



## Congresswoman Carolyn Maloney 2016 Second Avenue Subway Report Card

If the Metropolitan Transportation Authority (MTA) continues on its current pace, Phase 1 of the Second Avenue Subway should open for revenue service in December 2016, less than eight months from now. The project is 94.4% completed, all of the track and most of the third rail has been installed, station entrances and ancillary buildings are being completed and the MTA is starting to restore streets that have been under construction for years. There is good reason for guarded optimism that the MTA will meet its deadline, but since there is very little room for error, the project could fall behind if milestones are not met.

Phase 1 will include the construction of 2.3 miles of track, stations at 96th Street, 86th Street, 72nd Street and 63rd Street, 11 station entrances, 6 ancillary buildings, a ventilation shaft and a cooling tower structure. The MTA broke ground for the Second Avenue Subway in April 2007. When it opens, Phase 1 is expected to carry more than 200,000 passengers a day and relieve overcrowding on the Lexington Avenue line. While there is no longer any doubt whatsoever that Phase 1 will open in the very near future, there are still critical issues that may prevent the subway from opening for revenue service on December 2016, including delays resulting from late changes to the 72nd Street entrance, difficulties bringing electricity into the stations and complications in installing elevators and escalators.

The MTA's 2015-2019 Capital plan includes \$1.5 billion for Phase 2 of the subway, which will include stations at 106th, 116th and 125th Streets. Unfortunately, because the MTA did not begin preliminary planning for Phase 2 sooner, construction will stop after Phase 1 is completed so that the MTA can complete preliminary tasks like bringing the environmental impact statement up to date, completing preliminary design and engineering, obtaining a record of decision from the Federal Transit Administration and, hopefully, negotiating a full funding grant agreement with the federal government so that the project can receive federal funds. It would have been preferable if the MTA had begun these tasks sooner, simultaneously with the construction of Phase 1. Nonetheless, there is a clear commitment from the MTA and the State to move forward expeditiously with Phase 2, and the MTA is currently seeking bidders for community outreach, environmental consultants and consultant design services.

The MTA has been admirably open in its outreach to the community. The MTA has demonstrated that it is aware that it needs to do more than merely solve engineering problems; it needs to work pro-actively to reduce impacts on residents and businesses. More frequent meetings with community members and building representatives have enhanced dialogue and allowed the MTA to take action quickly to resolve problems.

First considered a transportation project, the Second Avenue Subway is also an important jobs creator. The project employed thousands of workers at a time when the construction industry was experiencing a sharp downturn. As a result of its importance as a stimulus project, the Second Avenue Subway qualified for funding under the American Recovery and Reinvestment Act of 2009 and received \$78,870,000 which was used at the 86th and 96th Street Stations. The economic downturn has enabled the MTA to secure contracts on better terms than it would have when the economy was stronger, helping to keep the project on-budget.

While 2007 estimates of the time and cost of building the first phase of Second Avenue Subway have proved to be unrealistic, since 2009 the MTA has consistently maintained that its target completion date of December 2016 is achievable. Furthermore, the MTA advises that all of the state funds were allocated as part of the MTA's 2010-2014 capital plan and the federal government has already contributed nearly all of the \$1.3 billion commitment. All of the federal funds have been appropriated, but a small amount was withheld while the MTA and FTA negotiated a new full funding grant agreement which was executed on March 31, 2015. The state should now be receiving the remaining funds.

When construction began, it was common to scoff at the idea that the Second Avenue Subway would ever be built; today few people doubt that the first phase will be completed. As a result, many of the grades on the report card have gone up and the areas of concern have dwindled, although new problems arise as the MTA starts focusing its attention on Phase 2.

## **WHAT'S BEEN WORKING**

### **Project Merit – A+**

**(2013: A+, 2011: A+, 2010: A+, 2009: A+)**

All the reasons that led the FTA to consider this project one of the best in the nation remain strong factors. Indeed, the Executive Director of the FTA recently testified that the benefits of this project will be "profound."

