ESPCP GENERAL NOTES

The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land-disturbing activities.

Erosion and sedimentation control measures will be maintained at all times. If full implementation of the approved plan does not provide for effective control, additional erosion and sedimentation control measures shall be implemented to control or treat the sediment source.

PLAN ALTERATIONS

This Erosion, Sedimentation, and Pollution Control Plan (ESPCP) is provided by the Department. It addresses the staged construction of the project on the basis of common construction methods and techniques. If the Contractor elects to alter the staged construction from that shown in the plans or utilize construction techniques that render this plan ineffective, the Contractor shall revise the plans in accordance to Special Provision 161 of the contract.

The Contractor, the Certified Design Professional, and the WECS shall carefully evaluate this plan prior to commencing land-disturbing activities. A major modification or deletion of structural BMP's with a hydraulic component requires a formal revision of the ESPCP and the signature of a GSWCC Level-II Certified Design Professional. Additional BMP's may be added per Special Provision 161-Control of Soil Erosion and Sedimentation.

TEMPORARY MULCHING

EPD General Permit GAR 100002 states that any disturbed area where construction activities have temporarily or permanently ceased shall be stabilized within 14 days of such cessation as soon as practicable with a suitable material listed in Standard Specification (or Special Provision) Sections 163, 700, or 711. However in special cases, the Project Engineer may require the contractor to perform stabilization more often than 14 days.

VEGETATION AND PLANTING SCHEDULE

All temporary and permanent vegetative practices including plant species, planting dates, seeding, fertilizing, liming, and mulching for this project can be found in Section 700 of the current edition of the Department's Standard Specifications (or special provisions) and other applicable contract documents, or landscaping plans.

SEQUENCE OF MAJOR ACTIVITIES

The Contractor is responsible for developing the construction schedule for the project. The construction schedule for this project shall be submitted after the project is awarded along with the NOI. A copy of the construction schedule shall be maintained at the project site.

(Occasionally, the Department will specify the number and location(s) of construction exits, but usually the following paragraph will be applicable.)

The project budget includes sufficient funds for the payment of construction exits. The Contractor is responsible for establishing at least one (1) construction exit per the specifications of the construction exit detail included in this ESPCP. To facilitate project logistics, the Contractor is also responsible for selecting the location(s) of the construction exit(s).

(Place a statement here that describes the sequence of BMP installations for each stage of construction. A project has multiple stages if traffic is shifted. If traffic is not shifted, the (project is a single-stage project. A single-stage project will have three phases of BMP installations: initial, intermediate, and final. For a multistage project, the first stage may include the initial phase of BMP installations for all stages, so the subsequent stages would include only the intermediate and final BMP installations. Alternatively, each stage may be treated separately with three phases of BMP installations for each stage. Other staging and phasing scenarios are possible. The initial BMP installation phase includes the installation of temporary sediment basins, when necessary, and perimeter BMPs and is completed prior to the commencement of clearing and grubbing operations for the entire project or each individual stage. This descriptive statement must address the installation of sediment basins and perimeter BMPs, intermediate BMPs, and BMPs for final stabilization. See the Department's ROADS web page for example staging descriptions and the Department's "Erosion Control for Linear Projects" course material for other examples of descriptive statements.)

PETROLEUM STORAGE, SPILLS AND LEAKS

These plans expressly delegate the responsibility of proper on-site hazardous material management to the Contractor. The Contractor shall at a minimum provide an action plan and keep the necessary materials on site for the capture, clean up, and disposal of any petroleum product, or other hazardous material, leaks or spills associated with the servicing, refueling or operation of any equipment utilized at the site. A copy of the action plan shall be submitted to the Project Engineer and maintained on the project site. All personnel operating or servicing equipment shall be familiar with the action plan. The Contractor shall not park, refuel, or maintain equipment within stream buffers.

If the Contractor elects to store petroleum products on site, the Contractor shall prepare an ESPCP addendum that addresses the additional BMPs needed for onsite storage and spill prevention for petroleum products. This plan shall be prepared by a Certified Design Professional as required by GAR100002 for inclusion with these plans. The Contractor's attention is specifically directed to Standard Specification 107-Legal Regulations and Responsibility to the public for additional requirements.

SOIL SERIES INFORMATION

(Use the notes listed below that are most applicable to the project in this soil series section.)

(Use the following note if a soil survey has been performed on the project site):

A project-specific soil survey and geotechnical investigation was performed for this project and can be made available upon request. Soil characteristics have been given full consideration in the hydrologic analysis, the design of channels and linings, selection of temporary BMP's, design of energy dissipaters, and in the selection of permanent vegetation and fertilizers.

(Use the following note if soil series information is available on the NRCS's website: http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm and list the soil types.)

The following is a summary of the soils that are expected to be found on the project site:

(Additionally, transcribe the information found on the "Soil Data Explorer/Suitabilities and Limitations for Use/Land Management/Erosion Hazard /Offroad, Offtrail/View Rating)" report that is generated from the NRCS soil survey website here. The portion of this report to place here in the plans is the soil erosion hazard table available in PDF.)

