

MONTHLY MONITORING REPORT

World Trade Center Port Authority Trans-Hudson Terminal
PORT AUTHORITY OF NEW YORK AND NEW JERSEY
New York, New York

May 2016



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David Evans and Associates, Inc., 17 Battery Place, Suite 1328, New York, NY 10004

PMOC Lead: Eric Chang, Contact Information: 212-742-4321, ehch@deainc.com

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TABLE OF CONTENTS

TABLE OF CONTENTS 2
DISCLAIMER..... 3
REPORT FORMAT AND FOCUS 4
EXECUTIVE SUMMARY 4
 Project Description..... 4
 Construction Agreement (CA) 4
 Design Activity 5
 Procurement Activity 5
 Construction Activity 5
 Risk Management 6
 Technical Capacity and Capability Review 6
 Project Management Plan (PMP)..... 6
 Project Quality Assurance..... 6
 Site Safety 6
 Issues/Problems/Suggestions 6
 A. Project Description 8
 B. Project Status 8
 C. Schedule 13
 E. Cost Data 14
 F. Risk Management..... 15
 F. Technical Capacity and Capability Review 16
 G. Site Safety..... 16
APPENDIX A – LIST OF ACRONYMS 18
APPENDIX B – LESSONS LEARNED 19

Cover: On May 26, 2016, WTCC opened the second of four planned phases of deliveries of the Transit Hall for public use, and a public ceremony took place on that day to mark the event. This Phase II opening placed the eastern portion of the Transit Hall (the Oculus) main floor into operation, enabling pedestrian access to the Fulton Center Dey Street Concourse, where connections to New York City Transit subway lines can be made without walking outdoors.

DISCLAIMER

This report and all subsidiary reports are prepared solely for the Federal Transit Administration (FTA). This report should not be relied upon by any party, except the FTA or the project sponsor, in accordance with the purposes as described below.

For projects funded through FTA's Lower Manhattan Recovery program, the FTA and its Project Management Oversight Contractor (PMOC) use a risk-based assessment process to review and validate a project sponsor's budget and schedule. This risk-based assessment process is a tool for analyzing project development and management. Moreover, the assessment process is iterative in nature; any results of an FTA or PMOC risk-based assessment represent a "snapshot in time" for a particular project under the conditions known at that same point in time. The status of any assessment may be altered at any time by new information, changes in circumstances, or further developments in the project, including any specific measures a sponsor may take to mitigate the risks to project costs, budget, and schedule, or the strategy a sponsor may develop for project execution.

Therefore, the information in the monthly reports may change from month to month, based on relevant factors for the month and/or previous months.

REPORT FORMAT AND FOCUS

This monthly report is submitted in compliance with the terms of the Federal Transit Administration (FTA) Contract No. DTFT60-14-D-00010, Task Order No. 006. Its purpose is to provide information and data to assist the FTA in continually monitoring the grantee's technical capability and capacity to execute a project efficiently and effectively, and hence, whether or not the grantee continues to receive federal funds for project development.

This report covers the project management activities on the Permanent World Trade Center (WTC) Port Authority Trans-Hudson (PATH) Terminal (Hub) project, conducted by the Port Authority of New York and New Jersey (PANYNJ) as Grantee and funded by the FTA's Lower Manhattan Recovery Office (LMRO).

EXECUTIVE SUMMARY

On May 26, 2016, WTCC opened the second of four planned delivery phases of the PATH Transit Hall for public use. The event was marked with a public ceremony that was held below the spectacular Oculus. Phase II placed the eastern portion of the Transit Hall main floor into public use and provided pedestrian access to the New York City Transit (NYCT) Fulton Center Dey Street Concourse, where connections to NYCT subway lines can be made without walking outdoors. Phase II includes the Transit Hall east end elevators, escalators, and stairs that connect the Oculus lower level, Oculus mezzanine, and Oculus upper level (southeast quadrant only). Phase II includes the southeast quadrant of the upper level of the Oculus and a connection to the South Concourse. Additional elevator access that adds Americans with Disabilities Act (ADA) access was included in Phase II as follows: Elevator 12 between the PATH mezzanine and the Oculus lower level, Elevator 13 between the PATH mezzanine and both levels of the Oculus, and Elevator 22 between the South Concourse upper level and street level at the Tower 4 transportation lobby. There are now ADA-accessible routes between the PATH mezzanine and the NYCT Fulton Center Dey Street Concourse, at which location ADA access is available to the street at Broadway and to the various NYCT subway lines.