The new subway will relieve overcrowding on the Lexington Avenue line, which continues to be the most overcrowded subway in the nation. Indeed, the MTA estimates that once the first phase of the Second Avenue Subway is completed 23,500 daily riders, or 13% of the Lexington Avenue subway's ridership, will move from the Lex line to the new subway. The Lex line carries 1.3 million riders each weekday, exceeding the combined transit ridership of San Francisco, Chicago, and Boston.

When the Second Avenue Subway is completed, it is expected to carry more than 200,000 passengers a day, more than any other 'New Start' project in the nation. It is projected to shave ten minutes or more off commuting times for many riders. New Yorkers continue to rely on mass transit to commute to work, more than any other Americans, and as ridership continues to hit record levels, the Second Avenue Subway will add much needed capacity to a system that has not expanded in more than 60 years. During much of that time, virtually no money was spent

to expand the system. Indeed, between 1981 and 1999, less than 1% of the MTA's capital funds were spent on expansion. Before that, grand plans were devised but not fulfilled, leaving us with partial tunnels for the Second Avenue Subway and a tunnel to nowhere at 63rd Street. In recent years, the MTA has worked to incorporate the 63rd Street tunnel into its system and Phase 2 will hopefully make use of the long-abandoned tunnels.

Because the Second Avenue Subway will move so many people, relieve crowding on the Lex line and reduce commuting time for thousands of riders, the Project earns an enthusiastic A+ for merit.

**Economic Benefits – A+ (2013: A+, 2011: A+, 2010: A+, 2009: A+)**

When this project was first proposed, it was viewed as an economic development project, crucial for New York City's ability to continue to attract new businesses and keep existing ones. Today, we also recognize its significance as an effective and efficient jobs program. All told, the Second Avenue Subway is creating 16,000 jobs, most of which are well-paid union jobs. At a time when the construction industry was in crisis, infrastructure construction such as the Second Avenue Subway provided vital jobs for thousands of construction workers. These workers spend their hard-earned dollars in local businesses, and pay taxes locally. Furthermore, once the project is completed, it will add value to surrounding areas. Economists like Mark Zandi posit that every dollar spent on public infrastructure increases Gross Domestic Product (GDP) by an estimated \$1.59. Using that formula, the Second Avenue Subway will generate nearly \$7 billion in GDP.

Mass transit is critical to New York's economic success and 1/3 of the nation's transit riders use the MTA's transit system. With ridership rising to levels not seen since World War II, we need to expand our system to reduce overcrowding, reduce headway and reduce delays. A February 2015 report *Keeping New York On Track: The Importance of the MTA Transit Network in a Changing World* revealed that the business density of the New York metropolitan region is ten times that of the average US city, by far the highest of any US metropolitan area.

The Second Avenue Subway is a critical part of New York's economic future, earning the project an wholehearted A+.

**Communication with the Public – A+ (2013: A-, 2011: B+, 2010: B+, 2009: B+)**

In general, the MTA has been extremely accessible to local residents and elected officials, and willing to make data available.

The MTA has taken a broad approach to community outreach -- working through Community Board 8's Second Avenue Subway Task Force, holding meetings with residents at each of the impacted stations, giving residents a chance to ask questions with its Meet the Experts sessions and opening its innovative Community Information Center (CIC). The MTA even conducts periodic tours so that members of the public can actually go down and see the

construction. This gives people a real sense of the monumental nature of the project and also reassures them that real progress is being made.

The MTA has significantly expanded its public outreach, convening meetings with residents near each construction zone, taking groups on tours of the subway excavation, providing periodic updates through Community Board 8's Second Avenue Subway Task Force, through special Ask The Experts sessions, through its website and through email updates. The CIC, located at 1628 Second Avenue (between 84th & 85th Streets), is open Monday, Wednesday and Fridays from 10 a.m. to 6 p.m., Tuesdays and Thursdays from 11 a.m. to 7 p.m. and the second Saturday of every month from 8 a.m. to 3 p.m. The MTA maintains a hotline and an email address so that people can express their concerns or ask for assistance. Dedicated staffers review each station area weekly and work directly with residents and city agencies to address sanitation, transportation and other quality of life issues. The name and email address of a community outreach staffer is listed on the MTA's website so that people know whom to contact. The MTA sends periodic newsletters to people who have requested information. The MTA also posts a broad array of presentations, newsletters and disclosure documents on its website.

