



# Small Construction Erosion Control Plan

## City of Kelso

The **Small Construction Erosion Control Plan** is an abbreviated plan for describing how a small construction site will be managed to prevent sediment and pollutants from leaving the site during construction. Sediment and pollutants from construction must be kept out of the City's drainage system, streets, streams, rivers, lakes, and wetlands.

The City-approved **Small Construction Erosion Control Plan** must be located at the construction site during construction and must be made available to a City inspector when requested. The property owner is responsible for implementing and maintaining the measures described in this plan. It is advisable to include the approved plan in the construction contract with the builder.

This plan template is intended for use by property owners and is not a substitute for Kelso Municipal Code. We have substituted some technical language contained in the code and engineering standards with plainer terms.

### ELIGIBLE PROJECTS:

The instructions in this plan template apply to new construction and additions/remodels that are eligible to use the **Abbreviated Stormwater Site Plan**.

### ELEMENTS OF ABBREVIATED STORMWATER SITE PLAN:

The **Small Construction Erosion Control Plan** is a required attachment to the **Abbreviated Stormwater Site Plan**. The plan consists of a narrative and drawing. Use the last page of this form (**Erosion Control Site Plan**) as a template for drawings.

Attach the completed plan (this form) and drawings to the **Abbreviated Stormwater Site Plan** and the Civil Permit application.

#### PROJECT SITE INFORMATION

Parcel #:

Address/Location:

#### APPLICANT/PROPERTY OWNER

Business Name:

Contact Name:

Mailing/Billing Address:

City

State

Zip

Phone Number:

Email:

#### AUTHORIZED REPRESENTATIVE OR CONTRACTOR (if applicable)

Business Name:

Contact Name:

Mailing/Billing Address:

City

State

Zip

Phone Number:

Email:

WA State License # (Not UB#):

Expiration Date:

City of Kelso Business License #

Expiration Date:

#### PROPERTY OWNER OR AUTHORIZED AGENT

I hereby certify that I have read and examined this application and know the same to be true and correct, and I am authorized to apply for this permit.

Signature:

Printed Name:

Date:

**Erosion Control Inspector**

Designate an Erosion Control Inspector who has the skills to assess the site conditions and construction activities that could impact stormwater quality. The inspector must be on-site or on-call at all times. The applicant or construction contractor may act as the Erosion Control Inspector.

The person identified below will be on-site or on-call at all times.

**Inspector Name:** \_\_\_\_\_

**Phone:** \_\_\_\_\_ **Alternate Phone:** \_\_\_\_\_

**Construction Schedule**

Determine the approximate start and end dates of construction.

Any clearing, grading, or construction from October 1 through April 30 shall only be permitted if shown to the satisfaction of the City that silt-laden runoff will be prevented from leaving the site through proper use of best management practices (BMPs).

**Start Date:** \_\_\_\_\_ **End Date:** \_\_\_\_\_

Describe any construction activities that will occur between October 1 and April 30:

**SITE NARRATIVE:**

The site narrative describes the site and expected construction activities. The site narrative is contained in Section 1: Site and Project Description of the **Abbreviated Stormwater Site Plan**.

Section 1 of the **Abbreviated Stormwater Site Plan** is attached.

Calculate the project impacts.



	<b>Impact</b>	<b>Impact</b>
A	Total land disturbed	(sq. ft.)
B	Total volume of proposed cut and fill	(cu. ft.)




**EROSION CONTROL REQUIREMENTS:**


The applicant and contractor must prevent eroded soils from leaving the site during construction.



At least one BMP for each of the 13 requirements below must be selected, unless the element is not applicable.



To select the appropriate BMP, review the applicability and design requirements on the **Erosion Control Site Plan** template or in the Stormwater Management Manual for Western Washington (SWMMWW), Volume II (<https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Stormwater-permittee-guidance-resources/Stormwater-manuals>).



This form includes the most common erosion control BMPs for small construction sites. The BMPs detailed on the **Erosion Control Site Plan** template are marked with . Refer to the SWMMWW for BMPs marked with a . Other approved BMPs from the SWMMWW may also be used.


Element #1: Preserve Vegetation and Mark Clearing Limits	
<i>Requirements</i>	<i>Select One or More BMPs</i>
Prior to clearing and construction, install highly visible fence to show the limits of construction activity and to protect vegetation and soils to be preserved. Use orange construction fence, chain link fence, or high visibility silt fence.	<input type="checkbox"/> C101 Preserving Natural Vegetation  <input type="checkbox"/> C103 High Visibility Fence  <input type="checkbox"/> C233 High Visibility Silt Fence – high visibility silt fence can act as both perimeter marking <i>and</i> sediment control (Element #4) (See WSDOT standard detail I-30.17-00) 
Show selected BMPs on the Erosion Control Site Plan.	


Element #2: Construction Access	
<i>Requirements</i>	<i>Use the Following BMP</i>
<p>Keep the street outside of the construction site clean by establishing and monitoring a single construction entrance. Restrict all traffic into the site to one entrance.</p> <p>If an existing driveway will be used, sweep and pick up dirt and debris from the driveway at the end of construction each day. Do not sweep into the street or drainage system.</p> <p>For sites without an existing driveway, use a gravel construction entrance.</p>	<input type="checkbox"/> C105 Stabilized Construction Entrance/Exit  <input type="checkbox"/> N/A (explain):
Show the BMP on the Erosion Control Site Plan.	



Element #3: Control Flow Rates	
<i>Requirements</i>	<i>Choose One or More BMPs</i>
Protect slopes, ditches, properties, and waterways downstream of the construction site from erosion due to increases in volume and velocity of stormwater runoff from the site.	<input type="checkbox"/> C209 Outlet Protection  <input type="checkbox"/> C235 Wattles (See WSDOT standard detail I-30.30-02)  <input type="checkbox"/> N/A (explain):
Show selected BMPs on the Erosion Control Site Plan.	




Element #4: Sediment Control		
<i>Requirements</i>	<i>Select One or More BMPs</i>	
<p>Prior to leaving a construction site, runoff from disturbed areas must pass through a sediment removal device.</p> <p>Sediment barriers are used to slow stormwater and allow the sediment to settle out behind the barrier.</p> <p>Install/construct the sediment control BMP before site grading.</p>	<input type="checkbox"/> C103 High Visibility Silt Fence – high visibility silt fence can act as both perimeter marking <i>and</i> sediment control (Element #4) (See WSDOT standard detail I-30.17-00) <input type="checkbox"/> C235 Wattles (See WSDOT standard detail I-30.30-02) <input type="checkbox"/> N/A (explain):	 
Show the selected BMP(s) on the Erosion Control Site Plan.		


Element #5: Stabilize Soils		
<i>Requirements</i>	<i>Select One or More BMPs</i>	
<p>Soils without grass or other vegetation can easily erode. Exposed soils must be protected from rain and flowing water. Soils are protected by covering them with various materials, such as grass/sod, tarp, compost, or mulch.</p> <p>Check one or both options below:</p> <p><input type="checkbox"/> Construction will take place during the dry season (May 1 to September 30). No soils shall remain exposed and unworked for more than 7 days.</p> <p><input type="checkbox"/> Construction will take place during the wet season (October 1 through April 30). No soils shall remain exposed and unworked for more than 2 days.</p>	<input type="checkbox"/> C121 Mulching <input type="checkbox"/> C123 Plastic Covering/Tarp Covering <input type="checkbox"/> N/A (explain):	 
Show the selected BMP(s) on the Erosion Control Site Plan.		



Element #6: Protect Slopes		
<i>Requirements</i>	<i>Use the Following BMP</i>	
<p>Design and construct cut and fill slopes in a way that minimizes the potential for erosion.</p>	<input type="checkbox"/> C121 Mulching <input type="checkbox"/> N/A (explain):	
Show the selected BMP(s) on the Erosion Control Site Plan.		

Element #7: Protect Drain Inlets		
<i>Requirements</i>	<i>Use the Following BMP</i>	
Protect all storm drain inlets and catch basins in the road near the site during construction. Prevent runoff from the site from entering the inlets without first being filtered to remove sediment.  Install catch basin protection on all catch basins within 500 feet downstream of the project.	<input type="checkbox"/> C220 Storm Drain Inlet Protection (See WSDOT standard detail I-40.20-00) <input type="checkbox"/> N/A (explain):	
Show the selected BMP(s) on the Erosion Control Site Plan.		

