ALTERNATIVE DELIVERY METHODS:

Design-Bid-Build (Traditional Approach)

Design-Build

Design-Build-Finance (Public-Private-Partnership) a/k/a P-3

Design-Build-Finance-Operate-Maintain a/k/a P3
Design-Build

- **Design-Build** combines design engineering services along with other preconstruction services/activities WITH construction services/activities into one single contract.
Design-Build

Such as: Planning (Concept) Design Environmental Preliminary Survey ROW Acquisition Construction
Design-Build Contract Options:

Can have “several” of a project’s major phases included in a DB Contract

OR

Can have “all” of a project’s major phases included in one DB Contract
Design-Bid-Build V/S Design-Build (ROW Acquisition)

Design-Bid-Build (Traditional Approach):

- **Linear Process** (Planning/Concept - Environmental Design - Preliminary Survey – ROW Acquisition - Final Plans - Construction)

- *Agency acquires ROW after environmental approval*

- *ROW Acquisition is completed prior to the Letting to Construction*
Design-Bid-Build vs. Design-Build (ROW Acquisition)

Design-Build Approach:

- ROW can be acquired concurrently with other activities
- ROW can be acquired by the Agency OR Design-Build Firm OR part by the Agency and part by the Design-Build Firm
- Can certify ROW in segments/construct proj. in segments
- Typically one Lump Sum contract rather than several
Project Delivery Comparison
(example of 100 parcel project)
+-6 years V/S +- 4.3 years

Design-Bid-Build (Traditional)
++-72 mos."

Design-Build
++-52 mos."

Diagram:
- Planning
- Desn
- Env.
- R/W
- Construction
- Utilization
- Bid
- Desn
- Env.
- R/W
- Construction
- Utilization
WHAT ARE SOME OF THE DB FIRM ROLES AND RESPONSIBILITIES?

DB Team’s Roles and Responsibilities:

- Perform certain Design thru Construction activities and in accordance with RFP and awarded contract scope of services
- Control/Manage all work phases in and as per their contract
- Ensure their Engineer of Record prepares and reviews all design related submittals throughout the term of the project
- Prepare/Manage environmental permits and processes
- Acquire ROW (all/part) within state and/or federal compliance
- Perform/Manage utility relocation activities & RR coordination

Note: Any questions the Design-Build Team’s construction personnel have on the design elements should be directed to THEIR Engineer of Record and not to the Agency’s construction engineers or Agency’s construction inspection personnel
WHAT ARE SOME OF THE AGENCY’S ROLES AND RESPONSIBILITIES?

Agency Roles and Responsibilities:

- Assure checks and balances are put in place.
- Assure proper reviews, audits, and authority approvals are performed timely and by independent agency personnel OR by others representing the Agency’s best interest at all times.
- Assure proper state and/or federal regulations, laws and procedures are being followed.
- May acquire part OR all of the necessary ROW to be acquired.
- Assure Scope of Services and DB Manual are adequate and detailed enough to accomplish satisfactory results.
- Conduct a “Lessons Learned” session after each DB project with the Agency and the DB Firm to develop and learn what can be improved upon and done better next time.
Georgia State Laws:

GA Code 32-2-81

- 2004 – 15% cap
- 2010 – 30% cap
- 2012 – 50% cap

Design-Build Agency Adopted Rules

- 2006 – adopted
- 2013 – revised

Agency Design-Build Manual
Federal Laws:

636 CFR (Design-Build Contracting)
49 CFR Part 24 (Uniform Act)
23 CFR Part 710.313
  - Acquisition services w/in DB contract
  - Construction may be phased
  - Need R/W Acquisition Plan
  - Need Project tracking/quality control system
  - Need Agency developed ROW Manual
SOME DESIGN-BUILD PROJECT EXAMPLES WITH ROW PHASES INCLUDE:

- “Advanced Acquisitions” method
- Agency Acquires ROW
- Locals Acquire ROW
- Design-Build Firm Acquires ROW
- Design-Build Firm / Agency Jointly Acquire ROW
DB PROJECT EXAMPLE: “ADVANCED ACQUISITIONS”

- Rapidly Developing Areas
- STIP and FHWA Pre-approval
- Prior to NEPA Completion, had Individual CE documents
- Agency Developed ROW Plans

Risks:
- May limit innovation
- Can acquire too much ROW or not enough ROW

I-85 @ Kia Interchange - $83M
DB PROJECT EXAMPLES: “AGENCY ACQUIRED ROW”

- ROW Acquired after Environmental Completion
- Agency Developed ROW Plans

Risks:
- May limit innovation
- Can acquire too much ROW or not enough ROW

DB PROJECT EXAMPLES:
“AGENCY ACQUIRED ROW”

SR 400 @ Hammond Dr - $17M
SR 400 @ I-85 Ramps - $22M
DB PROJECT EXAMPLE
LOCALS/AGENCY JOINTLY WORKED TOGETHER: “LOCALS ACQUIRED ROW”

- Agency Developed ROW Plans for the Locals
- Locals Acquired ROW
- May limit innovation
- Can acquire too much ROW or not enough ROW
DB PROJECT EXAMPLES: “DESIGN-BUILD FIRM ACQUIRED ROW”

