

Torres Rojas, Genara

FOI# 14919

From: lbs4@columbia.edu
Sent: Wednesday, May 14, 2014 7:44 AM
To: Duffy, Daniel
Cc: Torres Rojas, Genara; Van Duyne, Sheree; American, Heavyn-Leigh
Subject: Freedom of Information Online Request Form

Information:

First Name: lynne
Last Name: sagalyn
Company: columbia business school
Mailing Address 1: 3022 broadway
Mailing Address 2: Uris 816
City: new york
State: NY
Zip Code: 10027
Email Address: lbs4@columbia.edu
Phone: 2128543380
Required copies of the records: Yes

List of specific record(s):

MOU Agreement between the Port Authority and the MTA re temporary underpinning of No. 1 Subway line at the WTC. This agreement to be made is in PA board meeting minutes of 33006.

THE PORT AUTHORITY OF NY & NJ

FOI Administrator

May 16, 2014

Ms. Lynne Sagalyn
Columbia Business School
3022 Broadway, Uris 816
New York, NY 10027

Re: Freedom of Information Reference No. 14919

Dear Ms. Sagalyn:

This is in response to your May 14, 2014 request, which has been processed under the Port Authority's Freedom of Information Code (the "Code", copy attached) for a copy of the "MOU Agreement between the Port Authority and the MTA re temporary underpinning of No. 1 Subway line at the WTC. This agreement to be made is in PA board meeting minutes of 33006."

Material responsive to your request and available under the Code can be found on the Port Authority's website at <http://www.panynj.gov/corporate-information/foi/14919-WTC.pdf>. Paper copies of the available records are available upon request.

Please refer to the above FOI reference number in any future correspondence relating to your request.

Very truly yours,



Daniel D. Duffy
FOI Administrator

Attachment

MEMORANDUM OF UNDERSTANDING BETWEEN THE PORT AUTHORITY
OF NEW YORK & NEW JERSEY AND MTA NEW YORK CITY TRANSIT AND
MTA CAPITAL CONSTRUCTION

regarding the

UNDERPINNING of the 1 LINE CORTLANDT STREET STATION AND
SUBWAY

This Memorandum of Understanding and Agreement ("Agreement") made this 1st day of June 2006 between MTA Capital Construction (hereinafter referred to as "MTACC") and MTA New York City Transit ("MTA NYCT") which are respectively a subsidiary and affiliate of the Metropolitan Transportation Authority ("MTA"), and which are public benefit corporations having offices at 2 Broadway, New York, NY (the MTA NYCT and MTACC are collectively referred to herein as "MTA", unless otherwise intended) and THE PORT AUTHORITY OF NEW YORK AND NEW JERSEY ("PANYNJ") a body corporate and politic created by compact between the States of New York and New Jersey with the consent of Congress, having its principal office at 225 Park Avenue South, New York, New York, NY 10003.

WHEREAS, MTA and PANYNJ, consistent with the General Project Plan adopted by the Lower Manhattan Development Corporation on June 2, 2004 for the redevelopment of the World Trade Center Site (WTC Site) as referenced therein, including the mass transit system serving the WTC Site, plan to reconstruct, rehabilitate, reconfigure, and enhance the mass transit system that was destroyed in the terrorist attacks of September 11, 2001; and

WHEREAS, the Federal Transit Administration (FTA), in cooperation with PANYNJ, is funding in part, the design and construction of the World Trade Center Transportation Hub (WTC Hub) to rehabilitate, reconfigure and enhance the Port Authority Trans-Hudson (PATH) terminal (PATH Terminal) destroyed by terrorist attacks of September 11, 2001; and

WHEREAS, the WTC Hub has been identified as an FTA-funded, priority transit

project designated by USDOT Secretary Norman Mineta pursuant to Executive Order in order to address the urgent need for comprehensive transit improvements in Lower Manhattan in response to the events of September 11, 2001; and

WHEREAS, the proposed WTC Hub consists of a terminal at the WTC Site to serve the PATH rapid transit system and provide pedestrian connections to twelve (12) MTA NYCT subway lines from the Site, including on the east the future Fulton Street Transit Center and on the west the I Line Cortlandt Street Subway Station and further across West Street (Route 9A) to the World Financial Center and to all WTC Memorial, Cultural, and Commercial Development on the WTC Site; and

WHEREAS, MTA New York City Transit Authority ("MTA NYCT"), pursuant to the New York State Public Authorities Law and an Agreement of Lease with the City of New York, ("City"), operates the subway system in the City of New York, including connecting subway stations that comprise the existing I Line subway and future reconstructed Cortlandt Street station; and

WHEREAS, the proposed I Line subway underpinning project to be undertaken by PANYNJ consists of the construction of a structural system to support the existing subway box to create additional below-grade volume for utilization by World Trade Center ("WTC") site program including the reconstruction of the Cortlandt Street I Line subway station. The underpinning support system would extend along Greenwich Street from Vesey Street at the northern end of the WTC site to Liberty Street at the southern end of the site as more particularly described in the design drawings. This underpinning and related work is referred to herein as the "Underpinning Project"; and

