



# Design-Build 101

## Part 1 of 2

Alternative Delivery Division



# Design-Build 101

## Part 1 of 2

This is a self-directed overview of Design-Build contracting based on Version 6.0 of the Programmatic Documents



# Training Goals

1. Provide participants a better understanding of the Design-Build process
2. Identify the various parts of the Design-Build project delivery method
3. Identify expectations and responsibilities of the entities involved in Design-Build
4. Identify contractual differences between DBB and DB





<b>1</b>	References	5-8
<b>2</b>	Design-Build Overview	9-19
<b>3</b>	Design-Build Initiation	20-23
<b>4</b>	Procurement	24-30
<b>5</b>	Contractor Selection	31-37
<b>6</b>	TxDOT Project Team Organization	38-41
<b>7</b>	Implementation	42-60
<b>8</b>	Commencement of Construction Work	61-64



# References





# TxDOT Design-Build Authority



- Texas Transportation Code, Chapter 223, Subchapter F authorizes and governs Design-Build (DB) projects
- 



**6 PROJECTS**

*per fiscal biennium*



**\$150M**

*minimum*

- 
- TAC Title 43, Part 1 regulates DB
  - Code of Federal Regulations (CFR) Title 23, Chapter I, Subchapter G, Part 636 details the Federal Highway Administration's (FHWA) regulatory requirements for federally-funded DB projects

# Contract Documents (referred to as DB Contract)



## Design-Build Agreement (DBA)

Includes DB specific and traditional contract language. Allows flexibility for district specific language.

## Design-Build General Conditions (DB GC)

Items 1-9 of the DB Specifications are the Design-Build General Conditions and provide the static terms and conditions for DB contracts.

## Design-Build Specifications Items 10-28 (DBS)

Includes DB programmatic contract language. Allows flexibility for project specifications and district preferences.

## Capital Maintenance Agreement General Conditions (CMA GC)

- Includes provisions for maintenance during construction & options for maintenance after substantial completion.
- Items 1-8 of the CMA Specifications are the CMA General Conditions and provide the static terms and conditions for CMA contracts. The CMA Specifications are included in item 9



**These and other resources can be found at:**

**<https://ftp.txdot.gov/pub/txdot/atd/programmatic-docs/>**



ADOREplus is the official document repository for the Alternate Delivery Program

ADOREplus

Home Projects **Program** Ex(lm)port ARC Center ESR Center Resources Contact Us adm-Teresa Zunker TxDOT UA

ARC Center

- FiRe Tracker
- Section129/166
- OVT Compliance
- Projects

Integrated with other TxDOT systems providing **SINGLE SOURCE OF TRUTH**

ANNOUNCEMENTS QUICK LINKS





# Design-Build Overview





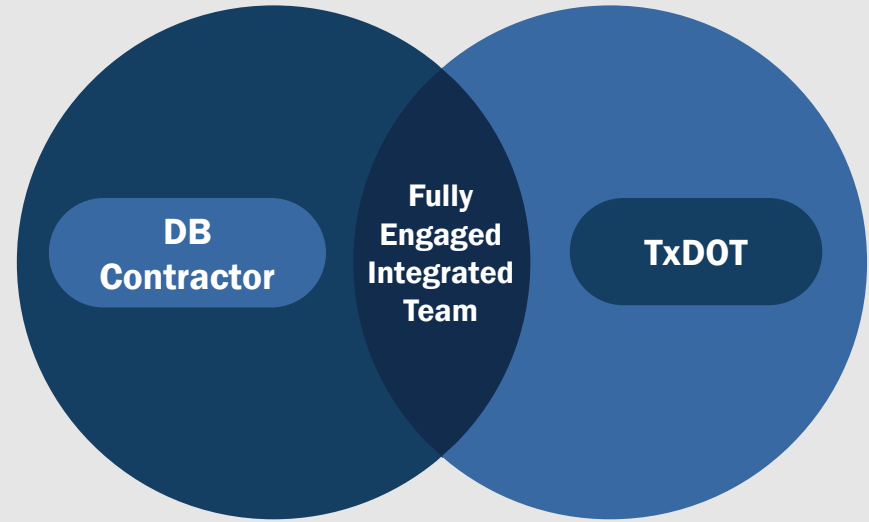
## Design-Build project delivery combines Project Design and Construction into a single contract

- The designer and contractor being one joint entity facilitates
  - Innovation through Alternative Technical Concepts
  - Rapid problem solving
  - Value engineering
- DB Contractor is **responsible** for both design and construction
  - Opportunity for DB Contractor to tailor design to preferred construction methods and resources
  - Design error or inefficiency is the responsibility of the DB Contractor to resolve
- TxDOT has less administrative burden with use of one contract



## The Design-Build Partnering mindset & culture is essential to success

- Use **Partnering** to solve challenges quickly in a shared risk environment
  - Establish decision-making process and response times
  - Establish responsible parties in the decision-making process
  - Create the foundation for trust to develop between team members
  - Encourage project teams to recognize the goals of all team members



# Benefit - Expedited Project Delivery

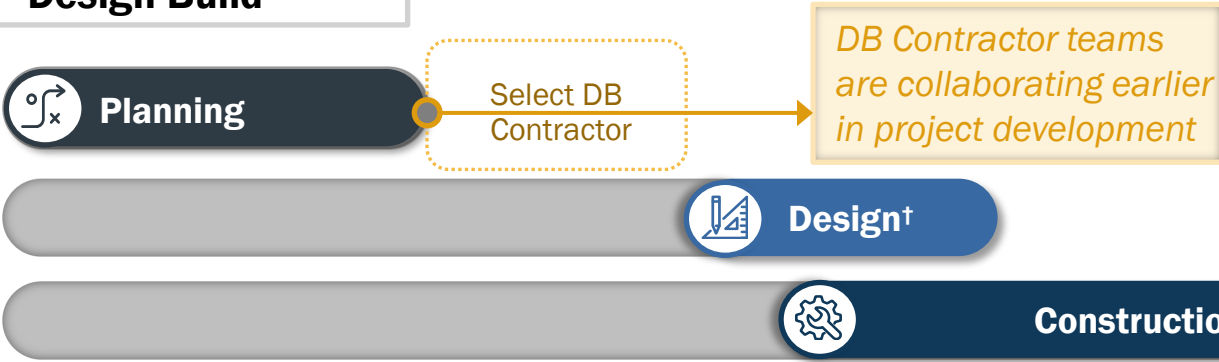


- **Design-Build Provides Expedited Project Delivery** by overlapping design, construction, ROW acquisition\* and utility adjustments to save time

## Design-Bid-Build



## Design-Build



(\*) ROW Acquisition will be by TxDOT for new DB Projects

(†) Typically, shorter Design duration due to parallel design packages, large design team, and shorter TxDOT review times



## Design-Bid-Build

- Contract bid with unit prices for line items
- Monthly payment based on completed measured quantities of line/pay items

