FACILITY PLAN AND SECTION VIEWS:
SW-300: SLOPED BASIN - WITH PARKING
SW-301: PLANTER - NO PARKING
SW-302: PLANTER - WITH PARKING 2.5 FT STEP-OUT
SW-303: PLANTER - WITH PARKING 1 FT STEP-OUT
SW-304: CURB EXTENSION - NO PLANTING STRIP
SW-305: CURB EXTENSION - WITH PLANTING STRIP

RELATED DETAILS:
SW-310: NOTCHED FOREBAY WALL FOR PLANTERS
SW-311: CARRIAGE WALK WITH TRENCH GRATE
SW-312: CHECK DAM - INFILTRATION FACILITY
SW-313: CHECK DAM - INFILTRATION FACILITY WITH ROCK
SW-314: CHECK DAM - PARTIAL INFILTRATION FACILITY WITH WEEP HOLES
SW-315: CHECK DAM - LINED FACILITY WITH WEEP HOLES
SW-316: FACILITY CONFIGURATION SECTIONS
SW-317: BEEHIVE OVERFLOW CONFIGURATION
SW-318: UNDERDRAIN WITH CLEANOUT CONFIGURATION

PLANTING GUIDELINES AND TEMPLATES:
SW-320: STREET TREES IN FACILITY NO ROCK STORAGE
SW-321: STREET TREES IN FACILITY WITH ROCK STORAGE
SW-322: PLANT SPACING FOR HERBACEOUS PLANTS, GROUNDCOVERS AND SHRUBS
SW-323: SWALES - LANDSCAPE PLANTING TEMPLATES
SW-324: PLANTERS - LANDSCAPE PLANTING TEMPLATES
SW-325: CURB EXTENSIONS - LANDSCAPE PLANTING TEMPLATES

ABBREVIATIONS:
AC ASPHALT/CONCRETE
AP ANGLE POINT
BI BOTTOM OF INLET ELEVATION
BP BEGINNING POINT
CDN CHECK DAM NOTCH ELEVATION
CN CURB NOTCH ELEVATION
EL ELEVATION
EX/EXIST EXISTING
EOC EDGE OF CONCRETE
EOP EDGE OF PAVEMENT
EP END POINT
FL GUTTER FLOW LINE ELEVATION
PC POINT OF CURVATURE
PT POINT OF TANGENCY
ROW RIGHT-OF-WAY
SF STORMWATER FACILITY
S/W SIDEWALK ELEVATION
TC TOP OF CURB ELEVATION
VSF VEGETATED STORMWATER FACILITY
DESIGNER INFORMATION:
1. Adapt this plan and section view example to your engineered design. Maximize surface storage.
2. Area and depth of facility are based upon engineering calculations and right-of-way constraints.
3. Provide beginning and ending stations for each facility. Provide stations and/or dimensions, and elevations for each inlet, outlet, check dam, notch, and wall corner.
4. Show inlet, slotted pipe, 24" depth stormwater facility blended soil, and aggregate in section when used. Refer to SWMM detail SW-316 Stormwater Configuration Sections.
5. Sidewalk elevation must be set above check dam and inlet elevations to allow overflow to drain to street before sidewalk.
6. Detail assumes top-of-curb and top-of-sidewalk at approximately same elevation. Modify detail if site conditions are different.
7. Proposed utility areas to be located out of facility, or per details P-331, P-332, and P-333.
8. Depress gutter pan Flow Line (FL) 2-in to Bottom of Inlet (BI).

RELATED DETAILS AND RESOURCES:
9. City of Portland Standard Drawings:
9.1. P-204: Concrete Inlet, Type D with Channel and Gate (T17 Step-out).
9.6. Stormwater Management Manual Details:
10.1. SW-312: Check Dam - Infiltration Facility.
10.2. SW-313: Check Dam - Infiltration Facility with Rock.
10.3. SW-314: Check Dam - Partial Infiltration Facility with Weep Holes.
10.4. SW-315: Check Dam - Lined Facility with Weep Holes.

