Briefing on:

**DC CLEAN RIVERS PROJECT**

Northeast Boundary Tunnel and Associated Utility Relocations

*Industry Outreach*

Gallaudet University Kellogg Conference Center

July 21, 2015
Agenda

- Welcome! We’re glad you’re here!
- DC Water Overview
- DC Clean Rivers Project Background
- Construction Phasing
- Northeast Boundary Tunnel
  - Division U – Utility Relocations
  - Division J – Northeast Boundary Tunnel
- Contracting Methodologies
- Procurement and MBE/WBE Requirements
- Schedule and Next Steps
- Questions and Networking
Who We Are
District of Columbia Water and Sewer Authority (DC Water)

- Provides
  - Drinking water distribution for DC
  - Required wastewater collection and treatment
  - Stormwater collection and conveyance
- Treats wastewater for a population of 2.1 million
  - District of Columbia
  - Montgomery & Prince George's Counties, MD
  - Fairfax & Loudoun Counties, VA
- Operates the world’s largest advanced wastewater treatment plant
  - Average daily capacity, 370 mgd
  - Peak daily capacity, 1 billion+ gallons
- Serves a regional area of approx. 725 square miles

Blue Plains Advanced Wastewater Treatment Plant
Who We Serve
Blue Plains Service Area
DC CLEAN RIVERS PROJECT BACKGROUND
DC Clean Rivers Project
Project Update
DC Clean Rivers Project
Consent Decree Modification for Potomac River and Rock Creek

CSO 049: Manage volume equal to 1.2" of rain falling on 365 impervious acres

CSOs 027, 028, 029: Manage volume equal to 1.2" of rain falling on 133 impervious acres

CSOs 025, 026: Separate sewers

CSOs 020–024: Control using Potomac tunnel

Rock Creek and Potomac drainage areas

Rock Creek and Potomac drainage areas with Green Infrastructure and targeted sewer separation

Drainage areas with sewer separation

Potomac River Tunnel (30 million gallons via gravity)

Anacostia River Tunnel System (157 million gallons)

CSO outfalls (associated with proposed plan)

Blue Plains Advanced Wastewater Treatment Plant
Summer 2012 Storm Events: Chronic Flooding
Mayor’s Task Force Overview

4 storms caused major flooding: July 10, 18, 19 and Sept 2, 2012

Mayor formed Task Force in Aug 2012

Task Force report delivered end of Dec 2012

Over 25 Recommendations:

- Public Outreach
- Regulatory
- Code Changes
- Operations & Maintenance

Engineering Measures
- McMillan Stormwater Storage
- First Street Tunnel
- Northeast Boundary Tunnel (NEBT)
Mayor’s Task Force Recommended Plan

1. SHORT-TERM (NOT ILLUSTRATED)
   - Construction of green infrastructure projects
   - Installation of storm drains and a five-foot-wide storm sewer
   - Backwater valve and rain barrel program

2. MEDIUM-TERM
   - **IRVING STREET GREEN INFRASTRUCTURE PROJECT**
     - Construction of bioretention facilities along Irving Street NW
     - 0.4 million gallons. Completed

   - **MCMILLAN STORMWATER STORAGE PROJECT**
     - Repurpose McMillan Sand Filtration cells as stormwater storage
     - In-line storage in a sewer that runs along First Street NW
     - 3.6 million gallons. Completed

   - **FIRST STREET TUNNEL PROJECT**
     - Construction of a new tunnel under First Street NW
     - Construction of diversion facilities to divert flows to tunnel
     - 9 million gallons, Completion in Spring 2016

3. LONG-TERM
   - **NORTHEAST BOUNDARY TUNNEL PROJECT**
     - A large, deep sewer tunnel that will increase the capacity of the sewer system to current design standards and control combined sewer overflow discharges to the Anacostia River
Project Benefits

- Significantly mitigate the frequency, magnitude and duration of sewer flooding and basement backups in the Northeast Boundary drainage area
- Control combined sewer overflow (CSO) discharges to the Anacostia River, significantly improving water quality
- Minimize the nuisance and economic costs associated with flooding
- Reduce risks to human health
- Greatly reduce the discharge of untreated wastewater into the District’s receiving waterbodies
- Prevent deterioration of historic resources from water damage caused by flooding

### Flood Relief

#### CSO Reduction to Anacostia River

<table>
<thead>
<tr>
<th>CSO Reduction Project Timeline</th>
<th>CSO Overflow Volume to Anacostia River (mg/yr)</th>
<th>% Reduction from Baseline</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996: Baseline: Without Inflatable Dams or Pumping Station Rehab</td>
<td>2,142</td>
<td></td>
</tr>
<tr>
<td>2008: After Inflatable Dams and Pumping Station Rehab</td>
<td>1,282</td>
<td>40%</td>
</tr>
<tr>
<td>2018: Blue Plains and Anacostia River Tunnels</td>
<td>407</td>
<td>81%</td>
</tr>
<tr>
<td>2022/3: Northeast Boundary Tunnel*</td>
<td>54</td>
<td>98%</td>
</tr>
</tbody>
</table>

