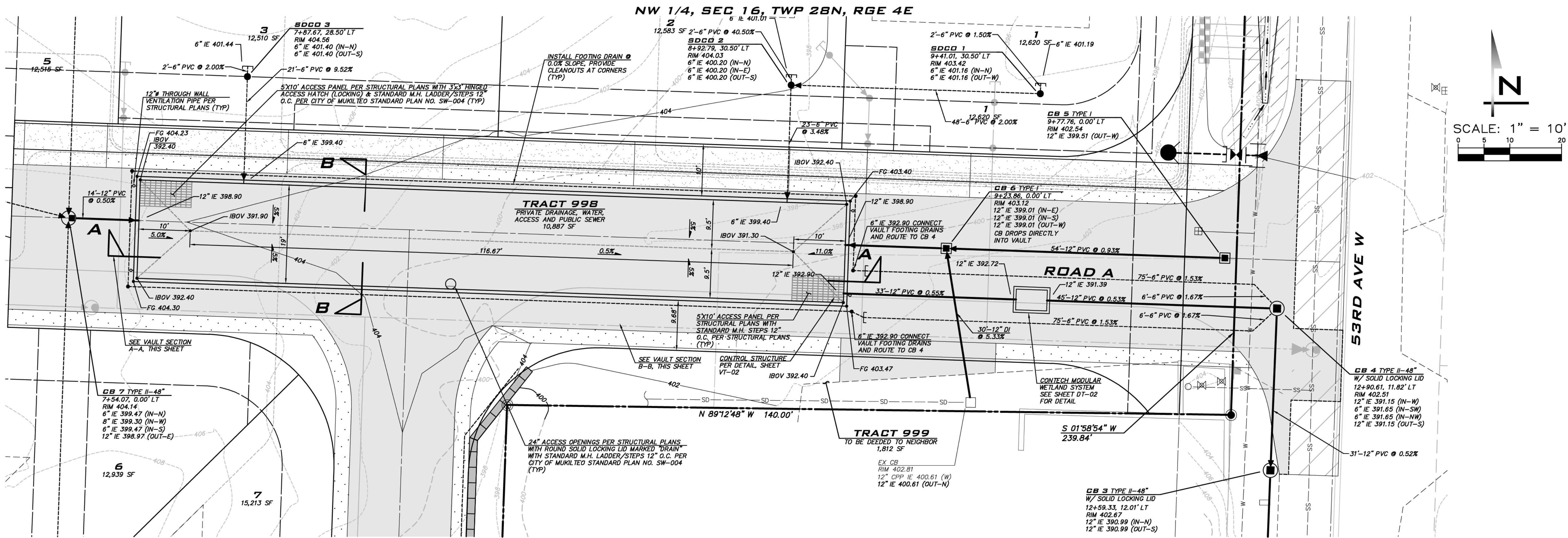
TRACT 99B - ROAD A



 4/19/23

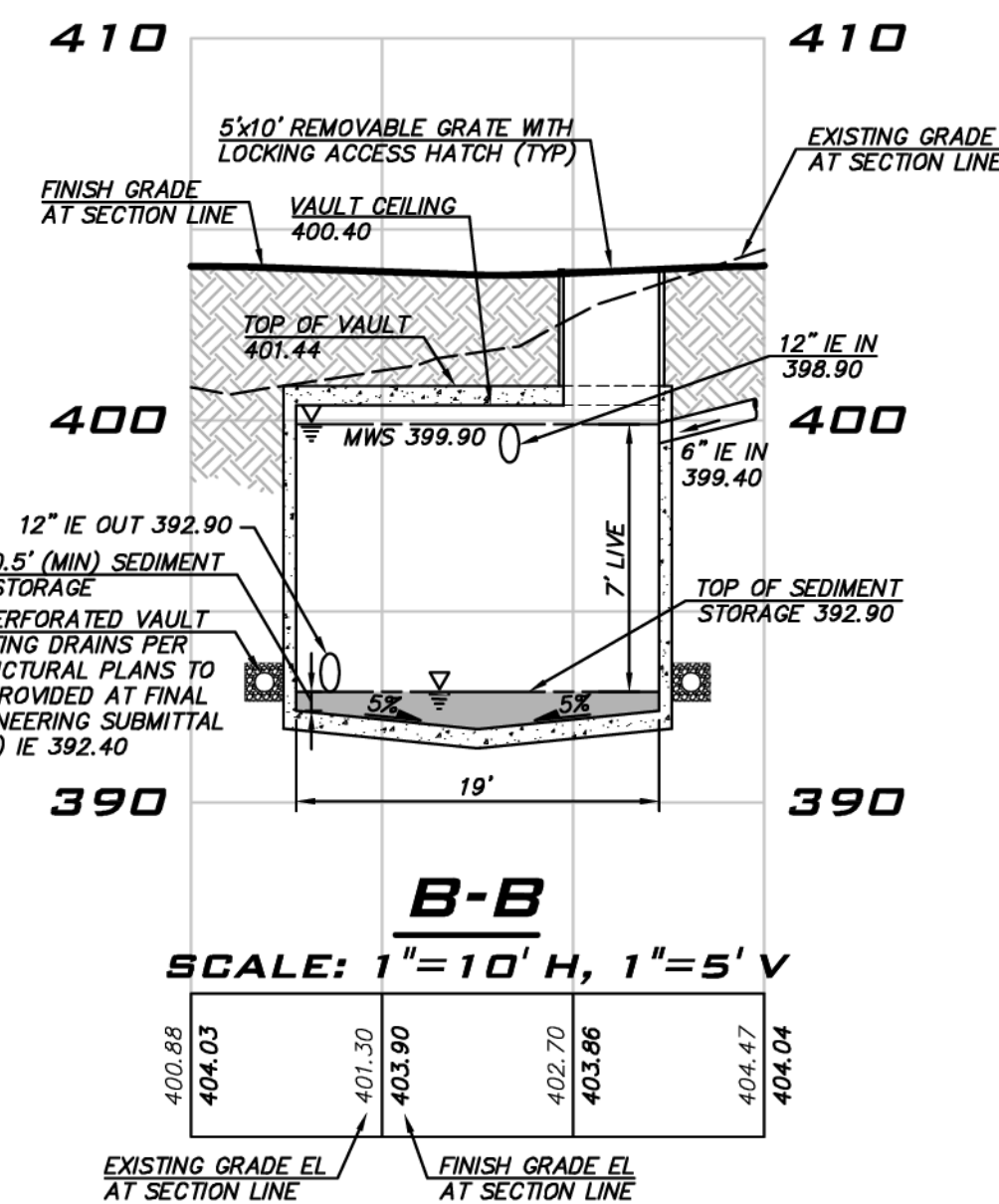
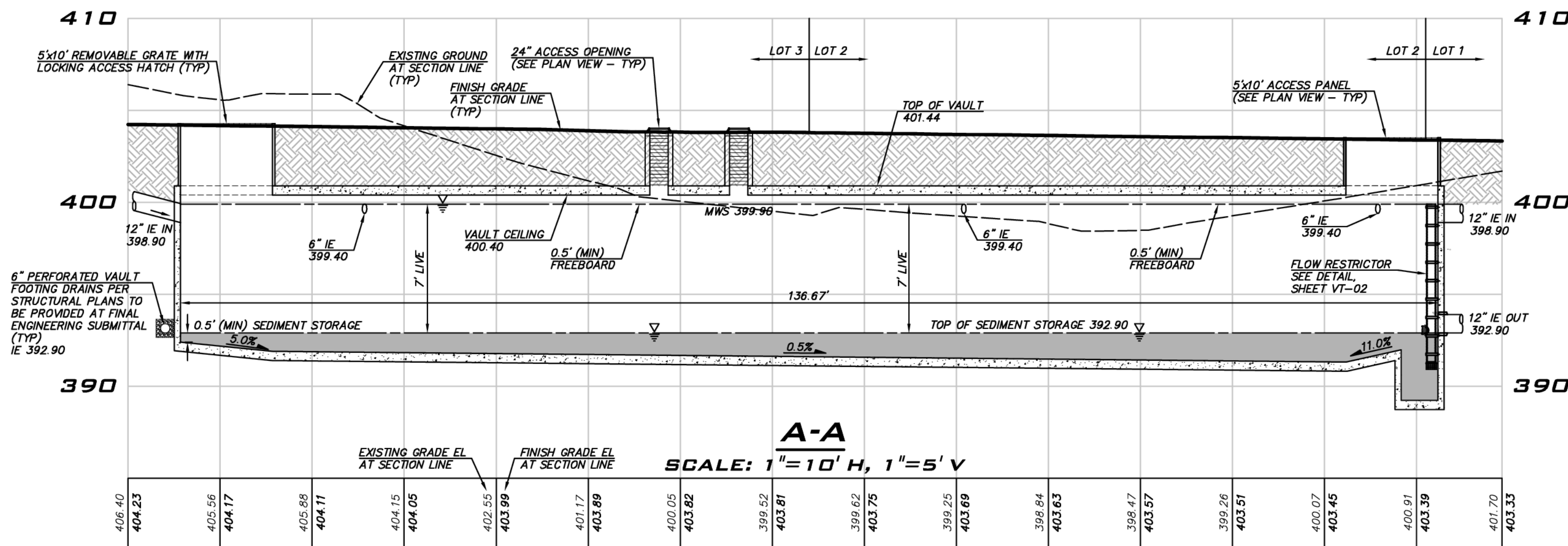
JOB NUMBER:
21-073

SHEET NAME:
BP-01



SCALE:
AS NOTED
PROJECT MANAGER:
T.C. COLLIERAN, P.E., AICP
PROJECT ENGINEER:
LUCAS ZIOTTI
DESIGNER:
LEE M. TOMKINS
ISSUE DATE:
7/29/21

NO	DATE	BY	REVISIONS	
			REVISIONS PER CITY/ST/FRM COMMENTS	REVISIONS PER CITY/ST/FRM COMMENTS
1	8/9/21	LCZ		
2	4/12/23	LMT		

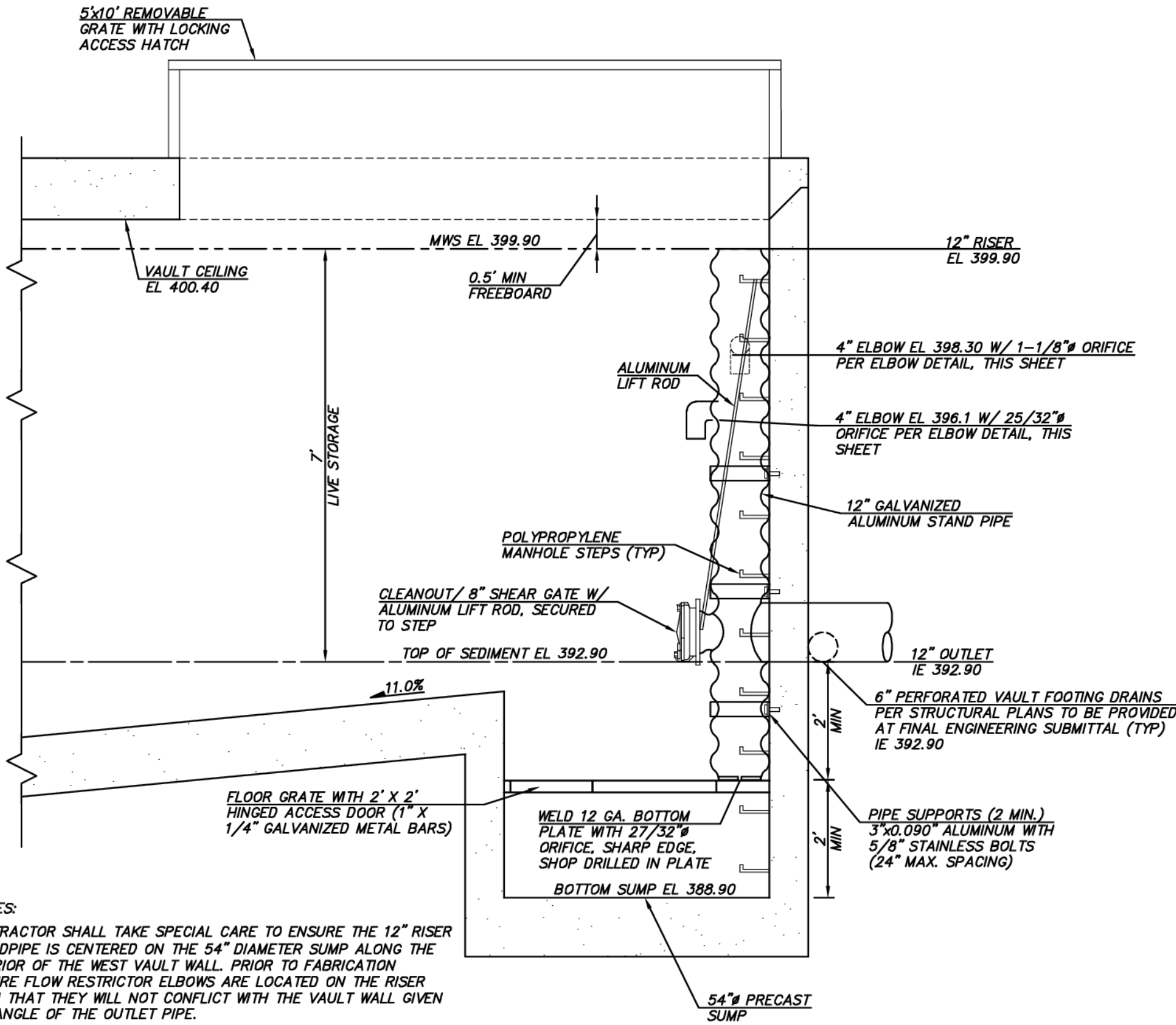


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VAULT VOLUMES			
	REQ'D	PROVIDED	ASBUILT
LIVE	17,080	18,088	XX,XXX
DEAD	3,946	4,256	X,XXX

VAULT INFO	
FG OVER VAULT:	403.40 (MIN) 404.30 (MAX)
MAX WATER SURFACE:	399.90
BOTTOM OF LIVE:	392.90
BOTTOM OF DEAD:	388.90

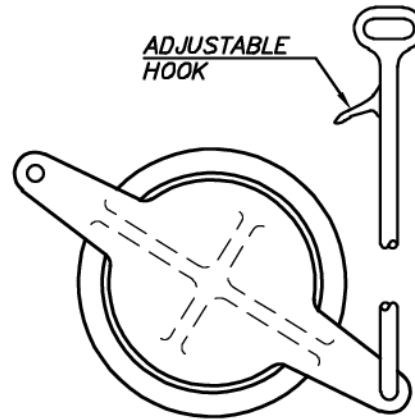


CONTROL STRUCTURE

SCALE: 1" = 2'

VAULT NOTES

- DIMENSIONS DEPICTING OVERALL SIZE OF VAULT ARE FOR REFERENCE ONLY. SEE STRUCTURAL PLANS FOR TOTAL LENGTH, WIDTH, HEIGHT AND WALL THICKNESS DESIGN, AS WELL AS LOCATIONS FOR ALL MAINTENANCE ACCESS POINTS AND PROPOSED PENETRATIONS.
- JOINTS AND PENETRATIONS IN VAULT AND LID TO BE WATER TIGHT. PROVIDE WATERSTOPS IN CAST IN PLACE JOINTS.
- ALL WATERSTOPS TO BE INSTALLED PER PLAN AND SPECIFICATION AND TO BE INSPECTED BY CITY.
- PIPES SEALED WITH GROUT.
- VENTILATION PIPES (MIN 12 INCH DIAMETER) PROVIDED AT CORNERS. VENT PIPE SHALL BE SCHEDULE 40 PVC OR BETTER AND SHALL HAVE LOCKING DUCTILE IRON RINGS AND LIDS.
- WALL DRAINS TO BE CONSTRUCTED OF A MINIMUM 6-INCH PERFORATED PVC PIPE SURROUNDED BY 6" MIN THICK WASHED ROCK (ALL SIDES) UNLESS OTHERWISE NOTED BY STRUCTURAL ENGINEER. DRAIN TO BE LOCATED AT THE WALL BASE. SHALL INCLUDE CLEANOUT AT ALL CORNERS, AND SHALL GRAVITY FLOW TO DISCHARGE POINT. NO ONE-WAY VALVES ALLOWED. DRAINS TO BE INSTALLED AT ELEVATION SHOWN. CONNECT PERFORATED DRAIN TO A 6" SOLID WALL PVC AT 2% MIN. SLOPE DIRECTED TO DOWNSTREAM CATCH BASIN. INSTALL CLEANOUT AT BENDS TOTALING 90° AND AT 100' MAX O.C.
- ACCESS OPENINGS TO HAVE OSHA CONFINED SPACE WARNING.
- PIPE SIZES AND SLOPES: PER PLANS.
- FINISHED GRADE OVER VAULT TO BE PER PLAN.
- VAULT EXCAVATION TO BE FENCED AND SECURED BY CONTRACTOR. SAFETY FENCING, SHORING, EXCAVATION SAFETY, AND OTHER SAFETY ITEMS ARE THE RESPONSIBILITY OF THE CONTRACTOR. ALL ACCESS TO HAVE SECURE COVERING DURING CONSTRUCTION.
- ALL STORMWATER FACILITIES, CATCH BASINS, AND CONVEYANCE SHALL BE CLEANED FOR CITY INSPECTION PRIOR TO FINAL PLAT AND ALSO FOR CITY INSPECTION PRIOR TO PERFORMANCE AND MAINTENANCE BOND RELEASE.
- THE CONTRACTOR AND HIS SUBCONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSION AND ELEVATIONS SHOWN ON THESE DRAWINGS WITH THE CURRENT PERMITTED SET OF STRUCTURAL DRAWINGS, AND SHALL NOTIFY BOTH THE STRUCTURAL & CIVIL ENGINEERS IN WRITING OF ALL DISCREPANCIES BETWEEN THE CIVIL DRAWINGS AND THESE DRAWINGS TO CONSTRUCTION.
- CONCRETE FINISH TO BE SMOOTH WITH NO FINS, VOIDS, ROCK POCKETS, OR OTHER IRREGULARITIES.
- CONE SNAP TIES ARE REQUIRED FOR FORMWORK AND EPOXY GROUT SEALED AT ALL INTERIOR AND EXTERIOR WALL SURFACES. NO FLAT TIES ALLOWED.
- PER THE 2014 SWMMWMA, ALL VAULTS SHALL BE DESIGNED FOR H 20 LOADING.
- MINIMUM AND MAXIMUM GRADES OVER VAULT AS SHOWN. FOOTING DRAIN ELEVATIONS ARE PROVIDED FOR REFERENCE.

