

# **Agenda**

## **Underground Transmission Line Working Group Meeting #3**

**Date:** October 9, 2014

**Time:** 7:00 PM to 9:30 PM

**Location:** City Hall Room 1101 (Sister Cities)

**Purpose of the Meeting:** Convene the third meeting of the Underground Transmission Line Working Group (UTLWG). Discuss Dominion open house summary, Pepco Substation C presentation information, review routing matrix, and develop Working Group Recommendations.

### **Agenda**

- |   |                |
|---|----------------|
| A. Dominion Open House Summary                  | 7:00 – 7:25 PM |
| A. Pepco Presentation of Substation C Expansion | 7:25 – 7:50 PM |
| B. Review Routing Matrix                        | 7:50 – 8:45 PM |
| C. Develop working Group Recommendations        | 8:45 – 9:00 PM |
| D. Citizen Comments                             | 9:00 - 9:15 PM |
| E. Wrap Up and Adjourn                          | 9:15 – 9:30 PM |

City of Alexandria, Virginia

# UNDERGROUND TRANSMISSION LINE & SUBSTATION WORKING GROUP

OCTOBER 9, 2014

7 PM TO 9:30 PM

CITY HALL ROOM 1101



# WORK GROUP MEETING #3



Dominion Public Meeting Summary – October 1, 2014

There were individual Stations showing:

- Need for the project and the 6 alternatives considered
- Substation C site showing the proposed substation expansion

# WORK GROUP MEETING #3



- Renderings showing possible overhead alignment
- Photographs and sketches showing underground construction means and methods
- Overall map of the proposed alignments under consideration
- Neighborhood aerial maps for the proposed alignments

# WORK GROUP MEETING #3



- Flight path station
- Dominion provided staff to respond to EMF issues
- Each station was manned by Dominion or Consultant representatives to answer questions

Sept. 11, 2014

701 Ninth St., NW  
Washington, DC 20068

## Joint Dominion-Pepco Transmission Project

### *Glebe Substation to Station C Proposal*

#### Proposal background

- Dominion's transmission planning department has confirmed the need for additional transmission facilities to ensure that its customers in northern Virginia, including the Alexandria and Arlington areas, continue to have an adequate, safe, and reliable supply of electricity.
- The proposed project involves Dominion constructing a new 2-mile 230kV transmission line that will begin at Dominion's Glebe Substation in Arlington County and end at Pepco's expanded Station C substation next to the retired NRG Potomac River Generating Station along Route 1 in Alexandria.
- The interconnection will provide electricity necessary for the residential and business development now underway in northern Virginia, including the Alexandria and Arlington areas.
- The new interconnection also will strengthen ties to the national grid, thereby strengthening overall reliability for residents, neighbors and critical government agencies that need a safe and reliable source of electricity.



### **Pepco's involvement**

- Pepco's role will be designing, constructing, owning and operating new 230kV substation facilities at the expanded Station C — a necessary connection for Dominion's proposed transmission line. Pepco will obtain all necessary jurisdictional approvals and permits to construct the new substation facilities.
- Pepco and Dominion introduced the project to our regional transmission organization, PJM, which approved it.
- Pepco will benefit by having an additional secured underground feed for enhanced reliability and operational flexibility.
- The total project cost is estimated at \$165 million and will be recovered through PJM transmission charges.

### **Station C**

- Pepco has reviewed and determined that it is not possible to construct the required new facilities within the existing substation footprint.
- The current total site area is approximately 25.4 acres, approximately 2.8 acres of which consists of Pepco's existing substation. The proposed expanded substation area is approximately 3.8 acres, which means that the new footprint will take up about a quarter of the property.
- We are using property for the substation expansion as far as possible from the waterfront that currently is a parking lot. We also will use the latest technology equipment to improve reliability as well as to minimize the substation expansion required for the project.
- The current proposal will have no bearing on the future of the NRG generating plant. Pepco, which owns the property, has leased the property to NRG, with 84 years remaining on the lease.
- We expect to develop site plans and renderings of the Pepco project and begin public information meetings by year-end 2014.
- The transmission line is expected to be placed in service by spring of 2018.



