

**MTA LIRR East Side Access
Technical Memorandum Assessing Design Refinement:
Tail Tracks Ventilation Plenum and Grate**

A. INTRODUCTION

This technical memorandum provides an assessment of a design change in the East Side Access Project. Specifically, the memo examines a change proposed since the issuance of the Final Environmental Impact Statement (FEIS) prepared for the project, dated March 2001, and the Record of Decision (ROD) issued by the Federal Transit Administration (FTA) in May 2001. The analysis considers whether additional environmental impacts would result from the new design change that were not previously identified in the FEIS and ROD.

The proposed modification is a refinement to the design of the ventilation system associated with the project's four tail tracks south of Grand Central Terminal (GCT). The tail tracks and associated ventilation system were originally analyzed as a potential design change in a Technical Memorandum dated February 26, 2002. When that analysis was conducted, the specific location for the ventilation plenum, shaft, and sidewalk grate was not identified; the ventilation system was to be located underground, leading to street-level gratings in the sidewalk at a location between East 37th and East 40th Streets near Park Avenue. The current design modification would place the ventilation gratings in the sidewalk along the west side of Park Avenue just south of East 37th Street (i.e., between East 36th and East 37th Streets).

This memorandum describes the FEIS design and the proposed design modifications, and then discusses the impacts of the modified design during construction and operation.

B. PROPOSED DESIGN MODIFICATION

FEIS DESIGN

The FEIS design did not include tail tracks south of GCT or its associated ventilation.

DESIGN MODIFICATION ANALYZED IN 2002 TECHNICAL MEMORANDUM

In the February 2002 Technical Memorandum, a design modification was analyzed that added four tail tracks south of GCT, extending south from the platform tracks of the new East Side Access Terminal at GCT (at approximately 44th Street). The four tail tracks will be approximately 1,700 feet long (including crossovers) and will each be capable of storing a 12-car consist. Each tail track will be in a separate cavern extending south to East 38th Street. During perturbed conditions, such as when disabled trains are occupying platform space in the terminal, the tail tracks will improve operating conditions by providing space to move disabled trains out of the way to allow normal operations at the platforms.

The tail tracks will require ventilation for normal operations as well as emergency conditions. The ventilation fans will operate to exhaust warm air from the tunnels if a train is occupying the tail tracks and the temperature exceeds 105 degrees, or in the unlikely event of a smoke condition in the tunnels. The preliminary ventilation design described in the 2002 Technical Memorandum consisted of a pair of jet fans installed in the annular tunnel space associated with the wye section in each tail track. A 200-square-foot ventilation plenum was to lead to a shaft and street-level gratings in the sidewalk at a location between East 37th and East 40th Streets. The ventilation shaft was to be constructed primarily from below, with limited cut-and-cover work at the surface.

CURRENT DESIGN MODIFICATION

The design of the ventilation system for the tail tracks has been further developed since the 2002 Technical Memorandum was completed. The design for the ventilation system now anticipates a ventilation air tunnel extending from the end of the tail track tunnel (approximately beneath East 38th Street and Park Avenue) to approximately East 37th Street. Jet fans for the ventilation system would be located at the north end of the air tunnel, approximately 140 feet below the surface beneath Park Avenue between East 37th and 38th Streets. At the south end of the air tunnel, three air shafts, each approximately 9 feet in diameter, would connect the air tunnel to an air plenum beneath the sidewalk on the west side of Park Avenue, just south of East 37th Street. The air plenum would be approximately 75 feet long and 12 feet wide and would be covered by a grate in the sidewalk.

The sidewalk grate would also be approximately 7 feet wide and 75 feet long. It would be located in front of the Union League Club building at 48 Park Avenue, ending before its canopied entrance. The grate would be at the eastern edge of the sidewalk (closest to the street). The sidewalk in front of 48 Park Avenue is 21'9" wide and therefore the remaining sidewalk between the building and the new grate would be 14'9" wide. **Figure 1** illustrates the design of the ventilation system in profile and plan; **Figure 2** shows the location of the site on a Sanborn map; and **Figure 3** provides photographs of the project site.

The three ventilation shafts would be constructed using the raise bore technique, an excavation method that involves little activity at the surface and that does not produce significant levels of noise or vibration. This technique uses a raise bore machine to drill the shafts from the already excavated tail track tunnels below. Typically, the first step in the raise bore process is to drill a small "pilot" hole at the center of the shaft from the top of the rock down to the tunnel below. Once the pilot hole is completed, the raise bore machine is used to drill the shaft from the tunnel up to the surface. The machine and workers operate from the bottom of the shaft, and the drilled rock falls to the bottom of the shaft for removal through the tunnels.

Before construction of the shafts and plenum begins, three street trees located in the area where the shaft would be constructed would be removed and utilities located beneath the street in this area would be relocated. Intermittent closures of the curb lane would be required in order to relocate utilities before drilling for the shafts begins. The canopy of the adjacent building (the Union League Club) would be temporarily removed for construction work and the Park Avenue entrance to the building may be inaccessible for short durations. Any such closures of this entrance would be coordinated with the building manager. During these times, the building would continue to be accessible from its main entrance on East 37th Street. The three trees that would be removed would be replaced. The total construction period for the shaft, plenum, and sidewalk gratings, and the restoration of the street and sidewalk is anticipated to be approximately eight months.

C. ASSESSMENT OF PROJECT EFFECTS

LAND USE AND SOCIAL CONDITIONS

The new ventilation shaft, plenum, and grate would be located within and beneath the sidewalk along the west side of Park Avenue between East 36th and East 37th Streets, in front of the 10-story Union League Club (see the photographs provided in **Figure 3**). The Union League Club is at the corner of East 37th Street and Park Avenue, with its main entrance on East 37th Street and a second entrance on Park Avenue. The Union League Club is a private club with dining facilities, a fitness center, meeting rooms, and overnight accommodations available to members.

The area around the site is predominantly residential, with institutional uses, hotels, and limited commercial uses interspersed between residential buildings. Park Avenue is a major six-lane thoroughfare that runs north-south through the area, with two moving lanes and a parking/drop-off/bus stop lane in each direction. Landscaped medians separate northbound and southbound lanes on Park Avenue. Buildings fronting on Park Avenue within 400 feet of the project site are generally mid-rise apartment buildings and hotels, ranging from 14 to 20 stories. Most of these buildings have ground-floor doctors' offices. Several smaller townhouses also front on Park Avenue in this area. Small four- and five-story townhouses predominantly occupy the cross streets in the study area. The buildings fronting on Madison Avenue include a mix of institutional uses such as the Pierpont Morgan Library at the northeast corner of Madison Avenue and East 36th Street, and taller residential buildings and hotels such as the 17-story Madison Towers Hotel at the southeast corner of Madison Avenue and East 38th Street. Many of the institutional buildings in the study area are occupied by missions to the United Nations and Consul General offices, including the General Consulates of Poland, Guatemala, and Armenia. The southeast corner of Park Avenue and East 38th Street is occupied by a church. **Figure 4** shows the land uses within 400 feet of the project site.