The MTA has been remarkably responsive to the community, earning it a grade of A+.

**Completion of Tunnel Construction – A+ (2013: A+, 2011: A+, 2010: N/A, 2009: N/A)**

The MTA was able to finish boring the tunnels to 63<sup>rd</sup> Street in just over 16 months (5 months earlier than projected). Over two miles of subway tunnels were bored at a depth of 70 feet below street level. The Manhattan schist rock from 92<sup>nd</sup> Street to 63<sup>rd</sup> Street proved to be the perfect substance for a TBM. The 485-ton, 450-foot-long TBM used a 22-foot diameter cutterhead to mine 7,789 linear feet averaging approximately 60 linear feet a day. Although there were some difficulties reported in the first few months, the tunnel boring was completed with few complications. The tunneling contract was fully completed in March 2012.

Given the speed and efficiency with which the tunneling was completed, the MTA earned a clear A+.

**Progress Toward Completion of Phase 1 – A- (2013: B+, 2011: B-, 2010: C+, 2009: C+)**

The MTA has made significant progress towards completion. It has awarded 100% of the 12 contracts for the project, completed 94.4% of the work, installed 100% of the tracks and roughly 85% of the third rail, and completed much of the work on station entrances and ancillary buildings.

At the most recent meeting of the Capital Program Oversight Committee in April 2016, it was reported that the 63rd Street Station Contractor is testing and commissioning elevators, escalators, HVAC systems and emergency tunnel ventilation fans, and that testing for the 63rd Street equipment was nearly completion. All Factory Acceptance Tests have been completed. Manpower is increasing to meet the levels required in acceleration agreements. All contractors

are working toward a September 1, 2016 Pre-Revenue training date, which is considered critical for meeting the December 2016 revenue service date.

There remains a lot of work to be done, but the MTA is making steady progress toward completion and has earned a A-.

**Construction Management – A- (2013: B+, 2011: B, 2010: B-, 2009: B)**

The MTA has definitely improved its construction management over the course of this project. By finishing the subway tunnels in just over 16 months, five months earlier than projected, the MTA has proved that it is capable of meeting its timetable. The MTA has taken other positive steps as well: In 2009, the MTA got the permission of the MTA board to allocate federal funding so that contracts could be bid more quickly. It has subdivided contracts into smaller chunks to allow for more competitive bidding to bring costs down. It has created a schedule of contracts so that the public can follow its progress to make sure that contracts are being bid on time. There are bi-weekly meetings with each contract to indentify issues and resolve them. An MTA Capital Corporation staffer has been designated as Fire Alarm Czar Project wide. According to the Fourth Quarter 2015 Report from MTACC (4th Quarter Report), concurrent testing of mechanical, electrical and plumbing systems among three new stations will be required by the project's compressed schedule, which could strain the availability of key New York City Transit resources for test witnessing and acceptance inspections. New York City Transit has agreed to dedicate testing and commission resources at the site. A Code Consultant was hired to augment NYC Transit Code Compliance and bi-weekly meetings are held with Code Compliance personnel. All contractors have been directed to develop an acceleration schedule that meets the September 1, 2016 Pre-Revenue training date, which is critical for meeting the December 2016 revenue service date.

A grade of A- signifies substantial progress in completing the project by December 2016, but concern that the MTA has given itself very little extra time in the event that any problems arise.

**On Time Record – B+ (2013: B, 2011: B-, 2010: C+, 2009: C)**

While the completion date slipped significantly during the first two and a half years of construction, for the last seven years the MTA has consistently projected a December 2016 revenue service date. Nonetheless, as we head down the stretch toward the projected revenue service date with a tight timetable, we are facing the very real possibility that problems could arise that would knock the project off schedule.