Element #8: Stabilize Channels and Outlets		
<i>Requirements</i>	<i>Select One or More BMPs</i>	
Stabilize all temporary and permanent conveyance channels and their outlets. If a ditch or pipe from the site discharges to a ditch in the street or to a stream, outlet protection must be used.	<input type="checkbox"/> C207 Check Dams (See WSDOT standard detail I-50.20-01) <input type="checkbox"/> C209 Outlet Protection <input type="checkbox"/> N/A (explain):	  
Show the selected BMP(s) on the Erosion Control Site Plan.		

Element #9: Control Pollutants		
<i>Requirements</i>	<i>Select One or More BMPs</i>	
Handle and dispose of all pollutants, including demolition debris and other solid wastes, to keep them out of rain and flowing water.  Provide cover and containment for all chemicals, liquid products (including paint), petroleum products, and other materials. Apply fertilizers and pesticides following manufacturers' instructions for application rates and procedures. Handle all concrete and concrete waste appropriately.	<input type="checkbox"/> C151 Concrete Handling <input type="checkbox"/> C152 Sawcutting and Surface Pollution Prevention <input type="checkbox"/> C153 Materials Delivery, Storage, and Containment <input type="checkbox"/> N/A (explain):	  
Show location(s) of materials delivery, storage, and handling areas on Erosion Control Site Plan.		

Element #10 – Control Dewatering		
<i>Requirements</i>	<i>BMPs</i>	
Many small sites will not require dewatering.	If dewatering is needed consult the SWMMWW Vol. II, Ch. II, Section 3.3 and list the selected BMPs below:	
Show location(s) of selected BMP(s) on the Erosion Control Site Plan.		

 Refer to the SWMMWW     Refer to the Erosion Control Site Plan template

Refer to the Kelso Engineering Design Manual, online at [www.kelso.gov/engineering/engineering-documents](http://www.kelso.gov/engineering/engineering-documents), for more information or clarification of stormwater requirements within Kelso. You may also contact the City of Kelso's Engineering Department at (360) 423-6590 or at [engineering@kelso.gov](mailto:engineering@kelso.gov).

<b>Element #11: Maintain BMPs</b>	
<i>Requirements</i>	<i>Select One or More BMPs</i>
<p>Maintain and repair BMPs as needed. The designated Erosion Control Inspector (see page 2) should inspect all BMPs at least weekly and after every storm event. Keep an inspection log on site and available for review by the City inspector at all times.</p> <p>Remove all temporary erosion and sediment control BMPs within 30 days after final site stabilization or if the BMP is no longer needed. Any trapped sediment should be removed or stabilized on the site. No sediment shall be discharged into the street storm drainage system or streams, lakes, rivers, or wetlands.</p> <p>Keep a small supply of materials on hand, such as an extra tarp or plastic covering, filled sandbags, wattles, and any materials needed to repair or stabilize any of the BMPs selected for the project.</p>	<input type="checkbox"/> C150 Materials On Hand <input type="checkbox"/> C160 Certified Erosion and Sediment Control Lead

<b>Element #12: Manage the Project</b>	
<i>Requirements</i>	<i>Select One or More BMPs</i>
<p>Coordinate all work before initial construction with subcontractors and other utilities to ensure no areas are prematurely worked. The Erosion Control and Pollution Prevention measures must be installed in the order described in the Scheduling of BMP Installation section, below.</p>	<input type="checkbox"/> C150 Materials On Hand <input type="checkbox"/> C160 Certified Erosion and Sediment Control Lead <input type="checkbox"/> C162 Scheduling (see page 7)

<b>Element #13: Protect Low Impact Development BMPs</b>	
<i>Requirements</i>	<i>Select One or More BMPs</i>
<p>Protect LID BMPs from compaction, erosion, and sedimentation during construction. LID BMPs include Rain Garden, Dispersion (all kinds), Roof Downspout Full Infiltration, Permeable Pavement, and Perforated Stub-out Connections.</p>	<input type="checkbox"/> C103 High Visibility Fence <input type="checkbox"/> C207 Check Dams (See WSDOT standard detail I-50.20-01) <input type="checkbox"/> C233 Silt Fence (See WSDOT standard detail I-30.15-02) <input type="checkbox"/> N/A (explain):
<p>Show location(s) of selected BMP(s) on the Erosion Control Site Plan.</p>	

**Scheduling of BMP Installation**

*Prior to Clearing and Construction*

- 1. Mark clearing limits (Element #1)
- 2. Install or designate stabilized construction entrance (Element #2)
- 3. Install protection for drainage systems and sediment control (Elements #3, #4, and #7)
- 4. Designate staging areas for storage and handling of materials (Element #9)

*With Land Disturbance, As Areas are Disturbed*

- 5. Install sediment control
- 6. Stabilize unworked soils
- 7. Protect slopes and channels
- 8. Maintain BMPs

*After Construction*

- 9. Continue to maintain BMPs until the site is stabilized with vegetation
- 10. Remove BMPs within 30 days after site stabilization

**EROSION CONTROL SITE PLAN:**

The **Erosion Control Site Plan** is a drawing which shows the location of the proposed BMPs.

Submit the **Erosion Control Site Plan** on the provided template or on 8½ x 11 or 11 x 17 paper. The site plan may be either drawn by hand or drafted electronically.

The **Erosion Control Site Plan** must show the location of improvements, grading, filling, and erosion control BMPs. Show the following listed items on the site plan.