CONSTRUCTION NOTES:
11. In facilities that are unlined, fracture and loosen soil - DO NOT TILL - to a depth of 13-in below stormwater facility blended soil excavation before installing aggregates or blended soil

IMPORTANT: Utility conflicts and existing conditions can create major design variables. Locate utilities and survey existing conditions prior to beginning design work and include information on design drawings.

The Portland Bureau of Transportation (PBOT), Portland Water Bureau (PWB), and Bureau of Environmental Services (BES) are responsible for the review and approval of Stormwater Swales in the public right of way. Stormwater facilities in the Hohedal Protection Area may require special permitting measures as required by City Code 21.35.

For more information contact:
PBOT (503) 823-7684
BES (503) 823-7761
PWB (503) 823-7368
Urban Forestry (503) 823-8733

Bureau of Environmental Services
CITY OF PORTLAND, OREGON
2020 STORMWATER MANAGEMENT MANUAL
SWMM Detail Title
SLOPED BASIN - WITH PARKING
1 FT STEP-OUT PLAN AND SECTION VIEWS

Effective Date: 12-14-2020
SWMM Detail No.: SW-300
Calc. Book No.: N/A
Baseline Report Date: N/A
DESIGNER INFORMATION:
1. Adapt this plan and section view example to your engineered design. Maximize surface storage.
2. Area and depth of facility are based upon engineering calculations and right-of-way constraints.
3. Provide beginning and ending stations for each facility. Provide stationing and/or dimensions, and elevations at each inlet, outlet, check dam, notch and wall corner.
4. If less than 18-in. between splash pad and planter wall, then extend pad to wall.
5. May use concrete per City Standards, or pavers as approved by PBOT.
6. Show line: dotted pipe, 24" depth stormwater facility blended soil, and aggregate in section when used. Refer to SWMM detail SW-316 Facility Configuration Sections.
7. Sidewalk elevation must be set above check dam and inlet elevations to allow overflow to drain to street before sidewalk.
8. Detail assumes top-of-curb and top-of-sidewalk at approximately the same elevation. Modify detail if site conditions are different.
9. Must drain notch at low point in sidewalk. Space additional notches 6-ft apart.
10. Proposed utility lines to be located out of facility, or per details P-331, P-332, and P-333.
11. Depths gutter pan flow line (FL) 2-4 ft to bottom of inlets (R).

RELATED DETAILS AND RESOURCES:
12. City of Portland Standard Drawings:
   12.1. P-330: Concrete Bldt, Type Metal with Channel and Grate (2.5 FT Step-Out).
   12.3. P-307: Barrier Wall.
   12.5. P-333: Utility Coordination Water Asset Clearances.
13. Stormwater Management Manual Details:
   13.1. SW-112: Check Dam - Infiltration Facility.
   13.2. SW-113: Check Dam - Infiltration Facility with Rock.
   13.3. SW-114: Check Dam - Partial Infiltration Facility with Weep Holes.
   13.4. SW-115: Check Dam - Lined Facility with Weep Holes.

CONSTRUCTION NOTES:
14. In facilities that are lined, fracture and loosen soil - DO NOT TILL - to a depth of 12" below stormwater facility blended soil excavation before installing aggregates or blended soil.

IMPORTANT: Utility conflicts and existing conditions can create major design variables. Locate utilities and survey existing conditions prior to beginning design work and include information on design drawings.

The Portland Bureau of Transportation (PBOT), Portland Water Bureau (PWB), and Bureau of Environmental Services (BES) are responsible for the review and approval of Stormwater Swales in the public right of way. Stormwater facilities in Wet Weather Protection Areas may require special containment measures as required by City Code 21-35.

