

2014 COUNTY ENGINEERS' WORKSHOP

**MDOT Contract Administration
Updates & e-Construction
Paperless Projects**

Manistee Little River Resort

February 12, 2014

Michigan Department of Transportation

Presenters

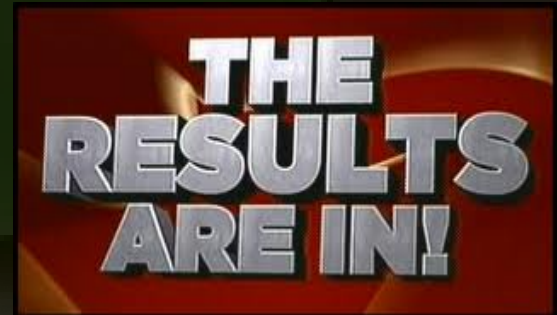
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 - MDOT Field Automation Engineer
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Topics

- MDOT Construction Program 2013 Results
- Current MDOT Construction Administration Topics / Projects
- e-Construction

MDOT 2013 Construction Program

- Have we met the STC goal for MDOT of keeping the entire construction program within 5% of as awarded amount?
- What are the Actual Results?

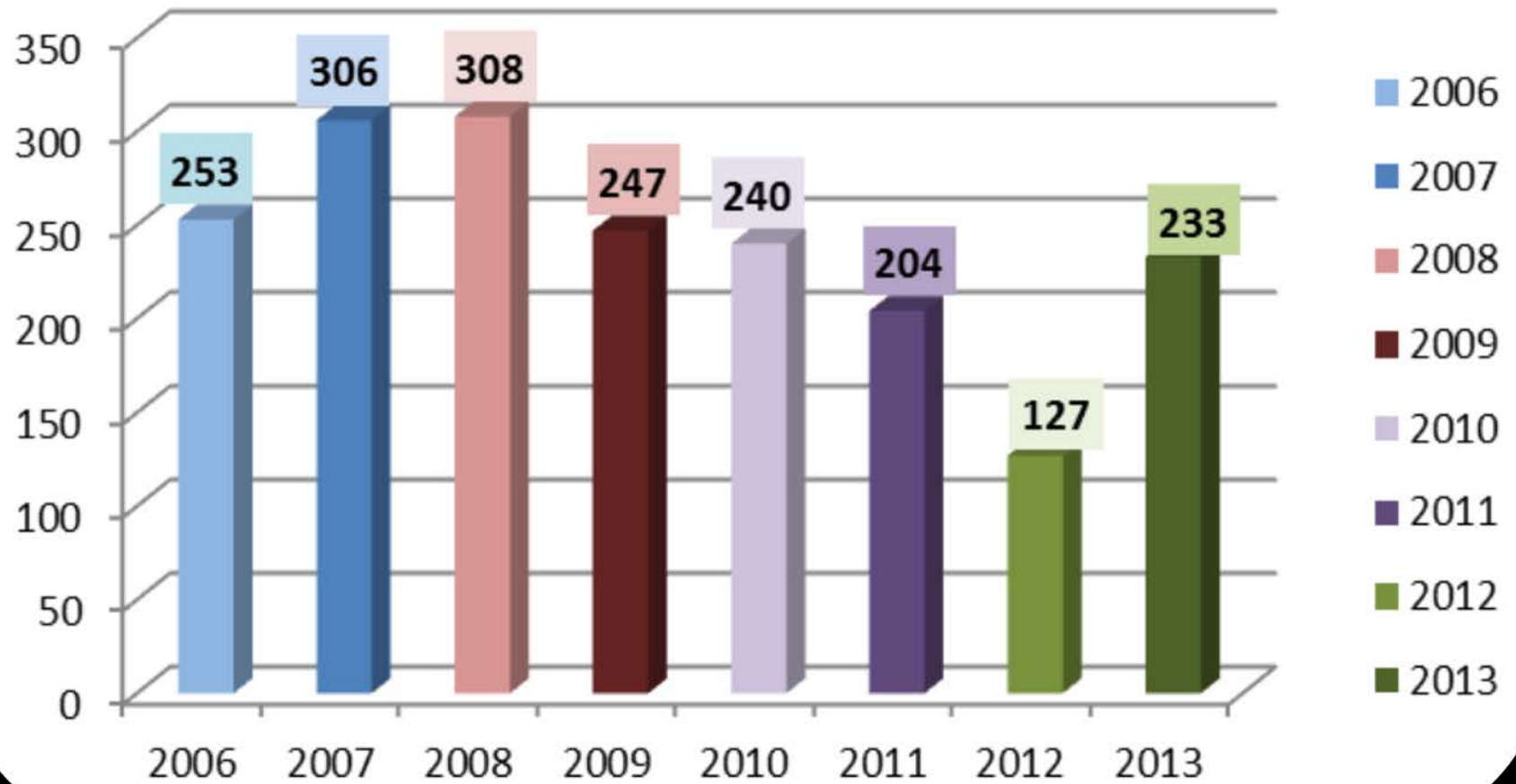


MDOT Construction Program

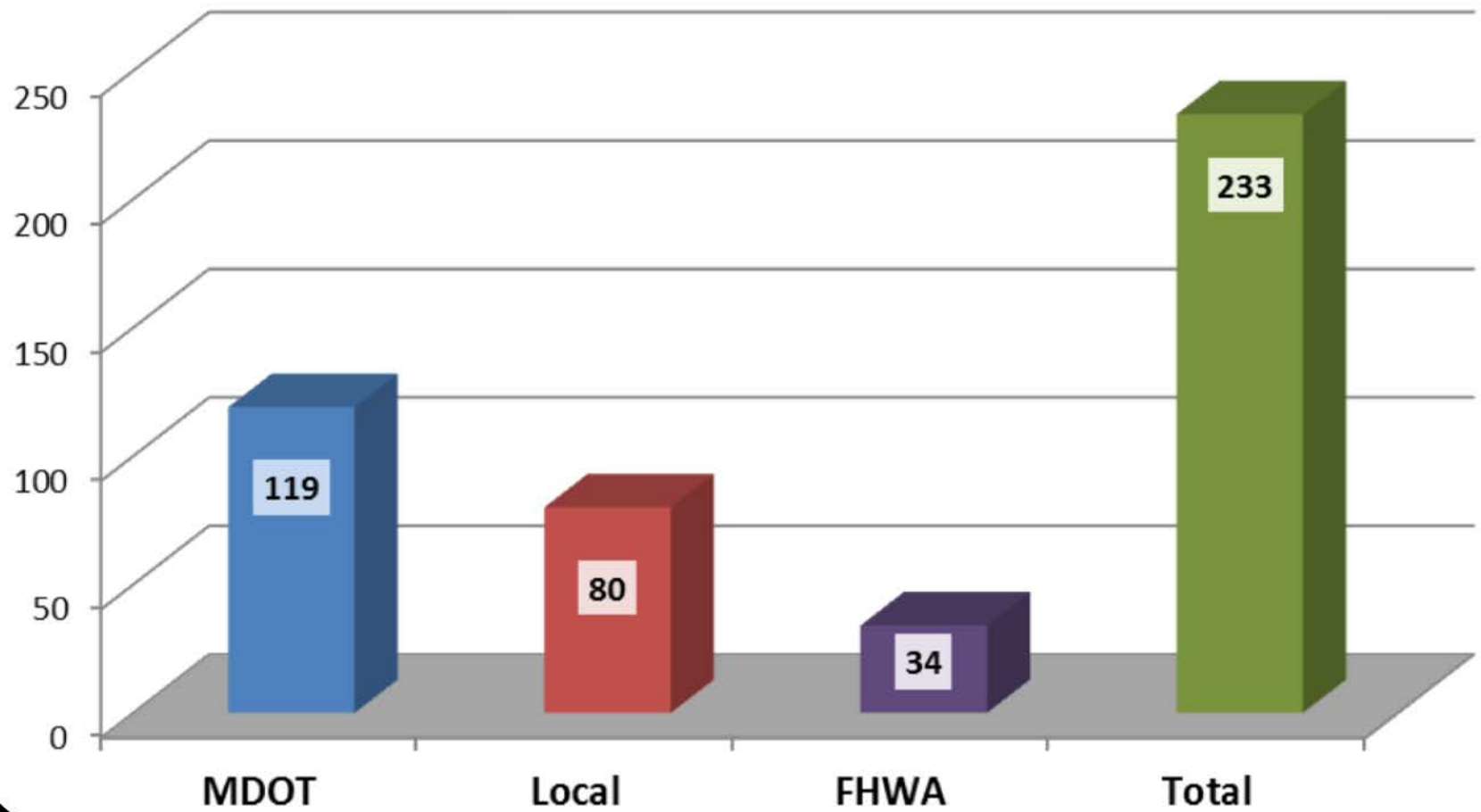
Summary of MDOT Projects

Calendar Year	Original Contract Cost	Final Contract Cost	Percent Difference
2008	\$967,285,996.11	\$983,915,828.12	1.72%
2009	\$726,981,046.84	\$750,956,601.62	3.30%
2010	\$615,818,269.64	\$615,142,561.83	-0.11%
2011	\$833,072,906.02	\$842,999,015.92	1.19%
2012	\$771,130,483.23	\$768,530,401.94	-0.34%
2013	\$934,395,684.55	\$943,440,046.41	0.97%

