112 Update Engineering Design Process

112.1 General

Conduct the update engineering design process when a period of time has elapsed (typically nine months minimum) since final contract plans, specification and estimates (PS&E) package was completed. The requirements of the update process depends on:

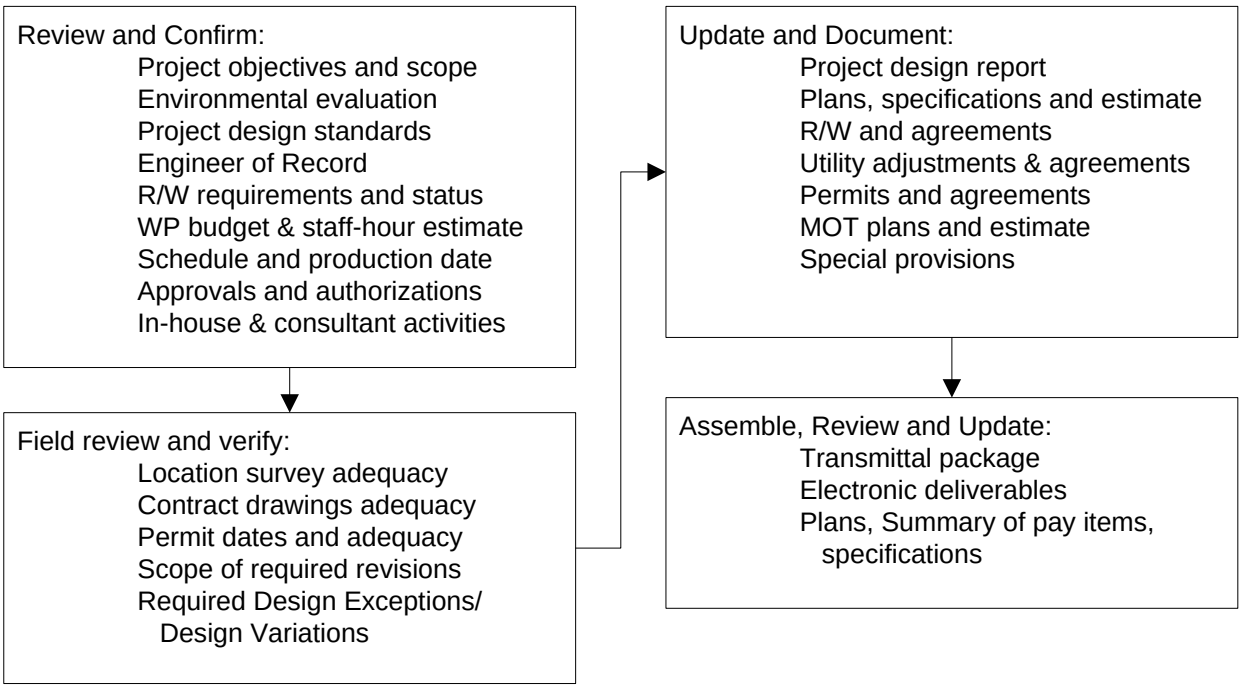
(1) Type of project

(2) Adequacy and appropriateness of the original design controls and standards

(3) Original scope and objectives.

Determining the extent of the update process, as shown in ***Figure 112.1.1***, requires input from both engineering and management.

Figure 112.1.1 Major Activities - Update Engineering Design Process



112.2 Design Update Review and Decision Process

Conduct an engineering review of the PS&E package and supporting documents to determine the activities required to update the package and get it ready for letting.

(1) Review and compare the original project objectives, scope and standards with current corridor conditions, as well as growth rate and patterns, to determine if the project design is still valid.

(2) Review and compare the original environmental evaluations and commitments against current requirements.

(3) Review and compare the permit date and terms against current requirements.

(4) Review R/W certifications and agreements and confirm the status of documents.

(5) Compare contract plans against current requirements, including ***Standard Plans***, ***Standard Specifications***, pay items, and design criteria.

(6) Review agreements with outside entities such as Utility Agency/Owners (UAOs), maintaining agencies and local agencies to determine if the agreements are still valid.

(7) Resubmit Design Exceptions and Design Variations with updated documentation based on current data and conditions.

If it is determined that engineering updates are required, the scope, staff-hour estimate, schedule, cost estimate, and other activities described in ***FDM 110*** should be followed to the extent necessary to define the scope and schedule for the update process.

112.3 Updating Engineering Design and Documents

The actual engineering design activities necessary to update the PS&E package will vary from project to project. Develop a fully defined scope of work to determine resources and schedule needed for the update. Fully describe the required activities in the professional services contract, if one is to be used.

All reports, calculations, assumptions, and engineering decisions that support the changes to plans, specifications, or other documents must be sealed by the Engineer of Record (EOR) updating the PS&E package. Changes to the plans are approved by the EOR and require concurrence by the District Design Engineer, District Structures Design Engineer, or District Consultant Project Management Engineer, as appropriate for the type of change. Updated documentation of approvals and concurrences must be in the project file.

112.4 Revised PS&E Package

In addition to the required engineering changes, the contract transmittal package must be reviewed and updated to current status.

(1) All component plans sets are made current and sealed.

(2) Specifications and special provisions are made current.

(3) The CADD files are revised.

(4) The pay item summaries (estimates) are made current.

(5) The contract file is made current.