For more information contact:
PBOT (503) 285-7884
BES (503) 285-7761
PWB (503) 285-7368
Urban Forestry (503) 285-8733

Bureau of Environmental Services
CITY OF PORTLAND, OREGON
2020 STORMWATER MANAGEMENT MANUAL

SWMM Detail Title: PLANTER - WITH PARKING
2.5 FT STEP-OUT
PLAN AND SECTION VIEWS

Effective Date: 12-14-2020
Call No.: N/A
Baseline Report Date: N/A

SWMM Detail No. SW-302
DESIGNER INFORMATION:
1. Adapt this plan and section view example to your engineered design. Maximize surface storage.
2. Area and depth of facility are based upon engineering calculations and right-of-way constraints.
3. Provide beginning and ending stations for each facility. Provide stations and/or dimensions and elevations at each inlet, outlet, check dam, notch and wall corner.
4. If less than 16-in between splash pad and planter wall, then extend pad to wall.
5. Slope stormwater facility blended soil down to flat bottom, area with 3:1 slope.
6. Show liner, slitted pipe, 24" depth stormwater facility blended soil, and aggregate in section when used. Refer to SWMM detail SW-316: Stormwater Configuration Section.
7. Sidewalk elevation must be set above check dam and inlet elevations to allow overflow to drain to street before sidewalk.
8. Detail assumes top-of-curb and top-of-sidewalk at approximately the same elevation. Modify this detail if site conditions are different.
9. Place drainage notch at low point in sidewalk. Space additional notches 6-ft apart.
10. Proposed utility lines to be located out of facility, or per details P-331, P-332, and P-333.
11. Depress gutter pans Flowline (FL) 2-in to Bottom of Inlet (BI).

RELATED DETAILS AND RESOURCES:
12. City of Portland Standard Drawings:
   12.1. P-304: Concrete Inlet, Type Metal with Channel and Grate (1 FT Step-out).
   12.2. P-340: Culvert, Modified Curb and Gutter, typ. When adjacent to a bike lane use a 1/2" gutter pan.
   12.5. P-333: Utility Coordination Water Asset Clearances.

13. Stormwater Management Manual:
   13.1. SW-312: Check Dam - Infiltration Facility
   13.2. SW-318: Check Dam - Infiltration Facility with Rocks
   13.3. SW-314: Check Dam - Partial Infiltration Facility with Weep Holes
   13.4. SW-315: Check Dam - Lined Facility with Weep Holes

CONSTRUCTION NOTES:
14. In facilities that are unlined, fracture and loosen soil - DO NOT TEL to a depth of 12-in below stormwater facility blended soil excavation before installing aggregates or blended soil.

IMPORTANT: Utility conflicts and existing conditions can create major design variables. Locate utilities and survey existing conditions prior to beginning design work and include information on design drawings.

The Portland Bureau of Transportation (PBOT), Portland Water Bureau (PWB), and Bureau of Environmental Services (BES) are responsible for the review and approval of Stormwater Swales in the public right of way. Stormwater facilities in Wilkeswood Protection Areas may require special containment measures as required by City Code 21.35.

For more information contact:
PBOT (503) 823-7884
BES (503) 823-7761
PWB (503) 823-7688
Urban Forestry (503) 823-8733
1. INLET TYPE MAY VARY, 3-FT STEP-OUT SHOWN. ADAPT THESE PLAN AND SECTIONS TO YOUR DESIGN AS REQUIRED.

2. AN 18-IN GUTTER IS TYPICAL FOR FACILITIES ADJACENT TO BIKE LANES. A 12-IN GUTTER IS REQUIRED.

3. REFERENCE TO CITY OF PORTLAND STANDARD DRAWINGS P-302 AND P-307 FOR PLANTERS.

4. REFERENCE TO CITY OF PORTLAND STANDARD DRAWINGS P-301, P-303, P-304, AND P-305 FOR INLETS.

5. DESIGNER INFORMATION:

4" REBAR DOWELS SPACED 12" O.C.

SECTION A-A

6" DEEP 1 1/2" WIDE NOTCHES IN WALL

PLANTING STRIP - LAWN, SIDEWALK, PLANTED OR PAVERS

TOP OF STORMWATER FACILITY BLENDED SOIL

SECTION B-B

2'-4" BALLAST, 6" DEEP ACROSS FULL LENGTH OF FOREBAY

TOP OF STORMWATER FACILITY BLENDED SOIL

6" DEEP 1 1/2" WIDE NOTCHES IN WALL

4" THICK CONCRETE SPLASH PAD, MATCH TOP OF STORMWATER FACILITY BLENDED SOIL

SIDEWALK BEHIND WALL

TOP OF PLANTER WALL

6" DEEP 1 1/2" WIDE NOTCHES IN WALL

CHANNEL WALL

12" OFFSET TYP.

