Kendall Square Mobility Task Force Meeting

LOCATION OF MEETING: One Broadway, 5th floor, Cambridge, MA

DATE/TIME OF MEETING: November 16, 2015 from 4:00 PM – 6:00 PM

TASK FORCE ATTENDEES:
Joe Barr, City of Cambridge – Traffic, Parking, and Transportation Department
Kelley Brown, MIT
Peter Crawley, East Cambridge Planning Team
Brian Dacey, Kendall Square Association (Co-Chair)
Bob Dorer, Volpe National Transportation Systems Center
Melissa Dullea, MBTA
Tom Evans, Cambridge Redevelopment Authority
Jim Gascoigne, Charles River TMA
Scott Hamwey, MassDOT
Ben Lavery, Boston Properties
Patrick Magee, East Cambridge Business Association
Michael Owu, MIT Investment Management Company
Susanne Rasmussen, City of Cambridge (Co-Chair)

MASSDOT, MBTA, AND PROJECT TEAM ATTENDEES:
Matthew Ciborowski, MassDOT (Facilitator)
David Carney, MBTA
Jeff Gonneville, MBTA
Joanne Haracz, McMahon Associates
Duncan Allen, IBI Group
Regan Checchio, RVA

PUBLIC:
John Attanucci
Tegin Bennett, City of Cambridge
Hannah Clark, Linnean Solutions
John Hawkinson
Steve Kaiser
Alexandra Lee, Kendall Square Association
Adam Shulman, City of Cambridge
Mike Stanley, Transit X
Arthur Strang
Saul Tannenbaum

PURPOSE/SUBJECT: Task Force Meeting #4

SUMMARY:

Introductions

Matthew Ciborowski, MassDOT Office of Transportation Planning, opened the meeting at 4:11 PM. He introduced Peter Crawley, East Cambridge Planning Team, as a new member of the Task Force. Mr. Crawley will be representing local residents on the Task Force.

Mr. Ciborowski noted that at the last Task Force meeting, the group had requested information about transit issues in Kendall Square, and to gain a better understanding of what is or is not possible. Mr. Ciborowski invited Jeff Gonneville, Chief Operating Officer of the MBTA, and David Carney, Assistant General Manager for Bus Operations at the MBTA, to provide some background information about the Red Line and Bus Operations. Mr. Ciborowski said he would follow with a presentation about the Grand Junction Railroad.

Overview of Red Line and Bus Operations

Mr. Gonneville provided an overview of the Red Line service, including current ridership trends. He explained that the MBTA has recently been focused on service performance standards. Recent ridership has shown a growth in Red Line ridership, especially during off-peak times. Demand is increasing.

There are currently three Red Line vehicle fleets:

- #1 Cars – 74, in service since 1969
- #2 Cars – 58, in service since 1987
- #3 Cars – 86, in service since 1993

Vehicles typically have a 25-30 year lifecycle. The #2 cars have been part of an in-house maintenance program to address reliability issues. There is currently a $20 million investment program for the #1 cars to sustain revenue service, as well. The #3 cars have received minimal investment to date and are past due to receive a midlife overhaul.

Mr. Gonneville said that a phased delivery of 132 new Red Line cars (#4 cars) is expected between 2019-2022. These will be one-to-one replacements of all existing #1 and #2 cars. The new vehicles will include capacity improvements, environmental upgrades, and accessibility upgrades. Mr. Gonneville reviewed some other features, but noted that some of these features, such as vehicle-to-wayside wireless communication capability, may not be "must haves."

Mr. Gonneville also reviewed the Red Line service management, noting how incidents that delay trains during the day can have cascading effects on maintaining headways.

Mr. Gonneville reviewed the current Red Line signal system – a traditional fixed block system that requires a buffer block between occupied blocks. He noted that there are incremental changes, such as changing from a five-aspect analog system to a seven-aspect digital system, adjusting the safe braking distance model/scenario, and changes at interlockings that could increase capacity. There are also more significant changes, such as moving to a Communications Based Train Control (CBTC) signal system that could increase capacity. Mr. Gonneville noted that transitions to CBTC are occurring or have occurred in London, New York MTA, and Hong Kong.

