



State of Oregon  
Department of  
Environmental  
Quality

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# Annual Report

## MS4 Phase II General Permit

National Pollutant Discharge Elimination System  
MS4 Stormwater Discharge Permit

2019-2020  
Monitoring Year

Marion County  
October 23, 2020

DEQ File Number: 113608

### 1.0 Certification and Signature

1. Permit Registrant(s): Marion County
2. Legally Authorized Representative: Brian Nicholas
3. Title: Director of Public Works
4. Email: bnicholas@co.marion.or.us
5. Phone: (503) 588-5036

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations (40 CFR 122.22(d)).

Signature: Brian Nicholas

Date: 10/23/2020

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## **Instructions**

At least once per year, the permit registrant must evaluate compliance with the requirements of the MS4 Phase II general permit using this Annual Report template. This self-evaluation includes assessment of progress made towards implementing the SWMP control measures in Schedule A, and implementation of actions to comply with any additional requirements identified pursuant to Schedule D.1 (Requirements for Discharges to Impaired Waterbodies).

For each SWMP control measure or activity listed below, please answer all the questions and in the comments field cite any relevant information and/or statistics that helps to illustrate implementation or compliance. If your answer is “No,” in the comments field explain the reasons and outline the anticipated implementation timeline. If the requirement does not apply, explain why it is not applicable in the comments field.

No later than November 1 each year, beginning in 2020, the permit registrant must submit an Annual Report to DEQ. One signed copy and one electronic copy must be submitted to DEQ using the address provided in permit. DEQ can provide an FTP site for submittal of the electronic copy, upon request.

**2.0 General Information**

**2.1 Registrant Information**

6. Permit Registrant(s): Marion County

7. Type(s):  City /  County /  Special District /  Other:

8. Registrant Type:

Existing Registrant:  New Registrant:

9. Community Type:

Large Community:  Small Community:

10. DEQ Permit No: 113608

11. EPA File No: ORS113608

12. Physical Address: 5155 Silverton Rd. NE

City: Salem

State: OR

Zip: 97305

13. Point of Contact: Alexander Wade

Title: Environmental Specialist

Email: awade@co.marion.or.us

Phone: 503-566-4124

14. Mailing Address (if different):

City: 5155 Silverton RD NE

State: Salem

Zip: 97305

**2.2 Municipal Separate Storm Sewer System (MS4) Information**

15. Estimate the area in square mileage served by the MS4: 43.6 square miles

16. Estimate the population served by the MS4: 30,000 + (This is difficult without defined jurisdictional boundary)

**2.3 MS4 Stormwater Discharge Information**

*Identify the names of all know waters that receive a discharge from your MS4.*

| Receiving Waterbody     | # of Outfalls | Impaired waterbody  |   | Impairment(s)                       |
|-------------------------|---------------|---|---|-------------------------------------|
|                         |               | 303d listed   | TMDL issued   |                                     |
| a. Little Pudding River | 131           | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | DO, E. Coli, Chlorpyrifos, DDT, DDE |
| b. Clagget Creek        | 68            | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Biological Criteria, DO, E. Coli    |
| c. Mill Creek           | 5             | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | temperature, DO, E. Coli            |
| d. Labish Ditch         | 8             | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |                                     |
| e. Jory Creek           | 0             | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |                                     |
| f. Fruitland Creek      | 10            | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |                                     |
| g. Powell Creek         | 0             | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |                                     |
| h.                      |               | Yes <input type="checkbox"/> No <input type="checkbox"/>            | Yes <input type="checkbox"/> No <input type="checkbox"/>            |                                     |
| i.                      |               | Yes <input type="checkbox"/> No <input type="checkbox"/>            | Yes <input type="checkbox"/> No <input type="checkbox"/>            |                                     |
| j. Battle creek         | 2             | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | DO, E. Coli                         |

**2.4 Coordination Among Registrants and Joint Agreements**

*Required for permit registrants relying on another entity to satisfy one or more of the requirements of the permit.*

17. Is there a joint agreement in place for the implementation of one or more stormwater management program control measure? *Schedule A.2* Yes  No

18. If yes, has there been any change to the joint agreement(s) submitted previously? Yes  No   
If yes, include, as an attachment, a summary of the changes.

### **2.5 Stormwater Management Program Information**

19. Discuss the status and overall progress of establishing legal authority to control pollutant discharges into and discharges from the MS4 and to implement and enforce the conditions of this permit. *Schedule A.2.c*  
Marion County has strong legal authority to respond to pollutant discharges within the Storm Water Management Area. Code 15.15 prohibits non storm water discharges into the MS4 and surface water drainage system within the Storm Water Management Area. The code provides capability for escalating enforcement actions to promote compliance.

### **2.6 Stormwater Management Program Information**

20. Is an updated SWMP Document attached? *Schedule A.2.c*  
Yes  No  (must be submitted with the second Annual Report)  
If necessary, provide an explanation:

21. Identify the publicly accessible website where the SWMP Document is posted. *Schedule 2.c & A.3.b.ii*  
<https://www.co.marion.or.us/PW/ES/waterquality/Pages/strmwtr.aspx>  
If necessary, provide an explanation:

22. Does the SWMP Document include an implementation schedule for control measures that have yet to be or are partially implemented? *Schedule A.2.c*  
Yes  No   
If necessary, provide an explanation:

23. Describe the method used to gather, track, and use SWMP information to set priorities or assess compliance: *Schedule A.2.d*  
Assigned teams track required work tasks and goals. This information is centrally gathered by program staff for evaluation.

24. Have adequate finances, staff, equipment and other support capabilities been provided to implement the permit? *Schedule A.2.e*  
Yes  No   
If necessary, provide an explanation:

25. During this monitoring year was compliance with the requirements of this permit evaluated? *Schedule B.1*  
Yes  No   
If necessary, provide an explanation:

26. During this monitoring year was it determined or reported that discharge from the MS4 caused or contributed to an excursion of an applicable water quality standard? *Schedule A.1.a*  
Yes  No   
***If "Yes", complete section 3.7, Water Quality Standards of this template.***

### 3.0 Stormwater Management Program Control Measures

#### 3.1 Public Education and Outreach

27. Provide a brief summary of the ongoing public education and outreach program. *Schedule A.3.a*  
 \*\*As of November, 2019: Marion County utilizes both in-person outreach and outreach through social media and advertising. In July, 2019 the County partnered with Cherriots Trip Choice, the regional transportation service to conduct a survey of the East Salem Service District (ESSD) the most densely populated area of the stormwater management area. Through that survey we were able to gather meaningful information about the overall demographic, communication preferences as well as behaviors related to water quality. That survey also helped the County establish the education and outreach topics that would be covered the following years. The activities completed during the permit term included in person presentations to school groups, an outdoor school event, e-newsletters and multiple social media and media advertisements focused on ways individuals can improve water quality. Marion County is part of the Mid Willamette Outreach Group as well, which works together to provide education and outreach messaging to the area.

28. Were the required components in place by the implementation date? *Schedule A.3.a.i*  
 Yes  No  (Implementation date: Feb. 28, 2020 for Existing Registrants and Sept. 1, 2023 for New Registrants)

29. Provide the number of education and outreach activities conducted: *Schedule A.3.a.iii*  
 During this reporting year: 6\*

30. During the permit term: 6\*  
 If necessary, provide an explanation:  
 The count excludes online campaigns, and only counts physically present activities, i.e. Storm Drain Marking, 2 Leaf Haul events, 2 Trashy Tuesday events, Erosion Control Summit.

31. Indicate target audiences addressed during this reporting year: *Schedule A.3.a.iv*  
 General public, homeowners, homeowner association, schoolchildren, and businesses  
 Local elected officials, land use planners and engineers  
 Construction site operators

32. Have each target audience been addressed during the permit term? *Schedule A.3.a.iv*  
 Yes  No

33. Indicate target topics addressed during this reporting year: *Schedule A.3.a.iv*  
 Impacts of illicit discharges on receiving waters and how to report them  
 Impacts from impervious surfaces and appropriate techniques to avoid adverse impacts  
 BMPs for proper use, application and storage of pesticides and fertilizer  
 BMPs for litter and trash control  
 BMPs recycling programs  
 BMPs for power washing, carpet cleaning and auto repair and maintenance  
 Low impact development/green infrastructure  
 Septic systems, information pertaining to maintenance of septic systems  
 Watershed awareness and how storm drains lead to local creeks and rivers, and potential impacts to fish and other wildlife  
 Other:

34. Describe the types of educational messages or activities distributed and/or offered during this reporting year. *Schedule A.3.a.iii*

- Facebook posts
- Short YouTube videos
- Video played as ads before desired video
- Erosion Control Summit
- Billboard (for Leafhaul)
- Internet browser banner ads
- Local news channel KPTV videos
- Trashy Tuesday

• Storm Drain Marking

35. Was outreach to construction site operators working within your community offered during this reporting year?

*Schedule A.3.a.v*

Yes  No

36. Total number during the permit term: 1 event, the erosion control summit, put on by the Mid Willamette Outreach group.

37. Identify and describe the assessment/evaluation of, at least, one education and outreach activity that occurred during this reporting year. Include the assessment process or metric for evaluation, and why this activity was considered successful. *Schedule A.3.a.vi*

A survey of the East Salem Service District was conducted in July, 2019. The purpose of this survey was to collect information from the residents of this area regarding their behavior as it relates to water quality. About 400 people responded to the survey giving us an understanding of the topics that we should be covering in our education and outreach.

38. Will the assessment be used to inform future stormwater education and outreach efforts? *Schedule A.3.a.vi*

Yes  No

39. Provide an explanation:

The results of the survey showed where there were gaps in information on behalf of the residents and gave information on what future stormwater education and outreach efforts should be focused on. For instance, about 43% of residents thought that stormwater gets filtered. The results will inform our future programs.

### 3.2 Public Involvement and Participation

40. Provide a brief summary of the overall progress towards implementation of this control measure. *Schedule A.3.b*  
We have a publically accesible website that is updated at least once a year. It has information for IDDE reporting, our SWMP, links to ordinances and relevant documents, and relevant contact information for program staff. There were two stewardship programs during the permit year, a series of litter removal events and a drain marking project. These opportunities will be continued annually as possible.

41. Were the required components in place by the implementation date? *Schedule A.3.b.i*  
Yes  No  (*Implementation date: Feb. 28, 2020 for Existing Registrants and Sept. 1, 2023 for New Registrants*)

42. Is the SWMP Document posted on a publicly accessible website? *Schedule 2.c & A.3.b.ii*  
Yes  No

43. Was the publicly accessible website updated during this reporting year? *Schedule 2.c & A.3.b.ii*  
Yes  No   
If necessary, provide an explanation:

44. Does the publicly accessible website include illicit discharge complaint/reporting information or procedures? *Schedule A.3.b.ii.A*  
Yes  No   
If necessary, provide an explanation:

45. Does the publicly accessible website include draft documents issued for public comment, final reports, plans and other official SWMP policy documents? *Schedule A.3.b.ii.B*  
Yes  No   
If necessary, provide an explanation:

46. Does the publicly accessible website include links to all ordinances, policies and/or guidance documents related to the construction and post-construction stormwater management control programs, including education, training, licensing, and permitting? *Schedule A.3.b.ii.C*  
Yes  No   
If necessary, provide an explanation:

47. Does the publicly accessible website include contact information for relevant staff, including phone numbers, mailing addresses and email addresses? *Schedule A.3.b.ii.D*  
Yes  No   
If necessary, provide an explanation:

48. During this reporting year, was a stewardship opportunity created or partnered with another entity? *Schedule A.3.b.iii*  
Yes  No   
If "Yes", summarize the stewardship opportunity(s).  
Trashy Tuesday is one such activity. Local community members were organized to collect litter from water ways within the SWMA. Volunteers got together several times throughout the year to clean up litter in East Salem. Once a month from March through July, volunteers gave up two hours on a Saturday, in rain or shine, to help keep trash out of their waterways and make their community a better place.



### 3.3 Illicit Discharge Detection and Elimination

49. Provide a brief summary of the overall progress towards implementation of this control measure. *Schedule A.3.c*  
We have a GIS database mapping our storm water control assets with relevant information. This has been used to create a maintenance tracking system using Collector and Survey123. We also are starting to track dry weather screening in the same way. The GIS database is editable by our field staff so that we can continuously ground truth to improve our records. All controls have unique identifiers. We have a very strong ordinance already and are working on a written escalating enforcement procedure that is in draft. We have a phone number and email for the public to report illicit discharges. The phone is always answered, by a contracted company when after hours. We typically respond to complaints within 24 hours. We are tracking complaints and response. We have priority locations, but have not identified them in our SWMP yet.

50. Were the required components in place by the implementation date? *Schedule A.3.c.i*  
Yes  No  (Implementation date: Feb. 28, 2022 for Existing Registrants and Sept. 1, 2023 for New Registrants)

51. Is the MS4 map(s) current? *Schedule A.3.c.ii.A*  
Yes  No

52. Describe the MS4 map(s) format(s):  
GIS

53. Is the MS4 map(s) included as attachment? Yes  No   
Or are the digital shapefiles available for electronic submittal? Yes  No   
(Existing Registrants must submit their MS4 map with the third Annual Report; New Registrants must submit by Sept. 1, 2023)  
If necessary, provide an explanation:

54. Is the digital inventory of all known outfalls, with the associated receiving waterbody current? *Schedule A.3.c.ii.A*  
Yes  No   
If necessary, provide an explanation:  
This is a living inventory that is subject to ground truthing and quality assurance. It changes with our understanding of the system.

55. Indicate if the following features are included on your MS4 map:  
 Location of all known outfalls, included the requirements in *Schedule A.3.c.ii.B*  
 Stormwater collection and conveyance system, included the requirements in *Schedule A.3.c.ii.C*  
 Stormwater structural controls, included the requirements in *Schedule A.3.c.ii.C*  
 Location of known chronic discharges *Schedule A.3.c.ii.D*  
If necessary, provide an explanation:  
We included a map showing the SWMA as well as a separate map showing a portion of the SWMA highlighting our outfalls, controls, and conveyance system. We have no known chronic discharges.

56. Have non-stormwater discharges into the MS4 been prohibited through enforcement of an ordinance or other regulatory mechanism? *Schedule A.3.c.iii*  
Yes  No   
If necessary, provide an explanation:  
You can find our illicit discharge ordinance from the following link.  
<https://www.co.marion.or.us/PW/ES/waterquality/Pages/strmwtr.aspx#policies>

57. Indicate which of the following have an ordinance or other regulatory mechanism to prohibit discharge to the MS4: *Schedule A.3.c.iii*  
 Septic, sewage, and dumping or disposal of liquids or materials other than stormwater into the MS4  
 Discharges of washwater resulting from the hosing or cleaning of gas stations, auto repair garages, or other types of automotive services facilities  
 Discharges resulting from the cleaning, repair, or maintenance of any type of equipment, machinery, or facility, including motor vehicles, cement-related equipment, and port-a-potty servicing, etc.  
 Discharges of washwater from mobile operations, such as mobile automobile or truck washing, steam cleaning, power washing, and carpet cleaning, etc.

|  |
|--|
| <p><input checked="" type="checkbox"/> Discharges of washwater from the cleaning or hosing of impervious surfaces in municipal, industrial, commercial, or residential areas (including parking lots, streets, sidewalks, driveways, patios, plazas, work yards and outdoor eating or drinking areas, etc.) where detergents are used and spills or leaks of toxic or hazardous materials have occurred (unless all spilled material has been removed)</p> <p><input checked="" type="checkbox"/> Discharges of runoff from material storage areas, which contain chemicals, fuels, grease, oil, or other hazardous materials from material storage areas</p> <p><input checked="" type="checkbox"/> Discharges of pool or fountain water containing chlorine, biocides, or other chemicals; discharges of pool or fountain filter backwash water</p> <p><input checked="" type="checkbox"/> Discharges of sediment, unhardened concrete, pet waste, vegetation clippings, or other landscape or construction-related wastes</p> <p><input checked="" type="checkbox"/> Discharges of trash, paints, stains, resins, or other household hazardous wastes.</p> <p><input checked="" type="checkbox"/> Discharges of food-related wastes (grease, restaurant kitchen mat and trash bin washwater, etc.)</p> <p>If necessary, provide an explanation:<br/>Marion County has a strong ordinance that prohibits all non storm water discharges to the MS4 except for the list of exempt discharges as it appears in the permit.</p> |
| <p>58. Is the written escalating enforcement and response procedure included as an attachment? <i>Schedule A.3.c.iv</i><br/>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/><br/>(For Existing Registrant must be submitted with the third Annual Report. New Registrants must submit by September 1, 2023)<br/>If necessary, provide an explanation:<br/>This procedure is in draft form and not yet completed.</p>  |
| <p>59. Is there a phone number, webpage, and/or other communication channel publicized for the public use to report illicit discharges? <i>Schedule A.3.c.v.A</i><br/><input checked="" type="checkbox"/> Phone number(s)<br/><input checked="" type="checkbox"/> Webpage(s)<br/><input type="checkbox"/> Other communication channels<br/>If necessary, provide an explanation:</p>   |
| <p>60. Provide the number of complaints received during this reporting year. <i>Schedule A.3.c.v.D</i><br/>Number: 13 inside the SWMA (<i>complaints related to IDDE</i>)</p>  |
| <p>61. On average, how long did it take to respond to complaints? <i>Schedule A.3.c.v.B</i><br/>In working days: 1</p>   |
| <p>62. Provide the number of complaints that included notification of the Oregon Emergency Response System during this reporting year. <i>Schedule A.3.c.v.B</i><br/>Number of notification: 0</p>   |
| <p>63. Provide the number of complaints where staff performed an investigation during this reporting year. <i>Schedule A.3.c.v</i><br/>Number: 13 inside the SWMA (<i>investigations related to IDDE</i>)</p>  |
| <p>64. On average, how long did it take to conduct an initial investigation? <i>Schedule A.3.c.v.B</i><br/>In working days: Less than one day</p>  |
| <p>65. Provide the number of illicit discharges discovered and eliminated during this reporting year. <i>Schedule A.3.c.v</i><br/>Number: 7</p>  |
| <p>66. On average, how long did it take to eliminate an illicit discharge? <i>Schedule A.3.c.v.B</i><br/>In working days: One day. An example would be oil in a catch basin discovered by a Marion County employee, which was documented and cleaned out with a vacuum truck the same day.</p>   |
| <p>67. Provide the number times escalating enforcement procedure was use to eliminate an illicit discharge during this reporting year. <i>Schedule A.3.c.v.B</i><br/>Number of times: 0</p>  |
| <p>Do any of the illicit discharges involve the repair or replacement of the wastewater and/or storm sewer conveyance systems? <i>Schedule A.3.c.v.B</i><br/>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/></p>   |

|  |
|--|
| <p>If necessary, provide an explanation:</p>   |
| <p>68. Provide the number of illicit discharges that were referred to another entity during this reporting year. <i>Schedule A.3.c.v.C</i><br/>Number: 1</p> <p>69. On average, how long did it take to notify the entity(s)?<br/>In working days: 1<br/>If necessary, provide an explanation:<br/>One incident was reported to City of Salem, as it was in their jurisdiction. Other jurisdictions we may report discharges to are: DEQ, ODA, and Cities.</p>   |
| <p>70. Indicate which of the following are included in the complaints or reports tracking documentation: <i>Schedule A.3.c.v.D</i></p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Date the complaint was received and, if available, the complainant's name and contact information</li> <li><input checked="" type="checkbox"/> Name of staff responding to the complaint</li> <li><input checked="" type="checkbox"/> Date the investigation was initiated</li> <li><input checked="" type="checkbox"/> The outcome of the staff investigation</li> <li><input checked="" type="checkbox"/> Corrective action(s) taken to eliminate the illicit discharge</li> <li><input checked="" type="checkbox"/> The responsible party for the corrective action(s)</li> <li><input checked="" type="checkbox"/> The status of enforcement procedure(s), when necessary</li> <li><input checked="" type="checkbox"/> The date the corrective action(s) was completed and staff that evaluated final compliance</li> </ul> <p>If necessary, provide an explanation:</p> |
| <p>71. Provide percentage of outfalls inspected. <i>Schedule A.3.c.vi.A/B</i><br/>Known outfalls screened this reporting year: 468, 100%</p> <p>72. Known outfalls screened during the permit term: 468, 100%<br/>If necessary, provide an explanation:<br/>The system was walked by storm water personel</p>  |
| <p>73. Provide percentage of outfalls inspected as part of field screening of priority location. <i>Schedule A.3.c.vi.C</i><br/>Priority location outfalls screened this reporting year: 100%</p> <p>74. Priority location outfalls screened during the permit term: 100%<br/>If necessary, provide an explanation:<br/>Walk through inspections are performed every Summer. Illicit discharge discoveries get logged and investigated. These dry weather screenings have only turned up 2 wet outfalls in 2 years and neither was noted as having the qualities of an illicit discharge. All outfalls were screened in this way during the last year. We are creating our new tracking sytem and preparing for implementation. It will be fully in use by the deadline.</p>   |
| <p>75. Indicate which of the following dry-weather field activities are performed and documented in accordance with dry-weather field: <i>Schedule A.3.c.vi</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> General observation</li> <li><input type="checkbox"/> Field Screening and Analysis</li> <li><input type="checkbox"/> Pollutant Parameter Action</li> <li><input type="checkbox"/> Laboratory Analysis</li> </ul> <p>If necessary, provide an explanation:<br/>We are beginning full documentation of Dry Weather Screening now. Past screening only turned up 2 wet outfalls in 2 years and neither was noted as having the qualities of an illicit discharge. All of these requirements will be fully implemented by the deadline.</p>  |
| <p>76. If flow is observed and the source is unknown, provide a brief description of the field investigation and analysis process. <i>Schedule A.3.c.vi.D,E,G</i><br/>Investigation has yet to be performed as part of dry weather screening, as it has been unnecessary. This process is being developed to meet the requirements of the general permit. Observations will be made and documented at the outfall. Then, operators will attempt to follow the flow upstream, looking in ditches, manholes, etc. as necessary to</p>  |

find a point as close to the origin as possible. A point closest to the source will be documented with any relevant observations and marked in GIS. If the source can not be identified in this way, the flow will be screened in the field for pH, temperature, specific conductance, and dissolved oxygen. Action levels have not been defined yet. If action levels are exceeded, samples will be taken and analyzed at a laboratory to characterize and attempt to identify the source of the flow. These analyses will be determined on a case by case basis in collaboration with the laboratory and any other outside counsel that may be able to sharpen the focus of the investigation.

77. Have pollutant parameter action levels been established and are they included as an attachment? *Schedule A.3.c.v.G*  
Yes  No   
(For Existing Registrant must be submitted with the third Annual Report. New Registrants must submit by September 1, 2023)  
If necessary, provide an explanation:

78. Are all persons responsible for investigating and eliminating illicit discharges and illicit connections into the MS4 are appropriately trained to conduct such activities? *Schedule A.3.c.vii*  
Yes  No   
If necessary, provide an explanation:  
All employees take a version of our Clean Water eLogic training (see Exhibit H in the Supporting Documentation packet). Then they shadow a more experienced employee for on the job training in their specific responsibilities. For those who investigate illicit discharge reports, this includes how to fill out and save our report form, and the follow up steps, including enforcement, necessary to ensure compliance.

79. Are all new staff working to implement the IDDE program within 30 days of their assignment to this program? *Schedule A.3.c.vii*  
Yes  No   
If necessary, provide an explanation:  
Marion County Stormwater BMP training is provided to all applicable employees within 30 days of hire. All employees take a version of our BMPs for Clean Water eLogic training. They then shadow a more experienced employee for on-the-job training in their specific responsibilities.

### 3.4 Construction Site Runoff Control

80. Provide a brief summary of the overall progress towards implementation of this control measure. *Schedule A.3.d*  
Marion County has a strongly written construction erosion and sediment control ordinance. We have recently developed a written policy for the escalating enforcement procedure to standardize our response. We are currently improving our inspection procedures to facilitate better tracking and documentation in accordance with new permit requirements. The minimum size to require an erosion control plan, and inspections, needs to be updated in the ordinance, this must be approved by the Board of Commissioners, and is a process that we have begun.

81. Were the required components in place by the implementation date? *Schedule A.3.d.i*  
Yes  No  (Implementation date: Feb. 28, 2023 for Existing Registrants and Sept. 1, 2023 for New Registrants)

82. Do ordinances or other regulatory mechanism require erosion controls, sediment controls, and waste materials management controls used and maintained at all qualifying construction projects? *Schedule A.3.d.ii*  
Yes  No  NA   
If necessary, provide an explanation:

83. Ordinance: 1307 and 1316, Code Section: Title 15 Section 10

84. Indicate the minimum land disturbance where construction site operators are required to complete and implement an Erosion and Sediment Control Plan (ESCP) for construction project sites: *Schedule A.3.d.ii*  
In square feet or portion of an acre: 1 ft<sup>2</sup> , acres   
If necessary, provide an explanation:  
A permit is required for 1 acre or more of ground disturbing activity per the definition of “Large development ground disturbing activities” within the Stormwater Management Area as well as any ground disturbing activity within the high-risk area or within 50 feet of a stream within the Stormwater Management Area. The new permit thresholds will be updated accordingly to meet the permit time lines.

85. For construction projects that disturb one or more acres (or that disturb less than one acre, if it is part of a “common plan of development or sale” disturbing one or more acres), provide a brief description how these project are referred to DEQ or the appropriate DEQ agent, to obtain a NPDES Construction Stormwater General Permit. *Schedule A.3.d.iii*  
Prior to issuance of Marion County associated permits for the project, such as building permit(s) or right-of-way permit(s), proof of coverage under a DEQ or other appropriate administering agent is required. If requested by the developer, contact information for the appropriate agency is provided.

86. Proved the written specifications that address the proper installation and maintenance of such controls during all phases of construction activity as an attachment *Schedule A.3.c.iv*  
Attached: Yes  No   
If necessary, provide an explanation:  
•Standard Details (currently from Clean Water Services) for applicable BMPs are provided with issued Erosion Prevention and Sedimentation Control (EPSC) permits. Inspections are performed to ensure BMPs are installed and being maintained appropriately.  
  
•Per standard construction requirements of our EPSC permit language:  
“4. Sufficiently maintain the BMP measures to minimize offsite erosion. Gauging of effectiveness is ‘Performance Based’.”  
and  
5. Provide to County inspectors continuous access to the property including Construction Site Activity to inspect the maintenance of the approved EPSC Plan measures.”  
  
•Additionally, our inspector works with contractors to ensure they are educated and aware of those maintenance needs associated with the chosen BMPs during inspections.

87. Provided the Erosion and Sediment Control Plan template as an attachment? *Schedule A.3.d.iv.A*  
Attached: Yes  No   
If necessary, provide an explanation:  
We utilize Clean Water Services ESC Plan for Sites 1 to 5 Acres template. A link to the template is provided on our Land Development Engineering & Permits (LDEP) webpage.

88. Indicate which of the following are required for qualifying construction projects: *Schedule A.3.d.iv*

- Site operator are required to complete an ESCP template prior to beginning construction/land disturbance
- Site operator are required to be kept the ESCP on site
- Site operator are required maintain and update the ESCP as site conditions change, or as needed.
- Site operator are required to provide the ESCP to the permit registrant, DEQ, or another administrating entity

If necessary, provide an explanation:

Per the current ordinance/code language it is required of a qualifying construction project to submit and obtain approval of an ESCP (either by utilizing the template provided or by submitting a plan with adequate information), and to adequately install and maintain the approved BMPs. Item 9 of the standard Erosion/Sediment Control Permit language covers Recordkeeping requirements in regards to on site retention and presentation of data to an administrating agency. Revisions of the ESCP would be required in the event an inspection is failed (i.e. additional controls necessary due to site topography not adequately identified in initial plan) or site conditions change in such a way the original approved plans are no longer adequate for the scope of work proposed.

89. ESCP templates [from construction projects that will result in land disturbance of one or more acres (or that disturb less than one acre, if it is part of a “common plan of development or sale” disturbing one or more acres)] are reviewed using a checklist or similar document to determine compliance? *Schedule A.3.d.v*

Yes  No

90. Provide the ESCP review template as an attachment? *Schedule A.3.d.v*

Attached: Yes  No

91. Indicate the minimum land disturbance where you require the ESCP to be review, if different than one acre:                      ft<sup>2</sup>  
, acres

If necessary, provide an explanation:

Review of an ESC Plan also applies to any ground disturbance within the mapped high risk area, which includes steep and erosive soils as well as areas within 50 feet of a stream within the Stormwater Management Area.

92. All construction projects [that will result in land disturbance of one or more acres (or that disturb less than one acre, if it is part of a “common plan of development or sale” disturbing one or more acres)] are expected or scheduled to be inspected at least once per permit term? *Schedule A.3.d.vi.A.1*

Indicate the number of inspections completed to comply with this requirement during this reporting year: 24

93. Number of inspections completed to comply with this requirement during the permit term: 24

If necessary, provide an explanation:

94. Are construction projects with visible sediment in stormwater/dewatering discharge or when a complaint is received inspected? *Schedule A.3.d.vi.A.2*

Yes  No

95. Indicate number of projects that were inspected bases on this inspection trigger: 0

If necessary, provide an explanation:

There have been no instances in the reporting period where we have been informed of a construction project discharging visible sediment/dewatering discharge nor complaints for projects under our jurisdiction.

96. Indicate the total number of construction projects that were inspected this monitoring year: 21

97. Indicate the total number of construction projects that were inspected during the permit term: 21

98. Indicate which of the following are documented during an inspection: *Schedule A.3.c.vi.B*

- That the ESCP is reviewed to determine if the described
- Control measures were installed, implemented, and maintained appropriately
- Assessment of the site’s compliance with the ordinances or requirements
- Visual observation of any existing or potential non-stormwater discharges, illicit connections, and/or discharge of pollutants from the site
- Recommendations to the construction site operator for follow-up
- Education or instruction provided to the site operator related to stormwater pollution prevention practices

If necessary, provide an explanation:

All of these items are encompassed within the inspection approval or denial, observations of non-compliance are

|  |
|--|
| <p>documented. For the future, inspection documentation is being reviewed to better align with the language of the new Phase 2 MS4 General Permit.</p>   |
| <p>99. If available, provide a copy of the written or electronic inspection report form. <i>Schedule A.3.c.vi.B</i><br/>Attached: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>  |
| <p>100. For Existing Large Communities: indicated number of new construction projects inspected that disturb less one acre during this monitoring year. <i>Schedule A.3.c.vi.B</i></p> <p>If necessary, provide an explanation:<br/>Not applicable. We are a "Small Community".</p>  |
| <p>101. Provide the written escalating enforcement and response procedure as an attachment? <i>Schedule A.3.d.vii</i><br/>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/><br/>(For Existing Registrant must be submitted with the third Annual Report. New Registrants must submit by September 1, 2023)<br/>If necessary, provide an explanation:</p>   |
| <p>102. Was the escalating enforcement procedure used to achieve compliance at any construction projects? <i>Schedule A.3.d.vii</i><br/>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/><br/>Indicate number of time during this reporting year: 1</p> <p>103. Indicate number of time during the permit term: 1<br/>If necessary, provide an explanation:</p>  |
| <p>104. Were all persons responsible for ESCP reviews, site inspections, and enforcement are appropriately trained to conduct such activities? <i>Schedule A.3.d.viii</i><br/>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/><br/>If necessary, provide an explanation:<br/>All inspectors and designated backups attend Certified Erosion and Sediment Control Lead (CESCL) training within 1 year of hire and maintain active certification through recertification courses.</p>   |
| <p>105. Were all new staff working to implement the construction site runoff control program appropriately trained within 30 days of their assignment to this program? <i>Schedule A.3.d.viii</i><br/>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/><br/>If necessary, provide an explanation:<br/>Marion County Stormwater BMP training is provided to all applicable employees within 30 days of hire. All employees take a version of our BMPs for Clean Water eLogic training. They then shadow a more experienced employee for on-the-job training in their specific responsibilities.</p> |

**3.5 Post-Construction Site Runoff for New Development and Redevelopment**

106. Provide a brief summary of the overall progress towards implementation of this control measure. *Schedule A.3.e*  
We have executed a contract with a qualified consultant to redevelop our stormwater engineering standards. These new standards will redefine the requirements for post construction runoff control. Meeting the requirements of the new permit language is a top priority of this effort.

107. Were the required components in place by the implementation date? *Schedule A.3.d.i*  
Yes  No  (Implementation date: Feb. 28, 2023 for Existing Registrants and Sept. 1, 2023 for New Registrants)

108. For projects creating or replacing impervious area, indicate the area (or threshold) where the site is required to implement the post-construction site runoff program requirements: *Schedule A.3.e.ii*  
In square feet: 21,780 ft<sup>2</sup>

109. If necessary, provide an explanation:  
Stormwater detention requirements are triggered at 0.5 acres of impervious surfaces per our 1990 Engineering standards. Water quality treatment requirements are triggered at 1 acre of disturbance within the County's Stormwater Management Area only. This is the current threshold, the new standards will meet the new permit requirements.

110. Indicate which of the following are required at qualifying sites: *Schedule A.3.e.ii*  
 The use of stormwater controls  
 A site-specific stormwater management approach that targets natural surface or predevelopment hydrological function through the installation and long-term operation and maintenance of stormwater controls  
 Long-term O&M of stormwater controls at project sites that are under the ownership of a private entity  
If necessary, provide an explanation:

111. Were ordinance(s), code(s) and development standards reviewed to identify, minimize or eliminate barriers that inhibit design and implementation techniques intended to minimize impervious surfaces and reduce stormwater runoff? *Schedule A.3.e.iii*  
Yes  No

112. If barriers were identified or if necessary, provide an explanation:  
A preliminary review has been conducted to identify major potential barriers. More thorough reviews will be completed as the program implementation continues.

113. Provide an explanation of the timeline for removal of barriers or if removal is outside your authority:  
Per our Stormwater Management Plan we are looking to start the process no later than February 2022 and have the program meet permit requirements no later than February 2023.

114. Indicate which of the following technical standards are used to determine the retention requirement: *Schedule A.3.e.iv.A*  
 Volume-based method  
 Storm event percentile-based method  
 Annual average runoff-based method  
If necessary, provide an explanation:  
Per our current 1990 Engineering Standards we classify our requirement as "detention". Per Section V.A.2.c of those Standards, "Detention facilities shall have storage capacities to detain the difference between a 5-year frequency storm with predevelopment conditions and a 10-year frequency storm with development conditions."

115. For projects that are unable to meet the retention requirement, is the remainder of the rainfall/runoff treated prior to discharge with a structural stormwater control? *Schedule A.3.e.iv.B*  
Yes  No

116. Was the stormwater structural control designed to remove, at minimum, 80 percent of the total suspended solids?  
Yes  No   
If necessary, provide an explanation:  
Per Section V.A.2.a of the 1990 Engineering Standards "This requirement may be waived if the applicant can show that it is not effective for the basin as a whole.". We currently have no other exemptions for the retention/detention requirement in the event it cannot be met. This will be updated to meet permit requirements as part



of the Stormwater Engineering Standards project.

117. Are the allowable structural stormwater controls and specifications available for review? *Schedule A.3.e.iv.C*

Yes  No

118. Indicate if they are attached or the location where they can be viewed:

Attached

Location:

<https://www.co.marion.or.us/PW/Engineering/engineeringstandards>

See "2012 Interim Stormwater Quality Treatment Engineering Standards"

If necessary, provide an explanation:

The 2012 Interim Stormwater Quality Treatment Engineering Standards contains our current allowable structural stormwater controls for those sites that require Water Quality Treatment. The Stormwater Engineering Standards project will amend this (as well as pertinent sections of the 1990 Engineering Standards) to comply with the new permit requirements.

119. Have alternatives for projects complying with the retention requirement been approved? *Schedule A.3.e.iv.D*

Yes  No

120. If yes, are the written technical justifications evaluated? *Schedule A.3.e.iv.D*

Yes  No

121. Provide a brief description of the factors of technical infeasibility or site constraints that prevented the on-site management of the runoff amount stipulated in the stormwater retention requirement or a portion thereof. *Schedule A.3.e.iv.D*

Not applicable at this time.

If necessary, provide an explanation:

Per Section V.A.2.a of the 1990 Engineering Standards "This requirement may be waived if the applicant can show that it is not effective for the basin as a whole.". We currently have no other exemptions for the retention/detention requirement in the event it cannot be met. This will be updated to meet permit requirements as part of the Stormwater Engineering Standards project.

122. Before the allowance of alternative compliance, were mitigation options established? *Schedule A.3.e.iv.E*

Yes  No

If necessary, provide an explanation:

Not applicable at this time as no alternative compliance has been allowed.

123. If applicable, indicate which of the following mitigation options have been used and provide a narrative description of the implementation of the mitigation option? *Schedule A.3.e.iv.E*

Off-Site Mitigation

Groundwater Replenishment Projects

Treatment Equivalent to the Retention Requirement

If necessary, provide an explanation:

Not applicable at this time as no alternative compliance has been allowed and therefore no mitigation options have been used.

124. Was a procedure developed for the review and approval of structural stormwater control plans for new development and redevelopment projects? *Schedule A.3.e.v*

Yes  No

If necessary, provide an explanation:

All new development and redevelopment that triggers the stormwater detention requirement (0.5+ acres of impervious surfaces per the 1990 Engineering Standards) and/or the water quality treatment requirement (1+ acres of ground disturbance per the 2012 Interim Stormwater Engineering Standards) is required to obtain an On-site Stormwater Discharge permit per Marion County Code 11.15. The permit is issued once plans are reviewed and meet County standards. Plans are reviewed using the Check List for Engineering Plan Review (available in the 1990 Engineering

Standards) as a guide.

125. Indicate the minimum land disturbance or creation of new impervious area where plans are required to be reviewed: 0.5 ft<sup>2</sup> , acres  of land disturbance  creation of new impervious area

126. Are all sites that use alternative compliance to meet the retention requirement reviewed?

Yes  No

If necessary, provide an explanation:

Per the 1990 Engineering Standards, "Peak storm water runoff shall be controlled by detention facilities for all subdivisions, all commercial and industrial developments and all parking lots with a total developed acreage of 0.5 acres or more and all other developments where the county engineer determines control is needed to prevent flooding or damage downstream." We have interpreted "total developed acreage" to mean impervious surfaces.

All new development and redevelopment that triggers the stormwater detention requirement (0.5+ acres of impervious surfaces per the 1990 Engineering Standards) and/or the water quality treatment requirement (1+ acres of ground disturbance per the 2012 Interim Stormwater Engineering Standards) is required to obtain an On-site Stormwater Discharge permit per Marion County Code 11.15. The permit is issued once plans are reviewed and meet County Standards. These thresholds will be updated to meet the new permit requirements.

127. Indicate if an inventory and implementation strategy is used to ensure that all stormwater controls are operated and maintained to meet the site performance standard in Schedule A.3.e.iv of the permit? *Schedule A.3.e.vi*

Yes  No

If necessary, provide an explanation:

We are working to implement this inventory and will have it implemented no later than February 28, 2023.

128. Indicate which of the following strategies have been developed to ensure that all stormwater controls are operated and maintained to meet the site performance standard in Schedule A.3.e.iv.: *Schedule A.3.e.vi*

Legal authority to inspect and require effective operation and maintenance of privately owned and operated stormwater controls

Inspection procedures and an inspection schedule to ensure compliance with the O&M requirements of each stormwater control operated by the permit registrant and by other private entities

A tracking mechanism for documenting inspections and the O&M requirements for each stormwater control

Reporting requirements for privately owned and operated stormwater controls that document compliance with the O&M requirement in Schedule A.3.f.

If necessary, provide an explanation:

We are working on implementing standard inspection procedures, an inspection schedule, a tracking mechanism for documenting these inspections and O&M requirements, as well as reporting requirement for privately owned and operated stormwater controls. These will be implemented no later than February 28, 2023.

All On-site Stormwater Discharge permits contain the language "Provide to County inspectors the continuous access to the property and detention system to inspect the maintenance of the system and the proper operation as approved.", granting legal authority for us to inspect and require effective O&M of privately owned and operated controls.

129. Are the location of all public and private stormwater controls installed during this permit term documented on the MS4 Map? *Schedule A.3.e.vi*

Yes  No

If necessary, provide an explanation:

We are continuously updating our GIS map to include public and private stormwater controls as we find undocumented existing controls and as new ones are developed.

130. Were all persons responsible for performing post-construction runoff site plan reviews, administering the alternative compliance program, or performing O&M practices or evaluating compliance with long-term O&M requirements are appropriately trained to conduct such activities? *Schedule A.3.e.vii*

Yes  No

If necessary, provide an explanation:

All inspectors and designated backups attend Certified Erosion and Sediment Control Lead (CESCL) training within 1 year of hire and maintain active certification through recertification courses.

131. Were all new staff working to implement the post-construction site runoff for new development and redevelopment

program appropriately trained within 30 days of their assignment to this program? *Schedule A.3.e.vii*

Yes  No

If necessary, provide an explanation:

Marion County Stormwater BMP training is provided to all applicable employees within 30 days of hire. All employees take a version of our BMPs for Clean Water eLogic training. They then shadow a more experienced employee for on-the-job training in their specific responsibilities.

**3.6 Pollution Prevention and Good Housekeeping for Municipal Operations**

132. Provide a brief summary of the overall progress towards implementation of this control measure. *Schedule A.3.f*  
 During the reporting period, staff created and launched a computerized training on best management practices for clean water available to all Public Works staff, but mandatory for anybody in a maintenance position. This training covers clean water regulations, defines stormwater and pollutants, discusses beneficial uses for clean water, goes over best management practices for field/shop work, and has an entire section devoted to erosion and sediment control. Supervisors are able to decide which version (the shorter version or the version that covers erosion control) they feel would best benefit their staff members. The training is hosted on the county's learning management system and has each staff member scheduled to take the course within 30 days of hire (usually done in the first two days during new employee onboarding) and then again once every five years. Staff are also beginning to look into a field training component for BMPs. A consultant has been hired to help identify standards for erosion control, which will be used for all operations and maintenance.

133. Were the required components in place by the implementation date? *Schedule A.3.f.i*  
 Yes  No  (Implementation date: Feb. 28, 2022 for Existing Registrants and Sept. 1, 2023 for New Registrants)

134. Were O&M strategies for existing controls developed for both permit registrant-owned controls and controls owned and operated by another entity discharging to the MS4? *Schedule A.3.f.ii*

135. Yes  No  N/A

If necessary, provide an explanation:

A consultant has been hired to help create standards for erosion control and post construction stormwater controls, which will be used for all operations and maintenance on County-owned facilities and infrastructure, as well as provided to private developers. The BMP manual also serves as an operation and maintenance guide for road maintenance, vegetation management, facilities maintenance, fleet activities, bridge and ferry maintenance, water/wastewater operations, and parks maintenance.

136. Indicate the percentage of catch basins inspected/cleaned: *Schedule A.3.f.iii*

Percentage inspected this reporting year: 21.9; Percentage cleaned: 21.9

137. If known, estimate of material removed: units

138. Percentage inspected during the permit term: 28; Percentage cleaned: 28

139. If known, estimate of material removed: units

If necessary, provide an explanation:

Catch Basins are inspected when they are cleaned. 1322 in 2020, 373 in 2019 after March 1, 2019, for a total of 1,695 so far this permit term.

140. Indicated if a catch basin inspection prioritization system and/or an alternate inspection frequency has been established. *Schedule A.3.f.iv*

Yes  No

If necessary, provide an explanation:

Historically the 2 person crew goes through half the system cleaning CB s and noting dirty half clogged pipes one summer and the other half the next year, typically south one year and north the next. We go by neighborhood, trees, age of system, and some are complaint driven.

141. During the permit term were existing procedures for inspection and maintenance schedules reviewed/updated to ensure pollution prevention and good housekeeping practices are conducted for the following activities? *Schedule A.3.f.iv*

- Pipe cleaning for stormwater and wastewater conveyance systems
- Cleaning of culverts conveying stormwater in roadside ditches
- Ditch maintenance
- Road and bridge maintenance
- Road repair and resurfacing including pavement grinding
- Dust control for roads and municipal construction sites
- Winter road maintenance, including salt or de-icing storage areas
- Fleet maintenance and vehicle washing
- Building and sidewalk maintenance including washing

- Solid waste transfer and disposal areas
- Municipal landscape maintenance
- Material storage and transfer areas, including fertilizer and pesticide, Hazardous material, used oil storage, and fuel
- Fire fighting training activities
- Maintenance of municipal facilities including public parks and open space, golf courses, airports, parking lots, swimming pools, marinas, etc.

If necessary, provide an explanation:

We have a BMP program and manual. All employees are trained on it and it is fully implemented. Inspections occur throughout the year, and during the next permit year there will be a focus on tracking inspections and reviewing procedures for updates.

