

Frequently Seen Comments at FPR's

COVER SHEET

- ⇒ Add the county name to the length of project box
- ⇒ Add the milepost to the begin and end project designations.
- ⇒ Flag the midpoint on the cover sheet.
- ⇒ Add the north arrow to the cover sheet.
- ⇒ Add the location and design approval date to the cover sheet.
- ⇒ It is recommended that the Current ADT and Design ADT data be updated. The current ADT should normally be the "Base Year" as defined in Chapter 13 of the GDOT Design Manual (base year is the year the project is anticipated to be open to traffic). In accordance with the GDOT Design Manual, the design year is the anticipated future life of the project and for all GDOT projects the future traffic volumes will be 20 years from the base year. In the case of this project the current or base ADT should be for 2009 and the Design ADT should be for 2029.

INDEX

- ⇒ Ensure the latest revision for all Georgia Standards and Details are provided and they have the most recent revision dates. Ensure that the 31" guardrail standards are provided.
- ⇒ Not including Safety Edge Construction Detail P-7 .
- ⇒ Remove GDOT Construction Standards 4040 Alternate A & B Guardrail Anchorage without Flare. At present there is no Standard for this application using the 31" height guardrail. Verify this won't affect R/W.

GENERAL NOTES

- ⇒ Add the following General Note: ***All borrow and waste sites for this project shall be environmentally approved prior to construction activities. All common fill or excess material disposed outside the project right of way shall be placed in either a permitted solid waste facility, a permitted inert waste landfill or in an engineered fill.***
- ⇒ Add the following General Note: ***There is no suitable place to bury existing construction debris within the project's limits. The Contractor shall provide an environmentally approved site to dispose of existing construction debris at no additional cost to the Department.***
- ⇒ Provide the correct Call Before You Dig logo.
- ⇒ Add pH and Resistance or Resistivity values from the Soil Survey to the Pipe Culvert Materials Alternates.
- ⇒ The State Utility Engineers Office has indicated that "only" the Utility/Railroad Owner Name and Facility Type info are to be shown in the plans, since that data could be outdated over the life of a project. Please remove the Utility contact telephone number from the General Notes.
- ⇒ Add the project specific notes from the soil survey.

- ⇒ Pipe Culvert Materials Alternate Chart, add the date. Please contact Ian Rish with the GDOT Office of Materials and Research for the most current version, if the chart is older than March 22, 2010.
- ⇒ Incomplete or no Environmental Resource Impact Table in Plans
- ⇒ Inaccurate Stream Buffer Encroachment Tables / unidentified Stream Buffer Variances

TYPICAL SECTIONS

- ⇒ Remove the Stationing below all superelevated sections in accordance with the Plan Presentation Guide (PPG) which states “Do not break-out the station range of the superelevated section”. Direct the reader to note.
- ⇒ The new 31-inch guardrail standards use a 12” offset block instead of the 8” offset block used on the 27” guardrail. Revise the shoulder width dimension to account for the additional 4 inches. If 2’ distance from back of post to shoulder break is not provided a 9’ post is required. Ensure 9’ posts are noted as required for guardrail.
- ⇒ Ensure the minimum and maximum dimensions of all variable-width pavements are labeled in accordance with the PPG Section 05.002 Required Information.
- ⇒ Per the GDOT Pavement Design Manual, if paving material is supplied from Florida or soil cement, top soil or other soil bases are used, then show a Square Yard measure for payment if weighing is inconvenient. If Square Yard measurement is specified, the typical section shall be clearly dimensioned along the top finished surface and dimensions noted as the “Width of Payment.”
- ⇒ The Safety Edge placement should be noted on the construction plan typical sections, with reference to GDOT Construction Detail P-7 for details.
- ⇒ Ensure that all typical sections (roadway widths) agree with what is shown on the construction plans and the final cross sections at all possible points throughout the plans without any gaps or overlaps in the station designations.
- ⇒ Label the type median (ie. Concrete) on the typical sections.
- ⇒ Use correct pay item description for asphalt (ie. 19 mm Superpave is incomplete on all drawings. Change INCL BITUM to INCL BITUM MATL & H LIME).