Other changes that could increase capacity include additional vehicles, additional maintenance capacity, and reducing dwell times by increasing the number and width of doors and reducing bottlenecks at key stations. Mr. Gonneville explained that the actual layout of the stations, including passenger flow, affect dwell times, and there are some low-cost solutions to reducing dwell time, such as directing passengers to cars that are not as full.

Mr. Gonneville then reviewed the current state of bus service planning. He explained that the MBTA Fiscal Management and Control Board (FMCB) is in the process of revamping the Service Delivery Policy. A working group is examining how the routes perform to policy. He noted that for many of the routes, there is a 60% on time performance.

The MBTA is also working on short-range changes within the existing fleet, such as reallocating buses to increase capacity or extending service in other places and speeding up existing routes through the use of bus lanes, queue jumps, and stop consolidation.

Mr. Gonneville said that projected long-range growth will require additional buses and increased maintenance capacity. He also outlined that routes in the Kendall Square area would likely change with the Green Line Extension project.

Mr. Ciborowski asked if the MBTA is tracking the types of incidents that occur on the Red Line, causing the delays. Mr. Gonneville said this information is being tracked; usually (about 60% of the time), it is the result of a vehicle or mechanical issue or a signal issue. The next most frequent incidents are medical emergencies.

Mr. Ciborowski asked if the mechanical issues are spread proportionally among the three fleets. Mr. Gonneville said that the incidents are relatively similar among the three, but the #3 vehicles are seeing a performance decline.

Brian Dacey, Kendall Square Association, asked how the Red Line compares to the Blue Line since the Blue Line has the newest vehicles in the fleet. Mr. Gonneville said the Blue Line averages about 82% on time performance. He said that incidents are generally the result of the management of the line or other emergencies, not mechanical issues.

Tom Evans, Cambridge Redevelopment Authority, asked about the energy needs of the new #4 cars. Mr. Gonneville explained that the MBTA wants to upgrade its traction power substations and cabling power. He said the new vehicle fleet will be able to use regenerative braking. The MBTA is also interested in looking at wayside vehicle energy storage, which has been used on the Blue Line.

Susanne Rasmussen, City of Cambridge, noted that the new Red Line fleet will be replacing vehicles, not adding new ones to the system. Since the program will not be finished for 7 years, she asked if the current on time performance of the line at 70% will continue to degrade. Mr. Gonneville said that he believes the MBTA can improve the 70% figure before the new cars are added to the fleet beginning in 2019 through incremental changes in management. He provided an example of a management innovation at Oak Grove station on the Orange Line that should help increase performance of that line. He added that there were other key programs to address issues, such as door reliability that are also being implemented in the meantime.

Ms. Rasmussen noted that passenger behavior change is difficult to accomplish and pointed out that many MBTA programs, such as entering through the front door and exiting through the rear door on buses have been discarded, as well as the initiative to have Red Line trains without seats due to lack of public support. Mr. Gonneville agreed that behavior change is difficult and some programs proved to be unpopular. He noted that "Big Red," the Red Line car with a minimal amount of seats, is still operating. Mr. Carney added that the board in front and exit in back policy was not marketed well and was hard to enforce. He said that MBTA is currently looking at issues, such as baby strollers on buses and how to accommodate them through measures such as bus layout/design.

Joe Barr, City of Cambridge, asked if Mr. Gonneville had a sense of the investment requirement to upgrade the interlocking at Alewife. Mr. Gonneville said he thinks there is an ability to increase the speed of the vehicle through the interlocking, but did not have a cost of upgrade to the physical track or speed code of the signal.

Bob Dorer, Volpe National Transportation Systems Center, asked how much excess capacity would exist at Kendall Square station if everything was moving smoothly. Mr. Gonneville said he is aware that the bigger question is that the MBTA is not keeping up with the growth in the area. Melissa Dullea, MBTA, added that the peak loading point is on the Braintree branch northbound, though the southbound side is also growing. Mr. Ciborowski said the MBTA is looking to increase reliability in order to increase capacity.