# Glebe to Station C Proposal



## Pepco's Partnership with Dominion Virginia

Presented by: Joe Schall, Project Manager, Pepco Holdings

Oct. 9, 2014

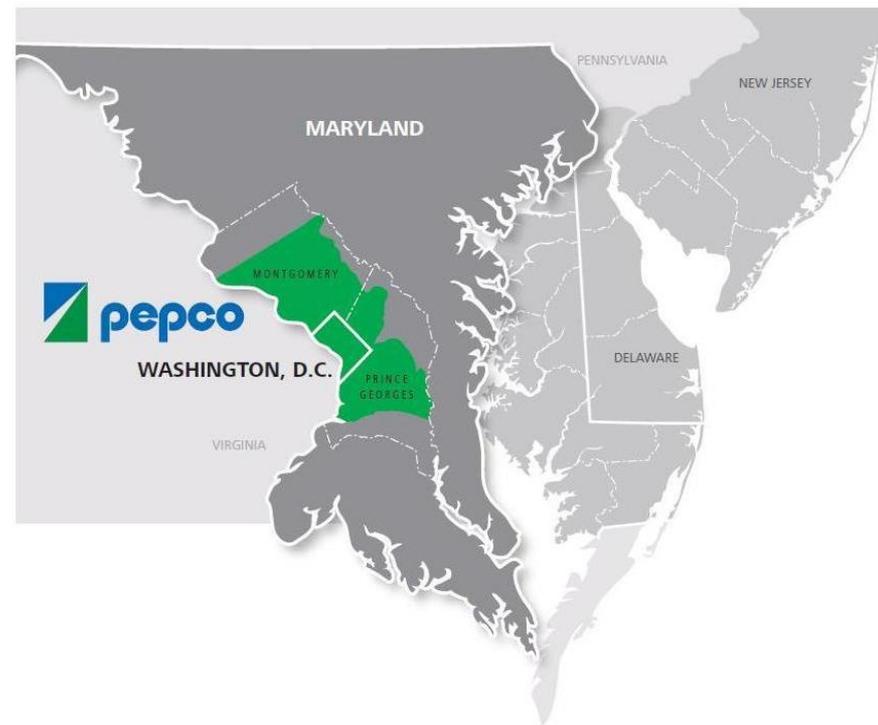
# About Pepco

- We provide safe, reliable and affordable electric service to more than 793,000 customers in Maryland and the District of Columbia
  - We are a regulated public utility owned by Pepco Holdings, Inc. (PHI)
  - PHI subsidiaries also include Atlantic City Electric, Delmarva Power and Pepco Energy Services



# Pepco Quick Facts

- First incorporated in 1896
- Service territory:  
640 square miles
- Customers served: 793,000
  - Washington, D.C.: 260,000
  - Montgomery County: 309,000
  - Prince George's County: 225,000
- Population served: 2.2 million



## Proposal Background

- Dominion has confirmed the need for additional transmission facilities to ensure adequate, safe and reliable supply for customers in northern Virginia, including the Alexandria and Arlington areas
- Dominion will construct a new 2-mile 230 kV transmission line to begin at Dominion's Glebe Substation in Arlington County and end at Pepco's expanded Station C substation in Alexandria
- The new interconnection will provide electricity necessary for the residential and business development now underway, including the Alexandria and Arlington areas.
- The new interconnection also will strengthen ties to the national grid

# Pepco's Involvement

- Pepco will design, construct, own and operate the new 230 kV substation facilities at the expanded Station C
- Pepco will obtain jurisdictional approvals, permits for the new substation facilities
- Pepco and Dominion introduced the project to PJM, which approved it
- Pepco will benefit by having an additional secured underground feed for enhanced reliability and operational flexibility



