Oregon Department of Transportation

ODOT Guide to Linking Planning and NEPA Using the ODOT PEL Questionnaire

September 2021

This guide provides information that ODOT planners and environmental staff, working with Federal Highway Administration Oregon Division (FHWA OR Division), can utilize to develop and document a strategy to link transportation planning and NEPA processes using the ODOT Planning and Environment Linkages (PEL) Questionnaire as a framework. It is not intended to be a complete or authoritative reference for federal, state, and ODOT planning and NEPA regulations and guidance or a substitute for planning and NEPA experience.

What does it mean to link planning and NEPA?

Linking planning and NEPA is a project-level approach[1] to Planning and Environment Linkages (PEL). According to FHWA, PEL is a collaborative and integrated approach to transportation decision-making that considers benefits and impacts of proposed transportation system improvements to the environment, community, and economy during the transportation planning process (FHWA, Planning and Environment Linkages Fact Sheet, 2020). PEL can be used to create efficiencies in transportation project development, streamline project delivery, enhance public involvement, and improve relationships with partner agencies. In practice, PEL occurs in two ways:

1. **Integrated Planning**: Programmatic approach where multiple types of resources, including the land use system, transportation system, water resources system, and other natural and cultural resource systems are integrated and planned for collaboratively (coordinating long-range and corridor transportation plans with the conservation and resources management plans developed by federal and state resource agencies); and/or
2. **Linking Planning and NEPA**: Project-level approach that links transportation planning and the environmental review process in an effort to streamline environmental review by reducing or eliminating duplication of work in the planning and NEPA processes and improve information sharing and early consultation among state, federal, and resource agencies.

Integrated planning occurs at the statewide system and policy planning level when the objectives, vision, and policies for a statewide or regional system are being developed, before specific projects are identified for development (see Table 1). Therefore, while integrated planning can result in similar efficiency and relationship benefits, it is distinct from a project-level PEL approach that incorporates planning studies[2] and/or planning products (decisions and analysis)[3] in to the NEPA process. When this guide refers to PEL, it represents a project-level PEL approach that links a planning study and/or planning product to a NEPA process.

> ***"When this guide refers to PEL, it represents a project-level PEL approach that links a planning study and/or planning product to a NEPA process."***

[1]For the purposes of this guide, the term "project-level" refers to project in the context of project delivery, rather than planning.

[2]For the purposes of this guide, a "planning study" is any kind of corridor or subarea study, and a PEL study is any such planning study that is intended to inform or be directly incorporated into a NEPA process.

[3]As defined by 23 USC 168 (3), the term "planning product" means a decision, analysis, study, or other documented information that is the result of an evaluation or decision-making process carried out by a metropolitan planning organization or a State, as appropriate, during metropolitan or statewide transportation planning under section 23 USC 134 or 135, respectively.

> ***"Linking planning and NEPA can be described simply as performing and documenting planning activities in a way that allows them to inform or be directly incorporated into the NEPA process."***

Linking planning and NEPA can be described simply as performing and documenting planning activities in a way that allows them to inform or be directly incorporated into the NEPA process. For planning studies and products to be used during NEPA, they need to be based on multidisciplinary considerations and be documented in a way that meets NEPA requirements. They must also include public involvement and coordination with federal and state resource agencies and Native American Tribes. PEL is flexible and can be implemented in a variety of ways to meet the needs of differing circumstances. Specific requirements will vary by circumstance and will depend on the objectives of the PEL process (i.e. what type of planning study or product will be used and how in the NEPA process). This is discussed further under PEL Process, Objectives, and Authorities Used below.

When should I consider linking planning and NEPA?

Linking an ODOT planning process or product to NEPA would be beneficial at a detailed level of planning, such as during a facility or refinement plan. Other planning processes where linking planning and NEPA could be considered include feasibility studies, planning for a corridor or subarea with unknown future capacity needs, unknown priorities, or without identified construction funding; a project with known controversy that would benefit from early public and stakeholder involvement. In some instances, a regional or local TSP could incorporate elements useful to the NEPA process (see **Table 1**).

While not every facility and refinement planning process is appropriate for PEL, there are many different ways to link planning and NEPA and, therefore, many different circumstances in which it could be appropriate and beneficial to do so. The most common include:

- **Facility plan that includes a major project[4] likely to receive funding:** Facility and refinement plans[5] act as plans to guide subsequent decisions by local governments and ODOT about land uses, the street network, and access to state and local roads. However, these plans also apply system policies and standards to a specific area or segment of highway and determine potential solutions to address an identified problem. When a facility planning process includes a solution likely to receive federal funding and result in a major project, linking planning and NEPA should be considered.
- **Facility plan concurrent with project development:** In ODOT's experience, facility and refinement plans are often developed in conjunction with a specific improvement project that requires a NEPA document (ODOT, 2013). Under these circumstances, when a facility or refinement planning process is occurring concurrently with a project development process, linking planning and NEPA should be considered.

---

[4]In this context, major project means any project that is complex, controversial, and/or has the potential to significantly affect the quality of the human environment.

[5]ncludes IAMPs, corridor plans, sub-area plans, and highway segment management plans.

It is important to keep in mind that one of the primary benefits of PEL is to reduce duplication of effort between the planning and NEPA process. The PEL authorities (23 CFR Part 450 and 23 USC 168) allow various types of planning products to be adopted in NEPA, including but not limited to:

- Purpose and need;
- Preliminary evaluation (i.e. screening) of alternatives;
- Elimination of unreasonable alternatives
- Basic description of the environmental setting, analysis methods and assumptions, potential environmental effects, and mitigation requirements
- Need for tolling or other innovative financing;
- Other decisions and analysis including general travel corridor and modal choice; need for tolling or other innovative financing; travel demand and/or socio-economic growth forecasts.

These planning products are most likely to be useful when preparing an Environmental Assessment (EA) or Environmental Impact Statement (EIS) under NEPA[6] because EAs and EISs require a formal process to define Purpose and Need, screening and analysis of alternatives (including the potential environmental effects of each alternative) and agency and public involvement[7]. Therefore, PEL will be most beneficial when one or more of these elements can be conducted with a sufficient level of detail and adequately documented during the planning stage for use in a future EA or EIS. If the NEPA class of action is unclear, a PEL process can assist in making the NEPA class of action determination and documenting the rationale behind that determination.

Another important consideration for determining whether (and how) to utilize PEL is timing. Federal regulations stipulate that, to directly adopt planning studies or products in to the NEPA process, the planning product must be approved within the 5-year period ending on the date on which the information is adopted or incorporated by reference in a NEPA document[8]. If it will be more than 5 years between the end of the PEL study and the beginning of the NEPA process, planning studies and/or products may be able to guide, inform, or shape a future NEPA process. However, additional data may be needed to be supplement or be confirm during NEPA. Therefore, the time and cost of any PEL process should be carefully weighed against the future benefit. More information is provided under PEL Process, Objectives, and Authorities Used below.

---

[6]An EA is prepared when the potential environmental impacts of an action are not clearly understood (i.e. action that is not a CE and does not clearly require the preparation of an EIS). An EIS is prepared for actions likely to have significant adverse environmental impacts.

[7]The requirements for Purpose and Need and screening and analysis of alternatives are different for EAs and EISs. NEPA practitioners should be engaged in any discussions regarding a potential NEPA class of action and associated requirements.

[8]23 USC 168 (d)(10)

Table 1. PEL Opportunities by Planning Level in Oregon

Type of PEL	Planning Level	PEL Opportunities
Integrated Planning (Programmatic level)	Oregon Transportation Plan	• Large scale identification of environmental resources, areas of potential concern for impacts • Develop comprehensive strategies for avoidance, minimization and/or mitigation (e.g. corridor and watershed level approaches to stormwater management; wildlife habitat connectivity and preservation; wetland mitigation banking) • Achieve consensus with resource agencies and tribes[1] around transportation goals, policies, and priorities
	Modal and Topic System Plans	
	Regional and Local Transportation System Plans	
	Facility and Refinement Plans[2]	
Linking Planning and NEPA (Project level)	Regional and Local Transportation System Plans (with project)[3]	• Develop solutions that consider environmental constraints • Develop and include a Purpose and Need statement
	Facility and Refinement Plans (with project)[4]	• Determine the NEPA class of action • Develop and include a Purpose and Need statement, project goals and objectives • Define the preliminary range of alternatives • Eliminate unreasonable alternatives • Document information pertaining to issues that will be considered during NEPA, including a basic description of the environmental setting, analysis methods and assumptions, resource impacts, and mitigation requirements

[1] *Early public involvement and coordination with federal and state resource agencies and Native American tribes is an assumed PEL opportunity at all levels of planning.*
[2] *Includes IAMPs, corridor plans, sub-area plans, and highway segment management plans.*
[3] *When a TSP identifies a solution that is likely to receive federal funding and result in a major construction project.*
[4] *When the facility or refinement plan is conducted/prepared in conjunction with a project development process for an improvement project that will receive federal funding.*

When is linking planning to NEPA not recommended?