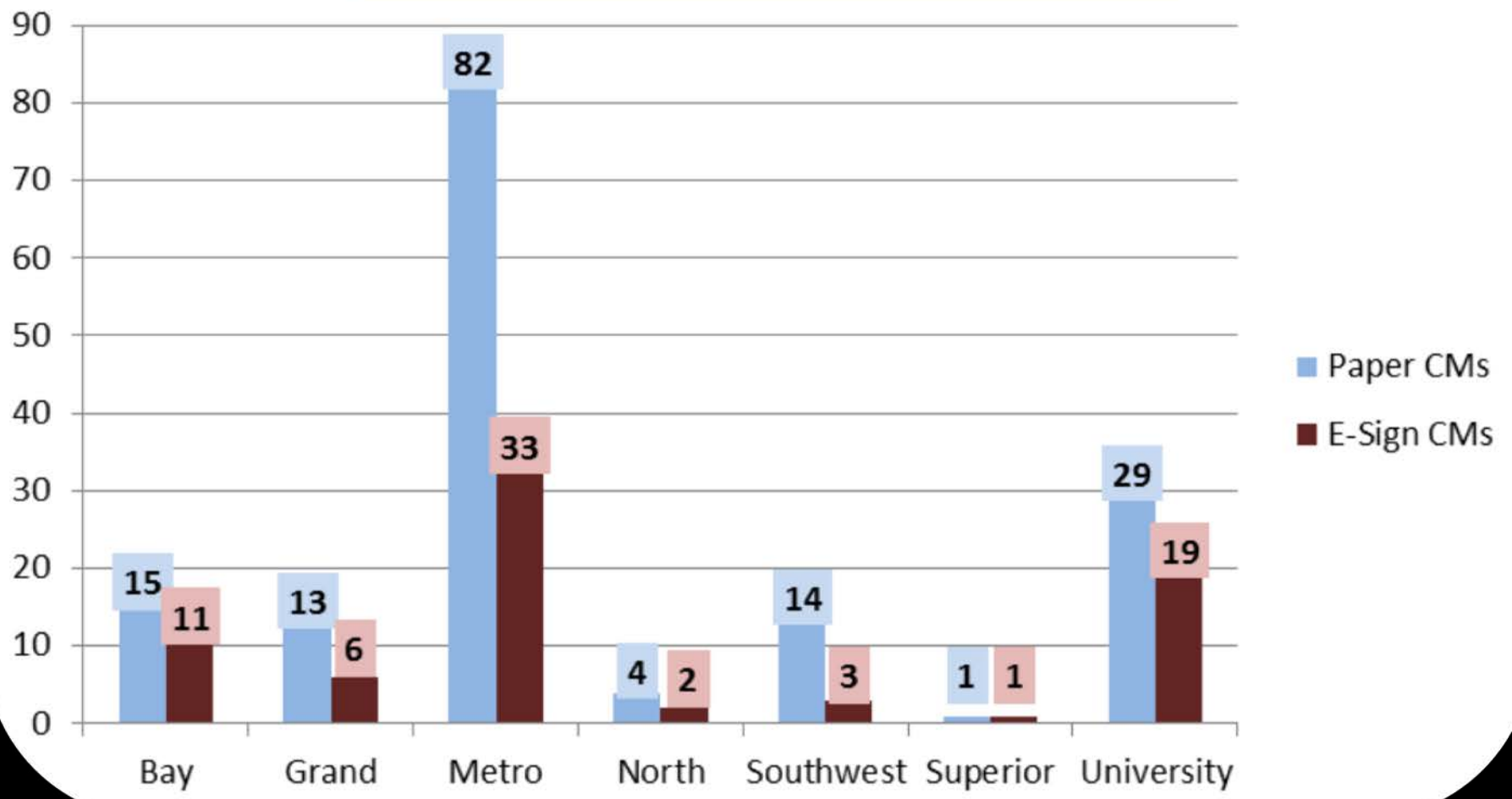
SAB / STC / TIER III Approval Contract Mods



