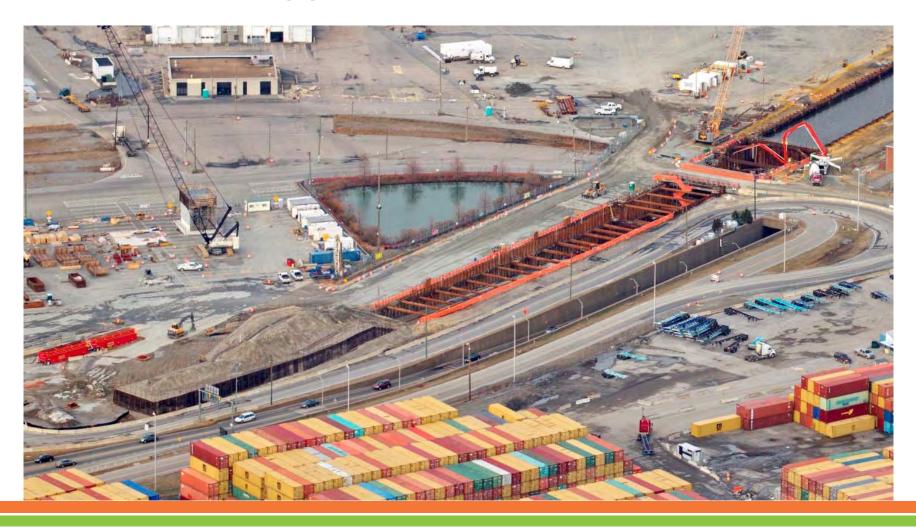
# New MTT - Approaches





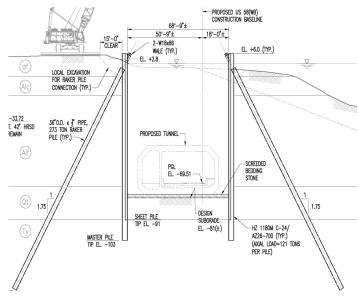






#### Marine - Raker Pile Installation













# New MTT - Approaches

- Excavation of Approach following installation of SOE and concrete piles
- Struts and Walers to brace excavation
- Placement of Inverts, Walls, Roofs





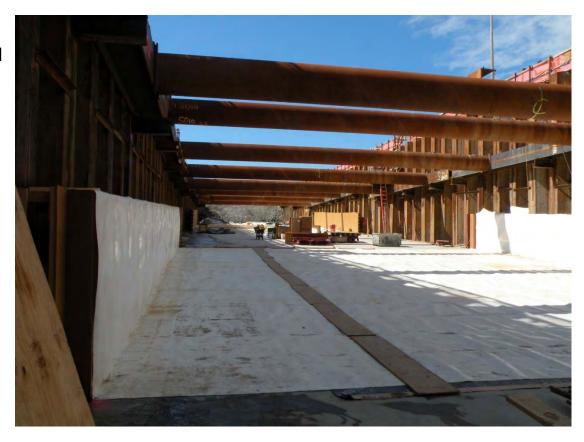






# New MTT - Approaches

- Excavation of Approach following installation of SOE and concrete piles
- Struts and Walers to brace excavation
- Placement of Inverts, Walls, Roofs











Existing Tunnel Rehab and Upgrades

- Three existing tubes
  - Downtown Tunnel West **Bound**
  - Downtown Tunnel East Bound
  - Midtown Tunnel
- Scope of repair similar











## Existing Tunnel Rehab and Upgrades

#### Scope

- Goal is to extend the useful life of existing assets
- Structural repairs
  - Delaminated and spalled concrete
- Goal to meet NFPA 502
  - (100 Megawatt fire)
- Ventilation upgrades
- ITS system
- Lighting Upgrades