Due to the size and scope of this project and the nature of soil series maps, it is not reasonably practical to delineate the precise locations of the above listed soils on the construction plans. The NRCS soil survey and soil series maps for the project site are also available online at http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm.

(Use the following note for projects that disturb more than one acre when NRCS web soil survey information is not available.)

NRCS soil information is not available for this project site.

POSTCONSTRUCTION BMP'S FOR STORMWATER MANAGEMENT

(As per Part IV.D.3.b. of GAR 100002, which addresses stormwater management, the designer shall include in this section "a description of measures that will be installed during the construction process to control pollutants in stormwater discharges that will occur after construction operations have been completed". The following paragraph is only an example note for the designer. The designer shall provide a project-specific note in this section.

All permanent postconstruction BMP's are shown in the construction plans and in the ESPCP plan. The postconstruction BMP's for this project consist of permanent detention ponds, sand filter basins, vegetation, permanent slope drains and/or flumes, riprap at pipe outlets for velocity dissipation and outlet stabilization, vegetated swales/ditches where practical, channel/ditch stabilization with turf reinforcing mats, riprap and concrete ditch lining where necessary. The postconstruction BMP's will provide permanent stabilization of the site and prevent abnormal transportation of sediment and pollutants into receiving waters.)

SILT FENCE INSTALLATION 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 is called using 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 GDOT Construction Detail D-24C. The maximum J-hook spacing is reached when the top of the J hook is at the same elevation as the bottom of the immediately upgradient J hook. J Hooks shall be paid for as silt fence items per linear foot. All costs and other incidental items are included in cost of installing and maintaining the silt fence.

SITE STABLIZATION AND BMP MAINTENANCE MEASURES

See the Department's Standard Specifications (or Special Provisions) 161, 163, 165, 700, 711, and other contract documents for stabilization and maintenance 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.

NONSTORMWATER DISCHARGES

Nonstormwater 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 other contract documents. The NPDES does not authorize the discharge of soaps or solvents used in vehicle and equipment washing or the discharge of wastewater containing stucco, paint, oils, curing compounds, and other construction materials.

INSPECTIONS

The primary permittee (GDOT) must retain the design professional who prepared the ESPCP, or an alternative design professional approved by EPD in writing, to inspect the installation of the initial sediment storage requirements and perimeter control BMPs within seven (7) days of installation over the entire infrastructure project. Alternatively, for linear infrastructure projects, the permittee must retain either of these personnel to inspect the initial sediment storage requirements and perimeter control BMPs for the initial segment, as defined by Part IV.A.5. of the current GAR100002 Permit, within seven (7) days of installation and all sediment basins within the entire linear infrastructure project within seven (7) days of installation. The inspecting design professional shall report the results to the primary permittee within seven (7) days, and the permittee must correct all deficiencies within two (2) business days of receipt of the inspection report, unless on-site weather conditions are such that more time is required. Additionally, the Department's Construction Project Engineer will be responsible for all subsequent seven-day inspections for all new BMP installations.

All other inspections shall be documented on the appropriate Department inspection forms. See Standard Specification (or Special Provision) 167 and other contract 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.

DEWATERING AND PUMPING ACTIVITIES

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 pumped discharges. The contractor shall prepare sampling plans in accordance with the current GAR100002 NPDES permit by utilizing 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 all applicable State and/or local regulations for waste disposal, sanitary sewer and septic systems, and petroleum storage.

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

RETENTION OF RECORDS

The Department will retain all records related to the implementation of this ESPCP in accordance with Part IV.F of the General Permit GAR100002.

SEDIMENT STORAGE

The site has a total disturbed area of X.XX acres. 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.

(Customize the following table as necessary. All outfalls must be listed in this table. Other sediment storage BMP's may be added or substituted for the five given. For each outfall, the table must include: total drainage area, disturbed area, required sediment storage volume (based on the total drainage area), total storage volume provided, and the individual BMP storage volume should add up to at least the required minimum volume. Account for all drainage that leaves the site by sheet flow in the bottom row. The sediment volume per foot of silt fence given below is a typical average based on the project side slopes averaging 3:1, and the average is site specific. Note that silt fence is not installed primarily to store sediment, and any storage volume is only a consequence of its installation.)

Location	Total Drainage Area (acres)	Disturbed Area (acres)	Required Sediment Storage Volume (yd^3)	Total Storage Volume Provided (yd^3)	Sediment Basins		Check Dam (# yd^3/each)		Inlet Sediment Traps (# yd^3/each)		Silt Gates (# yd^3/each)		Silt Fence (0.3 yd^3/ft)	
					Basin #	Total Volume (yd^3)	# of Devices	Total Volume (yd^3)	# of Devices	Total Volume (yd^3)	# of Devices	Total Volume (yd^3)	Length of Fence (ft)	Total Volume (yd^3)
Outfall 1														
Outfall 2														
Outfall 3														
Total Sheet Flow														

To prevent runoff from bypassing inlet sediment traps, a temporary sump shall be installed around all inlet sediment traps that are not located in a low point or an excavated sump. Construct temporary sumps in accordance with Construction Detail D-24C. Temporary sumps shall be installed 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.