142. Do any permit registrant-owned facilities have coverage under DEQ's 1200-Z Industrial Stormwater Discharge Permit? *Schedule A.3.f.v*

Yes  No  NA

If "Yes", provide DEQ File Number(s): 103964

If necessary, provide an explanation:

Not inside the SWMA.

143. Are practices in place to reduce the discharge of pollutants to the MS4 associated with the application and storage of pesticides and fertilizers? *Schedule A.3.f.vi*

Yes  No

If necessary, provide an explanation:

144. Are methods/practices in place to reduce the discharge litter within the jurisdiction? *Schedule A.3.f.vii*

Yes  No

If necessary, provide an explanation:

145. Are practices in place to ensure that collected material or pollutants removed in the course of maintenance managed and disposed of in a manner such as to prevent such pollutants from entering the waters of the state in accordance with state and federal rules? *Schedule A.3.f.viii*

Yes  No

If necessary, provide an explanation:

146. Were all persons responsible for evaluating O&M practices, evaluating compliance with long-term O&M requirements or ensuring pollution prevention at facilities and during operation appropriately trained to conduct such activities? *Schedule A.3.f.ix*

Yes  No

If necessary, provide an explanation:

147. Were all new staff working to implement the pollution prevention and good housekeeping for municipal operations program appropriately trained within 30 days of their assignment to this program? *Schedule A.3.f.ix*

Yes  No

If necessary, provide an explanation:

## 4.0 Monitoring

*If the requirement does not apply, mark "NA" and explain why it does not apply to you in the comments field.*

148. Was municipal stormwater monitoring performed at outfall locations, in the receiving waterbody, or to demonstrate compliance with this permit? *Schedule B.3*

Yes  No

149. If "Yes" is the data included in the Annual Report?

Yes  No

If necessary, provide an explanation:

this was not performed

## 4.1 Wood Village Monitoring Requirements

150. Provide a summary of the following to evaluate the control strategies established for the Lower Columbia Slough Phosphate, Lead, and Bacteria TMDLs: *Schedule D.1.b*

Phosphate:

Lead:

Bacteria:

151. Indicated which of the following were completed:

For phosphate, monitor influent and effluent dissolved orthophosphate concentrations and total phosphate concentrations at a representative site in Fairview Lake (Reach 4) and Fairview Creek (Reach 5)

For lead, estimates of the effectiveness of controls to remove TSS

For bacteria, measuring E. coli concentrations and its distribution over flows (for example, flow duration intervals) to demonstrate compliance with E. coli criteria

If necessary, provide an explanation:

na

## 5.0 Water Quality Standards

152. During this monitoring year was it determined or reported that the MS4 discharge caused or contributed to an excursion of an applicable water quality standard? *Schedule A.1.b*

Yes  No

If necessary, provide an explanation:

na

153. How and when did the excursion of an applicable water quality standard occur? *Schedule A.1.b*

If necessary, provide an explanation:

na

154. Was the excursion self-reported or did DEQ send written notification? *Schedule A.1.b*

Self-reported: Yes  No

If necessary, provide an explanation:

na

155. Within 48 hours was an investigation started into the cause of the water quality excursion? *Schedule A.1.b.i*

Yes  No

If necessary, provide an explanation:

na

156. Within 30 days of becoming aware of the excursion, was DEQ notified in writing, if self-reporting? *Schedule A.1.b.ii*

Yes  No

If necessary, provide an explanation:

na

157. Within 60 days of becoming aware of or being notified of the excursion, was a report submitted to DEQ that documents the following: *Schedule A.1.b.iii*

The results of the investigation, including the date the excursion was discovered

A brief description of the conditions that triggered the violation or the cause

Corrective actions taken or planned, including the date corrective action was completed or is expected to be completed

If necessary, provide an explanation:

na

158. Were the corrective actions implemented in accordance with the schedule approved by DEQ? *Schedule A.1.b*

Yes  No

If necessary, provide an explanation:

na

159. Provide any additional comments or narrative description, if necessary:

na

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## **Section 3.4 Construction Site Runoff Control**

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## *2.6 Stormwater Management Program Information*

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# Stormwater Management Plan

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Question 20

2019-2024

# Stormwater Management Plan



Kaileigh Westermann-Lewis

Marion County

2019-2024

[Supporting Attachments 3](#)

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## Background

Marion County has been implementing the NPDES MS4 Phase II permit since 2007. Because the permit has changed from an individual permit to a general permit, many of the BMPs to the existing program will need to be adjusted to fit within the new permit requirements. These adjustments will occur when work is completed on the specific minimum control measure.

The Stormwater Management Area for Marion County corresponds with the U.S. Census Bureau-designated “Urbanized Area”. These areas are developed from census data relating to population densities and census blocks. Within this “Urbanized Area” Marion County is responsible for an urbanized fringe around Keizer, Turner, and Salem. Though it is designated as an urbanized area, the land uses include agricultural, commercial, multifamily residential, single family residential, and rural residential areas.

### SWMA Vital Statistics

| SWMA Area     | Acres | Properties |
|---------------|-------|------------|
| Inside ESSD   | 3,407 | 9,344      |
| Outside ESSD  | 5,182 | 2,068      |
| <i>Totals</i> | 8,589 | 11,412     |

(ESSD – East Salem Service District)

The SWMA includes portions of the following watersheds:

- Claggett Creek
- Little Pudding River
- Mill Creek (including Battle Creek)
- Croisan Creek

## Revisions

Revisions of the SWMP document must be completed annually. Once revision is complete, please sign and date when the revisions are approved.

| Due Date      | e-Sign & Date |
|---------------|---------------|
| November 2021 |               |
| November 2022 |               |
| November 2023 |               |
| November 2024 |               |

## Minimum Control Measure 1: Education & Outreach

### Goal

- 1.) Inform the public, businesses, construction operators and other stakeholders about the impacts of stormwater pollution on our waterways
- 2.) Provide these audiences with steps and/or actions that will reduce pollutants in stormwater runoff
- 3.) Understand which local behaviors and practices cause and contribute to stormwater pollution and work to reduce selected behaviors

The program will provide education and outreach using methods that are appropriate for the desired audiences. Some of these methods may include social media messaging, brochures or handouts, in-person event outreach or presentations and trainings.

### BMPs

**EO-1:** Identify 3-5 topics that impact water quality locally. These topics will be considered priority topics to be addressed during outreach campaigns over the course of the permit term. Topics could include:

- a. Impacts of illicit discharges and how to avoid and report them
- b. Impacts from impervious surfaces and to avoid them
- c. Practices for proper use and storage of pesticides, herbicides, and fertilizers
- d. Practices to reduce litter
- e. Practices for recycling programs
- f. Practices for power washing, carpet, cleaning, auto repair and maintenance
- g. Low impact development and green infrastructure
- h. Potential impacts of septic systems and practices for maintenance
- i. Watershed awareness
- j. Storm drain awareness and connectivity to local rivers and streams
- k. Other stormwater issues of significance

**EO-2:** Offer at least two educational messages or activities a year that address the County's priority topics created from EO-1.

**EO-2a:** Offer at least one educational message or activity from the priority list to the general public, homeowners, students, or businesses over the permit term.

**EO-2b:** Offer at least one educational message or activity from the priority list to local elected officials, land use planners or engineers over the permit term.

**EO-2c:** Offer at least two educational messages or activities to construction site operators over the permit term that addresses any of the following topics:



- a. Appropriate selection, design, installation and use of onsite stormwater controls as outlined by Marion County ordinances
- b. Appropriate maintenance of onsite stormwater controls as outlined by Marion County ordinances

**EO-3:** Implement one assessment or evaluation on an education and outreach activity to determine how effective the activity was at conveying the material to the intended audience.

### Measurable Goals

| BMP     | Milestones  | Start     | Finish    | Deliverables   |
|---------|---|-----------|-----------|--|
| EO-1    | Identify 3-5 priority topics  |           |           | <ul style="list-style-type: none"> <li>Priority list of topics</li> </ul>  |
| EO-2a-c | <ul style="list-style-type: none"> <li>Develop annual plan</li> <li>Offer 2 messages annually</li> <li>Offer messages in Spanish</li> </ul>   | Mar. 2019 | Feb. 2024 | <ul style="list-style-type: none"> <li>EO Annual Plan</li> <li>Priority topic covered, method, audience type, estimated reach</li> </ul> |
| EO-6    | <ul style="list-style-type: none"> <li>Determine type of assessment &amp; activity to assess</li> <li>Implement assessment</li> <li>Implement findings in following year</li> </ul> | Feb 2020  | Nov. 2020 | <ul style="list-style-type: none"> <li>Assessment metric, summary of how the activity was considered successful</li> </ul>               |

### Responsible Person(s):

The majority of outreach activities are designed and implemented by an Environmental Specialist who is supervised by the Environmental Services Program Supervisor. Some outreach activities may involve other groups within Public Works or other entities, but will be coordinated through an Environmental Specialist. All environmental services activities are approved and overseen by the Environmental Services Division Manager and the Public Works Director.

### Rationale

**EO-1:** The County currently utilizes social media to share around 10-15 educational messages annually. However, it is challenging to measure the impact of those messages. In order to promote behavior change, staff will develop a list of 3-5 behaviors negatively impact water quality locally. Staff will concentrate on creating in-depth messages and activities that target those behaviors throughout the permit term. Focusing in-depth on a small number of topics will promote lasting behavior change.

**EO-2:** By distributing at least two educational messages or activities a year, the County will be fulfilling the general permit requirements. Additionally, by focusing messages on the County identified priority topics, the messaging will be more impactful.

**EO-2a:** The County currently focuses heavily on distributing most of their educational messages to the public through the use of social media. Going along with EO-1, during this permit term,

staff should identify priority topics to promote through social media. Staff should also coordinate social media messaging with other activities in an effort to have a greater impact. Finally, staff should continue to provide messaging in Spanish since a large percent of the population living in the SWMA speak Spanish.

**EO-2b:** Historically, the County has reached land use planners through the Point of Contact program by handing out brochures and informational pamphlets. During this permit term, staff should work with the Land Development Planning and Engineering group and the Marion Water Quality Advisory Committee (MWQAC) to identify priority topics to focus on annually and the best methods for distributing those messages.

Typically, methods for reaching elected officials have been through updates to the Board of Commissioner as issues arise. This approach meets the permit requirements however staff should consider identifying other possible ways of sharing educational messages with County public officials in a less formal way, to keep them abreast of concerns and successes.

**EO-2c:** The County has been successful in reaching Construction Site Operators through the yearly Erosion Control Summit in partnership with the Mid-Willamette Outreach Group. Continued participation in the development of the summit should be considered but if other opportunities arise to reach this audience, they should be considered as well.

**EO-3:** While the County has conducted informal evaluations of outreach programs, these evaluations do not typically inform future outreach activities. As staff develop the annual education and outreach plan, it should also include plan to evaluate the effectiveness of at least one activity.

## **Minimum Control Measure 2: Public Involvement**

### *Goal*

- 1.) Provide adequate opportunity for the public to participate in the development of the SWMP control measures and programs

The program will utilize a variety of methods to make the public aware of opportunities to participate in the development of implementation plans. It will also encourage participation from diverse groups within the community.

### **BMPs**

**PI-1:** Maintain and promote a publicly accessible website that includes the following information:

- a. SWMP
- b. Contact information
- c. Educational materials

- d. Illicit discharge reporting procedures
- e. Links to ordinances and policies related to stormwater control programs

**PI-2:** Utilize the Marion Water Quality Advisory Committee (MWQAC) to develop the SWMP and SWMP programs.

**PI-3:** Create an annual stewardship opportunity for the public. These could include:

- a. Stream team activities
- b. Storm drain marking
- c. Volunteer monitoring
- d. Riparian plantings or stormwater facility enhancement
- e. Neighborhood low-impact development
- f. Adopt-a-road
- g. Citizen advisory committee
- h. Other locally relevant opportunities

### Measurable Goals

| BMP  | Milestones   | Start     | Finish    | Deliverables  |
|------|--|-----------|-----------|---|
| PI-1 | <ul style="list-style-type: none"> <li>• Conduct an annual revision and update</li> </ul>                                    | Mar. 2019 | Feb. 2020 | <ul style="list-style-type: none"> <li>• Number of site visits to each page</li> <li>• Date of revision &amp; update</li> </ul> |
| PI-2 | <ul style="list-style-type: none"> <li>• Host quarterly MWQAC meetings</li> <li>• Provide opportunities for input</li> </ul> | Mar. 2019 | Feb. 2024 | <ul style="list-style-type: none"> <li>• Meeting dates, agendas, number of attendees</li> </ul>                                 |
| PI-3 | <ul style="list-style-type: none"> <li>• Develop stewardship opportunity</li> <li>• Implement activity</li> </ul>            | Mar. 2019 | Feb. 2024 | <ul style="list-style-type: none"> <li>• Summary of event, event date, number of participants</li> </ul>                        |

### Responsible Person(s)

The majority of outreach activities are designed and implemented by an environmental specialist who is supervised by the Environmental Services Program Supervisor. All environmental services activities are approved and overseen by the Environmental Services Division Manager and the Public Works Director.

### Rationale

**PI-1:** The County currently maintains and operates a publically accessible website that meets current permit standards, however improvements could be made to increase the organization and relatability of the content. Staff should plan to make updates to the site that will add educational value as well as make the site easier to navigate. Additionally, the most recent versions of the SWMP, illicit discharge reporting protocol and County Ordinances will be added as they are updated.

**PI-2:** During previous permit cycles, County staff met with the MWQAC to develop and review proposed ordinance changes and found great value in their feedback. Staff should continue to utilize this public group by meeting with them quarterly. These meetings should provide updates and assess programmatic needs. Staff will rely heavily on the MWQAC for their input on the SWMP, ordinance updates and other protocol that are being updated as a result of the general permit.

**PI-3:** The County has typically relied on the Adopt-a-Road program to fulfill the permit stewardship requirements; however they have seen recent success hosting volunteer litter clean ups and storm drain marking events. In order to see continued success and attendance at stewardship events, it will be important to continue to cultivate engagement of volunteers. Staff will work with the Volunteer Services coordinator to develop a list of potential volunteers and will continue to implement at least one of those stewardship opportunities yearly to meet permit requirements.

### **Minimum Control Measure 3: Illicit Discharge Detection and Elimination**

#### *Goal*

- 1.) Implement and enforce a program that detects and eliminates illicit discharges into the MS4

The program will prohibit non-stormwater discharges into the MS4 through the enforcement of a County ordinance or other regulatory method.

#### **BMPs**

**IDDE-1:** Update and maintain a current map and digital inventory of the MS4 including the following:

- a. Outfalls
- b. Conveyance system
- c. Stormwater control locations
- d. Chronic illicit discharges
- e. Dry weather flows

In addition to the map, there must also be an outfall inventory with all the known outfall locations. The inventory must include a unique identifier (i.e. alphanumeric code), any geographic information necessary to find the outfall in the field and the name(s) of the receiving water(s).

**IDDE-2:** Revise and update the existing Stormwater Discharge Quality Control Ordinance (#1311) to reflect the conditions of the general permit.

**IDDE-3:** Develop and implement an IDDE Response Plan that includes the following:

- a. An internal and external IDDE reporting system
- b. Timelines for response and investigation
- c. Documentation and tracking procedures

**IDDE-4:** Develop and implement an IDDE Enforcement Plan that includes the following:

- a. Timelines for compliance
- b. Progressively stricter responses for repeat violations

**IDDE-5:** Develop and implement a dry weather screening schedule.

**IDDE-6:** Implement an IDDE training program for all potential response staff.

## Measurable Goals

| BMP    | Milestones  | Start     | Finish     | Deliverables   |
|--------|---|-----------|------------|--|
| IDDE-1 | • Create unique IDs for stormwater assets in GIS        | Aug. 2019 | Aug. 2020  | <ul style="list-style-type: none"> <li>• Unique IDs</li> <li>• Percent of MS4 mapped</li> <li>• Updated map &amp; outfall inventory</li> </ul> |
|        | • Conduct GIS analysis to determine missing information | Aug. 2019 | Aug. 2023  |  |
|        | • Update missing information on GIS layers              |           |            |  |
|        | • Create an outfall inventory                           |           |            |  |
|        | • Continually update MS4 map and stormwater assets      |           |            |  |
| IDDE-2 | • Review & update ordinance                             | Jan. 2022 | July, 2022 | <ul style="list-style-type: none"> <li>• Updated ordinance</li> </ul>  |
|        | • Provide draft to BOC for review & approval            |           | Jan. 2023  |  |
|        | • Open for public comment                               |           |            |  |
|        | • Adopt the updated ordinance(s)                        |           |            |  |
| IDDE-3 | • Update IDDE reporting system                          | July 2019 | July 2020  | <ul style="list-style-type: none"> <li>• Updated response procedures</li> </ul>  |
|        | • Update IDDE response and documentation procedures     |           |            |  |
| IDDE-4 | • Evaluate current enforcement procedures               | July 2021 | Jan. 2022  | <ul style="list-style-type: none"> <li>• Updated ordinance</li> </ul>  |
|        | • Develop new IDDE enforcement procedures               |           | Jan. 2022  |  |
| IDDE-5 | • Develop a dry weather screening schedule              | Jan. 2020 | July 2020  | <ul style="list-style-type: none"> <li>• Schedule</li> <li>• Pollutant parameter document</li> <li>• Screening reports</li> </ul>              |
|        | • Develop pollutant parameters for response             | Jan. 2020 | July 2020  |  |
|        | • Complete 40% dry weather screening in the MS4         | June 2021 | Feb. 2022  |  |
|        | • Complete 60% dry weather screening in the MS4         | June 2022 | Feb. 2023  |  |
|        | • Complete 80% dry weather screening in the MS4         | June 2023 | Feb. 2024  |  |
| IDDE-6 | • Develop IDDE training                                 | Annually  |            | <ul style="list-style-type: none"> <li>• Training materials</li> <li>• Agenda &amp; Sign-In Sheets</li> </ul>                                  |
|        | • Host trainings for relevant staff                     |           |            |  |

## Responsible Person(s)

The illicit discharge program has traditionally been run as a coordinated effort between the Public Works Dispatch staff, the stormwater crew and Environmental Specialists. Dispatch collects and documents complaints; Stormwater crews will investigate where appropriate; Environmental Specialists will investigate and respond.

## Rationale

**IDDE-1:** While the County currently maintains a GIS database that includes features such as the storm drains, pipes and most outfalls, the general permit also requires additional features that are currently not mapped. Staff will work to update the mapping of ditches and outfalls, create unique IDs for all features, and begin mapping illicit discharge and dry weather monitoring sites. To stay in compliance, staff should continue to update new features as they are added to the MS4.

**IDDE-2:** In 2003 the County implemented East Salem Service District (ESSD) Ditch Maintenance Ordinance (#1174) which prohibits the dumping of solid waste, discarded items, or yard debris into ESSD ditches. While this ordinance only serves one portion of the SWMA and is not the main ordinance to prohibit illicit discharge, it can be used for IDDE purposes and thus should be reviewed for inconsistencies with the general permit. Under the conditions of the general permit, the ordinance must define the range of illicit discharges it covers. New activities may need to be added to the ordinance.

In 2011, the County implemented the Stormwater Discharge Quality Control Ordinance (#1311) in order to meet the illicit discharge terms of the previous individual permit. Because the range of illicit discharges in the general permit has changed, this ordinance should be reviewed to update the definitions and prohibited activities. In addition, the general permit requires the ordinance to include enforcement procedures. The enforcement procedures in the existing ordinance are not adequate to meet the new conditions. Staff will provide recommendations and refer to Legal Counsel for the best course of action.

**IDDE-3:** The County currently has a response and documentation procedure that fulfills the previous individual permit. However, the general permit has required response times that will need to be incorporated into the standard operating procedures.

Additionally, as was referenced in the rationale for IDDE-2, the enforcement measures in the existing ordinance do not adequately meet the requirements of the general permit. A separate enforcement plan will be necessary to meet the new requirements including a procedure that addresses repeat offenders with progressively stricter responses.

**IDDE-4:** The County currently routes illicit discharge complaints through the Public Works Dispatch, however not all internal and external reports are captured and documented the same way. For consistency and proper documentation, a standard reporting and investigation procedure should be developed. Additionally, the general permit requires the County to publicize a method for reporting illicit discharge 24/7, so an appropriate system will need to be established. Additionally, staff will need to develop an updated protocol for documentation and tracking.

**IDDE-5:** In the past, the County has conducted informal dry weather monitoring throughout the course of regular maintenance activities, but no written protocol or documentation have been

developed. The general permit requires this be established as well as documenting priority locations for monitoring. In order to meet the requirements of the permit, the County will need to develop a schedule, protocol, priority locations and a pollutant parameter if a response is required.

**IDDE-6:** Regular IDDE training has been an ongoing practice for County Road Operations Crews, but it will be necessary to provide updated training to reflect new expectations. Staff will also need to include all personnel responsible for illicit discharge response in those trainings.

## **Minimum Control Measure 4: Construction Site Runoff Control**

### *Goal*

- 1.) Implement and enforce a program that reduces the discharge of pollutants from construction sites to the MS4

Through the use of an ordinance or other regulatory mechanism, the program will require erosion and sediment controls and waste materials management controls to be used at all qualifying construction sites.

### **BMPs**

**CE-1:** Revise and update the existing Construction Erosion Ordinance (#1307) to reflect the conditions of the general permit.

**CE-2:** Review and update Erosion and Sediment Control Plan (ESCP) requirements for site operators as well as the County's procedures for documentation and tracking.

**CE-3:** Review and update the Construction Site Inspection procedure which should include triggers for inspection and minimum inspection documentation.

**CE-4:** Review and update the Construction Site enforcement procedures which should include an escalating enforcement procedure for repeat violations.



## Measurable Goals

| BMP  | Milestones   | Start      | Finish    | Deliverables                     |
|------|--|------------|-----------|----------------------------------|
| CE-1 | • Review & update current ordinance                          | Sept. 2019 | Jan. 2021 | • Updated ordinance              |
|      | • Provide draft to BOC for review                            |            | Aug. 2022 |                                  |
|      | • Public comment period                                      |            |           |                                  |
|      | • Update Ordinance #1307                                     |            |           |                                  |
| CE-2 | • Develop updated ESCP template                              | Sept. 2019 | Jan. 2021 | • Updated template               |
|      | • Develop inspection checklist                               | Sept. 2019 | Jan. 2021 | • Updated checklist              |
|      | • Develop updated internal procedures for ESCP documentation | Sept. 2019 | Jan. 2021 | • Updated procedures             |
| CE-3 | • Develop updated inspection procedures                      | Sept. 2019 | Jan. 2021 | • Updated procedures & ordinance |
| CE-4 | • Develop updated enforcement procedures                     | Sept. 2019 | Jan. 2021 | • Updated ordinance              |

## Responsible Person(s)

The work involved in MCM 4 will be a collaborative effort between the County's Land Development Engineering and Planning (LDEP), Engineering staff and Environmental Specialists. LDEP is responsible for reviewing, permitting and inspecting construction sites however in order to update ordinances and standards, they will need input from both Engineering and Environmental Specialist staff. LDEP staff will review and provide updates for ESCP templates, inspection checklists, internal and enforcement procedures. Engineering staff will review and provide updates to engineering standards and the Environmental Specialists will coordinate meetings, draft new language for ordinances and review final documents to ensure compliance with the general permit.

## Rationale

**CE-1:** In 2010 the County implemented the Construction Erosion Ordinance (#1307) in order to meet the construction erosion requirements of the previous individual permit. However, changes in the general permit such as size requirements for ESCP and requirements for enforcement procedures require the ordinance to be updated. During this update, the County will review the erosion and sediment control program to ensure new expectations and internal processes are effective and meet permit requirements.

**CE-2:** The LDEP division currently uses a permitting system to ensure construction site operators and developers comply with ESCP requirements. In order to meet the conditions of the general permit, the threshold for submitting an ESCP must be updated, along with the supplementary materials provided to site operators. Staff will develop or update the ESCP template, inspection checklist and internal procedures for ESCP review and approval.

**CE-3:** The LDEP's inspection procedures were created in 2010 to fulfill the needs of the individual permit. In order to comply with the new general permit requirements, an updated procedure will need to be implemented. LDEP and Environmental Specialists will work to update the inspection procedures to meet the current permit expectations.

**CE-4:** As stated in CE-1, the County's Construction Erosion ordinance was developed to fulfill the previous individual permit and as such, the enforcement procedures are not sufficient to meet the current requirements of the general permit. LDEP and Environmental Specialists will update the ordinance with the new enforcement procedures.

## **Minimum Control Measure 5: Post-Construction Site Runoff Control**

### *Goal*

- 1.) Implement and enforce a program that reduces the discharge of pollutants and controls stormwater runoff from new development and redevelopment to the MS4

Through the use of an ordinance or other regulatory mechanism, the program will require that qualifying sites use stormwater controls and implement long term operation and maintenance for proper upkeep.

### **BMPs**

**PCE-1:** Revise and update the existing Post Construction Runoff Ordinance (#1324) to reflect the conditions of the general permit.

**PCE-2:** Review ordinances, code and standards for any barriers to implementing green infrastructure or low impact development. If barriers are identified, work to minimize or remove those barriers within three years.

**PCE-3:** Review and develop standards that meet the conditions of the general permit. These should include the following:

- a. Structural stormwater control design and specifications
- b. Site performance standards with a numeric stormwater retention requirement
- c. Treatment standards for sites unable to meet the retention standards
- d. Allowance for alternative compliance for sites unable to meet the retention requirements
- e. Stormwater mitigation options for sites that qualify for alternative compliance

**PCE-4:** Review and update the Post Construction Site Runoff Plan review procedures.

**PCE-5:** Review and update the Post Construction enforcement procedures which should include an escalating enforcement procedure for repeat violations.

### Measurable Goals

| BMP   | Milestones  | Start    | Finish    | Deliverables   |
|-------|---|----------|-----------|--|
| PCE-1 | <ul style="list-style-type: none"> <li>Review &amp; update current ordinance</li> <li>Provide draft for BOC to review</li> <li>Public comment period</li> <li>Update ordinance #1324</li> </ul>   | Feb 2022 | Feb. 2023 | <ul style="list-style-type: none"> <li>Updated ordinance</li> </ul>  |
| PCE-2 | <ul style="list-style-type: none"> <li>Develop a team to review codes, policy and ordinances</li> <li>Review codes, policies and ordinances for barriers to GI or LID implementation</li> <li>Provide recommendations to BOC</li> </ul> | Feb 2022 | Feb. 2023 | <ul style="list-style-type: none"> <li>Barriers</li> <li>Recommendations &amp; Changes</li> <li>Updated codes, ordinances or policies</li> </ul> |
| PCE-3 | <ul style="list-style-type: none"> <li>Develop a post construction standard review team</li> <li>Review and update post construction standards</li> </ul>   | Feb 2022 | Feb. 2023 | <ul style="list-style-type: none"> <li>Updated standards</li> </ul>  |
| PCE-4 | <ul style="list-style-type: none"> <li>Review and update the site plan review procedures</li> </ul>   | Feb 2022 | Feb 2023  | <ul style="list-style-type: none"> <li>Updated procedures</li> </ul>   |
| PCE-5 | <ul style="list-style-type: none"> <li>Review and update enforcement procedures</li> </ul>  | Feb 2022 | Feb 2023  | <ul style="list-style-type: none"> <li>Updated ordinance</li> </ul>  |

### Responsible Person(s)

Implementing these BMPs will be a collaborative effort between the County’s LDEP, Engineering staff and Environmental Specialist. LDEP is responsible for reviewing, permitting and inspecting post construction sites however in order to update ordinances and standards they will need input from both Engineering and Environmental Services staff. LDEP will review and provide updates for internal documentation and procedures as well as enforcement. Engineering will review and provide updates to engineering standards and Environmental Specialists will coordinate meetings, draft new language for ordinances and review final documents to ensure compliance with the general permit.

### Rationale

**PCE-1:** In 2010 the County implemented the Post Construction Erosion Ordinance (#1324) in order to meet the construction erosion requirements of the previous individual permit. However,

changes in the general permit such as size requirements for stormwater controls and requirements for enforcement procedures, calls for the ordinance to be updated.

**PCE-2:** The County has a large list of codes, policies and ordinances that must be reviewed for barriers to LID and GI implementation. In order to review these policies, a team from Public Works will be gathered to identify barriers. Once barriers have been identified the group will propose recommendations to the County's management team and the Board of Commissioners for approval and implementation.

**PCE-3:** The post construction standards are used by LDEP, capital projects and the general public during post-construction development. As such, in order to develop a set of standards that meet permit requirements and also fulfill the needs and expectations of those who use them, a team from Public Works will be gathered to provide input in the changes. Representatives will assist in reviewing the County's [2012 Draft Interim Standards](#), review other jurisdiction's standards and propose updates.

**PCE-4:** LDEP is responsible for the review of all post construction plans submitted to the County. With multiple staff members potentially performing a review of the plans, it is important to have a documented procedure. This can be used by all staff performing the site runoff plan review to ensure consistency in evaluations and to provide site operators with a better understanding of County expectations. In order to be in compliance with the general permit, this procedure will be reviewed and updated by staff.

**PCE-5:** As stated in PCE-1, the County's Post Construction Erosion ordinance was developed to fulfill the previous individual permit and as such, the enforcement procedures are not sufficient to meet the current requirements of the general permit. Staff will update the ordinance with the new enforcement procedures.

## **Minimum Control Measure 6: Pollution Prevention and Good Housekeeping for Municipal Operations**

### *Goal*

- 1.) Implement a program that ensures prudent pollution prevention and good housekeeping practices are used to reduce the discharge of pollutants from municipal operations

The program will utilize a variety of methods to train staff on pollution prevention practices and ensure that good housekeeping practices are being utilized during day-to-day municipal activities.

### **BMPs**

**PP-1:** Develop and implement an operations and maintenance strategy for all existing stormwater controls that discharge into the MS4.

**PP-2:** Develop and implement a strategy to inspect and maintain at least 50% of the catch basins and inlets within the MS4.

**PP-3:** Revise and update the existing best management practices document and ensure proper procedures are in place for the following activities:

- a. Pipe cleaning for stormwater and wastewater conveyance systems
- b. Cleaning of culverts conveying stormwater in roadside ditches
- c. Ditch Maintenance
- d. Road and bridge maintenance
- e. Road repair and resurfacing including pavement grinding
- f. Dust control for roads and municipal construction sites
- g. Winter road maintenance including salt or de-icing
- h. Fleet maintenance and vehicle washing
- i. Building and sidewalk maintenance including washing
- j. Solid waste transfer and disposal areas
- k. Municipal landscape maintenance
- l. Material storage and transfer areas including fertilizer and pesticide, hazardous material, used oil storage and fuel
- m. Firefighting training activities
- n. Maintenance of municipal facilities including public parks and open space, golf courses, airports, parking lots, swimming pools, marinas, etc.
- o. Application and disposal of pesticides and fertilizers
- p. Material disposal that is removed during the course of maintenance, treatment, control of stormwater or wastewater

**PP-4:** Implement a method to reduce litter within MS4 by working cooperatively with other departments and entities on a regular basis including after major public events.

**PP-5:** Develop and implement a program to train all new staff working to implement pollution prevention for municipal operations within 30 days of hire and at least once during the permit term.

## Measurable Goals

| BMP  | Milestones   | Start    | Finish    | Deliverables  |
|------|--|----------|-----------|---|
| PP-1 | <ul style="list-style-type: none"> <li>Document all existing stormwater controls in the MS4</li> <li>Develop an annual maintenance plan for O&amp;M</li> </ul>                                   | Feb 2019 | Feb. 2022 | <ul style="list-style-type: none"> <li>Updated map</li> <li>Maintenance plan and documented work</li> </ul>       |
| PP-2 | <ul style="list-style-type: none"> <li>Develop an annual maintenance plan</li> <li>Inspect catch basins annually</li> </ul>  | Feb 2019 | Feb. 2022 | <ul style="list-style-type: none"> <li>Updated map</li> <li>Documentation of inspections</li> </ul>               |
| PP-3 | <ul style="list-style-type: none"> <li>Review the existing BMP document</li> <li>Compare practices to another jurisdictions</li> <li>Update BMPs as necessary</li> </ul>                         | Feb 2019 | Feb. 2022 | <ul style="list-style-type: none"> <li>Updated BMP guide</li> </ul>   |
| PP-4 | <ul style="list-style-type: none"> <li>Document all solid waste removed from the MS4 through the course of daily operations</li> <li>Develop a plan to reduce most frequent materials</li> </ul> | Feb 2019 | Feb. 2022 | <ul style="list-style-type: none"> <li>Documentation of waste</li> <li>Litter reduction plan</li> </ul>           |
| PP-5 | <ul style="list-style-type: none"> <li>Develop BMP training program</li> <li>Implement training program for new hires</li> <li>Train employees on BMPs once per year</li> </ul>                  | Feb 2019 | Feb. 2022 | <ul style="list-style-type: none"> <li>Updated training program</li> <li>Documentation of participants</li> </ul> |

## Responsible Person(s)

Implementing these BMPs will be a coordinated effort between Road Operations, Stormwater Operations and Environmental Specialists. Stormwater Operations will be responsible for mapping and inspecting stormwater controls as well as inspecting catch basins. Road and Stormwater Operations will be responsible for implementing all BMPs during the course of day-to-day activities. Finally, Environmental Specialist will be responsible for updating the BMP procedures and implementing training programs. The Road Operations Division Manager and Supervisors along with the Environmental Services Program Supervisor are responsible for ensuring the implementation.

## Rationale

**PP-1:** The County's post-construction requirements require certain sites to install stormwater controls within the MS4. However, documenting and inspecting these controls has been inconsistent in the past. To ensure compliance with the permit, LDEP and Capital Projects will

develop a comprehensive list of stormwater controls in the MS4. Once all the controls have been documented, the Environmental Services Program Supervisor will develop an annual plan for the Stormwater Operations team to inspect and maintain.

**PP-2:** Stormwater operations crews already inspect and clean catch basins within the MS4 on a regular basis. However, to ensure that there is evidence of meeting the permit expectations, the Environmental Services Program Supervisor will develop an annual plan and Stormwater Operations will provide documentation upon inspection and cleaning each catch basin.

**PP-3:** The County last updated their BMP document in 2012. Since it covers many different municipal activities, it is important that those BMPs are reviewed and updated to meet current expectations. An Environmental Specialist will review the BMP document and BMP activities, compare BMP activities to another jurisdiction, and update the BMP document.

**PP-4:** Stormwater operations crews already consistently remove solid waste and debris from ditches and catch basins throughout the MS4 but that is rarely documented. In order to show compliance with the general permit, staff will begin tracking the materials that they remove. An Environmental Specialist will review the data annually to develop a litter reduction plan that will address the root causes of the most frequent materials being found.

**PP-5:** Since 2009, the County has been implementing BMP training for all municipal operations crews. However, with newer technology and updated BMP strategy, there is an opportunity to update how training is implemented. In order to meet permit requirements staff should be trained once upon hire and once a year as a refresher. An Environmental Specialist will update these trainings and provide them to all appropriate employees.

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## *3.3 Illicit Discharge Detection & Elimination*

---

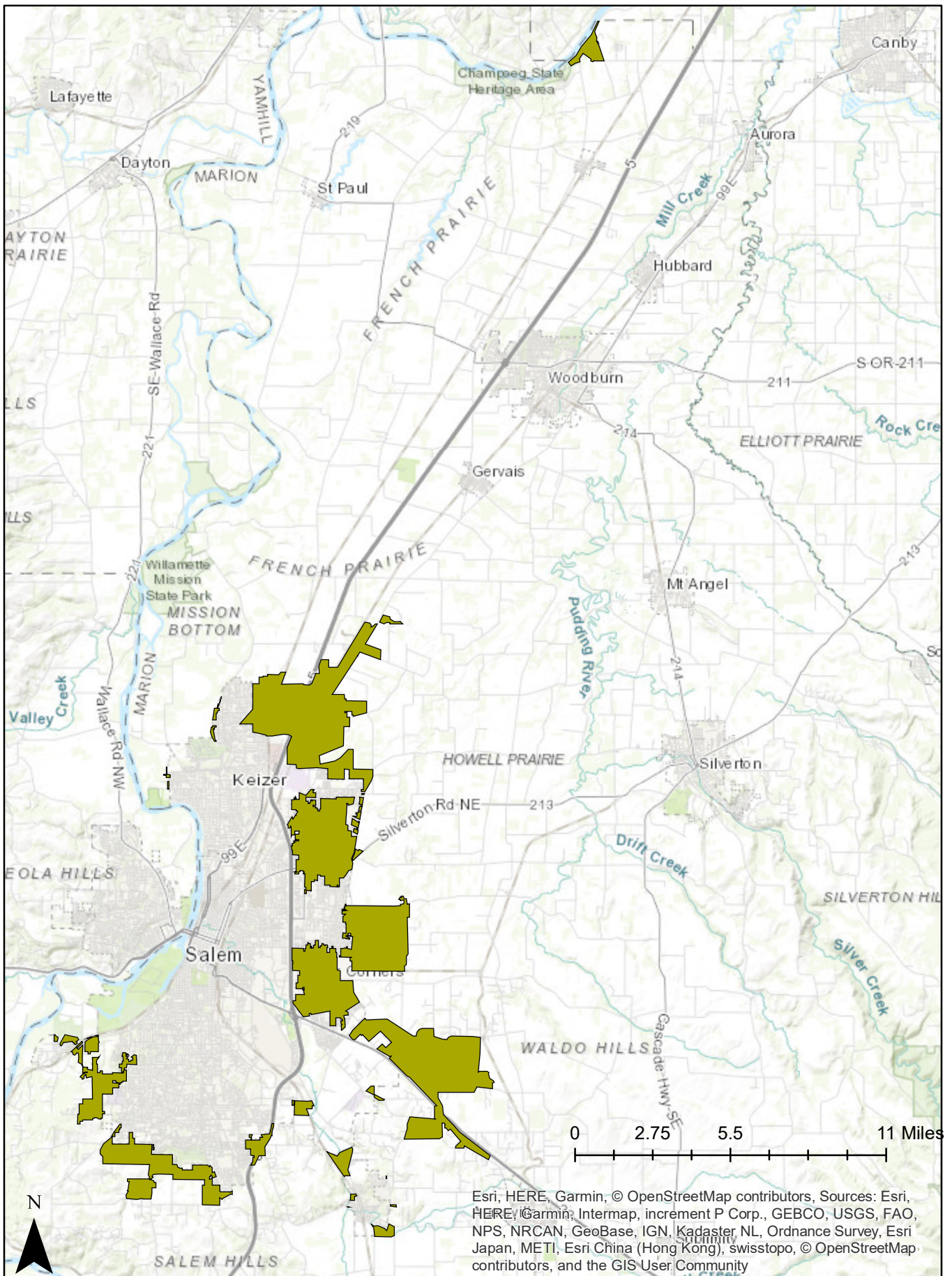


# MS4 Map

---

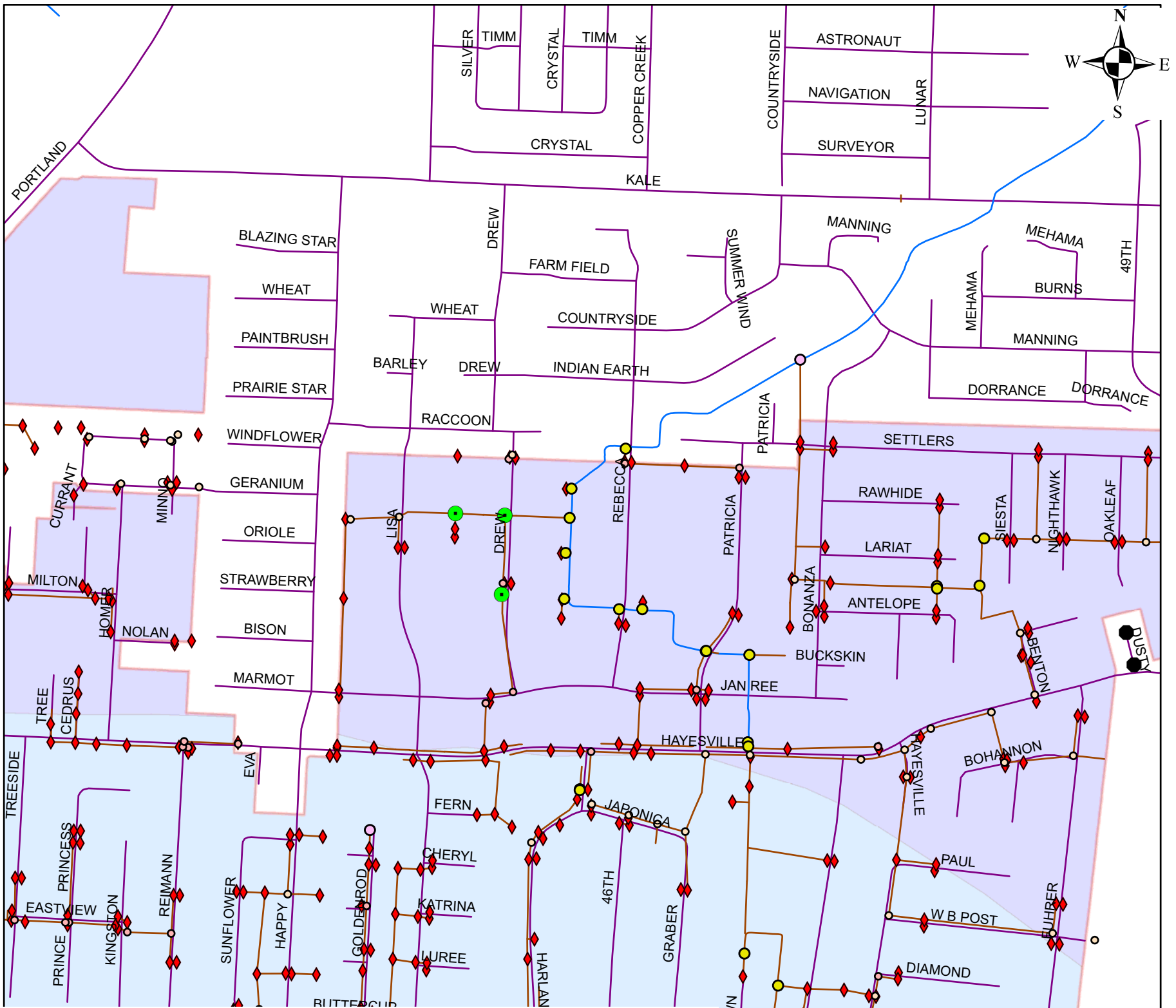
Questions 53 and 55

# Marion County Stormwater Management Area



Esri, HERE, Garmin, © OpenStreetMap contributors, Sources: Esri, HERE, Garmin; Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

# Conveyance and Controls Example



## Legend

- Output Not Near Asset
- Proximity to Ditch or Stream

- watershed**
- <all other values>

## Stormwater\_Structures

- <all other values>

## Name

- Beaver Creek
- Corral Creek-Willamette River
- Croisan Creek-Willamette River
- Glenn Creek-Willamette River
- Lower Little Pudding River
- Lower Mill Creek
- McKinney Creek
- Upper Little Pudding River

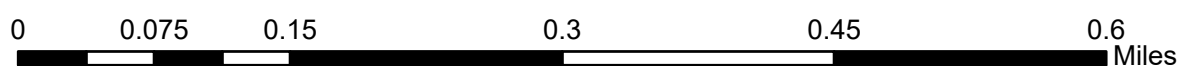
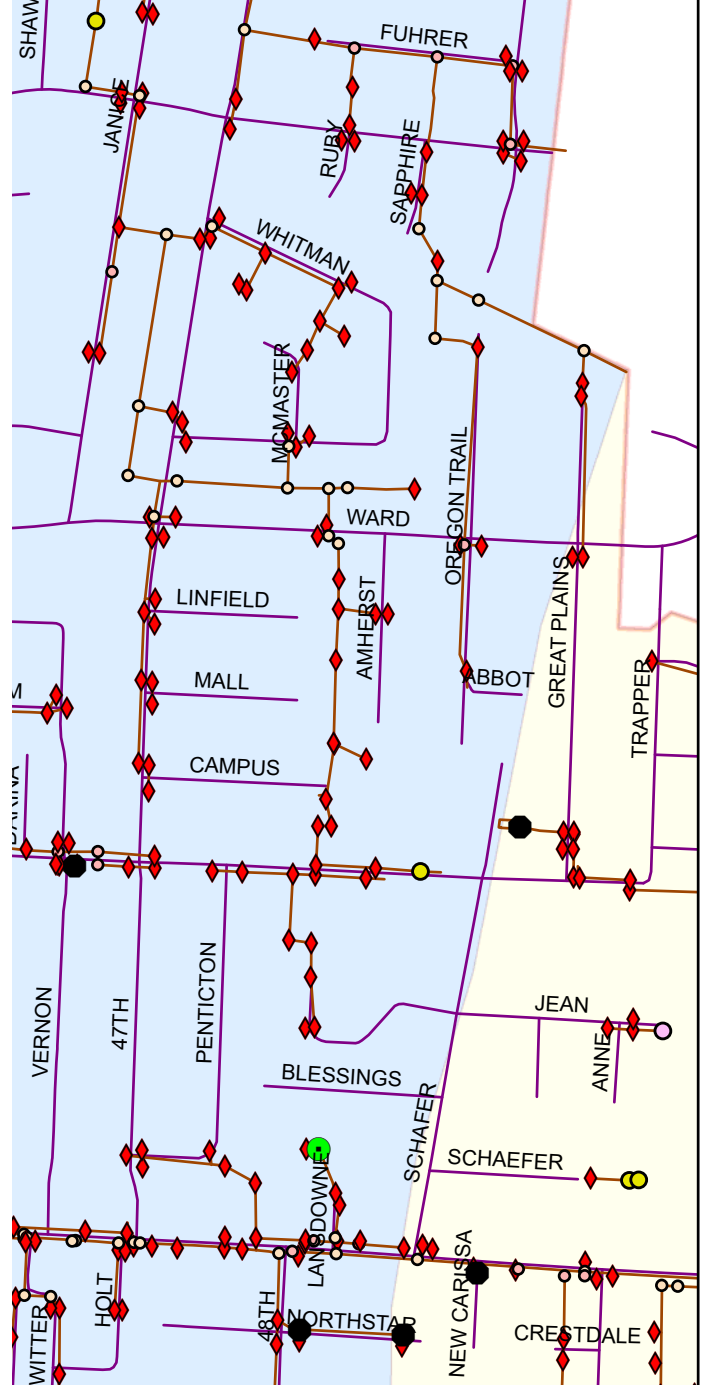
## AssetType