Number of 2013 TIER III CM by Type of Project

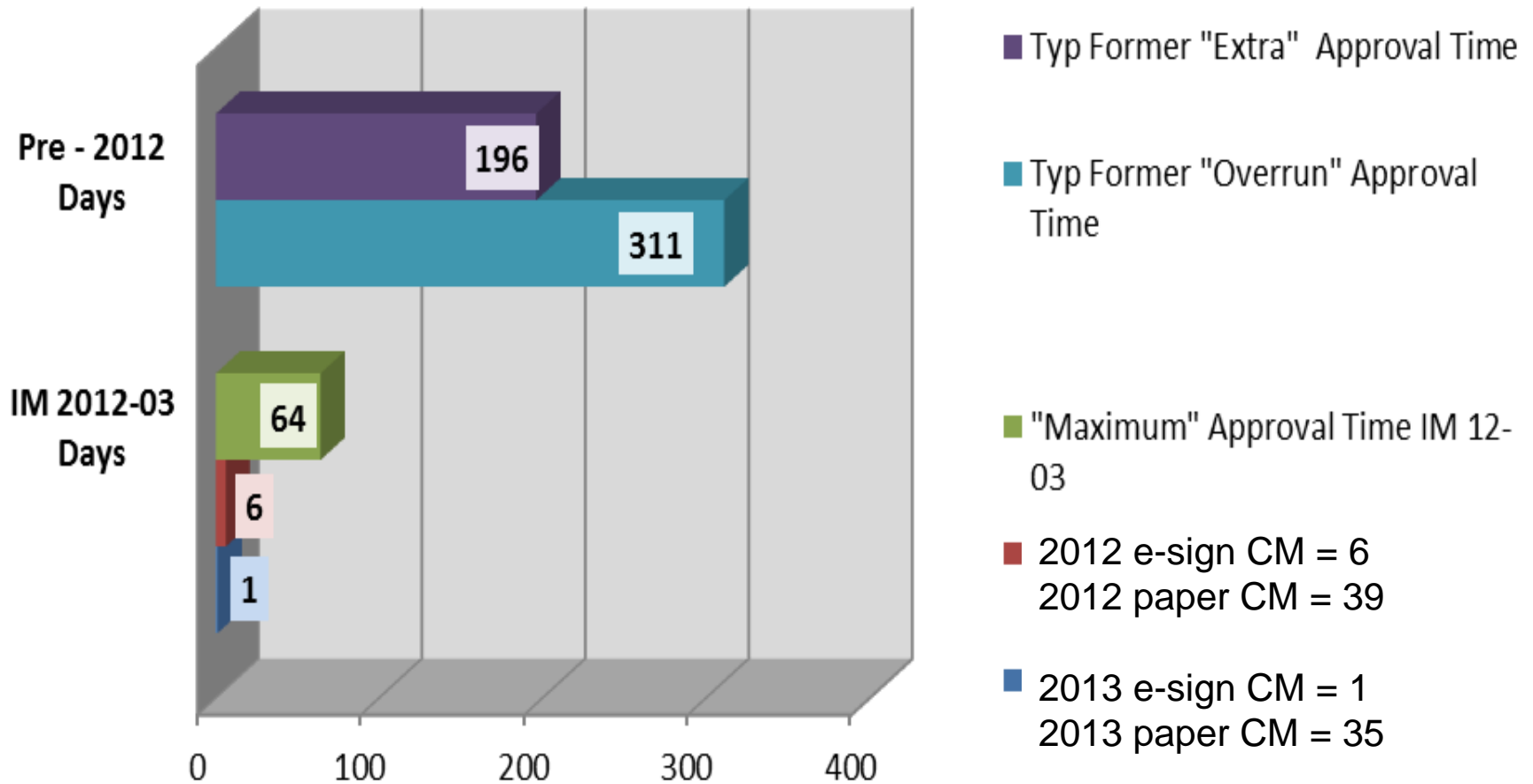


2013 TIER III Contract Mods: Number of Paper CMs vs. E-Sign CMs



Results – Approval Time

Typical "Large Change" CM Approval Time



The background image shows three men on a construction site. They are wearing hard hats and high-visibility safety vests. The man on the left is wearing a red vest, the middle man a yellow vest, and the right man a green vest. They are all looking down at a set of papers or a tablet held by the man in the middle. The scene is dimly lit, suggesting an indoor or shaded construction environment.

Updates on MDOT Construction Administration Topics / Projects

MDOT Construction Administration Updates

- **Office Technician Certification**
 - Course Content Updates
 - Use of Digital Signatures (e-sign)
 - Paperless Documentation / eFiling
 - Requirement for Consultant Prequal
- **FieldManager – AASHTOware**
 - 2014 Production
 - AASHTO Construction/Materials: Major update to how we administer projects
- **Training and Education**
 - CQP & Online Training
- **B2G Prevailing Wage Software Pilots**
 - Automate PW oversight functions



MDOT Construction Administration Updates

- e-Construction
 - Paperless Construction
 - Electronic Documentation
 - Digital Signatures
 - Contractor Access
 - Internal MDOT / Lab Improvements
 - Mobile Device Use in the Field
 - ALL MDOT projects in 2015
- e-Project
 - Overall MDOT Electronic Process



MDOT Construction Administration Updates

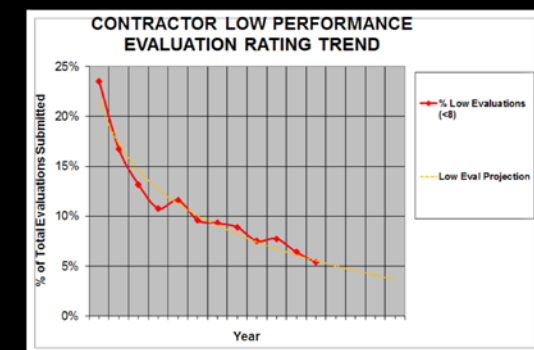
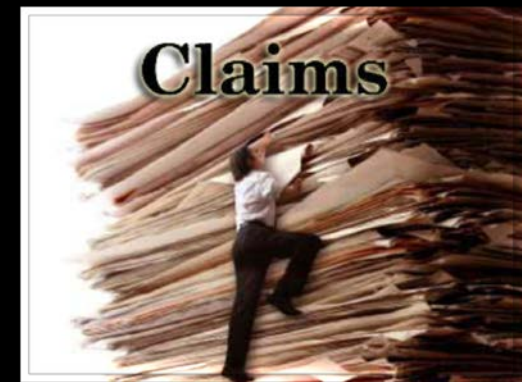
- **Technology Implementation**
 - MDOT inspectors smart phones
 - Many also receiving tablets
 - New Survey/Data Collection Equipment
- **MDOT Updating Construction Manuals**
 - Construction Manual interactive on-line Wiki style format
 - Publishing MDOT Manuals in eBooks/iBook format
- **New Apps and Software improving efficiency**
 - Digital signatures on Iphone/Ipad
 - CITRIX, and many others...