World Trade Center Construction (WTCC) has planned a Phase III opening of the Transit Hall for late June 2016, which will add another ADA-compliant egress path through the Transit Hall to the Tower 2 transportation lobby, with street access at Church and Vesey Streets. WTCC has set a goal for achieving the fourth and final phase of delivery of an operational Transit Hall during the middle of the third quarter of 2016. WTCC opened the first phase of the Transit Hall on March 3, 2016. WTCC continues to work to complete remaining work in the Phase I and Phase II areas of the Transit Hall.

Project Description

The WTC PATH Hub serves the PATH electrified rail transit system in Lower Manhattan. The PATH Hub is an extensive underground complex of pedestrian corridors and train station facilities that will replace the original WTC PATH Terminal destroyed by terrorist attack on September 11, 2001.

Construction Agreement (CA)

The CA was signed on April 25, 2006. A Revised and Restated Construction Agreement (RRCA) was executed on September 18, 2012. (b) (4)

(b) (4)
[Redacted text block]

Quarterly Progress Review Meeting (QPRM)

The QPRM for the first quarter of 2016 was scheduled for June 1, 2016.

Design Activity

The designer continues to provide construction support services, including reviewing contractor shop drawings, responding to Requests for Information (RFIs), and providing design certifications for completed elements of construction.

Procurement Activity

WTCC has completed all of the planned procurements for the PATH Hub project. However, change orders continue to be issued as necessary under the active construction contracts.

Construction Activity

During May, WTCC deployed a large contingent of available project resources to prepare for the Phase II opening of the Transit Hall which was successfully opened to the public on May 26, 2016. WTCC contractors continue to complete remaining work in Phase II as well as Phase I. Also during May, WTCC continued its two-shift construction effort for the new Platforms C and D and the mezzanine above those platforms. Installation of low-voltage systems, vertical circulation elements (VCEs), and finishes continued.

Schedule

On May 3, 2016, WTCC released Integrated Master Schedule (IMS) 85 (with a data date of April 1, 2016), (b) (4)
[Redacted text block]

Cost Data

WTCC submitted its monthly cost model revision for April 2016 on May 31, 2016. (b) (4)
[Redacted text block]

Risk Management

As of May 2016, the Project Management Oversight Contractor (PMOC) saw no changes to the top risks to the PATH Hub project construction, which are:

- Site-wide systems integration, testing, and commissioning.
- Completion of PATH Hub support rooms/facilities/elements.
- Remaining work to be performed by the low-voltage contractors.
- Performance of PATH Hub project work by other WTC stakeholders.

Technical Capacity and Capability Review

The FTA uses the Project Execution Plan (PEP) to measure WTCC's technical capacity and capability. *The May 26, 2016 opening of PATH Transit Hall Phase II for public use triggered a PEP milestone review and, as a result of that evaluation, the PMOC recommended that the FTA could release \$21 million from the Risk Retainage reserve.*

Project Management Plan (PMP)

In May, the PMOC and WTCC were able to resolve all of the outstanding comments on the updated Force Account Plan, including two suggestions and one recommendation. The FTA approved the updated version of the Force Account Plan in May 2016.

Project Quality Assurance

During May 2016, WTCC Quality Assurance (QA) completed six oversight audits that included reviewing the Construction Manager (CM) QA's field audits and performing its own field construction audits of Oculus glazing activities. The May 2016 audit total reflects the six WTCC QA audit reports that were issued and received at the time this monthly report was drafted. *During its May audits, WTCC QA did not identify any quality issues for corrective action.*

Site Safety

The WTC PATH Hub project has established its own project safety performance goals for Total Case Incident Rate (TCIR) and Lost-Time Incident Rate (LTIR) of less than 5.0 and less than 2.0, respectively. In May 2016, the project had no recordable incidents and no lost-time incidents, resulting in a monthly TCIR of 0 and an LTIR of 0, based on 115,250.8 hours worked. WTCC Safety initiatives that took place in April are discussed in the project monitoring report section of this report. The May 2016 safety data for the project was not fully available when this report was drafted but is expected to be available after mid-June 2016.

