Georgia Department of Transportation
Office of Environmental Services
Environmental Procedures Guidebooks

Environmental Procedures Overview

Environmental Procedures
Environmental Project Management
Environmental Role in the Plan Development Process

ENVIRONMENTAL PROCEDURES

Understanding a project's impact to the surrounding environment is critical to project development. By following these procedures, the project team will make the appropriate decisions to avoid and minimize impacts to environmental resources. The environmental procedures required by this decision-making process are for both federal-aid and state-funded projects. They are guided by numerous laws, regulations, and policies. They also detail the roles of agencies outside of GDOT, including state and federal agencies.

The project team must integrate its efforts to avoid and minimize impacts to environmental resources to successfully deliver GDOT's Construction Work Program (CWP). The CWP is comprised of a wide variety of projects that range in cost, complexity, and funding. Governed by the environmental procedures, decisions to avoid and minimize impacts must be tailored to each project in the CWP.

Combining the strengths of engineering with the findings of natural and social science disciplines, GDOT projects advance according to the Plan Development Process (PDP). By this interdisciplinary method, GDOT projects will sustainably serve the community and ensure that the public has access to the decision-making process. Advancing through the PDP requires coordination, collaboration, and communication from the project team.

Plan Development Process Manual

Georgia Department of Transportation

Last Updated: 1/31/2020

For most GDOT projects, Office of Environmental Services (OES) manages all aspects of the environmental procedures. Certain types of projects, such as those funded under Georgia's Transportation Investment Act (TIA), have limited involvement from OES. In these cases, project review and administrative roles are contracted to program management consultants and may require alternate procedures to fulfill the same obligations, regulations, and commitments to the public.

ENVIRONMENTAL PROJECT MANAGEMENT

Each project has unique conditions, requirements, and teams and thus must be managed with a project-specific scope, schedule, and budget. For OES, successful project management means adapting approaches to each project to meet the established goals for delivering the needed transportation improvements to the public.

The Project Team

A project team is composed of many important members. They may be all GDOT employees or they may be a mix of GDOT employees, project sponsors, and consultants. Described below are a few key members of the project team.

Project Manager

Generally, a GDOT Project Manager (PM) from either the Office of Program Delivery or the Office of Innovative Delivery is assigned to a project. The PM is responsible for the day-to-day scope, schedule, and budget decisions for the project. The PM steers, coordinates, and manages a project from concept through construction.

Environmental Lead

The Environmental Lead acts as the point person to guide project team members through the environmental approvals. To do this effectively, the Environmental Lead must have a general understanding of environmental requirements and project development issues.

Environmental Analyst

The Environmental Analyst, sometimes known as the NEPA analyst or the environmental planner, develops the environmental document, if required, and related tasks. These tasks may include studies related to Environmental Justice, farmland protection, floodplain involvement, community impacts, and public outreach activities. The Environmental Analyst often serves as the Environmental Lead.

Environmental Subject Matter Experts

An Environmental Subject Matter Experts (SMEs) is a member of the project team that produces the technical studies, such as the ecology, cultural resources, air, and noise documentation. Environmental SMEs include Air Specialists, Noise Specialists, Archaeologists, Historians, and Ecologists.

Design Manager

The Design Manager is appointed by the PM and charged with the coordination and timely delivery of a particular design phase. Bridge designers, in addition to roadway designers, also may be included on the project team.

Elements of Project Delivery

Understanding and linking project delivery elements to environmental tasks allows the project team to address relevant tasks in the most effective order for a successful project.

Environmental Schedule

Project schedules are set by GDOT's Schedule Review Committee. The Environmental Lead must track the environmental baseline schedule that relates to design's project delivery phases and places environmental issues into context. While many design tasks are in chronological order (i.e., linear), much of the environmental schedule depends on managing the overlapping and iterative tasks along a progressing timeline. The Environmental Lead should manage the critical path (i.e., the environmental issue that is most likely to throw the project off schedule) and its relationship to the overall project development. The Environmental Lead must ensure that the project team (including designers) understands how the project's delivery phases must be complete in order to meet the baseline schedule.

