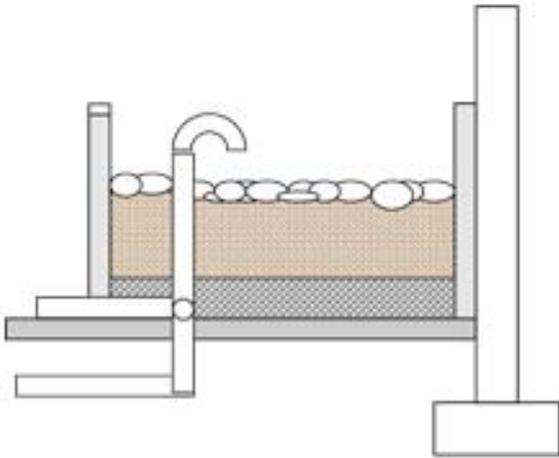


## Underground Injection Control Storm Water Information

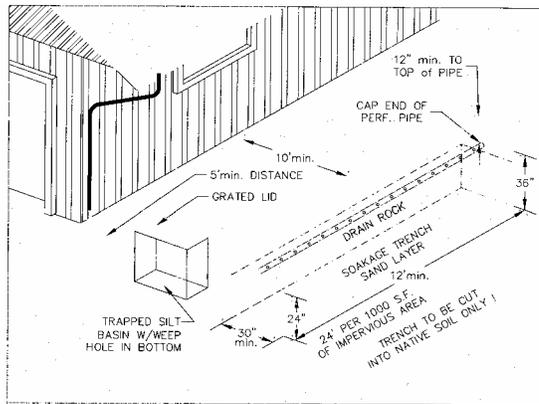
### Best Management Practices

DEQ has reviewed the EPA definition of a subsurface fluid distribution system and the infiltration design best management practices (BMPs) in Chapter 2 of the City of Portland's Storm Water Management Manual (Revision #2, September 1, 2002), in order to provide information to determine if a BMP for surface infiltration of storm water is a UIC (Underground Injection Control) injection system. DEQ's determination for classifying a storm water BMP control as a UIC is based on the criteria and examples presented below.



### UIC Decision Criteria

- EPA and DEQ defines a **subsurface fluid distribution system** as an assemblage of perforated pipes, drain tiles, or other similar mechanisms intended to distribute fluids below the ground surface.
- An assemblage of perforated pipes, drain tiles or other similar mechanisms designed and **intended to collect and convey** infiltrated storm water to another disposal or discharge point is **not** of itself a subsurface fluid distribution system as defined by EPA or DEQ. The point receiving the discharge from the collection and conveyance system may be a UIC injection system.
- A gravel **"storage area"** underlying a bioswale or contained within a water quality pre-treatment system (i.e., surface infiltration soil media) is **not** a subsurface infiltration distribution system when its intended purpose is to temporarily store storm water for infiltration into the subsurface natural soils when storm event precipitation exceeds the infiltration rate of the natural soils. If used alone to discharge storm water, a gravel storage area is a UIC.



- **"French drain"** is a generic term for a type of drainage system. A "French drain" is **not** a UIC when it is designed and functions to collect and convey water to another point of discharge. The point receiving the discharge may qualify as a UIC injection system (for instance: if the perforated pipes are the discharge point, then it is a UIC).
- A **surface infiltration swale** or landscape BMP that has an elevated overflow intake pipe is **not** a UIC provided the pipe conveys overflow to a discharge point away from the swale or landscape BMP. The point receiving the discharge may qualify as a UIC injection system.
- A **"soakage trench"** is an **"infiltration gallery"** and **is** a UIC as defined by federal regulations. A soakage trench does not meet the criteria for a gravel storage area as described above. The purpose of a soakage trench is to receive and distribute fluids for injection.

The pages that follow illustrate examples of BMPs, all but one of which do not involve use of a UIC injection system.

### For more information:

For questions regarding determination of BMPs that either qualify as a UIC injection well or not, please contact the DEQ Underground Injection Control Coordinator at (503) 229-5945.

### Alternative Formats

*Alternative formats of this document can be made available. Contact DEQ Public Affairs for more information: (503) 229-5696.*



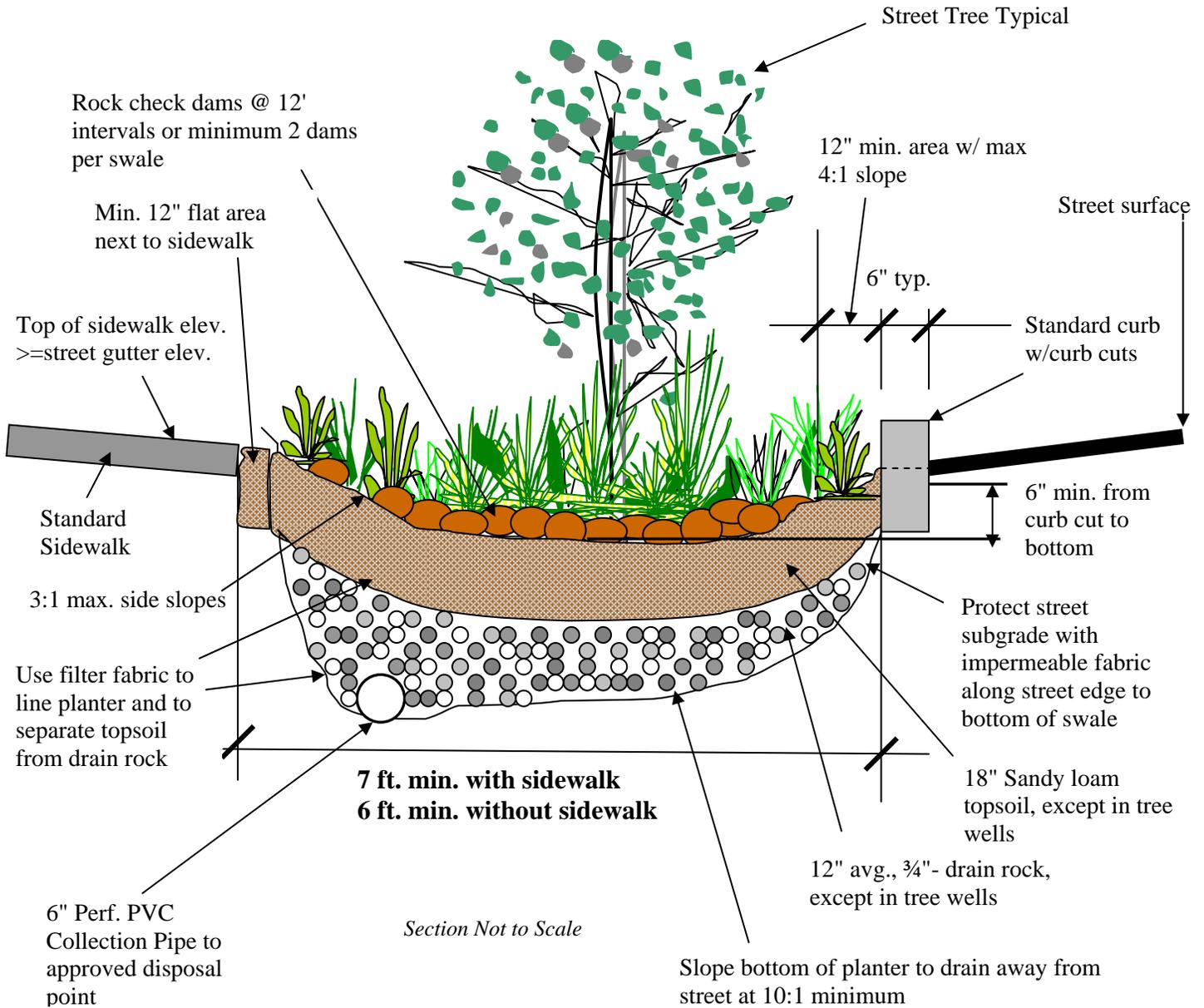
State of Oregon  
Department of  
Environmental  
Quality