Issues/Problems/Suggestions

WTCC advised that its targeted time frame for achieving the next phase (Phase III) of its plan to deliver the Transit Hall for operational use is by the end of June 2016. The successful deliveries of Phases I and II put WTCC in reasonable position to deliver Phase III by the end of June and then perhaps substantially complete the Transit Hall by the Recovery Plan 05 milestone date of July 30, 2016. WTCC will need to closely manage the work and aggressively mitigate any schedule delays to avoid missing this milestone and triggering the need for a new recovery plan.

Although WTCC's emphasis on completing public spaces for operational use provides earlier benefit to the public, it appears that the balance of work that will remain after the Transit Hall and the PATH Hall are operational will be considerable. FTA has tasked the PMOC with identifying the scope of remaining work and creating a tool that can be used to: (1) verify the Grantee's compliance with RRCA Attachments 1 and 3, and (2) assess the ability of the Grantee to achieve the December 31, 2016 RCD and thereby determine the likelihood that a new recovery plan will be necessary.

MONITORING REPORT

A. Project Description

The PATH Hub facility is an intermodal terminal serving the PATH electrified heavy rail transit system, which has a total of 13 stations in New York and New Jersey. When completed, the WTC PATH Hub will connect to 11 NYCT subway lines in Lower Manhattan. The PATH Hub will include a platform level, associated mezzanine and concourse levels called the PATH Hall, and a terminal building called the Transit Hall, or Oculus, with north-south and east-west pedestrian connections to the NYCT subways, the World Financial Center, and WTC above-grade site development. It will be a permanent replacement of the original WTC PATH Terminal complex destroyed by the terrorist attack on September 11, 2001.

B. Project Status

Construction Agreement

The CA was signed on April 25, 2006. An RRCA was executed on September 18, 2012. (b)

(4)

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Quarterly Progress Review Meeting

The QPRM for the first quarter of 2016 was scheduled for June 1, 2016.

WTC Site Master Plan

WTCC's latest site master plan is Master Plan Version 11, dated October 10, 2013.

Environmental Compliance

(Reported on separately by FTA's LMRO.)

Design Support During Construction

The designer continued providing post-award design support services for the PATH Hub construction during *May*, including responding to contractor RFIs, reviewing contractor submittals, and providing design certifications for completed elements of construction. *In May, the designer issued design certification letters for the PATH Hub project to support the documentation of completed work for the Transit Hall Phase II opening on May 26, 2016.*

Construction Status

As part of its plan to deliver the remaining project elements in stages, WTCC will open the Transit Hall in four phases before the middle of third quarter of 2016, and will open PATH Hall

Platforms C and D, along with additional PATH mezzanine space above Platforms C and D, later in 2016. WTCC will continue to complete remaining PATH Hall and Transit Hall work after they are opened for operational use. Essential portions of the project systems and support spaces, along with testing, commissioning, and integration, will be advanced, but not necessarily completed, in conjunction with the opening of public spaces.

Transit Hall Operational

On May 26, 2016, WTCC placed in operational service the second of four planned deliveries of the PATH Transit Hall for operational use. The event was marked with a public ceremony that was held below the spectacular Oculus. Phase II placed the eastern portion of the Transit Hall main floor into public use and provided pedestrian access to NYCT's Fulton Center Dey Street Concourse, where connections to NYCT subway lines can be made without walking outdoors. Phase II includes the Transit Hall east end elevators, escalators, and stairs that connect the Oculus lower level, Oculus mezzanine, and Oculus upper level (southeast quadrant only). Phase II includes the southeast quadrant of the upper level of the Oculus with a connection to the South Concourse. Additional elevator access that improves ADA access was included in Phase II as follows: Elevator 12 between the PATH mezzanine and the Oculus lower level, Elevator 13 between the PATH mezzanine and both levels of the Oculus, and Elevator 22 between the South Concourse upper level and street level at the Tower 4 transportation lobby. There are now ADA-accessible routes between the PATH mezzanine and the NYCT Dey Street Concourse, at which location ADA access is available to the street at Broadway and to the various NYCT subway lines.

Phase III, which is currently forecast to open in late June, will add another egress path through the Transit Hall to the Tower 2 transportation lobby at the corner of Church and Vesey Streets. Phase III will also add an ADA elevator from the main floor of the Oculus to street level at the Tower 4 transportation lobby. In conjunction with Phase III, WTCC will open a direct connection between the PATH mezzanine and the lower level of the West Concourse that is already in use. After opening this direct connection and completing the Phase III opening, WTCC plans to close the North Temporary Access (NTA). During May, contractors advanced Phase III construction in the north transept, North Concourse, and Tower 2 areas with the installation of floor and wall stone, lighting, above-ceiling mechanical, electrical, and plumbing (MEP) elements, security cameras, glass rails, stairs, and escalators.