Staying Current

The environmental regulatory picture changes often. Changes implemented at a federal level could include a new policy by the Federal Highway Administration (FHWA) in response to other agency actions, or new coordination procedures by resource agencies such as the US Fish and Wildlife Service (USFWS). The Environmental Lead must be aware of current or pending changes and how they might apply to projects. The project team, including Environmental SMEs, should regularly coordinate to address regulatory changes and find an approach that keeps the project on schedule.

Quality

The environmental members of the project team must assure that quality control procedures are followed for all environmental documents and technical studies. These procedures should be used throughout data collection, analysis, and documentation. They should be followed by effective review prior to submittal to GDOT or regulatory agencies. Environmental SMEs producing reports and documents—as well as their reviewers—share the goal for high quality control and assurance. Review and revision cycles occurring between producers and consultant staff should be accounted for in the environmental milestone dates to meet GDOT's delivery schedule goals. Poor quality work that results in multiple reviews jeopardizes the schedule for completion of project activities.

ENVIRONMENTAL ROLE IN THE PLAN DEVELOPMENT PROCESS

GDOT's PDP serves as the comprehensive guide for preparation and approval of design plans. Every GDOT office has a role in the PDP. Plan development is a series of engineering

and project management tasks and procedures that are outlined with a schedule. Environmental procedures must be followed interdependently with other offices for successful project delivery. The environmental findings will inform design while the design and construction requirements will provide the basis for determining impacts, mitigation, and permits. The following provides a snapshot of the environmental role in the PDP for typical GDOT projects.

Programming and Scheduling Activities

Prior to authorization of Preliminary Engineering (PE) funds, OES assists the PM in the development of a project scope. While many environmental scope activities remain the same regardless of the project type, unique environmental considerations should be identified during this time. Important environmental activities during this stage are detailed below.

Advise during the Project Team Initiation Process

During the Project Team Initiation Process (PTIP), the GDOT PM and SMEs provide input early to assist in the development of a project's scope, schedule, and budget. At this time, OES personnel should identify environmental risks and incorporate them into the project schedule. What level of public involvement is anticipated? Is the project location highly urbanized or surrounded by natural features like mapped "blue line" streams? What level of protected species surveys are expected? Do these have seasonal requirements that would influence schedule? If the project is federal-aid, does the project team believe a Section 4(f) evaluation will be required?

Help Develop the Project Schedule

OES personnel review project schedules to determine if they include appropriate activities and durations. Typically, the Office of Program Control starts with a template schedule based on project type. The template then incorporates any schedule influences the GDOT PM may initially know. A draft schedule is provided to OES, and activities may be included or deleted based on knowledge of the project area.

One common activity considered during schedule development is the need for a Section 404 permit for impacts within waters of the US. A process called Local Coordination Procedures (LCP) helps inform resource agencies and the project team about the required steps to obtain permitting under Section 404. The LCP process documents the early coordination steps with the US Army Corps of Engineers (USACE) and the initial estimates of whether a project likely will qualify for a Regional Permit (RP) or require an Individual Permit (IP).

The most complex permit levels, a RP 35 and an IP, require a Practicable Alternatives Review (PAR) to consider alternatives. Steps required for the PAR begin early. If needed, it will be included in the Concept Stage schedule so that the agencies and OES have consensus on the project alignment and scope. All project schedules include environmental resource identification and technical studies activities. If a project is federal-aid, the

schedule will also incorporate the anticipated type of NEPA documentation, because schedules vary greatly depending on the NEPA document.

Participate in the Project Kickoff Meeting

Once the project baseline schedule is approved, OES should assign the Environmental Analyst and the Environmental SMEs to the project. These assignments should be updated in TPRO, a GDOT project management application. The PM will invite all environmental team members to the project kickoff meeting.

Concept Stage Activities

For federal-aid projects, the Concept Stage begins after Preliminary Engineering (PE) authorization. The goal of the Concept Stage is to develop the Concept Report. For state-funded projects, the Concept Stage requires many of the same considerations, but the Concept Report may follow an abbreviated format. Important environmental activities during this stage are detailed below.

Review the Project Justification Statement

The Project Justification Statement (PJS) should be available at or before the project kickoff meeting. Usually the PJS is developed by the Office of Planning. It should be reviewed by the Environmental Analyst and used, along with traffic and/or accident data, to develop the Need & Purpose (N&P) narrative and verify that the project has logical termini. Logical termini means that the project limits, or end points (termini), are sufficient to address the need for the project (logical).

