Project Delivery Selection Matrix (PDSM) Workshop

I-25 North Segments 3B & 4 (144th Ave to CO 66)

Workshop Date: August 13, 2026

Workshop Location: I-25 North CoLocation Office, 11372 Business Park Circle, Firestone, CO 80504

Facilitator: Casey Valentinelli, PE

Delivery Method Selected: CM/GC

Table 1: List of Workshop Participants

Name	Email
Panel: Bob Hays, PE (HQ)	robert.hays@state.co.us
Panel: Heather Paddock, PE (R4)	heather.paddock@state.co.us
Panel: Andy Stratton, PE (R1)	andrew.stratton@state.co.us
Panel: Abra Geissler, PE (R4)	abra.geissler@state.co.us
Panel: Adam Parks, PE (R1)	adam.parks@state.co.us
Panel: Chris Boespflug, PE (R4)	chris.boespflug@state.co.us
Panel: James Zufall (R4)	jamesd.zufall@state.co.us
Facilitator: Casey Valentinelli, PE (HQ)	casey.valentinelli@state.co.us
ROW SME: Lisa Gerondale (R4)	lisa.gerondale@state.co.us
Env. SME: Natalie Shishido (R4)	natalie.shishido@state.co.us
Observer: Caroline Johnson, PE I (R1)	caroline.johnson@state.co.us
Observer: Vanessa Santistevan (R4 Env. SME)	vanessa.santistevan@state.co.us
Note Taker: Erika Galyardt (R1)	erika.galyardt@state.co.us

Pre Workshop Tasks

The project team should complete pages 1-5 and distribute to the workshop participants at least 1 week before the workshop.

Project Description

The following items should be considered in describing the specific project. Other items can be added to the bottom of the form if they influence the project delivery decision. Relevant documents can be added as appendices to the final summary report.

Project Name: I-25 North Segments 3B & 4

Location: I-25 between 144th Ave and CO 66

Estimated Budget: $730M Program (in YOE, assumed mid-year of construction in 2030)

Estimated Project Delivery Period: Anticipated September 2026 through June 2033

Required Delivery Date (if applicable): None at this time, possible funding constraints if a grant is secured

Source(s) of Project Funding:

- Secured/Approved: TIFIA Loan (Projected to be some portion of ~$89M), 10-year Plan (3B - $86.5M, 4 - $38M)
- Possible: New or amended TIFIA Loan, Grants, Local dollars, and/or bonding

Project Corridor: I-25 between 144th Ave and CO 66

Major Features of Work: Embankment widening, Pavement widening and reconstruction, bridge reconstruction (13), interchange reconstructions (CO 7, CO 52, CO 119), sound and retaining wall construction, culvert replacement, guardrail installation, ITS and tolling installation, lighting, signs and permanent pavement marking installation, and mobility hub ultimate reconfigurations (CO 7 and CO 119).

Major Schedule Milestones (Assuming is secured):

- PDSM: August 13, 2026
- Procurement Prep and Selection: Q3 2026 to Q3 2029
- Design: Q2 2027 to Q4 2027
- Construction: Q4 2027 to Q2 2033

Major Project Stakeholders:

- Federal: FHWA

- State: CTIO, DTR
- Local: Weld County, Adams County, City and County of Broomfield, Town of Mead, Town of Firestone, Town of Frederick, City of Dacono, City of Longmont, Town of Erie, emergency response agencies
- Other: E-470 Public Highway Authority, DRCOG, NATA, FIX North I-25 Coalition, utility companies, land owners

Major General Obstacles/Opportunities: Accelerated project schedule, fixed budget, internal and external stakeholder collaboration, environmental, ROW acquisition, utilities, and accommodating the traveling public through the workzone.

Major Obstacles with Right of Way, Utilities, and/or Environmental Approvals:

Mega project delivery requires large efforts to obtain important clearances. With a primary project goal of compressing delivery schedule as much as possible, project clearance with an aggressive construction commencement (9-12 months).

Major Obstacles during Construction Phase: Maintain four lanes of traffic during construction, lack of alternate routes for short-term full closures and/or I-25 mainline breakdown, utility impacts, closures and phasing during interchange reconstruction.

Safety Issues: Existing high number of vehicle crashes along this corridor, heavy congestion, ingress of traffic into the construction zone with the express lanes book ending the project 26 miles to the north and 10 miles to the south.

Sustainable Design and Construction Requirements: There are no requirements, but the following best practices will be encouraged:

- Reuse/repurpose existing materials on site to reduce haul and GHG emissions generated
- Reuse of existing alignment and pavement where practical to minimize material needs

Project Goals (Under Draft)

An understanding of project goals is essential to selecting an appropriate project delivery method. Project goals should be set prior to the workshop. Projects see the most benefit when setting three to five goals. While example goals are provided in the guidance document, project goals should be tailored to the specific needs and context of each project.

