AFC 2.0

Project Update

July 18, 2016
Today’s meeting in context

TODAY WE WILL ADDRESS:
Project Delivery
Eric Petersen, Hawkins Delafield & Wood LLP
Lead Counsel on 250 Major Public Works Projects in 25 states using Alternative Project Delivery

Private Financing
Tom Rousakis, Ernst & Young Infrastructure Advisors LLC
Leading authority on US infrastructure finance

Learning from Peers

CURRENT STEPS BEING TAKEN:
RFQ release today

FALL:
Shortlist of bidders
RFP
AFC 2.0 Recap

► Improve customer experience: easy, fast, flexible, expandable and proven

► Easy to use: payment standardized across all modes and private carriers

► Readers accept credit cards, mobile phones, and a MBTA-issued fare card: at gates, commuter rail platforms, and all doors of buses and the Green Line

► Buses operate 10%+ quicker by removing cash on board and allowing all-door boarding

► Greatly expanded retail network and “one more ride” overdraft protection improves equity
RFQ is ready to be released TODAY

► Three step process: RFQ, RFP, separate Design Builder for construction under applicable law

► Integrated project delivery through performance-based contracting
  ► Single point of responsibility
  ► Expedited project delivery
  ► Life-cycle cost approach to project decision-making

► Qualify a short list of bidders on past performance, financing, technical ability, diversity, and accessibility

► Share information early to get feedback; resulting in best technical AND achievable proposals

► Fixed price and committed financing to allow fast close
Financing is viable and beneficial

- **Financial advisors** assessed past projects and industry capacity

**100% private financing consistent with CIP**

- **Financing commitments** in proposal reduce risk of renegotiation post award
- Private finance repaid by “Availability Payments”
- **Performance-based** contracting

**Benefits of private finance**

- **Align incentives** of public and private sector on delivery and performance
- **Improve discipline** around performance specifications
- **Provide protection** to MBTA for resolving issues
Project histories

WMATA New Electronics Payment Program

- 2014 award, 2015 pilot, 2016 cancellation
- Dependent on credit, debit, government id, and mobile
- "The market isn’t there where basically you come up and just walk through things with a chip on your card. And years ago I think that was the thinking” -- WMATA general manager Paul Wiedefeld

WMATA’s plan depended on technological advances that did not progress as quickly as anticipated.
Project histories

CTA Ventra

► 2011 award; early 2014 rollout
► Rollout issues; **CTA did not pay** until issues were mitigated
► Issues with service delivery for in-need populations
► Little adoption of open loop payments for unbanked customers
► Has since rolled out to Pace, Metra, mobile

CTA experienced issues with initial card distribution to in-need populations.
Improve by learning from past projects

► Do not repeat the same mistakes
  ► Build for now, but allow future innovation
    ► Issue own card without open loop payments
  ► Engage low income and minority populations early
    AND ensure KPIs aligned with equity and accessibility goals

► Build on successes
  ► Positive experiential impact for customers
  ► Focused SLAs, KPIs, and performance payments to protect
    Authority and customers from rollout and operational bumps

► Run a good process
  ► Fully define the scope of the project at the start of the
    procurement, and define the delivery timetable
Appendix
Procurement Schedule

Integrator Request for Qualifications & DB Letter of Intent
► Issuance of RFQ for Integrator contract Jul 18, 2016
► Submittal of Qualifications deadline Sep 1, 2016
► Announcement of shortlisted Integrator proposers Sep 30, 2016

Integrator Request for Proposals
► Issuance of RFP and draft integrator Project Agreement Oct, 2016
► Meetings with bidders, inspection of facilities etc. Nov, 2016
► Submittal of Proposals Winter 2016
► Announcement of selected Integrator Spring 2017
► Commercial and Financial Close Spring – Summer 2017

Integrator Execution
► AFC System 2.0 goes live 24 months post selection with incentives for 18 months
Goals and Objectives

► Implement AFC 2.0 to enhance the MBTA customer experience and address various limitations associated with the current fare collection system

► Provide for holistic technical solution through AFC 2.0 – no continuing interface with AFC 1.0