Water Quality Division  
UIC Program  
811 SW 6<sup>th</sup> Avenue  
Portland, OR 97204  
Phone: (503) 229-5945  
(800) 452-4011  
Fax: (503) 229-6037  
Contact: Barbara Priest  
[www.deq.state.or.us](http://www.deq.state.or.us)

# BMP not a UIC

(An example of a best management practice [BMP] that does not utilize an underground injection system)

## Private Street Design (Parking Allowed) Lowered Planter Strip (Cross Section)

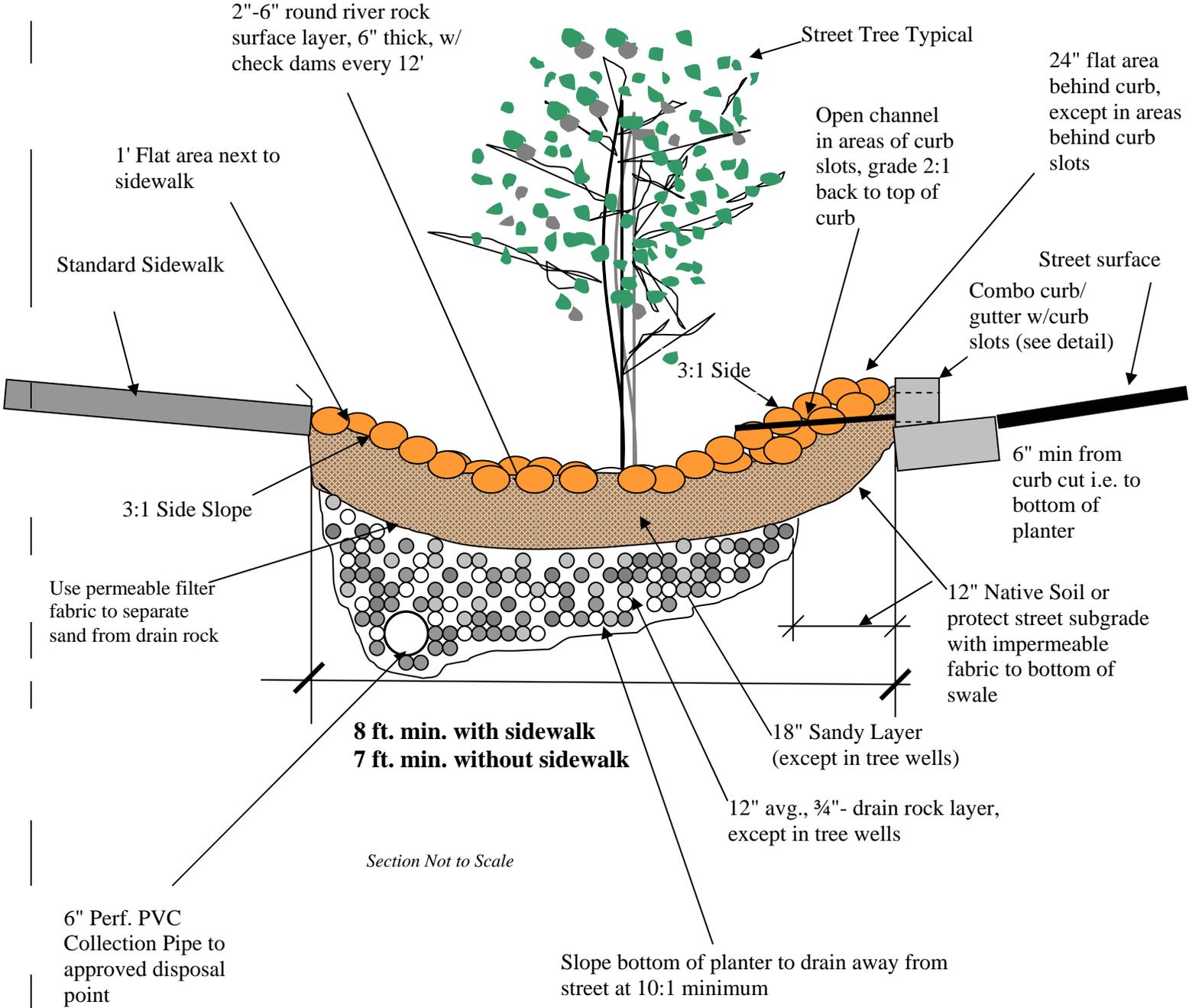


*BMP Source: City of Portland, Storm Water Management Manual, Revision #2, September 1, 2002 and is subject to change for the 2004 manual revisions. UIC determination is made by DEQ.*

# BMP not a UIC

(Another example of a best management practice [BMP] that does not utilize an underground injection system)

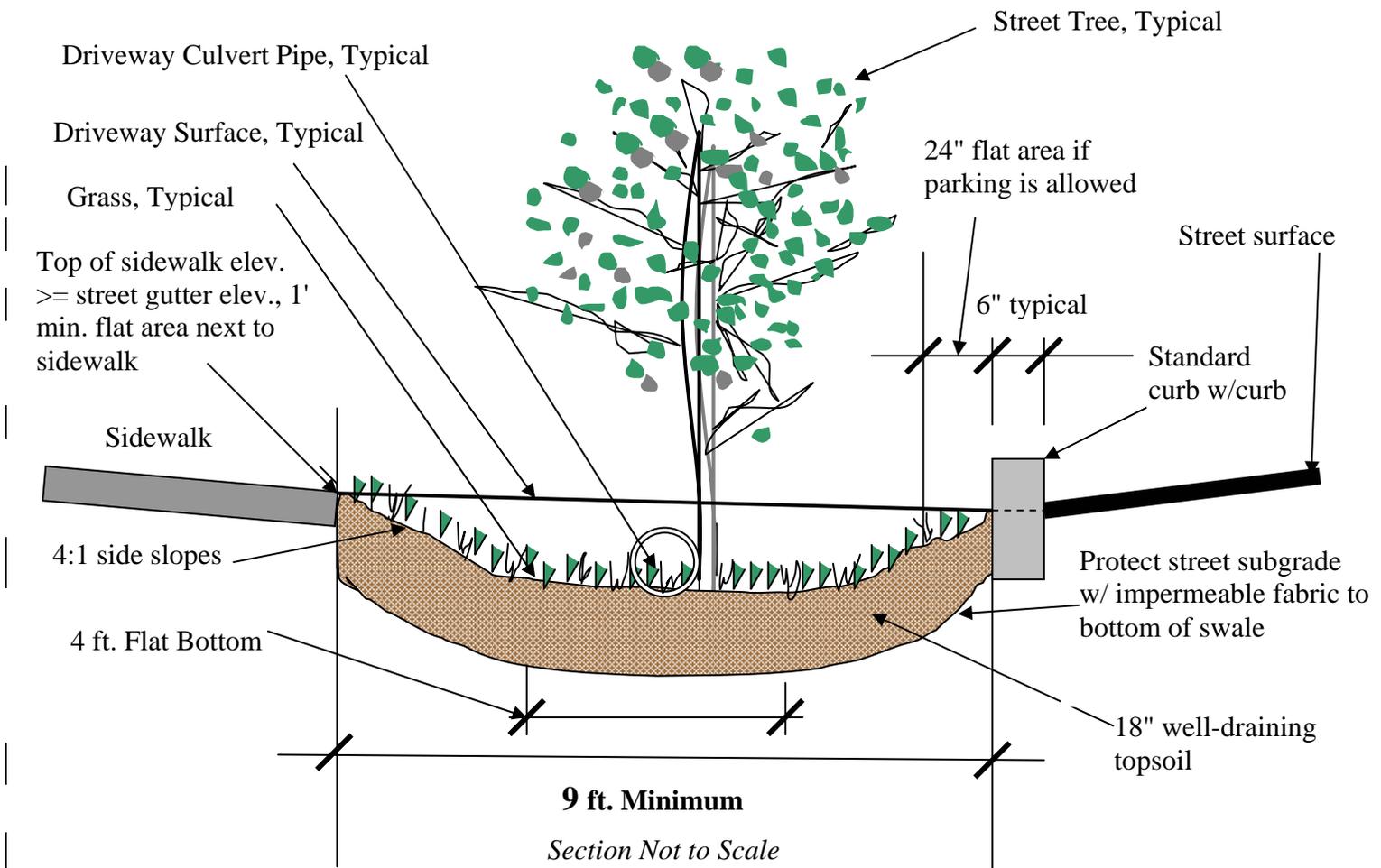
## Private Street Design (No Parking Allowed) Lowered Planter Strip (Cross Section)



