

World Trade Center Quarterly Report

4th Quarter 2010

March 14, 2011

The Honorable Andrew M. Cuomo
Governor of the State of New York
State Capitol
Albany, New York 12224

Dear Governor Cuomo:

I am pleased to provide you with the ninth of The Port Authority of New York and New Jersey's World Trade Center Quarterly Reports – an ongoing initiative to give the public a tangible way to track the Port Authority's progress. These quarterly installments are published on our WTC website – www.wtcprogress.com – and contain a complete accounting of the interim milestones that the Port Authority established in October 2008 and others we have since added so the public has a full understanding of what we are doing to advance the rebuilding effort.

The 4th Quarter of 2010 completed a year of remarkable progress at the World Trade Center site (WTC Site). Based on the accelerated pace of Memorial construction, we are ever closer to successfully delivering on our commitment to open the WTC Memorial by the 10th Anniversary of the attacks. At the same time, we surpassed our goal of reaching the 50th floor of One World Trade Center (1WTC) by year-end. 1WTC now stands as the most visible indication of the gathering momentum at the WTC site (currently at the 60th floor). Finally, on December 16th, the Port Authority, Silverstein Properties, the City and the State executed the documents required to move forward with the WTC Site East Side Development Plan. The implementation of this Plan will provide for the completion of Tower 4 by 2013, and the phase in of Towers 2 and 3 over time as market conditions permit, and provide the necessary support for the completion of the WTC Transportation Hub. This was a critical achievement that reflected many months of hard work by staff from the Port Authority, Silverstein Properties and the State and City of New York.

Overall, this past quarter, the Port Authority met 16 of 17 milestones. Our highest priority continues to be hitting the 9/11/11 deadline for opening the 9/11 Memorial. We remain on track to reach this commitment. The one milestone that was missed during this past quarter was making available for plaza construction the 25' walkway on the east side of the North Fountain. Final completion of this section depends on the placement of the first two sections of the Transportation Hub's Vierendeel Truss, as well as concrete placement over the steel sections of the PATH Mezzanine. This milestone will be completed in the 2nd Quarter 2011 and will not impact our commitment to completing this section in time for 9/11/11.

As we look ahead to this new year, we face several challenges:

- As we have discussed in past reports, because of the delays in the deconstruction of the 130 Liberty Street building (formerly the "Deutsche Bank building"), the date when the Vehicular Security Center and Tour Bus Parking Facility (VSC) will be operational has been moved to 2013. The Lower Manhattan Development Corporation (LMDC) just

recently completed the deconstruction of the 130 Liberty Street building, which now allows us to begin VSC construction on the east side of the VSC site (VSC construction has been in full swing on the west side of the VSC site notwithstanding the delay in the deconstruction of the 130 Liberty Street building, thanks to a demising wall strategy that the Port Authority constructed last year to partially mitigate the deconstruction delays). We continue to work aggressively with our contractors and project partners with the target of making the VSC operational in 2013.

- Another important element of the development effort is the opening of the new Greenwich Street. The completion of the construction of Greenwich Street will now be phased in going from the south to north through the WTC Site with the sections most needed for commercial office development prioritized first.
- We are also following closely the award, fabrication and erection of the steel for the WTC Transportation Hub's Transit Hall (also known as the "Oculus"). While full PATH service has been operational since November 2003 and will continue to be operational throughout this construction period, Transit Hall steel completion drives the final completion of the permanent WTC Transportation Hub. Though WTC Transportation Hub steel erection continues to progress well on the western side of the WTC Site, primarily for the PATH Mezzanine and the WTC Transportation Hub Connector that will connect the World Financial Center to the WTC Site, steel completion for the Transit Hall on the east side of the WTC Site remains dependent on construction and logistical coordination at this highly complex WTC Site. Construction risk is mostly in the area of procurement and delivery coordination for multiple steel fabricators (domestic and international) while logistical risk includes the ongoing WTC Site coordination challenge between the Transit Hall project and the Silverstein buildings now under construction (which are dependent on one another because they are structurally linked), with the additional constraint of maintaining safe, 24-7 operations of the MTA's #1 Subway Line that bisects the WTC Transportation Hub project.

