



US 160 — Elmore's East

CDOT Region 5 – Major Projects Program
3803 N. Main Avenue
Durango, CO 81301

Date: September 24, 2024
To: Keith Stefanik, P.E. Chief Engineer
From: David R. Valentinelli, Major Projects Manager
Subject: Alternative Project Delivery Method Recommendation for Chief Engineer
Project: Approval 20980, NHPP 1602-157, US 160 Elmore's Corner to Dry Creek

As stated in the CDOT Alternative Contracting Guidelines, Chief Engineer approval is required for a project to be delivered using any method other than Design-Bid-Build.

On June 26 & 27, 2024 the US 160 Elmore's Corner to Dry Creek Project Team held a Project Delivery Selection Matrix (PDSM) workshop, facilitated by the Alternative Delivery Program, to analyze the potential benefits of using an Alternative Delivery Method to deliver the US 160 Elmore's Corner to Dry Creek Project.

The US 160 Elmore's Corner to Dry Creek Project has been defined by three distinct segments, each with independent utility, and identified in the grant narrative as: The Elmore's East Segment, the LPCR 225 Segment, and the Valley Segment. The Elmore's East Segment includes widening the existing two-lane facility to four lanes adding a continuous two-way left turn lane with left-turn lanes included on the east end of the segment to facilitate access to two oil and gas well pads. Shoulders will be widened to improve safety, and auxiliary lanes will be lengthened to meet current design standards throughout the segment. The existing Florida River bridge will be replaced to accommodate the required section and to serve wildlife along with a dedicated wildlife underpass constructed for this segment. The LPCR 225 Segment includes the reconfiguration of the existing two-way stop-controlled intersection of US 160 and LPCR 225 to reduce the frequency and severity of accidents. The Valley Segment includes the creation of an east-bound passing lane on the west end of the project segment and the installation of a west-bound passing lane on the east of the segment. A large animal underpass will also be installed in the Valley segment. Wildlife exclusionary fencing will be installed along the entire project to reduce wildlife collisions.

The US160 Elmore's Corner to Dry Creek (Elmore's East) Project goals align with the Design-Build Delivery Method as the Project seeks to improve safety for the traveling public by reducing the number and severity of accidents. The project strives to provide an efficient, innovative, and cost-effective design with an approach to construction that maximizes the use of the available budget while ensuring the completion of the INFRA Grant scope and striving to extend improvements. CDOT further seeks an effective partnership in which design is created through input and coordination. The Region wishes to optimize construction phasing to minimize impacts to highway users. Utmost, the Project must meet tight Grant obligations and expenditure timelines which requires efficient and concurrent acquisition of ROW, contracting, completion of design, and construction.

Analysis (Highlights from the PDSM):

Project Complexity and Innovation

Project complexity and innovation is the potential applicability of new designs or processes to resolve complex technical issues. When discussing the opportunities and obstacles specific to this topic, several key characteristics of



this project were distinguishing factors in choosing the Design-Build Delivery Method. Opportunities including the competitive innovation from multiple proposers to find best value which seeks to maximize scope (ensure grant scope with potential additional elements) while bringing effective solutions to improve safety in the corridor. Additional opportunities are seen as the Design-Build Team's ability to efficiently construct the project and minimize impacts to highway users. The Project sees additional opportunity for innovative design to limit required material import, efficient earthwork phasing, and structural design, and intersection improvements.

Project Delivery Schedule

Delivery schedule is the overall project schedule from scoping through design, construction, and opening to the public. Time considerations for starting the project, receiving dedicated funding, and project completion were assessed for Elmore's East. In terms of Project Delivery Schedule, tight grant timelines offer opportunity through Design-Build which was viewed as the fastest path to obligation of all project funds and provides a maximized overlap of Design, ROW, and Construction. As an example, ROW acquisition can occur concurrently with RFP development and final design can overlap with construction. With the obligation of Grant funding occurring upon RFP Phase Authorization, fulfilling the grant terms will be concise and swift.