Mr. Dacey asked what a good on-time performance for a rapid transit system would be. Mr. Ciborowski said that Vancouver operates at 95%. Mr. Gonneville said it was also important to look at crowding standards. Mr. Dacey asked if the current system was able to get to 80%, even with improvements.

Mr. Crawley asked if there have been any studies conducted correlating the dollars spent on a project and the relative returns on investments. Mr. Gonneville said that all of the analysis needs to be conducted within the context of the $7.3 billion state of good repair backlog. He said the MBTA operates in a crisis, reactive mode to keep the fragile system stable and operating. He said a big question is whether to do a small upgrade on the Red Line signaling system or do a big one. There is a current study underway to look at the various options and get good estimates and implementation timeframes. He anticipates the modeling will be done by the end of December and the options generated in January. Public discussion will likely occur in early February.

Mr. Dacey said that deferred maintenance should have been in the Operations budget and now comes out of the Capital budget. He asked how the older vehicles will adapt to signaling upgrades. Mr. Gonneville said the new #4 vehicles would be able to be retrofitted to a CBCT system though the sooner that decision is made, the better. Mr. Evans asked if the #3 vehicles would also need a retrofit. Mr. Gonneville said replacing the #3 fleet entirely would result in a homogenous Red Line fleet.

Mr. Barr asked if the MBTA has looked at the possible bus realignments resulting from the Green Line Extension in any depth. Mr. Carney said the MBTA has not, and would wait to see how the bus ridership looks once the Green Line Extension is operating before changes are made.

Mr. Barr asked about a recent Request for Information (RFI) that went out regarding the prospect of privatizing certain bus routes. Mr. Gonneville said the RFI pertained to some late-night routes, express bus routes, and high-subsidy routes. At this point, the MBTA has the responses to the RFI and will begin discussions with vendors. He noted that the topic of high-subsidy routes would be a topic at the 11/18 MBTA Fiscal Management and Control Board (FMCB) meeting.

Jim Gascoigne, Charles River TMA, noted that a Transportation Committee exists in Cambridge. He asked Mr. Gonneville how this Committee could assist the MBTA to improve transit. Mr. Gonneville said the group could continue to advocate and noted that the MBTA wants to run the system the community wants. Mr. Ciborowski added that municipalities could also provide accommodations for bus transit. Scott Hamwey, MassDOT, said that Secretary Pollack often points out that there are six elements to high-quality bus service and MassDOT only controls two of them.

Grand Junction Corridor

Mr. Ciborowski outlined the current use of the Grand Junction corridor, the 8.5 mile long corridor that runs from the Framingham-Worcester Commuter Rail line in Allston at Beacon Park Yard to Chelsea. He noted that MassDOT purchased the right-of-way from CSX in 2009.

Mr. Ciborowski said that over the years, there have been many proposals for this corridor, including as a multi-use path, as Bus Rapid Transit (BRT), as MBTA Commuter Rail (to North Station) and other transit-like service such as DMUs or light rail.

Mr. Ciborowski noted that MassDOT does not own the entire corridor; sections of the right-of-way are controlled by MIT, the City of Cambridge, and by the Cambridge Redevelopment Authority. He then discussed the six at-grade roadway crossings, the three pedestrian/bike crossings,[1] and noted that the corridor goes under Memorial Drive and the McCarthy Overpass at different points.

Mr. Ciborowski then reviewed the MBTA rail requirements pertaining to vertical and horizontal clearances that would constrain the design of the corridor. He also noted that the right-of-way does not have the same width throughout the entire corridor and reviewed the pinchpoints, including at Pacific Street (40' MassDOT easement), at Main Street (20' MassDOT easement), and at Binney Street (27' MassDOT easement).

The corridor has also complicated connections at the West end (at Beacon Park Yard) and the East End (at North Station and tying into the Green Line Extension).

Mr. Ciborowski then reviewed the right-of-way widths in straight sections of the corridor required for different designs for the corridor (wider widths would be required for curves):

- Single-track rail with a multi-use path requires 33' of total right-of-way width.
- Double-track rail with a multi-use path requires 47' of total right-of-way width.

[1] The original presentation noted that there were two pedestrian/bike crossings. Ms. Rasmussen noted that there were, in fact, three. Mr. Ciborowski said he would update the final version of the presentation.