This last quarterly report of 2010 marks the completion of what was the most productive year of construction and development progress in the nine-plus year rebuilding effort. Not only is every corner of the WTC site humming with construction activity, but that progress has been validated by the private sector interest of The Durst Organization partnering with the Port Authority in the development of 1WTC, and the interest of Condé Nast in leasing 1 million square feet in that building. Despite the challenges ahead, we are confident that this momentum will continue through the critical 10th Anniversary milestone and beyond.

I look forward to updating you next quarter on our progress as well as our challenges, as we work every single day to build a new World Trade Center.

Sincerely,

Chris Ward
Executive Director
Port Authority of New York & New Jersey

Cc: Governor Chris Christie
David Samson, Chairman, Port Authority of NY & NJ
Stanley Grayson, Vice-Chairman, Port Authority of NY & NJ
Port Authority Board of Commissioners
Mayor Michael Bloomberg
Assembly Speaker Sheldon Silver
Senate Majority Leader Dean Skelos
Senate Minority Leader John Samson
Assembly Minority Leader Brian Kolb
State Senator Daniel Squadron
Council Speaker Christine Quinn
Council Member Margaret Chin
Manhattan Borough President Scott Stringer
Senator Charles Schumer
Senator Kirsten Gillibrand
Congressman Jerrold Nadler

MILESTONES

September 2010



December 2010



A full description of the 4th Quarter 2010 milestones is provided below, along with a look ahead at the key milestones for the 1st and 2nd Quarters of 2011.

4th Quarter 2010

National September 11 Memorial & Museum

- Complete Installation of 10% of the Trees on the Plaza - Complete

Installation of the Plaza's trees represents one of the final steps in completing the Memorial park. Originally, 10% of the trees were scheduled to be planted on the plaza prior to the end of the year. However, an accelerated program was put in place resulting in over 30% of the trees planted prior to the end of the year. These trees also included the "survivor tree." This tree was recovered from the original World Trade Center site, nursed back to health, and planted on the plaza on December 22, 2010.

- Complete Pavilion Steel Erection - Complete

This structural steel forms the skeleton of the Pavilion – the main entrance of the Memorial's Museum located to the west of what will eventually be Greenwich Street. This steel structure enclosed two of the "Trident" steel columns that were originally part of the eastern face of the original Tower 1 of the Twin Towers. These Tridents were placed in their final location on September 7, 2010. The Port Authority remains committed to opening the Museum by or before the 2nd Quarter of 2013, the date we established during the 2008 Assessment.

- Begin Testing of North Fountain - Complete

This major milestone was a key first step in preparation for the Port Authority's 9/11/11 operational commitments. Testing of the North Fountain included running the water

through the system to check both the piping systems and the fountain weir assembly. The successful operation better prepared the team for the South Fountain testing which is scheduled for the 2nd Quarter of 2011.

- Complete West Vent Structure Freight Elevator - Complete

Completion of the freight elevator within the North Vent Structure has enabled the north hoist to be removed. The removal of the north hoist has facilitated the acceleration of the construction of the Memorial Plaza finishes in the area west of the North Fountain.

- Complete Vertical Stone in the South Fountain - Complete

This work completes the vertical stone installation in the South Fountain and is incorporated into the Port Authority's commitment to have both fountains operational by 9/11/11.

WTC Transportation Hub

- Install First Two Sections of the East Box Girder - Complete

This represented the placement of the first two of eight total sections of this massive steel girder which will support the MTA's #1 Subway Line in the underpass area, and allow pedestrian access between the PATH Hall and WTC Transit Hall. It is essentially an underground bridge built to permanently hold the MTA's #1 Subway Line in place while allowing commuters, office workers, residents and visitors to travel below it east to the WTC Transit Hall and Fulton Street Transit Center and west to 1WTC and the World Financial Center and the Ferries to New Jersey.

- Complete East Spot Network Core and Shell - Complete

Completion of this area has allowed for the permanent fit-out of the East Spot Network to begin – a key component of the Port Authority's commitments for 9/11/11. The East Spot Network will help provide power to critical parts of site-wide infrastructure.

