

GLTPS



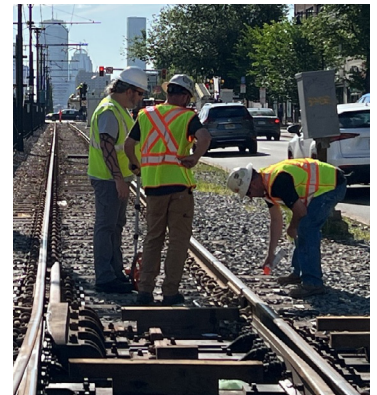
GREEN LINE TRAIN PROTECTION SYSTEM

A CAPITAL TRANSFORMATION PROJECT

Monthly Review and Lookahead

Thursday June 23, 2022

The [Green Line Train Protection System \(GLTPS\)](#) combines vehicle and wayside equipment, that work together to avoid train on train collisions, add red light signal protection, and incorporate speed enforcement. The project has four (4) overlapping phases starting with Equipment Design that integrates new components into the legacy system. The Vehicle Installation Contractor has completed mobilization at the GLX facility in Somerville and the Pilot installation is underway on car 3708. The Wayside Installation Contractor received Notice to Proceed (NTP) and has been mobilize and prepping materials. The Operational Integration phase prepares MBTA to use the new safety system on its Green Line.



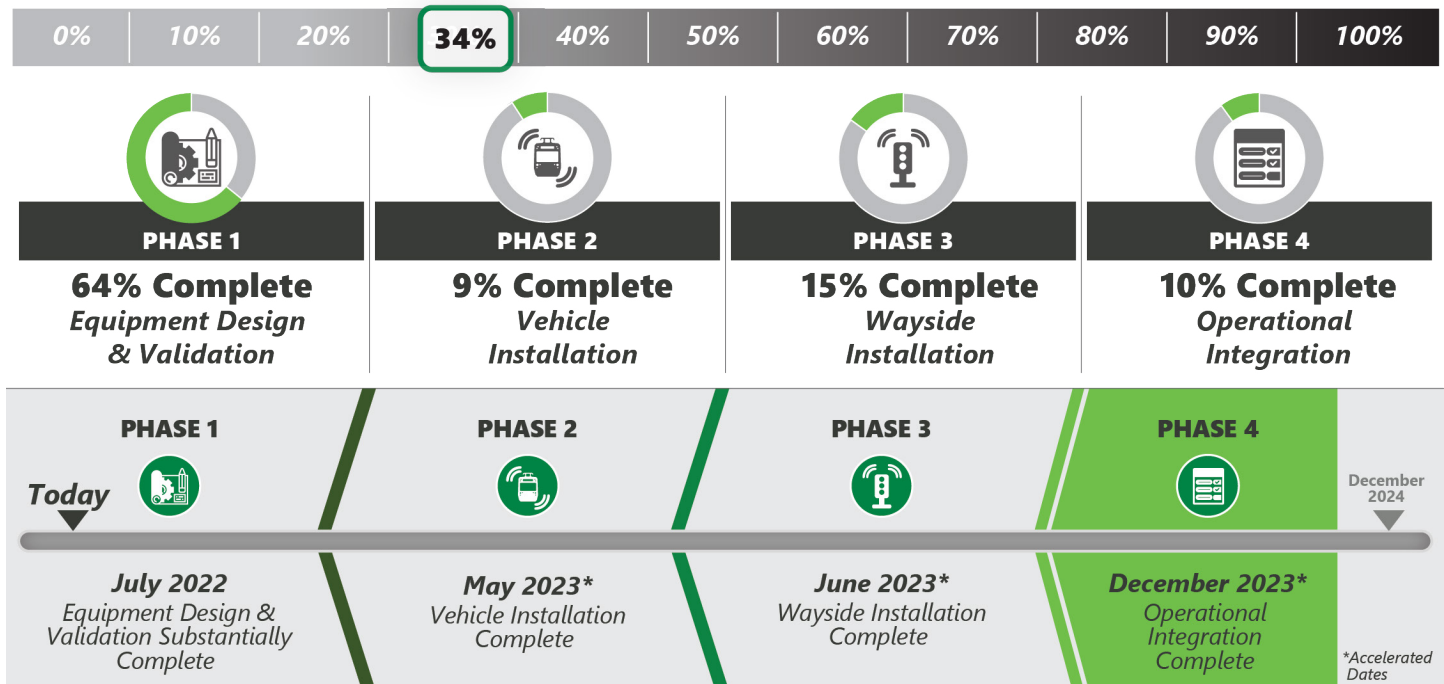
Currently our focus is on the equipment being installed as part of the [B-Branch work during our full access closure](#), which requires material kitting and programing, site prep, installation and then testing.

Did you know...

... the primary goals of the Green Line Train Protection System (GLTPS) are to provide:

- 1. Risk reduction of train-on-train collisions
- 2. Risk reduction of red signal violations
- 3. Speed enforcement at strategic locations
- 4. Protection of Right of Way (ROW) workers

GLTPS by the Numbers



This Past Month



Equipment Design & Validation

- **Members of the GLTPS Program Management team traveled to the BBR headquarters in Braunschweig Germany** for a Source Audit from May 30 – June 3. General process audits, project status meetings, design reviews, environmental testing and electronics manufacturing were all part of the activities participated in and witnessed during the visit.
- **A PreFAI inspection was held in Braunschweig Germany on Friday June 3** on the vehicle coupling coil. Two of these coils are strategically mounted on opposite sides of each vehicle and as the train passes over a wayside balise, the coils acquire information which is analyzed by onboard electronics to acquire signal status and indicate speed enforcement to the Operator.



Vehicle Installation

- **The Vehicle Installation is progressing on the 3708 Pilot car** at the Green Line Extension (GLX) vehicle maintenance facility in Somerville. Wiring harnesses and electronic equipment have been mounted. After installation is complete, 3708 will go through extensive qualification testing to validate functionality and ensure design parameters are met.
- **Serial production of GLTPS wiring harnesses and equipment has begun at Transitair in Hornell, NY.** Five different vehicle electronic enclosures and all associated wiring harnesses and mounting equipment will be manufactured and kitted for delivery to GLX and subsequent installation on the entire Green Line Light Rail fleet.



Wayside Installation

- **The Wayside Installation Contractor was given the notice to proceed (NTP) on June 3.** The overall contract will encompass installation of over 400 signal locations, 900 wayside balises, and 100,000 feet of cabling over the next calendar year. B-Branch & C-Branch materials have been received and are staged at their Hingham headquarters.
- **A wayside equipment demonstration was held jointly with the GLTPS Project Team, MBTA Signaling Department, Installation Contractor, and BBR representatives** at the Signals Training Center at Cabot. A general system overview, a 'show and tell' functional test of one complete signal setup, and detailed schematic with fault tree review was conducted for better understanding of how the GLTPS system integrates into the existing signal system.



Lookahead for July



Equipment Design & Validation

- Complete First Article Inspections (FAIs) for Type 7 vehicle & wayside assemblies
- Complete the Type 8 prototype enclosure and harness manufacturing



Wayside Installation

- Complete installation of B and C-Branch speed balises during June & July Surges
- Receive and stage the 8-location specific Pilot signal kits for installation in August



Vehicle Installation

- Complete First Installation Inspection (FII) on the 3708 Pilot
- Begin Type 8 prototype fitment of enclosures to further design progress



Operational Integration

- Receive revised maintenance manuals and begin scheduling training sessions
- Receive revised storyboard and training video for Stakeholder review