

SURVEY NOTE

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LEGEND

EXISTING	PROPOSED	
SS	SS	SANITARY SEWER
W	W	WATER
P		POWER
SD		STORM
	RD	ROOF DRAIN
G		GAS
T		TELEPHONE

PROJECT INFORMATION

OWNER/APPLICANT: ULERY STREET, LLC
 PO BOX 7846
 OLYMPIA, WA 98507

PARCEL NO: 09950002000

SITE ADDRESS: 1070 ULERY ST. SE
 LACEY, WA 98503

ZONING: CBD 4

PARCEL AREA: 0.977 AC (42,564 SF)

BUILDING FLOOR AREA: 12,830 SF

PARKING REQUIRED: ±26-52 (GEN. BUSINESS PARK)

PARKING PROVIDED: 28 (INCL. 2 ADA & 8 COMPACT)

WATER/SEWER: CITY OF LACEY

TELECOMMUNICATIONS: COMCAST & LUMEN

POWER/GAS: PUGET SOUND ENERGY

FIRE DISTRICT: LACEY

REFUSE/RECYCLING: PACIFIC DISPOSAL

SOIL TYPE: NISQUALLY LOAMY FINE SAND (HSG A) PER NRCS

FEMA FIRM DESIGNATION: ZONE X (PANEL #53067C0191E), OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN

BUILDING SETBACKS: 15' FRONT, 10' SIDE, 25' REAR

BUILDING COVERAGE: 30.1% (50% ALLOWED PER ZONING)

HARD SURFACE COVERAGE:

ROOF: 13,285 SF

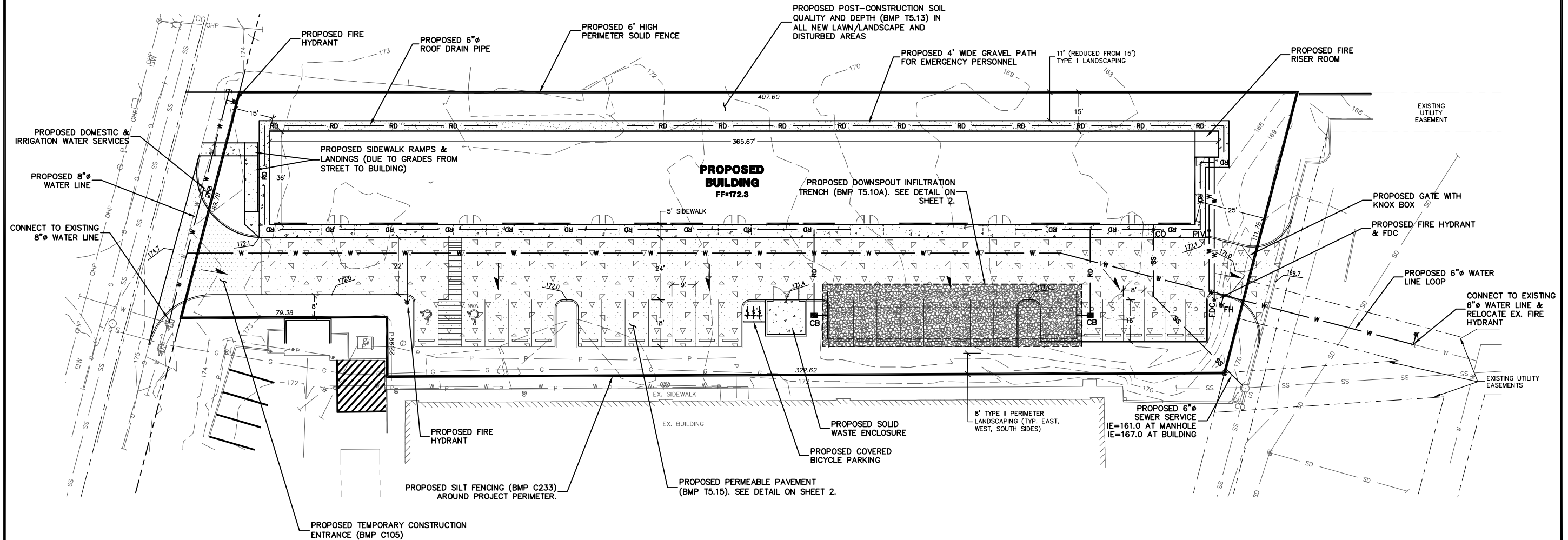
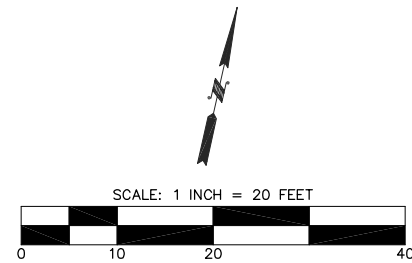
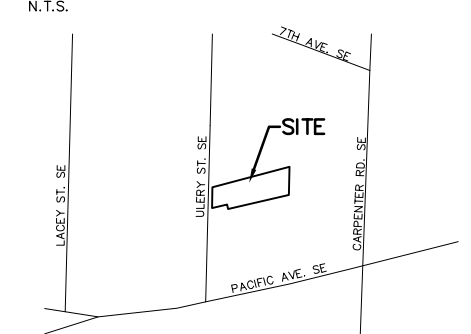
DRIVE/PARKING: 14,067 SF

