



# Emerging Technologies: Principles and Best Practices of Collaborative Delivery Methods

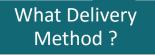




A method in which an owner enters into a single contract for the design, construction and commissioning of a project



ESE





What Procurement Process?



What Form of Contract



## **Collaborative Delivery**

#### **NO LONGER ALTERNATIVE**

- Design-Build
  - o Progressive
  - Fixed Price
- Design-Build Operate
- Public Private Partnerships (P3)
- Construction Management at Risk (CMAR)



## **Collaborative Delivery**

#### **METHODS**

Construction Management at-Risk (CMAR)

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Fixed-Price Design-Build (FPDB)

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Progressive Design-Build (PDB)

DESIGN-BUILD

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Design-Build-Operate (DBO)
Single Entity

PROPERATOR

Design-Build-Operate (DBO)
Multiple Entities

ORIGINAL DESIGNATION

OPERATOR OF THE PROPERTY O

OWNER

ADVISOR
Public-Private
Partnerships
(P3)

ORDERANDO
DESIGN.B



# **Design-Build Delivery**



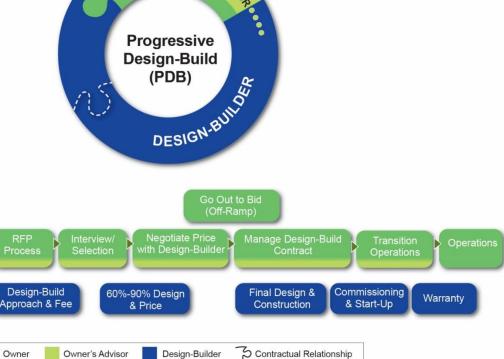
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**OWNER** 



Contract Amendment to Approve Construction

Implementation

Plan

RFQ Process

SOQ

Owner

• • • • Embedded Relationship



# **Distinguishing Features**

#### **PROGRESSIVE**

- One DB contract with two phases
  - 1st DB firm works with Owner to develop project scope, detailed design, all permit applications and schedule with "off-ramp" for Owner exclusively if final pricing cannot be agreed upon
  - 2<sup>nd</sup> DB proceeds to complete design, construction, testing and acceptance, and close-out
- DB has single source responsibility for overall project performance





## **Differences**

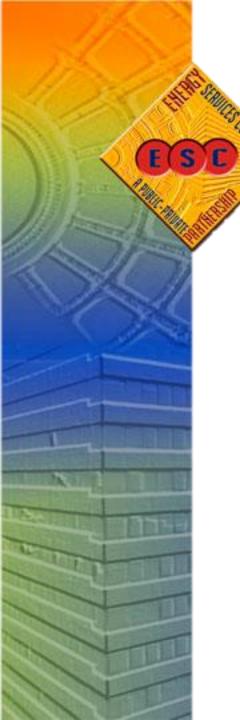
#### **PROGRESSIVE**

- Only way owner can take offramp is if price cannot be negotiated
- Significant cost burden to administer GMP
- Has single point of accountability
- Some owners chose to use two contracts and not a two phase contract – which adds time and cost
- Owner has opportunity for significant involvement in detailed design and scope refinement









# **Specific Requirements**

### **FIXED-PRICE**

- Either prescriptive or performance
   Prescriptive RFP limits innovation and creativity
- Performance RFP can provide flexibility and innovative cost-effective results.
- Requires fixed-price in proposal
- Owner can negotiation with another firm if cannot agree with first.



# **Distinguishing Features**

#### **FIXED-PRICE**

- Typical 2 step process with firms short-listed
- Technical package required with evaluation criteria
- Selection based on concept of "best value"
- Contract awarded to proceed on work at a specific price





# Comparisons

#### **DELIVERY METHODS**

[ties back to characteristics and selection criteria]

#### **PROGRESSIVE**

DB firm selected largely on qualifications

Collaboration benefits with DB team to develop scope, quality, schedule and cost

Owner controls project scope and design process

Cost transparency eliminates risk of public bids over budget

Support for Owner to obtain environmental permits

Reduced cost of technical package and RFP procurement

#### **FIXED-PRICE**

Shortlisted proposers compete on both technical solution and price

Subcontractor/suppliers provide market price competition

Innovation opportunities with multiple proposers

Fixed-Price price for contract award



**PROJECT SCHEDULE** 



Plan Project	RFQ	RFP	rmits/Design Inp	tify DB Performan	ce O&M
		Tech Support	Verify GMP	Inspection	
m	Quals	ropose Conce	esign/Develop GMI	Construction, Startu	Warranty
				omplete Design	

Fixed-Price DB (LS)

TIXOG TITOG E	B (EU)			
Plan Project RFQ	RFP	Verify DB Performance		O&M
		o <b>kt</b> erify Design	Inspection	
Quals	sign/Price for Propos	Iomplete Deign, Co	onstruction, Startu	Warranty
	Plan Project RFQ Project RFQ	ormance Criteria/Permits/Technical Supp	Plan Project RFQ RFP Verify DB Pormance Criteria/Permits/Technical Supporterify Design	Plan Project RFQ RFP Verify DB Performance  prmance Criteria/Permits/Technical Supporterify Design Inspection



# **Design-Build Delivery**

#### **SUMMARY**

- Single contract for overall performance
- Schedule savings with early start of construction
- Encourages design and construction innovation
- Early cost certainty; less change orders
- Clear warranty accountability





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