



GREEN LINE EXTENSION PROJECT



massDOT
Massachusetts Department of Transportation



April 11, 2016
MassDOT Board and MBTA, Fiscal
& Management Control Board

GLX Interim Project Management Team Achievements to Date



Discussion Summary

Ongoing redesign / cost estimation efforts

- Revenue/funding update
- Stakeholder meeting updates
- Evaluating competitive procurement process
- Evaluating schedule scenarios
- Compiled draft report on schedule
- Continuing to refine final report

GLX Evaluation Report

Report deliverables

- A. Progress Update presented to Joint Boards April 11, 2016
- B. Board Recommendation Report in advance of May 9, 2016 Board Meeting
- C. Full GLX Evaluation Report submission on **June 15, 2016**

FTA coordination ongoing



Results of GLX Review/Redesign Efforts

1. Cost estimation continues
2. Finalizing recommended scope
3. Starting to consider need for contingency & risks (upside pressures)
4. Final estimates will be included in May 9th submission





Construction Cost Estimating Focus Areas

Continued design refinements, quantities, and pricing

1. Stations (7)
2. Vehicle Maintenance Facility
3. Bridges (6)
4. Lowell Line retaining wall/path
5. Center Catenary
6. Gilman Traction Power Station
7. Power
8. Red Bridge Traction Power Substation
9. Ball Square Traction Power Substation
10. Contractor Supervision
11. Improved Productivity
 - *Traffic*
 - *Work in corridor*
12. Equipment rates
13. Contingency (FTA)



Stations

Nearly complete
with evaluation

1. Lechmere
2. Union Square
3. Washington Street
4. Gilman Square
5. Lowell Street
6. Ball Square
7. College Avenue



Vehicle Maintenance Facility Redesign



*Nearly complete
with evaluation*

- Light maintenance
- 7 and 10 ton cranes
- Vehicle storage for 46 cars
- Surface parking for MBTA staff
- Staff support facilities
- Future expansion preserved
- Inspection pit

Bridges

Nearly complete
with evaluation

1. Lechmere Viaduct
2. Medford Street
3. School Street
4. Lowell Street Bridge
5. Broadway Bridge
6. College Avenue Bridge

Potential Productivity Improvements



On-going

1. Under consideration with MBTA Operations:

- a) Weekends
- b) Regulated night time work
- c) Summer shutdowns

2. Reduced scope will help recover some of the lost time

- a) Expected shorter construction schedules

Community Path

1. Estimating the cost of the no path option
2. Estimating the cost of an alternative path
3. Objective – to reduce cost
 - A. Less permanent structure to build
 - B. Less temporary support-of-excavation to install & remove
 - C. Schedule efficiency
 - *Less construction time needed near track work*
 - *Less risk of delays during construction*
 - D. Risk
 - *Less risky footing excavation*
 - *Safer wall installation (Less equipment, height, potential to foul track)*

Procurement Process

(If GLX is a “go”)

1. Competitive bidding
2. MassDOT planning Legal procurement charrette
3. MBTA General Manager is conducting:
 - a) *Search for Program Manager*
 - b) *Assessment of staffing organization for Design & Construction department*
4. Evaluating design and construction schedules
5. Considering early construction actions

Upcoming Public Meetings

April 11, 2016

MassDOT Board Meeting
1:00 PM
Suite 3830
10 Park Plaza
Boston

April 13, 2016

5:30 – 9:00 PM
Somerville High School
Auditorium
81 Highland Street
Somerville

April 21, 2016

MPO Meeting
Time: 10:00 am
State Transportation Building
Conference Rooms 2 and 3
10 Park Plaza, Boston

April 27, 2016

5:30 – 9:00 PM
St. Anthony's Parish Hall
400 Cardinal Medeiros Avenue
Cambridge

April 28, 2016

MPO Meeting
Time: 10:00 am
State Transportation Building
Conference Rooms 2 and 3
10 Park Plaza, Boston