SIDEWALK/MISC.: 3,810 SF

TOTAL: 31,162 SF

CONSTRUCTION TYPE: II-B

VICINITY MAP



ULERY BUSINESS SUITES

SITE PLAN

DESIGNED BY: CMM
 DRAWN BY: CMM
 CHECKED BY: CMM
 SCALE: 1" = 20'
 DATE: 5/16/2023

PO Box 12690
 Olympia, WA 98508
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OLYMPIC ENGINEERING

Full Service Land Survey & Construction Management

JOB NUMBER: 22084
 DRAWING NAME: 22084_SITE

CITY OF LACEY, WASHINGTON

BIORETENTION SOIL MIX (BSM) REQUIREMENTS

Contractor shall submit proposed BSM specifications to Olympic Engineering and Pacific Testing & Inspection for review and approval prior to installation.

Bioretention soil shall be a well-blended mixture of mineral aggregate and composted material measured on a volume basis. Bioretention soil shall consist of two parts fine compost (approximately 35 to 40 percent) by volume and three parts mineral aggregate (approximately 60 to 65 percent), by volume. The mixture shall be well blended to produce a homogeneous mix.

Mineral Aggregate:

Percent Fines: A range of 2 to 4 percent passing the US #200 sieve is ideal and fines should not be above 5 percent for a proper functioning specification according to ASTM D422.

Mineral Aggregate Gradation:

- Mineral Aggregate shall be free of wood, waste, coating, or any other deleterious material. The aggregate portion of the Bioretention Soil Mix (BSM) should be well-graded. According to ASTM D 2487-98 (Classification of Soils for Engineering Purposes (Unified Soil Classification System)), well-graded sand should have the following gradation coefficients:
 - Coefficient of Uniformity (Cu = D60/D10) equal to or greater than 4, and
 - Coefficient of Curve (Cc = (D30)2/D60 x D10) greater than or equal to 1 and less than or equal to 3.

Aggregate shall be analyzed by an accredited lab using the US sieve numbers and gradation noted below.

US Sieve Number	Percent Passing
0.375 inch	100
4	95-100
10	75-90
40	24-40
100	4-10
200	2-5

Where existing soils meet the above aggregate gradation, those soils may be amended rather than importing mineral aggregate.

Compost to Aggregate Ratio, Organic Matter Content, Cation Exchange Capacity:

- Compost to aggregate ratio: 60-65 percent mineral aggregate, 35-40 percent compost.
- Organic matter content: 5-8 percent by weight.
- Cation Exchange Capacity (CEC) must be > 5 milliequivalents/100 g dry soil. Note: Soil mixes meeting the above specifications do not have to be tested for CEC. They will readily meet the minimum CEC.

