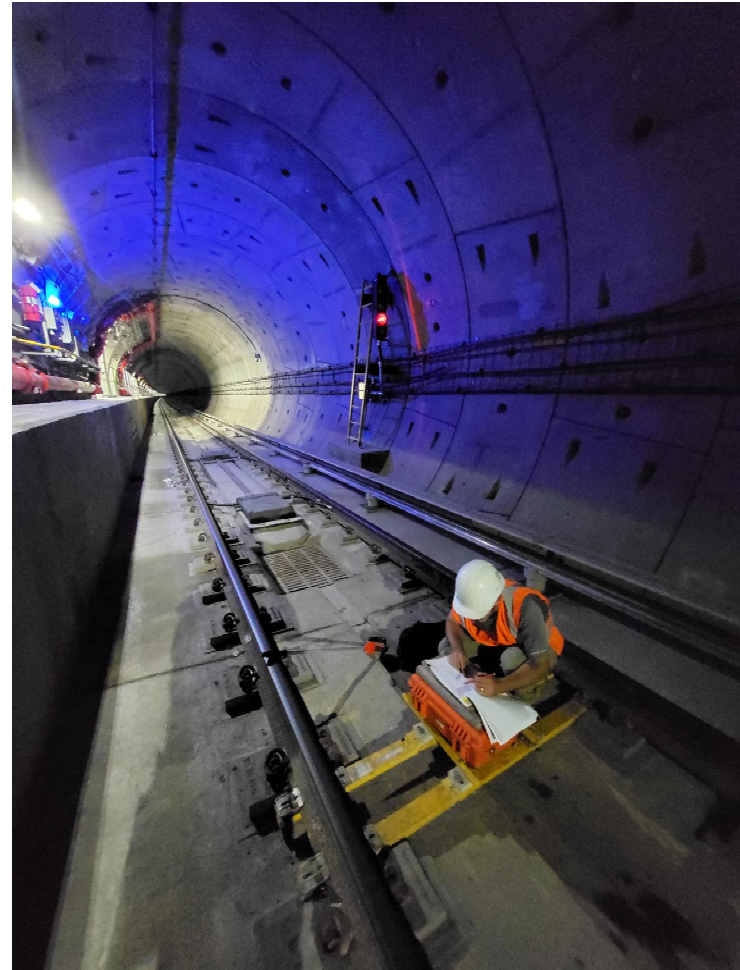


Joint LIRR/MNR PTC Committee Meeting October 24, 2022



LIRR Project Update



Implementation Summary

All trains are operating with full PTC functionality on entire LIRR territory and continue to be monitored daily with any issues mitigated.

Progress

- To meet contract completion with the System Integrator Contractor (Alstom/Siemens):
 - Prioritizing design, field support, and testing, to support meeting ESA Go Live date.
 - Continue to receive software releases to correct system variances and meet system contract requirements.
 - Continue to work to meet contract obligations for system reliability requirements (ARDT).
 - Continue to receive design changes to support resolution of PTC systems operations issues.
 - Continue receiving required warranty support.
 - Continue to ensure all contract requirements are met.
- PMO coordinating with LIRR Engineering, Transportation, and Maintenance of Equipment support, and contractor team, to support all on-going and up-coming infrastructure projects that include design, field work and testing, including:
 - Main Line 3rd Track Project
 - Jamaica Capacity Improvement
 - Queens Interlocking upgrade
- Continue Interoperability with Amtrak from Harold Interlocking through Penn Station.
- Continue working with the Northeast Corridor railroads to address FRA Safety Plan conditions, including:
 - Positive Train Stop Release (PTSR) – adds additional safety to system by incorporating code required by Dispatchers to enable the Positive Train Stop Override button prior to its use by Engineers.
 - Missed Transponder – Mitigation of issue when onboard computer misses read of transponders. FRA and NEC pursuing onboard database update. LIRR pursuing additional transponders at affected locations to mitigate issue, requires FRA approval.



LIRR PTC Timeline – Look Ahead Plan



2022

• 4th Quarter

- Complete ESA PTC System Testing & commence PTC Operations in East Side Access territory Grand Central
- Continue Integrated Factory Acceptance Testing (FAT) for new On-Board Computer (OBC) Software Release
- Continue Closeout of PTC contract requirements
- Continue planning / procurement of GE TD 220 Radio replacements due to obsolescence
- PTC Lab delivery
- Submit CRISI Grant Application to FRA for Positive Train Stop Release (PTSR) Safety Plan condition
- Continue to support on-going Infrastructure projects that require updates to the PTC design