May 9, 2016

MassDOT Board Meeting
1:00 PM
Suite 3830
10 Park Plaza
Boston

May 5, 2016

5:30 – 9:00 PM
St. Clement's Parish Hall
579 Boston Avenue
Medford

For more info: info@glxinfo.com

GLX

IPMT – Implementation Schedule Update

Layout: GLX 90 BY GROUP MDP		Filter All: PRIORITY 1 --- 9APR		April 2016				May 2016				June 2016				July 2016				August 2016		
Activity ID	Activity Name	Start	Finish	03	10	17	24	01	08	15	22	29	05	12	19	26	03	10	17	24	31	07
IPMT Baseline Schedule - Green Line Extension - Implementation		25-Jan-16 A	30-Jun-16	30-Jun-16, IPMT Baseline Schedule - Implementation																		
MILESTONES & GOALS		25-Jan-16 A	30-Jun-16	30-Jun-16, MILESTONES & GOALS																		
	Notice to Proceed - for the W&S (IPMTeam)	25-Jan-16 A																				
	MILESTONE - Complete DRAFT report for Internal Review (target April 7th)		06-Apr-16'	▲ MILESTONE - Complete DRAFT report for Internal Review (target April 7th)																		
	Initial Report - (Target Apr27 -- To GM & Secretary)		28-Apr-16'	▲ Initial Report - (Target Apr27 -- To GM & Secretary)																		
	Print Final Report (Target May 2nd - To both Boards)		02-May-16	▲ Print Final Report (Target May 2nd - To both Boards)																		
	MILESTONE - FINAL REPORT - (Target - May 9th PRESENTATION:)		09-May-16	▲ MILESTONE - FINAL REPORT - (Target - May 9th PRESENTATION:)																		
	MILESTONE - COMPLETE TRANSITION of IPMT to New Management		30-Jun-16	◆ MILESTONE - COMPLETE TRANSITION																		
REDESIGN EFFORT		12-Feb-16 A	09-Jun-16	09-Jun-16, REDESIGN EFFORT																		
	Review Previously Set Up (CP01 and CP4B)	12-Feb-16 A	18-Feb-16	CP4B)																		
	Review and Comment on Sketched / Concepts --- (package 1)	29-Feb-16 A	06-Apr-16	■ Review and Comment on Sketched / Concepts --- (package 1)																		
	Review Sketched / Concepts --- (package 2)	29-Feb-16 A	12-Apr-16	■ Review Sketched / Concepts --- (package 2)																		
	Coordinate Initial Draft of Report	01-Mar-16 A	04-Apr-16	■ Coordinate Initial Draft of Report																		
	Finalize Recommended NEW GLX Scope (of the IPMT) to advance Estimating and Scheduling --- BASE	14-Mar-16	29-Mar-16	■ Finalize Recommended NEW GLX Scope (of the IPMT) to advance Estimating and Scheduling --- BASE																		
	P- Prepare Documentation for THIRD Round possible/additional changes (cost avoidance)	14-Mar-16	23-Mar-16	■ Prepare Documentation for THIRD Round possible/additional changes (cost avoidance)																		
	Disposition Sheets (for GM Secretary Review) - w/ Order of Magnitude Estimates	18-Mar-16	19-Apr-16	■ Disposition Sheets (for GM Secretary Review) - w/ Order of Magnitude Estimates																		
	Outline Construction Limitations-of-Operations (issue & potential opportunities)	21-Mar-16	08-Apr-16	■ Outline Construction Limitations-of-Operations (issue & potential opportunities)																		
	Advance / Study for Construction Limitations-of-Operations (issue & potential opportunities)	21-Mar-16	04-Apr-16	■ Advance / Study for Construction Limitations-of-Operations (issue & potential opportunities)																		
	Finalize Next Listing of Possible Cost Avoidance Recommendations (for packages 3)	22-Mar-16	15-Apr-16	■ Finalize Next Listing of Possible Cost Avoidance Recommendations (for packages 3)																		
	Develop Outline for Strategic Track Closure Option	11-Apr-16	14-Apr-16	■ Develop Outline for Strategic Track Closure Option																		
	Prepare Redesign Section of the Final Report (constrained)	14-Apr-16	22-Apr-16'	■ Prepare Redesign Section of the Final Report (constrained)																		
	P- Refine Documentation for the Final Report FULL IPMT RECOMMENDATION	15-Apr-16	09-Jun-16	■ P- Refine Documentation for the Final Report FULL IPMT RECOMMENDATION																		