Phase IV, the last of the phases for an operational Transit Hall, is currently forecast to be delivered in August 2016. Phase IV includes the balance of the Transit Hall public space, which is primarily at street level but does include some remaining work inside the Oculus at the lower levels, notably at the scenic overlooks (diving boards). WTCC opened the first phase of the Transit Hall on March 3, 2016. WTCC continues to complete Phase I and Phase II remaining work.

In addition to advancing the interior fit-out and finishes in the Transit Hall, WTCC is completing remaining work for the Oculus as follows:

- *Oculus Painting: Only limited exterior painting work was performed during May, because the painting contractor was focusing its resources on interior painting work associated with the opening of Phase II of the Transit Hall. In addition, exterior painting work was limited by the presence of other contractors, primarily the Oculus plaza contractor, in areas where the*

painting contractor needed to place the boomlifts used by the painters to reach the exterior surfaces that remain to be finish-coated. WTCC is forecasting improved progress on exterior painting work during June 2016.

- *Oculus Skylight: During May, the contractor advanced the installation of the permanent fall-arrest system at the catwalk portion of the WT-3 metal panels that surround the exterior of the Oculus skylight. WTCC also reported that the initial testing of the anchorage cables and cable fastening devices for the arrest system was successfully accomplished during the month. The caulking and sealing of the catwalk panel joints was approaching completion at the end of May, and is forecast to be completed during June.*

Platforms C and D Operational

During May, WTCC continued to execute the work at Platforms C and D on a two-shift basis. Stone installation on the west wall of Platform D is approaching completion. WTCC assigned a high priority to the installation of the stone flooring on the mezzanine level above Platforms C and D to support a late June opening of the permanent connection between the PATH mezzanine and the West Concourse. In addition to stone installation, installation of other architectural wall and ceiling finishes continued. As noted in the discussion of vertical circulation below, elevator and escalator installation continued. Although the installations of the low-voltage systems continued at Platforms C and D, WTCC is closely monitoring the contractor's progress on this work in order to mitigate delays that might impact the planned third quarter operational completion of Platforms C and D.

West Concourse: Above the north end of the mezzanine level of the PATH Hall, at elevation 284, there was limited progress during May on the work on the remaining 200-foot-long section of the upper level of the West Concourse. WTCC continues to forecast that work on this project element will continue into the third quarter of 2016, with completion intended to correspond with the completion of Platforms C and D.

*East Bathtub MEP and Fire Protection Work: During May, the contractors focused on bringing the necessary public and support spaces to the level of operation needed to allow the opening of Phase II of the Transit Hall. Areas being addressed by these trades included work on ventilation, power supply including emergency backup power, and hot water and chilled water distribution, along with associated testing and commissioning of these elements *when they were ready for those steps*. In addition to the Phase II activities, work at the fresh air supply fans and fresh air shaft in the Tower 3 podium advanced during May, and WTCC forecasts that the activation of the fresh air shaft and supply fans will occur in the second quarter of 2016. The Emergency Generator Plant has been advanced to the point that the temporary emergency generator plant is needed only for the NTA. The replacement of the south fuel riser piping has been completed, and only the containment piping remains to be completed.*

*Vertical Circulation: During May, the vertical circulation contractor continued to focus its resources on the elevator and escalator work at Platforms C and D, as well as the vertical circulation work to support the Phase II opening of the Transit Hall. The contractor continued to make progress on the scenic elevators (Elevators 14 and 18) located at the west and east ends of the Transit Hall. At Platforms C and D, trusses for *two* additional escalators were set in place,*

bringing the total quantity of escalators set in place to seven. The contractor started installing elevator car frames, platforms, glass enclosures, and wiring for Elevators 1, 2, 3, and 4. As part of the Phase II opening of the Transit Hall, a total of eight escalators were placed in service, with four of these escalators serving the levels between the Transit Hall main floor (elevation 274) and Transit Hall Mezzanine (elevation 284) for connection to the NYCT Fulton Center Dey Street Concourse, and four others serving the levels between the Mezzanine and the Transit Hall upper floor (elevation 296). Additionally, four elevators were placed in service: two elevators at the east end of the Oculus serving elevations between 276 and 296, one at the west end of PATH Hall serving pedestrians between elevations 266 and 274, and one at Tower 4 Transportation Lobby between elevation 296 and street level. The status of elevators (including material lifts) and escalators through the end of May is summarized in the following table:

Item	In Service Last Month	In Service This Month	Onsite/Under Construction Last Month	Onsite/Under Construction This Month	Not Yet Onsite	Total
Escalators	20	28	25	19	0	47
Elevators	8	12	15	11	2*	25

*Tower 3 Transportation Lobby

Commissioning: During May, testing and commissioning activities continued to be performed selectively for those pieces of equipment and those systems that had been sufficiently installed to allow those activities to be initiated. Priority for testing and commissioning was given to those elements that are important to the upcoming opening to public use of areas of the project. It should be noted, however, that the absence of commissioning does not preclude public use as long as all life safety features are accommodated. This practice is documented by the generation of Critical Issues Reports (CIRs) identifying the commissioning activities to be performed on a post-operational basis. WTCC will continue commissioning of equipment and systems serving operational areas as the equipment and systems are readied. In late May, the CM informed WTCC and the Commissioning Agent that it tentatively expected to perform testing of the following elements during June:

Week of May 30	Heat Exchangers HX-1 and HX-1A
Week of June 6	<ol style="list-style-type: none"> 1. Integration of Fire Alarm System with Air-Handling Units AHU-34, 35, 38, and 41 2. Testing of AC-22, 22A, 25, 25A, 26, 26A, 27, 27A, 28, 28A, 31, 31A, 32, and 32A
Week of June 13	Emergency Chilled Water Pumps and Secondary Chilled Water Pumps
Week of June 20	Various Sewage Ejectors and Sump Pumps
Week of June 27	Air Handling Unit AHU-11

Fire Alarm System: During *May*, the fire alarm contractor continued to work on installing fire alarm controls at various supply air dampers located within the fresh air plenum that connects to the Central Fan Plant. *Previously, the fire alarm contractor had raised concerns about the interface of the fire alarm system and the radio system. WTCC reviewed the issues that were raised and conducted a meeting on May 3, 2016, with the radio system component supplier to resolve any concerns.*

Radio System: During *May*, the radio system contractor continued to work on the installation of the head-end equipment at the first of the two permanent head-end locations (Room TH-015). WTCC and its CM addressed, on a temporary basis, the lack of cooling for Room TH-015 in order to avoid potential harm to the operating electronics installed in the room. Early in May 2016, water infiltrated into Room TH-083 and damaged the installed radio equipment. The contractor began replacing the damaged equipment. WTCC and its CM investigated the source of the water infiltration and mitigated any further infiltration. *Limited progress in developing the radio system test plan was made during May. The CM is developing a punch list of items for correction by the contractor in order to prepare for system testing. The CM and WTCC are developing a plan for the switchover to the permanent radio system from the temporary radio system that is currently in operation.*

Telecommunications and Security Systems: *During May, the contractor continued to perform testing and commissioning of telecommunications and security systems equipment throughout the site. Also during May, the contractor started work on the ADA doors at the Tower 4 Transportation Lobby in preparation for the Phase II opening. With some telecommunications and security systems equipment in place and operational, the contractor is preparing to provide training sessions for the WTC Operations staff, including Every Day User Training, Supervisor Training, and Administrator Training. WTCC and the contractor also continue to perform the System Integration Tests (SITs) and Site Acceptance Tests (SATs).*

Building Automation and Temperature Control (BATC) System: *In May, the contractor continued to address, as part of its priority efforts, the following areas: tie-in of the leak-detection monitors at the emergency diesel fuel oil storage tank room to the Engineer's office located at the Central Chiller Plant; installation of air flow monitors in the fresh air shaft located in the Tower 3 podium; and advancement of control wiring for fresh air supply fans SF-1, SF-2, and SF-3. In addition, the contractor was performing controls work in the access ports of the radiant floor heating system located in the eastern portion of the Oculus main floor, and also working on detection devices in the escalator and elevator pits that are included as part of the Phase II opening. Additionally, the contractor installed temporary interim controls for six fans that were necessary for the Phase II opening. These temporary controls will be retired and removed once the permanent controls are installed.*