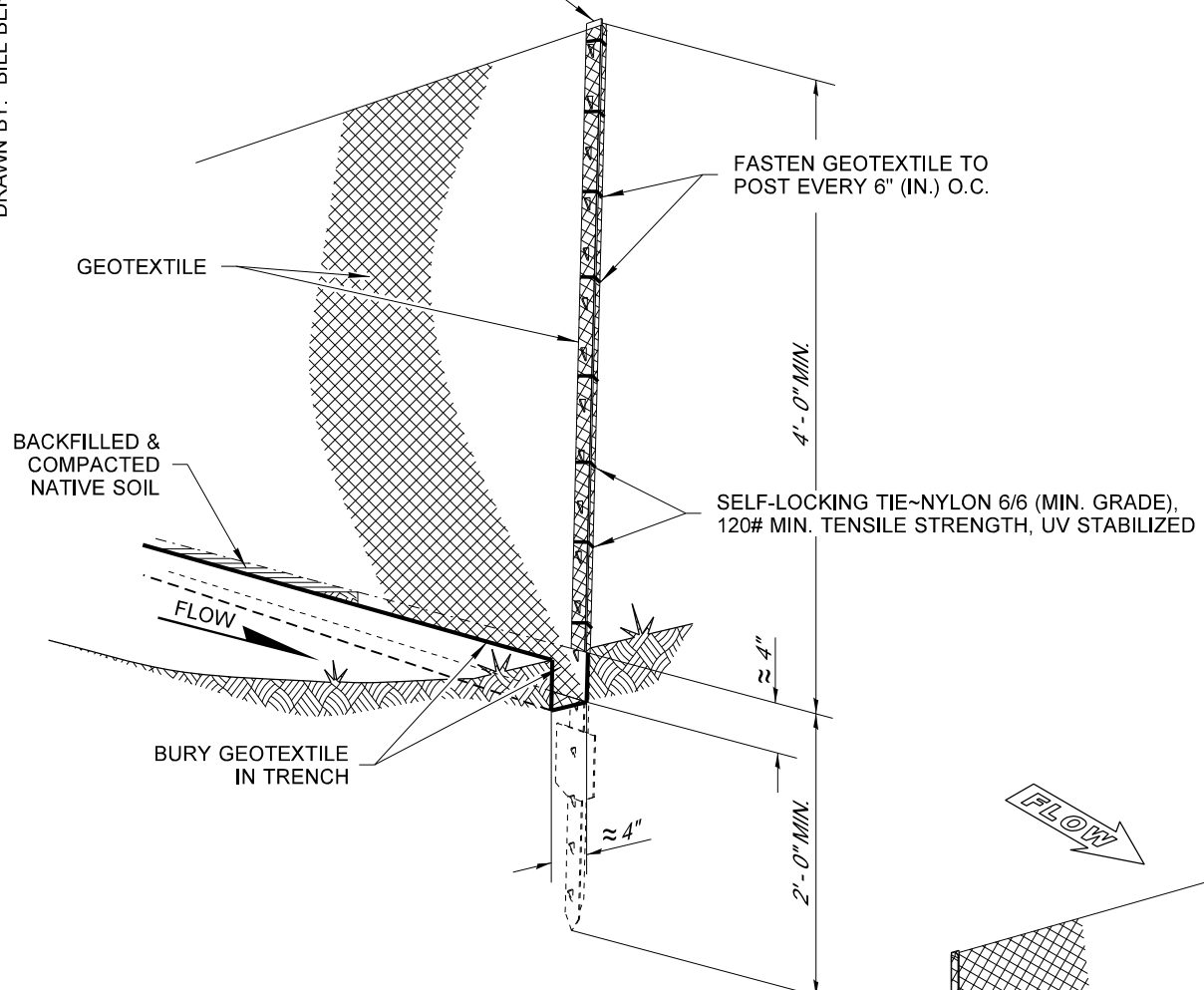
<b>Applicant Use</b>	<b>Required Elements</b>	<b>City Use</b>
<input type="checkbox"/>	Site address and/or parcel number	<input type="checkbox"/>
<input type="checkbox"/>	North arrow	<input type="checkbox"/>
<input type="checkbox"/>	Legend (if symbols are used)	<input type="checkbox"/>
<input type="checkbox"/>	Property boundary and dimensions	<input type="checkbox"/>
<input type="checkbox"/>	Adjoining street names	<input type="checkbox"/>
<input type="checkbox"/>	Location of highest and lowest elevations and arrows indicating slope (from high to low ground)	<input type="checkbox"/>
<input type="checkbox"/>	Areas that are to be cleared and/or graded	<input type="checkbox"/>
<input type="checkbox"/>	Cut and fill slopes, indicating top and bottom	<input type="checkbox"/>
<input type="checkbox"/>	Locations where upstream water enters the site	<input type="checkbox"/>
<input type="checkbox"/>	Existing surface water flow direction(s)	<input type="checkbox"/>
<input type="checkbox"/>	Location and direction of flow in all ditches, swales, pipes	<input type="checkbox"/>
<input type="checkbox"/>	Identify and locate all areas to be protected or preserved (vegetation protection, LID protection)	<input type="checkbox"/>
<input type="checkbox"/>	Identify and locate all BMPs described in the Erosion Control Plan	<input type="checkbox"/>
<input type="checkbox"/>	Post-construction soil amendment, if required	<input type="checkbox"/>





DRAWN BY: BILL BERENS

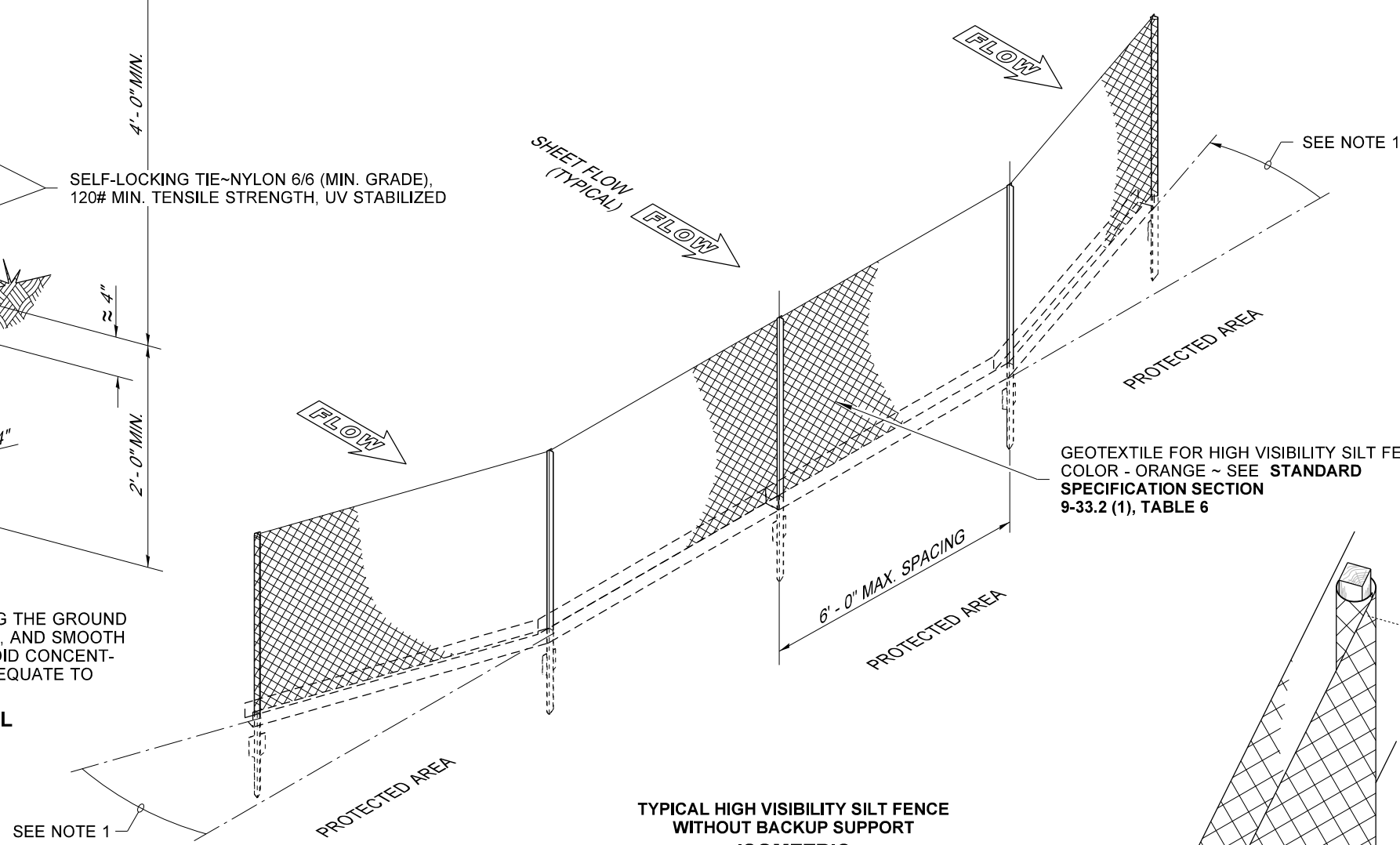
POST ~ SEE STANDARD SPECIFICATION, SECTION 8-01.3(9)A



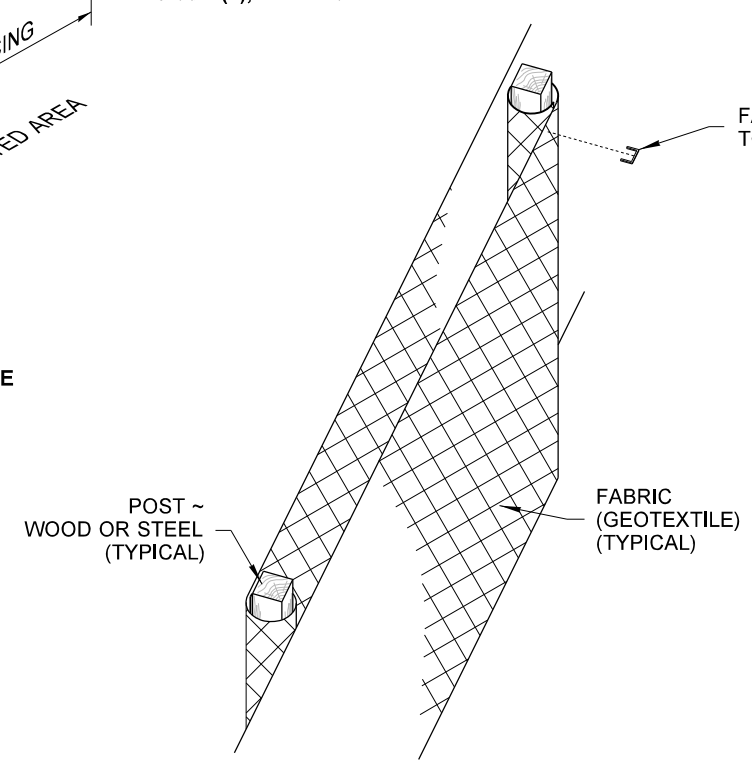
**NOTE**

DURING EXCAVATION, MINIMIZE DISTURBING THE GROUND AROUND TRENCH AS MUCH AS IS FEASIBLE, AND SMOOTH SURFACE FOLLOWING EXCAVATION TO AVOID CONCENTRATING FLOWS. COMPACTION MUST BE ADEQUATE TO PREVENT UNDERCUTTING FLOWS.