- Provide a facility that improves safety, mobility, technology, and operations and minimizes costly maintenance efforts by upgrading the built environment for the traveling public, including maximizing work zone safety for motorists, emergency responders, and workers through the duration of construction.
- Utilize innovation while advancing the project timeline, optimizing design, and strategically phasing construction to maximize scope, provide best value and quality, minimize disruption to the traveling public, and stay within budget and on schedule.
- Create a collaborative and transparent team culture that engages in open conversation regarding project risk, constructability, reviews, material accessibility, ROW acquisition, schedule, and third-party issues throughout preconstruction and construction.
- Be adaptable to variable funding and scope adjustments with the ability to change direction and deliver quickly while proactively solving problems, reducing risk with the right team members engaged at the right time.
- Efficiently deliver two adjacent, cross-regional, mega projects by combining Segments 3B and 4 and delivering them with a combination of Region 1 and Region 4 personnel to increase partnership, mentorship, and growth.

Project Constraints

There are potential aspects of a project that can eliminate the need to evaluate one or more of the possible delivery methods. A list of general constraints can be found below and should be referred to after completing this worksheet. The first section below is for general constraints and the second section is for constraints specifically tied to project delivery selection.

General Constraints

- Public information and communication outreach needs are varied and impact a wide audience.

Project Delivery Specific Constraints

Project delivery constraint #1: Obtaining Necessary Clearances for Construction

Mega project delivery requires large efforts to obtain important clearances. With a primary project goal of advancing the delivery schedule as much as possible, project clearance with an aggressive construction commencement (9-12 months) poses a constraint.

- ROW - The exact ROW parcel number is unknown but estimated at 50 parcels, but ROW efforts are highly probable for interchange reconstruction, utility relocations, and I-25 mainline realignment between E-470 and CO 7 (cemetery property).
- Environmental - Segment 3B currently has ROD 1 but needs a re-evaluation. Segment 4 needs a ROD. General timeline to produce, coordinate with locals and FHWA, and execute these agreements are generally 12-18 months (from 30% plan set), posing a constraint to construction commencement.
- Utility - Multiple high-risk utilities (water lines, irrigation ditches, electrical transmission lines, fiber, sanitary sewer, etc.) exist on the project, requiring high-effort coordination, agreements, and relocations. The unknown timing of obtaining the necessary requirements to obtain the utility clearance poses a huge constraint to when the construction may commence.
- Other - additionally permits could include FEMA (St. Vrain Creek Floodway), local agency permits, etc.

Project delivery constraint #2: Financial - Funding, Statewide Corridor Drawdown, and Escalation

- Funding - To date, Segments 3B and 4 have not secured the necessary funds to deliver the expected $700M-730M project. The current TIFIA loan has an estimated $89M to complete I-25 corridor projects. The 10-year plan has identified 3B - $86.5M and 4 - $38M in the FY 31+ timing. The project team has been working with the CDOT CFO and CTIO to identify other funding sources, such as another TIFIA loan or bonding. Additionally, the project team will continually look for other funding opportunities like grants, local partnership, bonding etc.
- 10-Year Plan Drawdown: Region 1 and Region 4 are working with CDOT's CFO to forecast and plan for how the I-25 corridor delivery will impact statewide cash flow to adjust project delivery schedule and tactics.
- Cost Escalation - The project delivery of mega projects is important due to escalation compounding every month the project lags. With this project, it is estimated that each year's delay results in an approximate $20M a year escalation.

Project delivery constraint #3: Possible Limitations on Material, Workforce, and Equipment Resources

With concurrent, regionally-adjacent mega projects (I-270, I-25 North: 2A & 2B) under design and construction around the same time, the area may be competing for similar resources, such as:

- Materials: Barrier, embankment, concrete, girder production, etc. are at risk of impacting critical path items
- Workforce: Quality workmanship is critical and sometimes limited regarding traffic control, guardrail installation, ITS, paving, etc.
- Equipment: Paving machines, striping trucks, cranes

Project delivery constraint #4: Design Effort Variation - Interchanges vs. Middle Widening

The project is approximately 16-miles long with varied scope needs along the corridor. Large areas exist that only involve a more simplified design and construction effort, like the areas only involving widening to the middle. Other areas involve deep complex analysis, design, and construction like the interchange

reconfigurations. This presents a discontinuity of design efforts where some areas will be ready for construction fairly quickly, while other areas will require a more complex design that would delay the construction timing compared to if the entire design would be released as one set.

Project delivery constraint #5: Traffic Phasing and Network resiliency

The project area experiences approximately 85,000-120,000 vehicles per day through this corridor so safe work zones and efficiently moving vehicles through the project is imperative to project success. Additionally, there are very few north/south parallel routes that can handle traffic if there is a crash or traffic limiting situation on I-25, therefore thoughtful consideration is imperative through the entire duration of the design and construction phases.

Project delivery constraint #6: Internal and External Coordination

- Internal: Numerous CDOT groups will be involved in successfully delivering this project. Early and proactive communication between the project team and various internal stakeholders will be imperative. Some affected groups are executive leadership, CTIO, DTR, procurement, alternative delivery, maintenance, Region 1 specialty units, Region 4 specialty units.
- External: The project has a long history of discussions related to the project and it is important to understand the community's vision and expectations to confirm or realign project goals and scope. Ongoing communication and coordination throughout the duration of design and construction is imperative to project success. Some areas will require more coordination and alignment than others that could delay design progress.

