AGENDA

• MBTA 101

• DESIGN AND CONSTRUCTION PROGRAM METRICS

• DESIGN AND CONSTRUCTION INITIATIVES

• FACTORS FOR CIP PROJECT SELECTION

• CIP FY 16-20 PROJECTS UNDER CONSIDERATION

• PROCUREMENTS AND DOING BUSINESS WITH THE MBTA
THE MBTA @ A GLANCE

“MBTA 101”
The MBTA...

• America’s fifth largest transit system (behind New York, Chicago, Los Angeles, and Washington DC)

• 175 member cities and towns with:
  - a 3,200 square mile area
  - over 4.7 million residents

• 1.3 million trips each weekday (FY14)

• 400 million boardings (CY14)
What does the Capital Program Invest in?

Over 3,000 Revenue Vehicles
332 Stations
Over 800 Miles of Track
467 Bridges
21 Miles of Tunnels
20 Maintenance Shops

The MBTA’s infrastructure is extensive and has major capital needs.
Heavy Rail ( $200.8m fare revenue CY14)

**Red Line:**
- 22 stations, 2 branches
- 284,000 weekday boardings (CY14 average)
- 218 cars fleet

**Orange Line:**
- 20 stations
- 212,000 weekday boardings (CY14 average)
- 120 cars fleet

**Blue Line:**
- 12 stations
- 67,000 weekday boardings (CY14 average)
- 112 cars in fleet
Light Rail ($93.8m fare revenue CY14)

**Green Line:**
- 66 stops/stations
- 219,000 weekday boardings (CY14 average)
- 206 cars in fleet

**Mattapan Trolley:**
- 8 stations
- 4,546 weekday boardings (CY14 average)
- 10 PCC cars in fleet
Bus ($102.0m fare revenue CY 14)

- 183 routes
- 8,000+ bus stops
- 385,000 weekday boardings (CY 14 average)
- 1,055 vehicle fleet
- Nine garage sites
Commuter Rail ($180.9m fare revenue FY14)

• Operated by Keolis under contract ($2.68b over 8 years)

• 5 north side lines (North Station)

• 7 south side lines (South Station)

• 137 stations

• 131,000 weekday boardings (CY14 average)

• 80 Locomotives, 410 coaches
Commuter Boat ($8.0m fare revenue CY14)

- Operated by Boston Harbor
- Cruises under contract
- 2 routes serving 7 terminals
- 4,800 weekday boardings (CY14 average)
- 2 MBTA owned vessels, 12 contract vessels available
Private Carriers

• Subsidized under contracts
($2,261,600 cost FY15)

• 16 routes
  710, North Medford
  712/713, Winthrop
  714, Hull
  716, Cobs corner – Mattapan
  Bedford Shuttle
  Beverly Shuttle
  Burlington “B” Bus
  Dedham Shuttle
  Mission Hill Link
  Lexpress (6 routes)

• 3,100 weekday boardings
(CY14 average)
The RIDE ($6.6m fare revenue FY14)

- Door-to-door shared-ride for eligible customers who cannot use fixed-route transit (bus, subway, trolley)

- 3 contractors (5 year term):
  - GLSS $188m
  - VTS: $237.8m
  - Next: $176.6m

- 819 vehicles

- 6,900 weekday trips (CY14 average)
6,137 employees (Dec. 14) [441 vacancies]
- 5,122 full time operating budget
- 576 part time operating budget
- 439 full time capital budget

Headcount by Function (Dec. 2014)
- Operating, 3737, 61%
- Maintenance, 1538, 25%
- Construction, 186, 3%
- Police/Security/Safety, 285, 5%
- Administrative, 391, 6%
Value of Awarded Contracts
Professional Services

Five-Year Average: $53 million
Ten-Year Average: $43 million
Value of Contract Payments Professional Services

- 1994: ~$40 million
- 1995: ~$40 million
- 1996: ~$40 million
- 1997: ~$40 million
- 1998: ~$40 million
- 1999: ~$40 million
- 2000: ~$40 million
- 2001: ~$40 million
- 2002: ~$40 million
- 2003: ~$40 million
- 2004: ~$140 million
- 2005: ~$100 million
- 2006: ~$60 million
- 2007: ~$60 million
- 2008: ~$60 million
- 2009: ~$60 million
- 2010: ~$60 million
- 2011: ~$60 million
- 2012: ~$120 million
- 2013: ~$120 million
- 2014: ~$140 million

Five-Year Average: $75 million
Ten-Year Average: $56 million
Value of Awarded Contracts
Construction

Five-Year Average: $181 million
Ten-Year Average: $114 million
Value of Contract Expenditures
Construction

- Dollar Value of Contract Payments - Construction

- Five-Year Average $121 million
- Ten-Year Average $144 million
DESIGN AND CONSTRUCTION MAJOR INITIATIVES

• Project Controls for Better Project Delivery
  • Improve likelihood of success (schedule/Budget)
  • Credibility of Projects- Internal and external
  • Better predictability of results for budget planning
  • Staff planning
  • More in house Project Controls staff
  • Consistency of estimating and scheduling

• Use of Alternative Project Delivery Methods
  • Reduce overall project delivery time
  • Reduction in cost/Fewer change orders and claims
  • Innovative and collaborative approach
  • Reduction in Risk
What is the Capital Investment Program (CIP)?