(All disturbed area must be accounted for including sheet flow. A sediment basin should be used for each outfall. If not, the design professional must provide a detail explanation. If the total storage volume provided is less than the required sediment storage volume for a particular outfall basin drainage area or the total sheet flow drainage area, the design professional must provide a detailed explanation stating how the area downstream of the outfall or sheet flow is protected in the absence of the required sediment storage volume.)

NTS

REVISION DATES

CHECKED:	DATE:	DRAWING No.
BACKCHECKED:	DATE:	51-0001
CORRECTED:	DATE:	
VERIFIED:	DATE:	

ESPCP GENERAL NOTES

TEMPORARY SEDIMENT BASIN DETAILS:

The table below is provided to show the overall dimensions and significant elevations of each sediment basin. Drainage areas, required sediment storage volumes, and actual sediment basin volumes as measured at the riser crest elevations are shown in the sediment storage section. See Construction Detail D-22 and Section 54 of the ESPCP plan sheets for further details.

Sediment Basin #	Inlet Location (Station and Offset)	Bottom Elevation MSL (ft)	Top of Dam Elevation MSL and Dam Width (ft)	Principal Spillway Riser Crest Elevation MSL (ft)	Basin Depth and Riser Height (ft)	Bottom Width (ft)	Bottom Length (ft)	Width at Riser Crest (ft)	Length at Riser Crest (ft)	Effective Length at Riser Crest (ft)	Clean Out Elevation MSL (ft)	Emergency Spillway Crest Elevation MSL (ft)	Emergency Spillway Bottom Width (ft)	Q_2, Q_{25} (ft^3/s)	Outlet Pipe Nominal Diameter (in)	Inside Width at Top of Dam (ft)	Inside Length at Top of Dam (ft)	Overall Footprint Width (ft)	Overall Footprint Length (ft)	Skimmer Pipe Nominal Diameter (in)	Skimmer Orifice Diameter (in)	Drainage Time (hr)
1	*20+00, 200' LT*	*760.00*	*768.00, 8'*	*765.00*	*5*	*25.00*	*50.00*	*50.00*	*75.00*	*100*	*762.25*	*766.00*	*8*	*7.6, 12.5*	*24*	*65.00*	*105.00*	*93.00*	*133.00*	*6*	*4*	*36*
2	*50+50, 215' RT*	*800.50*	*807.50, 8'*	*804.50*	*4*	*20.00*	*60.00*	*40.00*	*80.00*	*80*	*802.75*	*805.50*	*10*	*3.2, 10.7*	*12*	*55.00*	*95.00*	*91.00*	*131.75*	*6*	*3*	*46*
3																						
4																						
5																						
6																						

(The italicized example information in the table is to be deleted and replaced with site-specific information. The table may be modified to include detention ponds retrofitted to be used as sediment basins. Note that the effective length, L, is the flow path length from the inlet to the principal spillway at the riser crest elevation, and it is equal to or greater than the straight-line length, L.)

USE OF ALTERNATIVE AND/OR ADDITIONAL BMPS:

(A conventional BMP is one that is shown in the GSWCC's "Greenbook". An alternative BMP is a nonconventional BMP and required to be approved on a project specific basis through the GSWCC's and Georgia EPD Alternative BMP process. As of January 1, 2016, the use of any nonconventional BMP may also be submitted for application to the Equivalent BMP List according to the process documented in Appendix A-2 of the GSWCC's 2016 Edition of the Greenbook. Any BMP other than a conventional or alternative BMP is an additional BMP. Only sediment storage provided by conventional or approved alternative BMPs shall be included in the sediment storage table. Additional BMPs, however, may be used for purposes other than for sediment storage.

Use only the applicable following statements or write a statement that is more applicable to your project.)

No alternative or additional BMPs will be used on this project.

Fabric check dams will be used on this project as an alternative BMP. The use of the alternative BMP for stone check dams has been reviewed by the Georgia EPD and has been determined by the Georgia EPD to be allowable only for this ESPCP. This review was site specific and was based on documentation submitted and certified by the Level-II Certified Design Professional and was required by the Georgia EPD and GSWCC.

Alternative BMPs will be used on this project for application to the Equivalent BMP List. They are the following: . . .

Alternative BMPs from the Equivalent BMP List will be used on this project. They are the following: . . .

(Only alternative BMPs listed on the GSWCC's Equivalent BMP List and GDOT's QPL may be used!)

