

GDOT-ACEC Design/Environmental Discussion:

ESB (Environmental Survey Boundary) A3M (Avoidance & Minimization Measures Meeting) 2018 USACE Regional Permits

March 2019





Improving communication and collaboration

Internal look at interactions amongst project delivery team – reduce rework & project delays





Communication & Collaboration Multi-disciplinary team

- Georgia Tech study on communication
- Aligning design & environmental activities
 - Environmental Survey Boundary
 - Avoidance & Minimization Measures Meeting (A3M)
 - Lockdown Plans
- Improving procedural discussions with consultants
 - Approx. 80% of work is outsourced





Design-Environmental Discussions

Inaugural discussion – week of March 11

- ✓ Environmental Survey Boundary
- ✓ A3M roles & responsibilities
- ✓ 2018 Regional Section 404 Permits

We need your input \rightarrow Future topics?

Environmental Survey Boundary Guidance

GDOT-ACEC Design/Environmental Discussions March 13th, 15th, & 18th 2019



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Outline

- PDP Appendix O Record Plan Sets
- Environmental Survey Boundary (ESB)
 - What is an ESB?
 - Goals & Implications of the ESB
 - How to define/develop an ESB
 - Alternatives Analysis considerations
 - What information to include on an ESB layout
 - ESB examples
- Questions and Open Discussion

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Revision History:

Revision Number	Revision Date	Revision Summary
3.0	2/28/19	This is a PDP Committee Review and Update(or Revision) of the entire PDP Manual to bring it up to date with current GDOT polices, practices, and processes

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Definitions:

<u>Record Plan Set</u> – Project plans or layouts that serve as a snapshot of the design at a particular project milestone. Record plan sets will be stored in the project's electronic file in a specific location in ProjectWise for project team members to easily locate and use. A record plan set submission will include PDF files (plan sheets or layouts) along with design files (CAD, etc.) used to create the PDFs. Record plan sets should set the context for coordination among the project team, particularly between the design and environmental practitioners. See Appendix O for additional information.



Plan Development Process



APPENDIX O. Design & Environmental Coordination

0.1 Design & Environmental PDP Overview

See following pages.

0.2 Record Plan Set Guidance

See following pages.

ENVIRONMENTAL		DESIGN		
RECEIVE ENV STUDY AREA LAYOUT		SUBMIT ENV STUDY AREA LAYOUT (1)*		R
Activity #11412 STATE FUNDED: CR Survey Rpt -> GDOT review	CON	Activity #19322 (IN-HOUSE) Prepare Layout for Activity #11412 (CONSULTANT)	←	? e
ENV RESOURCE ID COMPLETE Activity #11499 - Resource Delmeations to Design (Copy OES, if consultant) or Notify Design of 'no resources in survey area'	СЕРТ	RECEIVE ENV RESOURCE BOUNDARIES Activity #19349 (IN-HOUSE), #02439 (CONSULTANT) CONCEPT REPORT LAYOUT (2)* Activity #03000		
PUBLIC INFORMATION OPEN HOUSE Activity #09300 (as needed)		PUBLIC MEETING LAYOUT (3)* Activity #09300 (as needed) DEV PRELIM. CROSS SECTION PLANS Activity #7352 (IN-HOUSE)		rd
AVOIDANCE & MIN. MEASURES MEETING Activity #20937 (A3M) - Held if ENV Resources present in project area.	PRELI	Activity #20997 (A3M)- Heid of ENV Resources present in project area.	Appen	Pla
RECEIVE PRELIMINARY PLANS	MINARY	CJA DF PRELIMINARY GEOMETRY Activity #21362 (IN-HOUSE) SUBMIT PRELIM PLANS TO GDOT OFFICES (4)* Activity #21397 (IN-HOUSE), #23697 (CONSULTANT)	dix O.1	an
RECEIVE CONSULTANT TECH STUDIES Activity #13467-13497	DESIG	PROJECT CHANGES ADDRESSED Project changes from Preliminary Plans that effect EsAs need to be coordinated with OEs	- Desi	Se
ENV TECHNICAL STUDIES COMPLETE Activity #13499 - Consultation Complete FEDERAL AID → FHWA; STATE FUNDED → USACE	N	PFPR PLANS (5)* Activity #40100 - PFPR to be hold after Env Tech Studies complete or <u>ALRISK</u> .	gn & E	ts
PUBLIC HEARING OPEN HOUSE Activity #14347 (as reeded)		PUBLIC MEETING LAYOUT (3)* ROUTLING LAYOUT (3)* ROUTLING #14347 (as needed)	nviro	
NEPA DOC SUMMARY Activity #14311 - FEDERAL AID, only To be completed prior to Env Cert for ROW		PFPR INSPECTION Activity #40200	nmer	
RECEIVE REVISED PLANS & CHANGE FORM Activity #18112 ENV CERTIFICATION FOR ROW Activity #70300 - FEDERAL AID, only	FIN	POST-PFPR ENVIRONMENTAL PLANS (6)* Activity #13131 (IN-HOUSE) Prepare Plans for Activity #18112 (CONSULTANT) ROW PLANS APPROVAL (7)* Activity #50400 - STATE FUNDED: ROW can proceed prior to completion of Env Tech Studies <u>AT RISK</u> .	ntal PDP O	PLANS
RECEIVE ENV. LOCKDOWN PLANS Activity #88222 - Changes requiring agency consultation must be addressed prior to lockdown	AL DES	ENV. LOCKDOWN PLANS SUBMITTAL (8)* Activity #81397 - Changes requiring agency consultation must be addressed prior to	vervie	
PERMIT/BUFFER VARIANCE APPLICATION Activity #88233/88253	GN	FFPR PLANS (9) * Activity #90100	N	
ENV CERTIFICATION FOR LET		CORRECTED FFPR PLANS (10)* Activity #90500 FINAL PLANS (11)*		
Hot Button Issues: -Change in ROW, easement, cut/fill limits within ESA -Drainage structure within ESA -Alignment or E/P shift (hor. or vert.) -Project limits increased beyond Env. Survey Boundary -Updated Traity Columes		Activity #95100 BID SET - LETTING (12)* Activity #95600		
•Thru lane has been added; •Signal has been added •New displacements/Access removed/Offsite Detour added		*Numbers following design milestone refer to Record Plan Sets.		
ev 1.0 28/19		O. Design & Environmental Coordina Page	ion	

