



**COLORADO**

Department of  
Transportation



**22420 US 550-US160 Connection South  
Design-Build Presentation**

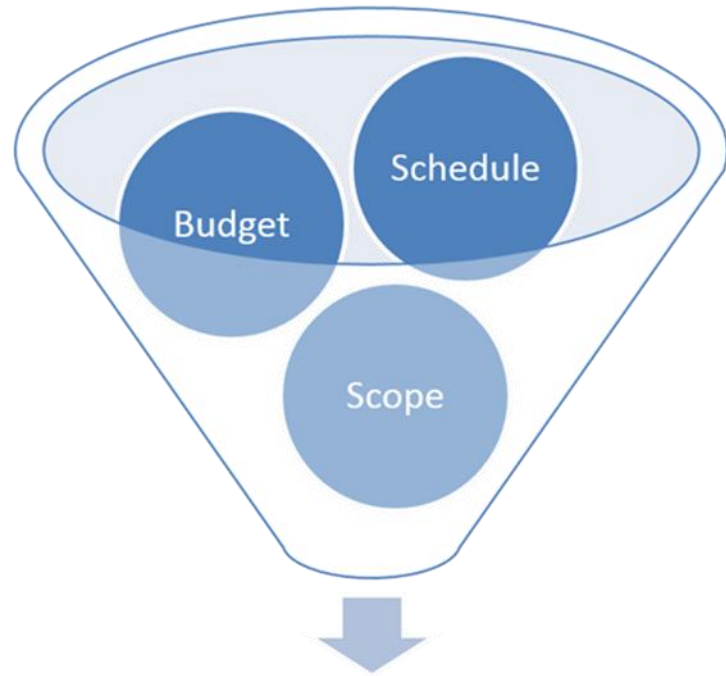


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## Objectives-

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Successful Project

- Why Design-Build?
- What is the rush?
- What is the Difference
- How does that affect
  - How I contribute
  - My insurance



# Methods of Project Delivery

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## CDOT's Current Project Delivery Methodologies:

- Design-Bid-Build
- Design-Build
- Contract Manager/General Contractor at risk (CM/GC)
- Indefinite Delivery/Indefinite Quantity (ID/IQ)