Additional BMPs will be used on this project. . . . will be used on this project as additional BMPs for . . . and are not being used as conventional or alternative BMPs. The stability of the site is maintained with the other conventional or alternative BMPs as shown on the plans. This ESPCP would be fully compliant with the GAR100002 permit requirements if the additional BMPs were removed. Any sediment stored by the additional BMPs is not included in the required minimum sediment storage volume or shown in the sediment storage table.

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

(Choose the appropriate statement below and modify it accordingly. A list of impaired streams can be found at: http://epd.georgia.gov/georgia-305b303d-list-documents)

All outfalls are either located further than 1 linear mile upstream or outside of the watershed of an impaired stream segment that has been listed for criteria violated, "Bio F" (impaired fish community) and/or "Bio M" (impaired macro invertebrate community), within Category 4a, 4b or 5, and the potential cause is either "NP" (nonpoint source) or "UR" (urban runoff).

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, "Bio F" (impaired fish community) and/or "Bio M" (impaired macro invertebrate community), within Category 4a, 4b or 5, and the potential cause is either "NP" (nonpoint source) or "UR" (urban runoff).

(If the first statement applies, the table below may be omitted. If the second statement applies, search applicable TMDLs on Georgia Environmental Protection Division's website here: http://epd.georgia.gov/final-total-maximum-daily-loadings-tmdls to complete the table and complete and include the Appendix I list. The Appendix I list shows the BMPs to be used in addition to the required minimum number of BMPs. The italicized example information in the table is to be deleted and replaced with site-specific information.)

Outfall ID # and Location (Station and Offset)	Reach Name	Location of the Impaired Stream Segment as Indicated in the 305b/303d List	Criteria Violated (Bio F or Bio M)	Potential Cause (NP or UR)	Category (4a, 4b, or 5)	Numeric waste load allocation (WLA) for sediment*
Outfall 5 STA 60+60, 120' RT	*Full Moon Creek*	*Headwaters to Acme River*	*Bio F*	*NP*	*4a*	*5 tons/year*
The TMDL for Acme River basin was completed in January 2016. The infrastructure construction project WLA for sediment is 5 tons/year.						
Outfall 6 STA 78+37, 100' LT	*Soggy Bottom Creek*	*Headwaters to Ohmygosh River*	*Bio M*	*UR*	*4a, 5*	*N/A*
Outfall 7 STA 78+40, 90' RT	*Soggy Bottom Creek*	*Headwaters to Ohmygosh River*	*Bio M*	*UR*	*4a, 5*	*N/A*
The TMDL for Ohmygosh River basin was completed in January 2007 without a sediment WLA for infrastructure projects. Infrastructure projects are required to follow the NPDES 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. See Appendix I for additional required BMPs for this project.*

READY MIX CHUTE WASH DOWN

The washing of ready-mix concrete drums and dump truck bodies used in the delivery of Portland cement concrete is prohibited on this site.

In accordance with Standard Specification 107: Legal Regulations and Responsibility to the Public, only the discharge chute utilized in the delivery of Portland cement concrete may be rinsed free of fresh concrete remains. The Contractor shall excavate a pit outside of State water buffers, at least 25 feet from any storm drain and outside of the travelled way, including shoulders, for a wash-down pit. The pit shall be large enough to store all wash-down water without overtopping. Immediately after the wash-down operations are completed and after the wash-down water has soaked into the ground, the pit shall be filled in, and the ground above it shall be graded to match the elevation of the surrounding areas. Alternate wash-down plans must be approved by the Project Engineer.

Wash-down plans describe procedures that prevent wash-down water from entering streams and rivers. Never dispose of wash-down water down a storm drain. Establish a wash-down pit that includes the following: (1) a location away from any storm drain, stream, or river, (2) access to the vehicle being used for wash down, (3) sufficient volume for wash-down water, and (4) permission to use the area for wash down.

On sites where permission or access to excavate a wash-down pit is unavailable, the Contractor may have to wash-down into a sealable 55-gallon drum or other suitable container and then transport the container to a proper disposal site. For additional information, refer to the Georgia Small Business Environmental Assistance Program's "A Guide for Ready Mix Chute/Hopper Wash-down".

STATE-WATER BUFFER IMPACTS

State-water buffers, as defined by O.C.G.A. 12-7-1, (are/are not) impacted by this project.
(Choose correct wording for statement above.)
Non-exempt activities shall not be conducted within the 25- or 50-foot undisturbed stream buffers as measured from the point wrested vegetation or within 25-feet of the coastal marshland buffer as measured from the Jurisdictional Determination Line without first acquiring the necessary variances and permits.
(If no stream buffers or coastal marshland buffers occur within the project limits, the remainder of this section may be omitted, including the table below.)
The Contractor is not authorized to enter into stream buffers, except as described in the table below:

Name or Number of Stream or Other Water Body Type	Location of Buffered Streams and State Waters**			Stream Type (Warm/Cold Water)*	Buffer Variance Required? (Yes/No)
	Roadway Alignment	Begin Station and Offset	End Station and Offset		
Stream 1	*SR 1000*	*STA 100+25, 50' LT* *STA 100+40, 50' RT*	*STA 100+85, 50' LT* *STA 101+00, 50' RT*	*Warm*	*No*
The contractor is allowed to extend the culvert on both sides and construct slopes.					
Stream 2	*SR 1000*	*STA 500+50, 120' LT* *STA 500+50, 50' RT*	*STA 503+00, 120' LT* *STA 503+00, 50' RT*	*Warm*	*Yes*
The contractor is allowed to construct the new bridge and remove the existing bridge.					

