

World Trade Center Quarterly Report

3rd Quarter 2010

December 30, 2010

The Honorable David A. Paterson
Governor of the State of New York
State Capitol
Albany, New York 12224

Dear Governor Paterson:

I am pleased to provide you with the eighth 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 agency'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 3rd Quarter of 2010 continued to see important progress on the 9/11 Memorial, One World Trade Center (1 WTC), the World Trade Center Transportation Hub and the other public infrastructure the Port Authority is responsible for building. Specifically, construction of the Memorial Plaza and fountains advanced significantly, as well as the Memorial Pavilion's (entrance to the Museum) steel erection. 1 WTC reached the 40th floor (and is now at the 52nd floor) and rising one floor per week. In addition, the Calatrava steel arches for the WTC Transportation Hub are being installed at an increasingly rapid rate.

Overall, this past quarter, we hit 13 of 13 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 overarching commitment. Beyond that overarching deadline, we face several issues that we are following closely.

- 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 VSC will be operational has been moved to 2013. The Lower Manhattan Development Corporation (LMDC) now plans to complete the deconstruction of the 130 Liberty Street building in February 2011, and we are working with them to make sure our contractors can get into that work zone at that time so VSC construction can begin on the eastern side of the VSC site (VSC construction has already commenced on the western side of the site, where the deconstruction of 130 Liberty Street is not taking place). We continue to work aggressively with our contractors and project partners to make sure the VSC is operational in 2013 for the private office space that will come online at the end of 2013.

- Another important element of the development effort is the reconstitution of Greenwich Street, which will intersect the center of the site going north-south. The completion of the construction of Greenwich Street will now be phased in going from the south to north with the sections of Greenwich Street most needed for commercial office development prioritized first. Thus, Greenwich Street will be completed first in front of the 4WTC site before the opening of that office building, and will progress north shortly thereafter in front of 3WTC and 2WTC sites. Greenwich Street will be fully complete after the WTC Transportation Hub is complete and the temporary PATH station is demolished (thus clearing the way for Greenwich Street to connect through to Vesey Street).
- We are also following closely the award, fabrication and erection of the steel for the Transportation Hub's Transit Hall (also known as the "Oculus"). While full PATH service has been and will continue to be operational throughout this construction period, Transit Hall steel completion drives the final completion of the permanent Transportation Hub. Though Hub steel erection continues to progress well on the western side of the site, primarily for the PATH Mezzanine and the Hub Connector that will connect the World Financial Center to the World Trade Center, steel completion for the Transit Hall on the east side of the site remains dependent on construction and logistical coordination at this highly complex 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 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 Transportation Hub project. We will be focused closely on each of these sets of risks.

I have very much appreciated your ongoing support and engagement since these reports first started following the 2008 WTC Assessment. I look forward to updating Governor Cuomo 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-Elect Andrew Cuomo
Governor Chris Christie
Anthony R. Coscia, 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 Democratic Conference Leader John Sampson
Senate President Malcolm Smith
Senate Majority Leader Pedro Espada Jr.
Assembly Minority Leader Brian Kolb
Senate Minority Leader Dean Skelos
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



June 2010

September 2010

A full description of the 3rd Quarter 2010 milestones is provided below, along with a look ahead at the key milestones for the 4th Quarter of 2010 and the 1st Quarter of 2011.

3rd Quarter 2010

National September 11 Memorial & Museum

- Plaza Finishes Begin - Complete

This milestone represented the placement of infrastructure and systems supporting the final Memorial Plaza and trees. This sequence includes the installation of waterproofing, concrete, masonry walls, soil, irrigation and electrical systems, as well as final pavements, furnishings and landscaping.

- Start Phase 2 of Plaza Construction - Complete

This area, originally totaling 38% of the overall plaza area, was resequenced to allow final grade/finishes construction on over 50% of the Memorial Plaza. The capture of additional Plaza area at an earlier time reduces the risk for the delivery of the plaza area for 9/11/11. The resequencing was enabled by the changing of the means and methods of the steel, concrete and curtain wall installation for the Memorial Pavilion.

- Complete Concrete Pavers in the North Fountain - Complete

The Concrete Pavers form the visible floor of the North Fountain and provide protection to the waterproofing layer below. This allowed the North Fountain to be successfully tested, with water freely flowing down the sides of the fountain.

WTC Transportation Hub

- Complete Concrete on sector 6C.1 Steel - Complete

Completion of this area, located over the PATH Substation, was critical to allow Phase 2A of the Memorial Plaza finishes to begin.

- Back spans erected to column line D-30 - Complete

These Calatrava arches (known as “back spans”), located directly below the footprint of the Memorial Pavilion, needed to be installed prior to the vertical erection of the Pavilion steel. This was a key component of the “build the roof first” construction solution that was developed during the 2008 Assessment to prioritize the completion of the Memorial Plaza by 9/11/11.

- Complete Installation of North and South Plate Girders - Complete

This represented placement of the large plate girders to allow for the support of the back spans and roof ribs within the PATH Hall. The large portions of the girders were installed in the 3rd quarter with rib installation commencing immediately after. This too was a key component of the “build the roof first” construction solution that was developed during the 2008 Assessment to prioritize the completion of the Memorial Plaza by 9/11/11.

WTC Vehicular Security Center and Tour Bus Parking Facility

- Start Tie-Back Installation - Complete

This represented the start of placement of tie backs to support the excavation of the “bathtub” area for the western portion of the VSC. These tiebacks support the slurry wall and allow excavation to continue downward. When complete, excavation will reach approximately 60 feet below street level.

- Award of Rock Excavation and Foundation Package - Complete

This contract included the excavation of rock to as low as elevation 205’ for mechanical spaces beginning in the western portion of the VSC site, as well as construction of foundations for all future building elements. The structural steel contract has also been awarded for the VSC.