MDOT Construction Administration Topics Under Review

- Claims Process
 - Piloting Dispute Resolution Boards (DRB)
 - Alternatives
- Force Account Team
 - Developing better FA process
- Contractor Performance Evaluations
 - Very Few Negative Ratings Given

(trend: will have perfect contractors by 2016)
 - Statewide tracking of evaluator history
 - Proposing new non-subjective rating criteria for some items
 - Revise Appeals process



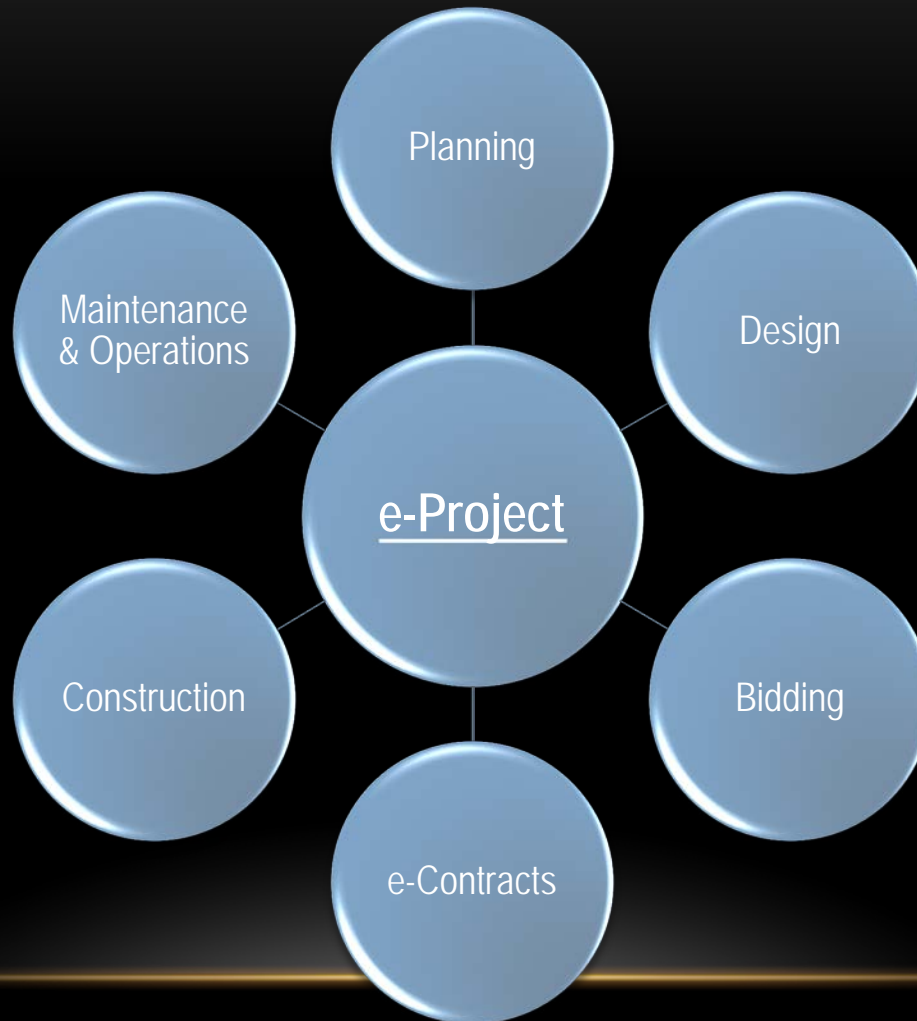
What Does It All Mean?

- CFS is Reviewing / Updating Much of the Construction Administration Process
 - Streamlining Internal & External Processes
 - Incorporating other good ideas (WIKI)
 - Demonstrating higher productivity with mobile devices & newer technology
 - Saving Money
 - Improving The Construction Process for all stakeholders

A person is shown from the chest up, holding a tablet computer. The tablet screen displays a grid-like interface, possibly a construction management software. The person's hands are visible, interacting with the device. The background is dark and out of focus, suggesting an office or construction site environment. The text 'e-Construction' is overlaid in a large, bold, yellow font across the center of the image.

e-Construction

What is e-Project?



