



Progress Report: The MTA Capital Security Program

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This is the eighth in a series of reports on the progress of the capital security program of the Metropolitan Transportation Authority (MTA). Earlier reports have chronicled the problems the program has encountered, which include: retrofits to a 100-year-old system; limited access because the system operates around the clock; improvements that were more complicated than initially envisioned; permit delays; unexpected site conditions; and a number of issues related to the electronic security program.

In response to the terrorist attacks on September 11, 2001, the MTA developed a multifaceted strategy to harden and control access to its facilities. The strategy included operational initiatives and 57 security-related projects to be funded mostly through the capital program.

The MTA's 2000-2004 capital program allocated \$591 million to fund the 24 highest-priority projects (i.e., Phase 1). The Phase 1 construction projects targeted the most vulnerable and most heavily used assets, such as stations, transit hubs, bridges and tunnels. Security improvements included electronic security and surveillance; fire, life, safety and evacuation enhancements; perimeter protection; and structural hardening. Each project could involve one or more facilities and security improvements. Over the years, the cost of Phase 1 has effectively grown by 49 percent to \$882 million (including two facilities that were deferred from Phase 1 to Phase 2).

In February 2012, the MTA completed Phase 1, with the notable exception of the electronic security program, the most difficult part of Phase 1. This program entails the installation of more than 3,000 video cameras (including intelligent video) and more than 1,400 access-control devices at various stations and tunnels, which will be integrated and monitored at six local and regional command centers and one central command center. Once installed, maintaining these devices in the mass transit environment will be an ongoing challenge.

The electronic security program has encountered numerous setbacks, and its cost has nearly doubled, to \$516 million, as the scope of the program has expanded. The MTA and Lockheed Martin, which had been the primary contractor, are currently in litigation to determine who is at fault for the various problems with the program.

Originally expected to be completed in August 2008, the electronic security program is now not expected to be entirely completed until June 2014 (assuming the timely release of federal funds), nearly six years later than originally planned and two years later than reported in our March 2011 report.

Despite delays and unplanned costs during Phase 1, the MTA has completed projects that will protect the public and the MTA assets that are critical to the regional economy. The MTA has also completed two of the 16 construction projects planned for Phase 2, but intends to defer six Phase 2 projects because of a lack of funding.

This report relies on information provided by the MTA and represents the progress of the capital security program as of March 15, 2012. As of that date, the MTA had hardened 17 critical infrastructure facilities (e.g., bridges, tunnels and stations) to make them better able to withstand the impact of explosive devices. In addition, perimeter protection had been enhanced at five major facilities.

Fire, life and safety improvements had been completed at 16 facilities, including tunnels and stations. These improvements include improved lighting, signs, ventilation and communication equipment, which are critically important to accelerate emergency response times and expedite evacuation.

Even though the electronic security program is far behind schedule, the MTA and the New York City Police Department (NYPD) are receiving significant benefits from those portions that have been completed. The MTA expects the electronic

security program to be fully operational at three of its four operating agencies by June 2012.

The MTA has also implemented, often with the cooperation of other stakeholders, operational initiatives that have improved security, such as enhanced police patrols, baggage inspections and public awareness programs.

Phase 1

Phase 1 of the MTA’s capital security program encompassed 16 projects (the 24 highest-priority projects were reconfigured, primarily for contracting purposes), divided into 38 construction tasks. We track the progress of the capital security program by using three quantitative measures, discussed below. To maintain security, this report does not reveal the details of individual security projects.

Project Phase

In 2011, the MTA completed two additional capital security projects (see Figure 1) and another was completed in February 2012, bringing the total number of completed projects to 14. Some important elements of the two remaining projects (both involve the electronic security program) have been completed and are providing immediate benefits.

Figure 1

Status of Phase 1 Construction Projects by Year

Phase	2005	2006	2007	2008	2009	2010	2011
Completed	1	2	3	4	7	11	13
Construction	5	8	9	11	9	5	3
Design	10	6	4	1	0	0	0
Total	16						

Sources: Metropolitan Transportation Authority; OSC analysis

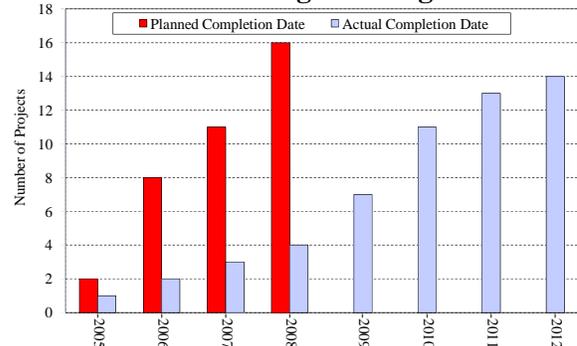
Progress Toward Completion Date

As shown in Figure 2, the MTA had planned to complete all 16 projects by September 2008, but two projects were still not completed at the time of our review. Based on the current schedule, Phase 1 is expected to be completed by June 2014, nearly six years later than the original estimate.

