

Dulles Metro is Coming

December 2010



Aerial Track Construction Dominates the Skies Along Route 123

Three 365-Ton Horizontal Cranes Building Bridges for Rail in Tysons Corner

Those big bright lights in the skies above the Route 123 corridor of Tysons Corner near Tysons Corner Center and the Capital Beltway are really not giant holiday decorations or an early visit by Santa's sleigh. Instead, they are the lights of crews building aerial bridges to carry the future Dulles Corridor Metrorail Project trains. Crews are working both day and night schedules, and the night time work illuminates the skies.

Phase 1 of the project includes three miles each of outbound and inbound aerial track in the Tysons Corner area.

The most visible work is now taking place along Route 123 near the Westpark Bridge which connects the Galleria Drive area and Tysons Corner Center.

Using a complex segmental bridge construction process involving huge cranes, crews from Rizzani de Eccher, headquartered in Italy, are using those horizontal cranes, known as trusses, to erect the structures. Each truss is about 360 feet long and weighs 365 tons.

Two of the horizontal cranes are now in use and a third is being assembled adjacent to I-495. Early in 2011, crews will use it to build the bridges over the Beltway. This will take 11 to 12 months to complete. Also, aerial bridge construction will take place next year along Route 7 from the site of the Tysons Central 7 Station near SAIC and the Marshalls shopping center west to and joining more aerial bridges at the Dulles Toll Road intersection where tracks will then lead westward to Reston using the median of the Dulles International Airport Access Highway/Dulles Toll Road corridor.

The bridges are built by connecting large concrete segments that are approximately 20 feet by 16 feet by 10 feet deep, large enough for workers to work inside segments suspended in the air. Approximately 2,700 segments are being built at a construction site located at Washington Dulles International Airport.



AS MORNING LIGHT BREAKS: One of three horizontal cranes is silhouetted against the morning winter skies along Route 123 in Tysons Corner. *Photo by Chuck Samuelson, Dulles Corridor Metrorail Project*

Each segment is custom engineered to fit the design. Once fabricated, each segment is then transported from the airport via truck to the spot where it will be lifted into a span in Tysons Corner.

Fun Facts about the Horizontal Cranes:

- In January, three will be operational in Tysons Corner
- Each truss weighs about 365 tons and is 360 feet long
- It takes 6 to 8 weeks to assemble the parts of a crane on-site
- About 2,700 concrete segments will be used to build bridge spans between piers
- A post-tensioning process is used to pressure the segments into bridge spans.



LIGHTING UP THE NIGHT SKIES: Crews build bridge spans using a horizontal crane near Route 123. Below the structure, traffic along Interstate 495 generates brilliant streams of color. *Photo by Chuck Samuelson, Dulles Corridor Metrorail Project*

For general information on the Dulles Corridor Metrorail Project, please visit our website at www.dullesmetro.com or call (703) 572-0506.

Rail Project Teams Up With HOT Lanes to Battle Distracted Driving, Using Cell Phones and Texting in Construction Zones

The Dulles Corridor Metrorail Project has joined forces with Transurban-Fluor, the builders of the Virginia HOT Lanes Project, and AAA Mid-Atlantic, in their “Orange Cones. No Phones” campaign to improve safety for the driving public and construction workers.

In late November, the organizations launched the campaign against distracted driving in construction zones in the wake of new research that shows that more than half of all distracted drivers on the Beltway are using their phones for work-related issues.

Virginia’s Secretary of Transportation, Sean T. Connaughton, spoke at the event, challenging 100 regional employers over the next 100 days to commit to meaningful steps to reduce distracted driving.



ORANGE CONES. NO PHONES: Press event held on November 18, 2010. Photo courtesy of Transurban

Four of the region’s largest employers were the first to take the pledge, and those companies will now reach more than 50,000 area commuters through their internal “Orange Cones. No Phones” education campaigns.

The first employer partners are:

- Booz Allen Hamilton
- Inova Health System
- Macerich’s Tysons Corner Center
- Science Applications International Corp (SAIC)

For additional information and tips for employers interested in joining this effort, visit www.orangeconesnophones.com.



WIEHLE AVENUE STATION RISING: Looking west in the foreground are the platform deck sections now in place as work continues at this station under construction in the median of the Dulles International Airport Access Highway just west of the Wiehle Avenue overpass. Photo by Chuck Samuelson, Dulles Corridor Metrorail Project



REFLECTIONS: Crews spray concrete on to the surface of the tunnels. Mining on both the inbound and outbound tunnels are complete, and the next phase of tunneling work is expected to last one more year. Photo by Frank Jenkins, Dulles Transit Partners

Mining Completed for Inbound, Outbound Tunnels Connecting Central 7, 123 Stations

Tunnel miners in Tysons Corner reached a second major milestone on Dec. 3 with the completion of the excavation for the inbound tunnel to carry trains from the future Tysons Central 7 Metrorail Station near SAIC and Marshalls to the Tysons Central 123 Station at Route 123 and Tysons Boulevard.

The parallel outbound tunnel was completed on Oct. 20.

Dulles Transit Partners, the design-build contractor for the Metropolitan Washington Airports Authority who owns and manages the project, are self-performing the tunnel construction. So far, more than 150,000 man-hours have been poured into tunnel construction.

During the mining process many, many truckloads of muck were transported from the tunnels to Dulles Airport where a rail yard will be built in Phase 2 of the Metrorail Project.

Tunnel crews have now started the next phase of construction, which includes waterproofing and installation of reinforced steel lining materials.

The tunnels will carry trains below the highest natural point in Fairfax County at the intersection of Routes 7 and 123.

Tunnel Mining Highlights:

- A shotcrete plant at Route 123 and International Drive provided 20,000 yards of a special cement mix to build the tunnel rim
- Approximately 100,000 cubic yards of muck were transported from the tunnel to Dulles Airport
- At its deepest point, the tunnel is 35 feet below ground.