SUMMARY OF QUANTITIES

- ⇒ SOQ is not matching the quantity in CES. (ie. Remove Wingwalls and Parapets is shown as 1 lump sum quantity in CES and 3 locations in the Summary of Quantities).
- ⇒ GDOT no longer uses Liquid Lime. Remove this item from the Summary of Quantities.
- ⇒ Temporary traffic striping is not typically paid for separately. It is usually part of the lump sum Traffic Control item.

PLAN SHEET

- ⇒ Ensure the minimum and maximum dimensions of all variable-width pavements are labeled in accordance with the PPG Section 05.002 Required Information.

- ⇒ Please add dimensions to reflect the proposed construction to include roadway dimensions, radii dimensions, taper stations and dimensions from alignment, pavement widths, median widths, and end of curb and gutter station on side streets, in accordance with the PPG Section 13.002 Required Information.
- ⇒ Label where the curb and gutter & concrete sidewalk is to begin/end
- ⇒ Please flag the limits of pavement work (i.e. limits of resurfacing, pavement removal, widening, full-depth, overlay, milling, reconstruction, etc.) in accordance with the PPG Section 13.002 Required Information.
- ⇒ Label the type rip rap on the plan sheet.
- ⇒ Add the structure number or size to all drainage structures
- ⇒ Label the type of wheel chair ramp that is to be installed at all of the wheel chair ramps on the plan sheets
- ⇒ Not all Utilities shown on the plans.
- ⇒ Verify Superelevation transition lengths. Many appear short and/or are applied incorrectly. GDOT standard is to apply SE at 1/3 in curve & 2/3 in tangent (Page 4-31, GDOT Design Policy Manual). Label ENC, BSE, RC, BFSE, EFSE, ESE & BNC stations and SE rates.
- ⇒ The curve data is incomplete and ensure all PC, PCC, and PT points are shown and labeled. Please refer to the GDOT Plan Presentation Guide (PPG).
- ⇒ There are several locations with fence that will be removed. Verify if the removal of fencing will be covered in the Right of Way negotiations or will new fence need to be added to the construction plans. If the fence is added to the construction plans; verify if gates will be required. Type of each will need to be specified.
- ⇒ Several Existing pipes shown on the plans yet only a few instruct to remove. Verify if the remaining pipes are to be retained. Please provide a note to either, retain, remove or plug/fill all existing pipe to provide adequate information for the Contractor to prepare his bid.
- ⇒ Ensure that the ESA notes are placed on ALL plan sheets where an ESA exists.
- ⇒ Angles are missing at roadway intersections. This information is required by the Plan Presentation Guide.
- ⇒ Please add plus (+) station numbers for all driveways and label them on the centerline of the construction plans.
- ⇒ Ensure that sufficient R/W or easement is obtained and provided for construction work areas. Normally 10' is recommended from the fill line locations to the R/W or easement and 5' at cut locations. Currently some locations do not meet these minimum recommendations.
- ⇒ Label the plus (+) station numbers for all driveways on the centerline of the construction plans.
- ⇒ Add a General Note indicating that all sidewalks within radii shall be 8 inch
- ⇒ Please revise the Matchlines to include station and drawing number in accordance with the PPG Section 13.002 Required Information.

PROFILE

- ⇒ All of the sag and crest vertical curves do not meet AASHTO and will require a design exception. Recommend reevaluating the profile and lengthening the vertical curves to meet AASHTO requirements. This may require lengthening the project.

CONSTRUCTION STAGING & STAGING CROSS-SECTION PLAN SHEETS

- ⇒ Show traffic arrows on all staging cross sections

DRAINAGE PROFILES

- ⇒ Add the required Type II Foundation Backfill and design height of fill to the label. (ie. I for the double 10' X 7' box culvert at 186+58. Ensure all quantities for Type II Foundation Backfill are included).

CROSS SECTIONS

- ⇒ Include berm ditch for embankments over

SIGNING AND MARKING GENERAL NOTES

- ⇒ Note No. 9, Type 3 Change (ENCAPSULATED LENS) to (HIGH INTENSITY).
- ⇒ Note No. 10 & 11, Type 9 Change (WIDE ANGLE PRISMATIC) to (VERY HIGH INTENSITY).

Common Errors with the ES&PC Plans

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Checklist Item 1

- The new 2014 checklist must be used on the plans.
- The Infrastructure Checklist must be used for all road projects.
- The checklist must be completed.

