

## WFLHD SUPPLEMENT 9.6.8.5-1

### 9.6.8.5 Development of Prices

This supplement explains how prices are developed at the various project development review stages. The objective of the cost estimate is to maintain a consistent cost as a project is developed by replacing contingent and inflationary factors with more detailed cost data at each project stage. Add the following to the end of [Section 9.6.8.5](#):

Provide a revised cost estimate (Engineer's Estimate) at each major project development review phase (Preliminary, Intermediate, Plan-in Hand, Final). The Estimate should become more detailed and complete at each subsequent phase. Develop unit prices for each defined pay item using either historic Bid data, or Cost Based pricing (using equipment costs, labor costs, material costs and production rates), as appropriate for each pay item.

In addition to the milestone dates listed above, an initial verification estimate should be developed at Project Initiation to ensure the program funds are reasonable given the proposed project scope and award year. The cost estimate should also be updated twice per year in December and June prior to Partner Agency program meetings (for example the Tri-Agency meetings). If a project milestone occurs between these dates, the level of effort to update the estimate could be minimal. Projects that have been "shelved" should have the cost estimate reevaluated on the same twice per year schedule and prior to being programmed.

Inflate the costs used in the Engineer's Estimates for pay items, wage rates, equipment rates, and material costs to future value amounts. Use current inflation trends in highway construction prices. Several cost inflation indexes are available to track short and long-term construction pricing trends. Recommended resources include:

- FHWA [Price Trends in Federal-Aid Highway Construction Projects](#)
- Oregon DOT [Cost Estimating](#)
- Oregon DOT [Construction Cost Trends](#)
- Washington State DOT [Trends in Highway Material Costs](#)

When updating historic bid prices or other cost data, use an inflation time period that begins at the year and month the **historic bid or cost data** originates from, and ends in the year and month of the **proposed project's anticipated construction completion**.

Estimates of major pay items involving asphalt cement products should be verified with the WFL Materials Engineer prior to submittal at the major review phases.

Provide a cost estimate at each project development review phase according to the following guidelines:

- **Project Initiation:** Provide a Class C cost estimate as a verification of the program amount. Develop a per-mile cost estimate based upon the known project scope and local conditions. Inflate this estimate out to the expected Construction year(s).
- **Preliminary:** Provide a Class B cost estimate that includes all major work items (asphalt pavement, excavation, etc). Smaller work items may be grouped into major categories (Temporary Traffic Control, Drainage, etc.) for estimating purposes. Pay items need not be defined at this review phase. Grouped items may be estimated as a percentage of the total project cost based upon historical data of similar projects. Because of the high uncertainty of the estimate at this phase, a 15% contingency should be added to the overall construction estimate.
- **Intermediate:** Provide an updated Class B estimate. Estimate the actual costs of some items, as needed, to verify the estimates of grouped items from the preliminary phase cost estimate. Develop a defined pay item and separate cost estimate for each major work item, using bid histories or Cost based pricing. Because of the high uncertainty of the estimate at this phase, a 10% contingency should be added to the overall construction estimate.
- **Plan-in-Hand:** Provide a Class A cost estimate. Develop separate cost estimates and pay items for virtually every work item in the project. Develop unit prices for each defined pay item using Bid histories or Cost based pricing. Verify and document construction price inflation rates used and any pay item incentives. Add additional percentage costs for any work still undefined. For the remaining uncertainty of the estimate at this phase, a 5% contingency should be added to the overall construction estimate.
- **Final:** Provide a revised Class A cost estimate. Pay items are defined for all work specified in the contract. Verify and document construction price inflation rates and any pay item incentives. No contingency is included for the final estimate.