



MBTA Program for Mass Transportation

PMT Stakeholder Advisory Committee

April 2, 2007





Overview of MBTA Services and Capital Assets





MBTA Overview

- Is America's fifth largest transit system
- Serves 175 member cities and towns
- Covers a 3,200 square mile area
- Provides about 345 million rides annually (unlinked)
- Accommodates just under 800,000 average weekday customers
- Has over 6,000 employees





Heavy Rail Services

- Red Line
 - 218 cars
 - 22 stations
 - 45 miles of revenue track
- Orange Line
 - 120 cars
 - 19 stations
 - 22 miles of revenue track
- Blue Line
 - 70 cars
 - 12 stations
 - 12 miles of revenue track





Light Rail Services

- Green Line
 - 199 cars
 - 70 stations and stops
 - 41 miles of revenue track
- Mattapan High Speed Line
 - 10 cars
 - 8 stations
 - 5 miles of revenue track





Commuter Rail

- 13 Lines (North and South)
- 410 coaches
- 80 locomotives
- 131 stations
- 600+ track miles





Bus Rapid Transit

- Silver Line Washington Street
 - 10 new surface stations
 - BRT bus lane
 - 17 articulated 60' vehicles
- Silver Line Waterfront
 - 2 new underground stations
 - 32 dual-mode articulated 60' vehicles





Bus and Trackless Trolley

- 180+ routes
- 7,800+ signed stops
- 150+ MBTA owned shelters
- 942 vehicles
 - 343 compressed natural gas
 - 193 emission controlled diesel
 - 371 diesel
 - 35 electric trolleys
- 8 stations / major terminals





Water Transportation

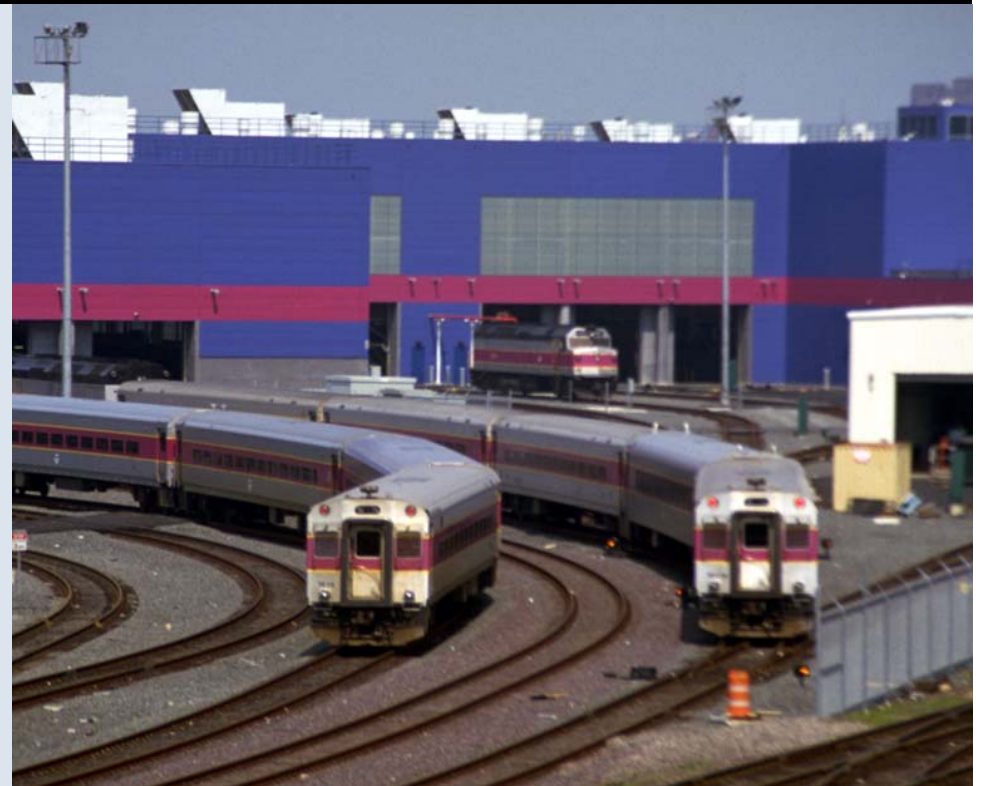
- 3 privately operated routes
 - 2 MBTA-owned docks
 - 2 MBTA-owned boats