Checklist Item 6

- Give the GPS locations of the beginning and end of the project in decimal degrees.
- This information is usually found on the cover page.



Checklist Item 10

- Identify the project receiving waters...
- The receiving waters are the **first** intermittent/perennial stream, wetland, open water etc. that the stormwater flows into.
- If the stormwater flows into an unnamed tributary of Chattahoochee River, the unnamed tributary is the receiving water.
- This information can be found in notes, in the sampling table and on 55-01.



Checklist Item 14

- 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.

Checklist Item 18

- 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.

Checklist Item 21

- Ensure current information is used. Currently the 2012 list is applicable.
- The 305(b)/303(d) list is published every two years. EPD should publish a 2014 list later this year.
- Only look for streams that are listed for Bio F or Bio M.
- This is a requirement if your project discharges into an Impaired Stream Segment or within 1 linear mile upstream of and within the same watershed.
- If the project does not, then provide a statement that it does not.



Checklist Item 21

- Examples using Google Earth and EPD's biota impaired shape files
 - Gordon Co. project on Google Earth
 - Forsyth Co. project on Google Earth & biota table example
 - Jones Co. project on Google Earth & cover page

Checklist Item 21

- If the project does discharge, the GDOT table must be filled out and Appendix 1 must be on the plan and completed.
- 4 BMPs from Appendix 1 must be chosen for use on the project.
- BMPS that are appropriate for the project must be chosen.



Checklist Item 22

- There are TMDL Reports and there are TMDL Implementation Plans.
- There is a TMDL Report for sediment for almost all of the watersheds in the state. This report must always be read.
- However, checklist item 22 refers to TMDL Implementation Plans for sediment.
- If there is not a TMDL Implementation Plan for sediment, provide a statement that there is not one.



Checklist Item 22

- If there is one, read it and incorporate any site-specific conditions or requirements into the plan.
- If there is one and there are no site-specific conditions, include the two statements below
 - No site specific conditions or requirements have been included in the TMDL Implementation Plan for sediment for ___ applicable to construction activities.
 - NPDES construction activities are considered a significant source of pollution-**compliance with the Permit should lead to sediment loading for construction sites at or below applicable targets.**

Checklist Item 32

- The Appendix B NTU value is determined using the total project area and the surface water drainage area (drainage area or watershed) of the receiving water.
- The drainage area is not the drainage area of the pipe or ditch.
- Because each outfall sampling location can have a different receiving water and drainage area, each outfall sampling location can have a different Appendix B NTU value.
- Outfall sampling has an Appendix B NTU value. Receiving Water sampling does not.



Checklist Item 33

- The sampling table must be completely filled out.
- The new sampling table must be used. The “Outfall Characteristics” section of the table fulfills the requirement to document representative sampling.
- The information in the sampling table must match the sampling information shown on 55-01.
- Sampling locations must have station numbers and offsets. Sometimes alignment names are required.
- Sampling locations should be appropriate for the stages of construction.



Checklist Item 33

Representative Sampling

- Representative sampling must be documented.
- In the first column of the table, instead of numbering the sampling locations chronologically, give the number or letter of the basin that the sampling site is in.
- In the last column, give the number(s) or letter(s) of the basin(s) that are represented by that sampling location.
- The basins should match the basins that are delineated on 53-01.



Checklist Item 33

- See sampling examples
 - Didn't use new table
 - Did use new table
 - Another sampling table

Checklist Item 33

Receiving Water Sampling

- Streams that run parallel to the project are not appropriate for sampling.
- Wetlands, open waters etc. are not appropriate for sampling.
- If multiple streams are merging at/within project, receiving water sampling is not appropriate.
- The locations must be in the middle of the stream.
- The locations must be upstream and downstream of all stormwater inputs from the project.
- Receiving water sampling has an Allowable NTU Increase. This is 25 for warm water streams, 10 for cold water streams.