Rev 1.0 2/28/19

Million Dollar Question: "What's Changed?"



Million Dollar Question: "What's Changed?"



	Se	ecord I	Plan Sets		WHAT	
			Appendix O.2 - R	ecord Plan Set Guid	lance	
		Record Plan Set	Project Schedule Activity ID	ProjectWise Workflow	PDFs to Post	Design Files to Post
and a second second	1	Environmental Study Area (Environmental Survey Boundary)	19322 (Create and SJD of ESB) - IN HOUSE ONLY & 11412 (Rec. En . Study Area Layout)	Record Plan ets Process	Environmental Survey Boundary {typically roll plot	All DGNs used to create the Layout (including PDF of aerial photos)
	2	Concept Report Layout	03000 (Con ept Approval)	Concept Rep et Approval Process	Concept Report Layout (typically roll plot)	All DGNs used to create the Layout (including PDF of aerial photos)
	3	Public Meeting Layout	09300 (PIOH Held) / 14347 PHOH Held) / Detour Meeting	Record Plan ets Process	Public Meeting Layout (typically roll plot)	All DGNs used to create the Layout (including PDF of aerial photos)
	.4	Preliminary Plans to GDOT Offices	21397 (Submit Prelim. Plan to GDOT Offices) - IN HOUSE 23697 (Submit Prelim. Plans to GDOT Offices) - CONSULTANT	Record Plan ets Process	See Environmental Plan Lockdown Schedule for required plan sheets	Reference DGNs only (see list below) Database files: .ALG, .ITL, .IRD, & EXIST.DTM
	5	PFPR Plans		PFPR Packages	Complete PFPR Plan Set	Reference DGNs plus sections 15 and 23 DGNs. Database files: .ALG, .ITL, .IRD, & EXIST.DTM
	6	Post-PFPR Environmental Plans	413 B (Im) of Party for the name of) - O HOLSE ONLY & 18112 (Rec Revised Plans & Change Form)	PFPR Packages	See Environmental Plan Lockdown Schedule for required plan sheets	Reference DGNs plus sections 15 and 23 DGNs. Database files: .ALG, .ITL, .IRD, & EXIST.DTM
	7	ROW Plans Approval	50400 (ROW Plans Final Approval)	ROW Plans Approval and Revision Process	Complete ROW Plans	All DGNs used in plan set including sheet files. Database files: .ALG, .ITL, .IRD, & EXIST.DTM
	8	Ensironmental Lockdown Plans	81397 (Plans to CES for Permit Application)	Record Plan ets Process	See Environmental Plan Lockdown Schedule for required plan sheets	Reference DGNs plus sections 15 and 23 DGNs. Database files: .ALG, .ITL, .IRD, & EXIST.DTM
	9	FFPR Plans	90100 (FFPR Request)	TEP'S Packages	Complete FFPR Plan Set	Reference DGNs plus sections 15 and 23 DGNs. Database files: ALG, .ITL, .IRD, & EXIST.DTM
	10	Corrected FFPR Plans	90500 (Submit corrected FFPR Plans)	HOW	omplete Corrected FFPR Plan Set	Reference DGNs plus sections 15 and 23 DGNs. Database files: .ALG, .ITL, .IRD, & EXIST.DTM
	11	Final Plans	95100 (Submit final plans)	Final Plans Submission Process	Complete Final Plan Set	All DGNs used in plan set including sheet files. Database files: .ALG, .ITL, .IRD, & EXIST.DTM
	12	Bid Set - Letting	95600 (Project Advertisement)	Advertisement / Letting / Award Process	Complete Final Plan Set with revisions	All DGNs used in plan set including sheet files. Database files: .ALG, .ITL, .IRD, & EXIST.DTM

Rev 1.0 2/28/19

Travelers	Business & Government	Projects	Programs	About GDOT		
Home -> Busine:	ss & Government -> Design Softwa	re -> ProjectWise				
ProjectWis	ning					
Workflows			lowchart		Video	
Award Process						
Chief Engneet Le	Ber 1					
Concept Report R	eview Process	- C	oncept Report Review	v Process Flowchart		
Construction As B	ult Plans Process	C	onstruction As Built P	tans Process Flowchart		
Consultant Survey	Compliance Check Process					
Corrected FFPR P	Yocess					
Design Build As B	uit Plans Process					
Design Exceptions	s/Design Variances					
Document Types						
Earthwork Submit	tal Process					
FFPR Process						
Final Plans Submi	ssion Process				Final Plans Submassion Video	
GOOT Plan File Fi	ormat and File Naming Standards					
Interim FPR Proce	55					
Mainténance Proje	ect Workflow					
Managed Export of	of ProjectWise Documents					
Pavement Design	Submission and Approval Process					
Pavement Manage	ement Submission Process					

Record Plan Set Process

NOTE:

PM = Project Manager

DPL = Design Phase Leader

The documentation below reflects **PM/DPL**. The intent is that if the project is being designed inhouse, the GDOT Design Phase Leader (DPL) will handle this task. If the project is being designed by a Consultant, the Project Manager (PM) will handle this task.