*2025 Consent Decree Deadline; Project accelerated due to Mayor’s Task Force recommendations.*

![Diagram showing flood relief and CSO reduction](image)
Carlton Ray

NORTHEAST BOUNDARY TUNNEL (NEBT) CONSTRUCTION PHASING
# Northeast Boundary Tunnel Construction Phases

*Construction work has been divided into two contracts:*

<table>
<thead>
<tr>
<th>Contract</th>
<th>Description</th>
<th>Start</th>
<th>End</th>
</tr>
</thead>
</table>
| Division U | • Relocation of utilities (gas, electric, communication, water, sewer, etc.) that conflict with permanent tunnel structures  
• DC Water to contract with Prime Contractor  
  - *Prime to perform water and sewer work*  
  - *Prime to hire pre-approved utility subcontractors to complete electric, communication and gas work*  
 • Typical linear trench-type utility work  
 • Moving work areas  
 • Maintenance of traffic is key | May 2016 | Nov 2017 |
| Division J | • Construction of NEBT and diversion facilities along tunnel alignment  
 • Stationary work areas  
 • Maintenance of traffic is key | April 2018 | 2022/3 |
Phased Alternative Approach to Mitigate Risk and Delays

Los Angeles Metro Example:

- $25 M Advance Utility Relocation contract before $960 M Regional Connector Light Rail project
- Many unknown/unidentified utilities encountered
- Utility relocation delaying project by 10 months, cost of $51 M
- Transferring some utility relocations to light rail contractor to reduce costs and save schedule

NEBT Approach:

- Division U
  - Utility relocation in separate contract will clear sites of utilities for tunnel contract
  - Utility relocation contract will include Unforeseen Utility Survey – trenches through work areas to find utilities not shown on plans (if any)
  - Additional time allowed in utility relocation contract to account for unknowns

- Division J
  - DC Water will advance design on specific facilities to reduce lead time for construction
  - Simplified Construction Impact Assessment Report process
  - (Tentative) phased design and construction NTP:
    - Reduce design delays
    - Mitigate permitting delays
    - Learning curve during design phase
    - Coordination of temporary and permanent design doesn’t affect schedule
Northeast Boundary Tunnel Schedules

### Phased NTP for Division J Design and Construction (TENTATIVE)

- **Design:**
  - Maintenance of Flow
  - Dewatering
  - Support of Excavation
  - Maintenance of Traffic & Signalization Plans
  - Adits and Tunnel, shaft connections
  - Geotechnical Instrumentation
  - Protection of Structures

- Acquire permits for construction

- Other submittals:
  - Schedule
  - Safety Plan
  - QA/QC
  - Commuter Outreach Plan
NORTHEAST BOUNDARY TUNNEL (NEBT)

• DIVISION U – UTILITY RELOCATIONS
• DIVISION J – TUNNEL AND APPURTENANCE CONSTRUCTION
Northeast Boundary Tunnel (NEBT) Alignment
Northeast Boundary Tunnel (NEBT)
Typical Diversion Facility

- Diversion chamber
- Existing sewer
- Approach channel/diversion sewer
- Drop shaft
- Northeast Boundary Tunnel: 27,000 feet long, 23 feet deep

Near Surface Structures (NSS) vs. Deep Structures

Grade (street level)
Approx. 100 feet below grade
Northeast Boundary Tunnel (NEBT)
Key Map
(1) CSO 019 Site
Aerial Plan

CSO 019 Site Map

- CSO 019 CONSTRUCTION STAGING AREA 2
- CSO 019 DIVERSION CHAMBER
- CSO 019 ODOR CONTROL VAULT
- 66'-3" ID CSO 019 SOUTH DROP SHAFT
- RFK STADIUM ACCESS ROAD
- ANACOSTIA RIVER TUNNEL
- CSO 019 OUTFALL
- NORTHEAST BOUNDARY TRUNK SEWER
- CONSTRUCT COVER
- 65'-10" ID CSO 019 NORTH DROP SHAFT
- EASTSIDE FORCE MAIN
- NORTHEAST BOUNDARY TUNNEL
- CSO 019 CONSTRUCTION STAGING AREA 1
- CSO 019 OVERFLOW STRUCTURE

Legend:
- Northeast Boundary Tunnel
- Proposed Structures
- Existing Sewer Infrastructure
- At-surface Structures
- Above-surface Structures
- Construction Staging Areas