## Design-Build

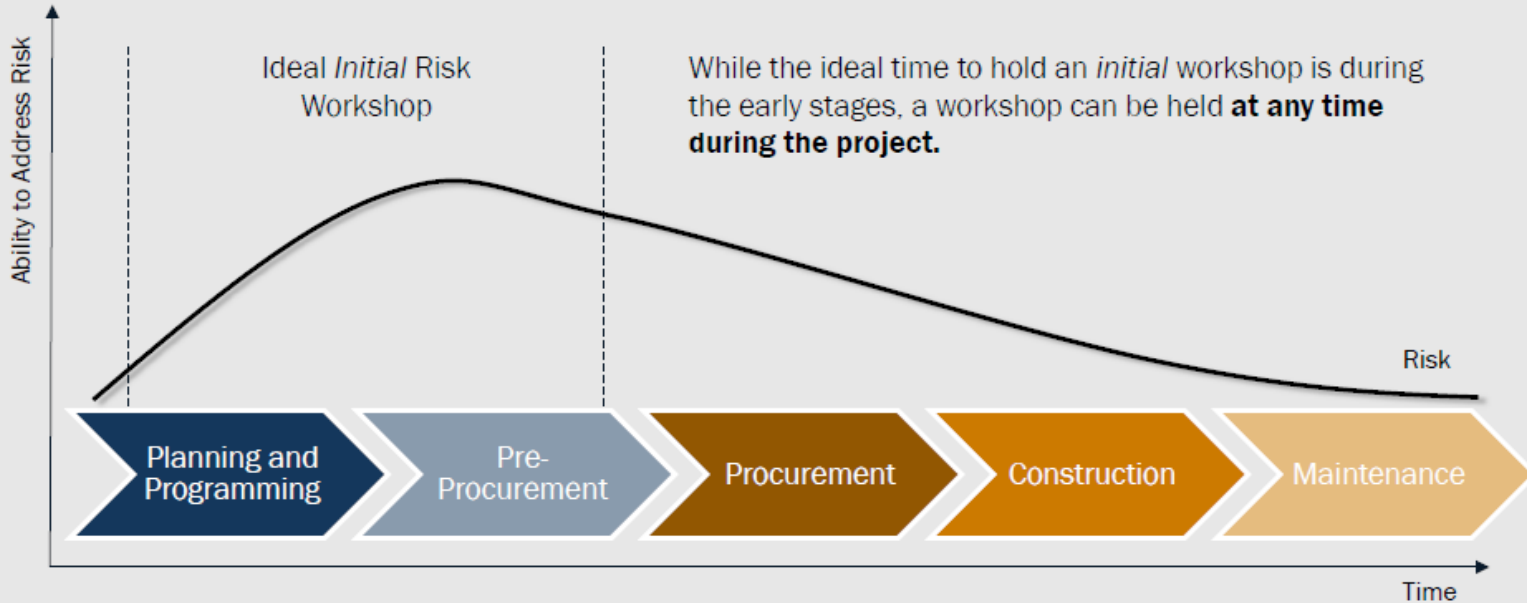
- Contract based on a price for a completed project
- Monthly progress payment based on percent completion
  - Based on a cost loaded CPM schedule



- Improved project cost certainty
- Reduced administrative burden



- Identify and document project uncertainties
- Record risks in a log (Risk Register)
- Assess the impacts
- Decide how to respond
- Track and update the Risk Register
- Transfer the Risk Register and other data as the project progresses from Planning to Maintenance

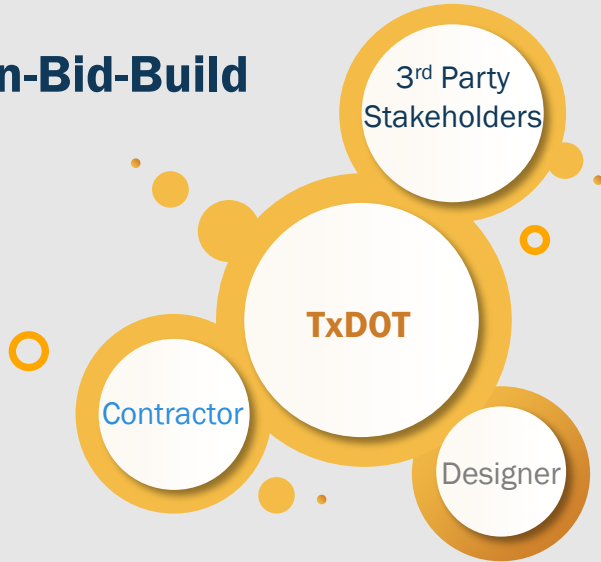


# Benefit - DB Contractor has Increased Control over Risk Factors

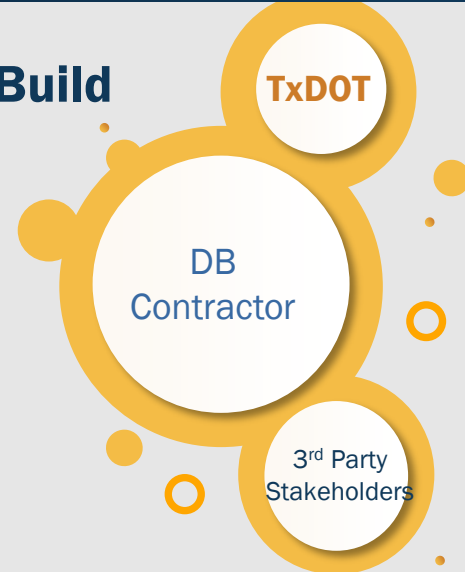


- DB Contractor has early communication with third-parties and stakeholders and better control over
  - Permitting
  - Utility Adjustments
  - ROW Acquisition\*
- DB Contractor has control over design and early access for site assessment

## Design-Bid-Build



## Design-Build



(\*) ROW Acquisition will be by TxDOT for new DB Projects.



## Risk Sharing



Design-Build Agreements include clauses sharing the time and money cost of delays between the DB Contractor and TxDOT



In addition to sharing delay costs, indirect costs (markups) are sometimes reduced



Both DB Contractor and TxDOT are incentivized to mitigate risk



Added value is created for TxDOT

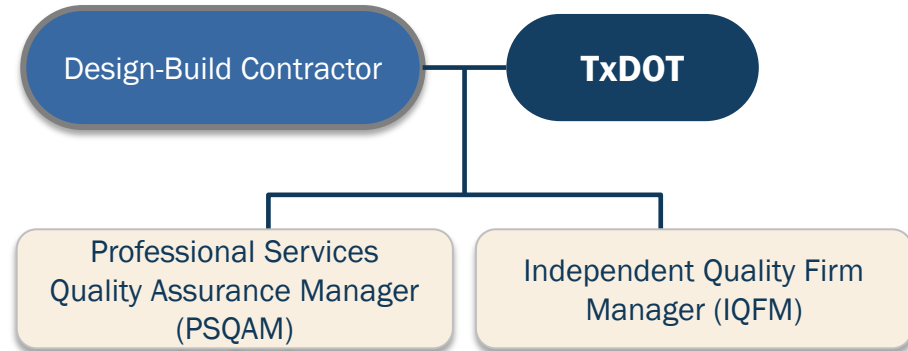
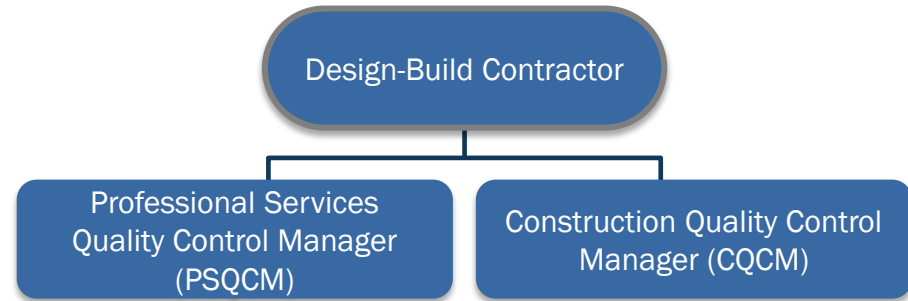
- Improved project cost certainty
- Greater schedule assurance
- Reduced construction disputes