CONCRETE FOREBAY

4" REBAR DOWELS SPACED 12" O.C.

TOP OF PLANTER WALL

2'-4"

6" DEEP 1 1/2" WIDE NOTCHES IN WALL
1. **Avoid using the detail if stopping and starting the facility is possible.**

2. **Detail depicted with combination swale/panter, modify detail to use with other cross sections.**

3. **Channel grate frame shelf varies per manufacturer, refer to manufacturer’s recommendations, and adjust channel opening as required. 2% maximum cross slope on grate. Grate and frame system to meet the following requirements:**

   3.1 **Olympic Foundry Inc. S350 18’X34” “TWS” ADA grate and frame, or approved equal.**

   3.2 **Cast iron, with natural finish.**

   3.3 **Grate shall be ADA compliant.**

   3.4 **In two opposite corners, bolt grate to frame, countersink, drill, and tap for 5/16-18 hex head bolt.**

   3.5 **Bolts to have anti-seize thread lubricant applied at installation.**

4. **See Section B-8 (Channel as check dam). Set top of channel elevation per designed ponding depth slope channel to be flush with facility grade at downstream cell.**

   **Use 1% slope maximum design slope for construction tolerance.**

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**Bureau of Environmental Services**
**CITY OF PORTLAND, OREGON**
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**SWMM Detail Title:** CARRIAGE WALK WITH TRENCH GRATE

**Effective Date:** 12-14-2020

**Calc. Book No.:** N/A

**Baseline Report Date:** N/A

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**SWMM Detail No.:** SW-311
DESIGNER INFORMATION:

1. USE THIS DETAIL FOR FACILITIES WITH >2" PER HOUR NATIVE INFILTRATION RATE; OR FOR FACILITIES DESIGNED FOR COMPLETE INFILTRATION OF THE 10-YEAR EVENT

2. CHECK DAM NOTCH (CDN) ELEVATION TO BE WHICHEVER IS LOWEST, EQUAL TO THE FLOW LINE ELEVATION AT THE UPSTREAM INLET OF THE FACILITY, 2" BELOW THE ELEVATION OR THE SIDEWALK ADJACENT TO THE CHECK DAM, OR 2" BELOW THE ELEVATION OF THE TOP-OF-CURB (TOC) ADJACENT TO THE IF IT IS NOT THEN CONTACT INSPECTOR FOR DIRECTION.

3. ENSURE THAT THE CHECK DAM ELEVATIONS DO NOT CAUSE STORMWATER TO OVERFLOW TO SIDEWALK, OR BACKWATER INTO THE STREET.

4. A PARTIAL LINER MAY BE REQUIRED ON THE STREET SIDE OR SIDEWALK SIDE DEPENDING ON EXISTING CONDITIONS. REFER TO CONSTRUCTION DRAWINGS. ATTACH LINER PER CITY OF PORTLAND STANDARD DRAWING P-382

5. WHERE FEASIBLE, LOCATE SIDEWALK DRAINAGE NOTCHES IMMEDIATELY DOWNSTREAM OF CONCRETE CHECK DAMS TO MINIMIZE DROP FROM SIDEWALK TO FACILITY SOIL

SECTION A-A

THICKENED CURB & GUTTER

CHECK DAM NOTCH (CDN)

LAP SPlice #4 REBAR TO EMBEDDED REBAR WITH 12" MINIMUM OVERLAP

TOP OF STORMWATER FACILITY BLENDED SOIL, TYP.