# Station C Expansion

- The new facilities will not fit within existing substation footprint
- Current total site area is about 25.4 acres
- Existing substation is about 2.8 acres
- Proposed expansion is about 3.8 acres, including existing underground infrastructure, and will include open space
- New footprint including existing substation and expansion will be about a quarter of the total site area



## Station C Expansion

- Expansion will be as far as possible from the waterfront in the current parking lot
- We will use the latest technology equipment to improve reliability and minimize the area needed for expansion
- Current proposal will not affect the future of the NRG generating plant
- Pepco, which owns the property, has leased the property to NRG, with 84 years remaining on the lease
- We expect to develop site plans and renderings of the Pepco project and begin public information meetings by year-end 2014
- The transmission line is expected to be placed in service by spring of 2018

Questions?

**Draft Recommendations Memo Outline to City  
Council  
Underground Transmission Line Working Group  
10/9/14**

- I. Introduction
- II. Qualifiers
- III. Recommendations
  - A. Oppose all overhead line options in Alexandria
  - B. Consolidate existing Potomac Yard North Substation with Glebe Substation and place lines connecting to Glebe substation underground
  - C. Potomac River Substation C – Incorporate existing substation with new substation; use as little as possible area for expansion; plan for and accommodate the redevelopment of the entire site; screen the entire area
  - D. Identify Least Objectionable Alignments
  - E. Identify mitigation or other potential benefits – To be discussed later
  - F. The City and its consultants perform its due diligence and review the need for the project to solve the reliability issue as well as assess the other alternatives, during the SCC process
  - G. Others to be identified

**DOMINION WORK GROUP  
Meeting #2  
Meeting Notes**

**DATE & TIME:** September 25, 2014, 7:00 PM

**LOCATION:** City Hall Room 1101 (Sister Cities)

**ATTENDEES:** **Working Group:** Jason Nestlerode (Chair), Elizabeth Chimento, Nathalie Simon, Ben Sylla, Rick Cooper, Judy Noritake, Patrick Harenburg  
**City of Alexandria Staff:** Yon Lambert, William Skrabak, Maurice Daly, Lisa Jaatinen, Bill Eger, Dana Wedeles, Jeff Farner, Kathleen Leonard, and Khoa Tran  
**Consultant:** Michael Randolph (STV)  
**Dominion:** Deborah Johnson, Wes Keck, Greg Baka, Peter Nedwick  
**Pepco:** Rafael Melandez, Pat Kurowski  
**PJM:** Paul McGlynn, Steve Herling  
**Members of the Public:** Christine Bump, Elias Papasauvas, George & Rochelle Schneickert, Pat Miller, Dave & Nancy Harrity, Amanda & Michael Wade, John Halu, Sohyim Cho, Michael Hobbs, Cathy Puskar, Lianne Childress, Terese Blanchard, Stephen Koenki, Deborah Youakim, Michael Mclaughlin, Randy Tripp, Charles Bailey, Piriya Suphaphiphat, Ryan Wotanowski, Aubrey Woolley, Matt Cruson

## **Welcome and Introduction**

Yon Lambert, Acting Director of Transportation and Environmental Services began the meeting by noting that it was the second meeting of the City of Alexandria's Underground Transmission Line Working Group. He emphasized that the meeting had three parts, a presentation by PJM, a presentation by Virginia Dominion Power, a presentation to the Working Group of the draft Routing Matrix.