The area also includes a notable transportation feature: a tunnel for vehicle traffic beneath the center of Park Avenue between East 34th and East 40th Street. In addition, the Lexington Avenue subway line runs beneath Park Avenue in the study area.

As described above, construction activities would be conducted to minimize disturbance at street level and would last approximately eight months. During this time, excavation would occur for the relocation of utilities, and limited drilling and excavation would occur to create the new sidewalk grating and vent shafts. Construction activities may be disruptive to nearby land uses, but this disruption would be of the same magnitude as typical utility repair construction work and would not affect the ability of nearby land uses to continue their normal activities. During construction, the canopy of the Union League Club's entrance on Park Avenue would be removed and this entrance may be inaccessible for short durations. Any required closures of this entrance would be coordinated with the building manager. The main entrance on East 37th Street would not be affected by the construction activities.

Once completed, the new ventilation system would not be disruptive to surrounding land uses. The only visible evidence of the system would be the sidewalk grate, which is a typical feature in many sidewalks in Manhattan. Warm air would at times be exhausted through the sidewalk grates, similar to exhaust from other sidewalk grates elsewhere in Manhattan. In the unlikely event of a smoke condition in the tail tracks, smoke may be exhausted through the grates to clear the tunnels below. These operations would not adversely affect land uses in the surrounding area.

ECONOMIC CONDITIONS

The new ventilation system would be located within the public right-of-way and does not require the acquisition of private property. As described above, neither construction nor operation of the new ventilation system would result in substantial disruption to nearby land uses. Therefore, no adverse effect to economic conditions would occur.

HISTORIC RESOURCES

The East Side Access Project's Construction Protection and Advance Field Testing Plan, Revision 2, includes provisions for construction of the tail tracks ventilation plenum and grate at Park Avenue and East 37th Street.

As set forth in the East Side Access Project's Construction Protection and Advance Field Testing Plan, Revision 2, the Area of Potential Effect (APE) for historic structures that could be affected by the construction of the new ventilation shaft, plenum, and grate for the tail tracks is the area within a 100-foot radius of the site. This APE includes one historic structure, the Union League Club at 38 East 37th Street/48 Park Avenue, which has been determined eligible for listing on the State and National Registers of Historic Places.¹ In addition, the APE abuts but does not include a portion of the State- and National-Register-listed Murray Hill Historic District. The portion of that district that abuts the APE is the building directly across Park Avenue from the project site, at 45 Park Avenue.

The East Side Access Project's Construction Protection and Advance Field Testing Plan sets forth procedures to protect historic structures from accidental damage during construction. This plan was developed in accordance with the project's Programmatic Agreement, as amended, among the Federal Transit Administration, the New York State Historic Preservation Officer (SHPO), and the Metropolitan Transportation Authority (MTA), with the New York City Landmarks Preservation Commission (LPC) as a consulting party. The Programmatic Agreement also sets forth procedures for review of design elements that have the potential to result in contextual effects to nearby historic structures. The Construction Protection and Advance Field Testing Plan was reviewed and approved by SHPO and LPC.² The procedures set forth in the Construction Protection Plan would be followed to protect the Union League Club from accidental damage during construction of the nearby underground ventilation structure.

Once completed, the underground ventilation system would not adversely affect the nearby historic structure. The sidewalk grate would be similar to the many other sidewalk grates at locations throughout New York City and would not alter the context of the building. On certain days, warm ambient air may be emitted through the sidewalk grate from the tunnels below, and this would not adversely affect the historic structure. Therefore, no adverse effect would occur to the historic Union League Club building from construction or operation of the new ventilation system.

¹ S/NR-eligibility determination made by the New York State Historic Preservation Officer in a letter dated September 5, 2007. In addition, the New York City Landmarks Preservation Commission indicated that the building is eligible for designation as a NYCL in a letter dated September 18, 2007.

² Approval from SHPO was in a letter dated November 9, 2007; approval from LPC was in a letter dated October 5, 2007.

ARCHAEOLOGICAL RESOURCES

Following the procedures set forth in the project's Programmatic Agreement for new design elements, the new location for the ventilation shaft, plenum, and grate was evaluated in a Stage 1A archaeological assessment to identify whether the site has the potential to contain buried archaeological resources.¹ The Stage 1A assessment was reviewed and approved by SHPO in a letter dated November 9, 2007 and by LPC in a letter dated October 5, 2007. The archaeological assessment concluded that the Area of Potential Effect for archaeological resources at the ventilation site, which is the area where excavation would occur, has moderate potential to contain archaeological resources related to the area's former use as the Murray farm. Therefore, archaeological monitoring would be performed, in accordance with the project's Construction Protection and Advance Field Testing Plan, Revision 2, to determine the absence or presence of potential intact cultural deposits. The plan also sets forth procedures to be followed should any intact archaeological resources be encountered. With these measures in place, no adverse effect to archaeological resources would occur.

VISUAL AND AESTHETIC CONSIDERATIONS

As shown in the photographs provided in **Figure 3**, the project site is part of a wide sidewalk in a densely developed area of Midtown Manhattan. During construction, some disruption to this setting would occur, as construction barriers are erected around the project site. As noted earlier, the construction period would be approximately eight months, so this disruption would be temporary and short-term.

Sidewalk grates are common throughout New York City. The addition of a new grate in this sidewalk would therefore introduce a design element that is typical in Manhattan and that would not alter the appearance of the project area. The new underground ventilation system would not obstruct any unique view corridors or views to any visual resources. Therefore, no significant adverse impact to visual or aesthetic resources would occur.

TRANSPORTATION

The site of the new ventilation facility is part of a wide sidewalk and is adjacent to a bus stop on Park Avenue for the southbound M1 bus. The first step in construction of the shafts and sidewalk grate would be relocation of utilities; when this work is under way, the curb lane (bus stop) would be temporarily closed. During this phase of construction, the bus stop would be temporarily relocated. Temporary bus stop relocation is typical in New York City during water main construction, utility work, roadway repairs, and other construction efforts. Relocation of the bus stop would be coordinated with MTA New York City Transit.

After relocation of the utilities, construction work on the ventilation shafts would occur. As described earlier, most of this work would be conducted from the tail track tunnels below. Nonetheless, the construction site would be fenced off from the rest of the sidewalk to protect pedestrians from the construction activities. The sidewalk in this area is more than 21 feet wide, so ample room would remain for pedestrian passage beside the construction area.

¹ *Stage 1A Archaeological Assessment for the 37th Street Ventilation Facility, East Side Access*, September 2007, prepared by URS Corporation.

