A summary of Alternative Project Delivery in Ohio and around the county

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Ohio’s updates

What we’ve been up to the last 12 months (or so)
3D / 4D Modeling

- 3D Modeling/4D Modeling
  - FRA-71-5.29
    - I-71 between Stringtown & SR-665
  - EveryDayCounts Rnd 2
  - 3D Model
    - = Contract Documents

- 3D Model in determination of final 3D Elevations and final earthwork quantities.
  - Direct import into machine control = time savings = $ savings
- 4D Required time phasing of work utilizing the model. Requiring Schedule to be utilized with Model.
  - There is the 5th Dimension.... $ vs time
Alternate Technical Concepts in Design-Build

- Equal or better concept to Department’s base concept
- Submitted Prior
- Similar Concept to VECP
- Used on HAM-71 (MLK Project)

Needs streamlined and made more easily implemented.

Low-Bid DBs?
Independent Quality Engineer

- LUC-75-2.75
- The Contractor must employ an Independent Quality Engineer (IQE) who will be responsible for verifying and documenting:
  - All The Work related quality data,
  - All construction processes, and
  - All construction progress for the Department

Inspection becomes competitive and allows new methods
Allows “as needed” staffing
ID/IQ
Indefinite Delivery / Indefinite Quantity

- Competitively bid project with an indefinite amount of quantities within a region
- Contract size is a known & fixed
- Duration known and fixed
- Pass HB53
- Potentials
  - Guardrail Ding-Dent
  - ITS Maintenance
  - Bridge Patching
  - Electrical Maintenance
Lump Sum Resurfacing

- No Quantities given for Pavement Quantities
- POR-5-4.93
- From Post Construction Meeting
  - Contractor:
    - There is an additional cost – more field review
    - Would do it again
  - Proj Engineer
    - No change orders on Lump Sum items
    - Less project waste on lump sum items.
  - Designer
    - Was not any less work; quantities are still needed for estimate

ODOT noted some benefit, but more industry Prebid work
Public Private Partnerships

- Portsmouth Bypass – SR-823
  - Appalachian Development Highway System – Corridor B
  - 1st DBFOM in Ohio
    - 16 mile in Scioto county/ 5 Interchanges / 20 mill yd³
    - Financial Close April 9th 2015 – Construction value $435 mill
      - Portsmouth Gateway Group, LLC
  - Developer’s design, but an Ohio Road with performance specs
- Learning Curves
  - Owner’s – both of them
  - IQF
  - Designer
- Future ???
ATC in Design-Bid-Build (Considered)

- Missouri Version
- Michigan Version
- ODOT Version:
  - During advertisement phase, contractor(s) propose(s) ATC(s)
    - VECP Prior to Award
    - Benefits
      - For contractor & ODOT: $ Savings....& Contractor Determined!
    - Risks
      - Level of Development to proceed
      - Added costs to all bidders
      - Idea Ownership

While possible, no real need.
Upcoming in Ohio
(in the not so distant future)

- 3D Model as a Standard Deliverable
  - See Wednesday afternoon session: Session 73
- Digital Inspection & Randomized Statistically Based Inspection
- CMGC
  - Pending…
- Additive Alternates for all Projects
Nationwide
Project Delivery is Changing

Traditional - **Project Delivery** - Alternative
Changing Roles & Responsibilities for **OWNERS**

- **DOT Maintenance** → **Design-Bid-Build** → **Design-Build** → **P3**
- Fix the pothole quickly.
- Inspect and test materials
- Design Builder follows QMP
- Validate Quality
- Oversight of Developer
- Due Diligence
- Ensure Quality
- Verify Quality

**Verify Quality**

**Ensure Quality**
Alternative Project Delivery
- around the country

- CMGC - variations around country
  - Most states have legislation
  - General model - 2 contracts, forced teaming
  - Mixed success - Colorado example, Florida example
  - Success factors - risk factors, industry experience
  - US Army Corps of Engineers - Early Contractor Involvement contracts
Alternative Project Delivery – around the country

- Design-Build
Alternative Project Delivery
– around the country

- Design-Build – Risk Transfer
  - State by State level of adoption (Utah to North Dakota)
  - Examples - NY State - Tappan Zee Bridge, Utah DOT, Conn DOT
  - Primary advantages – Time savings then cost savings
  - Successes – Failures
    - Speed of decision making
    - Project Management Systems adapted to DB model
    - ‘A Team’ or ‘C Team’
Alternative Project Delivery – around the country

- Public Private Partnership - Financing
  - Canadian perspective
  - Projects in bankruptcy - revenue projections
  - International players - Developers, Financers
  - Financing options -
    - Milestone payments,
    - Availability Payments,
    - Toll Revenue
  - Operation and Maintenance
What’s next?

- Alliance Contracting
  - Used in Australia
  - Owner/contractor share ‘pain & gain’
  - Unique contracting structure
  - Maybe in Canada – but in the US?