- Rolling 5-year capital program (www.mbta.com/cip)
- Implements the 25-year Program for Mass Transportation
- The CIP is financially constrained
- It focuses on State of Good Repair Projects
CIP PRIORITIZATION CRITERIA

Factor 1: Impact on the Environment/Alignment to GreenDot Objectives (reduce pollution, consumption of resources, promote mode shift)

Factor 2: System Preservation (SGR, lifecycle mgmt., reduce environmental vulnerability)

Factor 3: Financial Considerations (impact on operating costs and operating revenue)

Factor 4: Operations Impact (improve customer experience, operations critical, riders affected, and operational sustainability)

Factor 5: Legal Commitments (environmental, accessibility, consent)
MBTA STATE OF GOOD REPAIR BACKLOG

$ 6.7 B !!!!!
Winter Storms 2015
The “T’s” Infrastructure & Equipment

- 124 Heavy Rail And Light Rail Stations
- 8,800 Bus Stops
- 137 Commuter Rail Stations
- 1,050 Signals
- 895 Switches
- 80 Interlockings
- 846 Miles Of Track
- 740 Bus Route Miles
- 10 Bus Yards And Shops
- 7 Subway Facilities
- 3 Commuter Rail Facilities
- 2,660 Revenue Vehicles
Four Major Storms In Three Weeks

Historic Snowfalls

SOURCE: National Weather Service
Switches
Third Rail
Traction Motors
Doors
Assets Out In The Cold

- 124 heavy rail and light rail stations
- 8,800 bus stops
- 137 commuter rail stations
- 1,050 signals
- 895 switches
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Our Customers Forced To

Passengers Evacuate A
Stalled Red Line Train
Evacuated Customers Board Shuttle Bus
PROJECTS UNDER CONSIDERATION IN THIS CIP

- Bus and Subway
- Commuter rail engineering and mechanical
- Design and Construction
- Engineering and Maintenance
- Environment
- Information Technology
- Parking
- Security
- Service planning
- The Ride
- Resiliency
- Expansion and other initiatives
PROJECTS UNDER CONSIDERATION IN THIS CIP

**Bus and Subway**- Bus replacements, Wire cars for Blue and Green lines, Red line #3 car overhaul, Green line wheel truing machines, Blue line program maintenance, CNG Equipment reliability improvements, PCC Car replacement, Green line fleet replacement, Maintenance support equipment, Electronics room upgrade at Riverside car house, Traction motor DMA/ETB Transmission, Mattapan car house upgrades, feasibility study, Core capacity study (red, orange, green).
PROJECTS UNDER CONSIDERATION IN THIS CIP

Commuter Rail- Engineering- Positive Train Control, HVAC replacement at Cobble Hill, NH mainline data train replacements, Penta replacement, Mansfield Station mini-highs, End of Life equipment (Communications), FX interlocking, Lynn Station direct fixation track, Walpole west to Franklin signal improvements, Manchester Draw to Gloucester signal improvements, Saugus Marsh signal improvements, East route communications improvements, Cross platforms at N. Station.
PROJECTS UNDER CONSIDERATION IN THIS CIP

Commuter Rail- Mechanical- Modify
South Hampton train wash system, Replace wheel truing machine at Readville maintenance facility, Replace fuel dispensing systems at BET and Southampton S & I, 5 ton jib crane at CRMF coach house.
PROJECTS UNDER CONSIDERATION IN THIS CIP

Design and Construction- Rockport power upgrades, Hingham Ferry dock modifications, System wide vertical transportation improvements, Green line collision avoidance project, Design Standards and guidelines program, Operations and maintenance facility needs evaluation, Columbia Jct. signals replacement, South shore parking garages, Winchester CR station design.
PROJECTS UNDER CONSIDERATION IN THIS CIP

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Environment - Commuter rail system wide maintenance and utility improvements, climate change adaptation strategy, Soil management Program - Charlestown yard and other facilities.
PROJECTS UNDER CONSIDERATION IN THIS CIP

- Information Technology - MBTA financial system upgrade (FMIS system).
PROJECTS UNDER CONSIDERATION IN THIS CIP

Parking- Parking lot asphalt maintenance, Replacement of parking booths, Lynn garage restoration.
PROJECTS UNDER CONSIDERATION IN THIS CIP

Security - Security program funding
FY16- FY 20.
PROJECTS UNDER CONSIDERATION IN THIS CIP

Service Planning - HASTUS scheduling software, Expansion of CTPS travel demand model territory, Bus stop sign replacement program.
PROJECTS UNDER CONSIDERATION IN THIS CIP

The Ride - Centralized paratransit reservation, schedule, and dispatch call center, Digital scanning project for the ride, Ride fleet acquisition plan.
PROJECTS UNDER CONSIDERATION IN THIS CIP

**Resiliency**- Orange line traction motors, Orange line selective preservation, Red line SMR program advancement, Red and orange line HVAC AC motor convert, Red line #1 propulsion overhaul, Rail born snow fighting equipment, Snow fighting heavy equipment.
PROJECTS UNDER CONSIDERATION IN THIS CIP

Expansion and other initiatives- South Coast Rail, DMUs and infrastructure, GLX to Route 16.
PUBLIC ANNOUNCEMENT

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
TRANSPORTATION BUILDING
10 PARK PLAZA
BOSTON, MASSACHUSETTS 02116-3975

Solicitation for Design & Construction Services

Scope of Work

The Massachusetts Bay Transportation Authority is soliciting Architectural and Engineering services for the South Shore Parking Garages Repairs project. These include the Quincy Center, Quincy-
email:
ehunter@mbta.com

http://www.mbta.com

Massachusetts Bay Transportation Authority