Purpose

Overview of the Training Modules
  - Purpose, Goals and Hot Topics

Summary of New & Revised Processes
  - PMP & Stakeholder Engagement
  - Role of OCE from Initiation to Design

Questions & Discussion
Purpose of PM Training

Significant Organizational Changes and Leadership and New Departments

OCE and Capital Delivery are staffing up

Need to effectively delivery significant programs and projects to meet growing demands and address critical safety and operational impediments to aging infrastructure and services.

As such, critical to address processes, policies and procedures that adversely encumber and impede effective delivery of projects.

Remove obstacles and refocus efforts for more collaborative partnerships using the resources in each group more efficiently.
The MBTA / UMass Boston PM Training – TWO Parts

A. Morning Session – UMass Project Manager Certificate Training program – Course work required for certification exam

B. Afternoon Session – MBTA Training Focused – current state of practice, roles and responsibilities of PMs in delivering MBTA projects and the where, what and how of forms, new processes and updated procedures to follow.
Goal of the PM Training - to Ensure Successful Delivery of Capital Projects

Address confusion on the who, what, when, where and how - Project Managers deliver MBTA capital projects.

Clarify roles and responsibilities relative to scoping, planning, managing and overseeing projects.

Address critical problems: confusing terminology, poor scoping, unutilized project management plans, change orders, delayed delivery and costly project performance.

EFFECTIVELY MANAGE TO DELIVER:

- Scope
- Engagement
- Budget
- Schedule
Key Issues Addressed

• Terminology – Speak the Same Language
• Clarify Roles & Responsibilities of:
  • OCE
  • Capital Project Delivery PMs in all MBTA departments
  • Supporting Departments & Resources (e.g., OTP, OPMI, CX, SWA, ODCR, Environment)
• Role of Planning
• Who & How of Scoping
• Eye on Quality Deliverables – from Design Phases 0-100% & through Construction
• Refine and Update Processes:
  • EWOL
  • Estimating Project Budgets, ICE and costs
  • Project Management Plans (PMP)
  • Internal and External Engagement Plans & Resources (PDG, PPP & PEP)
  • Cardinal Change and CIP
Overview Of Changing Landscape

PM Role is Delivering Capital Projects from Initiation to Close Out

Project Management Plan – New Roadmap

Stakeholder Engagement – Resources and Departments

Roles and Responsibilities
- Office of Chief Engineer
- Delivery Project Managers
- Project Controls
- Capital Planning & Oversight
- Customer Experience
- Shared Services
- Consultants

Cost Estimating & Cardinal Changes
Current MBTA Project Management Plan Outline

**Approach**
- Overall Management Approach
- Roles & Authority of Project Team Members
- Departments Providing Resources
- Resource Constraints and Limitations

**Quality Baseline**
- Basis for Quality Measurement & Management

**Cost Baseline**
- Basis for Cost Management

**Risk Register**
- Known and Projected Risk Factors

**Component Plans**
- Change Management
- Communication Management
- Cost Management
- Procurement Management
- Project Scope Management
- Schedule Management
- Quality Management
- Risk Management
- Staffing Management

**Project Scope**
- Per Project Charter

**Milestones & WBS**
- Major Milestones
- Work Breakdown Structure (WBS)
- WBS Dictionary
- Schedule Baseline
Simplified Project Management Plan Outline

Project Management Plan Key Components

SCOPE (Risk & Quality)
- Scope Per Project Charter (including Tasks & Deliverables)
- Known and Projected Risk Factors
- Quality Control, Measurement & Management

PMP 4 Key Components

STAKEHOLDER (Internal and External)
- Internal – Project Development Group (PDG)
- External – Project Engagement Plan (PEP)

BUDGET
- Negotiated Cost – with Funding Source
- WBS
- Basis for Cost Management

SCHEDULE
- Cost-Loaded Project Schedule with Milestones
- Critical Path

New Template Under Design
Simplified Project Management Plan Roadmap

**Project Manager's (PM's) Responsibility**

PM reviews consultant’s monthly PMP updates submitted with invoices (“Project Progress Reports”)

PM manages updated PMPs with MBTA internal stakeholders to reconcile deviations and changes from Plan.