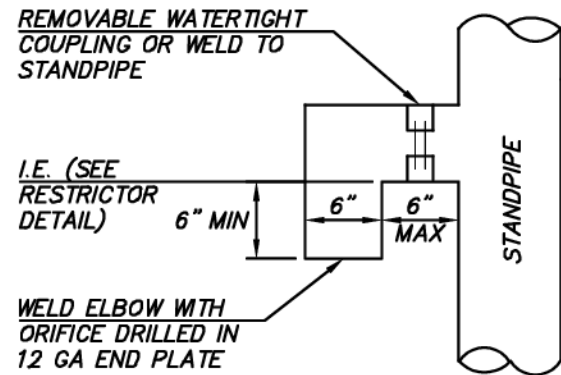


NOTES:

- SHEAR GATE SHALL BE:
A. CAST IRON BODY AND GATE, OLYMPIC FDY, STD., OR EQUAL.
B. ALUMINUM, DRAINAGE SPECIALTIES (SAVANNA, GA) STD., OR EQUAL.
- GATE SHALL BE 8" DIAMETER UNLESS OTHERWISE SPECIFIED.
- GATE SHALL BE JOINED TO TEE SECTION BY BOLTING (THROUGH FLANGE), WELDING, OR OTHER SECURE MEANS.
- LIFT ROD: AS SPECIFIED BY MANUFACTURER WITH HANDLE EXTENDED TO WITHIN ONE FOOT OF COVER AND ADJUSTABLE HOOK LOCK FASTENED TO FRAME OR UPPER HANDHOLD.

SHEAR GATE

NOT TO SCALE



ELBOW DETAIL

NOT TO SCALE

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CITY OF MUKILTEO FILE NUMBERS
SD-2021-001/ENG-2021-019/SEPA-2021-010



BLUELINE

25 CENTRAL WAY, SUITE 400,
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SCALE:

AS NOTED

PROJECT MANAGER:

T.C. COLLIERAN, P.E., AICP

PROJECT ENGINEER:

LUCAS ZIROTTI

DESIGNER:

LEE M. TOMKINS

ISSUE DATE:

7/29/21

NO	DATE	BY	REVISIONS	
			DESCRIPTION	DATE
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VAULT DETAILS & NOTES

HARBOR GROVE

CIVIL PLANS

9110 53RD AVE W

SNOHOMISH COUNTY

WASHINGTON



4/19/23

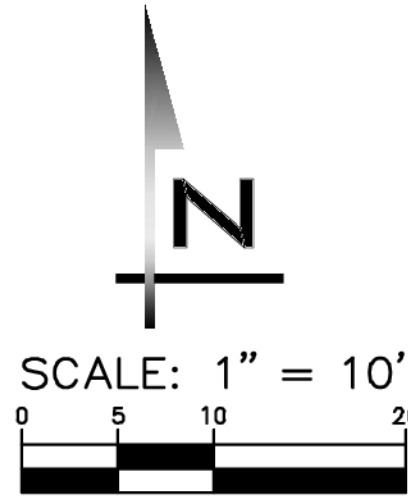
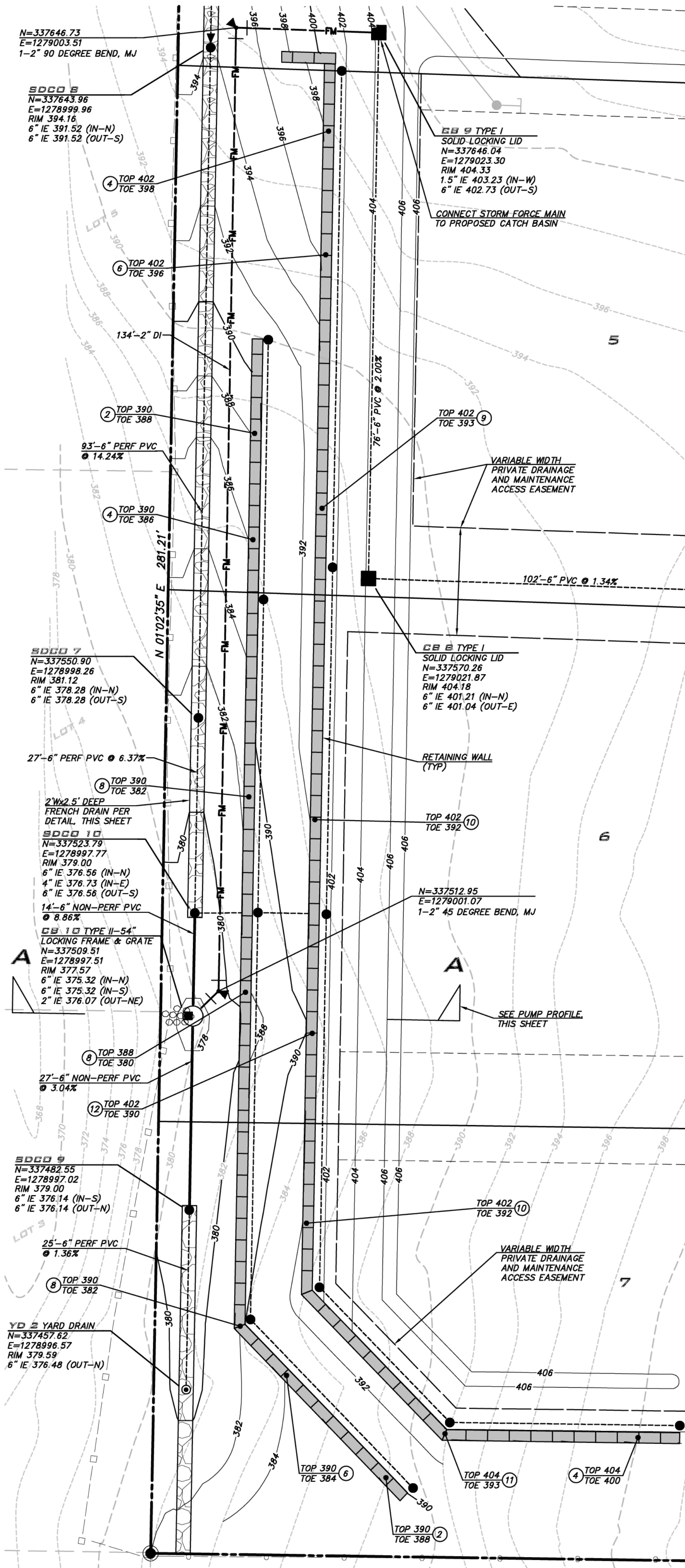
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21-073

SHEET NAME:

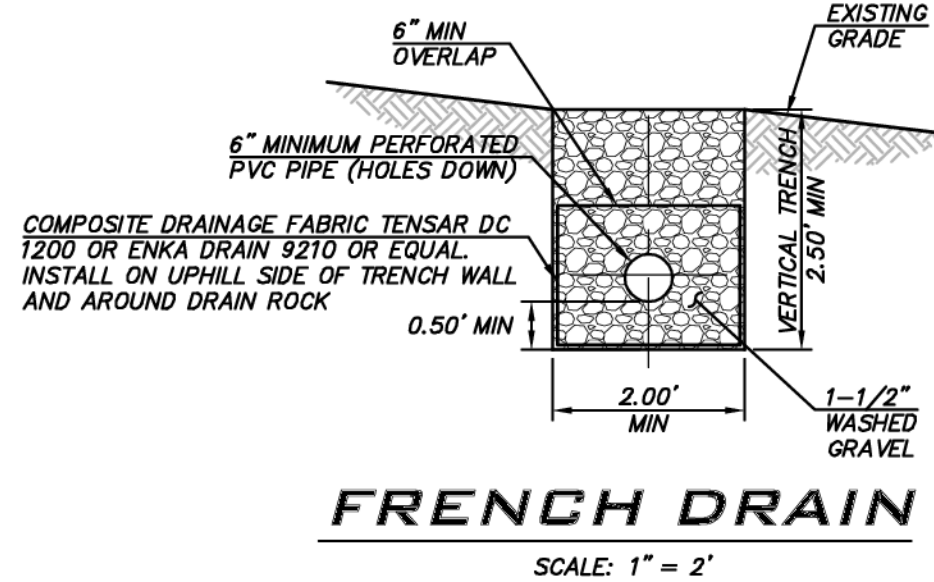
VT-02

SHT 14 OF 22



PUMP SPECIFICATIONS & NOTES

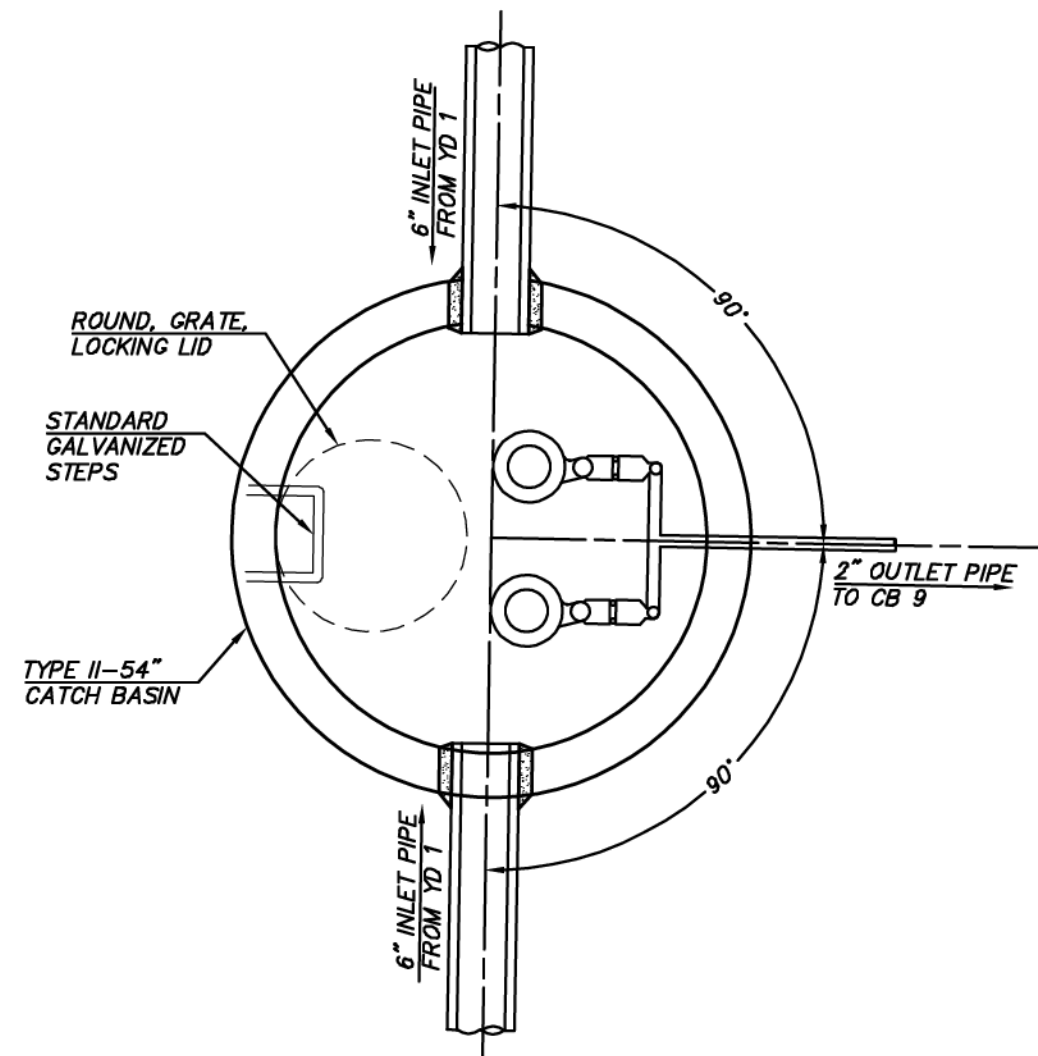
- THIS PUMP STATION DETAIL IS FOR SCHEMATIC PURPOSES ONLY AND TO OUTLINE THE BASIC PERFORMANCE REQUIREMENTS FOR THE SYSTEM. THE CONTRACTOR SHALL FOLLOW THE INSTALLATION REQUIREMENTS SPECIFIED BY THE PUMP MANUFACTURER. A REPRESENTATIVE OF THE PUMP MANUFACTURER SHALL BE ON-SITE TO INSPECT THE INSTALLATION OF THE SYSTEM.
- DUPLEX SUBMERSIBLE PUMP STATION REQUIREMENTS:
SUGGESTED PUMP: ZOELLER 153 DEWATERING SUBMERSIBLE PUMP
TOTAL HEAD = 34.11 FT
FLOW= 24.0 GPM / PUMP (0.054 CFS / PUMP)
PROVIDE ADJUSTABLE FLOW RESTRICTION VALVES ON DISCHARGE LINE
PUMPS SHALL BE RATED CONTINUOUS DUTY, SINGLE PHASED, 115V
2" NPT DISCHARGE LINE
INSTALL PUMPS ON DISCONNECT RAIL SYSTEM
PROVIDE ON, OFF AND ALARM FLOAT SWITCHES
ALTERNATING DUPLEX PUMP SYSTEM CONTROL PANEL TO BE INSTALLED BY QUALIFIED ELECTRICIAN PER NATIONAL ELECTRICAL CODE
SECURE/LOOKABLE OUTDOOR DUPLEX CONTROL PANEL WITH BATTERY BACKUP ALARM
PUMPS SHALL ALTERNATE WITH ONLY ONE PUMP ON AT A TIME (NO TWO PUMP ON CONDITION) WITH MAXIMUM RUN TIME OF 30 MINUTES PER PUMP



PUMP MAINTENANCE NOTE

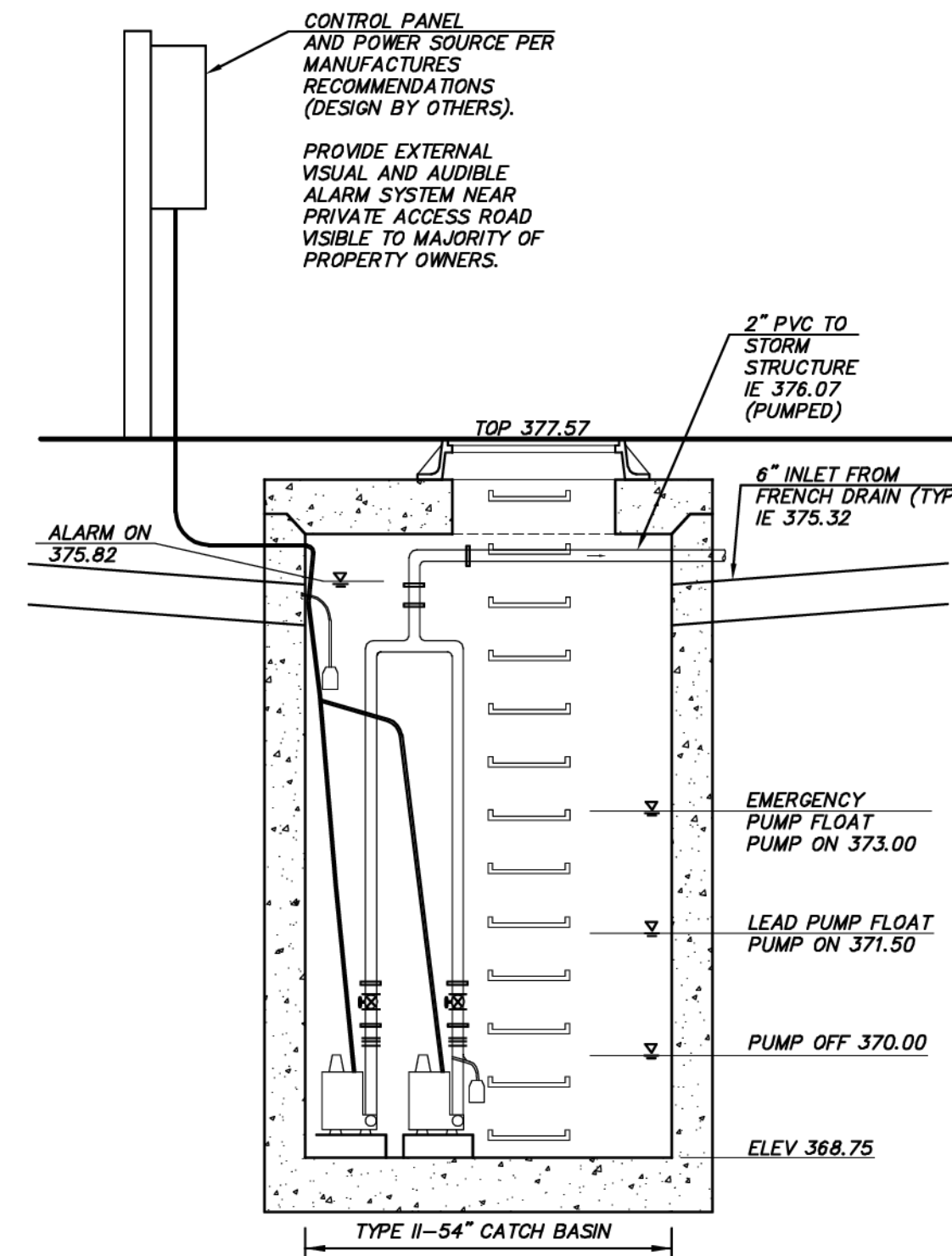
HOMEOWNERS ASSOCIATION (HOA) WILL BE RESPONSIBLE TO MAINTAIN/REPAIR THE PUMP. EASEMENTS AS DESCRIBED BELOW SHALL BE PROVIDED TO MAINTAIN/REPAIR THE PUMP. MAINTENANCE COVENANT SHALL BE PROVIDED TO HOLD HOA RESPONSIBLE TO MAINTAIN/REPAIR THE PUMP (CITY ATTORNEY TO CONFIRM DOCUMENTATION REQUIRED TO HOLD HOA RESPONSIBLE). SUBJECT EASEMENTS AND COVENANTS SHALL BE RECORDED WITH THE FINAL PLAT MAP AND CC&R'S.

