

Transportation Forum Coordinator: Wendy Dyson

Next Forum Meeting Date: 06/07/2017

GENERAL ITEMS:

- Welcome and attendee introductions.
- **June Forum meeting will have reports from all subcommittees.**
- No July Forum meeting – Have a safe and happy 4th of July!

SUBCOMMITTEE REPORTS:

Procurement (2017 Co-Chairs: GDOT – Treasury Young & ACECGA - Saurabh Bhattacharya)

- **CMIS performance** – evaluations relative to area classes entered on new contracts. Some 2016 contracts maybe included.
- **Time lapse between signed contract and receiving NTP** - Treasury said that if over a week has gone by to notify him. Contract negotiations, etc. were averaging 96 days (during Jan-March)
- **Negotiations Handbook and Process** – efforts to clarify position classifications are ongoing.
- **Discussion on workload/availability requirement on SOQs** – required for project specific procurement and not required for IDIQ contracts.
- **Upcoming:**
 - Innovative Delivery GEC contracts, programmatic CEI contracts
 - I-85 Widening DB – Environmental Clearance (2 contracts), to be procured as best value with emphasis on maximizing scope.
 - Government Estimator (2 contracts) – develop scope for Office of Program Delivery prior to advertising design services. Prime will be excluded from submitting and teaming for design opportunities on project where they serve as Government Estimator.
 - The Consultant manager will review historical hours and provide suggested hours to GDOT SMEs, but will not participate in negotiations.
 - The Consultant will assist in answering local government agencies questions regarding projects.
 - TE Re-compete
 - R/W Acquisition Services (pilot contract) – SR 20 corridor with 700 parcels.
 - Local Program Assistance to Office of Program Control – procurement anticipated in September 2017 or sooner.
 - Bridge Bundle 1-2017 - 52 bridges, RFQ around June
 - Geotechnical: Boring & Drilling Work and changing process – looking at the \$25K threshold and possible changes- adding to state exempt list and /or multiple on-call contracts for drillers.

FHWA Every Day Counts (EDC) Imitative and the GA State Transportation Innovation Council (STIC): Allen Krivsky, ACECGA representative, provided update and website link for further information:

In 2009, the Federal Highway Administration (FHWA) launched EDC in cooperation with the AASHTO to speed up the delivery of highway projects and to address the challenges presented by limited budgets.

EDC is a state-based model to identify and rapidly deploy proven but underutilized innovations to

- shorten the project delivery process,
- enhance roadway safety,
- reduce congestion and
- improve environmental sustainability.

From <<https://www.fhwa.dot.gov/innovation/everydaycounts/about-edc.cfm>>

STIC meeting opened with introductions- Bin Buih- GDOT EDC Coordinator / Research Implementation Manager
All together there are six EDC-4 Innovations that GDOT is working on: See FHWA Everyday Counts, EDC-4 Innovations https://www.fhwa.dot.gov/innovation/everydaycounts/edc_4/

1. Collaborative Hydraulics: Advancing to the Next Generation of Engineering (CHANGE)
2. Data Driven analysis
3. E-Construction and Partnering
4. Road Weather Management - Weather-Savvy Road
5. Safe Transportation for Every Pedestrian (STEP)
6. Ultra-High Performance Concrete Connections for Pre-cast Bridge Elements

Updates from GDOT on the EDC4 initiatives

- **Collaborative Hydraulics: Advancing to the Next Generation of Engineering**
Brad McManus- There is a move from one dimensional hydraulic analysis (HEC-RAS) to two-dimensional modeling. The new version of HEC-RAS has two-dimensional modeling capabilities.
- **Data-Driven Safety Analysis**
Dan Pass- GDOT is applying the Highway Safety Manual to the Data Driven Analysis initiative.
- **E-Construction**
Mark Mastronardi - GDOT is using E-construction on various projects.
- **Safe Transportation for Pedestrians**
Andrew Heath- Initiative is in the early steps and involves enhancing markings, signing, etc.
- **Ultra-High Performance Concrete for Pre-cast Bridge Elements**
Current use to implement shorter rebar development and speed curing of concrete. It is expensive because it is new. UHPC was spec'd on SR 211 in Barrow County.