Checklist Item 33

Receiving Water Sampling

- If a stream begins at the project limits, it is a receiving water not an outfall. The upstream sample is assumed to be zero. The downstream sample (the only place to sample) cannot have a NTU value greater than 25. Typically, I ask that a note be added below the table that states there is no upstream sampling location for the receiving water location. The upstream sample is assumed to be zero.
- See example

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Checklist Item 33

- See receiving water sampling examples



Checklist Item 33

Outfall Sampling

- An outfall is defined as a “location where stormwater, in a discernible, confined and discrete conveyance, leaves a facility or construction site...”
- If a stream is running through a culvert, the downstream end of the culvert is not an outfall. It is a receiving water sampling location.
- Driveway pipes are not outfalls if the ditch/land disturbance continues on past the end of the pipe.
- The middle of ditches are not outfalls.
- Sampling should occur past all BMPs.



Checklist Item 33

- See sampling examples
 - Incorrect outfall sampling examples 1 - 3

Checklist Item 34

- The initial stage should show the existing conditions (road, pipes, other structures) and the initial BMPs. Construction activities cannot be shown in this stage.
- The proposed construction should be shown in the next stage(s). The construction staging must be shown either by cross-hatching or having the activities in a darker print.
- If cross-hatching is used, it cannot make the plans illegible.
- Be aware, cross-hatching is for pavement, not drainage structures.
- The staging for drainage structures must be shown.



Checklist Item 38

- The points of wretched vegetation or stream bank must be clearly shown on the plan (streams and ponds).
- The lines for these should not be shown through a culvert. The lines should clearly have an ending at culverts.
- The buffer is delineated horizontally from the point of wretched vegetation. The buffer is not curved behind the culvert or does not continue through the culvert.
- If the stream is curved or running parallel, then the culvert or wingwall can be in the buffer.



Checklist Item 38

- Care must be taken to determine if the wrested vegetation ends at the wingwall or ends at the culvert opening or concrete apron. This does make a difference in the buffer delineation.
- For stream beginnings (headwater) the buffer is only curved around if the stream beginning is a ponded area. The wrested veg is circular so the buffer is circular. However, if the stream just begins, the wrested veg is typically not circular, so the buffer is not circular.
- Use the initial plan sheets to check the streams, ponds and buffers.



Checklist Item 38

- Examples
 - How to draw a buffer
 - Pictures 1 & 2
 - Buffers at culverts
 - Pictures 3 – 7
 - Examples 1 - 2

Checklist Item 38

- In the buffer encroachment table, give the specific station numbers for where the buffer impacts begin and end. Not the overall station numbers of the feature.
- Only list buffered State waters in the buffer encroachment table.
- If the Left side is completely different from the Right side, go ahead and have the feature in two rows of the table.



Checklist Item 38

- If a roadway drainage structure is being constructed, replaced or extended there is a 50 ft or 100 ft exemption area.
- The exemption only applies to the structure and any cut/fill and BMPs. If there are other activities occurring in that exemption area they must meet their own exemption or a variance must be applied for.
- Ex. Trail construction under a bridge. The bridge exemption does not apply to the trail. The trail must have a variance.
- Stream re-routing, re-construction within the exemption area is exempt.



Checklist Item 38

- On warm water streams, the construction of drainage structures are exempt.
- Drainage structures do not have an exemption area. Only the footprint of the structure and BMPs right at the structure are exempt.
- Drainage structures must be non-erodible. Natural bottom ditches are not drainage structures.

Checklist Item 38

- Riprap addition is considered part of the exemption for roadway drainage structures and drainage structures.
- Riprap must be within 50 or 100 ft of the roadway drainage structure. If it extends further than 50 or 100 ft in the buffer, a variance or additional exemption area must be requested.
- Use the intermediate stage plan sheets to determine what is exempt or not exempt.



Checklist Item 39

- Streams, open waters wetlands etc. and any associated buffers must be shown 200 ft from the project limits or to the edge of the paper.

Checklist Item 40

- Delineation and acreage of contributing drainage basins on the project site.
- This information is found on 53-01.
- The contributing drainage basins are the areas outside the disturbance that flow into the disturbance plus the disturbance itself.
- It does not include the watershed of streams that flow through the project.
- This is the drainage that is used for sediment storage requirements.
- These drainage areas correspond to the basins used in the sampling table.

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Checklist item 40

- See examples



Checklist Item 41

- Delineate on-site drainage and off-site watersheds using USGS 1' : 2000' topographical sheets.
- On-site drainage is typically shown with flow arrows on 53-01 or 55-01.
- Off-site watersheds are shown on 55-01.
- Delineate the watersheds (drainage areas) of the receiving waters.
- This corresponds to the information in the sampling table and the drainages used for Appendix B NTU value.