2023

- Complete fleetwide deployment of new Onboard (OBC) Software
- Closeout PTC contract requirements
- Obtain Final PTC documentation (CDRLs, O&M Manuals, Maximo, and As-Builts – All contained in SDMF (Software Data Maintenance Facility))
- Complete all outstanding maintenance training
- Receive PTC Software Data Maintenance Facility (SDMF) delivery
- Closeout of Non-Conformance Reports (NCRs) & Variances
- Receive all final software changes to meet contract system requirements and to correct variances and NCRs
- Complete Onboard equipment modifications
- Anticipate resolution with the FRA and NEC railroads on an agreed plan to move forward to resolve the Safety Plan conditions
- Continue to support on-going Infrastructure projects with changes that require updates to the PTC design
- Anticipate Design and Implementation of HMAC Security Key Exchange and Management Services
- Develop plan for HMAC Security Key Exchange and Management Services



LIRR PTC Timeline – Look Ahead Plan



2024

- Complete ARDT (Availability Reliability Demonstration Test) & Warranty Programs
- Achieve Final Contract Completion
- Commence use of 5-year Maintenance Option with the PTC System Integrator
- Continue to support on-going Infrastructure projects with changes that require updates to the PTC design
- Anticipate PTC Grant Application approval and funding from FRA to proceed with design development for Positive Train Stop Release (PTSR) Safety Plan condition



MNR Project Update



Implementation Summary

All trains are operating with full PTC Functionality on entire MNR territory including East and West of Hudson.

Progress

- To achieve contract completion with the System Integrator, close software variances across all subsystems improving operations and complete remaining contract requirements
- PTC Installations and Testing supporting infrastructure projects and New Haven Line Signal upgrades
 - Completed commissioning of New Haven Line new CP 229 signal enclosure in June 2022
 - Harlem Line CP 117 switch upgrades and track reconfiguration completed in Aug 2022
 - New Haven Line new CP 230 commissioning is scheduled for 1st Q 2023
- MNR is actively working with Alstom and Kawasaki to address open variances for the M8 fleet
 - OBC Software 1.3 deployment is nearly completed improving train operations
 - OBC Software 1.4 release testing has been completed; revenue service testing and deployment to commence starting Nov 22 pending FRA approval.
 - OBC Software 1.5 with ATC/ACSES software modifications required to address FRA Conditions is scheduled for 4th Q 2023.
- The CDOT Shore Line East revenue service using the M8 fleet successfully commenced on May 23rd.
- Continue working with the Northeast Corridor railroads to address FRA-mandated conditions:
 - Positive Train Stop Release (PTSR) – adds additional safety to system by incorporating code to be provided by RTCs to enable the Positive Train Stop Override button prior to its use by Engineers. Implementation plan and schedule is being developed for FRA Grant submission.
 - Missed Transponder - Mitigation of issue when onboard computer misses read of transponders. FRA response is pending to the joint NEC Letter sent. MNR is considering additional transponders at affected locations to mitigate issue, requires FRA approval.



MNR PTC Timeline – Look Ahead Plan



2022

- ✓ Award PTC 5-year Maintenance Option Contract to PTC System Integrator
- ✓ Commissioning of new CP 229 on New Haven Line
- ✓ Harlem Line CP 117 switch upgrades and track reconfiguration completed in Aug 2022
- Continue closeout of open variances with software releases across all subsystems
- Continue closeout of PTC contract requirements
- Commence planning and procurement for GE TD 220 replacement due to obsolescence
- Complete PTC Lab delivery and setup on MNR
- Submit CRISI Grant Application to FRA for Positive Train Stop Release (PTSR) Safety Plan condition
- Continue to support Infrastructure projects with changes that impact PTC design

2023

- Continue to support Infrastructure projects including Signal Upgrades for CP 230, CP 241 and new CP 243
- Complete Office, Wayside and Fleetwide software releases and deployment correcting variances
- Closeout PTC contract requirement, documentation (CDRLs, O&M Manuals and As-Builts) and Training
- PTC Software Data Maintenance Facility (SDMF) delivery
- Complete concept development and submit implementation plan to FRA for PTSR Safety Plan condition
- Resolution of Missed Transponder condition and other changes in coordination with NEC Railroads
- Develop plan for HMAC Security Key Exchange and Management Services
- Develop plan for design solution to the new FRA Reporting Requirement data collection and automation
- Support plans for Wayside, Onboard and Office updates required for Penn Station Access

2024

- Complete ARDT (Availability Reliability Demonstration Test) & Warranty Program
- Achieve Final Contract Completion
- Commence use of 5-year Maintenance Option with the PTC System Integrator
- Continue to support Infrastructure projects including new Walk Bridge associated PTC changes
- Anticipate FRA approval of PTC Grant Application to begin design for PTSR project

