A. INTRODUCTION

This chapter discusses safety and security as they relate to the Proposed Project and summarizes how potential safety and security issues are identified and addressed in LIRR's design process. It addresses the safety and security issues associated with increased train movement within the project corridor, the extension of electrification to accommodate a third track, the modification of platforms and stations, passenger safety, and the closure and/or separation of grade crossings.

Discussion of construction-related safety and security considerations is provided in Chapter 13, "Construction," although many transit industry safety and security standards and processes described below apply not only to the design and operational phases but also to that of construction.

B. PRINCIPAL CONCLUSIONS AND IMPACTS

The Proposed Project would not result in any significant adverse impacts to public safety and security. Rather, the completion of a continuous third track and the elimination of seven grade crossings would provide the opportunity for improvements to safety and security for the adjacent communities, LIRR customers and workers. These benefits include:

- Reduction in the potential for conflicts between pedestrians, bicyclists, vehicles, and trains
- Enhanced railroad operational flexibility and capacity in the event of a safety or security incident
- Improvements and upgrading of station conditions to improve lighting and visibility

These opportunities for enhanced safety and security would not be realized under the No Action Alternative.

C. METHODOLOGY

The methodology used to identify and address potential safety and security issues related to the Proposed Project entails describing the Study Area, identifying applicable regulatory requirements, and defining the technical approach to the analysis.

The Study Area comprises the 9.8-mile Project Corridor from Floral Park to Hicksville. It includes the LIRR right-of-way (ROW) and the sites of the proposed railroad bridge improvements, parking garages, and the proposed grade crossing eliminations.

The design and operation of the Proposed Project would be implemented in compliance with relevant federal and state regulations, and industry codes, policies and guidelines, including those of the MTA and LIRR intended to promote safety and security for railroad workers, customers and the general public. The design for the Proposed Project takes into account the latest publications and recommendations of the Federal Transit Administration (FTA) regarding

transit safety and security design considerations, including the *Handbook for Transit Safety and Security Certification* (2002) and the *Public Transportation System Security and Emergency Preparedness Planning Guide* (2003). While the Proposed Project would not be federally funded, the LIRR, as a grantee of FTA funds and a carrier on the national railroad network, is compelled to comply with FTA, Federal Railroad Administration (FRA), and general industry design and construction standards. The Proposed Project would be fully incorporated into existing MTA and LIRR operational safety and security programs and processes to provide the riding public and employees with a safe and secure environment.

The technical approach to identify and assess the Proposed Project's potential effects on public safety and security consist of:

- Review of existing published safety and security provisions of MTA and LIRR
- Review of federal requirements, including those of the FTA, the FRA, and the Transportation Security Administration (TSA)
- Coordination with federal, state, and local agencies having jurisdiction over safety and security
- Review of the comments and concerns raised during the public scoping ^ and DEIS processes.
- Field review to assess the interrelationship between the Main Line Corridor and the adjacent communities to understand their composition, character, context, and potential impacts
- Comparison of the existing rail operations along the Project Corridor to the proposed future service and facilities to assess the potential needs for increased safety and security features or procedures in light of MTA, LIRR, FTA, FRA, TSA, and other policies, guidelines, and regulations

D. EXISTING CONDITIONS

Pursuant to the current MTA-LIRR Business Plan, strategies to address the safety and security of the LIRR system begin with controls and processes that govern the development and environmental review of a project concept into its final design and construction. These strategies are developed primarily pursuant to FTA and FRA regulations and other comprehensive guidance to encourage the use of control processes to identify and address safety hazards and security threats in project designs.

LIRR currently maintains safety standards and requirements as appropriate to ensure safe and secure train operations, systems maintenance, and travel for the public and LIRR workers. These standards and requirements are included as part of the LIRR System Safety Program Plan (SSPP) required by the New York State Public Transportation Safety Board (PTSB), based on FTA and American Public Transportation Association (APTA) program standards. The SSPP covers LIRR's programs to ensure that safety is overseen at every level of operations and maintenance, from hiring and training, drug and alcohol testing, documentation controls, enforcement of rules, procedures and orders and, e.g., the internal and external coordination of parties to address emergencies on the LIRR system. The SSPP applies to everyone who works for the LIRR, including contractors. The LIRR SSPP is revised every two (2) years, per PTSB regulations and audited by APTA and the FRA every three (3) years. The SSPP includes descriptions of LIRR's operational compliance with FRA's safety regulations (49 CFR Part 200, *et. al.*).