**TYPICAL INSTALLATION DETAIL**  
(STEEL POSTS SHOWN)



**TYPICAL HIGH VISIBILITY SILT FENCE WITHOUT BACKUP SUPPORT ISOMETRIC**  
(STEEL POSTS SHOWN)



**SPLICE DETAIL**  
(WOOD POSTS SHOWN)

SPLICED FENCE SECTIONS SHALL BE CLOSE ENOUGH TOGETHER TO PREVENT SILT LADEN WATER FROM ESCAPING THROUGH THE FENCE AT THE OVERLAP. JOINING SECTIONS SHALL NOT BE PLACED IN LOW SPOTS OR IN SUMP LOCATIONS.

**NOTES**

1. Angle Terminal end uphill 24" (in) to 48" (in) to prevent flow around fence (Typical).
2. Perform maintenance in accordance with **Standard Specification, Sections 8-01.3(9)A and 8-01.3(15)**.
3. Splices shall never be placed in low spots or sump locations. If splices are located in low or sump areas, the fence may need to be reinstalled unless the Project Engineer approves the installation.
4. Install silt fencing parallel to mapped contour lines.



**HIGH VISIBILITY SILT FENCE**  
**STANDARD PLAN I-30.17-01**

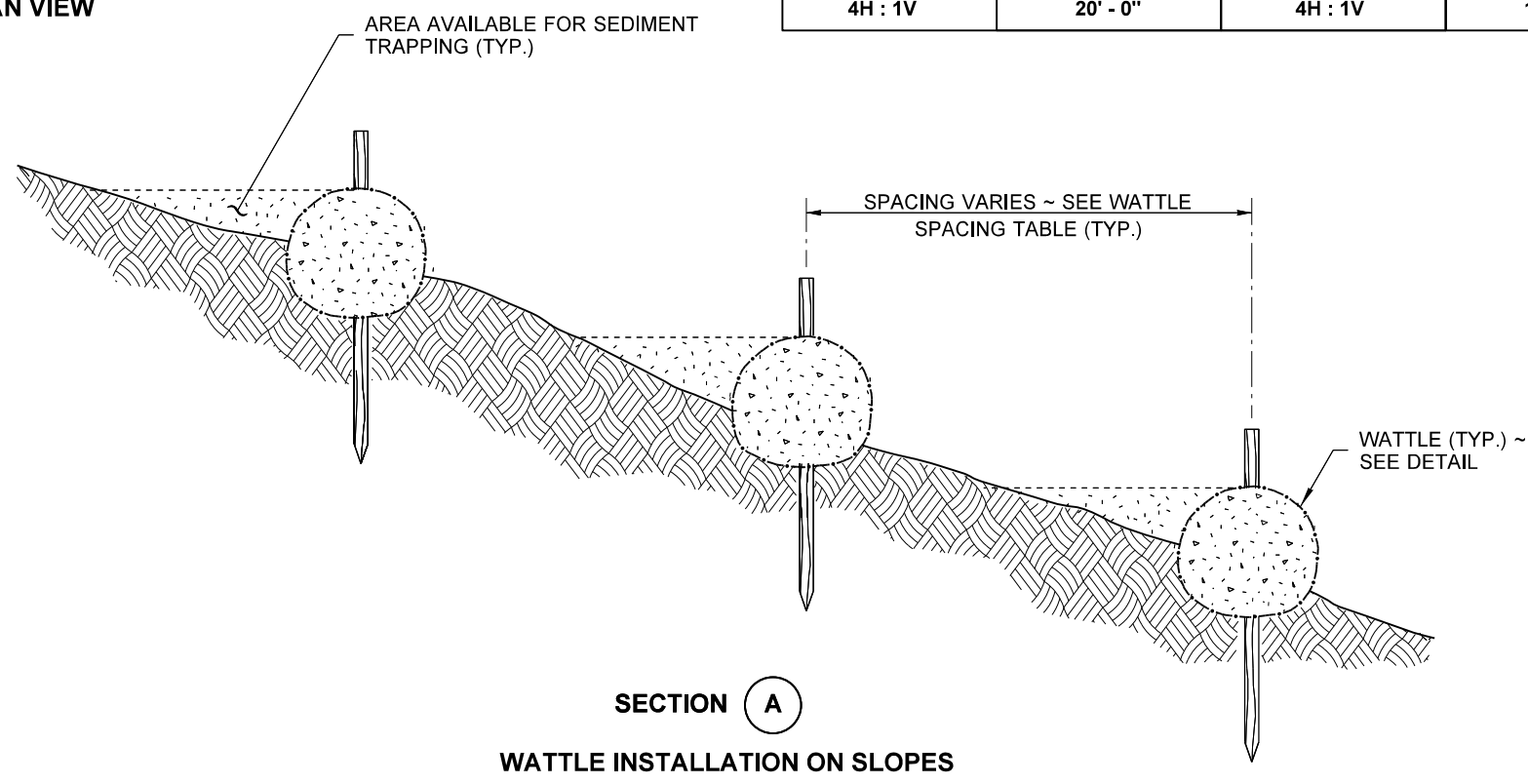
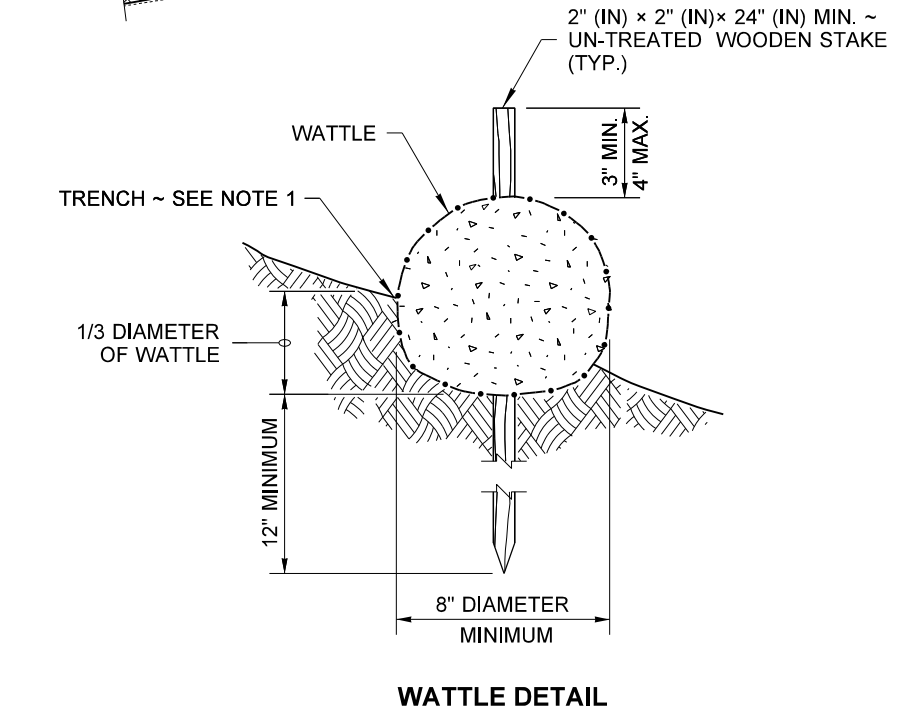
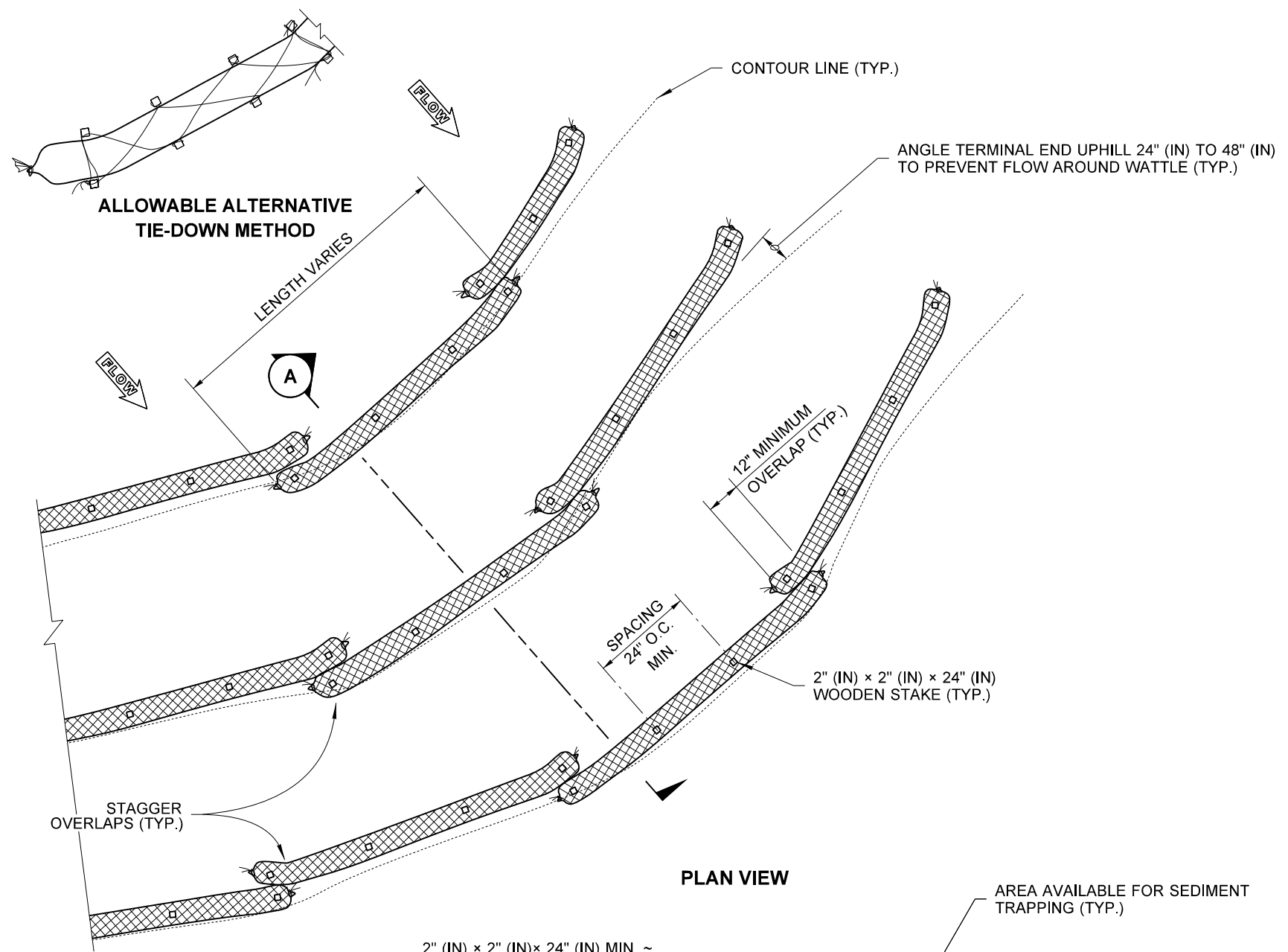
SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