Project Risks

Identifying key project risks early helps ensure the selected delivery method aligns with the project's risk profile and management needs. The nature and complexity of identified risks should directly inform the evaluation and selection of the most appropriate delivery method. This allows the project team to proactively allocate risks to the parties best equipped to manage them.

- Adapting project vision, scope, and direction as funding and coordination materializes
- Delivering the project on an aggressive schedule
- Responding to cost volatility in real time
- Sourcing needed resources and long lead items as to not delay construction
- Obtaining the necessary clearances (ROW, utility, environmental)
- Executing numerous stakeholder agreements and working with various stakeholders across two regions
- Obtaining necessary permits at appropriate times
- Procuring the appropriate team to deliver the project

Project Delivery Selection Matrix

Primary Factor Assessment

1) Project Complexity and Innovation

The degree to which a project involves complex technical challenges and the potential for applying innovative design approaches or construction methods to address them.

DESIGN-BID-BUILD allows the Owner to fully develop and resolve complex design issues prior to construction procurement. Innovation is primarily driven by the Owner and Designer, with opportunities through traditional processes such as value engineering (VE) and contractor bid alternatives.

Rating Key: +++: Most appropriate delivery method; ++: Appropriate Delivery Method; +: Least appropriate delivery method; NA: Factor not applicable or not relevant to the selection

Opportunities
• Owner can fully resolve and control the design for I-25 the 13 bridges, three interchange reconstructions, tolling/ITS, walls, drainage, and mobility hub requirements before bidding. • Traditional design process provides direct Owner control for extensive FHWA, CTIO, DTR, local agency, environmental, ROW, and utility coordination. • Simpler median-widening areas can be standardized and fully detailed before construction. • Well-developed plans can reduce ambiguity for bidders. • Broad industry and CDOT (specialty units, procurement, management) familiarity support conventional solutions.
Obstacles
• Limited contractor input during design reduces opportunities to optimize complex traffic phasing, constructability, materials, and long-lead items. • Innovation is primarily Owner/designer-driven and may not fully capture contractor means, methods, staging, or market knowledge. • A single sequential design approach does not align well with the I-25 corridor's major variation between simple widening and complex interchange work (CO7, CO119, and CO 52). Less partnership usually leads to less innovation • Late contractor involvement can expose constructability conflicts after design is complete, increasing redesign/change risk. Value proposals by contractor are not incentivized in this format (split savings between CDOT and contractor) • Contractor's experience is not considered in low bid environment, which may be limiting on a high-profile corridor like I-25. Specialized contractor preferred on a corridor with 100,000 + vpd. • Less adaptable to evolving funding, scope, and adjacent projects third-party requirements during design and construction. Major projects like I-270, I-25 2A and 2B coordination may be lacking from innovation, material procurement, ect.
Rating
+

CM/GC supports collaboration among the Owner, designer, and contractor during preconstruction to address complex technical challenges. Innovation is facilitated through early contractor involvement and iterative design development.

Rating Key: +++: Most appropriate delivery method; ++: Appropriate Delivery Method; +: Least appropriate delivery method; NA: Factor not applicable or not relevant to the selection

Opportunities

- Early contractor involvement can identify work areas (important in 16-mile corridor), resource allocation, optimize complex interchange, bridge, traffic phasing, utility, drainage, tolling/ITS, and mobility hub solutions.
- Iterative design/constructability reviews can tailor solutions to the corridor's mix of simple widening and highly complex areas.
- Supports early investigation, mitigation, and phasing strategy of ROW, utility, environmental, permit, material, and long-lead risks.
- Contractor market knowledge and job can inform material work phasing, trouble areas, risk, availability, workforce, equipment, staging, and work-zone safety strategies.
- Collaborative process directly supports the project goal of transparent risk, constructability, and third-party problem solving. Contractor's familiarity with the project through design will be advantageous in construction, specifically around complex interchanges and utility coordination.
- Uncoupling the designer and contractor may potentially get more proposers, creating a more competitive environment providing CDOT options to get the best value and quality teams.

Obstacles

- Requires disciplined collaboration and timely decisions among CDOT, designer, CM/GC, FHWA, CTIO, DTR, and numerous local stakeholders.
- Innovation can be reduced if design advances too far before CM/GC procurement or if roles are not clearly defined. – Design for 3B and 4 are in an appropriate design progression to take advantage of contractor input.
- Multiple work packages/CAPs can add management complexity and burdensome contract management. If CAP is unsuccessful, multiple contractors could be working in adjacent work zones.
- Strong owner management needs to actively manage scope, risk register, independent estimates, and CAP negotiations. Inherently puts the Owner as the middle person between the CM/GC and designer to negotiate and decide innovation priority and progression.
- Success depends heavily on team culture and sustained participation through a long mega-project delivery period.
- CDOT selecting two different CM/GC and designer contracts could be a disadvantage of industry self-selecting partners.