IPMT – Implementation Schedule Update

Layout: GLX 90 BY GROUP MDP		Filter All: PRIORITY 1 --- 9APR																			
Activity ID	Activity Name	Start	Finish	April 2016				May 2016				June 2016				July 2016				August 2016	
				03	10	17	24	01	08	15	22	29	05	12	19	26	03	10	17	24	31
COST ESTIMATING & BUDGET		29-Feb-16 A	03-Jun-16	03-Jun-16, COST ESTIMATING & BUDGET																	
	Prepare Final Estimating and Estimating Documentation Basis	29-Feb-16 A	15-Apr-16	█ Prepare Final Estimating and Estimating Documentation Basis																	
	Finalize Quantity and Pricing (by Arup) for all 27 direct cost centers	14-Mar-16	12-Apr-16	█ Finalize Quantity and Pricing (by Arup) for all 27 direct cost centers																	
	Refine Elevator & Fare Collection Cost Study Basis (order-of-magnitude cost estimate)	14-Mar-16	17-Mar-16	█ Refine Elevator & Fare Collection Cost Study Basis (order-of-magnitude cost estimate)																	
	Evaluate Upward Pressures / Risk Program Contingency (within the remaining scope and budget)	14-Mar-16	15-Apr-16	█ Evaluate Upward Pressures / Risk Program Contingency (within the remaining scope and budget)																	
	Finalize Pricing for the No Community Path and Alternative Path	14-Mar-16	12-Apr-16	█ Finalize Pricing for the No Community Path and Alternative Path																	
	Review of iGMP#4 Pricing (major items only)	18-Mar-16	25-Mar-16	█ Review of iGMP#4 Pricing (major items only)																	
	Support DRAFT Report --- Draft Contingency Section	18-Mar-16	23-Mar-16	█ Support DRAFT Report --- Draft Contingency Section																	
	Compile new complete Construction Cost Package	05-Apr-16	12-Apr-16	█ Compile new complete Construction Cost Package																	
	Provide and Initial Review of the Escalation Impacts (related to reprourement options)	13-Apr-16	15-Apr-16	█ Provide and Initial Review of the Escalation Impacts (related to reprourement options)																	
	Outline Impacts of Escalation & Program Contingency (within the remaining scope and budget)	13-Apr-16	20-Apr-16	█ Outline Impacts of Escalation & Program Contingency (within the remaining scope and budget)																	
	Review Estimate Adjustments	13-Apr-16	21-Apr-16	█ Review Estimate Adjustments																	
	Prepare Initial Cost Benefit Study of New Improved Limitations of Operations	13-Apr-16	20-Apr-16	█ Prepare Initial Cost Benefit Study of New Improved Limitations of Operations																	
	Develop and Summarize OTHER Program Costs	13-Apr-16	21-Apr-16	█ Develop and Summarize OTHER Program Costs																	
	Review Final Escalation Impact Assessment	19-Apr-16	22-Apr-16	█ Review Final Escalation Impact Assessment																	
	FINALIZE Cost Section of the Final Report	22-Apr-16	28-Apr-16	█ FINALIZE Cost Section of the Final Report																	
	Finalize Cost QA Section of the Final Report	22-Apr-16	28-Apr-16	█ Finalize Cost QA Section of the Final Report																	
	Refine Limitations of Operations issue & potential COST opportunities	22-Apr-16	27-Apr-16	█ Refine Limitations of Operations issue & potential COST opportunities																	
	Estimating Adjustments	22-Apr-16	26-Apr-16	█ Estimating Adjustments																	
	Prepare Narrative of Risk Considerations	22-Apr-16	27-Apr-16	█ Prepare Narrative of Risk Considerations																	
	Follow Up to Secretary / GM on Improved Limitations of Operations outcome	28-Apr-16	28-Apr-16	█ Follow Up to Secretary / GM on Improved Limitations of Operations outcome																	
	Recommend Initial Control Measures to Minimize Ongoing Spending (consistent with all potential r	29-Apr-16	05-May-16	█ Recommend Initial Control Measures to Minimize Ongoing Spending (consistent with all potential r																	
	P - Initiate ARUP on 3rd group of pricing reductions	29-Apr-16	12-May-16	█ P - Initiate ARUP on 3rd group of pricing reductions																	
	Finalize Graphics and Presentation	02-May-16	06-May-16	█ Finalize Graphics and Presentation																	
	P - Prepare Estimate Pricing & Documentation (package 3)	13-May-16	03-Jun-16	█ P - Prepare Estimate Pricing & Documentation (package 3)																	