Construction of the ventilation shafts would be coordinated with MTA New York City Transit so that operations on the southbound Lexington Avenue line would not be disrupted.

Once the shaft, plenum, and grates are complete, the sidewalk would be restored and reopened.

AIR QUALITY

The addition of a new below-grade ventilation system with shafts, a plenum, and a sidewalk grate beneath Park Avenue at East 37th Street would not adversely affect air quality. The only exhaust from the ventilation facility would be warm air emitted when trains are in the tunnels below and the ambient air temperature in the tunnels exceeds 105 degrees. In the unlikely event of a smoke condition in the tunnels, smoke may also be emitted from the tunnel through the sidewalk grate. This would not be a long-term condition and would not constitute a long-term source of air pollution.

NOISE AND VIBRATION

Construction activity at the project site would result in some noise. As described above, the three ventilation shafts would be constructed using the raise bore technique, an excavation method that involves little activity at the surface and that does not produce significant levels of noise or vibration. In addition, construction activities at the site would be short-term, estimated at approximately eight months. Therefore, no significant adverse impacts related to noise or vibration during construction are expected.

Once completed, the ventilation system would not increase noise or vibration levels nearby. The fans associated with the system would be located in the tail tracks tunnel, 130 feet deep beneath Park Avenue (and below the Lexington Avenue subway line and Park Avenue vehicular tunnel) between East 37th and 38th Streets.

ENERGY

The project modifications would not affect the amount of energy consumed during the construction of the ventilation system or during operation of the East Side Access Project once complete.

UTILITIES AND SUBSURFACE INFRASTRUCTURE

The area to be affected for the new shaft, plenum, and sidewalk grate contains some buried utilities. These would be relocated prior to other construction activities.

CONTAMINATED MATERIALS

A Phase I Environmental Site Assessment was prepared to identify potential concerns related to hazardous materials at the site. As for all construction areas for the East Side Access Project, the precautions set forth in the East Side Access Project's Environmental Health and Safety Plan (HASP) would be followed during construction. In addition, contract specifications require the contractor to submit a site-specific HASP that includes health and safety requirements related to specific environmental conditions present at the site.

NATURAL RESOURCES

The project site consists predominantly of a portion of a wide sidewalk and a below-grade area beneath the sidewalk. Three street trees would be removed during construction of the ventilation

shaft, plenum, and sidewalk grate. Once the construction is complete, the street trees would be replaced.

SAFETY AND SECURITY

The new ventilation system beneath the Park Avenue sidewalk is not anticipated to raise significant issues related to safety and security.

ENVIRONMENTAL JUSTICE

Construction and operation of the ventilation system does not have the potential to result in disproportionate impacts to low-income or minority populations, which are protected by Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations." The population in the study area is not low-income or minority in character, and therefore no environmental justice concerns are raised by the new ventilation facility. The closest Census Tracts to the project site are Tracts 80 and 82, together extending from East 35th to East 42nd Street Park to Third Avenue (Tract 80) and from Park to Fifth Avenue (Tract 82). Tract 80 has a minority population of 17 percent and, with a total of 9 percent of its population living below the federal poverty level; Tract 82 has a minority population of 16 percent and a total of 10 percent of its population living below the federal poverty level. In comparison, Manhattan as a whole has a total minority population of 54 percent, with 20 percent of the population living below the poverty level.

D. PUBLIC OUTREACH

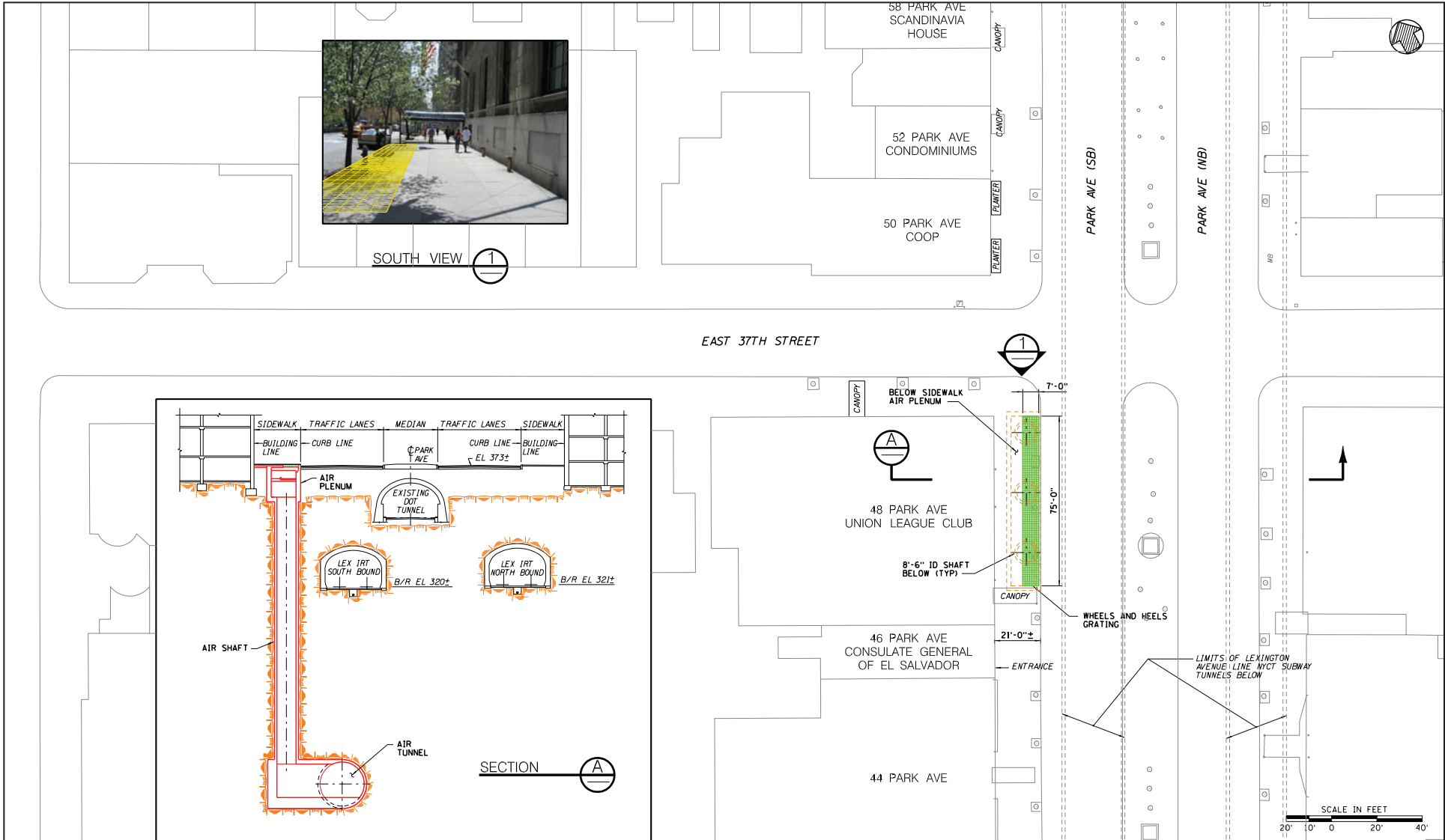
MTA has been conducting ongoing public outreach related to the East Side Access project, including specific outreach meetings with representatives of the neighborhood surrounding the project site for the ventilation shaft, plenum, and grates at East 37th Street and Park Avenue. The following meetings have been held to specifically discuss the ventilation features for the tail tracks:

- Meeting with Community Board 6, Transportation Committee: September 7, 2006.
- Meeting with Murray Hill Neighborhood Association Board of Trustees, October 10, 2006.
- Meeting with Union League Club, August 15, 2007.
- Meeting with Community Board 6, Transportation Committee, Murray Hill Neighborhood Association Board of Trustees, and neighboring property owners (including Hotel Kitano and America-Scandinavia House): October 1, 2007.

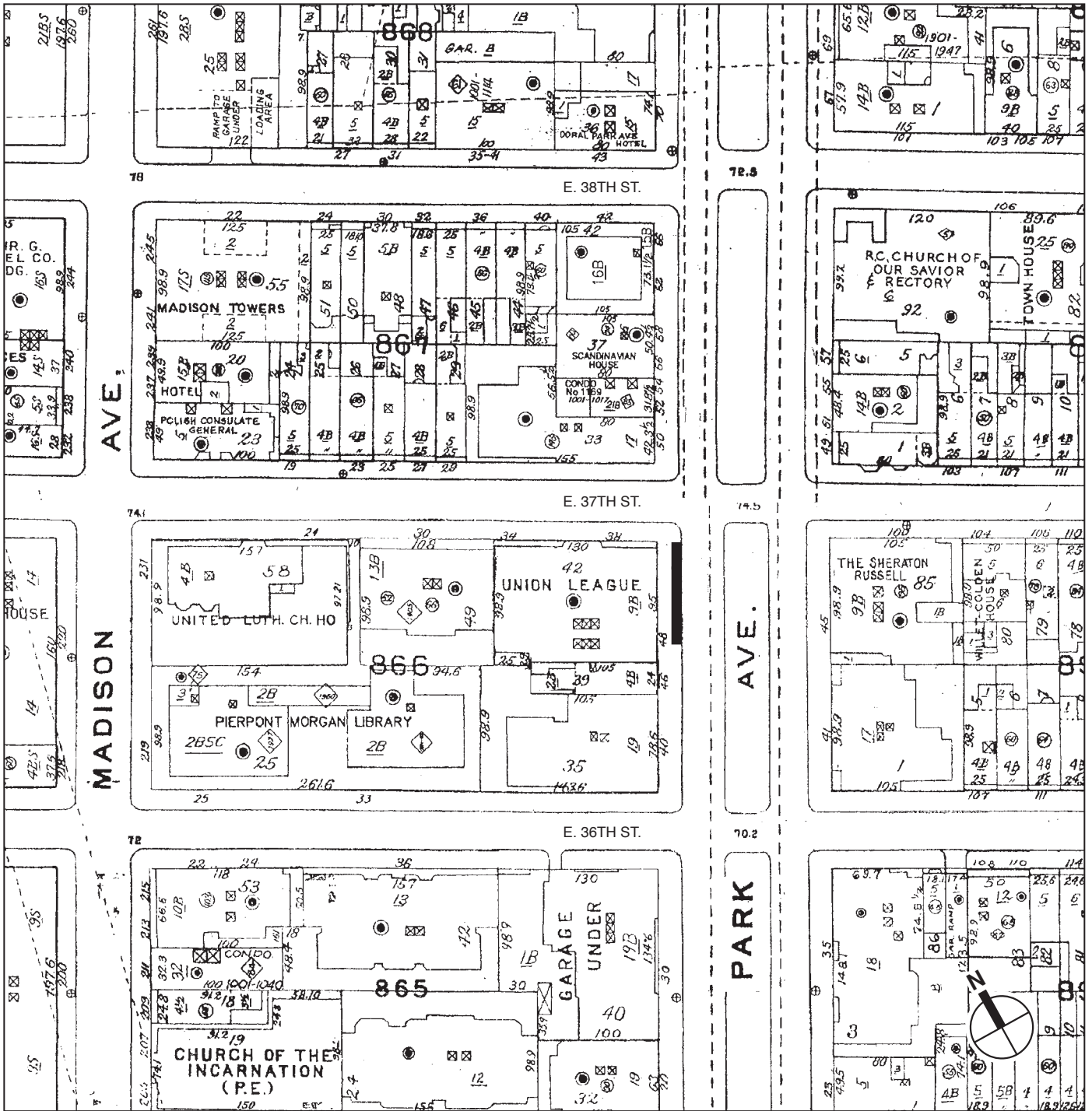
During those meetings, neighborhood representatives indicated that they preferred the proposed location at Park Avenue and 37th Street to other potential locations that had been discussed and that they were satisfied with the proposed location for the ventilation plenum and sidewalk grate.

E. CONCLUSION

Overall, the new ventilation shafts and sidewalk grate at Park Avenue and East 37th Street would not result in significant adverse impacts. It would involve limited disruption during construction, of less intensity and less duration than construction activities anticipated for other Manhattan sites in the East Side Access FEIS. The construction activities are anticipated to last approximately eight months. Once operational, the ventilation system would be similar in nature to the numerous other below-grade ventilation systems with sidewalk grates located throughout Manhattan and the rest of the city. *