SUBJECT PLAT IS PROVIDING A VARIABLE WIDTH PRIVATE DRAINAGE AND MAINTENANCE ACCESS EASEMENT BETWEEN LOT 5 & 6 AND ALONG THE WEST PORTION OF LOTS 4-7 TO ALLOW ACCESS TO INSPECT/MAINTAIN PUMP AS NECESSARY. PERSONNEL TO INSPECT/MAINTAIN PUMP WILL ACCESS THE VARIABLE WIDTH PRIVATE DRAINAGE AND MAINTENANCE ACCESS EASEMENT FROM TRACT 998, CONTINUE WEST ALONG LOT 5 & 6 SHARED PROPERTY LINE, TRAVEL NORTH TOWARDS LOT 4 TO PROCEED AROUND RETAINING WALLS, AND TRAVEL SOUTH TO THE PUMP STATION.



CB 10, TYPE II-54" PUMP STRUCTURE (PLAN)

SCALE: 1" = 2'



CB 9, TYPE I

NOT TO SCALE


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BLUELINE

25 CENTRAL WAY, SUITE 400,
KIRKLAND, WA 98033
P: 425.216.4001 F: 425.216.4002
WWW.THEBLUELINEGROUP.COM

SCALE:
AS NOTED

PROJECT MANAGER:
T.C. COLLERAN, PLA, AICP

PROJECT ENGINEER:
LUCAS ZIROTTI

DESIGNER:
LEE M. TOMKINS

ISSUE DATE:
7/29/21


REVISIONS			
NO	DATE	BY	COMMENTS
1	8/9/21	LCZ	REVISIONS PER CITY 1ST ROUND COMMENTS
2	8/17/21	LMT	REVISIONS PER CITY 2ND ROUND COMMENTS

PUMP STATION DETAILS

HARBOR GROVE

CIVIL PLANS

9110 53RD AVE W
SNOHOMISH COUNTY WASHINGTON



4/21/23

JOB NUMBER:
21-073

SHEET NAME:
PS-01

SHT **15** OF **22**

[illegible]

TREE RETENTION PLANS

HARBOR GROVE

CIVIL PLANS

9110 53RD AVE W

SNOHOMISH COUNTY



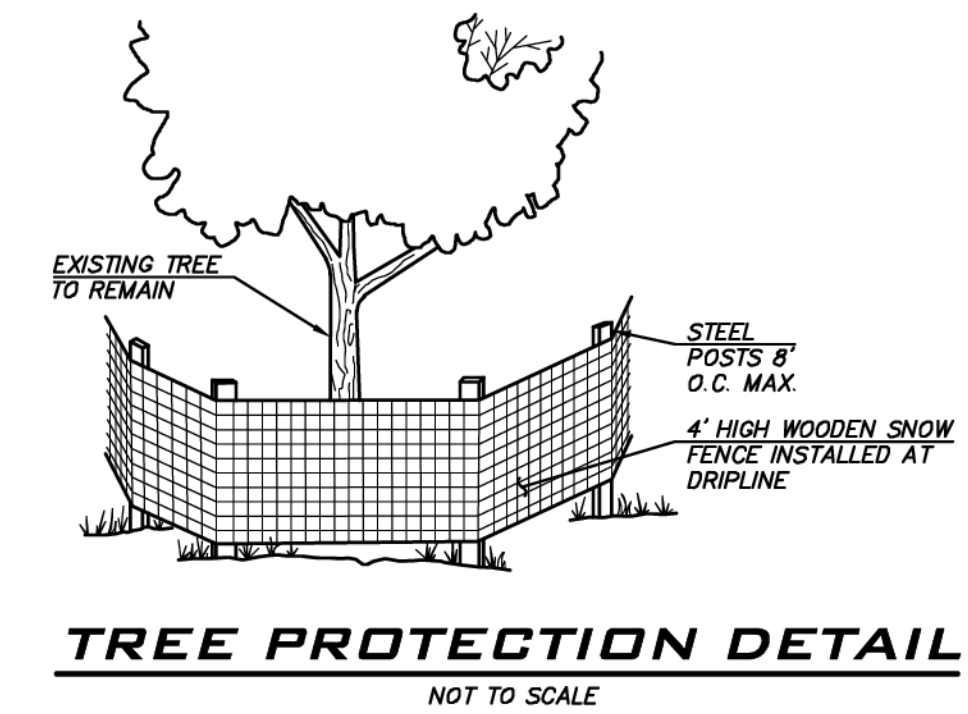
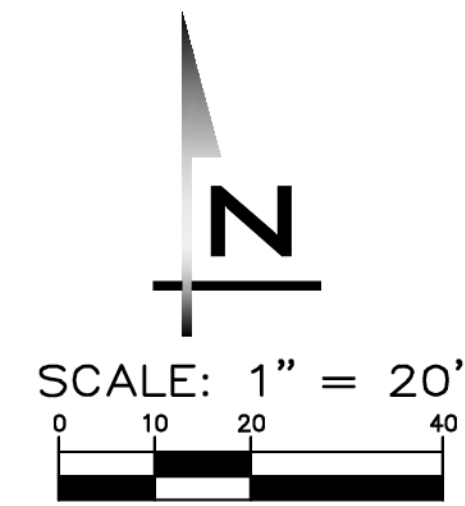
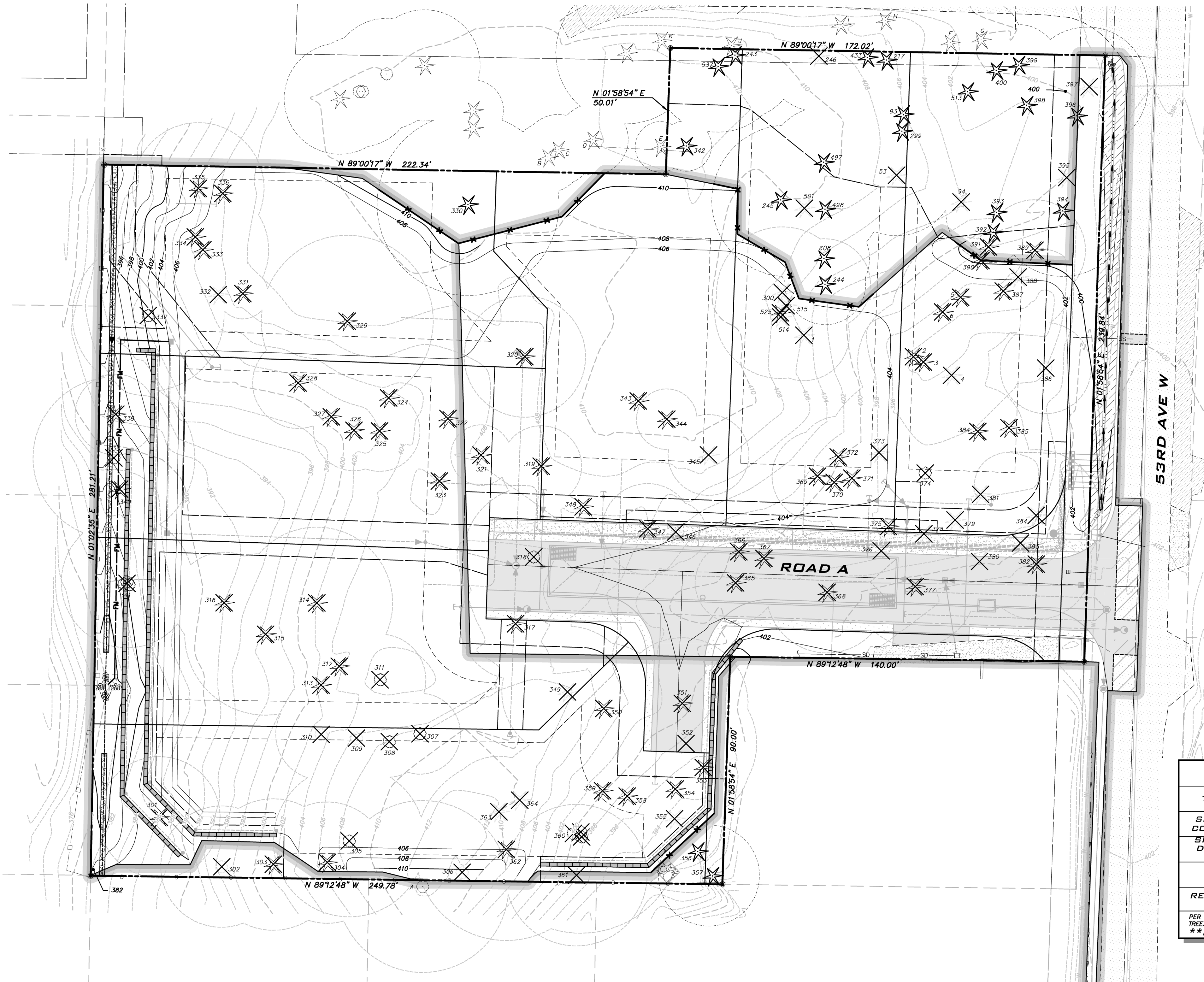
3/28/23

B NUMBER:









1-073

TR-01

Page 16 of 22



TREE LEGEND

		<i>EXISTING TREE TO BE REMOVED</i>
		<i>EXISTING TREE TO REMAIN</i>
		<i>EXISTING OFF-SITE TREE</i>
		<i>EXISTING TREE IN POOR CONDITION</i>

AVERAGE SLOPE CALCULATION

ELEVATION AT NORTHEAST CORNER = 400
ELEVATION AT SOUTHWEST CORNER = 382
DISTANCE BETWEEN TWO POINTS = 492'
AVERAGE SLOPE = $18/492 = 4\%$ AVERAGE GRADE

SUMMARY OF ON-SITE TREE RETENTION

SUMMARY OF ON-SITE TREE RETENTION				
TREE TYPE	TOTAL	RETAINED	REMOVAL	MIN % SIG TREES REQUIRED PER < 15% SLOPE —
SIGNIFICANT CONIFER (8"+)	83	23	60	SEE BELOW
SIGNIFICANT DECIDUOUS (12"+)	7	0	7	SEE BELOW
TOTALS	90	23	67	(25% OF 90) = 22.5 (PER CALCULATIONS ABOVE)
REPLACEMENT TREES	23 REQUIRED	23 RETAINED		

PER MUKILTEO CITY CODE 15.16.050 TREE RETENTION AND NATIVE VEGETATION RETENTION TABLE. REQUIRED TREES THAT ARE TO BE REMOVED TO BE REPLACED AT A RATE OF 3:1.
****SEE LS-01 FOR REPLACEMENT TREES**

EXISTING UTILITY NOTE

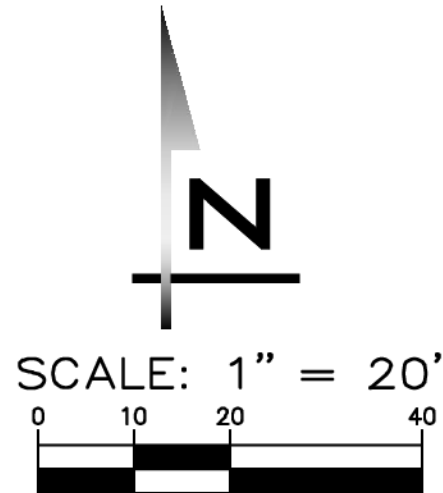
EXISTING UTILITIES ARE SHOWN IN THE APPROXIMATE LOCATION. THERE IS NO GUARANTEE THAT ALL UTILITY LINES ARE SHOWN, OR THAT THE LOCATION, SIZE AND MATERIAL IS ACCURATE. THE CONTRACTOR SHALL UNCOVER ALL INDICATED PIPING WHERE CROSSING, INTERFERENCES, OR CONNECTIONS OCCUR PRIOR TO TRENCHING OR EXCAVATION FOR ANY PIPE OR STRUCTURES, TO DETERMINE THE EXISTING LOCATION, SIZE AND MATERIAL. THE CONTRACTOR SHALL MAKE THE APPROPRIATE PROVISIONS FOR PROTECTION OF SAID FACILITIES. THE CONTRACTOR SHALL NOTIFY ONE CALL AT 8-1-1 (WASHINGTON811.COM) AND ARRANGE FOR FIELD LOCATION OF EXISTING FACILITIES BEFORE CONSTRUCTION.

CITY OF MUKILTEO FILE NUMBERS
SD-2021-001/ENG-2021-019/SEPA-2021-010



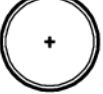









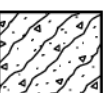
Tree Tag #	Species ID	DBH (in)	Adj. DBH (in)	Drip-line radius (ft)	Wind-firm	OK in Grove	Health	Defects/Comments	Proposed Action			CRZ/TPZ/LOD			
									Ret.	Poor	Rem.	Radius in feet			
									Viable	Unhealthy	Remove	N	W	E	S
301	Douglas fir	25	25	15		Y	Fair	Abnormal bark, shedding bark, popping bark, previous top loss, elongated branches, woodpecker activity, torque crack @ root crown up to 15' towards west			1	15	15	15	15
302	Red alder	20	20	12			Poor	Dead top, previous top loss @ 30', dead scaffold	1			12	12	12	12
303	Douglas fir	42	42	14		Y	Fair	Exposed roots, cavity @ root crown towards west, previous top loss, elongated branches, typical of species, woodpecker activity			1	14	14	14	14
304	Douglas fir	48	48	18			OK	Previous top loss, elongated branches, dead wood, broken branches, typical of species			1	18	18	18	18
305	Bigleaf maple	16.7	16.7	16		Y	Fair	Co-dominant leaders with included bark x2 @ 6', weak leaders			1	16	16	16	16
306	Red alder	10.4	10.4	12			Fair	Suppressed canopy, low live crown ratio <10%, moss and lichen, falling south	1			12	12	12	12
307	Japanese maple	10.7	10.7	14			OK	Moss and lichen, lean towards north, dead wood, broken branches, typical of species			1	14	14	14	14
308	Japanese maple	10	10	16		Y	OK/Fair	Moss and lichen, lean towards north, typical of species, cavity @ 5' up to 6' towards east			1	16	16	16	16
309	Japanese maple	10, 8	13	18			Fair	Co-dominant leaders with included bark x2 @ 2', cavity on scaffold, dead scaffolds, dead wood, moss and lichen	1			18	18	18	18
310	Japanese maple	10	10	18			Fair	Ivy @ root crown up to 20', lean towards west, moss and lichen, typical of species	1			18	18	18	18
311	Madrona	14, 4	14.5	14			OK	Co-dominant leaders with included bark x2 @ root crown, ivy @ root crown up to 15', typical of species			1	14	14	14	14
312	Western red cedar	16, 8	18	10			OK	Co-dominant leaders with included bark x2 @ root crown, ivy @ root crown up to 6', twisted trunk, typical of species			1	10	10	10	10
313	Western red cedar	4, 20	20.5	13		Y	Fair	Co-dominant leaders with included bark x2 @ root crown up to 30', woodpecker activity			1	13	13	13	13
314	Douglas fir	28	28	15		Y	Fair	Ivy @ root crown up to 10', thin canopy, dead wood, broken branches, typical of species			1	15	15	15	15
315	Douglas fir	34	34	18			OK	Thin canopy, dead wood, broken branches, ivy @ root crown up to 20'			1	18	18	18	18
316	Scots pine	14	14	15			OK	Ivy @ root crown up to 20', serpentine trunk, moss and lichen, typical of species			1	15	15	15	15
317	Hemlock	26	26	21			OK	Nurse tree, thin canopy, dead wood, broken branches, typical of species			1	21	21	21	21
318	Beech	18	18	24			Good	Typical of species			1	24	24	24	24
319	Hemlock	16	16	14		Y	Fair	Thin canopy, dead wood, broken branches, exposed roots, typical of species			1	14	14	14	14
320	Western red cedar	44	44	18			OK	Nurse tree, large cavity up to 8', carpenter ants, typical of species			1	18	18	18	18
321	Eastern white pine	8, 4, 6, 6	12.5	10			OK	Co-dominant leaders with included bark x4 @ root crown, typical of species			1	10	10	10	10
322	Douglas fir	10	10	10			OK	Dead wood, broken branches, typical of species			1	10	10	10	10
323	Douglas fir	10	10	14			OK	Thin canopy, low live crown ratio <30%, typical of species			1	14	14	14	14
324	Douglas fir	10	10	14		Y	Fair	Thin canopy, co-dominant canopy, typical of species			1	14	14	14	14
325	Douglas fir	4, 12	12.5	14			OK	Co-dominant leaders with included bark x2 @ root crown, falling south, thin canopy, typical of species			1	14	14	14	14
326	Western red cedar	14	14	14			OK	Thin canopy, typical of species			1	14	14	14	14
327	Western red cedar	9	9	13			OK	Typical of species			1	13	13	13	13
328	Western red cedar	8	8	10			OK	Thin canopy, typical of species			1	10	10	10	10
329	Douglas fir	72	72	45				Previous top loss, elongated branches, scraping wound 30' up to 40' towards east, typical of species			1	45	45	45	45
330	Douglas fir	61	61	45			OK	Previous top loss, elongated branches, dead wood, broken branches, previous ivy @ root crown up to 50'	1			45	45	45	45
331	Western red cedar	14	14	14			OK	Thin canopy, typical of species			1	14	14	14	14
332	Norway spruce	8	8	8			Fair	Dead wood, broken branches, spruce adelgid, ivy @ root crown up to 50'	1			8	8	8	8
333	Douglas fir	35	35	22		Y	Fair	Previous ivy @ root crown up to 80', racoon scat, dead wood, broken branches, previous top loss, elongated branches			1	22	22	22	22
334	Douglas fir	32	32	22			OK	Asymmetric canopy towards east, previous top loss, elongated branches, dead wood, broken branches, typical of species			1	22	22	22	22
335	Douglas fir	8	8	12			OK	Asymmetric canopy towards west, perennial canker, typical of species			1	12	12	12	12
336	Douglas fir	8	8	8			OK	Asymmetric canopy towards west, ivy @ root crown up to 20', typical of species			1	8	8	8	8
337	Bigleaf maple	30	30	18			OK	Moss and lichen, typical of species, slight lean towards west			1	18	18	18	18
338	Douglas fir	13	13	14			OK	Low live crown ratio <30%, previous top loss, elongated branches, typical of species			1	14	14	14	14
339	Bigleaf maple	22	22	18			OK	Moss and lichen, typical of species			1	18	18	18	18
340	Lodgepole pine	16	16	18		Y	Fair	Woodpecker activity, horizontal crack @ 12' towards east, asymmetric canopy towards south, typical of species			1	18	18	18	18