There are several circumstances in which PEL *does not* make sense, either from a timing, cost, and/or regulatory perspective.

ODOT does not recommend a formal PEL process for projects that are likely to be categorized as Categorical Exclusions (CEs) or Programmatic Categorical Exclusions (PCEs) under NEPA[9]. Projects that are classified as CEs or PCEs under NEPA do not require a formal process to define Purpose and Need, conduct a screening and analysis of alternatives, or public involvement. Therefore, the potential to realize efficiencies with a planning process in these instances are limited. As previously stated, a PEL process can also assist in documenting the rationale behind the NEPA class of action determination when it is not clear if a project requires an EA or EIS.

In addition, PEL should not be considered when a specific project is already in an advanced design phase and/or has identified construction funding. In these circumstances, the NEPA process should begin.

How do I conduct a PEL study and how should it be documented?

There is not one way to "do" PEL – practitioners can use a variety of authorities to implement PEL in a way that meets their individual needs (FHWA, 2020). PEL can range from a planning focused effort that considers just one or two elements of NEPA, such as determining logical termini or "fatal flaw" analysis of environmental issues, to a comprehensive PEL study with a strategy for full incorporation of the analysis and decisions into a NEPA document. Each PEL study will follow a unique process based on intended outcomes and will not necessarily include the same level of detail or information as another PEL study. Therefore, this guide does not provide prescriptive instructions for conducting a PEL study but instead provides information that ODOT planners and environmental staff, working with the FHWA Oregon Division, can utilize to develop and document a PEL strategy using the **ODOT PEL Questionnaire** as a framework.

The ODOT PEL Questionnaire is one way to capture "good documentation" of planning information and decisions to be utilized in the NEPA process. According to FHWA, good documentation includes (FHWA, 2011):

- Explaining the thought process underlying analytical conclusions and planning decisions, particularly when alternatives are analyzed and screened or eliminated;
- Describing the information used at the planning stage, including what that information is, how current or complete it is, and how reliable it is over time; and
- Documenting public and agency involvement.

NEPA practitioners and transportation planners should communicate to make sure there is mutual understanding of the documentation standards required and agree on the acceptable level of effort and documentation. The key to making a PEL process work is for NEPA practitioners and planners to collaborate and develop an agreed-upon process and documentation standards (FHWA, 2011).

---

[9]CE projects are actions which do not individually or cumulatively have a significant effect on the human environment and as such, based on past experience with similar actions, do not involve significant environmental impacts.

ODOT PEL Questionnaire

ODOT's PEL Questionnaire is an adaptation of a questionnaire jointly developed by the Colorado Department of Transportation and FHWA Colorado Division Office in order to ensure that planning information and decisions are properly documented to be utilized in NEPA. FHWA acknowledges processes and tools comparable to the PEL Questionnaire and sets forth criteria for identifying and recognizing equivalent approaches. The ODOT PEL Questionnaire meets these criteria (see Appendix A) .

The ODOT PEL Questionnaire is intended to be used as both a guidance and documentation tool; it provides a practical framework for identifying the work to be completed during a PEL study and can also be used to document transportation planning studies and/or products in a form that can be appended to a NEPA document or incorporated by reference.

The sections below correspond to the sections on the ODOT PEL Questionnaire and provide useful information for completing each section[10]. It is important to note that many PEL studies will not require completion of every section and the information needed to complete each section may vary. PEL project teams have the flexibility to conduct a PEL study or process that utilizes the entire ODOT PEL Questionnaire or a smaller, more focused planning effort that utilizes only the sections of it that are relevant to the effort.

Early coordination between ODOT planners, environmental staff, and the FHWA OR Division should determine the objective of PEL, which sections of the ODOT PEL Questionnaire are applicable, and the methods by which the information will be collected and analyzed. For this reason, the ODOT PEL Questionnaire should be considered in its entirety at the start of a PEL study and revisited throughout the process; it is not intended to be filled out solely "after the fact", when a PEL Study is complete. The PEL project team should start by reviewing the ODOT PEL Questionnaire in full and determining the objectives for linking the planning process to NEPA (see **PEL Process, Objectives, and Authorities Used** below).

The adoption or use of a PEL study or planning product in the NEPA process is subject to acceptance by FHWA, which will include a determination that all applicable statutory conditions and NEPA requirements have been met. FHWA will use the completed ODOT PEL Questionnaire to assist in determining if the planning study and/or product meets the PEL regulatory and/or statutory requirements and NEPA requirements. The questionnaire should be included in the PEL study as an executive summary, chapter, or appendix. When information requested in the ODOT PEL Questionnaire is included in the PEL study itself, simply reference the chapter, section, or page number that includes the information.

> ***"The ODOT PEL Questionnaire is intended to be used as both a guidance and documentation tool. It provides a practical framework for identifying the work to be completed during a PEL study."***

[10]*This guide provides information helpful to using the ODOT PEL Questionnaire in a general sense. Instructions for filling out specific lines of the Questionnaire are included in information bubbles in the Questionnaire.*

> ***"In cases where months or even years may have passed during or between the PEL study and the beginning of the NEPA process, detailed background information will help NEPA practitioners understand who was involved and where to locate documentation"***

Background

The background information serves as a brief summary of answers to 'who, what, when and where.' In cases where months or even years may have passed during or between the PEL study and the beginning of the NEPA process, this detailed information will help NEPA practitioners understand who was involved and where to locate the original documentation. The information could also be used for progress tracking, inquiry response follow-up, and cross referencing studies and projects.

Identifying the sponsor and study team members provide details as to who was involved and will provide opportunity for continuity in future phases. Taking advantage of the opportunities and benefits of a PEL process requires that planners, Environmental Project Managers (EPMs) or statewide NEPA Program staff (or both), are included in the PEL study team. When initiating a PEL process, planners and NEPA practitioners should collaborate closely and each should be responsible for providing input pertaining to their respective disciplines, including process and documentation requirements.

The description of the PEL study area should clearly represent the existing conditions, including the project limits, modes, number of lanes, shoulder, access control, and the nature of the surrounding environment. This ensures that future decision makers are aware of the nature and magnitude of potential natural, cultural or social impacts that might occur and could be useful for anticipating the nature and extent of future environmental studies.

The recent, current, or near future studies (i.e. air quality, ITS, demand management, or economic studies) support information sharing between proposed or anticipated components or phases of the study and anticipated studies or actions by others (FHWA, 2021).

Methodology

The methodology section of the ODOT PEL Questionnaire prompts the PEL project team to decide what part of the work will later be incorporated into subsequent NEPA efforts and how the work will meet standards established by NEPA regulations and guidance. This section should be completed for all PEL studies and should be considered early in the process.

Table 2. Determining PEL Authorities by Desired Outcome of PEL Process[1]

	Desired Outcomes	PEL Authorities[2]		NEPA Environmental Review Process
Considerations for every PEL: 1. Follow transportation planning process 2. Participation by federal and state resource agencies and Native American tribes 3. Opportunity for public review and comments 4. Use reliable and reasonably current data and reasonable scientifically acceptable methodologies 5. FHWA or FTA reviews as appropriate 6. Documentation	• Define Purpose & Need • Preliminary Screening of Alternatives and elimination of alternatives • Other planning decisions and analysis • Adopt planning decisions	23 USC 168	10 conditions in 23 USC 168(d) **ARE met** →	Adopt entire planning product or incorporate directly into NEPA, likely without additional information or analysis
			ARE NOT met →	Introduce planning product in NEPA process as information for further action
	• Eliminate alternatives from detailed analysis	23 USC 139(f)(4)(E)(ii)	Requirements in 23 USC 139(f)(4)(E)(ii) **ARE met** →	Eliminate unreasonable alternatives from detailed consideration in NEPA
			ARE NOT met →	Introduce planning product in NEPA process as information for further action
	• Planning studies - Purpose and need or goals and objectives - General travel corridor - General mode(s) - Preliminary screening of alternatives and elimination of unreasonable alternatives - Basic description of the environmental setting - Preliminary identification of environmental impacts and environmental mitigations	23 CFR 450.212 and 450.318, Appendix A	Conditions in 23 CFR 450 **ARE met** →	Use or incorporate by reference; additional content and analysis may be required to meet NEPA requirements
			ARE NOT met →	Introduce planning product in NEPA process as information for further action

[1]Table adapted from Figure 1 in report from FHWA PEL Peer Exchange. August 2019. Available at: https://www.environment.fhwa.dot.gov/env_initiatives/pel/publications/PEL_Peer_Exchange_DC_Aug2019.aspx

[2]Not all PEL authorities are included; only those most likely to be used in an ODOT PEL process and most relevant to this guide.

PEL Process, Objectives, and Authorities Used

The objectives of the project-level PEL will determine which PEL authorities to use and therefore what requirements must be met. **Table 2** provides information for using the desired outcomes of the PEL process to determine which PEL authorities to use. Note that "using" a PEL authority simply refers to meeting the conditions/requirements detailed in that regulation or statute so that the planning study or product can be used in the NEPA process as described in the regulation or statute. Multiple PEL authorities can be used together or they can be used individually.

