

HOW TO USE THESE GREEN INFRASTRUCTURE STANDARD DETAILS:

THESE DETAILS WERE DEVELOPED TO BE REVISED AND CUSTOMIZED FOR INDIVIDUAL PROJECTS BY DESIGN PROFESSIONALS. TWO TYPES OF DETAILS ARE PROVIDED:

1. TYPICAL CONFIGURATIONS. THESE ARE INTENDED TO SERVE AS A BASELINE DESIGN FOR THE DESIGN PROFESSIONAL, PROVIDING FLEXIBILITY TO ADAPT TO PROJECT SPECIFIC CONDITIONS. TYPICAL CONFIGURATIONS ARE DENOTED WITH "TYPICAL" PRECEDING THE DETAIL NAME.
2. STANDARD CONFIGURATIONS. THESE DETAILS INCLUDE SPECIFIC PERFORMANCE STANDARDS TO BE INCORPORATED AS SHOWN, WITH LIMITED FLEXIBILITY FOR THE DESIGN PROFESSIONAL TO MODIFY.

DIMENSIONS SHOWN ARE TYPICAL UNLESS OTHERWISE NOTED.

SUPPLEMENTAL INFORMATION:

REFER TO THE FOLLOWING DOCUMENTS FOR INFORMATION ON THE DESIGN, CONSTRUCTION, AND OPERATION AND MAINTENANCE OF GREEN STORMWATER INFRASTRUCTURE.

1. 2017 CITY OF EDMONDS STORMWATER ADDENDUM.
2. 2014 STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON AS AMENDED IN DECEMBER 2014. WASHINGTON STATE DEPARTMENT OF ECOLOGY.
3. 2013 RAIN GARDEN HANDBOOK FOR WESTERN WASHINGTON: A GUIDE FOR DESIGN, MAINTENANCE, AND INSTALLATION. WASHINGTON STATE UNIVERSITY EXTENSION.
4. 2012 LOW IMPACT DEVELOPMENT MANUAL: TECHNICAL GUIDANCE MANUAL FOR PUGET SOUND. PUGET SOUND PARTNERSHIP.
5. (CURRENT VERSION) AMERICAN PUBLIC WORKS ASSOCIATION GENERAL SPECIAL PROVISIONS FOR PERMEABLE PAVEMENTS.
6. (CURRENT VERSION) WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.

ABBREVIATIONS USED:

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
APPROX	APPROXIMATE
APWA	AMERICAN PUBLIC WORKS ADMINISTRATION
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
CSCC	CRUSHED SURFACING CHOKER COARSE
CSTC	CRUSHED SURFACING TOP COARSE
DIA	DIAMETER
EQ	EQUALLY
GSP	GENERAL SPECIAL PROVISION
GRI	GEOSYNTHETIC RESEARCH INSTITUTE
H:V	HORIZONTAL TO VERTICAL
HMA	HOT MIX ASPHALT
HDPE	HIGH DENSITY POLYETHYLENE
LLDPE	LINEAR LOW DENSITY POLYETHYLENE
MAX	MAXIMUM
MIL	MILLIMETER
MIN	MINIMUM
NTS	NOT TO SCALE
PATB	PERMEABLE ASPHALT TREATED BASE
PERF	PERFORATED
PVC	POLYVINYL CHLORIDE
REQS	REQUIREMENTS
SCH	SCHEDULE
STD	STANDARD
TYP	TYPICAL
UV	ULTRAVIOLET
WMA	WARM MIXED ASPHALT
WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION



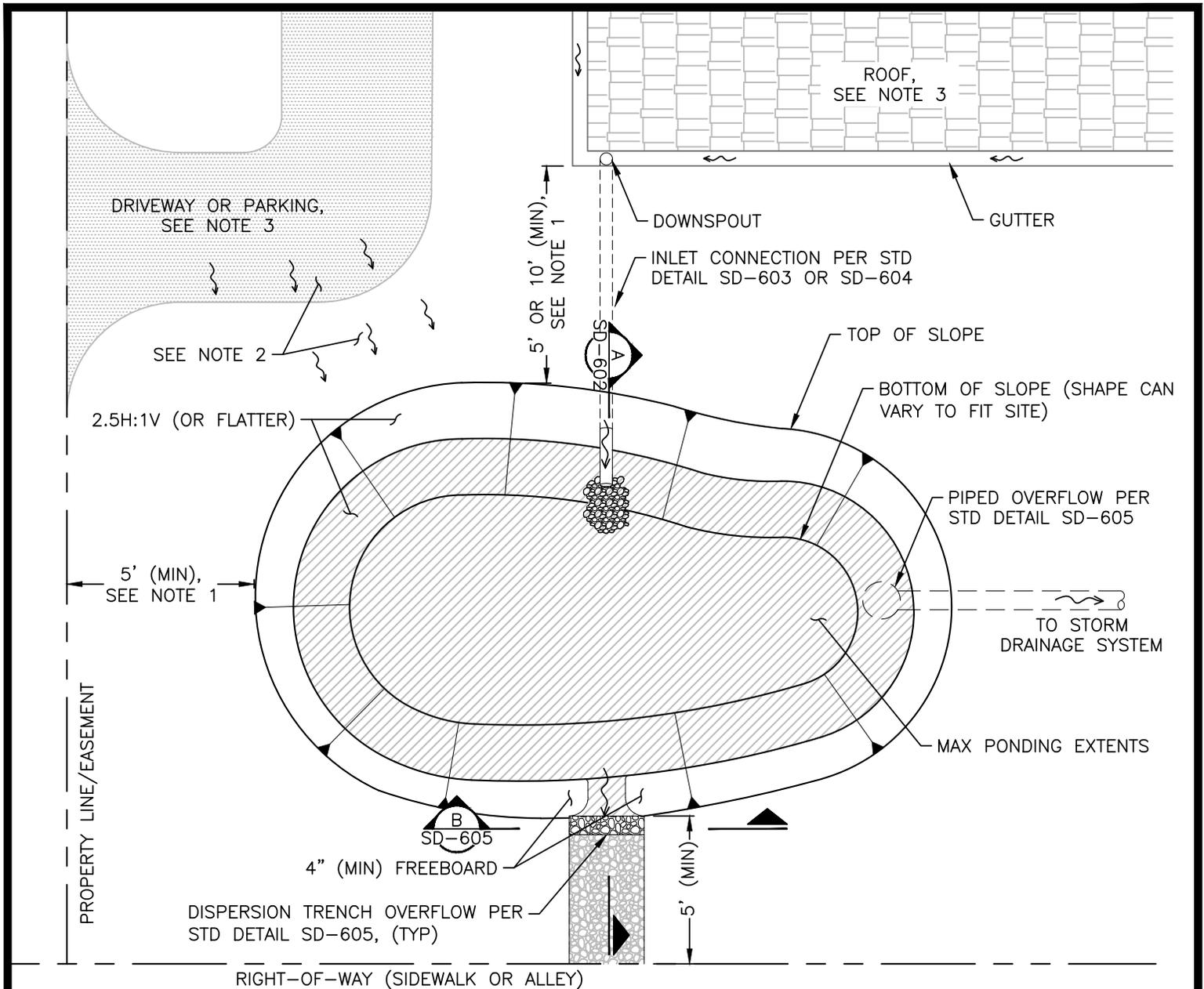
CITY OF EDMONDS
PUBLIC WORKS
DEPARTMENT

GREEN STORMWATER INFRASTRUCTURE COVER SHEET

APPROVED BY: R. ENGLISH

REVISION DATE
DECEMBER 2017

STANDARD
DETAIL
SD-600

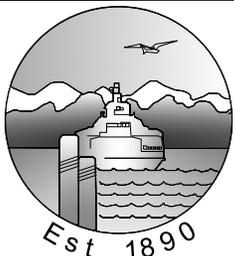


GENERAL NOTES:

1. REFER TO 2017 CITY OF EDMONDS STORMWATER ADDENDUM FOR SETBACK (CHECKLIST 12) AND INFEASIBILITY REQUIREMENTS.

NOTES:

1. RAIN GARDEN SHALL BE 5 FEET MINIMUM FROM BUILDINGS WITHOUT BASEMENT AND 10 FEET MINIMUM FROM BUILDINGS WITH BASEMENTS.
2. SHEET FLOW INTO RAIN GARDEN MUST BE KEPT WIDELY DISTRIBUTED OVER A STABILIZED SURFACE (PAVEMENT, PEA GRAVEL, GRASS). IF CONCENTRATED FLOW, PROVIDE A SWALE PER STD DETAIL SD-604.
3. TOTAL HARD SURFACE AREA CONTRIBUTING RUNOFF TO RAIN GARDEN MUST BE LESS THAN 5,000 SQUARE FEET.



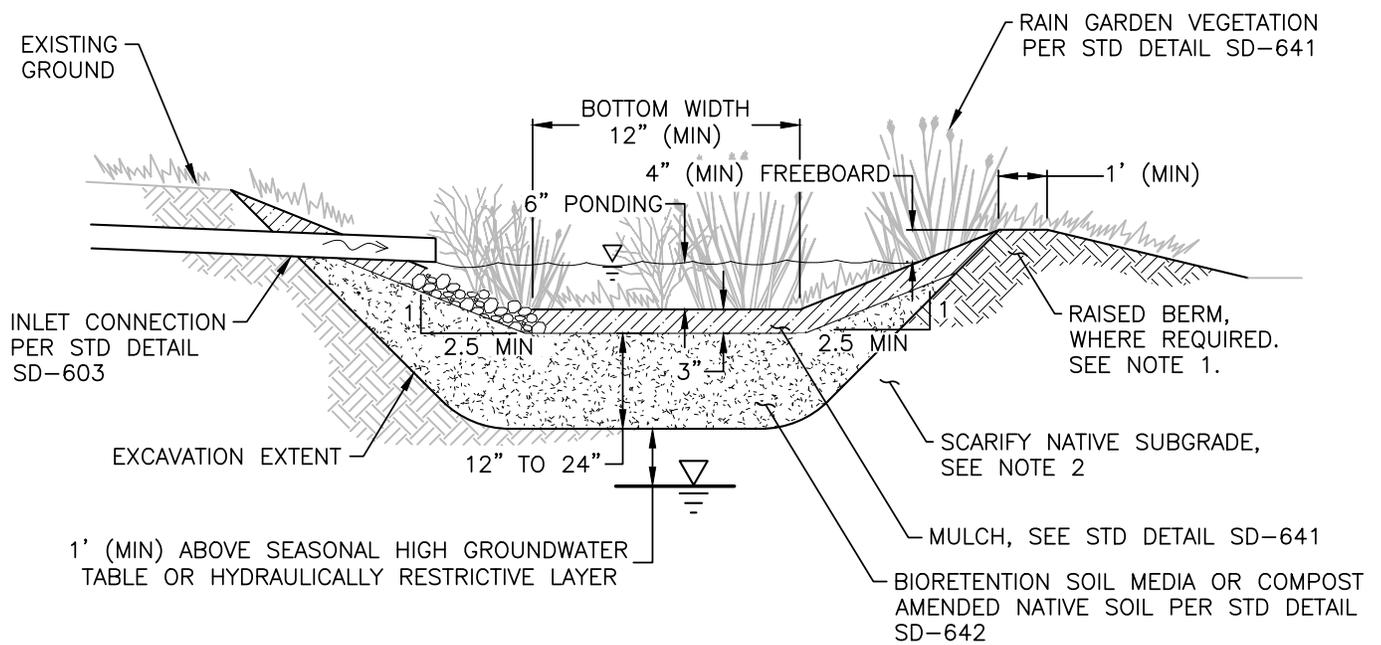
CITY OF EDMONDS
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**TYPICAL RAIN
GARDEN PLAN**

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REVISION DATE
DECEMBER 2017

STANDARD
DETAIL
SD-601



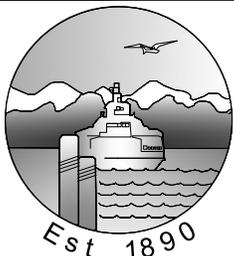
SECTION A
NTS SD-601

GENERAL NOTES:

1. REFER TO STANDARD DETAIL SD-605 FOR RAIN GARDEN OUTLET OPTIONS.

NOTES:

1. RAISED BERM SHALL BE FIRM, UNDISTURBED, NON-YIELDING NATIVE SOIL OR DISTURBED SITE SOILS COMPACTED WITH 12 POUND HAND TAMPER IN 3-INCH LIFTS. IF SITE SOILS ARE SANDY, CONSIDER IMPORTING DENSER, NON-PERMISSIVE SOILS FOR RAISED BERM.
2. BEFORE ADDING BIORETENTION SOIL MEDIA OR COMPOST AMENDED NATIVE SOIL, USE A RAKE, SHOVEL OR ROTOTILLER TO SCARIFY THE BOTTOM OF THE EXCAVATED AREA TO A DEPTH OF 3 INCHES MINIMUM.



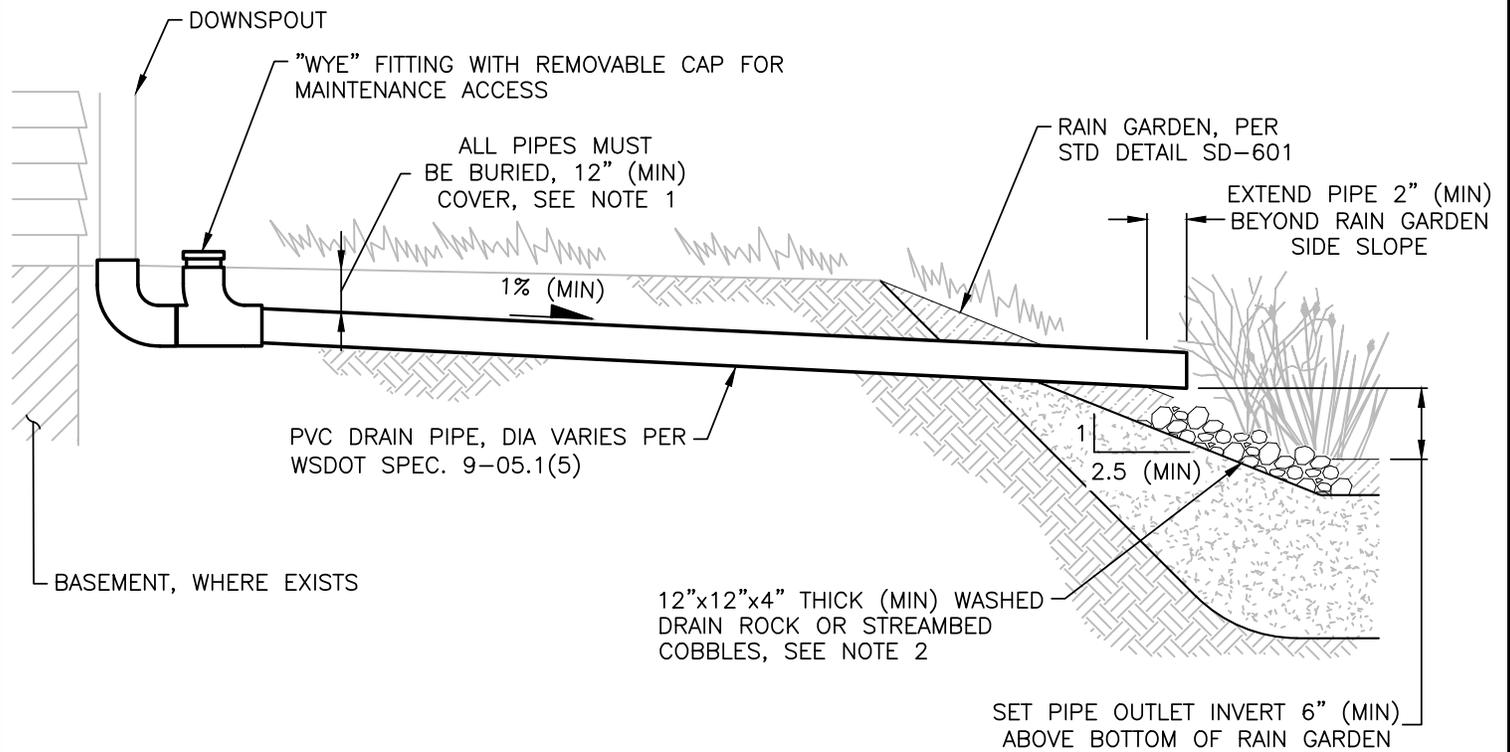
CITY OF EDMONDS
PUBLIC WORKS
DEPARTMENT

**TYPICAL RAIN
GARDEN SECTION**

APPROVED BY: R. ENGLISH

REVISION DATE
DECEMBER 2017

STANDARD
DETAIL
SD-602



NOTES:

1. MINIMUM COVER DEPTHS ASSUME NO VEHICULAR LOADING. DESIGNER TO SPECIFY COVER DEPTH IF VEHICULAR TRAFFIC IS ANTICIPATED. MINIMUM COVER FOR PIPE BELOW PAVEMENT (UNLESS OTHER SUPPORTING DOCUMENTATION IS PROVIDED TO DEMONSTRATE ADEQUATE COVER):
 - 2 FEET FROM BOTTOM OF FLEXIBLE PAVEMENT WEARING COURSE
 - 2 FEET MINIMUM FROM TOP OF RIGID PAVEMENT WEARING COURSE
2. WASHED DRAIN ROCK SHALL CONFORM TO WSDOT SPEC. 9-03.12(5) GRAVEL BACKFILL FOR DRYWELLS. STREAMBED COBBLES SHALL BE 4" COBBLES PER WSDOT SPEC. 9-03.11(2).



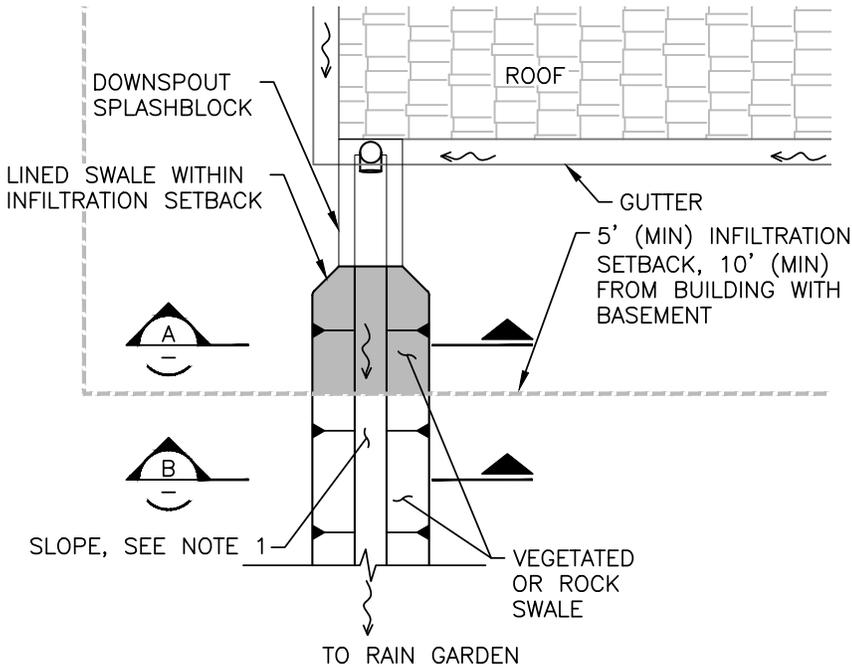
CITY OF EDMONDS
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 DEPARTMENT

**TYPICAL RAIN GARDEN
 PIPED INLET**

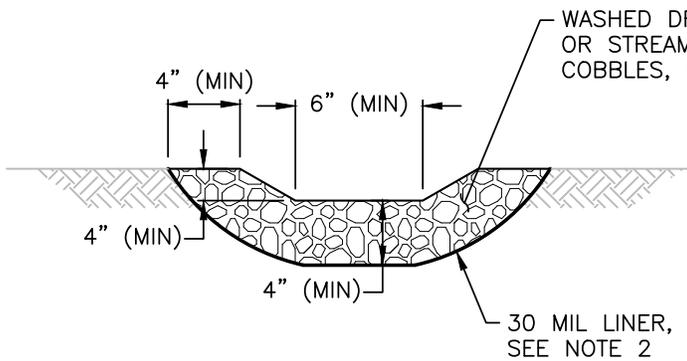
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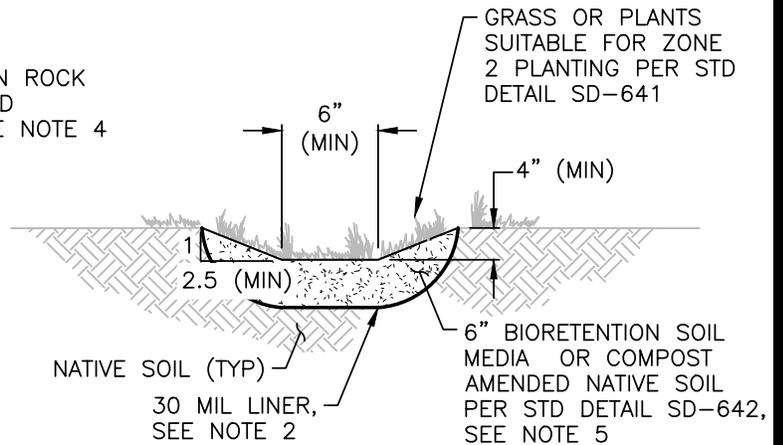
STANDARD
 DETAIL
SD-603



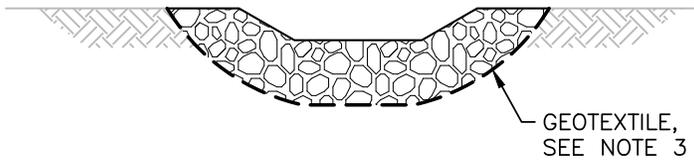
PLAN



SECTION A
NTS

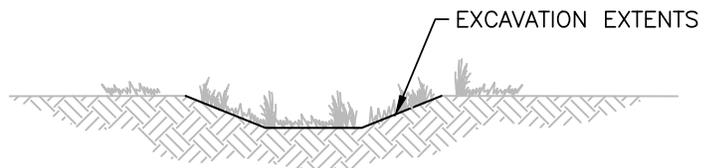


SECTION A
NTS



SECTION B
NTS

ROCK SWALE

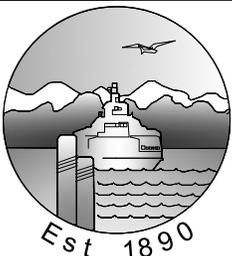


SECTION B
NTS

VEGETATED SWALE

NOTES:

1. MINIMUM SWALE SLOPE SHALL BE 1%, MAXIMUM SLOPE SHALL BE 2%. INSTALL GRADE AND EROSION CONTROL MEASURES FOR SLOPES STEEPER THAN 2%.
2. IMPERMEABLE LINER SHALL BE HDPE CONFORMING TO GEOSYNTHETIC RESEARCH INSTITUTE (GRI) GM 13 OR LLDPE CONFORMING TO GRI GM 17.
3. GEOTEXTILE SHALL CONFORM TO WSDOT SPEC. 9-33.2(1), GEOTEXTILE FOR SEPARATION, NON-WOVEN TYPE.
4. WASHED DRAIN ROCK SHALL CONFORM TO WSDOT SPEC. 9-03.12(5) GRAVEL BACKFILL FOR DRYWELLS. STREAMBED COBBLES SHALL BE 4" COBBLES PER WSDOT SPEC. 9-03.11(2).
5. BIORETENTION SOIL MEDIA SHALL MEET SPECIFICATION REQUIREMENTS IN THE 2017 EDMONDS STORMWATER ADDENDUM (CHECKLIST 10).