Maintenance Facilities

- 4 heavy rail
- 4 light rail
- 3 commuter rail
- 9 bus
- 17 smaller general maintenance facilities throughout the system





Signals – Rapid Transit

- 419 Switches
- 1,060 Signals
- 36 Instrument houses
- 2,101 Track circuits
- 252 Switch heaters
- 36 Train stop heaters
- 145 Trip stops
- 19 Train stops
- 134 Train approach lights





Signals – Commuter Rail

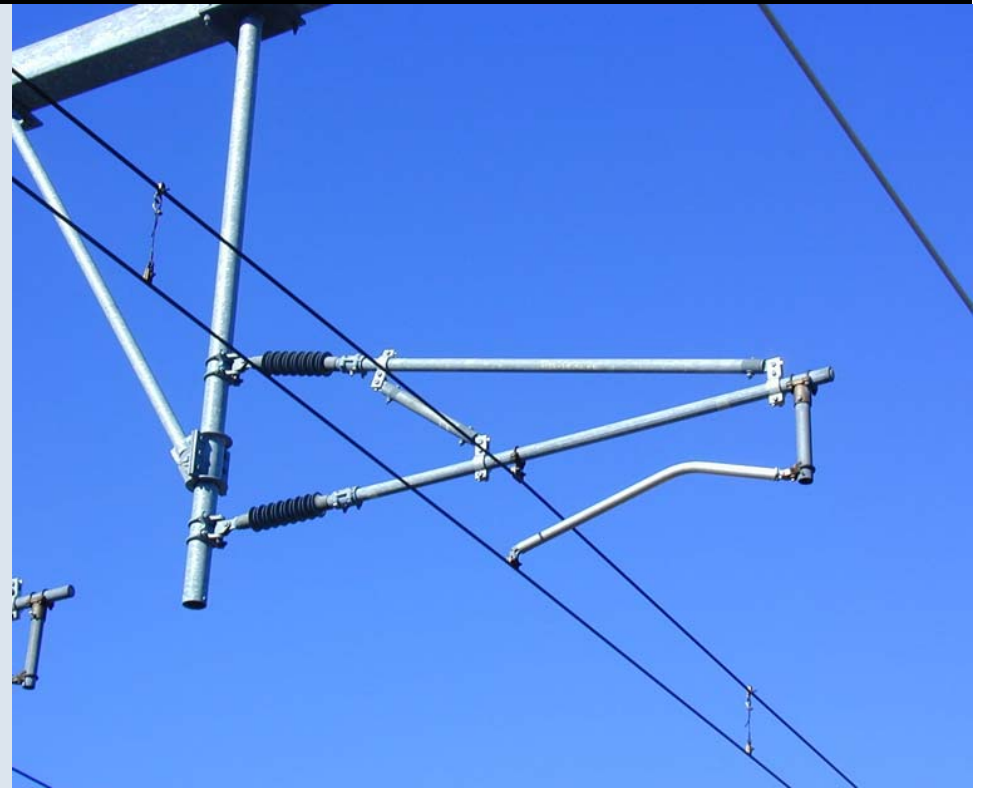
- 480 miles of signalized track
- 190 miles of aerial pole line
- 80 interlockings
- 10 train control machines
- 1000+ signal heads
- 476 electrical switches
- 200 grade crossings with automatic protection equipment
- 86 bungalows / houses





