**Construction Phasing**

This bulletin provides guidance for design staff in addressing construction phasing in our plans and specifications for design-bid-build projects.

One of CDOT’s primary goals for a PS&E (Plans, Specifications and Estimate) package is to create a level playing field for the bidders. A level playing field can only be achieved if the contractors are bidding the same scope of work and they know what they are required to bid. If a project is large enough, or complicated enough, the phasing is a key component of the scope of work.

**Small or Simple Projects:**

For many CDOT projects (overlays for example) a change in the phasing (paving eastbound first instead of westbound) will not change the scope of work. The bid items, their respective quantities, and the duration of the project will not change. And thus a level playing field is achieved without phasing in the PS&E package. Therefore, for smaller and simple projects, providing no phasing in the plans is an acceptable practice.

**Larger or Complicated Projects:**

For more complicated projects (an interchange for example), where different choices for phasing may cause the need to add, delete or modify bid items, quantities, and project durations, a phasing plan should be in the PS&E package. When a phasing plan is in the PS&E package the contractor is required to bid the phasing. There should be a note similar to *“This is the phasing plan to be bid. The constraints of the project, the bid items and their quantities reflect utilization of this phasing. The Contractor may submit an alternate phasing plan for approval by the Engineer after award of the project”*. If the Contractor bids something other than the phasing in the plans, he is at risk, for CDOT may not approve the Contractor’s plan The words “optional” or “for information only” or similar, shall not be used to describe the phasing (see exception below). If a project includes construction related to a bridge, it is most likely a phasing plan should be in the PS&E package.

Another approach, if the design team prefers Contractor’s ingenuity during the bid process, is to provide no phasing, or provide phasing using the words “optional” or “for information only” or similar. These approaches shall be combined with a list of constraints which must be bid. These constraints may regard limits on payment of traffic control items and their quantities, working hours, detours, lane closures, third party work, etc. These constraints may be listed in the plan sheets or in a project special specification. Using contraints is a riskier approach for both CDOT and the Contractor, but it has the advantage of potentially lower bids.

Any change to a phasing plan or constraint, which will add or delete bid items, and or significantly change bid item quantities should be a change order, and most likely is a Value Engineering Change Proposal.

**The Form 859:**

Construction phasing in the plans and development of the 859 are related tasks. There are two purposes for developing the Form 859. One purpose is to determine the contract time needed to build the project. This can only be done by determining how the project can be built (i.e. the phasing). The project duration in the contract is determined by the phasing used to build the 859. The second purpose for developing the 859 is to determine if the project is buildable within all the contract constraints.

**After Bidding:**

Although a contractor is required to bid the phasing and or list of constraints in the PS&E package, this does not preclude the contractor from submitting a proposal changing the phasing or constraints once the contractor is awarded the work. A submittal from a contractor proposing a change in the phasing is a Value Engineering Change Proposal (VECP). CDOT and the FHWA encourage contractors to submit VECP’s.

**Design Tools and Options:**

When the design team is not comfortable providing phasing or constraints, because the project is too large, complex, etc., the design team may utilize constructability and value engineering reviews, in which contractors should participate. Also, the design team should consider using an alternate contracting method which utilizes Contractors’ knowledge, such as design-build, CMGC, etc. In this case, contact CDOT’s Innovative Contracting Program Manager in Project Development.

**References:**

Design Bulletins can be found on the CDOT intranet at:

<http://www.coloradodot.info/business/designsupport/bulletins_manuals/design-bulletins>