NOTE: GREEN STORMWATER INFRASTRUCTURE TECHNIQUES APPLIED AS A PART OF FULL OR PARTIAL STREET IMPROVEMENTS ARE GENERALLY REFERRED TO AS NATURAL DRAINAGE SYSTEMS (NDS).

IS THE RIGHT-OF-WAY WIDTH 56-FOOT MINIMUM WIDTH?

YES

IS THE PROJECT WITHIN A CREEK BASIN, CAPACITY CONSTRAINED STORM SEWER SYSTEM BASIN, OR A COMBINED SYSTEM BASIN WITH COMBINED SEWER OVERFLOW (CSO)?

YES

IS THE PROJECT LOCATED ON A RESIDENTIAL OR COLLECTOR STREET?

YES

IS THE LAND USE IN THE AREA PREDOMINANTLY SFR OR LOW RISE?

YES

NDS ENCOURAGED, EVALUATE TO MAXIMUM EXTENT PRACTICABLE IS THERE CURRENTLY INFORMAL DRAINAGE?

YES

NDS FULL STREET CONCEPT NOT APPROVED AT THIS TIME. CONSIDER GREEN INFRASTRUCTURE FOR SIDEWALK DRAINAGE ONLY.

NO

FLOW CONTROL NOT REQUIRED IN THIS BASIN. CONSIDER GREEN INFRASTRUCTURE FOR WATER QUALITY TREATMENT OR SIDEWALK DRAINAGE ONLY.

NO

NDS MAY BE FEASIBLE IF PROJECT SCHEDULE CAN ALLOW ADEQUATE TIME TO DEVELOP DESIGN WITH CITY. OTHERWISE, CONSIDER GREEN INFRASTRUCTURE FOR SIDEWALK DRAINAGE ONLY.

NO

CONCEPTUAL DESIGN GUIDANCE IS AVAILABLE. REFER TO DETAIL IN ROWIM • NDS STREET CROSS SECTION WITH CURB AND GUTTER.

NO

CONCEPTUAL DESIGN GUIDANCE IS AVAILABLE. REFER TO DETAIL IN ROWIM • NDS STREET CROSS SECTION WITH FLUSH CURB, CURVILINEAR • NDS STREET CROSS SECTION WITH FLUSH CURB, OFFSET

YES
CURVILINEAR, FLUSH CURB

FOR FULL STREET IMPROVEMENT
NDS CONCEPTUAL DESIGN, CROSS-SECTION

TRAFFIC CIRCLES

SIDEWALKS WILL SEPARATE THE ROADWAY AT INTERSECTIONS WITH

NOTES: ROADWAY CURVATURE WOULD VARY ON A STREET-BY-STREET BASIS.
Park on One Side Offset, Flush Curb, For Full Street Improvement NDS Conceptual Design Cross-Section

- Contingency space not required
- 60' Right-of-Way
- 20' Roadway (New Pavement)
- Reinforced Erosion Curb
- Pavement Edge
- Shoulder
- VAR
- 2' Max
- 2' Max
- SWALEs 25
- PLANTING STRIP 8
- ROW 60 POWER SETBACK

Sidewalk may be adjacent to the roadway at some locations. Bring roadway centerline back to right-of-way centerline. Appropriate to preserve existing trees or power pole. Appropriately to preserve existing trees or power pole. Appropriately to preserve existing trees or power pole. Appropriately to preserve existing trees or power pole.
APPLICATION OF THESE DETAILS REQUIRE APPROVAL FROM SDOT AND SPU.

BIORETENTION, BIOFILTRATION CELL

JANUARY 2010

FIGURE

6–15
BIORETENTION, BIOFILTERATION CELL W/UNDER DRAIN

APPLICATION OF THESE DETAILS REQUIRE APPROVAL FROM SDOT AND SPU.

FIGURE 6-16

JANUARY 2010
CONVEYANCE SWALE

APPLICATION OF THESE DETAILS REQUIRE APPROVAL FROM SDOT AND SPU.

FIGURE 6-17

JANUARY 2010

NOTE:
1. DEPTH OVER 4' REQUIRE GUARD RAIL.
2. 4:1 MAX WHEN WITHIN 50- FEET OF INTERSECTIONS
3. SIDEWALK ELEVATION MUST BE SET ABOVE OVERFLOW ELEVATIONS.
4. LONGITUDINAL SLOPE ≥4% CHECK DAM REQUIRED.
CONCRETE INLET, CHANNEL & GRATE

APPLICATION OF THESE DETAILS REQUIRE APPROVAL FROM SDOT AND SPU.