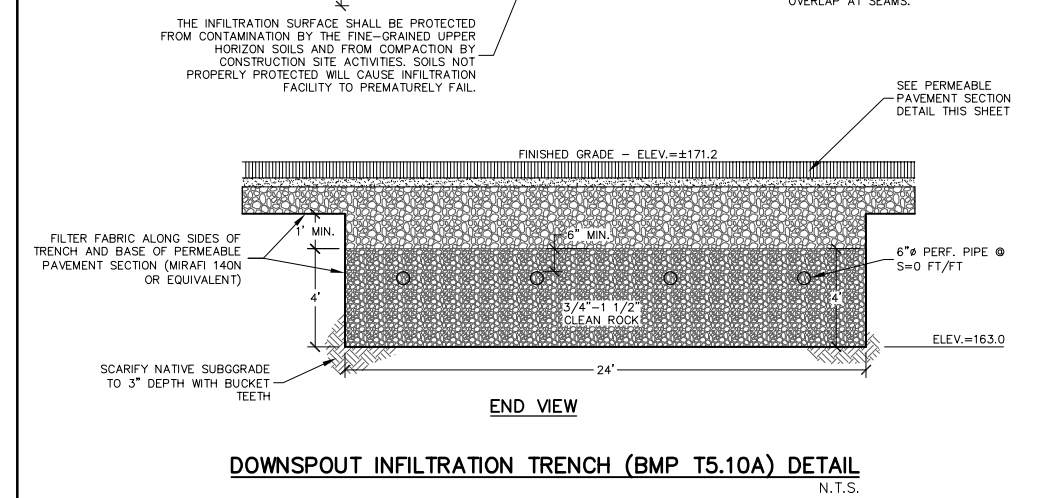
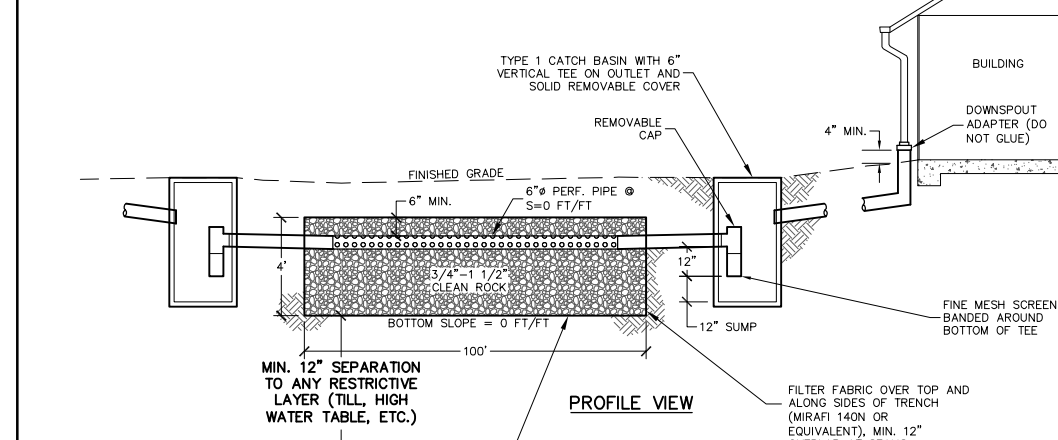
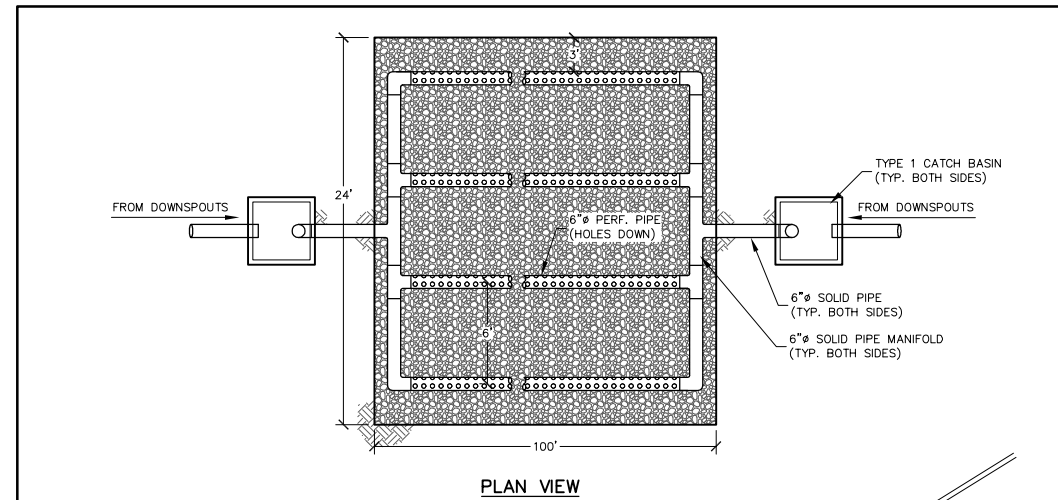
Composted Material