The fact that the projected revenue service date has remained unchanged for seven years has been welcome news. Initially the projected date slipped from 2012 to 2014 to 2016, but it has remained December 2016 for most of the construction period. Nonetheless, the FTA is more cautious about the revenue service date. The revised full funding grant agreement executed in March 2015 requires the MTA to deliver the project by February 28, 2018, giving the MTA a

broad window of time to address any problems. Nonetheless, the FTA clearly does not believe it will take that long to complete the project. At a field hearing of the House Subcommittee on Transportation and Public Assets of the Oversight and Government Reform Committee held in New York City in June 2015, Matthew Welbes, Executive Director of the FTA conceded that "It looks like the project is trending, based on our data, toward an opening of closer to, maybe early in, sometime in 2017." The MTA has been adding personnel and requiring contractors to add personnel to accelerate the pace of construction to meet the Pre-Revenue Training date of September 1, 2016.

By all appearances, the MTA has a good shot at meeting its deadline, but there are concerns that the 72nd Street Finishes contractor is falling behind. Because the MTA has succeeded in maintaining December 2016 as its projected completion date for seven straight years and has taken substantial measures to ensure that it will continue to be on-target over the next eight months, it receives a B+ for its on time record.

**Progress on Station Entrances and  
Ancillary Facilities – B+**

**(2013: C, 2011: C-, 2010: N/A, 2009: N/A)**

In 2013, little work had been done on the above-ground station entrances and ancillary facilities, although all of the contracts to build the entrances and ancillary facilities had been awarded. Today much of the work has been completed.

At 63rd street, where the MTA is retrofitting an existing station, all escalators and elevators have been installed, fire life safety installation is complete and testing is underway and on-target.

At 86th Street, ancillary structures 1 and 2 are on target, as is permanent power energization and testing. The contractor has fallen behind in installing escalators and elevators because of delays in machine room construction. The delay is not expected to impact the revenue service date.

At 96th Street, tunnel vent fans, HVAC installation, Fire Life Safety Installation and testing are all on target, but the contractor is behind in installation of escalators and elevators. Reportedly, 7 of 9 of the escalators will be installed by the end of this month and the remaining two will be installed by the end of June with no impact on the revenue service date. The platform elevator will be installed by the end of June and the street elevator will be installed by the end of July with no impact on the revenue service date.

The systems contractor is on target with regard to communications systems installation, traction power energization, track work and signal work.

The big problem is the 72nd street entrance where changes to the 69th Street entrance have caused delays. While escalator installation and testing remain on target, permanent power energization, elevator installation tunnel vent fan installation and HVAC installation are delayed.

The MTA says that most of these will not impact the revenue service date and they have a plan to bring fan installation at Ancillary 1 back on target. Nonetheless, the FTA's monitor expresses concern. The monitor notes that in April, contractors' forecasts had met schedule targets for only 70% of the interim tracking milestones identified at the March Capital Program Oversight Committee meeting; there had been no improvement in the forecasted escalator and elevator installations, coming perilously close to impacting the revenue service date; and NYC Transit personnel will be strained by having to approve testing at three different stations at roughly the same time.

Hopefully bi-weekly meetings between the contractors and designated overseers will help bring the project back on track. Significant progress at the station entrances and ancillary facilities earns the MTA a cautious B+.

### **Planning – B**

**(2013: B, 2011: B-, 2010: B-, 2009 B-)**

The MTA deserves credit for managing to keep both the budget and completion date steady over the last seven years. The Second Avenue Subway is a complex project, and it requires a lot of coordination to bring all of the elements together. The MTA appears to have performed reasonably well at those aspects of the project involving actual construction, but less well at anticipating problems that were foreseeable. In addition, as the project nears the revenue service date deadline, the MTA has expended additional resources in making sure the right people are in place to complete necessary tasks, including dedicated personnel assigned as a Fire Alarm Czar, a Code Consultant and dedicated NYC Transit personnel for test witnessing and acceptance inspections.