Most ODOT projects (and most highway and transit projects in general) are likely to use two main sources of authority for adopting planning products for use in NEPA: the transportation planning regulations (23 CFR Part 450) and a separate authority established in a federal statute (23 USC 168).

- **Statutory Authorities in 23 USC 168:** Using the statutory authority in 23 USC 168 is sometimes referred to as "statutory" PEL. 23 USC 168 identifies 10 conditions that must be met in order for planning products to be incorporated in to the NEPA process. These conditions are more rigorous than the conditions that must be met when using the authorities in 23 CFR Part 450; however, when the 23 USC 168 conditions are met, the information from the transportation planning process is more likely to meet NEPA requirements and can likely stand alone, without further content, analysis, or rework[11].
- **Regulatory Authorities in 23 CFR Part 450:** Using the authorities in 23 CFR Part 450 (450.212(a)-(c) and 450.318(a)-(d), with Appendix A) is sometimes referred to as "regulatory" PEL. Using the authorities in 23 CFR Part 450 may be most appropriate when the 10 conditions in 23 USC 168(d) will not be met, but the objective is for the planning study to guide, inform, or shape a future NEPA process. In this situation, information incorporated from the transportation planning process will likely not be able to completely stand alone and will not contain all of the content or analysis required by NEPA. Data may need to be supplemented or reconfirmed during NEPA.

When determining the PEL objective(s), the PEL project team should not only consider what planning information, decisions, and/or analysis will be used during NEPA, but how they will be used; this will determine what requirements need to be met (i.e. the result of the PEL process will be incorporated into the NEPA document consistent with how it meets NEPA requirements). For example, if the PEL objective is to establish a Purpose and Need statement that can be directly adopted and/or incorporated by reference in the NEPA analysis using the statutory authority in 23 USC 168, the PEL study team will need to ensure, among other things, that cooperating agencies and other stakeholders will be actively and consistently involved and that the NEPA process will begin within 5 years of the PEL study. See **Appendix B** for case studies detailing hypothetical PEL study process and outcomes using statutory authorities versus regulatory authorities.

---

[11] The adoption or use of a PEL study or planning product in the NEPA process is subject to acceptance by FHWA. In addition, cooperating agencies must concur that all 23 U.S.C. 168 conditions have been met if a PEL study will be relied upon as the basis for the issuance of a project permit or approval.

NEPA Terminology/Language Used

There are various words or phrases used in the planning and environmental professions that bear weight or have legal standing. For example, the term 'Purpose and Need' has a specific definition and must meet certain requirements under NEPA. As noted under the **Background** section above, planning and NEPA practitioners should collaborate closely; a NEPA practitioner with knowledge of NEPA terms (language) should work with a planner with knowledge of planning terms to determine how the various terms and phrases will be used in the PEL process. This will ensure that all terminology is used appropriately and will not contradict or be misinterpreted in any future NEPA document.

PEL Decision-Making Process – Key Steps and Coordination Points

Documenting the key steps and coordination points along with the decision-makers and those who participated in the decision will provide a documented perspective of the planning decision process and justify the progression of the transportation planning needs into the development (NEPA) phase (FHWA, 2021).

Agency and Public Coordination

Early and continuing involvement of and coordination with applicable agencies, the public, and other stakeholders is an essential and required part of both the transportation planning and the NEPA process. Similarly, applicable agencies and the public should participate in the PEL study and decision-making process from start to finish. The PEL authorities include requirements for participation by and consultation with federal and state resource agencies and Native American Tribes, as well as opportunities for the public to review and comment. Planners and NEPA practitioners should work together closely to make sure that all applicable requirements for agency and public coordination are met as doing so will give greater validity to the results and decisions and make them more likely to be incorporated into a future NEPA process.

Purpose and Need

A typical ODOT facility or refinement plan includes purpose and/or problem statements that are similar in function to a NEPA Purpose and Need statement in an EIS. The purpose statement conveys the reasons and context for preparing the facility plan while the problem statement serves as the basis for developing alternatives evaluation criteria and helps establish the benchmarks by which the plan's success is measured (ODOT, 2013). Similarly, the NEPA Purpose and Need is essential for establishing a basis for the development of the range of reasonable alternatives because an agency can dismiss, without detailed study, any alternative that fails to meet the project's Purpose and Need. Therefore, a planning process including and/or based on a detailed Purpose and Need has the potential to reduce or even eliminate time spent developing a Purpose and Need during the NEPA process. A PEL Purpose and Need does not have to be developed to the same level of detail as a Purpose and Need developed for a NEPA document. The transportation planning process can shape the Purpose and Need in the NEPA process in many ways, including (AASHTO, 2016):

- defining overall policies for the state or metropolitan transportation system, such as a policy of reducing congestion, increasing transit ridership, or expanding tolling;
- defining the complementary roles of different modes within the transportation system, potentially including specific corridors within which individual modal improvements will be made;
- establishing performance measures and performance targets (e.g., for congestion and safety), which can be used as benchmarks for determining the need for transportation improvements;
- designating specific projects as priorities for the state or region;
- designating the funding sources to be used for individual projects (e.g., tolling);
- establishing economic development and growth priorities, which may shape travel forecasts; and;
- developing regional travel demand forecasts, which may help to identify and support the need for individual projects.

However, if a Purpose and Need is developed in a manner consistent with what is required by NEPA, there will be less need to revisit it during the NEPA process. If the conditions in 23 U.S.C. 168 will be met, the Purpose and Need may be accepted in the NEPA document 'as is'. Thorough documentation of the development of the Purpose and Need is a critical element of the PEL process so that the decisions can be used in a future NEPA process. The Purpose and Need section of the ODOT PEL Questionnaire identifies key process and documentation considerations.

A NEPA Purpose and Need should focus on transportation-related needs, stating the core transportation problem(s) to be addressed expressed as a desired transportation outcome. The need for the project should be quantified, to the extent possible. In addition, any action evaluated under NEPA must have logical termini and independent utility[12] and cannot restrict the consideration of alternatives for other reasonably foreseeable transportation improvements. Therefore, it is critical that the Purpose and Need is written so that alternatives have logical termini and independent utility and is broad enough to allow for consideration of more than one alternative. FHWA NEPA regulations require identification and justification of logical termini and independent utility and a PEL process can provide this information for use in the NEPA process.

In addition to the transportation-based Purpose and Need, both planning and NEPA documents often identify goals and objectives (or equivalent terminology). A PEL study can also include goals and objectives (although it is not required). Project goals and objectives consider non-transportation factors and reflect key issues that will be addressed beyond the transportation issue identified in the Purpose and Need. The goals and objectives can include broad community and environmental objectives and can also be used to capture local agency and stakeholder priorities and concerns.

---

[12] *Independent utility and logical termini mean that a project has rational endpoints and would be functional even in the absence of other projects in the area.*

Alternatives

From a planning perspective, the purpose of an alternatives analysis is to analyze existing or future no build needs or deficiencies in order to develop and evaluate solutions to those needs or deficiencies. In project development, NEPA regulations require an EIS[13] to "evaluate reasonable alternatives to the proposed action" and "discuss each alternative considered in detail, including the proposed action, so that reviewers may evaluate their comparative merits". Transportation facility-level planning typically involves evaluating and then carrying forward several alternatives into the NEPA process as recommendations with a preferred alternative then being selected during the NEPA process[14]. Therefore, one of the objectives of a PEL process linking planning and NEPA is often to incorporate alternatives decisions. This includes evaluation criteria (i.e. screening), identification of a preliminary range of alternatives, or eliminating unreasonable alternatives from further consideration in NEPA.

The alternatives development and evaluation process is similar for both planning and project development (NEPA), with the main difference being the level of detail of the analysis. This process is generally tiered, with increasing levels of detail included at each stage of alternatives development and evaluation. Initial alternatives are usually filtered using a "fatal-flaw" analysis which involves comparing alternatives against the Purpose and Need and minimum design standards. The remaining alternatives would then be advanced to the next level of evaluations based on additional criteria. Alternatives are typically refined, combined or new ones created through this process. In order to use the results of a PEL alternatives development and evaluation process in a future NEPA document, it would also need to meet the requirements of NEPA and the conditions of the PEL authority or authorities being used. ODOT's Analysis Procedures Manual (TPAU, 2020) and National Environmental Policy Act, Environmental Impact Statement Template (FHWA and ODOT, 2010) can be referenced for more information about how to conduct an alternatives development and evaluation process. (See also **Where can I find additional guidance?**).

The Alternatives section of the ODOT PEL Questionnaire identifies key process and documentation considerations for a PEL alternatives development and evaluation process. Additional information on these considerations is provided below.