Update on EDC 2 Innovations

Georgia Tech is conducting research projects:

1. High Friction Surface Treatment
 - HFST consists of a binder and calcium bauxite and is applied with a truck spreader or by hand and is used to increase the friction of the road surface on sharp curves.
 - GT is working with OMAT and Maintenance to evaluate durability, life span, effectiveness and sudden deterioration.
 - The oldest application of HFST are on SR 20 and SR 140 in Cherokee County
2. Curve Identification Tool - involves creating a statewide inventory of horizontal curves

PRESENTATION: *Bridge Guidance Related To Environmental Consultation & Permitting

Presented by: *Bill DuVall, P.E.* - State Bridge Engineer, Georgia DOT, Office of Bridge Design
- GDOT GPTQ CRC Bridge & Structures Sub-Committee Co-Chair

- Bill noted that live-streaming of the SR299 Bridge replacement over I-24 viewing would be available (construction occurred over May 12-14, 2017). Video link included here.
<http://www.dot.ga.gov/BuildSmart/Projects/Pages/SR299.aspx>
- **Questions:**
 - **Will this move up BFI's in the process?** NO
 - **Will dealing with impacts vs spanning be considered?** Can always build for more \$\$\$. GDOT is sticking with 'tool kit' and selecting practical design. No pushback is being seen. Also, there is a huge cost to inspecting and maintaining the large structures.
 - **If a temporary 'work' bridge is specified in approved document but the contractor decides they want to use a rock jetty – Is this allowed and what impacts?** This would be at contractor's expense for permit modifications, etc. and the impacts schedule must be considered.

***Powerpoint presentation with Bill's notes and Forum notes in blue are attached.**

**Please send any additions and/or revisions for the Report to Ossie Brewer, obrewer@dpengr.com
-Ossie-**



BRIDGE GUIDANCE RELATED TO ENVIRONMENTAL CONSULTATION & PERMITTING

GPTQ/CRC Bridge & Structures
Sub-committee



Subcommittee Members

Bill DuVall, GDOT (GDOT Co-Chairman)

Greg Grant, RS&H (Co-Chairman)

Steve Gaston, GDOT

Jim Aitken, CHA, Inc.

Barry Brown, Moreland Altobelli

George Manning, Michael Baker

Masood Shabazaz, Heath & Lineback

Tom Tran, Gresham Smith Partners

Initiative started a year ago

Tom Tran was Co-chair when it started

Few members have changed

Greg Grant and RS&H spear headed development of the document

Greg is at his office in Florida today



Overview

- Background
 - Why is this document needed?
 - Who is it intended for?
 - How is it intended to be used ?

Targeting Bridge Engineers

Chris Goodson has worked on the Environmental side to discuss issues

Focus is to complete environmental documents and obtain permits and minimize changes later on in project or during construction

Bridge Engineers have historically been focused on the final product and not how you get there

Guidance for Bridge Engineers to understand impacts and then be able communicate with Environmental Specialist as well as Construction Engineers



Permanent Impacts

- Permanent Impacts are those environmental impacts that are defined as the permanent placement of structures or fill within Waters of the U.S. and other areas [such as Environmentally Sensitive Areas (ESA), including historic resources] protected by environmental legislation.
- These areas are permanently disturbed and will not recover over time. Permanent impacts also refers to any impacts to a resource that will not recover within 7 years.
- An example of this would be clearing a forested wetland, which would be a permanent impact since it would not recover within 7 years.
- Typical items requiring coordination with ecologist:
 - Type size and location of foundations
 - Road and bridge layout
 - Cofferdams
 - Justification of impacts