# Benefit – QC and QA are by the DB Contractor



- ❑ Design and Construction Quality Control are performed by the DB Contractor and managed by the PSQCM and CQCM
- ❑ The PSQCM and CQCM are part of the DB Contractor's team
- ❑ Independent Design QA is performed by a Professional Services Quality Assurance Firm (PSQAF)
- ❑ Construction QA by an Independent Quality Firm (IQF)
- ❑ Both firms have dual reporting responsibilities



# Benefit – Maintenance for Lifecycle Risk



- The DB Contractor is well-equipped to construct projects at a reduced cost. However, certain cost savings introduce **potential lifecycle risks**.
- To mitigate this challenge TxDOT may
  - Add more prescriptive lifecycle design to the technical specifications
  - Hold the Contractor responsible for lifecycle risks for an extended period after Final Acceptance of the project.



• DB projects include a **5-year Performance Warranty** federally funded within the contract price

**OR**

• Districts have the option to replace the 5-year Performance Warranty with a TxDOT funded **Capital Maintenance Agreement (CMA)** for longer term maintenance up to 15 years



## Price Score



**70% - 85%**

- **DB Price**
- **ATC Adjustments**
- **Maintenance Price**
- **Other Factors**

## Technical Score



**15% - 30%**

- **Project Management**
- **Quality Management**
- **Design, Construction and Maintenance Plan**

+

=

## Total Proposer Score

**Selection based on bid price and technical approach factors**



# Design-Build Initiation

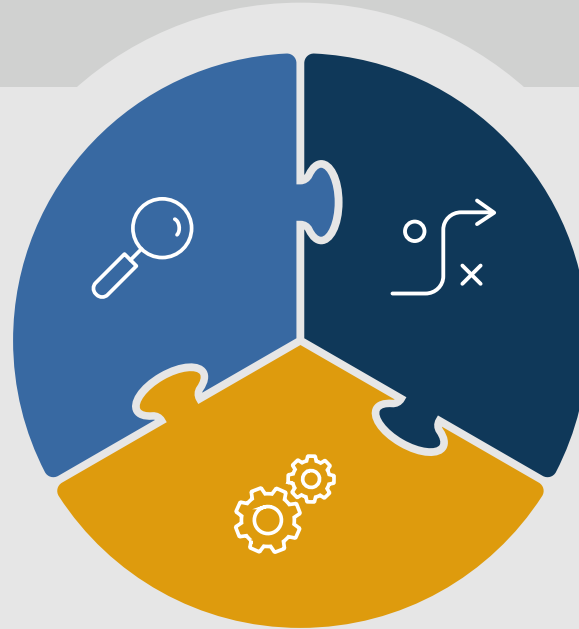


# Alternative Delivery



## Decision Lens

Select Alternative  
Delivery Projects



## Pre- Procurement

Better Understand Status of  
the Project Development

---

*Funding, Cost Estimate,  
Environmental, Schematic,  
ROW, Utilities, Railroad*

## Procurement

RFQ, RFP, Selection, Contract Execution



## ▪ Project Characteristics suited to Design-Build Delivery

- Early project delivery adds significant value to project stakeholders
- Opportunity for innovation
- Well known site-conditions
- Well-defined scope
- Risks are well known and best managed by a DB Contractor
- A DB Contractor would be better equipped to manage third party issues
- Project is funded and greater cost certainty is needed
- Defined design parameters rather than control of design is acceptable





More developed preliminary engineering may lead to a lower bid price but longer time to deliver project

- **Preliminary engineering should advance enough for Proposers to appropriately price risk**

- Geotech
- Survey
- ROW\*
- Utilities
- Railroads
- Environmental

Risk Register Description of Risk Event	Probability	Quality	Schedule	Cost	Severity	Response	Response Category	Risk Owner	Comments
Rework/redesign due to insufficient SUE	3	3	3	3	6	Include contract provisions for shared responsibility/cost	share	TxDOT/DBC	
USACE 408 Permit is delayed	5	3	4	4	8	TxDOT to advance permit as far as possible	share	TxDOT/DBC	
Soft subgrade is encountered	3	3	1	2	2	TxDOT to take borings of suspicious site	mitigate	TxDOT	
Due to poor materials or construction pavement fails in 10 years	2	4	4	4	10	Include long term maintenance contract	transfer	DBC	

(\* ) ROW Acquisition will be by TxDOT for new DB Projects.