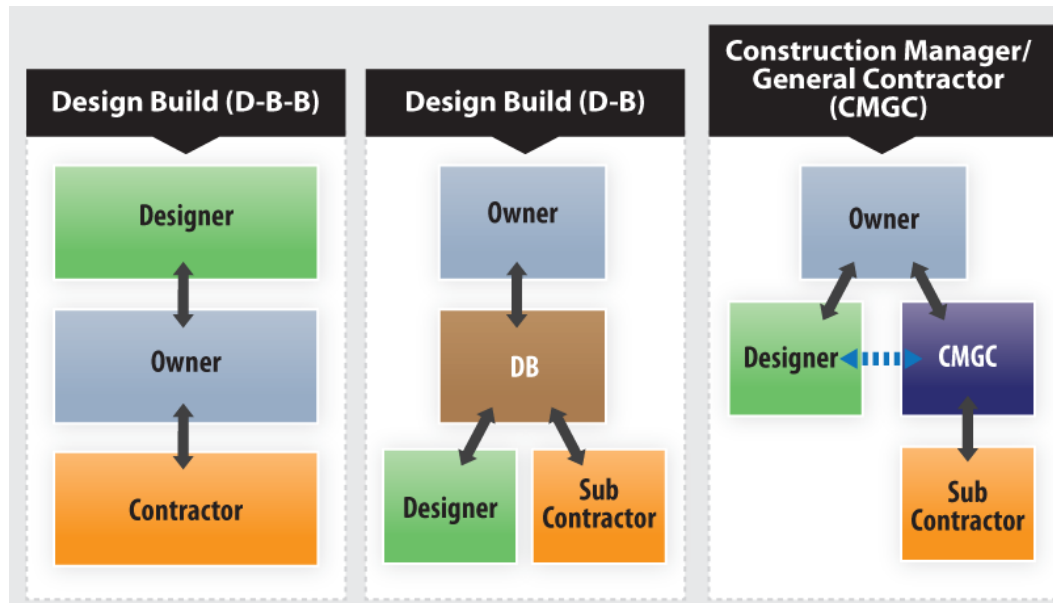


# Methods of Project Delivery

## Owner Procurement Strategies for Delivery

One Contract:  
▪ Design-Build

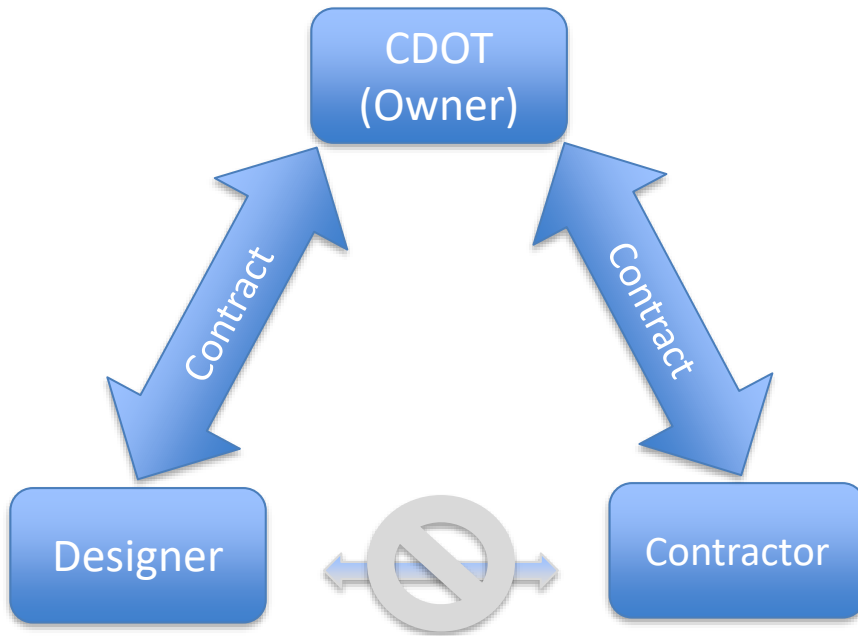
Multiple Contracts:  
▪ Design-Bid-Build  
▪ CM/GC  
▪ ID/IQ





# Why does one Contract Matter?

Traditional Project Structure:



Project Development Timeline:

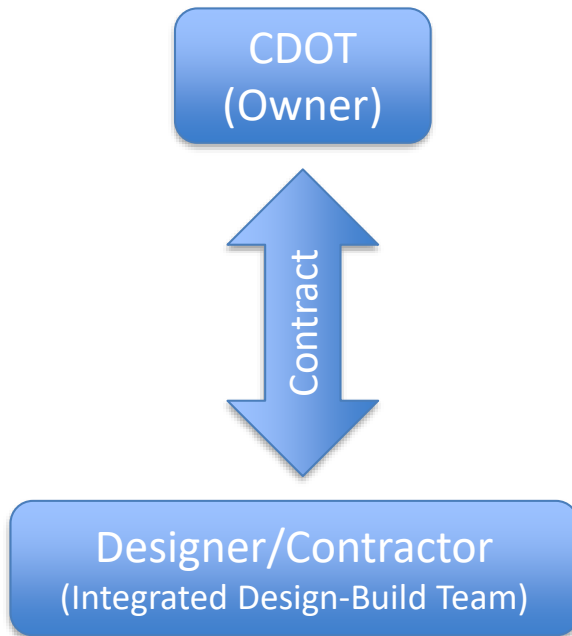




# Why does one Contract Matter?

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Design-Build Project Structure:

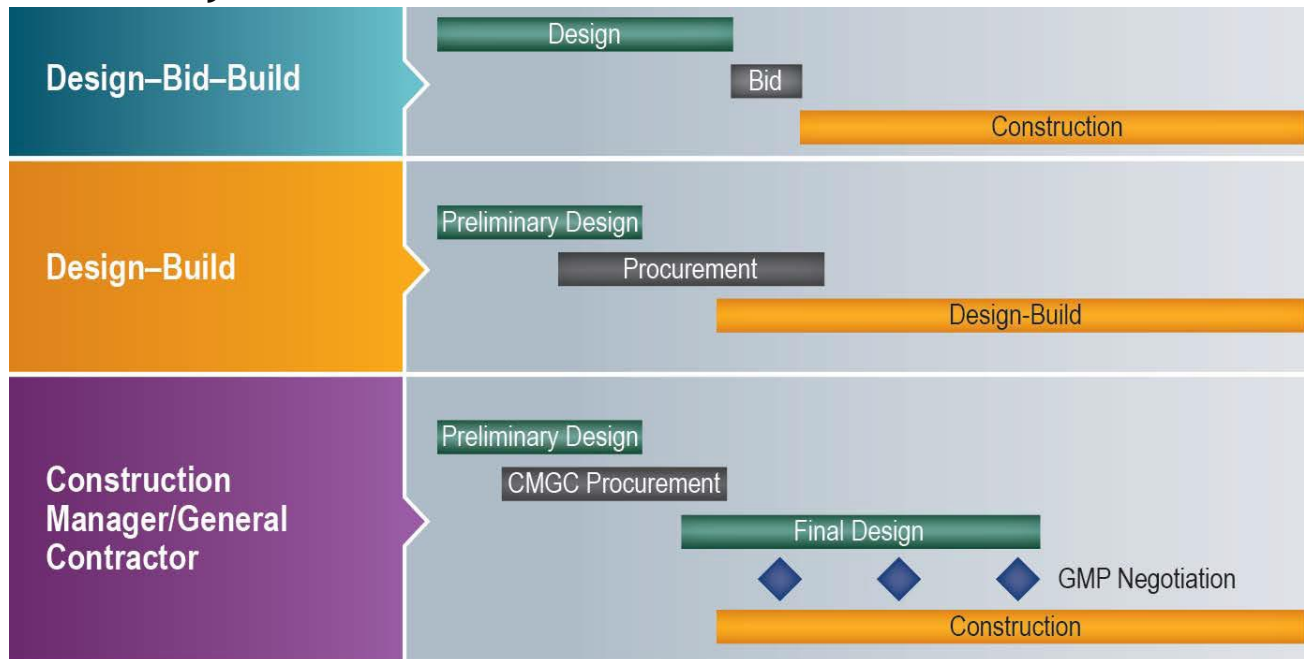


Owner is working with an Integrated project team that will provide both Design and Construction Services.



# Why does one Contract Matter?

- Integrated approach between the Design and Construction effort.
  - Creates opportunity for innovation.
    - Owner and Contractor can ask the “*What if we did this...*” question.
    - Design-Resources readily available to explore those questions.
  - Allows opportunities to coordinate and optimize the design
  - Project development no longer linearly constrained. parallels tasks, to create efficiency.
  - More efficiency = More value





# Why does Design Build Offer?

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- 70% **decrease** in construction duration\*
- 29% **decrease** in design duration
- 15% **decrease** in overall project duration
- 223% **increase** in Project Intensity (\$/Days)
- 0.4% **decrease** in Cost Growth

“Alternative Contracting Method  
Performance in US Highway Construction”  
TECHBRIEF FHWA-HRTA-17-100  
Sample Size of 284 projects Nationwide

\*When the mean scope has been normalized





# What is the Rush to get projects out!

## The Opportunity Cost

The quicker we can deliver the projects the more value they have.

For every month\* that it takes me to deliver:

\$100 million project we lose

\$250,000 in value

Every Three Months means that CDOT has to forego a 2 mile overlay project from this years budget.