PM Uploads PMP into PMIS at each design phase

PM uses PMP as basis to conduct PDG meeting – track progress and address changes

Manages PMP

Project Manager

Document PMP

Track Changes to PMP
Simplified Project Management Plan Roadmap

- **Pre-Design PM Initiates PMP**
- **PMP Hand-Off (Between PMs)**
- **Design PM Updates & Maintains PMP**

**Assistance from Pre-Design Consultant (optional)**

**Assistance from Existing Consultant (if Pre-Design & Design Consultants are same) or New Consultant (if Pre-Design & Design Consultants are different)**

**Design Consultant submits updated PMP monthly (with invoices) and uses the PMP at the PDG to review project progress**
MBTA Stakeholder Engagement Process

OUTREACH
- Identify & Coordinate with Stakeholders
- Employ Planning Tools & Resources
- Prepare Engagement Plan

NOTIFY
- One-Way Communication
- Notify External Stakeholders of a service change, construction, safety issue (not engagement)

ENGAGE
- Dynamic & Collaborative – Soliciting Ideas
- Engage Internal MBTA Stakeholders – PDG to monitor project
- Engage External Stakeholders to refine project

Internal Stakeholders - PDG & Shared Services

External Stakeholders – Legislative Affairs, Press, Public (business, community and advocacy)
The Project Development Group (PDG)

Purpose - Predictable Schedule – Control Costs

➢ Required at Each Design Phase – 15, 30, 75 & 100%
➢ Should be clearly stated in scope with defined deliverables at each phase
➢ Coordinated internal review of the relevant operating departments is critical to managing scope, cost, schedule and addressing external stakeholder input on a timely manner
Illustration of the PDG 30-Day Review Timetable

30-Day Timeline

3-Weeks Pre-PDG
- PM send 2-week advance reminder to Consultant
- PM sends PMIS link to Consultant - for document upload

2-weeks Pre-PDG
- PM confirms Consultant document upload
- PM sends 2-week advance reminder to PDG members, with PMIS link to document

1-week Pre-PDG
- PM sends 1-week advance reminder to PDG members - to review documents
- PM sends out PDG Meeting Agenda

PDG Meeting
- PM holds and leads PDG meeting

2-Weeks Post-PDG
- PM receives all comments from PDG members

Next PDG
- PM ensures response to all comments from PDG by next PDG meeting
- PM uploads all comments and resolution into PMIS
Public Engagement Early and Often (as necessary)

Each phase of the Capital Delivery process has an opportunity for public engagement. Some projects warrant different levels of engagement and have a rich history of engagement. IMPORTANT TO KNOW.....

<table>
<thead>
<tr>
<th>Capital Project Delivery Phase</th>
<th>Tracking Public Engagement</th>
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<tbody>
<tr>
<td>Long Range Planning</td>
<td>The Public is engaged in Long-Range planning (e.g., Focus40 and Rail Vision). Input is provided into long-term visions to inform the planning of projects.</td>
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<tr>
<td>Capital Investment Plan (CIP)</td>
<td>Public weighs in on specific projects and their relative priorities during the state-wide CIP roadshow.</td>
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<tr>
<td>Design</td>
<td>Public often is engaged in project scoping to inform early phase designs. Public engagement around milestones, coordinated with the Project Development Groups (PDGs)</td>
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<tr>
<td>Construction</td>
<td>During construction, the general public, business and customers need to know how construction might impact them, from noise to travel diversions.</td>
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<tr>
<td>Operations &amp; Maintenance</td>
<td>As needed, customers shall be notified of maintenance.</td>
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What is a Project Engagement Plan (PEP)?

• Once the consultant is on board, during the Pre-design stage, OCE and the PM will identify key external stakeholders to engage during the design phase of the project.