Scale: 1"=100'
<table>
<thead>
<tr>
<th>General Location</th>
<th>Property Ownership</th>
<th>Major Components</th>
</tr>
</thead>
</table>
| Immediately south of RFK Stadium along the west bank of the Anacostia River | • National Park Service | • Mining site for NEBT construction  
• Construction of 65’-10” diameter shaft liner and cover  
• Restoration and landscaping of site  
• Relocation of 48” sanitary force main (from East Side Pumping Station) | • N/A |

Division J | Division U
(2) Mt Olivet Road Site
Aerial Plan

Staging area for Division U = 0.5 acres
# (2) Mt Olivet Road Site
## Proposed Work

<table>
<thead>
<tr>
<th>General Location</th>
<th>Property Ownership</th>
<th>Major Components</th>
</tr>
</thead>
</table>
| Mt Olivet Road NE between Capitol Avenue NE and the Mt Olivet Cemetery | • District Department of Transportation  
• District Department of General Services  
• Bethesda Baptist Church | • Diversion chamber  
• 10-ft diameter diversion sewer, 720-ft long  
• Stormwater inlets and storm sewers  
• 25-ft diameter drop shaft  
• Vortex drop facility  
• 15-ft diameter adit, 67-ft long  
• 3,000 cfm ventilation control system in underground vault  
• Green infrastructure  
• Site restoration | Division U:  
**Water & Sewer:**  
• 8” water, 800-ft long  
• 20” water, 350-ft long  
• 6” sanitary sewer, 150-ft long  
• 18” storm sewer 200-ft long  
**Gas:**  
• 6” gas, 500-ft long  
**Electric:**  
• Overhead electric, 650-ft long  
• 2-Way electric, 150-ft long  
• Service drop for 120/208V, 400A, 3-phase electric |
(2) Mt Olivet Road Site
3D View of Proposed Structures
(3) W Street Site
Aerial Plan

NOTE: Construction Staging Areas shown for Division J only – Division U will work within multiple areas defined by the maintenance of traffic plan.
## (3) W Street Site
Proposed Work

<table>
<thead>
<tr>
<th>General Location</th>
<th>Property Ownership</th>
<th>Major Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>An area of mixed open space between W Street NE and the Amtrak railyard</td>
<td>District Department of General Services</td>
<td>Division J: 84,000 cfm ventilation control system housed within a 5,800 square-ft building, 30-ft tall retaining wall, 45-ft diameter junction shaft, Ventilation vault, Green infrastructure, Site restoration</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Division U: Electric: Installation of transformer for 265/460V, 600A, 3-phase service</td>
</tr>
</tbody>
</table>
(3) W Street Site
Rendering of W Street Ventilation Control Facility

- W Street Residences
- Existing Salt Dome
- Ventilation Vault
- Green Roof
- Ventilation Control Facility
- Bioretention Area
- 35 Feet of Natural Vegetation and Screening Fence
- Amtrak Property
(4) Rhode Island Avenue Site
Aerial Plan

- RHODE ISLAND AVENUE CONSTRUCTION STAGING AREA 1
- RHODE ISLAND AVENUE CONSTRUCTION STAGING AREA 2
- RHODE ISLAND AVENUE CONSTRUCTION STAGING AREA 3
- RHODE ISLAND AVENUE CONSTRUCTION STAGING AREA 4
- RHODE ISLAND AVENUE VENTILATION CONTROL VAULT
- CSX TRACKS
- NORTHEAST BOUNDARY TUNNEL
- 6'-6" COMBINED SEWER
- OWNED BY DC WATER
- 25'-0" ID RHODE ISLAND AVENUE DROP SHAFT
- 13'-0" ID RHODE ISLAND AVENUE ADIT
- RHODE ISLAND AVENUE DIVERSION CHAMBER
- CALVARY CHRISTIAN ACADEMY
- RHODE ISLAND AVE NE
- WMATA
- RHODE ISLAND AVENUE SITE

LEGEND:
- Northeast Boundary Tunnel
- Proposed Structures
- Existing Sewer Infrastructure
- At-surface Structures
- Above-surface Structures
- Construction Staging Areas

Staging area for Division U = 0.3 acres
## (4) Rhode Island Avenue Site
### Proposed Work

<table>
<thead>
<tr>
<th>General Location</th>
<th>Property Ownership</th>
<th>Major Components</th>
<th>Division J</th>
<th>Division U</th>
</tr>
</thead>
</table>
| Intersection of Rhode Island Avenue and 8th Place NE | • District Department of Transportation  
• DC Water | • Diversion chamber  
• Stormwater inlets and storm sewers  
• 25-ft diameter drop shaft  
• Vortex drop facility  
• 13-ft diameter adit, 25-ft long  
• Ventilation vault  
• Green infrastructure  
• Site restoration |  | Gas:  
• 12” gas, 300-ft long  
Electric:  
• 8-Way electric, 750-ft long  
• 20-Way electric, 200-ft long  
• Service drop for 120/208V, 400A, 3-phase electric  
• Work includes relocation of WMATA traction power service lines |  |
(4) Rhode Island Avenue Site
3D View of Proposed Structures
NOTE: Construction Staging Areas shown for Division J only – Division U will work within multiple areas defined by the maintenance of traffic plan.
(5) 4th Street Site
Proposed Work