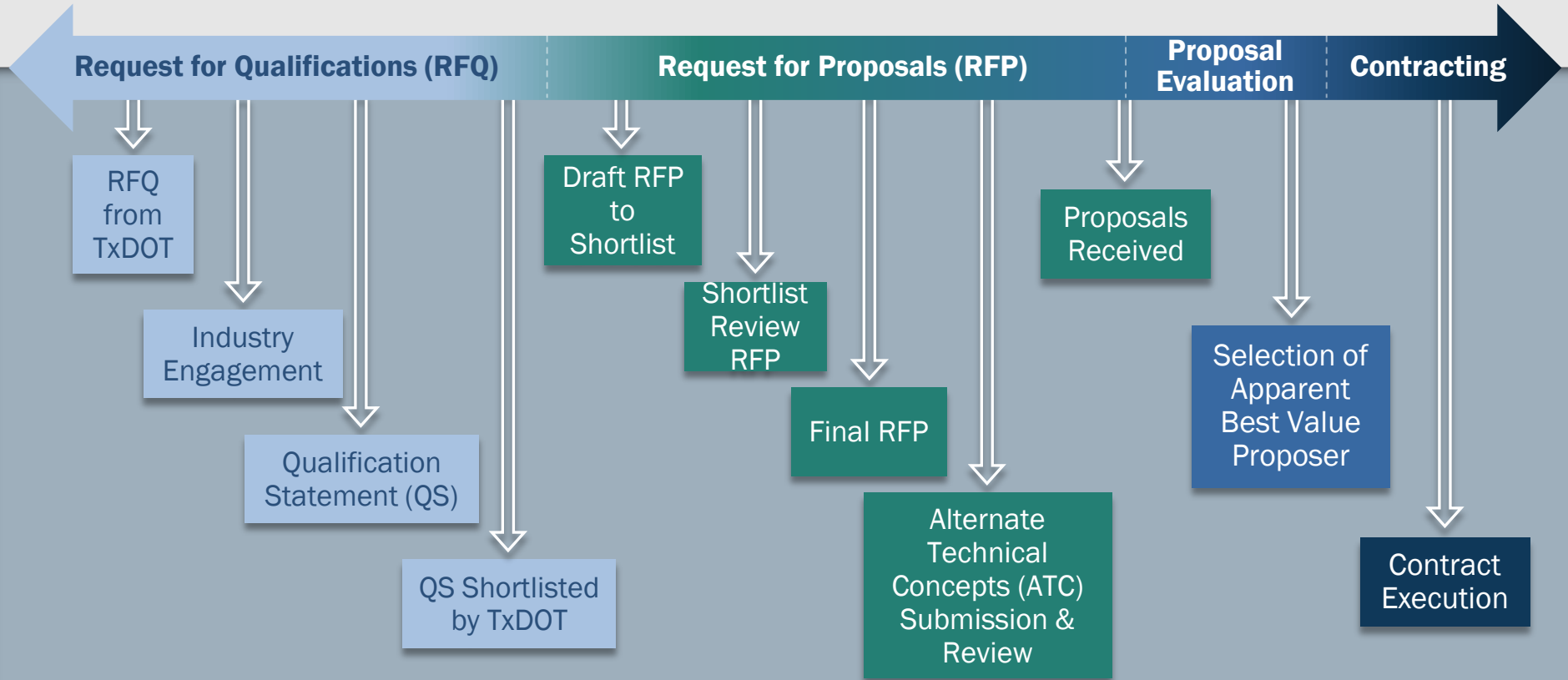


# Procurement





# Procurement Overview





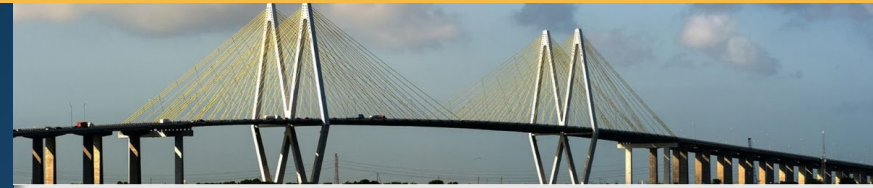
- **TxDOT posts RFQ including**

- Project Information

- Project Purpose and Need, Goals and Scope
- Environmental studies, status, and commitments
- Survey and Geotechnical
- Cost estimates
- Coordination & agreements with third parties (utilities, RR, permitting agencies, local governments, FHWA)

- List of Requirements

- Schedule
- Technical
- Maintenance
- Financial



- Industry Engagement

- TxDOT responds to written questions
- Addenda may be issued
- An industry workshop may be held
- One-on-one meetings may be held



## ■ Proposers submit Qualification Statements

- Qualifications of the firms
- Financial strength
- Experience with projects of similar size and complexity
- Resource availability
- Safety Qualifications
- DBE Performance Plan
- Project understanding and approach
- Key personnel experience and availability
- Effective organizational structure
- History of team working together
- History of working cooperatively with TxDOT & other owners

## ■ Shortlisted Proposers

The QS are kept confidential and scored by TxDOT. The most qualified candidates are shortlisted and invited to submit Proposals





- **Draft RFP distributed to Shortlisted Proposers**
  - Instructions to Proposers (ITP)
  - Updated or additional financial, technical, schedule and maintenance requirements
  
- **Industry Review**
  - Proposers may pose written questions about the RFP
  - Answers are not binding unless included in an addendum
  - Confidential one-on-one meetings may be held
  - Draft Alternative Technical Concepts may be submitted confidentially
  - Addenda may be issued



## Innovation and Value Engineering

- ATCs suggest modifications to the DB Specifications
- ATCs must not reduce project scope
- ATCs must result in equal or greater project performance and quality
- Design-Build Contractor assumes environmental, permitting, governmental approval and additional ROW risks associated with ATC
- TxDOT can approve ATCs with contractual conditions
- Draft ATCs during Procurement are a win-win
  - TxDOT gets an early look at potential design changes
  - Proposers get early feedback on the status of their ATCs



## One-on-one Meetings

- A forum for open discussion between Proposers and TxDOT about the Project including discussion of potential or draft ATCs and submitted ATCs
- Proposer drives the agenda and discussion which may be broad or focused
- Meetings are intended to provide Proposers with a better understanding of the RFP



## Submitted ATCs

TxDOT responds:

- Acceptable
- Not acceptable
- Conditionally acceptable
- Not eligible



# Contractor Selection



## Project Management Plan (PMP)

- DB Contractor's managerial approach, strategy, and procedures for the design and construction of the Project

## Design, Construction & Maintenance Plan

- Technical approach to engineering and construction methods
- Schedule



## Quality Management Plan (QMP)

- DB Contractor's QC, QA and document control procedures
- Complies with the TxDOT QAP (Quality Assurance Program)

Components of the Technical Proposal will become the basis for the project specific portion of the Design-Build Agreement (DBA)





**DB Contractor's  
managerial  
approach, strategy,  
and procedures**

- Organization to effectively manage all the work
  - Organizational roles and responsibilities refined from the QS
  - Describes Key Personnel
  - Establishes workflows
- May Include Value-Added Responses - services, aesthetics, ITS/tech, performance or other commitments exceeding the project requirements
- Typically includes these plans
  - Project Administration
  - Risk Management
  - Utility Management
  - ROW Acquisition
  - Other Affected Third Parties
  - Public Information and Communications
  - Safety and Health
  - Traffic Management
  - Maintenance Management
  - Comprehensive Environmental
  - TxDOT – DB Contractor Communications



**DB Contractor is responsible for QC/QA and document control**

- Complies with TxDOT's *Quality Assurance Program (QAP) for DB Projects*
- Includes specific responsibilities and workflows
- Key staff and independent consultants become contractual
- May include Value-Added Responses - materials, staff, performance or other commitments exceeding project requirements

## **Professional Services (PSQMP)**

- Professional Services Quality Assurance Firm (PSQAF)
- Design Review & PE Certification
- Design audit and document control