WHEREAS, the Parties have committed to restore and enhance all mass transit services at the WTC Site that were destroyed in the terrorist attacks of September 11, 2001, including the rebuilding of the IRT Cortlandt Street Station as reflected in the MTA's 2005-2009 Capital Program or as otherwise agreed to by the Parties that will be the subject of another agreement(s); and

WHEREAS, MTA and the PANYNJ herein commit to certain initial design and

construction requirements including but not limited to close coordination and acceptance of the proposed underpinning design, relocation of existing subway utilities, NYCT deflection criteria, design guidelines, construction standards, and shared use of the scheduled General Orders (GO's) for the MTA's South Ferry Construction project; and

WHEREAS, PANYNJ will utilize Phoenix Constructors, JV (the "Contractor") to complete the Underpinning Project pursuant to General Contracting Services Contract WTC - 284.458GC and work packages issued pursuant thereto (the "Contract").

NOW, THEREFORE, in consideration of the promises set forth below, and other good and valuable consideration, the receipt of which is hereby acknowledged, and based upon the foregoing recitals, which form a part of this Agreement, it is hereby agreed by the undersigned as follows:

1. Final Design Responsibilities

- a. Based on the two day design charette of July 25th and 26th, 2005, the PANYNJ and MTA have agreed to a design methodology for the Underpinning Project as reflected in the Contract, a copy of which is attached hereto and made a part hereof as Exhibit "A". The PANYNJ will develop the design for the Underpinning Project in a manner that is consistent with the design of the underpinning work performed by MTA in connection with its 63rd Street Tunnel taking into account existing site conditions at the WTC Site.
- b. During design development, MTA will work with PANYNJ to develop the final design in accordance with MTA NYCT design, construction and operational requirements to ensure the safety and integrity of the subway structure and the operating railroad. The final design provided to the Contractor, including construction approach, MTA NYCT construction and operational requirements, and controls for movements of the subway and station box structure, for the Underpinning Project shall be incorporated into the Contract and shall be subject to MTA's review and acceptance prior to the start of work. Such acceptance shall not, however,

abrogate or relieve PANYNJ and its consultants from responsibility and liability associated with the design of the Underpinning Project. PANYNJ shall have final decision authority on all design issues. PANYNJ's consultant, Downtown Development Partnership (DDP), will prepare the final engineering design of the underpinning. PANYNJ must at all times ensure the safety and integrity of the existing subway structure and the operating railroad. DDP is the Engineer of Record and will be responsible for the accuracy and completeness of the design.

- c. MTA will be provided the opportunity to monitor design progress and will provide needed and valuable input into the final design through their attendance of bi-weekly progress meetings held by the PANYNJ. In addition, MTA will be provided design development drawings at the 50% level of final design and design development drawings and draft specifications at the 90% level of final design for review and comment. MTA will provide written comment on both submittals in a matrix format as designated by the PANYNJ so that all comments can be addressed officially. PANYNJ will provide responses to the MTA's written comments through the matrix format. Once all the comments are resolved to the satisfaction of both parties, PANYNJ will incorporate those comments and response agreements into the Contract.
- d. MTA will provide necessary construction specifications and terms and conditions and precautions to the PANYNJ to be included in the Contract.
- e. PANYNJ has provided a copy of the Contract to MTA for review and acceptance. Execution of this MOU shall indicate MTA's acceptance of the Contract. MTA will not be provided the opportunity to request changes of the design methodology, with the exception of errors or omissions that could jeopardize the safety and the integrity of the existing subway structure and the operating railroad. If modifications to the design are required due to field conditions, MTA will be informed of the modifications and be given an opportunity to provide input.
- f. The final design drawings will reflect work that requires access to the track level of the subway. It is agreed to that the work identified as part of these final design drawings will be conducted during scheduled General

Orders ("GOs") for the MTA South Ferry project, or as otherwise agreed to by the parties.

- h. By acceptance of the Contract, MTA will be deemed to have granted PANYNJ, its staff members and contractors, temporary permission to enter the Cortlandt Street station and subway tracks, subject to the terms of this Agreement and the Contract, within the areas shown on the final design drawings for the purpose of surveying, monitoring, constructing, reconstructing, repairing, maintaining, inspecting the Underpinning Project.
- i. MTA and the PANYNJ agree that the underpinning support framing and monitoring systems installed under the Underpinning Project will remain in place until the permanent support of the subway box is installed by the PANYNJ at a future date. At such time, all the underpinning elements within the existing station structure will be removed. PANYNJ will repair any damage resulting from the removal of the temporary underpinning. PANYNJ shall assume the sole cost, expense and responsibility for the repairs. If PANYNJ fails to complete said repair work, MTA NYCT shall have the right to undertake and/or complete the repair work and PANYNJ agrees to reimburse MTA NYCT for all costs and expenses in connection therewith. The scope and manner of the repair and the design and construction of the permanent supporting structure shall be the subject of another MOU.
- j. In order to avoid movements of the subway structure and to ensure the safety of the operating railroad, the underpinning structure will be fully pre-loaded to its design capacity prior to the start of any excavation or dewatering work within the influence zone of the existing subway structure.