- ★ AREA DRAIN
- ◆ CB
- CO
- CONTROL INLET
- CONTROL STUCTURE
- INLET
- JB
- MH
- OUTLET
- PLUG
- ? Unknown
- ▲ VAULT
- WELL
- YARD DRAIN

— Pipes\_and\_Ditches

— Streams

— Roadways



[Supporting Attachments 27](#)

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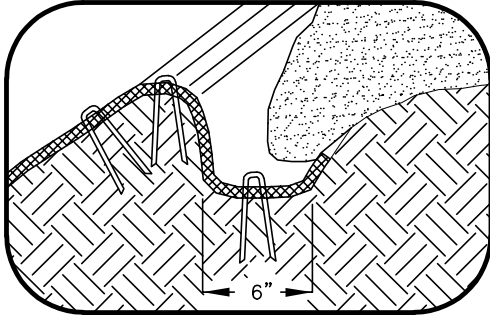
## *3.4 Construction Site Runoff Control*

---

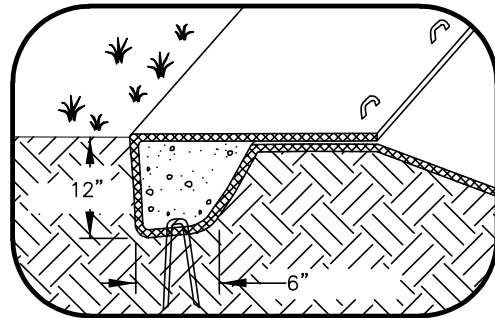
# Erosion Controls

---

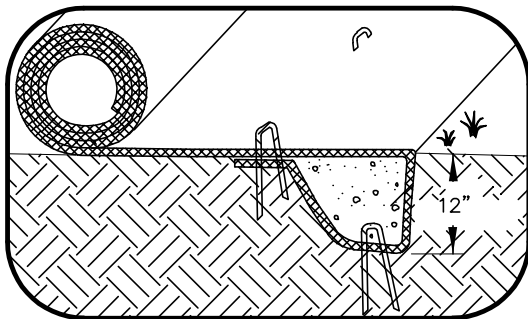
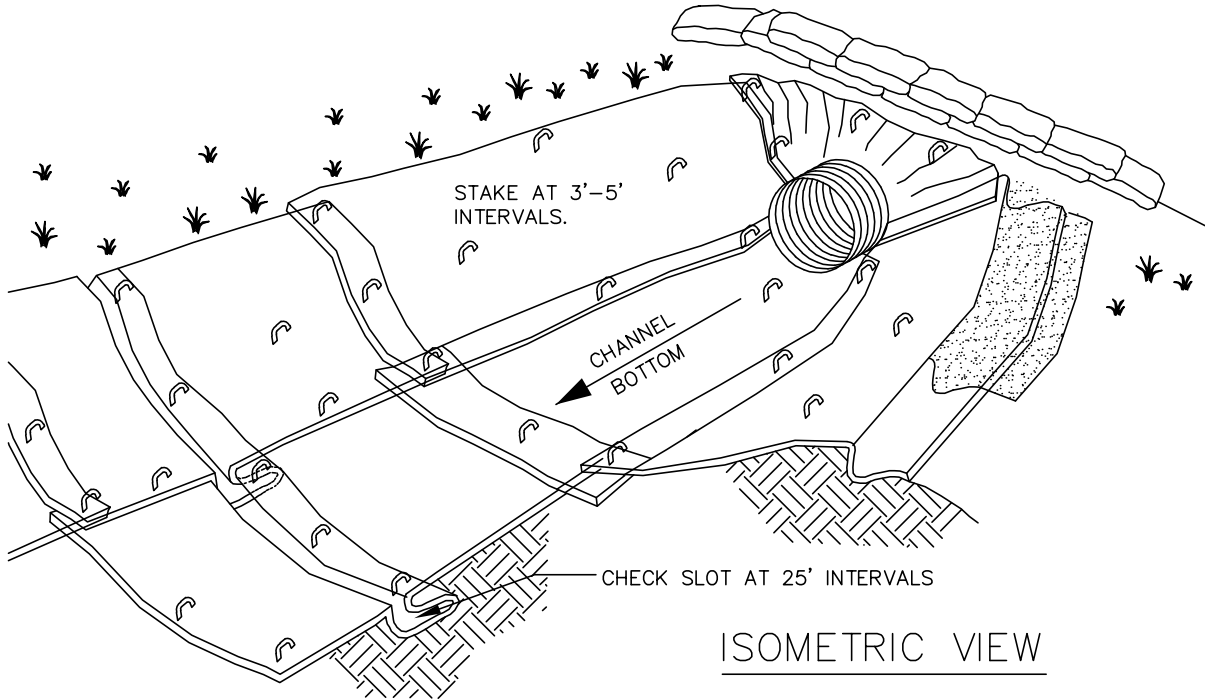
Question 86



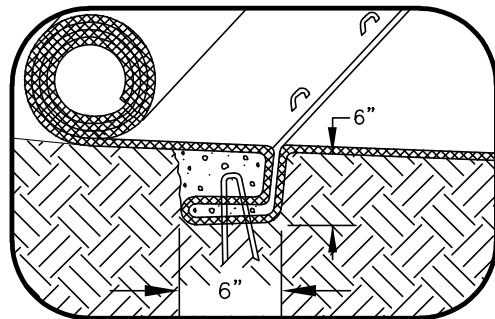
LONGITUDINAL  
ANCHOR TRENCH



TERMINAL SLOPE AND  
CHANNEL ANCHOR TRENCH



INITIAL CHANNEL  
ANCHOR TRENCH



INTERMITTENT CHECK  
SLOT

NOTES:

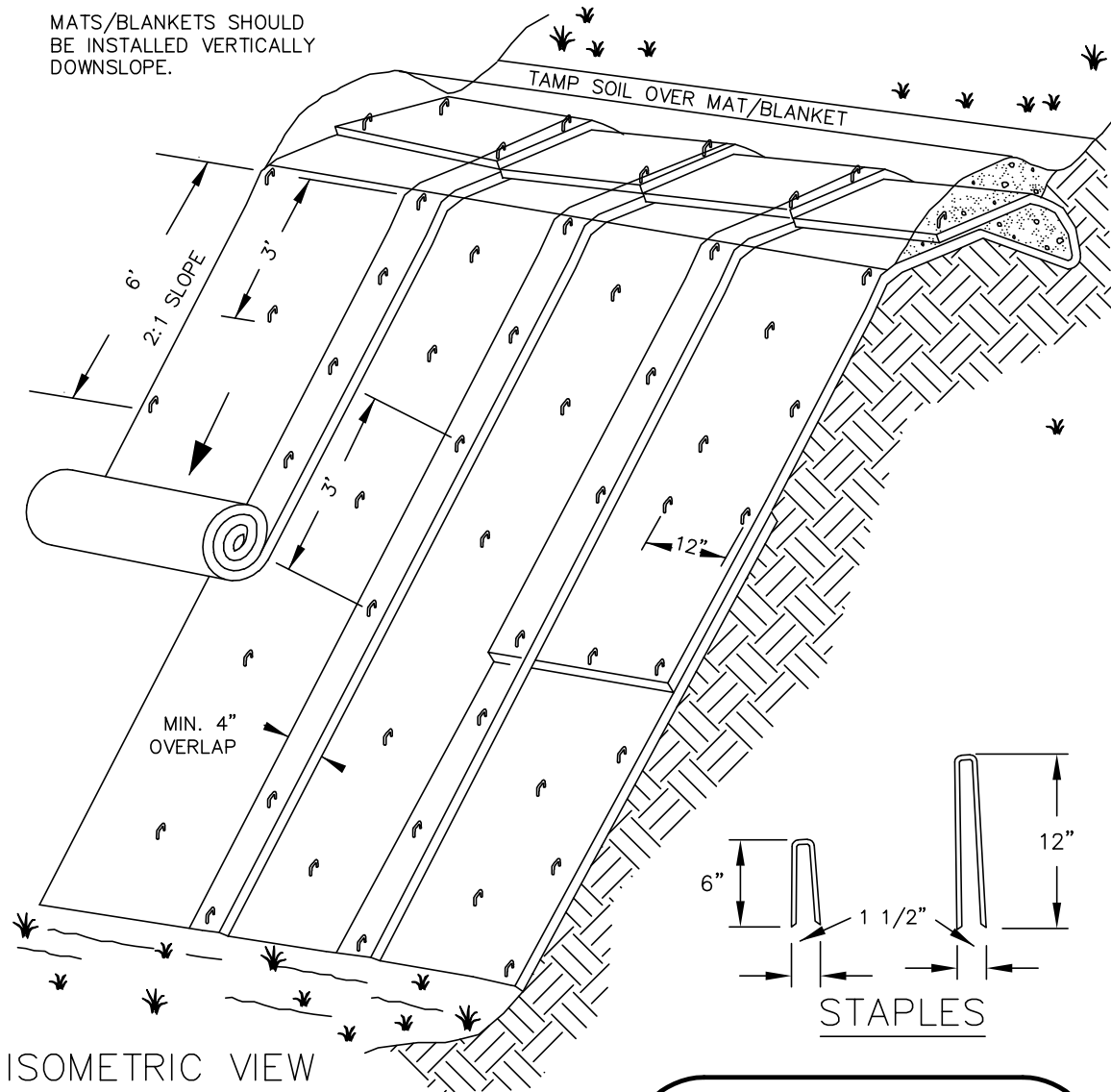
1. CHECK SLOTS TO BE CONSTRUCTED PER MANUFACTURERS SPECIFICATIONS.
2. STAKING OR STAPLING LAYOUT PER MANUFACTURERS SPECIFICATIONS.

MATTING CHANNEL INSTALLATION

DRAWING NO. 800

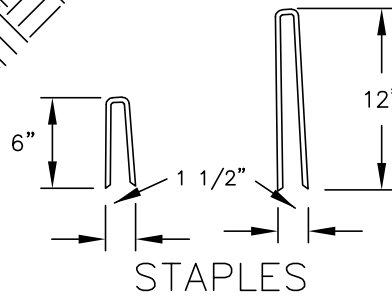
REVISED 10-31-19

MATS/BLANKETS SHOULD BE INSTALLED VERTICALLY DOWNSLOPE.

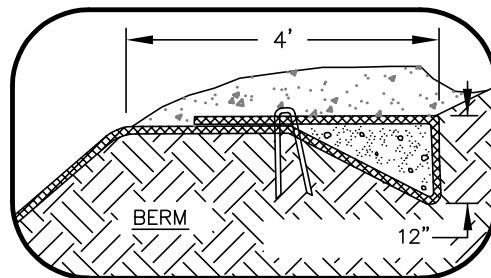


ISOMETRIC VIEW

TYPICAL SLOPE SOIL STABILIZATION



STAPLES



NOT TO SCALE

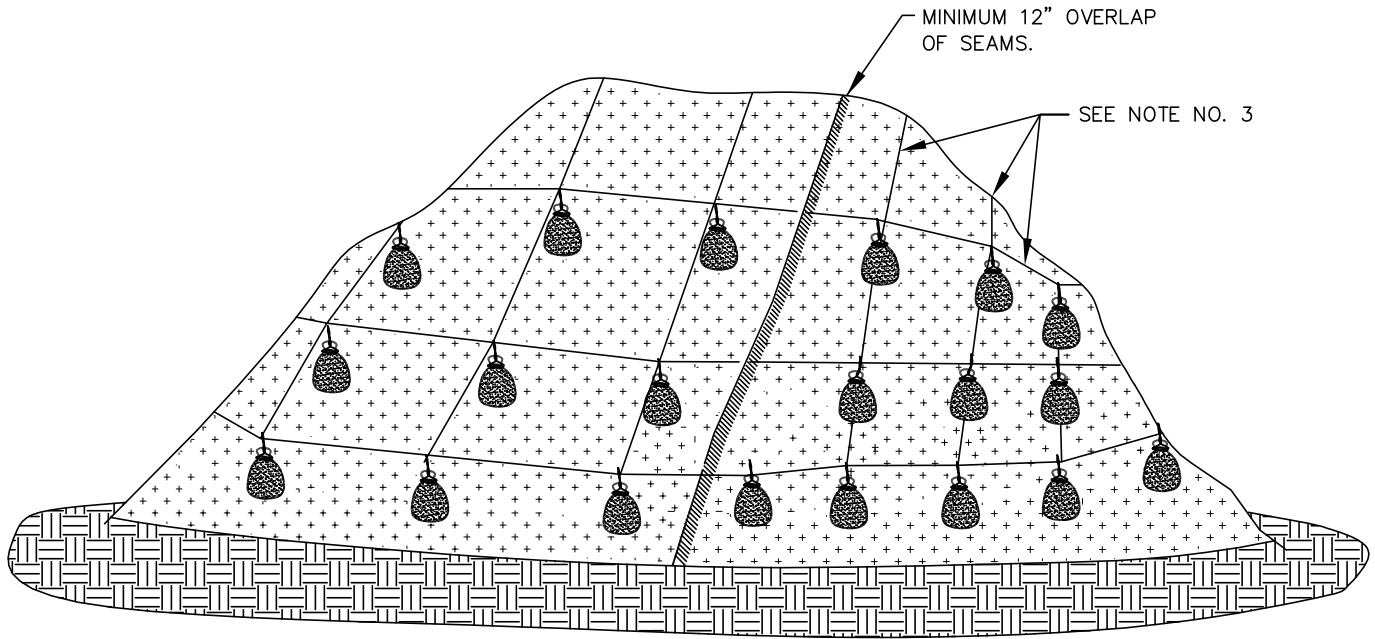
NOTES:

1. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS AND GRASS. MATS/BLANKETS SHALL HAVE GOOD SOIL CONTACT.
2. APPLY PERMANENT SEEDING BEFORE PLACING BLANKETS.
3. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.
4. STAKING OR STAPLING LAYOUT PER MANUFACTURERS SPECIFICATIONS.

MATTING SLOPE INSTALLATION



FOR FURTHER INFORMATION  
ON DESIGN CRITERIA SEE  
CHAPTER 4 OF CLEAN WATER  
SERVICES EROSION PREVENTION  
AND SEDIMENT CONTROL  
PLANNING AND DESIGN MANUAL.



## PLASTIC SHEETING

### NOTES:

1. MINIMUM 12" OVERLAP OF ALL SEAMS REQUIRED.
2. PERIMETER SEDIMENT CONTROL BMP TO BE INSTALLED A MINIMUM OF 3' FROM TOE OF STOCKPILE.
3. COVERING MAINTAINED TIGHTLY IN PLACE BY USING SANDBAGS OR APPROVED EQUAL ON ROPES WITH A MAXIMUM 10' GRID SPACING IN ALL DIRECTIONS.
4. PLASTIC TO EXTEND MINIMUM 1' BEYOND TOE OF SLOPE.
5. AS APPROPRIATE, BMP'S SHALL BE INSTALLED TO CONVEY WATER DISCHARGE FROM STOCKPILE AREAS.

## PLASTIC SHEETING

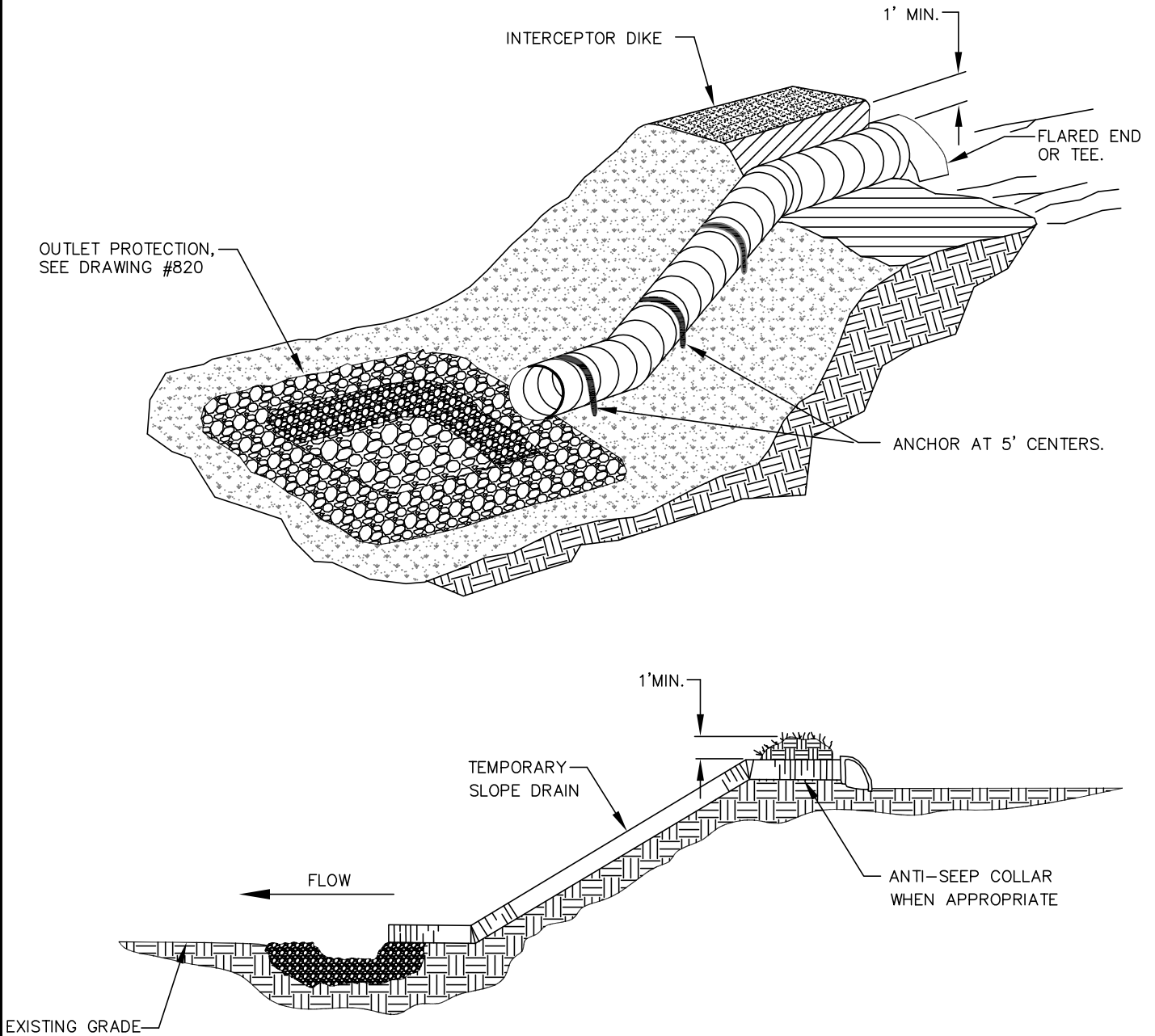
DRAWING NO. 810

REVISED 10-31-19

CleanWater  Services



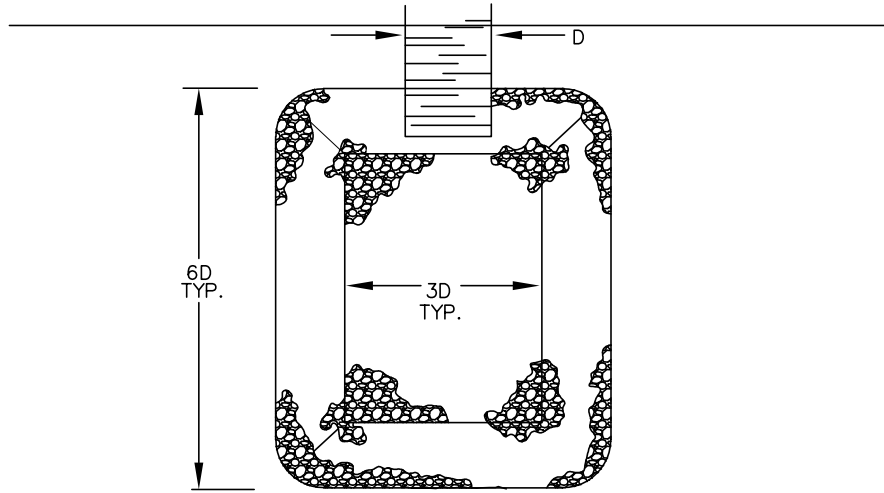
FOR FURTHER INFORMATION  
ON DESIGN CRITERIA SEE  
CHAPTER 4 OF CLEAN WATER  
SERVICES EROSION PREVENTION  
AND SEDIMENT CONTROL  
PLANNING AND DESIGN MANUAL.



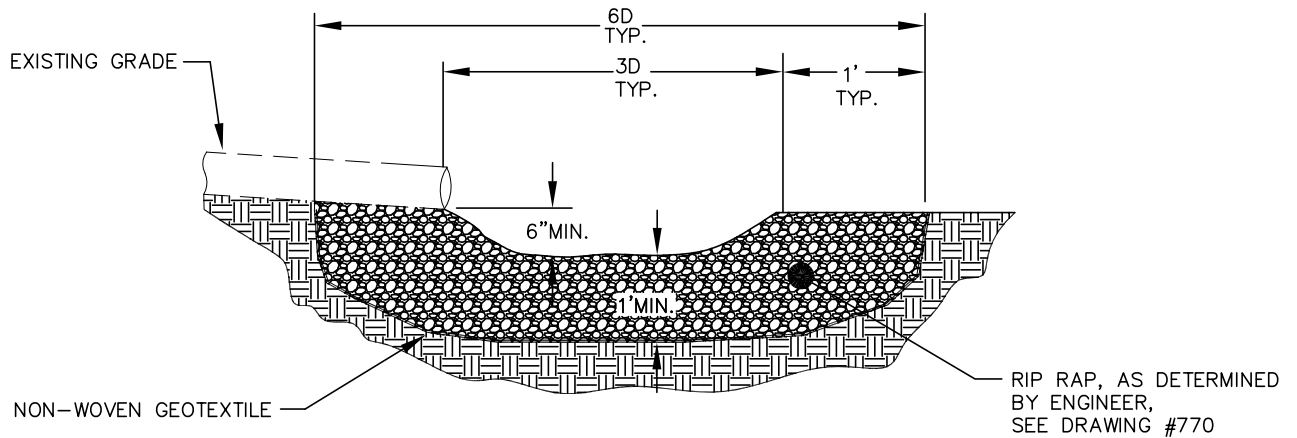
# PIPE SLOPE DRAIN



FOR FURTHER INFORMATION  
ON DESIGN CRITERIA SEE  
CHAPTER 4 OF CLEAN WATER  
SERVICES EROSION PREVENTION  
AND SEDIMENT CONTROL  
PLANNING AND DESIGN MANUAL.



PLAN VIEW



PROFILE

NOTE:

1. ADDITIONAL BMP'S ARE REQUIRED WHEN DISCHARGING SEDIMENT LADEN WATER.

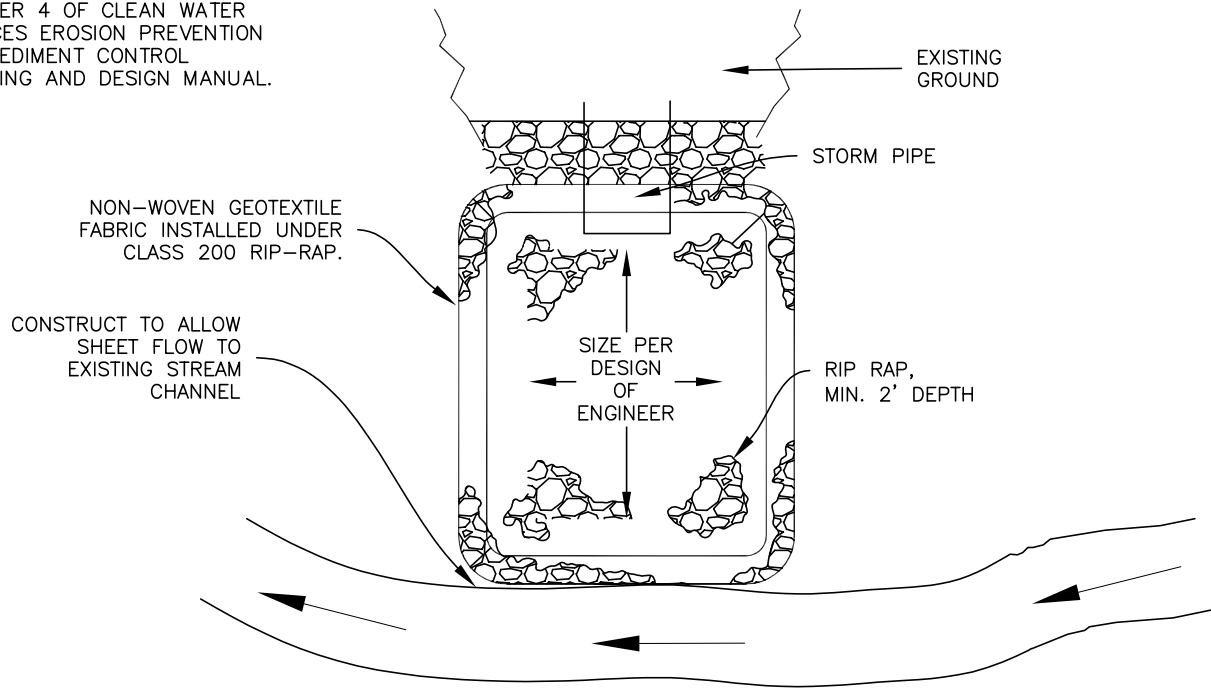
# OUTLET PROTECTION RIP RAP

DRAWING NO. 820

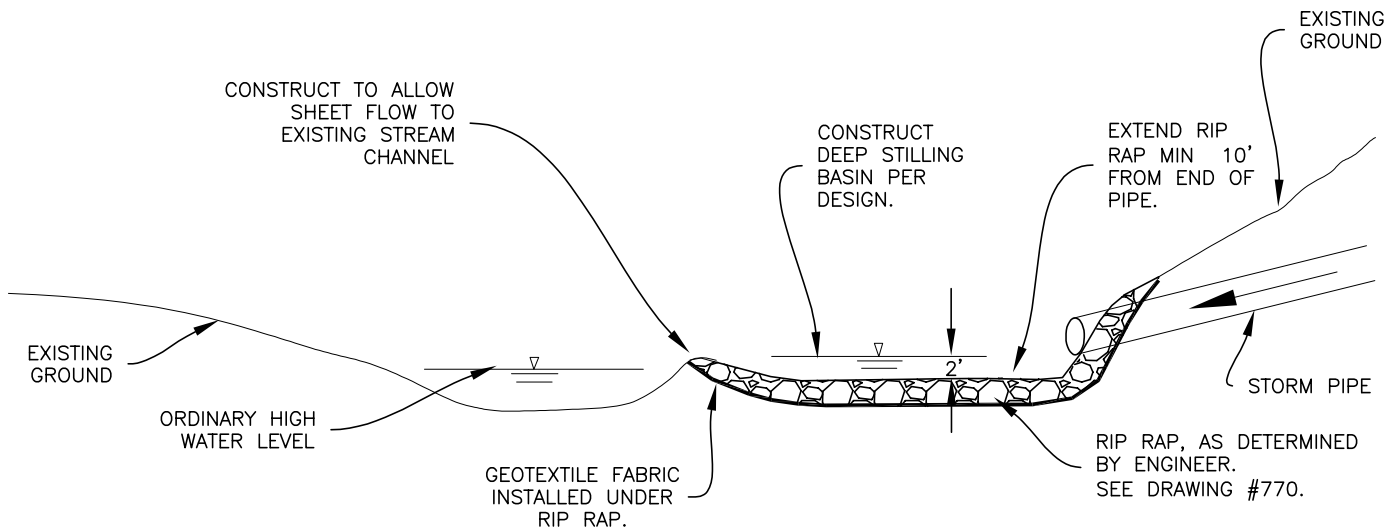
REVISED 10-31-19



FOR FURTHER INFORMATION  
ON DESIGN CRITERIA SEE  
CHAPTER 4 OF CLEAN WATER  
SERVICES EROSION PREVENTION  
AND SEDIMENT CONTROL  
PLANNING AND DESIGN MANUAL.



PLAN VIEW  
NTS



PROFILE

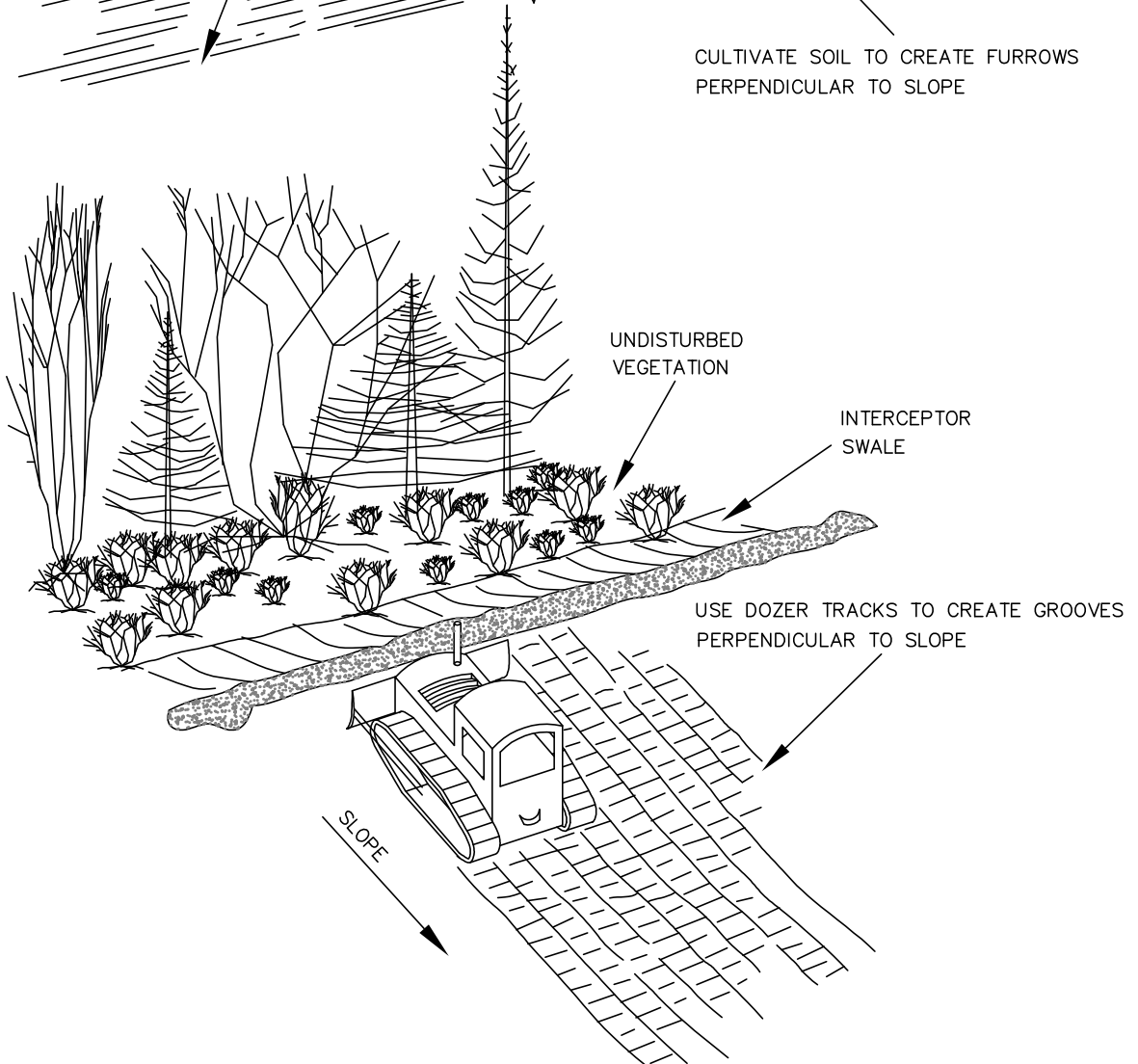
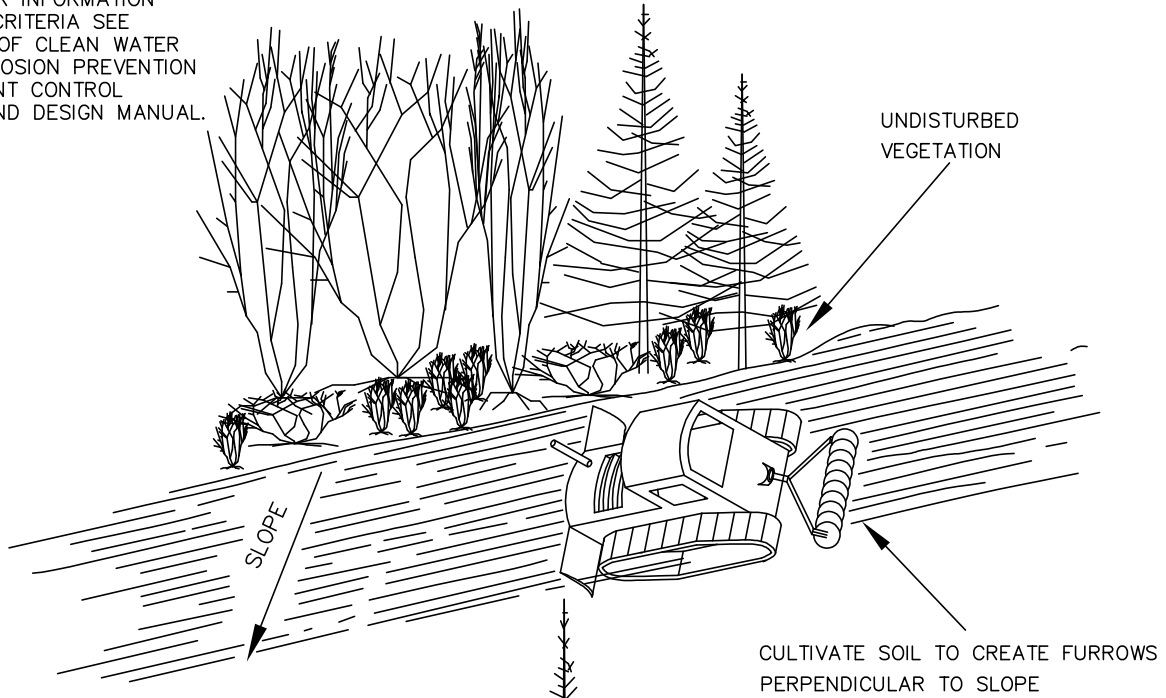
NOTES:

1. ADDITIONAL BMP'S ARE REQUIRED WHEN DISCHARGING SEDIMENT LADEN WATER.
2. CONTRACTOR TO COMPLY WITH CONDITIONS AND REQUIREMENT OF DSL AND CORPS PERMITS.

# OUTLET PROTECTION STILLING BASIN



FOR FURTHER INFORMATION  
ON DESIGN CRITERIA SEE  
CHAPTER 4 OF CLEAN WATER  
SERVICES EROSION PREVENTION  
AND SEDIMENT CONTROL  
PLANNING AND DESIGN MANUAL.



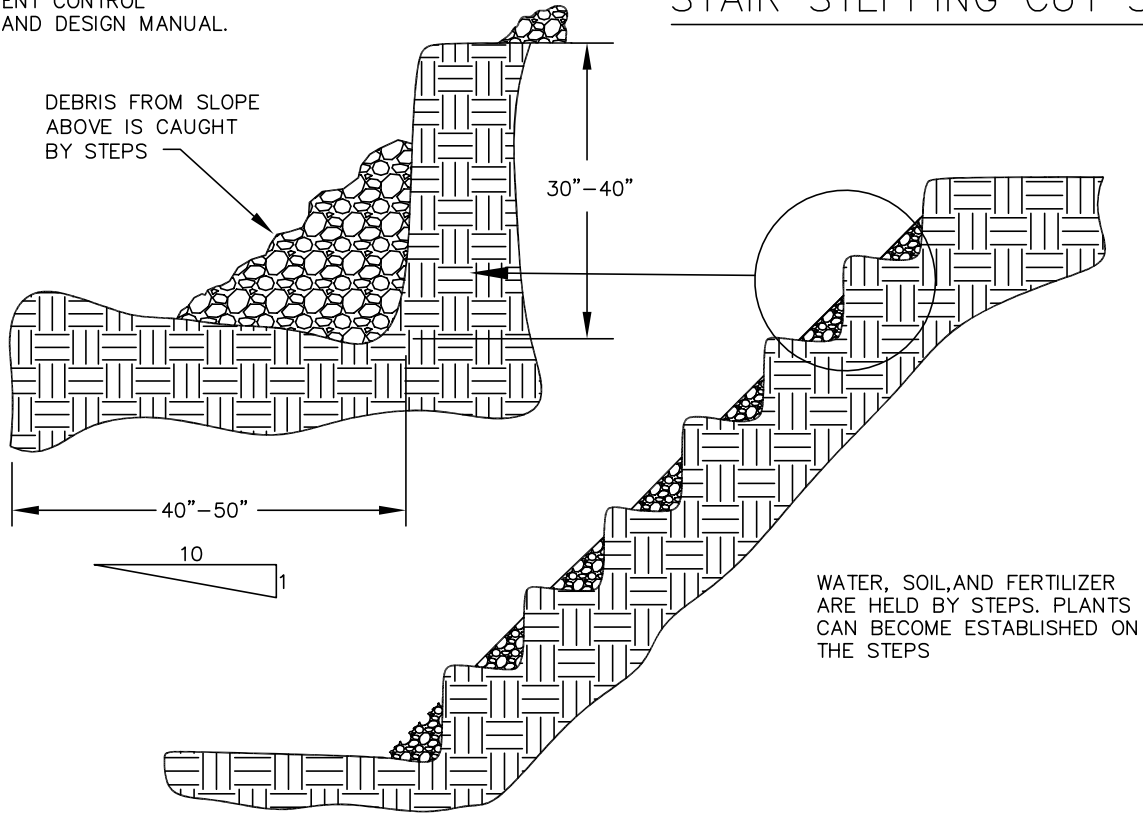
## SURFACE ROUGHENING CAT TRACKING

DRAWING NO. 830

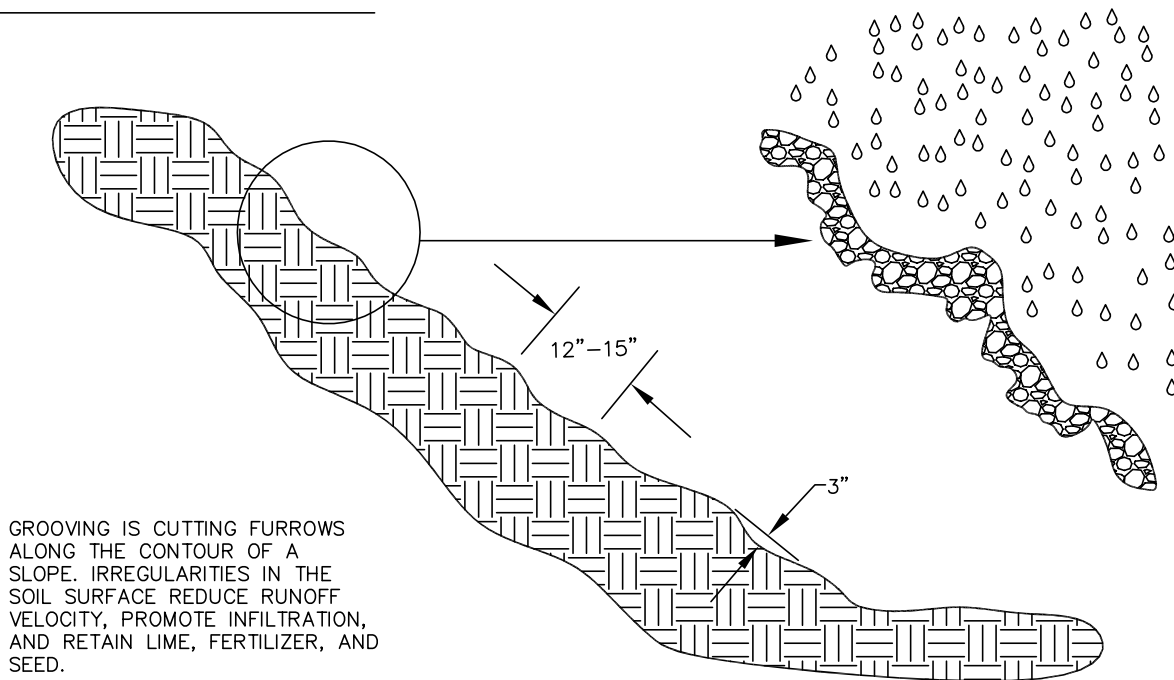
REVISED 10-31-19

FOR FURTHER INFORMATION  
ON DESIGN CRITERIA SEE  
CHAPTER 4 OF CLEAN WATER  
SERVICES EROSION PREVENTION  
AND SEDIMENT CONTROL  
PLANNING AND DESIGN MANUAL.

## STAIR STEPPING CUT SLOPES



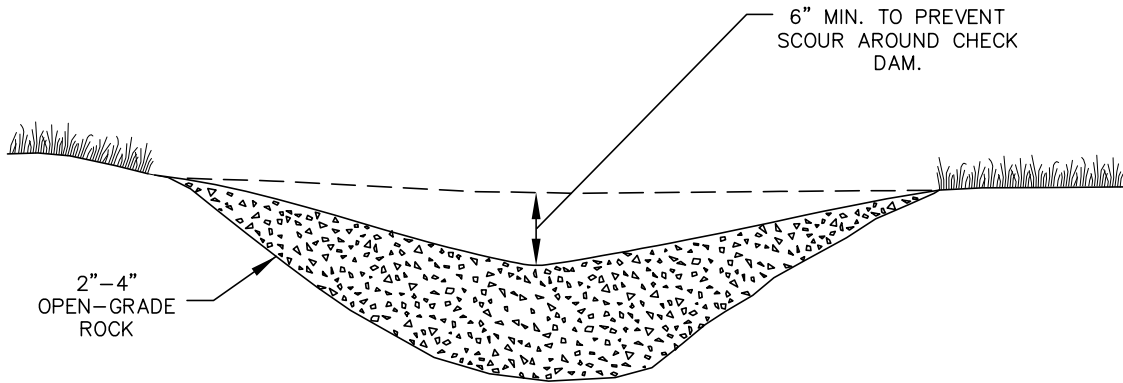
## GROOVING SLOPES



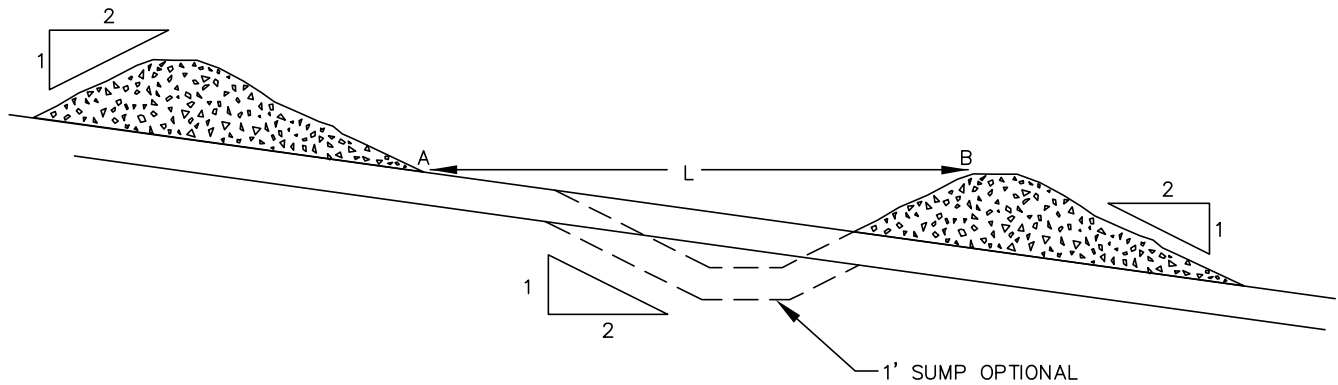
## SURFACE ROUGHENING STAIR STEPPING/GROOVING SLOPES



FOR FURTHER INFORMATION  
ON DESIGN CRITERIA SEE  
CHAPTER 4 OF CLEAN WATER  
SERVICES EROSION PREVENTION  
AND SEDIMENT CONTROL  
PLANNING AND DESIGN MANUAL.