## **AGENDA**

### **A. PJM Presentation of Project Need**

Steve Herling explained the geographical areas on the East Coast where PJM operates (from Chicago to New York, and down to North Carolina) and explained how PJM coordinates electric utilities to keep systems reliable. His position at PJM does long term transmission planning. One of his primary responsibilities is to ensure compliance with all of applicable standards most of which are written by the North American Electric Reliability Corporation, NERC, and the Federal Energy Regulatory Commission, FERC. PJM's performs analysis, updated annually, to

assess compliance in the 5 to 15 year time frame to ensure compliance with the criteria. PJM works with transmission owners to identify effective and cost effective solutions to resolve problems. PJM identifies the need where we are not compliant with reliability criteria and then works to evaluate solutions for effectiveness electrically, and factors cost into that determination. PJM will support the need phase of the project but does not get involved in the routing and alignment phase. PJM works with the transmission owners to help facilitate all of the sequencing of construction, but it is the agency's job to get the project built. Once the transmission line is built, then PJM will put it into the system and coordinate on a day-to-day basis. He asked if there were any questions.

There were questions by the Working groups members. Mr. Herling answered the questions:

- The Benning Road, Buzzard, and Mirant Plants closure had no impact on the need for this project
- The predominant flow of energy is towards Virginia from D.C. and Maryland.
- Currently, the energy flows from D.C. to the existing Pepco substation C, then back to D.C.
- Northern Virginia is the fastest growing area in the PJM area
- Demand management for peaks must be specifically located and need large number of customers to agree to turn off or reduce electric use at peak times
- The solution that is chosen is the most effective solution that solves the problem.
- Cost estimates are prepared by Dominion.
- The alternative solution was chosen by PJM after PJM identified the needs; and after Dominion developed the 6 alternative solutions.
- Last year PJM approved 700 projects

The Working Group will send any further questions to staff, and staff will compile and send to PJM.

## **B. Dominion Presentation of Alignment Information**

Deborah Johnson and Greg Baka from Virginia Power were introduced. Greg used a PowerPoint presentation to present a conceptual detail of the nine preliminary alignments. He advised that there hasn't been any engineering done on the alignments. He discussed the various pros and cons of each alignment and explained that it had not been determined that the alignment chosen will be underground because any and all alternatives will be under consideration.

- Orange and Blue Routes – More residences, less traffic than others
- Overhead alternative will be considered
- Rt. 1 – Major traffic, bus, existing utilities and maintenance obstacles; shortest distance
- Main Line Blvd – Developers coordination, utilities newer
- CSX & Potomac Ave – 120' wider rail ROW – Train schedules and engineering obstacles

- Metro & WMATA – similar to CSX
- GW Parkway – Historic aspects, trees, bike trail obstacles
- River route – Environmental difficulties & higher cost

Deborah Johnson said that Dominion thinks it will be an underground line but the State Corporation asks that all alternatives be studied and presented. She addressed the concepts of due diligence and cost effectiveness and the requirements of the State Corporation. Questions were asked and answered by Dominion staff:

- Potomac Avenue Overhead Route – Typically, cost of undergrounding is 5X the cost of overhead. Example of typical pole – 120' high, 4'-6" diameter at base, 1.5' diameter at top, arms 4' long. 80 feet of ROW is needed for overhead
- Generally, underground lines require an 8' wide excavated trench with conduits encased in a concrete box 5' wide and 3' high, with 3.5' of cover.
- EMF issues will be addressed by Dominion at the Oct. 1 open house.

Deborah said that information provided by the stakeholders will help Dominion in the preparation of the application to the State Board. The Work Group was invited to the October 1, 2014 Open House.

### **C. Review of Working Group Concerns and Discussion of Routing Matrix Draft**

Bill Eger presented a matrix designed to help the Working Group prioritize issues. It is structured so that City Staff can organize the information from the Working Group. The matrix allows that for each route the group can do an evaluation using common categories. The matrix would be used to provide direction to Dominion about route preferences. Yon Lambert advised that the Work Group recommendations will be given to Dominion. There was a discussion of the matrix between Bill Eger and members of the Work Group. Members of the Work Group were asked to complete the agenda as homework and provide comments back to the City by September 30, 2014.

### **D. Schedule**

Yon Lambert noted that the schedule is to proceed as established.