STATE DESIGN ENGINEER  
Washington State Department of Transportation



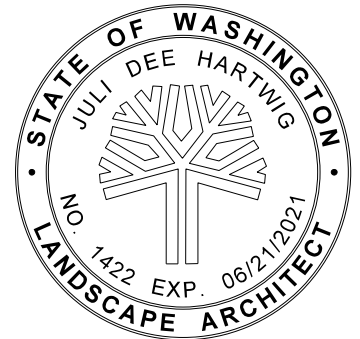
DRAWN BY: FERN LIDDELL



WATTLE SPACING TABLE			
TEMPORARY		PERMANENT	
8" - 10" OR 10" - 12" DIAM.		10" - 12" DIAM.	
SLOPE	MAX. SPACING	SLOPE	MAX. SPACING
1H : 1V	5' - 0"	-	-
2H : 1V	10' - 0"	2H : 1V	5' - 0"
3H : 1V	15' - 0"	3H : 1V	10' - 0"
4H : 1V	20' - 0"	4H : 1V	15' - 0"

**NOTES**

1. Wattles shall be in accordance with **Standard Specification, Section 9-14.5(5)**. Install Wattles along contours. Installation shall be in accordance with **Standard Specification, Section 8-01.3(10)**.
2. Securely knot each end of Wattle. Overlap adjacent Wattle ends 12" (in) behind one another and securely tie together.
3. Compact excavated soil and trenches to prevent undercutting. Additional staking may be necessary to prevent undercutting.
4. Install Wattle perpendicular to flow along contours.
5. Wattles shall be inspected regularly, and immediately after a rainfall produces runoff, to ensure they remain thoroughly entrenched and in contact with the soil.
6. Perform maintenance in accordance with **Standard Specification, Section 8-01.3(15)**.
7. Refer to **Standard Specification, Section 8-01.3(16)** for removal.



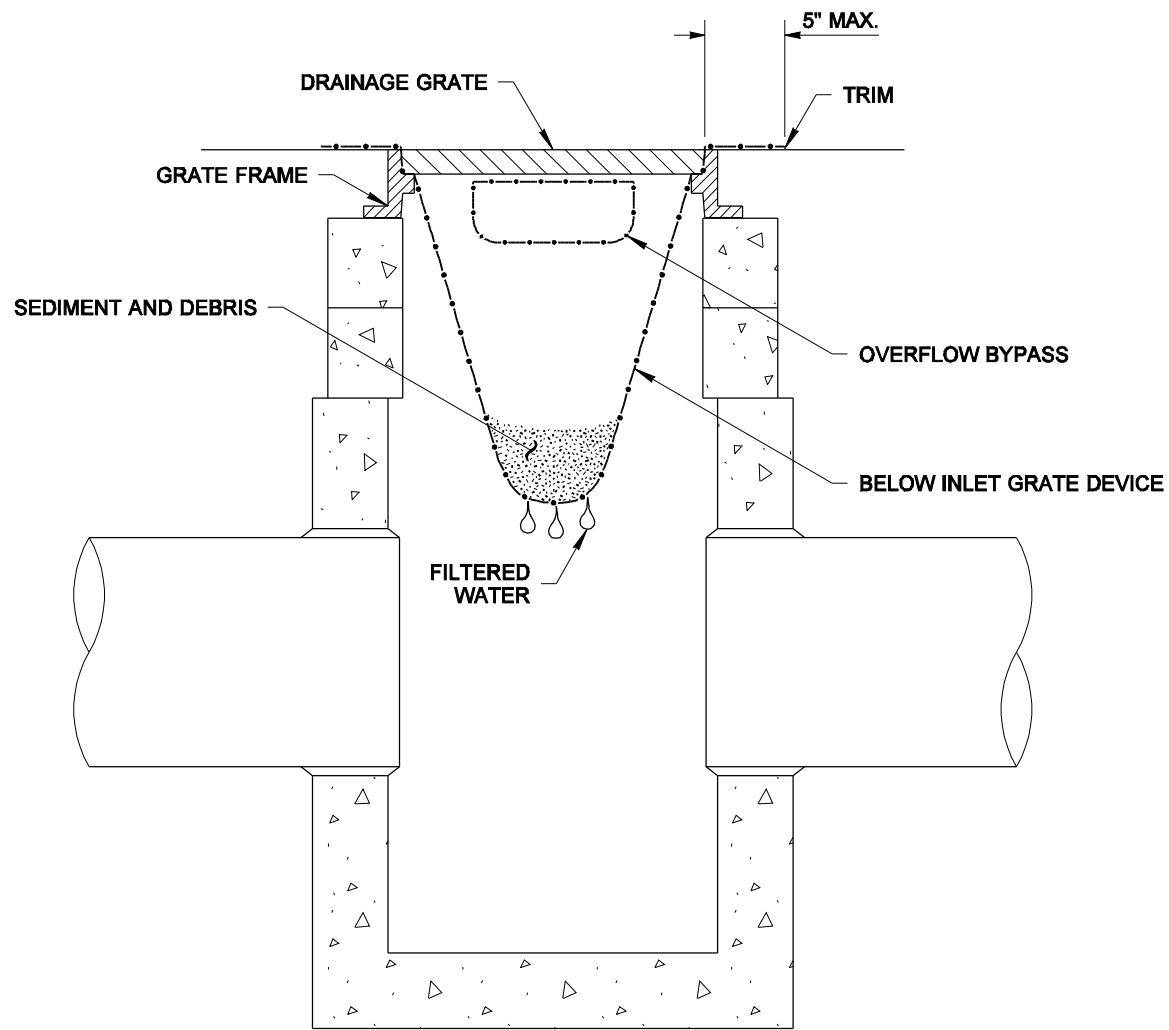
**WATTLE INSTALLATION ON SLOPE**  
**STANDARD PLAN I-30.30-02**

