



Dulles Corridor Metrorail Project

Silver Line Phase 2 Implementation

Board Transportation Committee Update

October 2, 2018

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Project Status

Phase 1

- Old Meadow Road Realignment – 90% design complete.
 - Construction completion scheduled for the end of 2018
- VDOT punch list ongoing – MWAA and Bechtel to complete
- Bus bays at Spring Hill and McLean are complete
- Phase 1 close out - \$2.982B (no change)

Phase 2

- Overall Phase 2 – 85% complete
- Package A (Rail line, system, and stations) – 86%
- Package B (Rail yard at Dulles) – 87%
- Contractual Substantial Completion – August 2019
 - WMATA Board to establish Revenue Operations Date

Phase 2 – Cost Summary

- Budget

• Total Budget	\$2.778B
• Total Forecast	\$2.778B
• Total Expenditures	\$1.758B

- Contingency Utilization

• Total Contingency	\$551.5M
• Total Contingency Utilized	\$241.9M
• Remaining Contingency	\$309.6M

Phase 2 – Station Construction

- *Reston Town Center Station* – Mechanical/electrical/plumbing rough-in, station roofing, and pavilion area work ongoing.
- *Herndon Station* – Electrical and steel welding work, south pavilion construction, and stair tower foundation.
- *Innovation Station* – Pedestrian bridge detailing work, station finishes, electrical rough-in and plumbing continues.



Phase 2 – Station Construction

- *Dulles Airport Station* – Station lighting, HVAC duct work, granite edging, and platform waterproofing.
- *Loudoun Gateway Station* – Vault roof welding, skylight framing and glazing, and MEP rough-in.
- *Ashburn Station* - Station roof work, MEP rough-in, pavilion work, and pedestrian bridge detailing.



Phase 2 – Universal Concrete Products (UPC)

- 1598 precast panels provided
 - 60 Panels rejected (42 installed 18 not installed). All rejected panels have been replaced.
- Issues with the panels
 - High water to cement ratio, air entrainment, insufficient concrete cover over the rebar, and may not meet non-reactivity to alkali-silica reaction (unknown until the whistleblower court documents unsealed)
- MWAA and CRC commenced an independent evaluation of the panels and materials used in the fabrication. Final results from the investigation show material used in the fabrication of the panels meet contract specifications. No finding of alkali-silica reaction.
- All panels provided by UPC will be coated with a sealant.

Phase 2 – Universal Concrete Products (UPC) cont.

- WMATA IG is doing an independent investigation.
- UPC panels are not structure panels. The concern was meeting the 100 year durability of the panels.
- MWAA proposes a sinking fund established by the contractor to provide money to coat the panels. This would improve durability and life of the panels to meet the contract 100 year requirement. WMATA is working with MWAA on the proposed solution.
- The costs for the “fix” is the responsibility of the Phase 2 contractor



Phase 2 – Aerial, Track, Utilities, Systems

- Aerial guideway finish painting girder bearings and clean up work
- Power and communication lines relocation ongoing
- Completed all 34.5kV cable and conduit installation
- All primary and secondary feeders tested and energized from Dominion Energy substation to project.
- Rail and switches being installed along the at grade guideway in the DIAAH median from the Reston Town Center Station to Yard Leads.



Phase 2 – Rail Yard at Dulles Airport

- Perimeter fence installation, interior work for Service and Inspection Building, Maintenance Way Building, and Transit Police Building. Construction continues at Train Wash Facility, Warehouse Facility, and Vehicle Storage Facility.
- Ongoing – Track approaches to SIB and MWB as well as special track work.