For some projects, OES will need to work with the Design Manager to evaluate the N&P and the limits to ensure that FHWA agrees that the project has logical termini. State-funded projects that require a Section 404 permit follow a process with USACE similar to the FHWA process. As part of the permit application process, the USACE reviews each application for logical termini and independent utility to confirm that the project limits cover all likely areas with jurisdictional waters and adequately address the project's identified needs.

Review the Environmental Survey Boundary

The Environmental Survey Boundary (ESB) is an enclosed boundary shape which represents a conservative, concept-level approximation of the project's footprint. The design team should define the ESB so that it reasonably accounts for the width (including required right of way [ROW] and proposed easements, if applicable) and length (including extensions beyond "termini" for tie-ins) of the proposed project footprint. The proposed project footprint should account for staging (including on-site detours), demolition, drainage, erosion control, etc. to the extent practical given the known information at the time.

As one of the early PDP tasks, design should provide the environmental team members with the ESB. It will serve as the area that Environmental SMEs will survey for environmentally sensitive areas (ESAs) such as archaeology, history, ecology, public parks, and community

resources. The ESB is intentionally larger than the anticipated impact limits so that environmental fieldwork can be completed as early as possible and to reduce the need to resurvey for minor shifts in project alignment.

Conduct Early Coordination

As part of the environmental survey process, environmental team members complete an early coordination process where letters are sent to federal, state, and local agencies along with any other stakeholder that may be identified. The purpose of the letter is to notify the agency or stakeholder of the proposed project and to obtain any relevant information they may have about the project corridor.

At the end of an environmental survey, the Environmental SME that completed the survey will provide the PM and Design Manager with all ESA boundaries. These boundaries will be put on all applicable plan series and remain throughout the life of the plans unless changes or corrections are authorized by the Environmental SME.

Practicable Alternatives Review

During the Concept Stage and prior to the Concept Report approval, the Ecologist will work with design to determine if a Section 404 permit is anticipated. The type of permit can be anticipated in the early project stages based on the number of streams, wetlands, and open waters (described herein as Waters of the US or jurisdictional waters) identified within the project corridor and based on design's early estimate of potential impacts.

Most of GDOT's projects will either avoid jurisdictional impacts or qualify for a lower-tiered Section 404 permit. In 2018, the USACE Savannah District will issue Regional Permits (RPs) that cover most of GDOT project conditions.

Per the LCP, interagency consultation on alternatives will be initiated for major widening and new location projects. This will form the basis of the Practicable Alternatives Review (PAR) for projects requiring a RP 35 or an IP.

The PAR report is prepared collectively by the Ecologist and designer that provides an analysis of alternatives useful in minimizing harm to or avoiding jurisdictional waters. The report is sent to USACE and other agencies for review. The process typically includes Environmental SMEs and designer giving a presentation of the alternatives to the USACE and other agencies to discuss any questions or concerns. Since the PAR influences alignment decisions, the PAR process should be completed prior to Concept Report approval.

Concept Meeting

The PDP describes two Concept Meetings. An Initial Concept Meeting and a Concept Meeting. The purpose of the Initial Concept Meeting is to produce a high-quality concept for the project by doing the following:

- Organize GDOT's resources,

- Identify the core project team and environmental team members,
- Establish lines of communications and responsibilities between team members,
- Validate the PJS before working on the concept,
- Identify project risks along with reduction or mitigation strategies for team members,
- Gain a better understanding of the project corridor,
- Understand the environmental scope,
- Determine the anticipated public involvement approach,
- Identify information that is available,
- Define information that is needed to develop the concept,
- Review the project schedule, and
- Provide a transition between planning and design.

The Concept Meeting involves many of the same activities, but it also includes a review of the draft Concept Report.

The Environmental Lead should participate in both the Initial Concept Meeting and Concept Meeting and ensure the appropriate Environmental SMEs participate. For a project corridor with multiple historic resources, for example, the Historian should attend to participate in any engineering decisions that could impact those resources.

Concept Report Development

The PM and the Design Manager lead Concept Report development. Information included in the Concept Report includes: identification of anticipated permits; level of environmental documentation required; public involvement activities; and any unique environmental features that could influence the concept or alignment decision.