Evaluation Criteria

Evaluation criteria are used to screen alternatives and compare them against each other. Evaluation criteria should be comprehensive enough to address all of the factors that are relevant to evaluating the reasonableness of alternative, including the ability of the alternatives to meet the Purpose and Need. The evaluation criteria will change based on the level of detail that the alternative evaluation process is in. The "fatal flaw" analysis is a first step that eliminates alternatives that do not meet the Purpose and Need or have fatal flaws. These criteria are usually described as pass/fail measures rather than quantitative measures. Later levels of evaluation are also rooted in the Purpose and Need, but are more precise and quantitative and could include criteria based on public input, environmental impacts, or be operational based. Evaluation criteria should be readily explainable, quantifiable, and data driven (TPAU, 2020).

[13] An EA is required to discuss alternatives but is not required to evaluate in detail all reasonable alternatives.

[14] An EIS is required to consider "all reasonable alternatives" while an EA is required only to include a "brief discussion" of alternatives; therefore, an alternatives screening for an EA is less extensive than for an EIS.

Alternatives Considered

Initial concepts or preliminary alternatives should reflect the full range of possible approaches to meeting the Purpose and Need and should be developed to respond to identified transportation needs, to avoid sensitive resources, and be consistent with federal, state, and ODOT directives. In addition, the preliminary alternatives should be coordinated with, and reflect input from, agencies, the public, and other stakeholders. A "No Action" alternative must be included as a baseline for comparison, even if it does not address the Purpose and Need. Similarly, for proposed actions that may require a land use goal exception or impact Section 4(f) properties or wetlands, development of an "avoidance" alternative may be necessary, even if it does not address the Purpose and Need (ODOT F. a., 2010).

Alternatives Screened Out / Eliminated from Further Consideration

An alternative that does not meet the Purpose and Need is, by definition, unreasonable, and for that reason, it can be eliminated from detailed analysis in the NEPA process, as long as the rationale for doing so is documented. Other valid reasons for eliminating an alternative include, but are not limited to: a major land use goal exception that cannot be achieved, and/or having insurmountable impacts that cannot be mitigated. The main point is that there should be documented reasoning, based on the evaluation criteria, why alternatives identified the PEL process are not to be carried forward into NEPA for future consideration. As described under **PEL Process, Objectives, and Authorities Used** above, each of the PEL authorities allow for the adoption of alternatives screening decision and/or the elimination of alternatives in a PEL process if certain conditions or requirements are met. In some cases, this includes concurrence by cooperating agencies, which should be thoroughly documented.

Alternatives Recommended for NEPA Analysis

A PEL process does not result in the selection or recommendation of a preferred alternative; that is done during the NEPA process. However, alternatives that are still considered reasonable after an evaluation process are advanced to the NEPA process for further analysis. PEL documentation should describe the features of the alternatives that are recommended to be advanced and any assumptions made in their development.

Planning Assumptions and Analytical Methods

According to FHWA, the points of contention in many planning and NEPA studies, raised by special interest groups or project opposition, have been focused on the planning assumptions and analytical methods used. Therefore, the documentation of the currency and the adequacy of the analytical tools are important as the basis or foundation of the PEL results and, ultimately, the NEPA decisions (FHWA, 2021).

Resources

Planning studies will generally address the context and some of the potential impacts to resources associated with proposed transportation improvements. These can be valuable inputs to the discussion of the affected environment and environmental consequences during NEPA analysis and can be included in a PEL process. Typically, a PEL study documenting the existing environment and potential impacts to resources will not be detailed or current enough to meet NEPA standards and may need to be supplemented during the NEPA process (FHWA, 2011).

The scope of resource identification and discussion of the potential direct, indirect, and cumulative effects on those resources will vary depending on the type of and reason for the PEL study. The extent to which resources are addressed in a PEL process should be balanced with cost and timeframe considerations. In most cases it will make sense to document existing conditions, identify resources that could require avoidance or minimization of impacts, and frame up the level of analysis that will be required in the NEPA process, including identifying resources that could have lengthy permitting or approval processes.

For each resource reviewed during the PEL process, the ODOT PEL Questionnaire should be used to document the level of detail and the method of review, as well as issues that need to be considered and how the data provided will be supplemented during NEPA. It should also document known resources that were not reviewed in the PEL study and if they must be considered during the NEPA process.

Miscellaneous

The PEL Questionnaire concludes with 3 questions pertaining to miscellaneous issues that may be addressed during a PEL study (FHWA, 2021):

- **Cumulative Impacts** – Most PEL studies will not evaluate cumulative impacts. However, when scenario planning efforts are undertaken by a PEL, the data can be very important to the NEPA study and should be documented.
- **Planning-Level Mitigation Strategies** – Traditionally, most mitigation has been based at the project level; however, the transportation planning regulations (23 CFR 450) extend the mitigation requirement into planning. Agencies can consider mitigation activities on a broader scale than individual projects may allow. This offers agencies the opportunity to identify activities that have the greatest potential to protect, restore, and enhance the environmental factors affected by the plan.
- **Other issues project team should be aware of** – This question acknowledges time lags and personnel changes that often occur between a PEL study and a NEPA process. It allows knowledge and additional information collected during the PEL to be passed forward.

Where can I find additional guidance?

This guide is not a substitute for federal, state, and ODOT planning and NEPA regulations and guidance and planners and NEPA practitioners should be responsible for providing input pertaining to the requirements of their respective disciplines. The following are additional resources that can be used to assist in developing and implementing a PEL strategy:

- **ODOT PEL website** – https://www.oregon.gov/odot/Planning/Pages/Planning-and-environment-linkages.aspx
- **FHWA PEL website** – The FHWA PEL website includes extensive information regarding PEL, including implementation guidance and best practices and training webinars.
- **ODOT NEPA Manual** – The ODOT NEPA manual compiles detailed information about environmental issues, conducting analyses and preparing documents to comply with NEPA.
- ***National Environmental Policy Act, Environmental Impact Statement Template*** – ODOT's NEPA EIS Template provides the framework for discussion expected to be contained within EIS documents produced in Oregon. It can be referenced for more information regarding important NEPA considerations when a planning study or product will be used to inform or incorporated into a future EIS document.
- **Analysis Procedures Manual, Version *2 (October, 2020)* (APM)** - ODOT's APM provides a comprehensive source of information regarding current methodologies, practices and procedures for conducting analysis of ODOT plans and projects. Chapter 10 of the APM provides guidance on facility level alternatives analysis for corridor plans, refinement plans, and project development with or without NEPA involvement and is based on an adaptation of the EIS alternative development and evaluation process. The APM can be referenced for more information about how to conduct a PEL alternatives development and evaluation process.

How is PEL funded?

PEL offers flexibility in funding. Planning funds, including Metropolitan Planning (PL), State Planning and Research (SPR), and Surface Transportation Program Block Grant (STPBG) funds, can be used for aspects of PEL studies, including corridor and feasibility studies, which can be used to accelerate project delivery (FHWA, 2020). Some "project" funds can also be used for PEL activities. More information on potential PEL funding sources is listed below (FHWA, 2011). Eligible uses of any other Federal Aid Fund Source should be discussed and confirmed with the FHWA OR Division office.

- **Metropolitan Planning (PL):** FHWA planning funds designated for MPOs under 23 U.S.C. § 104(f) are available to MPOs in order to carry out the metropolitan transportation planning process required by 23 U.S.C. § 134, including development of metropolitan area transportation plans and TIPs. Eligible activities include conducting inventories of existing routes to determine their physical condition and capacity, determining the types and volumes of vehicles using these routes, predicting the level and location of future population, employment, and economic growth, and using such information to determine current and future transportation needs.

- **Statewide Planning and Research (SPR):** FHWA planning funds designated for states under 23 USC § 505(a) are available to states in order to carry out the statewide planning process required by 23 USC § 135. Eligible activities include engineering and economic surveys and investigations, the planning of future highway programs and local public transportation systems and the planning of the financing of such programs and systems, including metropolitan and statewide planning under § 134 and § 135 [of 23 USC], and studies of the economy, safety, and convenience of surface transportation systems and the desirable regulation and equitable taxation of such systems. Some confusion has been expressed over just how far a PEL study is able to proceed using SPR or PL funding. Because both of these programs are tied to planning and not project development, the point where planning ends and project preliminary engineering begins is a critical discussion that needs to occur. Any general inventory data, system-wide level data collection or analysis and how they would be applied to the corridor (no specific alternative selected) would be considered planning. Publishing the Notice of Intent (NOI) and beginning NEPA would be considered a project-level activity and appropriate for project funds.
- **Surface Transportation Program (STP):** While typically thought of as "project" funds this most flexible FHWA funding source may also be used for surface transportation planning in accordance with 23 U.S.C. § 133(b)(7).
- **National Highway System (NHS):** While typically thought of as "project" funds, this funding program may be used for transportation planning activities associated with the NHS in accordance with 23 U.S.C. § 103(b)(6)(E).

References

AASHTO. (2016). AASHTO Practicioner's Handbook 07: Defining the Purpose and Need and Determining the Range of Alternatives for Transportation Projects. Center for Environmental Excellence by AASHTO.