To ensure that the BSM will support healthy plant growth and root development, contribute to bioremediation of pollutants, and not restrict infiltration when used in the proportions cited herein, the following compost standards are required:

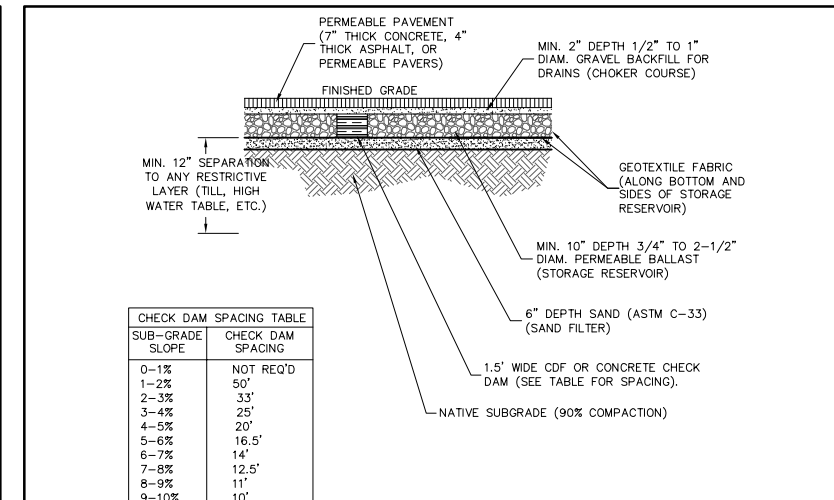
- Material must meet the definition of "composted material" in WAC 173-350-100 and comply with the testing parameters and standards in WAC 173-350-220.
- Material must be produced at a composting facility that is permitted by a jurisdictional health authority. Permitted compost facilities in Washington State are included on a list available at <https://ecology.wa.gov/Waste-Toxics/Reducing-recycling-waste/Organic-materials/Managing-organics-compost>.
- The completed compost product must originate a minimum of 65 percent by volume from recycled plant waste comprising "yard debris", "crop residues", and "bulking agents" as those terms are defined in WAC 173-350-100. A maximum of 35 percent by volume of "postconsumer food waste" as defined in WAC 173-350-100, but no including biosolids, may be substituted for recycled plant waste.
- Moisture content must be such that there is no visible free water or dust produced when handling the material.
- The material shall be tested in accordance with the U.S. Composting Council "Test Method for the Examination of Compost and Composting" (TMECC), as established in the Composting Council's "Seal of Testing Assurance" (STA) program. Most Washington compost BMP's now use these tests.
- Composted material shall meet the size gradations established in the U.S. Composting Council's Seal of Testing Assurance (STA) program, as follows: Fine Compost shall meet the following gradation by dry weight:

Percent passing 2"	Min.	Max.
Percent passing 2"	100	
Percent passing 1"	99	100
Percent passing 0.625"	90	100
Percent passing 0.25"	75	100
- The pH shall be between 6.0 and 8.5 (TMECC 04.11-A).
- "Physical contaminants" (as defined in WAC 173-350-100) content shall be less than 1 percent by weight (TMECC 03.08-A) total, not to exceed 0.25 percent film plastic by dry weight.
- Minimum organic matter content shall be 40 percent by dry weight basis as determined by TMECC 05.07-A, "Loss-On-Ignition Organic Matter Method."
- Soluble salt contents shall be less than 4.0 dS/mm (mmhos/cm) tested in accordance with TMECC 04.10-A, "1:5 Slurry Method, Mass Basis."
- Maturity indicators from a cucumber bioassay shall be greater than 80 percent for both emergence and vigor, in accordance with TMECC 05.05-A, "Germination and Vigor."
- The material must be stable (low oxygen use and CO2 generation) and mature (capable of supporting plant growth). This is critical to plant success in a bioretention soil mixes. Stability shall be 7 mg CO2-C/g OM/day or below in accordance with TMECC 05.08-B, "Carbon Dioxide Evolution Rate."
- Fine Compost shall have a carbon to nitrogen ratio of less than 25:1 as determined using TMECC 05.02A "Carbon to Nitrogen Ratio" which uses the TMECC 04.01 "Organic Carbon" and TMECC 04.02-D "Total Nitrogen by Oxidation." The Engineer may specify a Carbon:Nitrogen ratio up to 35:1 for projects where the plants selected are entirely Puget Sound lowland native species, and up to 40:1 for coarse compost to be used as a surface mulch (not in a soil mix).