ROCK CHECK DAM



SPACING BETWEEN CHECK DAMS

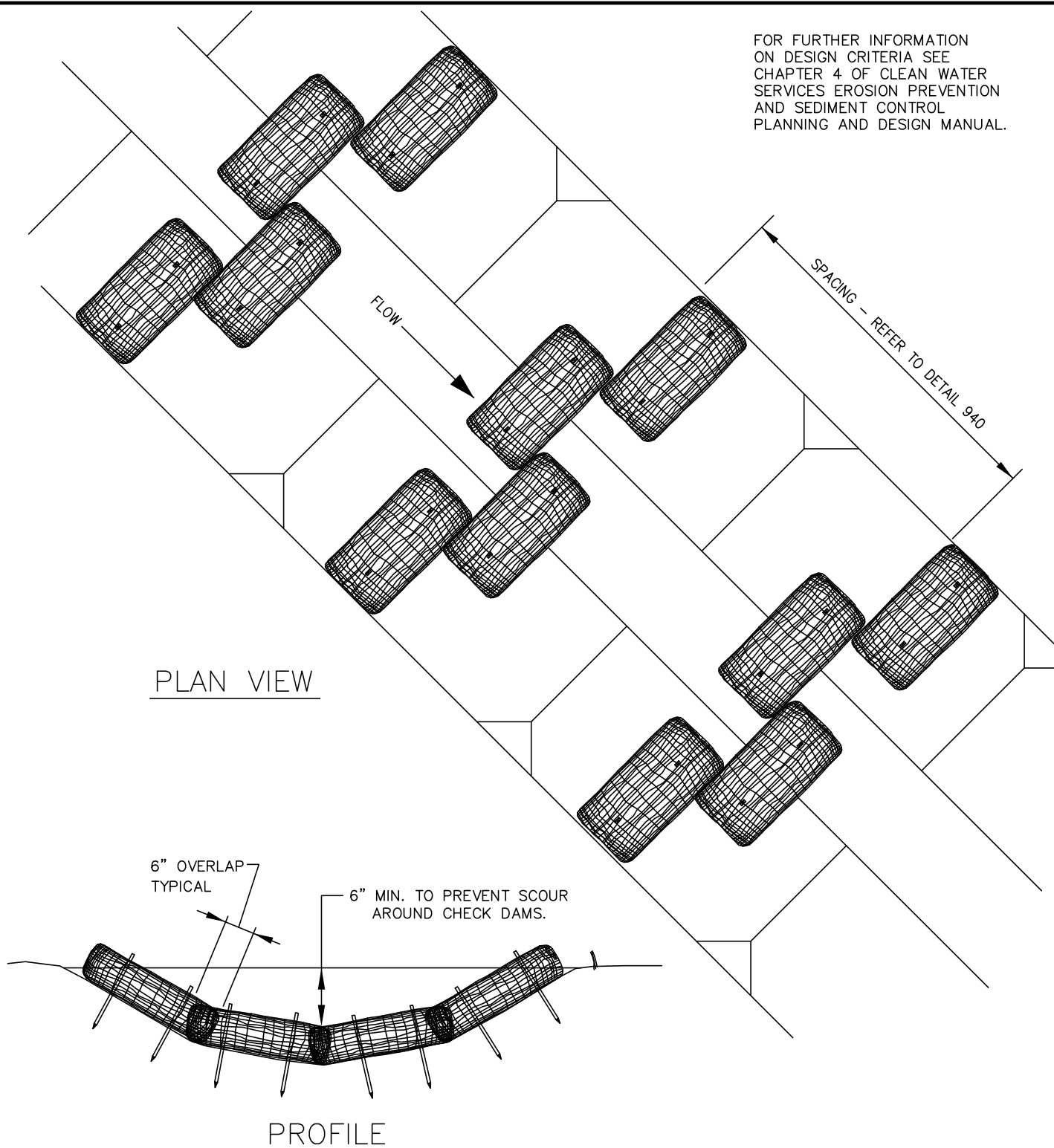
NOTES:

1. L = THE DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION.
2. SEE DRAWING #940 FOR HEIGHT AND SPACING OF CHECK DAMS.

CHECK DAM  
ROCK



FOR FURTHER INFORMATION  
ON DESIGN CRITERIA SEE  
CHAPTER 4 OF CLEAN WATER  
SERVICES EROSION PREVENTION  
AND SEDIMENT CONTROL  
PLANNING AND DESIGN MANUAL.



PLAN VIEW

PROFILE

NOTES:

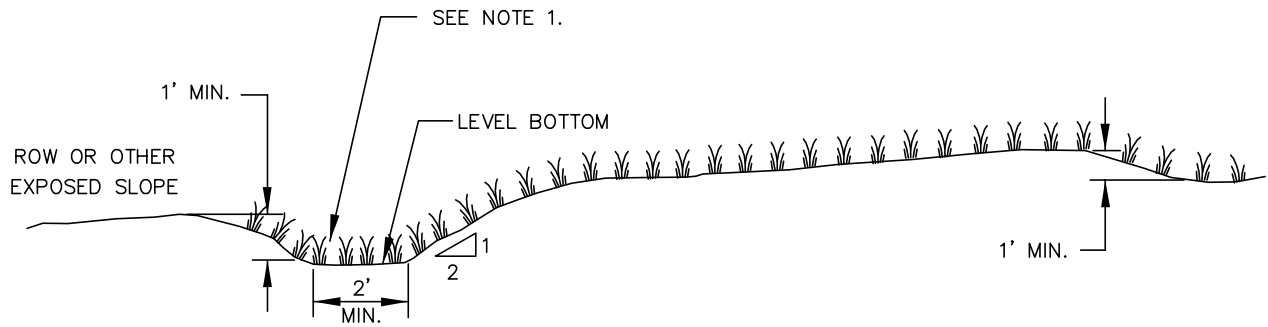
1. STAKING OF BAGS REQUIRED USING (2) 1"x2" WOOD STAKES OR APPROVED EQUAL PER BAG.
2. SURFACE MUST BE SMOOTH BEFORE APPLICATION.
3. CHECK DAMS CAN BE CONSTRUCTED USING STRAW WATTLES OR OTHER MATERIALS AS APPROVED BY THE DISTRICT OR CITY.

# CHECK DAM BIO-FILTER BAG

DRAWING NO. 845

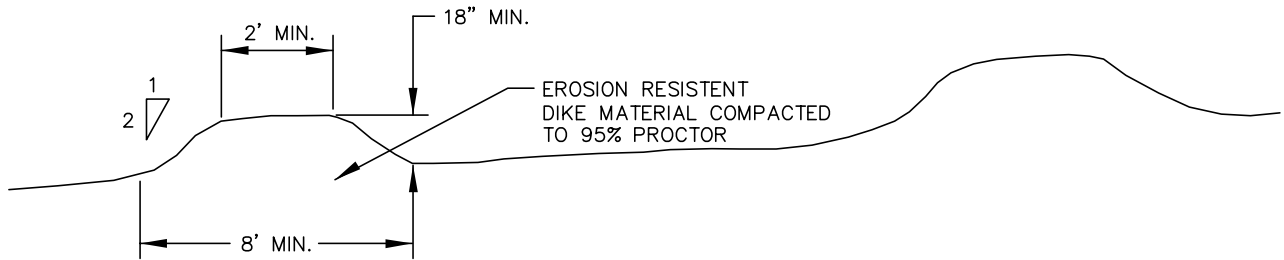
REVISED 10-31-19

FOR FURTHER INFORMATION  
ON DESIGN CRITERIA SEE  
CHAPTER 4 OF CLEAN WATER  
SERVICES EROSION PREVENTION  
AND SEDIMENT CONTROL  
PLANNING AND DESIGN MANUAL.



BOTTOM WIDTH – 2 FEET MINIMUM; THE BOTTOM WIDTH SHALL BE LEVEL.  
DEPTH – 1 FOOT MINIMUM.  
SIDE SLOPE – 2H:1V OR FLATTER.  
GRADE – MAXIMUM 5 PERCENT, WITH POSITIVE DRAINAGE TO A  
SUITABLE OUTLET (SUCH AS SEDIMENTATION POND)

### DIVERSION SWALE



### DIVERSION DIKE

| <u>SLOPE</u> | <u>SPACING</u> |
|--------------|----------------|
| <5%          | 300 FEET       |
| 5–10%        | 200 FEET       |
| 10–40%       | 100 FEET       |

NOTE:

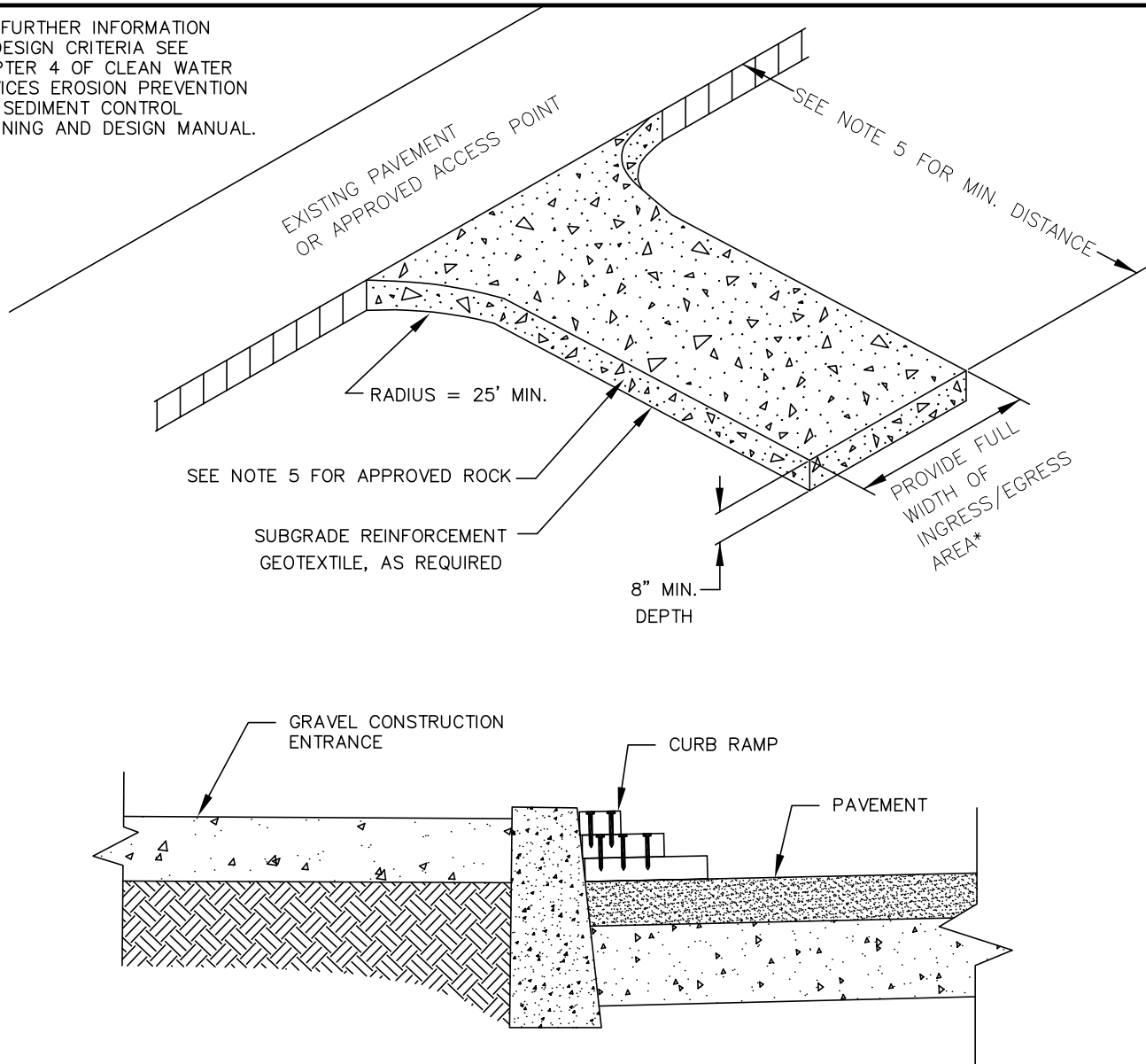
1. ESTABLISH VEGETATION AND/OR APPLY APPROVED EROSION PREVENTION BMPS IMMEDIATELY UPON CONSTRUCTION.

## DIVERSION DIKE / SWALE





FOR FURTHER INFORMATION  
ON DESIGN CRITERIA SEE  
CHAPTER 4 OF CLEAN WATER  
SERVICES EROSION PREVENTION  
AND SEDIMENT CONTROL  
PLANNING AND DESIGN MANUAL.



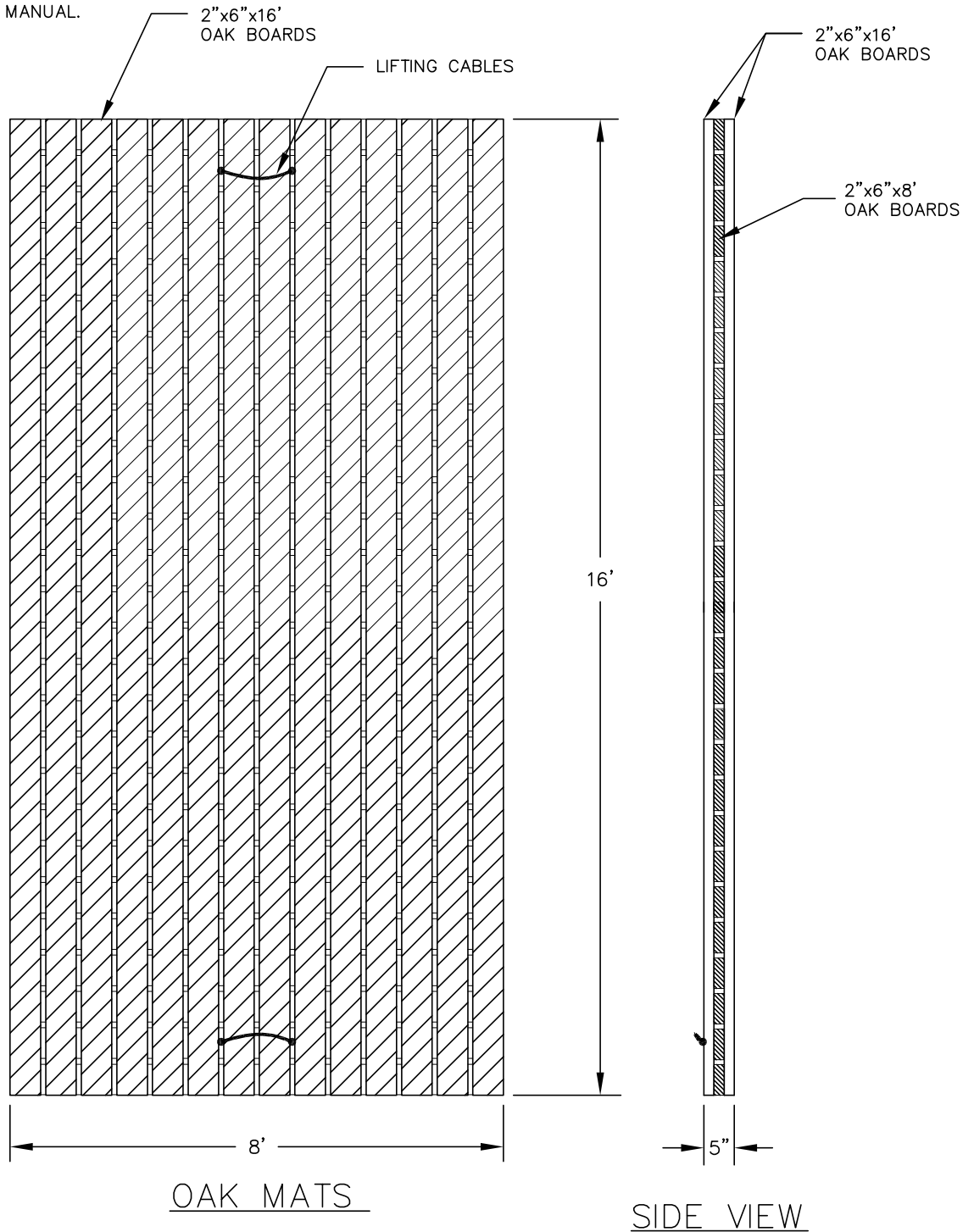
NOTES:

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF- WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
4. WHERE RUNOFF CONTAINING SEDIMENT LADEN WATER IS LEAVING THE SITE VIA THE CONSTRUCTION ENTRANCE, OTHER MEASURES SHALL BE IMPLEMENTED TO DIVERT RUNOFF THROUGH AN APPROVED FILTERING SYSTEM.
5. DIMENSIONS  
SINGLE FAMILY  
 20' LONG BY 20' WIDE 8" DEEP OF 3/4" MINUS CLEAN ROCK.  
COMMERCIAL/SITE DEVELOPMENT  
 50' LONG BY 20' WIDE 3-6" CLEAN ROCK, GOVERNING AUTHORITY MAY REQUIRE GEOTEXTILE FABRIC TO PREVENT SUB-SOIL PUMPING.

# CONSTRUCTION ENTRANCE



FOR FURTHER INFORMATION  
ON DESIGN CRITERIA SEE  
CHAPTER 4 OF CLEAN WATER  
SERVICES EROSION PREVENTION  
AND SEDIMENT CONTROL  
PLANNING AND DESIGN MANUAL.



NOTES:

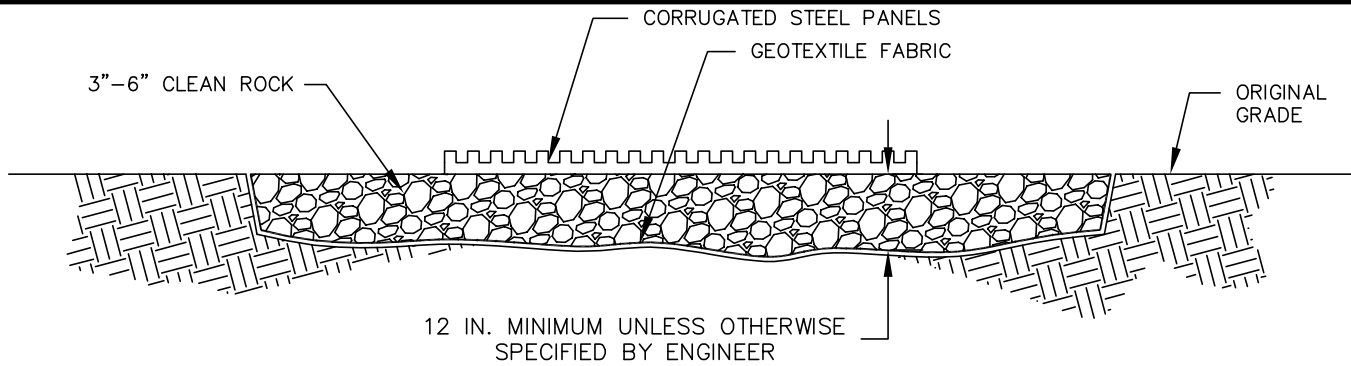
1. CONSTRUCTED OF 2"x6" OAK.
2. ALTERNATE MATTING SYSTEMS TO BE APPROVED BY CITY/DISTRICT.

# OAK MATS

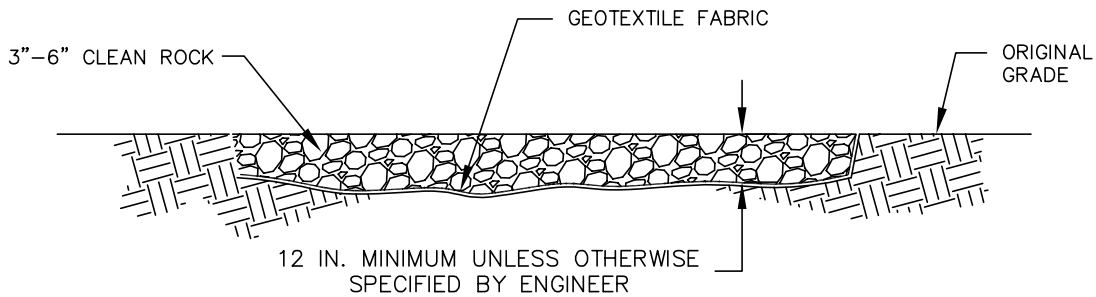
DRAWING NO. 860

REVISED 10-31-19

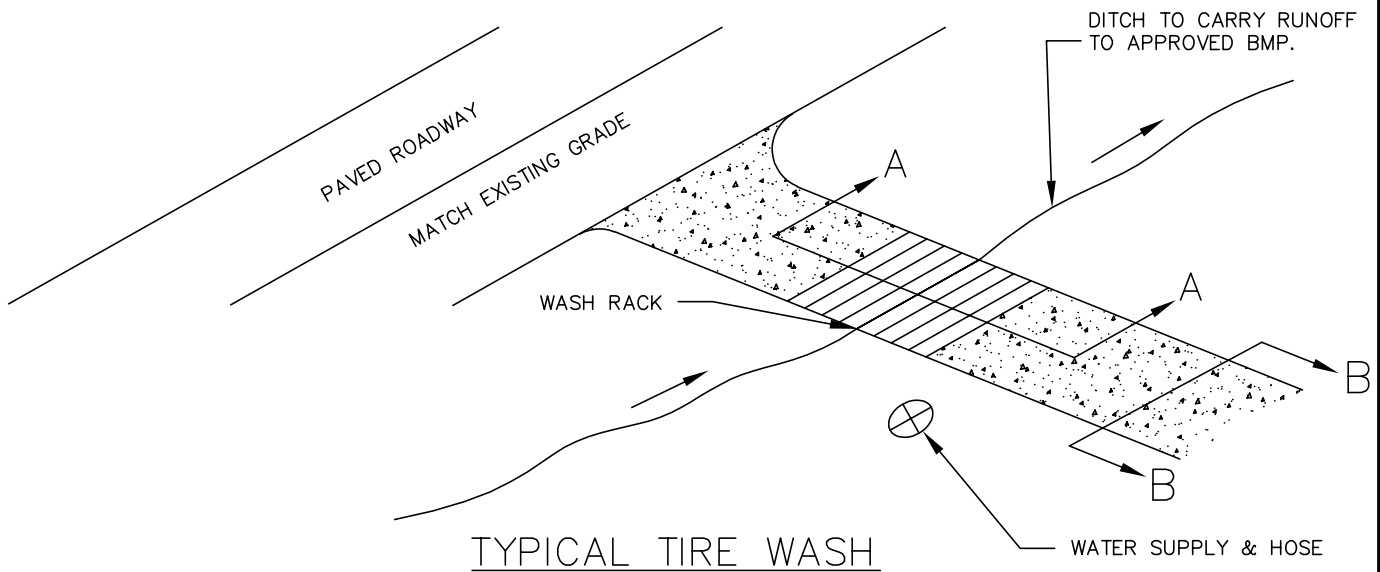




SECTION A-A



SECTION B-B



NOTE:

1. MANY DESIGNS CAN BE FIELD FABRICATED OR PRE-FABRICATED UNITS MAY BE USED

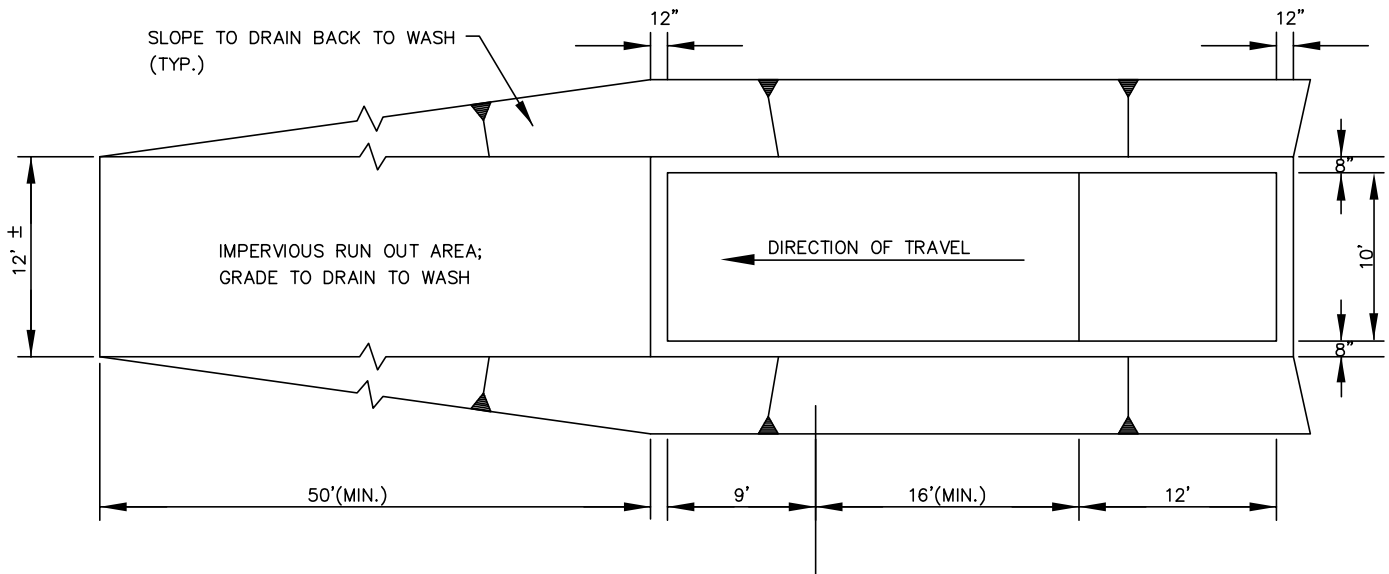
FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

# TIRE WASH (MANUAL HOSE WASH)

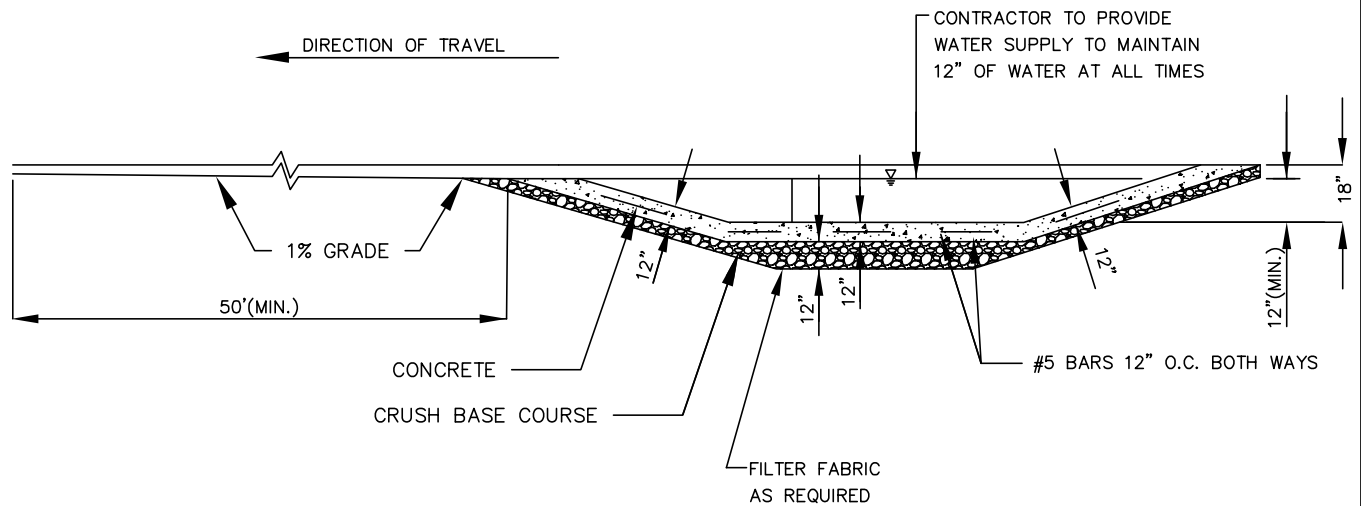
DRAWING NO. 865

REVISED 10-31-19





PLAN VIEW



PROFILE

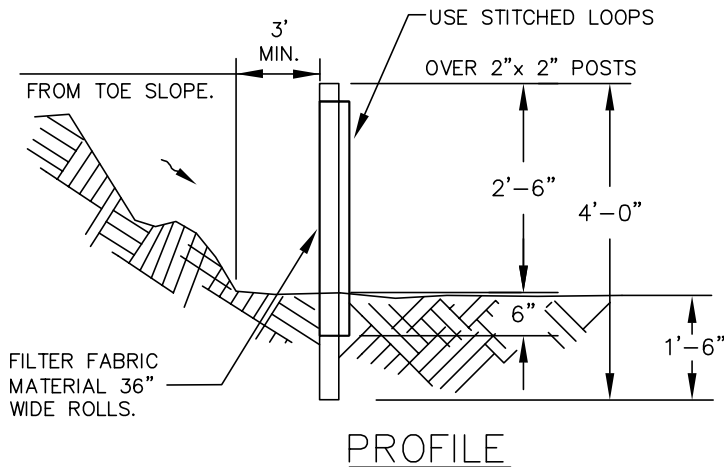
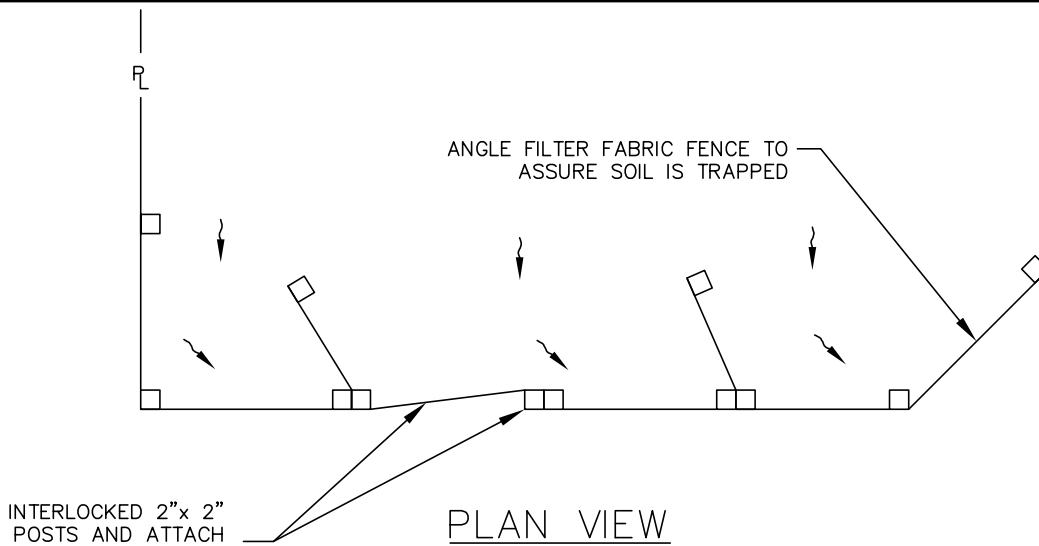
NOTES:

1. CONTRACTOR TO REMOVE ACCUMULATED SEDIMENT AS NEEDED TO PREVENT TRACKING FROM TIRE WASH; SEDIMENT LADEN WATER MAY BE PIPED TO AN APPROVED BMP.
2. USE GEOTEXTILE FABRIC WITH AGGREGATE FOR A TEMPORARY TIRE WASH.

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

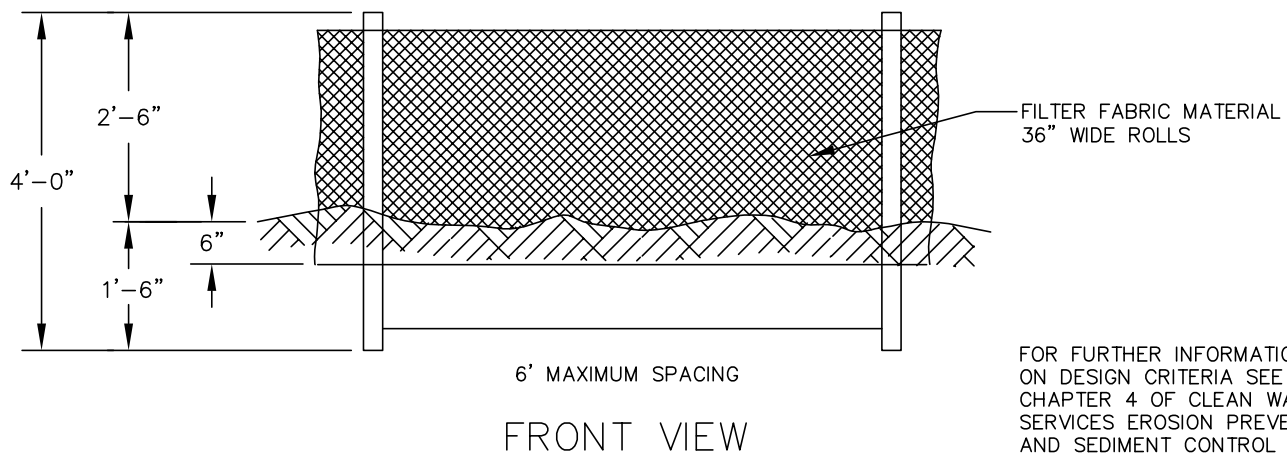
# TIRE WASH—(DRIVE—THROUGH)





NOTES:

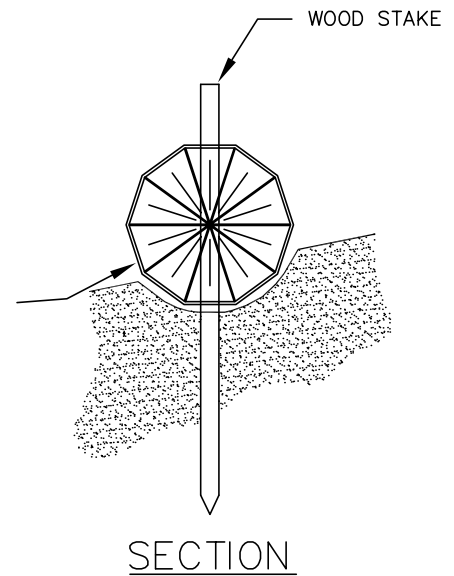
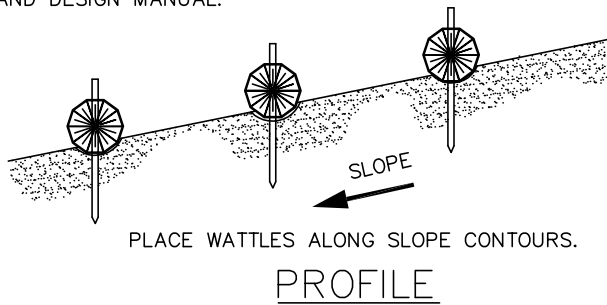
1. SEDIMENT FENCE TO HAVE STITCHED LOOPS AROUND 2" x 2" POSTS.
2. BURY BOTTOM OF FILTER FABRIC 6" VERTICALLY BELOW FINISHED GRADE.
3. 2"x 2" FIR, PINE OR STEEL FENCE POSTS.
4. POSTS TO BE INSTALLED ON UPHILL SIDE OF SLOPE.
5. COMPACT BOTH SIDES OF FILTER FABRIC TRENCH.
6. PANELS MUST BE PLACED ACCORDING TO SPACING ON DRAWING NO. 940.



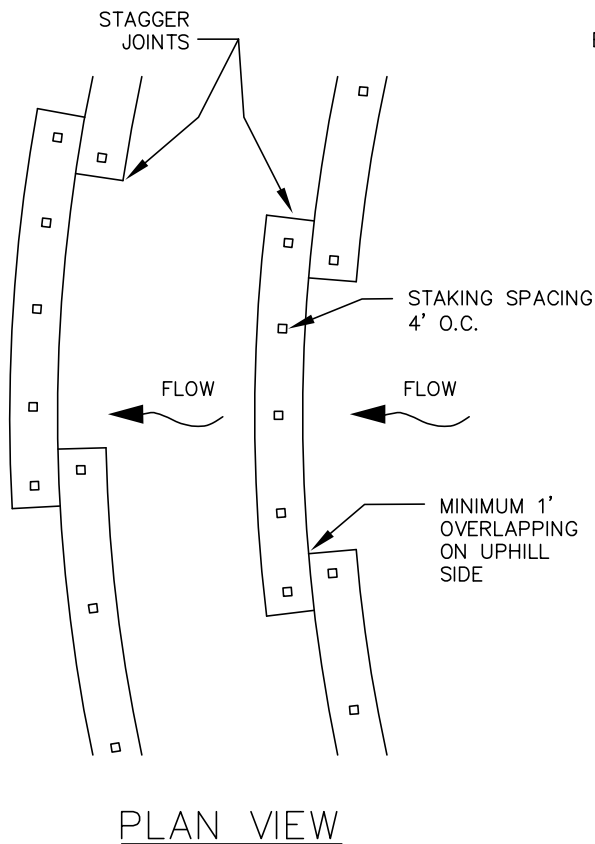
FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

# SEDIMENT FENCE

FOR FURTHER INFORMATION  
ON DESIGN CRITERIA SEE  
CHAPTER 4 OF CLEAN WATER  
SERVICES EROSION PREVENTION  
AND SEDIMENT CONTROL  
PLANNING AND DESIGN MANUAL.



WHEAT STRAW, RYE  
GRASS STRAW,  
COCONUT OR  
EXCELSIOR WATTLES



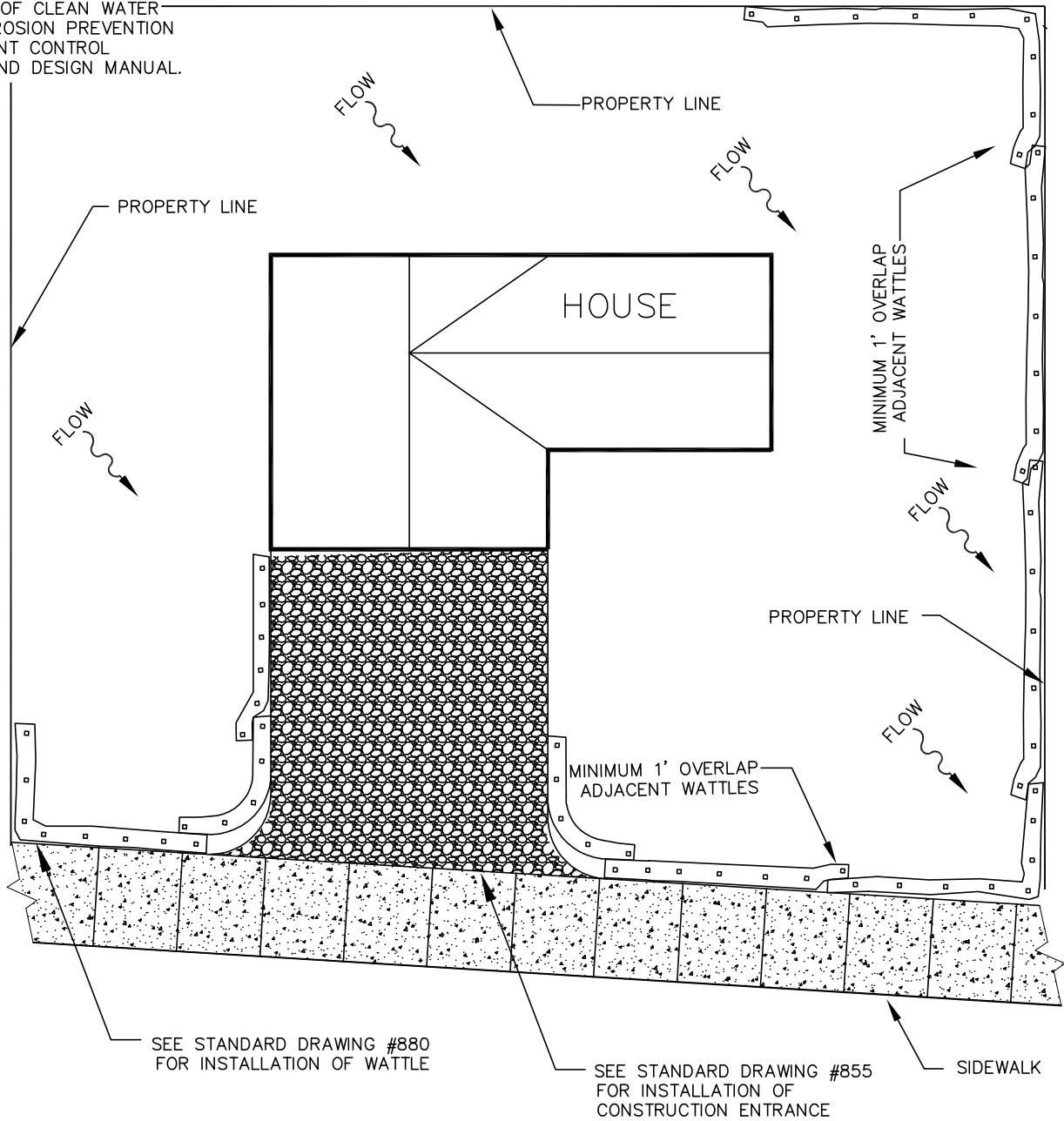
NOTES:

1. STAKING SPECIFICATIONS:
  - a. 1"X2" WOODEN STAKES
  - b. ADDITIONAL STAKES MAY BE INSTALLED ON DOWNHILL SIDE OF WATTLES, ON STEEP SLOPE OR HIGHLY EROSION SOILS.
2. SPACING IN ACCORDANCE WITH DETAIL 940.
3. REMOVE ALL ROCKS, CLODS, VEGETATION OR OTHER OBSTRUCTIONS SO THAT THE INSTALLED WATTLES WILL HAVE DIRECT CONTACT WITH THE SOIL.
4. INSTALL THE WATTLES IN A 2" DEEP TRENCH, INSURING THAT NO GAPS EXIST BETWEEN THE SOIL AND THE BOTTOM OF THE WATTLE. THE ENDS OF ADJACENT WATTLES SHALL BE OVERLAPPED 1 FT. MINIMUM TO PREVENT SEDIMENT PASSING THROUGH THE FIELD JOINT.

# WATTLES



FOR FURTHER INFORMATION  
ON DESIGN CRITERIA SEE  
CHAPTER 4 OF CLEAN WATER  
SERVICES EROSION PREVENTION  
AND SEDIMENT CONTROL  
PLANNING AND DESIGN MANUAL.



### PLAN VIEW

NOTES:

1. SEE STANDARD DRAWING #880 FOR INSTALLATION OF WATTLES..
2. ALTERNATE MATERIALS MAY BE USED AS APPROVED BY DISTRICT OR CITY.
3. PERIMETER MEASURES INSTALLED AS NEEDED.

