

# Preliminary Engineering



Preliminary Engineering Initiation includes notifying the consultant or in-house design staff to commence work. All solicitation activities for Preliminary Engineering are conducted at the conclusion of Concept Development.

Engineering Design shall be performed during Preliminary Engineering only at a level of detail necessary to secure the Environmental Document and the Design Exception Report, if necessary. Roadway, structural, right of way, access and utility engineering design may be necessary to gain approval of the Environmental Document and Design Exception Report. Some projects will require that these design details be further defined or developed in Final Design. All design decisions shall be documented in the project's Design Communications Report. Public Outreach efforts during Preliminary Engineering will vary depending on the level of engineering efforts necessary to secure the Environmental Document and the Design Exception Report.

The preparation of the project's Environmental Documents may include Technical Environmental Studies, an Executive Order 215, an Environmental Impact Statement, a Categorical Exclusion, a Self-Certified Categorical Exclusion, an Environmental Assessment and Environmental/Plan Sheets. An approved environmental document pursuant to federal and state environmental regulations begins with an analysis of project impacts to various environmental disciplines. The scope of this analysis is done commensurate with the scope of the proposed improvements and is collectively summarized in the appropriate environmental document. A Public Information Center may be necessary to update the general public on the project and to fulfill National Environmental Policy Act (NEPA) requirements when getting approval of the Environmental Document.

The Design Exception Report is prepared and submitted to FHWA for approval of substandard design elements that will remain or are proposed on the project. A design exception may be approved when it can be documented that a lesser design value is the best practical alternative.

The Preliminary Engineering Report documents the work performed in Preliminary Engineering in summary format and includes the Environmental Document, Design Exception Report, Final Design Scope Statement, Final Design Public Involvement Action Plan, and the appropriate plans in support of the Environmental Document and Design Exception Report. The Preliminary Engineering Report along with the associated plans and reports shall be submitted to FHWA for approval. The Approved Project Plan (APP) is the advancement and approval of the Preliminary Preferred Alternative (PPA) developed during Concept Development (CD). The APP selection is based on alternative analysis comparisons and provisions of a reasonable cost for derived benefits that satisfy the problem statement. This plan will incorporate detailed environmental analysis and input as gathered in Preliminary Engineering.

Prior to the conclusion of Preliminary Engineering, approvals are necessary to graduate the project to the Final Design Phase. These approvals include the Final Design Scope Statement Approval and the Preliminary Engineering Report Approval by FHWA

A Final Design Addendum is executed if the Preliminary Engineering Designer is retained for Final Design. If the Preliminary Engineering Designer is not retained for Final Design, the process to select a new designer is initiated.