SECTION B-B

CHECK DAM NOTCH (CDN)

SIDEWALK

12" OF 2"-4" BALLAST AGGREGATE 6" DEEP

STORMWATER FACILITY BLENDED SOIL (12" DEPTH)

FRACtURE AND LOOSEN SOIL (12")

12" MIN. EMBED. SW-312

Bureau of Environmental Services
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CHECK DAM - INFILTRATION FACILITY

Effective Date: 12-14-2020
Calc. Book No.: N/A
Baseline Report Date: N/A
**DESIGNER INFORMATION:**

1. USE THIS DETAIL FOR FACILITIES WITH >2" PER HOUR NATIVE INFILTRATION RATE WHEN THE PAC REQUIRE ROCK.

2. CHECK DAM NOTCH (CDN) ELEVATION TO BE WHICHEVER IS LOWEST EQUAL TO THE FLOW LINE ELEVATION AT THE UPSTREAM INLET OF THE FACILITY, 2" BELOW THE ELEVATION OF THE SIDEWALK ADJACENT TO THE CHECK DAM OR 2" BELOW THE ELEVATION OF THE TOP OF CURB (TOC) ADJACENT TO THE. IF IT IS NOT THEN CONTACT INSPECTOR FOR DIRECTION.

3. ENSURE THAT THE CHECK DAM ELEVATIONS DO NOT CAUSE STORMWATER TO OVERFLOW TO SIDEWALK, OR BACKWATER INTO THE STREET.

4. A PARTIAL LINER MAY BE REQUIRED ON THE STREET SIDE OR SIDEWALK SIDE DEPENDING ON EXISTING CONDITIONS. REFER TO CONSTRUCTION DRAWINGS. ATTACH LINER PER CITY OF PORTLAND STANDARD DRAWING P-340.

5. WHERE FEASIBLE, LOCATE SIDEWALK DRAINAGE NOTCHES IMMEDIATELY DOWNSTREAM OF CONCRETE CHECK DAMS TO MINIMIZE DROP FROM SIDEWALK TO FACILITY SOIL.

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**Bureau of Environmental Services**

**CITY OF PORTLAND, OREGON**

**2020 STORMWATER MANAGEMENT MANUAL**

**CHECK DAM**

**INFILTRATION FACILITY WITH ROCK**

**Effective Date:** 12-14-2020

**Calc. Book No.:** N/A

**Baseline Report Date:** N/A

**SWMM Detail No.:** SW-313
**Designer Information:**

1. Use the details for facilities with <2" per hour native soil infiltration rates with an underwater at the downstream end of the facility.

2. Check dam notch (CDN) elevation to be whichever is lowest: equal to the flow line elevation at the upstream inlet of the facility; 2" below the elevation of the sidewalk adjacent to the check dam or 2" below the elevation of the top of curb (TOK) adjacent to the sidewalk. If both are not then contact inspector for direction.

3. Ensure that the check dam elevations do not cause stormwater to overflow to sidewalk or backwater into the street.

4. A partial liner may be required on the street side or sidewalk side depending on existing conditions. Refer to construction drawings. Attach the liner per City of Portland standard drawing P-340.

5. Construct 4" weep holes 8" on center with at least 4' between outside edge of weep holes and edge of checkdams.

6. Where feasible, locate sidewalk drainage notches immediately downstream of concrete check dams to minimize drop from sidewalk to facility soil.

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**Check Dam Partial Infiltration Facility with Weep Holes**

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2020 STORMWATER MANAGEMENT MANUAL