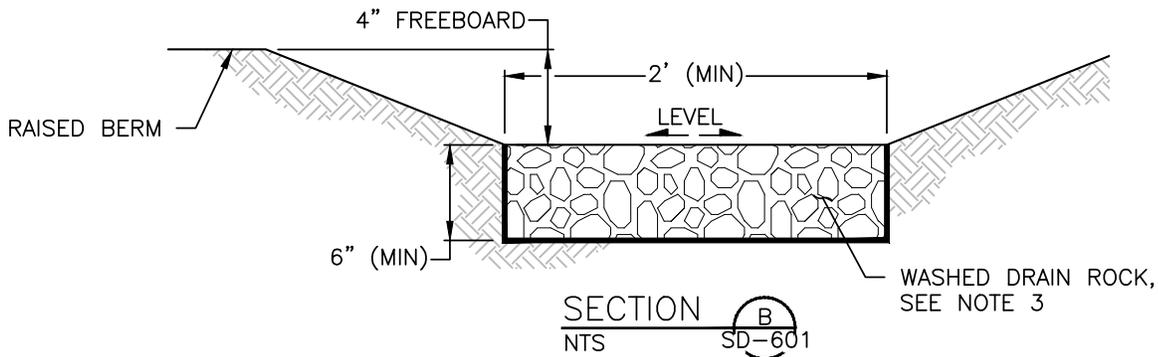
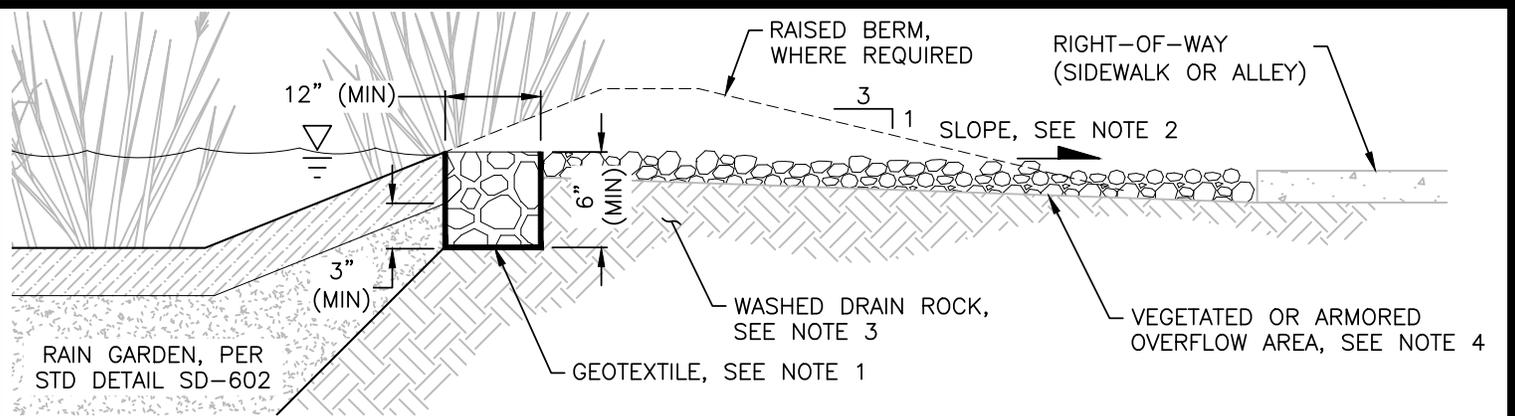
CITY OF EDMONDS
PUBLIC WORKS
DEPARTMENT

TYPICAL RAIN GARDEN
SWALE INLETS

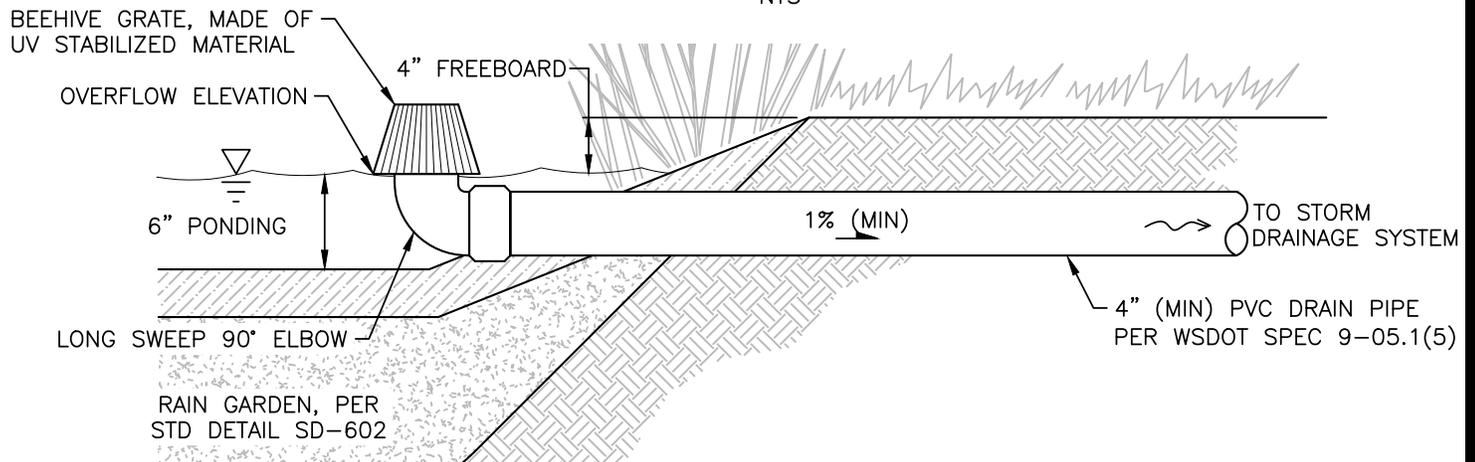
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REVISION DATE
DECEMBER 2017

STANDARD
DETAIL
SD-604



DISPERSION TRENCH OVERFLOW
NTS



PIPED OVERFLOW
NTS

NOTES:

1. GEOTEXTILE SHALL CONFORM TO WSDOT SPEC. 9-33.2(1), GEOTEXTILE FOR SEPARATION, NON-WOVEN TYPE.
2. MAINTAIN POSITIVE DRAINAGE. MINIMUM OVERFLOW AREA SLOPE SHALL BE 1%. MAXIMUM SLOPE SHALL BE 4%.
3. WASHED DRAIN ROCK SHALL CONFORM TO WSDOT SPEC. 9-03.12(5), GRAVEL BACKFILL FOR DRYWELLS.
4. OVERFLOW AREA SHALL BE VEGETATED (GRASS OR PLANTS SUITABLE FOR ZONE 2 PLANTING PER STD. DETAIL SD-641) OR ARMORED WITH WASHED DRAIN ROCK OR STREAMBED COBBLES. WASHED DRAIN ROCK SHALL CONFORM TO WSDOT SPEC. 9-03.12(5), GRAVEL BACKFILL FOR DRYWELLS. STREAMBED COBBLES SHALL BE 4\"/>



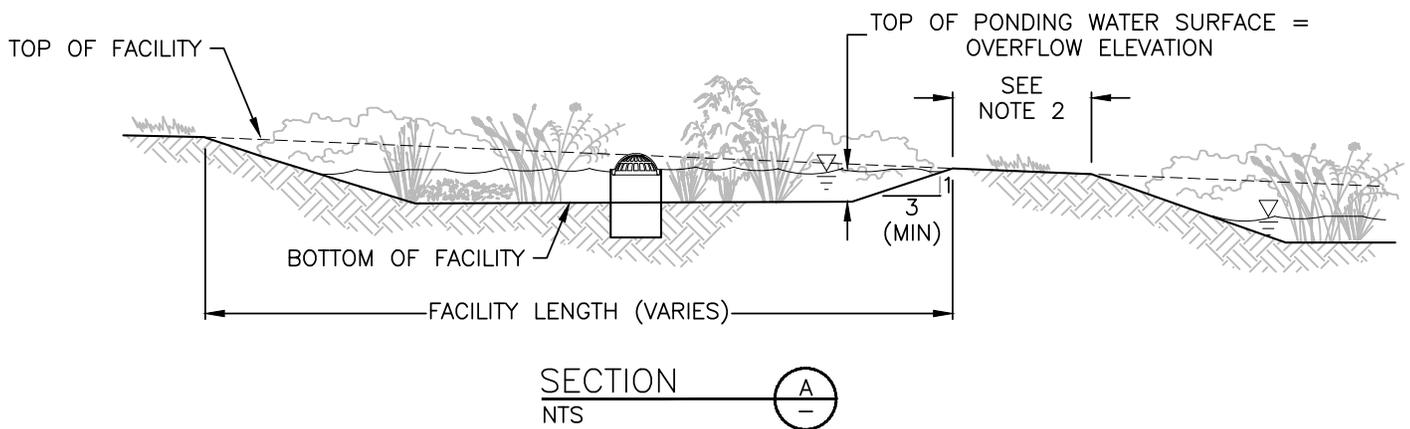
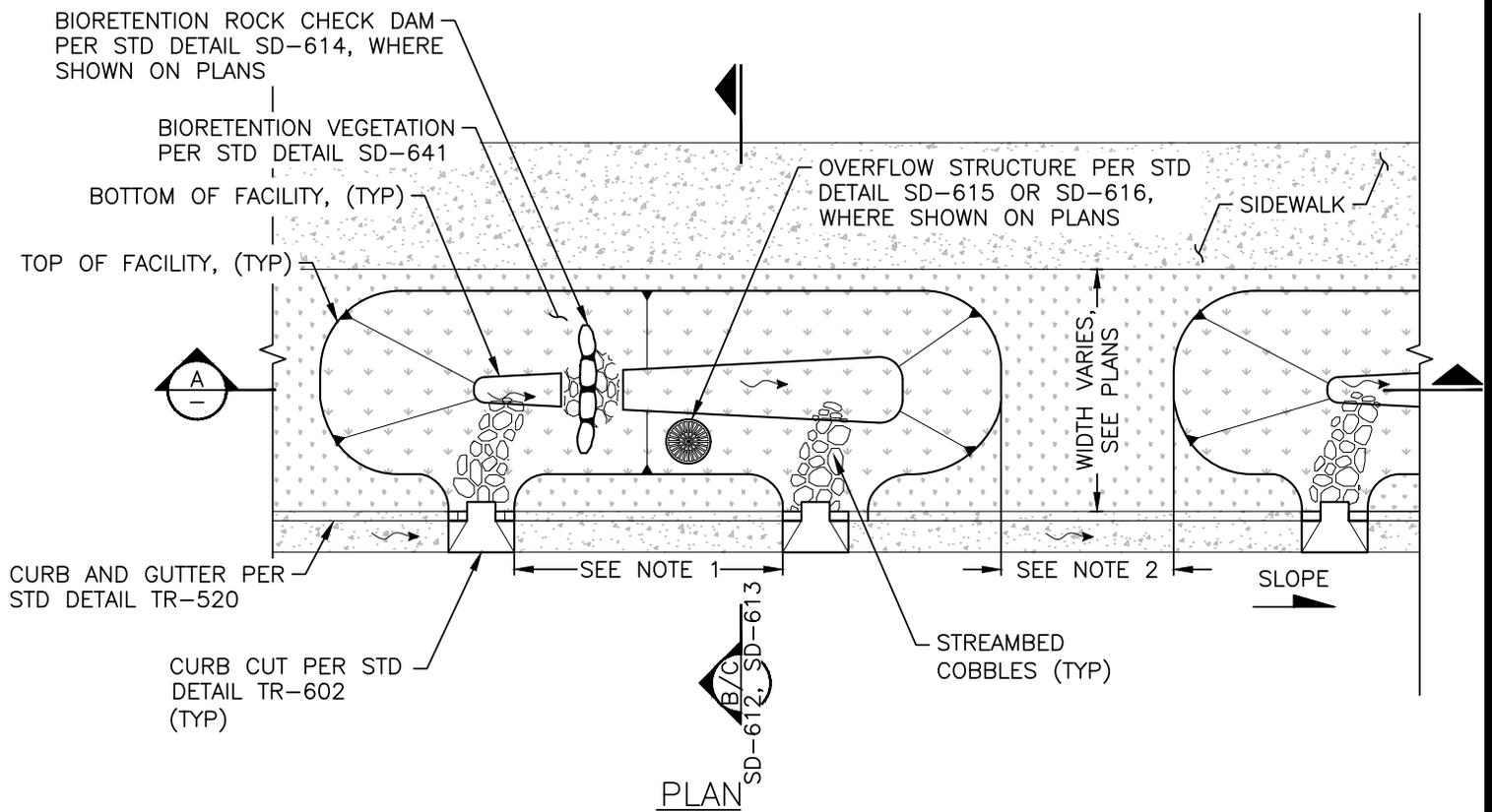
CITY OF EDMONDS
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**TYPICAL RAIN
GARDEN OUTLETS**

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REVISION DATE
DECEMBER 2017

STANDARD
DETAIL
SD-605

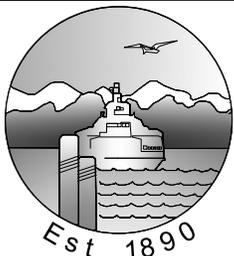


GENERAL NOTES:

1. REFER TO 2017 CITY OF EDMONDS STORMWATER ADDENDUM FOR SETBACK (CHECKLIST 10) AND INFEASIBILITY REQUIREMENTS.

NOTES:

1. LOCATION, NUMBER, AND SPACING OF CURB CUTS VARY WITH FACILITY LENGTH AND ROAD SLOPE. PROVIDE A MINIMUM OF ONE CURB CUT PER FACILITY. SEE PLANS FOR LOCATIONS.
2. 2 FOOT MINIMUM, 5 FOOT MINIMUM IF PEDESTRIAN ACCESS IS REQUIRED.



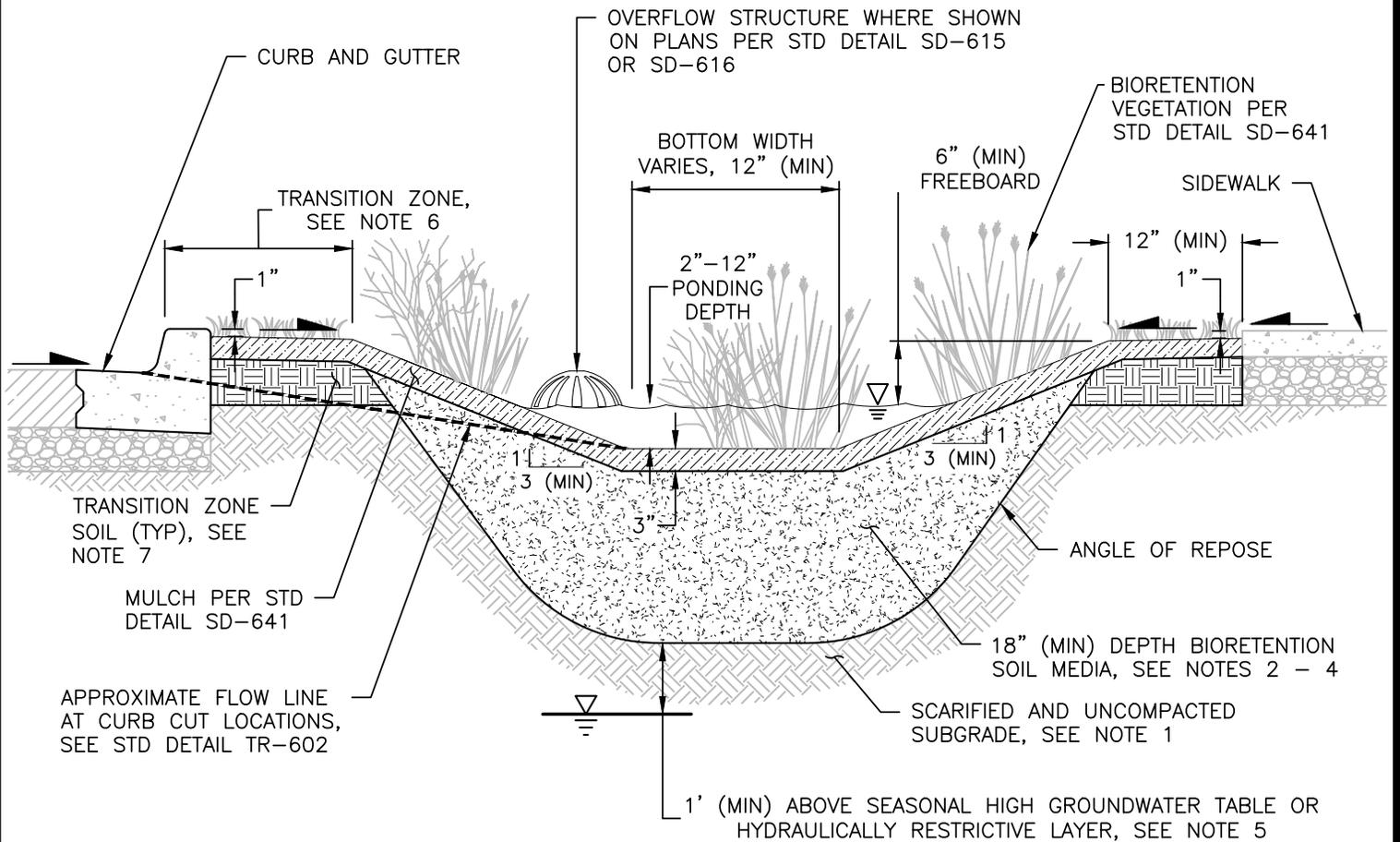
CITY OF EDMONDS
PUBLIC WORKS
DEPARTMENT

**BIORETENTION
PLAN/SECTION**

APPROVED BY: R. ENGLISH

REVISION DATE
DECEMBER 2017

STANDARD
DETAIL
SD-611



SECTION B
NTS SD-611, TR-601

NOTES:

1. SCARIFY SUBGRADE 3" (MIN) BEFORE BIORETENTION SOIL MEDIA (BSM) INSTALLATION.
2. BSM SHALL CONFORM TO 2017 CITY OF EDMONDS STORMWATER ADDENDUM (CHECKLIST 10) SPECIFICATIONS.
3. BSM PLACEMENT, GRADING, AND CONSOLIDATION SHALL NOT OCCUR WHEN THE BSM IS EXCESSIVELY WET, OR HAS BEEN SUBJECTED TO MORE THAN 1/2 INCH OF PRECIPITATION WITHIN 48 HOURS PRIOR TO PLACEMENT. EXCESSIVELY WET IS DEFINED AS BEING AT OR ABOVE 22 PERCENT SOIL MOISTURE BY A GENERAL TOOLS & INSTRUMENTS DSMM500 PRECISION DIGITAL SOIL MOISTURE METER WITH PROBE (OR EQUIVALENT). THERE SHOULD BE NO VISIBLE FREE WATER IN THE MATERIAL.
4. PLACE BSM LOOSELY WITH A CONVEYOR BELT OR WITH AN EXCAVATOR OR LOADER FROM A HEIGHT OF 6 FEET OR LESS (I.E., DO NOT DUMP MATERIAL DIRECTLY FROM TRUCK INTO CELL). COMPACT BSM USING NON-MECHANICAL COMPACTION METHODS (E.G., BOOT PACKING, HAND TAMPING, OR WATER CONSOLIDATION) TO 83 PERCENT (+/- 2%) OF THE MAXIMUM DRY DENSITY PER MODIFIED PROCTOR TEST (ASTM D1557).
5. MINIMUM DEPTH TO GROUNDWATER OR HYDRAULICALLY RESTRICTIVE LAYER VARIES BY CONTRIBUTING AREA. SEE 2017 CITY OF EDMONDS STORMWATER ADDENDUM (CHECKLIST 10).
6. TRANSITION ZONE SHALL BE 2' (MIN) FOR LOCAL AND COLLECTOR STREETS AND 4' (MIN) FOR ARTERIALS. PROVIDE 2.5' (MIN) TRANSITION ZONE WHERE ADJACENT TO PARALLEL PARKING.
7. TRANSITION ZONE SOIL SHALL BE UNDISTURBED NATIVE OR APPROVED SOIL COMPACTED TO 95% MAXIMUM DRY DENSITY PER MODIFIED PROCTOR TEST (ASTM D1557).