341	Bigleaf maple	22	22	20			OK	Tagged on #340, co-dominant leaders with included bark x2 @ 10', moss and lichen, typical of species				1	20	20	20	20
342	Douglas fir	8	8	6			OK	Suppressed canopy, typical of species				1	6	6	6	6
343	Hemlock	6, 7	9	10			OK	Co-dominant leaders with included bark x2 @ root crown, typical of species				1	10	10	10	10
344	Western red cedar	9	9	9			OK	Typical of species				1	9	9	9	9
345	Black pine	12	12	16			Fair	Trunk gall, serpentine trunk, typical of species				1	16	16	16	16
346	Western red cedar	9	9	8			Fair	Co-dominant leaders with included bark x2 @ 10', typical of species				1	8	8	8	8
347	Hemlock	18	18	12		Y	Fair	Nurse tree @ 6', typical of species				1	12	12	12	12
348	Hemlock	18	18	13			OK	Thin canopy, dead wood, broken branches, exposed roots, typical of species				1	13	13	13	13
349	Douglas fir	29.8	29.8	18			Poor	Topped @ 30', weak laterals, abnormal bark, shedding bark, popping bark				1	18	18	18	18
350	Douglas fir	34	34	20		Y	Fair	Kink @ 50', dead wood, broken branches, previous top loss, elongated branches				1	20	20	20	20
351	Douglas fir	32	32	19			OK	Previous top loss, elongated branches, dead wood, broken branches, asymmetric canopy towards north				1	19	19	19	19
352	Douglas fir	32	32	24			Fair	Exposed roots, cavity @ root crown up to 1' towards west, woodpecker activity, calloused wound @ root crown up to 1' towards west, low live crown ratio <20%, previous top loss, elongated branches				1	24	24	24	24
353	Douglas fir	18	18	16		Y	Fair	Dead wood, broken branches, no taper, suppressed canopy, typical of species				1	16	16	16	16
354	Douglas fir	16	16	16			OK	Previous top loss @ 30', strong leader, suppressed canopy, dead wood, broken branches, thin canopy, asymmetric canopy towards south, lean towards south				1	12	12	12	12
355	Douglas fir	14	14	12			Fair	Nurse tree, exposed roots, asymmetric canopy towards east, typical of species				1	12	12	12	12
356	Hemlock	12	12	12		Y	Fair	Nurse tree, exposed roots, asymmetric canopy towards west, typical of species				1	12	12	12	12
357	Hemlock	20	20	14		Y	Fair	Abnormal bark, shedding bark, popping bark, low live crown ratio <30%, dead wood, broken branches, typical of species				1	14	14	14	14
358	Douglas fir	49.7	49.7	21		Y	Fair	Low live crown ratio <20%, asymmetric canopy towards west, previous top loss, elongated branches, typical of species				1	21	21	21	21
359	Douglas fir	34	34	20		Y	Fair	Low live crown ratio <20%, asymmetric canopy towards west, previous top loss, calloused wound @ 15' towards south, typical of species, abnormal bark, shedding bark				1	20	20	20	20
360	Bigleaf maple	14, 28, 18	36	30		Y	Fair	Co-dominant leaders with included bark x3 @ 4', cavity @ crotch, exposed roots, moss and lichen, hypoxylon canker				1	30	30	30	30
361	Bigleaf maple	18	18	20			Fair	Previous top loss @ 50', asymmetric canopy towards south, dead scaffolds				1	20	20	20	20
362	Douglas fir	14, 40	42.5	24			OK	Co-dominant leaders with included bark x2 @ root crown, abnormal bark, shedding bark, popping bark, woodpecker activity, previous top loss, elongated branches, typical of species				1	24	24	24	24
363	Douglas fir	28	28	28			Poor	Previous top loss @ 50', weak leader, abnormal bark, shedding bark, falling towards north, laminated root rot?				1	28	28	28	28
364	Douglas fir	18	18	18			Poor	No taper, abnormal bark, shedding bark, popping bark, previous top loss, elongated branches, laminated root rot?				1	18	18	18	18
365	Hemlock	15	15	14			OK	Asymmetric canopy towards north, dead wood, broken branches, exposed roots, typical of species				1	14	14	14	14
366	Hemlock	7	7	8		Y	Fair	Dead wood, broken branches, suppressed canopy				1	8	8	8	8
367	Douglas fir	14	14	14		Y	Fair	Dead wood, broken branches, suppressed canopy, typical of species				1	14	14	14	14
368	Douglas fir	32	32	18			OK	Dead wood, broken branches, previous top loss, elongated branches, typical of species				1	18	18	18	18
369	Douglas fir	26	26	16			Fair	Kink @ 25', asymmetric canopy towards west, previous top loss, elongated branches, self-corrected lean				1	16	16	16	16
370	Douglas fir	13	13	12			Poor	Previous top loss @ 30', moss and lichen, falling towards south				1	12	12	12	12
371	Douglas fir	21.5	21.5	18			OK	Dead wood, broken branches, previous top loss, elongated branches, low live crown ratio <30%				1	18	18	18	18
372	Western red cedar	18	18	14			OK	Asymmetric canopy towards west, dead top, co-dominant canopy, typical of species				1	14	14	14	14
373	Western red cedar	31	31	14			Fair	Cavity @ root crown up to 6' towards east, previous top loss @ 10', weak leader, co-dominant canopy				1	14	14	14	14
374	Bigleaf maple	36, 12	38	21			OK	Co-dominant leaders with included bark x2 @ root crown, moss and lichen, dead wood, broken branches, hanger, typical of species				1	21	21	21	21
375	Douglas fir	16	16	15			OK	Low live crown ratio <5%, previous top loss, elongated branches, dead wood, broken branches, typical of species				1	15	15	15	15
376	Douglas fir	12, 16	20	14			Fair	Co-dominant leaders with included bark x2 @ root crown, previous top loss, dead wood, broken branches, asymmetric canopy towards west				1	14	14	14	14

									Ivy @ root crown up to 15', free flowing sap, previous top loss, elongated branches, epicormic branch formation @ 20' towards east							
377	Douglas fir	38	38	18				OK					1	18	18	18
378	Douglas fir	16	16	15				Poor	Self-corrected lean towards east, serpentine trunk, suppressed canopy				1	15	15	15
379	Douglas fir	14	14	12				Poor	Serpentine trunk, self-corrected lean towards south, previous top loss, asymmetric canopy towards south				1	12	12	12
380	Douglas fir	16	16	14				Fair	Self-corrected lean towards north, serpentine trunk, previous top loss, elongated branches, dead wood, broken branches, asymmetric canopy towards south				1	14	14	14
381	Douglas fir	18	18	16				Fair	Lean towards north, dead wood, broken branches, dead twigs, moss and lichen, previous top loss, elongated branches				1	16	16	16
382	Douglas fir	22	22	18				OK	Serpentine trunk, asymmetric canopy towards north, dead wood, broken branches, typical of species				1	18	18	18
383	Douglas fir	29.5	29.5	20				Poor	Moss and lichen, serpentine trunk, lean towards east, previous top loss, elongated branches				1	20	20	20
384	Douglas fir	23.6	23.6	16				Fair	Bulge @ 20', low live crown ratio <20%, previous top loss, elongated branches, lean towards north				1	16	16	16
385	Douglas fir	21	21	18				OK	Previous top loss, elongated branches, dead wood, broken branches, moss and lichen, typical of species				1	18	18	18
386	Red alder	11	11	16				Fair	Lean towards east, moss and lichen				1	16	16	16
387	Douglas fir	23.5	23.5	16			OK/Fair		Low live crown ratio <30%, asymmetric canopy towards south, dead wood, broken branches, co-dominant canopy, typical of species				1	16	16	16
388	Douglas fir	16	16	16				Fair	No taper, kink @ 20', previous top loss @ 40'				1	16	16	16
389	Douglas fir	34.2	34.2	15		Y	Fair		Abnormal bark, shedding bark, popping bark, dead wood, broken branches, previous top loss, elongated branches, typical of species				1	15	15	15
390	Douglas fir	22	22	16		Y	Fair		Asymmetric canopy towards west, low live crown ratio <30%, abnormal bark, shedding bark, horizontal crack @ 6' towards east				1	16	16	16
391	Douglas fir	29	29	18		Y	Fair		Low live crown ratio <20%, previous top loss, elongated branches, red ring rot, typical of species				1	18	18	18
392	Douglas fir	13	13	12		Y	Fair		Suppressed canopy, dead wood, broken branches, previous top loss				1	12	12	12
393	Douglas fir	35	35	18			OK		Dead wood, broken branches, previous top loss, elongated branches				1	18	18	18
394	Douglas fir	36.6	36.6	22			OK		Previous top loss, elongated branches, asymmetric canopy towards east, dead wood, broken branches, typical of species				1	22	22	22
395	Douglas fir	22	22	16				Poor	Abnormal bark, shedding bark, previous top loss @ 6', dead spur, asymmetric canopy towards east, taps hollow				1	16	16	16
396	Douglas fir	11	11	12				OK	Suppressed canopy, previous top loss, lean towards east, asymmetric canopy towards east				1	12	12	12
397	Douglas fir	15	15	16				Fair	Thin canopy, dead wood, broken branches, asymmetric canopy towards northeast				1	16	16	16
398	Douglas fir	42	42	22			OK		Previous top loss, elongated branches, dead wood, broken branches, typical of species				1	22	22	22
94	Douglas fir	9	9	14				Poor	Previously girdled with wire @ 4', free flowing sap				1	14	14	14
399	Douglas fir	13.8	13.8	8		Y	Fair		Suppressed canopy, serpentine trunk, dead wood, broken branches				1	8	8	8
400	Douglas fir	26.2	26.2	18		Y	Fair		Previous top loss, elongated branches, dead wood, broken branches, typical of species				1	18	18	18
513	Douglas fir	28.8	28.8	18			OK		Low live crown ratio <30%, previous top loss, elongated branches, dead wood, broken branches, typical of species				1	18	18	18
93	Douglas fir	8	8	8		Y	Fair		Suppressed canopy, thin canopy				1	8	8	8
239	Douglas fir	24	24	18		Y	Fair		Ivy @ root crown up to 25', co-dominant canopy, asymmetric canopy towards west, previous top loss, elongated branches				1	18	18	18
53	Douglas fir	26	26	20				Poor	Self-corrected lean towards north, woodpecker activity, carpenter ants, dead wood, broken branches				1	20	20	20
217	Douglas fir	30	30	22		Y	Fair		Girdled by barb wire fencing @ 4', co-dominant canopy, low live crown ratio <30%, previous top loss, elongated branches, dead wood, broken branches				1	22	22	22
433	Douglas fir	16	16	10		Y	Fair		Suppressed canopy, asymmetric canopy towards south, no taper, typical of species				1	10	10	10
246	Douglas fir	22	22	18			OK		Previous top loss, elongated branches, asymmetric canopy towards west, dead wood, broken branches, typical of species				1	18	18	18
243	Douglas fir	22	22	18		Y	Fair		Asymmetric canopy towards east, dead wood, broken branches, previous top loss, elongated branches, exposed roots, moss and lichen				1	18	18	18
537	Douglas fir	36	36	18			OK		Ivy @ root crown up to 15', hanger, dead wood, broken branches, typical of species				1	18	18	18
497	Douglas fir	19.7	19.7	18		Y	Fair		Ivy @ root crown up to 30', pin point crack @ 5', free flowing sap, dead wood, broken branches, previous top loss, elongated branches				1	18	18	18



PLANT SCHEDULE

TREES	QTY	BOTANICAL / COMMON NAME
	3	ACER CIRCINATUM WINE MAPLE
	9	ACER RUBRUM 'FRANKSRED' TM RED SUNSET MAPLE
	4	CERCIDIPHYLLUM JAPONICUM KATSURA TREE
REPLACEMENT TREES	QTY	BOTANICAL / COMMON NAME
	4	THUJA PLICATA 'EXCELSA' WESTERN RED CEDAR
SHRUBS	QTY	BOTANICAL / COMMON NAME
	42	CORNUS SERICEA 'ARTIC FIRE' ARTIC FIRE DOGWOOD
	9	LONICERA INVOLUCRATA TWINBERRY
	20	LONICERA NITIDA 'BAGGESEN'S GOLD' BOXLEAF HONEYSUCKLE
	55	PANICUM VIRGATUM 'NORTHWIND' NORTHWIND SWITCH GRASS
	20	RHUS AROMATICA 'GRO-LOW' GRO-LOW FRAGRANT SUMAC
	36	SYMPHORICARPOS ALBUS COMMON WHITE SNOWBERRY
	48	VACCINIUM OVATUM EVERGREEN HUCKLEBERRY
GROUND COVERS	QTY	BOTANICAL / COMMON NAME
	4,692	COTONEASTER DAMMERI 'CORAL BEAUTY' CORAL BEAUTY COTONEASTER
RAIN GARDEN	QTY	BOTANICAL / COMMON NAME
	2,494 SF	RAIN GARDEN PLANTS PER SW-047

SOIL AMENDMENT NOTE



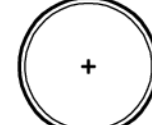








POST-CONSTRUCTION SOIL QUALITY DEPTH PER DETAIL ON SHEET DT-03 SHALL BE APPLIED TO ALL NEW/REPLACED LAWN AND LANDSCAPED SURFACES.


EXISTING UTILITY NOTE

EXISTING UTILITIES ARE SHOWN IN THE APPROXIMATE LOCATION. THERE IS NO GUARANTEE THAT ALL UTILITY LINES ARE SHOWN, OR THAT THE LOCATION, SIZE AND MATERIAL IS ACCURATE. THE CONTRACTOR SHALL UNCOVER ALL INDICATED PIPING WHERE CROSSING, INTERFERENCES, OR CONNECTIONS OCCUR PRIOR TO TRENCHING OR EXCAVATION FOR ANY PIPE OR STRUCTURES, TO DETERMINE ACTUAL LOCATIONS, SIZE AND MATERIAL. THE CONTRACTOR SHALL MAKE THE APPROPRIATE PROVISION FOR PROTECTION OF SAID FACILITIES. THE CONTRACTOR SHALL NOTIFY ONE CALL AT 8-1-1 (WASHINGTON811.COM) AND ARRANGE FOR FIELD LOCATION OF EXISTING FACILITIES BEFORE CONSTRUCTION.