At this stage, public involvement activities should be identified, and public outreach may need to begin prior to Concept Report approval. Larger projects may require a detailed Public Involvement Plan (PIP) that includes multiple stakeholder meetings and public outreach through multiple concept development stages. For complex projects, a PIP should be produced that outlines the proposed environmental activities and dictates how those activities will be documented in the project record.

Public involvement activities often cross over into Preliminary and Final Design activities. Off-site detours may not be identified until later in the design process. Once identified, public outreach is required to gather information about how a detour will affect the community.

Concept Report Approval

Prior to Concept Report approval, the PM and the Environmental Lead need to ensure that all activities that have the potential to change a project's alignment are complete. Some activities that may affect the alignment include the PAR, public involvement, and environmental resource identification. The State Environmental Administrator, a signatory on the Concept Report, may decide not to sign the Concept Report if alignment-related activities are incomplete.

Preliminary Design Activities

Preliminary Design activities begin after Concept Report approval. The goal of Preliminary Design is to reach the Preliminary Field Plan Review (PFPR) and ultimately ROW authorization. Important environmental activities during this stage are detailed below.

Avoidance and Minimization Measures Meeting

Early in the Preliminary Design, the environmental team members start the Avoidance and Minimization Measures Meeting (A3M) Tracking List. The A3M Tracking List documents all avoidance and minimization measures incorporated into the plans and aids the project team in preparation for the A3M. While the A3M is typically conducted between environmental, design, and the PM, it may include other stakeholders if needed to make design decisions. The A3M process typically involves one meeting to evaluate engineering avoidance and minimization options. It occurs following environmental resource identification and design's development of preliminary cross sections.

Once the A3M process is completed and design develops plans showing the least damaging alternative, Environmental SMEs undertake completing their technical studies and agency coordination. During the A3M and while developing the technical studies, Environmental SMEs and the designers should evaluate constructability aspects for impacts. These impacts could include determining if rock jetties are needed for bridge construction, or the amount of vegetation clearing required for utility relocations in front of historic houses. Before committing to mitigation measures, coordination occurs between design, the PM, and the Office of Construction to ensure that environmental commitments can be fulfilled. Once technical studies and Assessments of Effect (AOE) are complete, the reports are distributed to the appropriate review agency for concurrence (e.g., State Historic Preservation Officer, USFWS).

Environmental Commitments Table

During the Preliminary Design, an Environmental Commitments Table (ECT)—also referred to as the "green sheet", is prepared by the Environmental Analyst with support from the Environmental SMEs. The ECT lists all required delineations (including buffers), plan notes, special provisions, permits and variance requirements, and other commitments (such as photos of historic properties or data recovery at archaeological sites).

Once completed, the Environmental Analyst routes the ECT to all Environmental SMEs to ensure that all commitments are correctly presented. The GDOT PM uses the ECT to

document that both the PM and Engineer of Record are in concurrence with all environmental commitments

The designers on the project use the ECT to create the Environmental Resource Impact Table (ERIT), a plan sheet in the general notes section of the construction documents. The ERIT includes all environmentally sensitive areas and permit requirements. The ERIT is created collaboratively between the environmental team and the designer; it dictates to the contractor the amount of impact that can occur while remaining in environmental compliance.

Environmental Documentation

In accordance with FHWA regulations, for federal-aid project, a NEPA document is required before ROW authorization and final design can begin. NEPA documents include Categorical Exclusions (CEs), Environmental Assessments (EAs), and Environmental Impact Statements (EISs). The type of documentation is based on project type and impact significance.

Although there is no similar state regulation, project baseline schedules for state-funded projects require the completion of environmental technical studies prior to ROW activities. Georgia Environmental Policy Act (GEPA) documents are only required for projects that are over $100 million in state funds or for non-roadway construction projects, such as land surplus projects above 5 acres. Three types of GEPA documents may apply (Type A, Type B, or Environmental Effects Report), with the level being based on the resource impact significance.