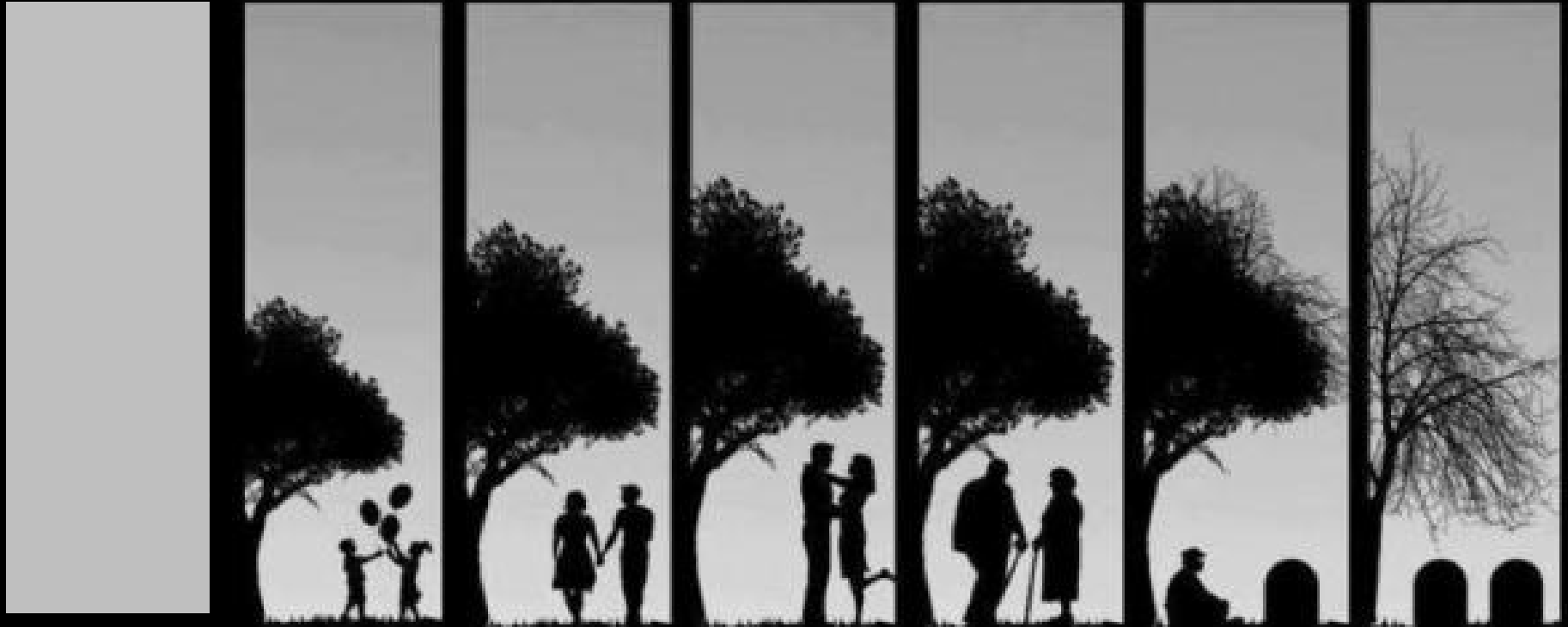


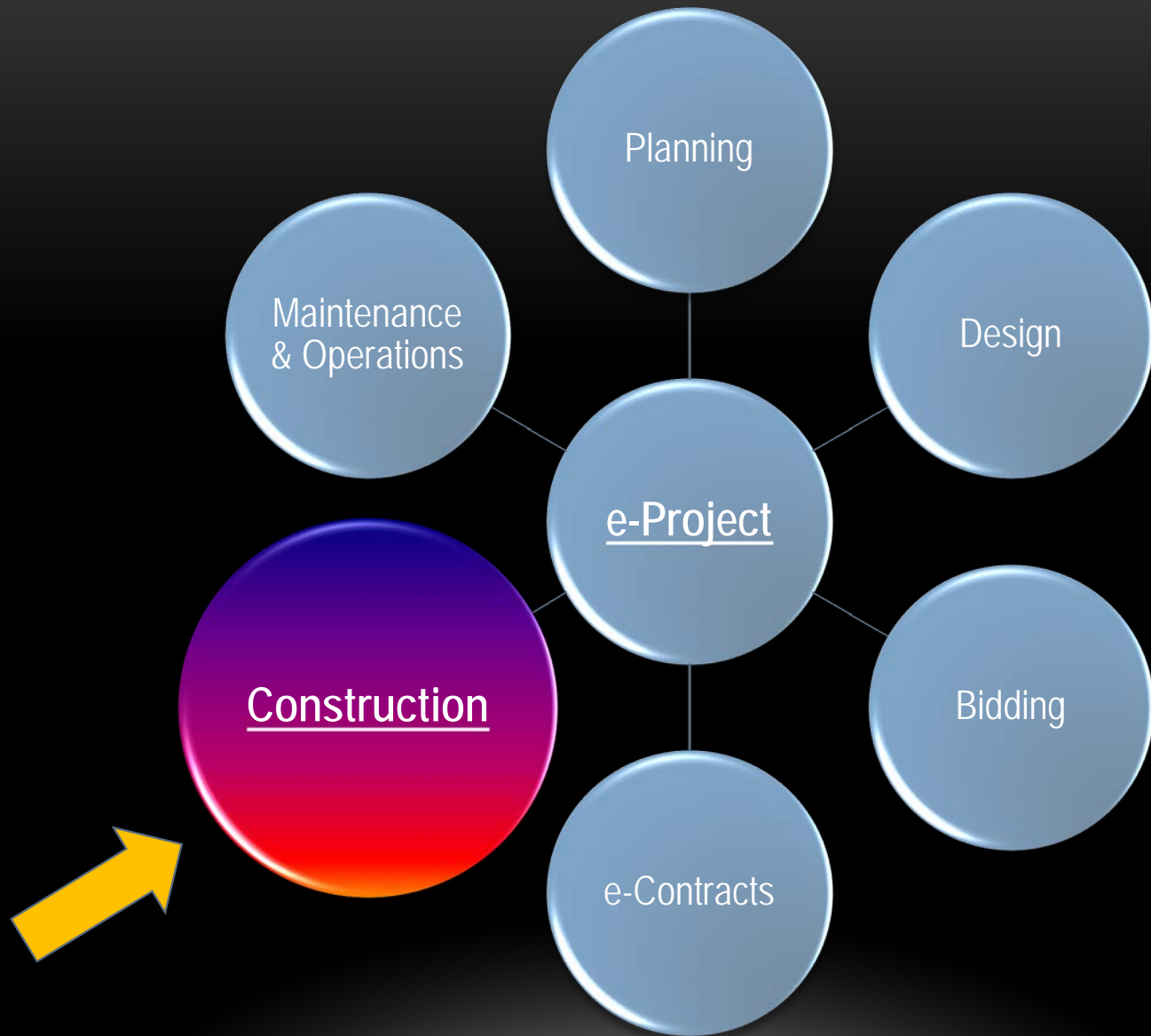
Design

Construction

Customers

Maintenance & Operations





What is e-Construction?