<table>
<thead>
<tr>
<th>General Location</th>
<th>Property Ownership</th>
<th>Major Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intersection of 4th Street NE and Rhode Island Avenue NE</td>
<td>• District Department of Transportation</td>
<td>Division J</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Diversion chamber</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Stormwater inlets and storm sewers</td>
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<tr>
<td></td>
<td></td>
<td>• 20-ft diameter drop shaft</td>
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<tr>
<td></td>
<td></td>
<td>• Vortex drop facility</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 13-ft diameter adit, 63-ft long</td>
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<tr>
<td></td>
<td></td>
<td>• Ventilation vault</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Green infrastructure</td>
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<td></td>
<td>• Site restoration</td>
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<td>Division U</td>
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<td>Water &amp; Sewer:</td>
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<tr>
<td></td>
<td></td>
<td>• 2&quot; water, 150-ft long</td>
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<tr>
<td></td>
<td></td>
<td>• 8&quot; water, 50-ft long</td>
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<tr>
<td></td>
<td></td>
<td>• 12&quot; water, 250-ft long</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 15&quot; sanitary sewer, 100-ft long</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 24&quot; sanitary sewer, 100-ft long</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gas:</td>
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<tr>
<td></td>
<td></td>
<td>• 6&quot; gas, 100-ft long</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 12&quot; gas, 250-ft long</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Electric:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 8-Way electric, 500-ft long</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Communication:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 4-Way comm, 300-ft long</td>
</tr>
</tbody>
</table>
NOTE: Construction Staging Areas shown for Division J only – Division U will work within multiple areas defined by the maintenance of traffic plan.
## (6) T Street Site
### Proposed Work

<table>
<thead>
<tr>
<th>General Location</th>
<th>Property Ownership</th>
<th>Major Components</th>
</tr>
</thead>
</table>
| Intersection of T Street NW and Rhode Island Avenue NW | • District Department of Transportation | • Stormwater inlets and storm sewers  
• 15-ft diameter drop shaft  
• Vortex drop facility  
• 8-ft diameter adit, 35-ft long  
• Ventilation vault  
• Green infrastructure  
• Site restoration  
• Service connections | Division J  
Division U |
| | | Water & Sewer:  
• 8” water, 250-ft long  
Gas:  
• 8” gas, 150-ft long  
Electric:  
• 4-Way electric 73-ft long  
• Various electric services, 100-ft long | |
(7) Pumping Station Site Aerial Plan
### (7) Pumping Station Site

**Proposed Work**

<table>
<thead>
<tr>
<th>General Location</th>
<th>Property Ownership</th>
<th>Major Components</th>
</tr>
</thead>
</table>
| Intersection of Thomas and First Streets NW | - District Department of Transportation  
- Mt Bethel Baptist Church | - Decommissioning of a 6 mgd pumping station  
- Removal of power feed and transformer  
- Connection of the existing First Street Tunnel to the NEBT  
- Demolition of a 22-ft diameter drop shaft  
- Abandonment of 8-ft diameter adit  
- Demolition of valve vaults  
- Site restoration  
- Green infrastructure | - N/A |

- Division J
- Division U
NOTE: Construction Staging Areas shown for Division J only – Division U will work within multiple areas defined by the maintenance of traffic plan.
### (8) Channing Street Site
#### Proposed Work

<table>
<thead>
<tr>
<th>General Location</th>
<th>Property Ownership</th>
<th>Major Components</th>
</tr>
</thead>
</table>
| First Street NW between Channing Street NW and McMillan Drive NW | • District Department of Transportation | • 3,000 cfm ventilation control system in underground vault  
• 8-ft diameter diversion sewer, 100-ft long  
• Removal of actuator  
• Removal of bulkheads  
• Installation of stop logs  
• Site restoration  
• Green infrastructure | • Service drop for 120/208V, 400A, 3-phase electric |
| Division J | Division U |
(9) Michigan Avenue Site
Aerial Plan
(9) Michigan Avenue Site
Proposed Work