*BMP Source: City of Portland, Storm Water Management Manual, Revision #2, September 1, 2002. BMP is subject to change for the 2004 manual revisions. UIC determination is made by DEQ.*

# BMP not a UIC

## Private Street Design Side Swale (Cross Section)

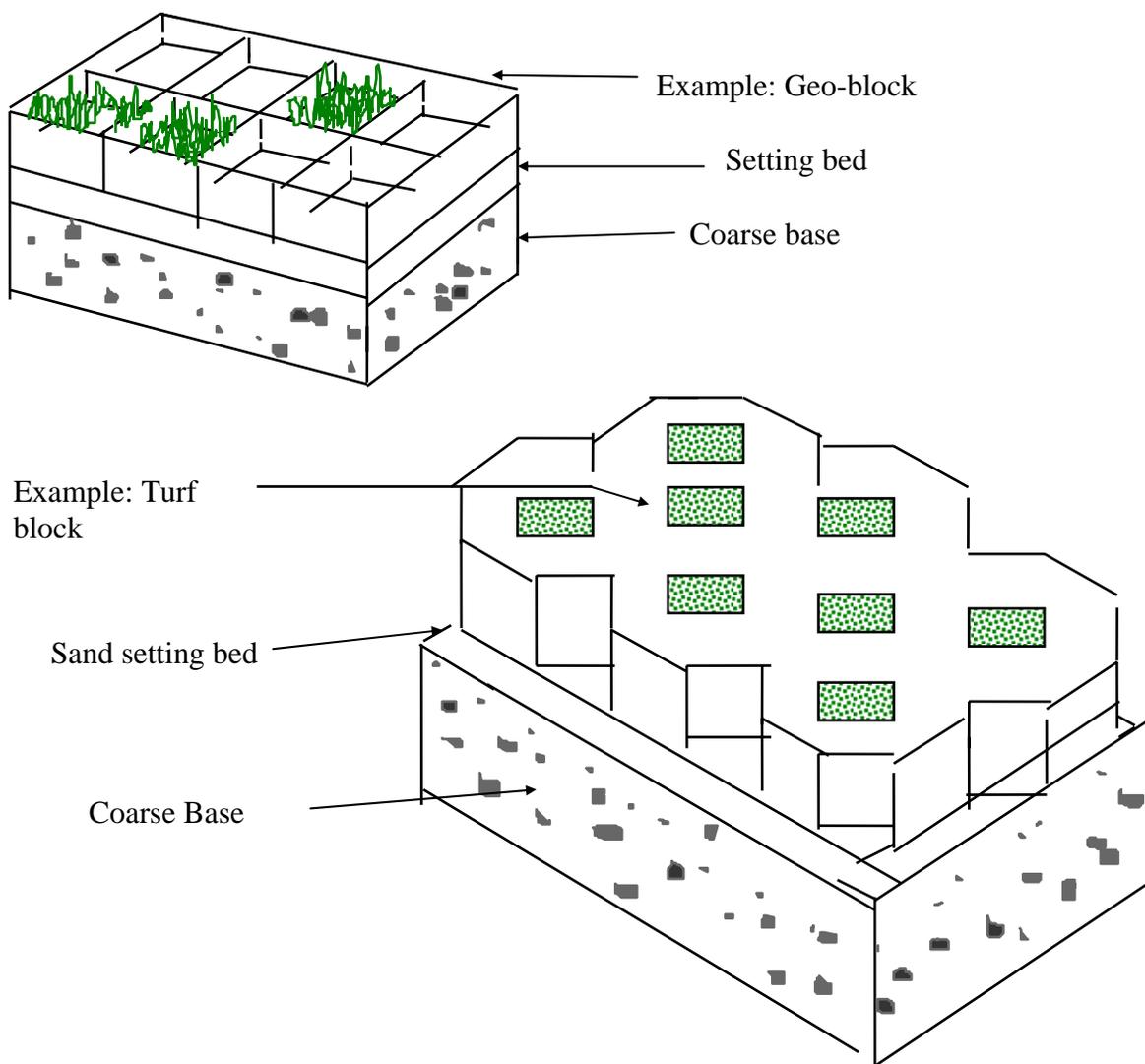


*BMP Source: City of Portland, Storm Water Management Manual, Revision #2, September 1, 2002.  
BMP is subject to change for the 2004 manual revisions. UIC determination is made by DEQ.*

# BMP not a UIC

## Simplified Approach Design Criteria Porous Pavement

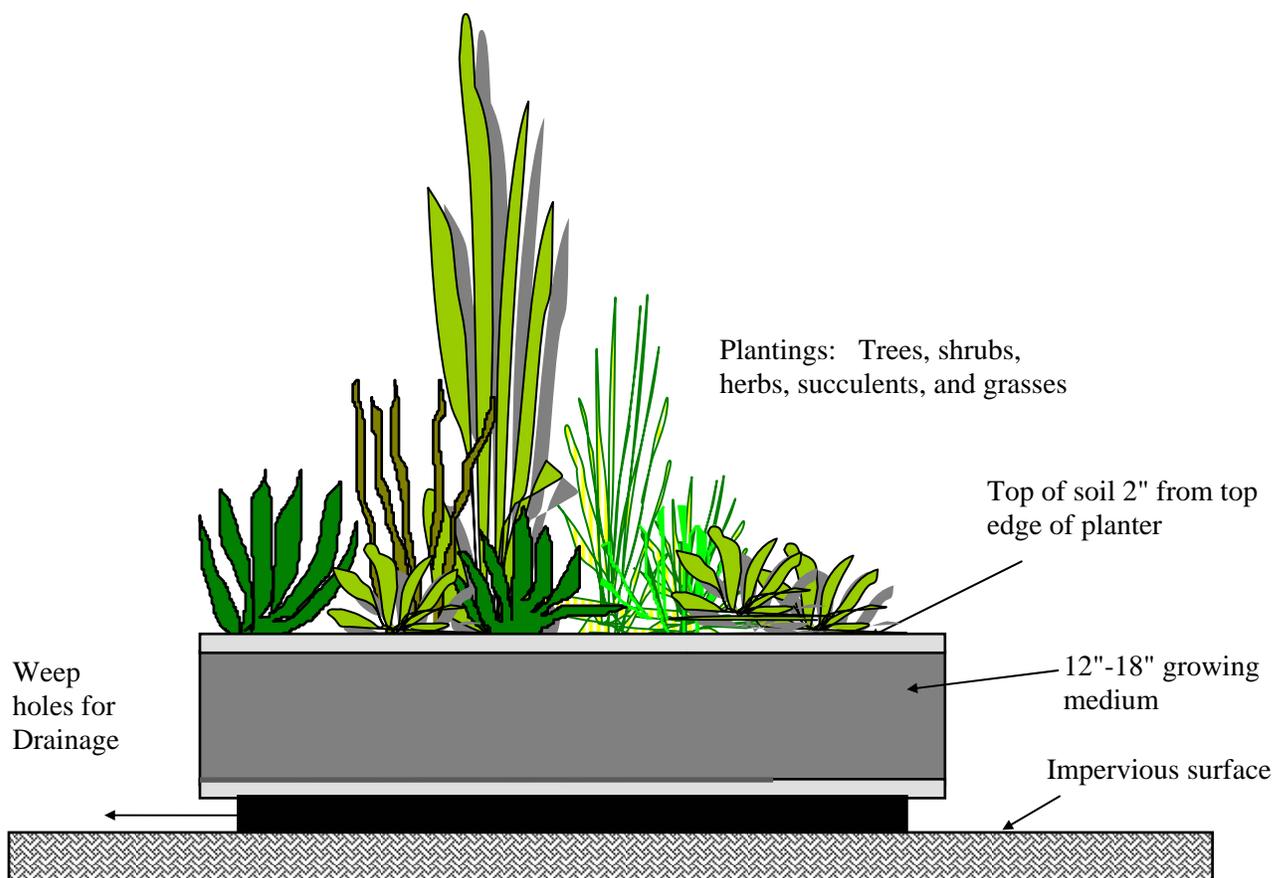
**Note:** Minimum/maximum dimensions and other specifications are product-specific and shall comply with manufacturer's recommendations.