- ProjectWise construction document management
- Digitally encrypted electronic signatures
- Mobile devices in the field
- Innovative training/manuals/instructions
- Electronic data gathering
- Significant process improvement

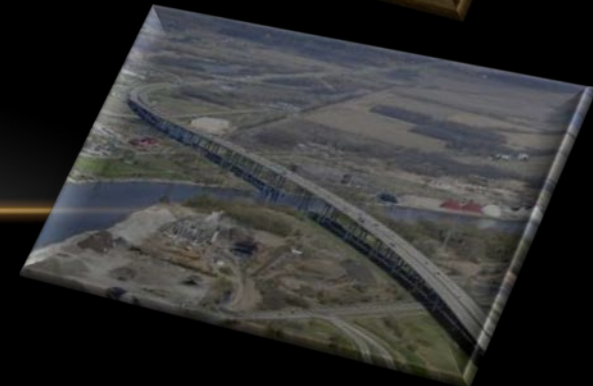


e-Construction e-fficiencies

- Document distribution is immediate
 - No time and money wasted mailing documents
- Documents are approved faster
 - 10x faster than the paper process using e-signatures, workflows and automated email notification
 - Results in faster payment to Contractors
- Original documents are available for viewing by all project partners
 - Not hidden in a filing cabinet and locked in an office
 - Reduces the need for duplication
- Documents are secure
 - Backed up

e-Construction Pilot Projects

- Pilots projects started construction in October of 2012
 - I-96 Latson Road
 - M-231 Little Robinson Creek
 - M-231 over the Grand River
 - I-75 Zilwaukee Bridge



Draft Video - Inspector Mobility

<http://youtu.be/To48dmqgVvI>



<http://youtu.be/cbNSkLzNfQY>

e-Construction Stats

One Pilot Project Preliminary Estimated Savings:

- ~170,000 pieces of paper (all parties)
- ~\$300,000 (time, total paper, printing, mail, etc.)
 - ~\$180,000 MDOT savings
 - ~\$120,000 Contractor savings
- ~150,000 days of mail time (410 yrs)
- Incalculable time savings
 - Contractor interest, bonding, etc.
 - Contracts completed faster



Not So Miscellaneous

- Develop Standards
 - Electronic document files
 - Document naming conventions
 - MDOT documentation
 - Contractor documentation
- Getting all business areas on board



Current External ProjectWise Users

- Access for external partners is critical to the success of this program
 - 24 Contractors
 - Added since Fall 2012
 - 18 Consultants
 - Design & Construction
 - New Design Initiatives will increase these numbers dramatically in 2014
 - 1 Local agency
 - Livingston County



Statewide Implementation

- Start in January 2014
 - Statewide implementation for one project in each office to be complete in June 2014
 - After successful implementation of first project, TSCs can add projects on their own through 2014
- Special provision will be included
- Local Agency/Consultant training will be conducted by MDOT
 - Contractor training as well
- Additional training offered online