- Complete D15 Wall Construction in the Underpass Area - Complete

The D15 wall is a critical element of the PATH Hall construction. Now that the wall is complete in the underpass area, the precast concrete installation can continue along Platform A. The precast concrete creates the mezzanine level of the PATH Hall and forms a portion of the area above what will eventually become the PATH's platform area.

- Complete Concrete Slab in Area East of South Fountain - Complete

This concrete at elevation 307' represents over 9,000 SF of additional area for the construction of the Memorial Plaza. The turnover of this area further supported the acceleration of the Memorial Plaza finishes east of the South Fountain.

- Begin Transit Hall Foundation Work - Complete

The foundation work in the East Bathtub signifies the start of the permanent construction of the Transit Hall. Work has begun with rock excavation for the footings and shear walls. Currently tie down, reinforcement and concrete operations are underway.

- 25' Walkway at North Fountain Available – Incomplete

Final completion of the 25-foot walkway to the final plaza level is awaiting the placement of the first two sections of the Vierendeel Truss, as well as concrete placement over the steel sections of the PATH Mezzanine. This milestone will be completed in the 2nd Quarter 2011 and will not impact our commitment to completing this section in time for 9/11/11.

WTC Vehicular Security Center and Tour Bus Parking Facility

- Award Structural Steel Contract - Complete

This contract represents the permanent structural steel installation for both the eastern and western portions of the Vehicular Security Center. The contract was awarded to W&W Steel with fabrication currently underway.

One World Trade Center

- Steel Erection to the 50th floor - Complete

This represents the structural steel framing which makes up the building's "Skeleton." The 50th floor is approximately 585 feet above street level. The steel was actually completed to the 52nd floor level prior to the end of the year, and rises approximately 610 feet above street level.

- Concrete core to the 45th floor - Complete

This represents the interior concrete core which is critical to the structural stability of the building as it rises.

- Metal Decking to 48th Floor - Complete

Metal decking was installed to the 52nd floor level prior to the end of the year, which is approximately 610 feet above street level. Following the installation of the decking will be the concrete placement of the floor.

Greenwich Street

- Complete Critical Excavation Under MTA's #1 Subway Line Box - Complete

This milestone marks the completion of all of the critical soil and rock excavation necessary for the load transfer of the MTA's #1 Subway Line box on to the permanent structure. This structure is part of the innovative "top-down" construction solution that was developed during the 2008 Assessment to expedite the construction of Greenwich Street. Selective excavation was completed to allow for the critical footing and wall construction to begin in the final level of permanent structure prior to the beginning of the load transfer.

- Complete Installation of First Section of Invert Slab - Complete

The mock-up section of the first invert was successfully placed and approved making way for the placement of the remaining 14 areas of invert slabs. The invert slab is the last major structural element of the Greenwich Street or "top-down" construction. After completion of 14 sections of slab, which sit only several inches below the existing MTA's #1 Subway Line, the weight of the subway enclosure can be transferred from the temporary supports to the permanent supports.

1st Quarter 2011

National September 11 Memorial & Museum

- Museum Design Complete (by NS11MM)

NS11MM will issue the final design documents necessary to construct the interior portion of the Museum. This design includes all elements necessary to begin construction of the Museum exhibits, and represents the final design element of the Memorial program.

- Museum Construction Begins

While core and shell work is already well underway on the Museum, interior fit-out work will begin in the first quarter of 2011. This work will include the initial framing of interior partitions and MEP systems necessary to construct all rooms and exhibit areas.

- Substantial Completion of South Fountain

In the 1st Quarter, workers will complete the installation of the final pieces of stone and metal weir, and begin preparations for the start-up and testing of the South Fountain in preparation for 9/11/11.

- Complete Installation of Two Sides of the Bronze Nameplates in the North Fountain

Installation of the Bronze Nameplates and their supporting structures will begin in early 2011. These plates, which will record the names of the victims of 9/11/01 and 2/26/93, will be etched and backlit from within the parapet housing. A glycol system will also be installed to keep temperature of the metal regulated at all times. The Port Authority has been coordinating with the 9/11 Memorial Foundation, who is closely overseeing this project.