<table>
<thead>
<tr>
<th>General Location</th>
<th>Property Ownership</th>
<th>Major Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Capitol Street NW between Channing Street NW and Michigan Avenue NW</td>
<td>• District Department of Transportation</td>
<td>• Removal of actuator</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Decommissioning diversion chamber and sewer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Site restoration</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N/A</td>
</tr>
</tbody>
</table>
NOTE: Construction Staging Areas shown for Division J only – Division U will work within multiple areas defined by the maintenance of traffic plan.
## (10) Florida Avenue Site
### Proposed Work

<table>
<thead>
<tr>
<th>General Location</th>
<th>Property Ownership</th>
<th>Major Components</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Division J</td>
<td>Division U</td>
</tr>
<tr>
<td>Intersection of 3rd Street NW and Florida Avenue NW</td>
<td>• District Department of Transportation</td>
<td>• Diversion chamber</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 8-ft diameter diversion sewer, 100-ft long</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 20-ft diameter drop shaft</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Vortex drop facility</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 13-ft diameter adit, 50-ft long</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Ventilation vault</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Green infrastructure</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Site restoration</td>
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<tr>
<td></td>
<td>Water &amp; Sewer:</td>
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</tr>
<tr>
<td></td>
<td>• 8&quot; water, 400-ft long</td>
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<tr>
<td></td>
<td>• 12&quot; water, 250-ft long</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 12&quot; sanitary sewer, 20-ft long</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 48&quot; sanitary sewer, 60-ft long</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 15&quot; storm sewer, 10-ft long</td>
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<tr>
<td></td>
<td>Gas:</td>
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<tr>
<td></td>
<td>• 12&quot; gas, 100-ft long</td>
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<td></td>
<td>Electric:</td>
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</tr>
<tr>
<td></td>
<td>• 8-Way electric, 100-ft long</td>
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<tr>
<td></td>
<td>• 16-Way electric, 50-ft long</td>
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</tr>
<tr>
<td></td>
<td>• 20-Way electric, 150-ft long</td>
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</tbody>
</table>
(10) Florida Avenue Site
3D View of Proposed Structures
NOTE: Construction Staging Areas shown for Division J only – Division U will work within multiple areas defined by the maintenance of traffic plan.
## (11) R Street Site
### Proposed Work

<table>
<thead>
<tr>
<th>General Location</th>
<th>Property Ownership</th>
<th>Major Components</th>
</tr>
</thead>
</table>
| Intersection of 6th Street NW and Rhode Island Avenue NW | • District Department of Transportation  
• District Department of General Services | **Division J**  
• Diversion chamber  
• 38-ft diameter drop shaft  
• Vortex drop facility  
• 3,000 cfm ventilation control system in underground vault  
• Green infrastructure  
• Site restoration – including the restoration of an existing pocket park  
• Installation of public art  
• Irrigation system  

**Division U**  
**Water & Sewer:**  
• 48" water, 800-ft long  
• 30" storm sewer, 200-ft long  
**Electric:**  
• 4-Way electric, 100-ft long  
• Service drop for 120/208V, 400A, 3-phase electric  
**Communication:**  
• 8-Way comm, 350-ft long  
• 9-Way comm, 250-ft long |
Northeast Boundary Tunnel (NEBT) Design Responsibilities

### Division J

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Item</th>
<th>Design Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydraulics</td>
<td>Hydraulic Internal Requirements</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Maintenance of Flow</td>
<td>X</td>
</tr>
<tr>
<td>Civil</td>
<td>Demolition</td>
<td></td>
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<td></td>
<td>Site Restoration</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Dewatering</td>
<td>X</td>
</tr>
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<td></td>
<td>Support of Excavation</td>
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<td>Utility Relocations/Connections</td>
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<td>Landscaping</td>
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<td>Erosion and Sediment Control</td>
<td>X</td>
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<td>Stormwater Management</td>
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<td>Maintenance of Traffic</td>
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<td>Signaling Plans</td>
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<td>Structural</td>
<td>Near Surface Structures</td>
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<tr>
<td></td>
<td>Shafts</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Equipment (gates, hatches, etc.)</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Connection to Existing Sewer System</td>
<td>X</td>
</tr>
<tr>
<td>Architectural</td>
<td>Final Design of Buildings</td>
<td>X</td>
</tr>
<tr>
<td>Underground</td>
<td>Adits</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Tunnel</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Connection between Tunnel/Adits and Shafts</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Tunnel Boring Machine</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Trenchless Diversion Sewers</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Temporary Support of Excavation</td>
<td></td>
</tr>
<tr>
<td>Mechanical</td>
<td>Odor Control Units</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Backdraft Dampers and Bar Grating</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ductwork</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Drains and Piping</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Ventilation</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Sump Pumps and Piping</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Valves</td>
<td>X</td>
</tr>
<tr>
<td>Electrical</td>
<td>Motor Control Center</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Electrical equipment</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Permanent Low Voltage Power</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Temporary High Voltage Power</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Transformer Vault</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Pepco Meter, Disconnect Switch &amp; Transformer</td>
<td>X</td>
</tr>
<tr>
<td>Instrumentation</td>
<td>Monitoring and Data Collection Equipment</td>
<td>X</td>
</tr>
<tr>
<td>Geotechnical</td>
<td>Geotechnical Instrumentation</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Protection of Structures</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Ground Improvement</td>
<td>X</td>
</tr>
</tbody>
</table>