- Singe-track rail with a two-way busway and multi-use path requires 61' of total right-of-way width.

Mr. Dorer asked about bridges on the corridor. Mr. Ciborowski said there is an existing bridge across the Charles River that was built for two tracks, though only one track is active.

Mr. Evans asked about the feasibility of single-track rail service through the corridor. Mr. Gonneville noted that while Commuter Rail does not report to him, he knows that single-tracks significantly impact the efficiency of running service. Ms. Rasmussen suggested the comparison to light rail is more appropriate. Mr. Ciborowski noted that the train used must be compatible with freight or have a temporal separation.

Mr. Barr asked if the trains will require positive train control (PTC). Mr. Ciborowski said he would need to look into that. Since the current train movements on the Grand Junction are non-revenue (i.e no passenger service), he does not know if it would be classified as yardtrack. If it is passenger service, PTC is required.

Next Steps

Mr. Ciborowski noted that this was the fourth meeting of the Task Force and suggested that the next steps for the Task Force include determining the evaluation criteria, soliciting project/program ideas, evaluating the universe of potential improvement ideas, reviewing results, and finalizing recommendations.

He proposed that the evaluation criteria could rely on some already established processes, such as the K2C2 evaluation criteria and the criteria developed through MassDOT's Project Selection Advisory Council and Focus 40 processes. Mr. Ciborowski suggested that the Task Force and public could provide feedback on the evaluation criteria and propose projects via email or through online tools. The reviewing of results and finalization of recommendations could occur at the next two Task Force and public meetings.

Mr. Dacey suggested that some of this work could be done at a Task Force meeting. Mr. Ciborowski acknowledged there were resource restrictions, and also noted that he did not want to extend the original commitments of the Task Force members.

Mr. Evans suggested that it might be appropriate to wait to meet until Mr. Gonneville's study on Red Line signaling was further along. Mr. Ciborowski agreed and said it was likely that the scheduled January Task Force meeting would be postponed.

Mr. Barr said the big piece that is still missing is the cost side. Mr. Ciborowski agreed, noting that it was important to have an equal amount of information for all the possible alternatives. Michael Owu, MIT, added that was it was important not to only understand the cost options but also their impact. Mr. Ciborowski said that CTPS would also need to conduct the ridership estimates for proposed alternatives, which would take about 6 weeks.

Mr. Evans said he would like to take a look at how roadways service bus routes and not just take a wait and see approach. He said this would better help to plan out the necessary roadway infrastructure.

Ms. Rasmussen said there is a direct connection between the frequency of service and street infrastructure. She said that the City of Cambridge has agreed to make physical accommodations for bus service provided the frequency of the service is high enough. Mr. Hamwey said it is important to keep in mind that changes to service will not happen right away.

Mr. Owu said he was willing to participate in more meetings as a group, as it is more helpful to the overall conversation.

Open Comment

John Attanucci commended the MBTA and the FMCB for moving to more quantitative measures. He cautioned against using the same metric for the Orange Line, Blue Line, and Red Line's through-capacity, as each has different effects relating to issues like crowding. Mr. Gonneville agreed and noted that after January 1, the MBTA will be using a customer weighted average measure.

Mr. Hawkinson also suggested that the evaluation criteria include some quantitative measures. He said the K2C2 process had softer criteria. Mr. Hamwey suggested that Mr. Ciborowski will distribute the PSAC criteria for the group. Ms. Rasmussen said that K2C2 has some quantitative targets, and suggested a metric such as the number of passengers that could be absorbed into the transit system.

Steve Kaiser said that the Red Line operated at 1 ½ minutes headways on a fixed block signaling system during World War II. He suggested it would be easy to make improvements to improve headways. [2]

Saul Tannenbaum said the lack of money to fund these improvements is a policy choice, not an act of nature. He also said that the discussion of various ideas should include the cost of not doing them, with secondary economic effect and other direct effects.

Mike Stanley offered to provide more information about his new transit company, Transit X, to anyone interested at the conclusion of the meeting.

The meeting adjourned at 6:07 PM.

[2] This assertion has not yet been verified by analysis completed by the project team.