Rating

+++

DESIGN-BUILD integrates design and construction, enabling innovation through proposer-driven solutions, including Alternate Technical Concepts (ATCs). Effective use requires clearly defined project requirements and performance outcomes.

Rating Key: +++: Most appropriate delivery method; ++: Appropriate Delivery Method; +: Least appropriate delivery method; NA: Factor not applicable or not relevant to the selection

Opportunities

- Integrated designer-contractor team that should be able to efficiently and successfully can innovative solutions for interchanges, bridges, traffic phasing, and construction sequencing that will work together as a team.
- ATCs and best-value procurement can encourage early and consistent corridor-wide innovation and efficient technical solutions.
- Design and construction integration can optimize means, methods, materials, and long-lead procurement.
- Maximizes innovation from multiple pursuiters with ideas that are committed and vetted ideas early in design.
- Single-point responsibility can streamline resolution of design-construction interfaces, especially with errors and omissions in design.
- Variable scope can be structured to maximize improvements within available funding and solutions are known early in the design process.

Obstacles

- Current ROW, environmental, utility, permit, funding, and stakeholder uncertainties are difficult to define and allocate cleanly in an early RFP.
- Managing the delicate balance of producing non-ambiguous but too prescriptive performance requirements and contract documents must be sufficiently developed to protect CDOT, CTIO/DTR, local agency, and community expectations.
- Proposers may price unresolved third-party and clearance risks conservatively, reducing value. Third party coordination might not be as robust.
- Less direct Owner/designer collaboration (mobility hub, interchange design) after award can make evolving scope or stakeholder-driven changes more difficult.
- Cross-regional, cross-specialty coordination and consensus may be more difficult when writing contract documents and may leave less room to remain open to innovation/ compromise on solutions.

Rating

+++

2) Delivery Schedule

The total project timeline from scoping through design, construction, and opening to the public. Consider both timing constraints for starting the project (or securing funding) and the importance of meeting overall completion deadlines.

DESIGN-BID-BUILD follows a sequential design and procurement process. While design must be completed before construction procurement, the procurement phase is relatively short once design is finalized.

Rating Key: +++: Most appropriate delivery method; ++: Appropriate Delivery Method; +: Least appropriate delivery method; NA: Factor not applicable or not relevant to the selection

Opportunities
● Construction procurement is relatively short once final design and clearances are complete. ● Owner can sequence the final design around clearance needs before advertisement. ● Bid period is shorter than alternative-delivery procurements. ● Traditional procurement is predictable and familiar. ● Fully developed plans can reduce design-related delays during construction.

Obstacles
● Sequential design-bid-build delays construction until design is substantially complete, conflicting with the goal to advance project delivery to minimize the impact to the traveling public. ● ROW, environmental, utility, and permit timelines can hold the entire advertisement if incorporated into one complete design package. Negates goal of moving resources from Segment 5 to Segments 3B &4 (barrier, CDOT workforce, etc.). ● Schedule is contractor driven so certainty, refinement, and advancement opportunities are less. Could be critical with possible future funding constraints. ● Does not naturally capitalize on early-release packages for simple widening while complex interchanges continue design, which is especially challenging for coming two mega segments (3B and 4). ● Could have multiple contractors working in adjacent work zones if two low-bid contractors are needed to incrementally progress work. ● Does not allow more flexibility in project execution strategy based on unknown incremental funding amount and types. ● Approximately $20M/year escalation makes extended preconstruction particularly costly. ● Risk of engineering estimate and bids not aligning, an erroneous bid, or repackaging may elongate schedule. ● No contractor is available during design to plan long-lead materials, workforce, equipment, or traffic staging. – BARRIER Needs. ● Complex interchanges and third-party clearances can delay release of simpler portions of the corridor.

Rating
+

CM/GC allows early contractor involvement, enabling construction to begin before design is fully complete. Parallel design and construction processes can accelerate the schedule, but coordination between the CM and designer and the process of reaching an acceptable Cost Amendment Proposal (CAP) may introduce delays.

Rating Key: +++: Most appropriate delivery method; ++: Appropriate Delivery Method; +: Least appropriate delivery method; NA: Factor not applicable or not relevant to the selection

Opportunities
● Allows early work packages and construction to begin before the entire 16-mile corridor design is complete. Allows time and flexibility to minimize impacts and obtain necessary clearances (that could be easier to obtain based on impact reduction). Structure allows shared risk (best-value approach) between CDOT and CM/GC. ● Simple median widening can advance while complex interchange, bridge, utility agreements, clearance, and stakeholder work continues. ● Allows more flexibility in project execution strategy based on unknown incremental funding. ● Early contractor input can identify, develop, and execute work based on traffic phasing while maintaining three lanes and network resiliency. ● Supports early procurement planning for barrier, girders, concrete, embankment, equipment, and other constrained resources. ● Best supports aggressive commencement with transitioning resources from an experienced project Owner staff to interface efficiently between CM/GC8 and designer to help reduce exposure to ~$20M/year escalation.
Obstacles
● CAP development, independent estimating, negotiation, and approvals can delay release if not actively and strongly managed. ● Requires tight coordination of design packages, clearances, procurement, and construction interfaces. ● Schedule benefit depends on timely Owner decisions and continuous designer/contractor collaboration and negotiating slower design progression with quick contractor pace. Due to contractual structure and obligations Contractor is usually more assertive on the influence on design pace than Owner, as well as the construction phase (RFI, 105, etc.). ● Construction should not outpace required ROW, environmental, utility, and permit clearances without having a resourcing strategy outlined in risk documents. ● Multiple packages may create schedule/interface risk if scope boundaries are not well controlled.
Rating
+++