Power

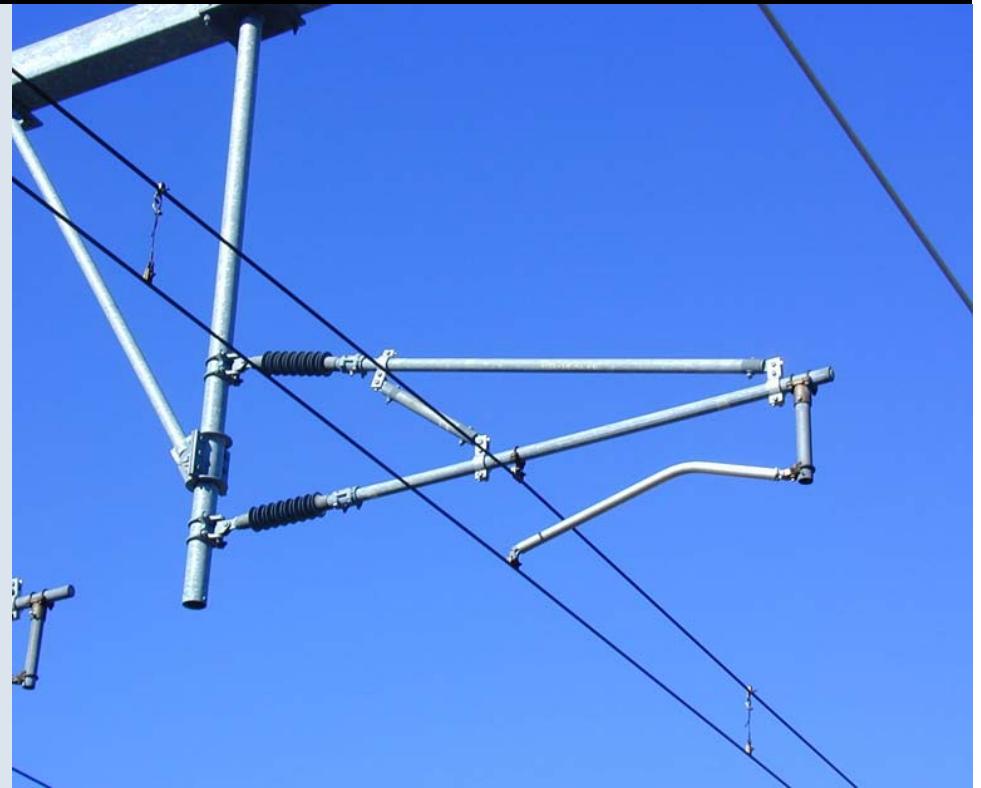
- Rapid transit
 - Power substations
 - 50 unit substations
 - 48 traction power substations
 - 3-million feet of cable
 - Overhead contact systems
 - 54 passenger station low voltage switchgears





Power

- Commuter Rail
 - 390 switch heaters
 - Layover facility for each line
- System Wide
 - South Boston power complex gas turbines
 - Supervisory equipment
 - 67 unit substations





Bridges

- 285 commuter rail
- 58 rapid transit
- 86 highway
- 44 pedestrian
- 610 commuter rail culverts





2008 Program for Mass Transportation





What is the PMT?

The Program for Mass Transportation (PMT) defines a long-range vision for regional mass transportation and prioritizes infrastructure investments.





PMT Program Areas

- System Preservation
- Enhancements
- Expansion

The 2008 PMT will focus on System Preservation and making the Boston transit system more **reliable**, more **convenient** for customers, more **accessible** and more **secure**.





New Focus for 2008 PMT

- Will strengthen relationship to the Capital Investment Program (CIP)
 - Establish long-range capital priorities implemented by 5-year programs
 - Support timely funding of identified needs and priorities through the CIP
- Will focus on mobility within transit travel corridors
 - Define mobility problems within corridors
 - Identify and prioritize improvement strategies, as well as system preservation needs, to respond to the mobility problems





25 Year Needs Assessment

- Vehicles
- Track / Right-of-Way
- Signals
- Communications
- Power
- Maintenance Facilities
- Stations
- Bridges and Tunnels
- Fare Equipment





PMT Internal Process

- Department Interviews
 - Identify long-term needs and priorities to achieve and maintain SGR
 - Relate operational problems to capital needs
 - Provide project team with relevant policies, plans and data
 - Update state of good repair (SGR) database





PMT Internal Process

- MBTA Capital Spending Group
 - Advise PMT process to
 - Provide policy guidance
 - Assess capital needs
 - Develop medium- and long-range prioritization
 - Facilitate coordination with internal departments
 - Act as resource for Stakeholder Advisory Committee
 - Participate in public meetings





PMT Public Process

- PMT Stakeholder Advisory Committee
 - MBTA's needs and priorities
 - Advise PMT project team

- 5 Public meetings
 - Corridor approach
 - “Open house” format
 - Focus on identifying mobility issues rather than specific project ideas