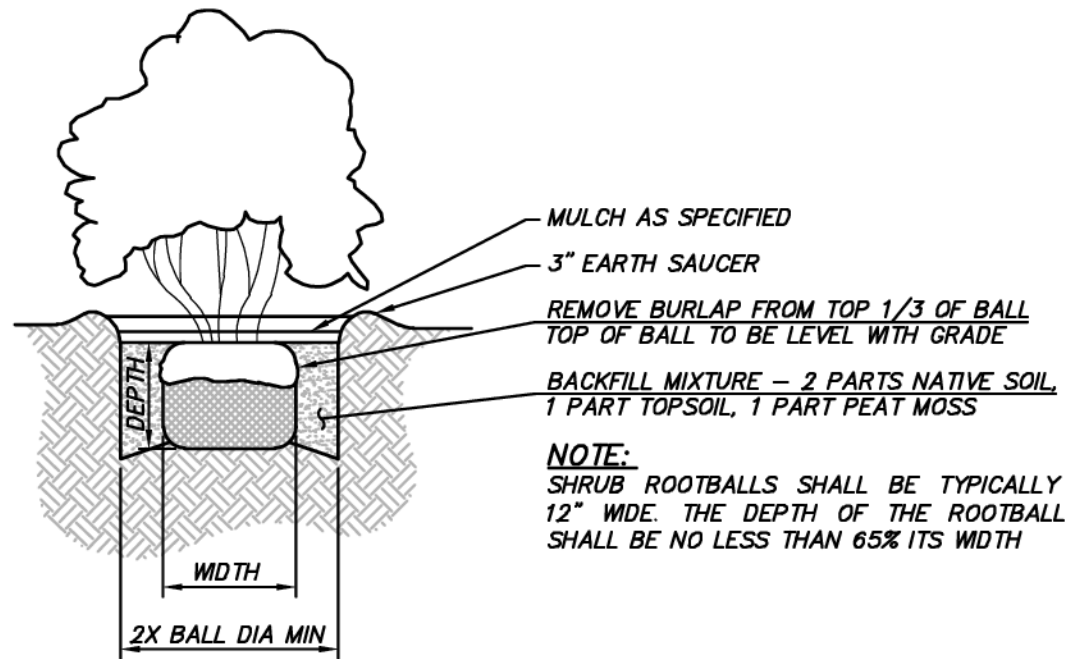
PLANT SCHEDULE

<u>TREES</u>	<u>QTY</u>	<u>BOTANICAL / COMMON NAME</u>	<u>CONT</u>	<u>SIZE</u>	
	3	ACER CIRCINATUM VINE MAPLE	B & B	2" CAL	
	9	ACER RUBRUM 'FRANKSRED' TM RED SUNSET MAPLE	B & B	2" CAL	
	4	CERCIDIPHYLLUM JAPONICUM KATSURA TREE	B & B	2" CAL	
<u>REPLACEMENT TREES</u>	<u>QTY</u>	<u>BOTANICAL / COMMON NAME</u>	<u>CONT</u>	<u>SIZE</u>	
	4	THUJA PLICATA 'EXCELSA' WESTERN RED CEDAR	B & B	8' MIN PLANTED HT.	
<u>SHRUBS</u>	<u>QTY</u>	<u>BOTANICAL / COMMON NAME</u>	<u>SIZE</u>	<u>HEIGHT</u>	<u>SPACING</u>
	42	CORNUS SERICEA 'ARTIC FIRE' ARTIC FIRE DOGWOOD	5 GAL		42" o.c.
	9	LONICERA INVOLUCRATA TWINBERRY	5 GAL		48" o.c.
	20	LONICERA NITIDA 'BAGGESEN'S GOLD' BOXLEAF HONEYSUCKLE	5 GAL		48" o.c.
	55	PANICUM VIRGATUM 'NORTHWIND' NORTHWIND SWITCH GRASS	1 GAL		36" o.c.
	20	RHUS AROMATICA 'GRO-LOW' GRO-LOW FRAGRANT SUMAC	5 GAL		48" o.c.
	36	SYMPHORICARPOS ALBUS COMMON WHITE SNOWBERRY	3 GAL		42" o.c.
	48	VACCINIUM OVATUM EVERGREEN HUCKLEBERRY	5 GAL		48" o.c.

GROUND COVERS	QTY	BOTANICAL / COMMON NAME	CONT	SIZE	SPACING	DETAIL
	4,692	COTONEASTER DAMMERI 'CORAL BEAUTY' CORAL BEAUTY COTONEASTER	FLAT		4" o.c.	

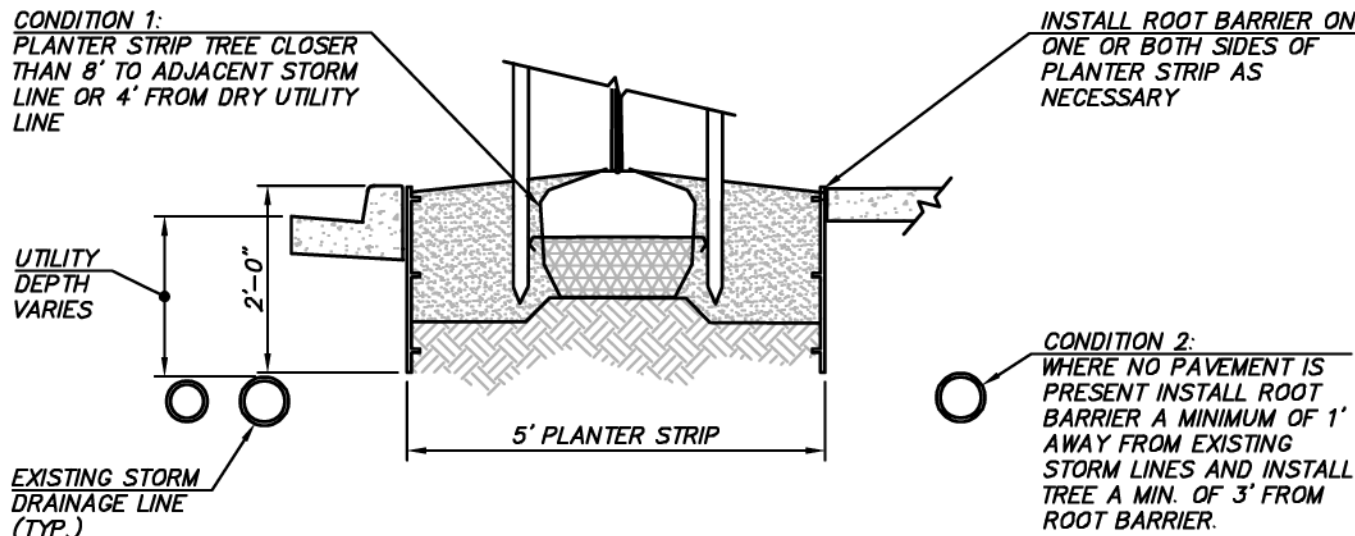
RAIN GARDEN

	RAIN GARDEN PLANTS PER SW-047	2,494 SF
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SHRUB DETAIL

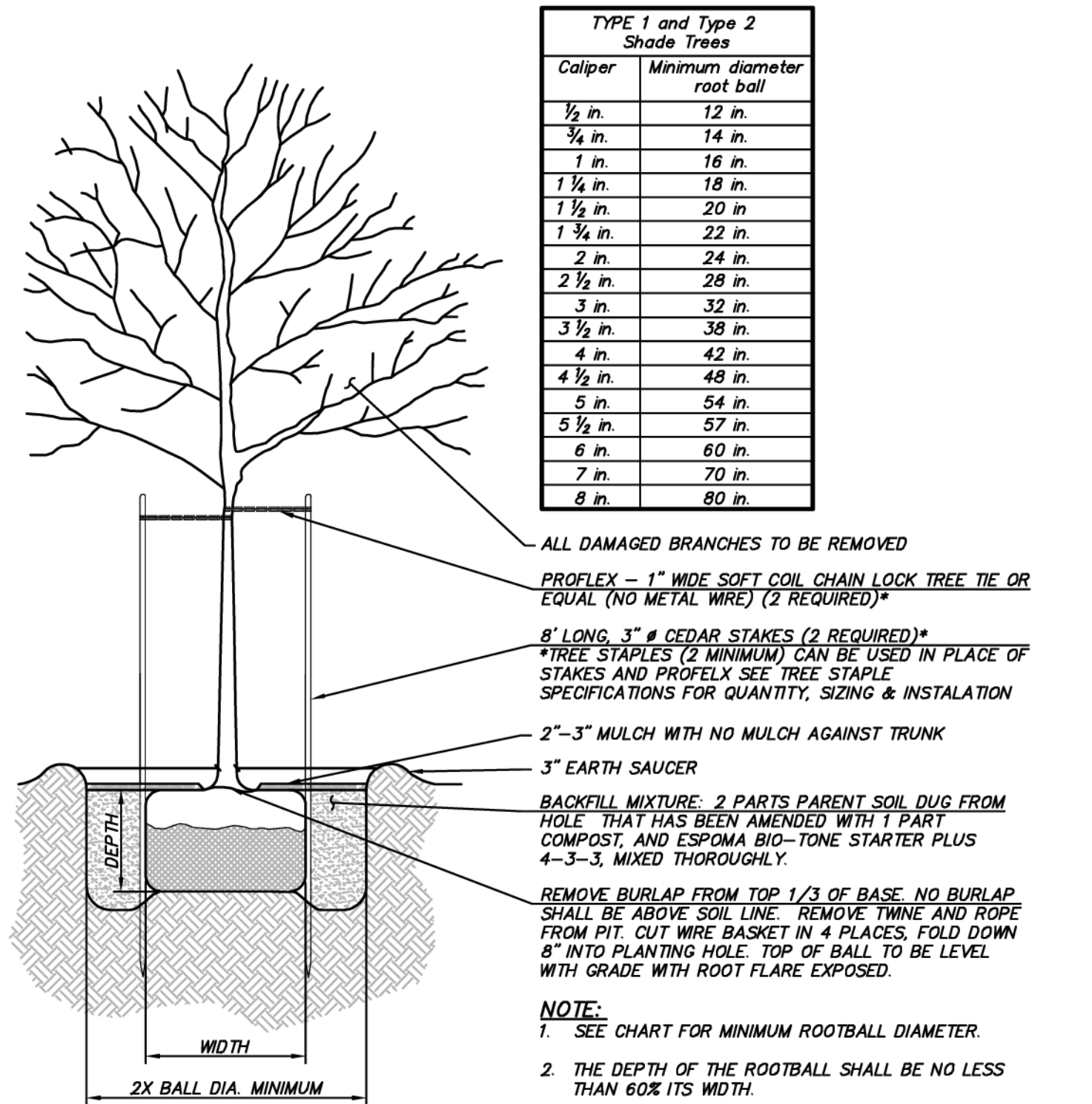
NOT TO SCALE



- NOTE:
- ROOT BARRIER TO BE NDS, MODEL RP-2450, OR APPROVED EQUIVALENT.
 - INSTALL PRODUCT PER MANUFACTURER'S SPECIFICATIONS.
 - INSTALL PRODUCT A MINIMUM OF 3' BEYOND CENTER OF TREE IN EACH DIRECTION PARALLEL TO UTILITY LINE.
 - ALL TREES LOCATED WITHIN PLANTER STRIPS TO RECEIVE ROOT BARRIER.

ROOT BARRIER DETAIL

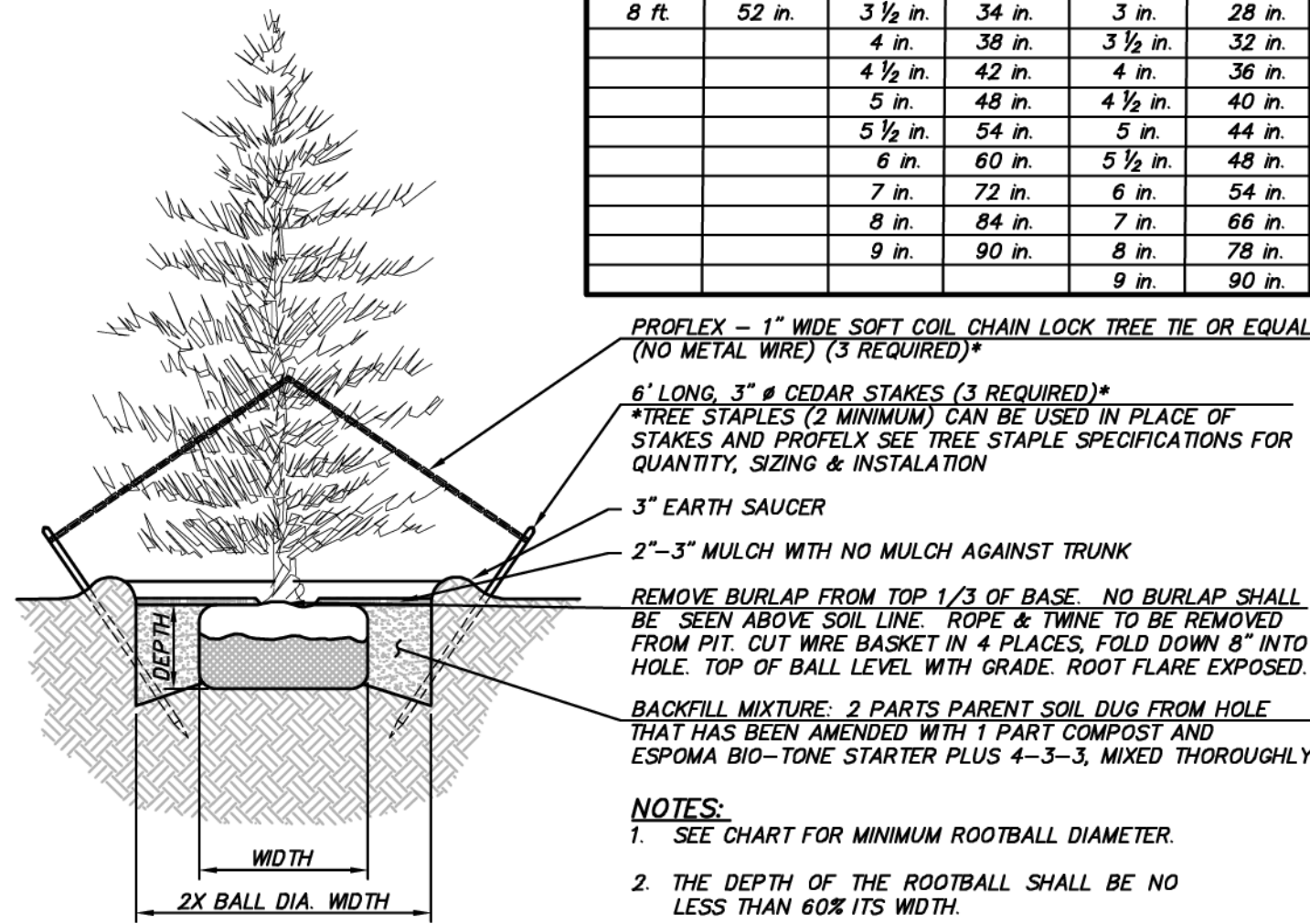
NOT TO SCALE



DECIDUOUS DETAIL

NOT TO SCALE

TYPES 1, 2, AND 3 Spreading, semi- spreading, broad spreading, globe, and compact upright		Types 4 & 5 Pyramidal, broad upright		Type 6* Columnar	
Spread (Types 1 and 2) Height (Type 3)	Minimum diameter ball	Height/ Caliper	Minimum diameter ball	Height/ Caliper	Minimum diameter ball
9 in.	8 in.	12 in.	8 in.	12 in.	7 in.
12 in.	10 in.	15 in.	10 in.	15 in.	8 in.
15 in.	12 in.	18 in.	12 in.	18 in.	9 in.
18 in.	14 in.	24 in.	14 in.	24 in.	11 in.
24 in.	16 in.	30 in.	16 in.	30 in.	13 in.
30 in.	18 in.	3 ft.	18 in.	3 ft.	14 in.
36 in.	24 in.	4 ft.	20 in.	4 ft.	16 in.
42 in.	26 in.	5 ft.	22 in.	5 ft.	18 in.
4 ft.	28 in.	6 ft.	24 in.	6 ft.	20 in.
5 ft.	36 in.	7 ft.	26 in.	7 ft.	22 in.
6 ft.	40 in.	8 ft.	28 in.	8 ft.	24 in.
7 ft.	46 in.	9 ft./3 in.	32 in.	9 ft./2 1/2 in.	26 in.
8 ft.	52 in.	3 1/2 in.	34 in.	3 in.	28 in.
		4 in.	36 in.	3 1/2 in.	32 in.
		4 1/2 in.	42 in.	4 in.	36 in.
		5 in.	48 in.	4 1/2 in.	40 in.
		5 1/2 in.	54 in.	5 in.	44 in.
		6 in.	60 in.	5 1/2 in.	48 in.
		7 in.	72 in.	6 in.	54 in.
		8 in.	84 in.	7 in.	66 in.
		9 in.	90 in.	8 in.	78 in.
				9 in.	90 in.