- Installation of the Large Major Museum Artifacts in the Museum Area

This milestone represents the installation of additional large artifacts recovered after 9/11/01, including a FDNY Fire Engine, a NYPD Police Car and a taxicab. These artifacts follow the “Last Column” and “Vesey Street Staircase” (also known as the “Survivor’s Staircase”) which have already been placed within the Museum’s walls. Given their size, all of these artifacts must be placed before the Memorial Plaza is permanently closed given that they are too large to fit in the Museum’s freight elevators. The Memorial Foundation has now decided to wait until the end of the 2nd Quarter to place these artifacts. This timing was made available by construction of a temporary loading opening in the Memorial Plaza deck that can be quickly closed in the 3rd Quarter to enable final Memorial Plaza finishes to be constructed in that area.

- Begin Installation of Pavilion Curtain Wall

The glass and metal cladding, representing the “skin” of the Pavilion structure, will begin to be installed during this period. Once complete, it will allow interior finish work to begin in the Pavilion. (At the time of the October 2008 Assessment, the Port Authority did not anticipate or commit to completing curtain wall construction by 9/11/11.)

- Substantially Complete Fit-Out of East Spot Network

Providing power to the South Fountain, this element represents the last major electrical piece necessary to begin final testing of the South Fountain in advance of 9/11/11.

WTC Transportation Hub

- Complete Metal Deck to D35 for PATH Hall Roof

Subsequent to the PATH Hall steel installation currently ongoing, the installation of the metal deck will be the precursor to placing concrete in that area. The concrete will serve a dual purpose, as it will be the roof of the PATH Hall and the floor of the Memorial Plaza.

- Complete Installation of Super Columns

The Massive Super Columns provide the main support for the steel girders that span the MTA’s #1 Subway Line in the underpass area. Once these supercolumns are in place along the western side of the MTA ‘s #1 Subway Line, steel and decking can be completed from the PATH roof to the MTA’s #1 Subway Line box over all PATH Platforms and Mezzanine area.

- Pour Roof Slab for Route 9A Underpass

Located in the western portion of the site, the Route 9A underpass will provide continuous pedestrian access from the Winter Garden of the World Financial Center to the WTC Site by passing under Route 9A (aka the Westside Highway or West Street).

Once the roof installation is complete, the finish work can commence in the pedestrian walkway.

- Substantially Complete D15 Wall south of the PATH Hall

Spanning almost the entire length of the WTC Site, this critical wall running North-South provides structural support for the PATH Hall mezzanine and infrastructure for the construction of Greenwich Street.

- Begin Platform A Construction

PATH's Platform A will be the first permanent platform for the new WTC Transportation Hub. As work continues, the temporary PATH station will be phased out as new, permanent platforms are built.

WTC Vehicular Security Center and Tour Bus Parking Facility

- Perimeter Wall Substantial Completion

Due to the delay in the deconstruction of 130 Liberty Street, contract work was started in the western half of the VSC site only. As discussed in past Quarterly reports, the deconstruction delays have caused the VSC operational date to be pushed into 2013 (from 2012). The slurry wall and excavation to rock will be substantially complete from the temporary demising wall to the western edge of the site by the 1st Quarter. Immediately upon turnover of the VSC site to the Port Authority, following completion of the deconstruction of the 130 Liberty building (which has been overseen by the Lower Manhattan Development Corporation), the Port Authority work will begin in the eastern portion of the VSC site.

- Start Ramp Structure Foundations

Foundation work in the Western portion of the site will begin in the 1st Quarter. The work on these foundations will be made possible due to the installation of the demising wall which has been used to bifurcate the site and mitigate to the extent possible the delays from the 130 Liberty Street building deconstruction. These foundations will support the steel columns that comprise the VSC underground structure and ramp system.

