

**SILT FENCE INSTALLATIONS WITH J-HOOKS AND SPURS**

Silt fence should never be run continuously. The silt fence should turn back into the fill or slope to create small pockets that trap silt and force stormwater to flow through the silt fence. This technique, or configuration, is commonly referred to as J-hooks or spurs. The J-hooks shall be utilized on all silt fences that are located around the perimeter of the project and along the toe of embankments or slopes. The J-hooks shall be spaced in accordance with typical location details for silt fences/baled straw. Spacing for J-hooks shall not be less than 50 feet except as noted. Silt fences that are near the outlet of culverts, cross drains, and storm drains shall have a minimum of three (3) J-hooks on both sides of the structure at spacing not to exceed 30 feet. J-hooks shall be paid for as silt fence items per foot. All costs and other incidental items are included in cost of installing and maintaining the silt fence.

**MAINTENANCE AND STABILIZATION MEASURES**

See Special Provision 161 and 700 and other contract documents for maintenance and stabilization measures.

**WASTE DISPOSAL**

Where attainable, locate waste collection areas, dumpsters, trash cans and portable toilets at least 50 feet away from streets, gutters, watercourses and storm drains. Secondary containment shall be provided around liquid waste collection areas to minimize the likelihood of contaminated discharges. The Contractor shall comply with applicable state and local waste storage and disposal regulations and obtain all necessary permits. Solid materials, including building materials, shall not be discharged to waters of the State, unless authorized by a Section 404 Permit.

**INSPECTIONS**

All inspections shall be documented on the appropriate Department Inspection forms. See Special Provision 167 and other documents for inspection requirements. These inspections shall continue until the Notice of Termination (NOT) is submitted.

Failure to perform inspections as required by the contract documents and the NPDES permit shall result in the cessation of all construction activities with the exception of Traffic Control and Erosion Control. Continued failure to perform inspections shall result in non-refundable deductions as specified in the contract documents.

By agreement with Georgia EPD, the Department's Construction Project Engineer will be responsible for the seven day inspections required for new BMP installations.

**NON-STORM WATER DISCHARGES**

Non-storm water discharges defined in Part III.A.2 of the NPDES Permit will be identified after construction has commenced. These discharges shall be subject to the same requirements as storm water discharges required by the Georgia Erosion and Sedimentation Control Act, the NPDES Permit, the Clean Water Act, The Manual for Erosion and Sediment Control in Georgia, Department Standards, and contract documents.

**SEDIMENT STORAGE**

The following table summarizes the required and available sediment storage for every outfall on this project. The Contractor shall provide and maintain the storage volumes for the BMP's specified in this table.

Outfall ID	Total Drainage Area (acres)	Disturbed Area (acres)	Required Sediment Storage Volume (cu yd)	Total Storage Volume Provided (cu yd)	Sediment Basins			Ditch Checks			Inlet Sediment Traps		J-Hooks		Rock Filter Dams		
					Pond No.	Total Volume	No. of Stone Devices	No. of Sandbag Devices	Total Volume	No. of Devices	Total Volume	No. of Devices	Total Volume	No. of Devices	Total Volume		
1	57.95	11.61	3882.6	1485.1	-	-	32	-	753.9	21	231.2	50	500.0	-	-	-	-
2	4.54	2.29	304.2	425.4	-	-	21	-	356.3	3	49.1	2	20.0	-	-	-	-
3	35.85	7.96	2401.9	1627.1	-	-	16	53	1387.1	-	-	24	240.0	-	-	-	-
4	3.17	0.93	212.4	221.1	-	-	9	-	131.1	-	-	9	90.0	-	-	-	-
5	5.84	1.54	391.28	422.8	-	-	6	-	127.8	-	-	26	260.0	-	-	-	-
6	14.22	1.37	952.8	655.7	-	-	19	-	495.7	-	-	16	160.0	-	-	-	-
7	279.40	10.92	18719.8	1204.8	-	-	81	-	995.8	19	209.0	-	-	-	-	-	-
8	38.22	9.36	2560.7	2181.6	-	-	58	-	1687.8	4	44.0	5	68.2	3	381.6	-	-
<b>TOTAL</b>	<b>45.98</b>																

In order to prevent runoff from bypassing inlet sediment traps, a temporary berm shall be installed on the downstream side of all inlet sediment traps that are not located in a low point or an excavated sump. Temporary berms, when necessary, shall be a minimum of 18" high and constructed in a manner that ensures stormwater does not bypass the inlet. The contractor may submit alternate temporary containment berm designs to the Project Engineer for approval.

