Opportunities in TXDOT’s Design-Build Program

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CDA Program Director
Texas Department of Transportation (TxDOT)
OPPORTUNITIES: DB & CDA Projects

TXDOT STRATEGIC PROJECTS DIVISION
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UNDERSTANDING INNOVATIVE PROJECT DELIVERY
Texas’ Comprehensive Transportation System

TxDOT Manages and Maintains

- 80,233 Miles centerline
- 194,887 Miles total lane
- 480,000,000 Miles traveled (avg daily vehicle)
- 53,000+ Bridges
- 1,000,000+ Acres right of way
- 301 Airports (nation’s largest air system)
- 423 Miles intercoastal water way

El Paso
Dallas
Austin
San Antonio
Houston
Industry Trends

The way TxDOT builds/finances projects has changed:

- Typically projects need some type of public contribution or revenue guarantee
- Very few new projects are 100% privately financed
- Most states are now considering private finance projects with payments amortized over time ... similar to home mortgage
- Not many profitable PPP’s left in state
- Projects must be accelerated. Will see more design build
**TxDOT Procurement Methods**

- **Design-Bid-Build**
  - Consultants: Quality Based Selection
  - Contractors: low bid

- **Innovative Project Delivery**
  - (Strategic Project Division, SPD)

**Design-Build**
- Design Build firm is a combination of Design Consultants and Contractors
- Selection based on qualifications and price

**Comprehensive Development Agreement (CDA)**
- Public Private Partnerships (P3)
- CDA Projects may combine:
  - Design-Build
  - Finance
  - Acquisition
  - Operation
  - Maintenance

Understanding Design-Build and Comprehensive Development Agreements (CDA)
Traditional Project Delivery

- Phased process of designing, bidding, then building the project
  - Design 2 years
  - Bid 3 months
  - Build 6 years *(through phased delivery)*
  - Estimated Delivery: **8.25 years**

Innovative Project Delivery (Strategic Project Division, SPD)

- Concurrent process of delivery through designing while building
  - Design 2 years
  - Build 4 years *(concurrent with design)*
  - Estimated Delivery: **4-5 years***

Potential Savings:
- Time - concurrent design & build
- Cost - from time, construction and road user savings
Design–Build

- Allows for the design and construction of a project to be combined into one contract and awarded on either a low-bid or best-value basis.

- The project is delivered by a designer-contractor team and generally includes more flexible design and construction requirements than traditional design-bid-build projects.

- Allows private sector maintenance to assure lifecycle efficiencies.

- Typically financed by the public sector through budgeted funds, bonds or some other means.

- Estimated construction value must be at least $50 million.
- A concessionaire invests its own equity and borrows additional funds to pay for construction of a highway project.
- In some cases, the project financial plan may include a public subsidy.
- The concessionaire expects to be repaid for its investment in the project over the period of the concession, up to 52 years.
- The contract provides Developer the right to collect toll revenues, and defines revenue-sharing with the State.
- At the end of the concession, the road must meet predetermined performance standards and handback requirements.
Project agreements entered into through a competitive procurement process defined in statute and code.
Keys to Success

- **Departmental Paradigm Shift Allowing Innovation**
  - Internal TxDOT D/B Training
  - Enterprise Risk Workshops

- **Partnering (Industry Outreach)**
  - Project Specific
  - General Industry
  - DB 101 Training coordinated with AGC

- **Innovative Capture Initiative**
  - Seeking input from Private and Public Sector Across the Nation
  - Capturing lessons learned from innovation in contracting and ATCs

- **Contract/ATC Reviews**
  - Regular Validation of Technical and Contractual Requirements
  - Streamlining Submittal Requirements
Key Benefits of Innovative Project Delivery

- Faster time/delivery
- Cost savings
- Leverages private financing
- Transfers risk to developer
- Requires consideration of life cycle cost
- Generates innovative design ideas
- Use design-build method with single entity for both design and build services which reduces litigation claims
- Decreased administrative burden
CDA and Design-Build Benefits

- Accelerates the project delivery schedule
  - Provides capacity and congestion improvements years earlier than traditional pay-as-you go funding and design-bid-build
    Examples:
    - SH 99 F1, F2 and G
    - LBJ managed lanes
    - Energy sector project