Effective Date: 12-14-2020
Calc. Book No.: N/A
Baseline Report Date: N/A

**Swmm Detail No. SW-314**
DESIGNER INFORMATION:

1. USE THIS DETAIL FOR FULLY LINED NON-INfiltrATING FACILITIES.
2. CHECK DAM NOTCH (CDN) ELEVATION TO BE whicheveR LEsT equal TO THE FLOW LINE ELEVATION AT THE UPSTREAM INLET OF THE FACILITY; 2" BELOW THE ELEVATION OF THE SIDEWALK ADJACENT TO THE CHECK DAM; or 2" BELOW THE ELEVATION OF THE TOP OF CURB (TOC) ADJACENT TO THE IF IT IS NOT THEN CONTACT INSPECTOR FOR DIRECTION.
3. ENSURE THAT THE CHECK DAM ELEVATIONS DO NOT CAUSE STORMWATER TO OVERFLOW TO SIDEWALK OR BACKWATER INTO THE STREET.
4. REFER TO CITY OF PORTLAND STANDARD DRAWING P-346 FOR LINER ATTACHMENT DETAILS.
5. CONSTRUCT 4" WEEP HOLES 8" ON CENTER WITH AT LEAST 4" BETWEEN OUTSIDE EDGE OF WEEP HOLES AND EDGE OF CHECK DAM.
6. WHERE FEASIBLE, LOCATE SIDEWALK DRAINAGE NOTCHES IMMEDIATELY DOWNSTREAM OF CONCRETE CHECK DAMS TO MINIMIZE DROP FROM SIDEWALK TO FACILITY SOIL.

Effective Date: 12-14-2020

City: Portland

2020 STORMWATER MANAGEMENT MANUAL

SW-315
CONTACT INFORMATION:
1. SET THE 4-IN SLOTTED PVC UNDERDRAIN PIPE 4" ABOVE THE LINER OR THE BOTTOM OF EXCAVATION AND COVER WITH 4" OF AGGREGATE.
2. RUN UNDERDRAIN PIPE A MAXIMUM OF 3/4" THE LENGTH OF THE FACILITY.
3. SEE DETAILS SW-317/318 FOR OVERFLOW CONFIGURATION AND UNDERDRAIN WITH CLEANOUT FOR ADDITIONAL DESIGN GUIDANCE.
4. HYBRID FACILITIES MUST BE REGISTERED AS A VIC.

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FACILITY CONFIGURATION SECTIONS

Effective Date: 12-14-2020
Calc. Book No.: N/A
Baseline Report Date: N/A

SW-316
FLEXIBLE PIPE TO APPROVED DISCHARGE POINT

EXTESTS OF 1/4 NO.10 ANGULAR AGGREGATE MOUNDING

EXTEND 6" BEYOND

2.5" X 3.0"

PLAN VIEW

SCH. 40 PVC FEMALE PIPE THREADAD ADAPTOR

SCH. 40 PVC THREADED PLUG

DRILL ORIFICE HOLE PER PAC

DRAWN BEHIVE EXIT CITY OR PORTLAND STANDARD DETAILS

IF REQUIRED, ATTACH LINER TO BEEHIVE INLET STRUCTURE USING FLEXIBLE SHEAR BANDS

TOP-OF-CURR (TOC)

PONDI NG DEPTH

CONNECT SLOTTED PIPE TO CONCRETE STRUCTURE PER SPECIFICATIONS

6" DROP ACROSS INVERTS

OUTLET PIPE TO APPROVED DISCHARGE POINT

SLOPE CONCRETE BASE TO DRAIN TO OUTLET PIPE

ORIFICE IF REQUIRED BY PAC SEE ORIFICE DETAIL, THIS PAGE

SECTION A-A

1/4 NO.10 ANGULAR AGGREGATE MOUND OVER PIPE AND EXTEND 6" BEYOND CAP

4" SLOTTED PVC COLLECTION PIPE, RUN 3/4 LENGTH OF FACILITY, MATCH FACILITY GRADE

HOPE LINER, IF REQUIRED

DRAINAGE STRUCTURE WALL

FLEXIBLE PIPE CONNECTION PER SPECIFICATIONS

ORIFICE DETAIL

DESIGNER INFORMATION:

1. EXAMPLE SHOWN IS FOR A LINED FACILITY. MODIFY DETAIL FOR UNLINED FACILITY.

2. IF CONNECTING TO A COMBINATION SEWER MAINTENANCE HOLE INSTALLATION OF A SWING-CHECK BACKWATER VALVE OR APPROVED EQUIPMENT IS REQUIRED TO PREVENT ODOR EMISSIONS.