FHWA. (2011). Guide on Using Corridor and SubArea Planning to Inform NEPA.

FHWA. (2020, August). Planning and Environment Linkages Fact Sheet. Retrieved from FHWA Environmental Toolkit, Planning and Environmet Linkages: https:// www.environment.fhwa.dot.gov/env_initiatives/pel/pel_fact_sheet.pdf

FHWA. (2021). FHWA Initiatives to Accelerate Project Delivery. Retrieved from Questions and Answers about Using the National PEL Questionnaire: https:// www.environment.fhwa.dot.gov/env_initiatives/pel/pel_qa_howto.aspx

ODOT. (2013, April). ODOT Interchange Area Management Plan Guidelines.

ODOT, F. a. (2010). National Environmental Policy Act, Environmental Impact Statement Template.

TPAU. (2020). Analysis Procedures Manual, Version 2. Salem: ODOT.

Appendix A

Criteria Identification Table

FHWA Criteria for Determining PEL Questionnaire Equivalents		
Criterion #	**Criterion**	**How Criterion is Met**
Criteria 1	The equivalent should be institutionalized within the department (i.e. it is a formal process or tool available statewide).	The equivalent (i.e. the ODOT PEL Questionnaire and the *ODOT Guide to Linking Planning and NEPA Using the ODOT PEL Questionnaire*) was created with input from FHWA, all 5 ODOT regions, and statewide discipline representatives. The equivalent was formalized in September 2021 and is available for statewide use on the ODOT PEL website.
Criterion #	**Criterion**	**Section of ODOT PEL Questionnaire and/or Guidance that Addresses Criterion**
Criteria 2	*The equivalent **must** provide information on how to consider and document the following:*	
2A	The early and continuous coordination with Federal, Tribal, State, and local transportation, environmental, regulatory, and resource agencies.	ODOT PEL Questionnaire sections: Agency and Public Coordination section Purpose and Need section Alternatives section *ODOT Guide to Linking Planning and NEPA Using the ODOT PEL Questionnaire*
2B	Coordination efforts with the public and stakeholders.	ODOT PEL Questionnaire sections: Agency and Public Coordination section Purpose and Need section Alternatives section *ODOT Guide to Linking Planning and NEPA Using the ODOT PEL Questionnaire*
2C	Description of planning scope, vision statement, and steps needed to scale the vision statement to a project-level purpose and need statement.	ODOT PEL Questionnaire sections: Methodology section Purpose and Need section *ODOT Guide to Linking Planning and NEPA Using the ODOT PEL Questionnaire*
2D	Alternatives that were considered, selected and rejected; criteria and process used for selecting and rejecting alternatives.	ODOT PEL Questionnaire sections: Alternatives section *ODOT Guide to Linking Planning and NEPA Using the ODOT PEL Questionnaire*
2E	Explanation of planning assumptions, including forecast year, traffic volumes, policy, and data as well as consistency of those planning assumptions with the long -range transportation plan.	ODOT PEL Questionnaire sections: Planning Assumption and Analytical Methods section *ODOT Guide to Linking Planning and NEPA Using the ODOT PEL Questionnaire*

Appendix B

Federal PEL Examples

ALTERNATIVES

BACKGROUND

PEL is a valuable tool for creating efficiencies in the transportation project development process that supports agencies' efforts to accelerate project delivery. PEL represents a collaborative and integrated approach to transportation decision-making that considers benefits and impacts of proposed transportation system improvements to the environment, community, and economy during the transportation planning process to inform the environmental review process.

This case study provides a hypothetical example of how the State Department of Transportation (DOT), West Sound Regional Council (WSRC), and the Metropolitan Planning Organization (MPO) for the West Sound region used PEL to identify a preliminary set of alternatives during the planning process that could be carried forward into the National Environmental Policy Act (NEPA) process.

ENVIRONMENTAL CONTEXT

The West Sound region is located between two mountain ranges that support a diverse ecosystem. Source: 123RF

The geographic features of the West Sound region, located between two mountain ranges and bisected by its name-sake, make for a remarkable setting and support a richly diverse ecosystem. The region's forests, wetlands, maritime waterways, and fisheries are natural resources that serve as key foundations for the region's growing economy, and sustaining the environment is important for maintaining a high quality of life in the region. Although the region's setting and resources make for an ideal location for a city, the topography limits lands suitable for development and imposes complex and often expensive infrastructure requirements.

PLANNING CONTEXT

PLAN2040, developed through a collaborative process among agencies and stakeholders, serves as the long-range growth management, environmental, economic, and transportation strategy for the West Sound region. It combines public commitment to environmental sustainability and regional growth management with the economic strength and efficient transportation facilities and infrastructure necessary to support that vision. It identifies the goals the community hopes to achieve by 2040, looks ahead to identify issues that could impede those goals, and strategizes ways to accommodate the projected job and population growth while preserving the natural environment.

Key themes shaping the community goals identified in PLAN2040 are environmental preservation, land use strategies, and sustainable transportation:

- **Environmental Preservation**: The region will care for the natural environment by protecting and restoring natural systems, conserving habitat, improving water quality, reducing greenhouse gas emissions and air pollutants, and addressing potential climate change impacts.
- **Land Use Strategies**: The region will focus growth within already urbanized areas to create walkable, compact, and transit-oriented communities that maintain their unique character.
- **Sustainable Transportation**: The region will have a safe, clean, integrated, sustainable, and

highly efficient multi-modal transportation system that supports the regional growth strategy, promotes economic and environmental vitality, and contributes to better public health.

For many years, there has been discussion about growth and land use in the region, especially in the South Avenue corridor. The South Avenue corridor is experiencing commercial growth and development. Thus, congestion and transit reliability issues are worsening. In part due to the information in PLAN2040, the State DOT decided to form a PEL study team (consisting of the State DOT, the West Region Transit Authority, WSRC, Federal and state resource agencies, the Federal Highway Administration (FHWA), and the Federal Transit Administration (FTA)) that identified the purpose and need for a transportation improvement project in the South Avenue Corridor as addressing increased congestion by 2045, reliability, safety, increased travel demand due to population and employment growth, and insufficient multimodal system linkages.

Because there was a lack of information and clarity about potential alternatives, the PEL study team conducted a PEL corridor study during the transportation planning process, with the goal of determining the general modes of transportation.

PLANNING ACTIVITY

The PEL study team decided to use PEL to conduct a corridor study that fully integrates the transportation planning and the environmental review processes. The PEL study considered the conditions of the various PEL authorities early in the process to ensure that the information collected and decisions made could be used to inform subsequent environmental studies. The team worked to ensure the corridor study was sufficiently comprehensive, accurate, and integrated with the statewide and metropolitan planning processes, while engaging appropriate Federal and state resource agencies, Indian tribes, and the public in consultation, as appropriate. The PEL study team used a broad multidisciplinary consideration of systems-level or corridor-wide transportation needs.

Because work on the South Avenue corridor could affect the human and natural environment, and because the PEL study had not decided which PEL authority would be preferable, the team provided public notice that a multimodal team was undertaking the corridor study and that the products that would result from the study may be adopted during a subsequent environmental review process.

The corridor study focused on broad issues associated with various modes of transportation. The modes considered in this corridor study included:

- Expanding bus routes;
- Modifying existing transit routes into express routes;
- Extending light rail service;
- Constructing a subway;
- Establishing bus rapid transit;
- Establishing street car service;
- Expanding existing bike paths; and
- Widening existing highways.

The South Avenue corridor study included considerations for bus routes and bike paths. Source: 123RF

The first phase of the corridor study used GIS data and other existing information to analyze the overall feasibility of improvements to the corridor. The feasibility analysis also included determining whether

the regulatory (23 CFR 450.212(a)-(c) and 450.318(a)-(d) with the Appendix A of 23 CFR 450 guidance) or statutory (23 U.S.C. 168) approach to PEL should be used, taking into consideration the differing conditions for each approach. Although the regulatory approach would allow the corridor study to inform the project's purpose and need statement and evaluation of preliminary alternatives, the statutory approach could be used in the planning process to fully develop the purpose and need and eliminate unreasonable alternatives, which could then be adopted and/or incorporated by reference during the subsequent environmental review process. The PEL study team thoroughly documented its evaluation criteria, coordination, and planning product decisions. The results of the first phase of the corridor study were made available for public review and comment through several public workshops, and any comments received were documented for the next phase.

The study team conducted several public workshops as part of the corridor study. Source: 123RF

In the second phase of the corridor study, the PEL study team seamlessly continued public involvement and coordination. They performed a more detailed analysis of the corridor conditions, existing issues, and possible modal solutions. The PEL study team requested and held a coordination meeting with environmental, regulatory, and resource agencies with jurisdiction within the study area, to consider and concur on the purpose and need for the project. The PEL team also coordinated with federally recognized tribes.[1] The PEL study team included local jurisdictions and major modes of transportation as a subcommittee. The agencies represented included the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service, the U.S. Forest Service, and the state historic preservation office. The PEL study team continued to sufficiently document the analysis criteria and process, as well as the input received from the coordination meetings.