*BMP Source: City of Portland, Storm Water Management Manual, Revision #2, September 1, 2002.  
BMP is subject to change for the 2004 manual revisions. UIC determination is made by DEQ.*

# BMP not a UIC

## Simplified Approach Design Criteria Contained Planter Box

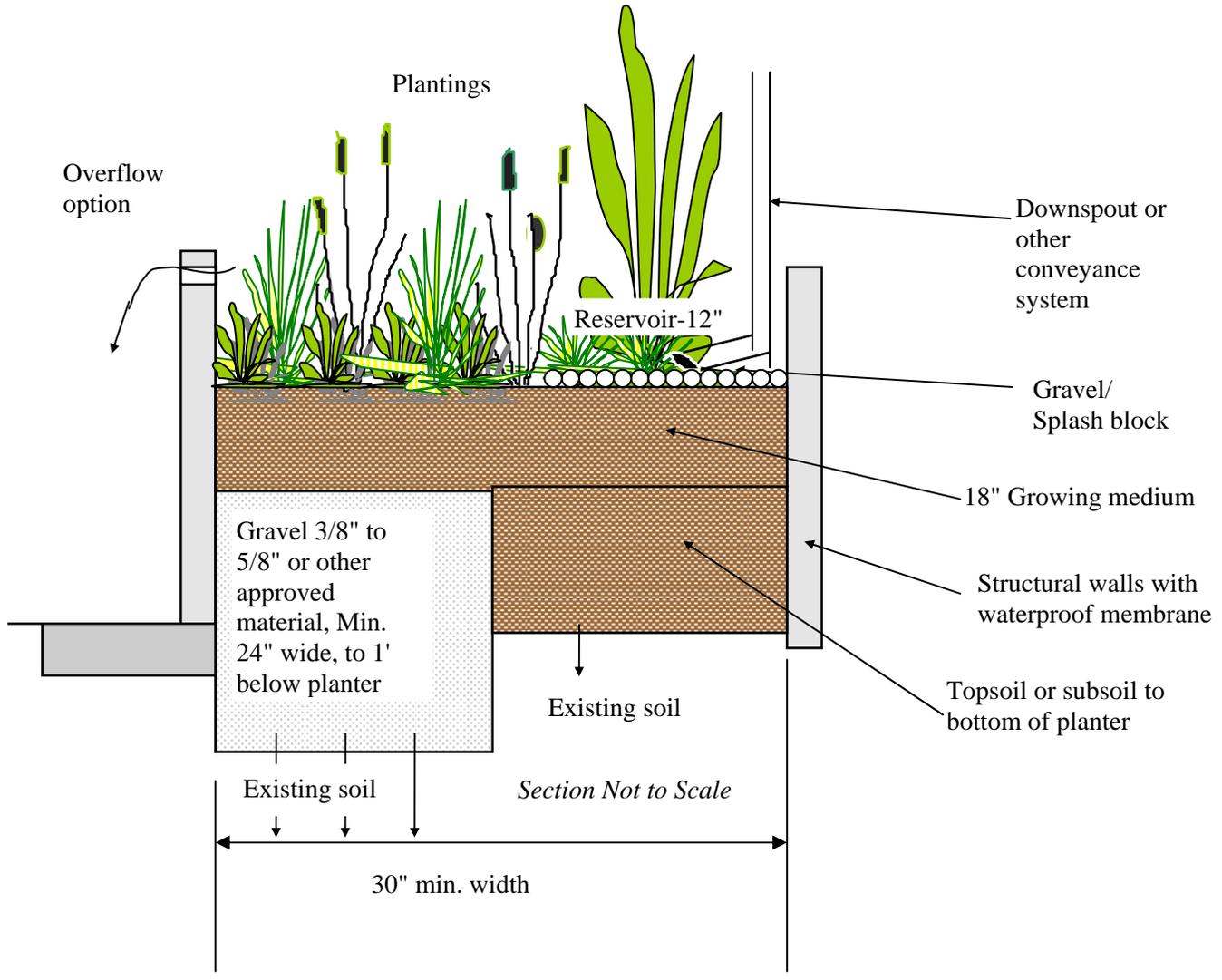


*Section Not to Scale*

*BMP Source: City of Portland, Storm Water Management Manual, Revision #2, September 1, 2002.  
BMP is subject to change for the 2004 manual revisions. UIC determination is made by DEQ.*

# BMP not a UIC

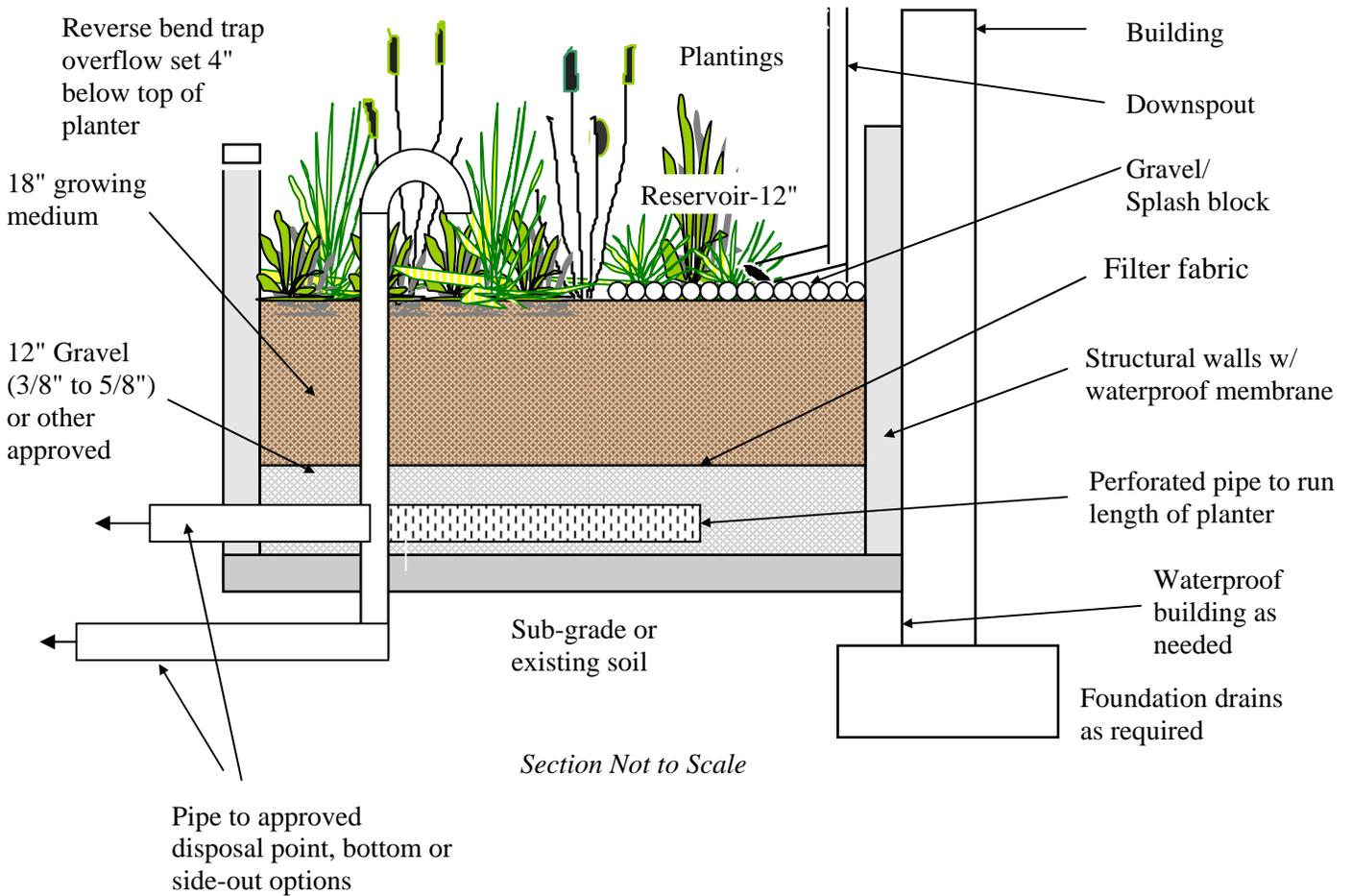
## Simplified Approach Design Criteria Infiltration Planter Box