3. PRIOR TO INSTALLATION, SMOOTH AND/OR SAND ORIFICE REMOVING ROUGH EDGES. CLEAR PIPE OF ALL DEBRIS BEFORE INSTALLING ORIFICE CAP.
EXTENTS OF 1/4"-NO.10 ANGULAR AGGREGATE MOUNDING

PLAN

6" SCH 40 PVC

ALUMINUM CLEAN-OUT CAP

6" SCH 40 PVC 45° BEND

INCREASER/REDUCER SIZE AS REQUIRED FOR DISCHARGE

PONDING DEPTH

OUTLET PIPE TO APPROVED DISCHARGE POINT

SCH 40 PVC WYE, SZIED FOR DISCHARGE PIPE AND 6" CLEANOUT

1/4"-NO.10 ANGULAR AGGREGATE MOUND OVER PIPE AND EXTEND 6" BEYOND CAP

4" SCH 40 SLOTTED PVC COLLECTION PIPE, RUN IS LENGTH OF FACILITY, MATCH FACILITY GRADE

SECTION A-A

HOPE LINER IF REQUIRED

PVC CAP

Clean-Out Cap
DESIGNER INFORMATION:

1. ALL PLANTS SHALL BE PLANTED AT EQUAL TRIANGULAR SPACING ON CENTER (O.C.) PER SPACING SPECIFIED ON THE PLANTING LEGEND.

2. PLANTS SHALL BE LOCATED SET BACK FROM FACILITY EDGES AS FOLLOWS:

   2.1. HERBACEOUS PLANTS AND GROUNDCOVERS: 12" FROM CENTER OF PLANT TO FACE OF FACILITY WALL, BACK OF CURB OR SIDEWALK EDGE.

   2.2. SHRUBS: 18" FROM CENTER OF PLANT TO FACE OF FACILITY WALL, BACK OF CURB OR SIDEWALK EDGE.

3. INTERIOR PLANT SPACING MAY BE SLIGHTLY ADJUSTED TO ACHIEVE DESIRED EDGE SETBACK.
Designer Information:
1. Choose a template and alter it to design. These are examples of approved planting templates. Other planting plans may be approved.
2. Plant lists and on-center spacing requirements are found in Section 4.2.2.
3. Planting Legend Required: State plant species, spacing, and quantities per Zone A and Zone B, and per facility. Include the square footage of Zone A and B.
4. Planting plans shall include labels for each plant group identifying the plant species and quantity in the group.
5. See detail SW-322 for plant spacing.
6. See Section 4.9.6, landscape plan requirements, for submittal requirements.

Key 1
Recommended Plants
Symbol | Botanical Name | Common Name | Spacing
--- | --- | --- | ---
ZONE A | Coreopsis | Slough Sedge | 12" O.C.
Juncus patens | Spreading rush | 12" O.C.
ZONE B | Mahonia repens | Creeping Oregon Grape | 24" O.C.
Spiraea x bumalda 'Goldflame' | Goldflame spiraea | 24" O.C.
Rubus colensois | Creeping Raspberry | 12" O.C.

Key 2
Recommended Plants
Symbol | Botanical Name | Common Name | Spacing
--- | --- | --- | ---
ZONE A | Coreopsis | Slough Sedge | 12" O.C.
Juncus patens | Spreading rush | 12" O.C.
ZONE B | Cornus sericea 'Kelsey' | Dwarf Red-Twig Dogwood | 24" O.C. OR AS SHOWN
Spiraea x bumalda 'Goldmound' | Goldmound Spiraea | 24" O.C. OR AS SHOWN
Fragaria chiloensis | Coastal Strawberry | 12" O.C.

Sample Planting Legend
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<tr>
<th>Symbol</th>
<th>Botanic Name</th>
<th>Common Name</th>
<th>Size (in)</th>
<th>Spacing (in)</th>
<th>Qty. Zone A</th>
<th>Qty. Zone B</th>
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**Designer Information:**

1. Choose a template and alter it to design. These are examples of approved planting templates. Other planting plans may be approved.
2. Plant lists and on-center spacing requirements are found in Section 4.2.2.
3. Planting legend required state plant species, spacing, and quantities per zone A and zone B and per facility. Include the square footage of zone A and B.
4. Planting plans shall include labels for each plant group identifying the plant species and quantity in the group.
5. See detail SW-322 for plant spacing.
6. See section 4.9.5, landscape plan requirements, for submitter requirements.