Checklist Item 41

- See examples



Checklist Item 46

- Sediment storage table must be filled out completely.
- The basins or outfalls should correspond to the information shown on 53-01.
- The drainage areas are the contributing drainage basins. You are not responsible for the flows in a stream. You are only responsible for the flows into disturbed areas.
- All disturbed areas must be accounted for.
- The required sediment storage is calculated by multiplying 67 cy by the drainage area.

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Checklist Item 46

- When sediment basins are not used on the project, a written justification explaining the decision to use equivalent controls must be given.
- If there are 20 drainage basins onsite and none have sediment basins, the justification can be combined into one.
- If 3 drainage basins do have sediment basins, spell out which ones do not and the justification.
- Ex. Sediment basins are not used at drainage basins 1-5, 7- 11, 13 – 18 and 20 due to.... In the sediment storage table it should be documented that there is a sediment basin at drainage basins 6, 12 & 19.



Checklist Item 46

- If the required sediment storage cannot be met an additional justification must be given.
- This is a separate justification than the one for not using sediment basins.
- Spell out which drainage basins are not meeting the requirement, why and that the BMPs should be sufficient to control erosion.



Checklist item 46

- 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 feasible, a written justification explaining this decision must be included in the plan.



Checklist Item 46

- See examples



Checklist Item 47

- A double row of Type C silt fence must be installed between land disturbing activities and buffers and other sensitive areas (wetlands).
- The new Green Book divides SD1's into sensitive and non-sensitive.
- So the new requirement is two rows of SD1-S between land disturbing activities and buffers and other sensitive areas.



Checklist Item 47

- Silt fence must go to the ends of the culvert. All the disturbance from constructing the pipes must be surrounded by the BMPS. The silt fence should not stop well before the structure.
- Silt fence is not for use in areas of concentrated flow. It cannot be in front of pipes or in or across ditches or streams.
- Check dams cannot be used in streams.
- Silt fence check dams are no longer allowed based on the new Green Book requirements.



Changes in the 2013 NPDES Permit

- Definitions of Infrastructure Construction and Infrastructure Company were changed.
- The construction activity defines whether it is an Infrastructure project, not the entity.
- This means that park and ride lots, purely landscaping projects, buildings etc. have to be permitted using the Stand Alone Permit, not the Infrastructure Permit.



Changes in the 2013 NPDES Permit

- Roadway project definition was added: traveled ways including but not limited to roads, sidewalks, multi-use paths and trails, and airport runways and taxiways. This term also includes the accessory components to a roadway project that are necessary for the structural integrity of the roadway and the applicable safety requirements. These accessory components include but are not limited to slopes, shoulders, storm water drainage ditches and structures, guardrails, lighting, signage, cameras and fences and exclude subsequent landscaping and beautification projects.



Changes in the 2013 NPDES Permit

- Coverage under the Permit is required for “all discharges of stormwater... that will result in contiguous land disturbances equal to or greater than one (1) acre... Contiguous means areas of land disturbances that are in actual contact to create a connected, uninterrupted area of land disturbance. However, for purposes of this permit, contiguous areas of land disturbances include those areas of land disturbances solely separated by drilling and boring activities, waters of the State and adjacent State-mandated buffers, roadways and/or railways. In addition, contiguous areas of land disturbances include all areas of land disturbances at a sole roadway intersection and/or junction.”



Contiguous Areas

- See examples



Changes in the 2013 NPDES Permit

- Coverage under this permit is not required for discharges of storm water associated with infrastructure construction projects that consist solely of routine maintenance for the original purpose of the facility that is performed to maintain the original line and grade and the hydraulic capacity, as applicable. The permittee shall, as a minimum, implement and maintain best management practices...



Changes in the 2013 NPDES Permit

- In order to be eligible for this exemption, the project must comply with the following conditions:
 - 1. no mass grading shall occur on the project
 - 2. the project shall be stabilized by the end of each day with temporary or permanent stabilization measures
 - 3. the project shall have a duration of less than 120 calendar days
 - 4. final stabilization must be implemented at the end of the maintenance project