### Division U

- Owner is responsible for design work
- Owner will obtain some permits:
  - DDOT Construction Permit
  - WMATA No Conflict Notice
  - DC Water Permits

---

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## Northeast Boundary Tunnel (NEBT) Utility Approved Subcontractors

<table>
<thead>
<tr>
<th>Pepco</th>
<th>Verizon</th>
<th>Verizon Business</th>
<th>Comcast</th>
<th>Washington Gas</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Cable Construction</td>
<td>National Cable Construction</td>
<td>Woodlawn Communications, LLC</td>
<td>Capitol Cable</td>
<td>DCI Enterprise Solutions</td>
</tr>
<tr>
<td>RB Hinkle Construction</td>
<td>RB Hinkle Construction</td>
<td>Jones Utilities Construction, Inc. Fishel Company</td>
<td>Communications Construction Group DCI Enterprise Solutions</td>
<td>Flippo Construction Miller Pipeline</td>
</tr>
<tr>
<td>Flippo Construction</td>
<td>Flippo Construction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Frank Joy</td>
<td>B. Frank Joy</td>
<td>Metropolitan Communications Group</td>
<td></td>
<td>Northern Pipeline</td>
</tr>
<tr>
<td>Anchor Construction</td>
<td>DCI Enterprise Solutions</td>
<td></td>
<td></td>
<td>InfraSource Underground</td>
</tr>
<tr>
<td>Fort Myer Construction</td>
<td>Cuddy &amp; Associates</td>
<td></td>
<td></td>
<td>Willbros Engineers</td>
</tr>
<tr>
<td>(Street Light Only)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manna</td>
<td>LAI Construction</td>
<td></td>
<td></td>
<td>Skoda Contracting</td>
</tr>
<tr>
<td>M&amp;L Contractors</td>
<td>Casper Colosimo &amp; Son</td>
<td></td>
<td></td>
<td>Ferguson Trenching</td>
</tr>
<tr>
<td>Allstar Utility</td>
<td></td>
<td></td>
<td></td>
<td>Danella Atlantic Corporation The Fishel Company</td>
</tr>
<tr>
<td>Harkless Construction</td>
<td></td>
<td></td>
<td></td>
<td>Perry Engineering Company</td>
</tr>
<tr>
<td>C. W. Wright Construction</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:** List based on information provided by utility agencies, subject to change
Gordon Evans

CONTRACTING METHODOLOGIES
## Contracting Methodologies

<table>
<thead>
<tr>
<th>Contract</th>
<th>Method</th>
<th>Shortlisting Qualifications</th>
<th>Award</th>
</tr>
</thead>
<tbody>
<tr>
<td>Division U</td>
<td>Design-Bid-Build with Collaboration Period</td>
<td>Shortlist up to 4 teams</td>
<td>Low-Bid</td>
</tr>
<tr>
<td>Division J</td>
<td>Design-Build with Collaboration Period</td>
<td>Shortlist up to 4 teams</td>
<td>Best Value</td>
</tr>
</tbody>
</table>

### Best Value Process for Division J

- Technical Proposal Evaluation Factors (35% of score)
  - Project Management and Organization
  - Design and Construction Plan
  - M/WBE Business Development Plan, Local Hiring Initiative and Subcontracting Plan
- Price Proposal (65% of score)
- Selection on price and technical proposal = best value
- Stipends for responsive proposers not awarded contract
Collaboration Period
General Purpose

- Collaboration Process is designed to:
  - Review the procurement process
  - Understand proposed means and methods
  - Understand project schedule and durations
  - Identify fatal flaws with team’s approach
  - Reduce contingencies due to uncertainty
Collaboration Period
Process

- Kick-off meeting open to all teams
  - Led by DC Water
  - Review project scope and procurement process
- Confidential meetings conducted with each team
  - Optional terms and conditions meeting
  - Series of technical collaboration meetings:
    - Led by each team
    - Presentation of means and methods of Key Elements of work
    - Presentation of sequence and duration of work
- Division U – One (1) Technical Meeting
  - Work sequence, construction schedule and coordination with Third Parties
  - Groundwater management and support of excavation approach
- Division J – Four (4) Technical Meetings
  - Shafts and near surface structures
  - Underground
  - Advanced design submittal process and QA/QC
  - Sequencing, scheduling, mitigation and maintenance of traffic
RFQ
Shortlisting Evaluation Criteria