- Begin Construction in the Eastern Portion of the Site

This represents the start of construction work on the site of the former 130 Liberty Street building. Work is to begin immediately after turnover of the site and the completion of the deconstruction of 130 Liberty Street. As discussed in past reports, the year-and-a-half delay on this critical hand-off has pushed the VSC operational date into 2013.

One World Trade Center

- Steel Erection to the 60th Floor

This Represents the structural steel framing which makes up the building's "Skeleton."
The 60th floor rises approximately 720' above street level.

- Concrete Core to the 52nd Floor

This represents the interior concrete core which is critical to the structural stability of the building as it rises.

- Concrete Floor Slab to the 55th Floor

This represents the placement of the concrete slab on the 55th floor that is approximately 650' feet above street level. After the placement of the concrete, other critical trades like Spray Fireproofing and Curtain wall can begin.

- Curtain Wall to the 32nd Floor

This represents the glass curtain wall installation from the 20th floor podium level to the 32nd floor level. The curtain wall will provide weather tight protection to allow for interior finish work to begin on the typical office floors.

Greenwich Street

- Complete Footing and Wall Construction at Elevation 242

This represents the lowest level of the Greenwich Street or "Top-Down" Construction. The footings and walls will complete the massive permanent structure that goes over 70' below street level and provides the permanent support for the MTA's #1 Subway Line in the areas North and South of the underpass.

2nd Quarter 2011

National September 11 Memorial & Museum

- Start Pavilion Curtain Wall

The Pavilion will be the main entrance to the 9/11 Museum. This original October 2008 assessment milestone is for beginning the installation of the curtain wall of the Pavilion structure. This ornate system of steel and glass will form the "skin" of the atrium, the area that houses the Tridents. Acceleration of the Memorial Plaza area and early construction of the pavilion steel will enable this milestone to be started in the 1st Quarter of 2011.

- Complete Pavilion Core and Shell

Because of careful planning and execution, the core and shell of the Pavilion will be complete in the second quarter of 2011. This work will include the concrete, steel, exterior paneling and curtain wall installation. Reaching this milestone is significant in that it surpasses the Port Authority's original commitment for 9/11/11 to provide completed steel only. Once this work is complete, interior fit out construction of the Pavilion will begin.

- Begin Phase 4 of Plaza Construction

This final phase of plaza construction will be the last major are required to be complete for the Port Authority's 9/11/11 commitments. Totaling approximately 27,000 SF, this phase had to be delayed to enable the accelerated completion of the Museum Pavilion's steel erection and curtain wall installation. When finished, the portion of the Memorial Plaza committed to be open on 9/11/11 will be complete – an area totaling over 144,000 SF.

- Complete Bronze Nameplate Installation in North Fountain

By the end of the second quarter, installation on all four sides of the North Fountain will be complete. These plates, which will record the names of the victims of 9/11/01 and 2/26/93, will be etched and backlit from within the parapet housing. A glycol system will also be installed to keep temperature of the metal regulated at all times. The Port Authority has been coordinating with the 9/11 Memorial Foundation, who is closely overseeing this project.

- Test South Fountain

Following the successful testing of the North Fountain in the 4th Quarter of 2010, testing of the South Fountain will occur in the 2nd Quarter of 2011. Because of the successful efforts of the team on the North Fountain, work on the South Fountain is expected to progress more quickly. Successfully testing the South Fountain will ensure the Port Authority's commitment of having both fountains operational by 9/11/11.

- Complete West Vent Structure Cladding

The West Vent Structures provide ventilation to the below- grade Museum space. In the 2nd Quarter, the cladding system will be installed on both buildings. The system consists of anchors, steel beams and a wire like mesh that will wrap the exterior the structures.

WTC Transportation Hub

- Platform A Construction Complete

The PATH stations' Platform A will be the first permanent platform for the new WTC Transportation Hub. Work for this original October 2008 assessment milestone has been resequenced in order to also incorporate work on Platform B as well. The original plan had construction of Platform B beginning after Platform A was complete. The WTC Transportation Hub team is currently in the process of developing a revised plan that calls for work on both platforms to occur simultaneously, but original completion dates to be pushed back. In the meantime, the PATH system at the WTC site remains fully operational and will remain so throughout construction.

