Minnesota Department of Transportation Change Management
Update on Cost Estimating/Cost Management

CTS Research Conference
Jim Weingartz and Michael Ginnaty
March 2, 2010
Overview

§ Cost Estimating Project Background
§ Implementation Plan and Results
§ Update on Current Work
§ Future Directions for Project Scope and Cost Management Office
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Cost Estimating Process Improvement and Organizational Integration Project

<table>
<thead>
<tr>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
<th>Phase 4</th>
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<tbody>
<tr>
<td><strong>Data Gathering</strong></td>
<td><strong>Desired Solutions &amp; Implementation Plan</strong></td>
<td><strong>Reference Manual</strong></td>
<td><strong>Training</strong></td>
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<tr>
<td>Oct 06 – June 07</td>
<td>July 07 – Dec 07</td>
<td>Jan 08 – Dec 08</td>
<td>June 08 – Dec 08</td>
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Cost Estimating Process Improvement and Organizational Integration Project

- Created a vision for CE/CM, policies, manual and training
- Developed policies and procedures
- Developed a Technical Reference Manual
- Developed a training program
- Created Project Scope and Cost Management Office
Overview

§ Cost Estimating Project Background

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§ Future Directions for Project Scope and Cost Management Office

Office
CE/CM Implementation Plan

1. Develop system to track and define TPCE elements
2. Performance Measures and incentives
3. Role and Responsibilities of Estimators and Office
4. Communication of CE/CM
5. Resources Requirements
6. Technical Support
7. Integration with Scoping initiative and others processes
8. Accurately identify inflation impacts
9. Identify and develop additional tools and databases
11. Reduce the use of Setasides in the SRC
12. Emerging areas to be addressed
CE/CM Implementation Requirements

• Directive by Commissioner in October, 2008

• Chapter 152 Projects (10 Year Program)
  – Legislative program in Spring, 2008
  – Scopes and TPCE’s completed by Dec 1, 2008
  – One-pagers completed by Dec 15, 2008

• 10–13 STIP Projects
  – Scopes and TPCE’s completed by April 24, 2009
Implementation Results

• Chapter 152 Projects
  - Districts delivered 100% of projects having scoping documents, TPCE and one-pagers

• FY 10–13 STIP Projects
  - Districts delivered 94% of projects having scoping documents, TPCE and one-pagers
Better define a project so we are able to more accurately estimate the cost.
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Bundle Project
Goals & Objectives

• Provide the new State accounting system (SWIFT) with a link to all Mn/DOT projects.
• Provide a single data table that holds all S.P. Numbers; generate all new S.P. Numbers.
• Identify groups of projects in a way that captures the full picture, Bundles.
• Provide a data hub that is able to link all computer systems that hold operational data about projects.
TPCE Base Estimate Elements:
1. Pre-letting Engineering
2. Construction Engineering
3. Project Construction Costs
4. Detours and Haul Roads
5. Traffic Management
6. Communications/Public Involvement
7. Right-of-Way
8. Utilities
9. Railroads
10. Municipal/Local Issues
11. Turn-backs
12. Landscaping
13. Environmental Clean-up/Mitigation
14. Incentives
Contingency:

• Pre-letting Contingency
  • Total for Base Estimate Elements

• Post-letting Contingency
  • Supplemental Agreements/Change Orders
  • Cost Overruns
  • Incentives

TPCE = Base Estimate + Contingency
## Preconstruction Engineering

### SUMMARY

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<thead>
<tr>
<th>Work Type</th>
<th>Complexity</th>
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<tbody>
<tr>
<td></td>
<td>Major</td>
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<tr>
<td>GSBR</td>
<td>ATH</td>
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<td>GRSU</td>
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<td>RW</td>
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**Work Type = PPMS Primary Work Type**

**ATH = Average Total Hours in Phase P**

**Activity Code = RCA Reported Hours**

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### DETAIL

- **State Project Number:** (PPMS)
- **Route:** (PPMS)
- **Work Type:** (PPMS)
- **Complexity:** (Input)

<table>
<thead>
<tr>
<th>Activity Code</th>
<th>Mgr</th>
<th>Engr</th>
<th>Tech</th>
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<tr>
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| Total Hours | X | X | X |
CE/CM Training

- Two Days of Cost Estimating
- One Day of Cost Management
- 14 Total Events
- Approximately 350 attending
- For Project Delivery Staff
Work Flow Process
Cost Estimating Process Improvement and Organizational Integration Project

§ Increased effort in scoping and cost estimating/cost management earlier in the project development process

§ Identify project risks and apply contingencies

§ Estimates for Total Project Costs

§ Requires Signed Scoping Report, TPCE and Project Summary Report
Scoping Process Improvement

- Developed a process model for statewide use
- Early
- Comprehensive
- Documented
- Signed Scoping Reports
- Implemented in 2007 for FY 2012
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Keys to Mn/DOT’s Success

- We need to become a Risk Management Organization
- Emphasis on scoping, increase effort on scoping projects
- The end of scoping is the end of discovery.
- Management is looking for “Right Estimate”, need to define “Right”
- Retirement of Contingency
Project Management Peer Review

- Conducted Fall 2009
- Broad use of Project Management Plans
- Recognize leadership skills
- Describe expectations in project transitions
- Integrate risk and conflict management into Project Management Plans
Project Management

Scope

Risk

Budget

Schedule

Quality

Your Destination...Our Priority
Thank you!

Questions?

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