NOTE:

Record plan sets are project plans or layouts that serve as a snapshot of the design at a particular project milestone. Record plan sets will be stored in the project's electronic file in a specific location for project team members to easily locate and use. A record plan set submission will include PDF files (plan sheets or layouts) along with design files (CAD, etc.) used to create the PDFs. Record plan sets should set the context for coordination among the project team, particularly between the design and environmental practitioners. The record plan sets are:

- 01 Environmental Survey Boundary
- 02 Concept Report Layout see "Concept Report Approval Process" workflow for details
- 03 Public Meeting Layout
- 04 Preliminary Plans to GDOT Offices (or 04 Geometry QC Plans)
- 05 PFPR Plans see "PFPR Packages" workflow for details
- 06 Corrected PFPR Plans see "PFPR Packages" workflow for details

07 - ROW Plans Approval - see "Right-of-Way Plans Approval and Revision Process" workflow for details

- 07a Interim FPR Plans see "Interim FPR Process" workflow for details (folder to be created)
- 08 Environmental Lockdown Plans (or 08 Permit App Plans)
- 09 FFPR Plans see "FFPR Packages" workflow for details
- 10 Corrected FFPR Plans see "Corrected FFPR Packages" workflow for details
- 11 Final Plans see "Final Plans Submission Process" workflow for details
- 12 Bid Set Letting see "Advertisement/Letting/Award Process" workflow for details

For all record plan set submissions that do not have separate workflows (01 – Environmental Survey Boundary, 03 – Public Meeting Layout, 04 – Preliminary Plans to GDOT Offices, and 08 – Environmental Lockdown Plans), the PM/DPL should follow the steps below within the appropriate record plan set folder.

PFPR Packages

PM = Project Manager

Manager

Project

e

Manag

Project

Manager

Project

DPL = Design Phase Leader

The documentation below reflects *PM/DPL*. The intent is that if the project is being designed in-house, the GDOT Design Phase Leader (DPL) will handle this task. If the project is being designed by a Consultant, the Project Manager (PM) will handle this task.

EDG QA Check - Consultant Designed Projects Only

<u>NOTE</u>: For Consultant Designed projects, the following steps must be completed <u>BY THE PM</u> before submission of the PFPR package to Engineering Services.

1. Using the link in the PWDM email received, navigate to the Submittal folder containing the files.

- Open the email and copy/paste the ProjectWise Explorer link into the address bar in ProjectWise Explorer and press Enter.
- b. The new submittal package will be highlighted. Click the link to the package.
- c. In the bottom right corner of the dialogue box, Acknowledge the package. This will import all files to the ProjectWise Client into the project's pre-configured folder for the organization that sent the package.
- d. Click on the Documents tab and click on the Go To Folder button in the bottom right corner to be taken to the folder where the files reside.
- Complete the document properties for the submitted plans in the Submittal folder.
 a. Select all the files in the folder.
- b. Right-click and select Assign Document Type
- c. Select the following:
 - Document Group: Preliminary Engineering
 - Document Category: Design Plans
 - Document Type: Plans Image
- Click on OK
- d. With the files still selected, right-click and select Modify.
- e. Select the GDOT Environment tab.
- f. Scroll down to Plan Document Type and select Working Plans from the drop-down.
- g. Click on Apply and then Close.
- 3. Create a document set of the submitted files.
 - <u>PFPR</u>: Move the submitted files from the ProjectWise submittal folder for the organization that sent the package to the Record Plan Set folder PI\Record Plan Sets\05 – PFPR Plans.
 - b. <u>Supplemental PFPR (if necessary)</u>: Create a subfolder under PI\Record Plan Sets\05 PFPR Plans and name it Supplemental. Then, move the submitted files from the ProjectWise submittal folder for the organization that sent the package to the Record Plan Set folder PI\Record Plan Sets\05 – PFPR Plans\Supplemental just created.

Record Plan Sets: Take-Aways

- Layouts are available prior to plans be developed
- Project plans are continuously evolving
- For your project, ask yourself:
 - What is the most recent Record Plan Set I have?
 - What is the next Record Plan Set I should receive?
- Key milestones for Design-Env Coordination:
 - Environmental Survey Boundary
 - A3M
 - Submit Plans to OES
 - Lockdown Plans
- Overall: major challenge how can we improve?

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Environmental Survey Boundary (ESB)

5.8 Concept Development Considerations

It is essential that a high quality, comprehensive Concept Report be prepared as early in the process as possible. The benefits to be derived from a detailed concept include critical coordination with the planning process, better environmental analysis, and better right-of-way, utility, and construction cost estimates. In addition, earlier and better decisions on local government participation can be made.