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**Key 1**

**Recommended Plants**

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<th>Common Name</th>
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<td>ZONE A</td>
<td>Juncus patens</td>
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<td>Carex obruca</td>
<td>Slough sedge</td>
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**Key 2**

**Recommended Plants**

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<td>Slough sedge</td>
<td>12&quot; O.C.</td>
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<td>Linopy tuscan &quot;Big Blue&quot;</td>
<td>Big blue My turf</td>
<td>12&quot; O.C.</td>
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<td>Cornus sericea &quot;Kelseyi&quot;</td>
<td>Kelsey dogwood</td>
<td>24&quot; O.C. OR AS SHOWN</td>
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**Sample Planting Legend**

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</tbody>
</table>

---

**Protocol:**

- [ ] Submit preliminary layouts.
- [ ] Submit final layout.
- [ ] Submit plant list.
- [ ] Submit sample plantings.
- [ ] Submit electrical plans.
- [ ] Submit mechanical plans.
- [ ] Submit conceptual plans.

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Bureau of Environmental Services
CITY OF PORTLAND, OREGON
2020 STORMWATER MANAGEMENT MANUAL

PLANTING TEMPLATE - PLANTER

Effective Date: 12-14-2020
Calc. Book No.: N/A
Baseline Report Date: N/A

SWMM Detail Title: SW-324
KEY 1
Recommended Plants

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Botanical Name</th>
<th>Common Name</th>
<th>Spacing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Carex obnupta</td>
<td>Grass rush</td>
<td>12&quot; O.C.</td>
</tr>
<tr>
<td></td>
<td>Juncus patens</td>
<td>Spreading rush</td>
<td>12&quot; O.C.</td>
</tr>
</tbody>
</table>

KEY 2
Recommended Plants

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Botanical Name</th>
<th>Common Name</th>
<th>Spacing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Juncus patens</td>
<td>Grass rush</td>
<td>12&quot; O.C.</td>
</tr>
<tr>
<td></td>
<td>Carex morrowii 'Ice Dance'</td>
<td>Ice Dance Sedge</td>
<td>12&quot; O.C.</td>
</tr>
<tr>
<td></td>
<td>Spiraea x bumalida 'Goldflame'</td>
<td>Goldflame spirea</td>
<td>24&quot; O.C.</td>
</tr>
</tbody>
</table>

SAMPLE PLANTING LEGEND

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>BOTANIC NAME</th>
<th>COMMON NAME</th>
<th>SIZE (IN)</th>
<th>SPACING (IN)</th>
<th>QTY. ZONE A</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>Xxxxx xxxxxx</td>
<td>xxxxx</td>
<td>X</td>
<td>X</td>
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<tr>
<td>+</td>
<td>Xxxxx xxxxxx</td>
<td>xxxxx</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

DESIGNER INFORMATION:

1. CHOOSE A TEMPLATE AND ALTER IT TO DESIGN. THESE ARE EXAMPLES OF APPROVED PLANTING TEMPLATES. OTHER PLANTING PLANS MAY BE APPROVED.

2. PLANT LISTS AND DW-CENTER SPACING REQUIREMENTS ARE FOUND IN SECTION 4.2.2.

3. PLANTING LEGEND REQUIRED, STATE PLANT SPECIES, SPACING, AND QUANTITIES PER ZONE A AND ZONE B AND PER FACILITY. INCLUDE THE SQUARE FOOTAGE OF ZONE A AND B.

4. PLANTING PLANS SHALL INCLUDE LABELS FOR EACH PLANT GROUP IDENTIFYING THE PLANT SPECIES AND QUANTITY IN THE GROUP.

5. SEE DETAIL SW-322 FOR PLANT SPACING.

6. SEE SECTION 4.9.5, LANDSCAPE PLAN REQUIREMENTS, FOR SUBMITTAL REQUIREMENTS.