(The italicized example information in the table is to be deleted and replaced with site-specific information.)
Unless noted otherwise, utility companies will be submitting the required permits/variances in conjunction with the impacts caused by their activities. If utility impacts are covered by the Department's stream buffer variance, this shall be noted in the buffer-variance-required column.

* Warm water streams have a 25-foot minimum buffer as measured from the wrested vegetation. Cold Water streams have a 50-foot buffer as measured from the wrested vegetation.
**Locations are approximate, a detailed location of stream buffers and authorized work areas are shown on the individual BMP sheets

SAMPLING GENERAL NOTES

Representative sampling may be utilized on this project as explained here. The individual outfall drainage basins along the project corridor have been carefully evaluated and compared on the basis of four characteristics: the type of construction activity, the disturbed acreage, the average slope about the outfall, and the soil erosion index 0-10, 10 being the most erodible soil. The construction activity types are new road on fill, new road in cut, road widening, and maintenance/safety. The disturbed area classes are less than or equal to 1 acre, greater than 1 acre to less than 2 acres, and equal to or greater than 2 acres. The average outfall slope is mild if it is equal to or less than 0.03, and steep if it is greater than 0.03. The soil erosion index is low if it is less than or equal to 5 and high if it is greater than 5. After evaluation of these characteristics as presented in the project's drainage area map, hydrology and hydraulic studies, construction plans, geotechnical soil survey, and erosion sedimentation and pollution control plans, the Department has determined that the representative sampling scheme shown below is valid for the duration of the project. The table shows the groups of similar outfall drainage basins.

The increase in turbidity at the specified locations in the table below will be representative of the alternate outfall drainage basins when similar outfall drainage basins exist. Approved primary and alternate representative sampled features are identified in the table below.

Note: The Total site area is X.XX acres.											Representative Sampling Scheme				
SAMPLING INFORMATION											OUTFALL CHARACTERISTICS				
Primary Sampled Feature	Location (Station and Offset)	Name of Receiving Water	Applicable Construction Stage for Sampling	Sampling Type (Outfall or Receiving water)	Drainage Area for Receiving Water (mi^2)	Upstream Disturbed Area (acres)	Warm or Cold Water Stream	Appendix B NTU Value (Outfall Sampling only)	Allowable NTU Increase (Receiving water sampling only)	Location Description	Construction Activity	Disturbed Area (acres)	Average Outfall Slope (Rise/Run)	Soil Erosion Index	Represented Outfall Drainage Basins
1 Up	20+00, 200' LT	Sunset Creek	All	Receiving Water	5.0	0	Warm	N/A	25	Upstream	Road Widening	N/A	N/A	N/A	N/A
1 Dn	20+50, 150' RT	Sunset Creek	All	Receiving Water	7.2	6.5	Warm	N/A	25	Downstream	Road Widening	N/A	N/A	N/A	N/A
2 Up	50+00, 200' LT	Sunrise Creek	All	Receiving Water	6.0	1.5	Warm	N/A	25	Upstream	Road Widening	1.5	0.03	2	N/A
2 Dn	50+65, 150' RT	Sunrise Creek	All	Receiving Water	6.0	2	Warm	N/A	25	Downstream	Road Widening	6	0.02	3	1,2,3,4
5	60+60, 120' RT	Full Moon Creek	2	Outfall	5.4	N/A	Warm	50	N/A	End of Ditch	New Road-Fill	2.1	0.02	5	N/A
6	78+37, 100' LT	Soggy Bottom Creek	3	Outfall	5.7	N/A	Warm	50	N/A	End of Ditch	New Road-Cut	3.5	0.03	3	7
8	25+51, 92' RT	Unnamed Trib. to Sunrise Creek	3	Outfall	6.3	N/A	Warm	50	N/A	End of Ditch	New Road-Fill	5	0.1	2	9,10

(Note that outfall sampling requires one sample per event while receiving-water sampling requires a pair of samples, one sample upstream and one sample downstream, per event for comparison. The italicized example information in the table represents the minimum number of sampled features for representative sampling and is to be replaced with site-specific information. Alternate sampled features are optional. According to the EPD, additional sampling sites may be required depending on significant changes during the project. Determine the representative sampling scheme by using the Representative Sampling Database for GDOT internal use on the R.O.A.D.S. webpage under Design Policies and Guidelines in the ESPCP box Internal Representative Sampling Database. For consultants, use the external database External Representative Sampling Database. Alternatively, determine the scheme by hand.)