2. Movement and Settlement Monitoring:

- a. Prior to and throughout the Underpinning Project construction, the PANYNJ will install instrumentation along the subway box to monitor the movements and settlement of the tracks and the subway and station structure, as indicated in the Contract, to ensure that MTA NYCT

operations will not be affected during and after the construction. The instrumentation will be installed within the subway box structure in locations as shown in the final design drawings. The instrumentation will remain within the subway box structure and the movements will be monitored throughout the duration of construction until after the permanent supporting structures are in place. The instrumentation will be installed outside of the dynamic envelope of the subway train and in a manner so as to not affect subway operations. Copies of monitoring data and any reports generated as specified in the Contract in connection with the monitoring shall be provided to MTA NYCT for their review. This data shall be reviewed by PANYNJ daily and any exceedences from acceptable Alert Limits shall be immediately reported to MTA onsite construction oversight personnel with written notice sent to Anil Parikh within 24 hours.

- b. While working along and in the vicinity of existing NYCT tracks, care shall be taken not to disturb the vertical and horizontal alignment of the tracks. The Contract shall require the Contractor to monitor the alignment within 100 feet of the construction activities. Prior to the start of construction activities, the PANYNJ shall obtain from NYCT, at no cost to PANYNJ, a geometry car survey of each track to establish the baseline conditions. Upon written request by the PANYNJ to MTACC, MTA NYCT shall schedule a geometry car survey of the tracks affected by the construction activities. The request is to be submitted at least one week in advance of the survey. Throughout the project, all geometry car surveys shall utilize the same equipment and the type of measurement system shall remain constant. Track geometry shall be maintained for profile, alignment and cross-level and gauge within the following limits from the baseline in effect at the time of project award:

| | Alert Limit | Upset Limit |
|---------------------|-------------|-------------|
| Vertical Movement | 1/8" | 1/4" |
| Horizontal Movement | 1/4" | 1/2" |

- c. All movement and settlement of the subway structure resulting from construction work, such as mining, underpinning and excavation activities, shall be maintained within the following limits:

| Alert Limit | Upset Limit |
|-------------|-------------|
|-------------|-------------|

Vertical Settlement ½" over 75' but < 1" total 1" over 75' but < 2" total
Horizontal Movement ½" over 75' but < 1" total 1" over 75' but < 2" total

- d. In the event the change in the alignment of the existing tracks or the movement of the subway structure exceed the Upset Limits at any time prior to the completion of the permanent supporting structure, PANYNJ will immediately cease construction, and will perform additional design and construction work as described in the Contract to ensure the safety and the integrity of the existing subway structure and the safety of the subway operations, subject to prior approval of MTA NYCT. At the completion of the Underpinning Project, PANYNJ shall request an additional track geometry car survey to ensure that the geometry of the tracks has remained within the allowable alert limits. Any deviations to the baseline track geometry caused by the construction activities shall be corrected by PANYNJ at no cost to MTACC or MTA NYCT.

3. Construction Work and Access

- a. All activities by and on the behalf of PANYNJ inside and around the MTA subway system shall be performed in full compliance with all the safety rules and regulations of the MTA NYCT set forth in the Contract and without interfering with the subway operations. Schedules for access in and around the Subway and Station areas will be submitted to MTA NYCT in accordance with the Contract. Preparation for work in Phase I of the Underpinning Project began in March, 2006, and actual underpinning work will commence in June 2006. MTA shall be provided with current and updated schedules for the Underpinning Project on a monthly basis.
- b. MTA will coordinate the provision of the necessary Flaggers when flagging protection is required, and Access and Protection personnel for access to operating facilities when such access is required. Cost of such services, payable by PANYNJ to MTA, is specified in Exhibit "B" of this Agreement or as otherwise agreed to by the parties. Flagging Protection can only be provided through MTA NYCT, and must be done in a manner consistent with MTA NYCT's applicable requirements set forth in the Contract.