### **E. Letter from Working Group to Dominion**

Yon Lambert and the Work Group members discussed the letter on page 25. A clarification was made that October 16 is not the deadline and a motion was made to accept the amendments.

### **F. Citizens comments.**

- We want to make sure we understand the process.

- Some of the alternative routes are in an area of single family homes. I have young children. I want to push to not have that as an option.
- One of the routes has nineteen residences, she referenced future development, traffic, and how the line will look in the future.
- The pictures provided of the overhead lines were “disingenuous.” The audience member spoke about housing prices, and a highly utilized children’s park. Dominion staff thanked the audience member for their comments and stated there was no intent to be disingenuous.
- A member of the audience thanked the Working Group and requested information about aerial options. Dominion said it would share this information.
- Concerned about a proposal that will impact us for decades and asked if the group recommend to the City to take a little more time.
- Yon Lambert advised that Dominion has informed the City it will file in November and that is not a process the City controls.
- A member of the audience lives in Potomac Yard and questioned why we weren’t brought into this conversation during the PJM sessions and said ruled out alternatives should be known. Modern cities don’t use overhead power lines. It’s aesthetically unpleasing. Why do other countries plan for fifty years ahead and this isn’t being done now?
- A member of the audience questioned building the BRT and then tearing it up again. Reminded attendees that no matter how the costs are accounted for, the consumer ends up paying the cost. Discussed the issues of projections, density, and health concerns.
- Cathy Puskar made a statement, referring to the overhead route being the most objectionable route, right of way, and referenced other issues related to Potomac Yard development (PYD). Dominion met with PYD.
- A member of the audience asked questions about the power lines, advised he did not live in the area, and made lengthy comments.
- A member of the audience questioned the schedule. They asked that Dominion delay the schedule.
- A comment was made that if a line is overhead or underground is a SCC decision.
- Dominion commented on its role and responsibilities and said we have an obligation to our customers to evaluate all viable routes. All estimates are based on underground

investments. It's not checking a box. We believe that one of the underground will be a preferred alternative. Your input is important. We are obligated by law that the lights come on.

- A Work Group member said a month more time prior to filing with SCC will be a gesture of good faith.
- A Work Group member asked if the group name should be changed to the underground and overhead transmission line Work Group. Yon Lambert advised that this is the title was chosen by Council. Bill Skrabak explained why the group has the name it has.
- Someone asked if the City is aware that both overhead and underground are on the table.

#### **G. Wrap Up and Adjournment**

- Maurice Daly is the point of contact for the City of Alexandria for this initiative.
- The next meeting of the working group will be on Thursday, October 9, 2014.
- Dominion will be hosting a Public Information Meeting on October 1, 2014 at the Mount Vernon Community Center from 5-8 pm.

## DRAFT DOMINION GLEBE SUBSTATION TO POTOMAC RIVER SUBSTATION: PLANNING AND DEVELOPMENT ISSUES

Information Provided By City Staff and Their Consultants - Route Colors In This Chart Align With the Dominion Project Map Routes Colors