*BMP Source: City of Portland, Storm Water Management Manual, Revision #2, September 1, 2002. BMP is subject to change for the 2004 manual revisions. UIC determination is made by DEQ.*

# BMP not a UIC

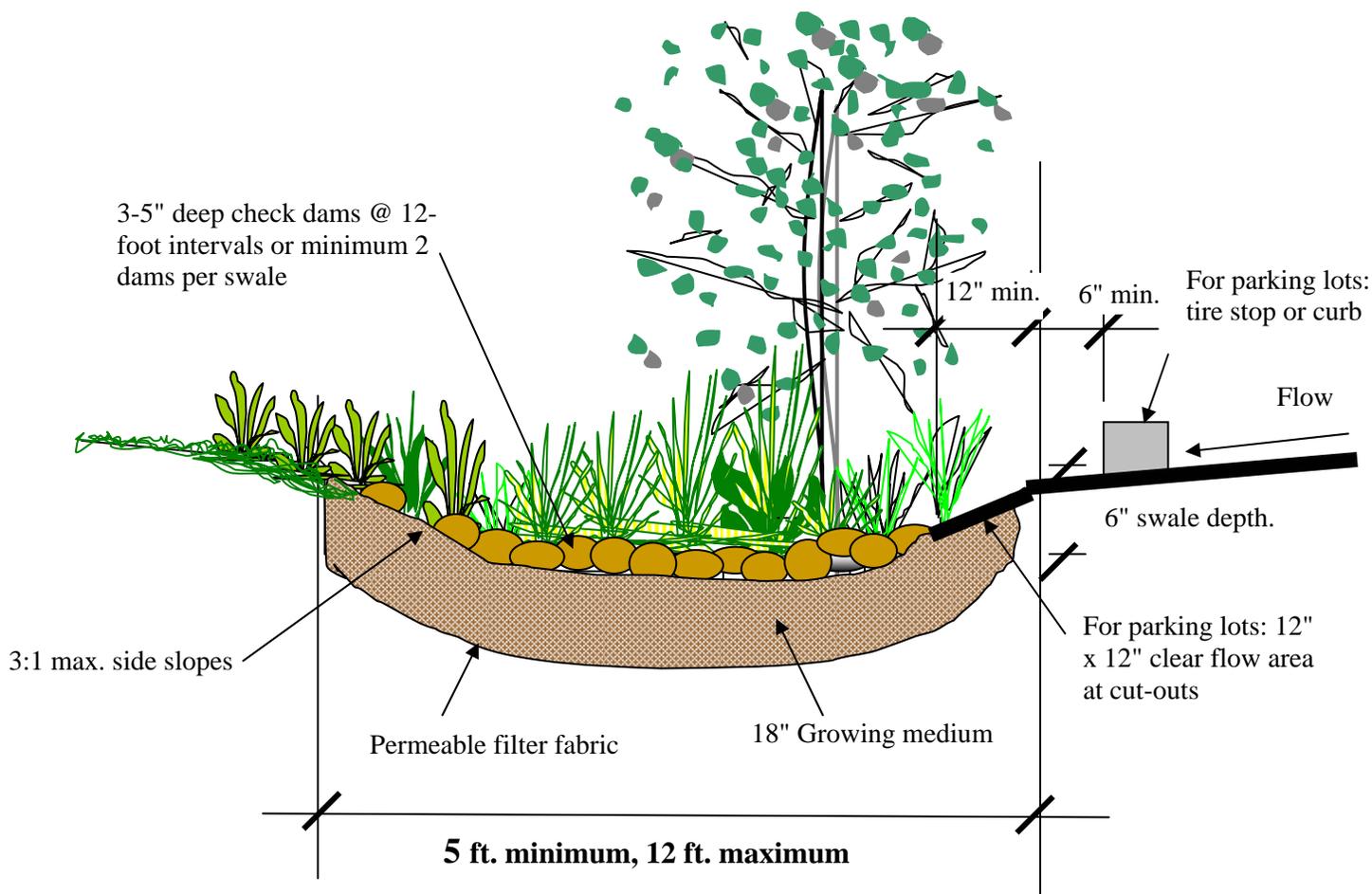
## Simplified Approach Design Criteria Flow-Through Planter Box



*BMP Source: City of Portland, Storm Water Management Manual, Revision #2, September 1, 2002. BMP is subject to change for the 2004 manual revisions. UIC determination is made by DEQ.*