MTA LIRR system security is overseen and coordinated by the LIRR Office of Security (LIRR OOS) in coordination with the MTA Office of Security (MTA OOS), in conjunction with all local and state law enforcement partners in the communities across Long Island where LIRR operates. Under the Proposed Project, LIRR OOS and MTA OOS would continue to coordinate with TSA for security operations, if necessary, pursuant to U.S. Department of Homeland Security and TSA regulatory security authority over mass transit systems and the national railroad network. LIRR OOS and MTA OOS may conduct and participate in threat, risk, and vulnerability assessments for the design, construction, and/or operation of MTA-owned facilities. The MTA Office of Security participates in the New York City Joint ^ Terrorist Task Force, which includes the Federal Bureau of Investigation (FBI) and the US Department of Homeland Security, in addition to other agencies. Through this task force, and by using outside security experts, the MTA Office of Security develops strategies to strengthen protections against terrorist threats directed at MTA transportation facilities.

LIRR operates electric train service in the Project Corridor through means of electrified track. Power is supplied to the trains through an electrified third rail, which is located alongside the active tracks within LIRR's ROW and carries active current. At grade crossings, there is a gap in the third rail to allow for safe crossing for vehicles, bicycles and pedestrians. Through its Together Railroads and Communities Keeping Safe (TRACKS) System Safety Program, LIRR educates the public about the dangers of the third rail.

The Proposed Project includes the elimination of ^ seven (7) grade crossings^ : five (5) through the construction of new vehicular and pedestrian underpasses and two (2) through full closures (with pedestrian overpasses or underpasses). Currently, at these locations, roadways cross railroad tracks at grade rather than passing over or under the tracks. The crossings are equipped with active warning devices consisting of gates, lights and bells. The warning devices are maintained in a state of good repair. Despite the presence of these devices, the potential perpetually exists for vehicles, bicycles and pedestrians to maneuver around the warning gates into the path of oncoming trains. LIRR administers ^ the Together Railroads and Communities Keeping Safe (TRACKS) program to reduce the number of collisions at grade crossings throughout its system. ^ LIRR educates the public through its TRACKS System Safety Program about the dangers of trespassing on railroad property, maneuvering around lowered safety gates, and failing to exercise caution upon train ingress or egress. In addition, working with the New York State Department of Transportation, LIRR encourages the elimination of grade crossings so that fewer track/roadway intersections exist. ^

Despite the efforts of the LIRR to eliminate the occurrence of collisions at grade crossings, these collisions occur, as illustrated by Table 15-1.

Table 15-1
Summary of Crash Data at or Near
Grade Crossing Locations (November 2012 – October 2015)

Location	Total Crashes	Crash Severity			
		Fatal	Injury	Property Damage Only	Non-Reportable
Covert Avenue	28	2	5	13	8
South 12th Street	4	1	2	1	0
New Hyde Park Road	22	0	2	12	8
Main Street	1	0	0	0	1
Willis Avenue	2	1	0	1	0
School Street	1	0	0	0	1
Urban Avenue	8	1	2	3	2

E. FUTURE WITHOUT THE PROPOSED PROJECT

In the Future without the Proposed Project, MTA-LIRR would continue its existing programs and procedures for maintaining facilities and operations in a state of good repair to ensure passenger and facility safety and security in the Project Corridor. The traveling public and the adjacent communities would not accrue any additional safety and security benefits beyond those already in place. Stations and tracks would remain largely as they are today, with the exception of normal replacement projects necessary to maintain the system in a state of good repair. In the event of a safety or security incident, the Future without the Proposed Project scenario would not allow MTA-LIRR and NYSDOT to take advantage of improved safety and security conditions that would be created by the Proposed Project. Grade crossing eliminations or closings, or improvements that could increase public safety through reducing the potential for conflicts between trains and pedestrians, bicycles and vehicles would not occur. Projected increases in train and vehicular traffic ^ would lead to increased risk of conflicts at existing crossings.

F. POTENTIAL IMPACTS OF THE PROPOSED PROJECT

In the operational phase, the existence and running of trains along a third track within the existing LIRR ROW would be an expansion of a current railroad use in a restricted area delineated and maintained specifically for that use. The Proposed Project would not result in greater train speeds; the current maximum authorized speed of 80 mph would be maintained. The Proposed Project would not increase freight capacity, and therefore no adverse safety or security impacts with regard to freight would occur. The running of trains would continue to be subject to existing LIRR protocols regarding safety and security.

Likewise, station upgrades would not result in adverse impacts in the operational phase. The following improvements would enhance safety and security at stations:

- Closed circuit television (CCTV)
- Improved station lighting
- Pedestrian overpasses (or underpasses)
- Americans with Disabilities Act (ADA) compliant ramps and access points
- Curbside drop-off/pick-up areas
- 12-car platforms that provide more efficient access than shorter platforms
- Heated platforms providing safer environments in freezing weather conditions

The addition of pedestrian walkways, overpasses^ (or underpasses), stairways and elevators would enhance pedestrian access to LIRR facilities, and all platform modifications would maintain the existing means of passenger ingress and egress on and off of trains. Security in stations and on platforms would continue to be instituted in accordance with LIRR standard ^ procedures.