- c. Construction work that requires track access and track outages, can only be arranged through the MTA NYCT General Order process (GO's). PANYNJ will share in the use of the scheduled GO's for the MTA South Ferry project. Track outages are scheduled for weeknights as well as for weekends during this time period. The exact hours of work will be specified in the Contract or as otherwise agreed to by the parties. Currently, no GO's are planned to be provided beyond the time shown in the contract.
- d. Circumstances may arise that require adjustments to the schedule. Under such circumstances, PANYNJ will be notified at least 72 hours in advance of change. If a GO cannot be provided on the date specified, PANYNJ will be provided with an equivalent GO. The cost of the equivalent GO will be paid for as per Paragraph 11. This will be the only form of compensation. No other compensation, in the form of time, money or otherwise, will be provided.
- e. It is understood that the hours indicated on the GO schedule are the hours of service outage at the location indicated. These are not the actual hours when construction work can be performed. There are operational and safety procedures required for properly securing the tracks for construction work. At the closing of the GO, the tracks will be inspected by the operating department and a test train will be sent into the GO limits to ensure that the tracks, including switches and signals, are safe for service operation. At least one hour before the closing time of the GO, all construction work must stop and all construction materials must be cleared from the right-of-way in order for the test train to enter into the GO limits.
- f. For work not requiring track outages or other subway service impacts, MTA will allow the PANYNJ to perform construction 24 hours a day, 7 days a week and as specified in the Contract. Such work shall not affect subway operations as determined by MTA NYCT. Flagging, where required in accordance with the MTA NYCT's safety rules and regulations set forth in the Contract, will be coordinated by MTA. Failure to provide scheduled flagging and access and protection services will not give rise to any claim from PANYNJ or its Contractor for damages or other liabilities.

- g. The PANYNJ and its contractor(s) will conduct construction operations in close coordination with existing MTA NYCT operations for the 1 Line subway and will use their best efforts to avoid any impacts to the subway service.
- h. PANYNJ acknowledges that timely return of the subway at the conclusion of a GO is of paramount importance for MTA NYCT to resume revenue service. In the event that the subway is not returned to service in a timely manner as a result of PANYNJ and its Contractor activity in the area of work as shown in the contract documents, and there is any delay or impact to MTA NYCT revenue service, PANYNJ shall pay MTA NYCT \$3,276 for each hour or part thereof of delay.
- i. In the event that the South Ferry project completes its work prior to the completion of a previously scheduled G.O., MTA will maintain the remainder of that G.O. for the benefit of the PANYNJ.
- j. Storm and seepage that are discharged into the track drainage system in this section of the subway are being handled by the Vesey Street Pump Room to the north of the Station and the Thames Street Pump Room to the south. MTA will continue to maintain the pumps and the pump room during the construction period. PANYNJ shall design a system to prevent spoils and excavated materials from entering into the track or station drainage system. Design and procedure shall be submitted to MTA for its review and approval. Approved design and procedure must be fully implemented prior to the commencement of the work.
- k. In order to ensure an uninterrupted subway service, MTA maintenance will remove the silt from the pump room sumps and jetta the cross drains once a month. There will be a weekly inspection of the drainage and the protection systems. PANYNJ agrees to pay the costs of these services during underpinning construction activities.
- l. PANYNJ agrees to purchase and deliver four pumps to the pump rooms, concurrent with the commencement of the work, as replacement for the existing pumps in the event that they will be damaged by the construction activities. The pumps shall become the property of MTA NYCT. If it is agreed under joint inspection by both MTA and PANYNJ that the

replacement is deemed not necessary, the replacement pumps will serve as replacements for the subsequent contracts in the construction of the permanent PATH terminal.

4. Contractor Procurement

- a. The Underpinning Work shall be performed in accordance with the terms and conditions of the Contract.
- b. The Underpinning Project will either be performed by the Contractor directly or by qualified subcontractors. Subcontractors who perform work that may impact the safe operation of the subway shall be subject to the review and approval of the MTA. Such approval shall not be unreasonably withheld or delayed.

5. MTA Oversight of the Construction Activities

- a. Prior to the start of construction, each party shall sign a Non-Disclosure Agreement for "Confidential and Privileged" information (NDA) concerning the construction of the 1-Line subway Underpinning Project. The NDA shall prohibit personnel from sharing Confidential and Privileged information learned about the Underpinning Project or any other project occurring on-site. In addition, each agency's staff that has contact with Confidential and Privileged documents shall sign an acknowledgement form recognizing his/her review of the NDA. Both the NDA and all acknowledgement forms shall be maintained by each agency with respect to their personnel. In the event that such an arrangement cannot be finalized, both parties will exercise a mutually agreeable method to share information on a confidential basis.
- b. Any documents that are marked "Confidential and Privileged" will not be provided to the other agency staff unless an NDA Acknowledgement form is signed and demonstrated to be on-file, as indicated in item 5a.
- c. All construction personnel who will work on and in the vicinity of the subway track will be required to attend a one-day track safety training offered by MTA NYCT. The training is offered free by MTA. All other costs will be borne by PANYNJ and its contractors.