1.18.08



Project Site

0 200 FEET
SCALE

Location of Proposed Ventilation Plenum and Grate
Figure 2

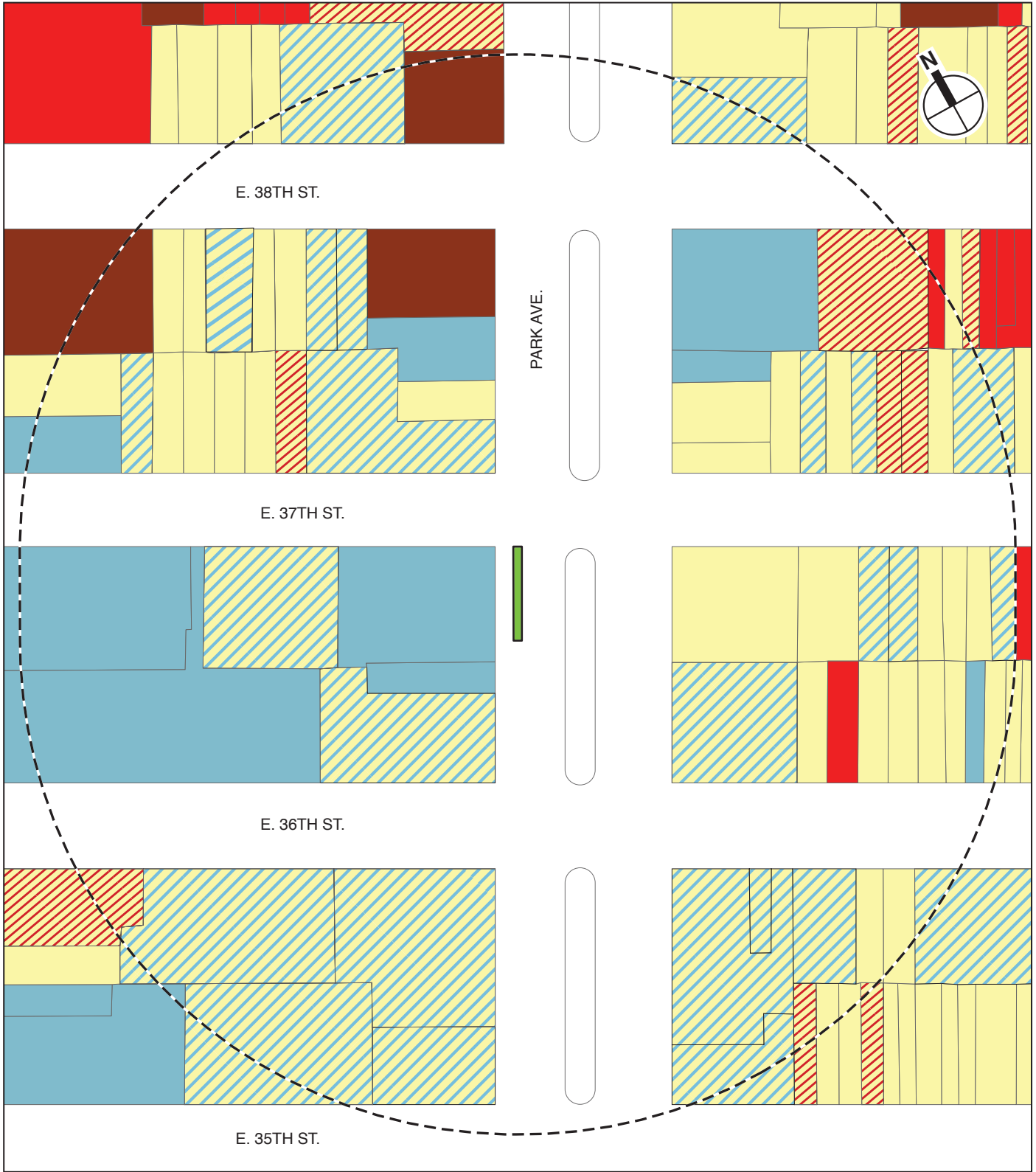


View south from East 38th Street 1



View southwest from Park Avenue 2

1.18.08



- Project Site*
- Commercial and Office Buildings*
- Residential*
- Public Facilities and Institutions*
- Hotel*
- Residential with Commercial Below*
- Residential with Medical Below*
- Study Area Boundary (400-Foot Perimeter)*





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July 15, 2008

JUL 18 2008

Ms. Sarah B. Rios
Metropolitan Transportation Authority
Director Grant Management
347 Madison Avenue
New York, NY 10017-3739

Re: Technical Memorandum for ESA Tail Tracks Ventilation Plenum and Grate


Dear Ms. Rios:

The Federal Transit Administration (FTA) has reviewed the "MTA LIRR East Side Access Technical Memorandum Assessing Design Refinement: Tail Tracks Ventilation Plenum and Grate" (Technical Memorandum) dated February 2008 and submitted to our office on April 16, 2008. Based on our review of the Technical Memorandum, the FTA has determined that the design refinement to the East Side Access Project (Project), as described in the Technical Memorandum, will not result in additional significant environmental impacts.

The NEPA requirements as outlined in 23 CFR 771.130 have been met, and no supplemental environmental review is necessary for the proposed refinement.

Please be aware that the Project must be carried out as described in the Technical Memorandum and FTA's Memorandum, dated July 14, 2008. If changes to the Project are proposed, FTA will need to determine if additional environmental studies will be necessary before the changes can be implemented. Should you have any questions concerning this Project, please contact Nina Chung at 212-668-2180.

Sincerely,



Brigid Hynes-Cherin
Regional Administrator

cc: A. Heffernan

Enclosure: FTA Memorandum, date July 14, 2008

**ADDENDUM TO TECHNICAL MEMO NO.4
37TH STREET VENTILATION PLANT CONSTRUCTION ACTIVITIES**

**V. PROPOSED MODIFICATIONS TO CONSTRUCTION ACTIVITIES AT
37TH STREET VENTILATION PLENUM**

Two construction activities are now proposed to occur in the area of the 37th Street ventilation plenum at Park Avenue that were not anticipated in the earlier analyses conducted for the East Side Access Project. These activities are: the use of the ventilation plenum for construction access to the train tunnels, and blasting in the tunnels near 38th Street to complete the installation of fans there. These new activities would extend the construction period at 37th Street and Park Avenue by about two years.

Description of Proposed Construction Activities

Previously Approved Design

The FEIS design did not include tail tracks south of GCT or its associated ventilation. Technical Memorandum No. 2, prepared in February 2002, analyzed the design modification that added four tail tracks south of GCT and anticipated a ventilation plenum and street-level gratings at a location between East 37th and East 40th Street. Construction activities at 37th Street and Park Avenue were evaluated in Technical Memorandum No. 3: Tail Tracks Ventilation Plenum and Grate, prepared in February 2008. That memorandum evaluated the addition of ventilation gratings in the sidewalk along the west side of Park Avenue just south of East 37th Street (i.e., between East 36th and East 37th Streets).

Technical Memorandum No. 3 described and evaluated construction activities required for the ventilation plenum at 37th Street and Park Avenue. The activities evaluated included removal of street trees, relocation of utilities, and the mining of three ventilation shafts using the raise bore technique on the western sidewalk at Park Avenue between 36th and 37th Streets. An eight-month construction period was anticipated.

Following approval by the FTA of the 37th Street ventilation plenum, construction was undertaken. Construction of the 37th Street plenum and shafts was mostly completed in December 2009. Three shafts are now present, extending from the tunnels up to the sidewalk. The shafts are located at the southwest corner of East 37th Street and Park Avenue, in front of the Union League Club. These shafts will be covered with a sidewalk grate once all activities at the site are complete.

