

## Building a Security and Screening Facility at the World Trade Center

**L**ocated in the southwest corner of the World Trade Center (WTC) redevelopment site, in the south bathtub, is the Vehicular Security Center and Tour Bus Parking Facility (VSC) construction project. As part of a comprehensive logistics plan developed by the Port Authority, the VSC was designed with the purpose of being a state-of-the-art security screening check point for all buses, trucks and cars accessing the WTC site and parking facilities. When complete, this below-grade structure will reach five stories underground into a basement with connecting ramps leading to the parking and below-grade facilities of all of the adjacent projects on the 16-plus acre WTC site.



VSC under construction, January 2012

Construction on the VSC began in early 2009. The first priority was to excavate and secure the south sub-grade against

the infiltration of groundwater into the VSC site from adjacent areas. This required the installation of new slurry wall panels. These panels—29 interconnected, three-foot-thick concrete walls—are supported laterally by high-strength tieback anchors, which were lowered into the VSC project site with special cranes. Once the reinforced panels were in place, soil excavation, rock blasting and removal, and utility work commenced.

In the western portion of the south bathtub, where the first phase of VSC construction is underway, an on-site

tower crane is currently lifting steel into place. This steel will form the roof and substructure of the future vehicle entrance. Preliminary designs for Liberty Park, an open space planned atop the future VSC's roof, are also in development. The second phase of VSC construction, in the eastern portion of the site, commenced after the full deconstruction of 130 Liberty in late February 2011. Due to the Port Authority's careful planning and the diligence of VSC construction workers, both soil excavation and rock blasting and removal are nearing completion in this portion of the VSC site.



Crane at VSC with World Financial Center in the background

### Vehicular Security Center: Fun Facts

- The weight of the steel reinforcing bars used in the VSC slurry walls is equivalent to one tenth of the total weight of the Eiffel Tower.
- The VSC's design calls for 10,701 tons of structural steel, which is the equivalent in weight to approximately 5,350 average sized cars.
- The VSC's slurry walls will be reinforced with 700 tons of steel, the equivalent of approximately 18 trailer hitch Mack trucks.

# CONSTRUCTION PROGRESS AROUND THE WTC SITE

## Transportation Hub



The Transportation Hub is a transit project that will enhance service beyond what existed at the WTC site prior to 9/11. This Hub will serve as an access point, providing seamless underground connections between the Port Authority Trans Hudson (PATH) rail line, New York City Transit Subway lines, and destinations east and west of West Street/Route 9A. Current construction includes erecting steel, placing concrete, and installing temporary support materials for the Oculus' (or main Transit Hall's) east arch truss. Bolting and welding across the entire PATH Hall Roof and Number 1 Subway line structure continue.

## Three World Trade Center



Three WTC will be the third tallest building on the WTC site when fully complete with over 2.5 million square feet of office space. The tower, designed by Rogers Stirk Harbour + Partners, will have a reinforced concrete core and columns with steel girders and beams. Construction is underway on 3 WTC as superstructure concrete for the north walls and rebar and formwork progresses on the structure.

## One World Trade Center

Located in the northwest corner of the WTC redevelopment site, 1 WTC, at 104 floors and 1,776 feet above street level (including the spire atop the structure), is scheduled to become the tallest skyscraper in the United States later this year. The Port Authority maintains a steady construction pace to ensure the building's continued progress.

Currently, the lobby fit-out continues with marble panel installation around the outward face of the north core wall. Superstructure steel erection will reach the 92<sup>nd</sup> floor and superstructure concrete core shear wall casting and floor slab work will continue through the 88<sup>th</sup> floor by the end of February. Glass and metal curtain wall installation will proceed past the 69<sup>th</sup> floor by the end of the month.