## **Construction (CQMP)**

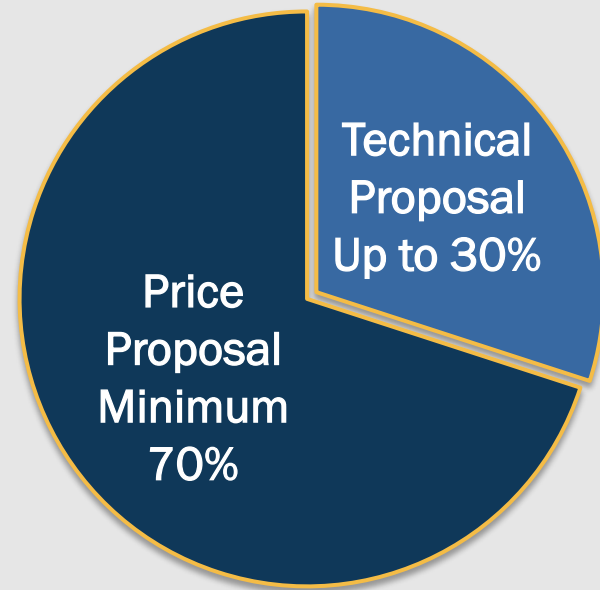
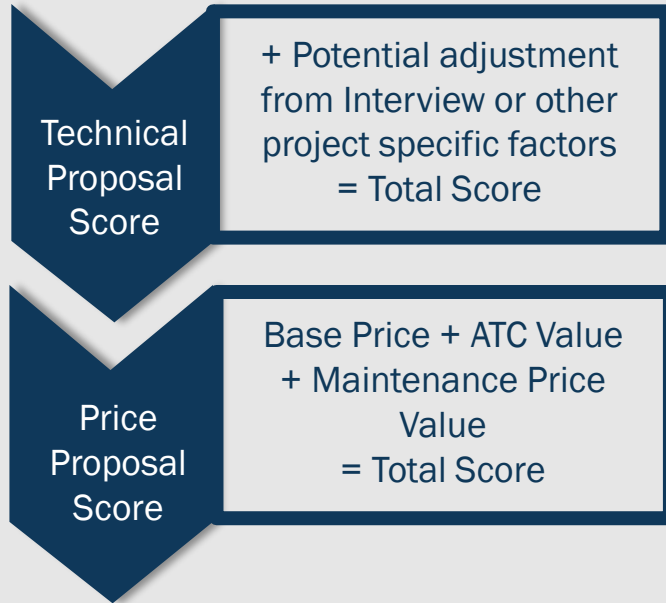
- Independent Quality Firm (IQF)
- Inspection and material control
- Construction audit and document control



**Includes technical approach to engineering and construction methods**

- ATCs
- Proposal Schedule (PBS1)
  - Major milestones & work activities
  - Relationships between activities
  - ROW Acquisition\*
  - Utility Adjustments
  - Third Party coordination and permitting
  - Completion date
  - Becomes the basis of the contractual Project Baseline Schedules (PBS2 and PBS3)
- Includes traffic management, construction staging/sequencing, bridges, walls, roadway, drainage and maintenance.

(\* ) ROW Acquisition will be by TxDOT for new DB Projects.



**Apparent Best Value Proposer**



- Proposal commitments are incorporated into the Design-Build Agreement including ATCs, Value-Added elements, Key Personnel and independent consultants
- ATCs of unsuccessful Proposers and other TxDOT changes may be negotiated into the DBA
- Escrow, bonding and insurance are established
- Stipends can be given to unsuccessful Proposers that submit a responsive Proposal to offset the cost for work during the Proposal phase

**Implementation -  
Notice to Proceed #1  
(NTP1) is issued**





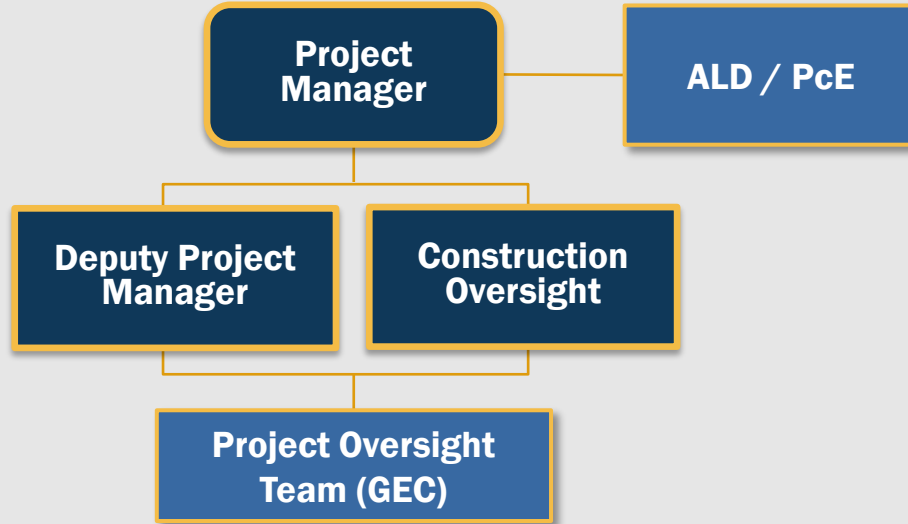
# TxDOT Project Team Organization



# TxDOT's Organization for a DB Project



*Typical TxDOT District Organization Chart:*



*Legend:* District Staff Support Staff

## Role of the GEC and ALD

### ALD SERVICES:

- ⚙ Tracking and Reporting
- ⚙ Project Liaisons and Program audit Services
- ⚙ Preparing ADP guides/procedures/training and other support materials for District use
- ⚙ Review and oversight responsibilities
- ⚙ Approvals and reviews per the SAM

### GEC SERVICES:

- ⚙ Serves as extension-of-staff for the District
- ⚙ Contract administration, coordination and oversight during implementation
- ⚙ Environmental, design, and schedule reviews
- ⚙ Project audit services

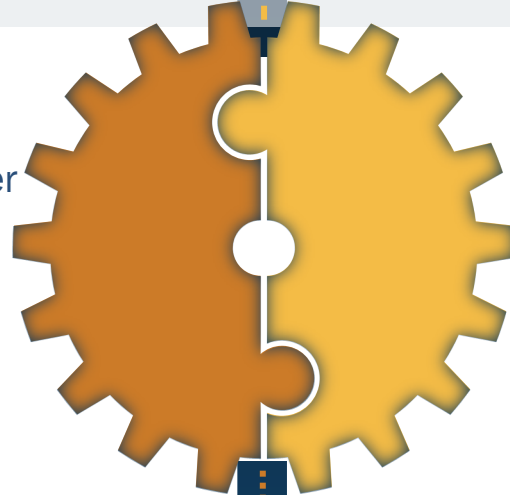




## Aligning DB Project Team Roles and Responsibilities

### DISTRICT / GEC TEAM

- TxDOT District DB Delivery Supervisor
- TxDOT District Project Manager
- GEC Construction Oversight Manager
- GEC Design Oversight
- GEC Design SME
- GEC MOT Oversight
- GEC Maintenance Oversight



### DESIGN-BUILD CONTRACTOR TEAM

- Project Director
- Project Manager
- Construction Engineer/Manager
- Design Team Leader
- Design Task Leader
- MOT Manager
- Maintenance Manager