- d. MTA will provide its own oversight of the construction activities to ensure the construction work proceeds in accordance with the approved Contract drawings, shop drawings, procedures and materials, and that the safety of the subway operations and the integrity of the existing subway structure will not be compromised. The costs for this oversight will be included in those items charged to PANYNJ as further set forth below.
- e. MTA, either with its own work force or as an assignment to contractors and consultants, shall be allowed to inspect all work that is related to the Underpinning Project.
- f. MTA will be permitted to attend and actively participate in all construction progress meetings and discussions. MTA will be allowed to ask questions that are related to the underpinning work or affect the subway operations. PANYNJ will provide answers to the satisfaction of MTA.
- g. As part of the PANYNJ Quality Assurance and Quality Control process, PANYNJ will hold preparatory meetings, with the participation of MTA, prior to the start of a particular type of work. The meetings will present the approved methods, sequence and materials of the work to be performed, and the check and hold points, where applicable, to ensure the quality and safety of the work and non-interference with subway operations.
- h. PANYNJ will provide office space or cubicles on-site or adjacent to the WTC site for three MTA personnel to work for the duration of the Underpinning Project. The office locations shall be determined by the PANYNJ Resident Engineer in coordination with MTA upon the start of construction. MTA shall provide a list of staff anticipated to monitor the construction project to the Resident Engineer at least two weeks before the anticipated start of construction. All MTA force account assigned to the project shall obtain WTC site security identification and shall display the identification at all times. Details of the office and the equipment to be supplied is attached as Exhibit "C" to this Agreement.
- i. MTA Engineers shall monitor construction activities in coordination with the PANYNJ Construction Engineers. As the construction progresses, MTA Engineers assigned to the project shall not direct construction

activities or give direction to the Contractor and any of its subcontractors working on site for the Underpinning Project nor any other project. If an issue arises concerning construction activities, the MTA Engineers shall notify the designated PANYNJ Construction Engineer immediately and request an evaluation of the particular issue for potential action.

- j. When in the opinion of the MTA Engineer a construction activity could jeopardize personal safety, either of the construction workers or the riding public, or could cause disruption of the MTA train services, or could cause damage to the existing subway structure, the MTA Engineer will have the authority to order the activity to stop so as to prevent such potential incidents from happening. PANYNJ will be immediately notified and a solution sought that is acceptable to MTA.
- k. The Contract reflects work that requires relocation of existing utilities within the station box. All utilities are to be maintained and kept operational at all times during and after the construction period. MTA NYCT rules and regulations and local building and fire-life-safety codes will be observed and followed during and after utility relocation. Any damage to the utilities will be the responsibility of PANYNJ and shall be repaired immediately so as not to disturb subway services. PANYNJ will design and make permanent repair upon coordination and arrangement with MTA.
- l. In the event that a section of the existing railroad needs to be skeletonized to facilitate construction work, the section must be restored to serviceable condition to allow revenue trains to pass, with the possibility of a reduced speed restriction if required, prior to the completion of the GO.

6. Shop Drawing Review and Submittal Approval

- a. MTA NYCT shall review all Contractor submittals during the review process that relate to the safe operation of the subway and provide written comments within ten business days to PANYNJ. PANYNJ shall then cause its Contractor to address any comments to the satisfaction of MTA NYCT. In the event that PANYNJ receives no comments from MTA NYCT within this timeframe, PANYNJ will assume that MTA NYCT has

no comments on the submittal.

- b. MTA NYCT Engineers will be on-site to monitor construction progress and witness that the construction conforms to the approved designs and submittals.
- c. MTA will be provided copies of all approved Contractor submittals and logs/reports for subway box structure deflection monitoring for its use in monitoring the construction. At the conclusion of construction, MTA will be provided one set of the "as-built" contract documents for their use.
- d. In the event that MTA does not agree with the submittal or the disposition of the submittal, MTA will provide its comments and recommendations to PANYNJ. MTA will have final decision authority on issues related to the safety and integrity of the existing subway structure, and PANYNJ will have the final decision authority on all other issues.
- e. The Underpinning Project shall be constructed in accordance with the approved design drawings and/or shop drawings.

7. Safety

- a. The PANYNJ and MTA agree that all work shall be performed in accordance with the MTA NYCT safety rules and regulations set forth in the Contract Documents, with the highest regard for the safety of persons and property, and in a manner designed to minimize interference with activities at the WTC Site and not to interfere with the operation of the 1 Line subway (except through approved GOs).

8. Dispute Resolution

- a. Any dispute arising out of this Agreement or in connection with construction phasing, staging, or coordination activities related to the Underpinning Project which cannot be resolved at a project staff level, will be elevated to PANYNJ's Director, Priority Capital Programs and MTACC's Chief Engineer, or their designees, for resolution. In the event that the dispute concerns work that relates to the operation, safety, or integrity of the subway, that dispute shall be resolved between the PANYNJ Director, Priority Capital Programs Department and the MTA

NYCT Chief Engineer, working through MTACC.

- b. In the event that such a dispute involves another lower Manhattan project, executive staff from that project will be brought into the resolution process as appropriate.
- c. In the event the parties are unable to resolve any dispute submitted to them for resolutions then the parties may seek all available legal or equitable remedies.