# BMP not a UIC

## Vegetated Swale

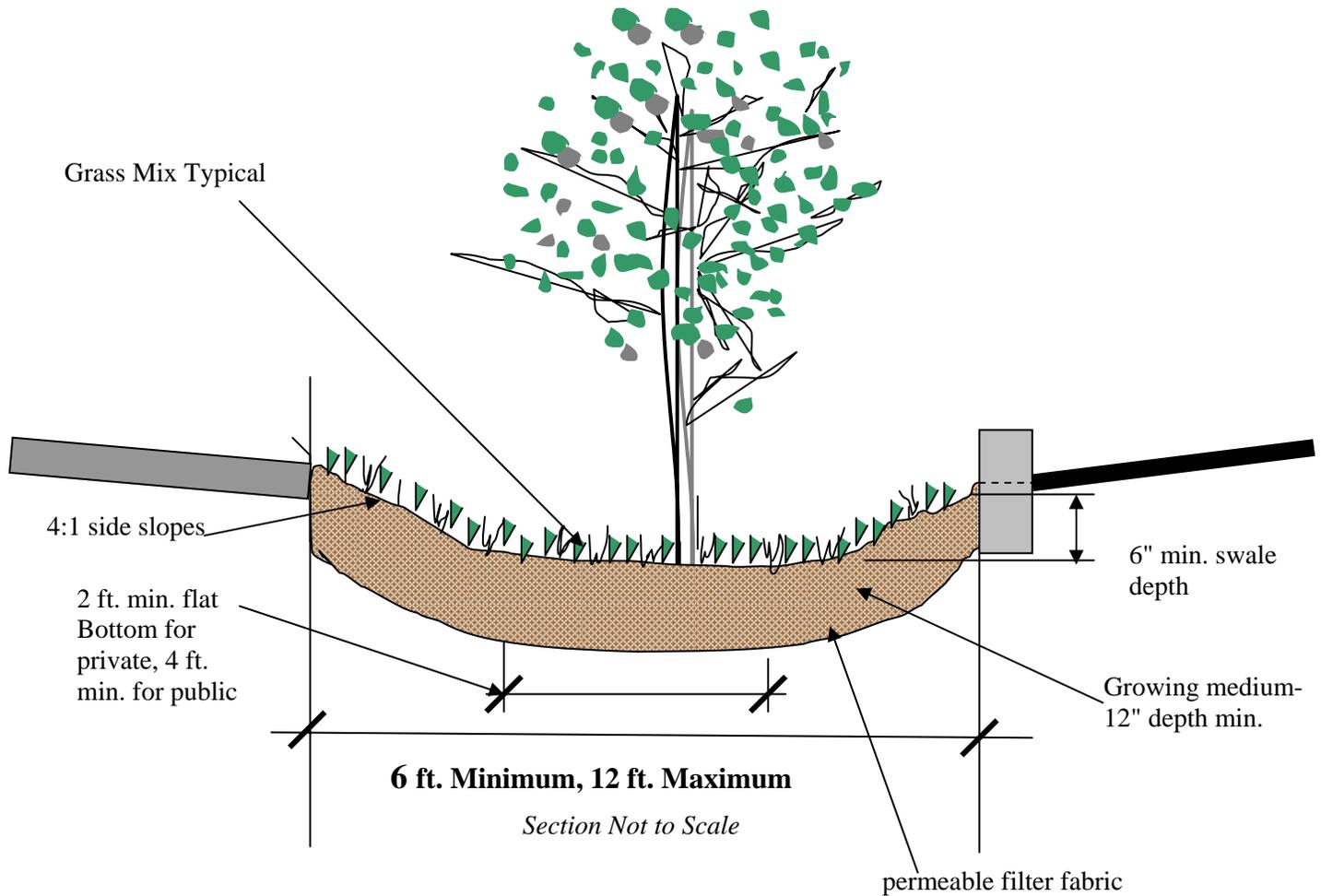


Section Not to Scale

BMP Source: City of Portland, Storm Water Management Manual, Revision #2, September 1, 2002.  
BMP is subject to change for the 2004 manual revisions. UIC determination is made by DEQ.

# BMP not a UIC

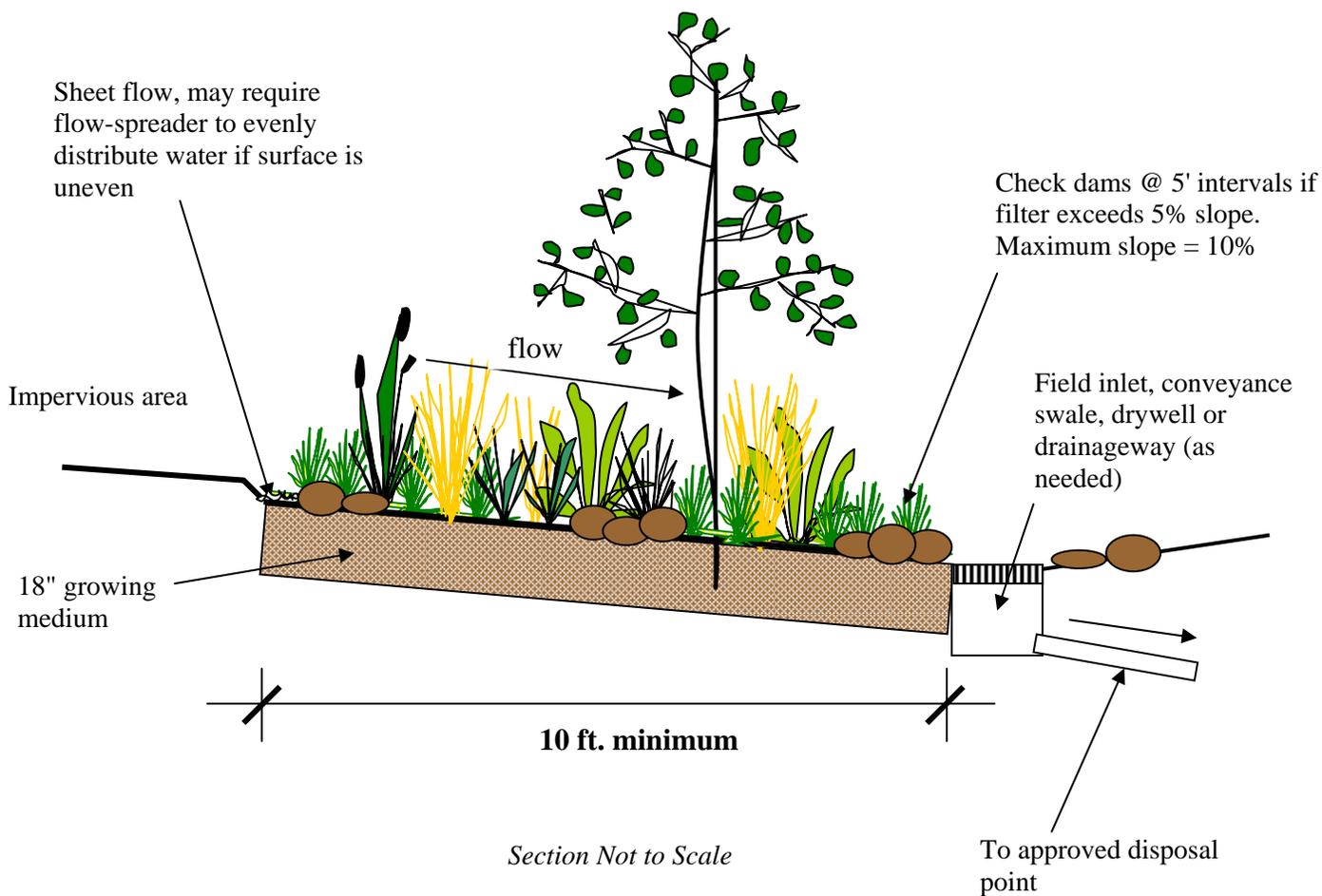
## Simplified Approach Design Criteria Grassy Swale



*BMP Source: City of Portland, Storm Water Management Manual, Revision #2, September 1, 2002. BMP is subject to change for the 2004 manual revisions. UIC determination is made by DEQ.*