FIGURE 6-19

JANUARY 2010
CHECK DAM

SECTION A - A

APPLICATION OF THESE DETAILS REQUIRE APPROVAL FROM SDOT AND SPU.
NOTES:
1. STREAMED COBBLE FOREBAY FOR USE WITH STORMWATER CURB EXTENSIONS ONLY.

2. TO PREVENT PONDING, POSITION INLET CLOSER TO EXISTING CURB IF THE STREET CROSS-SLOPE IS >2%. ADDITIONAL INLETS CAN BE ADDED IF NECESSARY (PREFERABLY IMMEDIATELY DOWNSTREAM OF EACH CHECK DAM TO MINIMIZE POTENTIAL BACKFLOW). ADDITIONAL INLETS ARE NOT RECOMMENDED FOR STREETS SLOPED <1%.

APPLICATION OF THESE DETAILS REQUIRE APPROVAL FROM SDOT AND SPU.

NATURAL DRAINAGE SYSTEM DETAIL
CURB EXTENSION
INLET / OUTLET DETAILS

FIGURE 6–21A
NOTE:
* IF STORMWATER CURB EXTENSION IS CONSTRUCTED NEXT TO AN EXISTING SIDEWALK, SOIL ELEVATION MUST BE BROUGHT TO TOP OF CURB AND SLOPE AWAY FROM CURB AT A 4:1 MAX SLOPE.
TREE PLANTING WITHIN BIORETENTION SWALE

APPLICATION OF THESE DETAILS REQUIRE APPROVAL FROM SDOT AND SPU.

CURB & GUTTER
STD PLAN 410B

3' DEPTH WOODCHIP MULCH, COARSE

BIORETENTION SOIL, COMPACTED TO 90% DENSITY

BIORETENTION SOIL

3' DEPTH OF COMPOSTED MATERIAL IN PONDING AREA

1:1 MAX

3' DIA WATERING RING

3'-6'

OF TREE
NOTES:
1. Depth of aggregate discharge subbase shall be determined by engineer if used as facility (see 6.4.2 of Stormwater Manual, Volume 3), where porous sidewalk is within the critical root zone of trees that are required to be saved, reduce aggregate discharge subbase to 2'.
2. Depths shown for pavement sections are compacted depths.
3. Sidewalk depth at driveway to match driveway pavement depth.
4. Depth of aggregate shall be 6' min. If used as facility additional depth shall be designed by engineer.

Geotextile bottom and sides when required by design, extend geotextile above porous pavement. After pavement has cured and adjacent finished grade has been stabilized, cut geotextile at finished grade (typ.)

Section A – Permeable Pavement Section

Section B – Sidewalk Depth Transition at Driveways

Application of these details require approval from SDOT and SPU.
PERMEABLE PAVEMENT SIDEWALK ADJACENT TO CURB

PERMEABLE PAVEMENT SIDEWALK ADJACENT TO SWALE OR DITCH

NOTE: PERMEABLE PAVEMENT FACILITIES ARE FOR LONGITUDINAL SLOPE OF 0 ~ 5% ONLY. TO MAXIMIZE THE PONDING CAPACITY USE OF CHECK DAM OR OTHER METHOD ARE RECOMMENDED. (SEE FIGURE 6–25 FOR DETAIL).

APPLICATION OF THESE DETAILS REQUIRE APPROVAL FROM SDOT AND SPU.
PERMEABLE PAVEMENT FACILITY, SIDEWALK
CHECK DAM, INTERCEPTOR

APPLICATION OF THESE DETAILS REQUIRE APPROVAL FROM SDOT AND SPU.
PERMEABLE PAVEMENT IN PLANTING STRIP

APPLICATION OF THESE DETAILS REQUIRE APPROVAL FROM SDOT AND SPU.

SEATTLE RIGHT-OF-WAY MANUAL

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FIGURE 6–26
APPLICATION OF THESE DETAILS REQUIRE APPROVAL FROM SDOT AND SPU

OVER FLOW STRUCTURE

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FIGURE 6-27