Concept decisions shall be sensitive to environmental resources. To initiate the identification of environmental resources, the Design Phase Leader will develop an environmental survey boundary (study area) based on concept-level assumptions about the future footprint of the project (see Appendix O for additional information). Wherever possible, environmental resources are to be avoided, but where avoidance is not prudent, the impacts are to be minimized and mitigated. For those projects that are on new alignment or involve major new location sections, avoidance and minimization alternatives shall be coordinated with FHWA (for federally funded projects) and consulting agencies prior to the finalization of the Concept Report. Concept decisions shall also consider compatibility with adjacent land use (context - rural vs. urban section, historic area, etc. for example), address community issues if present, satisfy the Project Justification Statement for the project, be consistent with the STIP, and provide for logical termini.

Environmental Survey Boundary (ESB)

Enclosed boundary shape which represents a concept level approximation of the project's footprint (right-of-way and easement) and a 100ft buffer/offset. ESB = Conceptual Footprint (ROW/ESMT) + 100ft Buffer

- Provided early in Concept Development to allow Environmental to conduct studies so that resources can be considered in concept development.
- Developed by the Design Team
 - P6 Activity #19322 (In House)
- Primary users are environmental SMEs, Required to start Environmental Resource Identification
 - P6 Activity #11412 (In House & Consultant)

Analogous to a topographic survey boundary – developed by design so that the environmental team can collect resource data within a clearly defined boundary.

ESB = Conceptual Footprint (ROW/ESMT) + 100ft Buffer



ESB Guidance

ESB = Conceptual Footprint (ROW/ESMT) + 100ft Buffer

- Conceptual ROW Footprint accounts for all potential required ROW and easements needed for construction of a project
- Consider potential for cut/fill, erosion control, staging, tie-ins, signage, pavement removal, etc. in development of footprint
- ESB includes footprint and 100ft buffer to account for uncertainty of design and resource agency identification requirements. Each SME will survey per their respective requirements.
- Existing ROW should be considered the minimum Conceptual ROW Footprint for any project not anticipated to require new ROW or easements.

ESB Guidance

Balance of potential design needs and level of environmental survey effort

- Goal is to avoid addendum surveys later in project development (i.e. schedule, cost, etc.)
 - Too large increased field time, reporting, and agency consultation efforts (resource allocation, cost)
 - More survey area = more resources
 - Too small addendum surveys, reports, and agency consultation required later in project (schedule delays, additional cost, etc.)
 - Any additional required surveys have impact on project schedule, regardless of size



Too Large

- Consider project scope.
- Very large boundaries may exceed assumptions for level of survey in existing task order.

Too Large





Too Small

- Consider side street tie-ins.
- Any design outside of the original ESB, regardless of size, may result in additional studies requiring procurement, fieldwork, reporting, and agency concurrence.

ESB Guidance

Alternatives Analysis

- Larger scale projects (widenings, new locations, etc.) may require project meeting with PM, Design, and Environmental to determine level and timing of surveys in relation to alternatives analysis.
 - What does environmental survey and when?
 - How does this affect the project schedule?

• Design should clearly note whether an ESB includes multiple concept alternatives, or just the assumed preferred alternative.







ESB Guidance

What to Include on an ESB Layout:

- Legend
- Aerial Photography Background
- Graphic Scale and North Arrow
- Road Names
- Conceptual ROW/ESMT Footprint Line
- ESB Line clearly defined and labeled as "Environmental Survey Boundary"
- Dimensions and notes to assist specialists in the field, e.g.: ESB 250' from existing edge of pavement ESB 500' beyond intersection of SR 1
- Anticipated begin/end project callouts
- Transmit in both PDF and DGN format





RECOMMENDED ENVIRONMENTAL INVESTIGATION AREA 200' SIDE DISTANCE IS 100' EACH SIDE OF CENTERLINE ON ROAD OR HIGHWAY



ESB Guidance

Additional Considerations:

- Side road tie-ins
- Signing and Marking
 - Interstate Guide Signs, associated guardrail, etc.


ESB Guidance

Additional Considerations:

- ESBs should not be "revised" if preliminary plans go beyond the original boundary.
- Construction Plans should be used by specialists and buffered as required to determine need for additional surveys



ESB Guidance

"Results" from ESB and Next Steps

- Environmental Resource Identification and Transmittal of Resource Boundaries to Design
 - ESA delineation on project plans
 - Environmental P6 Activities #11499 (In House), #02469 (Consultant)
- Required prior to A3M Meeting
 - P6 Activity #20937

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Questions & Feedback





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Avoidance & Minimization Measures Meeting (A3M) 18-Month Check In

Carla Benton-Hooks, Office of Environmental Services Doug Chamblin, Office of Environmental Services Fletcher Miller, Office or Roadway Design Robert Elam, Office of Roadway Design Debbie Cottrell, Office of Program Delivery





Roadmap

- Background
- Roles and Responsibilities
- Case Study
- Discussion





Why avoid & minimize? Federal Aid

Mater Act

Section 4(f) of USDOT Act

Clean Water Act Section 6(f) of the Land & Water Conservation Fund Fish & Wildlife Coordination Act **Endangered Species Act** National Historic Preservation Act Coastal Zone Management Act of 1972 Noise Abatement – 23 CFR 772 Title VI of the Civil Rights Act Georgia Wildflower Act Archaeological Resource Protection Act Magnuson-Stevens Act Native American Grave Protection & Repatriation Act E.O. 12898 – Environmental Justice E.O. 11990 – Protection of Wetlands Rivers & Harbors Act of 1899 Georgia Endangered Wildlife Act National Pollutants Discharge Elimination System Surface Transportation & Uniform Relocation Farmland Protection Policy Act of 1981 Assistance Act Clean Air Act E.O. 11988 – Floodplain Management National Environmental Policy Act



Why avoid & minimize? State funded

Section 6(f) of the Land & Water Conservation Fund **Clean Water Act** Fish & Wildlife Coordination Act **Endangered Species Act** National Historic Preservation Act Coastal Zone Management Act of 1972 Title VI of the Civil Rights Act Georgia Wildflower Act Archaeological Resource Protection Act Magnuson-Stevens Act Native American Grave Protection & Repatriation Act Clean Air Act Georgia Endangered Wildlife Act Rivers & Harbors Act of 1899 National Pollutants Discharge Elimination System Surface Transportation & Uniform Relocation Assistance Act

Georgia Environmental Policy Act



Why an A3M?