Each of the 14 completed projects took considerably longer to finish than the MTA had initially expected. Eleven projects took between 21 months and 79 months longer than expected (including six that took more than three years longer than expected), according to the baseline schedules set by the MTA in late 2003 and early 2004. For the remaining three projects, delays ranged between 8 months and 12 months.

The two projects still in construction were also far behind the MTA’s baseline schedules. One project was eight years behind the MTA’s baseline schedule and the other project was four years behind schedule.

Figure 2
Phase 1 Program Progress



Sources: Metropolitan Transportation Authority; OSC analysis

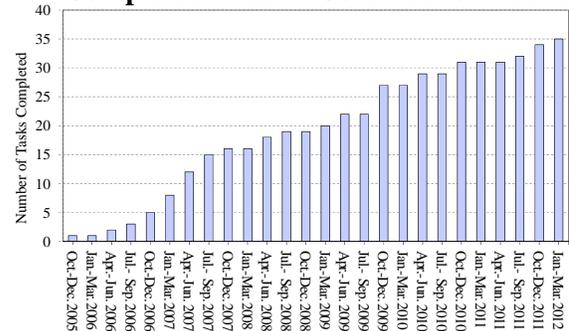
Construction Task Status

Each construction task has its own contractually specified end date agreed to when the contracts are awarded. A contractor can incur financial penalties if it fails to fulfill its obligations under the contract. Alternatively, the MTA risks incurring additional costs if it is unable to fulfill its obligations.

The construction work for the 16 projects in Phase 1 is divided into 38 construction tasks. By March 2012, the MTA had completed 35 tasks (see Figure 3). The remaining three tasks were in the construction phase.

Figure 3

Completed Phase 1 Construction Tasks



Sources: Metropolitan Transportation Authority; OSC analysis

Nearly two-thirds of all of the construction tasks (24 of 38), whether they were already completed or still in construction, were behind the contract schedules (see Figure 4), including ten tasks that were more than one year behind.¹ Only 14 tasks were completed on or ahead of the agreed-upon schedules.

¹ Six tasks were more than two years behind schedule; one was nearly four years behind schedule.

Figure 4
Progress of Phase 1 Construction Tasks

On or Ahead of Schedule	1 to 6 Months Behind Schedule	7 to 11 Months Behind Schedule	1 to 2 Years Behind Schedule	More Than 2 Years Behind Schedule
14 Tasks	11 Tasks	3 Tasks	4 Tasks	6 Tasks

Sources: Metropolitan Transportation Authority; OSC analysis

Current Challenges

While all four MTA operating agencies, the MTA Police Department and the NYPD were receiving benefits from the electronic security program at the time of our review, only one operating agency had achieved full operational capability. A second operating agency is expected to complete work on its part of the electronic security program shortly, although four years later than planned.

A third MTA operating agency had made substantial progress, but the project is not expected to be completed until June 2012. The MTA has had difficulties gaining access to certain facilities to complete the installation of cameras and other electronic devices. These facilities are used by the MTA, but controlled by another entity.

A fourth MTA operating agency (along with the NYPD) was receiving benefits from the electronic security program, but had not completed critical elements of Phase 1. The MTA had applied for federal funds to complete the installation of electronic security devices in certain critical facilities, but the funds had not been received.

According to the MTA, the fourth operating agency will issue the construction award upon receipt of the federal funds, which is expected to occur by June 2012. The MTA estimates that construction will take about two years to complete. If the project follows this schedule, Phase 1 of the electronic security program should be fully operational in June 2014, nearly six years later than originally planned.

The MTA continues to face challenges in integrating access and control devices that were installed prior to the electronic security program. The MTA is seeking opportunities to connect these legacy systems to the new electronic security program. While these devices can be monitored by the agency at its local and regional monitoring centers, the MTA is unable to monitor these devices at its central command center.

The fourth MTA operating agency also had extensive problems with the data network that was expected to support its portion of the electronic security program, but it appears that these obstacles have been largely overcome. For example, sections of the network’s fiber-optic cable had deteriorated and had to be replaced. In addition, underground communication rooms frequently overheat as a result of the heat generated by computers and other equipment. Preventing equipment from overheating remains an ongoing challenge, but the MTA has given priority to communication rooms that house elements of the electronic security program.