The separation or closure of grade crossings would enhance vehicular, pedestrian and bicycle safety by eliminating ^ seven (7) rail/road intersections where there currently exists the potential for conflicts. Any roadway safety issues occurring in these places would not be attributable to the Proposed Project. Rather, the elimination of these grade crossings would have a beneficial rather than adverse impact in terms of safety. Also, the installation of a traffic signal at Denton Avenue would enhance vehicle and pedestrian safety.

G. SAFETY & SECURITY MEASURES

Measures taken to ensure the avoidance of adverse impacts in terms of safety and security would include the adherence to current MTA and LIRR safety and security policies, guidelines and procedures, and requirements. Incorporation of specific design features to protect adjacent communities, the traveling public and workers will continue to be a major focus of project planning and design. The development and incorporation of these features ^ will be coordinated with federal, state and local agencies having jurisdiction over safety and security issues throughout all phases of the project development process.

LIRR, as an FTA grantee, follows the regulations and general industry guidance that compels system operators to consider and evaluate safety and security issues in all phases of the development of major rail capital projects. As such, for the Proposed Project, LIRR would follow FTA requirements for the development and implementation of a Safety and Security Management Plan (SSMP) for Major Capital Projects, as described in the United States Department of Transportation (USDOT) 49 Code of Federal Regulations (CFR) Part 633 – Project Management Oversight and FTA circular C 5800.1, dated August 1, 2007. The SSMP formalizes the technical and management strategies for determining safety and security risk identification, assessment and resolution, and review and acceptance of a transit capital project into revenue service.

The core safety and security component of the LIRR project design effort is the safety and security certification (SSC) process. LIRR would develop a Safety and Security Certification Plan (SSCP) for the Proposed Project. The purpose of the SSCP is to outline LIRR's formal program of SSC which identifies and addresses safety hazards, security threats and vulnerabilities, and how such program processes are managed and documented. The LIRR would use the standards, criteria, and processes set forth in the SSCP to identify safety- and security-critical elements of the design and hazards and vulnerabilities that may impact them. Key elements of the SSCP include the development of:

- A formal, on-going LIRR project risk management process. This process will be used to ensure effective risk management for all high-consequence decisions that affect project design, construction, testing, acceptance, and initiation into revenue service. It provides a structured approach to considering and evaluating potential sources of hazards and vulnerabilities in the project and developing appropriate actions (e.g., design modifications or operational changes) to mitigate hazards and vulnerabilities. It should be noted that the public comment process is an important element in the project's risk evaluation methodology as members of communities provide project stakeholders with important insight and data regarding local issues and circumstances
- Project design criteria and standards which address system safety and security requirements applicable to the entire project. These standards are based on APTA, National Fire Protection Association (NFPA), the Underwriters Laboratories (UL), ADA, as well as safety and security recommendations from the Department of Homeland Security (DHS), TSA, and FTA, among many other industry standards
- Lists of safety- and security-critical design elements and sub-elements and their appropriate and applicable design specifications^
- Appropriate system operations and maintenance rules, Standard Operating Procedures (SOPs), plans, and policies^

- Training programs for operations and maintenance personnel on applicable system rules, SOPs, plans, policies, and procedures
- Methods to ensure that affected outside response agencies, including fire and police departments, are prepared to respond to normal and emergency situations^

These processes will guide LIRR to consider risks to operations and maintenance programs and the experience of patrons, employees and the general public. Examples of safety- and security-critical elements of the Proposed Project that would be developed and closely assessed for risk factors include, among others:

- Control systems^
- Power systems^
- Roadways^
- Track and signal systems^
- Retaining walls^
- Support for the operation of fire and EMT services on the south side of the tracks in the Village of New Hyde Park during periods of construction related to grade crossing^ construction
- Stations and parking facilities, including platforms, station shelters or houses, and pedestrian walkways associated with station and parking facilities. For example, LIRR requires that the design of vehicular drop-off and pick-up areas at stations address both safety and security issues and that measures be incorporated into the facility design to reduce the potential for vehicular and pedestrian conflicts. To help promote pedestrian safety and security, drop-off and pick-up areas are typically located away from nearby intersections to maintain adequate traffic flow on the local roadways and to avoid congested intersections.

For each risk identified, LIRR would identify appropriate design standards and criteria, any additional design specifications, operational responses or other mitigations to address risk factors and to ensure that the final design and actual implementation of such identified standards are implemented.

H. MITIGATION

Because the Proposed Project would not result in any significant adverse impacts in terms of safety and security, no mitigation is required. ✷