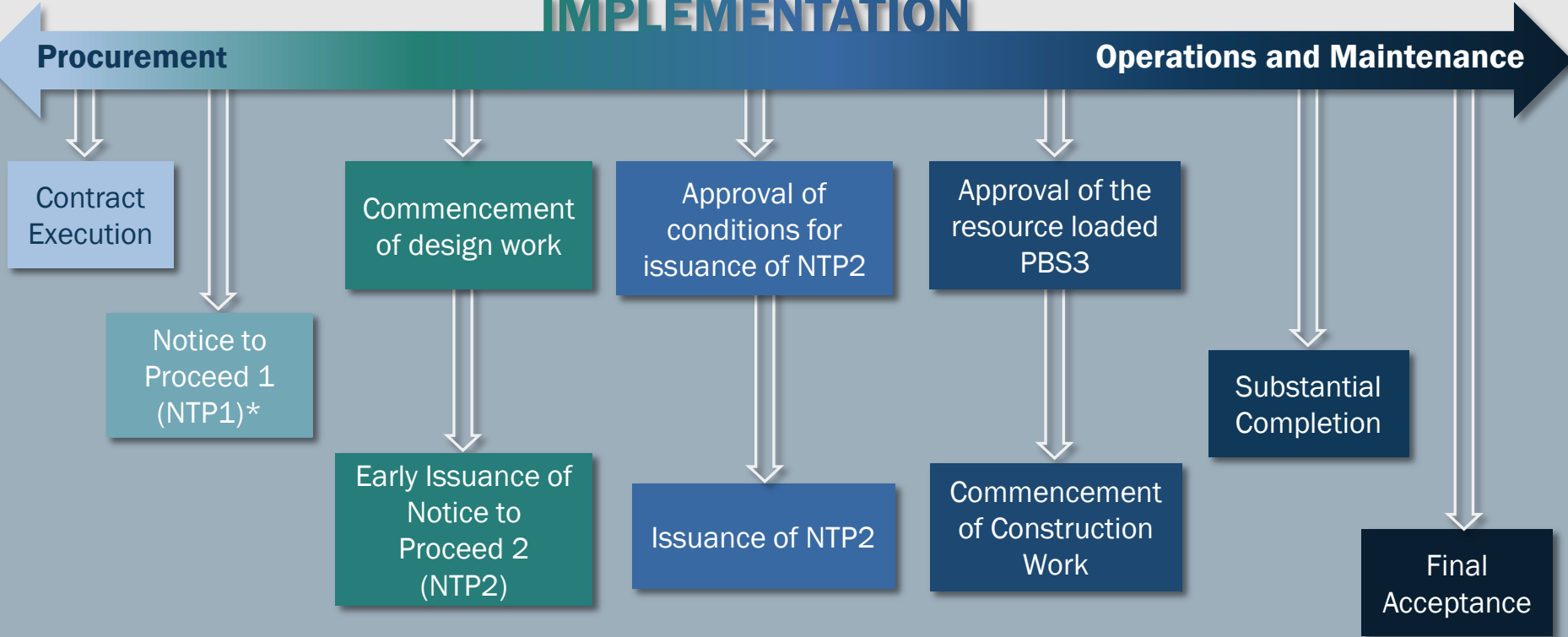


# Implementation





## IMPLEMENTATION



(\* ) Typically, the same day or shortly after Contract Execution



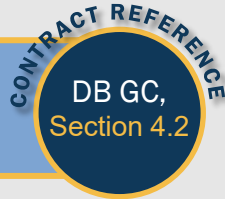
## Notice to Proceed 1 (NTP1)

- DB Contractor begins project initiation activities before the commencement of design and construction
- A Maximum Payment Amount is placed on initial work until PBS2 is approved by TxDOT and NTP2 is issued
- Approval of these four items is required before NTP2 is issued:
  - **Project Management Plan (PMP)**
  - **Quality Management Plan (QMP)**
  - **Project Baseline Schedule 2**
  - **Availability of core and field office space**

## Notice to Proceed 2 (NTP2)



TxDOT will review  
for compliance with



Based on the Initial  
(Proposal) PMP

The PMP is a living  
document and will be  
updated as needed

- **Remember, the PMP includes these component plans which need TxDOT approval**
  - Project Administration
  - Public Information and Communications
  - Risk Management
  - Utility Management
  - ROW Acquisition
  - Other Affected Third Parties
  - Safety and Health
  - Traffic Management
  - Maintenance Management
  - Comprehensive Environmental Protection
  - TxDOT – Design-Builder Communications

# Quality Management Plan (QMP)



**TxDOT will review for compliance with**

**CONTRACT REFERENCE**

DB GC,  
Section 4.3,  
Attachments 4-1  
and 4-2, and  
QAP

**Based on the Initial  
(Proposal) QMP**

**The QMP is a living  
document and will be  
updated as needed**

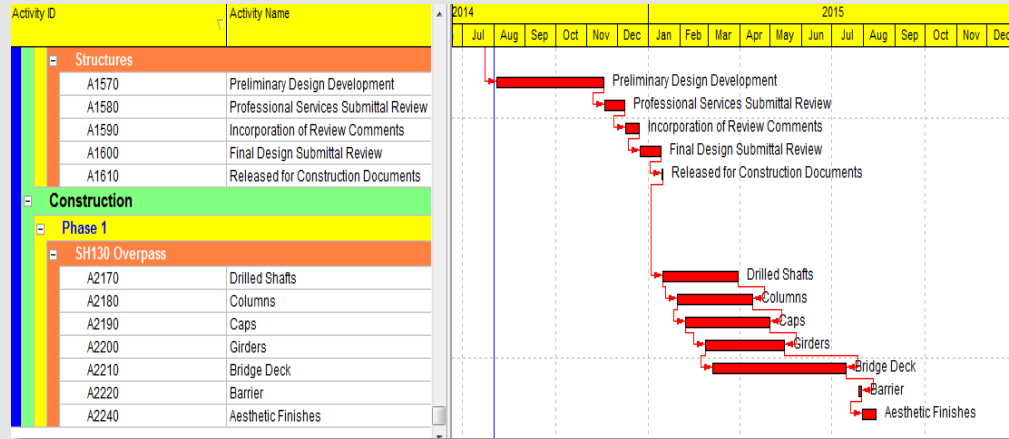
- The Professional Services QMP must be approved before design package submittal
- Includes a Professional Services Quality Control Manager (PSQCM) for the designer's internal Quality Control
- Includes an Independent Quality (IQ) Assurance Firm and Manager (PSQAF & PSQAM) for QC/QA/IQ reviews and audits
- Includes workflows, forms, schedules and checklists

- Includes a Construction Quality Control Manager (CQCM) responsible for DB Contractor QC construction and material acceptance procedures
- Includes an Independent Quality Firm (IQF) responsible for the implementation of the CQMP policies, procedures, QC/IQ reviews, audits and IQ material acceptance.
- Includes required trainings and certifications, testing equipment & specifications, workflows, forms, schedules and checklists

# Project Baseline Schedule 2 (PBS2)



- Like Design-Bid-Build the CPM schedule identifies
  - Activities of all project disciplines
  - Durations of activities
  - Relationships between activities
- Primavera.xer format
- Narrative explaining methodology, software settings, and assumptions
- Weather, calendar, and shift work assumptions, etc.
- Activity durations not to exceed 20 days without approval



- PBS2 also includes a *cost loaded Schedule of Values* used to make progress payments

# Schedule of Values (SOV)



- Schedule of Values includes a Work Breakdown Structure (WBS) made of **distinct identifiable Payment Activities (deliverables)** derived from the PBS2 Activities
- Progress Payments will be based on % completion of the activities identified in the SOV
- Activities broken into value of \$1M or less

Activity ID	Activity Name	Budget At Completion
I-35 NEX Project Baseline Schedule - PBS3 -Schedule Update 11 - March		\$1,513,555,711.37
Project Administration		\$379,669,792.98
Contract Milestones		\$0.00
Administrative Submittals and Permitting		\$373,437,215.50
DB Contractor Segment Milestones		\$6,232,577.48
Utility Agreement & Design		\$78,219,126.07
Utility Coordination		\$8,564,615.00
Utility Conflict		\$69,654,511.07
Design		\$101,169,611.64
General Activities and Field Work		\$2,016,948.96
Project Specifications		\$10,504,979.22
Geotechnical Design & Sitework		\$14,489,369.82
Roadway Design		\$14,088,995.01
Bridge Design		\$33,342,261.29
Traffic Management		\$800,000.00
Environmental Design		\$24,204,929.12
Landscape and Aesthetic Design		\$747,664.53
Electrical Design		\$533,615.92
ITS		\$320,423.88
Signage and Marking Design		\$320,423.88
Construction		\$954,497,180.67
General		\$0.00
Phase 1		\$237,536,819.96
Phase 1A		\$468,219,753.86
Phase 1B		\$145,433,400.23