DESIGN-BUILD integrates design and construction under a single entity, allowing construction to start before design completion. Parallel design and construction can accelerate overall delivery, procurement is relatively long due to the time needed to develop the RFP and evaluate proposals.

Rating Key: +++: Most appropriate delivery method; ++: Appropriate Delivery Method; +: Least appropriate delivery method; NA: Factor not applicable or not relevant to the selection

Opportunities

- Overlapping design and construction can shorten overall delivery once the design-build contract is awarded.
- Design-builder can sequence design releases around construction priorities and long-lead needs.
- Integrated team can optimize traffic phasing and construction sequencing.
- Single entity can quickly resolve design-construction schedule conflicts after award.
- Can package early construction activities while later design continues.
- Design may not be as prescriptive or detailed in areas that may be less important in order to build a quality product.

Obstacles

- RFQ/RFP development, industry review, proposal preparation, evaluation, and award create a relatively long front-end procurement especially when there are early opportunity areas for early and quick design and construction (median widening). DB procurement production (~12-16 months).
- The project may need additional definition of environmental, ROW, utility, funding, and stakeholder requirements before procurement can responsibly proceed. Owner will need to provide a lot of estimates on ROW and utility clearances during the procurement phase that may or may not materialize. Utility impacts (irrigation agreements, transmission line, interchange utilities, ect.) will be a heavy lift.
- Early construction still depends on obtaining required clearances and permits.
- Major scope/funding changes after award can require time-consuming contract modifications. Could be tricky with TIFIA procurement risk and timing.
- A long procurement period could increase escalation exposure before field work begins.
- Does not allow more flexibility in project execution strategy based on unknown incremental funding amount and types.

Rating

++

3) Project Cost Considerations

Includes estimating, controlling, and managing project costs within budget constraints. Consider the accuracy of early cost estimates, flexibility to adjust scope to meet budget, and the potential for cost risk throughout design and construction.

DESIGN-BID-BUILD Competitive bidding can provide low-cost construction for a fully defined scope. Cost accuracy is limited until design is complete, and the contractor's lack of design responsibility increases the likelihood of change orders.

Rating Key: +++: Most appropriate delivery method; ++: Appropriate Delivery Method; +: Least appropriate delivery method; NA: Factor not applicable or not relevant to the selection

Opportunities
• Low-bid competition can produce favorable initial pricing for a fully defined scope. • Complete plans allow bidders to price a common scope. • Owner retains direct control of scope development and can Value-Engineer before bid. • Broad competition may reduce contractor markup on straightforward work. • Traditional estimating and bid tabulation are familiar.
Obstacles
• Cost certainty arrives late, after substantial design, while the project has a fixed/limited funding environment and ~$20M/year escalation. • Unresolved ROW, utility, environmental, traffic phasing, and stakeholder issues can become change orders/claims during construction. • Limited contractor market input during design reduces ability to respond early to material, workforce, equipment, and long-lead cost volatility. • If bids exceed budget, redesign/rebid may be required, adding escalation and schedule cost. • Sequential delivery provides less flexibility to continuously balance scope and budget as funding materializes. • Plan interpretation is more varied because of the lack of collaboration during design development. • Pricing risk is primarily allocated to the Owner
Rating
+

CM/GC Early collaboration with the contractor can reduce risk-based pricing. Negotiated Construction Agreed upon Price proposals (CAPs) are non-competitive and can introduce price risk. Provides flexibility to design within a defined budget.

Rating Key: +++: Most appropriate delivery method; ++: Appropriate Delivery Method; +: Least appropriate delivery method; NA: Factor not applicable or not relevant to the selection

Opportunities

- Continuous estimating allows design-to-budget decisions while funding and scope evolve (interchange and mobility hub).
- Early contractor input can reduce risk pricing through investigation, constructability, phasing, and risk mitigation.
- Supports scope optimization and packaging to maximize value within available and incremental funding.
- Market feedback can address material escalation, material selection, labor/equipment constraints, and long-lead procurement in real time for sound Owner decision making on scope and priorities. ICE component enhances/enforces pricing certainty.
- Early construction can reduce exposure to approximately $20M/year escalation.
- Able to release money sooner based on risk mitigation and earlier project closeout.