PMT Issues





Long-range Planning Context

- Service challenges
 - Maintain service quality and reliability
 - Respond to changing demographics and travel demand
- Financial challenges
 - Work within Forward Funding constraints
 - Minimize impact of Capital program on operating budget
 - Overcome \$2.7b state of good repair backlog
- Emerging Technologies





Regional Growth

- Existing Trends Scenario: Shortage of 175,000 workers
- Transit as a catalyst for sustainable development / TOD
 - South Boston / Seaport District
 - Assembly Square
 - Harvard / Allston
 - South Weymouth
 - Westwood / Route 128 station
 - Turnpike air rights: Fenway / Kenmore
 - Revere / Wonderland
 - Wellington





Regional Mobility

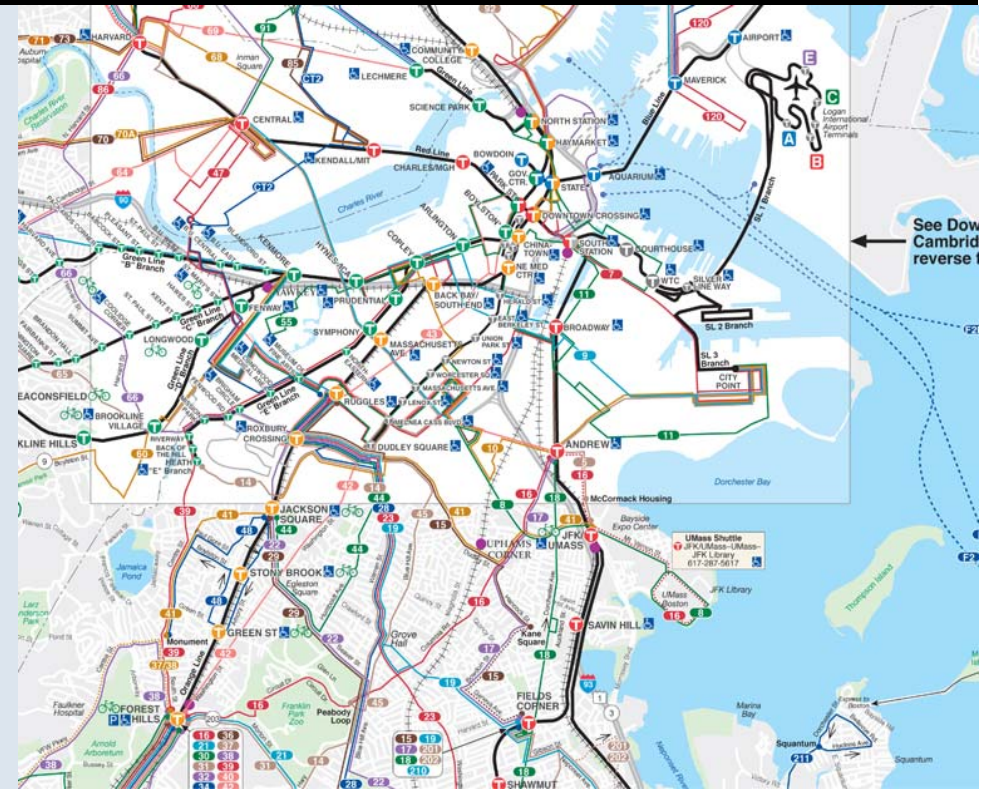
- Annual person-hour delay on region's roadways is 54% lower because of public transportation
- Regional Travel to increase from 16.8 million trips today to 19 million trips in 2030
- Congestion to worsen; vehicle hours traveled on roadways to increase by 15%
- Transit trips projected to increase by 17%
- Equity concerns





Mobility Corridors

- Northeast
- North
- Northwest
- West
- Southwest
- Southeast
- Urban Core
- Circumferential





Issues for the 2008 PMT

- How can the MBTA best design its capital program to make system operation more effective and efficient?
- What should the MBTA do to ensure that future system capacity adequately serves the region's mobility needs?
- How can the MBTA advance the Commonwealth's goals in protecting the environment and responding to climate change?
- What is the MBTA's role in shaping how the Boston region grows over the next 25 years?

