

Massachusetts Bay Transportation Authority (MBTA)

Request for Information (RFI)

Commuter Rail Fiber Optic Resiliency (FOR) Project

September 28, 2020

Responses Due: October 9, 2020, 4 PM EST

1. Purpose

The purpose of this Request for Information (RFI) is to gather installation information from experienced underground fiber optic cable installation contractors on behalf of the Massachusetts Bay Transportation Authority (MBTA).

The MBTA is seeking responses to a set of questions provided within this document prior to the issuance of a formal Request for Proposal (RFP).

2. Project Background

The MBTA is undertaking a Commuter Rail Fiber Optic Cable Resiliency Program, which will install approximately 250 miles of one 96 strand fiber cable and one 288 strand fiber optic cable. These cables will be plowed approximately 5' below grade and installed in separate innerducts between and/or alongside the MBTA commuter rail tracks, except for bridge locations where the fiber will be mounted to the bridges. Installation includes under street grade crossings and across adjacent tracks.

3. Project Overview

The MBTA is currently reviewing a 30% design that will serve as the basis of its Request for Proposal. The RFP will include advancing the design to 100%, along with installation, termination and test of the Fiber Optic Cable. Figure 1 identifies the "Lines with proposed FO underground cable" which specifies the limits of this project.

4. Assumptions

In order to effectively respond to the questions below the following assumptions should be considered:

- To expedite this work, the MBTA will have weekend outages of the entire line section, allowing approximately 48 consecutive hours of work. The outage would begin late Friday evening and continue until early Monday morning.
- The Installer should plan to provide two at least 2 plow trains and the necessary staffing required to install fiber under grade crossings, under adjacent tracks as required, and across bridges.
- Plowing and installation work may occur on the same line where the lines are long or possibly with one team on the North Side and one team on the South Side.

5. Goals of this RFI

Throughout this RFI, the MBTA would like to hear from companies that have experience plowing fiber cable and to learn from your experience as it relates to design and installation. Our questions primarily focus on productivity and potential risks that we should be cognizant of.

6. Responding to this RFI

6.1. RFI Calendar

The RFI schedule is shown below. The MBTA intends to take lessons learned from this RFI and incorporate them within our planning and scheduling.

Activity	Date
RFI Release Date	9/28/2020
RFI Responses due @ 4:00pm EST	10/9/2020

6.2. RFI Contact

Responses to and questions about this RFI should be directed to:

Email : jgarmendia@mbta.com

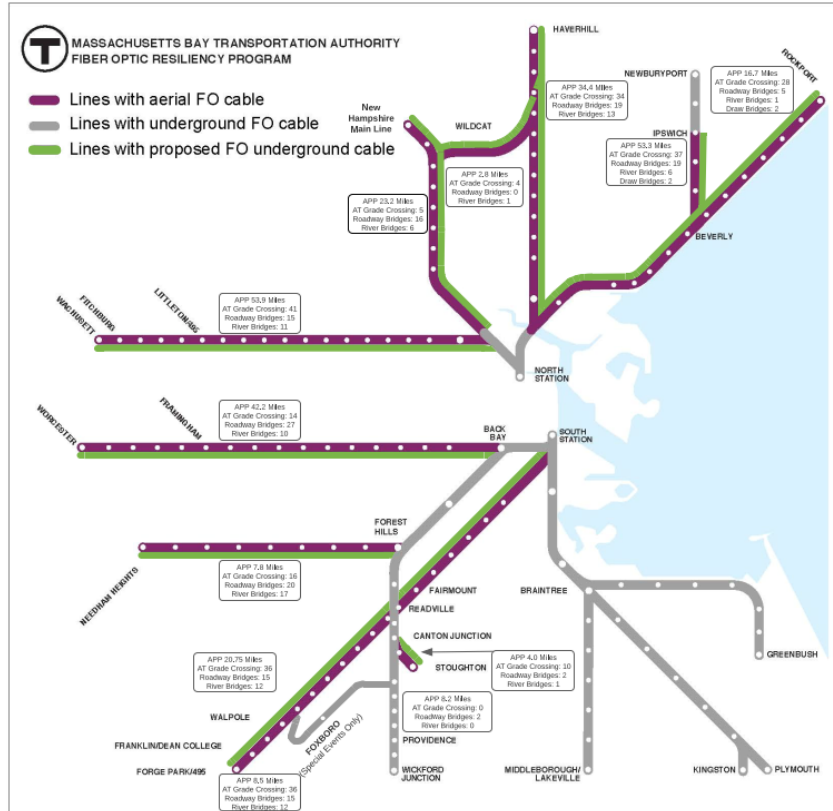


Figure 1 MBTA Fiber Optic Resiliency Program

No.	Question	Response
1	The MBTA anticipates 200-250 miles of plowing. What is your experience of required minor and major services to the plowing equipment that will halt plowing? What is the expected downtime required between plow operations?	
2	The MBTA may decide to provide work locomotives without head-end power. Would you need head-end power to operate your equipment, and if so, would you be able to provide head-end power?	
3	The MBTA anticipates DBE content. Does this present any challenges?	
4	Are Proposers able to furnish multiple plow work trains and crews?	
5	How many plow/other crews per shift would you plan for this size project?	
6	Can plowing be performed in conditions of frozen ground, snow, or heavy rain? What are conditions that would result in suspension of plowing?	
7	How many hours of productivity could be expected in a 12-hour shift, and over a weekend of multiple back to back 12 hour shifts?	
8	What are rail projects that you have successfully completed that are consistent with the MBTA anticipated plowing length of 200 – 250 miles?	
9	What is the production rate for plowing that you can anticipate (Distance per hour and distance per 12-hour shift)? Assume that you have approximately 48 hours of uninterrupted track access.	
10	How would you recommend running innerduct and fiber around interlockings, stations and grade crossings, and bridges including drawbridges?	

11	How would you address locations where plowing is not possible due to a high water table or extremely rocky conditions?	
12	What is the minimum required distance for the plow from the center line of track? From the edge of tie?	
13	What is the expected noise level associated with plowing? Does the proposer anticipate complaints from homeowners along the tracks if plowing occurs overnight?	
14	When directionally boring under a roadway (at grade crossing), will there be a need to have pull boxes installed on each side of the roadway?	
15	What is the estimated plowing distance before the conduit/fiber spools would need to be replaced?	
16	What is your experience with multi-cell raceway such as MicroDuct and microcables?	
17	What is the maximum distance that can be bored? At some stations we will not be able to plow on either side of the tracks (due to station platforms) or plow down the center of the tracks (due to safety fence between the tracks).	
18	We are specifying armored 96 strand and 288 strand fiber optic cable. What is the production rate for installing this type of fiber? (Distance per hour and distance per 12-hour shift)? Assume that you have approximately 48 hours of uninterrupted track access.	
19	From your experience what are the Top 3 Risks that we should be concerned about?	