Compost not conforming to the above requirements or taken from a source other than those tested and accepted shall be immediately removed from the project and replaced.



DOWNSPOUT INFILTRATION TRENCH (BMP T5.10A) DETAIL
N.T.S.



CHECK DAM SPACING TABLE

SUB-GRADE SLOPE	CHECK DAM SPACING
0-1%	NOT REQ'D
1-2%	50'
2-3%	33'
3-4%	25'
4-5%	20'
5-6%	16.5'
6-7%	14'
7-8%	12.5'
8-9%	11'
9-10%	10'

NOTES:

- ALL THICKNESSES ARE COMPACTED DEPTHS (90%).
- MAXIMUM PAVING SLOPES SHALL BE 5% FOR PERMEABLE ASPHALT, 6% FOR PERMEABLE CONCRETE, 10% FOR INTERLOCKING PAVERS, AND 6% FOR GRID/LATTICE SYSTEMS.
- EXCAVATE TO GRADE WITH LIGHT EQUIPMENT WITH RUBBER TIRES. MINIMIZE DISTURBANCE OF THE SUBGRADE SOILS TO THE EXTENT PRACTICAL.
- WASHED AGGREGATES SHALL MEET THE WSDOT SPECIFICATIONS FOR GRAVEL BACKFILL FOR DRAINS 9-03.12(4) AND PERMEABLE BALLAST 9-03.9(2).
- GEOTEXTILE FABRIC SHALL BE MIRAFI 160N OR EQUAL.
- PROVIDE CONTROLLED DENSITY FILL (CDF) OR CONCRETE CHECK DAMS PERPENDICULAR TO THE PAVEMENT SLOPE TO PREVENT WATER FROM FLOWING LATERALLY WITHIN THE STORAGE RESERVOIR SECTION.
- ANY FILL NEEDED TO BRING THE PERMEABLE PAVEMENT SECTION UP TO GRADE SHALL CONSIST OF "PERMEABLE BALLAST PER WSDOT 9-03.9(2)".

PERMEABLE PAVEMENT (BMP T5.15) SECTION
N.T.S.

TEMPORARY CONSTRUCTION BMP'S

THE FOLLOWING BEST MANAGEMENT PRACTICES (BMP'S) ARE PROPOSED DURING THE CONSTRUCTION PHASE OF THE PROJECT TO PREVENT SEDIMENTATION, EROSION, AND RELEASE OF POLLUTANTS TO WATERS OF WASHINGTON STATE, ADJACENT PROPERTIES, AND DRAINAGE FACILITIES:

- C101 PRESERVING NATURAL VEGETATION
- C105 STABILIZED CONSTRUCTION ENTRANCE/EXIT
- C121 MULCHING
- C123 PLASTIC COVERING
- C125 TOPSOILING/COMPOSTING
- C140 DUST CONTROL
- C150 MATERIALS ON HAND
- C151 CONCRETE HANDLING
- C152 SAWCUTTING AND SURFACING POLLUTION PREVENTION
- C154 CONCRETE WASHOUT AREA
- C160 CERTIFIED EROSION AND SEDIMENT CONTROL LEAD
- C233 SILT FENCING

PERMANENT STORMWATER BMP'S

THE FOLLOWING PERMANENT STORMWATER BEST MANAGEMENT PRACTICES (BMP'S) ARE PROPOSED:

- T5.10A DOWNSPOUT INFILTRATION TRENCH
- T5.13 POST-CONSTRUCTION SOIL QUALITY AND DEPTH (LAWN/LANDSCAPE AND DISTURBED AREAS)
- T5.15 PERMEABLE PAVING (DRIVE/PARKING AREA)

ULERY BUSINESS SUITES

CITY OF LACEY, WASHINGTON

DETAILS AND NOTES

DESIGNED BY:	CMM	DATE:	5/16/2023
DRAWN BY:	CMM	SCALE:	N.T.S.
CHECKED BY:			

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JOB NUMBER:	22084
DRAWING NAME:	22084_DET1