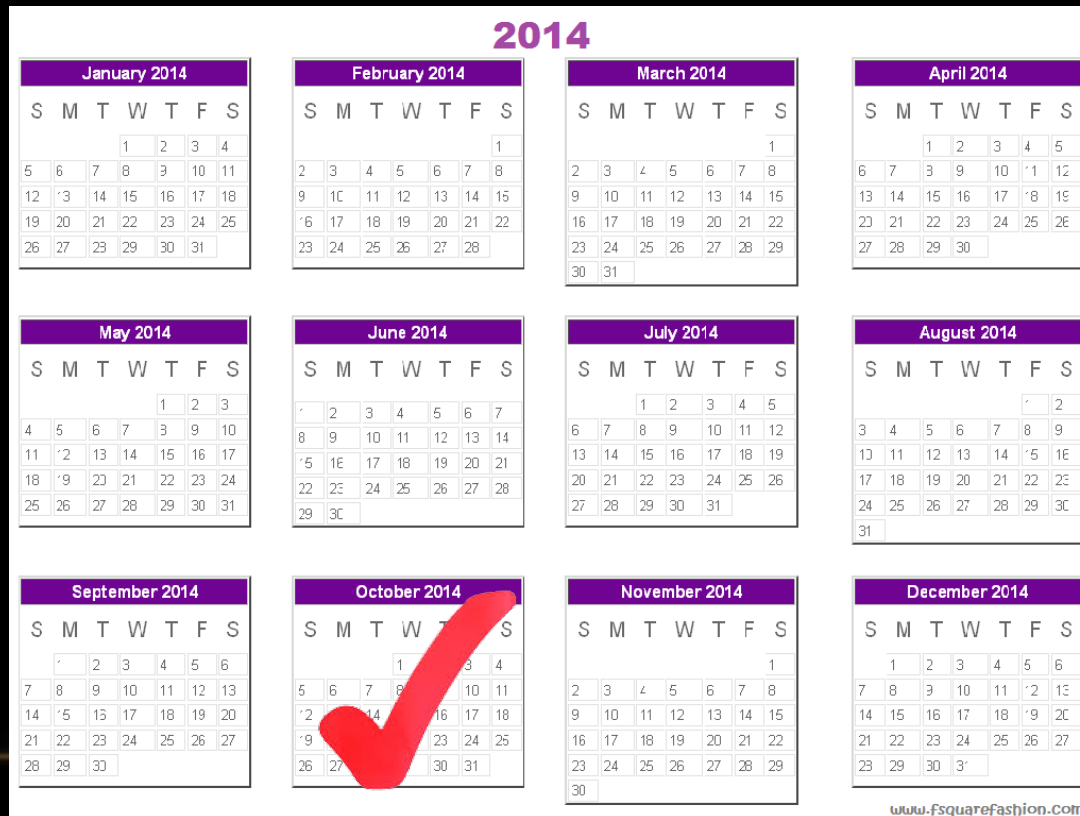
Access to ProjectWise Data

- ProjectWise Explorer
 - Downloadable for free from MDOT's ftp site
 - The same tool that MDOT uses
 - Demonstration to follow
- ProjectWise Web Server
 - Accessible from any computer with Internet Explorer
 - Fully functional but works differently from thick client
- ProjectWise Explorer Mobile
 - This iPad app is a free download from the iTunes store. Not available for Android or iPhone.



October 2014

The ProjectWise Document Management Special Provision is added to all trunkline projects as a Frequently Used Special Provision.

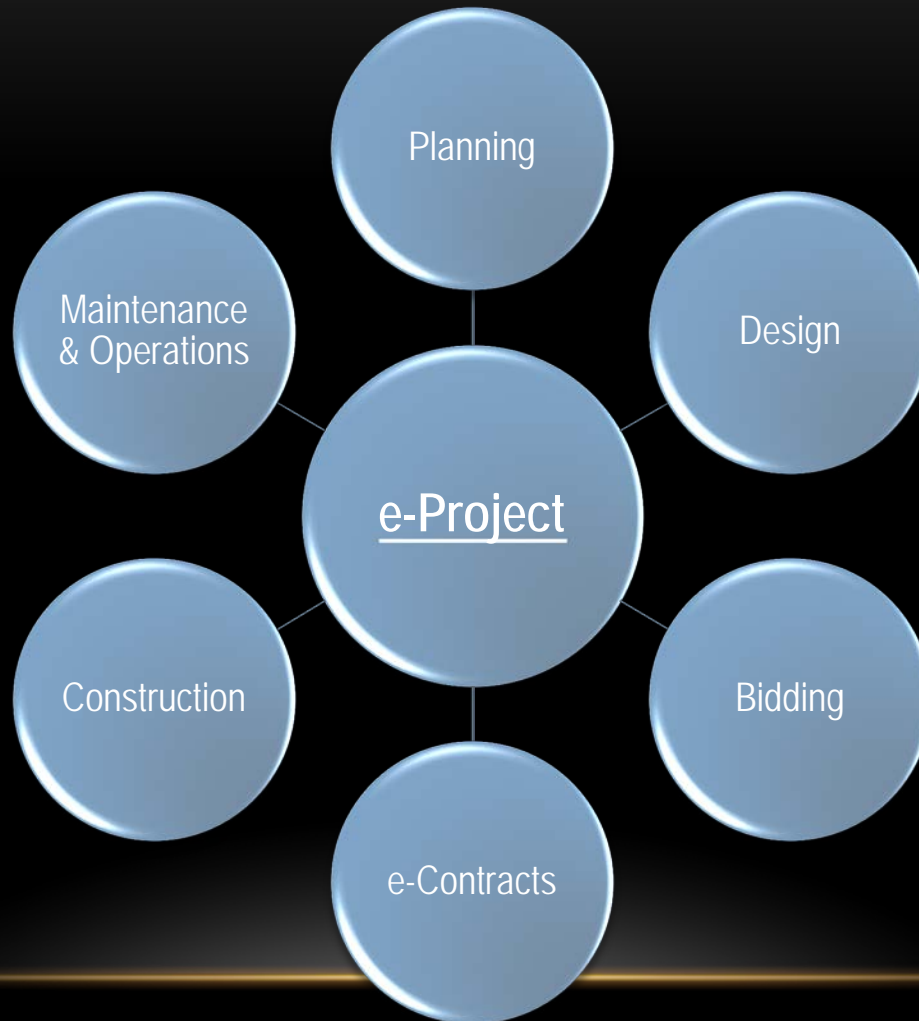


Statewide Implementation

MDOT's Goal:

All trunkline projects use ProjectWise Construction Documentation procedure by 2015 Construction Season.

e-Project



Conclusion





I LOVE THIS THING!