At the beginning of the project a great deal of time was lost because of problems locating and moving the utilities. Anyone with experience with New York City's utility grid knows that there are few roadmaps for where utilities and water pipes have been laid, and that there will inevitably be surprises. Delays of this type should have been expected and built into the schedule. Similarly, residents of 301 E. 69th argued for nearly a year that their building systems could not withstand the MTA's proposed construction. Eventually, the MTA conceded that the building's engineers could be correct and moved the entrance to the street. Unfortunately, the MTA may have waited too long to make the change and the late date at which construction began at this entrance could end up delaying revenue service. The MTA should have met with the building leaders and engineers earlier in the process to ascertain whether this would be a problem, and they should have conceded the point earlier in order to give themselves a sufficient window to finish the entrance.

After initial stumbles, the MTA seems to have done a reasonably good job of making sure the project is staying on time and on budget. Because the MTA has augmented its staffing plan, implemented regular meetings with appropriate personnel and focused closely on finding ways to achieve the December 2016 revenue service date, its grade for planning remains a B. Unfortunately, because the project still seems precariously close to missing that deadline, it is impossible to award a grade higher than a B.

**Staying on Budget - B****(2013: B, 2011: C+, 2010: C, 2009: C)**

When the full funding grant agreement was signed, this project was supposed to cost \$3.8 billion. In 2009, the MTA began to project that the project would cost \$4.45 billion. In February 2016, the MTA's board approved an additional \$66 million for this project in order to maintain the December 2016 revenue service date.

The MTA has succeeded in taking advantage of the economic downturn and has gotten better than expected prices from its vendors. It also scrapped plans for a three track system to reduce costs further. Unfortunately, in order to accelerate the project to reach the December 2016 revenue service date, the MTA has been burning through its budgeted contingency funds. In 2009, the budgeted contingency was \$388 million. In December 2015, the contingency was down to \$137 million. By March 2016, the contingency had shrunk to \$56 million. Nonetheless, the FTA's monitor says the \$56 million contingency is in line with the project's current level of completion and confirms that the project continues to be on budget. The monitor says that the MTA spent \$39 million per month over the last three months, but suggests that in order to maintain the December 2016 revenue service date, the MTA should increase spending to \$47 million per month.

Despite the fact that the MTA is increasing its level of spending in order to meet its deadlines, the MTA and the FTA agree that the project is on budget. Accordingly, the MTA is being awarded a solid B.

**Funding for Phase 2 – B-****(New category)**

The good news is that the MTA's final 2015-2019 Capital plan includes \$1.5 billion. The bad news is that the community and elected officials had to fight to keep \$1 billion from being diverted at the last minute to other projects. The state restored \$500 million of the funding and pledged to apply to the federal New Starts program for the other \$500 million. It is entirely appropriate for the MTA to seek New Starts funding which covered 27.2% of the cost of Phase 1.

Unfortunately, the Capital plan is not entirely funded. The State has put in \$8.3 billion and the City agreed to provide an unheard of \$2.5 billion, largely with the understanding that much of this funding would be applied to the Second Avenue Subway. The rest is supposed to come from the federal government and other sources. In a time of cutbacks in the federal budget, there is no guarantee that the expected revenues will be forthcoming.

We nearly were not able to obtain enough funds to enable significant construction to take place during the current capital plan. The history of the Second Avenue Subway is one in which funds have been allocated only to be diverted to other projects or cost savings. As a result, there have been three previous false starts to this project. When \$1 billion was cut from the budget for this project, it looked as if the traditional betrayal of the Second Avenue Subway could be happening again. The fact that New York State's leaders, particularly Governor Andrew Cuomo, heard the community's concerns and restored the funding is excellent news. Nonetheless,

because we nearly lost the funding, and so much of what has now been allocated to the project is contingent on federal action, the MTA earns a B- for Funding for Phase 2.

## **WHAT NEEDS IMPROVEMENT**

### **Mitigation of Construction Impact – C (2013: C-, 2011: C-, 2010: C-, 2009 Grade: C-)**

Construction impact continues to be the most negative aspect of the project. the community continues to experience significant negative impacts from the construction; however some of the most disruptive aspects of the project are starting to wind down.