POSSIBLE OUTCOME #1

The South Avenue corridor project remained a fully funded, high priority project, as part of the transportation planning process (and followed the 23 U.S.C 139(f)(4)(E) and 23 U.S.C. 168 approaches).

During the transportation planning process, the PEL study team used the purpose and need established during the corridor study and concurred upon by the environmental, regulatory, and resource agencies to move forward with identifying transportation modes as preliminary alternatives and eliminating unreasonable alternatives. The PEL study team wanted to allow for the adoption of planning products (i.e., purpose and need, preliminary identification of alter-natives, and elimination of unreasonable alternatives) from the corridor study directly into the NEPA document during the targeted two-year environmental review schedule. Because the corridor improvements remained a priority to local decision makers, the PEL study and the resource agencies were fully engaged and agreed to cooperate during planning the planning process. Both

[1] Tribal Consultation Guidelines. Available at https://www.environment.fhwa.dot.gov/env_topics/tribal/tribal_consultation_guidelines.aspx.

the PEL study team and the resources agencies decided that they were willing and able to meet and achieve the conditions of the 23 U.S.C. 168 and 23 U.S.C 139(f)(4)(E) approaches.

The PEL study team included a multimodal team that ensured that the purpose and need and elimination of unreasonable alternatives were developed and fully integrated into the transportation planning process.[2] By following this process, the existing WSRC planning processes could be used in the subsequent environmental review process. This process included freight, bicycle and pedestrian, and broad multidisciplinary analysis and subcommittee input to incorporate consideration of systems-level or corridor-wide transportation needs and potential effects.

The PEL study team was able to eliminate unreasonable alternatives, such as construction of a subway and establishment of bus rapid transit, because they did not meet the established purpose and need. The elimination of unreasonable alternatives analysis during the corridor study was documented in sufficient detail to support the decision to move forward with alternatives for expansion of pedestrian and bike paths, highways, street car routes, and bus routes. These multimodal alternatives all met the purpose and need and responded to the various constituencies involved in the project corridor, setting the stage for a thorough alternatives analysis in the subsequent environmental review that weighed each alternative in a fair and balanced manner. All analyses or studies used to eliminate alternatives from detailed consideration were made available to the public and participating agencies during the NEPA scoping process and were reasonably available during comment periods. Upon initiation of the environmental review process the project sponsor coordinated with FHWA/FTA for publication of the Notice of Intent (NOI) in the Federal Register. The NOI announced the preparation of a NEPA document for the project that would include the limited alternatives. Having met the requirements of 23 U.S.C. 139(f)(4)(E), the lead agency adopted the analysis and decisions documenting the elimination of alternatives.

POSSIBLE OUTCOME #2

The South Avenue corridor project lost funding due to changing priorities and was delayed to later program years (using the 23 CFR 450.212(a)-(c) and 450.318(a)-(d), with the Appendix A of 23 CFR 450 guidance, approach).

Due to the high cost of some of the alternatives proposed, the project is no longer considered high priority project during the transportation planning process, and some of its funding has been subsequently reallocated to other projects. Further, the PEL study team was unable to gain internal consensus on the project's purpose and need. However, the PEL study team determined that a more detailed study was necessary to move forward to identify modal alternatives and eliminate unreasonable alternatives. The additional study has helped to identify a reasonable range of alternatives to solve the noted transportation challenges and potentially regain support for the project so that it could be programmed for funding.

The PEL study team wanted to incorporate by reference or use the documents produced from the South Avenue corridor study into the subsequent environmental study. The planning products from the corridor study would inform the purpose and need, and support the elimination of unreasonable alternatives (or the preliminary identification of alternatives) in the NEPA document.

[2] 23 U.S.C. 134 and 135, and implementing regulations at 23 CFR Part 450.

The PEL study team and resource agencies agreed that the regulatory approach would be beneficial for the project because it would allow for early analysis to further develop the purpose and need that could be used to inform and support identification of alternatives and modes.[3] Planning products from the corridor study could also be incorporated by reference to support the elimination of unreasonable alternatives during NEPA.

The agencies agreed that the project would not be able to move forward without additional information, such as more in-depth knowledge about the project need, the depth of public controversy or public commitment to environmental sustainability and regional growth management, and how this affected the project alternatives. Further analysis was needed to determine if there was sufficient economic growth to support the different pro-posed future transportation facilities. The PEL study team needed additional performance management data and analysis that would contribute to establishing or evaluating the purpose and need and reasonable alternatives based on regional system performance.

The PEL study team provided the public with ongoing opportunities to review the progress of the corridor study with a reasonable opportunity to comment, which was integrated into the metropolitan transportation planning process. Because of the rapid growth on the corridor, sufficient and comprehensive documentation of land use decisions was also needed.

The PEL study team determined that these should be documented in a form that would be identifiable and available for review during the NEPA scoping process. The PEL study team committed to documenting the analysis in a manner that allowed for direct reference in the NEPA process. This was accomplished with FHWA's and FTA's continued oversight and review of the information.

During NEPA, the lead agency for the project ensured that all the documents for the analysis of elimination of alternatives, that were to be incorporated by reference were ''reasonably available for inspection by potentially interested persons within the time allowed for comment.''[4] All analyses or studies were made available to the public and participating agencies during the NEPA scoping process and were reasonably available during comment periods. Incorporated materials were cited in the NEPA document and their contents briefly described, so that the stakeholders and the public reviewing the documents could understand why the document was being cited and knew where to look for further information. To the extent possible, the documentation included official actions such as decisions by the MPO, State DOT, or public transportation operator and/or correspondence within and among the organizations involved in the transportation planning process regarding major modes of transportation.[5]

[3] 23 CFR 450.212(a)-(c) and 450.318(a)-(d) and Appendix A of 23 CFR Part 450.

[4] 40 CFR 1501.12.

[5] See, e.g., Appendix A of 23 CFR Part 450.

PLANNING STUDIES

BACKGROUND

PEL is a valuable tool for creating efficiencies in the transportation project development process that supports agencies' efforts to accelerate project delivery. PEL represents a collaborative and integrated approach to transportation decision-making that considers benefits and impacts of proposed transportation system improvements to the environment, community, and economy during the transportation planning process to inform the environmental review process.

This case study provides a hypothetical example for how a State Department of Transportation (DOT) could conduct a PEL study for a scenario with sensitive resources, potential environmental constraints, and multimodal considerations with the potential for many alternative solutions. PEL studies are developed with the stated purpose of producing planning analyses and decisions that can be adopted and/or incorporated into subsequent project-level environmental reviews. This can be used when sensitive resources are known to be present, but additional information is needed to avoid and/or minimize environmental effects or when a future project is complex. This can be done by conducting early screening and identification of transportation and land use planning goals. By analyzing environmental data, as well as transportation and land use planning information, transportation agencies can screen planning-level decisions, such as the selection of the general travel corridor or mode choice, or their impacts on recreational areas, wetlands, watersheds, or sensitive habitats, for example. Knowing the potential environmental effects early in the planning process provides agencies the opportunity to modify the proposed project to avoid impacts and, for unavoidable impacts, develop more effective and sustainable mitigation strategies that achieve both environmental and transportation objectives.

PLANNING CONTEXT

Route 1 is a two-lane non-divided state highway connecting two medium-sized towns, Greenville and Stilton. A U.S. Fish and Wildlife Service Refuge is situated on one side of the road and Rey State Park is on the other side for most of its length. The population and job growth in Greenville and Stilton has created development pressure on those public lands, as well as increased traffic volumes and congestion along the corridor. In addition to through-travel between the two towns, both Rey State Park and the wildlife refuge attract vehicular, bicycle, and pedestrian traffic, which use the three-foot shoulder along Route 1 to access the refuge and park entrances. This traffic has also increased, further contributing to intermittent congestion and community safety concerns. Within a five-year period, State DOT safety division data show a disproportionate rate of traffic crashes along Route 1 within the wooded segment between Greenville and Stilton: five of those crashes involving motorized vehicles only (two fatal, three critical), four crashes involving vehicles and bicycles or pedestrians (one fatal, three critical), and two involving vehicle and wildlife conflict (no human fatalities, two critical). Community groups and local elected officials representing people who walk and ride bicycles along the corridor have complained to the State DOT about the lack of available safe pedestrian and bicycle accommodations.