Bridge Design	\$33,342,261.29
Design Package 1 (01, 03A, 06, 07)	\$ 2,877,356.00
Structure type study 01	\$ 724,568.00
Structure type study 03A	\$ 327,855.00
Structure type study 06	\$ 925,411.00
Structure type study 07	\$ 899,522.00



# SOV Cash Flow & Maximum Payment



- The SOV also includes cumulative cash flow curves based on
  - Early schedule dates
  - Late schedule dates
  - Maximum Payment Schedule

<u>Months after NTP 1</u>	<u>Cumulative Draw</u>

- Payments are capped by the Maximum Payment Schedule

**EXHIBIT 3 TO ATTACHMENT 9-1**  
**DRAW REQUEST CONTENTS CHECKLIST**

- Updated actual cumulative cash flow curve plotted along with the three cumulative cash flow curves:
  - one based on the early dates;
  - one based on the late dates;
  - and one based on the Maximum Payment Schedule required in DB GC Section 8.5.3.2.

# Design Submittal Packaging Plan



## Developed by the DB Contractor

- DB Contractor hosts Workshop to explain and discuss
- Includes 3rd Party submittals and review times
- Early design work may be started after the approval of the Plan by meeting conditions for commencement of design work or early issuance of NTP2
- Activities correspond with the Work Breakdown Structure (WBS) for payment
- Early Start of Construction (ESOC) Packages are included

## DESIGN PACKAGING AND SUBMITTAL PLAN

Wave	Wave Content	Stage	Current Start	Original Duration	Current Finish
1	Aesthetics and Landscape Plan	Preliminary	8-Nov-23	10	19-Nov-23
	Corridor Structure Type Study and Report				
	General Notes/Specifications				
	Standards				
	Environmental Re-eval for ATC				
2	Aesthetics and Landscape Plan	Final	10-Dec-23	10	23-Dec-23
	Corridor Structure Type Study and Report				
	General Notes/Specifications				
	Standards				
	Environmental Re-eval for ATC				
3	Hydraulics Report	Preliminary	17-Jan-24	10	28-Jan-24
4	Roadway Package I-35 STA27+40-STA102+00	Preliminary	8-Mar-24	10	21-Mar-24
	Drainage Package I-35 STA27+40-STA102+00				
	Roadway Removal Package- River Street				
	Bridge Package 1 (01, 03A, 06, 08A)				
	Walls Package 1				
	Permanent ITS				
	Permanent Lighting				
	Permanent Signs, Signals, Striping				
5	MOT Phase 1A, 1, 2	Preliminary	21-Mar-24	10	4-Apr-24
	SWPPP Phase 1A, 1, 2				
	Temporary ITS Phase 1A, 1, 2				
6	Roadway Package (Early Package)	RFC	17-May-24	8	26-May-24
	Drainage Package (Early Package)				
	Roadway Removals Package (Early Package)				

## Conditions for Commencement of Design Work



- DB Contractor may begin Design Work prior to issuance of NTP2 if TxDOT provides confirmation that DB Contractor has satisfied all of the conditions for issuance of NTP2 relating to the Design Work to be performed.
- Required Submittals and Approvals:
  - TxDOT approval of the Professional Services Quality Management Plan (PSQMP)
  - Obtain and maintain in effect Performance and Payment Bonds
  - Insurance Certificates
  - Approval of the portion of the Schedule of Values identifying the Design Work



# Early Start of Construction (ESOC)




**EARLY START OF CONSTRUCTION**  
Document Control  
z 05/27/2022 2:53:09 PM


**CONSTRUCTORS**

Z 4" WHITE DOTTED (W/TY 11-C-R @ 48' SPACING)  
T TEMPORARY PAVEMENT MARKING ARROW/WORD "ONLY"

## EARLY START OF CONSTRUCTION



DocuSigned by:  
PROFESSIONAL ENGINEER  
**5/9/2022**


**Texas Department of Transportation**  
© 2022

NAME:	DESIGNED NM	FED. RD. DIV. NO. 6	FEDERAL AID PROJECT NO. (SEE TITLE SHEET)	HIGHWAY NO.
NO.	DRAWN DK	STATE	DISTRICT	COUNTY
PACKAGE:	CHECKED RO	TEXAS		
of 36	APPROVED DG	CONTROL	SECTION	JOB 02114008

- ESOC is work performed by DB Contractor prior to TxDOT's written statement of no exceptions taken
  - Rough Grading
  - Drainage
  - Temp Drainage
  - Demo/Removal Plans
  - Temporary Pavement
  - ROW Plans
  - SWPPP
  - Utilities
- ESOC is at the sole risk of the DB Contractor
- Must be pre-identified and included in Design Submittal Packaging Plan and Project Schedule
- Preliminary and Final Design Packages are required
- TxDOT comments relating to health and safety must be addressed prior to release of the package
- TxDOT concurrence is not provided for ESOC packages

# Additional Activities initiated at NTP1



Conduct surveys and site investigations on TxDOT ROW (geotechnical, hazardous mat, SUE, etc.)



Environmental Studies and Re-evaluations



ROW Acquisition



Other affected Third-Party coordination



Utility Agreements



Select Members of the Dispute Review Panel



**TxDOT  
Responsibility**

## **TxDOT option which tasks to transfer**

- Meeting with displaced occupants
- Preparing relocation assistance packages
- Preparing payment packages
- Initiating and verifying relocation
- Securing vacant improvements

**DB Contractor  
Responsibility**

### **TxDOT is always responsible for:**

- Relocation package approval
- Relocation appeal approval
- Eviction case management
- Cost of the relocation assistance reimbursements