CONIFER DETAIL

NOT TO SCALE

LANDSCAPE NOTES:

- IN THE EVENT THAT ANY DISCREPANCIES BETWEEN THE QUANTITIES OF PLANTS INDICATED ON THE PLANT SCHEDULE AND THOSE INDICATED ON THE PLAN, THE QUANTITIES INDICATED ON THE PLAN SHALL GOVERN.
- NO SUBSTITUTIONS SHALL BE ACCEPTED, EXCEPT WITH THE WRITTEN PERMISSION OF THE LANDSCAPE ARCHITECT OR HIS AGENT.
- THE LANDSCAPE ARCHITECT OR HIS AGENT SHALL BE THE SOLE JUDGE OF THE QUALITY AND ACCEPTABILITY OF THE MATERIALS. ALL REJECTED MATERIALS SHALL BE IMMEDIATELY REPLACED WITH ACCEPTABLE MATERIAL AT NO ADDITIONAL COST.
- ALL PLANT BEDS SHALL BE MULCHED WITH A MINIMUM OF 3" SHREDDED BARK MULCH OR OTHER MATERIAL APPROVED BY THE LANDSCAPE ARCHITECT. ALL PROPOSED PLANT MATERIAL SHALL BE FULLY GUARANTEED FOR ONE (1) YEAR FROM DATE OF ACCEPTANCE AND SHALL BE IN HEALTHY AND VIGOROUS CONDITION. ANY PLANT MATERIAL WHICH DIES WITHIN THAT PERIOD SHALL BE REPLACED WITH THE SAME SIZE AND SPECIES OF PLANT MATERIAL.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLANTING AT CORRECT GRADES AND ALIGNMENT.
- PLANTS SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY; HAVE NORMAL GROWTH HABITS, WELL DEVELOPED BRANCHES, DENSELY FOLIATED, VIGOROUS ROOT SYSTEMS AND BE FREE FROM DEFECTS AND INJURIES.
- THE CONTRACTOR SHALL REPORT ANY SOIL OR DRAINAGE CONDITION CONSIDERED DETRIMENTAL TO THE GROWTH OF PLANT MATERIAL.
- QUALITY AND SIZE OF PLANTS, SPREAD OF ROOTS AND SIZE OF BALLS SHALL BE IN ACCORDANCE WITH "AMERICAN STANDARDS FOR NURSERY STOCK" ANSI Z60 (MOST RECENT EDITION) AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC.
- B & B PLANTS SHALL BE HANDLED FROM THE BOTTOM OF THE ROOT BALL ONLY. PLANTS WITH BROKEN, SPLIT OR DAMAGED ROOT BALLS SHALL BE REJECTED.
- TREES SHALL BE LOCATED IN A MANNER WHICH WILL NOT OBSTRUCT ACCESS TO FIRE HYDRANT OR VISIBILITY OF STREET OR TRAFFIC SIGNS.
- PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WEATHER AND SOIL CONDITION ARE SUITABLE.
- SET ALL PLANTS PLUMB AND STRAIGHT. SET AT SUCH LEVEL THAT, AFTER SETTLEMENT, A NORMAL OR NATURAL RELATIONSHIP TO THE CROWN OF THE PLANT WITH THE GROUND SURFACE WILL BE ESTABLISHED. LOCATE PLANTS IN THE CENTER OF THE PLANTING PIT.
- TREES SHALL BE SUPPORTED IMMEDIATELY AFTER PLANTING IN ACCORDANCE WITH THE PLANTING DETAILS.
- THE LOCATION OF ALL PLANT MATERIAL IS DIAGRAMMATIC. FINAL LOCATION OF ALL PLANT MATERIAL SHALL BE DETERMINED IN THE FIELD UNDER THE DIRECTION OF THE LANDSCAPE ARCHITECT OR HIS AGENT.
- THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY BEARING UPON THE PERFORMANCE OF THE WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO CALL FOR UTILITY LOCATIONS, IF NECESSARY.
- AMENDED SOIL AS REQUIRED IN ALL LANDSCAPED AREAS (OTHER THAN BIORETENTION AREAS). SOIL MUST MEET WA STATE DEPARTMENT OF ECOLOGY BMP TS.13.

REVISIONS

NO	DATE	BY	REVISIONS FOR CITY 1ST ROUND COMMENTS	REVISIONS PER CITY 2ND ROUND COMMENTS
1	8/9/23	LCZ		
2	4/12/23	LMT		

LANDSCAPE DETAILS

HARBOR GROVE
CIVIL PLANS

9110 53RD AVE W

SNOHOMISH COUNTY

WASHINGTON



3/28/23

JOB NUMBER:

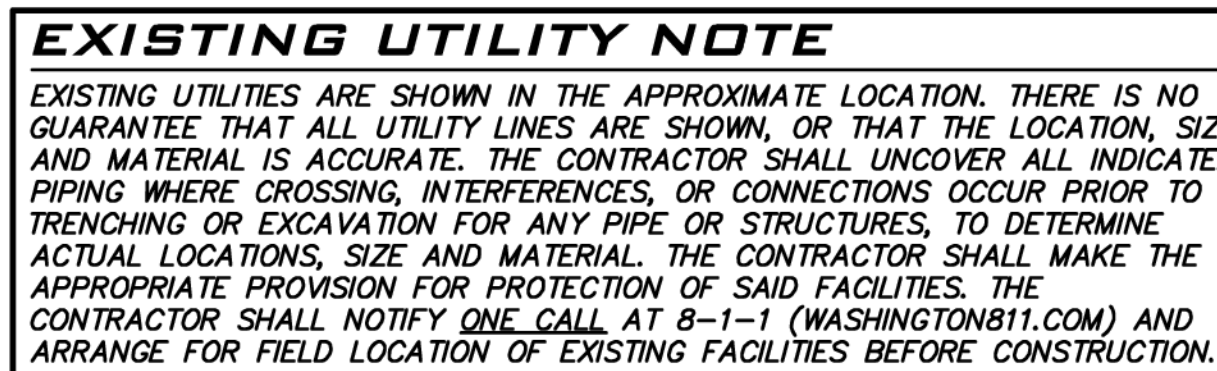
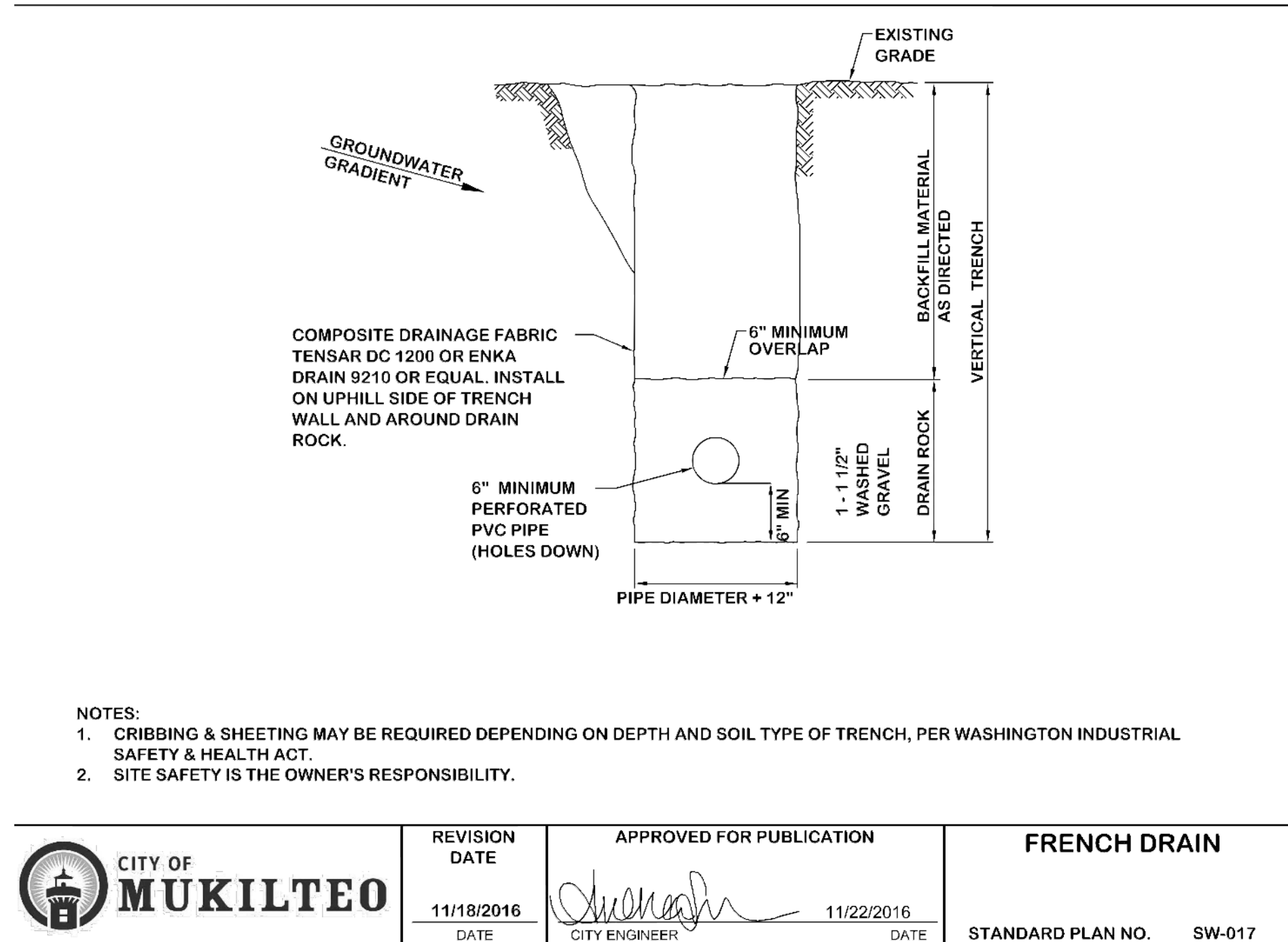
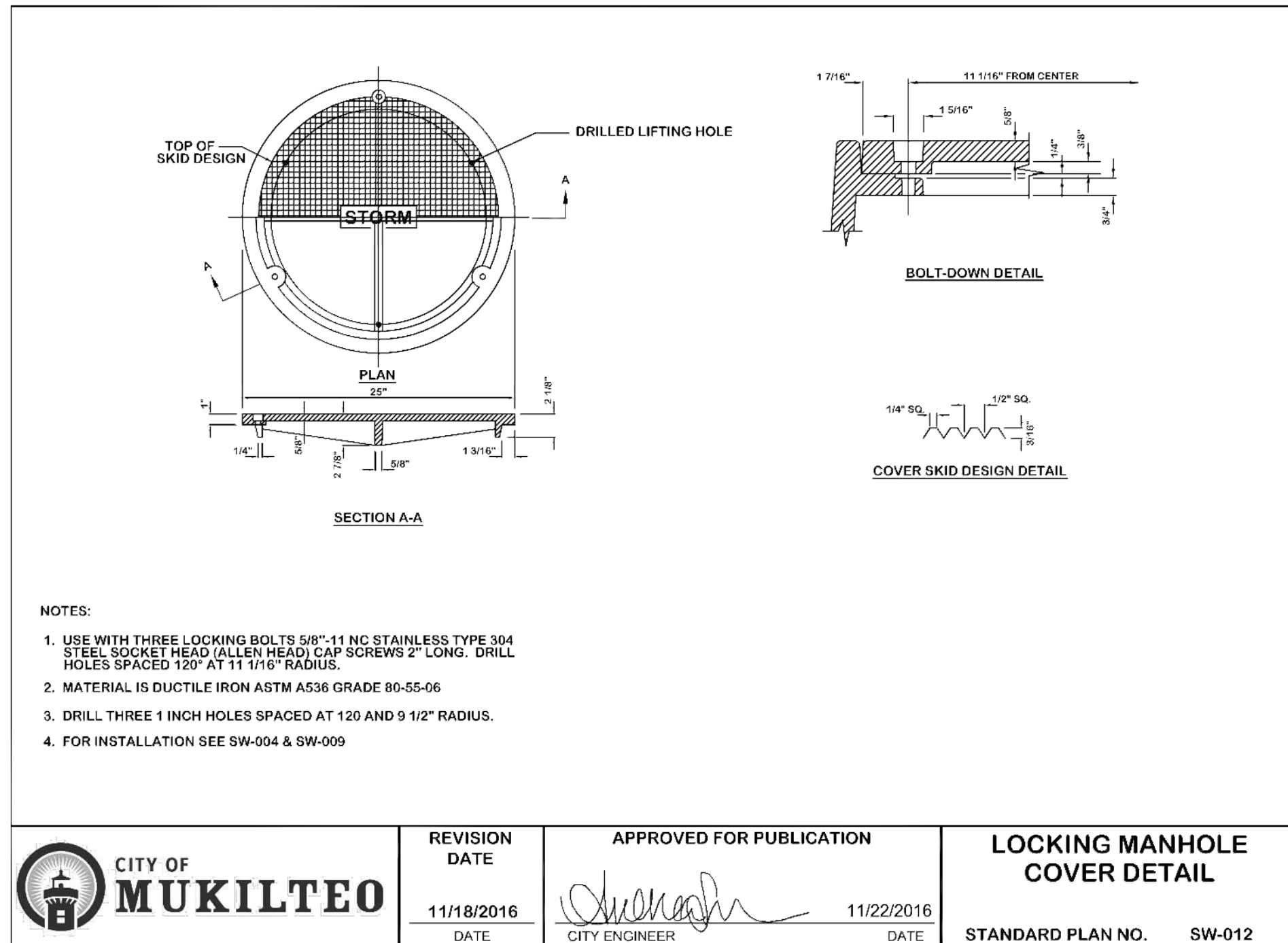
21-073

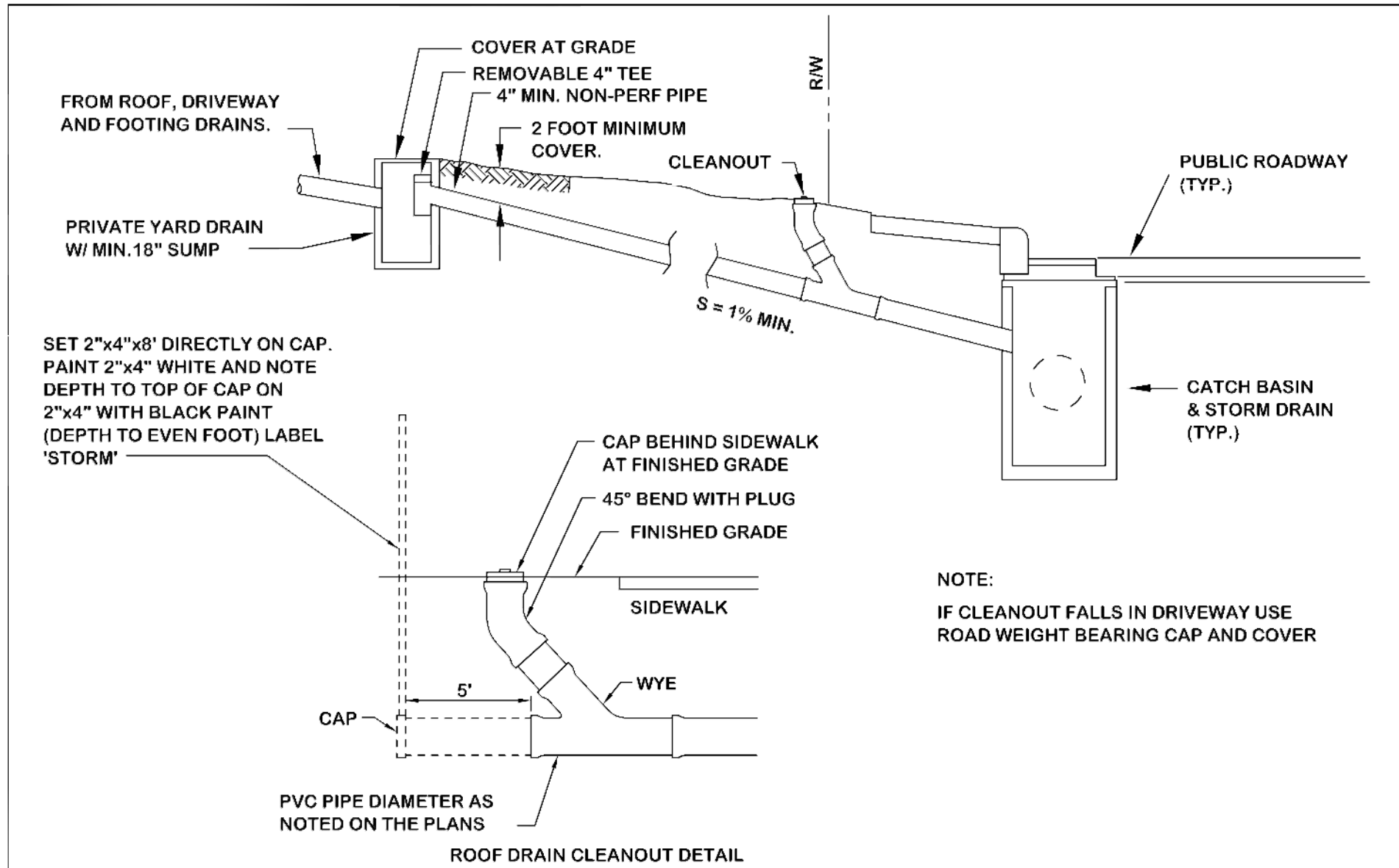
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LS-02