- Predictable time for team <u>collaboration</u>
 - ✓ One conversation among all disciplines
 - ✓ Ensure accuracy of ESA delineations on plans
 - ✓ Discuss ESA avoidance/minimization
- Document efforts for reports and permits
- Standardize existing requirements





When in the P6 Schedule?

- AFTER Environmental Resource ID
- EARLY in the Preliminary Plans Phase
 - ✓ AFTER first run of prelim cross sections

✓ BEFORE QA of Preliminary Geometry

Activity Name	Activity ID 🔺	Planned Duration	Remaining Duration
Request Soil Survey/Ex Pvmt Eval	80200	Od	Od
📟 Soil Survey Report Preparation	80600	180d	180d
📟 Review Local/Consultant Soil Survey	80650	40d	40d
💾 Preliminary Plans Phase		241d	241d
📟 Preliminary Plans Phase Summary	20700	241d	241d
Request/Receive Utilities First Submission/SUE Coordination	20900	60d	60d
 Conduct Utility Field Meeting 	20927	Od	Od
Conduct Avoidance and Minimization Meeting (AMM)	20937	0d	0d
📟 Request/Receive Preliminary Lighting Plans	20940	20d	20d



Who Should Attend?

- GDOT Project Manager
- Designer
- Environmental Analyst ("doer")
- Environmental SMEs with resources present (the "doer" - GDOT or Consultant)
- OES "reviewer" SMEs at their discretion
- Bridge design if bridge present
- Utilities if relocations a concern
- Construction if staging a concern



Roles - Handout!





Environmental Role - Before the Meeting

✓ "Doer" Environmental SMEs:

- **O** Identify resources in the field
- Complete Resources Reports and gets
 OES approval, then agency concurrence
- Provide delineations to Design
- Enter resources in A3M Tracking List (OES SharePoint site) at least 10 business days prior to the meeting
- **Review Layout/ESA delineations**



Environmental Role - Before the Meeting

GDOT Environmental Analyst

- Provides PM & designer with "Schedule P6 Activity: A3M" Letter
- Coordinates with PM on invitee list





Environmental Role - During the Meeting

✓ Environmental SMEs

- Participate with PM and Designer as each resource is discussed sequentially
- Describe their resource and implications of avoiding vs. impacting
- Weigh trade-offs for competing resources
- Considerations: Permits, Mitigation,
 Schedule, Budget, etc



Environmental Role - After the Meeting

✓ Environmental SMEs

- Review meeting notes from PM
- Follow up with Design on AMM, as needed
- Complete the final fields in the A3M Tracking Sheet



PM Role - Before the Meeting

- Identify A3M date during team meetings
 - Note: A3M may not be in your schedule
- Confirm consultant access to A3M tracking sheet
- Logistics work with project team to determine:
 - Where OGC is preferred
 - When send meeting invite at least 20 working days before meeting
 - Who refer to previous slide
 - **How** in person is preferred, video/conference call if needed
- Provide link to meeting materials 10 days before meeting
 - A3M layout, plans
 - Project photos, drone video, .kmz file
 - Link to approved Concept Report
- Prepare Agenda



PM Role - During the Meeting

Sample Agenda

1. Introduction

- Introductions
- Project overview, Status of roadway/bridge design
- Review schedule and upcoming milestones
- 2. Discuss Environmental Resources <u>follow A3M tracking sheet NEPA lead to assist</u>
 - Resource: PS1
 - Locate on the layout
 - Discuss how the resource is being impacted based on A3M Plans
 - Discuss potential design changes to avoid or minimize impacts to the resource
 - Repeat for each Resource
- **3.** Discuss Constructability Issues input from CST and UTL staff in attendance
 - Additional impacts to resources due to utility relocations?
 - Additional impacts to resources due to bridge removal?
 - Additional impacts to resources due to required staging areas?
- 4. Meeting Recap
 - Review requested design changes
 - Review major action items



PM Role - During the Meeting

- Moderate all discussions, especially the SME/Designer discussion
- Ensure every Resource is addressed
- Take notes line up assistance if needed
- Ensure virtual attendees are engaged
- Utilize monitor for additional visual support (Google Earth, photos, etc.)
- Schedule multiple meetings for bundled projects



PM Role - After the Meeting

- Update P6 Activity
- Prepare Meeting Notes
 - send draft to attendees and allow time for comment
 - Compile comments and issue final minutes
 - Include actions items
- Follow up on actions items at your next team meeting or individually
 - Some issues can be resolved quickly
 - Others may take more time, depending on the progression of preliminary design activities



Design Role - Before the Meeting

- Confirms that all ESAs received & adds to plans
- Begins preliminary "first run" cross sections
- **O** Inputs ESA details on A3M Tracking Sheet
- Provides layout(s) to PM 10 business days prior to meeting
- Inputs Pre-A3M avoidance measures on A3M Tracking Sheet