SHEET 1 OF 1 SHEET

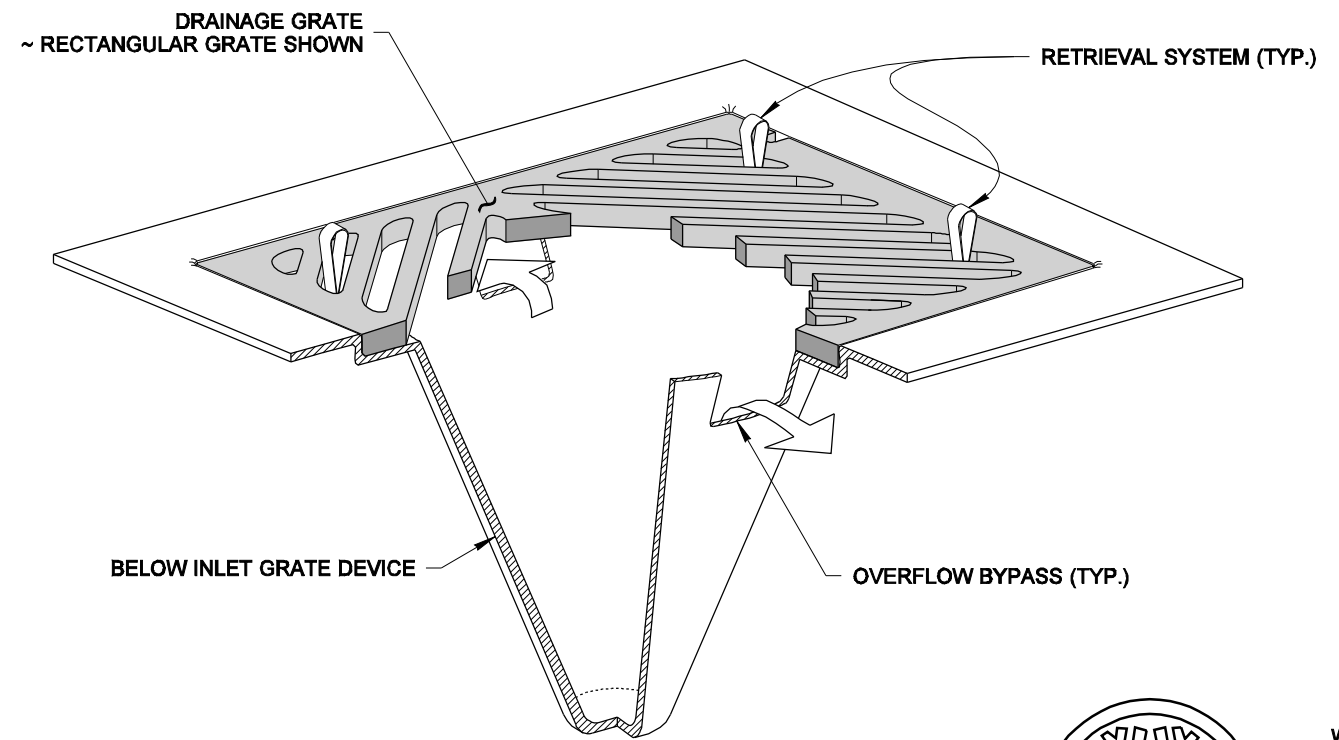
APPROVED FOR PUBLICATION







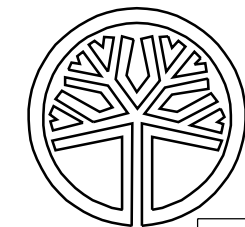
**SECTION VIEW**  
NOT TO SCALE



**ISOMETRIC VIEW**

**NOTES**

1. Size the Below Inlet Grate Device (BIGD) for the storm water structure it will service.
2. The BIGD shall have a built-in high-flow relief system (overflow bypass).
3. The retrieval system must allow removal of the BIGD without spilling the collected material.
4. Perform maintenance in accordance with Standard Specification 8-01.3(15).



STATE OF WASHINGTON  
REGISTERED  
LANDSCAPE ARCHITECT

MARK W. MAURER  
CERTIFICATE NO. 000598

NOTE: THIS PLAN IS NOT A LEGAL ENGINEERING DOCUMENT BUT AN ELECTRONIC DUPLICATE. THE ORIGINAL, SIGNED BY THE ENGINEER AND APPROVED FOR PUBLICATION, IS KEPT ON FILE AT THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION. A COPY MAY BE OBTAINED UPON REQUEST.