Central Fan Plant: The air handlers that are currently being run in the Central Fan Plant will continue to depend on fresh air supply from the spill air shaft in the Tower 2 basement until the permanent fresh air shaft and supply fans in the Tower 3 podium are completed and placed in service *during the second quarter of 2016, as forecasted by WTCC. The controls contractor continues to install control wiring and devices for the fans and dampers in the Central Fan Plant.*

Construction Logistics

The WTCC Office of Program Logistics (OPL) continues to facilitate construction progress and the sharing of access, egress, and work zones among all contractors onsite. *Notable during May was OPL's coordination with the Metropolitan Transportation Authority (MTA) for the opening of the connection between the PATH Transit Hall and the Fulton Center Dey Street Concourse.*

Interagency Coordination

During *May*, work *continued on* the restoration of the pre-September 11 connection between the WTC PATH Station and the NYCT WTC E Line Station at the northeast corner of the WTC site. This connection point between the two properties is being preserved as one of the historic elements at the site and is identified in the Cumulative Effects Report. *When the restoration is complete, pedestrians will have direct access between the NYCT E Line Station and the PATH Transit Hall. WTCC continues to coordinate with MTA Capital Construction (MTACC) to complete their agreement for the construction of the free transfer connector between the NYCT WTC E Line Station and the NYCT R Line Cortlandt Street Station (R to E Connector).*

Community Relations

OPL continued to distribute construction alerts, updates, and monthly construction progress newsletters to the community and stakeholders. Updates on the project are listed at the website wtccprogress.com and publicized on commonly used social media outlets, and specific presentations are periodically made to Manhattan's Community Board #1. In late April 2016, WTCC announced the planned formal opening date of May 26, 2016, for Phase II opening of the Transit Hall. The opening of Phase II will allow direct below-grade access between the WTC PATH Station and the Fulton Center Dey Street Concourse and the NYCT subway lines served by the Fulton Center.

C. Schedule

On May 3, 2016, WTCC released IMS 85 (with a data date of April 1, 2016), (b) (4)

[REDACTED]

The following table summarizes the 90-day look-ahead for completion of significant activities:

Significant Activity	Action by
Stone Installation at Platforms C and D	WTCC
West Bathtub Vertical Circulation Equipment Installation	WTCC
Tracks 4 and 5 Signalized and Traction Power Energized	WTCC
Partial Opening of Transit Hall to Pedestrian Traffic (<i>Phases III and IV</i>)	WTCC

(b) (4) [Redacted text block]

[Redacted]	[Redacted]
[Redacted]	[Redacted]

[Redacted text block]

[Redacted text block]

[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]

[Redacted text block]

- [Redacted list item]

D. Cost Data

(b) (4) [Redacted text block]

(b) (4)

[Redacted]

The following table summarizes the latest available EAC (WTCC’s forecast) and expenditures as of April 2016:

Description	EAC (WTCC’s Forecast) (in millions)	Expenditures (in millions)
Construction	\$2,811	\$2,581
Program Management and Design	724	718
Contingency	(b)	(b)
Total	(b) (4)	(b) (4)

WTCC submitted its monthly cost model revision for April 2016 on May 31, 2016. The report shows that WTCC’s EAC for the federally funded PATH Hub project (b) (4)

[Redacted]

E. Risk Management

As of May 2016, the PMOC saw no changes to the top risks to the PATH Hub project construction, which are:

- Site-wide systems integration, testing, and commissioning.
- Completion of PATH Hub support rooms/facilities/elements.
- Remaining work to be performed by the low-voltage contractors.
- Performance of PATH Hub project work by other WTC stakeholders.

F. Technical Capacity and Capability Review

The FTA uses the PEP to measure WTCC's technical capacity and capability. *On May 26, 2016, WTCC opened a second portion of the Transit Hall and North-South Concourse to public use, and thus achieved the PEP milestone of "Transit Hall Operational—Phase II Opening" on May 26, 2016. With WTCC's achievement of this milestone, the PMOC evaluated residual risks based on revised PEP Exhibits 2 and 3 and, as a result of that evaluation, the PMOC recommended that FTA release \$10 million from the Risk Retainage reserve. In addition, WTCC partially achieved the PEP milestone of "Hub-Wide Systems Integration, Testing and Control" in support of the Phase I and Phase II openings. With WTCC's partial achievement of this milestone, the PMOC evaluated residual risks based revised PEP Exhibits 2 and 3 and, as a result of that evaluation, the PMOC recommends that FTA make a further release of an additional \$11 million from the Risk Retainage reserve. Subsequently, FTA authorized a release of \$21 million from the remaining Risk Retainage reserve of \$119 million, leaving a balance of \$98 million.*