The primary sampled features specified should be used as the initial sampling locations. An alternate sampled feature may be used if additional sampling is required or to replace a primary sampled feature that is no longer located within the active phase of construction.

WATER QUALITY INSPECTING AND SAMPLING PROCEDURES

See Special Provision 167 and other contract documents for the inspecting and sampling procedures.

RIPRAP OUTLET PROTECTION

Structure #, Outfall ID#, or Station and Offset	Pipe Diameter Do (ft)	Q_{25} (ft^3/s)	V_{25} (ft/s)	Tailwater Condition (TW<0.5 Do TW>0.5 Do)	Width at Drainage Structure W1=3Do (ft)	Apron Length La (ft)	Downstream Width W2=Do+La (ft)	Average Stone Diameter d_{50} (ft)	Apron Thickness D (ft)	Riprap Type (Type 3 or Type 1)	Quantity (yd^2)
A-10	*1.5*	*16.0*	*11.6*	*TW<0.5 Do*	*4.50*	*16*	*20.50*	*0.67*	*1.50*	*Type 3*	*22*
B-22	*2.0*	*38.5*	*14.2*	*TW<0.5 Do*	*6.00*	*22*	*28.00*	*1.20*	*3.00*	*Type 1*	*42*

(The italicized example information in the table is to be deleted and replaced with site-specific information in accordance with Greenbook. The minimun storm event for outlet protection is the 25-yr. However, outlet protection may be designed for larger storms where warranted. The required information may be provided in the table or included in the vicinity of applicable areas in Section 54.)

CHANNEL PROTECTION

All channels may be stabilized exclusively with permanent grassing except as noted otherwise in the table below.

Begin Station and Offset	End Station and Offset	Q_{25} (ft^3/s)	V_{25} (ft/s)	Type of Channel Lining	Channel Bottom Width (ft)	Depth of Protection Dp (ft)	Quantity (yd^2)
100+00 RT	*105+00 RT*	*100.0*	*8.13*	*TRM-6*	*4.0*	*2.00*	*889*
100+00 LT	*108+00 LT*	*125.0*	*12.00*	*Concrete*	*4.0*	*2.00*	*1422*
500+00 RT	*501+50 RT*	*50.0*	*6.24*	*TRM-2*	*4.0*	*1.50*	*200*
650+25 LT	*655+25 LT*	*55.0*	*9.00*	*Type-3 Riprap*	*4.0*	*1.50*	*667*

(The italicized example information in the table is to be deleted and replaced with site-specific information in accordance with Greenbook if applicable to your project. The minimun storm event for channel protection is the 25-yr. However, channel protection may be designed for larger storms where warranted.)

NTS

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ESPCP GENERAL NOTES

DRAWING No. 51-0003

GSWCC

Georgia Soil and Water Conservation Commission

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST

INFRASTRUCTURE CONSTRUCTION PROJECTS

SWCD: _____

Project Name: _____ **Address:** _____

City/County: _____ **Date on Plans:** _____

Plan Page #	Included Y/N	TO BE SHOWN ON ES&PC PLAN
		1 The applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the Commission as of January 1 of the year in which the land-disturbing activity was permitted. (The completed Checklist must be submitted with the ES&PC Plan or the Plan will not be reviewed)
		2 Level II certification number issued by the Commission, signature and seal of the certified design professional. (Signature, seal and Level II number must be on each sheet pertaining to ES&PC Plan or the Plan will not be reviewed)
		3 The name and phone number of the 24-hour local contact responsible for erosion, sedimentation and pollution controls.
		4 Provide the name, address and phone number of primary permittee.
		5 Note total and disturbed acreage of the project or phase under construction.
		6 Provide the GPS locations of the beginning and end of the Infrastructure project. Give the Latitude and Longitude in decimal degrees.
		7 Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions.
		8 Description of the nature of construction activity.
		9 Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary.
		10 Identify the project receiving waters and describe all sensitive adjacent areas including streams, lakes, residential areas, wetlands, marshlands, etc. which may be affected.
		11 Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on page 15 of the permit.
		12 Design professional's certification statement and signature that the permittee's ES&PC Plan provides for an appropriate and comprehensive system of BMPs and sampling to meet permit requirements as stated on page 15 of the permit.*
		13 Design professional certification statement and signature that the permittee's ES&PC Plan provides for representative sampling as stated on page 26 of permit as applicable.*
		14 Clearly note the statement that "The design professional who prepared the ES&PC Plan is to inspect the installation of the initial sediment storage requirements, perimeter control BMPs, and sediment basins in accordance with part IV.A.5. within 7 days after installation."*
		15 Clearly note the statement that "Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrested vegetation or within 25-feet of the coastal marshland buffer as measured from the Jurisdictional Determination Line without first acquiring the necessary variances and permits."
		16 Provide a description of any buffer encroachments and indicate whether a buffer variance is required.
		17 Clearly note the statement that "Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional."*
		18 Clearly note the statement that "Waste materials shall not be discharged to waters of the State, except as authorized by a section 404 permit."*
		19 Clearly note statement that "The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities."
		20 Clearly note statement that "Erosion control measures will be maintained at all times. If full implementation of the approved Plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source."
		21 Clearly note the statement "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."
		22 Any construction activity which discharges storm water into an Impaired Stream Segment or within 1 linear mile upstream of and within the same watershed as, any portion of an Biota Impaired Stream Segment must comply with Part III. C. of the Permit. Include the completed Appendix 1 listing all the BMPs that will be used for those areas of the site which discharge to the Impaired Stream Segment.*
		23 If a TMDL Implementation Plan for sediment has been finalized for the Impaired Stream Segment (identified in item 22 above) at least six months prior to submittal of NOI, the ES&PC Plan must address any site-specific conditions or requirements included in the TMDL Implementation Plan.*
		24 BMPs for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of the vehicles. Washout of the drum at the construction site is prohibited.*
		25 Provide BMPs for the remediaton of all petroleum spills and leaks.
		26 Description of the measures that will be installed during the construction process to contro pollutants in storm water that will occur after construction operations have been completed.*
		27 Description of the practices that will be used to reduce the pollutants in storm water discharges.*
		28 Description and chart or timeline of the intended sequence of major activites which disturb soils for the major portions of the site (i.e., initial perimeter and sediment storage BMPs, clearing and grubbing activities, excavation activities, utility activities, temporary and final stabilization).