IPMT – Implementation Schedule Update

Layout: GLX 90 BY GROUP MDP		Filter All: PRIORITY 1 --- 9APR		April 2016					May 2016				June 2016				July 2016				Aug					
Activity ID	Activity Name	Start	Finish	03	10	17	24	01	08	15	22	29	05	12	19	26	03	10	17	24	31	07				
[-]	STAKEHOLDER & ENVIRONMENTAL REVIEW	28-Mar-16	29-Apr-16	29-Apr-16, STAKEHOLDER & ENVIRONMENTAL REVIEW																						
	Review Env Approval and permitting meeting with Environmental MBTA	28-Mar-16	30-Mar-16	review Env Approval and permitting meeting with Environmental MBTA																						
	Stakeholder review of redesign options (second priorities)	31-Mar-16	01-Apr-16	Stakeholder review of redesign options (second priorities)																						
	Prepare 2nd DRAFT Environmental and Permitting Section for Report	31-Mar-16	06-Apr-16	█ Prepare 2nd DRAFT Environmental and Permitting Section for Report																						
	Prepare "Making the Case" memo	08-Apr-16*	14-Apr-16	█ Prepare "Making the Case" memo																						
	Submit DRAFT Making the Case Determination Memo to FTA	15-Apr-16	19-Apr-16	█ Submit DRAFT Making the Case Determination Memo to FTA																						
	Finalize Report for Environmental and Permitting Section	25-Apr-16	29-Apr-16	█ Finalize Report for Environmental and Permitting Section																						
	Stakeholder review of redesign options (advancement of rescoping)	27-Apr-16	29-Apr-16	█ Stakeholder review of redesign options (advancement of rescoping)																						
[-]	SCHEDULE ADJUSTMENTS	31-Mar-16	06-Jun-16	06-Jun-16, SCHEDULE ADJUSTMENTS																						
	Refine Program Schedule Adjustments - Listing Adjustments (packages 1&2) (from Arup original	31-Mar-16	21-Apr-16	█ Refine Program Schedule Adjustments - Listing Adjustments (packages 1&2) (from Arup original st																						
	Refine Schedule Options for Limitations of Operations Impats (options)	31-Mar-16	21-Apr-16	█ Refine Schedule Options for Limitations of Operations Impats (options)																						
	P - Program Schedule QA Section of the Final Report (listing items to adjust)	22-Apr-16	12-May-16	█ P - Program Schedule QA Section of the Final Report (listing items to adjust)																						
	P - Refine Intial Program Schedule Adjustments Listing	13-May-16	06-Jun-16	█ P - Refine Intial Program Schedule Adjustments Listing																						
[-]	RE-PROCUREMENT STRATEGY	23-Mar-16	02-May-16	02-May-16, RE-PROCUREMENT STRATEGY																						
	Prepare for Reprocurement - Workshop	23-Mar-16	28-Mar-16	█ Prepare for Reprocurement - Workshop																						
	Prepare and Present Initial Recommended Re-Procurement Strategy	13-Apr-16*	20-Apr-16	█ Prepare and Present Initial Recommended Re-Procurement Strategy																						
	Facilitate Reprocurement - Workshop	13-Apr-16*	15-Apr-16	█ Facilitate Reprocurement - Workshop																						
	Review & QA - Workshop Report	19-Apr-16	27-Apr-16	█ Review & QA - Workshop Report																						
	Prepare Reprocurement Section of the Final Report	21-Apr-16	27-Apr-16	█ Prepare Reprocurement Section of the Final Report																						
	Develop Recommendation Demobilization of Professional Services (no longer needed -as a result	28-Apr-16	02-May-16	█ Develop Recommendation Demobilization of Professional Services (no longer needed -as a																						
	Consider Next Steps to Possibly Hire permanent PM (if needed)		02-May-16	█ Consider Next Steps to Possibly Hire permanent PM (if needed)																						
[-]	REVENUE & REAL ESTATE	30-Mar-16	31-May-16	31-May-16, REVENUE & REAL ESTATE																						
	Finalize Right-of-Way Review - Conceptual Needs (for Final report)	30-Mar-16	22-Apr-16	█ Finalize Right-of-Way Review - Conceptual Needs (for Final report)																						
	Finalize MOU (w/Cities) for Final Report	30-Mar-16	28-Apr-16	█ Finalize MOU (w/Cities) for Final Report																						
	Continue to refine potential revenue MOU with city of Cambridge	01-Apr-16*	17-May-16	█ Continue to refine potential revenue MOU with city of Cambridge																						
	Explore potential revenue MOU with city of Somerville	01-Apr-16*	31-May-16	█ Explore potential revenue MOU with city of Somerville																						
	Explore potential agreements w/ other project partners on revenue/cost shifting (i.e. TUFTS/DVC	01-Apr-16*	31-May-16	█ Explore potential agreements w/ other project partners on reven																						
	Explore reprogramming of Boston MPO funds from GLX phase 2 to core GLX project	07-Apr-16*	31-May-16	█ Explore reprogramming of Boston MPO funds from GLX phase 2																						
	Prepare Final for Potential Revenue	19-Apr-16*	02-May-16	█ Prepare Final for Potential Revenue																						
	MEETING -- MPO Presentation (21-Apr)	21-Apr-16*	21-Apr-16	█ MEETING -- MPO Presentation (21-Apr)																						
	MEETING -- MPO final VOTE on transfer of funds - (28-Apr)	28-Apr-16*	28-Apr-16	█ MEETING -- MPO final VOTE on transfer of funds - (28-Apr)																						