9. Insurance and Indemnification

- a. The MTA hereby acknowledges that the Underpinning Project is to be performed by the Contractor pursuant to the Contract and that the PANYNJ is not performing any work in connection therewith. PANYNJ shall include MTA and its agencies as an Indemnified Party in its construction contract. Except as set forth herein, the PANYNJ shall not be responsible or liable to the MTA for or in connection with the work performed by the Contractor or its subcontractors pursuant to the Contract, and the MTA shall look solely to, and have recourse only to, the Contractor for such work and any related claims.

In the event the Contractor shall fail to fully indemnify the MTA in accordance with the terms of the Contract, and in the event MTA is not made whole by proceeds from Contractor's insurance, then in such event, the PANYNJ shall indemnify the MTA as if the PANYNJ were named in place of the Contractor in such indemnification to the extent MTA is not made whole through Contractor's indemnification and proceeds from Contractor's insurance, provided the PANYNJ shall not be liable for consequential damages of MTA.

In addition, the PANYNJ shall be responsible for and indemnify and hold harmless the MTA from and against remediation or removal cost or expenses, fines or penalties which arise out of the Underpinning Project work and occur as a result of the release or the threat of release of

hazardous and/or toxic wastes or substances or as a result of compliance or non compliance with applicable law, except to the extent such costs, fines or penalties are caused by the MTA, or to the extent the Contractor provides indemnification to the MTA for such losses or MTA receives proceeds from Contractor's insurance. The PANYNJ shall have no responsibility for consequential damages.

The parties acknowledge that the design work relating to the Underpinning Project is the sole responsibility of the PANYNJ, and the PANYNJ therefore agrees to indemnify, defend and hold harmless MTA from and against all losses arising from such design work beyond any indemnity MTA receive from the Contractor or proceeds MTA may receive from Contractor's insurance. The PANYNJ shall have no responsibility for consequential damages.

- b. The PANYNJ shall cause the Contractor to procure, maintain and pay the premiums on policies of insurance as set forth in Contract WTC - 284.458GC.
- c. Notwithstanding anything to the contrary contained in this Agreement, the PANYNJ may elect to provide any or all of said coverage's for itself and the MTA, by self insurance or through the PANYNJ's insurance programs.
- d. The Contractor's obligation to indemnify the MTA and its affiliate agencies shall not be limited in any way by the insurance policies provided under this Agreement or pursuant to the Contract.
- e. Before any construction work can commence, PANYNJ shall furnish to MTA evidence of the insurance coverage as listed in this section fully paid for and executed.
- f. PANYNJ shall notify MTA in writing thirty days prior in the event coverage is substantially changed, canceled, or non-renewed.
- g. All insurance shall remain in force until the issuance by PANYNJ of a Certificate of Final Completion for the Underpinning Project. Failure to comply with the insurance requirements set forth herein shall constitute a violation of this Agreement.

10. General Provisions

- a. Each party agrees that it shall not assign, transfer, convey or otherwise dispose of this Agreement, except by operation of law, without the prior written consent of the other party.
- b. Waiver by either party of a breach of any provision of this Agreement shall not be deemed to be a waiver of any other or subsequent breach and shall not be construed to be a modification of the terms of the Agreement unless and until the same shall be agreed to in writing by such other party and attached to the original Agreement.
- c. This Agreement may only be modified by the parties in writing. It may not be altered or modified orally.
- d. This Agreement contains all of the terms and conditions agreed upon by the parties hereto, and except as noted herein, no other agreement, oral or otherwise, regarding the subject matter of this Agreement shall be deemed to ~~exist~~ or to bind any of the parties hereto, or to vary any of the terms contained herein.
- e. It is specifically understood and agreed by and between the parties that this Agreement is the result of negotiations between the parties. It is understood and agreed that both parties shall be deemed to have drawn this Agreement in order to avoid any negative inference by any court as against the preparer of the document.
- f. This Agreement shall be enforceable in accordance with the laws of the State of New York. The parties agree that any and all claims asserted or arising hereunder shall be heard and determined either in a federal or state court located in New York County.
- g. The signatories below, on behalf of the MTA and PANYNJ, hereby represent that they have full authority to execute, and enter into, this Agreement and to bind the MTA and PANYNJ respectively, to its terms.
- h. Any and all notices under this Agreement, if to PANYNJ shall be delivered to PANYNJ to John Barrera; Program Manager; 115 Broadway, 7th Floor; New York, New York 10006 with copies to PANYNJ, General Counsel, 225 Park Avenue South, 15th Floor; New York, New York 10003 with a copy to PANYNJ, Attention: Brian Smith, Attorney; 225 Park Avenue South; New

York, New York 10003; ; and if to MTA NYCT, to Craig Stewart, Department of Subways, 2 Broadway, 14th floor, New York, New York 10004; and if to MTA CC, to MTA Capital Construction, Anil Parikh, Program Manager, 20 Exchange Place, 14th Floor, New York, New York 10005, with copies to MTA Capital Construction, Veronique Hakim, General Counsel, 2 Broadway, 8th Floor, New York, New York 10004.