Project Management Plan

WTCC had provided an updated version of its Construction Phase Force Account Plan and Justification, a PMP sub-plan, which extended the covered period through the end of September 2016. In mid-April, following its review of the revised plan, the PMOC furnished comments to WTCC on the updated version of the Force Account Plan. *In May, the PMOC and WTCC were able to resolve all of the outstanding comments, including two suggestions and one recommendation. The FTA approved the updated version of the Force Account Plan in May 2016.*

Project Quality Assurance

During *May* 2016, WTCC QA completed *six* oversight audits that included reviewing the CM QA's field audits and performing its own field construction audits of Oculus glazing activities. The *May* audit total reflects the *six* WTCC QA audit reports that were issued and received at the time this monthly report was drafted. During its *May* audits, WTCC QA did not identify any quality issues for corrective action.

G. Site Safety

The WTC PATH Hub project has established safety performance goals for its TCIR and LTIR of less than 5.0 and less than 2.0, respectively. In *April* 2016, the project had *no* recordable incidents and *no* lost-time incidents, resulting in a TCIR of *0* and an LTIR of *0* for the month, based on *115,250.8* hours worked. *The May safety data for the project was not fully available at the time this report was drafted but is expected to be available after mid-June 2016.*

During *May*, WTCC Safety issued safety information for use by its site safety managers that included a WTCC Safety Bulletin *describing the WTC site injury reporting process that includes notifying the Port Authority Police Department (PAPD) of all injuries. The Safety Bulletin explains that the PAPD are the first responders to all WTC site incidents and emergencies, and because PAPD officers are familiar with the entire site, they know the quickest access to all locations and can expedite response times in emergencies. The Safety Bulletin acknowledges that medical attention should be the first consideration when an injury occurs and, if an individual*

needs the site Emergency Medical Technician or an ambulance, notify PAPD for assistance. For minor injuries, the bulletin provides guidance on reporting to the site medical office and then notifying PAPD.

Issues/Problems/Suggestions

WTCC advised that its targeted time frame for achieving the next phase (Phase III) of its plan to deliver the Transit Hall for operational use is by the end of June 2016. The successful delivery of Phases I and II puts WTCC in a reasonable position to deliver Phase III by the end of June and then perhaps substantially complete the Transit Hall by the Recovery Plan 05 milestone date of July 30, 2016. WTCC will need to closely manage the work and aggressively mitigate any schedule delays to avoid missing this milestone and triggering the need for a new recovery plan.

Although WTCC's emphasis on completing public spaces for operational use provides earlier benefit to the public, it appears that the balance of work that will remain after the Transit Hall and the PATH Hall are operational will be considerable. (b) (4)

[REDACTED]

End of report. Appendices follow.

APPENDIX A – LIST OF ACRONYMS

ADA	Americans with Disabilities Act
BATC	Building Automation and Temperature Control
CA	Construction Agreement
CIR	Critical Issues Report
CM	Construction Manager
EAC	Estimate at Completion
FTA	Federal Transit Administration
IMS	Integrated Master Schedule
LMRO	Lower Manhattan Recovery Office
LTIR	Lost-Time Incident Rate
MEP	Mechanical, Electrical, and Plumbing
MTA	Metropolitan Transportation Authority
MTACC	MTA Capital Construction
NTA	North Temporary Access
NYCT	New York City Transit
OPL	Office of Program Logistics
PANYNJ	Port Authority of New York and New Jersey
PAPD	Port Authority Police Department
PATH	Port Authority Trans-Hudson
PEP	Project Execution Plan
PMOC	Project Management Oversight Contractor
PMP	Project Management Plan
QA	Quality Assurance
QPRM	Quarterly Progress Review Meeting
SAT	Site Acceptance Test
SCD	Substantial Completion Date
SIT	System Integration Test
RCD	Required Completion Date
RFI	Request for Information
RRCA	Revised and Restated Construction Agreement
TCIR	Total Case Incident Rate
VCE	Vertical Circulation Element
WTC	World Trade Center
WTCC	World Trade Center Construction