► Provide for close coordination between installation, maintenance, operations and customer service to help ensure a timely and smooth introduction and a high level of performance over the long term

► Integrated project delivery – combine the core, long-term functions of the project under a single contract in order to provide for:
  ► Single point of responsibility
  ► Expedited project delivery; and
  ► Life-cycle cost approach to project decision-making

► Performance-based contracting – align the incentives of the private sector with the goals of the MBTA and establish a balanced, cost-effective risk allocation

► Leverage procurement and contractual approaches from precedent AFC and similar complex infrastructure projects to add value for the MBTA and implement “lessons learned”

► Maximize innovation, competition and private sector participation

► Establish a procurement and contracting structure in compliance with applicable law
Procurement and Contracting Approach

Systems Integrator (SI)

► Procure the SI through a two-step, RFQ/RFP competitive proposal process, with selection based on best value to the MBTA

► SI responsible for core functions of design, implementation, financing, operations and maintenance of AFC 2.0, including:
  ► All fare collection hardware and software
  ► System integration, testing, implementation and transition to full AFC 2.0 operations
  ► Card manufacture, supply, retail network and vending
  ► Interface with acquiring bank; and
  ► System operations and maintenance for not less than 10 years

► Project Agreement between MBTA and SI will be performance-based, with availability payments commencing only upon system operations and subject, in part, to compliance with key performance indicators

Design-Build Contractor (DB) for DB Installation Work

► Separately procure DB through similar, best value competitive proposal process, resulting in single, performance-based DB Contract with MBTA for all station installation work

► DB responsible for all station installation work based on plan proposed by selected SI

► SI responsible for financing DB station installation work, coordinating with DB, and accepting work as fit for purposes of system installation and risk transfer

► MBTA responsible for enforcing DB contract under circumstances of DB non-performance, as SI may be entitled to relief under such circumstances
Procurement Procedures

► Sequencing and coordination (DB procurement steps in blue)
  ► Issue RFQ for system integrators/advertisement requesting LOI from design-builders
  ► Prequalify system integrators/issue RFQ for design-builders
  ► Issue RFP (including draft contract) to prequalified system integrators/prequalify design-builders
    ► RFP for integrators requires proposals to include plan/performance specifications for installation work
  ► Individual meetings with integrators/issue draft RFP (including draft DB contract) to design-builders
  ► Receive fixed-price integrator proposals and select integrator/issue RFP to design-builders
    ► RFP to design-builders to include successful integrator’s plan/performance specifications for installation work
  ► Receive fixed-price DB proposals and select design-builder

► SI RFQ and DB LOI advertisement to request comments on project concepts
► RFP processes will encourage innovation and competition
► RFP processes will include interactive steps intended to result in firm, fixed-price proposals and limit the need for post-selection negotiations
► RFP process to include stipend payment for unsuccessful proposers
Financing Approach

MBTA analyzed various different approaches to financing the project.

Propose to 100% privately finance the AFC project:
- Private developer required to secure private finance to fund development and installation.
- Proposal will be required to include financing commitments to reduce risk of renegotiation post award.
- Private finance will be repaid during operations period by regular payments subject to deductions, typically called “Availability Payments.”
- Payment deductions are applied for failure to meet the performance requirements, not related to demand or other factors.

Benefits of private finance:
- Private financing can help align the incentives of the public and private sectors around delivery and performance.
- Private financing creates greater focus, discipline around performance specifications.
- Private financing provides first loss protection to MBTA and an additional party responsible for resolving issues should they occur.

Project development costs independent of financing; $8m in Pay-Go Capital committed for project development costs for FY17; up to $25m projected needed through FY19 prior to AFC1.0 shutdown.
Team Structure & Today’s Presenters
Team Structure

Customer Technology

CTO
Project Director
Technology & Policy Manager

MassDOT & MBTA Senior Leadership Input

Peer Agency Coordination & Learning

Legislative Support

Community Insight

Cross-Functional Leads

Procurement and Legal
Hawkins Delafield & Wood

System Architecture

Quality Assurance

Customer Experience

Project Controls

Accessibility

Specialty Leads

Electromechanical Engineering
Bay Computer Associates

Private Financing
EY

Design & Construction
Nitsch Engineering

Vehicle Engineering
CH2M Hill

Payment Technology
Consult Hyperion

MBTA Operations
Keolis

Other Public & Private Transportation Operators

Customers

Title VI Review
CTPS
Profile

Tom Rousakis is a Senior Managing Director of EY Infrastructure Advisors, LLC (EYIA), an affiliate of Ernst & Young LLP.