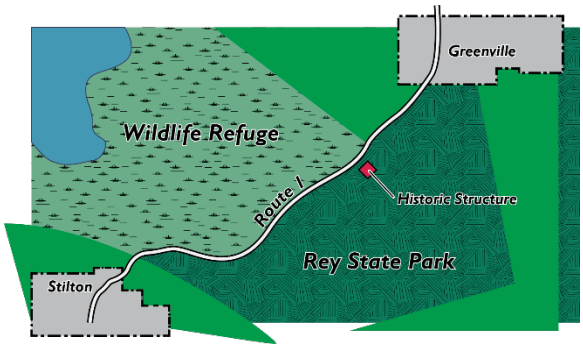

Figure 1. Project area map

ENVIRONMENTAL CONTEXT

Both the refuge and park are wooded areas, providing habitat to a variety of species that often pass back and forth between the two recreation areas, thriving in the protected woodlands and wetlands. The right-of-way along Route 1 is particularly narrow, limiting encroachment into the relatively undisturbed public lands. Rey State Park also contains a historic property located approximately 10 feet from the Route 1 right-of-way. State-owned woodland and wetland areas also lie along the corridor. Some of these resources are protected under Section 4(f).[1]

PEL STUDY OVERVIEW

In response to safety and congestion concerns in the corridor, the State DOT acknowledged the need to examine this section of Route 1 in more detail to determine possible interventions. Due to the combination of the sensitive environmental setting, complex transportation problems, and unknown information about the study area, the State DOT chose to conduct a PEL study rather than immediately initiate the National Environmental Policy Act (NEPA) process. By following the process for conducting a PEL study, the State DOT expects to achieve better project results and save time by ensuring that planning information, analyses, and decisions can be incorporated or adopted by reference during the subsequent NEPA process. Because the decision had not yet been made about which PEL authority would be preferable, the State DOT provided a public notice that the products of the PEL study may be adopted during a subsequent environmental review process.

ROUTE 1 PEL STUDY GOALS

The State DOT's Route 1 PEL study includes the following goals, each of which is aligned with a specific objective:

1. **Collect Data**: Collect high quality information about transportation and environmental baseline conditions, assessing the sources and defining reliable data that are viable for use in NEPA.
2. **Engage Stakeholders and the Public**: Engage Federal, state, and local stakeholders, Indian tribal governments,[2] including the public, early and throughout the PEL study.
3. **Prepare Adequate Documentation**: Create documentation that describes outreach, data collection, analysis, and decision-making to ensure a complete record is available for subsequent project phases, including NEPA.
4. Determine the potential seriousness of the impacts and the resulting level of documentation that may be required in the NEPA process and whether there is any feasible and prudent avoidance alternative to impacts to the park and wildlife refuge.[3]

ROUTE 1 PEL STUDY PROCESS

The State DOT appointed a study project manager to lead the PEL study. Monthly integration review team (IRT) meetings were held with the Metropolitan Planning Organization (MPO) and local, state, and Federal partners to discuss the project and engage stakeholder representatives. The IRT formed a technical advisory committee (TAC) to assist the State DOT with conducting the PEL study and provide monthly reports to the IRT to keep all relevant parties informed

[1] Additional information related to Section 4(f) is available at https://www.environment.fhwa.dot.gov/legislation/section4f.aspx.

[2] To engage with the federally recognized tribe located near the study area, the PEL team followed DOT Order 5301.1 (November 16, 1999) that directs DOT agencies to work with federally recognized tribes and their designated representatives on a government-to-government basis, respecting their rights to represent their respective interests. Available at https://www.transportation.gov/individuals/foia/dot-order-53011-american-indiansalaska-nativestribes.

[3] See 23 CFR 771.115. More information about the level of documentation in the NEPA process is available at https://www.environment.fhwa.dot.gov/legislation/section4f.aspx.

throughout the process. The TAC included planning and environmental subject matter experts from the Federal Highway Administration (FHWA) division office, as well as representatives from the resource, regulatory, and land-management agencies. The TAC worked with the PEL study project managers to achieve the PEL study's four goals: (1) Data; (2) Engagement; (3) Documentation; and (4) Potential impacts and Section 4(f) avoidance alternatives.

ROUTE 1 PEL STUDY CONTENTS

The PEL study included the following:

- **Data**: The study used state traffic count data, regional traffic forecasts, and visitation data from the wildlife refuge and Rey State Park. Collision records collected from state and local police forces provided additional details about safety conditions in the study area. Wildlife, habitat, historic resources, and other environmental data came from the StateMAP GIS database, the state's agreed upon source for statewide geospatial data, which incorporates data from state, local, and Federal agencies. The TAC also reviewed all relevant state and local planning documents pertaining to the PEL study area.
- **Engagement**: The TAC engaged resource and regulatory agencies with special expertise or jurisdiction and held regular meetings regarding the PEL study, including workshops to conduct analyses. Meetings and workshops were open to the public and, throughout the process, the TAC published updates to a study website and an e-mail listserv.
- **Documentation**: The PEL study team documented each component of the PEL study in memoranda or separate reports. All methodologies, data, sources, analyses, meeting agendas and minutes, workshop proceedings, and results were compiled and formatted as study appendices.

POSSIBLE OUTCOME #1

Route 1 PEL study under 23 U.S.C. 168

Moving forward into the project study during planning, the State DOT has used the PEL study to identify sensitive resources in the project study area before starting the environmental review process. The planning study objectives were to identify the sensitive resource areas that should be avoided, analyze the development pressure along the corridor, and study the potential for indirect or cumulative impacts to the resources that could result from the transportation improvements. The intent was to adopt the avoidance information produced from the corridor study directly in the environmental review. The land management agencies and the resource agencies have actively engaged with the project because of the sensitive nature of the resources, and the PEL study team has felt that the conditions required by 23 U.S.C. 168 were achievable.

The PEL study team developed the study as part of the transportation planning process,[4] with the TAC ensuring that the team developed the study in accordance with the conditions for adoption or incorporation by reference of its products in the environmental review process. Importantly, the team identified the most current data available and reviewed it for rationality and reliability, confirming the data was based on scientifically acceptable methodologies. The TAC documented the collection and use of the data to facilitate its use in subsequent environmental studies and to support any decisions made in the study that would inform the environmental review. The active coordination with resource and regulatory agencies has been critical to ensure that information gathered and decisions made during the study could be adopted or

[4] 23 U.S.C. 134 and 135.

incorporated by reference into the environmental review.

Once NEPA began, the lead agency determined that the conditions in 23 U.S.C. 168 had been satisfied, that the information from the transportation planning process could stand alone, without further content, and was of NEPA quality. The cooperating agencies concurred in this determination. The lead agency made all analyses or studies available to the public and participating agencies for review and comment during the NEPA scoping process, and the documents were reasonably available during comment periods. The lead agency also gave notice that it intended to adopt, or incorporate by reference, the planning information and decisions in the NEPA document.

POSSIBLE OUTCOME #2

PEL study under 23 CFR 450.212(a)-(c) and 450.318(a)-(d), with the Appendix A of 23 CFR Part 450 guidance

Moving forward into the PEL study during planning, the agencies have used 23 CFR 450.212(a)-(c) and 450.318(a)-(d), and the guidance in Appendix A of 23 CFR Part 450, because consistent involvement by the resource agencies was uncertain, and the team believed the regulatory conditions were more achievable and would enable the use of partial or entire documents produced from the PEL study to inform NEPA. The PEL study team conducted studies on the corridor involving com-munity groups and local elected officials representing people who walk and ride bicycles along the popular recreational corridor. The team also coordinated with the wildlife refuge and the state park to conduct additional studies and some surveys to update the information about sensitive resources along the corridor and shared that information with the public during the many project workshops.

Following safety and congestion improvements on a parallel corridor that resulted in alleviating some of the traffic challenges on Route 1, the PEL study schedule changed to allow time to better assess how the adjacent improvements might inform the improvements along the study corridor. Due to the improvements on the adjacent corridor, vehicular traffic on Route 1 decreased somewhat and non-motorized recreational traffic increased, making improvements to accommodate those users a priority.

There were many factors that contributed to the success of the PEL study including:

- The active and frequent engagement of the resource agencies;
- The public involvement plan was flexible and easily accommodated the revised schedule; and
- Documentation of the safety, congestion, and multimodal studies were maintained.

Once NEPA began, the lead agency determined that the information incorporated from the transportation planning process could not completely stand alone, that it did not contain all of the information or analysis required by NEPA, and that it would need to be supplemented by other information contained in the NEPA document. All analyses or studies were made available to the public and participating agencies during the NEPA scoping process, and were reasonably available during comment periods.

PURPOSE AND NEED

BACKGROUND

PEL is a valuable tool for creating efficiencies in the transportation project development process that supports agencies' efforts to accelerate project delivery. PEL represents a collaborative and integrated approach to transportation decision-making that considers benefits and impacts of proposed transportation system improvements to the environment, community, and economy during the transportation planning process to inform the environmental review process.

This case study provides a hypothetical example of how the West Sound Regional Council (WSRC), the Metropolitan Planning Organization (MPO) for the West Sound region, and the State DOT used PEL to identify a purpose and need during planning for a future project that could be carried forward into the National Environmental Policy Act (NEPA) process.

ENVIRONMENTAL CONTEXT

The geographic features of the West Sound region, located between two mountain ranges, make for high quality habitat that supports diverse ecosystems. Forests, wetlands, maritime waterways, and fisheries are natural resources that serve as key foundations for the region's growing economy, so sustaining the environment is important for maintaining both a strong economy and a high quality of life in the region. Though the region's setting and resources make it an ideal location for a city, the topography limits available land suitable for development and imposes complex and often expensive infrastructure requirements.