- i. The parties agree that none of the terms and provisions of this Agreement shall be deemed to have intended to constitute a benefit of any kind onto any third parties, except the City of New York and the MTA respectively.
- j. No commissioner, member, officer or employee of the MTA or PANYNJ shall be liable personally under or by reason of this Agreement, or any of its articles, covenants or provisions, nor shall any commissioner, member, officer or employee of the MTA or PANYNJ be personally liable or be sued individually for damages on account of any breach of this Agreement.
- k. This Agreement shall not be effective until it is duly authorized and executed by the parties and a fully executed original has been delivered to MTA and the Port Authority. Unless otherwise extended by mutual agreement of the parties, the term of the Agreement shall be from the Effective Date until the date that a subsequent Agreement addressing the subject matter herein is entered into or until the Projects are completed.
- l. The MTA shall maintain records and audit trails sufficient to satisfy any regulatory or other reasonable audit requirements of PANYNJ and to satisfy the terms of this Agreement, including available documents to support the provision of services as detailed in this Agreement. PANYNJ shall have the right to review and audit the MTA's related records regarding the provision of services hereunder.

11. Sharing of Cost and Expenses

- a. Except as specifically provided otherwise herein, PANYNJ will be responsible for all the costs associated with the Underpinning Project. For rate of services provided by NYCT, see the "Schedule of Rates for Services Rendered To Outside Parties", effective date: January 1, 2006. MTA will reimburse PANYNJ for all costs incurred by the PANYNJ in connection with

the underpinning and related work required for the construction of the 1 Cortlandt Street Station including construction costs, design costs, PANYNJ staff costs, and the cost of services provided by the MTA.

- b. PANYNJ will not be required to pay for those GO's being provided for MTA's South Ferry Project. In the event that South Ferry decides not to use a scheduled GO and PANYNJ decides to use the scheduled GO (or other subsequently provided GO), PANYNJ will pay the full cost of the GO. The estimated cost of the weeknight and weekend GO is shown in the Contract Documents.
- c. PANYNJ agrees to pay MTA for the cost of the MTA force account services required to support the Underpinning Project. Exhibit "B", attached hereto, summarizes the estimate of each type of service to be provided to PANYNJ. The numbers for flagging and Access and Protection occasions are only estimates. PANYNJ will only pay the actual costs of the GO and the services it utilizes plus overhead.
- d. In the event that GO's in addition to the initial number allocated for the South Ferry project are required to complete the South Ferry project, the PANYNJ will be provided the opportunity to "piggyback" those additional GO's free of charge. The PANYNJ will only be responsible for additional costs for the NYCT force account required to support the Underpinning Project construction activities.
- e. In the event that there are other scheduled GO's that affect service through the WTC site (1-Line subway), the MTACC shall alert the PANYNJ for possible "piggybacking". In the event the PANYNJ wishes to utilize those GO's, the PANYNJ shall only incur costs for the NYCT force account required to support the Underpinning Project construction activities.
- f. Any actual payments required from PANYNJ or MTA under this Agreement will be made within sixty (60) days after receipt of an invoice from the MTA or PANYNJ.

IN WITNESS WHEREOF, PANYNJ and MTA have caused this Agreement to be signed
by their duly authorized officer on the day and year first above written.

PANYNJ

MTACC

By: Steven Plate
Steven Plate, Director
Priority Capital Programs Department
Port Authority of New York and New Jersey

By: Mysore Nagaraja
Mysore Nagaraja, President
MTA Capital Construction

MTA New York City Transit

By: Lawrence G. Reuter
Lawrence G. Reuter, President

MTA New York City Transit

EXHIBIT A - GENERAL CONTRACTING SERVICES CONTRACT WTC - 284.458GC
AND WORK PACKAGES ISSUED PURSUANT THERETO (CONTRACT PCP-224.480:
WORLD TRADE CENTER TRANSPORTATION HUB: UNDERPINNING 1 LINE
SUBWAY TUNNEL (ATTACHED)

EXHIBIT B - BACK-UP OF MTA FORCE ACCOUNT STAFF COSTS

Cortlandt Street Station Underpinning Support

TA Labor Force and Engineering Account Estimate

(note: all costs include overhead)