• Utilizing the tools and processes of the MBTA Public Participation Plan (PPP), the Project Engagement Plan (PEP) will:
  • Identify priority groups to reach (who);
  • Identify which components of the project are subject to public feedback (what);
  • Determine the approximate schedule for engagement (when); and,
  • Select mechanisms for notice and engagement (how).

• The PEP will be incorporated into the Project Management Plan (PMP) and be updated at each Project Development Group (PDG) meeting.

• The input from external stakeholder meetings will be used to guide the PDG review of the project – scope, budget and schedule as well as to advise on any course correction due to additional public engagement requests.
Public Participation “Org-Chart” for Capital Projects

MBTA Public Participation Plan
Informs development of the Project Engagement Plan (PEP).

Capital Delivery Project Manager
Manages the PDGs and owns the PEP.

Internal Resources
Internal resources provide guidance and support for the PM in developing PEP.

Consultant Team
Helps draft and executes the PEP.

Information learned through execution of the PEP should flow into project development through the PDGs.

Project Team
Project Development Groups (PDGs)
Office of the Chief Engineer

Who We Are

OCE is a department within the MBTA that includes the following units:
- Reliability Engineering / Quality Management
- Infrastructure Planning and Engineering
- Vehicle Engineering

Why OCE?

The MBTA established the OCE for medium and long-term planning and standards setting, to:
- Create an Operations team with a strategic view of asset performance to inform the CIP
- Establish asset management strategies and tools to provide meaningful asset performance information based on SGR standards
- Establish consistent design standards and specifications
- Establish lifecycle quality performance and maintenance standards for all asset classes
- Fully define scope early on in design process and ensure early coordination with internal stakeholders

What We Do

The Office of the Chief Engineer
- Inform the CIP program based on operational needs and asset performance needs to ensure service reliability
- Define asset engineering and design criteria
- Manage Revenue Vehicle Procurements, including Warranty work and outsourced capital maintenance programs
- Manage infrastructure project scope, cost and schedule to a 15% level
- Manage project scope and design criteria throughout project design and closeout
OCE PRE-DESIGN PROCESS FLOW DIAGRAM

INITIAL CHARTER
- Purpose & Need
- Conceptual Budget (Per Historical Data)
- Project Priority
- Design Schedule
- Funding Source

DESIGNER SELECTION
- GEC
- RFQ/RFP
- Sole Source

CHARTER DEFINITION
- Deliverables
- ICE
- PDG Definition (internal stakeholders)

PRE-DESIGN PHASE
- Site Visit/Data Collection
- Preliminary Design/Reports/Plans
- Refine Scope Definition
- External Stakeholder engagement
- Refine Schedule/Estimate
- Evaluate potential delivery methods
- Prepare Initial PMP

PDG TRANSITION
- Transition to CPD PMs.
- Revised Estimate and Schedule
- PMP submitted
- Revised Charter

Operations
- Asset Management
- Capital Planning
- Capital Program Oversight

0%

Decision Time

Procurement and Project Milestones by executing Department

15%

Status of Scope

1: <10% Minor Change in Scope and/or cost – Refine scope and continue

2: 10-25% Major Change in Scope and/or cost – Resolve with PDG and continue

3: Over 25% Cardinal Change in Scope and/or cost – Revise Project Charter & obtain CIP reapproval.
QUESTIONS & DISCUSSION
Critical Internal Resources

MassDOT Office of Transportation Planning (OTP)
- Transfer of documents
- Geospatial data & analysis

MassDOT/MBTA Office of Performance Management & Innovation (OPMI)
- Data & analysis to inform internal and external parties

Systemwide Accessibility (SWA) and Office of Diversity & Civil Rights (ODCR)
- Guidance and tools for diversity, inclusion, and accessibility

Customer Experience Department (CX) & Customer Technology Department (CTD)
- Tools for customer notification (flyers, screens, social media)

External and Legislative Affairs
- Knowledge of the press and municipal and state leaders