

CDOT Region 1 - North Program
4670 Holly St
Denver, CO 80216

DATE: January 23, 2023

TO: Keith Stefanik, P.E. Chief Engineer
Matthew Pacheco, P.E. Alternative Delivery Program Manager

FROM: Adam Parks, P.E. Region 1 North Program Resident Engineer

SUBJECT: Alternate Project Delivery Method Recommendation
Project 22922, NHPP 006A-069, Vasquez Blvd – 64th Ave. to I-270 Intersection Improvements

BACKGROUND:

CDOT held a Project Delivery Selection Matrix (PDSM) workshop on September 26th, 2022, to discuss project 22922 Vasquez Blvd – 64th Ave to I-270.

In 2018, The Colorado Department of Transportation (CDOT) completed a Planning and Environmental Linkages (PEL) Study to identify needed improvements to Vasquez Blvd in Commerce City Colorado between East 52nd Ave and East 64th Ave, with a special emphasis on the interchange of I-270 and Vasquez Blvd and the intersection of Vasquez Blvd, 60th Avenue and Parkway Drive.

During the PEL process, the following goals were identified for the study area:

1. Provide reliability
2. Balance access between the transportation network and adjacent land uses
3. Effectively connect current and future modes and networks, including roads, bicycles, pedestrians and transit
4. Improve the ability of freight to efficiently travel through and within the area
5. Minimize and mitigate impacts to the built environment consistent with local master plans
6. Avoid and minimize impacts to the natural environment

An EA (Environmental Assessment) for the project is nearing completion with a FONSI anticipated later this year. The selected alternative includes converting Parkway Drive from a full movement intersection to a restricted movement. Southbound Parkway Dr. will no longer be allowed to merge onto Southbound Vasquez Blvd. or onto 60th Ave. Southbound Parkway Dr. will be required to merge onto Northbound Vasquez Blvd. Restricting this movement will reduce the amount of light cycles at the Vasquez/60th Ave intersection, allowing for longer green cycles, as well as more time for pedestrians to cross Vasquez Blvd. This increases the overall LOS and safety of the intersection. Restricting Parkway Blvd necessitates the construction of a T-intersection at Vasquez and 62nd Ave, to allow traffic to turn South on Vasquez.

Movements along the frontage road West of Vasquez (Dexter St.) will also be restricted. Currently, Northbound traffic on Dexter St. can turn directly onto Vasquez Blvd and Parkway Dr. The project will eliminate this movement. Traffic will still be allowed to turn South on Dexter, but Northbound movements will be restricted. This necessitates the construction of a new service road system to the West of the intersection, as well as the construction of a new storm sewer system.

ANALYSIS:

The Project Team first discussed the project attributes, goals, constraints, and risks. Design-Bid-Build (DBB), Design-Build (DB), and Construction Manager/General Contractor (CM/GC) methods were then discussed. Each

participant provided input as the opportunities and obstacles of each delivery method were discussed. The Progressive Design Build (PDB) delivery method was evaluated in the workshop but was quickly determined by members of the Project Team that turning over complete ownership of the project was not ideal and could undo the last 3 years of previous work. The resulting schedule uncertainty and risk would not meet project delivery goals. After all comments were recorded, the Project Team collectively assigned a rating to each method for the primary factors listed in the Project Delivery selection Matrix. The summary table was then populated with the ratings for the sake of comparison and selection of the most appropriate delivery method for this project. Please refer to the Vasquez Blvd. Project Delivery Selection Matrix (PDSM) for the summary table and detailed matrix evaluations.

The project faces scheduling risks due to the strike dates associated with the City of Commerce City's contributed DRCOG funds. The first strike date occurs in September 2023, the second in June 2024. The City of Commerce City has expressed a high importance on meeting the first strike date and the Project Team has agreed to do what is necessary to meet this deadline. Furthermore, the project currently consists of two separate construction packages. The first package includes the construction of the T-intersection located at Vasquez Blvd. and 62nd Avenue, improvements and widening to 62nd Ave. East of Vasquez Blvd., as well as improvements to Vasquez Blvd. between 64th Ave and just North of 60th Ave. The second construction package will include the remainder of the work, including the construction of the new frontage road system West of Vasquez Blvd. and the remaining work to the Vasquez Blvd./60th Ave./Parkway Dr. intersection. Bringing in a construction manager will greatly aid in formalizing these packages, or recommending another approach with additional packages, in order to maximize the project's efficiency. By providing innovative project delivery packages, this will help the project maintain business and residential accesses at all times, as well as maximizing pedestrian and traffic safety, during and after construction.

The Project Team recognized several advantages offered by alternative delivery methods when compared to traditional Design-Bid-Build (DBB). An alternative delivery method with an accelerated design schedule can accommodate an earlier construction start date, avoiding the failure to meet the specified DRCOG strike date. Alternative contracting also results in contractor input and consultation during the design phase, reducing the risk of post-design scope changes and schedule delays stemming from contractor site access, phasing considerations and general constructability issues.

With a design consultant already secured and preliminary design already at the 30% FIR level, the CM/GC delivery method provides CDOT the earliest opportunity to secure a qualified Contractor with the needed expertise for the Project and provides early and continuous collaboration between the Owner, Designer, General Contractor, and stakeholders throughout all Project phases. In addition, the Construction Manager's early and continuous input into design may identify additional or previously unknown risks while providing further consideration of opportunities for innovation, feasible mitigation strategies and collaborative scope development.

RECOMMENDATION:

The Project Team recommends a CM/GC Project Delivery Method. The expected opportunities offered by the CM/GC method can be leveraged to meet the unique challenges of this project. CM/GC allows CDOT to manage and mitigate risks using shared risk pools and the influence of an integrated project team that includes participation from CDOT, the Designer and the Contractor. CDOT can negotiate and coordinate risk elements by assigning risk to the party best suited to manage the risk during design and construction.

Justification includes:

- Advantage of early contractor input on complex project challenges:
 - Constructability and site access planning
 - Project phasing and sequencing
- Acceleration of project pre-construction schedule
- Project Team collaboration can result in early cost certainty
- Collaborative design process, guided by CDOT, can pursue a quality and practical project

- Through strong CDOT management and project team collaboration, risks can be identified, quantified and mitigated

Attachments:

- Vasquez Blvd. Project Delivery Selection Matrix (PDSM Workshop)

Respectfully submitted for consideration of concurrence.

I concur:

Matthew Pacheco

Matthew Pacheco, P.E. Alternative Delivery Program Manager

Keith Stefanik

Keith Stefanik, P.E. Chief Engineer

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