- Performance history. ........................................... 40 points
- Qualifications and experience of key personnel. .... 30 points
- Conceptual management plan ......................... 20 points
- Safety program and safety record ................... 10 points

100 points

- Division U
  - Select up to four highest scoring teams to submit price proposal
- Division J
  - Select up to four highest scoring teams to submit technical and price proposals
<table>
<thead>
<tr>
<th>Contract</th>
<th>Performance History</th>
<th>Key Personnel</th>
<th>Conceptual Management Plan</th>
<th>Safety Program &amp; Record</th>
</tr>
</thead>
</table>
| Division U | • As Prime Contractor  
• Ability to self-perform  
• Maintenance of traffic in urban setting  
• Coordination of multi-discipline subcontractors  
• MBE/WBE goals | • Project Manager  
• Construction Manager  
• Permit Coordinator | • Discussion on how to control and manage schedule  
• Discussion on utility coordination requirements  
• Discussion of critical work elements  
• Discussion on approach and use of MBE/WBE | • Workers’ compensation experience modification ratio/factor (EMR or EMF)  
• Days away from work (past 3 years)  
• Summary of work-related injuries and illness (past 3 years) |
| Division J | • Experience as team  
• Design-Build experience  
• Similar work  
• Maintenance of traffic in urban setting  
• MBE/WBE goals | • Project Manager  
• Construction Manager  
• TBM and Equipment Manager/ Superintendent  
• Design Manager  
• Design Coordinator  
• QA/QC Manager | • Discussion on how to control and manage schedule  
• Discussion on availability of TBMs  
• Discussion of critical work elements  
• Discussion on approach and use of MBE/WBE | |
Construction Management Procurement

- Division U
  - Performed by Program Consultants Organization
- Division J

**RFQ**
- Advertise/release RFQ (May 2016)
- Pre-SOQ Meeting (May/June 2016)
- Submit SOQ (July 2016)
- Evaluate SOQ/Shortlist up to four (4)
- Notice to Shortlisted Teams

**Technical Proposal**
- Send RFP to Shortlisted Teams
- Proposal Submitted
- Evaluation/Interviews/Technical Scoring
- Select
- Negotiate Contract
- Award and NTP (February 2017)
Vendor Registration

- Register online to receive solicitations, amendments, and contract awards via email
- To become a registered vendor, go to:
  - www.dcwater.com, click on “Business Opportunities,” then select “Vendor Portal”
- Solicitations are published on:
  - DC Water’s website http://www.dcwater.com/business/solicitations.cfm
  - The Washington Post
MBE and WBE Requirements

- DC Water’s MBE and WBE fair share objectives are:

<table>
<thead>
<tr>
<th>Services</th>
<th>Fair Share Objectives (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MBE</td>
</tr>
<tr>
<td>Professional (A/E Agreements)</td>
<td>28</td>
</tr>
<tr>
<td>Construction</td>
<td>32</td>
</tr>
</tbody>
</table>

- Objectives are based on goals established by EPA Region 3: DC, DE, MD, PA, VA and WV
- The commitment to MBE/WBE requirements will be an integral part of the evaluation
- DC Water’s policy is to meet or exceed EPA objectives for MBE and WBE participation in meaningful roles
- Current certification letter from Local, State or Federal Agencies
- Monthly online reporting
MBE and WBE History

- Over the last three years (FY12 – FY14), DC Water has awarded:
  - 47 construction contracts with a total award value of $1.1 Billion. Of this total, over 51.7% ($583+ Million) was awarded to:
    - Local Small Disadvantaged Business Enterprises ($95+ Million)
    - Minority Business Enterprises and Woman Business Enterprises ($488+ Million)
  - 14 engineering contracts with a total award value of $201 Million. Of this total, over 39.8% ($80 Million) was awarded to:
    - Minority Business Enterprises ($69 Million)
    - Woman Business Enterprises ($11 Million)
Construction Bidding
Prime Contractor Responsibilities prior to Contract Award

- Outreach
- Organize and document your outreach efforts
- Evaluation of bids
- Complete mandatory EPA Forms
- Submit complete package with your bid to DC Water
Construction Bidding
Mandatory EPA Forms

- **EPA form 6100-2**
  - This form gives a DBE subcontractor the opportunity to describe the work the DBE subcontractor received from the prime contractor, how the DBE subcontractor was paid and any other concerns the subcontractor may have.

- **EPA form 6100-3**
  - This form captures an intended subcontractors description of work to be performed for the prime contractor and the price of work submitted to the prime.

- **EPA form 6100-4**
  - This form captures the prime’s intended use of an identified DBE subcontractor and the estimated dollar amount of the subcontract.