Plan Page #	Included Y/N	TO BE SHOWN ON ES&PC PLAN
		29 Provide complete requirements of inspections and record keeping by the primary permittee.*
		30 Provide complete requirements of sampling frequency and reporting of sampling results.*
		31 Provide complete details for retention of records as per Part IV.F. of the permit.*
		32 Description of analytical methods to be used to collect and analyze the samples from each location.*
		33 Appendix B rationale for NTU values at all outfall sampling points where applicable.*
		34 Delineate all sampling locations, perennial and intermittent streams and other water bodies into which storm water is discharged also provide a summary chart of the justification and analysis for the representative sampling as applicable.*
		35 A description of appropriate controls and measures that will be implemented at the construction site including: (1) initial sediment storage requirements and perimeter control BMPs, (2) intermediate grading and drainage BMPs, and (3) final BMPs. For construction sites where there will be no mass grading and the initial perimeter control BMPs, intermediate grading and drainage BMPs, and final BMPs are the same, the plan may combine all of the BMPs into a single phase.*
		36 Graphic scale and North arrow.
		37 Existing and proposed contour lines with contour lines drawn at an interval in accordance with the following:

Existing Contours	USGS 1": 2000' Topographical Sheets
Proposed Contours	1" : 400' Centerline Profile

Plan Page #	Included Y/N	TO BE SHOWN ON ES&PC PLAN
		38 Use of alternative BMPs whose performance has been documented to be equivalent to or superior to conventional BMPs as certified by a Design Professional (unless disapproved by EPD or the Georgia Soil and Water Conservation Commission). Please refer to the Alternative BMP Guidance Document found at www.gaswcc.org.
		39 Use of alternative BMP for application to the Equivalent BMP List. Please refer to Appendix A-2 of the Manual for Erosion & Sediment Control in Georgia 2016 Edition.*
		40 Delineation of the applicable 25-foot or 50-foot undisturbed buffers adjacent to State waters and any additional buffers required by the Local Issuing Authority. Clearly note and delineate all areas of impact.
		41 Delineation of on-site wetlands and all State waters located on and within 200 feet of the project site.
		42 Delineation and acreage of contributing drainage basins on the project site.
		43 Delineate on-site drainage and off-site watersheds using USGS 1" :2000' topographical sheets.
		44 An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed.
		45 Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/Delineate all storm water discharge points.
		46 Soil series for the project site and their delineation.
		47 The limits of disturbance for each phase of construction.
		48 Provide a minimum of 67 cubic yards of sediment storage per acre drained using a temporary sediment basin, retrofitted detention pond, and/or excavated inlet sediment traps for each common drainage location. Sediment storage volume must be in place prior to and during all land disturbance activities until final stabilization of the site has been achieved. A written justification explaining the decision to use equivalent controls when a sediment basin is not attainable must be included in the plan for each common drainage location in which a sediment basin is not provided. A written justification as to why 67 cubic yards of storage is not attainable must also be given. Worksheets from the Manual must be included for structural BMPs and all calculations used by the design professional to obtain the required sediment storage when using equivalent controls. When discharging from sediment basins and impoundments, permittees are required to utilize outlet structures that withdraw water from the surface, unless infeasible. If outlet structures that withdraw water from the surface are not feasable, a written justification explaining this decision must be included in the plan.
		49 Location of Best Management Practices that are consistent with and no less stringent than the Manual for Erosion and Sediment Control in Georgia. Use uniform coding symbols from the Manual, Chapter 6, with legend.
56-0000	Y	50 Provide detailed drawings for all structural practices. Specifications must, at a minimum, meet the guidelines set forth in the Manual for Erosion and Sediment Control in Georgia.
		51 Provide vegetative plan, noting all temporary and permanent vegetative practices. Include species, planting dates and seeding, fertilizer, lime and mulching rates. Vegetative plan shall be site specific for appropriate time of year that seeding will take place and for the appropriate geographic region of Georgia.