| Type of Support | Persons | Shifts | Unit Cost | Days/Wks/Occs | Total Cost |
|--|---------|--------|-----------|---------------|---------------------|
| 53 Hours GO From March 24, 2006 to October 2, 2006 = 27 weekends | | | | | |
| Flaggers | 4 | 7 | \$ 650 | 27 | \$ 491,400 |
| Supervisors | 2 | 2 | \$ 750 | 27 | \$ 81,000 |
| 5 Hours GO from May 1, 2006 to September 1, 2006 = 72 weeknights | | | | | |
| Flaggers | 4 | 1 | \$ 650 | 72 | \$ 187,200 |
| Supervisors | 1 | 1 | \$ 750 | 72 | \$ 54,000 |
| Miscellaneous Surveys and Investigations / Occasions = 27 occasions | | | | | |
| Flaggers | 2 | 1 | \$ 650 | 27 | \$ 35,100 |
| Supervisors | 1 | 1 | \$ 750 | 27 | \$ 20,250 |
| Test Trains - required for track work | | | | | |
| Train Operator | 2 | 1 | \$ 750 | 27 | \$ 40,500 |
| Train Service Supervisor | 1 | 1 | \$ 750 | 27 | \$ 20,250 |
| Conductor | 1 | 1 | \$ 750 | 27 | \$ 20,250 |
| Track Geometry Test Train | 1 | 1 | \$ 5,341 | 2 | \$ 10,682 |
| Access & Protection to Various MTA Facilities | | | | | |
| Circuit Breaker House | 2 | 1 | \$ 750 | 12 | \$ 18,000 |
| Signal & Relay Room | 2 | 1 | \$ 750 | 12 | \$ 18,000 |
| Manhole | 2 | 1 | \$ 750 | 12 | \$ 18,000 |
| Fan Plant | 2 | 1 | \$ 750 | 6 | \$ 9,000 |
| Electrical Distribution Room | 2 | 1 | \$ 750 | 12 | \$ 18,000 |
| Communications Room | 2 | 1 | \$ 750 | 12 | \$ 18,000 |
| Pump Room Maintenance | | | | | |
| Drainage Inspection | 1 | 1 | \$ 750 | 12 | \$ 9,000 |
| Silt and Jetta cross drains | 2 | 1 | \$ 650 | 12 | \$ 31,200 |
| Pre-Final and Final Inspection At Completion | | | | | |
| Tracks | 2 | 1 | \$ 750 | 10 | \$ 15,000 |
| Third Rail | 2 | 1 | \$ 750 | 2 | \$ 3,000 |
| Signals | 2 | 1 | \$ 750 | 10 | \$ 15,000 |
| Communications | 2 | 1 | \$ 750 | 5 | \$ 7,500 |
| Hydraulics | 2 | 1 | \$ 750 | 2 | \$ 3,000 |
| Infrastructures | 2 | 1 | \$ 750 | 2 | \$ 3,000 |
| Stations Operations | 2 | 1 | \$ 750 | 2 | \$ 3,000 |
| Station Electrical | 2 | 1 | \$ 750 | 3 | \$ 4,500 |
| Total for TA Labor Account | | | | | \$ 1,153,832 |

| | | | | | |
|--|------|--------------|-----------|----|------------------|
| Design Review | | | | | |
| Structural | 0.33 | 220,000 / yr | 6 months | \$ | 36,300 |
| Electrical | 0.2 | 220,000 / yr | 6 months | \$ | 22,000 |
| Communication | 0.2 | 220,000 / yr | 6 months | \$ | 22,000 |
| Mechanical | 0.2 | 220,000 / yr | 6 months | \$ | 22,000 |
| Inspection & Coordination | | | | | |
| Construction Inspection | 4 | 220,000 / yr | 12 months | \$ | 880,000 |
| Quality & Safety | 1 | 220,000 / yr | 12 months | \$ | 220,000 |
| Environmental & Administration | 1 | 220,000 / yr | 12 months | \$ | 220,000 |
| Total For Engineering Force Account | | | | \$ | 1,422,300 |
| Total of TA Labor & EFA | | | | \$ | 2,576,132 |
| Add 10% for Contingency | | | | \$ | 257,613 |
| Total Estimate for Underpinning Support | | | | \$ | 2,833,745 |

Note:

The Cortlandt Street Station underpinning is piggy-backing on the South Ferry scheduled General Orders. If South Ferry decides not to use a scheduled GO and Cortlandt Underpinning decides to use a scheduled GO, then Cortlandt Underpinning pays the full cost of the GO.

The cost of a GO is as follows:

A 53 hour weekend GO is \$ 299,871, and a 5 hour weeknight GO is \$35,071

EXHIBIT C - FIELD OFFICE REQUIREMENTS

At one central, approved location, prior to starting any work, provide and maintain an approved field office within thirty days from the date of Award of the Contract to the Final Completion of the underpinning work. The office shall be for the use of three MTA NYCT Field Engineers. This office shall be provided with adequate hot and cold water, electric light, heat, ventilation (including fans) and air conditioning, drinking water cooler, fire extinguishers, sanitary facilities (including toilets, lavatories, medicine chest with mirror and showers), weekly cleaning services, desks, chairs, racks for instruments and plans. Supply, install, and maintain three computers workstations, with modems for Internet connection, and three telephones, one fax machine, one copying machine and one serial printer with adequate supplies, service and maintenance for the duration of the underpinning work and pay for the installation charges, internet connection and monthly bills. The computers are to be furnished with the latest version of MS Window and MS Office Professional Version installed. The equipment and furniture to be furnished shall be in satisfactory condition subject to the initial and continuing approval for the MTACC.