PA Turnpike Quality Improvement Initiatives

ASHE/Dist. B-D/PTC Conference
April 7, 2017

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Transportation Quality Initiative (TQI)

[www.paturnpike.com/elearning]

Transportation Quality Initiative (TQI)

- Culture of Quality
- Shared Vision & Values
- Trust & Collaboration
- Partnership

- Leadership
- Training
- Recruitment

- Pre-Construction
- Contractual
- Issue Resolution

- QA/QC
- Materials
- Durability/Quality

Transportation Quality Initiative (TQI)

- Workforce Team Goals
  - Retain a qualified, experienced and diversified design and construction workforce
  - Enhance transportation industry training
  - Promote careers in the transportation industry
  - Enhance recruitment activities

Transportation Quality Initiative (TQI)

- Process Team Goals
  - Partnering / Relationship Building
  - Issue Resolution
  - Constructability
  - Lessons Learned
  - Increased Use of A+Bx
  - Revise the Force Account Process

Transportation Quality Initiative (TQI)

- Technical Team Goals
  - Bid item requiring Contractor to submit QC plans
  - LLCP and LLAP
  - Consistent enforcement of specs
  - Overcoming material challenges
  - Improve pavement durability and quality
  - PWT specs
  - JMF reduction

Why Discuss TQI ?

- Need Help Moving Forward with all the TQI efforts
- Validation of Turnpike Quality Improvement Initiatives

Turnpike Quality Improvement Initiatives

- Staff Development and Training
- Design Error and Omissions
- Constructability Reviews
- Improved Pavement Durability and Quality
- Continued use of Partnering (Relationship building)
- Lessons Learned
- Quality Improvement Website

Staff Development and Training

- Updating of Design Consistency Guidelines
- Development of Design Operations Manual (DOM)
- Annual DOM training to design staff
- Annual Updating of the Construction Operations Manual (COM)
- Annual COM training at CMC and Inspector Training Program
- Engineer Trainee Program & Internships
- Attend and participate in annual APC, PACA and ACPA Conferences annually

Design Error and Omissions

- Continued focus of quality design efforts
- Quality designs help to produce quality construction

Constructability Reviews

- Getting Construction Manager involved early in Design Phase
- Use of CM/CI Open Ends Contracts

Improved Pavement Durability and Quality

- PTC payment for Asphalt includes air voids in the calculation
- Limits on the amount of RAP permitted in PTC asphalt mixes
- Limits on Natural Sand in PTC asphalt mixes
- PTC Rich Bottom Base Course higher AC in PTC mix
- Use of Stone Matrix Asphalt for all future Total Reconstruction projects as well as selected resurfacing projects
- Use of Long Life Concrete Pavement (LLCP) on the Southern Beltway

Continued Use of Partnering (Relationship Building)

- Partner all major Construction projects with the contractor as well as hold Quarterly Executive Level Follow-up Meetings
- Partner on selective smaller scale Construction projects as needed or requested

Lessons Learned

- Hold Post Design Construction Meeting for all Construction projects to pass on items that worked well and those that didn't
- Provide summary of issues to all PTC to use for future project development
- Working on improved procedure to communicate the Lessons Learned and developing annual training
- Major items are communicated thru Quality Improvement (QI) Website

PTC Quality Improvement Initiative

- Taking lessons learned from projects and important design and construction considerations and using technology to disseminated to the PTC design community

Concept of a Quality Improvement Website

Quality Improvement Website

- Who has Access
- How to Register
- Website Layout
- Current Topics
- Topics under Development
- Feedback

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Quality Improvement Website

- The objective of this e-learning website is to provide a central location for design and construction topics that will improve the overall quality of future PTC projects
- The training topics are intended for informational and educational purposes only and to demonstrate observations from design and construction events
- When?
  - **Started development of website Fall 2015**
  - **Website went live March 2016**

[www.paturnpike.com/elearning]

How to Locate the Website?

Use: www.paturnpike.com/elearning or Select "Doing Business" then "General Information"

How to Locate the Website?

Then Select "Quality Improvement Training"

Who has access to the Website?

- Website will require registration and PTC will grant access on an <u>individual</u> basis so each person at a firm who will be working on PTC projects should register
- Website will be available to:
  - **PTC Project Managers**
  - **Consultants performing design and CMCI services for the PTC**
  - **Consultant Design Managers**
- PTC will request all consultants working on a PTC project to register and review discipline related topics

[www.paturnpike.com/elearning]

How to Register

To register on the site, visit www.paturnpike.com/elearning and click on **"Register"**

On the **Register** screen, fill out the form completely and click the "**Register**" button.

How to Register

- Once approved, you will receive a welcome email
- Log in with the same password you used to register
- You will then have access to all topics

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Website Layout

- Topics segregated into the following areas:
  - **Roadway**
  - **Maintenance & Protection of Traffic**
  - **Structures and/or Geotechnical**
  - **Drainage and/or Environmental**
  - **Other**
- User can track which presentations they have previously reviewed

Format

- Short webinars, presentations, or videos
- Email blast to registrants when new topics are added to the site

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Sample Webinar/Video
QUALITY IMPROVEMENT
STRUCTURES AND/OR GEOTECHNICAL
Drainage Ditches Above Retaining Structures In Cut Sections
Structures and/or Geotechnical
Pre-cast Channel Segments
Segment Handling
Pre-cast segments weigh up to 4.5 tons
Placement requires a crane
Long and thin segments with minimal reinforcement may be easily broken
TURN PIKE

Sample Webinar/Video
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Current Topics on the Site
QUALITY IMPROVEMENT
STRUCTURES AND/OR GEOTECHNICAL
Drainage Ditches Above Retaining Structures In Cut Sections
QUALITY IMPROVEMENT
OTHER TOPICS
Importance of Accurate Pay Items
QUALITY IMPROVEMENT
STRUCTURES AND/OR GEOTECHNICAL
Support of Excavation – Typical Shoring Types
Drainage Ditches Above Retaining Structures in Cut Sections
Importance of Accurate Pay Items
Support of Excavation – Typical Shoring Types
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Current Topics on the Site

- Stormwater Management Design and Construction – Critical Stages
- Stormwater Management Design and Future Maintenance Considerations
- Retaining Walls: Top Down or Bottom Up Construction
- Design Errors and Omissions
- PTC Cost Estimating Guide Overview

Topics Under Development

- BID Tab Wizard from Design to Construction
- Agency Overview for Permitting PTC Projects
- Typical Permitting Level for Typical PTC Projects
- PASPGP-5 and Typical General Permits for PTC Projects
- Utilities

Feedback

- If you have feedback on a presentation or suggestions for other topics, please submit your comments through the feedback link.

QUESTIONS
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