- Substantially Complete Core and Shell Construction of Zones 1&2 of the Route 9A Underpass

This represents the first two of five zones that are being constructed under Route 9A and will connect the Hub's East-West Connector with the World Financial Center. The core and shell of the remaining three zones, being managed by Brookfield Properties, will be completed by early 4th Quarter 2011. The Route 9A underpass will be the pedestrian thoroughfare that connects commuters from the World Financial Center to the World Trade Center Transportation Hub's East-West Connector, which will ultimately provide pedestrian access all the way east to the Fulton Street Transit Center. The Port Authority's completion of the core and shell work within the World Trade Center site will correlate with Brookfield Property's completion of the work in their portion of the site.

- Substantially Complete Structure for VSC / Hub Interface Area

The VSC / Hub Interface area is a key location that connects the Vehicular Security Center with the Hub's Greenwich Street Corridor below grade. In addition, the structure will provide the support for the Memorial Plaza and Greenwich and Liberty Street work at grade.

WTC Vehicular Security Center and Tour Bus Parking Facility

- Start Ramp Structure Steel Erection

The Vehicular Security Center's Ramp will be the main structural element which supports vehicles as they undergo the screening process. Per the October 2008 Assessment, work for this milestone was to occur in the 2nd Quarter of 2011. However, this milestone depended on LMDC completing deconstruction of the 130 Liberty Street building by August 2009, per LMDC's Assessment commitment. As a result of the delays to the deconstruction of the 130 Liberty Street building, the work has been resequenced and will occur in the first half of 2012.

- Start Secant Wall Installation in Eastern Portion of Site

The secant wall installation signifies the first major construction in the eastern portion of the Vehicular Security Center. The wall will form the perimeter structural support or

“bathtub” to allow for excavation to begin in the area. This milestone depends on site turnover and the completion of deconstruction activities of the 130 Liberty Street building in early February.

- Relocate Existing Utilities in Eastern Portion of Site

Several existing utility lines must be relocated within the eastern portion of the site. This work must be done in order to allow excavation to take place in the area.

One World Trade Center

- Complete Installation of Podium Glass

The podium of One World Trade Center is located between street level and the 20th floor of the building. In this area, there is prismatic glass that forms the curtain wall, a different type of glass than the one currently being installed from the 20th floor and up. Completion of this work in the 2nd Quarter of 2011 has been resequenced to start installation in the 1st Quarter of 2012 in order to improve logistics for other trades operating in the building and to avoid any damage to the glass once it has been installed. Installation of the curtain wall above the 20th floor will continue and is currently rising at a floor per week. This re-sequencing should not impact the overall completion of the building's core and shell by the end of 2013.

- Steel Erection to the 75th Floor

This represents the structural steel framing which makes up the building's "Skeleton." The 75th floor rises approximately 920' above street level.

- Concrete Core to the 65th Floor

This represents the interior concrete core which is critical to the structural stability of the building.

- Concrete Floor Slab to the 70th Floor

This represents the placement of the concrete slab on the 70th floor that is approximately 850' feet above street level. After the placement of the concrete, other critical trades like spray fireproofing and curtain wall can begin.

- Curtain Wall to the 42nd Floor

This represents the glass curtain wall installation from the 20th floor to the 42nd floor level. The curtain wall will provide weather tight protection to allow interior finish work to begin on the typical office floors.

Greenwich Street

- Begin Cortlandt Street Station Finishes

Located on the MTA's #1 Subway Line that bisects the WTC site from North to South, this represents the installation of finishes for the MTA's Cortlandt Street Station and its connection to the WTC Transportation Hub.

- Substantially Complete Invert Slab Construction in Areas 1 through 10

The invert slab is the last major structural element of the Greenwich Street or "top down" construction. After completion of the slab, which sits only several inches below the existing MTA's #1 Subway Line, the weight of the subway enclosure can be transferred from the temporary support to the permanent support. Once the subway load in areas 1 through 10 is transferred to the permanent structure, construction of the street, infrastructure and utilities of Greenwich Street can begin.