\*assumes a 3% escalation factor



# What is the Difference?

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## Design-Bid-Build Contract

- Detailed Final design
- Prescriptive Specifications
- Selection based on Low Bid
- Bid Package includes Final Quantities



# What is the Difference?

## Design Bid Build

- Detailed Final design
- Prescriptive Specifications
- Final Quantities to bid on
- Selection based on Low Bid

## Design-Build

- Two Phase Selection process
  - RFQ phase to determine Shortlisted Firms based on Qualifications
  - RFP phase to determine proposer that provides the “Best Value”
- Contract Documents are performance based
- Only conceptual design is provided (final design is not complete)
- Budget is set by Guaranteed Maximum Price, Scope is variable
- No quantities provided



## What is the Difference?: What Does Best Value Mean?

- Our Project has stated several goals that need to be achieved
  - These goals communicate what CDOT values as an Owner
- We have also established a Guaranteed Maximum Price
- The successful proposer will be the one that can best meet the goals of the project, within the budgeted guaranteed maximum price
  - Each proposer will be trying to put as much scope into project as they can while staying under the Guaranteed Maximum Price.
  - Proposers will use innovation to recover budget to fund additional scope





## What is the Difference?: What will a successful Proposer be responsible for?

- Progress the Design of the Project to Final
- Construction of the Project
- Quality Control
- Scheduling
  - Schedule consists of cost loaded “Work Breakdown Structure” elements
  - Payment is based on percentage complete of these WBS elements



## What is the Difference?: How does the Invoicing work?

- Contractor submits justification for percent complete of each WBS element.
- Now if The Owner determines that the WBS element in question is not in conformance to the contract documents they will not pay for that element.
- Non-conformances (NC's) can be due to Execution, Quality, or Safety
- Non conformances need to be documented with objective evidence and responded to by the Design-Build team



## What is the Difference?: How does the Invoicing work?

- What does the invoicing discussion mean?
- Because we are paying based on a Cost Loaded Schedule. Tracking where your work falls into the Work Breakdown Structure (WBS) may be difficult.
- The Invoicing process is subject to quality requirements, negotiation and may take some time to process.



## What is the Difference?: How does the Invoicing work?

- Typically if you installed your work, or invoiced for work completed the first week of the month.
- That invoice will be included in the progress payment 5 days before the closing at the end of the month.
- The Owner and the Design-Build Team have to meet to discuss/negotiate within 5 days of the submittal of the invoice.





## What is the Difference?: How does the Invoicing work?

- If there are any outstanding Non-Conformance issues on the WBS element then that WBS element is not eligible for payment.
- Once negotiation is completed then the Owner has 7 days to process payment.



## What is the Difference?: How does the Invoicing work?

### Example:

- You completed your work on September 12, 2018 (Day 0)
- You invoiced for your work on September 15, 2018 (Day 2)
- Progress payment for the entire project will be submitted September 24, 2018 (Day 12)
- Negotiation will happens on (October 1, 2018) (Day 19)
- Payment happens on (October 8, 2018)\* (Day 26)

\*Assuming no outstanding Non-Conformance issues.



## What is the Difference?: What about Insurance?

# Owner Controlled Insurance Program

- What is included:

- Liability
- Contractor Pollution Liability
- Builder's Risk

- **Workers Compensation is not included**

- ✦ All sub-contractors that work on the project enroll in the OCIP.
- ✦ The GC is responsible for ensuring that everyone enrolls and the sub-contractor enrolls under whichever contractor hires them.
- ✦ The contract requirements of the prime apply to all tiers.
- ✦ Sub-Contractors should remove insurance costs for the covered lines of insurance and then they can report to their broker/agent that they are insured for their work on the OCIP.



## How can I get involved?

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- Market yourself to the Design-Build Teams
  - Let them know your capabilities and capacities
- Get involved in the proposal phase
  - As the Teams are developing their proposals share your Ideas on ways that could help them recover budget
- Think of Innovative ways to apply your skills, products and services to help a Design-Build Team recover budget, schedule, or add efficiency.
- Balance your Risk and flexibility