Tom has over 19 years of experience in US infrastructure finance and is a recognized authority on the growing US public-private partnership market. Tom joined EYIA in the fall of 2013 from Goldman Sachs' Public Sector & Infrastructure Banking group, where he was co-head of the national transportation and project finance practice. Tom led transaction teams from inception through execution of debt and advisory assignments, developing rating agency, deal structure and investor marketing strategies for over $20 billion in infrastructure projects for highway and transit agencies, as well as universities and state and local governments generally. Tom currently leads project teams for a variety of transit, highway, multi-modal, flood control and university infrastructure and real estate development projects.

Transaction-specific experience

Example projects that Tom has advised include:

- Denver Regional Transportation District (RTD) — Eagle Project*
- Private Bidder - WMATA AFC System Project*
- Private Bidder - CTA AFC System*
- Chicago Transit Authority (CTA) – Red and Purple Line Modernization Project*
- Washington Metropolitan Area Transit Authority – Efficiency study
- Charlotte Area Transit System (CATS) - Blue Line Extension and CityLYNX Gold Line streetcar project
- Empire State Development (ESD) / Moynihan Station Development Corporation
- (MSDC) – Empire Station Complex
- Regents of the University of California, Merced – Merced 2020 Project

Education and memberships

Tom received a MPP from John F Kennedy School of Government, Harvard University and BA from Harvard University

Tom is a Trustee for the Citizen’s Budget Commission of New York.

* Experience from a prior employer
Profile
Jon is a Senior Vice President with Ernst & Young LLP and part of its US infrastructure advisory practice.
Jon has experience providing strategic, commercial and financial advice to governments on infrastructure projects in Bermuda, US, UK and UAE across a range of sectors including transit, highway, healthcare, utilities, justice and renewables.

Transaction-specific experience
Example projects that Jon has advised include:
- Philadelphia Regional Port Authority — Southport Redevelopment Project
- Washington Metropolitan Area Transit Authority — Efficiency study
- Nakheel — Palm Jumeirah Monorail Project*
- Virginia Department of Transportation — I-95 HOT Lanes Project*
- Bermuda Hospitals Board — King Edward VII Memorial Hospital Project*
- Indiana Finance Authority — Ohio River Bridges Project*
- National Railroad Passenger Corporation, Amtrak — Northeast Corridor High Speed Rail
- Illinois Department of Transportation — Chicago Managed Lanes
- Ohio Department of Transportation — Ohio Turnpike Opportunity Analysis*
- District of Columbia Department of Transportation — DC Streetcar (phase 2)
- Moynihan Station Development Corporation — Moynihan Station
- Severn Trent Services — Middletown, PA Water Concession

Education and memberships
- Jon received a BSc. (Hons.) in Management from the London School of Economics and Political Science
- Jon is a member of the Institute of Chartered Accountants in England and Wales

* Experience from a prior employer
Firm Profile

- 90 Attorney Infrastructure Procurements Contract and Finance Boutique
- Lead Counsel to Owners on 250 Major Public Works Projects in 25 states using Alternative Project Delivery and P3 Procurements

Transaction-specific experience

- Eric is an infrastructure procurement, contract and finance lawyer with over 40 years of experience
- Example projects that Eric has advised on include:
  - State of California -- the New Long Beach Court Building
  - San Diego County Water Authority -- Carlsbad Seawater Desalination Project
  - City of Houston -- Houston Justice Complex
  - State of New York – Consolidated Laboratory Project
  - Rhode Island Department of Transportation – RhodeWorks Project
  - San Antonio Water System – Vista Ridge Regional Water Supply Project
  - State of New Jersey – New Jersey Turnpike P3

Education and memberships

- Eric received a B.A. from Brown University and a J.D. from the University of Chicago Law School
- Eric is admitted to practice in the State of New York