A joint effort between the MTA and the NYPD resulted in the accelerated installation of 561 MTA electronic security cameras at three of New York City’s busiest transit hubs. Work was completed in October 2010, and now live video feeds are streamed to the NYPD’s security command center as part of a security initiative for Lower and Midtown Manhattan. These video feeds, which are being monitored by the NYPD, are now routed back to one MTA regional command center and in the future will be routed to the MTA’s central command center.

The overall cost of the electronic security program is expected to nearly double, growing from \$265 million to \$516 million. Nearly half of the increased cost is due to the inclusion of additional facilities (\$110 million), with most of the balance due to unplanned costs associated with facilities to house the command and control centers (\$51 million) and the upgrading and repair of computer networks (\$33 million).

Phase 2

The MTA is implementing additional capital improvements to protect the public as well as MTA assets. Phase 2 of the capital security program encompasses 18 projects.² Two projects are design-only, and 16 projects involve both design and construction. The current budget for Phase 2 is \$212 million, with \$126 million (or 60 percent) devoted to electronic security.

The MTA has completed two design-only projects and two hardening projects in Phase 2. While it took significantly longer than originally planned to complete the two hardening projects, both projects were completed within two months of the scheduled contract completion dates. In addition, the MTA

² For reporting purposes, we exclude from Phase 2 one project that had originally been part of Phase 1 but was deferred by the MTA to Phase 2 because of a lack of funding. We still consider this project part of Phase 1 in our analysis.

expects to complete another construction project by the end of March 2012. This project entails the installation of electronic security devices with live video feeds streaming to the NYPD's security command center.

Of the remaining 13 Phase 2 projects, the MTA intends to defer six to a subsequent phase because of a lack of funding. At the time of our review, the other seven projects were moving forward; one was in construction and six were in design.

Status of Litigation

On April 24, 2009, Lockheed Martin filed a lawsuit seeking to terminate its contract with the MTA. According to Lockheed, the MTA: did not fulfill its obligations under the contract; did not provide access to various sites where work was to be performed; and refused to cooperate in scheduling the performance of work. Lockheed also alleged that inadequate conditions in the communication rooms, where work was to be performed, contributed to delays.

The MTA denied the allegations and filed a counterclaim, stating that Lockheed had breached fundamental and material provisions of the parties' contract, resulting in substantial delays and monetary damages. The MTA also alleged that Lockheed failed to perform its design obligations, manage its subcontractors, adhere to contracted scheduling requirements, provide software maintenance and updating services, and provide a training program. In addition to the counterclaim, the MTA sent a letter of default to Lockheed and then terminated the contract.

Lockheed is claiming damages of at least \$149 million for wrongful termination or \$93 million for breach of contract. The MTA is claiming damages of at least \$141 million. The lawsuit is currently in the discovery stage, which is expected to be completed during the second quarter of 2012. Litigation costs, which are being paid from the capital budget, could be significant.

In July 2009, Lockheed's performance bond sureties for the electronic security contract filed an action in federal district court against Lockheed and the MTA, alleging that they were unable to conclude that the conditions to their obligations under the bond have been met. (Proceeds from a performance bond may be used to complete a project if a contractor is found to be in default.) The MTA is alleging that the insurance companies violated their obligations, and is seeking damages to be determined at trial.

Other Initiatives

The MTA has implemented, often with the cooperation of other stakeholders, a multifaceted approach to making the transit system more secure. These initiatives have received national recognition and include, but are not limited to, the following:

- Multiple security agencies continue to work to protect the transit network. For example, the NYPD patrols the subway system and stations officers at entrances to tunnels, with officers riding more than 1,000 trains each week. The NYPD's Directed Patrol Program enhances the visibility of uniformed personnel in transit areas and facilities. Weekly activities, including directed patrols performing "step-on" inspections and bag screenings, are coordinated with other agencies.
- The MTA Police Department continues counterterrorism operations, which include the use of 75 additional officers, a 10-person emergency services unit and a canine unit with 50 bomb-sniffing dogs.
- Through federal funding, the MTA has acquired emergency preparedness and explosive detection equipment such as radiological detection equipment and mobile command vehicles.
- In 2002, the MTA implemented a public relations campaign that features the slogan "If You See Something, Say Something" to alert the public to suspicious activity. The slogan has been used in 54 organizations around the world, and was recognized by the American Public Transportation Association in 2008.