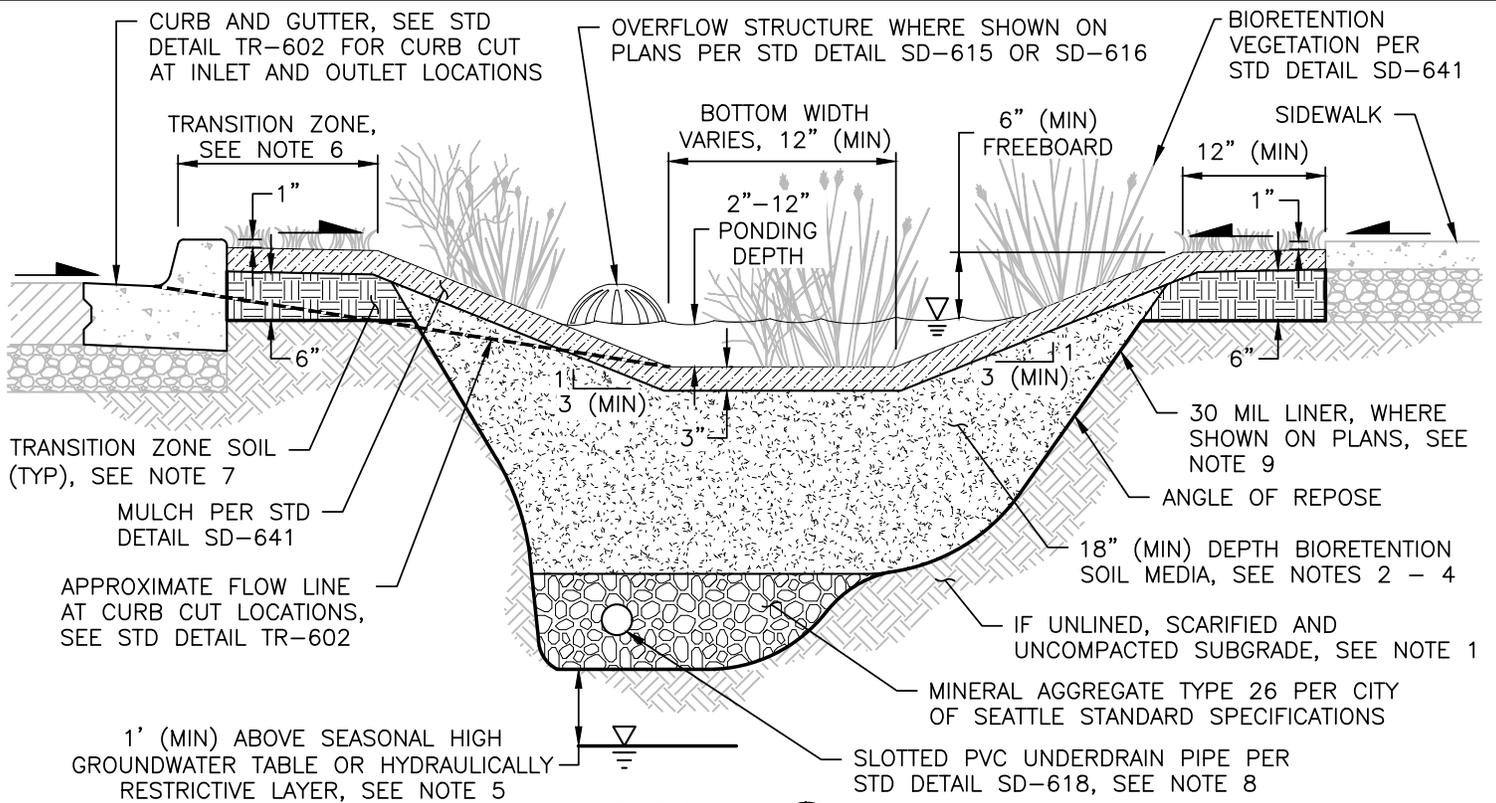
CITY OF EDMONDS
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DEPARTMENT

BIORETENTION SECTION

APPROVED BY: R. ENGLISH

REVISION DATE
DECEMBER 2017

STANDARD
DETAIL
SD-612



SECTION C
NTS SD-611, TR-601

NOTES:

1. SCARIFY SUBGRADE 3" (MIN) BEFORE BIORETENTION SOIL MEDIA (BSM) INSTALLATION.
2. BSM SHALL CONFORM TO 2017 CITY OF EDMONDS STORMWATER ADDENDUM (CHECKLIST 10) SPECIFICATIONS.
3. BSM PLACEMENT, GRADING, AND CONSOLIDATION SHALL NOT OCCUR WHEN THE BSM IS EXCESSIVELY WET, OR HAS BEEN SUBJECTED TO MORE THAN 1/2 INCH OF PRECIPITATION WITHIN 48 HOURS PRIOR TO PLACEMENT. EXCESSIVELY WET IS DEFINED AS BEING AT OR ABOVE 22 PERCENT SOIL MOISTURE BY A GENERAL TOOLS & INSTRUMENTS DSMM500 PRECISION DIGITAL SOIL MOISTURE METER WITH PROBE (OR EQUIVALENT). THERE SHOULD BE NO VISIBLE FREE WATER IN THE MATERIAL.
4. PLACE BSM LOOSELY WITH A CONVEYOR BELT OR WITH AN EXCAVATOR OR LOADER FROM A HEIGHT OF 6 FEET OR LESS (I.E., DO NOT DUMP MATERIAL DIRECTLY FROM TRUCK INTO CELL). COMPACT BSM USING NON-MECHANICAL COMPACTION METHODS (E.G., BOOT PACKING, HAND TAMPING, OR WATER CONSOLIDATION) TO 83 PERCENT (+/- 2%) OF THE MAXIMUM DRY DENSITY PER MODIFIED PROCTOR TEST (ASTM D1557).
5. MINIMUM DEPTH TO GROUNDWATER OR HYDRAULICALLY RESTRICTIVE LAYER VARIES BY CONTRIBUTING AREA. SEE 2017 CITY OF EDMONDS STORMWATER ADDENDUM (CHECKLIST 10).
6. TRANSITION ZONE SHALL BE 2' (MIN) FOR LOCAL AND COLLECTOR STREETS AND 4' (MIN) FOR ARTERIALS. PROVIDE 2.5' (MIN) TRANSITION ZONE WHERE ADJACENT TO PARALLEL PARKING.
7. TRANSITION ZONE SOIL SHALL BE UNDISTURBED NATIVE OR APPROVED SOIL COMPACTED TO 95% MAXIMUM DRY DENSITY PER MODIFIED PROCTOR TEST (ASTM D1557).
8. SLOPE PIPE AT 0.5% MIN, UNLESS OTHERWISE SPECIFIED. PROVIDE ONE CLEANOUT MIN PER 100 FEET OF UNDERDRAIN LENGTH, AND AT EACH END. MATCH CROWN ELEVATION OF UNDERDRAIN TO OVERFLOW PIPE, UNLESS SPECIFIED OTHERWISE.
9. IMPERMEABLE LINER SHALL BE HDPE CONFORMING TO GEOSYNTHETIC RESEARCH INSTITUTE (GRI) GM 13 OR LDPE CONFORMING TO GRI GM 17.



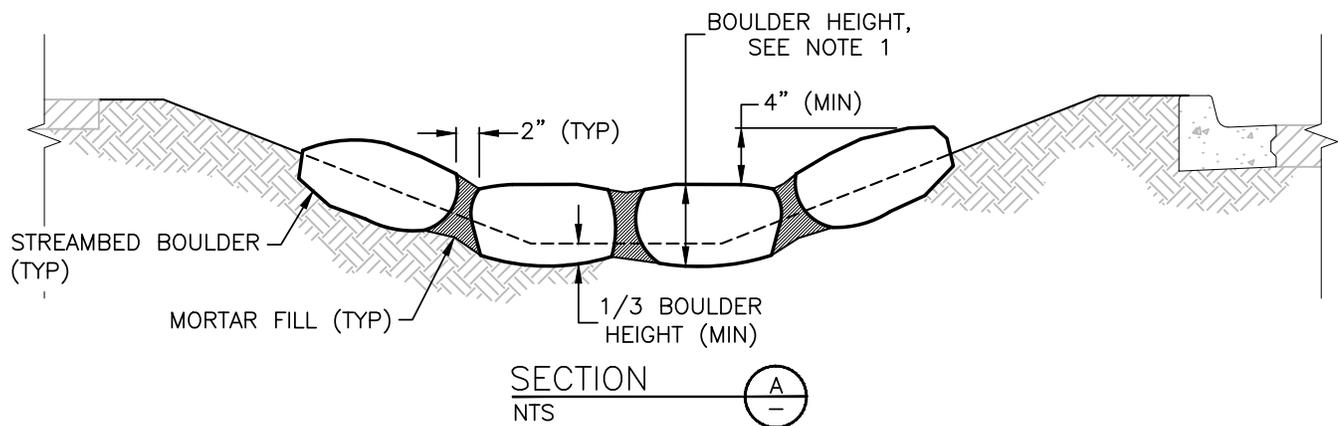
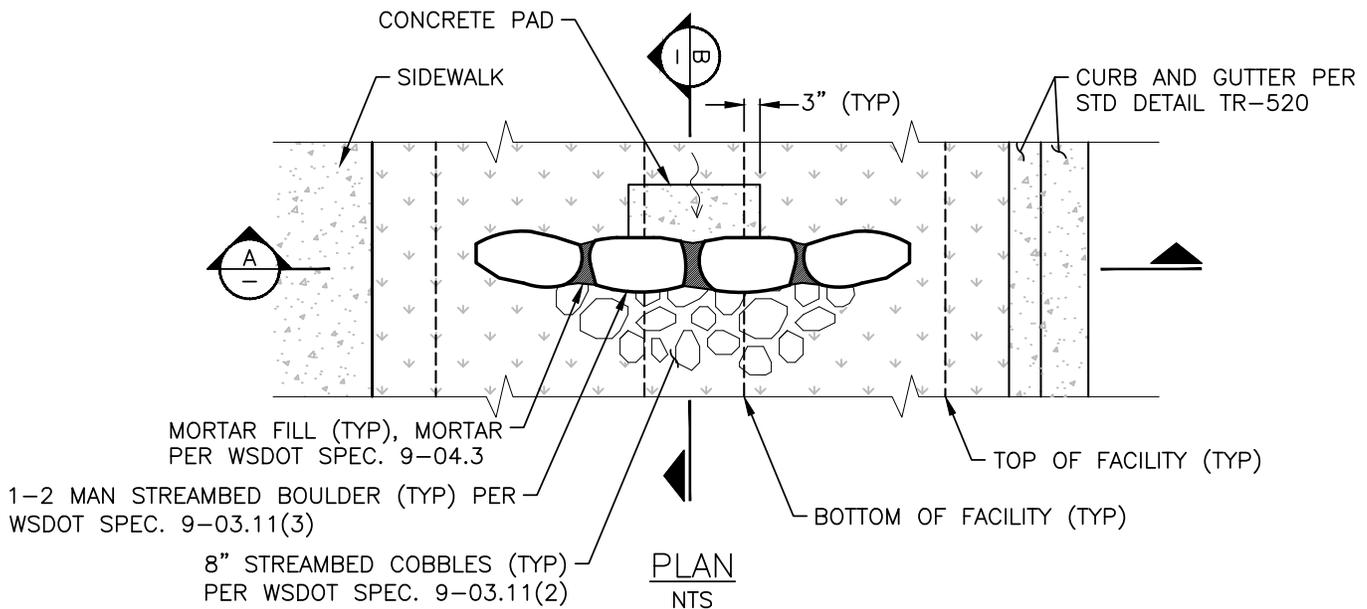
CITY OF EDMONDS
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DEPARTMENT

BIORETENTION SECTION
WITH UNDERDRAIN

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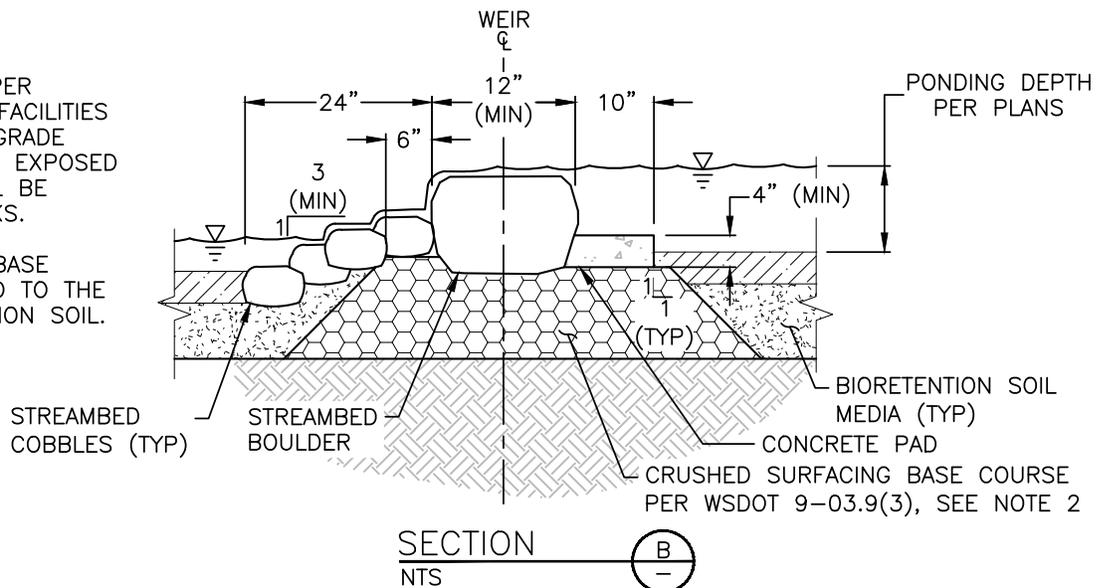
REVISION DATE
DECEMBER 2017

STANDARD
DETAIL
SD-613



NOTES:

1. HEIGHT OF BOULDER PER DESIGNER, BASED ON FACILITIES PONDING DEPTH AND GRADE CHANGE ACROSS WEIR. EXPOSED BOULDER FACES SHALL BE SMOOTH, CLEAN BREAKS.
2. CRUSHED SURFACING BASE COURSE SHALL EXTEND TO THE BOTTOM OF BIORETENTION SOIL.



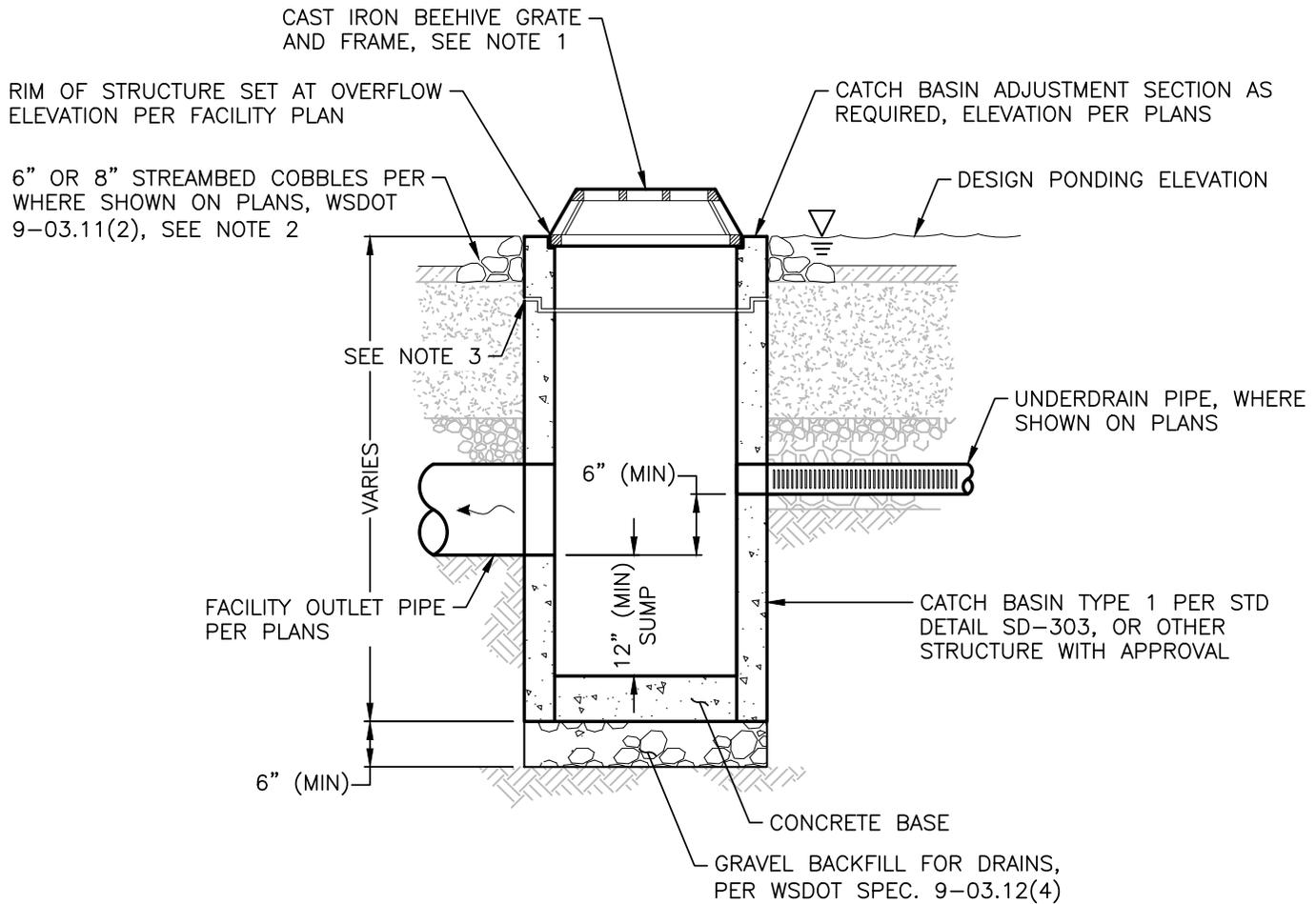
CITY OF EDMONDS
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**BIORETENTION
 ROCK CHECK DAM**

APPROVED BY: R. ENGLISH

REVISION DATE
 DECEMBER 2017

STANDARD
 DETAIL
 SD-614



GENERAL NOTES:

1. FACILITY OUTLET PIPES MUST BE LOCATED AT AN ELEVATION HIGHER THAN THE STORM DRAIN SYSTEM HYDRAULIC GRADE LINE TO PREVENT BACKFLOW INTO THE BIORETENTION FACILITY.
2. OVERFLOW STRUCTURE SHALL BE LOCATED WITHIN 10 FEET OF ROAD EDGE FOR MAINTENANCE ACCESS, UNLESS APPROVED OTHERWISE. OVERFLOW STRUCTURE MAY BE LOCATED IN SIDE SLOPES.

NOTES:

1. FRAME AND GRATE SHALL BE LOCKING AND GRATE SHALL BE BOLTED TO FRAME. FRAME SHALL CONFORM TO WSDOT STANDARD PLAN B-30.10-01. GRATE TO BE DUCTILE IRON BEEHIVE GRATE FITTING 20"x24" FRAME. OLYMPIC FOUNDRY PART SM60BH OR EQUAL.
2. MINIMUM STREAMBED COBBLE DIAMETER SHALL BE LARGER THAN MAXIMUM GRATE OPENING.
3. GROUT ALL PENETRATIONS, CRACKS, SEAMS, AND JOINTS WITH TYPE 2 MORTAR PER WSDOT 9-20.4(3). JOINTS BETWEEN PRECAST STRUCTURES SHALL BE RUBBER GASKETED PER WSDOT 7-05.3.



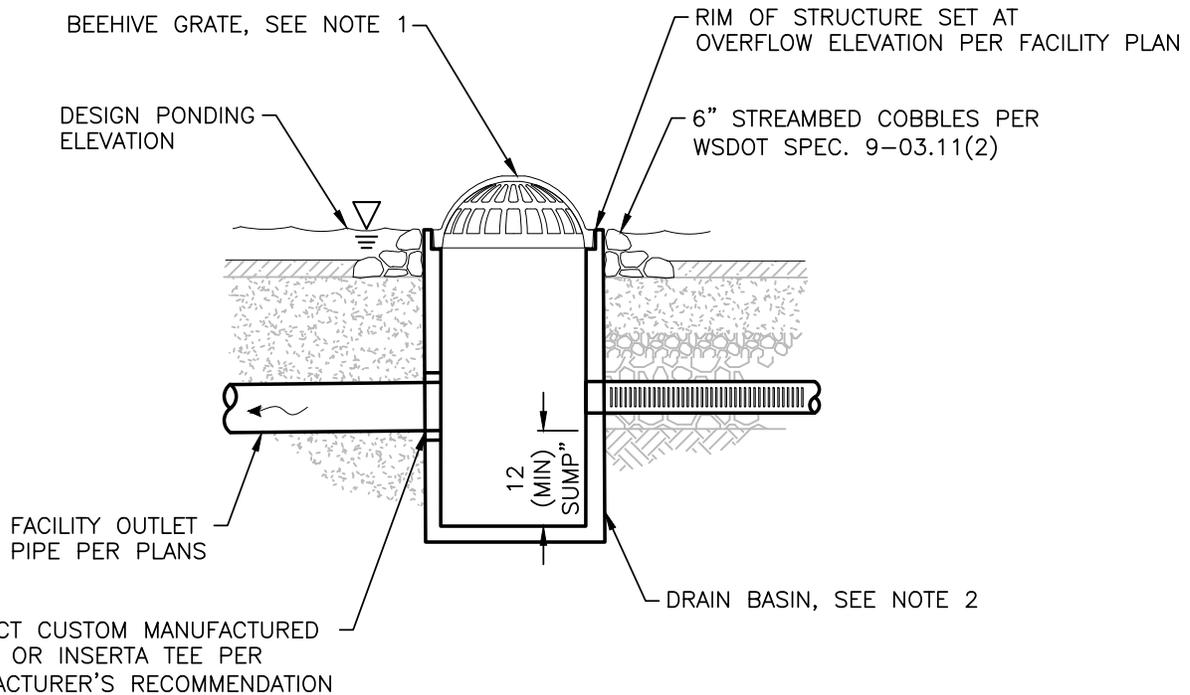
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DEPARTMENT

OVERFLOW OUTLET STRUCTURE - OPTION 1

APPROVED BY: R. ENGLISH

REVISION DATE
DECEMBER 2017

STANDARD
DETAIL
SD-615



GENERAL NOTES:

1. FACILITY OUTLET PIPES MUST BE LOCATED AT AN ELEVATION HIGHER THAN THE STORM DRAIN SYSTEM HYDRAULIC GRADE LINE TO PREVENT BACKFLOW INTO THE BIORETENTION FACILITY.
2. OVERFLOW STRUCTURE SHALL BE LOCATED WITHIN 10 FEET OF ROAD EDGE FOR MAINTENANCE ACCESS, UNLESS APPROVED OTHERWISE. OVERFLOW STRUCTURE MAY BE LOCATED IN SIDE SLOPES.

NOTES:

1. BEEHIVE GRATE SHALL BE NYLOPLAST 12" DOME (PART #1299GCD), LOCKING, LIGHT DUTY DUCTILE IRON (ASTM A536) OR AN APPROVED EQUAL.
2. DRAIN BASIN SHALL BE NYLOPLAST 12" DRAIN BASIN (PART #2812AG__X). OR AN APPROVED EQUAL. MAXIMUM DEPTH FROM RIM STRUCTURE TO IE SHALL BE 5'.



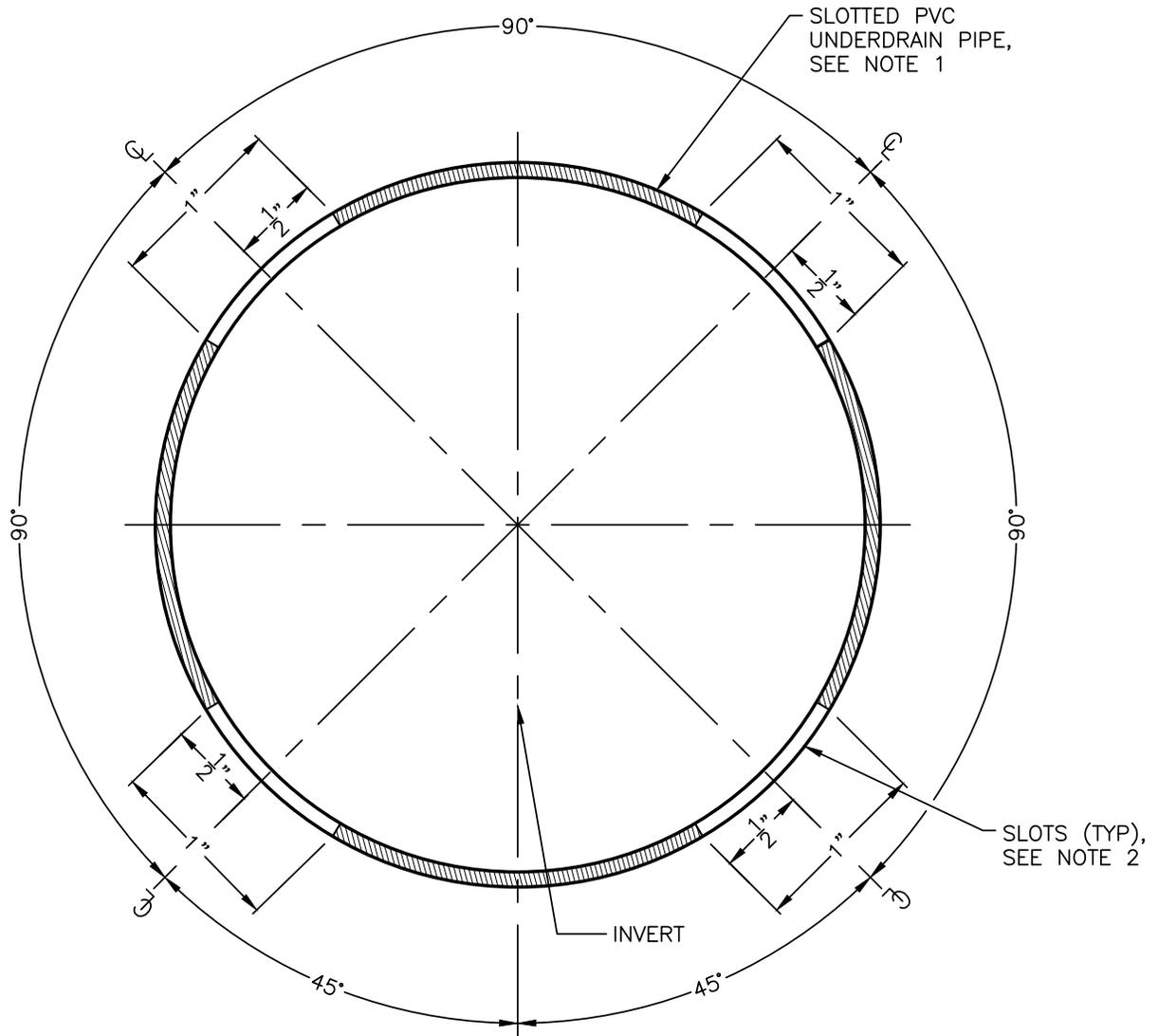
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DEPARTMENT

**OVERFLOW OUTLET
STRUCTURE – OPTION 2**

APPROVED BY: R. ENGLISH

REVISION DATE
DECEMBER 2017

STANDARD
DETAIL
SD-616



NOTES:

1. SLOTTED PVC UNDERDRAIN PIPE SHALL BE SDR 21, CLASS 200 PVC PIPE (ASTM D2241) OR SCH 40 PVC PIPE (ASTM D 1785).
2. SLOT DIMENSIONS ARE 0.04" TO 0.069" WIDE X 1.00" LONG SPACED ALONG PIPE AT 0.25" ON CENTER.
3. UNDERDRAIN PIPE SHALL BE 4" MINIMUM DIAMETER (PRIVATE), 8" MINIMUM DIAMETER (PUBLIC).