IPMT – Implementation Schedule Update

KEY MEETINGS & ADMINISTRATION	28-Mar-16	30-Jun-16
MEETING - Follow-up with FTA to Ensure Redesign Concepts Remain Consistent w/ the FFGA	28-Mar-16	28-Mar-16
MEETING - FULL BOARD (Apr11th) Monday	11-Apr-16*	11-Apr-16
PUBLIC MEETING - (13-Apr) Focus on Path Options	13-Apr-16*	13-Apr-16
MEETING - F&MC BOARD (Apr 11) Monday 3pm (check time might be 12pm)	13-Apr-16*	13-Apr-16
KEY MEETING - Prep for & Facilitate Strategic Track Closure Options (MBTA)	15-Apr-16	20-Apr-16
MEETING - with FTA on Cost Adjustments	20-Apr-16	22-Apr-16
MEETING - MPO VOTE -- (28-Apr)	21-Apr-16*	21-Apr-16
MEETING - MPO PRESENTATION -- (21-Apr)	21-Apr-16*	21-Apr-16
MEETING - F&MC BOARD (Apr 25) Monday 12pm	25-Apr-16*	25-Apr-16
MEETING - F&MC BOARD (May 2) Monday 12pm	02-May-16*	02-May-16
Refinements of Final Report and Preparation for Presentation to Board	04-May-16	09-May-16
Quality Assurance Check Final Report (print version)	05-May-16	09-May-16
MEETING - FULL BOARD (May 9) Monday	09-May-16*	09-May-16
MEETING - F&MC BOARD (May 9) Monday 3pm (check time - might be 12pm)	09-May-16*	09-May-16
MEETING - F&MC BOARD (May 16) Monday 12pm	16-May-16*	16-May-16
MEETING - F&MC BOARD (May 23) Monday 12pm	23-May-16*	23-May-16
MEETING - F&MC BOARD (Jun 6) Monday 12pm	06-Jun-16*	06-Jun-16
Prepare Transition Documents	07-Jun-16	30-Jun-16
Support MBTA with the Revised Federal Finance Plan (after Board Approval on 5/11)	10-Jun-16	29-Jun-16
MEETING - FULL BOARD (Jun 13) Monday	13-Jun-16*	13-Jun-16
MEETING - F&MC BOARD (Jun 13) Monday 12pm	13-Jun-16*	13-Jun-16

30-Jun-16, KEY MEETINGS & ADMINISTRATION
MEETING - Follow-up with FTA to Ensure Redesign Concepts Remain Consistent w/ the FFGA
MEETING - FULL BOARD (Apr11th) Monday
PUBLIC MEETING - (13-Apr) Focus on Path Options
MEETING - F&MC BOARD (Apr 11) Monday 3pm (check time might be 12pm)
KEY MEETING - Prep for & Facilitate Strategic Track Closure Options (MBTA)
MEETING - with FTA on Cost Adjustments
MEETING - MPO VOTE -- (28-Apr)
MEETING - MPO PRESENTATION -- (21-Apr)
MEETING - F&MC BOARD (Apr 25) Monday 12pm
MEETING - F&MC BOARD (May 2) Monday 12pm
Refinements of Final Report and Preparation for Presentation to Board
Quality Assurance Check Final Report (print version)
MEETING - FULL BOARD (May 9) Monday
MEETING - F&MC BOARD (May 9) Monday 3pm (check time - might be 12pm)
MEETING - F&MC BOARD (May 16) Monday 12pm
MEETING - F&MC BOARD (May 23) Monday 12pm
MEETING - F&MC BOARD (Jun 6) Monday 12pm
Prepare Transition Documents
Support MBTA with the Revised Federal Finance Plan (after Board Approval on 5/11)
MEETING - FULL BOARD (Jun 13) Monday
MEETING - F&MC BOARD (Jun 13) Monday 12pm