**STORM DRAIN  
INLET PROTECTION  
STANDARD PLAN I-40.20-00**

SHEET 1 OF 1 SHEET

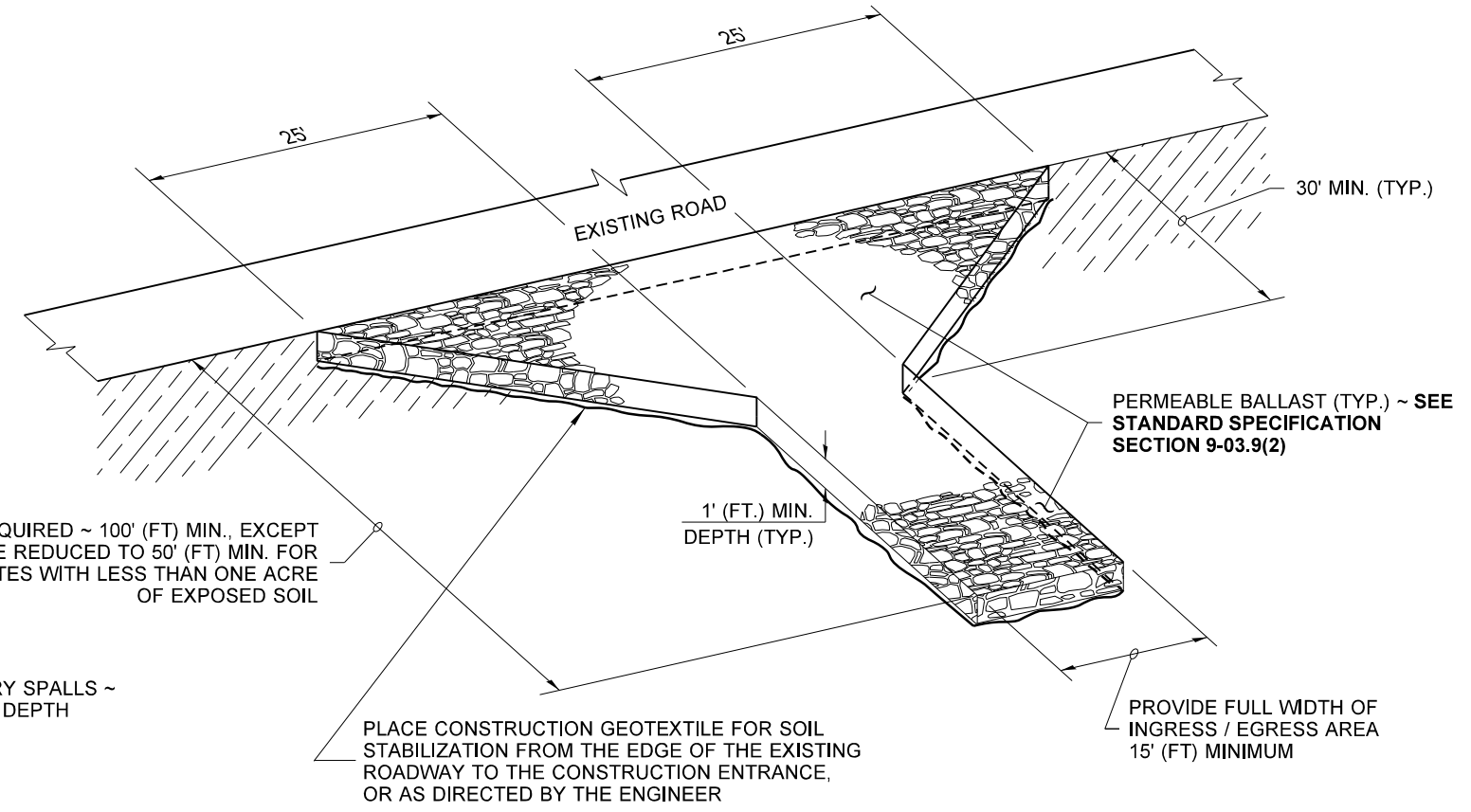
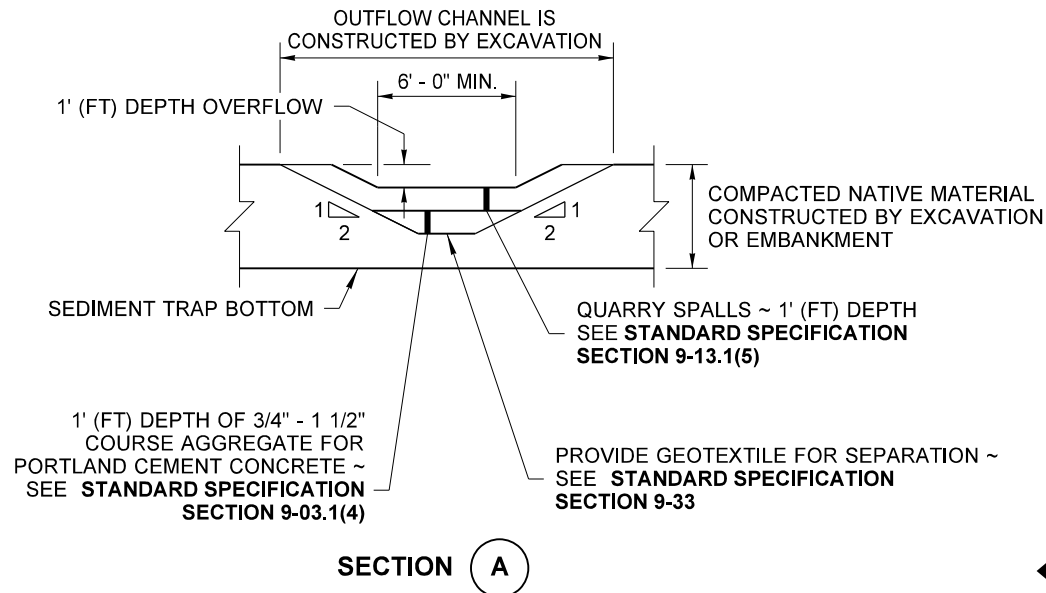
APPROVED FOR PUBLICATION

**Pasco Bakotich III**      **09-20-07**  
STATE DESIGN ENGINEER      DATE



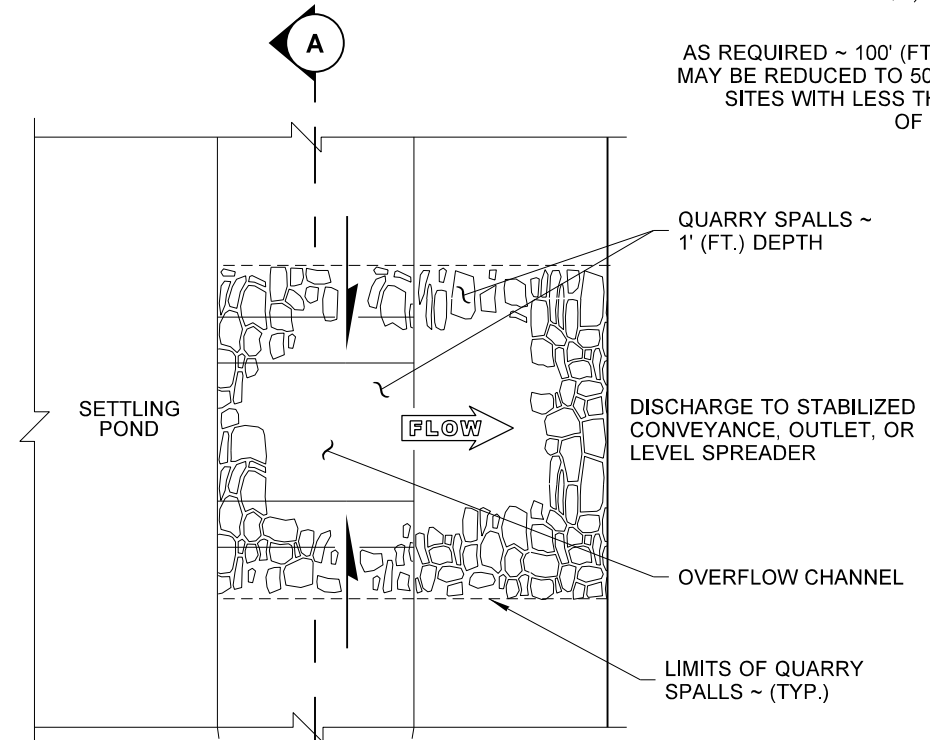


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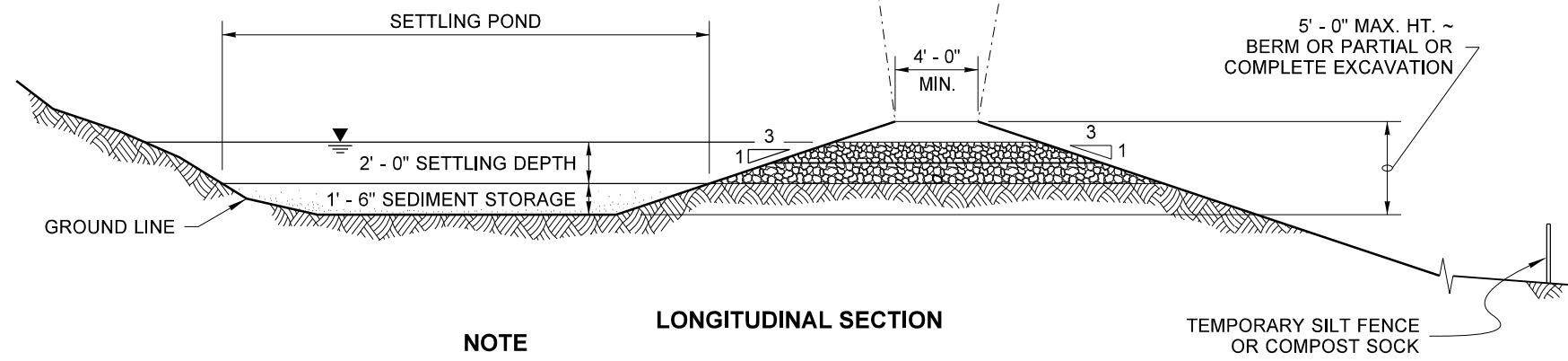


**ISOMETRIC VIEW  
STABILIZED CONSTRUCTION ENTRANCE**

STABILIZED CONSTRUCTION ENTRANCE SHALL MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 8-01.3(7).