**SEDIMENT BASINS**

Outfalls 1-8: Sediment Basins are not used at these locations.

Land disturbance activities associated with constructing and removing sediment basins at these locations would cause additional adverse impacts based on existing physical constraints.

**DISCHARGES INTO, OR WITHIN ONE LINEAR MILE UPSTREAM OF AND WITHIN THE SAME WATERSHED AS, ANY PORTION OF A BIOTA IMPAIRED STREAM SEGMENT**

The following is a summary of project outfalls within 1 mile and within the watershed of an identified Impaired Stream Segment that has been listed for criteria violated, "Blo F" (Impaired Fish Community) and/or "Blo M" (Impaired Macro Invertebrate Community), within Category 4a, 4b or 5, and the potential cause is either "NP" (nonpoint source) or "UR" (urban runoff).

Outfall Location(s)	Basin Name	Reach Name	Location of the Impaired stream segment as indicated in the 305b/303d list	Criteria Violated (Blo F or Blo M)	Potential Cause (NP or UR)	Category (4a, 4b or 5)	Numeric waste load allocation for sediment*
Outfall 3 +/- Sta 13+50 Ramp A	Coosa River	Lynn Creek	Headwaters to Oothkaaloga Creek Gordon County	Blo F	NP	4a	N/A
Outfall 4 +/- Sta 30+00 Johnson Lake Road	Coosa River	Lynn Creek	Headwaters to Oothkaaloga Creek Gordon County	Blo F	NP	4a	N/A

The additional BMPs used for this watershed are:  
 d. Place a large sign (minimum 4 feet x 8 feet) on the site visible from the roadway identifying the construction site, the permittee(s), and the contact person(s) and telephone number(s).  
 e. Use anionic polyacrylamide (PAM) and/or mulch to stabilize areas left disturbed for more than seven (7) calendar days in accordance with Part III.D.1 of this permit.  
 m. Apply the appropriate Georgia Department of Transportation approved erosion control matting or blankets or bonded fiber matrix to all slopes steeper than 3:1.  
 r. Certified personnel shall conduct inspections at least once every seven (7) calendar days and within 24 hours of the end of the storm that is 0.5 inches rainfall or greater in accordance with Part IV.D.4.a(2)(a) - (c) of the GAR permit.

\* If the TMDL Implementation Plan establishes a specific numeric waste load allocation that applies to the project discharge(s) to the Impaired Stream Segment, then the Certified Design Professional must incorporate that allocation into the Erosion, Sedimentation and Pollution Control Plan and implement all necessary measures to meet that allocation.

**DE-WATERING ACTIVITIES AND USE OF PUMPS**

Any pumped discharge from an excavation or disturbed area shall be routed through an appropriately sized sediment basin, silt filter bag or shall be treated equivalently with suitable BMP's. The contractor shall ensure the post BMP treated discharge is sheet flowing. Failure to create sheet flow will obligate the contractor to perform water quality sampling of their pumped discharges. The contractor shall prepare sampling plans in accordance with the current GAR 100002 NPDES permit utilized by a Certified Design Professional. No separate payment will be made for water quality sampling of pump discharges.

**OTHER CONTROLS**

The contractor shall follow this ESPCP and ensure and demonstrate compliance with applicable State and/or local waste disposal, sanitary sewer or septic system regulations.

The contractor shall control dust from the site in accordance with Section 161 of the current edition of the Department's Specifications.

**STREAM BUFFER ENCROACHMENT**

Stream Buffers are impacted by this project. The contractor is not authorized to enter into stream buffers, except as described in the table below:

Name (name or number of feature)	Location of Buffered Streams and State Waters **			Stream Type (Warm/Cold Water) *	Buffer Impacted (Yes/No)	Buffer Variance Required?
	Alignment	Begin Sta (LT or RT)	End Sta (LT or RT)			
Stream 25	Union Grove Road	314+10 LT	315+00 LT	Warm	Yes	No
Stream 31A	Union Grove Road	348+90 LT	350+45 LT	Warm	Yes	No
Pond 29	Ramp A	3+20 LT	40+00 LT	Warm	Yes	Yes
Stream 31b	Union Grove Road	350+20 RT	355+20 RT	Warm	Yes	Yes

Description of Impacts:  
 General Roadway Construction Activities  
 \* Warm water streams have a 25-foot minimum buffer as measured from the wooded vegetation. Cold Water streams have a 50-foot buffer as measured from the wooded vegetation.  
 \*\* Locations are approximate, a detailed location of stream buffers and authorized work areas are shown on the individual BMP sheets.