Proposed Tunnel Access from 37th Street

The temporary use of the completed plenums at 37th Street and Park Avenue for tunnel access is proposed to facilitate the overall construction of the East Side Access Project. The proposal includes use of the ventilation shafts for delivery of concrete, delivery of other materials, and access by tunnel construction personnel:

- **Concrete Deliveries:** The southernmost shaft would be used for concrete and shotcrete deliveries. Between 10 and 30 concrete trucks per day (depending on the pour size) would supply concrete to the tunnels via a concrete pump located within the air plenum beneath the sidewalk or in the tunnel, approximately 140 feet below the sidewalk. These deliveries would be made between 8 AM and 7 PM on weekdays, on average about three days per week. A maximum of four concrete mixer trucks would be in the 37th Street vicinity at the same time. Two would be in the west curb lane of Park Avenue to the south of 37th Street—one delivering concrete and one having its concrete chute washed out after completing its delivery. The other two trucks would be in the west curb lane of Park Avenue north of 37th Street, waiting to make their deliveries. Concrete-related deliveries are anticipated to be needed for about 16 months over a 20-month period.
- **Deliveries of Other Construction Materials:** The southernmost shaft would also be used for deliveries of construction materials (formwork, rebar, etc) to support the concrete operations in the tunnels, requiring a mobile crane to be stationed adjacent to the plenum. Materials would be lowered into the tunnels via the crane. Concrete and materials deliveries would be coordinated and would not occur at the same time. Every effort would be made to locate the crane in the parking lane and not on the sidewalk, to minimize noise levels at adjacent properties during its operation. The crane would be on site daily during an initial six- to eight-week mobilization period and, thereafter, two to three times per week for a 22-month period. Deliveries would be made on weekdays between the hours of 8 AM and 7 PM.
- **Personnel Access:** The northern shaft would be use for personnel access for about a 22-month period. Approximately 30 workers per shift, three shifts per day Monday thru Friday, would use this access route into the tunnels. A small guard booth would be located on the sidewalk above the middle plenum and a stairway would be installed leading to the base of the plenum. Workers would walk to the northern shaft where an elevator (also referred to as an Alimak) would be installed for tunnel access. A guard would be at the site during all working hours.

After the 22-month construction access period, the sidewalk grates will be installed and the site will be restored over a two-month period.

During preparation of the FEIS, the EA, and Technical Memorandum No. 3, it was anticipated that concrete would be delivered to the tunnels from three access points: the Northern Boulevard shaft in Queens, and the 50th Street Facility site and the 44th Street Facility site in Manhattan. Due to the delay in the awards of the contracts for both the 44th and 50th Street Facilities, tunnel shafts at these locations have not been constructed and access to the southern end of the tunnels is difficult and time consuming. Furthermore, the Manhattan Tunnels contract was expanded to include construction of the ventilation fan chambers located in the tunnels beneath Park Avenue at about 38th Street. The advancement of this work provides for better ventilation during the ESA

construction period. As a result, concrete pours will be needed sooner than anticipated at the southern end of the tunnels. Tunnel access at 37th Street would enable discrete work locations for the different contractor activities that will be occurring simultaneously in the tunnels. Discrete access for different contractor work locations reduces the potential for construction hazards/risks as well as the potential for delay claims.

Proposed Blasting to Complete Excavation of Fan Chambers

To complete the installation of fans in the 37th Street ventilation plenum, controlled drill and blast activities is required. As noted earlier, blasting was not evaluated in Technical Memorandum No. 3 for construction of the 37th Street ventilation plenum.

Approximately 12 months of controlled drill-and-blast activities would occur over a period of 18 months. During that time, on days when blasting would occur, one or two blasts would be discharged between the hours of 9AM to 10 PM on weekdays only. Blasting would be conducted in coordination with the New York City Fire Department (FDNY). Residents of the immediate area would be notified prior to any blasting activities.

Previous Analyses Related to 37th Street Ventilation Plenum

Technical Memorandum No. 3 included analysis of the anticipated construction impacts associated with East Side Access Project activities at the 37th Street ventilation plenum site. The memo concluded that these activities might be disruptive, but given their short duration and limited scope, they would not result in significant adverse impacts at that site.

Technical Memorandum No. 3 identified one historic resource within the Area of Potential Effect (APE) for the 37th Street ventilation plenum: the Union League Club, which is immediately adjacent to the ventilation site. The East Side Access Project's Construction Protection and Advance Field Testing Plan sets forth procedures to protect historic structures from accidental damage during construction. This plan was developed in accordance with the project's Programmatic Agreement, as amended, among the Federal Transit Administration, the New York State Historic Preservation Officer (SHPO), and the Metropolitan Transportation Authority (MTA), with the New York City Landmarks Preservation Commission (LPC) as a consulting party. The Construction Protection and Advance Field Testing Plan was reviewed and approved by SHPO and LPC.¹ Technical Memorandum No. 3 indicated that the procedures set forth in the Construction Protection Plan would be followed to protect the Union League Club from accidental damage during construction of the nearby underground ventilation structure.

¹ Approval from SHPO was in a letter dated November 9, 2007; approval from LPC was in a letter dated October 5, 2007.

Assessment of Effects of the Proposed Changes

For most of the analysis areas considered in the FEIS and Technical Memorandum No. 3, the proposed additional construction activities at the 37th Street site and the corresponding extension of the construction schedule at that site would not change the overall conclusions of the FEIS and Technical Memorandum No. 3. The construction activities proposed at 37th Street and Park Avenue would be temporary (an estimated 2 years) and, during that time, would be sometimes be disruptive to surrounding land uses. Technical Memorandum No. 3 already described the effects of short-term construction activities on the surrounding area, and for most areas these effects would be the same with the longer construction schedule.

The proposed modifications to the construction activities at 37th Street do not require acquisition of property and would not affect or disturb areas outside the initial 37th Street construction zone. Specifically, no significant adverse impacts would occur in the following categories:

- Land Use, Zoning, Socioeconomic Impacts, since the proposed modifications would not cause significant adverse impacts and the construction zone is smaller than the initial one analyzed in Tech Memo No.3;
- Parkland, since no parkland is in the area;
- Archaeology or Hazardous Materials, since no excavation is proposed;
- Utilities, since no additional utilities at 37th Street would be disturbed;
- Natural, Water Resources/Coastal Zone/Waterfront Revitalization, since none exist in the area.

This technical memorandum considers the construction effects for four areas where effects could differ from those previously considered: historic resources, transportation, air quality, and noise.

Historic Built Properties

As noted in Technical Memorandum No. 3, one historic resource, the Union League Club is located within the APE for the proposed construction site. The procedures set forth in the East Side Access Project's Construction Protection and Advance Field Testing Plan would be followed to protect this building from accidental damage during construction activities, including the tunnel access activities and the blasting.