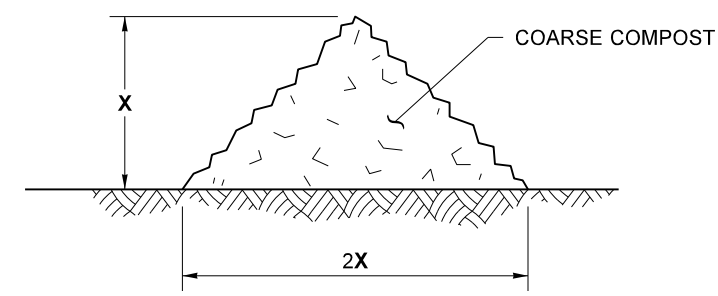
**PARTIAL PLAN VIEW OF BERM  
SHOWN LARGER FOR CLARITY**



**LONGITUDINAL SECTION**

**NOTE**  
PLACE GEOTEXTILE UNDER THE SPILLWAY AND SIDE SLOPES. PROVIDE A CONTINUOUS LAYER BETWEEN THE GRAVEL/ROCK AND THE NATIVE EARTHEN MATERIAL.

**TEMPORARY SEDIMENT TRAP**



X = 1' - 0" FOR SLOPES 4H:1V OR FLATTER  
X = 1' - 6" FOR SLOPES STEEPER THAN 4H:1V

**TYPICAL SECTION  
COMPOST BERM DETAIL**



STATE OF WASHINGTON  
REGISTERED  
LANDSCAPE ARCHITECT  
  
JULI DEE HARTWIG  
LICENSE NO. 1422  
DATE: 06-21-17

**MISCELLANEOUS  
EROSION CONTROL DETAILS  
STANDARD PLAN I-80.10-02**

SHEET 1 OF 1 SHEET

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STATE DESIGN ENGINEER  
Washington State Department of Transportation





EROSION CONTROL SITE PLAN

USE THIS SHEET TO DRAW THE LOCATION OF THE PROPOSED BMPS. SHEET 2 CONTAINS DETAILS FOR SELECT BMPS.

LEGEND:  
SYMBOLS FOR BMPS ON SHEET 2.

C233 HIGH VISIBILITY SILT FENCE	
C235 / WSDOT I-30.30-02 WATTLES	
C105 / WSDOT I-80.10-02 STABILIZED CONSTRUCTION ENTRANCE	
C220 / WSDOT I-40.20-00 STORM DRAIN INLET PROTECTION	

SYMBOLS FOR SELECT ADDITIONAL  
BMPS FROM THE SWMMWW:

BMP T5.13 POST-CONSTRUCTION SOIL QUALITY AND DEPTH	
C121 MULCHING	
C123 PLASTIC COVERING	
C207 / WSDOT I-50.20-01 CHECK DAMS	
C209 OUTLET PROTECTION	

INDICATE  
NORTH:

CHECK SCALE USED:  ONE SQUARE = TWO FEET  
 ONE SQUARE = FIVE FEET  
 ONE SQUARE = TEN FEET

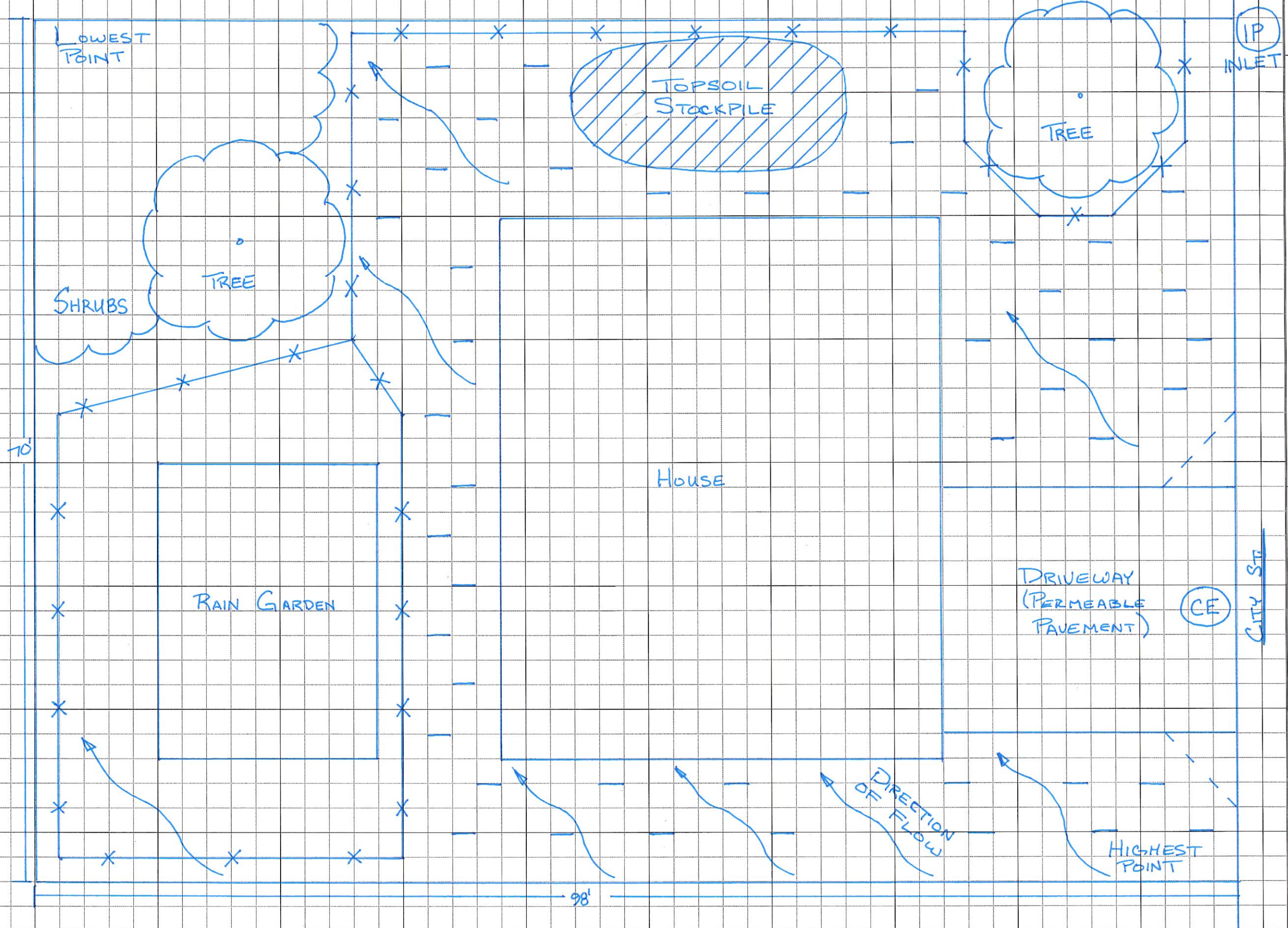
APPLICANT PLAN SET

OWNER/CONTRACTOR: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_



# EXAMPLE COMPLETED EROSION CONTROL SITE PLAN

TEMPLATE  
VERSION:  
2017-09-20  
SHEET # 1



USE THIS SHEET TO DRAW THE LOCATION OF THE PROPOSED BMPs. SHEET 2 CONTAINS DETAILS FOR SELECT BMPs.

LEGEND:  
SYMBOLS FOR BMPs ON SHEET 2.

C233 HIGH VISIBILITY SILT FENCE	—*—*—*
C235 / WSDOT 1-30.30-02 WATTLES	⊗—⊗—⊗
C105 / WSDOT 1-80.10-02 STABILIZED CONSTRUCTION ENTRANCE	(CE)
C220 / WSDOT 1-40.20-00 STORM DRAIN INLET PROTECTION	(IP)

SYMBOLS FOR SELECT ADDITIONAL  
BMPs FROM THE SWMMWW:

BMP T5.13 POST-CONSTRUCTION SOIL QUALITY AND DEPTH	— — —
C121 MULCHING	⊠
C123 PLASTIC COVERING	▨
C207 / WSDOT 1-50.20-01 CHECK DAMS	(CD)
C209 OUTLET PROTECTION	(OP)

INDICATE  
NORTH:



CHECK  
SCALE  
USED:

- ONE SQUARE = TWO FEET
- ONE SQUARE = FIVE FEET
- ONE SQUARE = TEN FEET

EROSION CONTROL SITE PLAN

APPLICANT PLAN SET  
OWNER/CONTRACTOR: JOHN DOE  
ADDRESS: 1025 NE CITY ST.