- Allowed DB Firm opportunities to Phase Work
- DB Firm controlled own schedule
- DB Firm did Pre-acquisition ROW activities
- DB Firm did ROW Acquisition activities
- DB Firm Acquired ROW in constructible segments as approved by GDOT

Jimmy Deloach Connector - $73M

Jonestho Road
Northbound Morning Commute

I-75 Managed Lanes - $176M
Opportunities to phase work

Agency can focus on “Early Start” parcel areas

Shared Risk

Can still promote DB innovation
PUBLIC-PRIVATE PARTNERSHIP (P3)
Another form of Design-Build: Public-Private Partnership (P-3)

Agency and a DB Firm may share in a project’s cost
Public-Private Partnership (P-3)

DB Firm may:
- pay most of a project’s cost
- pay a portion of project’s cost, after a certain point in time
- receive payments over time and/or tolls over time
P3 Program - State Laws

- GA Code 32-2-80
  - 2004 – unsolicited PPI (unsolicited no long accepted)
  - 2009 – P3 legislation (SB 200)

- P3 Agency Rules

- Projects
  - Northwest Corridor (post-let construction phase) - $1 Billion
  - SR 400 @ I-285 (pre-let procurement phase) - $800 Million
NORTHWEST CORRIDOR (P3) (+- $ 800 MILLION)

- 29.7 miles/Open to tolling in ‘18
- 2 reversible barrier separated managed lanes along the west side of I-75 (from I-285 to I-575/I-75 interchange)
- One (1) reversible barrier-separated managed lane in the median (on both I-575 and I-75) from the I-75/I-575 interchange
Ramp and bridge modifications through the interchange

- Eastbound and Westbound CD lanes on I-285
- Roswell Road, Ashford-Dunwoody, and Hammond Drive Bridges will remain
SR 400 Collector Distributor Lanes (P3)

• Northbound and Southbound CD lanes
• Will replace Mt. Vernon Bridge
• Will modify Abernathy Road Interchange
  o Single Point Urban Interchange (SPUI)
  o Diverging Diamond Interchange (DDI)
Design-Build-Finance-Operate-Maintain
Agencies may elect to transfer operating and maintenance responsibilities over by contracting to a private entity through bidding processes.

DBFOM Firm’s concessions often extend for a period of 30 to 50 years or even longer and are awarded under competitive bidding conditions. In most cases, the public agency sponsoring a project retains full ownership over the project.
DESIGN-BUILD-FINANCE-OPERATE-MAINTAIN

With the DBFOM model:

1. State or local government, through equity or debt, rolls services and transfers to a Private Entity/Grantor (with funding from commercial debt, private equity or possible public subsidy/guarantee) and contractor and Operator.

2. Future revenues such as Road Tolls, are leveraged to issue bonds or other debt that provide funds for capital and project development costs. Often they are also supplemented by public sector grants in the form of money or contributions in kind, such as right-of-way.
3. Generally, payments are made based on milestones, such as initially completing specified construction activities or subsequently meeting metrics and operational performance standards.

3. Depending on the structure of the P3 agreement, a private partner may not receive any payments until construction is complete.
LESSONS LEARNED
(R/W ACQUISITION – ALTERNATIVE DELIVERY METHODS)

- Agencies are typically the best suited to acquire R/W
- ROW Acquisition Services in the DB Contract typically cost much more
- ROW scope of services is not always clear due to so many plan revisions (i.e. - drainage plan revisions)
- Acquire the most impacted or complicated parcels first
- Assure Design-Build Firm ROW scopes are well defined
- Assure Design-Build Firm oversight responsibilities are well defined
LESSONS LEARNED
(R/W ACQUISITION –
ALTERNATIVE DELIVERY METHODS)

- Assure roles in ROW condemnation processes are well defined
- Develop an accurate R/W cost estimate as possible
- DB Firm must manage ROW plan revisions and design changes or will have multiple updated appraisals, revised offers, and costly delays
- All parties must commit to work together
- Always negotiate in “good faith”
- Document successes/failures for improvements
PROS/CONS
FROM GDOT AGENCY PERSPECTIVE

Pros

- May accelerate delivery
- Typically transfers more risks to the DB Team
- May encourage more design modifications to mitigate damages which may save the Agency money
- Potentially assists or frees up Agency resources
Cons (Risks)

- coercive negotiations/negotiating in bad faith by the DB Firm or their subs
- multiple efforts due to ongoing ROW plan revisions (updated appraisals, revised offers, etc.)
- increased condemnation rates
- may get inferior or less experienced personnel working on the project
Looking Ahead at GDOT

- **Design-Build**
  - Continue to document processes in the Design-Build Manual
  - Enhance contract scope/clarity in the Design-Build Contract
  - Continue to evaluate/select the “right” projects to deliver cost and schedule savings by Design-Build project methods
  - Continue internal and external outreach

- **P3**
  - Successfully deliver NWC and SR 400 @ I-285 Projects
  - Continue to evaluate finance strategies such as DBF Models and also explore DBF-Operate Models as well to advance projects
QUESTIONS/COMMENTS?