- Allows Innovation to expedite project construction schedule
  - Allows A+B bidding where schedule and cost are considered
  - Decreases amount of construction time and impacts to traffic and businesses
  - Allows contractors to bring schedule innovation
    Examples:
    - DFW connector – Aggressive 57 month schedule – completed 10 months early
    - Energy sector – Aggressive 18 month schedule for 27 project locations

- Allows for contractor/developer innovation resulting in cost savings
  - Innovation through ATCs
    Example:
    - 6 projects to date delivered over $210 Millions in Savings and 35 ATCs implemented
SPD Transportation Mega Projects Program Overview

- $26.8 B in active projects*
- Leveraged $8B in public fund to deliver $19B in projects (2:1)
- Successful bond issuance of $2.9B for Grand Parkway in July 2013
- Dedicated agency organization and consultant support

<table>
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<tr>
<th>Phase</th>
<th>Amount</th>
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<tr>
<td>PRE-PROCUREMENT</td>
<td>$6.3 Billion</td>
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<tr>
<td>PROCUREMENT</td>
<td>$4.3 Billion</td>
</tr>
<tr>
<td>DESIGN - CONSTRUCTION</td>
<td>$10.1 Billion</td>
</tr>
<tr>
<td>OPERATIONS &amp; MAINTENANCE</td>
<td>$6.1 Billion*</td>
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* Includes SH-130 Seg. 1-4, $1.3 B
TxDOT Strategic Projects Division

Strategic Projects Division (SPD)

Katie Nees, PE (Director of SPD)

Admin & Contract Management

Procurement & Implementation Coordination Section

Strategic Projects Right of Way

Houston Strategic Project Office

South Central Strategic Project Office

DFW Strategic Project Office

Katherine Holtz Director of Quality
Roles and Responsibilities

- Administer and manage TxDOT CDA and Design-Build projects
- Procure, Design, Build, Operate, Maintain
- Collaborate with TxDOT Debt Management Office and Transportation Planning and Programming Division to secure funding and financing.
- Coordinates with Office of the General Council, Districts and FHWA
- Right-of-Way acquisition
- Coordinate with TxDOT Office of Civil Rights to oversee federal and state HUB/DBE programs
WORKING WITH TXDOT
TxDOT Strategic Projects Division

SPD Consulting Opportunities

- Planning
- Feasibility studies
- Environmental Documents and Permitting
- Hazardous Materials
- Route Studies and Schematic Design for Roads and Bridges
- Traffic Engineering ITS
- Scheduling
- Hydraulics
- Plan Review
- Cost Estimating
- Office Support
- Public Involvement

Budget for Next 4 years-Approx. $300 Million

- Procurement Engineers $ 40 Million
- Project Management Consultants $ 40 Billion
- General Engineering Consulting Firm-Project Management $ 60 Million
- Independent Engineers $ 25 Million

Understanding Design-Build and Comprehensive Development Agreements (CDA)
Understanding Design-Build and Comprehensive Development Agreements (CDA)

TxDOT Strategic Projects Division

SPD Consulting Opportunities
- Oversight of DB design plans
- Oversight of DB Construction Inspection and Materials Testing Process
- Oversight of DB Maintenance
- Traffic Engineering ITS
- Scheduling
- Hydraulics
- Plan Review
- Cost Estimating
- Office Support
- Public Involvement

Budget for Next 4 years - $300 Million

General Engineering Consulting for Design
- $ 60 Million

General Engineering Consulting for Construction
- $ 80 Million

General Engineering Consulting Firm - Maintenance and Operations
- $ 20 Million
Working with TxDOT

- TxDOT procurement process and web sites to find consultant contracts.
  - Become a DBE or HUB
    - [https://www.txdot.gov/business/partnerships/dbe.html](https://www.txdot.gov/business/partnerships/dbe.html)
  - Become Pre-certified and Administratively Qualified
  - Find consulting opportunities
Getting there

- From the TxDOT.gov home page, click on “Business”
WORKING WITH DEVELOPERS
HOUSTON STRATEGIC PROJECT OFFICE
Alternative Delivery Projects
CDA and Design-Build
Current Houston Strategic Projects