Obstacles

- CAPs are negotiated rather than low-bid, requiring strong independent estimates and open-book cost validation and requires a strong ICE and Owner.
- Failure to reach an acceptable CAP can add time and procurement risk.
- Multiple CAPs and packages require rigorous cost tracking to avoid cumulative scope/cost growth and variation in item pricing between CPs, hard for inspectors to track.
- Owner retains meaningful third-party, design, and unknown risks that can still affect final cost.
- Requires disciplined contingency and risk allocation to avoid paying more for ambiguous or unallocated risk.
- Sometimes it is difficult to create contracts that are independent of each other to ensure successful CP independence and delivery.

Rating

+++

DESIGN-BUILD allows collaboration and the use of Alternate Technical Concepts (ATCs) to achieve cost-efficient solutions. Costs are established early through the design-build proposal, and variable scope can be used to meet a fixed budget. Poor risk allocation can lead to higher contingencies.

Rating Key: +++: Most appropriate delivery method; ++: Appropriate Delivery Method; +: Least appropriate delivery method; NA: Factor not applicable or not relevant to the selection

Opportunities
● Best-value competition and ATCs can produce cost-efficient integrated solutions (interchanges) with cost certainty at the contract execution. ● Price is established earlier than DBB, improving budget visibility after award. ● Variable scope can be used to align award with available budget. ● Design-builders can optimize quantities, means/methods, staging, and material selections. ● Risk transfer can improve cost certainty when risks are clearly defined, resulting in a reduction in change orders.
Obstacles
● Unresolved ROW, utility, environmental, permit, and funding risks may be included as significant contingencies in proposals. ● Long procurement and proposal development for Owner occur before final price certainty and during continuing escalation. Large proposal costs are apparent for Contractor. ● Changes to Owner requirements or stakeholder commitments after award can be expensive. ● Poorly defined risk transfer can increase bid prices or lead to disputes rather than reduce total cost.
Rating
++

4) Level of Design

The extent of design completion at the time of project delivery procurement, desired risk allocation, and the ability to incorporate contractor input.

DESIGN-BID-BUILD requires 100% design completion prior to construction procurement.

Opportunities
● 100% design provides clear quantities, requirements, and bid documents. ● Owner can fully coordinate complex stakeholder and technical requirements before construction, which will be important with cross-regional coordination. . ● Design decisions remain under direct CDOT control for satisfactory scope item prioritization and design decisions. ● Final design can incorporate completed ROW/environmental/utility commitments.
Obstacles
● Waiting for full corridor design conflicts with the need to start construction aggressively and capitalize on early-ready widening areas. ● Complex interchanges and third-party clearances can delay release of simpler portions of the corridor. ● No contractor constructability input is incorporated before design completion unless separately obtained. ● Funding and scope are expected to evolve, making a fully fixed design vulnerable to rework. ● Long design duration increases escalation exposure.
Rating
++

CM/GC is most effective when procured during early to intermediate design (30%–60%). Advancing design too close to completion reduces the value of contractor input and collaboration.

Opportunities
● CM/GC can be procured early enough to influence design while the project advances from conceptual/intermediate development. ● Design can progress at different rates: early-ready median widening packages while complex interchanges and portions of 3b continue development. ● Contractor input can shape traffic phasing, constructability, material selection, and long-lead strategies before final design. ● Supports iterative incorporation of ROW, environmental, utility, permit, and stakeholder information to identify early work areas and overall project progression. ● Allows Owner to prioritize level and type of scope to adapt as funding becomes available to build a best-value project without waiting for a single 100% corridor plan set.
Obstacles
● Frequent scope changes can create redesign or CAP rework if funding and/or design decisions are not timely. ● Requires careful package tracking and design management. ● Designer and contractor remain under separate contracts, so CDOT must resolve disagreements and retain design responsibility when dealing with construction issues. ● Early packages must still have adequate design and clearances to control construction risk.
Rating
+++

DESIGN-BUILD is most effective when procured at a conceptual level of design (typically ≤30%), advanced only to define contract requirements and properly allocate risk.

Opportunities
● Conceptual design can establish performance requirements while allowing the design-builder to optimize final design. ● Low design completion at procurement maximizes proposer innovation and ATC value. ● Integrated design-builder can tailor design releases to construction sequencing. ● Can avoid Owner focusing on completing detailed design when it would be better managed by the contractor for constructability purposes (SWMP plans). ● Performance-based requirements can focus on outcomes and project goals rather than prescriptive details.

Obstacles
● The project currently has substantial unresolved third-party, clearance, scope, and funding issues that are difficult to capture at <=30% design, and would take substantial time to understand corridor impacts before performance criteria can be written. ● CDOT must advance enough design to define ROW limits, environmental commitments, utility responsibilities, tolling/ITS, traffic, and stakeholder requirements. ● Over-advancing design before procurement would reduce DB innovation; under-advancing it could create pricing and scope ambiguity. ● Stakeholder expectations across two regions and many local agencies may require more Owner-led definition than typical DB. ● Evolving funding and scope after award may not fit a fixed performance-based contract cleanly.

Rating
+++

5) Risk Assessment

The selected delivery method should align with the project's risk profile and support effective identification, management, and allocation of risk.