Transportation

With the proposed use of the 37th Street ventilation plenum for tunnel access, concrete deliveries to the site would take place intermittently over a period of 20 months. No deliveries would occur during the New York City Department of Transportation's (NYCDOT) embargo period for street disruptions, which is between Thanksgiving and New Year's Day. During operations, the deliveries would be made between 8 AM and 7 PM for an average of three weekdays per week. Depending on the size of the concrete pour, there could be up to 30 deliveries on a given day.

All activities would take place along the southbound side of Park Avenue. After delivering concrete, the concrete chute of each truck would be washed out at the construction site. At the same time, up to two other trucks would be queued along the west curb north of East 37th Street. No more than four concrete trucks would be present in the vicinity of the construction site at the same time, because of the time constraints for concrete transport. Also, given that there would be no more than 30 deliveries on a given day, there would not be a large number of hourly truck arrivals and departures at the site. According to the *CEQR Technical Manual*, an action that generates more than 50 vehicle trips in a peak hour could warrant a detailed traffic analysis. Since the proposed concrete deliveries would not yield peak hour trips that exceed the CEQR threshold, no further detailed traffic analysis is required and the operations are not expected to result in any significant adverse traffic impacts.

With regard to the maintenance and protection of traffic, permit approvals would be obtained from NYCDOT to ensure that all requirements are met, including the protection of pedestrian flow. All operations would be limited to the site on the west sidewalk between 36th and 38th Streets and along the associated curb lane of southbound Park Avenue. Unlike the previous construction activities at the site, for the proposed tunnel access activities, pedestrian access on the sidewalk would be maintained, with a minimum of a 5-foot-wide sidewalk maintained alongside the 37th Street ventilation plenum shafts. Concrete delivery trucks would use the curb lane (i.e., parking lane), and no moving traffic lanes would be closed.

Prior to commencement of construction of the ventilation plenum at 37th Street, a bus stop for the southbound M1 bus was located at the construction site. As described in Technical Memorandum No. 3 (February 2008), the bus stop was temporarily relocated to accommodate the East Side Access construction activities for the 37th Street ventilation plenum. To use this site for tunnel access, the period of bus stop relocation would be extended for the additional construction period. Temporary bus stop relocation is typical in New York City during utility work, roadway repairs, and other construction efforts. North of East 37th Street, prior to the beginning of East Side Access construction activities on the block to the south, the curb lane on southbound Park Avenue approaching East 37th Street is used for daytime deliveries and nighttime parking, which would be displaced for the construction activities. An estimated four to five parking spaces would be displaced.

As was done for the previous construction at East 37th Street, all travel lanes would be maintained on Park Avenue. In addition, unlike the previous work conducted for the ventilation plenum construction, the concrete deliveries would not require staging on the north side of East 37th Street between Park and Madison Avenues. The north curb lane, which has weekday daytime No Standing regulations, would be available for moving traffic, thereby creating a more favorable condition than experienced during the prior construction activities on this Thru-Street. Finally, in accordance with NYCDOT stipulations made as part of the permit approval process, MTA will engage NYPD to

provide traffic agents to manage traffic flow during concrete deliveries and other construction activities at the site.

Air Quality

The equipment used at the 37th Street construction site for tunnel access would generate pollutant emissions in the immediate area around the construction site, however, the proposed construction activities are not expected to result in any significant adverse air quality impacts. At the construction site, these emissions would be very low when compared to emissions for typical New York City construction projects, which involve other types of activities that generate air emissions in addition to concrete pours, such as demolition, excavation, soil dumping, grading, foundation and structural tasks, and erecting building facades.

The primary pollutant of concern for the proposed construction activities is particulate matter (PM) specifically, fine particles with an aerodynamic diameter of less than or equal to 10 micrometers (PM₁₀) and fine particles with an aerodynamic diameter of less than or equal to 2.5 micrometers (PM_{2.5}). New York City (and much of the surrounding metropolitan area) is classified as non-attainment for the PM_{2.5} National Ambient Air Quality Standard (NAAQS) of 35 µg/m³ on a 24-hour average basis and 15 µg/m³ on an annual average basis. For PM₁₀, current ambient levels monitored in New York City are well below the current standard of 150 micrograms per cubic meter (µg/m³) which is based on a 24-hour average.

New York City's PM_{2.5} guidance requires a quantified analysis to determine the maximum increases in concentrations if the number of heavy-duty trucks is projected to be greater than 19 during any one hour. The proposed project would generate approximately 10 to 30 concrete truck deliveries over an 11-hour operating day, resulting in a maximum average of three per hour, or, at most four per hour, well below the City threshold. Consequently, no analysis of traffic-related PM_{2.5} impacts is required.

The crane and concrete pump to be used for the proposed construction activities would incorporate the latest air emissions reduction technology, including diesel particulate filters (DPFs) for the control of PM emissions. In general, DPFs reduce PM_{2.5} emissions by 90 percent or greater, and are considered Best Available Technology (BAT). Additionally, all construction equipment and trucks would use Ultra Low Sulfur Diesel Fuel, as required by law.

Emissions and impacts of PM_{2.5} from construction-related activities (engine emissions from truck queuing and concrete pumping, and fugitive emission from truck cleanout) would be extremely low when factoring in the level of construction activities over a longer term (annual) basis.

Similarly, emissions of PM₁₀ from the proposed construction activities are not expected to result in any exceedance of the NAAQS. The levels of PM₁₀ produced by these activities would be well below the NAAQS and background concentrations, based on the

maximum number of concrete trucks operating during a 24- hour period and the duration of concrete pumping activities.

Noise

A screening assessment for construction noise was performed in accordance FTA’s guidance document, *Transit Noise and Vibration Impact Assessment*, May 2006 to determine whether a more detailed noise assessment would be required.

The FTA screening methodology specifies guideline values, shown in Table 1, to be used for evaluating the potential for construction noise impacts. When the General Assessment indicates that construction noise levels (based on an evaluation of the two noisiest pieces of equipment operating simultaneously) would be lower than the values shown in the table, no detailed analysis is warranted.

Table 1
FTA Construction Noise Criteria:
General Assessment

Land Use	L _{eq(1)} (dBA)	
	Day	Night
Residential	90	80
Commercial	100	100
Industrial	100	100

For the tunnel access construction activities, the noisiest pieces of equipment are the concrete mixer trucks and the mobile crane. Based on the proposed construction phasing, the mobile crane would not be operated at the same time as the concrete mixer trucks. It is assumed that the contractor would use concrete mixer trucks that each generate an L_{max} of 79 dBA or less at a distance of 50 feet, and a mobile crane that generates an L_{max} of 79 dBA or less at 50 feet. The only other piece of construction equipment at the construction site would be located below grade in the tunnel and therefore would be shielded from the adjacent residential buildings.

As shown in Table 2, in all cases the analysis results are below the FTA guideline levels. Accordingly, the proposed construction activities would not result in any significant adverse noise impacts, and no further analysis is required.