- **Grand Parkway (SH 99) Segments H & I**
  - Active Design-Build Procurement Phase

- **SH 288 Toll Lanes in Harris County**
  - Active CDA Procurement Phase

- **SH 288 Toll Lanes in Brazoria County**
  - Coordinating development by Brazoria County Toll Road Authority

- **SH 249**
  - Pre-procurement Montgomery Project Limits
Procurement: SH 288 Toll Lanes

- SH 288 Toll Lanes in **Harris County**, 10.4 miles from U.S. 59 to the Harris/Brazoria County line
- The base project scope includes:
  - A toll **concession**, under a CDA
  - Four (4) tolled lanes two (2) each direction
  - Interchange access for the Texas Medical Center
  - 8 Direct Connectors at Beltway 8 Interchange
- Estimated total cost: $815 million
- Project Development Agreement being prepared with Brazoria County for the Brazoria Project
# Procurement: SH 288 Toll Lanes - Concession (PPP)

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<th>Winning Firm</th>
<th>Proposal Phase</th>
<th>Procurement Schedule</th>
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</table>
- Technical Proposals received January 6, 2015  
- Financial Proposals received January 27, 2015 | - Proposal Evaluation completed  
- Conditional Award – February 26, 2015 Commission Meeting  
- Commercial Close – Summer 2015  
- Financial Close/Contract Execution – Fall 2015 |

Begin Construction Spring 2016
Blueridge Transportation Group (BTG)

The Blueridge Transportation Group (BTG) is an outstanding team comprised of global and local firms to support the Texas Department of Transportation’s (TxDOT) objectives of safely delivering the TxDOT SH 288 Toll Lanes Project (Project) in Harris County.

BTG is a consortium formed by ACS Infrastructure Development, Inc., InfraRed Capital Partners Limited (acting in its capacity as manager on behalf of each of the several limited partnerships comprising of InfraRed Infrastructure Fund III), and Shikun & Binui Ltd. Individually each firm is a global company with recognized extensive experience developing private public partnership projects, robust financial portfolios, and proven expertise in the financial markets.

BTG’s Lead Contractor, Almeda-Genoa Constructors (A-GC), is a fully integrated joint venture between Dragados USA, Inc., Pulice Construction, Inc., and Shikun & Binui Ltd. who will perform the design and construction of the Project in association with Kellogg Brown and Root Services, Inc. as Lead Engineering Firm.

Project Overview

TxDOT, in cooperation with local and regional stakeholders, has developed a project that consists of a 10.3-mile section of SH 288 from US 59 to the Harris County line at Clear Creek in Harris County. The Project includes the following:

- The design, construction, maintenance, and operation of four tolled lanes within the median of SH 288 from US 59 to the Harris County line at Clear Creek.
Disadvantaged Business Enterprise Commitment

TxDOT has adopted a Disadvantaged Business Enterprise (DBE) Program to provide DBEs opportunities to participate in the Project. **The DBE participation goal is 7%** of the professional services and construction portions of the Work.

BTG recognizes the local and specialty subcontractors as vital and productive members of the Project. Our Team has successfully implemented DBE programs that meet and exceed project goals and develop meaningful participation for local enterprises.
BTG Subcontracting Event

Subcontracting Networking Event May 1, 2015
Meet the Blueridge Transportation Group and the Almeda-Genoa Constructors (A-GC) Team.

Come meet us to learn about opportunities from the design-build team for the SH 288 Toll Lanes Project.

Friday, May 1, 2015 from 8 AM to noon.

Crown Plaza, 8686 Kirby Drive, Houston, TX 77054 (near NGR Park and Texas Medical Center)

TxDOT SH 288 Toll Lanes Project
The TxDOT SH 288 Toll Lanes Project in Harris County Proposal Due date is September 16, 2014
Subcontracting Networking Event
Wednesday, June 18, 2014

6pm to 8pm

Houston Community College Conference Center
3100 Main St.
Houston, TX 77002
Seminar Room A
Segments H, I-1 & I-2