DESIGN-BID-BUILD is appropriate for projects with well-defined scope and limited uncertainty. The Owner retains design and third-party risks. Projects with significant unknowns or unresolved risks may experience increased change orders and claims.

Rating Key: +++: Most appropriate delivery method; ++: Appropriate Delivery Method; +: Least appropriate delivery method; NA: Factor not applicable or not relevant to the selection

Opportunities
• N/A
Obstacles
• N/A
Rating
N/A

CM/GC is appropriate for projects with moderate to high complexity or risk that would benefit from early contractor involvement. Enables collaborative risk identification and allocation during preconstruction. Best when risks are not fully defined and can be mitigated through iterative design and construction input.

Rating Key: +++: Most appropriate delivery method; ++: Appropriate Delivery Method; +: Least appropriate delivery method; NA: Factor not applicable or not relevant to the selection

Opportunities
● Collaborative risk registers can identify, quantify, mitigate, and allocate risks as design and clearances develop. ● Early contractor involvement directly addresses constructability, traffic, material, workforce, equipment, and long-lead risks. ● Supports iterative mitigation of ROW, utility, environmental, permit, and stakeholder risks before and during each construction package. ● Can adapt construction sequencing as funding, economical, and third-party conditions change. ● Best aligns with the project goal of engaging the right team members at the right time to proactively solve problems.

Obstacles
● CDOT retains substantial responsibility and must actively manage risks that cannot be transferred or resolved. ● Shared/retained risk allocation must be clearly reflected in CAP pricing to avoid ambiguity or duplicate contingency. ● Multiple packages create interface risks that require active coordination. ● CAP negotiation can become a risk if parties disagree on pricing or allocation. ● Requires experienced Owner leadership and transparent team behavior throughout preconstruction and construction.

Rating
+++

DESIGN-BUILD is appropriate for projects where risks can be clearly defined and allocated through performance-based requirements. Transfers significant risk to the design-builder but requires well-developed project criteria.

Opportunities
● Can transfer design, construction integration, means/methods, and selected schedule/cost risks to one entity. ● Single-point responsibility reduces designer-contractor interface risk. ● Design-builder can manage technical and construction risks holistically. ● Best-value procurement can evaluate risk-management approach and team capability. ● ATCs can reduce technical risk through alternative solutions.
Obstacles
● Many key risks are not yet clearly defined or fully controllable by a design-builder, especially ROW, environmental, utility, permits, funding, and stakeholder agreements. ● Transferring uncontrollable risks may result in high contingencies, exclusions, or disputes. ● Owner must develop clear performance requirements and risk allocation before procurement. ● Evolving scope/funding after award can shift risk back to Owner through changes. ● Long procurement leaves some risks unresolved without contractor collaboration during the near-term pre-award period.
Rating
+

Project Delivery Selection Matrix Secondary Factors

6) Staff Experience and Availability

Consider whether sufficient staff resources and experience are available to effectively procure, administer, and oversee the project.

DESIGN-BID-BUILD requires staff experienced with traditional delivery to oversee design and construction phases available throughout the project.

Opportunities
• N/A
Obstacles
• N/A
Rating
N/A

CM/GC requires staff with strong project management and collaborative process experience. Active Owner involvement is needed to coordinate between designer and contractor, effectively manage risk, and facilitate CAP negotiations.

Opportunities

- Early CM/GC participation adds construction expertise to supplement Owner/designer staff during design.
- Collaborative structure supports combined Region 1/Region 4 staffing, partnership, mentorship, and knowledge transfer. Strong Owner experience and knowledge (PM and specialty units).
- Contractor can help plan traffic, constructability, resources, long-lead items, and packaging before construction.
- Owner can use independent cost estimating and specialty support strategically.
- Aligns with the project goal of transparent cross-functional collaboration.

Obstacles

- Requires strong Owner project management, facilitation, risk management, estimating, and CAP negotiation resources.
- Active Owner involvement remains high throughout preconstruction; CM/GC does not reduce the need for CDOT decisions.
- Multiple CAPs/work packages increase administrative workload.
- Staff continuity is important over a long delivery period.
- Success depends on having enough experienced alternative-delivery staff available while other mega projects are underway.

Rating

Pass

CM/GC is a pass on staff experience and availability because of multiple factors. Early CM/GC participation adds construction expertise to supplement Owner/designer staff during design. Collaborative structure supports a combined Region 1/Region 4 staffing, partnership, mentorship, and knowledge transfer. There is strong Owner experience and knowledge (PM and specialty units). The Contractor can help plan traffic, constructability, resources, long-lead items, and packaging before construction. The Owner can use independent cost estimating and specialty support strategically. CM/GC aligns with the project goal of transparent cross-functional collaboration.

DESIGN-BUILD requires Owner resources for procurement and oversight during design and construction. Staff should have experience developing RFQs/RFPs and managing performance-based contracts or retain an owner's rep with these skills.

Opportunities
• N/A
Obstacles
• N/A
Rating
N/A

7) Level of Owner Oversight and Control

The degree to which the Owner retains control over design decisions, construction activities, and overall project execution. Consider how much control is desired versus how much responsibility can be delegated.