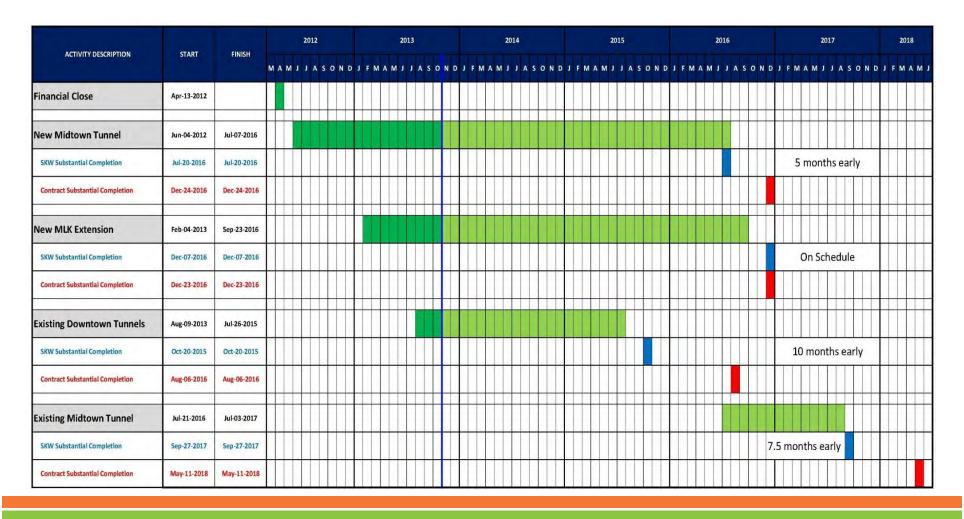








## Schedule – Project Wide











#### SKW Constructors – Brent Hunt

- Project Manager MLK Extension
- Skanska USA Civil Southeast
  - —Past Projects
    - —Huguenot Bridge, Richmond, VA (Project Manager)
    - —Bridge of Lions, St. Augustine, FL (Project Manager)
    - —Route 5 Bridge over Chickahominy River, James City County, VA (Project Manager)
    - —APM Terminals Interchange, Portsmouth, VA (Project Engineer)
    - —Pinner's Point Interchange, Portsmouth, VA (Assistant Project Manager)









# MLK Extension – Project Wide











## MLK Extension – Project Wide











#### **MLK Extension**

- Technical Requirements Final Design Criteria MLK Extension
  - Designed to meet VDOT and AASHTO requirements
  - —Standard VDOT project with few exceptions
    - Design-Build
    - Design Exception required at London Blvd Ramp
      - —Proceed with existing ramp geometry (substandard)
    - —DB Scope includes ROW Acquisition









### MLK Extension – Design Considerations

- Construction through populated area
- Railroad Coordination
  - —CSX
  - -NPBL
- Historically significant sites
  - —Mount Calvary Cemetery Complex
  - —Potter's Field site
    - —Unmarked graves
    - —Protect from construction equipment









## MLK Extension – Design Considerations

- Calvary Baptist Church
  - Preconstruction surveys
  - Seismic Monitoring during construction









### MLK Extension – Design Considerations

- Right of Way Acquisition
  - —Acquire property on behalf of the Commonwealth
  - -69 Parcels
  - —34 Structures to demolish
  - —Private Residential Homes
    - —Relocate residents
    - —Inspect homes, abate as necessary, then demolish
  - **Businesses** 
    - —Similar process to residential properties
    - —Additional work to coordinate movement of businesses
      - —Vulcan Materials
      - Old Dominion Demolition









#### MLK Extension – Mainline US-58

- General Information
  - —1 mile of controlled access freeway
  - —1.4 miles of elevate structure of varying width (1 to 3 lanes in each direction)
  - —Retaining Walls
    - -MSE Wall
    - —Geofoam
    - —Other
  - —SWM Ponds
    - —BMP Planting









#### MLK Extension – Mainline US-58

- General Information
  - —200 + Utility Relocations
    - —Water, Sewer, Cox, Dominion, Verizon, Virginia Natural Gas
    - —Modifications to existing 20" water line
    - —Primary water system feeder to downtown Portsmouth
  - —Ground Improvements
    - —Surcharges
    - —Pile Supported Embankments









### MLK Extension – Interchanges

- I-264 Interchange
  - —New construction of 4 ramps between US-58 and I-264
  - —Roadway Widening of I-264 EB and WB
    - Des Moines Avenue overpass
    - —Bridge over N&PBL
  - ITS Relocation overhead sign structure replacement









### MLK Extension – Interchanges

- I-264 Interchange
  - —Reconstruction of Frederick Blvd off ramp
  - —Permanent closure of Des Moines Exit and South Street on ramp
  - -Pedestrian Bridge Replacement