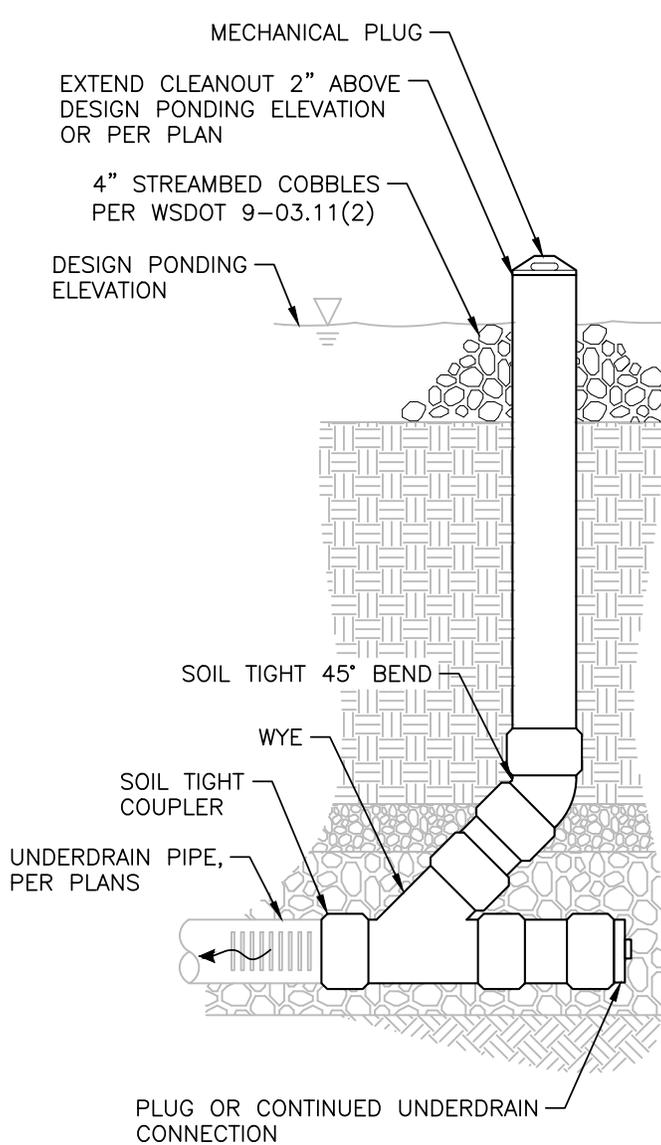
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DEPARTMENT

**SLOTTED PVC
UNDERDRAIN PIPE**

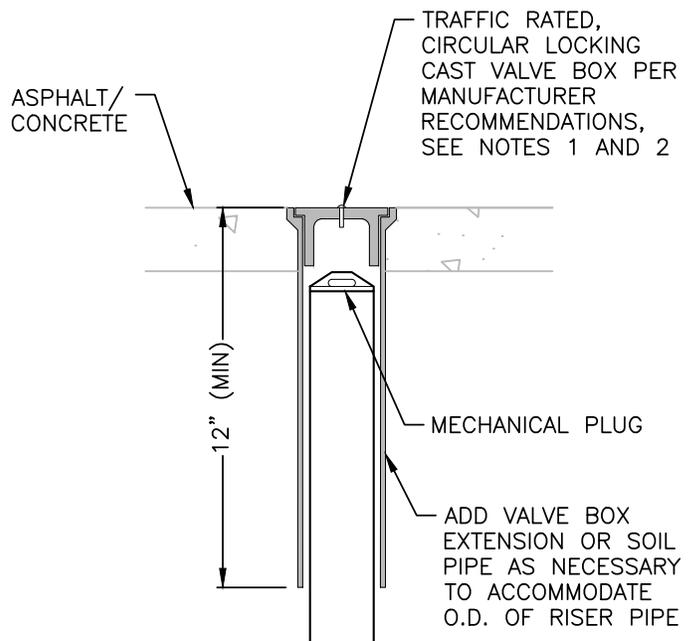
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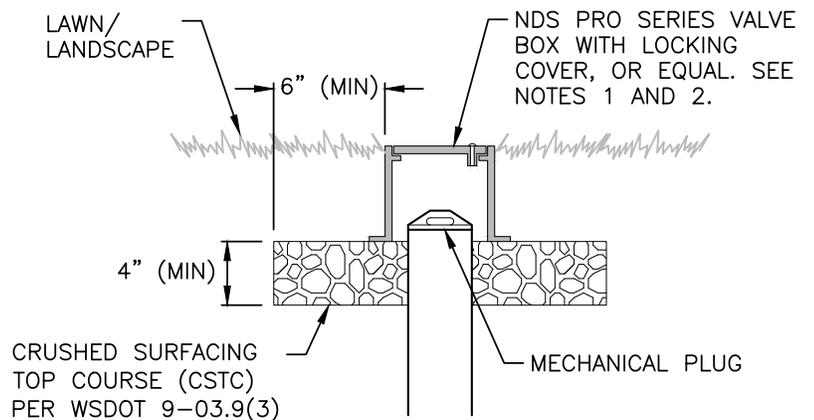
STANDARD
DETAIL
SD-618



CLEANOUT
(SHOWN WITHIN BIORETENTION FACILITY)



CLEANOUT COVER IN PAVED AREA



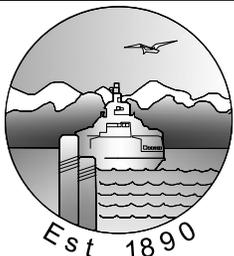
CLEANOUT COVER IN LANDSCAPE AREA

GENERAL NOTES:

1. CLEANOUT PIPE SHALL BE SAME SIZE AND MATERIAL AS UNDERDRAIN PIPE.
2. CLEANOUT SHALL BE INSTALLED TO ALLOW FOR MAINTENANCE ACCESS TO ALL PIPES.
3. ALL FITTINGS SHALL BE SOIL TIGHT.
4. CLEANOUT RISER TOP SHALL BE LOCATED OUTSIDE OF PONDING AREAS WHERE POSSIBLE.

NOTES:

1. CLEANOUT COVER TO BE LOCKING WITH ALLEN HEAD BOLT, MARKED "DRAIN CLEANOUT," "CLEANOUT," "CO," OR SIMILAR.
2. TRAFFIC RATED LID REQUIRED IN AREAS WITH VEHICULAR LOADING.



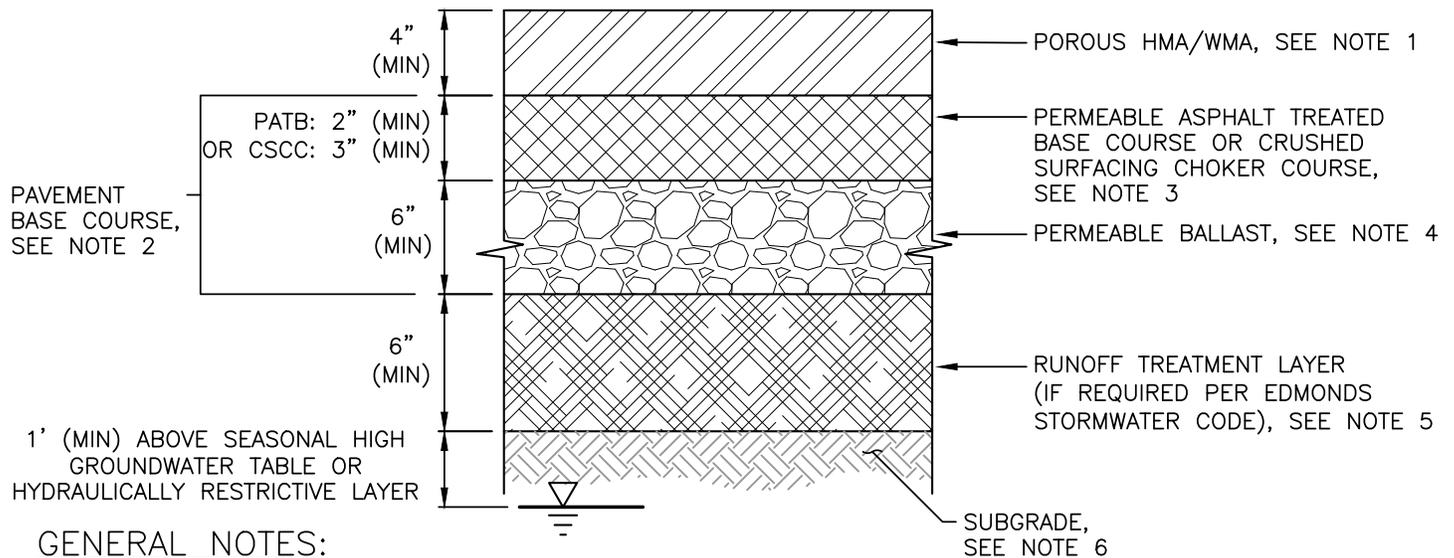
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**STORM DRAINAGE
CLEANOUT**

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STANDARD
DETAIL
SD-619



GENERAL NOTES:

1. REFER TO THE 2017 CITY OF EDMONDS STORMWATER ADDENDUM FOR SETBACK (CHECKLIST 11) AND INFEASIBILITY REQUIREMENTS.
2. THE MINIMUM THICKNESS SHOWN ABOVE MAY NOT BE SUFFICIENT FOR ALL APPLICATIONS. A PROJECT SPECIFIC PAVEMENT DESIGN SHALL BE PREPARED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF WASHINGTON IN CIVIL ENGINEERING TO:
 - 2.1. SUPPORT THE ANTICIPATED LOADING (E.G. PAVEMENT DESIGN LIFE, INITIAL AND TERMINAL SERVICEABILITY, RELIABILITY, ETC.) AND
 - 2.2. TO SATISFY THE HYDROLOGIC REQUIREMENTS OF THE CITY OF EDMONDS STORMWATER CODE (I.E., CODE MAY WARRANT A THICKER PAVEMENT SECTION THAN THE MINIMUM STRUCTURAL SECTION REQUIRED).
3. FOR SUBGRADE SLOPES 3% OR GREATER, SUBSURFACE CHECK DAMS OR OTHER METHODS TO PROMOTE SUBSURFACE PONDING ARE REQUIRED.
4. GEOTEXTILE SHALL NOT BE USED IN PAVEMENT SECTION UNLESS REQUIRED BY GEOTECHNICAL ENGINEER. IF REQUIRED, GEOTEXTILE SHALL CONFORM TO WSDOT 9.33.2(1) GEOTEXTILE FOR SEPARATION, WOVEN TYPE.
5. REFER TO WSDOT LOCAL AGENCY GSPs DIVISIONS 2-9 FOR APWA GSPs.

NOTES:

1. POROUS HMA SHALL CONFORM TO REQUIREMENTS OF APWA GSP 5-04. SURFACE SLOPE SHALL BE BETWEEN 0.5% AND 5%.
2. PAVEMENT BASE SHALL BE INSTALLED PER APWA GSP 4-04.3(5) SHAPING AND COMPACTION.
3. PERMEABLE ASPHALT TREATED BASE (PATB) SHALL CONFORM TO THE REQUIREMENTS OF APWA GSP 4-SA2. CRUSHED SURFACING CHOKER COURSE (CSCC) SHALL CONFORM TO THE REQUIREMENTS OF APWA GSP 4-04.2(9-03.9(2)).OPT2.
4. PERMEABLE BALLAST SHALL CONFORM TO THE REQUIREMENTS OF APWA GSP 4-04.2(9-03.9(2)).OPT1.
5. RUNOFF TREATMENT LAYER SHALL MEET THE REQUIREMENTS OF 2017 CITY OF EDMONDS STORMWATER ADDENDUM.
6. PREPARE AND PROTECT SUBGRADE PER APWA GSP 2-06.3(3) SUBGRADE FOR PERMEABLE PAVEMENTS.



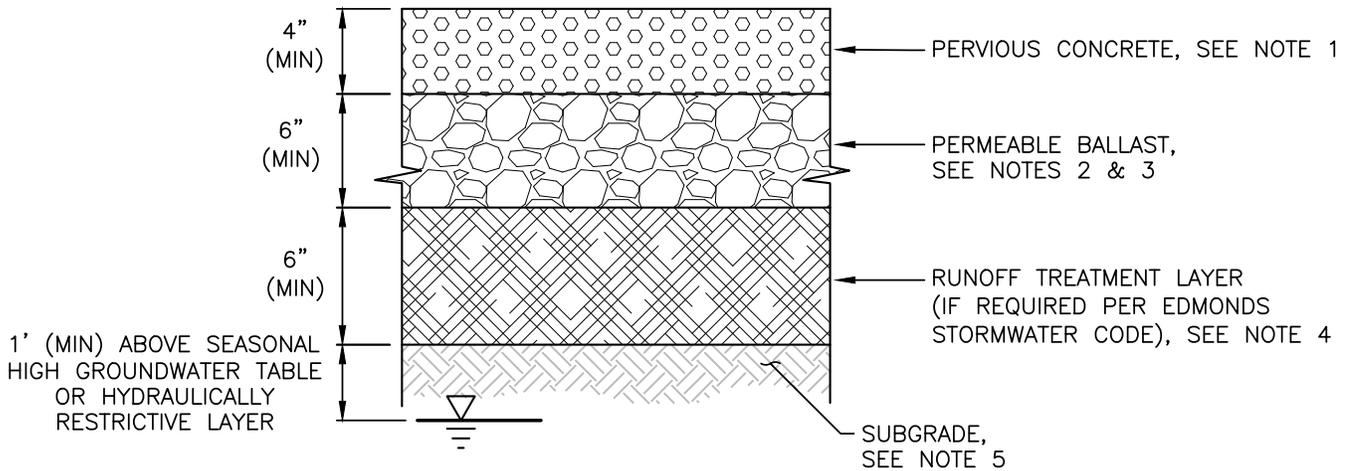
CITY OF EDMONDS
PUBLIC WORKS
DEPARTMENT

**TYPICAL POROUS
ASPHALT PAVEMENT**

APPROVED BY: R. ENGLISH

REVISION DATE
DECEMBER 2017

STANDARD
DETAIL
SD-621

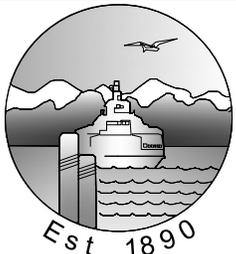


GENERAL NOTES:

1. REFER TO THE 2017 CITY OF EDMONDS STORMWATER ADDENDUM FOR SETBACK (CHECKLIST 11) AND INFEASIBILITY REQUIREMENTS.
2. THE MINIMUM THICKNESS SHOWN ABOVE MAY NOT BE SUFFICIENT FOR ALL APPLICATIONS. A PROJECT SPECIFIC PAVEMENT DESIGN SHALL BE PREPARED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF WASHINGTON IN CIVIL ENGINEERING TO:
 - 2.1. SUPPORT THE ANTICIPATED LOADING (E.G. PAVEMENT DESIGN LIFE, INITIAL AND TERMINAL SERVICEABILITY, RELIABILITY, ETC.) AND
 - 2.2. TO SATISFY THE HYDROLOGIC REQUIREMENTS OF THE CITY OF EDMONDS STORMWATER CODE (I.E., CODE MAY WARRANT A THICKER PAVEMENT SECTION THAN THE MINIMUM STRUCTURAL SECTION REQUIRED).
3. FOR SUBGRADE SLOPES 3% OR GREATER, SUBSURFACE CHECK DAMS OR OTHER METHODS TO PROMOTE SUBSURFACE PONDING ARE REQUIRED.
4. GEOTEXTILE SHALL NOT BE USED IN PAVEMENT SECTION UNLESS REQUIRED BY GEOTECHNICAL ENGINEER. IF REQUIRED, GEOTEXTILE SHALL CONFORM TO WSDOT 9.33.2(1) GEOTEXTILE FOR SEPARATION, WOVEN TYPE.
5. REFER TO WSDOT LOCAL AGENCY GSPs DIVISIONS 2-9 FOR APWA GSPs.

NOTES:

1. PERVIOUS CONCRETE SHALL CONFORM TO REQUIREMENTS OF APWA GSP 5-06SA. SURFACE SLOPE SHALL BE BETWEEN 0.5% AND 10%.
2. PERMEABLE BALLAST SHALL CONFORM TO THE REQUIREMENTS OF APWA GSP 4-04.2(9-03.9(2)).OPT1.
3. PAVEMENT BASE SHALL BE INSTALLED PER APWA GSP 4-04.3(5) SHAPING AND COMPACTION.
4. RUNOFF TREATMENT LAYER SHALL MEET THE REQUIREMENTS OF 2017 CITY OF EDMONDS STORMWATER ADDENDUM.
5. PREPARE AND PROTECT SUBGRADE PER APWA GSP 2-06.3(3) SUBGRADE FOR PERMEABLE PAVEMENTS.



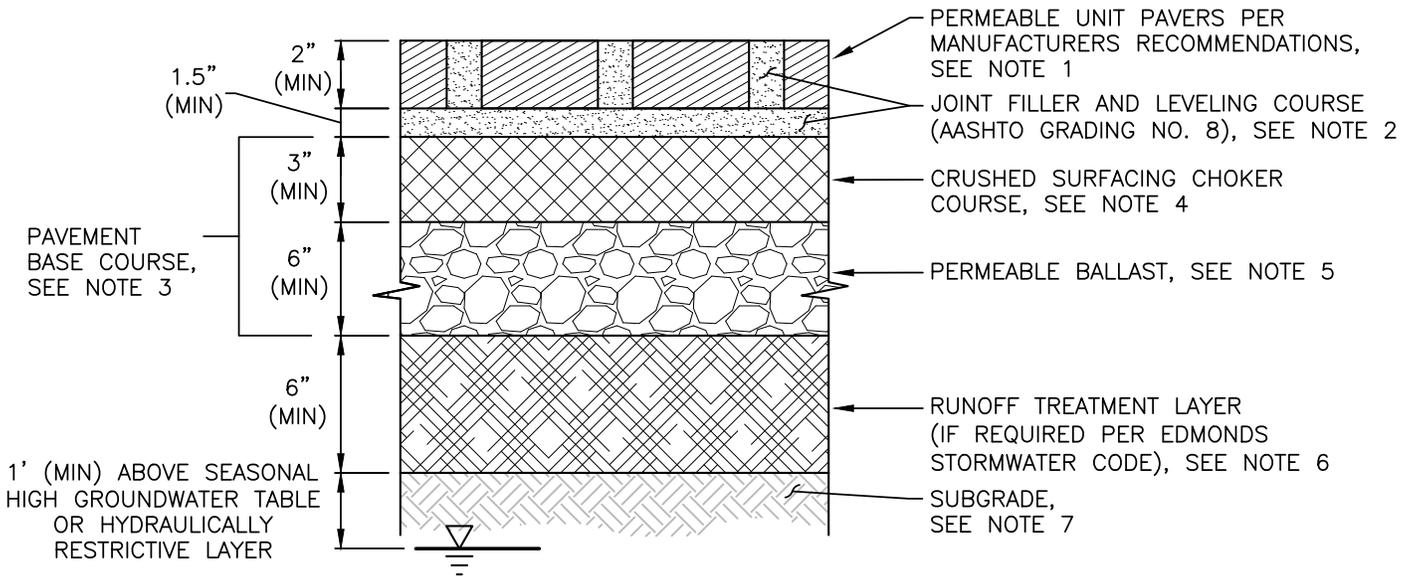
CITY OF EDMONDS
PUBLIC WORKS
DEPARTMENT

TYPICAL PERVIOUS CONCRETE PAVEMENT

APPROVED BY: R. ENGLISH

REVISION DATE
DECEMBER 2017

STANDARD
DETAIL
SD-622

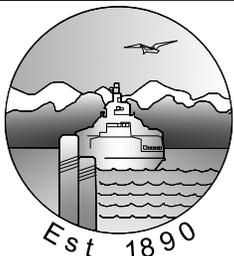


GENERAL NOTES:

1. REFER TO THE 2017 CITY OF EDMONDS STORMWATER ADDENDUM FOR SETBACK (CHECKLIST 11) AND INFEASIBILITY REQUIREMENTS.
2. THE MINIMUM THICKNESS SHOWN ABOVE MAY NOT BE SUFFICIENT FOR ALL APPLICATIONS. A PROJECT SPECIFIC PAVEMENT DESIGN SHALL BE PREPARED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF WASHINGTON IN CIVIL ENGINEERING TO:
 - 2.1. SUPPORT THE ANTICIPATED LOADING (E.G. PAVEMENT DESIGN LIFE, INITIAL AND TERMINAL SERVICEABILITY, RELIABILITY, ETC.) AND
 - 2.2. TO SATISFY THE HYDROLOGIC REQUIREMENTS OF THE CITY OF EDMONDS STORMWATER CODE (I.E., CODE MAY WARRANT A THICKER PAVEMENT SECTION THAN THE MINIMUM STRUCTURAL SECTION REQUIRED).
3. FOR SUBGRADE SLOPES 3% OR GREATER, SUBSURFACE CHECK DAMS OR OTHER METHODS TO PROMOTE SUBSURFACE PONDING ARE REQUIRED.
4. GEOTEXTILE SHALL NOT BE USED IN PAVEMENT SECTION UNLESS REQUIRED BY GEOTECHNICAL ENGINEER. IF REQUIRED, GEOTEXTILE SHALL CONFORM TO WSDOT 9.33.2(1) GEOTEXTILE FOR SEPARATION, WOVEN TYPE.
5. REFER TO WSDOT LOCAL AGENCY GSPs DIVISIONS 2-9 FOR APWA GSPs.