- **All forms must be completed to include:**
  - Statement of work
  - Estimate of work
  - MBE/WBE Percentages
  - MBE/WBE designation
  - Signatures (Prime and Subcontractors, if required)
Construction Bidding
Submission of Documents to DC Water

- Cover Sheet
  - Project name
  - Fair Share Objective
  - Prime name and address
  - Bidding firm status
  - Contact name and number
  - Bid Price
  - Price of MBE/WBE
  - Participation

- Good Faith Effort Documentation
  - Advertisements
  - Emails (outgoing and incoming)
  - Faxes (cover sheets and transmittal records)
  - Call logs
  - Response logs
  - EPA Mandatory Forms
  - Current DBE certification
Construction Bidding
The Six Good Faith Efforts

1. Ensure DBEs are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities
2. Make information on forthcoming opportunities available to DBEs and arrange time frames for contracts and establish delivery schedules where the requirements permit in a way that encourages and facilitates participation by DBEs in the competitive process
3. Consider in the contracting process whether firms competing for large contracts could subcontract with DBEs
4. Encourage contracting with a consortium of DBEs when a contract is too large for one of these firms to handle individually
5. Use the services of the SBA and the Minority Business Development Agency of the Department of Commerce
6. If the prime contractor awards subcontracts, require the prime to use Steps 1 through 5
Construction Bidding
Local Employment Requirements

- DC Water Works Interim Employment Plan
- Online submission of project staffing and certified payrolls
- Preference for qualified employees from DC Water user jurisdictions
  - District of Columbia
  - Montgomery and Prince George’s County in Maryland
  - Fairfax and Loudoun Counties in Virginia
General Information

Minority Outreach Resources

- www.Mdot.state.md.us/MBE_Program/directory
- www.thebluebook.com
- www.diversitybusiness.com
- www.uida.org
- http://cfpub.epa.gov/sbvps
- www.sba.gov/md
- http://ebidmarketplace.com
- www.mbda.gov
- www.olbd.dc.gov
- www.baltimorecounty.md.gov
General Information
Minority Outreach Programs

SBA
http://sba.gov

The Washington DC Minority Business Development Center
info@dcmbec.org

National Association of Women Business Owners
national@nawbo.org

Maryland/Washington Minority Contractor Association
wrf@mwmca.org
General Information

Important Notes

- MBEs and WBEs must be certified by a state-approved agency in order to be counted toward a recipient’s accomplishments
- Primes who are MBE/WBEs CANNOT include themselves toward their MBE/WBE fair share objective
General Information
Who Can Help?

- US Environmental Protection Agency
  [http://www.epa.gov/osbp/grants.htm](http://www.epa.gov/osbp/grants.htm)

- Rhonda Green, Grants Specialist, DC Water
  202-787-2276
  [Rhonda.green@dcwater.com](mailto:Rhonda.green@dcwater.com)

- Ken Pantuck, Sr. Environmental Specialist, EPA
  215-814-5769
  [Pantuck.kenneth@epa.gov](mailto:Pantuck.kenneth@epa.gov)
SCHEDULES AND NEXT STEPS
## Project Schedules

### Division U General Schedule

<table>
<thead>
<tr>
<th>Item</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Release RFQ</td>
<td>July 2015</td>
</tr>
<tr>
<td>Shortlist Teams</td>
<td>October 2015</td>
</tr>
<tr>
<td>Collaboration Period</td>
<td>February 2016</td>
</tr>
<tr>
<td>Bids Submitted</td>
<td>March 16, 2016</td>
</tr>
<tr>
<td>Notice to Proceed</td>
<td>May 2016</td>
</tr>
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</table>

### Division J General Schedule

<table>
<thead>
<tr>
<th>Item</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Release RFQ</td>
<td>October 2015</td>
</tr>
<tr>
<td>Shortlist Teams</td>
<td>February 2016</td>
</tr>
<tr>
<td>Proposals submitted</td>
<td>December 2016</td>
</tr>
<tr>
<td>Notice to Proceed (Design)*</td>
<td>April 2017</td>
</tr>
<tr>
<td>Notice to Proceed (Construction)*</td>
<td>April 2018</td>
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</table>

*NOTE: Tentative approach*

### Division J Construction Management Schedule

<table>
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<th>Item</th>
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<tbody>
<tr>
<td>Release RFQ</td>
<td>May 2016</td>
</tr>
<tr>
<td>SOQ’s due</td>
<td>July 2016</td>
</tr>
<tr>
<td>Notice to Proceed</td>
<td>February 2017</td>
</tr>
</tbody>
</table>
Acquire RFQs and Contact Information

- To obtain RFQs or for more information about today’s presentation, email:
  - Kimberly Isom; kimberly.isom@dcwater.com

- For periodic program updates, visit us online at:
  - www.dcwater.com/workzones/projects/cleanrivers.cfm