We “Bridge Engineers” need to understand the difference between “Permanent” and “Temporary” Impacts

Basically, Permanent impacts are changes within the stream, ESA etc that will not recover within 7 years

Examples:

- Foundations
- Rip Rap (scour repair)
- Pile encasements
- Cofferdams when there are seals



Temporary Impacts

- Temporary Impacts are those environmental impacts defined as “temporary” (not permanent) in nature and that will allow the Waters of the U.S. to regain full function within seven (7) years of placement.
- Temporary impacts are typically those caused by *during construction* activities.
- Quantify duration of impacts...
- Common asked questions of the Bridge Engineer during temporary impacts discussion
 - Bridge removal and Construction methods
 - Construction Access
 - Seasonal Restrictions

Conversely, impacts that are temporary when the disturbance will return back natural within 7 years

Cause as a result of the construction

- Bridge Removal
- Bridge Construction
- Construction Access (placement of cranes)

Sometimes this requires development of time limits



Quantifying Impacts

- Impacts are generally measured linearly (along the length of the stream crossed) or as an area of surface.
- Once impacts are understood by the environmental permitting personnel, there are usually additional questions to answer such as:
 - Is clear spanning the resource/resources an option? If not, why can this not be achieved?
 - How many piles would be constructed per bent?
 - What are the dimensions of the concrete footprint for each pile footing or each caisson?

Linear or Area

Asked Questions like:

- Clear Span stream
- Size of “Pile”
- Number of “Piles”

Can be very difficult without BFI

Need to do your homework



Selecting Construction Access Methods

- Background
- The following order of construction access selection generally provides an approach that disturbs the environment from least to most.
 - Work Barges;
 - Work Bridges;
 - Bulkhead Walls;
 - Jetties;
 - Haul Roads.

We cannot dictate “means and methods” for construction

Must determine most likely means of access and document in the plans in order for the document and permits to be developed

Barges - Work Bridges - Bulkheads - Jetties

Manual helps provide guidance on selection of method

NOTES:

- Removal is as important as construction itself
- Consider where crane will be located to set beams
- Rock jetties are a consideration to use instead of temporary bridge. DNR will ask for velocities & scour in regards to adding jetty.. if overflows-velocity increase would not increase.
- Consider the time limits that a jetty can be in place



Selecting Construction Access Methods





Guidance on Miscellaneous Items

- Temporary Casings for Drilled Shafts
- Number of Pile hammer strikes
- Bridge Demolition

NOTES:

- cannot dictate to contractor
- for barges, depth of channel unknown - but must be least intrusive
- difficult to calculate the # of hammer strikes to determine the affect of vibration of water and for impacts to marine life ie.. sturgeons)



Guidance on Level of Accuracy

Specific questions often arise at preliminary plans phase that can only be answered by the engineer making an educated “Best Guess” due to the level of plan development at the time this information is required. Examples include:

- Foundation sizes/ Number of Piles / size of caissons
- Cofferdam requirements

Over conservative responses can lead to over permitting for a project which is not desired either.



Section 20 – Construction Staging Details

- Primary Source of information related to environmental Permitting from plans presentation standpoint is Section 20- Construction Staging Details
- Section contains drawings specifically related to constructability approach considered by the design team
- Goal is to depict construction approach to contractor to provide a method that, if followed, eliminates further environmental permitting coordination during construction.

Section 20 is being updated in the PPG

Name won't stay Construction Staging

This is not "just a bridge function"

Haul roads approaching stream may cross an ESA or encroach on a stream

Need to be included in PFPR but may be limited in development

NOTES:

- this will be location of where jetties would be shown
- take every opportunity to discuss what is going on as part of Field Plan Reviews.



Document Status and Next Steps

- Addressed outstanding items earlier this week
- Submitted document to Design Policy & Support to be posted on website
- Formatting will occur later this summer

NOTES:

- GDOT Bridge office is meeting with OES monthly to discuss projects and status, progress, etc.