NOTES:

1. SURFACE SLOPE SHALL BE 0.5% MINIMUM. MAXIMUM SLOPE PER MANUFACTURER.
2. JOINT FILLER AND LEVELING COURSE SHALL CONFORM TO WSDOT 9-03.1(4) COARSE AGGREGATE FOR PORTLAND CEMENT CONCRETE, AASHTO GRADING NO. 8.
3. PAVEMENT BASE SHALL BE INSTALLED PER APWA GSP 4-04.3(5) SHAPING AND COMPACTION.
4. CRUSHED SURFACING CHOKER COURSE SHALL CONFORM TO THE REQUIREMENTS OF APWA GSP 4-04.2(9-03.9(2)).OPT2.
5. PERMEABLE BALLAST SHALL CONFORM TO THE REQUIREMENTS OF APWA GSP 4-04.2(9-03.9(2)).OPT1.
6. RUNOFF TREATMENT LAYER SHALL MEET THE REQUIREMENTS OF 2017 CITY OF EDMONDS STORMWATER ADDENDUM.
7. PREPARE AND PROTECT SUBGRADE PER APWA GSP 2-06.3(3) SUBGRADE FOR PERMEABLE PAVEMENTS.



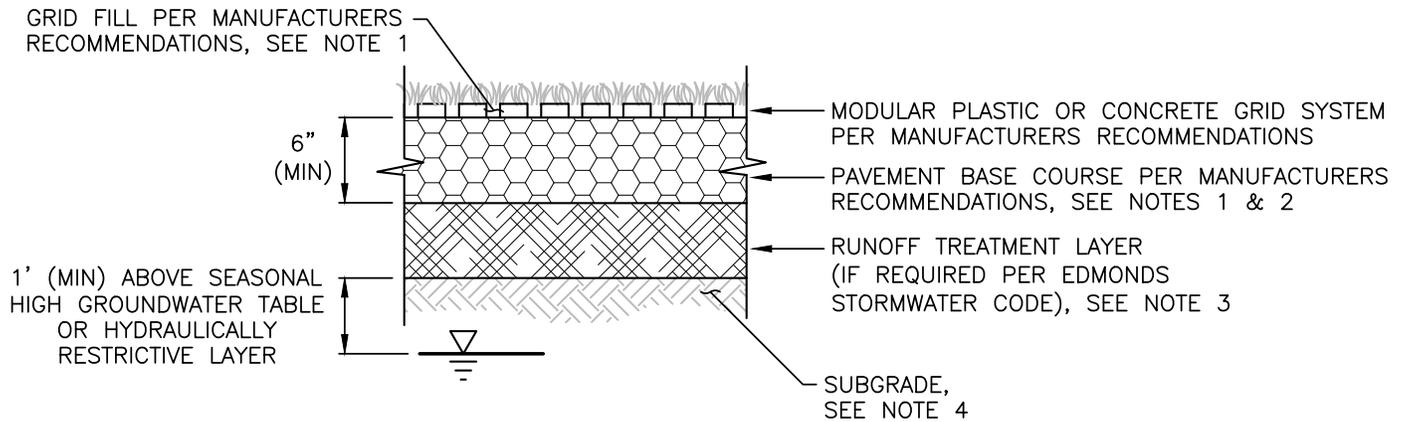
CITY OF EDMONDS
PUBLIC WORKS
DEPARTMENT

**TYPICAL PERMEABLE
UNIT PAVER SYSTEM**

APPROVED BY: R. ENGLISH

REVISION DATE
DECEMBER 2017

STANDARD
DETAIL
SD-623



GENERAL NOTES:

1. REFER TO THE 2017 CITY OF EDMONDS STORMWATER ADDENDUM FOR SETBACK (CHECKLIST 11) AND INFEASIBILITY REQUIREMENTS.
2. THE MINIMUM THICKNESS SHOWN ABOVE MAY NOT BE SUFFICIENT FOR ALL APPLICATIONS. A PROJECT SPECIFIC PAVEMENT DESIGN SHALL BE PREPARED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF WASHINGTON IN CIVIL ENGINEERING TO:
 - 2.1. SUPPORT THE ANTICIPATED LOADING (E.G. PAVEMENT DESIGN LIFE, INITIAL AND TERMINAL SERVICEABILITY, RELIABILITY, ETC.) AND
 - 2.2. TO SATISFY THE HYDROLOGIC REQUIREMENTS OF THE CITY OF EDMONDS STORMWATER CODE (I.E., CODE MAY WARRANT A THICKER PAVEMENT SECTION THAN THE MINIMUM STRUCTURAL SECTION REQUIRED).
3. FOR SUBGRADE SLOPES 3% OR GREATER, SUBSURFACE CHECK DAMS OR OTHER METHODS TO PROMOTE SUBSURFACE PONDING ARE REQUIRED.
4. GEOTEXTILE SHALL NOT BE USED IN PAVEMENT SECTION UNLESS REQUIRED BY GEOTECHNICAL ENGINEER. IF REQUIRED, GEOTEXTILE SHALL CONFORM TO WSDOT 9.33.2(1) GEOTEXTILE FOR SEPARATION, WOVEN TYPE.
5. REFER TO WSDOT LOCAL AGENCY GSPs DIVISIONS 2-9 FOR APWA GSPs.

NOTES:

1. APPLY MOISTURE RETAINING ADDITIVE TO GRID FILL AND/OR PAVEMENT BASE AS SPECIFIED BY THE MANUFACTURER.
2. PAVEMENT BASE SHALL BE INSTALLED PER APWA GSP 4-04.3(5) SHAPING AND COMPACTION.
3. RUNOFF TREATMENT LAYER SHALL MEET THE REQUIREMENTS IN THE 2017 CITY OF EDMONDS STORMWATER ADDENDUM.
4. PREPARE AND PROTECT SUBGRADE PER APWA GSP 2-06.3(3) SUBGRADE FOR PERMEABLE PAVEMENTS.



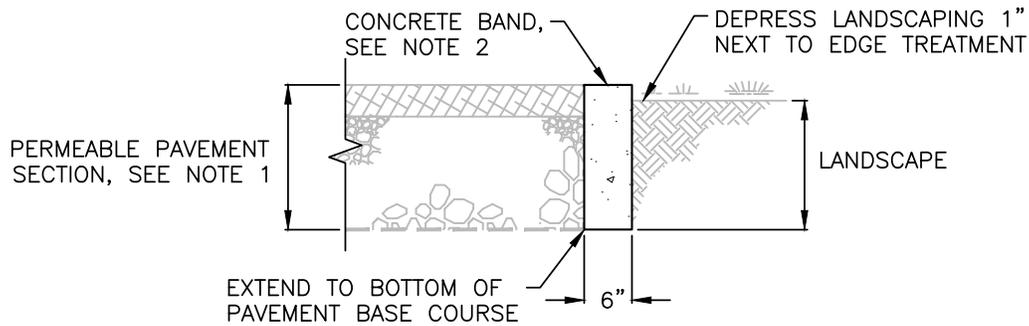
CITY OF EDMONDS
PUBLIC WORKS
DEPARTMENT

TYPICAL PERMEABLE GRASS PAVER SYSTEM

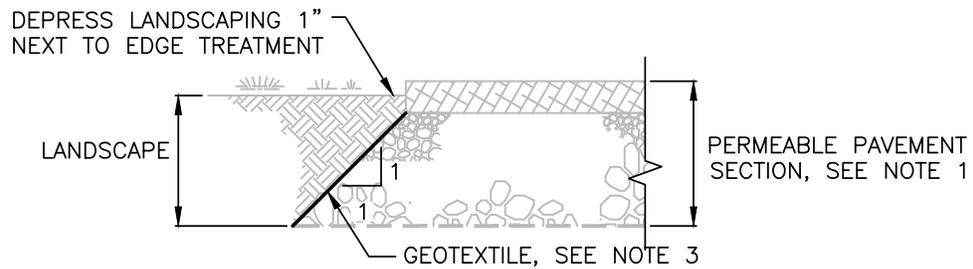
APPROVED BY: R. ENGLISH

REVISION DATE
DECEMBER 2017

STANDARD
DETAIL
SD-624



CONCRETE BAND AT LANDSCAPE



PERMEABLE SIDEWALK AT LANDSCAPE

NOTES:

1. SEE STD DETAIL SD-621 THROUGH SD-624 FOR PERMEABLE PAVEMENT SECTION.
2. CONCRETE SHALL BE CLASS 3-3000 PSI. CONCRETE REINFORCEMENT AND EXPANSION JOINT PLACEMENT TO BE SPECIFIED BY ENGINEER.
3. GEOTEXTILE SHALL CONFORM TO WSDOT SPEC. 9-33.2(1), GEOTEXTILE FOR SEPARATION, NON-WOVEN TYPE.



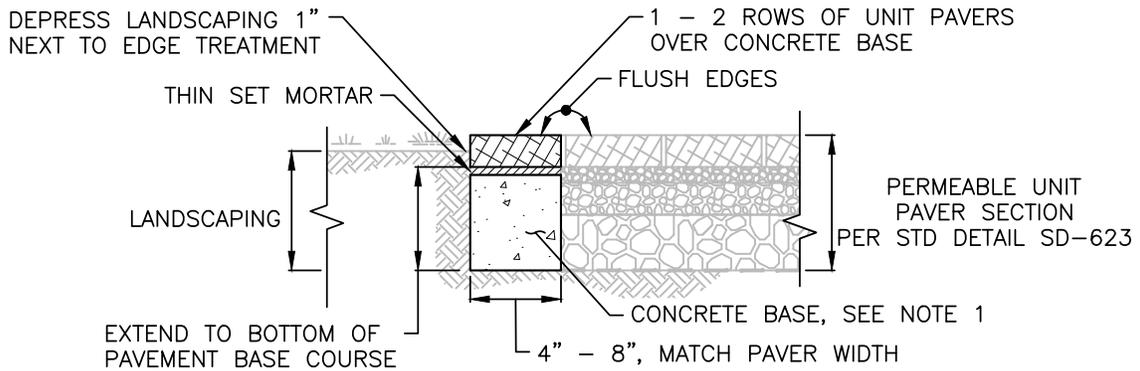
CITY OF EDMONDS
PUBLIC WORKS
DEPARTMENT

**EDGE TREATMENTS
AT LANDSCAPE INTERFACE**

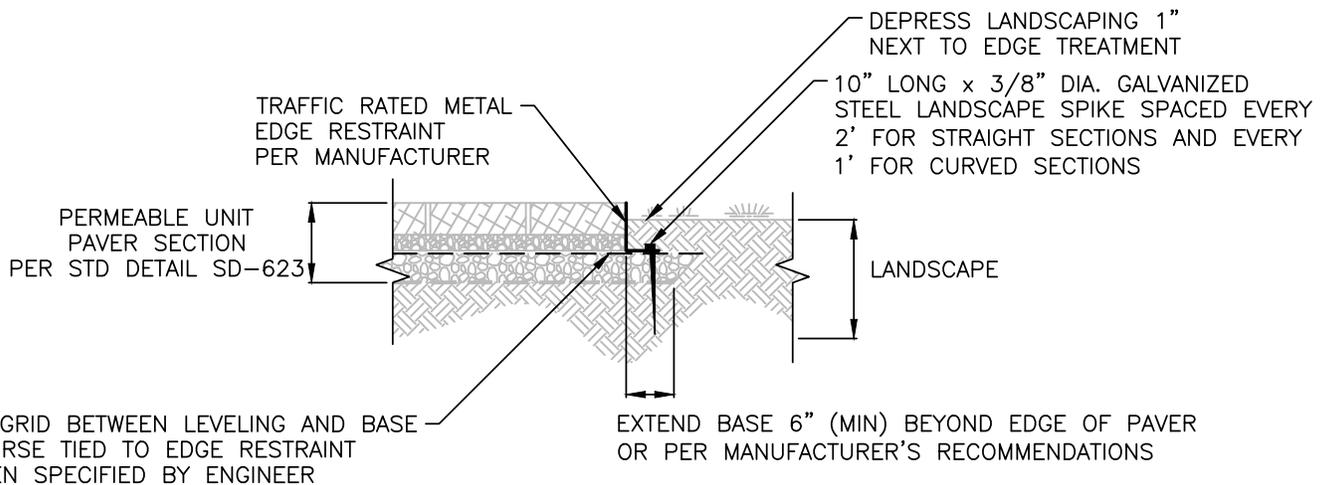
APPROVED BY: R. ENGLISH

REVISION DATE
DECEMBER 2017

STANDARD
DETAIL
SD-625



MORTARED PAVER AT LANDSCAPING



METAL PAVER EDGE AT LANDSCAPING
(FOR PRIVATE PROPERTY ONLY)

NOTES:

1. CONCRETE SHALL BE CLASS 3-3000 PSI. CONCRETE REINFORCEMENT AND EXPANSION JOINT PLACEMENT TO BE SPECIFIED BY ENGINEER.



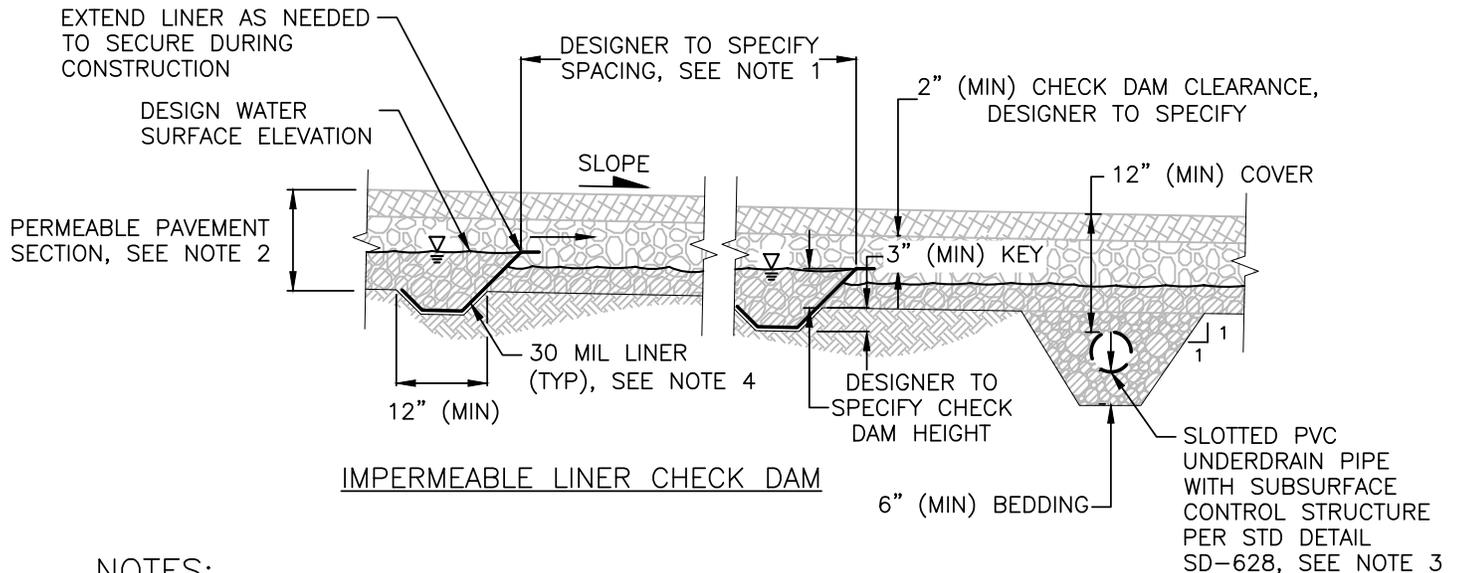
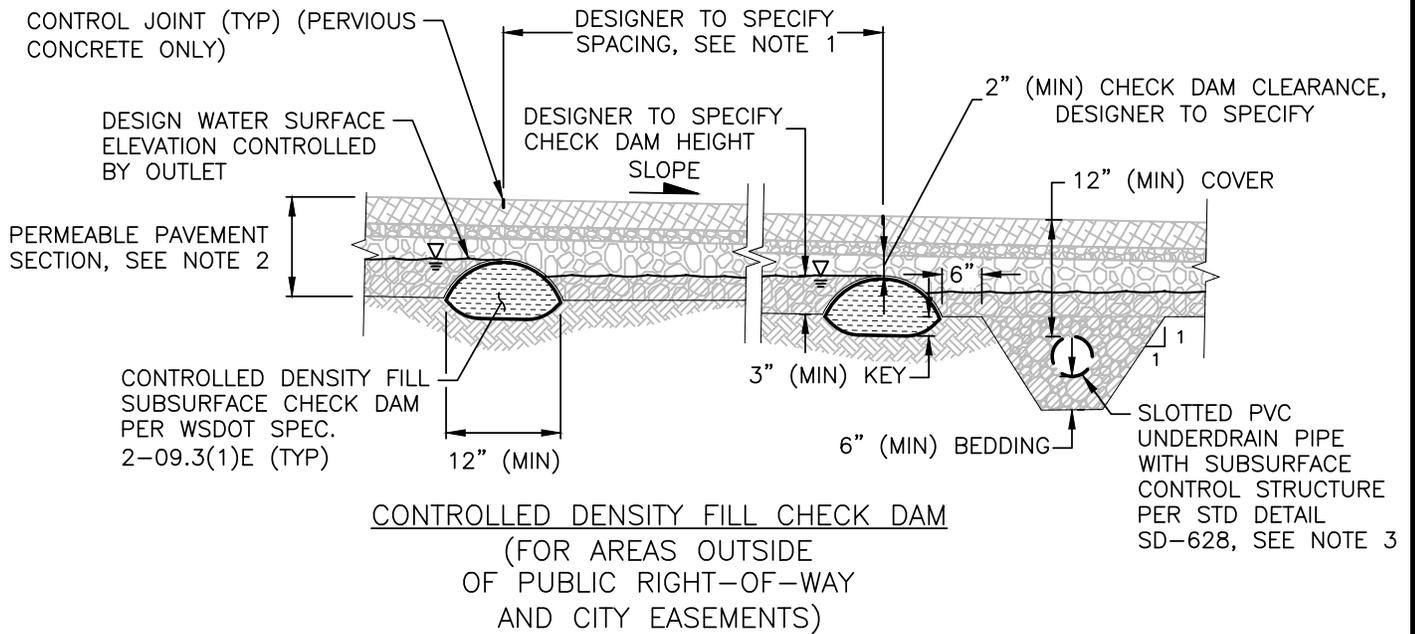
CITY OF EDMONDS
PUBLIC WORKS
DEPARTMENT

**EDGE TREATMENTS
AT PAVER INTERFACE**

APPROVED BY: R. ENGLISH

REVISION DATE
DECEMBER 2017

STANDARD
DETAIL
SD-626



NOTES:

1. DESIGNER SHALL DETERMINE AND SPECIFY SUBSURFACE CHECK DAM SPACING BASED ON THE SUBGRADE SLOPE AND DESIGN AVERAGE STORAGE DEPTH REQUIRED. TYPICAL MAXIMUM SPACING CAN BE ESTIMATED BY DIVIDING THE CHECK DAM HEIGHT BY THE SUBSURFACE SLOPE.
2. SEE STD DETAIL SD-621 THROUGH SD-624 FOR PERMEABLE PAVEMENT SECTION.
3. IF REQUIRED, UNDERDRAIN PIPE SHALL BE 6" MINIMUM DIAMETER (PRIVATE), 8" MINIMUM DIAMETER (PUBLIC). SLOPE PIPE AT 0.5% MIN UNLESS OTHERWISE SPECIFIED. PROVIDE ONE CLEANOUT (MIN) PER 100 FEET OF UNDERDRAIN, AND AT EACH END. LOCATE UNDERDRAIN BELOW STRUCTURAL PAVEMENT BASE DEPTH.
4. LINER SHALL BE HDPE CONFORMING TO GEOSYNTHETIC RESEARCH INSTITUTE (GRI) GM13 OR LLDPE CONFORMING TO GRI GM17.



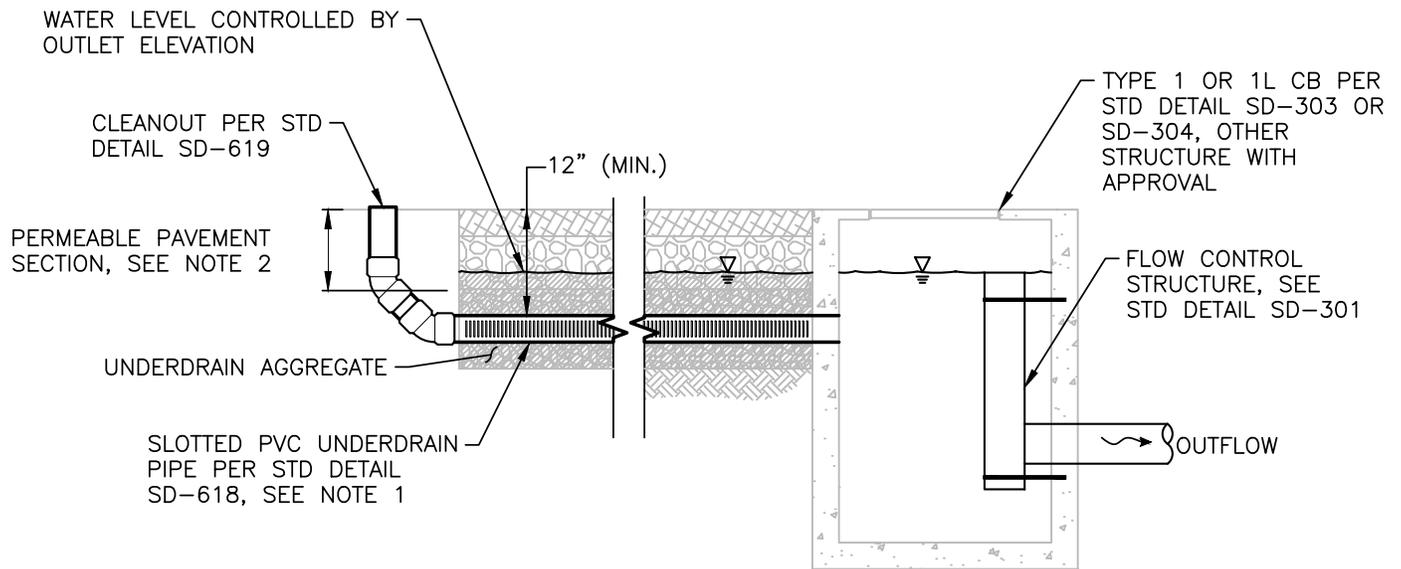
CITY OF EDMONDS
PUBLIC WORKS
DEPARTMENT

**PERMEABLE PAVEMENT
SUBSURFACE
CHECK DAMS**

APPROVED BY: R. ENGLISH

REVISION DATE
DECEMBER 2017

STANDARD
DETAIL
SD-627



SUBSURFACE OVERFLOW CONTROL STRUCTURE

NOTES:

1. UNDERDRAIN PIPE SHALL BE 6" MINIMUM DIAMETER (PRIVATE), 8" DIAMETER MINIMUM (PUBLIC). SLOPE PIPE AT 0.5% MIN UNLESS OTHERWISE SPECIFIED. PROVIDE ONE CLEANOUT (MIN) PER 100 FEET OF UNDERDRAIN, AND AT EACH END.
2. SEE STD DETAIL SD-621 THROUGH SD-624 FOR PERMEABLE PAVEMENT SECTION.