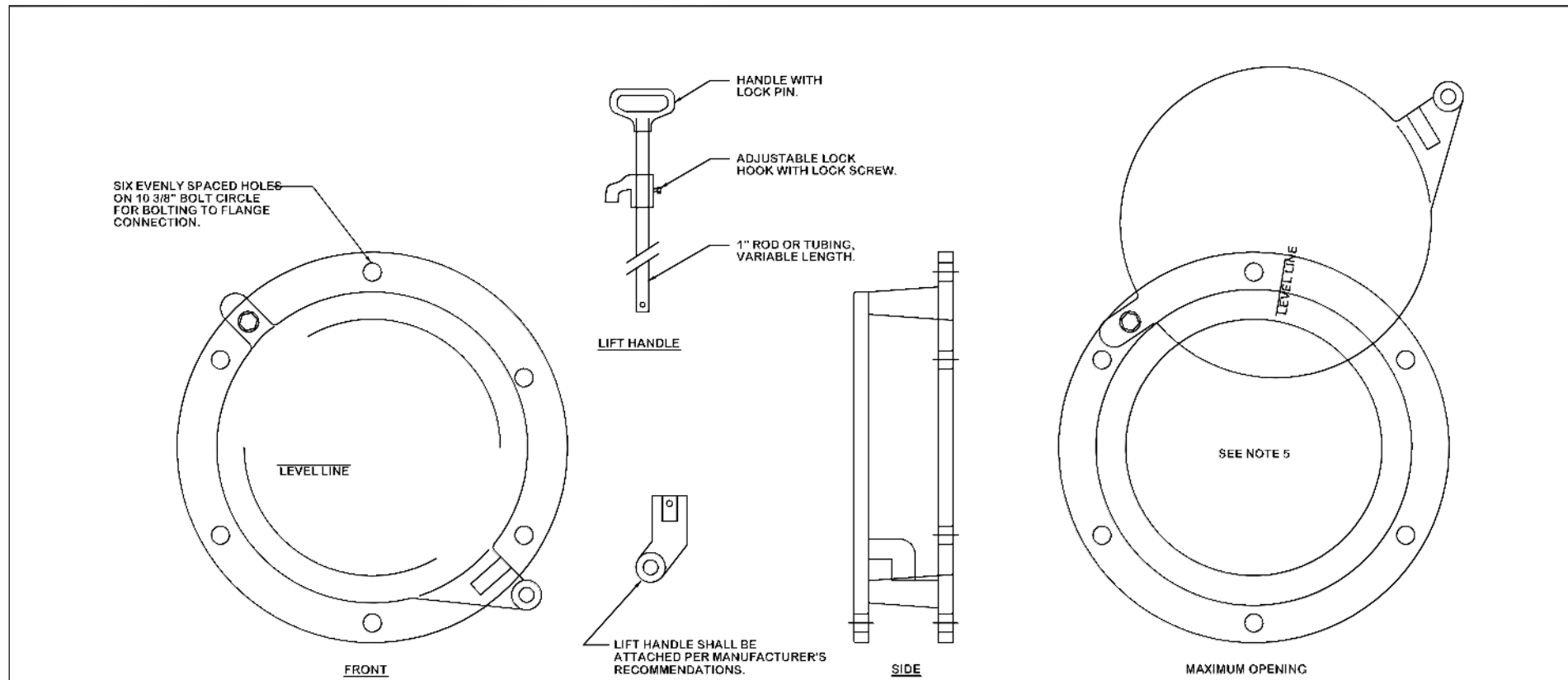
SHT 19 OF 22

CITY OF MUKILTEO FILE NUMBERS
SD-2021-001/ENG-2021-019/SEPA-2021-010





CITY OF MUKILTEO	REVISION DATE	APPROVED FOR PUBLICATION	INDIVIDUAL LOT & ROAD DRAIN PLAN DETAILS
	11/18/2016 DATE	 CITY ENGINEER 11/22/2016 DATE	STANDARD PLAN NO. SW-018

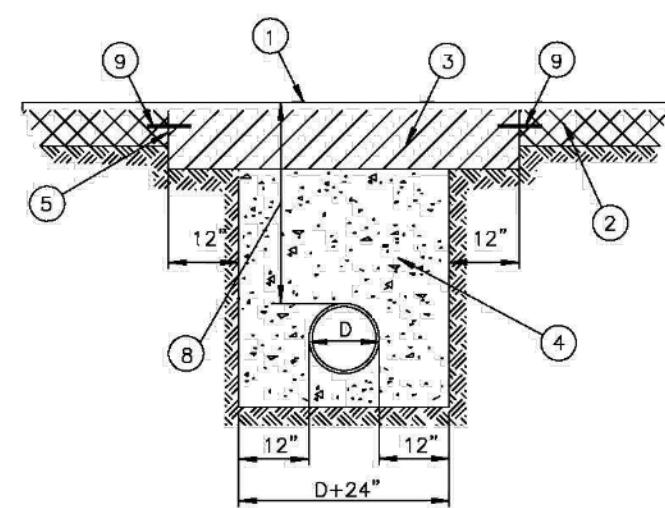


- NOTES:
- SHEAR GATE SHALL BE ALUMINUM ALLOY PER ASTM B-26-ZG-32a OR CAST IRON ASTM A48 CLASS 30B AS REQUIRED.
 - GATE SHALL BE 8" DIAM. UNLESS OTHERWISE SPECIFIED.
 - GATE SHALL BE JOINED TO TEE SECTION BY BOLTING (THROUGH FLANGE), WELDING, OR OTHER SECURE MEANS.
 - LIFT ROD: AS SPECIFIED BY MFR. WITH HANDLE EXTENDING TO WITHIN ONE FOOT OF COVER AND ADJUSTABLE HOOK LOCK FASTENED TO FRAME OR UPPER HANDHOLD.
 - GATE SHALL NOT OPEN BEYOND THE CLEAR OPENING BY LIMITED WINGE MOVEMENT, STOP TAB, OR SOME OTHER DEVICE.
 - NEOPRENE RUBBER GASKET REQUIRED BETWEEN RISER MOUNTING FLANGE AND GATE FLANGE.
 - MATING SURFACES OF LID AND BODY TO BE MACHINED FOR PROPER FIT.
 - FLANGE MOUNTING BOLTS SHALL BE 3/8" DIAM. STAINLESS STEEL.
 - ALTERNATE CLEANOUT/SHEAR GATES TO THE DESIGN SHOWN ARE ACCEPTABLE, PROVIDED THEY MEET THE MATERIAL SPECIFICATIONS ABOVE AND HAVE A SIX BOLT, 10-3/8" BOLT CIRCLE FOR BOLTING TO THE FLANGE CONNECTION.

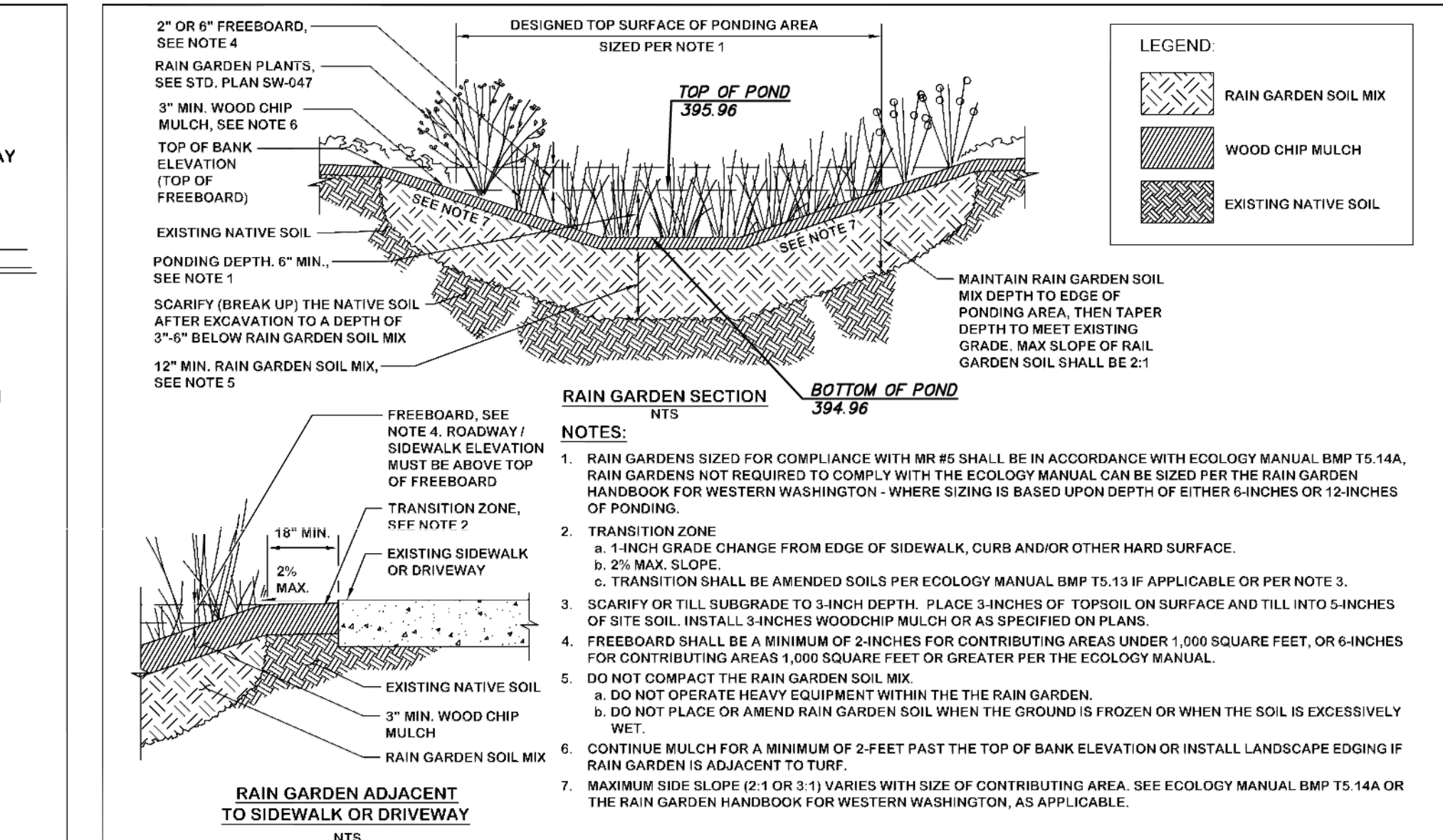
CITY OF MUKILTEO	REVISION DATE	APPROVED FOR PUBLICATION	SHEAR GATE DETAIL
	11/18/2016 DATE	 CITY ENGINEER 11/22/2016 DATE	STANDARD PLAN NO. SW-077

ASPHALT OR CONCRETE PAVEMENT:

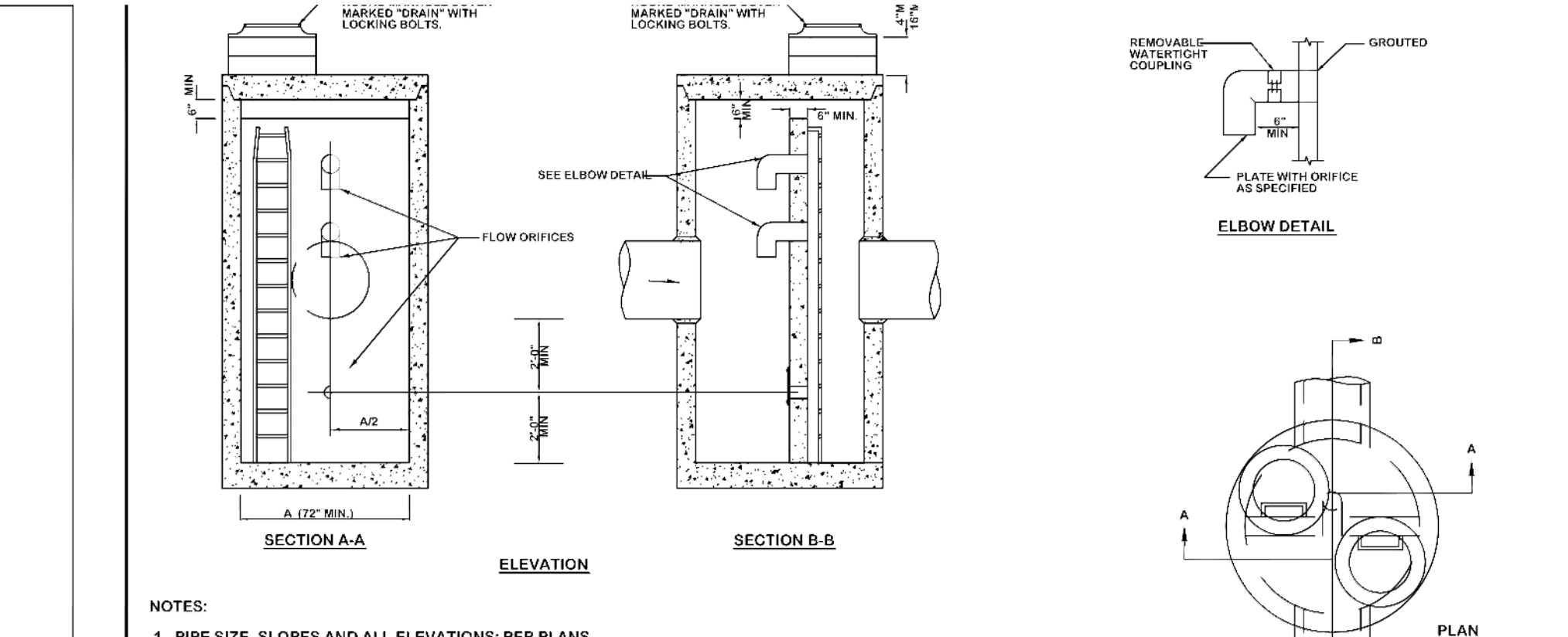
- A 2" HMA OVERLAY
- EXISTING PAVEMENT.
- TRENCH - 6" OF HMA OR MATCH EXISTING ASPHALT, WHICHEVER IS GREATER, PER WSDOT STANDARD SPECIFICATIONS SECTION 5-04. IF CONCRETE, RESTORATION SHALL BE IN ACCORDANCE WITH SECTION 5-05 OF THE WSDOT/HPWA SPECIFICATIONS.
- NATIVE MATERIAL, BANK RUN GRAVEL, CSTC OR CONTROL DENSITY FILL (CDF) A MINIMUM OF 6" FROM TOP OF EXISTING ASPHALT.
- NEAT LINE CUT, CLEAN, HEAT & TACK EDGES WITH SEALER CSS-1 & SEAL WITH HOT ASPHALT CEMENT.
- TEMPORARY RESTORATION OF TRENCHES FOR OVERNIGHT USE SHALL BE ACCOMPLISHED BY USING ASPHALT, OR STEEL PLATES.
- PATCH SHALL BE MACHINE ROLLED FLUSH WITH EXISTING PAVEMENT AND SHALL BE PLACED PER WSDOT STANDARD SPECIFICATIONS SECTION 5-04.
- COVER DEPTH OVER UNDERGROUND UTILITIES SHALL CONFORM TO FEDERAL AND STATE REGULATIONS.
- TRENCHES IN CONCRETE PAVEMENT SHALL BE RESTORED USING TIE BARS OR DOWEL BARS IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATIONS SECTION 5-04.



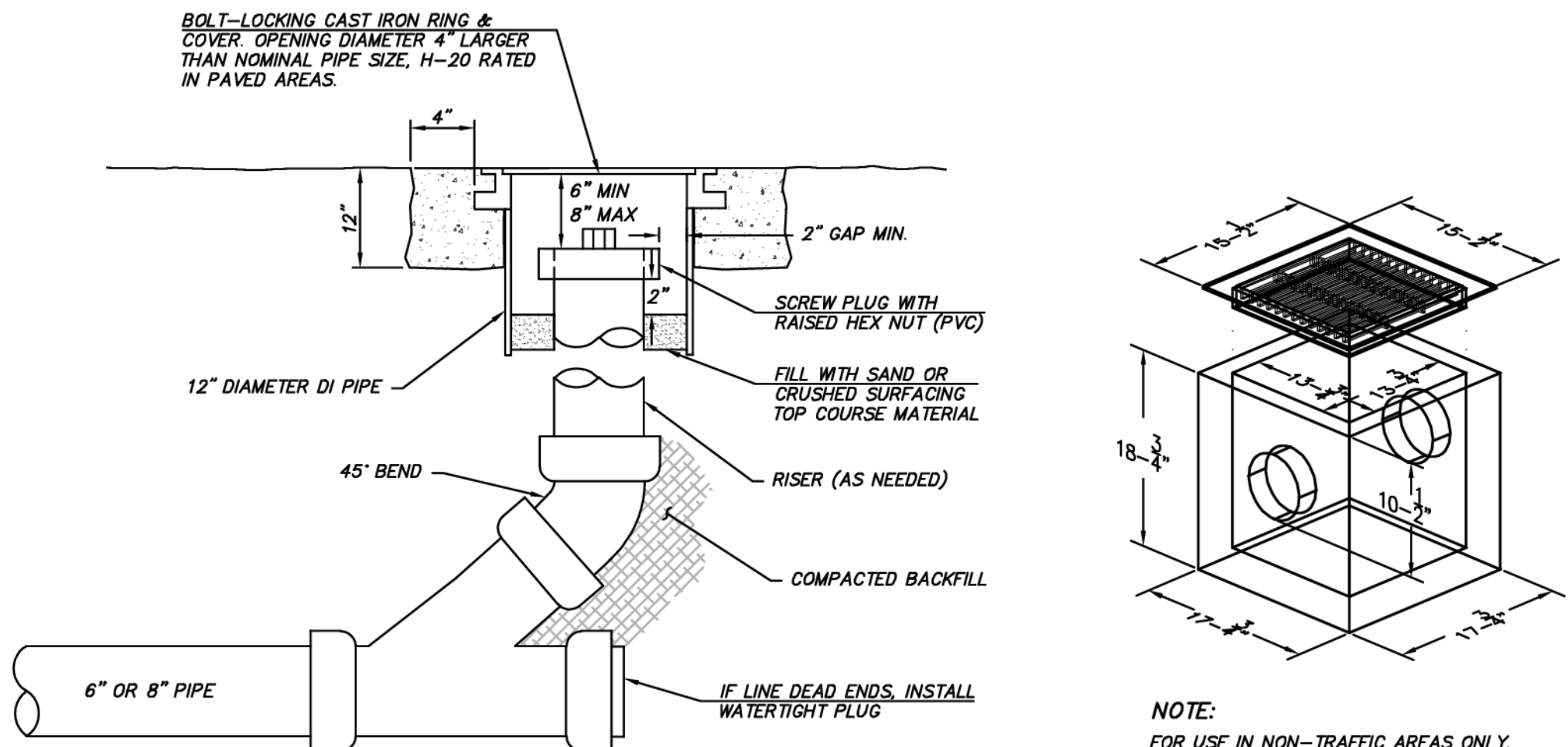
UTILITY TRENCH RESTORATION DETAIL



CITY OF MUKILTEO	REVISION DATE	APPROVED FOR PUBLICATION	RAIN GARDEN - SECTION
	11/18/2016 DATE	 CITY ENGINEER 11/22/2016 DATE	STANDARD PLAN NO. SW-048