*If using this checklist for a project that is less than 1 acre and not part of a common development but within 200 ft of a perennial stream the * checklist items would be N/A.

Effective January 1, 2017

NTS

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DRAWING No. 51-0004

APPENDIX 1

THE ES&PC PLAN MUST INCLUDE AT LEAST FOUR (4) OF THE FOLLOWING BMPS FOR THOSE AREAS OF THE SITE WHICH DISCHARGE TO A IMPAIRED STREAM SEGMENT AND FOR SITES WHICH EPD HAS APPROVED IN WRITING A REQUEST TO DISTURB 50 ACRES OR MORE AT ANY ONE TIME.

The four items chosen must be appropriate for the site conditions.

Plan Page #	Included Y/N	
		a. During construction activities, double the width of the 25 foot undisturbed vegetated buffer along all State waters requiring a buffer and the 50 foot undisturbed vegetated buffer along all State waters classified as "trout streams" requiring a buffer. During construction activities, EPD will not grant variances to any such buffers that are increased in width.
		b. Increase all temporary sediment basins and retrofitted storm water management basins to provide sediment storage of at least 3600 cubic feet (134 cubic yards) per acre drained.
		c. Use baffles in all temporary sediment basins and retrofitted storm water management basins to at least double the conventional flow path length to the outlet structure.
		d. A large sign (minimum 4 feet x 8 feet) must be on the site on the actual start date of construction visible from a public roadway identifying the construction site, the permittee(s), and the contact person(s) and telephone number(s) until a NOT has been submitted.
		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 the NPDES Permit
		f. Conduct turbidity sampling after every rain event of 0.5 inch or greater within any 24 hour period, recognizing the exceptions specified in Part IV.D.6.d. of the NPDES Permits.
		g. Comply with the applicable end-of-pipe turbidity effluent limit, without the "BMP defense" as provided for in O.C.G.A. 12-7-6 (a)(1).
		h. Reduce the total planned site disturbance to less than 50% impervious surfaces (excluding any State-mandated buffer areas from such calculations). All calculations must be included on the plan.
		i. Limit the amount of disturbed area at any one time to no greater than 25 acres or 50% of the total planned is less. All calculations must be included on the plan.
		j. Use "Dirt II" techniques available on the EPD website, www.gaepd.org (e.g., seep berms, sand filters, anionic PAM) to model and manage construction storm water runoff (including sheet flow). All calculations must be included on the Plan.
		k. Add appropriate organic soil amendments (e.g., compost) and conduct pre- and post-construction soil sampling to a depth of six (6) inches to document improved levels of soil carbon after final stabilization of the construction site.
		l. Use mulch filter berms, in addition to a silt fence, on the site perimeter wherever construction storm water (including sheet flow) may be discharged. Mulch filter berms cannot be placed in waterways or areas of concentrated flow.
		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. All graphical illustrations must be included on the Plan.
		n. Use appropriate erosion control matting or blankets instead of concrete in all construction storm water ditches and storm drainages designed for a 25 year, 24 hour rainfall event.
		o. Use anionic PAM under a passive dosing method (e.g., flocculant blocks) within construction storm water ditches and storm drainages that feed into temporary sediment basins and retrofitted management basins.
		p. Install sod for a minimum 20 foot width (in lieu of seeding) after final grade has been achieved, along the site perimeter wherever storm water (including sheet flow) may be discharged.
		q. Conduct soil tests to identify and to implement site-specific fertilizer needs.
		r. Certified personnel for primary permittees shall conduct inspections at least twice 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.(3).(a) – (c); secondary permittees, Part IV.D.4.b.(3).(a) – (c); and tertiary permittees Part IV.D.4.c.(3).(a) – (c). *
		s. Apply the appropriate compost blankets (minimum depth 1.5 inches) to protect soil surfaces until vegetation is established during the final stabilization phase of the construction activity.
		t. Use alternative BMPs whose performance has been documented to be superior to conventional BMPs as certified by aDesign Professional (unless disapproved by EPD or the State Soil and Water Conservation Commission). (If using this item please refer to the Alternative BMP guidance document found at www.gaswcc.georgia.gov)
		u. Limit the total planned site disturbance to less than 15% impervious surfaces (excluding any state mandated buffer areas from such calculations). All calculations must be included in the plan.

Effective January 1, 2017

* This requirement is different for infrastructure projects.
Certified personnel for primary permittees 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.(3).(a) – (c) of this permit.

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DRAWING No. 51-0005