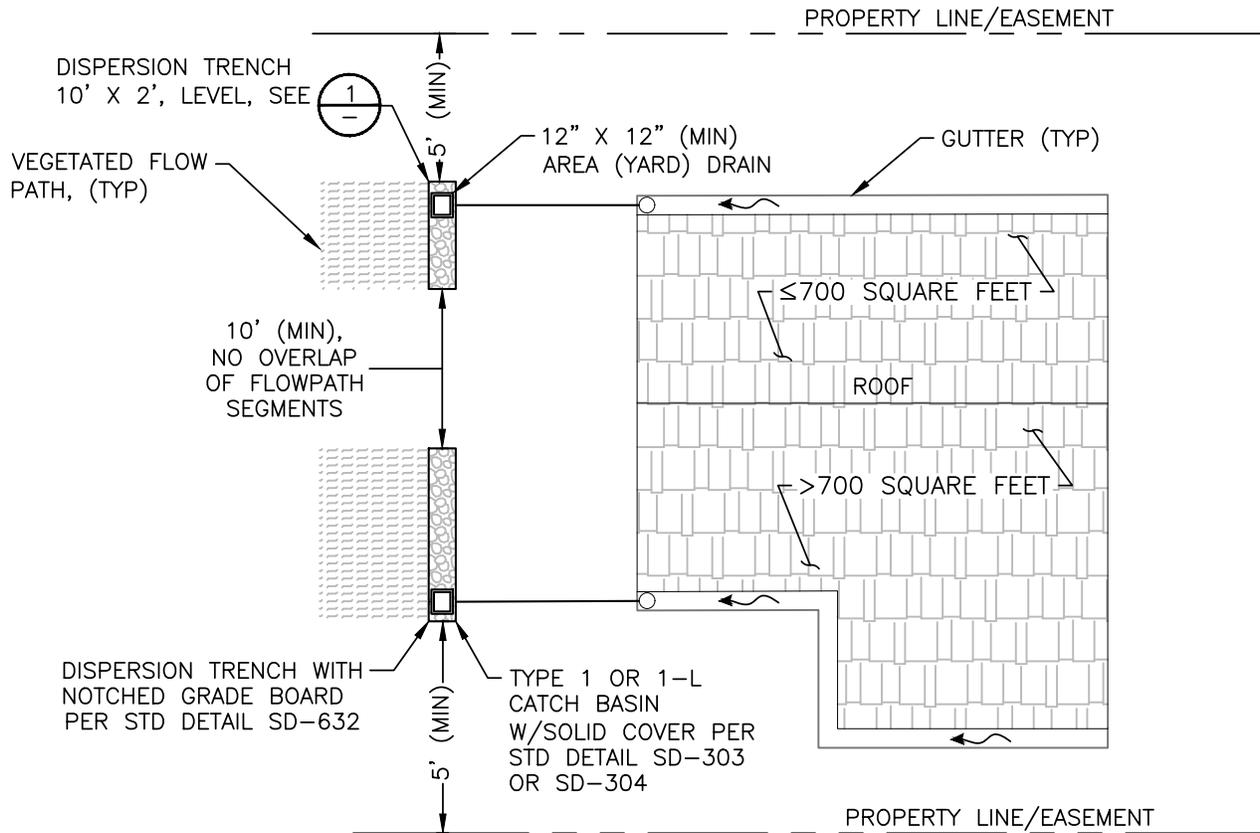
CITY OF EDMONDS
PUBLIC WORKS
DEPARTMENT

**PERMEABLE PAVEMENT
UNDERDRAIN WITH
CONTROL STRUCTURE**

APPROVED BY: R. ENGLISH

REVISION DATE
DECEMBER 2017

STANDARD
DETAIL
SD-628



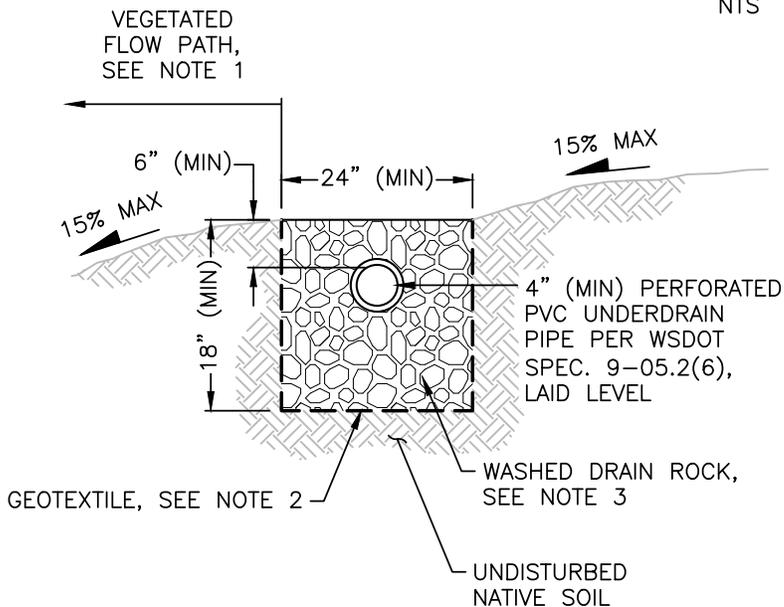
PLAN
NTS

GENERAL NOTES:

1. REFER TO THE 2017 CITY OF EDMONDS STORMWATER ADDENDUM FOR SETBACK AND INFEASIBILITY REQUIREMENTS.

NOTES:

1. A VEGETATED FLOW PATH MUST BE PROVIDED IN ACCORDANCE THE 2017 CITY OF EDMONDS STORMWATER ADDENDUM REQUIREMENTS.
2. GEOTEXTILE SHALL CONFORM TO WSDOT SPEC. 9-33.2(1), GEOTEXTILE FOR SEPARATION, NON-WOVEN TYPE.
3. WASHED DRAIN ROCK SHALL CONFORM TO WSDOT SPEC. 9-03.12(5), GRAVEL BACKFILL FOR DRYWELLS.



*FOR CONTRIBUTING ROOF AREAS LESS THAN OR EQUAL TO 700 SQUARE FEET

DISPERSION TRENCH
NTS



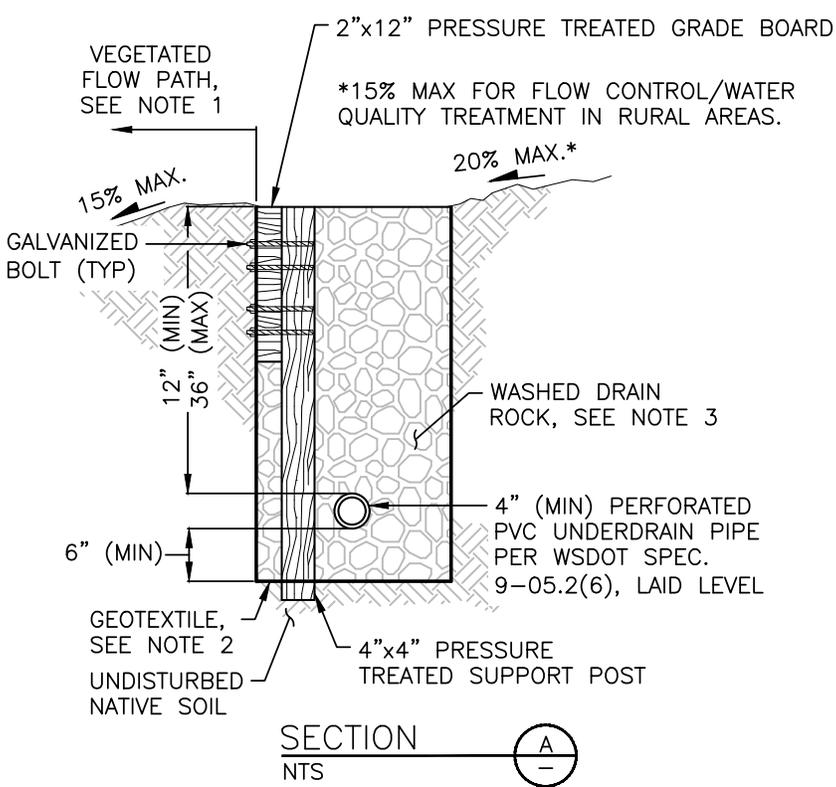
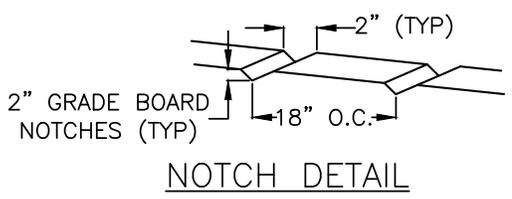
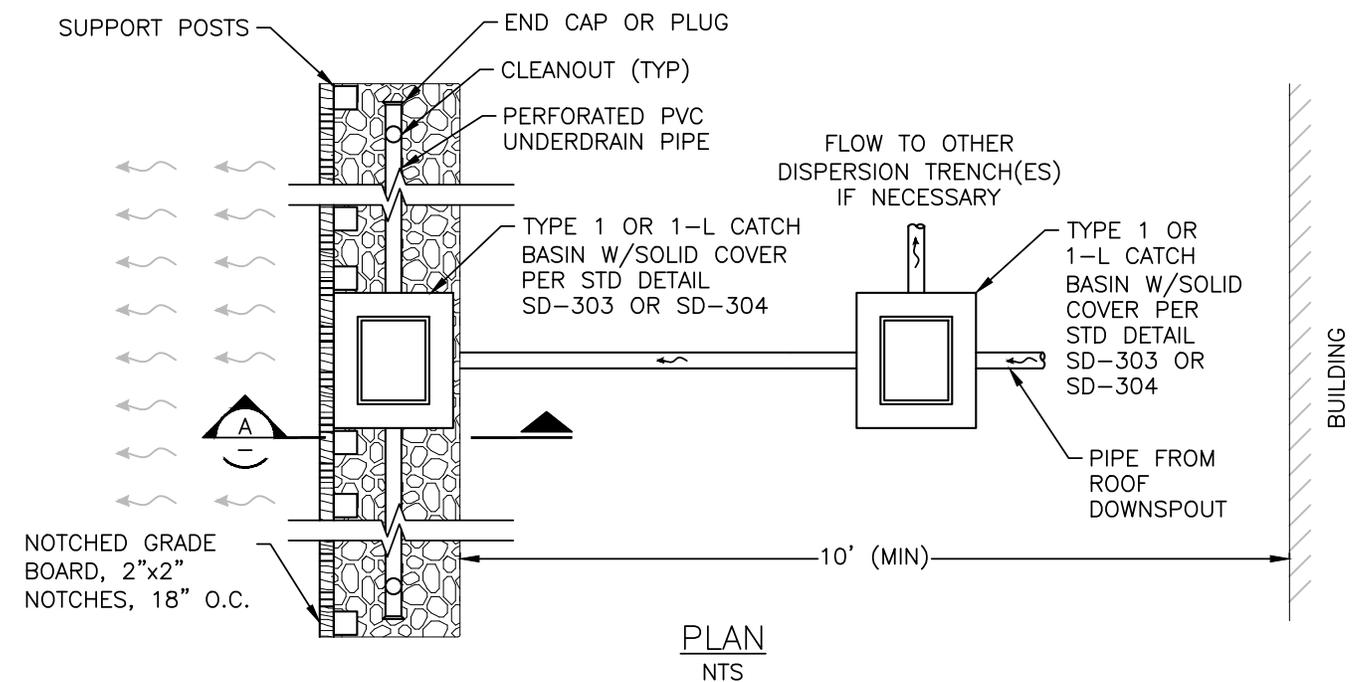
CITY OF EDMONDS
PUBLIC WORKS
DEPARTMENT

TYPICAL DOWNSPOUT
DISPERSION

APPROVED BY: R. ENGLISH

REVISION DATE
DECEMBER 2017

STANDARD
DETAIL
SD-631

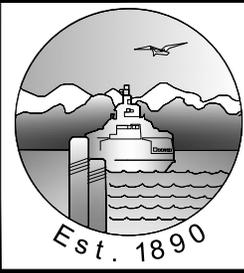


GENERAL NOTES:

1. REFER TO THE 2017 CITY OF EDMONDS STORMWATER ADDENDUM FOR SETBACK AND INFEAIBILITY REQUIREMENTS.

NOTES:

1. A VEGETATED FLOW PATH MUST BE PROVIDED IN ACCORDANCE THE 2017 CITY OF EDMONDS STORMWATER ADDENDUM REQUIREMENTS.
2. GEOTEXTILE SHALL CONFORM TO WSDOT SPEC. 9-33.2(1), GEOTEXTILE FOR SEPARATION, NON-WOVEN TYPE.
3. WASHED DRAIN ROCK SHALL CONFORM TO WSDOT SPEC. 9-03.12(5), GRAVEL BACKFILL FOR DRYWELLS.



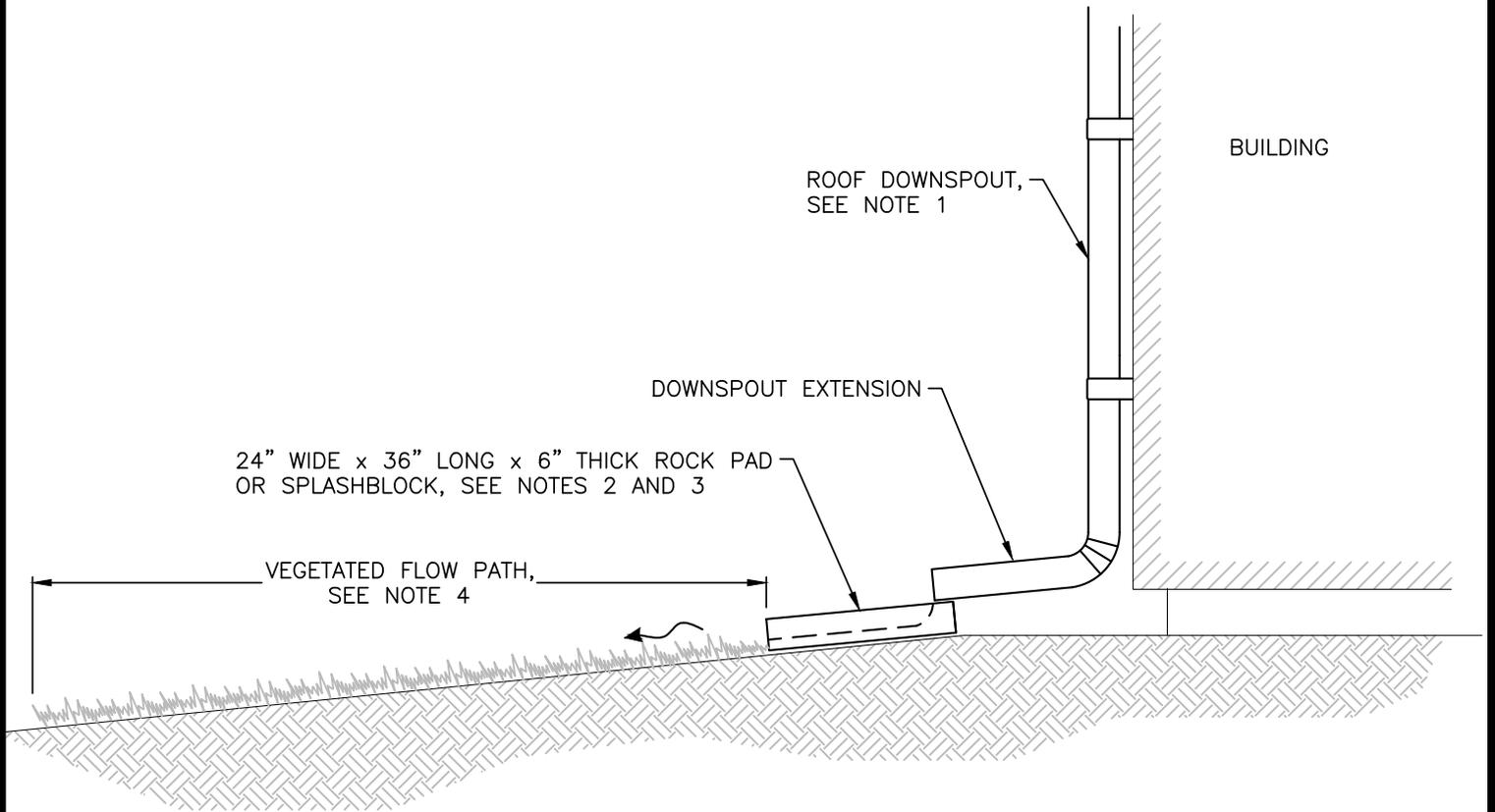
CITY OF EDMONDS
PUBLIC WORKS
DEPARTMENT

**TYPICAL DISPERSION
TRENCH WITH NOTCHED
GRADE BOARD**

APPROVED BY: R. ENGLISH

REVISION DATE
DECEMBER 2017

STANDARD
DETAIL
SD-632



GENERAL NOTES:

1. REFER TO THE 2017 CITY OF EDMONDS STORMWATER ADDENDUM FOR SETBACK AND INFESIBILITY REQUIREMENTS.

NOTES:

1. MAXIMUM OF 700 SQUARE FEET OF ROOF AREA MAY DRAIN TO EACH SPLASHBLOCK.
2. SPLASHBLOCK MAY BE CONCRETE, PLASTIC, OR SIMILAR RIGID MATERIAL.
3. ROCK PAD SHALL CONSIST OF 4" STREAMBED COBBLES PER WSDOT SPEC. 9-03.11(2) OR WASHED DRAIN ROCK CONFORMING TO WSDOT SPEC. 9-03.12(5), GRAVEL BACKFILL FOR DRYWELLS.
4. A VEGETATED FLOW PATH MUST BE PROVIDED IN ACCORDANCE THE 2017 CITY OF EDMONDS STORMWATER ADDENDUM REQUIREMENTS.



CITY OF EDMONDS
PUBLIC WORKS
DEPARTMENT

**TYPICAL DOWNSPOUT
DISPERSION SPLASHBLOCK**

APPROVED BY: R. ENGLISH

REVISION DATE
DECEMBER 2017

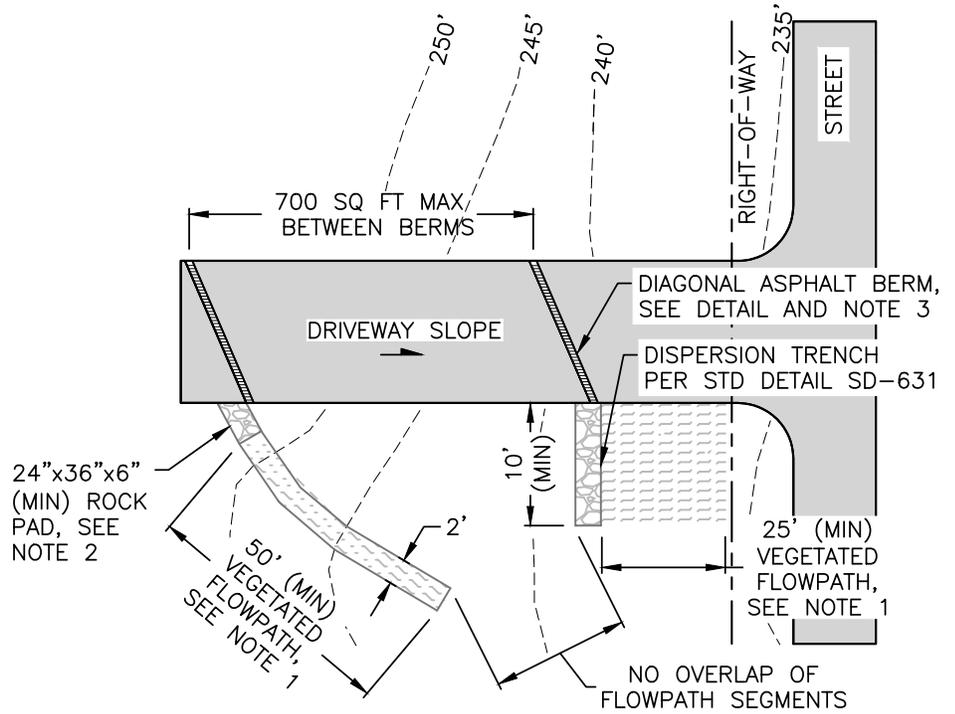
STANDARD
DETAIL
SD-633

GENERAL NOTES:

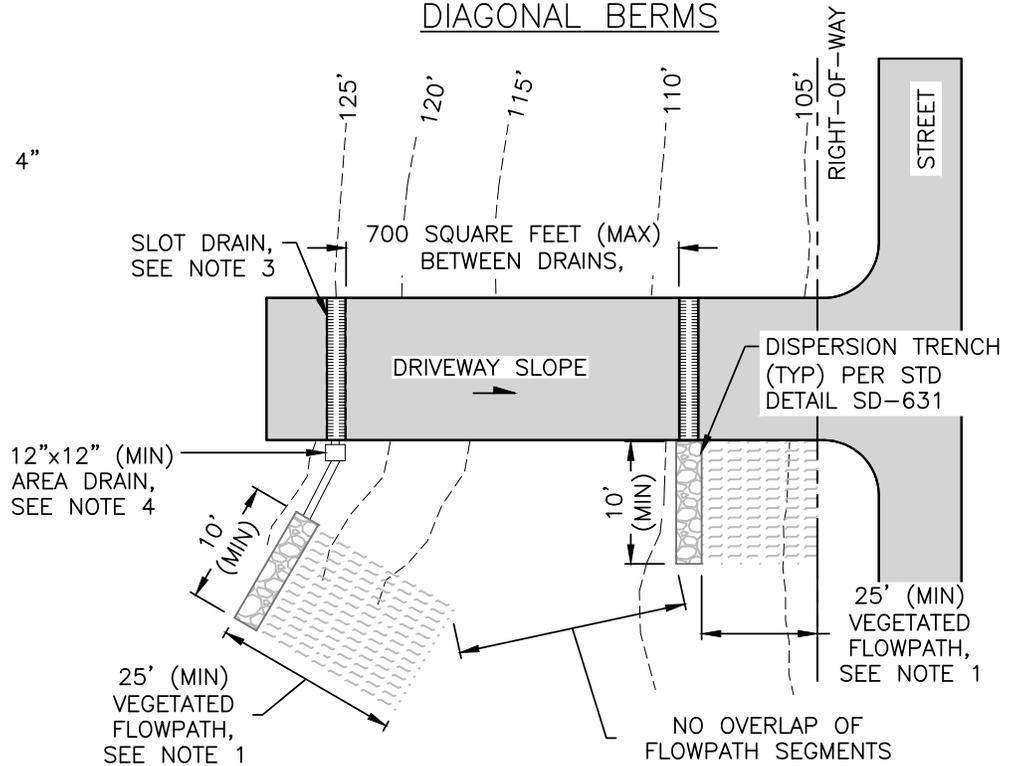
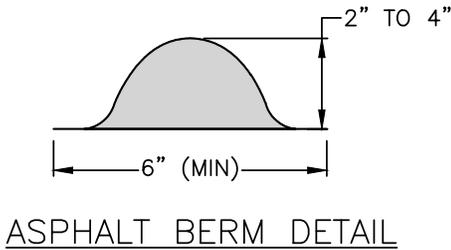
1. REFER TO THE 2017 CITY OF EDMONDS STORMWATER ADDENDUM FOR SETBACK AND INFEASIBILITY REQUIREMENTS.