The existing highway routes have been in heavy use since the early 1950s. The highway was upgraded in 1957, but over time has become even more heavily used, thereby reducing system performance. The State Department of Transportation (DOT) has actively pursued a direct, contiguous, transportation corridor connecting two major metropolitan areas in the state and for over 20 years has identified the corridor for widening in the long-range plan. Both MPOs have similarly identified improvements in their Metropolitan Transportation Plans (MTPs) that connected to the study corridor. The State DOT, in consultation with the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), and the two MPOs, determined that a planning study team was necessary to conduct additional study on the corridor. The planning study team was led by the State DOT in cooperation with the two MPOs, and fully integrated with the statewide and metropolitan planning processes. Additionally, the team requested cooperation from appropriate Federal and state resource agencies (such as the U.S. Fish and Wildlife Service, the State Department of Natural Resources, the U.S. Forest Service).

Freight congestion is common along the corridor. Source: 123RF

The corridor remains a congested freight corridor with several bridges needing improvements. There is support for transit, pedestrian, and bicycle improvements throughout the corridor, made to improve quality of life and workforce attraction. Supporters of these improvements argue that transportation improvements can be made to reduce the congestion within the corridor while avoiding treasured community places.

Although the average roadway user could identify several discrete problems along the corridor (unreliable travel time, deficient bridge conditions, lack of multimodal options), those problems produce similarly discrete solutions that may not comprehensively address the corridor. The challenge facing the planning study team was finding consensus among the many stakeholders on the overall problem statement that the corridor project would ultimately solve. Without a defined problem statement that addressed the multiple challenges along the corridor, the possible solutions were not clear, including possible alternatives on new alignments to avoid community impacts, bridge rehabilitation or replacement to allow for pedestrian and bicycle facilities, and operational improvements. With so much discussion about multiple alternatives, the potential for controversy was high. However, state officials considered the corridor a priority and made sure that funding would be available over the following three years, necessitating an accelerated approach to project delivery.

In response to the numerous possible solutions suggested to the planning study team by various stakeholders and the urgency to position the project to leverage available funding, the State DOT initiated a PEL study, which agency staff felt would provide needed information about the corridor, including economic growth projections (e.g., development patterns), sensitive environmental resources present in the area, and feasibility of various possible solutions suggested by the public. The PEL study would help to accelerate the project process by determining the extent of the transportation problem and facilitating consensus on the purpose and need for the project.

PEL STUDY GOALS

1. **Collect Data**: Collect high quality information about transportation and environmental baseline conditions, assessing the sources and identifying reliable data that are viable for use in NEPA.
2. **Engage Stakeholders and the Public**: Engage tribes,[1] Federal, state, and local stakeholders, including the public, early and throughout the PEL study.
3. **Documentation**: Create documentation that describes outreach, data collection, analysis, and decision-making to ensure a complete record is available for subsequent project phases, including NEPA.
4. **Problem Statement**: Establish the project problem statement that can be carried forward as the purpose and need in subsequent NEPA.

[1] DOT Order 5301.1. November 16, 1999. Available at https://www.transportation.gov/individuals/foia/dot-order-53011-american-indiansalaska-nativestribes.

Because the State DOT had not yet decided which PEL authority it would use (e.g., 23 U.S.C. 168 or 23 CFR part 450 and Appendix A guidance), the agency provided a public notice that the products of the PEL study may be adopted during a subsequent environmental review process. The State DOT, in coordination with FHWA and FTA, assembled a PEL study team that also included WSRC and state and Federal resource agencies. The resource agencies played an important role in the study, as the project location was adjacent to public lands and the potential for identifying protected resources was considered high.

To meet the first goal, the PEL study team determined through this coordination that new data collection was required where existing data were unavailable, as a necessary part of developing a rational planning purpose and need includes gathering information and data that is of sufficient detail and quality to meet requirements for use in the environmental review process. To meet the second goal, the PEL study team engaged stakeholders and resource agencies to establish reasonable and agreed-upon methodologies for analysis and identify recently updated ecosystem data and other reliable and reasonably current data to inform the planning work and support the purpose and need statement produced.

The public participation plan provided for workshops for public input. Source: 123RF

Because of the land use changes resulting from rapid economic development and the sensitive nature of adjacent land cover along the corridor, the project team determined that to meet the third goal it needed to include a public participation plan that clearly defined and documented the cooperation between a local tribe, local jurisdictions, resource agencies, and the PEL study team. The public participation plan detailed how public stakeholders would receive clear information about the PEL study and how planning information may be used to identify the planning purpose and need, while also requiring public notices that the state may adopt planning products during a subsequent environmental review process. The public participation plan also provided for workshops with convenient access through a variety of media for stakeholders and communities, as well as a frequently updated website.

Through the additional study on existing conditions and the active participation of resource agencies on the PEL study team, the team was able to reach consensus on the planning purpose and need statement for the corridor that was shared with the public. Following public comment, the PEL study team further refined the purpose and need statement.

POSSIBLE OUTCOME #1

The West Sound Corridor project remained fully funded and a high priority for the state, maintaining the accelerated delivery schedule through the transportation planning process (and followed the 23 U.S.C. 168 approach).

The West Sound Corridor project continued to be a high priority for the state and the region, and project planning remained on schedule for completion in three years. The PEL study team decided to use the 23 U.S.C. 168 approach to develop the project purpose and need as a planning product. The members of the PEL study team remained fully engaged and agreed to cooperatively participate in the project study during planning. The State DOT intended to reserve the opportunity to directly adopt and/or incorporate by reference the purpose and need statement, as well as the documents produced in the PEL study, in subsequent NEPA analysis by satisfying the conditions of 23 U.S.C. 168. The purpose and need statement was developed as part of the transportation planning process,[2] and the statement:

- Resulted from consultation with the Federal and state resource agencies monthly, with the full participation of the relevant resource agencies, as well as FHWA and FTA;
- Included a systems-level analysis of how the West Sound Corridor project included consideration of multimodal transportation solutions;
- Was based on reasonable and scientifically acceptable methodologies guiding the analysis of potential effects, including the effects on the human and natural environment using information with a rational basis and based on reliable and reasonably current data; and
- Provided public notice that the planning products produced in the planning process may be adopted during a subsequent environmental review process.

If FHWA and the State DOT, serving as NEPA joint lead agencies and as the relevant agencies under 23 U.S.C. 168(b)(1)(A), subsequently determine that the planning purpose and need for the project has met the all the conditions in 23 U.S.C. 168, then they may decide to adopt the purpose and need in NEPA. Those conditions include that the planning product was approved by planning officials within the five-year period of adoption or incorporation by reference.[3]

[2] 23 U.S.C. 134 and 135, and 23 CFR 450.218, 450.324 and 450.326.

[3] 23 U.S.C. 168(d)(10).

POSSIBLE OUTCOME #2

The West Sound Corridor project experienced a slight project delay, but remained a fully funded project in later program years (using 23 CFR 450.212(a)-(c) and 450.318(a)-(d) with the Appendix A of 23 CFR part 450 guidance approach).

The West Sound Corridor project continued as an active project, but the planning work has experienced a slight delay due to changes in priorities. The PEL study team has remained engaged, but decided they could no longer meet the 23 U.S.C. 168 conditions. With the delayed project initiation and implementation, resource agencies could no longer be actively engaged because competing priorities demanded their limited resources. The PEL study team decided to use the 23 CFR 450.212(a)-(c) and 450.318(a)-(d) approach to identify a planning purpose and need statement. Resource agency coordination meetings have occurred as needed at key decision points. Despite reduced involvement, the resource agencies have agreed that the purpose and need identified in the PEL study would aid in establishing or evaluating the subsequent NEPA purpose and need.

As the PEL study team wanted to be able to incorporate by reference partial or entire documents produced from the PEL study, the team decided to use the regulatory approach because, with the rapidly developing corridor, some circumstances may change and some of the analysis (even though reconfirmed during NEPA) may have planning approval of the planning product older than five years.[4] FHWA and FTA have continued to be engaged and reviewed the information at key decision points. The data may need to be supplemented or reconfirmed during NEPA due to the passage of time. The PEL study team has continued to:

- Include regular public review through the MPO and state public involvement processes using the West Sound Corridor project website and workshops;
- Ensure that sufficient and comprehensive documentation has been developed, so that if there is turnover in staff at the state, MPO, or resource agencies, the relevant decisions will be available for review during the NEPA scoping process; and
- Maintain documented planning information using the State DOT project management system, to ensure that it can be easily accessed to allow for direct reference in the NEPA process and will be in a format that could readily be appended or referenced in the NEPA document.

When the West Sound Corridor project was initiated several years later, the purpose and need for a project was shaped by goals and objectives established in PEL study as part of the project planning process.

[4] 23 U.S.C. 168(d)(10).