- Segments H and I-1
  - Proposed Two to Four Toll Lanes, 37.5 miles, I-69N to I-10E
  - Interchanges at I-69/US 59, US 90, and I-10E
- Segment I-2
  - Existing (I-2A): Four Toll Lanes, 8.7 miles, I-10E to FM 1405
  - Proposed Toll Lanes (I-2B): Four Toll Lanes, 6.5 miles, FM 1405 to SH 146
- TxDOT Districts – Beaumont and Houston
- Subject to Market Valuation Waiver Agreement executed by the State and seven local counties
- Request for Design-Build Qualifications: Published July 31, 2014
Procurement: Grand Parkway H and I

Short-Listed Proposers

ZOTPB:
- Zachry – Odebrecht – Traylor Parkway Builders

FBW:
- Fluor – Balfour Beatty – Williams Brothers

Grand Parkway Infrastructure (GPI):
- Ferrovial – Webber - Granite

Proposal Phase

- Draft Request for Proposals issued November 14, 2014
- One on One Meetings held December 16, 2014
- Second Draft Request for Proposals issued December 19, 2014

Procurement Schedule

- Final RFP – April 2015
- Proposals Due – August 2015
- Conditional Award – Fall 2015
- Contract Execution – Spring 2016

Target Open to Traffic Summer 2020
Pre-Procurement: SH 249

SH 249
- Study/extension phases, 23 miles
- Project Limits: SH 105 in Grimes County to FM 1774 near Pinehurst in Montgomery County
- Environmental clearance anticipated Summer/Fall 2015
- Request for qualifications: anticipate April 2015
- Conditional award Spring 2016
- Begin construction Fall 2016
- $293M Funding in approved 2014 UTP
- Estimated Total Project Cost $380M plus $4M/year for maintenance
Who are the DB Firms?

- Many of the same firms that do typical design consulting on Design Bid Build projects
- Many of the same contractors that bid on typical design bid build contracts
- Out of state big consulting and contracting firms.
How do you find DB Firms?

Go to TxDOT web pages to find out about consulting firms prequalified to work for TxDOT

Go to TxDOT web site to find prequalified contractors
http://www.txdot.gov/insdtdot/orgchart/cmd/cserve/pqlist/PqListA.htm
http://www.txdot.gov/insdtdot/orgchart/cmd/cserve/bqlist/bqListA.htm

Go to TxDOT web pages to find out about upcoming projects, short listed and winning firms from past projects.

https://www.txdot.gov/business/partnerships/current-cda.html
Example web site of short listed firms Grand Parkway

On July 29, 2014, the Texas Department of Transportation (TxDOT) announced the short-list of teams to compete for the Grand Parkway Project Design-Build contract. Below is a listing of the teams, along with the major equity members, that will be invited to submit a detailed proposal.

**Short List**

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<th>Name</th>
<th>Major Equity Members</th>
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<td>Fluor Balfour Beatty Williams Brothers (FBW)</td>
<td>• Fluor Enterprises, Inc.</td>
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<td></td>
<td>• Balfour Beatty Infrastructure, Inc.</td>
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<td>• Williams Brothers Construction Company, Inc.</td>
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<tr>
<td>Kiewit-Granite Parkway Constructors JV</td>
<td>• Kiewit Infrastructure Group, inc.</td>
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<td></td>
<td>• Granite Construction Company, Inc.</td>
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<tr>
<td>Zachry-Odebrecht Parkway Builders</td>
<td>• Zachry Construction Corporation</td>
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<tr>
<td></td>
<td>• Odebrecht</td>
</tr>
<tr>
<td>GP Infrastructure</td>
<td>• Ferrovial Agroman S.A.</td>
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<td></td>
<td>• Webber, LLC</td>
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Working with DB/CDA Firms

- Procurement process and web sites to find DB contracts.
  - Become a DBE or HUB
    - [https://www.txdot.gov/business/partnerships/dbe.html](https://www.txdot.gov/business/partnerships/dbe.html)
  - Become Prequalified Contractor or Consultant
  - Find DB/CDA Project opportunities
    - [https://www.txdot.gov/business/partnerships/current-cda.html](https://www.txdot.gov/business/partnerships/current-cda.html)
  - Find DB firms and understand their process
    - DB firm project web page
    - Networking
    - Meeting with consultants and contractors now
QUESTIONS/DISCUSSION
Katherine Holtz, PE

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Texas Department of Transportation

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TxDOT website