**TMDL IMPLEMENTATION PLAN**

A TMDL Implementation Plan for sediment has not been finalized for Lynn Creek.

**USE OF ALTERNATIVE AND/OR ADDITIONAL BMP'S**

Alternative BMP's are not used on this project. Silt Gates are used on this project as additional BMP's at pipe inlets and are not being used in place of or as a substitute for other conventional BMP's. Temporary check dams are used in ditches to provide interim stabilization and flow velocity reduction. The stability of the site is maintained with other conventional BMP's as shown on the plans. This ESPCP would be fully compliant with permit requirements if the silt gates were removed and as a result are not considered alternative BMP's when used on this project. The silt gates help to prevent pipe clogging during construction that can result from the ingestion of sediments and other large debris like rip rap, sand bags, roadway debris and other construction materials that when combined with sediments easily clog roadway drainage pipes. Sediment storage by silt gates is not included in the minimum sediment storage volume shown in the sediment storage table.

Outfall 1: The total sediment storage volume provided in Outfall 1 is less than the required 67 CY of sediment storage per acre due to the large size of undisturbed land upstream of the outfall. The total area of Basin 1 is 57.95 AC while the disturbed area for the basin is 11.61 AC. 70% of the total undisturbed area of Basin 1 bypasses the project's disturbed area prior to Outfall 1 where the water enters ditches that are protected with grade control BMPs. Disturbed areas that are not protected by the sediment control BMPs shown in the table will be treated with grassing, mulch, and mats and blankets. BMPs shown in the table are sufficient to control sediment created by the disturbed area.  
 Outfall 3: The total sediment storage volume provided in Outfall 3 is less than the required 67 CY of sediment storage per acre due to the large size of undisturbed land upstream of the outfall. The total area of Basin 3 is 35.85 AC while the disturbed area for the basin is 7.96 AC. 50% of the total undisturbed area of Basin 3 bypasses the project's disturbed area prior to Outfall 3 where the water enters ditches that are protected with grade control BMPs or the water enters existing ditches that have already been established. Disturbed areas not protected by the sediment control BMPs shown in the table will be treated with grassing, mulch, and mats and blankets. BMPs as shown are sufficient to control sediment created by the disturbed area.  
 Outfall 6: The total sediment storage volume provided in Outfall 6 is less than the required 67 CY of sediment storage per acre due to the large amount of undisturbed land upstream of the outfall. The total area of Basin 6 is 14.22 AC while the disturbed area for the basin is 1.37 AC. 90% of the total undisturbed area of Basin 6 bypasses the project's disturbed area prior to Outfall 6 where the water enters ditches that are protected with grade control BMPs. Disturbed areas not protected by the sediment control BMPs shown in the table will be treated with grassing, mulch, and mats and blankets. BMPs as shown are sufficient to control sediment created by the disturbed area.  
 Outfall 7: The total sediment storage volume provided in Outfall 7 is less than the required 67 CY of sediment storage per acre due to the large size of the off site drainage area upstream of the outfall. The total area of Basin 7 is 279.40 AC while the disturbed area for the basin is 10.92 AC and the large undisturbed area is bypassed by the use of earth berms to divert the water down to stream 31A until the proposed ditches can be established. These diversion earth berms will be installed, as shown in the plans, before any earthwork begins. Disturbed areas not protected by the sediment control BMPs shown in the table will be treated with grassing, mulch, and mats and blankets. BMPs as shown are sufficient to control sediment created by the disturbed area.  
 Outfall 8: The total sediment storage volume provided in Outfall 8 is less than the required 67 CY of sediment storage per acre due to the large amount of undisturbed land upstream of the outfall. The total area of Basin 8 is 38.22 AC while the disturbed area for the basin is 9.36 AC. Disturbed areas not protected by the sediment control BMPs shown in the table will be treated with grassing, mulch and mats and blankets. BMPs as shown are sufficient to control sediment created by the disturbed area.

**USE ON CONSTRUCTION**

REVISION DATES		STATE OF GEORGIA DEPARTMENT OF TRANSPORTATION	
4-09-12		OFFICE: CONSULTANT DESIGN	
		<b>BMP GENERAL NOTES</b>	
		NHSTP-0075-03(203)	
		UNION GROVE ROAD INTERCHANGE	
		DRAWING No. 51-002	

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