Businesses and community residents were badly impacted by living and working in a construction zone for nearly ten years. The MTA made efforts to address immediate concerns, including complaints about rats, sanitation. inadequate signage about street crossings or closings, poor visibility of traffic lights and other problems; however it offered no solutions for the largest problems, particularly the fact that businesses in the construction zone lost much of their business and reported a significant loss in income.

Businesses have been significantly affected by the construction, losing sidewalk cafes, pedestrian traffic, and signage, experiencing narrowed sidewalks, constant construction noise, barricades and poor visibility. The MTA created a Shop Second Avenue campaign to try to drive customers to affected businesses, and has extended it to all areas where construction is impacting businesses. Unfortunately, dozens of businesses have closed along the subway's construction zone despite these efforts. Those that weathered the construction are now poised to see revenues increase with added foot traffic from Second Avenue Subway riders, but the coming economic boom will come too late for many. It is unfortunate that the city and state offered no programs or rebates for business owners.

After nearly ten years of construction, residents and businesses are looking forward to completion of Phase 1. For its failure to do more to mitigate construction impact, the MTA has earned a gentleman's C.

### **Testing of Equipment – C**

(New Category)

It all comes down to the final tests to make sure all the equipment is working properly. The MTA has left itself with very little time to complete the installation of remaining equipment and tests to make sure everything is working. If all goes well, the MTA will meet its revenue service date. If not, we will have to wait a few extra months for the tests to be finished and revenue service to start.

Unfortunately, as the FTA's monitor points out, all three of the new stations will be completed within a few weeks of each other. The people who are responsible for testing will be

stretched thin trying to confirm that everything is working at all of the stations. This leaves the possibility that issues will be missed or that the tests will not be able to be conducted on time.

Because there is too much room for error, the MTA gets a C for Equipment Testing.

### **Seamless Transition to Phase 2 – C**

(New Category)

In a perfect world, the MTA would have allocated resources a year or two ago to plan for Phase 2. The contracts for environmental review and engineering and design would have already been awarded, the preliminary work would have been completed and the MTA would have been ready to begin construction on Phase 2 just as Phase 1 was winding down. Unfortunately, the MTA's attention has been entirely focused on Phase 1 and, until recently, minimal work was done on Phase 2.

In recent weeks, there have been some signs of progress. The first three contracts for Phase 2 (environmental review, engineering and design, and community outreach) are being put out to bid. The request for proposals for community outreach was issued in March 2016. The other two contracts are listed on the MTA's Construction and Architectural/Engineering Opportunities page, but do not seem to be available yet.

The delay in moving from Phase 1 to Phase 2 could mean that knowledgeable people will move on and that institutional knowledge could be lost. It certainly means that several years during which construction could have been going forward have been lost. There is a risk that the preliminary work will drag on and that the MTA will not actually begin construction for several years.

When funding was cut from the draft capital plan, the MTA argued that it would not be able to spend the money because construction would not start for two to three years. We need to remain vigilant to ensure that the MTA moves forward expeditiously to get the approvals it needs to begin construction and to qualify for federal New Starts funding.

Because the transition of Phase 2 is proceeding, but is anything but seamless, the MTA barely earns a C.

## **FINAL GRADE**

**Overall Grade – A-**

**(2013: B+, 2011: B, 2010: B, 2009: B-)**

The Second Avenue Subway's economic contributions to the city cannot be understated. The Second Avenue Subway has been an important job generator at a time when the construction industry has been hit hard, and once Phase 1 opens for revenue service, it will help spur economic growth. The MTA has remained on time and on budget for 7 straight years. Nonetheless, we will soon know whether at the end of this year, the Second Avenue Subway opens for revenue service as promised.

The MTA has an ambitious construction schedule to complete Phase 1 by December 2016, and it needs to make sure that this project continues to move forward with all deliberate speed. We must remain vigilant to ensure that the full-length Second Avenue Subway is built. There is a lot more work to be done, but there is also a growing realization that a Second Avenue Subway is fast becoming a reality.