Preliminary Field Plan Review

The Preliminary Field Plan Review (PFPR) is conducted at the end of Preliminary Design with environmental team members, multiple other GDOT offices, and local stakeholders (including utility companies). The environmental team must review the plans for the following:

- Ensure the environmental resource delineations and the ERIT are correctly shown on the plans;
- Ensure all ROW, easement, and construction work is included within the ESB (if not, additional surveys and technical studies may be required);
- Ensure no ROW, easement, and/or construction work was added to an ESA (if so, additional technical studies may be required); and
- Be aware of any changes to laws, regulations, and new types of resources—such as endangered species—in the project area.

Resource delineations should be on all appropriate plan sheets. The assigned Environmental Analyst leads the environmental preparation efforts before the PFPR by circulating plans to the Environmental SMEs for review and comments. At the PFPR, the Environmental Analyst should discuss any comments. Following the PFPR, the Environmental Analyst should distribute any minutes that could lead to design changes near ESAs and begin coordinating with the environment team to address. The Environmental

Analyst will typically attend, but Environmental SMEs may attend as warranted. Following the PFPR, designers correct PFPR plans to address issues discussed at PFPR.

Final Design Activities

Final Design activities begin after the PFPR comments are addressed. Corrected PFPR plans form the basis for the Location and Design Report, Notice for Advertisement, and ROW plans. All of these are required for ROW acquisition. Final Design includes completing ROW acquisition (if needed) and letting the project to construction contractors for bid. Important environmental activities during this stage are detailed below.

Certification for Right-of-Way Authorization

For federal-aid projects, OES will coordinate with design to complete a Certification for ROW Authorization. The Environmental Analyst will review the ROW plans to ensure that all resource delineations are correctly shown and that the impacts reported in the technical studies and environmental documents match the plans. If everything is aligned, OES will complete the certification for ROW and ROW authorization can take place. If the project cannot be certified, it may require plan revisions or additional environmental activities. This could delay ROW authorization, depending on the revisions or environmental activities required. Thus the timely communication of project changes to all team members is critical.

Final Field Plan Review

Many of the same personnel and processes of the PFPR occur at the Final Field Plan Review (FFPR). OES will review this final plan set to confirm ESA boundaries are correctly shown on all plan series and that reported environmental impacts remain current. OES will review the environmental commitments and make sure the plans correctly address them as needed. Special provisions should be reviewed by OES, design, the PM, and construction, and should be included in the construction documents. At the FFPR, more finalized information is known so constructability issues and potential conflicts (e.g., utility relocations) must be evaluated by the project team to ensure environmental compliance. As with the PFPR, the Environmental Analyst will typically attend the FFPR with Environmental SMEs attending if warranted.

Preconstruction Environmental Commitments

During Final Design, the environmental members of the project team must address any commitments required to be complete prior to the start of construction. The commitments may include public involvement activities, archaeological site excavation, and permitting among others.

The environmental team will secure permitting requirements—specifically the Section 404 permit or buffer variances, if required. The applications for these permits/variances require plan submittals so impacts to ESA can be verified. Project designers must adhere to GDOT's Lockdown Plan Schedule so that OES can apply for these permits at the appropriate time before let. Post-lockdown design changes must be reviewed and approved by the Director of Engineering. Late changes will often result in letting delays.

Certification for Let

Certification for Let is OES's last review of the plans before letting the project to construction for contractor bids. This review includes ensuring that all preconstruction commitments are complete and that the plans adequately convey all environmental requirements. In addition, the plans are checked against the latest technical studies and environmental documents to ensure consistency.

An on-time certification is completed per the baseline schedule. If the baseline certification date cannot be achieved, the deadline for certification is 11 weeks before the Management Let date. To certify, design needs to provide OES with plans in time to ensure adequate environmental review and coordination. Open communication between environmental and design team members, both consultant and GDOT, is crucial to meeting milestones leading up to the certification.

Construction Activities

For complex projects, an Environmental Analyst may be assigned to ensure environmental commitments are being met by the contractor during the Construction phase. For all projects with environmental commitments, GDOT's Office of Construction and the GDOT PM must verify that all commitments have been met and provide documentation at the end of the Construction phase.

Design changes may be required during construction as unique conditions are encountered in the field or a better solution to a problem is determined. For areas close to ESAs, additional environmental activities such as technical studies, environmental documentation, a Section 404 permit modification, or acquiring additional mitigation credits may be required. Any changes to resources and impacts should be updated through technical studies and document reevaluations, if required. These updates also require updates to the ECT and ERIT to address any changes.