NOTES:

1. A VEGETATED FLOW PATH MUST BE PROVIDED IN ACCORDANCE WITH THE 2017 CITY OF EDMONDS STORMWATER ADDENDUM REQUIREMENTS.
2. MATERIAL FOR ROCK PAD SHALL BE WASHED DRAIN ROCK CONFORMING TO WSDOT SPEC. 9-03.12(5), GRAVEL BACKFILL FOR DRYWELLS.
3. SLOT DRAINS OR ASPHALT BERMS MAY BE USED TO DIRECT RUNOFF TO ROCK PADS OR DISPERSION TRENCHES IN VARIOUS CONFIGURATIONS. LAYOUTS SHOWN ARE ONLY EXAMPLES.
4. CONVEYANCE PIPE SHALL BE 4-INCH (MIN) DIAMETER, PVC DRAIN PIPE PER WSDOT SPEC. 9-05.1(5), POSITIVE SLOPE.



PLAN - DRIVEWAY WITH DIAGONAL BERMS



PLAN - DRIVEWAY WITH SLOTTED DRAINS



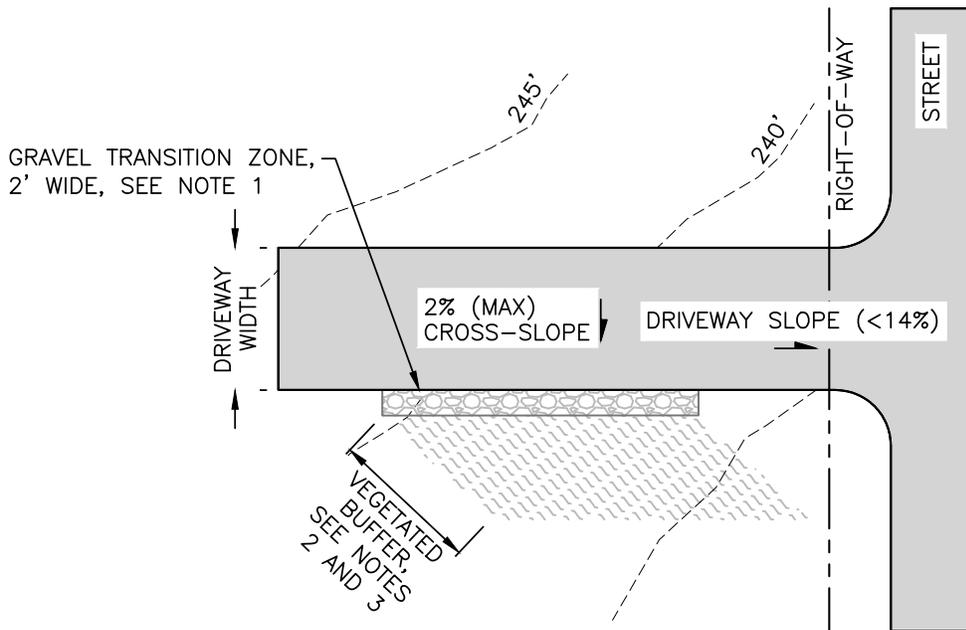
CITY OF EDMONDS
PUBLIC WORKS
DEPARTMENT

TYPICAL CONCENTRATED FLOW DISPERSION

APPROVED BY: R. ENGLISH

REVISION DATE
DECEMBER 2017

STANDARD
DETAIL
SD-634



PLAN – FLAT TO MODERATELY SLOPED (<14%) DRIVEWAY

GENERAL NOTES:

1. REFER TO THE 2017 CITY OF EDMONDS STORMWATER ADDENDUM FOR SETBACK AND INFESIBILITY REQUIREMENTS.
2. SEE EDMONDS CITY CODE AND COMMUNITY DEVELOPMENT CODE SECTION 18.80.070 FOR DRIVEWAY DESIGN REQUIREMENTS.
3. SHEET FLOW DISPERSION MAY BE USED FOR OTHER SURFACES, INCLUDING BUT NOT LIMITED TO, PATIOS, SPORT COURTS, LAWNS, PASTURES, OR OTHER SURFACES WHERE FLOWS ARE NOT CONCENTRATED.

NOTES:

1. TRANSITION ZONE SHALL BE A 2 FOOT WIDE BY 6 INCH THICK GRAVEL TRENCH CONFORMING TO REQUIREMENTS OF WSDOT SPEC. 9-03.12(5), GRAVEL BACKFILL FOR DRYWELLS.
2. A VEGETATED BUFFER MUST BE PROVIDED IN ACCORDANCE THE 2017 CITY OF EDMONDS STORMWATER ADDENDUM REQUIREMENTS.
3. WIDTH OF VEGETATED BUFFER SHALL BE 10 FEET (MIN) FOR DRIVEWAY WIDTH UP TO 20 FEET AND 20' (MIN) FOR DRIVEWAY WIDTH UP TO 40' OF IMPERVIOUS SURFACE. VEGETATED BUFFER SHALL BE MEASURED PERPENDICULAR TO SITE CONTOURS.



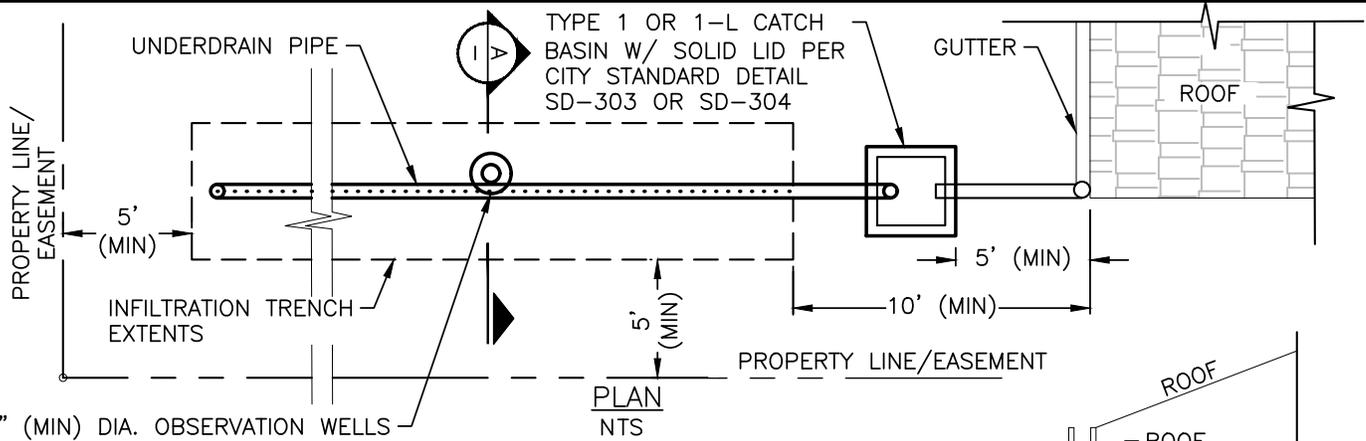
CITY OF EDMONDS
PUBLIC WORKS
DEPARTMENT

**TYPICAL SHEET
FLOW DISPERSION**

APPROVED BY: R. ENGLISH

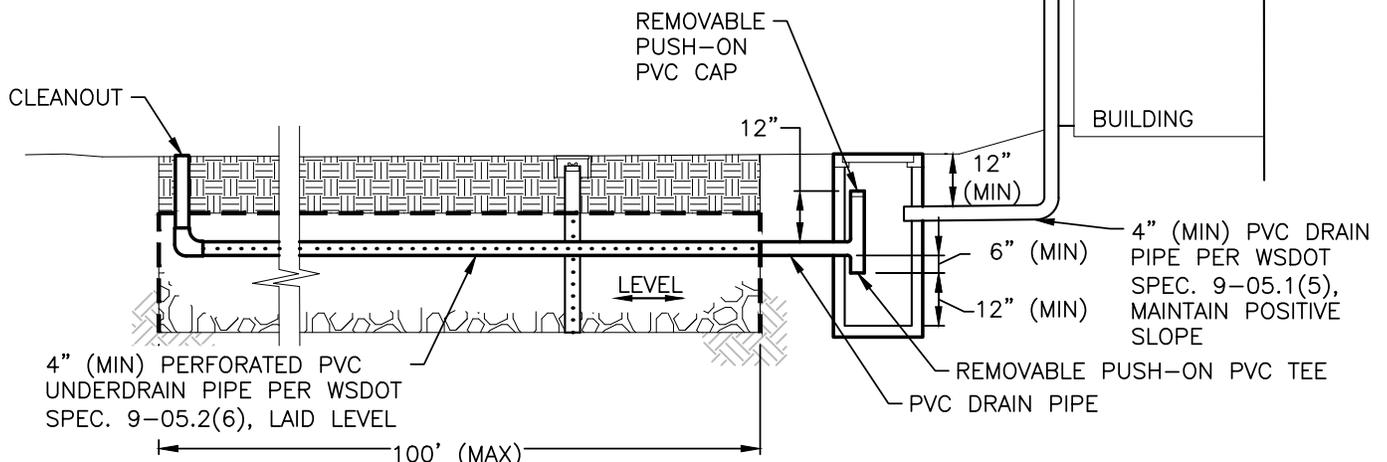
REVISION DATE
DECEMBER 2017

STANDARD
DETAIL
SD-635



4" (MIN) DIA. OBSERVATION WELLS
SPACED 25' APART (MAX), 1
WELL (MIN) PER TRENCH

PLAN
NTS



4" (MIN) PERFORATED PVC
UNDERDRAIN PIPE PER WSDOT
SPEC. 9-05.2(6), LAID LEVEL

4" (MIN) PVC DRAIN
PIPE PER WSDOT
SPEC. 9-05.1(5),
MAINTAIN POSITIVE
SLOPE

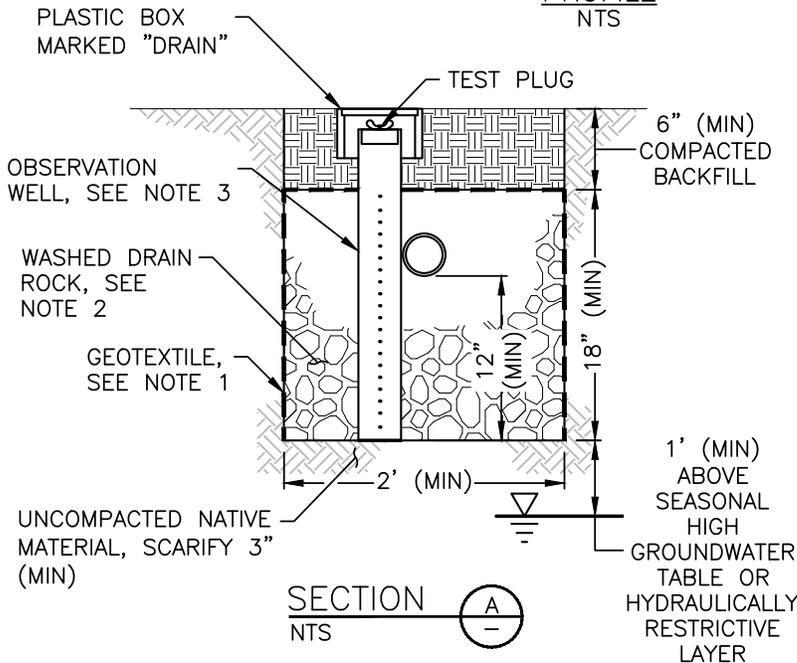
PROFILE
NTS

GENERAL NOTES:

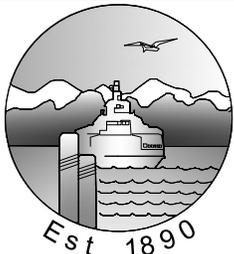
1. REFER TO THE 2017 CITY OF EDMONDS STORMWATER ADDENDUM FOR SETBACK (CHECKLIST 13) AND INFEASIBILITY REQUIREMENTS.
2. MIN COVER DEPTHS ASSUME NO VEHICULAR LOADING. DESIGNER TO SPECIFY COVER DEPTHS IF VEHICULAR TRAFFIC ANTICIPATED.

NOTES:

1. PLACE GEOTEXTILE FABRIC ALONG WALLS AND TOP OF WASHED ROCK. GEOTEXTILE SHALL CONFORM TO WSDOT SPEC. 9-33.2(1), GEOTEXTILE FOR SEPARATION, NON-WOVEN TYPE.
2. WASHED DRAIN ROCK SHALL CONFORM TO WSDOT SPEC. 9-03.12(5), GRAVEL BACKFILL FOR DRYWELLS.
3. OBSERVATION WELL SHALL CONFORM TO WSDOT SPEC. 9-05.2(6), PERFORATED PVC UNDERDRAIN PIPE.



SECTION
NTS



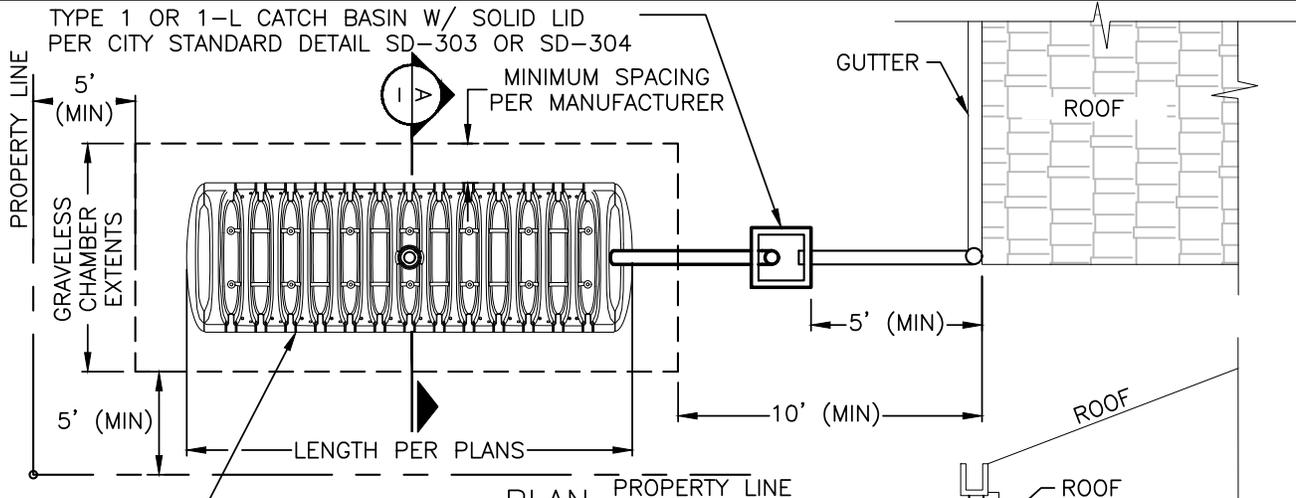
CITY OF EDMONDS
PUBLIC WORKS
DEPARTMENT

**TYPICAL DOWNSPOUT
INFILTRATION TRENCH**

APPROVED BY: R. ENGLISH

REVISION DATE
DECEMBER 2017

STANDARD
DETAIL
SD-636



TYPE 1 OR 1-L CATCH BASIN W/ SOLID LID
PER CITY STANDARD DETAIL SD-303 OR SD-304

MINIMUM SPACING
PER MANUFACTURER

PROPERTY LINE
5' (MIN)

GRAVELLESS
CHAMBER
EXTENTS

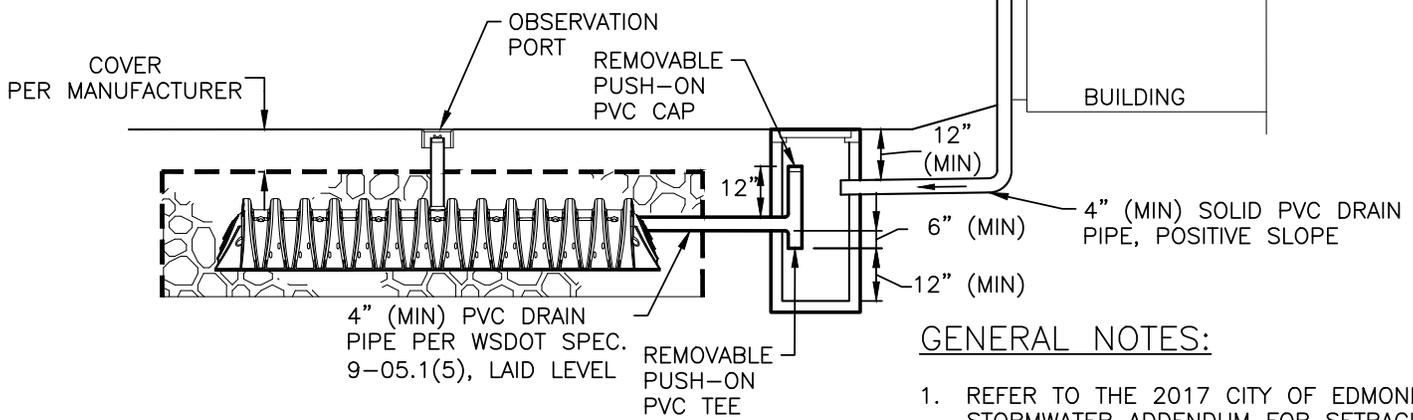
5' (MIN)

LENGTH PER PLANS

PROPERTY LINE

GRAVELLESS
CHAMBER,
SEE NOTE 1

PLAN
NTS



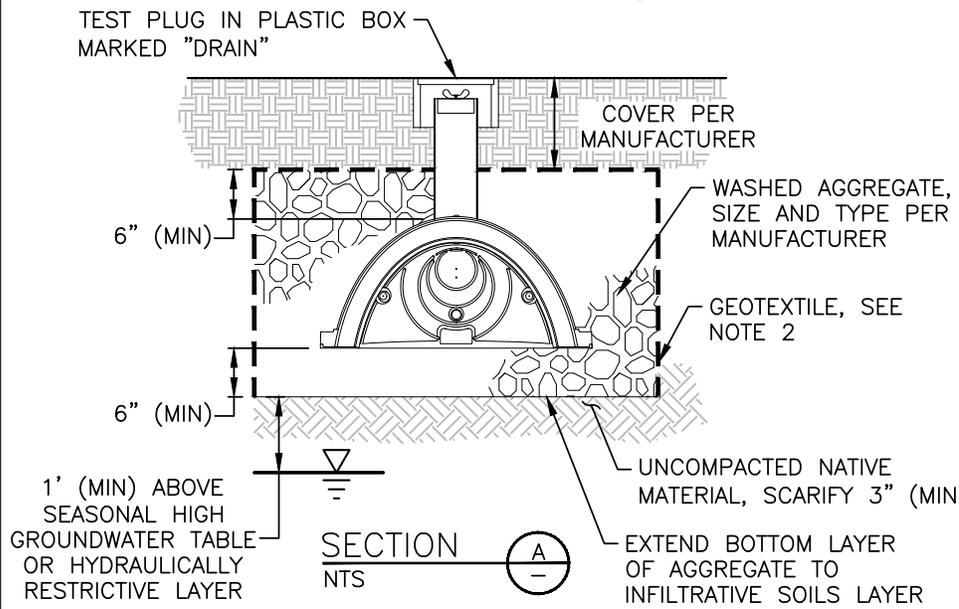
PROFILE
NTS

GENERAL NOTES:

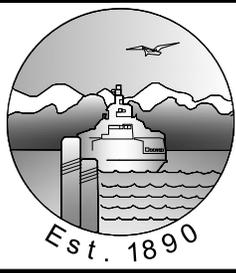
1. REFER TO THE 2017 CITY OF EDMONDS STORMWATER ADDENDUM FOR SETBACK (CHECKLIST 13) AND INFEASIBILITY REQUIREMENTS.
2. UNLESS OTHERWISE NOTED, ALL PVC PIPE SHALL BE SCH. 40 CONFORMING TO ASTM D1785 REQS.
3. MIN. COVER DEPTHS ASSUME NO VEHICULAR LOADING. DESIGNER TO SPECIFY COVER DEPTHS IF VEHICULAR TRAFFIC ANTICIPATED.

NOTES:

1. THE FOLLOWING PRODUCTS ARE KNOWN TO MEET THESE GRAVELLESS CHAMBER CRITERIA:
STORMTECH® SC-310 BY STORMTECH LLC. QUICK 4 HIGH CAPACITY CHAMBER BY INFILTRATOR SYSTEMS INC.
2. PLACE GEOTEXTILE FABRIC ALONG WALLS AND TOP OF WASHED ROCK. GEOTEXTILE SHALL CONFORM TO WSDOT SPEC. 9-33.2(1), GEOTEXTILE FOR SEPARATION, NON-WOVEN TYPE.