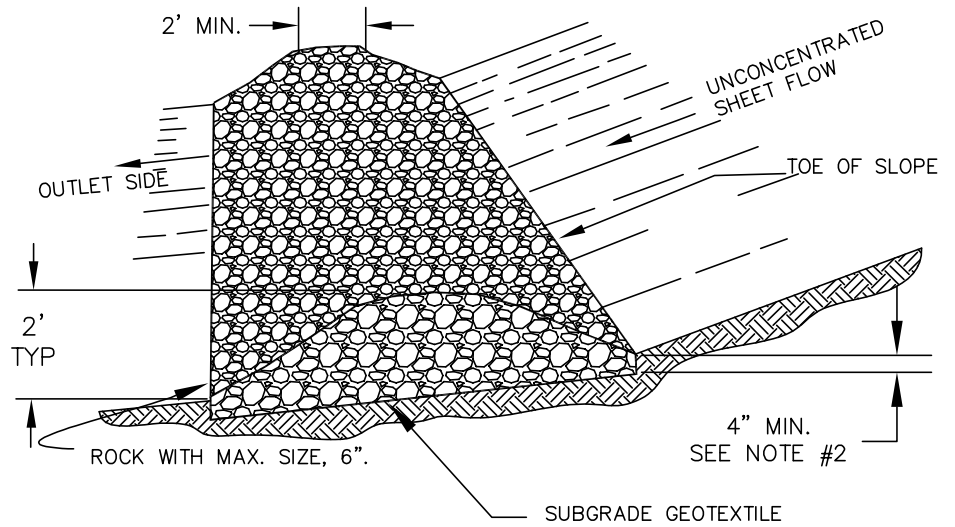
# WATTLES SINGLE FAMILY APPLICATION



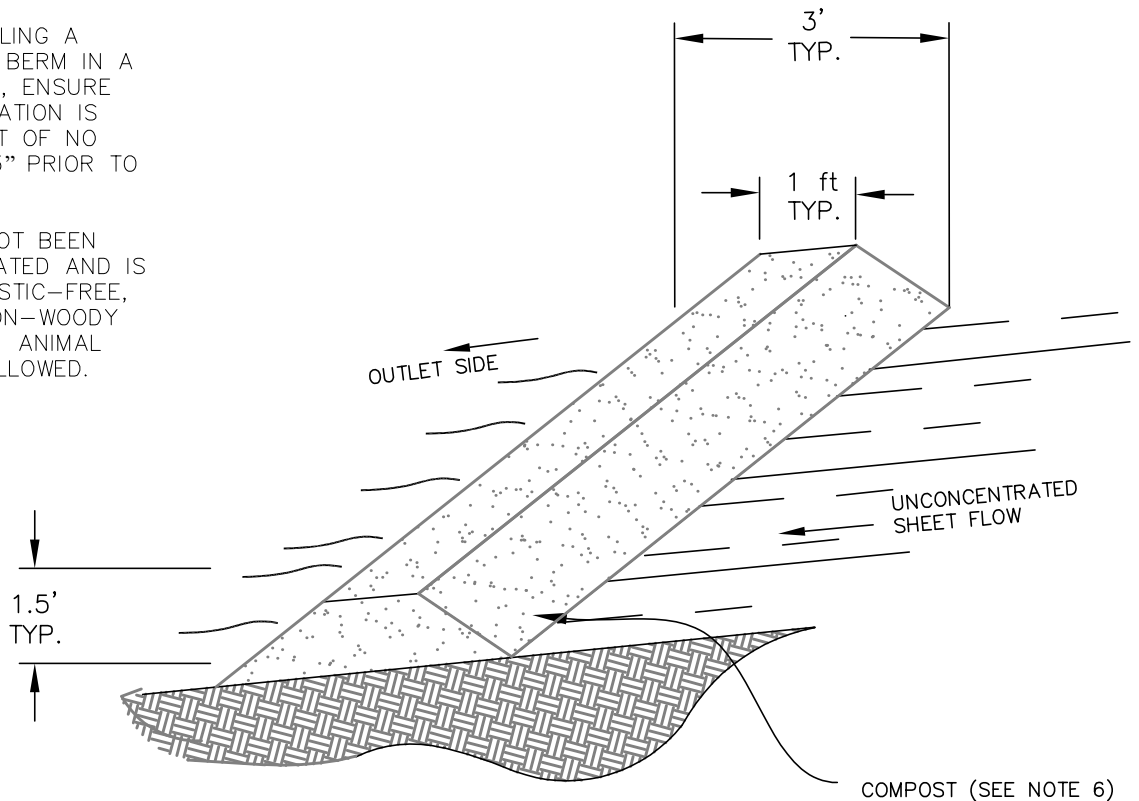
FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

NOTES:

1. DIRECT THE OUTLET SIDE OF THE ROCK/COMPOST FILTER BERMS ONTO A STABILIZED AREA, SUCH AS VEGETATION AND/OR ROCK.
2. EMBED ROCK FILTER BERM A MIN. OF 4" INTO THE EXISTING GROUND/EMBANKMENT.
3. USE ROCK FILTER BERM ON 3H:1V OR FLATTER SIDE SLOPES. WITHIN THE SAFETY CLEAR ZONE. USE 6H:1V OR FLATTER ON SIDE SLOPES.
4. PLACE COMPOST FILTER BERMS ALONG OR ON THE GROUND CONTOUR WITH THE ENDS TURNED UP SLOPE.
5. PRIOR TO INSTALLING A COMPOST FILTER BERM IN A VEGETATED AREA, ENSURE THAT THE VEGETATION IS CUT TO A HEIGHT OF NO GREATER THAN 3" PRIOR TO INSTALLATION.
6. COMPOST HAS NOT BEEN CHEMICALLY TREATED AND IS WEED-FREE, PLASTIC-FREE, DECOMPOSED, NON-WOODY PLANT MATERIAL; ANIMAL WASTE IS NOT ALLOWED.



ROCK FILTER BERM

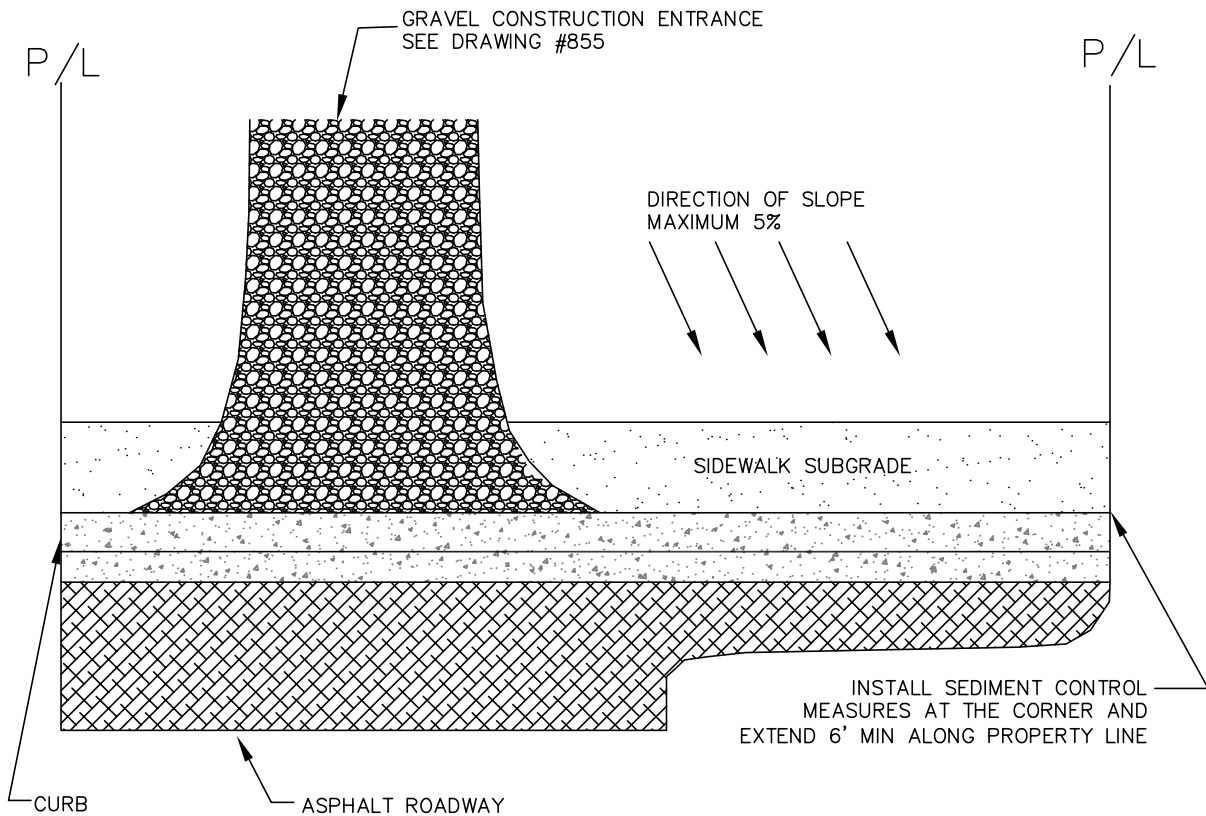


COMPOST FILTER BERM

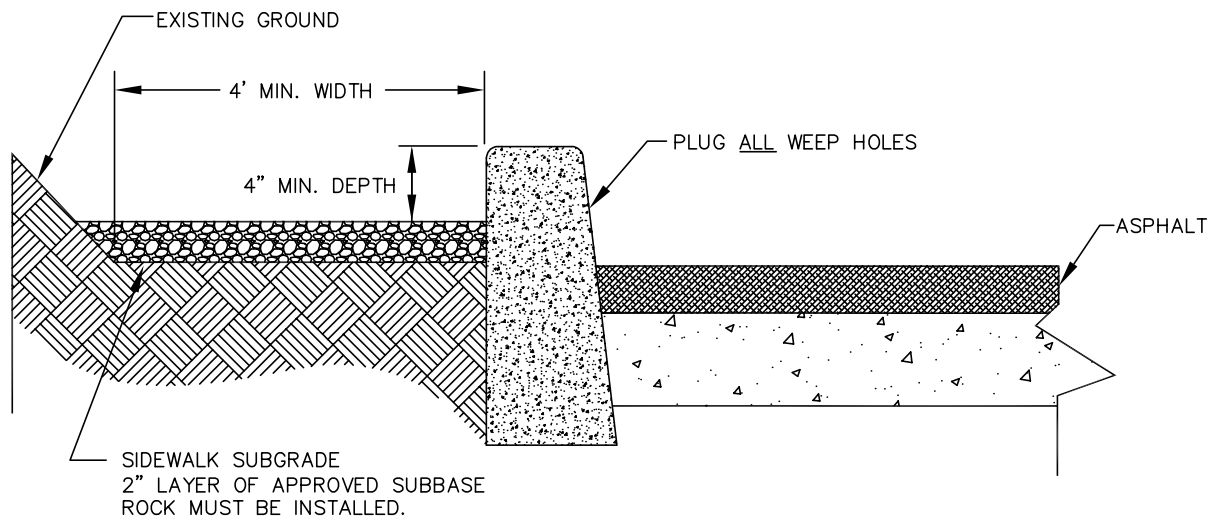
FILTER BERMS  
ROCK/COMPOST







PLAN VIEW



PROFILE

NOTE:

1. SIDEWALK SUBGRADE CAN BE USED FOR ALL CONSTRUCTION ACTIVITIES.

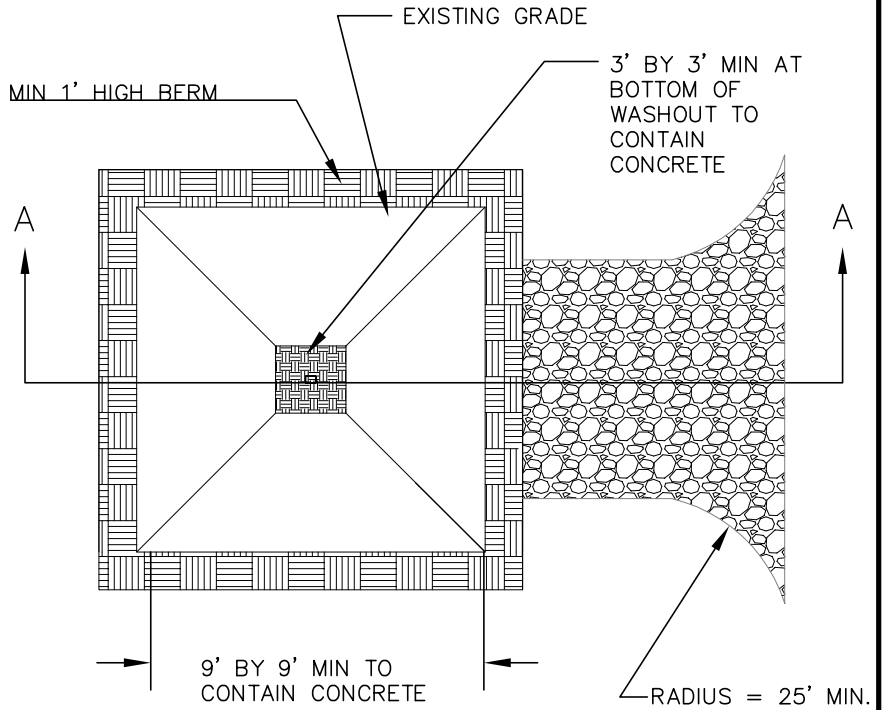
FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

# SIDEWALK SUBGRADE

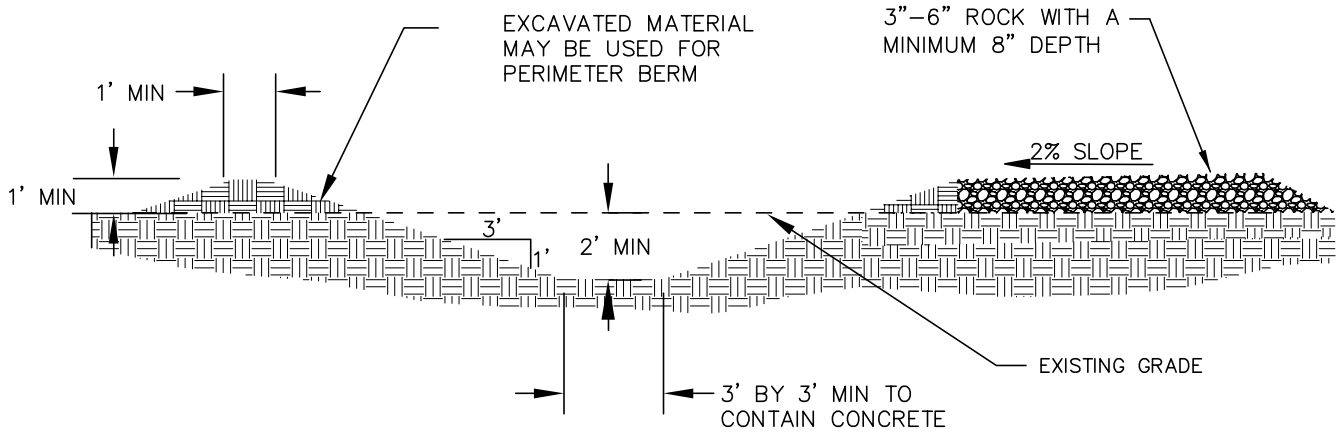


**NOTES:**

1. WASHOUT FACILITIES SHALL BE MAINTAINED TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM FREEBOARD OF 12 INCHES.
2. WASHOUT FACILITIES MUST BE CLEANED, OR NEW FACILITIES MUST BE CONSTRUCTED AND READY FOR USE ONCE THE WASHOUT IS 75% FULL.
3. IF THE WASHOUT IS NEARING CAPACITY, VACUUM AND DISPOSE OF THE WASTE MATERIAL IN AN APPROVED MANNER.
4. TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE LOCATED A MINIMUM OF 50 FT FROM SENSITIVE AREAS INCLUDING OPEN DRAINAGE FACILITIES AND WATER SOURSES.
5. CONCRETE WASHOUT FACILITIES SHALL BE CONSTRUCTED AND MAINTAINED IN SUFFICIENT QUANTITY AND SIZE TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.
6. INSTALL CONCRETE WASHOUT SIGN WITHIN 30 FEET OF TEMPORARY CONCRETE WASHOUT FACILITY.
7. TEMPORARY CONCRETE WASHOUTS MAY BE A PREFABRICATED CONTAINER THAT IS PORTABLE AND REUSABLE.



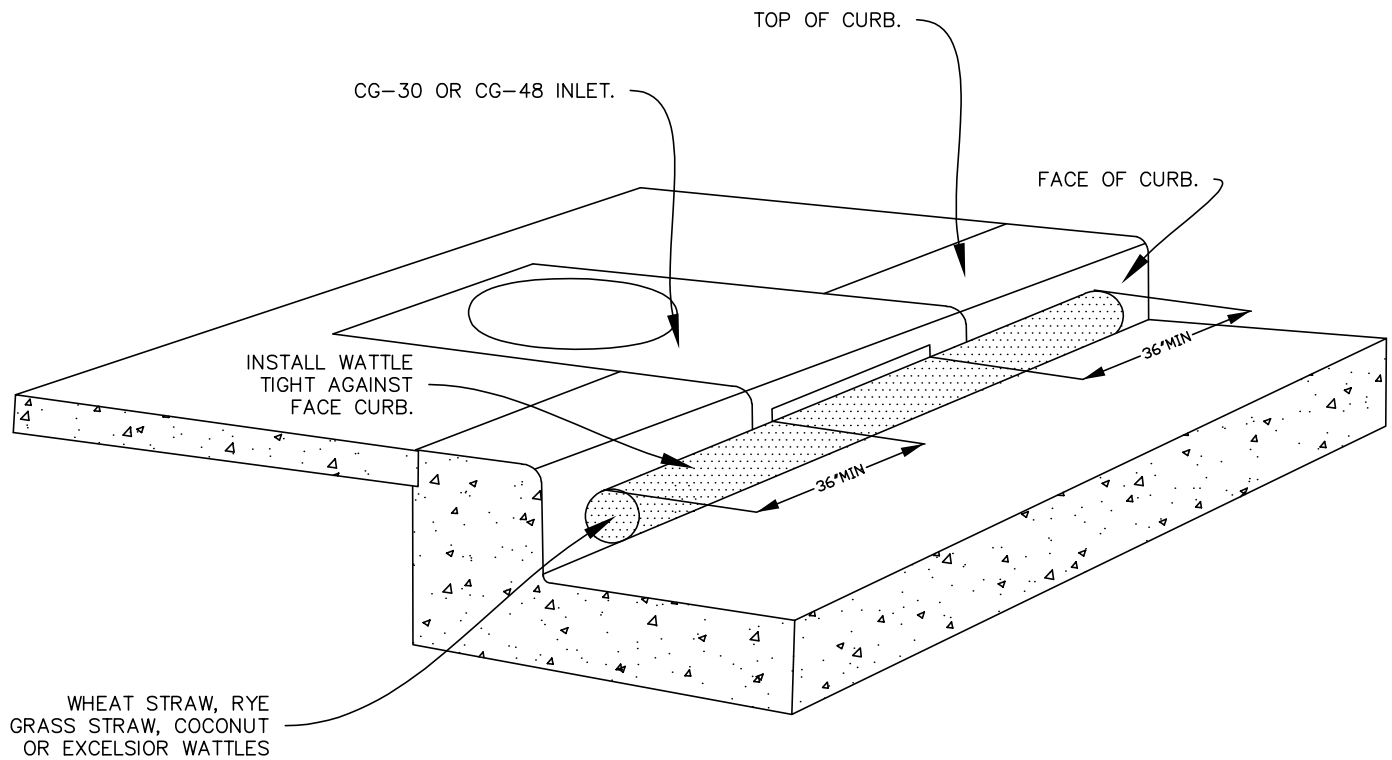
PLAN



SECTION A-A

CONCRETE WASHOUT





PERSPECTIVE VIEW SHOWING WATTLE  
ALONG GUTTER AT CURB INLET

NOTES:

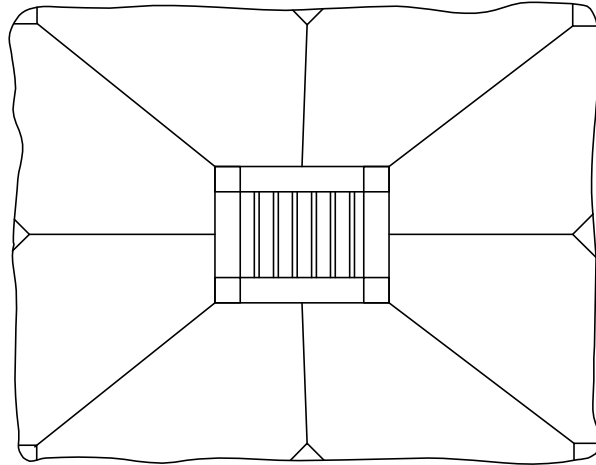
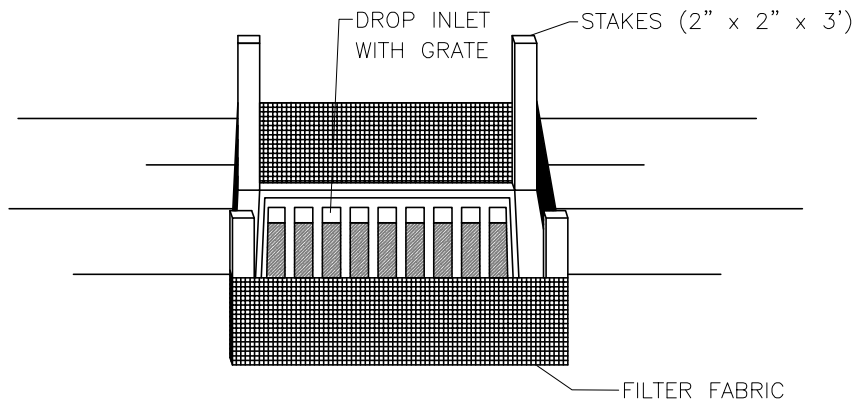
1. ONLY ALLOWED USE OF APPLICATION IS ON CURB AND GUTTER INLETS.
2. INSTALL WATTLE ALONG INLET WITH WATTLE EXTENDING A MIN OF 36" BEYOND INLET OPENINGS IN EACH DIRECTION.
3. WATTLE MUST BE INSTALLED TIGHTLY AGAINST CURB. MAY REQUIRE ADDITIONAL MEASURES TO ENSURE WATTLE REMAINS TIGHT AGAINST CURB, SUCH AS USING ZIP TIES TO SECURE WATTLE TO INLET'S TRASH BARS OR USING SANDBAGS TO WEIGHT DOWN WATTLE.
4. REPLACE WATTLE AS NECESSARY TO PREVENT SEDIMENT FROM ENTERING THE STORM SYSTEM.

# CURB AND GUTTER INLET PROTECTION

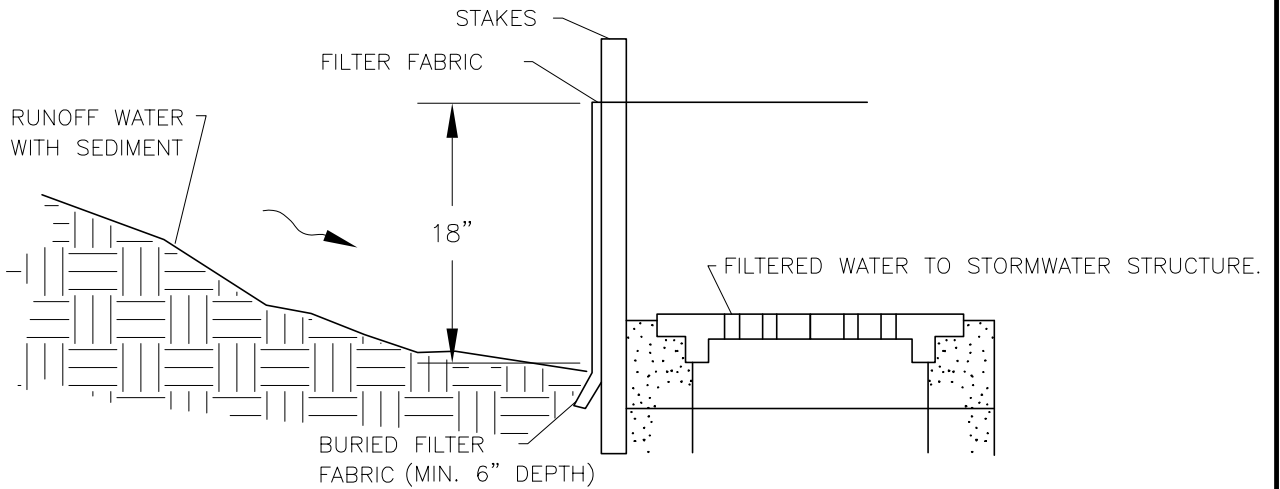
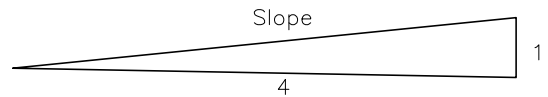


DRAWING NO. 905

REVISED 10-31-19



PLAN VIEW  
Slope 4H:1V



PROFILE

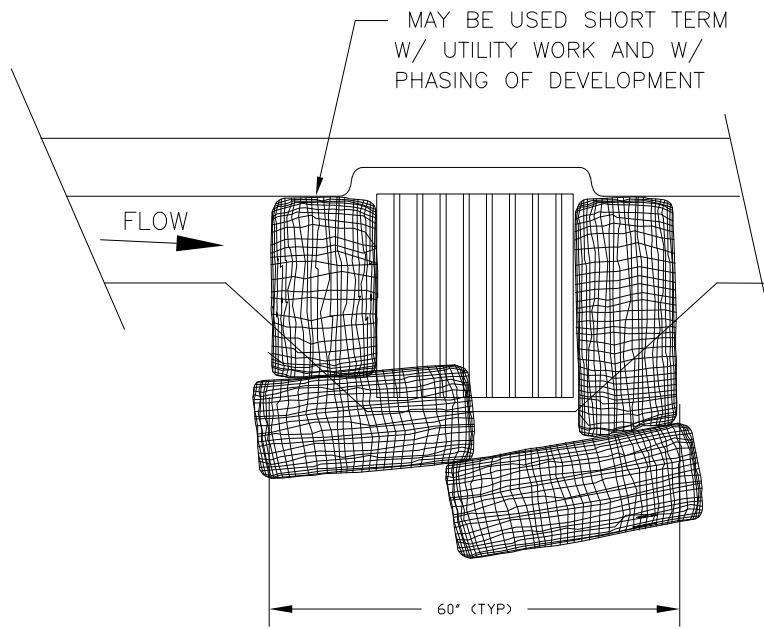
FOR FURTHER INFORMATION  
ON DESIGN CRITERIA SEE  
CHAPTER 4 OF CLEAN WATER  
SERVICES EROSION PREVENTION  
AND SEDIMENT CONTROL  
PLANNING AND DESIGN MANUAL.

# INLET PROTECTION TYPE 3

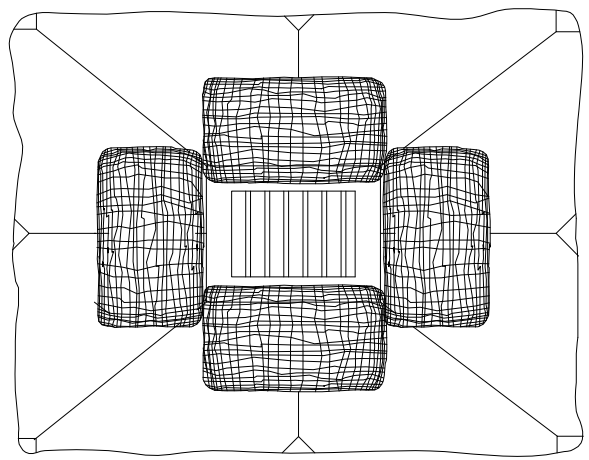
DRAWING NO. 910

REVISED 10-31-19

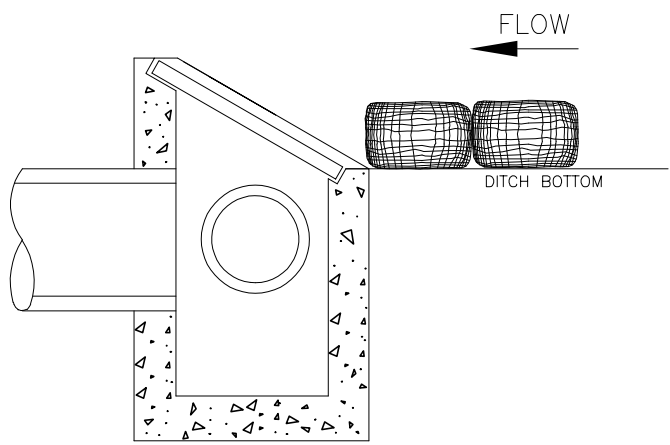




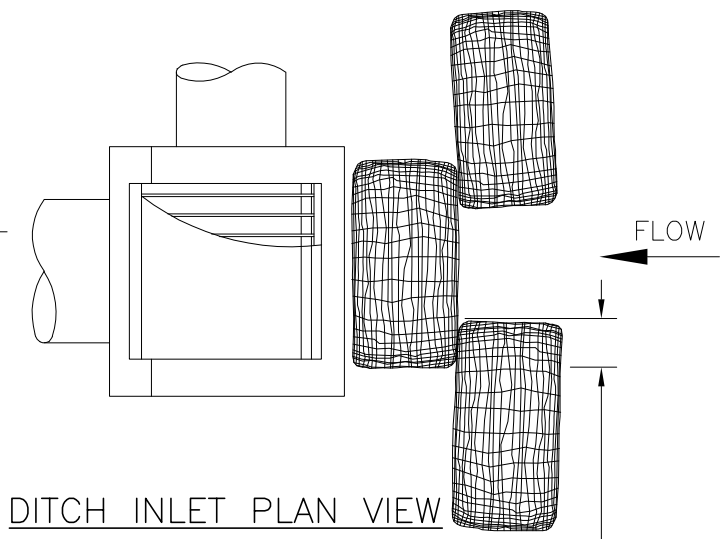
CATCH BASIN



AREA DRAIN



DITCH INLET



DITCH INLET PLAN VIEW

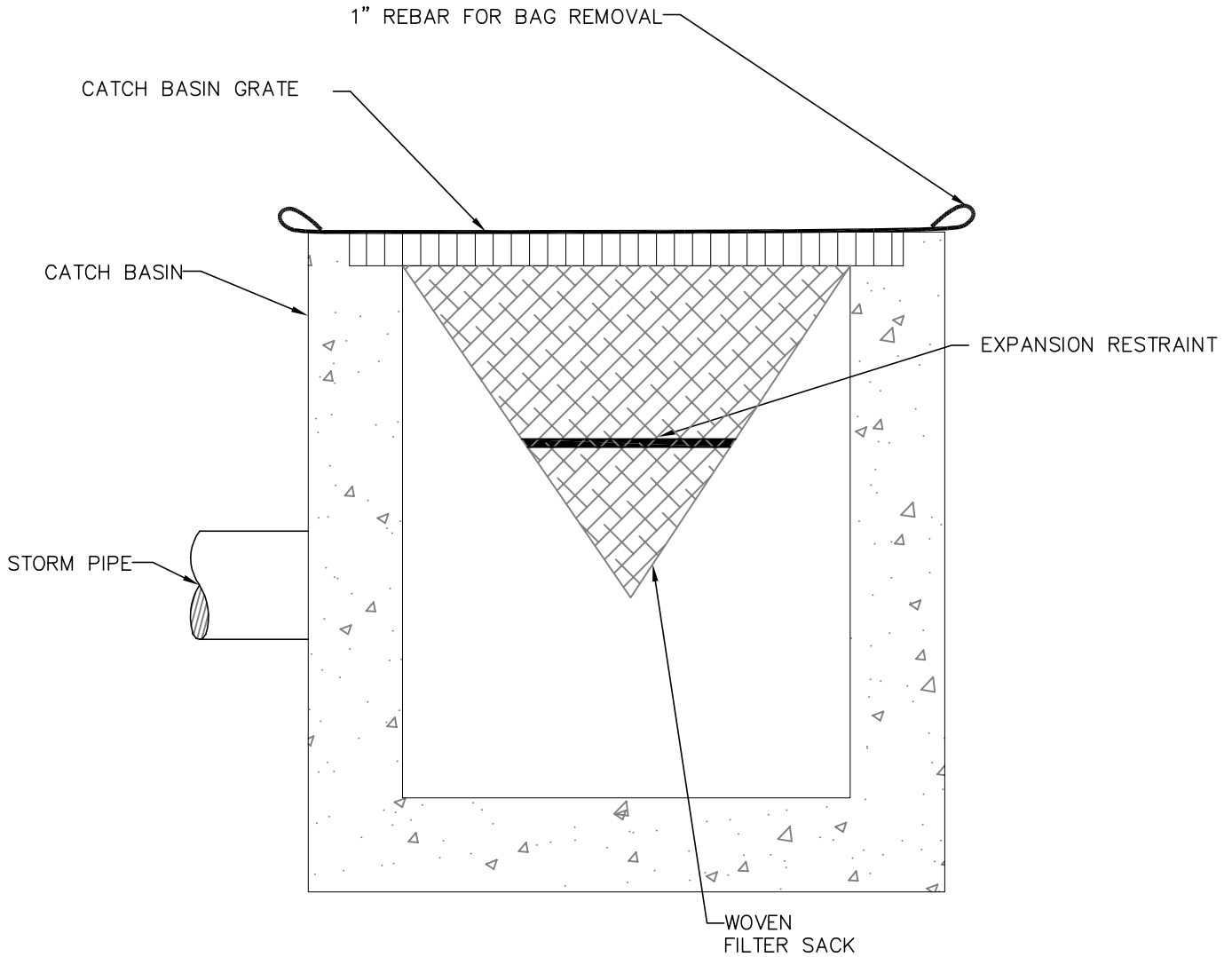
6" overlap of bags.

NOTES:

1. ADDITIONAL MEASURES MUST BE CONSIDERED DEPENDING ON SOIL TYPES.
2. BIO-FILTER BAGS SHOULD BE STAKED WHERE APPLICABLE USING (2) 1"x2" WOODEN STAKES OR APPROVED EQUAL PER BAG.
3. WHEN USING 30" BIO-BAGS TO PROTECT A CATCH BASIN YOU HAVE 4 BAGS AND THEY SHALL BE OVERLAPPED BY 6".

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

# INLET PROTECTION TYPE 4



CATCH BASIN INSERT

NOTE:

1. RECESSED CURB INLET CATCH BASINS MUST BE BLOCKED WHEN USING FILTER FABRIC INLET SACKS. SIZE OF FILTER FABRIC INLET SACKS TO BE DETERMINED BY MANUFACTURER.

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

INLET PROTECTION  
TYPE 5

DRAWING NO. 920

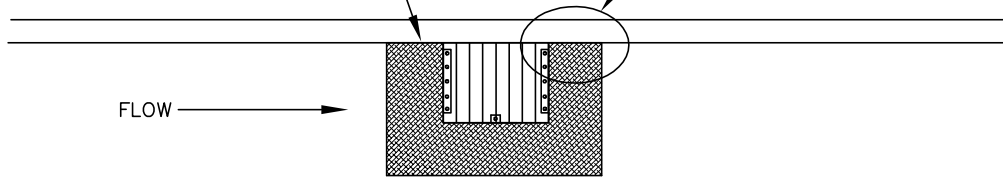
REVISED 10-31-19



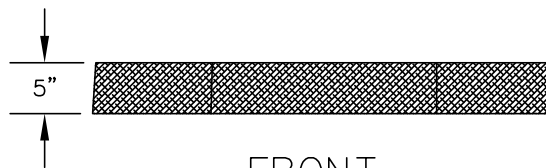
FOR FURTHER INFORMATION  
ON DESIGN CRITERIA SEE  
CHAPTER 4 OF CLEAN WATER  
SERVICES EROSION PREVENTION  
AND SEDIMENT CONTROL  
PLANNING AND DESIGN MANUAL.

MAY BE USED SHORT TERM W / UTILITY  
WORK AND W / PHASING OF DEVELOPMENT

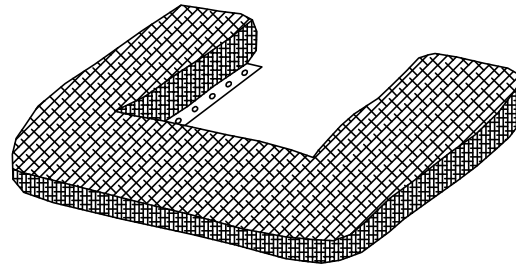
TIGHT TO CURB



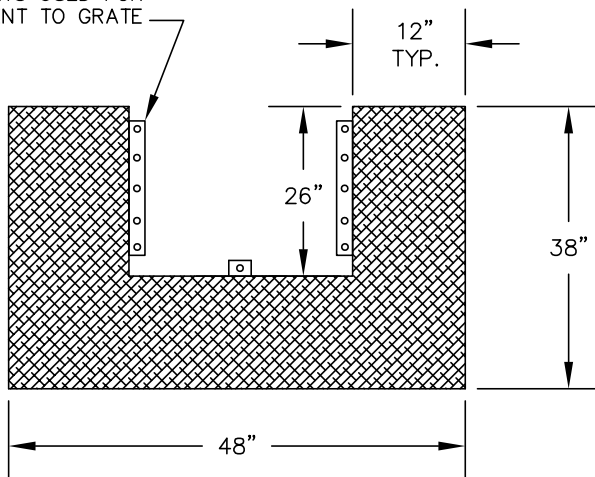
CATCH BASIN



FRONT



GROMMETS USED FOR  
ATTACHMENT TO GRATE



TOP

INSTALLATION NOTES:

1. INSTALL SOLID FABRIC SIDE DOWN MESH SIDE UP.
2. ATTACH TO CATCH BASIN GRATE AT A MINIMUM OF 3 LOCATIONS TIGHT TO CURB WITH 1/4" ZIP TIES.

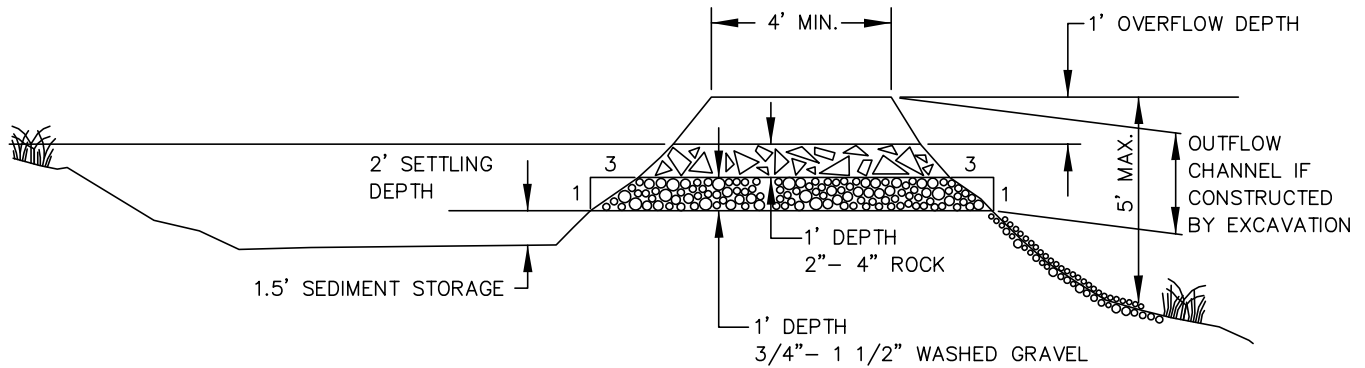
MAINTENANCE NOTES:

1. ANY VISIBLE SIGN OF SEDIMENT ACCUMULATION TO BE CLEANED UP AT THE END OF EACH WORKDAY.
2. REPLACE U - SHAPED FILTER BAG AS NECESSARY TO PREVENT WOOD CHIPS FROM ENTERING THE STORM SYSTEM.

INLET PROTECTION  
TYPE 6

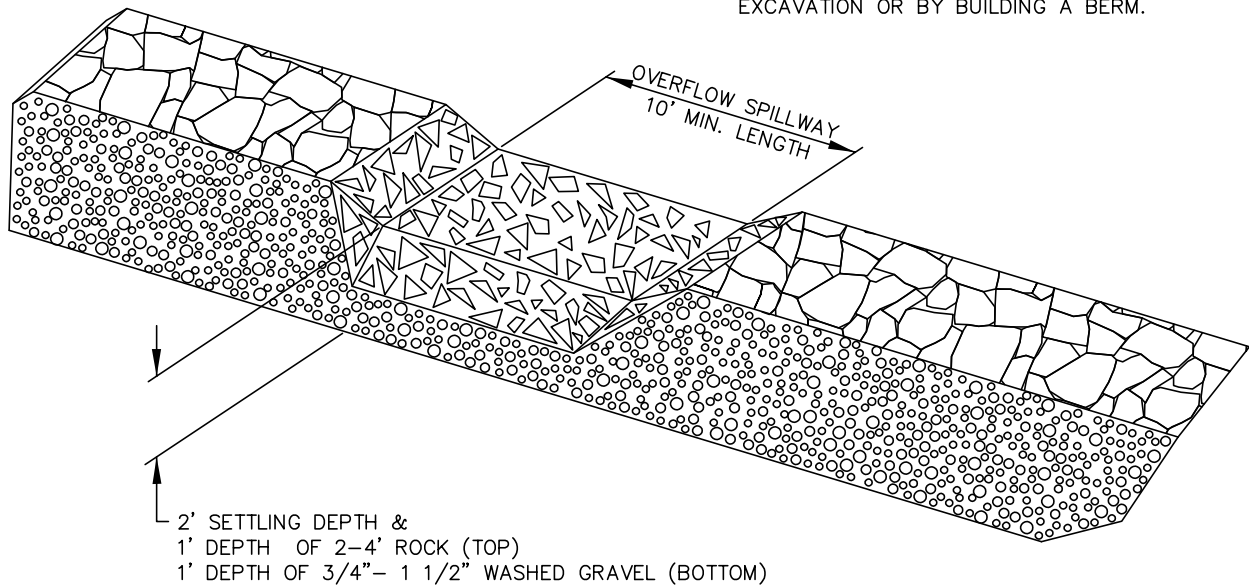


FOR FURTHER INFORMATION  
ON DESIGN CRITERIA SEE  
CHAPTER 4 OF CLEAN WATER  
SERVICES EROSION PREVENTION  
AND SEDIMENT CONTROL  
PLANNING AND DESIGN MANUAL.



CROSS SECTION

NOTE: MAY BE CONSTRUCTED BY  
EXCAVATION OR BY BUILDING A BERM.



SEDIMENT TRAP OUTLET  
NOT TO SCALE

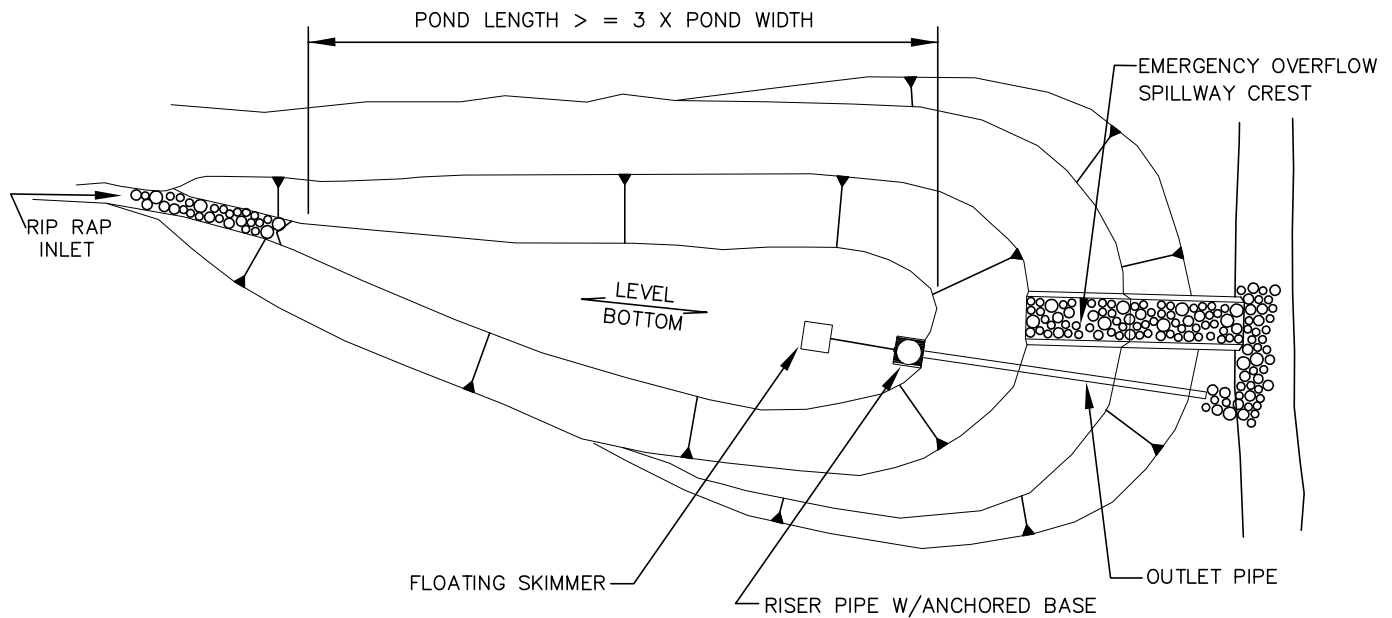
NOTE:

1. ADDITIONAL BMPS MAY BE REQUIRED TO FILTER RUNOFF FROM THE SEDIMENT TRAP PRIOR TO DISCHARGE FROM THE CONSTRUCTION SITE.