Herndon Metrorail Garage

- Total Project Estimate: \$44.5M
- Construction Progress: 91% complete
- Existing garage repair work scope and cost under review

Schedule

- Construction Award: October 2016
- Construction (new garage): November 2016 – March 2019
- Construction (existing garage): February 2019 – March 2019
- Ready for Occupancy: April 2019

Herndon Metrorail Garage



Herndon Metrorail Garage



Innovation Metrorail Garage

- Total Project Estimate: \$52 million
- Construction Progress: 65% complete
- Precast Fabrication: October 2017
- Precast Erection: April 5, 2018

Schedule

- Construction Award: March 2017
- Construction: April 2017
- Ready for Occupancy: April/May 2019*

* Will be updated as needed pending the lifting of the stop work order

Innovation Station Garage

- 64% of precast panels installed
- Stop Work Order issued by DPWES and LDS
- Settlement of four foundation caissons (135 caissons installed)
- Successfully stabilized the caissons by injecting remedial grout
 - Additional steps underway to install a redundant foundation system
 - Electronic monitoring of the structure
 - Investigative work ongoing, a total of 13 caissons have been identified as requiring remedial work.
 - Independent geotechnical firm contracted by DPWES
- Garage remains on schedule to be operational with the start of Phase 2 revenue operations.

Innovation Metrorail Garage



Reston Town Center Station

Reston South Precast Retaining Wall Underway



Reston Station Painting and Ceiling Installation



Reston Station Platform Paver Installation



Herndon Station

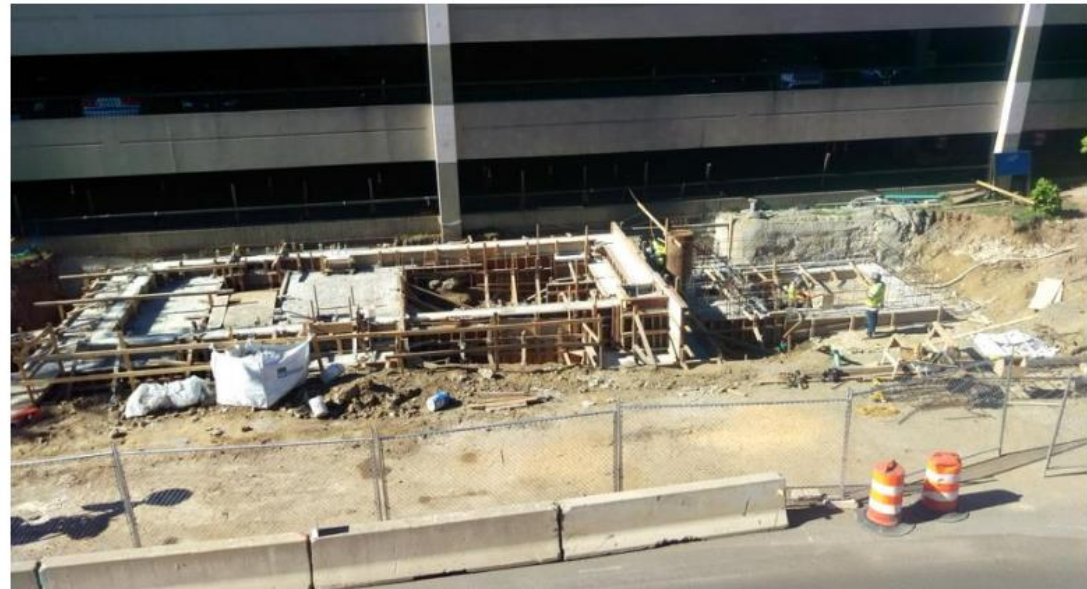
Herndon Station South Pavilion



Herndon North Pedestrian Bridge Set to North Pavilion



Foundations Underway at Herndon South Stair Tower to Fairfax County Garage



Innovation Center Station



Innovation Pedestrian Bridge



Innovation North Entrance Canopy



Innovation Station Pavilions



Dulles Airport Station



Dulles Station Platform, Canopy Roof and Guideway



Installing Ceiling Grid in Dulles Station Mezzanine



Rail Yard Dulles Airport

SIB High Bay Service Area



Car Hoist Jacks Awaiting Installation in the SIB



Erecting Steel Support Frame for the Stinger System in the SIB



QUESTIONS?