**TxDOT  
Responsibility**

## **TxDOT option which tasks to transfer**

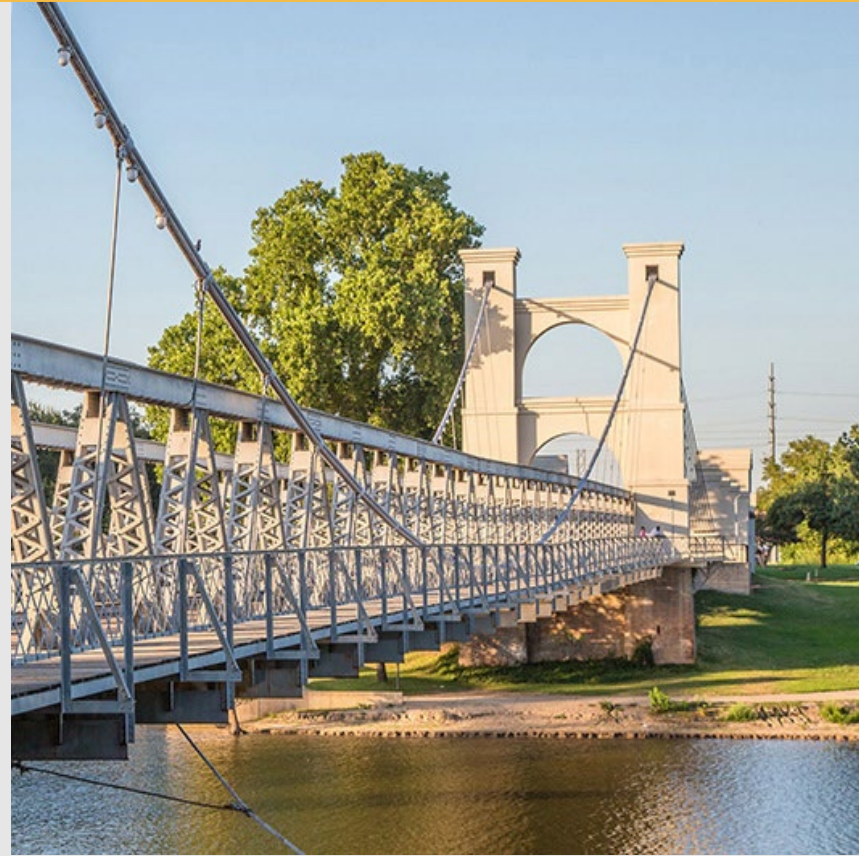
- Utility Location
- Coordination with utility owners
- Potential conflicts and affected utilities
- Preparing utility adjustment agreements

**DB Contractor  
Responsibility**

**TxDOT is always responsible for approving utility adjustment agreements**



- NEPA studies, coordination and re-evaluations can be included in the DBA and may begin after NTP1
  - Public Involvement
  - Cultural resources
  - Natural resources
    - Endangered species
    - Fish & Wildlife
    - Scenic Rivers
  - Noise







- **DB Contractor is responsible for compliance and monitoring NTP1 through Project Acceptance**
  - Environmental Management System (EMS)
  - Environmental Compliance and Mitigation Plan (ECMP)
    - Natural and Cultural Resources
  - Environmental Protection Training Plan (EPTP)
  - Hazardous Materials Management Plan (HMMP)
  - Communication Plan (CP)
  - Construction Monitoring Plan (CMP)
    - Noise
    - Dust
    - Water quality
  - Recycling Plan (RP)
  - Environmental Team





- USACE/EPA Section 404 and 401 (either nationwide or individual) permits
- Section 402/TPDES stormwater (either general, SWP3, and Notice of Intent) permits
- Section 408 & Section 10
- TCEQ
- Floodplain Coordination / CLOMR
- Coast Guard
- Local Governments
- Border Highway Patrol
- Railroads

# Disputes Review Panel Members



- Before or within 14 days of Contract Execution TxDOT and DB Contractor will each select a Disputes Review Panel (DRP) Member
- The DRP facilitates **Project Level** Dispute Resolution as part of the project team
  - Members attend regular meetings & receive work & schedule updates



1 member selection by  
TxDOT

- Approved by DB Contractor



1 member selection  
by DB Contractor

- Approved by TxDOT



Panel Chairperson selected by  
the two approved panel members

- Approved by TxDOT and DB Contractor



- NTP2 allows the DB Contractor to move forward with the remaining design and construction on the Project.
- The DB Contractor may request that TxDOT issue NTP2 prior to all of the component parts, plans and documentation of the PMP, QMP and PBS2 are finalized.
- Construction on any specific portion of work may not take place until the conditions of commencement for that portion of work are fulfilled.



# Commencement of Construction Work





## Third-Party Approvals

- Other Agency – USACE, Coast Guard, EPA, Flood Plain Administrator
- Railroads



## Fee Simple Property Rights

- Other property rights may be acceptable



## Administrative Requirements

- Insurance in place
- Guarantee, if any, delivered
- Adopted ethical standards



## TxDOT Approval

- Final NEPA
- NTP2
- RFC Plan
- PBS3



**Commencement of Construction Work**



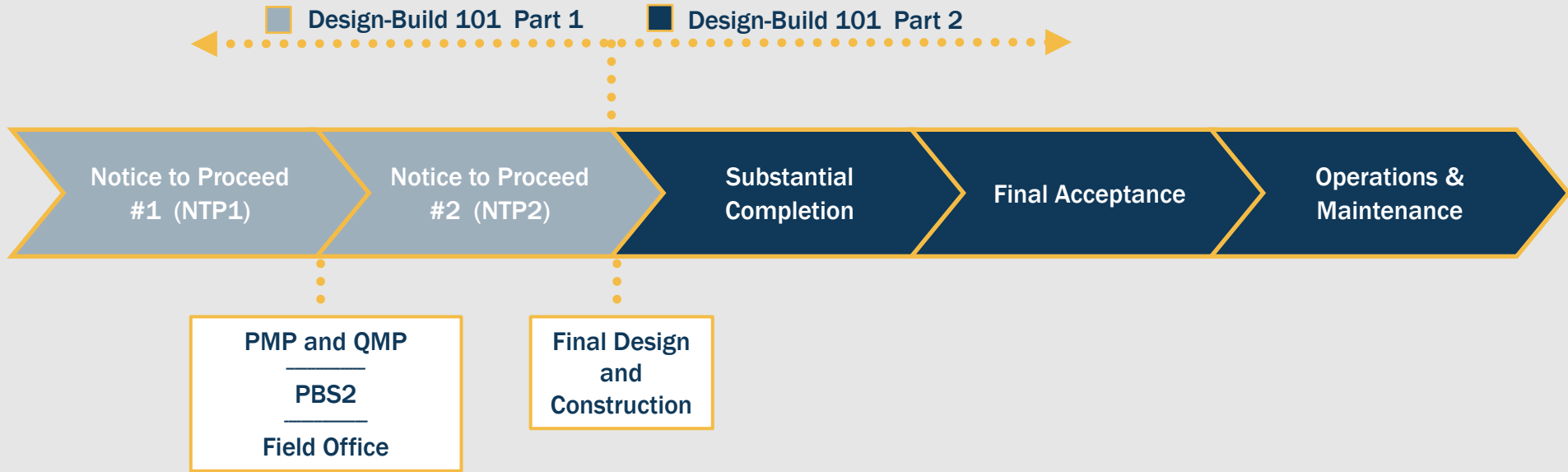
## Cost and Resource Loaded PBS3

- Work/Cost Breakdown Structure (from PBS2)
- Resource and cost loading added to approved PBS2 detailing how the DB Contractor will accomplish the Construction Work
  - Number of crews
  - Crew composition
  - Expected crew production rates
- PBS3 is approved before commencement of Construction Work

# Design-Build 101 – Part 2



- This is the end of Design-Build 101 Part 1
- Design-Build 101 Part 2 is available and covers Final Design and Construction through Final Acceptance & Maintenance







# HELP #EndTheStreakTX

End the streak of daily deaths on Texas roadways.

[TxDOT.gov](http://TxDOT.gov) (Keyword: #EndTheStreakTX)



#EndTheStreakTX Toolkit