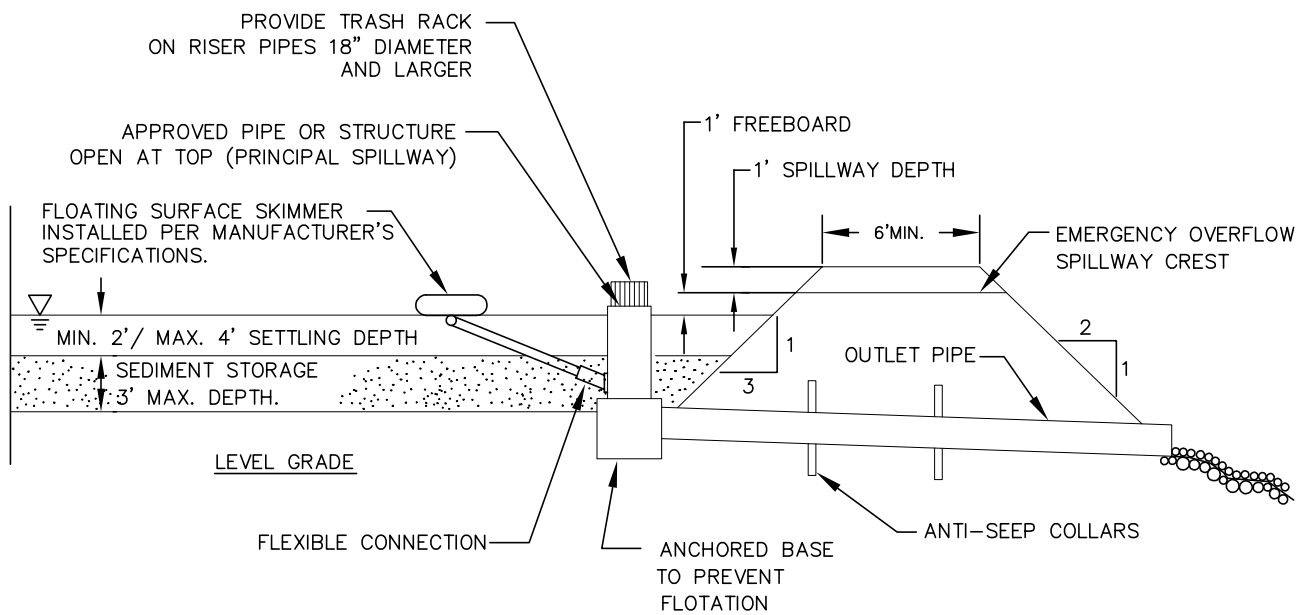
SEDIMENT TRAP







PLAN VIEW



PROFILE

NOTE:

1. 50' MINIMUM OF HIGHLY VEGETATED AREA AND/OR SEDIMENT FENCE IS REQUIRED PRIOR TO DISCHARGING TO STREAM OR WETLAND.

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

# SEDIMENT BASIN

DRAWING NO. 935

REVISED 10-31-19



FOR FURTHER INFORMATION  
ON DESIGN CRITERIA SEE  
CHAPTER 4 OF CLEAN WATER  
SERVICES EROSION PREVENTION  
AND SEDIMENT CONTROL  
PLANNING AND DESIGN MANUAL.

## SPACING FOR CHECK DAMS

| DITCH GRADE |             |            |            |
|-------------|-------------|------------|------------|
|             | 6 INCH      | 12 INCH    | 18 INCH    |
| 6%          | NOT ALLOWED | 16 FT O.C. | 26 FT O.C. |
| 5%          | NOT ALLOWED | 20 FT      | 30 FT      |
| 4%          | NOT ALLOWED | 26 FT      | 40 FT      |
| 3%          | 15 FT       | 33 FT      | 50 FT      |
| 2%          | 25 FT       | 50 FT      | 80 FT      |

## BARRIER SPACING FOR GENERAL APPLICATION

**INSTALL PARALLEL ALONG CONTOURS AS FOLLOWS**

| % SLOPE        | SLOPE H:V       | MAXIMUM SPACING ON SLOPE |
|----------------|-----------------|--------------------------|
| 10% OR FLATTER | 10:1 OR FLATTER | 300 FT                   |
| >10% OR <15%   | >10:1 OR <7.5:1 | 150 FT                   |
| >15% OR <20%   | >7.5:1 OR <5:1  | 100 FT                   |
| >20% OR <30%   | >5:1 OR <3.5:1  | 50 FT                    |
| >30% OR <50%   | >3.5:1 OR <2:1  | 25 FT                    |

NOTE:

- FOR MORE INFORMATION REGARDING THESE TABLES SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL DESIGN MANUAL.

## SPACING TABLES

DRAWING NO. 940

REVISED 10-31-19



NOTES:

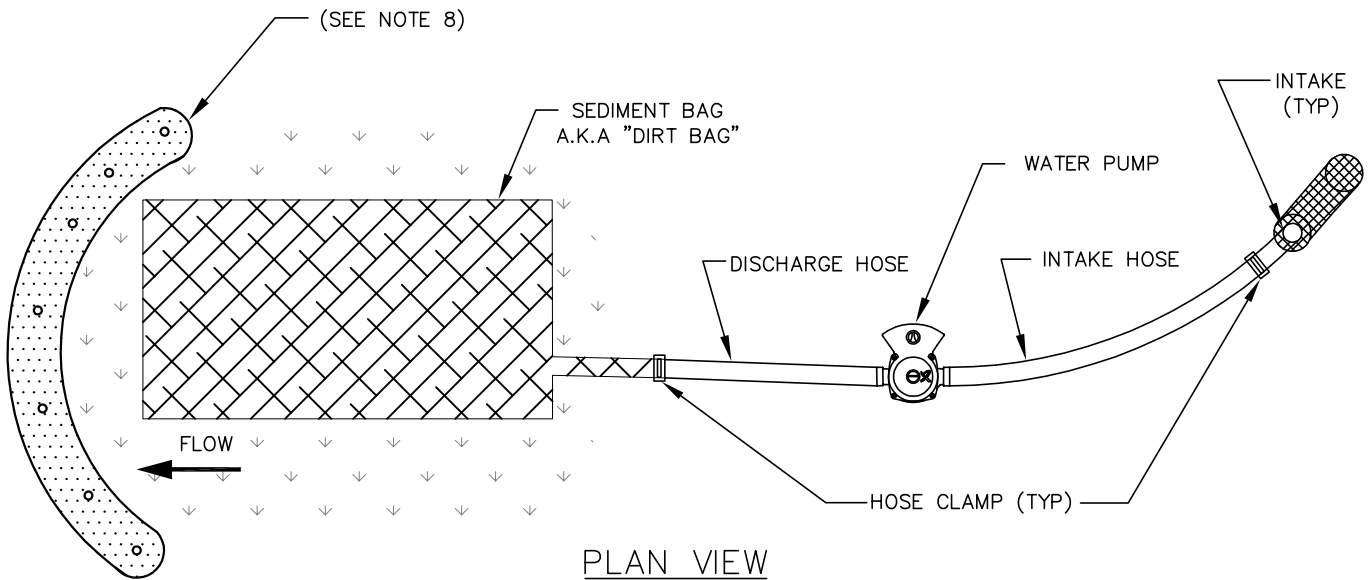
1. WHEN RAINFALL AND RUNOFF OCCURS, A KNOWLEDGEABLE AND EXPERIENCED PERSON IN THE PRINCIPLES, PRACTICES, INSTALLATION, AND MAINTENANCE OF EROSION AND SEDIMENT CONTROLS WHO WORKS FOR THE PERMITTEE MUST PROVIDE DAILY INSPECTIONS OF THE EROSION AND SEDIMENT CONTROLS AND DISCHARGE OUTFALLS.
2. CONSTRUCTION ACTIVITIES MUST AVOID OR MINIMIZE EXCAVATION AND CREATION OF BARE GROUND FROM OCTOBER 1 THROUGH MAY 31ST EACH YEAR.
3. DURING WET WEATHER PERIOD, TEMPORARY STABILIZATION OF THE SITE MUST OCCUR AT THE END OF EACH WORK DAY.
4. SEDIMENT CONTROLS MUST BE INSTALLED AND MAINTAINED ON ALL DOWN GRADIENT SIDES OF THE CONSTRUCTION SITE AT ALL TIMES DURING CONSTRUCTION. THEY MUST REMAIN IN PLACE UNTIL PERMANENT VEGETATION OR OTHER PERMANENT COVERING OF EXPOSED SOIL IS ESTABLISHED.
5. ALL ACTIVE INLETS MUST HAVE SEDIMENT CONTROLS INSTALLED AND MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
6. SIGNIFICANT AMOUNTS OF SEDIMENT THAT LEAVES THE SITE MUST BE CLEANED UP WITHIN 24 HOURS AND PLACED BACK ON THE SITE AND STABILIZED OR PROPERLY DISPOSED. THE CAUSE OF THE SEDIMENT RELEASE MUST BE FOUND AND PREVENTED FROM CAUSING A RECURRENCE OF THE DISCHARGE WITHIN THE SAME 24 HOURS. ANY IN-STREAM CLEAN UP OF SEDIMENT SHALL BE PERFORMED ACCORDING TO THE OREGON DEPARTMENT OF STATE LANDS REQUIRED TIME FRAME.
7. SEDIMENT MUST NOT BE INTENTIONALLY WASHED INTO STORM SEWERS, DRAINAGE WAYS, OR WATER BODIES.
8. SEDIMENT MUST BE REMOVED FROM BEHIND ALL SEDIMENT CONTROL MEASURES WHEN IT HAS REACHED A HEIGHT OF 1/3-RD THE BARRIER HEIGHT AND PRIOR TO THE CONTROL MEASURES REMOVAL.
9. CLEANING OF ALL STRUCTURES WITH SUMPS MUST OCCUR WHEN THE SEDIMENT RETENTION CAPACITY HAS BEEN REDUCED BY 50% AND AT COMPLETION OF PROJECT.
10. ANY USE OF TOXIC OR OTHER HAZARDOUS MATERIALS MUST INCLUDE PROPER STORAGE, APPLICATION, AND DISPOSAL.
11. THE PERMITTEE MUST PROPERLY MANAGE HAZARDOUS WASTES, USED OILS, CONTAMINATED SOILS, CONCRETE WASTE, SANITARY WASTE, LIQUID WASTE, OR OTHER TOXIC SUBSTANCES DISCOVERED OR GENERATED DURING CONSTRUCTION.
12. THE APPLICATION RATE OF FERTILIZERS USED TO REESTABLISH VEGETATION MUST FOLLOW MANUFACTURER'S RECOMMENDATIONS. NUTRIENT RELEASES FROM FERTILIZERS TO SURFACE WATERS MUST BE MINIMIZED. TIME RELEASE FERTILIZERS SHOULD BE USED AND CARE SHOULD BE MADE IN APPLICATION OF FERTILIZERS WITHIN ANY WATER WAY RIPARIAN ZONE.
13. OWNER OR DESIGNATED PERSON SHALL BE RESPONSIBLE FOR PROPER INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES, IN ACCORDANCE WITH CURRENT CLEAN WATER SERVICES STANDARDS AND STATE, AND FEDERAL REGULATIONS.
14. PRIOR TO ANY LAND DISTURBING ACTIVITIES, THE BOUNDARIES OF THE CLEARING LIMITS, VEGETATED BUFFERS, AND ANY SENSITIVE AREAS SHOWN ON THIS PLAN SHALL BE CLEARLY DELINEATED IN THE FIELD. UNLESS OTHERWISE APPROVED, NO DISTURBANCE IS PERMITTED BEYOND THE CLEARING LIMITS. THE OWNER/PERMITTEE MUST MAINTAIN THE DELINEATION FOR THE DURATION OF THE PROJECT. NOTE: VEGETATED CORRIDORS TO BE DELINEATED WITH ORANGE CONSTRUCTION FENCE OR APPROVED EQUAL.
15. PRIOR TO ANY LAND DISTURBING ACTIVITIES, THE BMPS THAT MUST BE INSTALLED ARE GRAVEL CONSTRUCTION ENTRANCE, PERIMETER SEDIMENT CONTROL, AND INLET PROTECTION. THESE BMPS MUST BE MAINTAINED FOR THE DURATION OF THE PROJECT.
16. IF VEGETATIVE SEED MIXES ARE SPECIFIED, SEEDING MUST TAKE PLACE NO LATER THAN SEPTEMBER 1ST; THE TYPE AND PERCENTAGES OF SEED IN THE MIX ARE AS IDENTIFIED ON THE PLANS OR AS SPECIFIED BY THE DESIGN ENGINEER.
17. WATERTIGHT TRUCKS MUST BE USED TO TRANSPORT SATURATED SOILS FROM THE CONSTRUCTION SITE. AN APPROVED EQUIVALENT IS TO DRAIN THE SOIL ON SITE AT A DESIGNATED LOCATION USING APPROPRIATE BMPS; SOIL MUST BE DRAINED SUFFICIENTLY FOR MINIMAL SPILLAGE.
18. ALL PUMPING OF SEDIMENT LADEN WATER MUST BE DISCHARGED OVER AN UNDISTURBED, PREFERABLY VEGETATED AREA, AND THROUGH A SEDIMENT CONTROL BMP (I.E. FILTER BAG).
19. THE ESC PLAN MUST BE KEPT ONSITE. ALL MEASURES SHOWN ON THE PLAN MUST BE INSTALLED PROPERLY TO ENSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER A SURFACE WATER SYSTEM, ROADWAY, OR OTHER PROPERTIES.
20. THE ESC MEASURES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE MEASURES SHALL BE UPGRADED AS NEEDED TO MAINTAIN COMPLIANCE WITH ALL REGULATIONS.
21. WRITTEN ESC LOGS ARE SUGGESTED TO BE MAINTAINED ONSITE AND AVAILABLE TO DISTRICT INSPECTORS UPON REQUEST.
22. IN AREAS SUBJECT TO WIND EROSION, APPROPRIATE BMPS MUST BE USED, WHICH MAY INCLUDE THE APPLICATION OF FINE WATER SPRAYING, PLASTIC SHEETING, MULCHING, OR OTHER APPROVED MEASURES.
23. ALL EXPOSED SOILS MUST BE COVERED, AT END OF BUSINESS DAY, DURING WET WEATHER PERIOD, FROM OCTOBER 1 - MAY 31.

STANDARD EROSION CONTROL  
NOTES FOR SITES LESS THAN 1  
ACRE

DRAWING NO. 945

REVISED 10-31-19





NOTES:

1. THE SEDIMENT BAG SHALL BE MANUFACTURED USING A POLYPROPYLENE 8 OZ. NON-WOVEN GEOTEXTILE SEWN INTO A BAG WITH A DOUBLE NEEDLE, USING A HIGH STRENGTH THREAD.
2. EACH STANDARD SEDIMENT BAG MUST HAVE A FILL SPOUT LARGE ENOUGH TO ACCOMMODATE A 4" DISCHARGE HOSE. STRAPS ARE ATTACHED TO SECURE THE HOSE AND PREVENT PUMPED WATER FROM ESCAPING WITHOUT BEING FILTERED.
3. THE SEDIMENT BAG SHALL MEET OR EXCEED OVERALL BAG REMOVAL EFFICIENCY RATE OF 97.55%.
4. WATER BEING DISCHARGED FROM THE SEDIMENT BAG MUST BE FREE OF ALL SEDIMENT PRIOR TO LEAVING THE SITE OR ENTERING INTO THE STORM SYSTEM.
5. SEDIMENT BAG IS FULL WHEN IT NO LONGER CAN EFFICIENTLY FILTER SEDIMENT OR ALLOW WATER TO PASS AT A RATE LESS THAN 50% OF MANUFACTURER'S DESIGNED FLOW RATE.
6. DURING USE, THE SEDIMENT BAG MUST BE MONITORED.
7. DISPOSE OF USED SEDIMENT BAG OFF SITE OR AS APPROVED BY CWS.
8. WHEN APPROPRIATE, INSTALL DOWNSTREAM SEDIMENT CONTROL MEASURES PER CWS STANDARDS.
9. FOR BEST RESULTS, PLACE SEDIMENT BAG ON FLAT SURFACE.
10. SEDIMENT BAG SHOULD BE PLACED ON EXISTING VEGETATION, ROCK, OR BED OF STRAW. SEDIMENT BAG SHOULD NOT BE PLACED ON BARE GROUND.

# SEDIMENT BAG

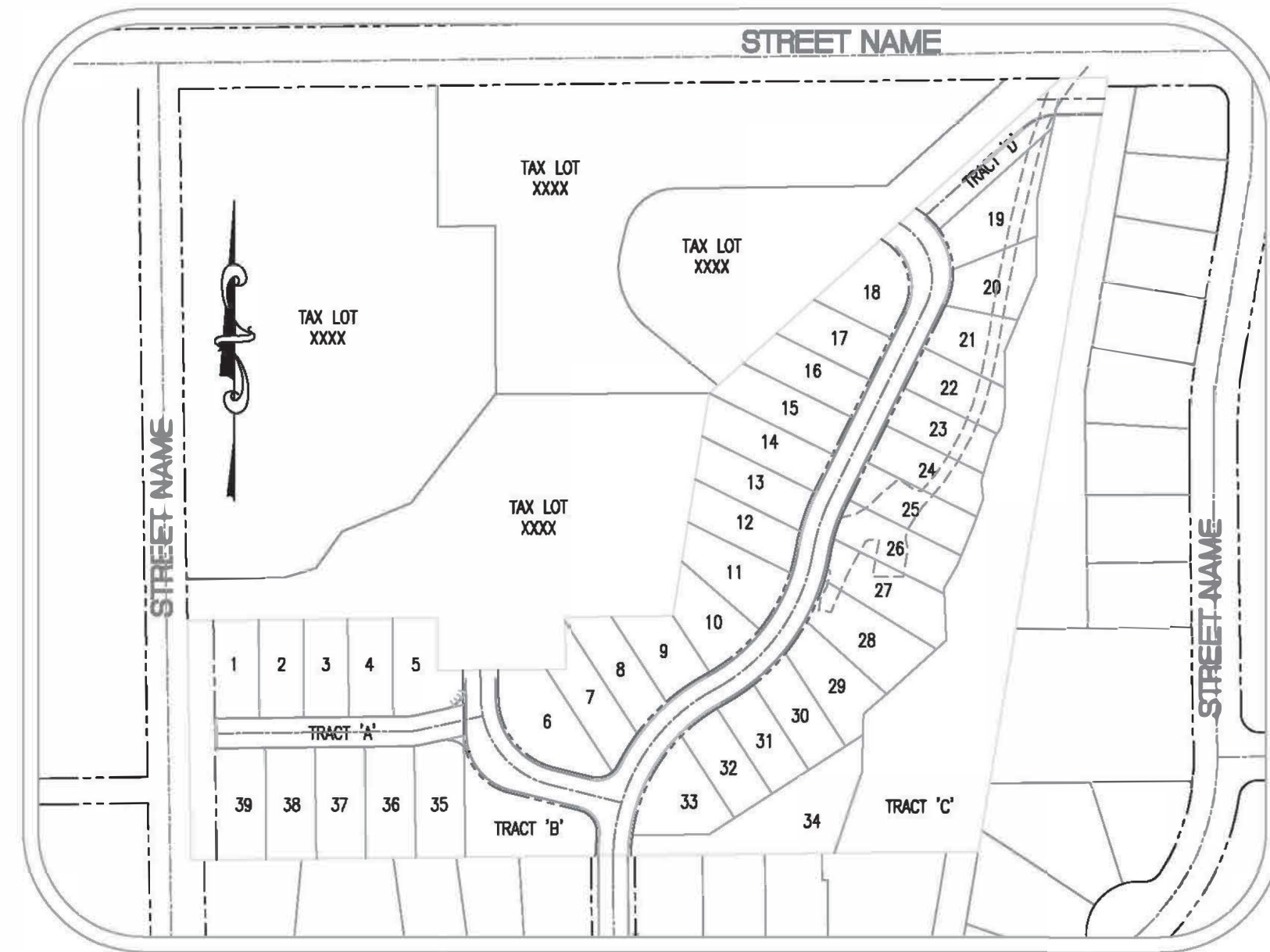


# Erosion Control Plan Template

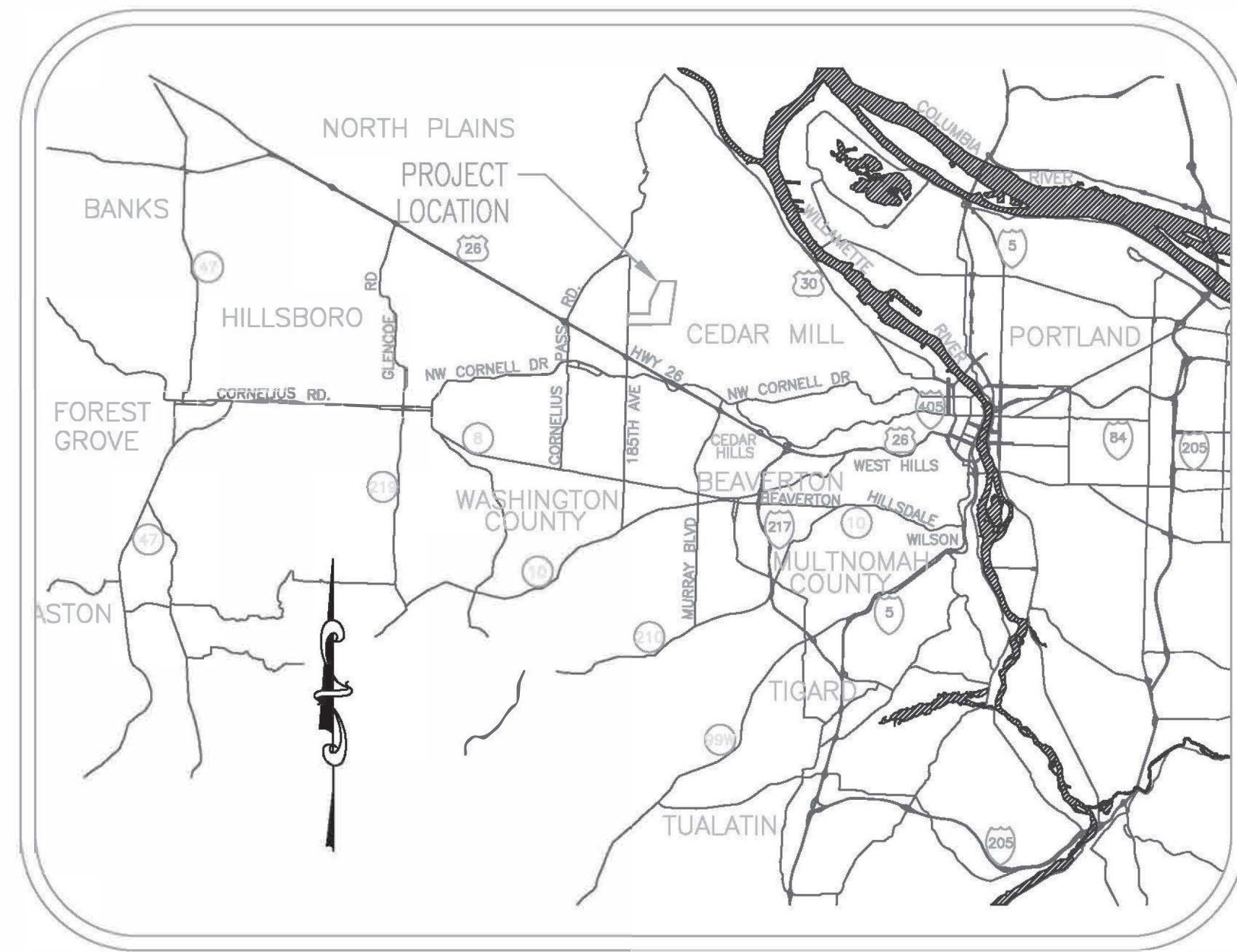
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Question 87

# ESC PLAN FOR SITES 1 TO 5 ACRES



**SITE MAP** NOT TO SCALE



**VICINITY MAP** NOT TO SCALE

**DEVELOPER**

DEVELOPER/COMPANY: \_\_\_\_\_  
 CONTACT: \_\_\_\_\_  
 ADDRESS 1 \_\_\_\_\_  
 ADDRESS 2 \_\_\_\_\_  
 PHONE: 503-\_\_\_\_\_  
 FAX: 503-\_\_\_\_\_

**PLANNING / ENGINEERING / SURVEYING FIRM**

ENGINEERING & SURVEY FIRM  
 CONTACT: \_\_\_\_\_  
 ADDRESS 1 \_\_\_\_\_  
 ADDRESS 2 \_\_\_\_\_  
 PHONE: 503-\_\_\_\_\_  
 FAX: 503-\_\_\_\_\_

**NARRATIVE DESCRIPTIONS**

**EXISTING SITE CONDITIONS**

\* 3 HOMES, 3 OUT BUILDINGS, FORESTED AREAS, PASTURE AREAS, AND DRIVEWAYS

**DEVELOPED CONDITIONS**

\* 39 LOT RESIDENTIAL SUBDIVISION WITH PUBLIC STREETS AND UTILITIES

**NATURE OF CONSTRUCTION ACTIVITY AND ESTIMATED TIME TABLE**

- \* CLEARING (DATES, FROM & TO: \_\_\_\_\_)
- \* MASS GRADING (DATES, FROM & TO: \_\_\_\_\_)
- \* UTILITY INSTALLATION (DATES, FROM & TO: \_\_\_\_\_)
- \* STREET CONSTRUCTION (DATES, FROM & TO: \_\_\_\_\_)
- \* FINAL STABILIZATION (DATES, FROM & TO: \_\_\_\_\_)

TOTAL SITE AREA = 217,800 SF = 5.00 ACRES

TOTAL DISTURBED AREA = 174,240 SF = 4.00 ACRES

**SITE SOIL CLASSIFICATION:**

- 11B - CORNELIUS AND KINTON SILT LOAMS, 2 TO 7 PERCENT SLOPES
- 11D - CORNELIUS AND KINTON SILT LOAMS, 12 TO 20 PERCENT SLOPES
- 11E - CORNELIUS AND KINTON SILT LOAMS, 20 TO 30 PERCENT SLOPES
- 11F - CORNELIUS AND KINTON SILT LOAMS, 30 TO 60 PERCENT SLOPES
- 16C - DELENA SILT LOAM, 3 TO 12 PERCENT SLOPES

ON-SITE SOILS HAVE A MODERATE TO HIGH EROSION POTENTIAL. ALL FILL MATERIAL SHALL BE GENERATED ON-SITE FROM GRADING EXCAVATION AND UTILITY TRENCH SPOILS.

**RECEIVING WATER BODIES:**

NEAREST WATER BODY: JOHNSON CREEK

**INSPECTION FREQUENCY:**

| SITE CONDITION   | MINIMUM FREQUENCY   |
|--|---|
| 1. ACTIVE PERIOD   | WEEKLY WHEN STORMWATER RUNOFF, INCLUDING RUNOFF FROM SNOW MELT, IS OCCURRING.<br><br>AT LEAST ONCE EVERY MONTH, REGARDLESS OF WHETHER STORMWATER RUNOFF IS OCCURRING. |
| 2. PRIOR TO THE SITE BECOMING INACTIVE OR IN ANTICIPATION OF SITE INACCESSIBILITY. | ONCE TO ENSURE THAT EROSION AND SEDIMENT CONTROL MEASURES ARE IN WORKING ORDER. ANY NECESSARY MAINTENANCE AND REPAIR MUST BE MADE PRIOR TO LEAVING THE SITE.          |
| 3. INACTIVE PERIODS GREATER THAN FOURTEEN (14) CONSECUTIVE CALENDAR DAYS.          | ONCE EVERY MONTH.   |
| 4. PERIODS DURING WHICH THE SITE IS INACCESSIBLE DUE TO INCLEMENT WEATHER.         | IF PRACTICAL, INSPECTIONS MUST OCCUR DAILY AT A RELEVANT AND ACCESSIBLE DISCHARGE POINT OR DOWNSTREAM LOCATION.   |
| 5. PERIODS DURING WHICH DISCHARGE IS UNLIKELY DUE TO FROZEN CONDITIONS.            | MONTHLY. RESUME MONITORING IMMEDIATELY UPON MELT, OR WHEN WEATHER CONDITIONS MAKE DISCHARGES LIKELY.  |

- \* HOLD A PRE-CONSTRUCTION MEETING OF PROJECT CONSTRUCTION PERSONNEL THAT INCLUDES THE INSPECTOR TO DISCUSS EROSION AND SEDIMENT CONTROL MEASURES AND CONSTRUCTION LIMITS.
- \* ALL INSPECTIONS MUST BE MADE IN ACCORDANCE WITH DEQ 1200-CN PERMIT REQUIREMENTS.
- \* INSPECTION LOGS MUST BE KEPT IN ACCORDANCE WITH DEQ'S 1200-CN PERMIT REQUIREMENTS.
- \* RETAIN A COPY OF THE ESCP AND ALL REVISIONS ON SITE AND MAKE IT AVAILABLE ON REQUEST TO DEQ, AGENT, OR THE LOCAL MUNICIPALITY. DURING INACTIVE PERIODS OF GREATER THAN SEVEN (7) CONSECUTIVE CALENDAR DAYS, RETAIN THE ESCP AT THE CONSTRUCTION SITE OR AT ANOTHER LOCATION.

**STANDARD EROSION AND SEDIMENT CONTROL PLAN DRAWING NOTES:**

1. All permit registrants must implement the ESCP. Failure to implement any of the control measures or practices described in the ESCP is a violation of the permit.
2. The ESCP measures shown on this plan are minimum requirements for anticipated site conditions. During the construction period, upgrade these measures as needed to comply with all applicable local, state, and federal erosion and sediment control regulations.
3. Submission of all ESCP revisions is not required. Submittal of the ESCP revisions is only under specific conditions. Submit all necessary revision to DEQ or Agent.
4. Phase clearing and grading to the maximum extent practical to prevent exposed inactive areas from becoming a source of erosion.
5. Identify, mark, and protect (by fencing off or other means) critical riparian areas and vegetation including important trees and associated rooting zones, and vegetation areas to be preserved. Identify vegetative buffer zones between the site and sensitive areas (e.g., wetlands), and other areas to be preserved, especially in perimeter areas.
6. Preserve existing vegetation when practical and re-vegetate open areas. Re-vegetate open areas when practicable before and after grading or construction. Identify the type of vegetative seed mix used.
7. Erosion and sediment control measures including perimeter sediment control must be in place before vegetation is disturbed and must remain in place and be maintained, repaired, and promptly implemented following procedures established for the duration of construction, including protection for active storm drain inlets and catch basins and appropriate non-stormwater pollution controls.
8. Establish concrete truck and other concrete equipment washout areas before beginning concrete work. Direct all wash water into a pit or leak-proof container. Handle wash water as waste, concrete discharge to waters of the state is prohibited.
9. Apply temporary and/or permanent soil stabilization measures immediately on all disturbed areas as grading progresses and for all roadways including gravel roadways.
10. Establish material and waste storage areas, and other non-stormwater controls.
11. Prevent tracking of sediment onto public or private roads using BMPs such as: gravelled (or paved) exits and parking areas, gravel all unpaved roads located onsite, or use an exit tire wash. These BMPs must be in place prior to land-disturbing activities.
12. When trucking saturated soils from the site, either use water-tight trucks or drain loads on site.
13. Use BMPs to prevent or minimize stormwater exposure to pollutants from spills; vehicle and equipment fueling, maintenance, and storage; other cleaning and maintenance activities; and waste handling activities. These pollutants include fuel, hydraulic fluid, and other oils from vehicles and machinery, as well as debris, leftover paints, solvents, and glues from construction operations.
14. Implement the following BMPs when applicable: written spill prevention and response procedures, employee training on spill prevention and proper disposal procedures, spill kits in all vehicles, regular maintenance schedule for vehicles and machinery, material delivery and storage controls, training and signage, and covered storage areas for waste and supplies.
15. Use water, soil-binding agent or other dust control technique as needed to avoid wind-blown soil.
16. The application rate of fertilizers used to reestablish vegetation must follow manufacturer's recommendations to minimize nutrient releases to surface waters. Exercise caution when using time-release fertilizers within any waterway riparian zone.
17. If a stormwater treatment system (for example, electro-coagulation, flocculation, filtration, etc.) for sediment or other pollutant removal is employed, submit an operation and maintenance plan (including system schematic, location of system, location of inlet, location of discharge, discharge dispersion device design, and a sampling plan and frequency) before operating the treatment system. Obtain plan approval before operating the treatment system. Operate and maintain the treatment system according to manufacturer's specifications.
18. At the end of each workday soil stockpiles must be stabilized or covered, or other BMPs must be implemented to prevent discharges to surface waters or conveyance systems leading to surface waters.
19. Construction activities must avoid or minimize excavation and creation of bare ground during wet weather October 01 - May 31.
20. Sediment fence: remove trapped sediment before it reaches one third of the above ground fence height and before fence removal.
21. Other sediment barriers (such as biobags): remove sediment before it reaches two inches depth above ground height. and before BMP removal.
22. Catch basins: clean before retention capacity has been reduced by fifty percent. Sediment basins and sediment traps: remove trapped sediments before design capacity has been reduced by fifty percent and at completion of project.
23. Within 24 hours, significant sediment that has left the construction site, must be remediated. Investigate the cause of the sediment release and implement steps to prevent a recurrence of the discharge within the same 24 hours. Any in-stream clean up of sediment shall be performed according to the Oregon Division of State Lands required timeframe.
24. The intentional washing of sediment into storm sewers or drainage ways must not occur. Vacuuming or dry sweeping and material pickup must be used to cleanup released sediments.
25. Provide permanent erosion control measures on all exposed areas. Do not remove temporary sediment control practices until permanent vegetation or other cover of exposed areas is established. However, do remove all temporary erosion control measures as exposed areas become stabilized, unless doing so conflicts with local requirements. Properly dispose of construction materials and waste, including sediment retained by temporary BMPs.
26. If vegetative seed mixes are specified, seeding must take place no later than September 1; the type and percentages of seed in the mix must be identified on the plans.
27. All pumping of sediment laden water shall be discharged over an undisturbed, preferably vegetated area, and through a sediment control BMP i.e. (filter bag).
28. All exposed soils must be covered during the wet weather period, October 01 - May 31.
29. If water of the state is within the project site or within 50 feet of the project boundary, maintain the existing natural buffer within the 50-foot zone for the duration of the permit coverage, or maintain less than the entire existing natural buffer and provide additional erosion and sediment control BMPs.

THE PERMITTEE IS REQUIRED TO MEET ALL THE CONDITIONS OF THE 1200-CN PERMIT. THIS ESCP AND GENERAL CONDITIONS HAVE BEEN DEVELOPED TO FACILITATE COMPLIANCE WITH THE 1200-CN PERMIT REQUIREMENTS. IN CASES OF DISCREPANCIES OR OMISSIONS, THE 1200-CN PERMIT REQUIREMENTS SUPERCEDE REQUIREMENTS OF THIS PLAN.

**BMP MATRIX FOR CONSTRUCTION PHASES**

REFER TO DEQ GUIDANCE MANUAL FOR A COMPREHENSIVE LIST OF AVAILABLE BMP'S.

|                             | CLEARING | MASS GRADING | UTILITY INSTALLATION | STREET CONSTRUCTION | FINAL STABILIZATION | WET WEATHER (OCT. 1 - MAY 31ST) |
|-----------------------------|----------|--------------|----------------------|---------------------|---------------------|---------------------------------|
| <b>EROSION PREVENTION</b>   |          |              |                      |                     |                     |                                 |
| PRESERVE NATURAL VEGETATION | ** X     | X            | X                    | X                   | X                   | X                               |
| GROUND COVER                |          |              |                      |                     | X                   | X                               |
| HYDRALIC APPLICATIONS       |          |              |                      |                     | X                   | X                               |
| PLASTIC SHEETING            |          |              |                      |                     | X                   | X                               |
| MATTING                     |          |              |                      |                     | X                   | X                               |
| DUST CONTROL                | X        | X            | X                    | X                   | X                   | X                               |
| TEMPORARY PERMANENT SEEDING | X        | X            | X                    | X                   | X                   | X                               |
| BUFFER ZONE                 | ** X     | X            | X                    | X                   | X                   | X                               |
| <b>OTHER:</b>               |          |              |                      |                     |                     |                                 |
| <b>SEDIMENT CONTROL</b>     |          |              |                      |                     |                     |                                 |
| SEDIMENT FENCE (PERIMETER)  | ** X     | X            | X                    | X                   | X                   | X                               |
| SEDIMENT FENCE (INTERIOR)   |          |              |                      | X                   | X                   | X                               |
| STRAW MATS                  |          |              | X                    | X                   | X                   | X                               |
| FILTER BERM                 | X        | X            | X                    | X                   | X                   | X                               |
| INLET PROTECTION            | ** X     | X            | X                    | X                   | X                   | X                               |
| DEWATERING                  | X        | X            | X                    | X                   | X                   | X                               |
| SEDIMENT TRAP               | X        | X            | X                    | X                   | X                   | X                               |
| NATURAL BUFFER ENCRICHMENT  | ** X     | ** X         | ** X                 | ** X                | ** X                | ** X                            |
| <b>OTHER:</b>               |          |              |                      |                     |                     |                                 |
| <b>RUN OFF CONTROL</b>      |          |              |                      |                     |                     |                                 |
| CONSTRUCTION ENTRANCE       | ** X     | X            | X                    | X                   | X                   | X                               |
| PIPE & GORE DRAIN           | X        | X            | X                    | X                   | X                   | X                               |
| OUTLET PROTECTION           | X        | X            | X                    | X                   | X                   | X                               |
| SURFACE ROADSIDEWALK        | X        | X            | X                    | X                   | X                   | X                               |
| CHECK DAM                   | ** X     | X            | X                    | X                   | X                   | X                               |
| <b>OTHER:</b>               |          |              |                      |                     |                     |                                 |
| <b>POLLUTION PREVENTION</b> |          |              |                      |                     |                     |                                 |
| PROPER SIGNAGE              | X        | X            | X                    | X                   | X                   | X                               |
| HAZ WASTE MGMT              | X        | X            | X                    | X                   | X                   | X                               |
| SPILL KIT ON SITE           | X        | X            | X                    | X                   | X                   | X                               |
| CONCRETE WASHOUT AREA       | X        | X            | X                    | X                   | X                   | X                               |
| <b>OTHER:</b>               |          |              |                      |                     |                     |                                 |

\* SIGNIFIES ADDITIONAL BMP'S REQUIRED FOR WORK WITHIN 50' OF WATER OF THE STATE.  
 \*\* SIGNIFIES BMP THAT WILL BE INSTALLED PRIOR TO ANY GROUND DISTURBING ACTIVITY.

**RATIONALE STATEMENT**

A COMPREHENSIVE LIST OF AVAILABLE BEST MANAGEMENT PRACTICES (BMP) OPTIONS BASED ON DEQ'S GUIDANCE MANUAL HAS BEEN REVIEWED TO COMPLETE THIS EROSION AND SEDIMENT CONTROL PLAN. SOME OF THE ABOVE LISTED BMP'S WERE NOT CHOSEN BECAUSE THEY WERE DETERMINED TO NOT EFFECTIVELY MANAGE EROSION PREVENTION AND SEDIMENT CONTROL FOR THIS PROJECT BASED ON SPECIFIC SITE CONDITIONS, INCLUDING SOIL CONDITIONS TOPOGRAPHIC CONSTRAINTS, ACCESSIBILITY TO THE SITE, AND OTHER RELATED CONDITIONS, AS THE PROJECT PROGRESSES AND THERE IS A NEED TO REVISE THE ESC PLAN, AN ACTION PLAN WILL BE SUBMITTED.

PERMITTEE'S SITE INSPECTOR: JOE INS PEJOR  
 COMPANY/AGENCY: \_\_\_\_\_  
 PHONE: \_\_\_\_\_  
 FAX: \_\_\_\_\_  
 E-MAIL: \_\_\_\_\_

DESCRIPTION OF EXPERIENCE: 10 YEARS OF EXPERIENCE IN THE CONSTRUCTION INDUSTRY, OF WHICH 5 YEARS WERE SPENT INSTALLING AND MAINTAINING EROSION CONTROL MEASURES. ATTENDED AN 8 HOUR TRAINING COURSE ON THE PRINCIPLES AND PRACTICES OF EROSION CONTROL AT THE UNIVERSITY OF WASHINGTON. ATTENDED IECA CONFERENCE IN 2008 AND 2013.

**SHEET INDEX**

**EROSION AND SEDIMENT CONTROL PLANS**

- C050 EROSION AND SEDIMENT CONTROL COVER SHEET
- C051 CLEARING AND DEMOLITION EROSION AND SEDIMENT CONTROL PLAN
- C052 GRADING, STREET AND UTILITY CONSTRUCTION EROSION AND SEDIMENT CONTROL PLAN
- C053 EROSION AND SEDIMENT CONTROL DETAILS
- C054 EROSION AND SEDIMENT CONTROL DETAILS

REVISIONS:

|          |  |
|----------|--|
| 1/23/07  | Revised Inspection Frequency, and Notes  |
| 12/01/10 | Updated for 1200-C issued after 01Dec10  |
| 06/02/11 | Note revisions                           |
| 12/15/15 | Updated for 1200-CN issued after 15Dec15 |

**EROSION AND SEDIMENT CONTROL COVER SHEET**

**ENGINEERING FIRM**

|                   |  |
|-------------------|--|
| DESIGNED BY: XXXX | DRAWING NO.: XXXX  |
| DRAWN BY: XXXX    | SCALE: XXXX  |
| CHECKED BY: XXXX  |  |
| PREPARED FOR:     | CLEAN WATER SERVICES<br>2550 SW HILLSBORO HIGHWAY<br>HILLSBORO, OR 97123<br>PHONE: 503-681-3600<br>FAX: 503-681-3603 |

WASHINGTON COUNTY  
TAX LOTS \_\_\_\_\_

OREGON  
WASHINGTON COUNTY TAX MAP \_\_\_\_\_

DATE: \_\_\_\_\_

JOB NUMBER: XXXX  
SHEET: XXXX

# LEGEND

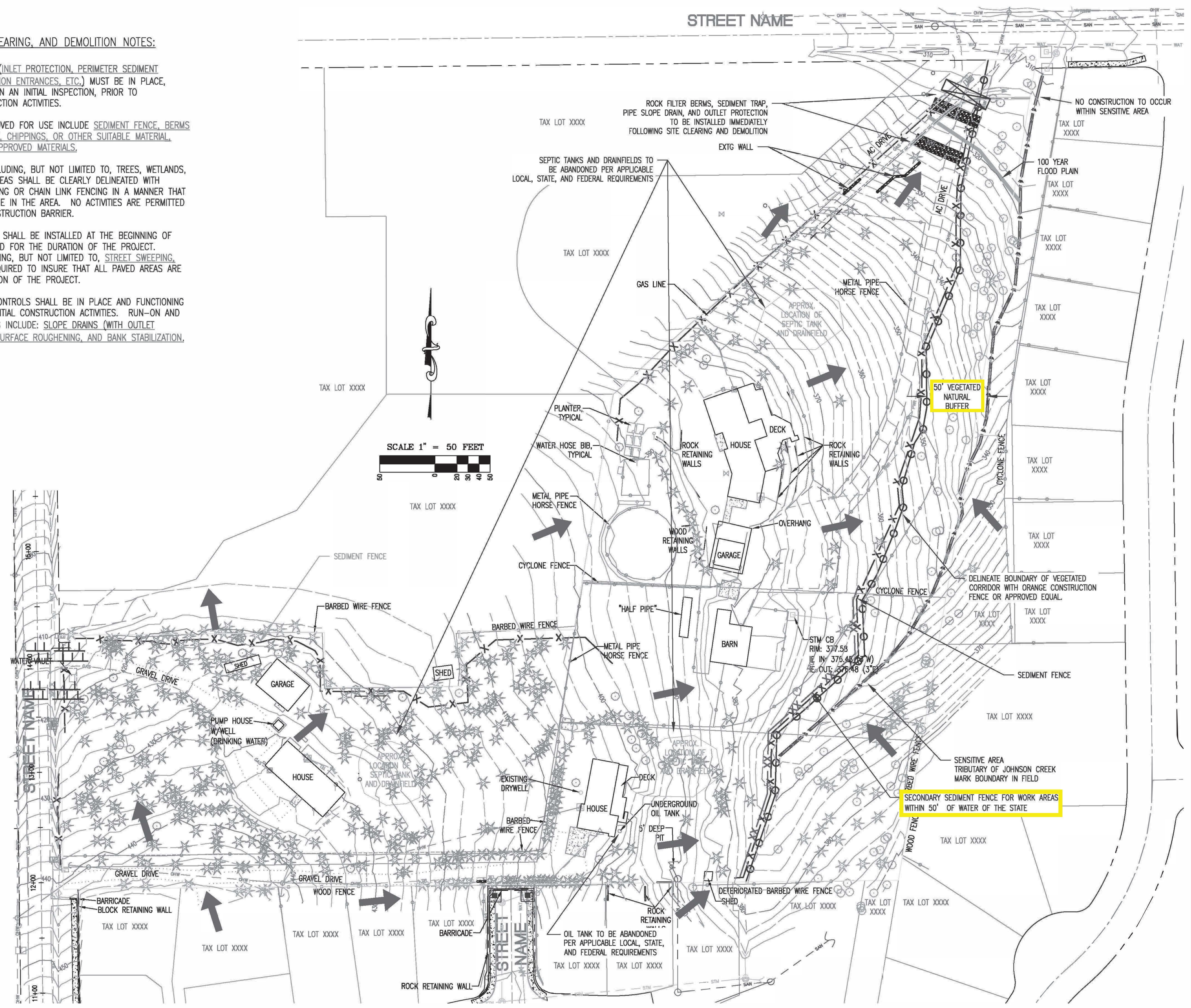
- EXISTING GROUND CONTOUR (2 FT)
- EXISTING GROUND CONTOUR (10 FT)
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- SEDIMENT BARRIER (PERIMETER)
- SEDIMENT BARRIER (INTERIOR)
- ORANGE CONSTRUCTION FENCE
- SEDIMENT TRAP
- BRUSH BARRIER
- CHECK DAM
- CONSTRUCTION ENTRANCE
- DIVERSION DIKE
- DIVERSION SWALE
- DIVERSION DIKE/SWALE
- INLET PROTECTION
- SEDIMENT MAT
- TEMPORARY SLOPE DRAIN
- ROCK FILTER BERM
- TEMPORARY SLOPE STABILIZATION MEASURES
- DRAINAGE FLOW DIRECTION

## PRE-CONSTRUCTION, CLEARING, AND DEMOLITION NOTES:

1. ALL BASE ESC MEASURES (INLET PROTECTION, PERIMETER SEDIMENT CONTROL, GRAVEL CONSTRUCTION ENTRANCES, ETC.) MUST BE IN PLACE, FUNCTIONAL, AND APPROVED IN AN INITIAL INSPECTION, PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
2. SEDIMENT BARRIERS APPROVED FOR USE INCLUDE SEDIMENT FENCE, BERMS CONSTRUCTED OUT OF MULCH, CHIPPINGS, OR OTHER SUITABLE MATERIAL, STRAW WATTLES, OR OTHER APPROVED MATERIALS.
3. SENSITIVE RESOURCES INCLUDING, BUT NOT LIMITED TO, TREES, WETLANDS, AND RIPARIAN PROTECTION AREAS SHALL BE CLEARLY DELINEATED WITH ORANGE CONSTRUCTION FENCING OR CHAIN LINK FENCING IN A MANNER THAT IS CLEARLY VISIBLE TO ANYONE IN THE AREA. NO ACTIVITIES ARE PERMITTED TO OCCUR BEYOND THE CONSTRUCTION BARRIER.
4. CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES INCLUDING, BUT NOT LIMITED TO, STREET SWEEPING, AND VACUUMING, MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
5. RUN-ON AND RUN-OFF CONTROLS SHALL BE IN PLACE AND FUNCTIONING PRIOR TO BEGINNING SUBSTANTIAL CONSTRUCTION ACTIVITIES. RUN-ON AND RUN-OFF CONTROL MEASURES INCLUDE: SLOPE DRAINS (WITH OUTLET PROTECTION), CHECK DAMS, SURFACE ROUGHENING, AND BANK STABILIZATION.