DESIGN-BID-BUILD The Owner manages separate contracts and retains decision-making authority throughout.

Opportunities
• N/A
Obstacles
• N/A
Rating
N/A

CM/GC maintains a high level of Owner control over both design and construction while incorporating contractor input.

Opportunities
• CDOT retains design control while gaining contractor input on constructability, cost, schedule, phasing, and risk. • Supports transparent, collaborative discussion with designer and contractor before construction commitments. • Allows CDOT to maintain control of stakeholder, environmental, ROW, utility, tolling/ITS, and community commitments. Stakeholder engagement is needed through design and construction. • Owner can decide when individual packages are sufficiently developed and cleared for construction. • Best matches the stated goal for collaborative and transparent team culture with active risk management.
Obstacles
• High Owner involvement requires timely decisions and clear governance across Regions 1 and 4 and specialty groups. • Separate designer and contractor contracts can create differing recommendations that CDOT must resolve. • CAP negotiations require Owner discipline to preserve independent cost and risk decisions. • Frequent Owner changes can undermine schedule and pricing if not controlled. • Requires sustained executive and technical engagement throughout a long preconstruction/construction period.
Rating
Pass

CM/GC passes the secondary factor of level of owner oversight and control due to multiple factors. CDOT retains design control while gaining contractor input on constructability, cost, schedule, phasing, and risk. CM/GC supports transparent, collaborative discussion with designer and contractor before construction commitments. It allows CDOT to maintain control of stakeholder, environmental, ROW, utility, tolling/ITS, and community commitments. Stakeholder engagement is needed through design and construction. The Owner can decide when individual packages are sufficiently developed and cleared for construction. CM/GC best matches the stated goal for collaborative and transparent team culture with active risk management.

DESIGN-BUILD transfers significant responsibility for design and construction to the design-builder. Clearly defined requirements are necessary to ensure desired outcomes.

Opportunities
• N/A
Obstacles
• N/A
Rating
N/A

8) Competition and Contractor Experience

Consider the availability, qualifications, competitiveness, and capacity of the contractor market, as well as experience with the delivery method.

DESIGN-BID-BUILD is widely understood, with broad contractor participation and experience. Typically results in a high level of competition, with contractor selection based on low bid.

Opportunities
• N/A
Obstacles
• N/A
Rating
N/A

CM/GC uses a qualifications-based selection process to identify a contractor early. Pricing is negotiated through the CAP, which may reduce competitive pricing pressure.

Opportunities
• Qualifications-based procurement can select a contractor specifically for mega-project collaboration, traffic phasing, constructability, risk, and innovation capability. • Early selection lets the chosen contractor engage the subcontractor/supplier market and plan constrained resources. • Selection can emphasize team culture and ability to work across Regions 1 and 4 and numerous stakeholders. • Multiple CAPs can competitively bid subcontracted scopes while retaining one corridor-wide CM/GC. • Early contractor commitment supports continuity from design through construction.

Obstacles
• CAP pricing is negotiated after selection, reducing direct competitive price pressure during construction pricing. • The scale and duration of the project may limit the number of qualified CM/GC teams with sufficient capacity. • Strong independent cost estimates and subcontractor bid coverage are needed to demonstrate price reasonableness. • Concurrent mega projects may constrain key subcontractors, suppliers, workforce, and equipment. • If CAP negotiations fail, fallback procurement can affect schedule.

Rating
Pass

CM/GC passes the secondary factor of competition and contractor experience due to multiple factors. Qualifications-based procurement can select a contractor specifically for mega-project collaboration, traffic phasing, constructability, risk, and innovation capability. Early selection lets the chosen contractor engage the subcontractor/supplier market and plan constrained resources. Selection can emphasize team culture and ability to work across Regions 1 and 4 and numerous stakeholders. Multiple CAPs can competitively bid subcontractor scopes while retaining one corridor-wide CM/GC. Early contractor commitment supports continuity from design through construction.

DESIGN-BUILD Uses a best-value selection process that balances price and non-price factors. Requires a market with sufficient experience in design-build delivery and the ability to develop responsive proposals.

Opportunities
• N/A
Obstacles
• N/A
Rating
N/A

Project Delivery Selection Summary

The factors are qualitatively rated using the key below. Review all factor ratings across all delivery methods and use the collective results to identify which Delivery Method best positions the project to achieve its goals.

Primary Factors

Rating Key: +++: Most appropriate delivery method; ++: Appropriate Delivery Method; +: Least appropriate delivery method; NA: Factor not applicable or not relevant to the selection

	DBB	CM/GC	DB
1. Project Complexity & Innovation	+	+++	+++
2. Project Delivery Schedule	+	+++	++
3. Project Cost Considerations	+	+++	++
4. Level of Design	++	+++	+++
5. Risk Assessment	NA	+++	+

Secondary Factors

	DBB	CM/GC	DB
6. Staff Experience/Availability (Owner)	NA	P	NA
7.Level of Oversight and Control	NA	P	NA
8. Competition and Contractor Experience	NA	P	NA

Project Delivery Selection Summary Conclusions and Comments