Design confirms ESAs

1. Convert ESA dgn/shp file to ENVE.dgn



2. Cross-check delineations against list of resources





Design inputs A3M details

	CountyDest	Researce Laber	Researce Type	Ever Martine	Crie Specialist	Decigner	Nager Station P	ted Matter 1	Sila	Heid?	Base of Andre Monting	andle forunts	GOOT Inv Analyst	Permitted ExectionClass Accests (for 1907)	Comments (Nor (1817)	Additional Notes	Researce Impacted?	Impact Acaded Minimized day to ASM?	CR Imperi Type
123456	Bacon	P541	Stream	This is a parentral stream; bottomless structures need to be considered.	M. Pulser	F Flanders	155+24	164+13			6/15/2016	Dric resource will be bridged. Plans in the channel cannot be provided due to	A. Boignie	35 h./0.1 ac of Aprap	NA		Yes.		NA
S 123656	elec	t the	Ellips Artueology Ste	A status measure. If H carstat be presided, a mbasi pathlearion for impact is required, impacting this resource will add approximately 12 meetiful to the project schedule.	A Shea	f Flanders	175+45	181+05	it.	Ves	4/15/2018	This resource will be completely avoided	A. Burgesa	No attivity	м		No		No effect
123456	Beton	95 81 Buffer	25 Buffer	This is a 25-foot buffer annual PS 46. Impacting this mesoarce for anything other than calvert/bridge wink will negate a beffer sanarce	XI. Pulwer	f Flanders	125+42	130=00	Both.	Tes	6/15/2018	This resource will be reparted by ME for culvert construction.	A Burgers	Activities related to subset epidement within 50 her of cultert reglacement are overspt	86.		Yes		NA
123456	Bacon	Cultural Relovice E54	Archaeology Site	Any work within this ElA would require extensive and travity consultation with resource agencies.	L Fallety	F. Flanders	95+20	103+50	both	Ny		This resource cannot be avoided due to	A. Byrgos	Roadway construction	84		Yes.		No Adverse Effect



Design inputs A3M details

	CountyDeal	Noneral Label	Resource Type	Des Matten	tre Specialist	December	terre a	teef Marten 4	544	Note:	Base of AMMA Monting	And Managers	GENER New Analysi	Permitted Construction Activity (for 1907)	Contractor (Nor CBUT)	Additional Notes	Resource Impacted?	Impact Acceled Minimized due to A3M7	CR Impart Type
121456	Bacon	P541	Stream	This is a parameter of many bottomings structures read to be considered.	M. Fulser	F Flanders	155+24	164+18			6/15/2019	This resource will be bridged. Pars in the charved carved be avoided due to	A. Burgette	35 H,70,3 ac of Aprap	84		Yes		144
123456	Viev Edit	v Item Item		This is a 407, measure. If H carinat be peopled, a robust partification for impact is required, impacting this recourse will add approximately 12 methods to the project schedule.	A Bes	f Flanders	175+45	383+00	и	Yes	6/15/2018	Dhis resource well be completely avoided	A Burgess	No attivity	NA		*		No effect
173456	Con Woi	npliance (rkflows	Details	This is a 25-foot buffer annual PS RL impacting this resource for anything other than calvert/bridge work will nearry a beffer variance	M. Fuluer	f Flanders	125+02	130+00	Both.	786	6/15/2018	This resource will be reparted by All for cultert construction.	A Bargers	Adduties related to outwert replacement within 50 test of outwert replacement are outright	166.		Yes		- 144
123456	Shai	red With		Any work within this ESA would require extensive and throug consultation with researce agencies.	L. Fallety	F. Flanders	96+20	103+50	both	No.		This resource surrout be avoided due to	A. Burgios	Roadway sometraction	NA		Yes.		No Adverse Officit



Desi	1	Designer Name	Enter the name of the designer who is coordinating the AMM effort for this resource.				
			Enter as "Last Name, First Name". Do not use initials.				
			Lannon, Teresa	_			
ma County/Ind Resource		Designer Firm	Enter the name of the firm that employs the project designer.	anty Andersonal Anatom	Researce Impacted?	Impact Activity Minimum due to ASM?	CR Import Type
di kana kana kana kana kana kana kana kan			If the designer is a GDOT employee, enter "GDOT".				
23456 Bacon PS-R			GDOT		Area.		140
		Begin Station #	Enter the station number where the resource first enters the project.				
			81+38.21,170.45'RT EXCHANGE BLVD				
2804		End Station #	Enter the station number where the resource leaves the project.		-		ho effect
view item			85+19.06, 175.13'LT EXCHANGE BLVD				
Edit Item	Z 🖌	Side	Enter the side of the project where the resource is located.				
Complian	No.		both				
23456	ä	Discussed at A3M?	Was this resource discussed at the A3M?		Yes		NA
Workflow		Discussed at Abin:	Yes				
Alert me		Date of A3M	Enter the date the initial A3M was held. If no A3M was held, leave blank.				
2456 Charad W			1/7/2019		Yes.		No Adverse
Shared W		A3M Results					
Delete Ite		ASIM RESULT	1/10/19: We have investigated utilizing a wall at the shoulder break point and included room for ditches, erosion control, and room to work. See the cross section insets on the revised A3M layout. We coordinated with Bridge Design for recommendations on the ditches and footing. Additional risks are listed on the layout due to the location in a swamp area.				