THESE EROSION AND SEDIMENT CONTROL PLANS ASSUME "DRY WEATHER" CONSTRUCTION. "WET WEATHER" CONSTRUCTION MEASURES NEED TO BE APPLIED BETWEEN OCTOBER 1ST AND MAY 31ST.

\* NOTE: PRE-DEVELOPED RUN-OFF SHEET FLOWS EASTERLY INTO ON-SITE DRAINAGE AND NORTHERLY ONTO ADJACENT PROPERTIES.



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**CLEARING, DEMOLITION,  
MASS GRADING, EROSION AND  
SEDIMENT CONTROL PLAN**

**ENGINEERING FIRM**

DESIGNED BY: \_\_\_\_\_ DRAWING NO: \_\_\_\_\_  
 DRAWN BY: \_\_\_\_\_ SCALE: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
**PREPARED FOR:**

**PROJECT NAME**

**WASHINGTON COUNTY**  
TAX LOTS

**OREGON**  
WASHINGTON COUNTY TAX MAP

DATE: \_\_\_\_\_

THIS IS A PLACE HOLDER  
  
 PRELIMINARY DESIGN  
 OREGON  
 REMOVE FOR STAMPING

JOB NUMBER: XXXX  
 SHEET: XXXX  
 EXPIRES: Month Day Year

# LEGEND

- FINISHED GRADE CONTOUR (2 FT)
- FINISHED GRADE CONTOUR (10 FT)
- SEDIMENT BARRIER (PERIMETER)
- SEDIMENT BARRIER (INTERIOR)
- ORANGE CONSTRUCTION FENCE
- BRUSH BARRIER
- CHECK DAM
- CONSTRUCTION ENTRANCE
- DIVERSION DIKE
- DIVERSION SWALE
- DIVERSION DIKE/SWALE
- INLET PROTECTION
- SEDIMENT MAT
- TEMPORARY SLOPE DRAIN
- COMPOST BLANKET
- SEEDING & MULCHING
- CONCRETE WASH AREA
- OUTLET PROTECTION
- ROCK FILTER BERM
- TEMPORARY SLOPE STABILIZATION MEASURES
- LONG TERM SLOPE STABILIZATION MEASURES
- NEW IMPERVIOUS SURFACE
- DRAINAGE FLOW DIRECTION

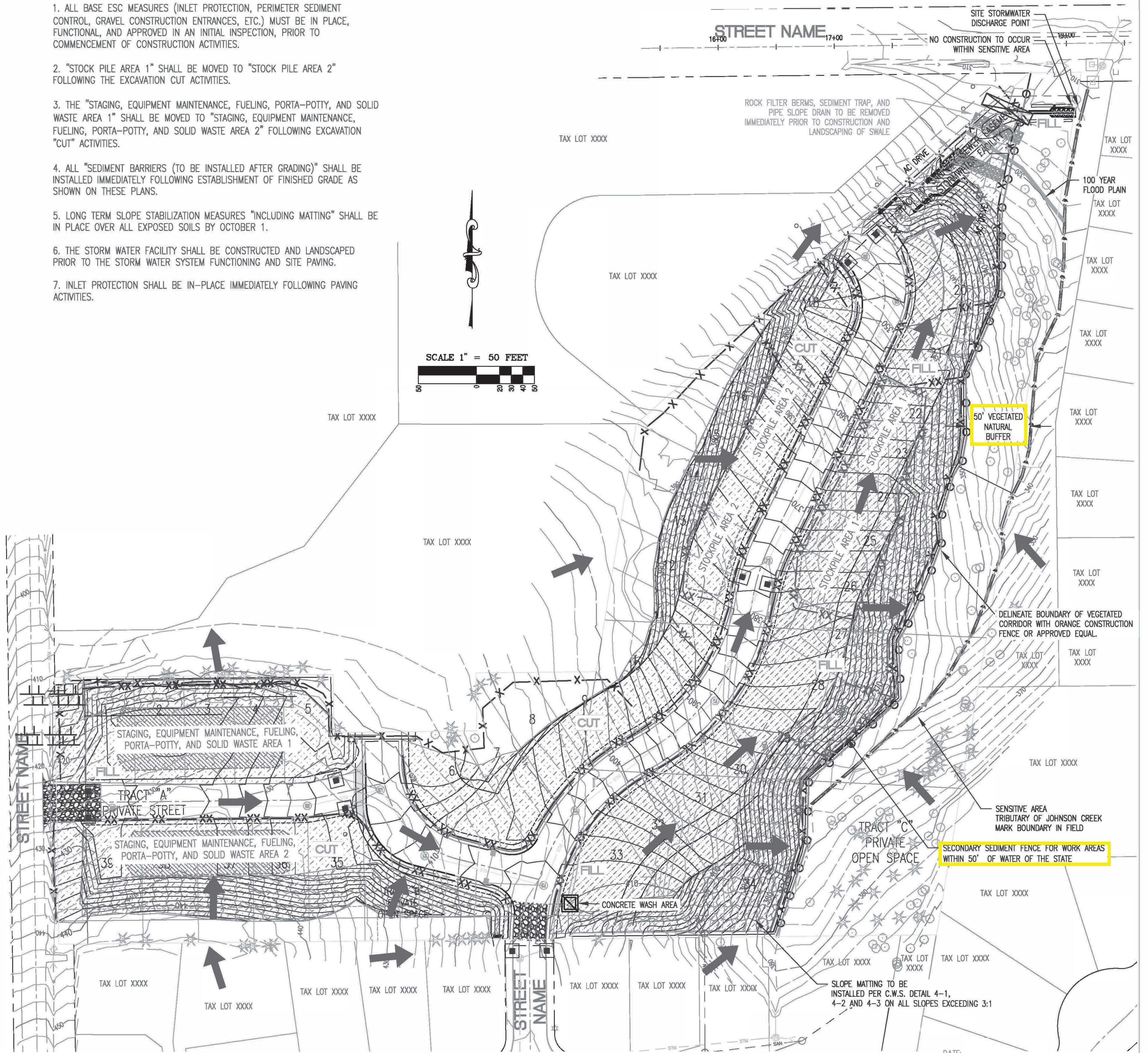
## GRADING, STREET AND UTILITY EROSION AND SEDIMENT CONSTRUCTION NOTES:

1. SEED USED FOR TEMPORARY OR PERMANENT SEEDING SHALL BE COMPOSED OF ONE OF THE FOLLOWING MIXTURES, UNLESS OTHERWISE AUTHORIZED:
  - A. VEGETATED CORRIDOR AREAS REQUIRE NATIVE SEED MIXES. SEE RESTORATION PLAN FOR APPROPRIATE SEED MIX.
  - B. DWARF GRASS MIX (MIN. 100 LB./AC.)
    1. DWARF PERENNIAL RYEGRASS (80% BY WEIGHT)
    2. CREEPING RED FESCUE (20% BY WEIGHT)
  - C. STANDARD HEIGHT GRASS MIX (MIN. 100LB./AC.)
    1. ANNUAL RYEGRASS (40% BY WEIGHT)
    2. TURF-TYPE FESCUE (60% BY WEIGHT)
2. SLOPE TO RECEIVE TEMPORARY OR PERMANENT SEEDING SHALL HAVE THE SURFACE ROUGHENED BY MEANS OF TRACK-WALKING OR THE USE OF OTHER APPROVED IMPLEMENTS. SURFACE ROUGHENING IMPROVES SEED BEDDING AND REDUCES RUN-OFF VELOCITY.
3. LONG TERM SLOPE STABILIZATION MEASURES SHALL INCLUDE THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER VIA SEEDING WITH APPROVED MIX AND APPLICATION RATE.
4. TEMPORARY SLOPE STABILIZATION MEASURES SHALL INCLUDE: COVERING EXPOSED SOIL WITH PLASTIC SHEETING, STRAW MULCHING, WOOD CHIPS, OR OTHER APPROVED MEASURES.
5. STOCKPILED SOIL OR STRIPPINGS SHALL BE PLACED IN A STABLE LOCATION AND CONFIGURATION. DURING "WET WEATHER" PERIODS, STOCKPILES SHALL BE COVERED WITH PLASTIC SHEETING OR STRAW MULCH. SEDIMENT FENCE IS REQUIRED AROUND THE PERIMETER OF THE STOCKPILE.
6. EXPOSED CUT OR FILL AREAS SHALL BE STABILIZED THROUGH THE USE OF TEMPORARY SEEDING AND MULCHING, EROSION CONTROL BLANKETS OR MATS, MID-SLOPE SEDIMENT FENCES OR WATTLES, OR OTHER APPROPRIATE MEASURES. SLOPES EXCEEDING 25% MAY REQUIRE ADDITIONAL EROSION CONTROL MEASURES.
7. AREAS SUBJECT TO WIND EROSION SHALL USE APPROPRIATE DUST CONTROL MEASURES INCLUDING THE APPLICATION OF A FINE SPRAY OF WATER, PLASTIC SHEETING, STRAW MULCHING, OR OTHER APPROVED MEASURES.
8. CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES INCLUDING, BUT NOT LIMITED TO, TIRE WASHES, STREET SWEEPING, AND VACUUMING MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
9. ACTIVE INLETS TO STORM WATER SYSTEMS SHALL BE PROTECTED THROUGH THE USE OF APPROVED INLET PROTECTION MEASURES. ALL INLET PROTECTION MEASURES ARE TO BE REGULARLY INSPECTED AND MAINTAINED AS NEEDED.
10. SATURATED MATERIALS THAT ARE HAULED OFF-SITE MUST BE TRANSPORTED IN WATER-TIGHT TRUCKS TO ELIMINATE SPILLAGE OF SEDIMENT AND SEDIMENT-LADEN WATER.
11. AN AREA SHALL BE PROVIDED FOR THE WASHING OUT OF CONCRETE TRUCKS IN A LOCATION THAT DOES NOT PROVIDE RUN-OFF THAT CAN ENTER THE STORM WATER SYSTEM. IF THE CONCRETE WASH-OUT AREA CAN NOT BE CONSTRUCTED GREATER THAN 50' FROM ANY DISCHARGE POINT, SECONDARY MEASURES SUCH AS BERMS OR TEMPORARY SETTLING PITS MAY BE REQUIRED. THE WASH-OUT SHALL BE LOCATED WITHIN SIX FEET OF TRUCK ACCESS AND BE CLEANED WHEN IT REACHES 50% OF THE CAPACITY.
12. SWEEPINGS FROM EXPOSED AGGREGATE CONCRETE SHALL NOT BE TRANSFERRED TO THE STORM WATER SYSTEM. SWEEPINGS SHALL BE PICKED UP AND DISPOSED IN THE TRASH.
13. AVOID PAVING IN WET WEATHER WHEN PAVING CHEMICALS CAN RUN-OFF INTO THE STORM WATER SYSTEM.
14. USE BMPs SUCH AS CHECK-DAMS, BERMS, AND INLET PROTECTION TO PREVENT RUN-OFF FROM REACHING DISCHARGE POINTS.
15. COVER CATCH BASINS, MANHOLES, AND OTHER DISCHARGE POINTS WHEN APPLYING SEAL COAT, TACK COAT, ETC. TO PREVENT INTRODUCING THESE MATERIALS TO THE STORM WATER SYSTEM.

## EROSION AND SEDIMENT CONTROL BMP IMPLEMENTATION:

1. ALL BASE ESC MEASURES (INLET PROTECTION, PERIMETER SEDIMENT CONTROL, GRAVEL CONSTRUCTION ENTRANCES, ETC.) MUST BE IN PLACE, FUNCTIONAL, AND APPROVED IN AN INITIAL INSPECTION, PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
2. "STOCK PILE AREA 1" SHALL BE MOVED TO "STOCK PILE AREA 2" FOLLOWING THE EXCAVATION CUT ACTIVITIES.
3. THE "STAGING, EQUIPMENT MAINTENANCE, FUELING, PORTA-POTTY, AND SOLID WASTE AREA 1" SHALL BE MOVED TO "STAGING, EQUIPMENT MAINTENANCE, FUELING, PORTA-POTTY, AND SOLID WASTE AREA 2" FOLLOWING EXCAVATION "CUT" ACTIVITIES.
4. ALL "SEDIMENT BARRIERS (TO BE INSTALLED AFTER GRADING)" SHALL BE INSTALLED IMMEDIATELY FOLLOWING ESTABLISHMENT OF FINISHED GRADE AS SHOWN ON THESE PLANS.
5. LONG TERM SLOPE STABILIZATION MEASURES "INCLUDING MATTING" SHALL BE IN PLACE OVER ALL EXPOSED SOILS BY OCTOBER 1.
6. THE STORM WATER FACILITY SHALL BE CONSTRUCTED AND LANDSCAPED PRIOR TO THE STORM WATER SYSTEM FUNCTIONING AND SITE PAVING.
7. INLET PROTECTION SHALL BE IN-PLACE IMMEDIATELY FOLLOWING PAVING ACTIVITIES.

THESE EROSION AND SEDIMENT CONTROL PLANS ASSUME "DRY WEATHER" CONSTRUCTION. "WET WEATHER" CONSTRUCTION MEASURES NEED TO BE APPLIED BETWEEN OCTOBER 1ST AND MAY 31ST.



| REVISIONS: |
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UTILITY + STREET CONST.  
GRADING + STABILIZATION  
EROSION/SED CONTROL PLAN

ENGINEERING FIRM

|               |                 |
|---------------|-----------------|
| DESIGNED BY:  | DRAWING NO.:    |
| DRAWN BY:     | SCALE: AS NOTED |
| CHECKED BY:   |                 |
| PREPARED FOR: |                 |

PROJECT NAME

WASHINGTON COUNTY OREGON

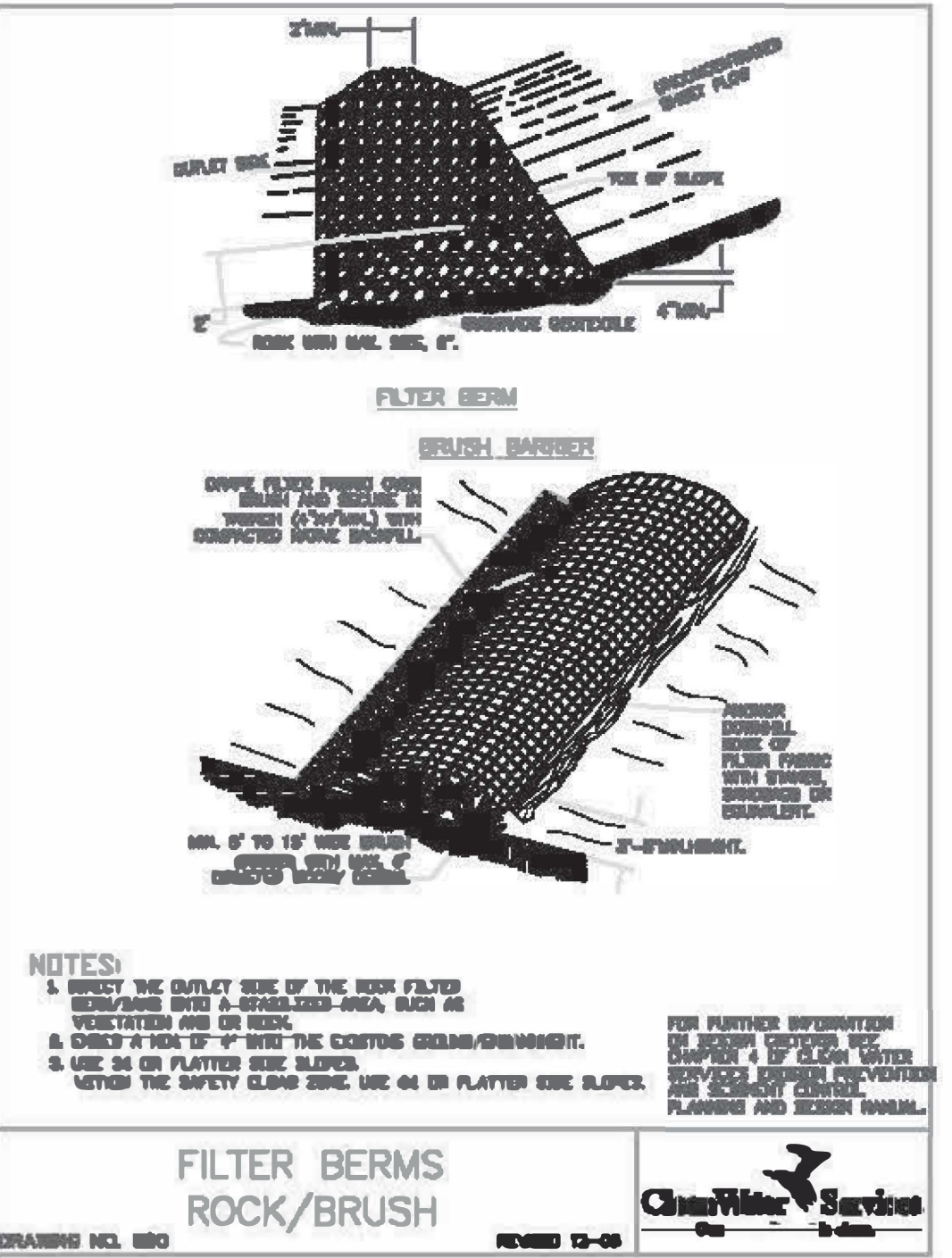
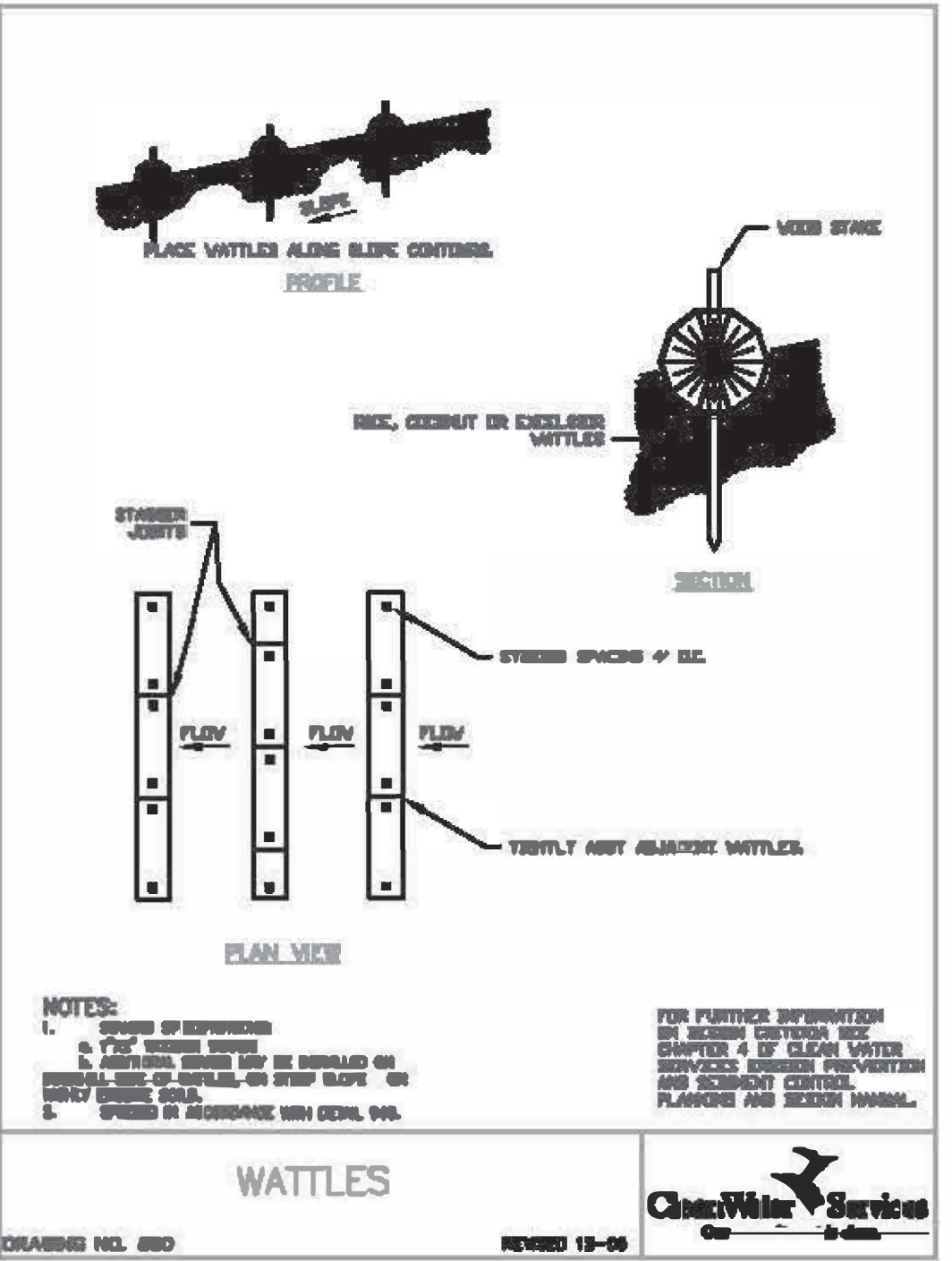
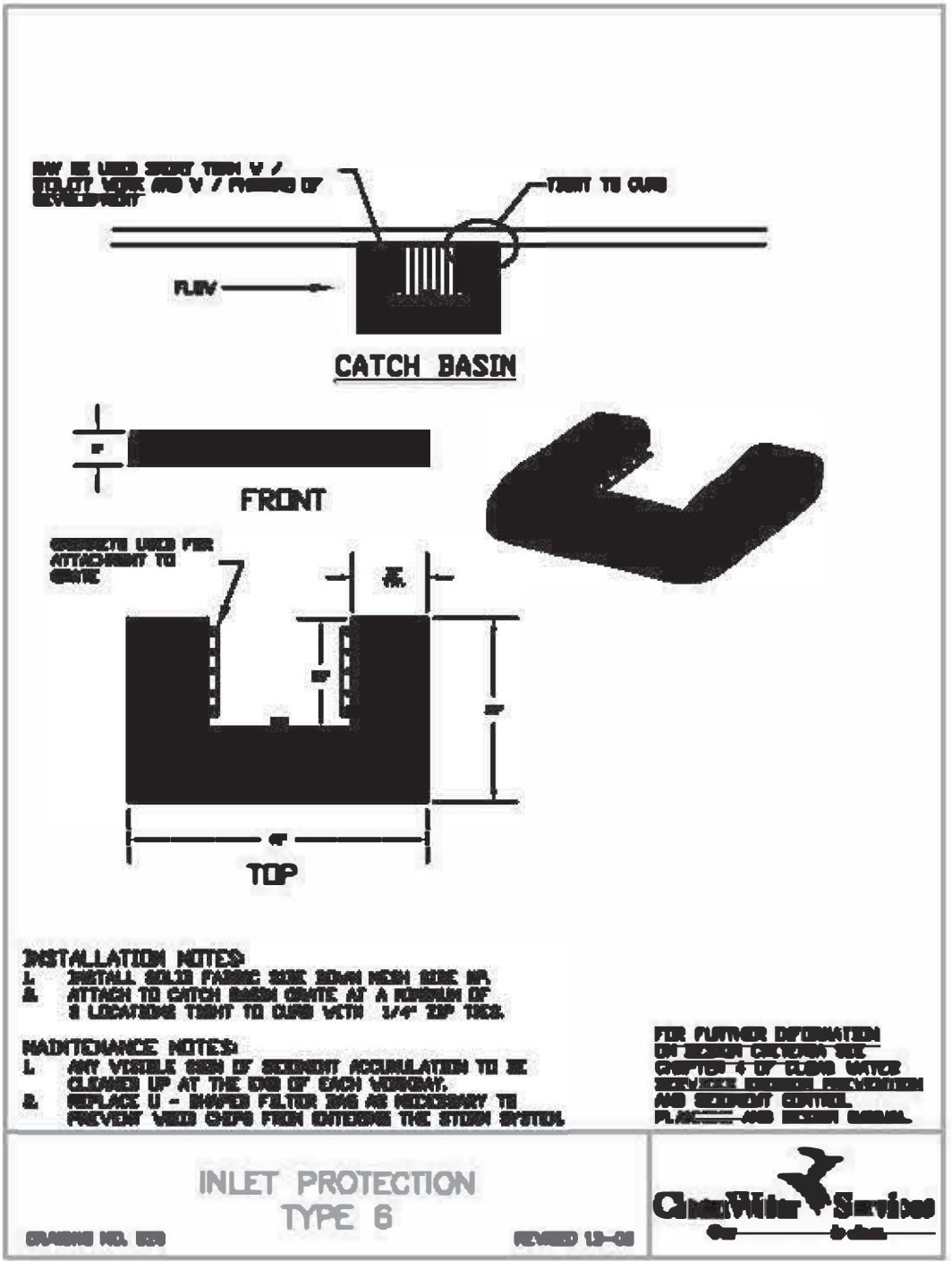
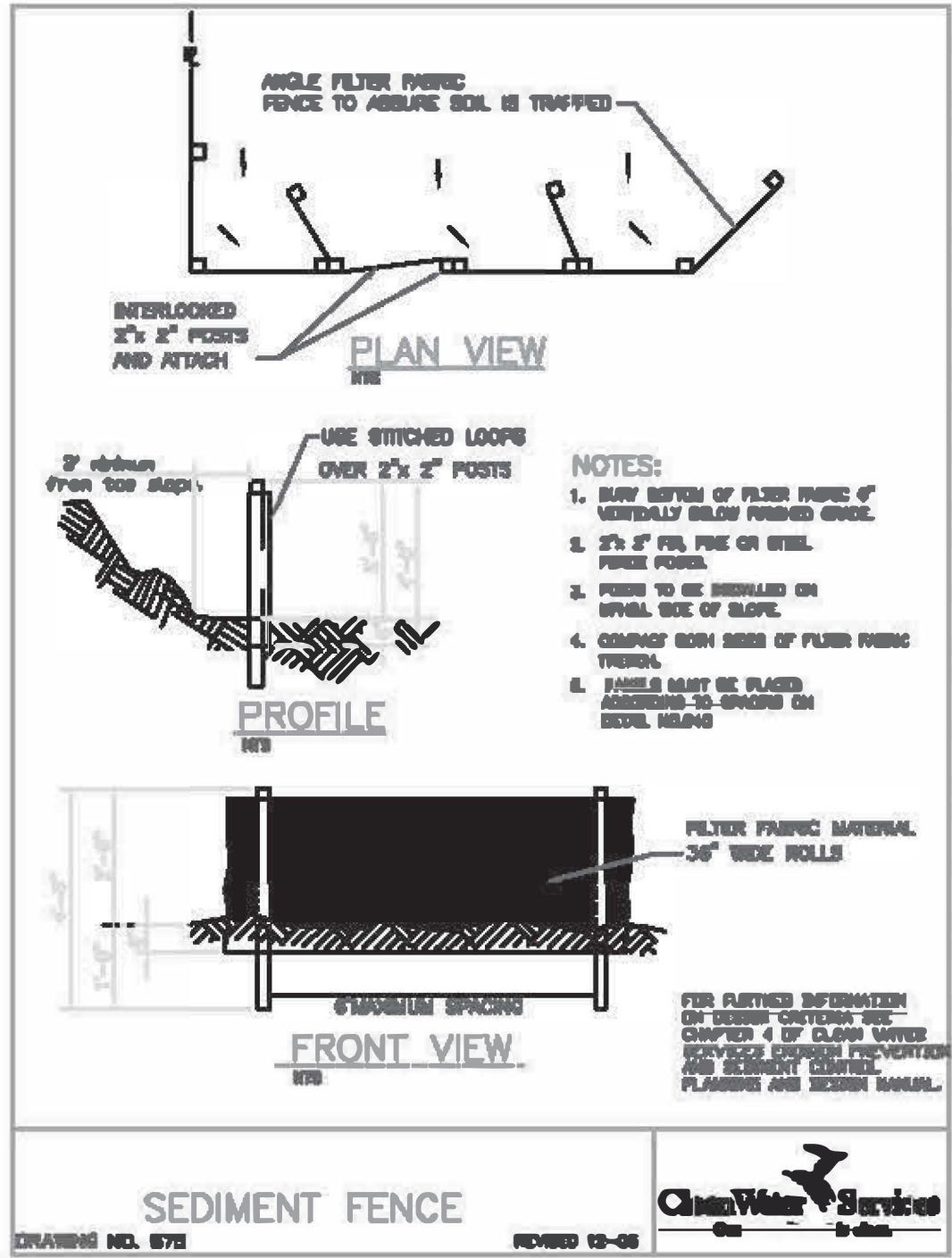
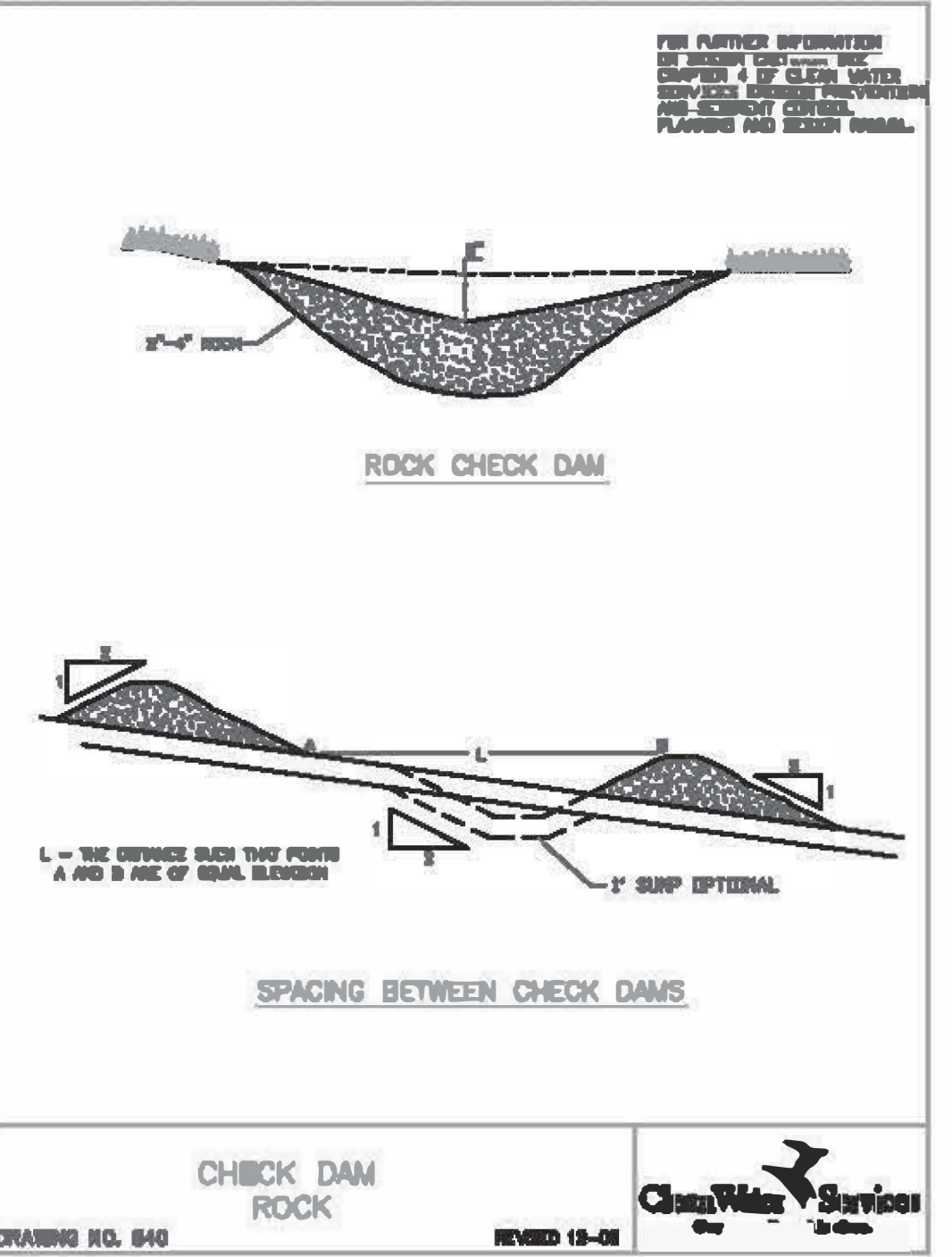
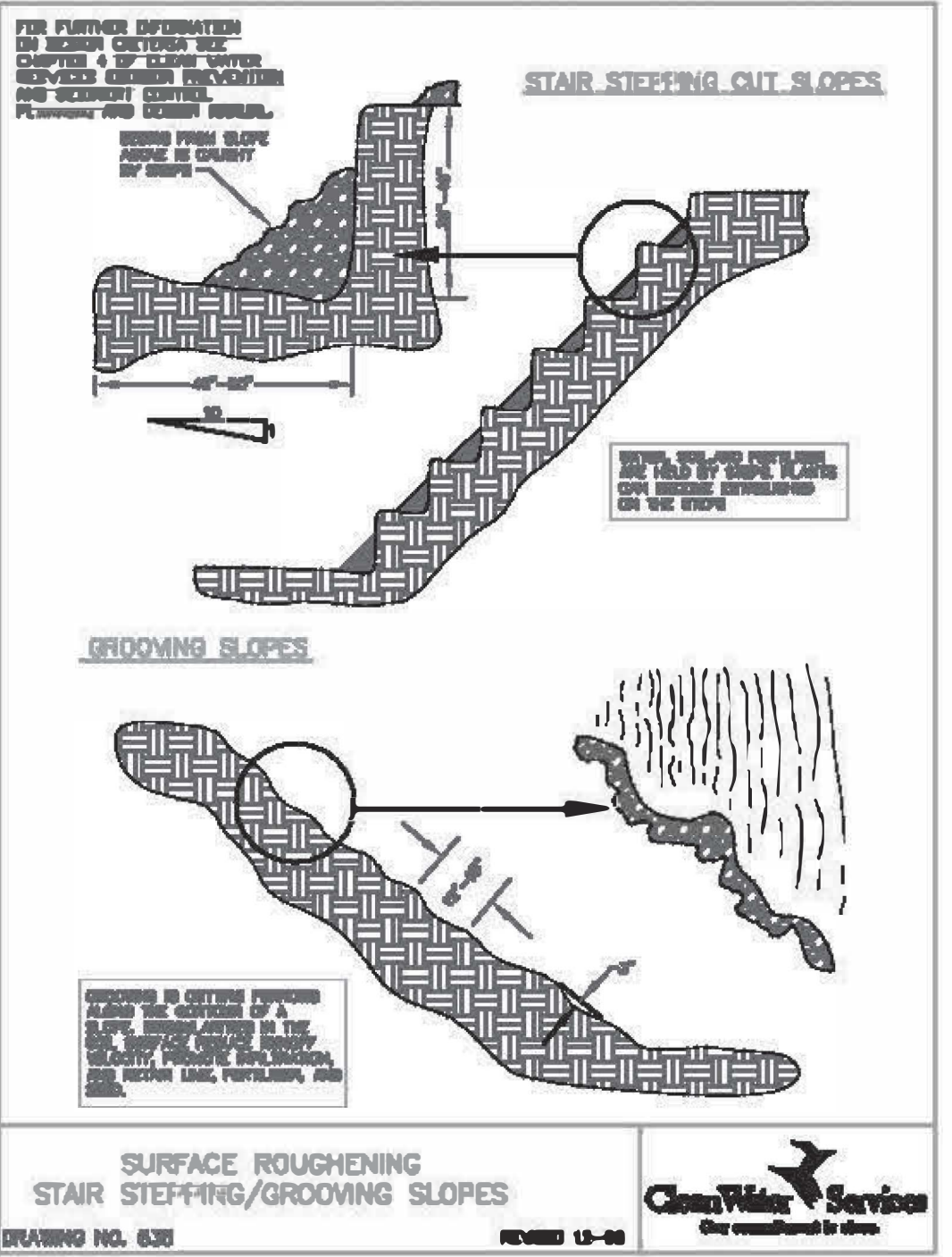
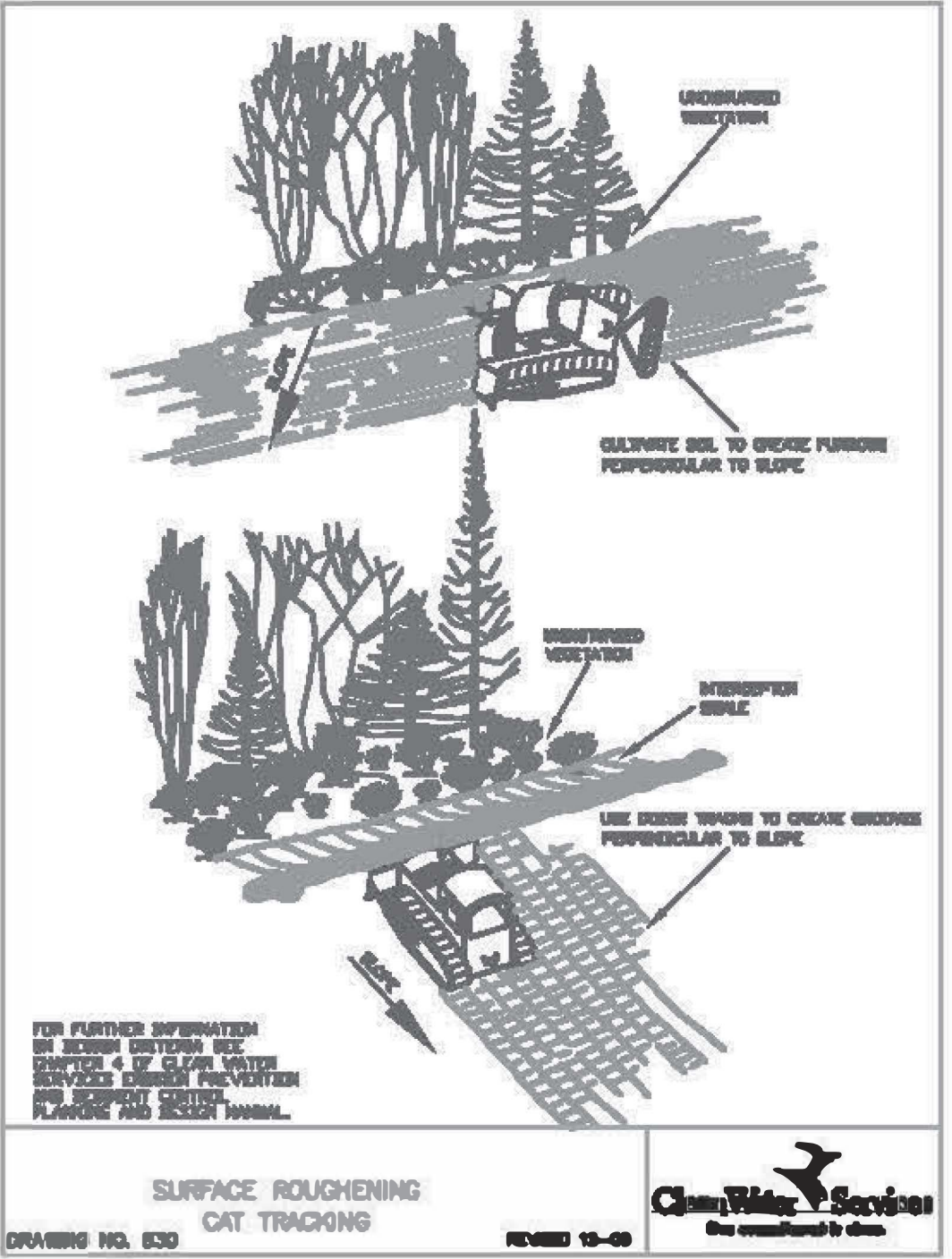
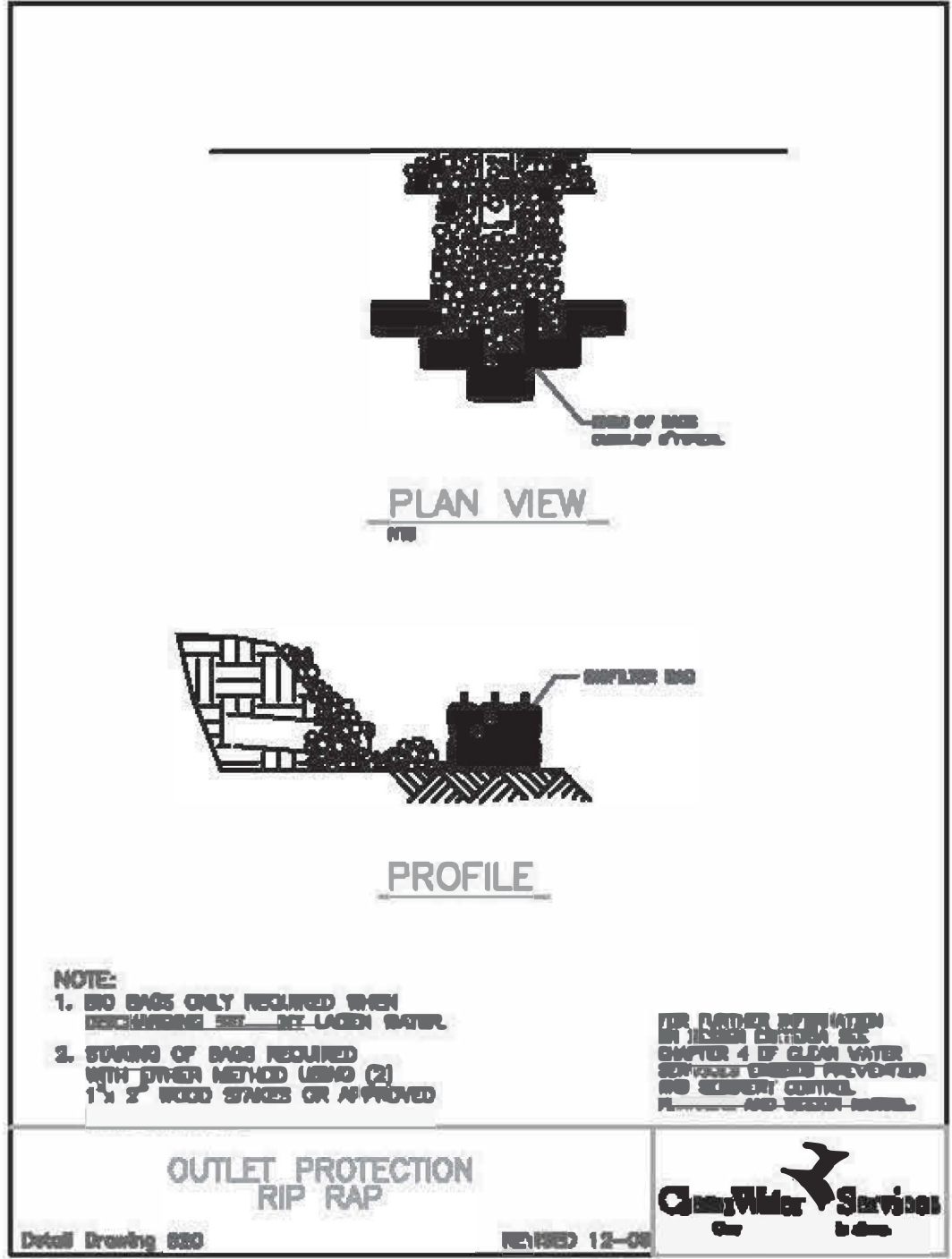
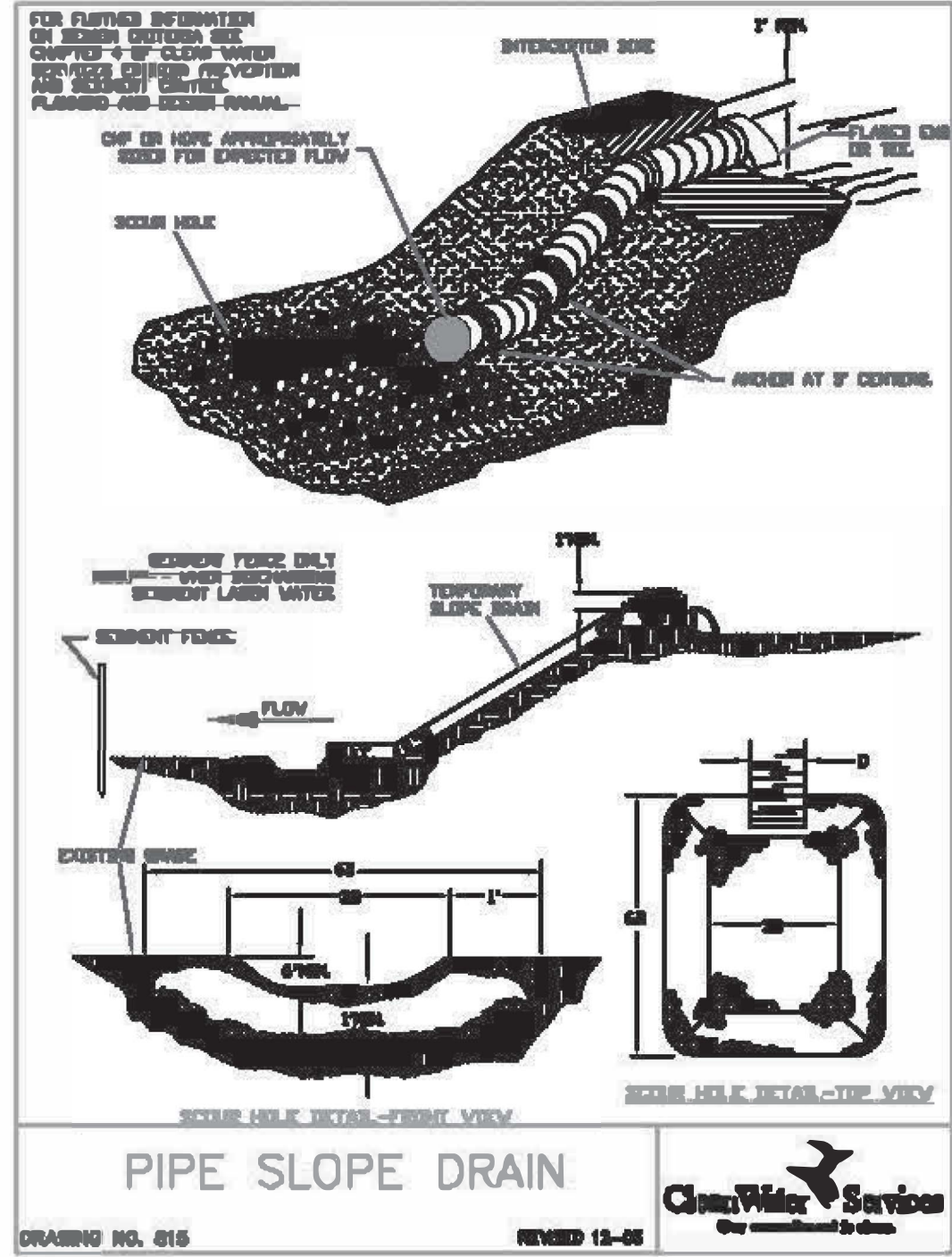
TAX LOTS WASHINGTON COUNTY TAX MAP

DATE:

THIS IS A PLACE HOLDER  
ENGINEER  
PRELIMINARY DESIGN  
OREGON  
REMOVE FOR STAMPING

JOB NUMBER XXXX  
SHEET XXX-XXX  
EXPIRES: Month Day Year





EXAMPLE DETAILS SHOWN REPRESENT THOSE CHOSEN FOR THIS ESC TEMPLATE. USERS NEED TO CONSULT THE DEQ GUIDANCE MANUAL OR LOCAL AGENT'S ESCP MANUAL FOR A COMPREHENSIVE LIST OF AVAILABLE DETAILS.