Project Cost

Project Cost is the financial process related to meeting budget restrictions, looking to early and accurate cost estimation, and the control of Project costs to do so. As it relates to Project Cost considerations, Design-Build uses an upset amount to control the maximum budget avoiding concern over changes to the price index. To this, the later the project is awarded, the greater the market conditions could impact the cost and affect the scope of the project. Design-Build locks in the contract value at the time the contract is signed. Admittedly, some cost risk will be incurred through design-build, but competition and the contractor's control over schedule will mitigate this better than the other two methods. Further, having the greatest potential for upfront innovation can maximize scope and/or value.

Level of Design

Level of design is the percentage of design completed at the time of the project delivery procurement. Elmore's East has a variety of design completeness including 90% complete of a proposed roundabout intersection (CR225) design, 30-60% complete of ½ of the project limits (Elmore's to CR225 Segment) and conceptual level design of ½ of the project limits (Valley Segment). There is an opportunity for Design-Build to capitalize on this level of design, believing that little to no work must be done to create an effective reference design while allowing the Design-Build proposers to competitively reassess the current design to bring best value. Even within the Project's current level of design, there is a need to ensure the full project extents meet grant obligations. Achieving final design for DBB or CM/GC would require a project specific design contract, creating the potential of a full reassessment of the design if the current designers were not successful with their SOQ. Design-Build takes that risk and adds benefit through several proposed approaches to the design.

Risk Assessment

Risk is an uncertain event or condition that, if it occurs, influences a project's objectives. Risk allocation is the assignment of unknown events or conditions to the party that can best manage them. An initial assessment of project risks is important to ensure the selection of the delivery method that can properly address them. An approach that focuses on a fair allocation of risk will be most successful. In terms of Project Risk for Elmore's east, the opportunity for D-B is the ability to assign or retain risk as deemed best suited for the specific area. Risk and risk allocations are important factors in the most appropriate delivery method for the Elmore's Project

The selection of three qualified teams to propose on the project, ensures that the quality is in place to address the



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Project's needs including risks. Elements of third-party agreements and the navigation of their approvals are beneficially shared to support the design and implementation of the improvements. This coordination and collaboration are required universally, but Design-Build places some of the importance of this action with the contractor. Risk of adhering to Grant commitments can be assigned to the contractor (scope, completion dates, "partial completion", etc.) as most appropriate. While risk of ROW commitments can be shared or retained. Cost risk is mitigated through GMP. Each entity can support and mitigate the risk they are most appropriate to address.

Secondary Factor Assessment

Secondary Factors, including Staff Experience, Level of Oversight and Control, and Competition and Contractor Experience all Passed with no obstacles preventing the utilization of the Design-Build Delivery Method.

Industry Review and TC approval

An Industry Outreach / Information Virtual Meeting was held on August 6, 2024. Industry provided comments and questions that will be posted on the Project Website (www.codot.gov/project/us160elmoreseast). Comments were mixed, but overall supportive of the Design-Build Delivery Method.

Subsequently, the Delivery Method was approved through resolution by the Transportation Commission on September 19, 2024.

Recommendation:

Based upon the findings of the Project Delivery Selection Matrix Workshop summarized above, and in consultation with the CDOT Alternative Delivery Program, it is recommended that the most appropriate delivery method for this project is **Design-Build**.

As discussed in this memo, Design-Build allows opportunity to mitigate cost uncertainty, ensure meeting of grant milestones, provide innovation toward the benefit of maximizing scope and safety, and a nuanced approach to risk management. In short, Design-Build can be leveraged to position the project for its greatest success.

The Project Management Team is requesting concurrence and approval to proceed with our recommendation to use **Design-Build** to deliver the US160 Elmore's to Dry Creek Project.

Attachments:

- Completed Project Delivery Selection Matrix
- Public/Industry Meeting Summary in accordance with the accountability and transparency requirements of SB 21-260.

Signed,



David R Valentinelli, Region 5 Major Projects Manager

I concur:

Julie Constan

Julie Constan (Sep 25, 2024 08:03 MDT)

Julie Constan, P.E., Region 5 Transportation Director

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I concur:

Matthew Pacheco

Matthew Pacheco, P.E. Alternative Delivery Program Manager

I approve:

Keith Stefanik, P.E. Chief Engineer

Cc: Kevin Curry, Program Engineer
Shaun Cutting, FHWA
Casey Valentinelli, Alternative Delivery Program
Jan Walker, Alternative Delivery Contracts Officer