arry Additional Average	Resource Impacted?	Impact Actived Minimized days to A3M?	CR Impert Type
	Yes		NA
	*		ho effect
	Yes		м
	Yes		No Adverse Effect



A3M Tracking ----> ERIT

PI #	County	Resource Label	Resource Type	Begin Station #	End Station #	Side	Permitted Construction Activity (for ERIT)	Comments (for ERIT)
123456	Bacon	PS #1	Stream	155+24	164+10	Rt	25 ft./0.1 ac of riprap	NA
123456	Bacon	Duff House	Archaeology Site	175+45	183+00	Lt	No activity.	NA
123456	Bacon	PS #1 Buffer	25' Buffer	123+42	130+00	Both	Acitvities related to culvert replacement within 50 feet of culvert replacement are exempt.	NA
123456	Bacon	Cultural Resource ESA	Archaeology Site	96+20	101+50	Both	Roadway construction	NA



Design provides layout

What needs to be included?



Existing information

- ESA delineations
 - Existing ROW & property lines
- 🗸 Торо
- ✓ Env Survey Boundary

Proposed information

- Alignments
- Edges of pavement
- ✓ Construction limits (cut/fill)
- Required ROW (concept level)



Layout similar to Public Layouts - Large Scale Roll Plot





Layout similar to Public Layouts - Large Scale Roll Plot





Design Role - During the Meeting

- Discusses potentially foreseen impacts
 - Discusses what it would take to fully avoid each resource
 - Learns priority of potentially competing resources





Design Role - After the Meeting

- ✓ Determines if each ESA can be avoided
 - If the impact <u>can</u> be avoided, records efforts made to avoid in the A3M Tracking List
 - If impact <u>cannot</u> be avoided, records
 - Why the resource cannot be avoided and
 - Impact minimization measures
- ✓ Records A&M measures in A3M Tracking List
- ✓ Confirms Record plans





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09 - FEPR Plans	GDOT_PROJ_MGR_OFFICE		Program	Delivery					
10 - Corrected FFPR Plans	GDOT_MPO		Atlanta 1	MA					
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- Project team works TOGETHER, instead of independently
- Designer has context for competing resources
- Clarifies an existing responsibility
- Documents and tracks efforts
 which informs Env. Reports
- We can take credit for our work





A3M Case Study

Ramp Fill Impacts to Intermittent Stream





A3M Case Study

Design Avoidance/Minimization Options Presented at the A3M

- 1. Change the proposed slopes to be steeper than 2:1 to <u>minimize</u> impacts by tying into the existing slope at the existing culvert headwall. This option would require a Soil Survey report exemption for this area of the project.
- 2. Raise the existing headwall to <u>minimize</u> impacts. This option would propose to dowel into the existing headwall and wing walls, and pour concrete to raise or extend the headwall and wing walls to an elevation that would allow the proposed 2:1 slope to be intercepted, limiting impacts to the stream to only the contractor's form work and slope backfill and compaction work.


A3M Case Study

Design Avoidance/Minimization Options Presented at the A3M

3. Add a wall at the top of the slope on the SR 316 shoulder, which would tie on both ends to the proposed and existing guardrail. While this option would <u>avoid</u> impacts to the stream, a rigid barrier would be introduced in the roadway clear zone, which with regards to safety is less desirable than a semi-rigid barrier (i.e., a guardrail). (PREFERRED OPTION)

4. Revise the Ramp B alignment to tie into SR 316 further from the stream. During the 2nd QA Geometric Review, it was determined that taper guidelines require specific taper lengths, which would <u>minimize</u> impacts to the stream. Discussion was held that the implementation of this option would be dependent on the review of the existing culvert's condition to both convey the proposed drainage area runoff and the Area Maintenance office's recommendation to retain the existing culvert.



A3M Case Study

Design Avoidance Option Implemented





Thank you!



2018 USACE Regional Permits

Hannah Pruett OES, Ecology Team Leader

http://www.sas.usace.army.mil/Missions/ Regulatory/Permitting/General-Permits/Regional-General-Permits/



DEPARTMENT OF THE ARMY U.S. ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT 100 W. OGLETHORPE AVENUE SAVANNAH, GEORGIA 31401-3604

October 5, 2018

Regulatory Branch SAS-2018-00158

> PUBLIC NOTICE ISSUANCE OF REGIONAL PERMITS 30, 31, 32, 33, 34, AND 35 AUTHORIZING LOCAL, STATE, AND FEDERAL GOVERNMENT FUNDED TRANSPORTAION PROJECTS WITHIN THE STATE OF GEORGIA



US Army Corps of Engineers® Savannah District



Presentation Overview

- Regional Permit Thresholds
- When a PCN is not required
- Special Conditions
 - Project Managers
 - o Design
 - o Environmental
- RP Appendices





2018 Regional Permit Thresholds

Permit type†	Document and/or Project type	Area* each crossing	Area* per HUC	Linear feet** each crossing	Linear feet** per HUC
RP 30† (cf. NW 3)	Maintenance, Repair, Rehabilitation, and Replacement	No threshold	No threshold	Stream modifications only within 100 ft of existing x-ing.	No threshold
RP 31† (cf. NW 25, NW 33)	Temporary Impacts	No threshold	No threshold	Stream modifications only within 100 ft of existing x-ing.	No threshold
RP 32 (cf. NW 14, NW 23, RP 1)	Replacement of a Bridge with a Bridge	No threshold	No threshold	Stream modifications only within 100 ft of existing x-ing.	No threshold
RP 33 (cf. NW 14, NW 23, RP 1)	Replacement of a Culvert with a Culvert or a Bridge	No threshold	No threshold	Stream modifications only within 100 ft of existing x-ing.	No threshold
RP 34 (cf. RP 96)	Construction on Existing or New Alignment	≤ 2 ac North ≤ 3 ac South	≤ 8 ac North ≤ 10 ac South	≤ 1,500 lf North ≤ 1,000 lf South	≤ 2,000 lf North ≤ 1,500 lf South
RP 35 (cf. IP)	Construction on New Alignment	≤ 4 ac North ≤ 5 ac South	≤ 12 ac North ≤ 15 ac South	≤ 2,000 lf North ≤ 1,500 lf South	≤ 5,000 lf North ≤ 4,000 lf South

Note: Thresholds for **RP 34** and **RP 35** are only for permanent losses, not temporary impacts.