SECTION
NTS



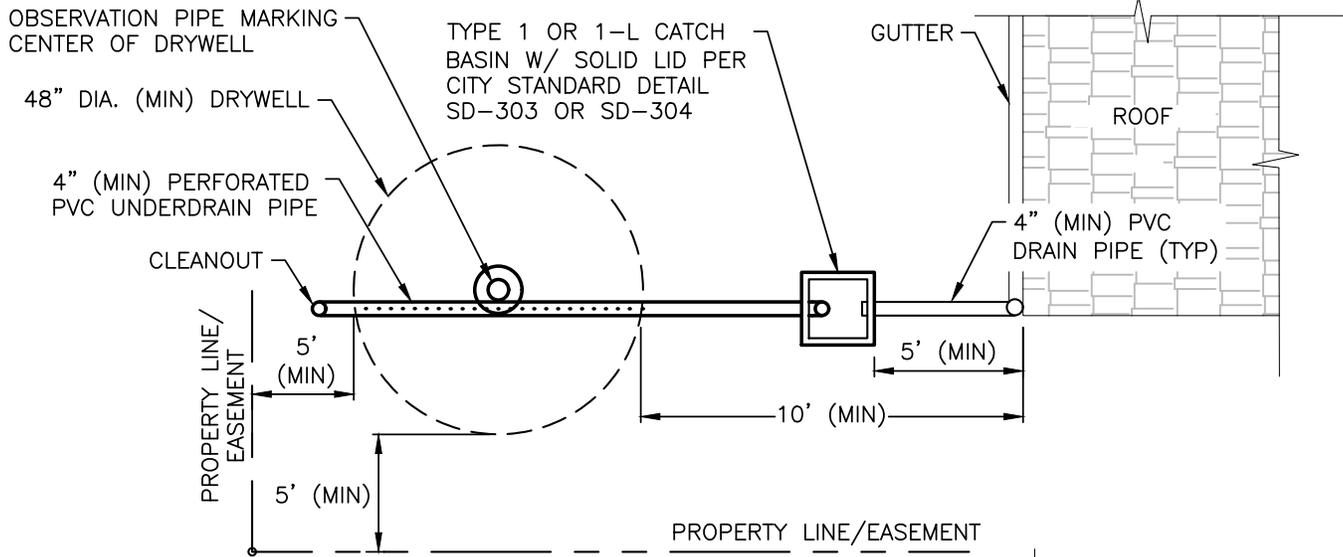
CITY OF EDMONDS
PUBLIC WORKS
DEPARTMENT

**TYPICAL ROOF DOWNSPOUT
GRAVELLESS CHAMBER**

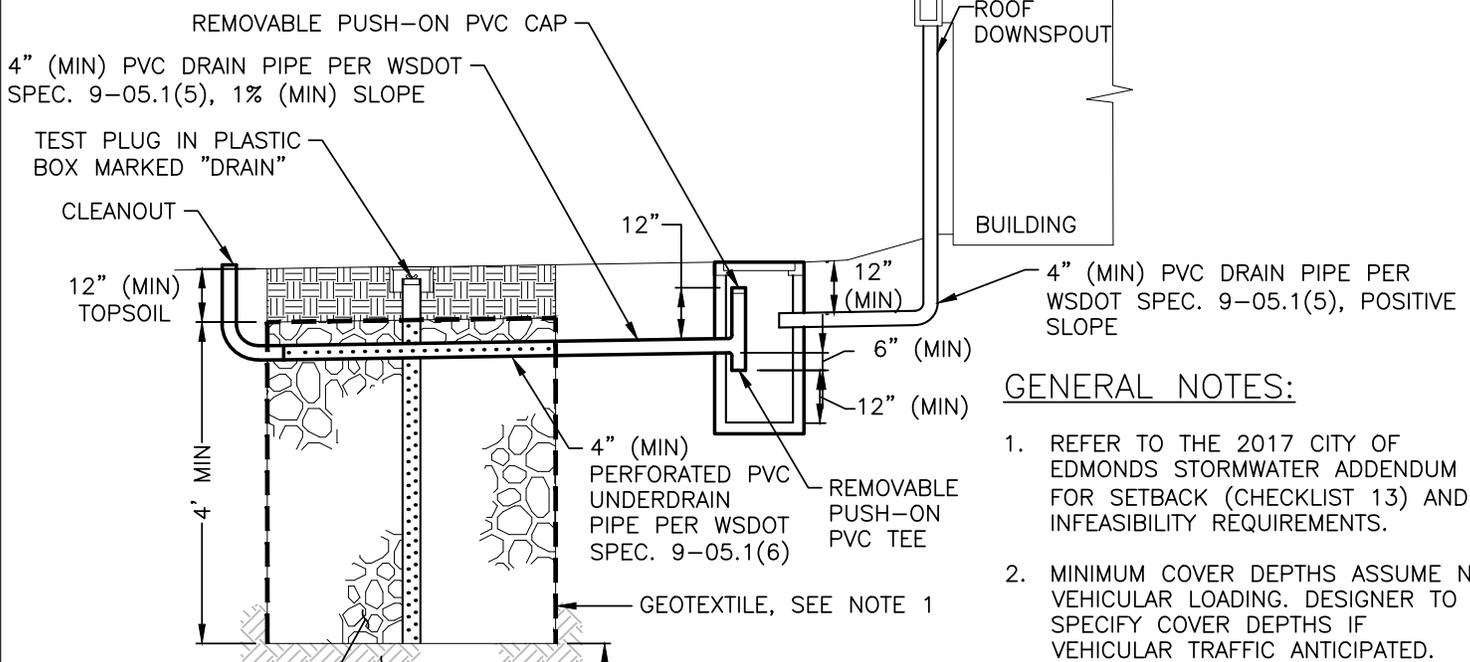
APPROVED BY: R. ENGLISH

REVISION DATE
DECEMBER 2017

STANDARD
DETAIL
SD-637



PLAN
NTS



GENERAL NOTES:

1. REFER TO THE 2017 CITY OF EDMONDS STORMWATER ADDENDUM FOR SETBACK (CHECKLIST 13) AND INFEASIBILITY REQUIREMENTS.
2. MINIMUM COVER DEPTHS ASSUME NO VEHICULAR LOADING. DESIGNER TO SPECIFY COVER DEPTHS IF VEHICULAR TRAFFIC ANTICIPATED.
3. PROVIDE 10 FEET (MIN) SPACING BETWEEN DRY WELLS.

NOTES:

1. PLACE GEOTEXTILE FABRIC ALONG WALLS AND TOP OF WASHED ROCK. GEOTEXTILE SHALL CONFORM TO WSDOT SPEC. 9-33.2(1), GEOTEXTILE FOR SEPARATION, NON-WOVEN TYPE.
2. WASHED DRAIN ROCK SHALL CONFORM TO WSDOT SPEC. 9-03.12(5), GRAVEL BACKFILL FOR DRYWELLS.
3. OBSERVATION WELL SHALL CONFORM TO WSDOT SPEC. 9-05.2(6), PERFORATED PVC UNDERDRAIN PIPE.

PROFILE
NTS



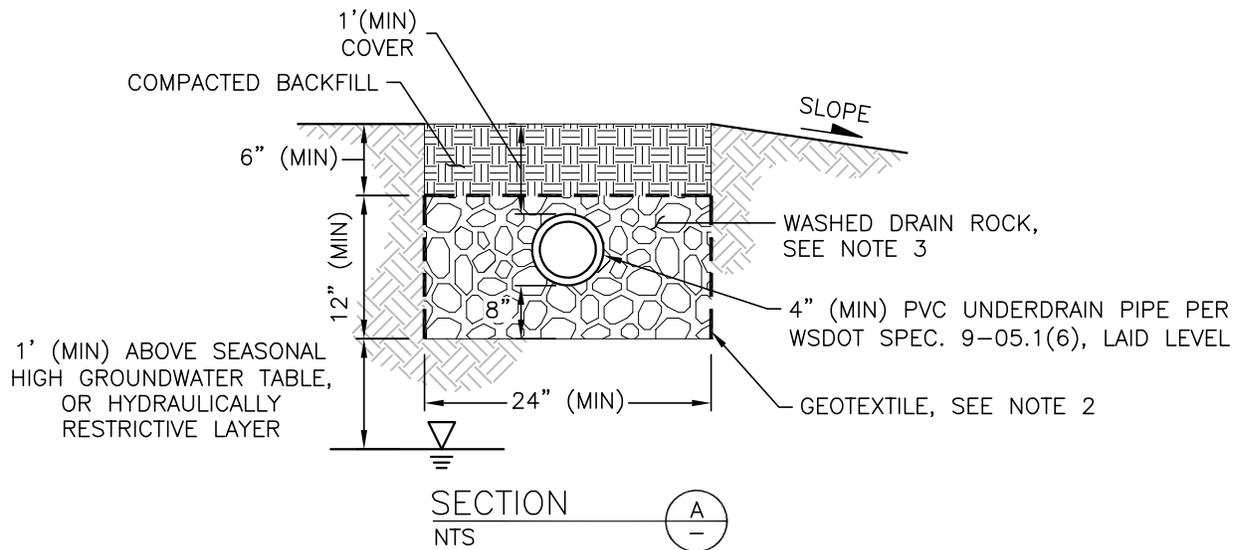
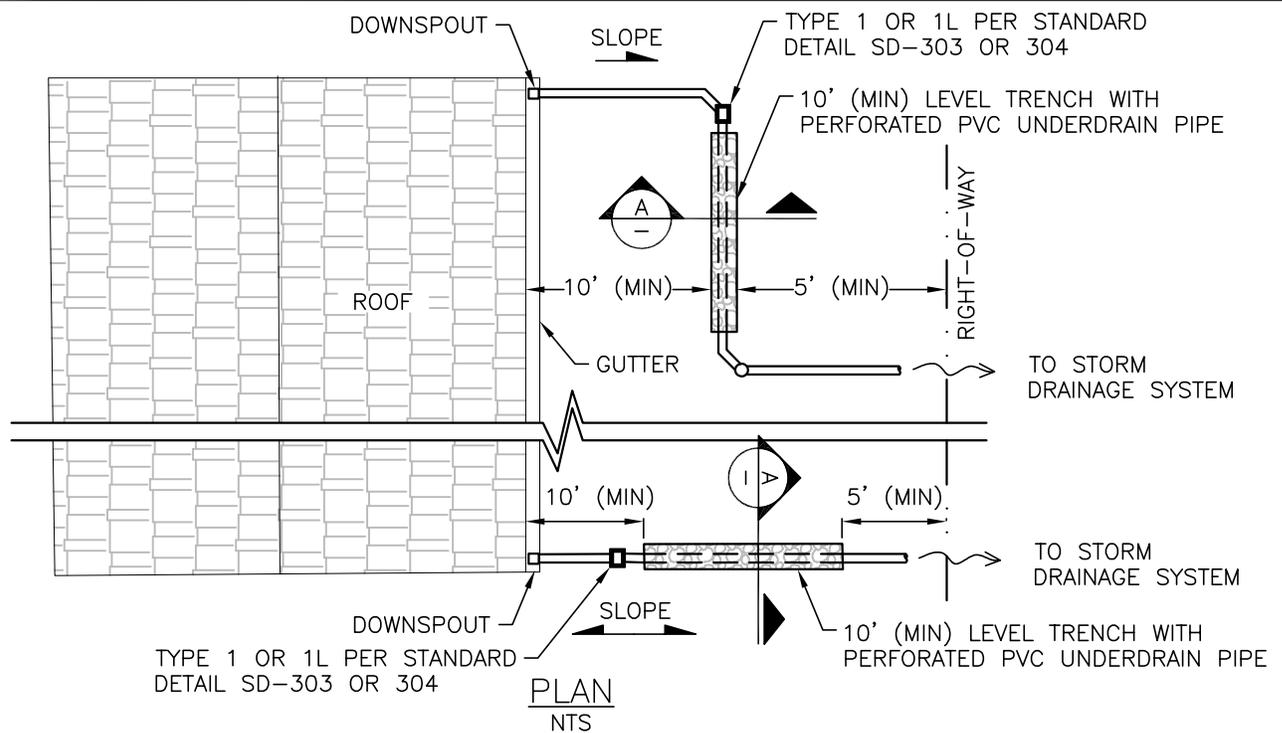
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**TYPICAL DOWNSPOUT
INFILTRATION DRYWELL**

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REVISION DATE
DECEMBER 2017

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GENERAL NOTES:

1. REFER TO THE 2017 CITY OF EDMONDS STORMWATER ADDENDUM FOR SETBACK (CHECKLIST 15) AND INFEASIBILITY REQUIREMENTS.
2. TRENCH LENGTH TO BE 10 FEET IN LENGTH FOR EVERY 5,000 SQUARE FEET OF CONTRIBUTING ROOF AREA.

NOTES:

1. CLEANOUTS RECOMMENDED AT PIPE BENDS.
2. GEOTEXTILE SHALL CONFORM TO WSDOT SPEC. 9-33.2(1), GEOTEXTILE FOR SEPARATION, NON-WOVEN TYPE.
3. WASHED DRAIN ROCK SHALL CONFORM TO WSDOT SPEC. 9-03.12(5), GRAVEL BACKFILL FOR DRYWELLS.



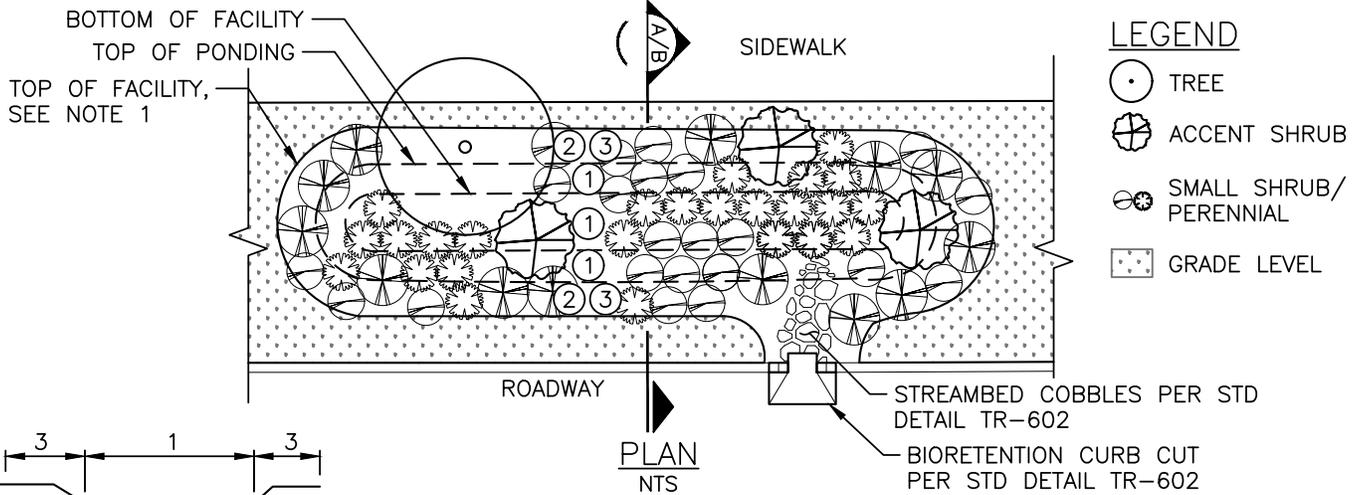
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**TYPICAL PERFORATED
STUB-OUT CONNECTION**

APPROVED BY: R. ENGLISH

REVISION DATE
NOVEMBER 2018

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SECTION – TYPICAL PLANTING ZONES

NTS



SECTION – WITH OCCASIONALLY SATURATED SOIL TRANSITION ZONE

NTS



TYPICAL PLANTING ZONES

ZONE	PLANTING HYDROLOGIC AND SOIL CONDITIONS
①	AREA OF FREQUENT TO REGULAR PONDING AND SOIL SATURATION DURING RAINY SEASON
②	AREA WITH RARE SHALLOW PONDING AND MOIST TO OCCASIONALLY SATURATED SOILS DURING RAINY SEASON
③	UPLAND AREA WITH DRIER SOILS, RECEIVING ON-SITE RAINFALL ONLY

GENERAL NOTES:

1. ALL PLANTINGS SHALL BE SELECTED TO MEET APPROPRIATE ENVIRONMENTAL AND SITE CONDITIONS. WHERE REQUIRED, SELECT PLANTS WITH A MAXIMUM MATURE HEIGHT NOT GREATER THAN 36 INCHES ABOVE THE TOP OF FACILITY TO PROVIDE VISUAL RELIEF.
2. PROVIDE A MINIMUM OF 50% EVERGREEN PLANTS. SEE THE 2012 LOW IMPACT DEVELOPMENT MANUAL AND THE 2013 RAIN GARDEN HANDBOOK FOR WESTERN WASHINGTON FOR PLANT SELECTION, SPACING, DENSITIES AND INSTALLATION REQUIREMENTS.
3. PROVIDE 3 INCHES ARBORIST WOOD CHIP MULCH FOR UPLAND AREAS AND 3 INCHES COARSE COMPOST AS A MULCH FOR AREAS THAT SEE PONDING. IN FACILITIES WITH AN UNDERDRAIN, WOOD CHIP MULCH MUST BE USED.
4. PLANTINGS ADJACENT TO STREET, DRIVEWAY OR SIDEWALK SHALL BE SELECTED AND SPACED TO ALLOW ACCESS TO FACILITY INFRASTRUCTURE (E.G. OVERFLOWS, CLEANOUTS) AND MINIMIZE THE NEED FOR FREQUENT AND CONTINUAL PRUNING AND MAINTENANCE.
5. PLANTS SHALL BE SPACED TO ENSURE CLEAR VISUAL AND MAINTENANCE ACCESS AND UNIMPEDED FLOW FROM INLETS, OUTLETS, AND OVERFLOWS.

NOTES:

1. WHEN FACILITY IS ADJACENT TO TURF, CONTINUE TO MULCH FOR A MINIMUM OF 2 FEET PAST THE TOP OF BANK ELEVATION OR INSTALL LANDSCAPE EDGING.



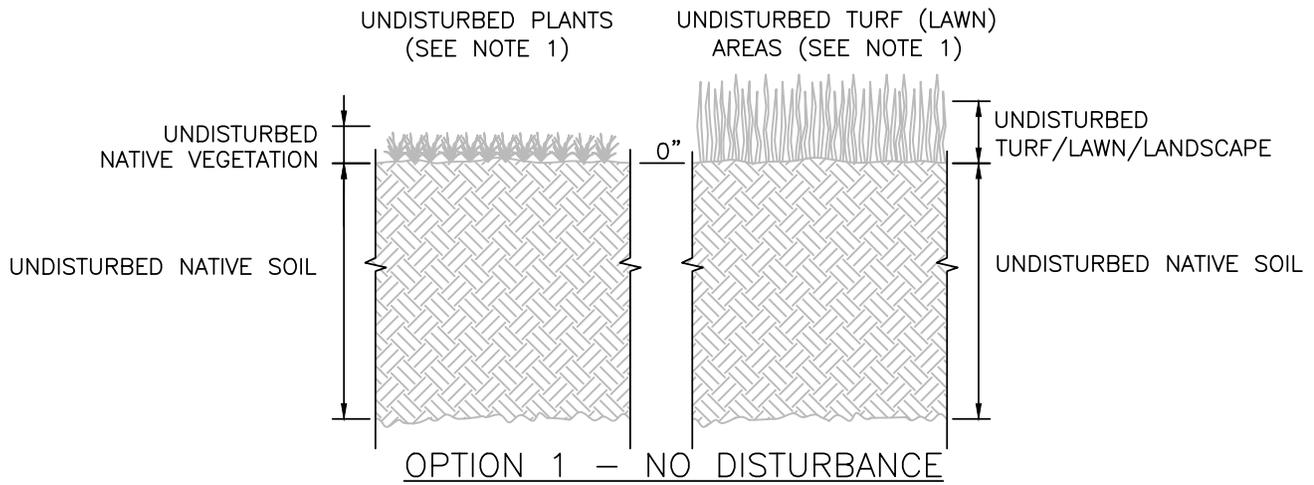
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BIORETENTION AND RAIN GARDEN PLANTING ZONES

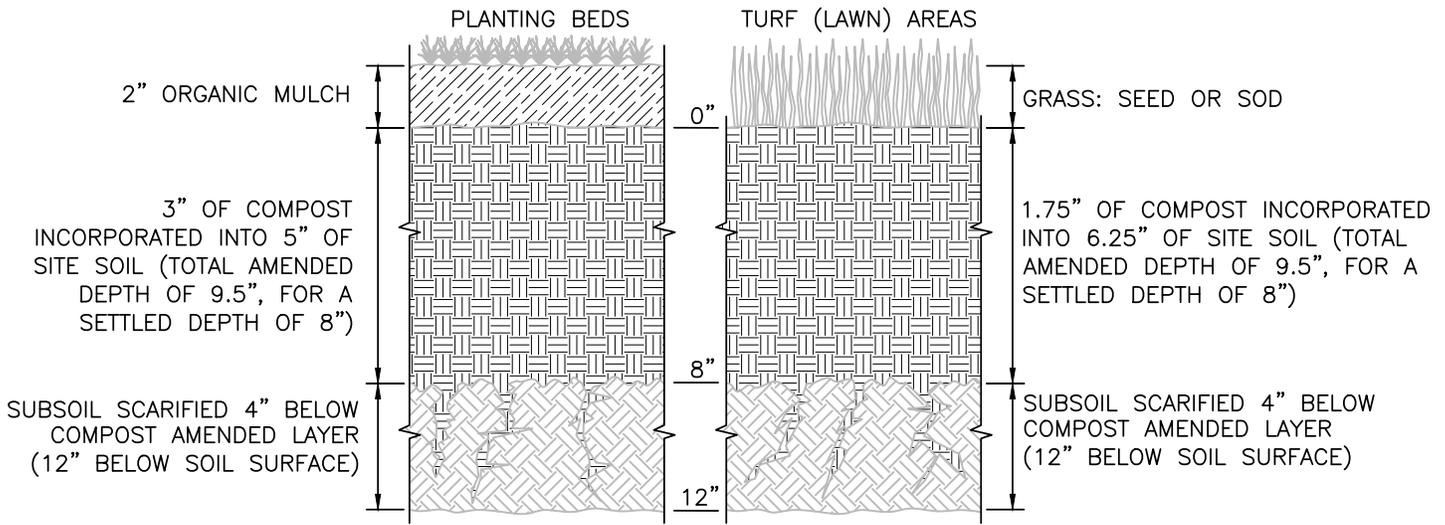
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DECEMBER 2017

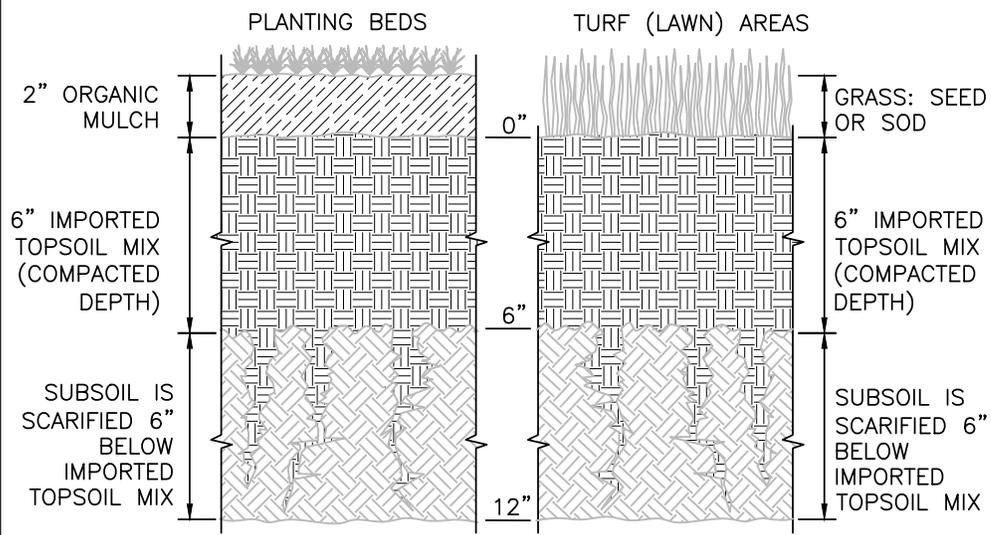
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OPTION 1 – NO DISTURBANCE



OPTION 2 – AMEND IN PLACE OR STOCKPILE AND AMEND



OPTION 3 – IMPORT TOPSOIL

GENERAL NOTES:

1. AREAS OF NO DISTURBANCE SHALL BE FENCED AND EXISTING VEGETATION AND SOIL SHALL BE PROTECTED FROM CONSTRUCTION IMPACTS.
2. TO MEASURE SETTLED DEPTH, WATER SOIL SUFFICIENTLY TO FULLY SATURATE WITHOUT CAUSING EROSION.
3. COMPOST SHALL MEET SPEC. REQUIREMENTS IN THE 2017 EDMONDS STORMWATER ADDENDUM (CHECKLIST 7).
4. COMPACTION OF TOPSOIL (WHERE REQUIRED) TO BE TO 85% (MAX) OF THE MAXIMUM DRY DENSITY PER MODIFIED PROCTOR TEST (ASTM D1557).



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**POST CONSTRUCTION SOIL
QUALITY AND DEPTH**

APPROVED BY:

REVISION DATE
DECEMBER 2017

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