Table 2
General Assessment Analysis Results

Case	L _{eq(1)} (dBA)
1: Impact of two concrete mixer trucks at 50 Park Avenue	87 dBA
2: Impact of two concrete mixer trucks at Union League Club	83 dBA
3: Impact of mobile crane at Union League Club	81 dBA
4: Impact of mobile crane at 40 Park Avenue	89
5: Impact of two concrete mixer trucks at 40 Park Avenue	87

Controlled blasting activities that are proposed at the 37th Street site would also result in additional noise and vibration, it would occur intermittently and over very short periods

of time, i.e., 4-5 seconds once or twice within a 24-hour period. The blasting would adhere to the requirements of the East Side Access Project's noise and vibration control specifications, and all efforts would be made to notify nearby building occupants in advance. Based on the implementation of these measures, the proposed blasting activities would not result in any significant adverse noise or vibration impacts.

Public Outreach

MTA has been conducting ongoing public outreach related to the East Side Access Project, including specific outreach meetings with representatives of the neighborhood surrounding the project site for the ventilation shaft, plenum, and grates at East 37th Street and Park Avenue. The outreach related to the 37th Street ventilation plenum began in 2006, prior to selection of the final location of the ventilation plenum and sidewalk grates, and continued into 2008 and 2009 as Technical Memorandum No. 3 was prepared and the final location was approved by FTA and incorporated into the East Side Access Project.

Since then, outreach has continued as construction has been under way at 37th Street. More recently, public outreach has included specific discussions of the proposed construction activities at 37th Street and Park Avenue, including a presentation to Community Board 6 in December 2009. Table 3 lists the various outreach activities conducted related to the 37th Street ventilation plenum and other East Side Access construction activities at this site.

Table 3
Public Outreach Related to East Side Access Project Activities
at 37th Street and Park Avenue

Date of meeting	Individuals/Groups Present
<i>Presentation of prior locations for ventilation plenum</i>	
Sept 7 th 2006	Community Board 6 - Transportation Committee
October 10 th 2006	CB6 Transportation Committee, Murray Hill Board of Trustees, Kitano Hotel representatives, American-Scandinavian House representatives
<i>Presentation of current sidewalk configuration</i>	
August 15 th 2007	Union League Club
October 1 st 2007	CB6 – Transportation Committee
February 2008	Union League Club
May 15 th 2008	El Salvadorian Mission and Consulate
June 2 nd 2008	Union League Club
August 20 th 2008	Kitano Hotel
August 26 th 2008	American-Scandinavian House
September 10 th 2008	CB6 – Full Board
September 18 th 2008	Rudin Management – 40 Park Avenue
September 2008	50 Park Avenue
October 9 th 2008	Kitano Hotel

October 20 th 2008	Union League Club
December 12 th 2008	CB6, local elected officials representatives, property representatives
December 23 rd 2008	Rudin Management – 40 Park Avenue
January 9 th 2009	El Salvadorian Mission and Consulate
March 27 th 2009	CB6 – Full Board
<i>Current proposal for construction activities</i>	
October 20 th 2009	CB6 – District Manager and small number of representatives
October 30 th 2009	50 Park Avenue
November 11 th 2009	CB6 – District Manager and small number of representatives
December 9 th 2009	CB6 – Full Board
December 14 th 2009	CB6 District Manager and small number of representatives, NYCDDC

Since construction began, there have been many informal meetings with property representatives that have occurred as East Side Access Project representatives stopped at nearby buildings to discuss upcoming work or address concerns. Numerous e-mails have been distributed to provide updates and notifications. A community update that provides a description of construction work under way and what to expect related to construction impacts is distributed approximately every three months.

The current proposal for additional construction activities at the 37th Street site related to tunnel access was first raised at a meeting with District Manager of Community Board 6 and small number of district representatives on October 20th 2009. The Community Board was advised that 44th Street Vent Facility was not a viable an option for concrete drop activity because that contract was awarded behind schedule.

Concerns that were raised included the following:

- Construction noise and dust
- Expanding construction footprint
- Construction activities continuing outside of work hours
- Insufficient information provided on construction progress
- Project time-line extended.

Several meetings followed where other alternatives to the 37th Street location were reviewed. On December 14th 2009, East Side Access Project representatives presented the current proposal to use the southbound curb lane on Park Avenue north and south of 37th Street. Other alternatives that were also reviewed were:

- Pershing Square (near East 42nd Street), which was deemed technically infeasible, because New York City Transit facilities and a number of major utilities are located close to the surface below street level.
- 38th Street, which was suggested by the Community Board to avoid impacts to 37th Street while another street construction project is under way. The Community Board determined that the 38th Street option was not necessary, since the other construction project would not have the impact originally anticipated.



U.S. Department
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March 3, 2010

Christopher Boylan
Deputy Executive Director, Corporate and Community Affairs
Metropolitan Transportation Authority
347 Madison Avenue
New York, NY 10017-3739


Dear Mr. Boylan:

FTA has reviewed the Metropolitan Transportation Authority's (MTA) "MTA LIRR East Side Access Technical Memorandum Assessing Design Changes: LIRR Concourse and Street Entrances" (referred to as Technical Memorandum No. 4), dated July 30, 2009. MTA also submitted the following documents as part of the environmental record in order to support FTA's review and decision on Technical Memorandum No. 4:

- August 28, 2009, October 22, 2009, and February 19, 2010 emails from MTA to FTA.
- December 2009 Categorical Exclusion Documentation for "Grand Central Terminal Recycling and Waste Management Facility".
- November 2009 "Pedestrian Simulation of East Side Access and Grand Central Terminal".
- January 11, 2010 "Addendum to Technical Memorandum No. 4 – 37th Street Ventilation Plant Construction Activities".


This documentation was submitted to FTA pursuant to CFR 450.771.130(c) to determine if any new significant environmental impacts would result from the proposed design changes since the East Side Access (ESA) Final Environmental Impact Statement (FEIS) and Record of Decision (ROD).

Based on FTA's analysis of Technical Memorandum No. 4 and supporting documentation, FTA finds that the refinements, as described in the above documentation, would not result in any significant environmental impacts that were not evaluated in the FEIS or ROD.

In addition, the MTA LIRR, NYSHPO, and the FTA are executing an Amendment to the 2006 East Side Access Amended Programmatic Agreement in order to ensure that if any resource is discovered when Areas of Potential Effects are modified, an amendment to the Amended PA will not be necessary. Attached for your file is one, original executed copy of the Amendment to the ESA Amended Programmatic Agreement.

If you have any question regarding this, please call me at 212-668-2170.

Sincerely,


Brigid Hynes-Cherin
Regional Administrator

Cc: A. Heffernan, MTACC
S. Rios, MTA