† PCN not required as long as impacts are below 100 linear feet and 0.1 acre AND no effect on resources under Section 7 (ESA) and Section 106 (NHPA). * Area of jurisdictional wetlands, open waters, and perennial, intermittent, and ephemeral streams.

** Linear feet of jurisdictional perennial, intermittent and ephemeral streams.



Thresholds for RP 34 & RP 35 Northern v. Southern



"Permanent aquatic losses of other jurisdictional waters of the U.S. (e.g., open water, ephemeral streams, and ditches) are limited to the minimum necessary to accomplish the primary activity."

Wetland Loss (acres)

2.0

30

4.0

50

Total Linear

Project

8.0

10.0

12.0

15.0

Single/Complete

Crossing

Total Linear

Project

2.000

1.500

5,000

4,000

1.500

1,000

2.000

1,500



Regional Permits 34 and 35

- RP 35 PAR required to determine LEDPA (V.4)
- RP 34 Alternatives Analysis (VII.7.c)
 "For all proposed uses of RP34, the PCN shall include information concerning the basic project purpose, alternatives considered, and aquatic resource avoidance and minimization measures."
- VI.4 and VI.5 EPD Water Quality Certification (WQC) and CRD Georgia Coastal Management Program (GCMP) Concurrence: Required for any New Location under RP 34 and 35.



PCN May Not Be Required

Non-notifying RP 30 or 31

- < 100 linear ft. or 0.1 acre impact (no mitigation required) (V.2)
- No effect to species and cultural resources (V.2)
- Not in a trout watershed (VII.2)
- Not < 2000' from special conservation lands (VII.3)
- Single page form to EPD (attached to the RPs; Appendix E)
- Projects in 11 coastal counties must also submit form to CRD



Special Conditions for Project Managers

- V.5 **Conditional Re-Authorization**: Although these RP's expire in five years, if an RP is obtained prior to the expiration date it is eligible for automatic re-authorization until October 5, 2028.
- V.10 Altering Civil Works: 408 permission must be issued before a 404 permit is authorized.
- V.20.e **Seasonal Restrictions**: Certain species of fish require restrictive dates for spawning in the Oconee, Ocmulgee, Savannah, Hudson, and Broad River systems.
- VII.7.k Utility Relocations: PCN package shall include owner's name and contact info, verify their awareness of project, and provide general info on utility relocation.



Special Conditions for Designers

- V.6 and V.7 **Navigable Waters**: structures over navigable waters must be approved by the US Coast Guard.
- V.16 Fish Passage: New culverts in perennial streams must be embedded for fish passage (details required for PCN listed in V.II.7.j).
- V.17 **Temporary Dewatering**: Channel constriction must be less than 33% of channel width.
- V.20.e **Anadromous fish waters:** Avoid directly impacting bedrock or other suitable spawning habitat.
- V.22 **Best Management Practices**: All BMP's are recommendations, not requirements.
- VII.7.k Temporary Dewatering: Hydraulic analysis is required for structures occupying >25% of cross-sectional area of critical flow.



Special Conditions for Environmental

- V.11 Anadromous Fish: USACE will need to coordinate with FWS/NMFS if project is in or within 1000' of those waters identified in Appendix B.
- V.18 **SOP Tables**: Use 2018 versions.
- V.20.b **Protected Species Lists**: Although the RP's refer applicants to the traditional websites hosted by FWS and DNR, GDOT will be operating under our new protocol by referring to GNAHRGIS and HUC-10 Lists.
- V.22 **Best Management Practices**: Review these recommendations for possible inclusion in SP 107.23.
- VII.6 **Units of Impact**: The minimum units of measurement for impacts is linear feet (no fractions or decimals) and tenths-of-an-acre (unless impact is <0.1 ac).
- VII.7 PCN Package Requirements



Appendices to the RPs

- A. North/South Georgia Map
- B. Anadromous Fish Waters in Georgia
- C. Photos and diagrams of different culvert designs (fish passage do's and don'ts)
- D. Tidal Waters in Georgia Map
- E. Non-reporting Form for RP 30/31
- F. PCN form for Regional Permits (differs from Nationwide Permit PCN form)



Questions?

Contact an Ecology Team Leader

Hannah Pruett

HPruett@dot.ga.gov

Jeffrey Garnett JGarnett@dot.ga.gov



Questions, Feedback, & <u>Future Discussion Topics</u>?



Sam Woods, P.E. GDOT Office of Roadway Design Asst. State Roadway Design Engineer <u>swoods@dot.ga.gov</u> | 404-631-1628 Gail D'Avino, PhD GDOT Office of Environmental Services Asst. State Environmental Administrator gdavino@dot.ga.gov | 404-631-1075