# BMP not a UIC

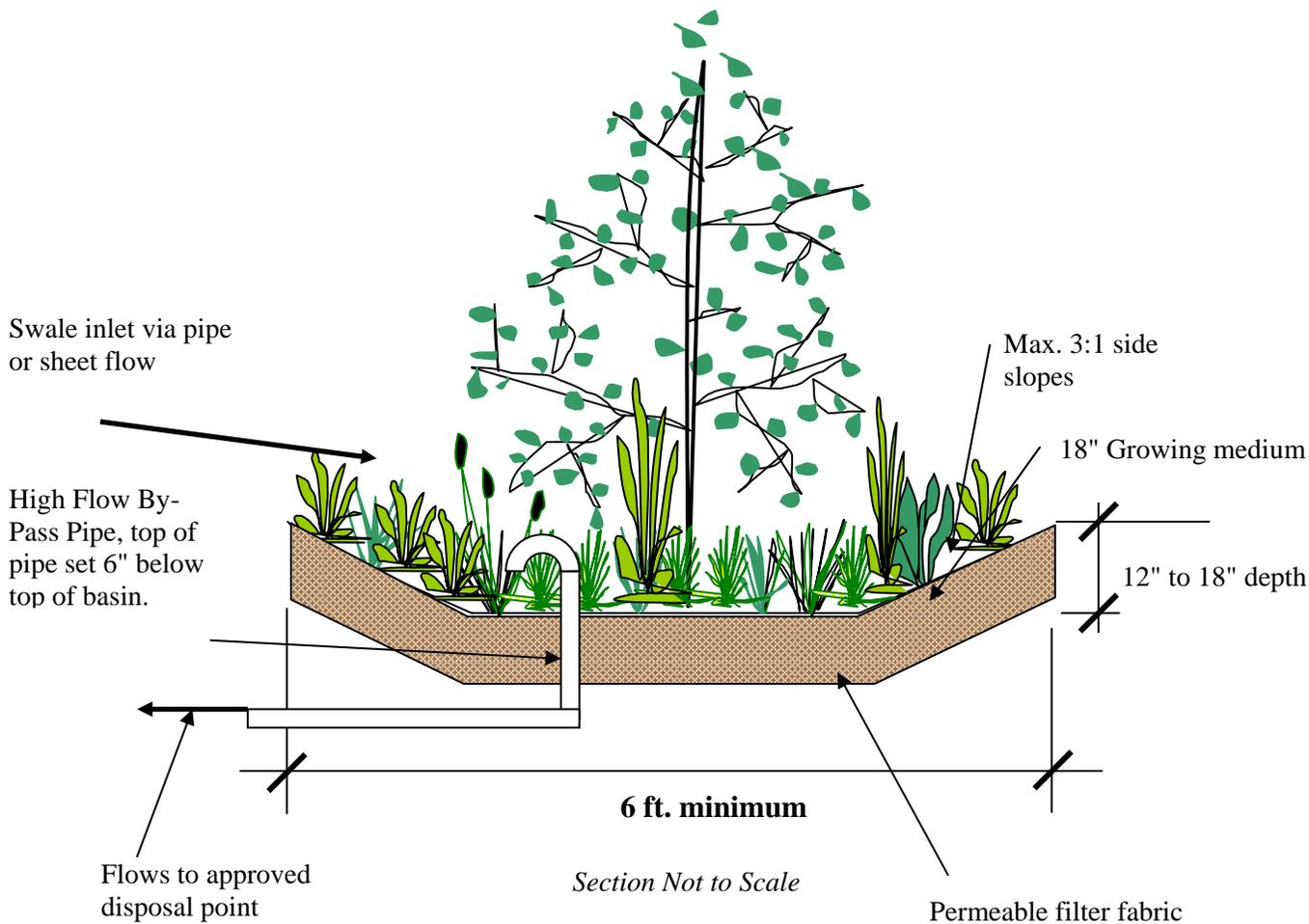
## Simplified Approach Design Criteria Vegetated Filter Strip



*BMP Source: City of Portland, Storm Water Management Manual, Revision #2, September 1, 2002.  
BMP is subject to change for the 2004 manual revisions. UIC determination is made by DEQ.*

# BMP not a UIC

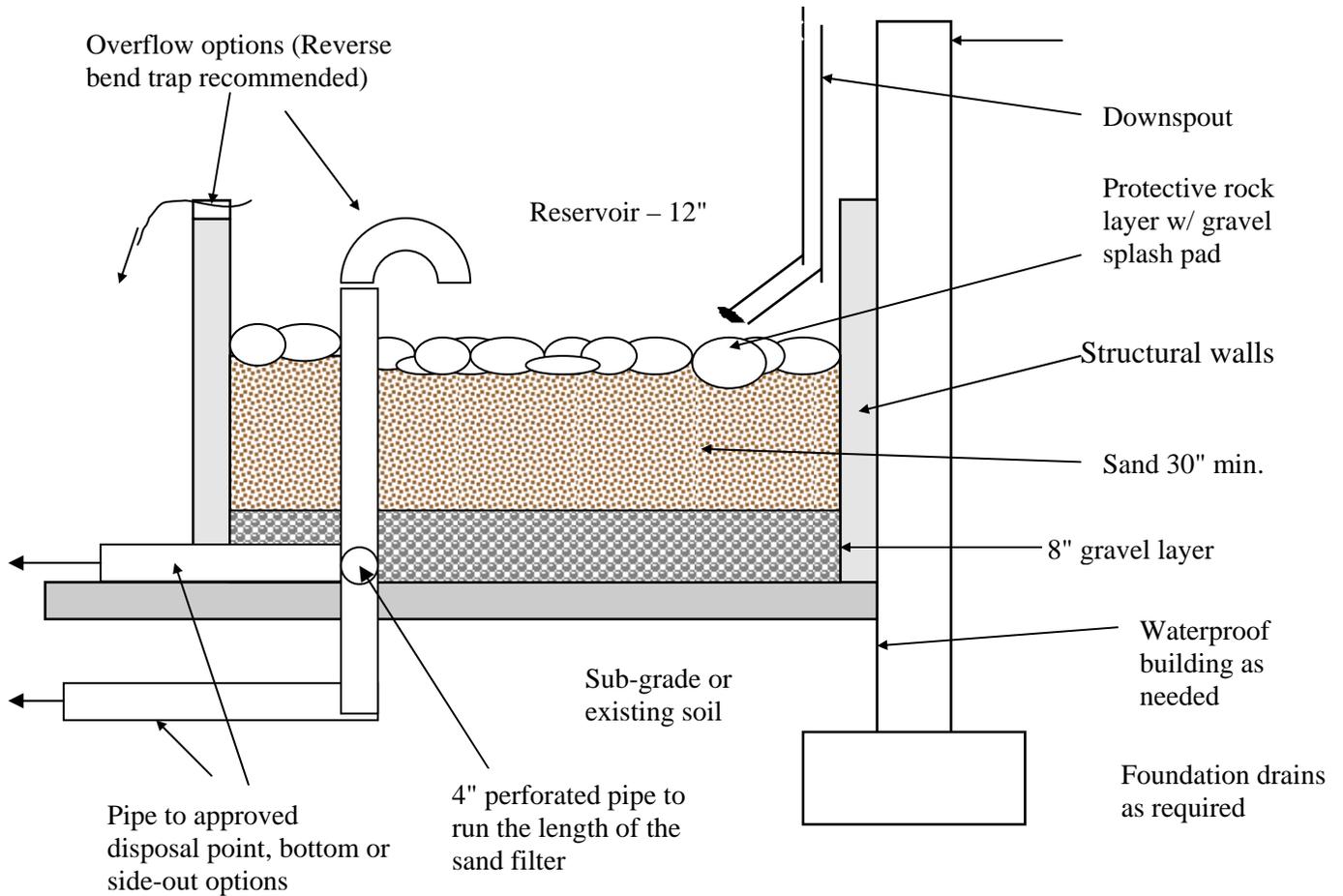
## Simplified Approach Design Criteria Vegetated Infiltration Basin



*BMP Source: City of Portland, Storm Water Management Manual, Revision #2, September 1, 2002. BMP is subject to change for the 2004 manual revisions. UIC determination is made by DEQ.*