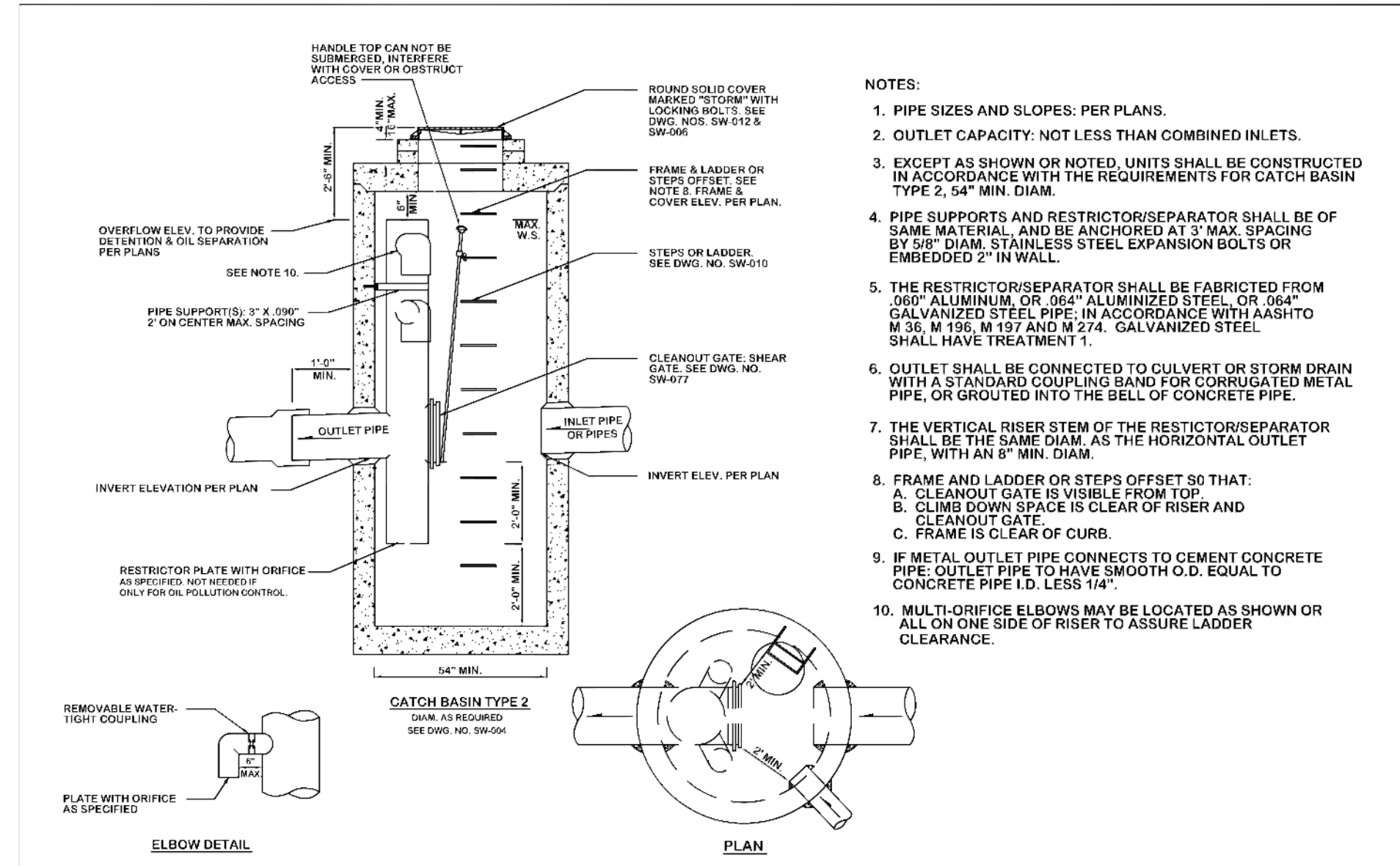


CITY OF MUKILTEO	REVISION DATE	APPROVED FOR PUBLICATION	FLOW RESTRICTOR/OIL POLLUT. DEBRIS CNTRL TEE TYPE (FROP-B) INSTAL
	11/18/2016 DATE	 CITY ENGINEER 11/22/2016 DATE	STANDARD PLAN NO. SW-078



- NOTES
- CAST IRON COVER SHALL READ "STORM".
 - LOCKING BOLTS FOR COVER SHALL BE 5/8" -11 NC STAINLESS STEEL TYPE 304 SOCKET (ALLEN) HEAD BOLTS, 2 INCHES LONG.

CLEANOUT
NOT TO SCALE



CITY OF MUKILTEO	REVISION DATE	APPROVED FOR PUBLICATION	FLOW RESTRICTOR/OIL POLLUT. DEBRIS CNTRL TEE TYPE (FROP-T) INSTAL
	11/18/2016 DATE	 CITY ENGINEER 11/22/2016 DATE	STANDARD PLAN NO. SW-076

25 CENTRAL WAY, SUITE 400,
HUNTSVILLE, WA 98033
P: 425.216.4051 F: 425.216.4052
WWW.THEBLUELINEGROUP.COM

SCALE:
AS NOTED

PROJECT MANAGER:
T.C. COLLIERAN, PLA, AICP

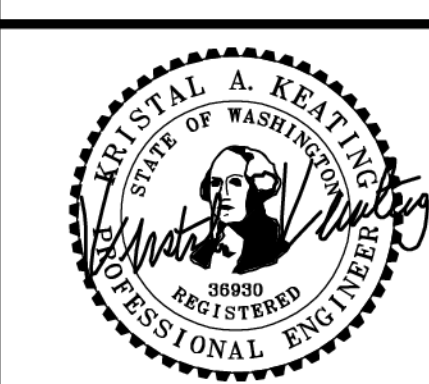
PROJECT ENGINEER:
LUCAS ZIROTTI

DESIGNER:
LEE M. TOMKINS

ISSUE DATE:
7/29/21

REVISIONS			
NO	DATE	BY	REVISIONS FOR CITY 1ST ROUND COMMENTS REVISIONS FOR CITY 2ND ROUND COMMENTS
1	8/9/21	LCZ	
2	4/12/23	LMT	

STANDARD DETAILS
HARBOR GROVE
CIVIL PLANS
9110 53RD AVE W
SNOHOMISH COUNTY WASHINGTON



4/19/23

JOB NUMBER:
21-073

SHEET NAME:
DT-02

SHT 21 OF 22

EXISTING UTILITY NOTE

EXISTING UTILITIES ARE SHOWN IN THE APPROXIMATE LOCATION. THERE IS NO GUARANTEE THAT ALL UTILITY LINES ARE SHOWN, OR THAT THE LOCATION, SIZE AND MATERIAL IS ACCURATE. THE CONTRACTOR SHALL UNCOVER ALL INDICATED PIPING WHERE CROSSING, INTERFERENCES, OR CONNECTIONS OCCUR PRIOR TO TRENCHING OR EXCAVATION FOR ANY PIPE OR STRUCTURES, TO DETERMINE ACTUAL LOCATIONS, SIZE AND MATERIAL. THE CONTRACTOR SHALL MAKE THE APPROPRIATE PROVISION FOR PROTECTION OF SAID FACILITIES. THE CONTRACTOR SHALL NOTIFY ONE CALL AT 8-1-1 (WASHINGTON811.COM) AND ARRANGE FOR FIELD LOCATION OF EXISTING FACILITIES BEFORE CONSTRUCTION.

CITY OF MUKILTEO FILE NUMBERS
SD-2021-001/ENG-2021-019/SEPA-2021-010

SCALE:
AS NOTED

PROJECT MANAGER:
T.C. COLLERAN, PLA, AICP

PROJECT ENGINEER:
LUCAS ZIROTTI

DESIGNER:
LEE M. TOMKINS

ISSUE DATE:
7/29/21

NO	DATE	BY	REVISIONS
1	8/9/22	LCZ	REVISIONS PER CITY IST FORMING COMMENTS
2	4/12/23	LMT	REVISIONS PER CITY AND FORMING COMMENTS

STANDARD DETAILS

HARBOR GROVE

CIVIL PLANS

9110 53RD AVE W



4/19/23

JOB NUMBER:

21-07E

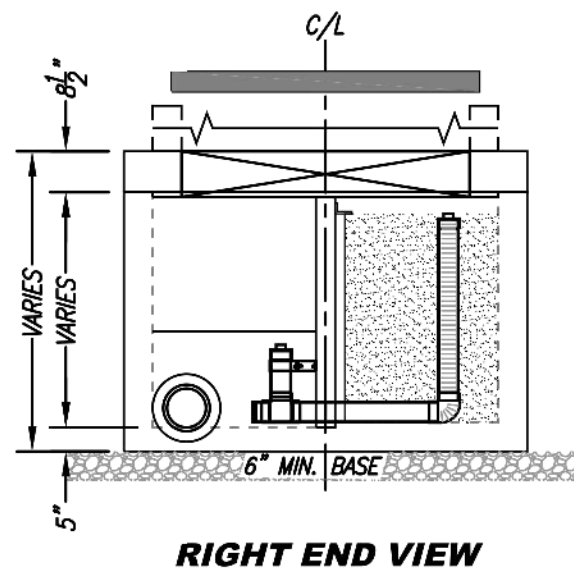
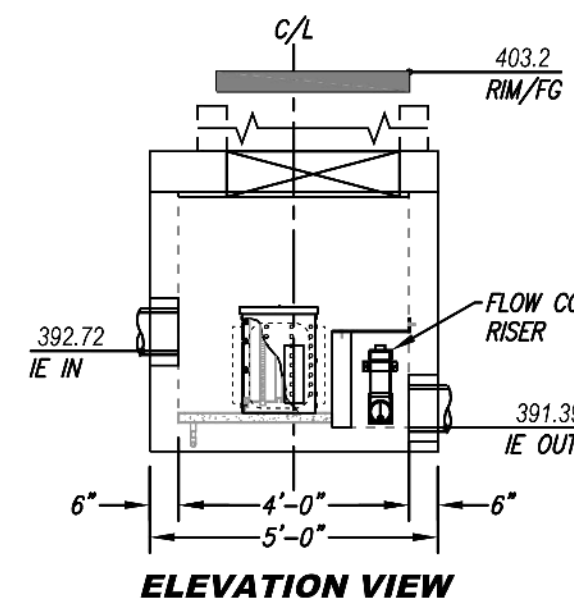
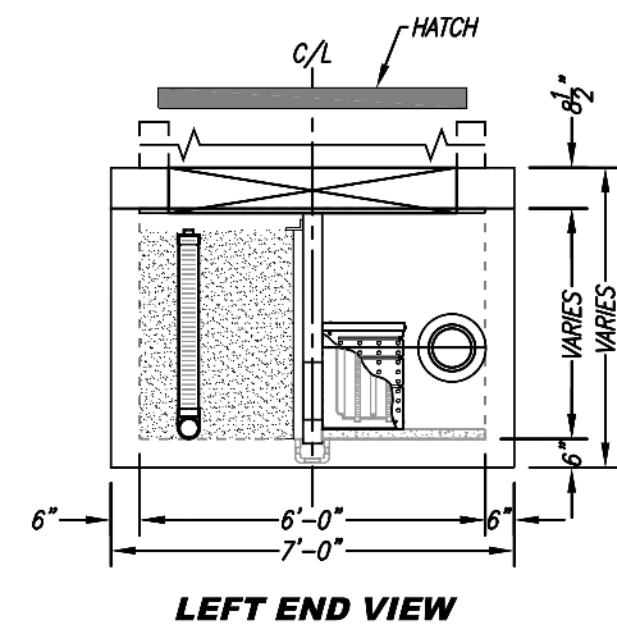
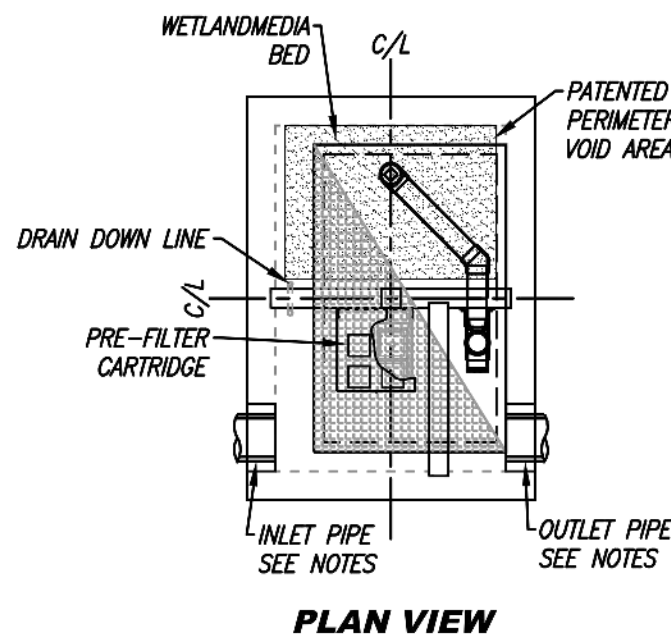
SHEET NAME:
DE 02

DT-03

SITE SPECIFIC DATA			
PROJECT NUMBER		738522	
PROJECT NAME		9110 53rd Ave W	
PROJECT LOCATION		Mukilteo, WA	
STRUCTURE ID		Modular Wetland	
TREATMENT REQUIRED			
FLOW BASED (CFS)			
0.0305			
PEAK BYPASS REQUIRED (CFS) - IF APPLICABLE		0.0888 (CFS)	
PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	392.72	PVC	12"
INLET PIPE 2	N/A	N/A	N/A
OUTLET PIPE	391.39	PVC	12"
PRETREATMENT		BIOFILTRATION	DISCHARGE
RIM ELEVATION		403.20	
SURFACE LOAD		DIRECT TRAFFIC	
NOTES: HS-20 LOAD RATED			

1. CONTRACTOR TO PROVIDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS REQUIRED TO OFFLOAD AND INSTALL THE SYSTEM AND APPURTENANCES IN ACCORDANCE WITH THIS DRAWING AND THE MANUFACTURER'S SPECIFICATIONS, UNLESS OTHERWISE STATED IN MANUFACTURER'S CONTRACT.
2. UNIT MUST BE INSTALLED ON LEVEL BASE. MANUFACTURER RECOMMENDS A MINIMUM 6" LEVEL ROCK BASE UNLESS SPECIFIED BY THE PROJECT ENGINEER. CONTRACTOR IS RESPONSIBLE FOR VERIFYING PROJECT ENGINEER'S RECOMMENDED BASE SPECIFICATIONS.
3. CONTRACTOR TO SUPPLY AND INSTALL ALL EXTERNAL CONNECTING PIPES. ALL PIPES MUST BE FLUSH WITH INSIDE SURFACE OF CONCRETE (PIPES CANNOT INVERT BEYOND FLUSH). INVERT OF OUTFLOW PIPE MUST BE FLUSH WITH DISCHARGE CHAMBER FLOOR. ALL PIPES SHALL BE SEALED WATERTIGHT PER MANUFACTURER'S STANDARD CONNECTIONS.
5. CONTRACTOR RESPONSIBLE FOR INSTALLATION OF ALL PIPES, RISERS, MANHOLES, AND HATCHES. CONTRACTOR TO USE GROUT AND/OR BRICKS TO MATCH COVERS WITH FINISHED SURFACE UNLESS SPECIFIED OTHERWISE.
6. VEGATION SUPPLIED AND INSTALLED BY OTHERS. ALL UNITS WITH VEGATION MUST HAVE DRIP OR SPRAY IRRIGATION SUPPLIED AND INSTALLED BY OTHERS.
7. CONTRACTOR RESPONSIBLE FOR CONTRACTING CONTENT FOR ACTIVATION OF UNIT. MANUFACTURER'S WARRANTY IS VOID WITHOUT PROPER ACTIVATION BY A CONTEXT REPRESENTATIVE.

1. MANUFACTURER TO PROVIDE ALL MATERIALS UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS, ELEVATIONS, SPECIFICATIONS AND CAPACITIES ARE SUBJECT TO CHANGE. FOR PROJECT SPECIFIC DRAWINGS DETAILING EXACT DIMENSIONS, WEIGHTS AND ACCESSORIES PLEASE CONTACT CONTECH.



TREATMENT FLOW (CFS)	0.0305
OPERATING HEAD (FT)	1.4
PRETREATMENT LOADING RATE (GPM/SF)	0.5
WETLAND MEDIA LOADING RATE (GPM/SF)	1.0

MWS-L-4-6-V-UG
STORMWATER BIOFILTRATION SYSTEM
STANDARD DETAIL



EXISTING UTILITIES ARE SHOWN IN THE APPROXIMATE LOCATION. THERE IS NO GUARANTEE THAT ALL UTILITY LINES ARE SHOWN, OR THAT THE LOCATION, SIZE AND MATERIAL IS ACCURATE. THE CONTRACTOR SHALL UNCOVER ALL INDICATED PIPING WHERE CROSSING, INTERFERENCES, OR CONNECTIONS OCCUR PRIOR TO TRENCHING OR EXCAVATION FOR ANY PIPELINES OR STRUCTURES, TO DETERMINE EXISTING UTILITIES AND MATERIALS. THE CONTRACTOR SHALL MAKE THE APPROPRIATE PROVISION FOR PROTECTION OF SAID FACILITIES. THE CONTRACTOR SHALL NOTIFY ONE CALL AT 8-1-1 (WASHINGTON811.COM) AND ARRANGE FOR FIELD LOCATION OF EXISTING FACILITIES BEFORE CONSTRUCTION.

CITY OF MUKILTEO FILE NUMBERS
SD-2021-001/ENG-2021-019/SEPA-2021-010