One World Trade Center

- Start Curtain Wall Installation - Complete

This represented the start of activities to support the placement of curtain wall above the 20th story level of 1WTC. The curtain wall encloses the building and trails the “cocoon” safety system as it rises with the erection of the structural

steel. Beginning activity included the installation of hangers on the steel frame. The follow-on activity, glass installation, commenced during the 4th quarter.

- Steel Erection to the 36th floor - Complete

This Represents the structural steel framing that makes up the building's "Skeleton."

- Concrete core to the 28th floor - Complete

This represents the interior concrete core, which provides the structural stability or the building's "spine".

- Metal Decking to 33rd Floor - Complete

This represents the metal decking on the 33rd floor slab, which is approximately 360 feet above street level.

Greenwich Street

- Begin Cortlandt Street Station Structure - Complete

This represents the start of the initial activities for the construction of the MTA's Cortlandt Street Station and its connection to the WTC Transportation Hub. In the 3rd quarter, workers began the demolition of parts of the existing #1 subway line box to expose the underlying steel. Once complete, new steel will be connected to the structure in preparation for concrete placement. Eventually, these extended areas will become the platforms of the new Cortlandt Street Station.

4th Quarter 2010

National September 11 Memorial & Museum

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

Installation of the trees in the Plaza represents one of the final steps in completing the Memorial Park.

- Complete Pavilion Steel Erection

The structural steel will be the skeleton of the Pavilion -- the main entrance of the Memorial's Museum located on what will eventually be Greenwich Street. The Port Authority remains committed to opening the Museum by the 2nd Quarter of 2013, which was the date we established during the 2008 Assessment and have been holding to since.

- Begin Testing of North Fountain

This major milestone will kick off the preparation of the Port Authority's 9/11/11 commitments. Testing of the north fountain will include running the water through the system. (Testing has already begun.)

- Complete West Vent Structure Freight Elevator

Completion of the freight elevator in the north vent structure will enable the north hoist to be removed. Once the north hoist is removed, the construction of the Plaza finishes in that area can commence.

- Complete Vertical Stone in the South Pool

This work completes the vertical stone installation in the South pool 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

This represents 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 Transit Hall. It is essentially an underground bridge built to permanently hold the #1 Line in place while allowing commuters to travel below it east to the WTC Transit Hall and Fulton Transit Center and west to 1WTC and the World Financial Center.

- Complete East Spot Network Core and Shell

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

- Complete D15 Wall Construction in the Underpass Area

The D15 wall is a critical element of the PATH Hall construction. Once complete, the precast concrete installation can begin. 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 A.

- Complete Concrete Slab in Area East of South Fountain

This concrete at elevation 307' represents over 9,000 SF of additional area for the construction of the Memorial Plaza. Once this portion is completed and turned over to the Memorial, finish work can commence.

- Begin Transit Hall Foundation Work

The foundation work in the East Bathtub signifies the start of the permanent construction of the Transit Hall.

- 25' Walkway at North Pool Available

This portion of work is critical to the Port Authority's 9/11/11 commitment, as this area is needed to access the Northern and Eastern parapets of the North pool. Its construction is incorporated into the steel and concrete placement of the PATH Hall roof. The PATH Hall steel needs to be in place in order to have the 25-foot walkway area available for metal decking and concrete work. This is a key component of the "build the roof first" construction solution that was developed during the 2008 Assessment to prioritize the completion of the Memorial Plaza by 9/11/11.

WTC Vehicular Security Center and Tour Bus Parking Facility

- Award Structural Steel Contract

This contract represents the permanent structural steel installation for both the eastern and western portions of the Vehicular Security Center (has already been awarded).

One World Trade Center

- Steel Erection to the 50th floor

This Represents the structural steel framing which makes up the building's "Skeleton." The 50th floor is approximately 900' above street level.

- Concrete core to the 45th floor

This Represents the Interior Concrete Core which is critical to the structural stability of the building as it rises

- Metal Decking to 48th Floor

This represents the metal decking on the 48th floor, which is approximately 560 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 Line Subway Box

This milestone marks the completion of the soil and rock excavation necessary for the load transfer of the MTA's #1 Subway 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.

- Complete Installation of First Section of Invert Slab

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 all 14 inverts are installed.

1st Quarter 2011

National September 11 Memorial & Museum

- Museum Design Complete (by NS11MM)

Representing the final remaining design element, 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.

- Museum Construction Begins

While core and shell work has already begun 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 victim's 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 large artifacts recovered after 9/11, 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 may wait until the 2nd Quarter to place some of these artifacts.

- 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.

- 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 on going, 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 in place, the girder installation can continue ultimately ending in the transfer of the load of the subway box from the temporary minipiles to the permanent structure in the area.

- Pour Roof Slab for 9A Underpass

Located in the western portion of the site, the 9A underpass provides continuous pedestrian access from the Wintergarden of the World Financial Center to the World Trade Center Site under Route 9A (the Westside Highway). Once the roof installation is complete, the finish work can commence in the pedestrian walk way.

- Substantially Complete D15 Wall south of the PATH Hall

Spanning almost the entire length of the World Trade Center 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 has started in the western half of the VSC site only. As discussed in past quarterly reports, the demolition 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 completion of the deconstruction of the 130 Liberty building (which has been overseen by the Lower Manhattan Development Corporation) 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 was used to bifurcate the site and mitigate the delays from the 130 Liberty deconstruction. These foundations will support the steel columns that make up 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 upon the completion of the deconstruction of 130 Liberty Street and Port Authority site access to the . 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 #1 subway line in the areas north and south of the underpass.