# BMP not a UIC

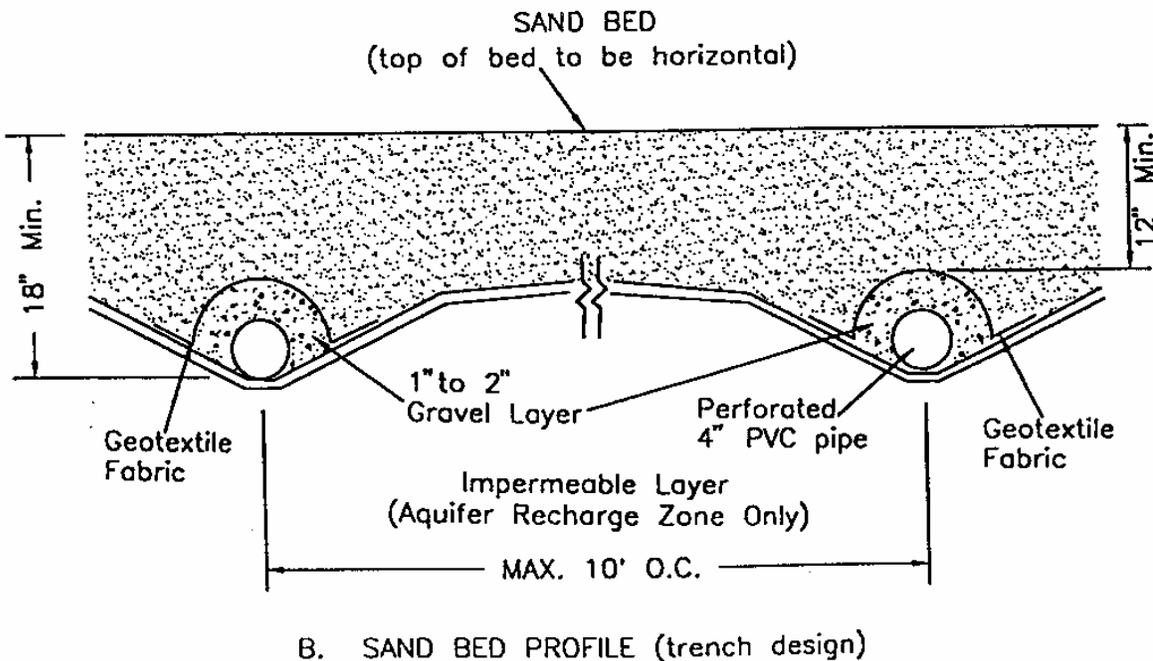
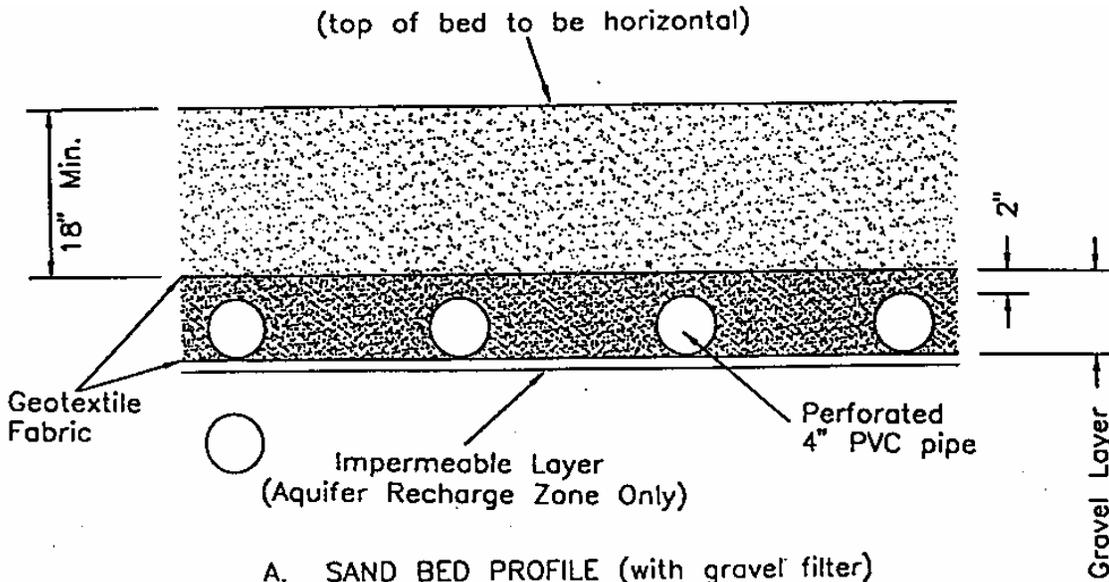
## Simplified Approach Design Criteria Sand Filter



*BMP Source: City of Portland, Storm Water Management Manual, Revision #2, September 1, 2002. BMP is subject to change for the 2004 manual revisions. UIC determination is made by DEQ.*

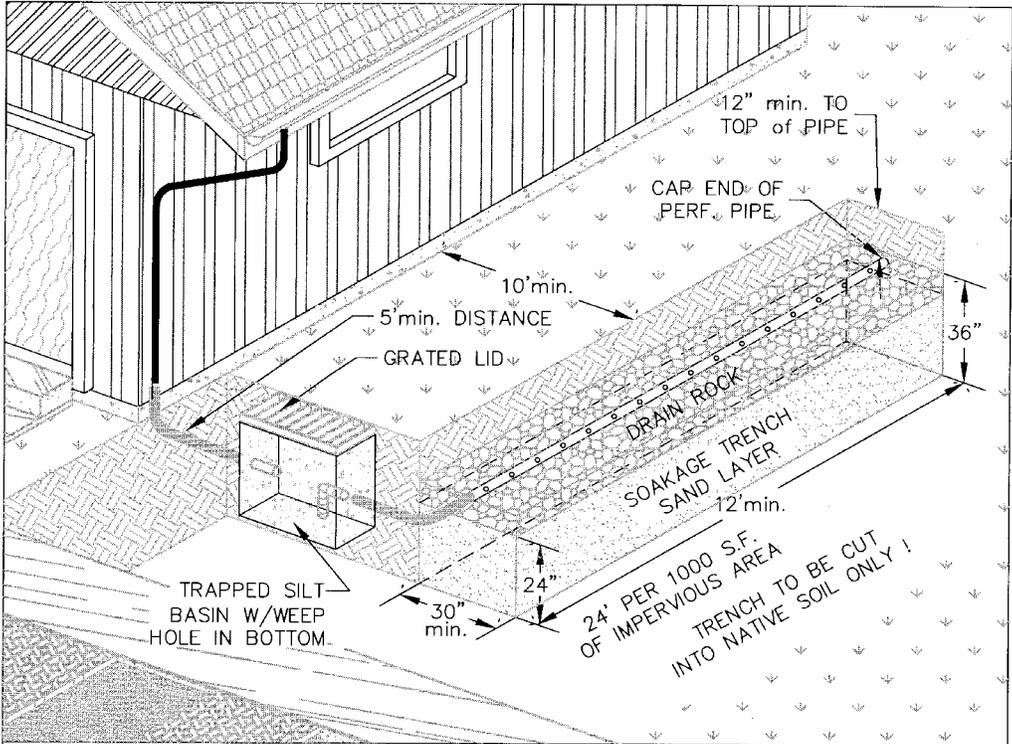
# BMP not a UIC

## Sand Bed



# BMP is a UIC

## Soakage Trench



<p style="text-align: center;"><b>TRAPPED SILT BASIN DETAIL</b></p> <p><b>NOTE: *</b> THE BOTTOM OF THE INLET PIPE MUST NOT BE LOWER THAN THE TOP OF THE OUTLET PIPE.</p>	<p style="text-align: center;"><b>SOAKAGE TRENCH CONSTRUCTION DETAIL</b></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; border: none; vertical-align: top;"> <p><b>STEP 1</b> FILL TRENCH WITH FILTER FABRIC AS SHOWN</p> </td> <td style="width: 33%; border: none; vertical-align: top;"> <p><b>STEP 2</b> ADD 24" AND FOLD ONE SIDE OF FABRIC OVER SAND</p> </td> <td style="width: 33%; border: none; vertical-align: top;"> <p><b>STEP 3</b> ADD 12 INCHES OF DRAIN ROCK PLACE PERF. PIPE AND COVER ALL.</p> </td> </tr> </table>	<p><b>STEP 1</b> FILL TRENCH WITH FILTER FABRIC AS SHOWN</p>	<p><b>STEP 2</b> ADD 24" AND FOLD ONE SIDE OF FABRIC OVER SAND</p>	<p><b>STEP 3</b> ADD 12 INCHES OF DRAIN ROCK PLACE PERF. PIPE AND COVER ALL.</p>
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