REVISIONS:

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**EROSION AND SEDIMENT CONTROL DETAILS**

**ENGINEERING FIRM**

|               |                 |
|---------------|-----------------|
| DESIGNED BY:  | DRAWING NO.:    |
| DRAWN BY:     | SCALE: AS NOTED |
| CHECKED BY:   |                 |
| PREPARED FOR: |                 |

**PROJECT NAME**

**WASHINGTON COUNTY OREGON**

TAX LOTS \_\_\_\_\_ WASHINGTON COUNTY TAX MAP \_\_\_\_\_

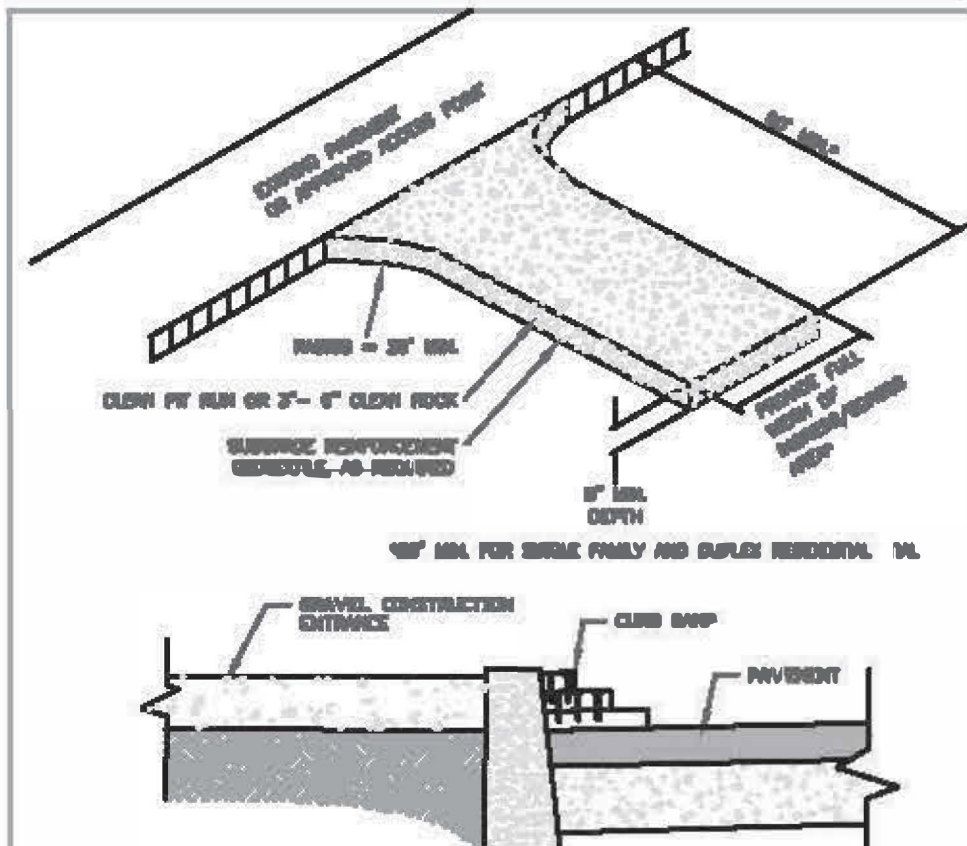
DATE: \_\_\_\_\_

**PRELIMINARY DESIGN**

**JOB NUMBER XXXX**

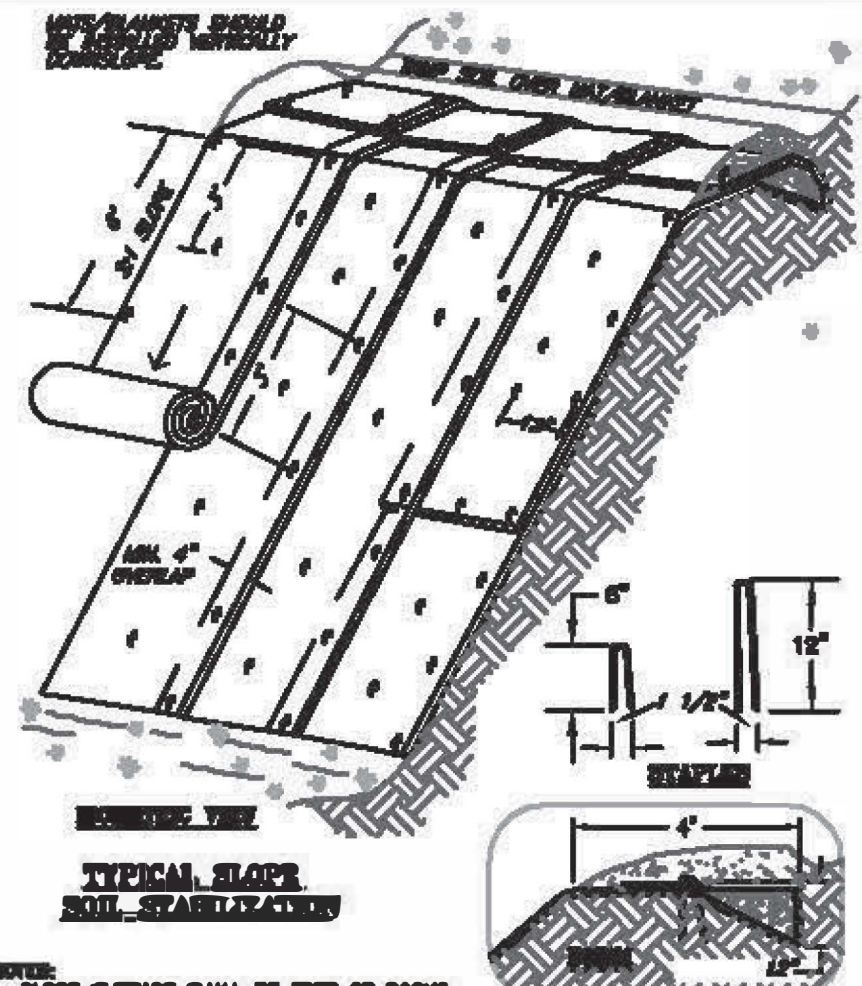
**SHEET XXXX**

EXPIRES Month Day Year



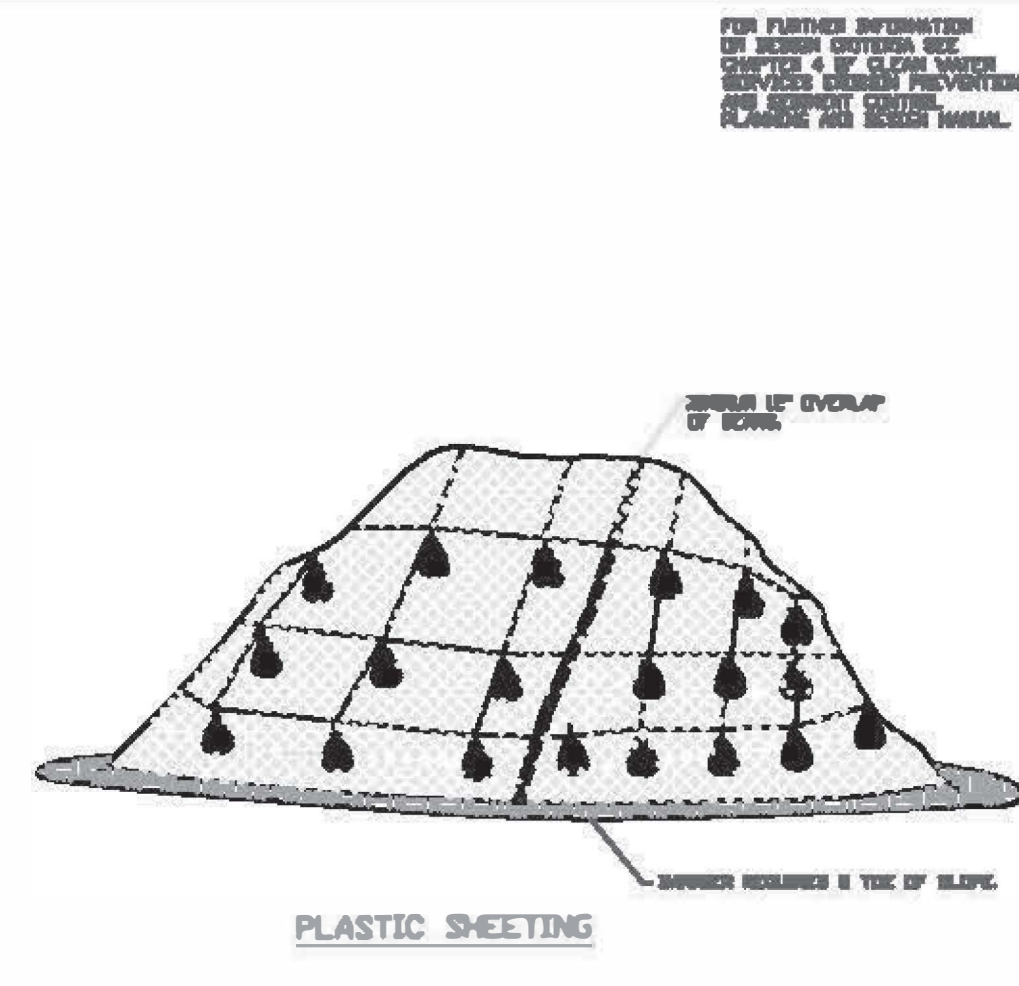
- NOTES:**
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOODING OF SEDIMENT INTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN-UP OF ANY MATERIALS USED TO TOP DRESSING.
  2. GRAVEL SURFACING SHALL BE APPLIED PRIOR TO EXPOSURE INTO PUBLIC RIGHT-OF-WAY.
  3. WHEN EXPOSURE IS REQUIRED, IT SHALL BE DONE IN AN AREA CONFINED WITH CURBING OR SIMILAR DEVICE AND AN APPROVED SEDIMENT TRAP OR SEDIMENT BARRIERS.
  4. GRAVEL SURFACING SHALL BE APPLIED TO THE SURFACE OF THE CONSTRUCTION ENTRANCE. OTHER MATERIALS SHALL BE APPLIED TO OTHER SURFACES AS APPLICABLE.
  5. SEDIMENT BARRIERS SHALL BE MAINTAINED TO PREVENT TRACKING AND FLOODING OF SEDIMENT INTO PUBLIC RIGHT-OF-WAY.

**CONSTRUCTION ENTRANCE**  
 Detail Drawing 805 REVISED 12-08



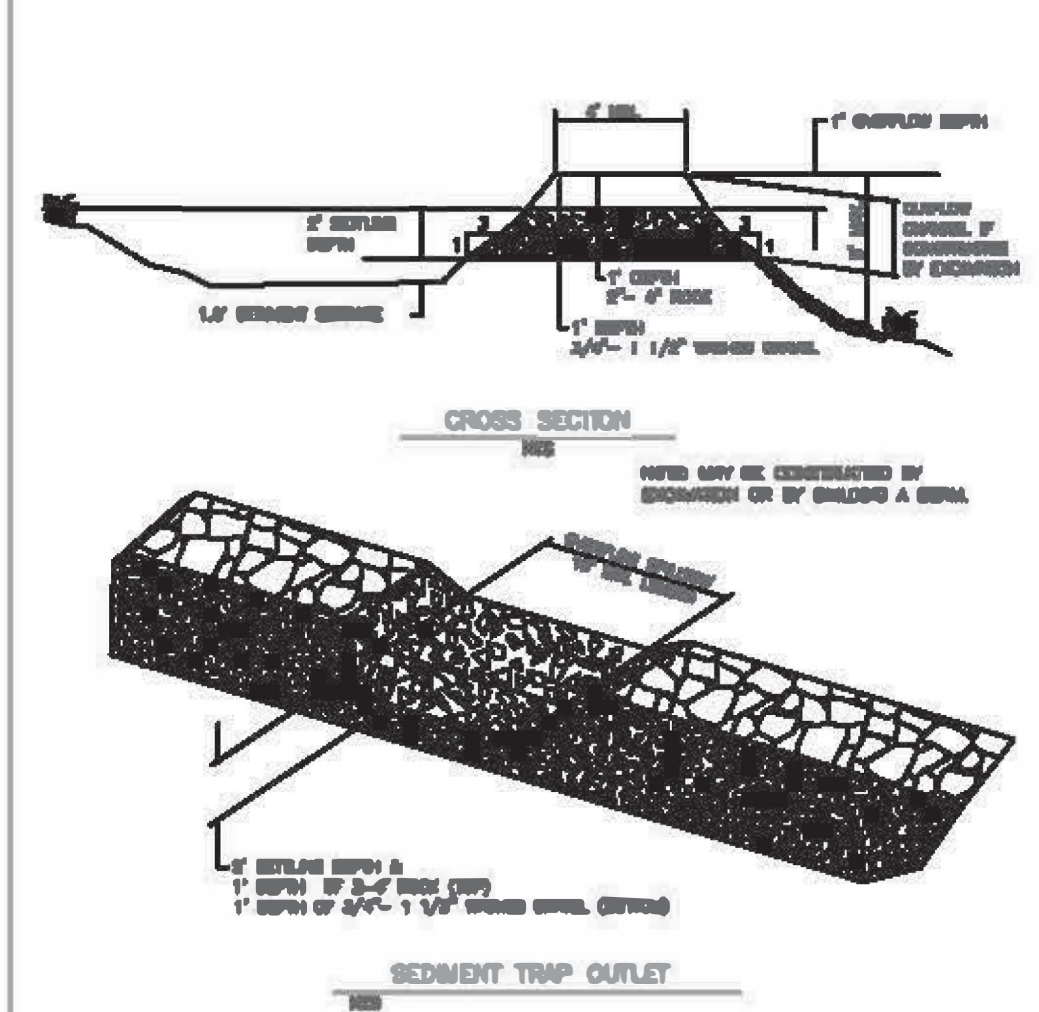
- TYPICAL SLOPE SOIL STABILIZATION**
- NOTES:**
1. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLUMPS, BRUSH AND OTHER MATTER/DEBRIS THAT WILL HINDER SOIL CONTACT.
  2. APPLY PERMANENT STAPLES BEFORE PLACING MATTING.
  3. LAY MATTING LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.
  4. STAPLES OR STAPLER LAYOUT PER DIMENSIONED SPECIFICATIONS.

**MATTING SLOPE INSTALLATION**  
 DRAWING NO. 806 REVISED 12-08



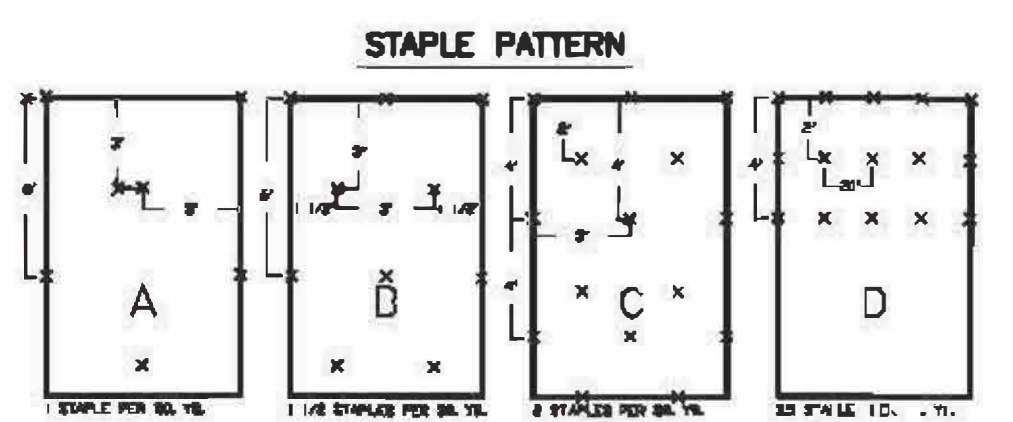
- PLASTIC SHEETING**
- NOTES:**
1. MINIMUM 12" OVERLAP OF ALL SEAMS REQUIRED.
  2. BARRIER REQUIRED @ TOE OF STOCK PILE.
  3. COVERING MAINTAINED TIGHTLY IN PLACE BY USING SANDBAGS OR TIES ON ROPEL WITH A MAXIMUM 10' GRID SPACING IN ALL DIRECTIONS.
  4. STAPLES OR STAPLER LAYOUT PER DIMENSIONED SPECIFICATIONS.

**PLASTIC SHEETING**  
 DRAWING NO. 810 REVISED 12-08



- NOTE:**
- A FILTER FABRIC FENCE OR SIMILAR FILTER MUST BE CONSTRUCTED TO FILTER RUNOFF FROM THE SEDIMENT TRAP PRIOR TO DISCHARGE FROM THE CONSTRUCTION SITE.

**SEDIMENT TRAP**  
 DRAWING NO. 830 REVISED 12-08



**LENGTH AND SLOPE TABLE**

|     |   |   |   |   |   |
|-----|---|---|---|---|---|
| 300 | B | C |   |   |   |
| 275 |   |   | C |   |   |
| 250 |   |   |   | C |   |
| 225 |   |   |   |   | D |
| 200 |   |   |   |   |   |
| 175 |   | B |   |   |   |
| 150 |   |   |   |   |   |
| 125 | A |   |   |   |   |
| 100 |   |   |   |   |   |
| 75  |   | A | B |   |   |
| 50  |   |   |   |   |   |
| 25  |   |   |   |   |   |
| 0   |   |   |   |   |   |

LOW FLOW CHANNEL      HIGH FLOW CHANNEL

MINIMUM STAPLE PATTERN GUIDE AND RECOMMENDATION FOR SLOPE AND CHANNEL APPLICATION.

**STAPLE TABLE**      Detail Drawing 4-3

**REVISIONS:**

|  |  |
|--|--|
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

**EROSION AND SEDIMENT CONTROL DETAILS**

**ENGINEERING FIRM**

DESIGNED BY: \_\_\_\_\_ DRAWING NO.: \_\_\_\_\_  
 DRAWN BY: \_\_\_\_\_ SCALE: AS NOTED  
 CHECKED BY: \_\_\_\_\_  
 PREPARED FOR: \_\_\_\_\_

**PROJECT NAME**

WASHINGTON COUNTY OREGON  
 WASHINGTON COUNTY TAX MAP \_\_\_\_\_

**THIS IS A PLACE HOLDER FOR THE ENGINEER'S SEAL**

PRELIMINARY DESIGN

REMOVE FOR STAMPING

JOB NUMBER XXXX  
 SHEET XXXX

# Inspection Checklist

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Question 90

**MARION COUNTY PUBLIC WORKS**  
**EROSION & SEDIMENTATION CONTROL (ESC)**  
**PLAN CHECK LIST**

**PLAN COVER SHEET**

Before Public Works Land Development Engineering & Permits (PW-LDEP) will accept an ESCP Plan for review, the following list of ESC Plan elements must be checked-off as provided for on the Plan, and then signed/dated by the Applicant or their Authorized Agent.

- Vicinity Map
- Site Map, including north arrow in correct orientation
- Project Location (Address if available), including latitude and longitude
- Property Description
- Narrative Site Descriptions including Existing Site Conditions, Developed Conditions, Nature of Construction Site Activity, Phases (i.e. clearing, rough grading, foundation, final grading, landscaping), and estimated schedule
- Define the estimated area of the permitted site and the estimated area to be disturbed, including square footage/acres
- Site Soil Characterization – Including soil classifications and soil erosive potential
- Contours on the existing conditions plan shall extend a minimum of 20' beyond all site boundaries
- Receiving water body, as applicable (named if available), wetlands, named 100-year floodplain
- Plans within urban areas shall be drawn at a scale of one-inch equals 20 or 30 feet, and for rural sites, at a scale of one-inch equals 40 or 50 feet
- Provide stationing for linear projects within the public Right-of-Way. Stationing shall run from left to right of plan and profile and typically commence at the south or west end of project and end at the north or east end of project.
- Inspection frequencies
- Standard ESC Plan notes, with permit references when applicable
- BMP Matrix for construction phases
- Names and contact information for Applicant's agents such as Architect, Engineer, Prime Contractor, and Excavator
- Name and contact information for Applicant's designated erosion control inspector
- Initialed (wet ink) Rationale Statement

**MARION COUNTY PUBLIC WORKS**  
**ESC PLAN CHECK LIST**

**PRE-DEVELOPMENT SHEET FOR CLEARING, DEMOLITION, AND  
MASS GRADING**

- Existing (pre-construction) conditions site plan
- Elevations based on USGS vertical datum
- Total property boundary including surface area of development
- Perimeter of area to be disturbed
- Existing contours extending a minimum of 20' beyond all site boundaries
- Locations of receiving water body, as applicable (named if available), springs, wetlands, 100-year floodplain boundary
- Drainage flow arrows depicting estimated overland and channelized pre-development flow directions
- Locations of natural existing discharge points for overland and channelized flow to receiving stream or buffers
- Location of temporary staging area
- Locations of existing structures and indications of those to be removed
- Location for temporary stockpile areas for soil and demo debris
- Locations of septic tanks, drywells, and potable / irrigation wells
- Identify areas where vegetation is to be protected and remain undisturbed (i.e. specimen trees). Delineate this boundary with erosion and sedimentation control base measures and orange construction fencing.
- Clearly define (show and label) Sensitive Areas and Vegetated Corridors
- Location of all ESC measures including but not limited to: gravel construction entrance, perimeter control BMPs, existing inlet protection, temporary diversion channels, settling ponds, etc.
- Legend of ESC BMP elements. Element distribution can be assigned symbolically or alpha/numerically.
- Site and phase specific ESC construction notes

**MARION COUNTY PUBLIC WORKS**  
**ESC PLAN CHECK LIST**

**POST-DEVELOPMENT SHEET FOR UTILITY, STREET  
CONSTRUCTION, COMPLETION OF GRADING, AND FINAL  
STABILIZATION**

- Developed (post-construction) conditions site plans
- Show onsite development boundary and any offsite work associated with the development. Include ESC for offsite areas.
- Finished Floor Elevation (FFE) based on USGS vertical datum
- Clearly identify areas or cuts and fills as well as show finished contours tying into existing contours
- Drainage flow arrows depicting locations of natural and altered discharge points for overland and channelized flow. Show appropriate interior sediment control BMP's downslope of all disturbed areas above streets, parking areas, and water quality facilities.
- Open / closed storm drain system and detention facilities, as applicable. Including all inlets and outlets.
- Designated areas for solid waste, hazardous waste, concrete washout, fuel storage areas, and method of control, as applicable
- Designated areas for soil stockpiles and method of control, as applicable
- Landscaping plan, including areas to be stabilized by seeding and/or sodding with watering requirements
- If seeding is specified as a BMP, specify dates in which seed is to be applied to ensure that vegetation becomes established prior to wet weather period.
- Identify areas where vegetation is to remain undisturbed. Delineate this boundary with ESC base measures and orange construction fencing.
- Relative locations of proposed features to receiving water body, as applicable (named if available), wetlands, 100-year floodplain boundary and how they will be protected from erosion
- Locations of water features (listed above) plus septic tanks, drain fields, drywells, detention ponds, potable / irrigation wells
- Show location of post development discharge points to receiving streams or buffers
- Clearly define (show and label) Sensitive Areas and Vegetated Corridors
- Include phase specific notes for dust control

- Indicate additional BMP's to be used when project boundary is within 50 feet of water of the state including but not limited to compost berms, compost blankets, compost socks, two parallel rows of sediment fence.
- Location of all ESC measures including but not limited to: inlet protection, temporary diversion channels, settling ponds, etc.
- Legend of ESC Plan BMP elements. Element distribution can be assigned symbolically or alpha/numerically.
- Site and phase specific ESC construction notes and site and phase specific ESC BMP implementation rules

**MARION COUNTY PUBLIC WORKS**  
**ESC PLAN CHECK LIST**

**DETAILS SHEET**

- Details for all proposed BMPs and installation techniques
- General ESC Plan notes. Refer to Clean Water Services ESC planning and design manual for guidance on design criteria.
- Notes pertaining to Non-Structural BMPs, if applicable, with descriptions and method of use

***Prior to submittal, check that all the following are included:***

- Appropriate BMPs have been used
- One set of approvable plans
- Copy of this checklist

ESC Plan Designed by: \_\_\_\_\_ Date : \_\_\_\_\_

Checklist Completed/Verified by: \_\_\_\_\_ Date : \_\_\_\_\_

Submit to:  
**Land Development Engineering & Permits**  
**Marion County Public Works**  
**5155 Silverton Road NE**  
**Salem, OR 97305**

# EPSC Permit Example

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Question 99



# Record ID: 555-19-000739-PW

Forward Cancel Help

**Importance**

Normal

**From**

Auto\_Sender@Accela.com

**Sent**

01/13/2020 15:43:47

**To**

MECALEAHERRERA@GMAIL.COM

**Cc**

**Bcc**

**Title**

Inspection results for 555-19-000739-PW, Job Site Address 4645 UTAH AVE NE, SALEM, OR 97305 have been posted

**Attachment(s)**

**Content**

Inspection results for 555-19-000739-PW

Address: 4645 UTAH AVE NE, SALEM, OR 97305

Inspection: 6010 Preliminary Erosion Control

Inspection Date: 01/13/2020

Result: Denied

Comments: Needs more wattels around dirt pile.

If you have any questions regarding this inspection, please contact the corresponding Marion County department indicated below:

Building at (503) 588-5147

Public Works at (503) 588-5036

Code Enforcement at (503) 373-4333

Thank you,

Marion County

5155 Silverton Rd NE Salem, OR 97305

Ph: 503-588-5147 Fax: 503-588-7948

Email: [building@co.marion.or.us](mailto:building@co.marion.or.us)

Web Address: [www.co.marion.or.us](http://www.co.marion.or.us)

[Supporting Attachments 73](#)



# Inspection Result

555-19-000739-PW  
Public Works Tracking

Marion County Public Works  
5155 Silverton Rd NE  
Salem, OR 97305  
503-584-7714  
Fax: 503-373-4418  
mcldep@co.marion.or.us  
Website:  
co.marion.or.us/PW/Pages/default.aspx

**Worksite:** 4645 UTAH AVE NE SALEM OR 97305

**Parcel:** 072W18AA06100

**Subdivision:** MIDDLEGROVE TRACTS

**Lot:** FR 11

**Block:** 4

**Owner:** HERRERA,MECALEA

**Inspection type**

**Scheduled date**

**Inspector**

6010 Preliminary Erosion Control

January 13, 2020

Matt Ficek

**Work description:** EROSION PERMIT FOR ADDITION AND GARAGE CONVERSION - ADDING KITCHEN AND MASTER SUITE CONV GARAGE TO LIV RM AND LAUNDRY

**Inspection result**

- Approved     Approved w/conditions     Accepted     Partial approval     Not required     Holdover
- Denied     Not ready     No access     Information only     Wrong inspection requested     Cancelled

**CORRECTIONS/COMMENTS**

Needs more wattels around dirt pile.

**Inspection completed by:**  Matt Ficek

**Inspection completed date:**  January 13, 2020

Schedule or track inspections at [buildingpermits.oregon.gov](http://buildingpermits.oregon.gov)  
Schedule by phone call 1-888-299-2821, use IVR number: **555 009 803 990**  
Schedule using the Oregon ePermitting Inspection App, search "epermitting" in the app store

[Supporting Attachments 74](#)



# Inspection Result

555-19-000739-PW  
Public Works Tracking

Marion County Public Works  
5155 Silverton Rd NE  
Salem, OR 97305  
503-584-7714  
Fax: 503-373-4418  
mcldep@co.marion.or.us  
Website:  
co.marion.or.us/PW/Pages/default.aspx

**Worksite:** 4645 UTAH AVE NE SALEM OR 97305

**Parcel:** 072W18AA06100

**Subdivision:** MIDDLEGROVE TRACTS

**Lot:** FR 11

**Block:** 4

**Owner:** HERRERA,MECALEA

**Inspection type**

**Scheduled date**

**Inspector**

6010 Preliminary Erosion Control

January 29, 2020

Matt Ficek

**Work description:** EROSION PERMIT FOR ADDITION AND GARAGE CONVERSION - ADDING KITCHEN AND MASTER SUITE CONV GARAGE TO LIV RM AND LAUNDRY

### Inspection result

- Approved  
  Approved w/conditions  
  Accepted  
  Partial approval  
  Not required  
  Holdover  
 Denied  
  Not ready  
  No access  
  Information only  
  Wrong inspection requested  
  Cancelled

### CORRECTIONS/COMMENTS

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**Inspection completed by:**  Matt Ficek

**Inspection completed date:**  January 27, 2020

Schedule or track inspections at [buildingpermits.oregon.gov](http://buildingpermits.oregon.gov)  
Schedule by phone call 1-888-299-2821, use IVR number: **555 009 803 990**  
Schedule using the Oregon ePermitting Inspection App, search "epermitting" in the app store

[Supporting Attachments 75](#)

# CESC Escalating Enforcement

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Question 101



**LDEP POLICY & PROCEDURES MEMORANDUM**

**RE: Construction Erosion and Sediment Control Enforcement Procedure**

**POLICY**

In the event that a violation of Marion County Code Chapter 15.10 is discovered, the following series of escalations shall be followed in an attempt to end the violation of Marion County's Construction Erosion and Sediment Control Code, and bring the responsible party/project into compliance. When a non-compliance of a construction site is discovered:

1. The inspector will look at past applicable records to determine if this is a repeat violation. This will impact the enforcement actions taken if a violation is confirmed to be occurring.
  - a) For repeat violations, follow the same procedure, but also initiate issuance of fine for violation in accordance with step 5.
  
2. The inspector will attempt to make contact onsite and communicate verbally the nature of the violation, why it matters, what needs to happen to end the non-compliance, a deadline for remediation not to exceed 5 business days, and what the potential consequences are, both for the construction project, and for the County as a whole.
  - a) If contact cannot be made onsite the Applicant of record for the permit will be contacted and the information mentioned previously will be communicated.
  
3. If the violation(s) identified are not remediated by the deadline given in Step 2 or the site is found to continually violate the CESC permit, a Stop Work Order (SWO) letter (in accordance with County Code 15.10.110) requiring the remediation of the violation(s) and non-compliant site conditions, sent by certified mail, shall be issued to the Applicant(s).
  - a) This Stop Work Order will include a deadline not to exceed 7 business days from the date of the letter in which it is anticipated the violation(s) will be corrected.
  - b) In addition to the certified mailing, an email containing a signed copy of the letter may be sent to the Applicant of record to ensure receipt of the letter.
  - c) In accordance with Marion County Code 15.10.110(B) a copy of the Stop Work Order will be posted at the project site.
  - d) Issuance of a SWO requires the prior approval of the LDEP Supervisor
  
4. If a SWO is issued, and the violation is not remedied by the deadline given in the SWO, the Sheriff's Office shall be notified to initiate issuance of a fine for a non-continuing violation in accordance with County Code 15.10.120.
  - a) If the violations noted in the SWO are corrected prior to the deadline provided in the SWO, and no other CESC violations need be corrected, then the Stop Work Order will be removed and the Sheriff's Office not notified.
  - b) If it is necessary to issue a second SWO for the same project this will be treated as a continuing violation per Step 5.

5. If the SWO is violated (i.e. construction work other than that related to remedying the violation(s) is conducted prior to removal of the SWO), or it is necessary to issue multiple for the same project, contractor, developer or property owner, the Marion County Sheriff's office shall be notified to initiate the issuance of a penalty fine for a continuing violation in accordance with County Code 15.10.120. Fines shall be determined from the date the County was first made aware of the initial violation(s).

### **BACKGROUND**

A written procedure for Construction Erosion and Sediment Control code violations provides staff guidance for a previously undefined process. This will ensure consistency and equity in how the County approaches developments that fail to meet County code for erosion and sediment control.

### **ATTACHMENTS**

1. Marion County Code Chapter 15.10

## Chapter 15.10 CONSTRUCTION EROSION AND SEDIMENT CONTROL

### Sections:

- 15.10.010 Title.**
- 15.10.020 Purpose.**
- 15.10.030 Definitions.**
- 15.10.040 *Repealed.***
- 15.10.050 Permit required.**
- 15.10.060 Erosion prevention and sediment control plan.**
- 15.10.070 Permit fee.**
- 15.10.080 Construction site deposits on public streets and into storm drains.**
- 15.10.090 Maintenance.**
- 15.10.100 Falsifying information.**
- 15.10.110 Stop work orders.**
- 15.10.120 Penalties.**
- 15.10.130 Enforcement.**
- 15.10.140 Other remedies.**

### **15.10.010 Title.**

This chapter shall be known as the construction erosion and sediment control ordinance of Marion County. [Ord. 1307 § 1, 2010.]

### **15.10.020 Purpose.**

The purpose of this chapter is to minimize the amount of sediment reaching waterways, wetlands, and the public storm drainage and surface water system for the duration of construction site activities. [Ord. 1307 § 2, 2010.]

### **15.10.030 Definitions.**

For the purposes of this chapter, the following words shall have the following meanings:

“Applicant” means the owner of real property or the owner’s authorized agent. “Applicant” includes any person who would be required to obtain a Marion County permit or exemption approval, but who neglects or otherwise fails to do so.

“Authorized agent” means the developer, architect, contractor, engineer, builder, personal representative, or anyone designated by the owner to have control or supervision of a site involving construction site activity.

“Construction site activity” means ground disturbing activities at a location where a Marion County permit or exemption approval is required.

“Director” means the director of public works or the director’s designee.

“Emergency” has the same meaning as found in ORS [401.025](#).

“Erosion” means the wearing away of the ground surface, or the movement, detachment or dislocation and transport of sediment including soil particles by the action of water or wind.

“Exemption approval” means an exemption from the requirement to obtain a building permit for an agricultural building.

“Ground disturbing activities” means any activity that exposes soil, including, but not limited to, grading, excavating, filling, clearing, or working of land at a particular location.

“High-risk area” means an area that the board of commissioners has established by order to be at high risk for erosion or sediment dispersal to a water body due to the following conditions: erosive soils, steep slopes, or close proximity to a water body.

“Large development ground disturbing activities” means any activity that exposes soil covering one acre or more of land surface area, either in isolation or as part of a subdivision, partition, or planned unit development, including, but not limited to, construction, landscaping, removal of vegetation, stockpiling of soil or construction debris, grading, filling, excavating, trenching, drilling, transport or fill, or utility work at a particular location.

“Public storm drainage and surface water system” means natural or manmade drainage courses for the conveyance of surface water.

“Sediment” means finely divided loose material that can be suspended and transported in water or air and may originate from disturbed soil, landscaping, or construction activities or materials.

“Storm event” means one-half inch or more of precipitation in a 24-hour period.

“Stormwater management area” means an area designated as a stormwater management area by the Department of Environmental Quality. [Ord. 1316 § 3(I), 2011; Ord. 1307 § 3, 2010.]

#### **15.10.040 Exempt activity.**

*Repealed by Ord. 1316.* [Ord. 1307 § 4, 2010.]

#### **15.10.050 Permit required.**

A. An erosion prevention and sediment control permit is required inside a stormwater management area if construction site activity takes place within a high-risk area.

B. A large development erosion prevention and sediment control permit is required inside a stormwater management area for large development ground disturbing activities. [Ord. 1316 § 3(II), 2011; Ord. 1307 § 5, 2010.]

#### **15.10.060 Erosion prevention and sediment control plan.**

A. An erosion prevention and sediment control plan is required for all erosion prevention and sediment control permits. The plan must be submitted by the applicant and approved by the director for issuance of the erosion prevention and sediment control permit, prior to the issuance of a Marion County permit or exemption approval and commencement of ground disturbing activities. The plan must contain protection techniques that will eliminate runoff siltation created from the construction activity both during and after construction. Site-specific considerations shall be incorporated.

B. The county may require that the applicant design and construct a temporary drainage system that will ensure any off-site impacts caused by the construction site activity can be mitigated.

C. The department of public works may perform inspections to ensure compliance with this chapter at the discretion of the director. [Ord. 1307 § 6, 2010.]

#### **15.10.070 Permit fee.**



The county may establish a fee for review of plans and inspections required by this chapter by order of the board of commissioners. The board of commissioners shall set the fee to recover the public works department costs of providing an applicant's erosion prevention and sediment control permit, inspections, and plan review. [Ord. 1307 § 7, 2010.]

**15.10.080 Construction site deposits on public streets and into storm drains.**

No person shall cause or allow visible and measurable erosion or sediment related to construction site activity inside a stormwater management area as defined herein to enter the public storm drainage and surface water system. Any person causing visible and measurable erosion or sediment shall immediately abate or remove it. The removal shall be accomplished by hand labor or approved mechanical means. [Ord. 1307 § 8, 2010.]

**15.10.090 Maintenance.**

A. The applicant shall maintain all erosion and sediment control measures in proper functioning order for the duration of the ground disturbing activities or until adequate ground cover has been established.

B. The applicant shall inspect, maintain, adjust, repair, and replace erosion and sediment control measures as necessary within 24 hours following a storm event to ensure that the measures are functioning properly.

C. During active ground disturbing activity, the applicant shall inspect and maintain erosion and sediment control measures weekly or within 24 hours of a storm event. [Ord. 1307 § 9, 2010.]

**15.10.100 Falsifying information.**

No person shall knowingly make any false statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained pursuant to this chapter. [Ord. 1307 § 10, 2010.]

**15.10.110 Stop work orders.**

A. In the event there is a violation of this chapter and it is necessary to obtain compliance with this chapter, the director may issue a stop work order requiring that all work, except work directly related to the elimination of the violation, be immediately and completely stopped. If the director issues a stop work order, the applicant shall not resume work until such time as the director gives specific approval in writing. The stop work order shall include:

1. The date of the stop work order;
2. The erosion prevention and sediment control permit and/or permit or exemption approval number if applicable;
3. The site address, legal description or location applicable to the stop work order;
4. A description of all violations; and
5. The conditions under which the work may resume.

B. The stop work order shall be in writing and posted in a conspicuous location at the site. Other means of communication of the stop work order may be exercised in the discretion of the director.

C. No person may remove, obscure, mutilate or otherwise damage a stop work order.

D. A stop work order shall be effective upon posting or upon verbal delivery under subsection (E) of this section.

E. When an emergency condition exists, the director may issue a stop work order verbally. A written stop work order shall be posted in a conspicuous location at the site within 24 hours of the verbal order. [Ord. 1307 § 11, 2010.]

**15.10.120 Penalties.**

A. Any person who is cited for a violation of this chapter shall be subject to a fine of not more than \$500.00 for a noncontinuing violation and a fine of not more than \$1,000 for a continuing violation.

B. Each day that this chapter is violated shall constitute a separate violation. [Ord. 1307 § 12, 2010.]

**15.10.130 Enforcement.**

The provisions of this chapter are enforceable pursuant to Chapter 1.25 MCC. [Ord. 1307 § 13, 2010.]

**15.10.140 Other remedies.**

The provisions of this chapter are in addition to and not in lieu of any other procedures and remedies provided by law including equitable relief and damages. [Ord. 1307 § 14, 2010.]

Mobile Version