Impact Areas	Commonwealth Ave / E Glebe Rd	Route 1 / Slaters Lane	Potomac Avenue	CSX
<b>Traffic</b>	Code <input checked="" type="radio"/> Potential traffic impacts along Slaters and Massey Lane. Significant impacts to Potomac Ave, East Glebe RD and Commonwealth Ave	Code <input checked="" type="radio"/> Potential traffic impacts along Slaters and Massey Lane. Major impacts to Route 1	Code <input checked="" type="radio"/> Potential traffic impacts along Slaters and Massey Lane. Significant impacts to Potomac Ave	Code <input checked="" type="radio"/> Potential traffic impacts along Slaters and Massey Lane. Potential impacts to freight and commuter rail service along CSX main line
<b>Open Space</b>	Code <input type="radio"/> Potential impacts to open space along Potomac Ave. Impacts on Four Mile Run banks and park.	Code <input type="radio"/> Impacts on Four Mile Run banks and park.	Code <input checked="" type="radio"/> Potential impacts to open space along Potomac Ave. Impacts on Four Mile Run banks and park. Impact on future planned park at Land Bay E. Impacts to new street trees.	Code <input type="radio"/> Majority of route is CSX right-of- way or immediately adjacent to CSX right of way. Impacts on Four Mile Run banks and park. Impact on future planned park at Land Bay E.
<b>Development</b>	Code <input type="radio"/> Majority of this route has already been developed, but some potential redevelopment sites remain.	Code <input checked="" type="radio"/> Could interfere with future plans to develop along route 1. If located within the existing travel lanes will have a low impact. If located within the sidewalk or adjacent to the site will have a moderate to high impact on the planned development.	Code <input checked="" type="radio"/> Potential to significantly constrain future access, design, grading and location of planned mixed-use density development area	Code <input type="checkbox"/> Majority of route is CSX right-of- way or immediately adjacent to CSX right of way
<b>Environmental</b>	Code <input type="radio"/> Potential environmental issues when working in areas with contaminated soils.	Code <input type="checkbox"/>	Code <input type="radio"/> Majority of this route has already been developed. Potential environmental issues when working in areas with contaminated soils.	Code <input checked="" type="radio"/> Majority of route is CSX right-of- way or immediately adjacent to CSX right of way. Likely environmental issues when working in areas with contaminated soils.
<b>School/Population</b>	Code <input checked="" type="radio"/> Potential impacts to Cora Kelly School, businesses and residents along Potomac Ave, East Glebe Rd and Commonwealth Ave. 142 residential buildings, 1144 residences in the 100-foot buffer area. Substantial residential use along right-of-way.	Code <input checked="" type="radio"/> Impacts to businesses and residents along Route 1. 84 residential buildings, 630 residences in the 100-foot buffer area. Substantial residential use near right-of-way, but substantial setbacks for most.	Code <input checked="" type="radio"/> Impacts to businesses and residents along Potomac Ave. 83 residential buildings, 519 residences in the 100-foot buffer area. Wide right-of-way where adjacent to residential use. Impacts to the existing Theater site during construction. Adjacent to Future Potomac Yard School.	Code <input type="checkbox"/> Majority of route is CSX right-of- way or immediately adjacent to CSX right of way
<b>Right-of-Way</b>	Code <input checked="" type="radio"/> Would have significant impact existing right-of-way on this route and add the required 50-ft right-of-way for the underground utility.	Code <input checked="" type="radio"/> Would have significant impact existing right-of-way on this route and add the required 50-ft right-of-way for the underground utility	Code <input checked="" type="radio"/> Would impact existing right-of-way on this route and add the required 50-ft right-of-way for the underground utility.	Code <input type="radio"/> Majority of route is CSX right-of- way or immediately adjacent to CSX right of way. 24 residential buildings, 50 residences in buffer area. within CSX right-of-way. There would be temporary impacts during construction
<b>Aesthetics</b>	Code <input type="checkbox"/> Utility is underground	Code <input type="checkbox"/> Utility is underground	Code <input checked="" type="radio"/> Utility is underground. The proposed alignment may impact the existing Potomac Greens Park .	Code <input type="checkbox"/> Utility is underground
<b>Cost</b>	Code <input checked="" type="radio"/>	Code <input checked="" type="radio"/>	Code <input checked="" type="radio"/>	Code <input checked="" type="radio"/>
<b>Catalyst</b>	Code <input checked="" type="radio"/> Potential streetscape improvements for Glebe Road and Commonwealth Avenue.	Code <input checked="" type="radio"/> Potential to underground utilities and make long-term roadway improvements if along west side of right-of-way.	Code <input type="checkbox"/>	Code <input type="checkbox"/>
<b>Beneficial Result</b>	Code <input type="checkbox"/>  *To be more thoroughly analyzed at a later date	Code <input type="checkbox"/>  *To be more thoroughly analyzed at a later date	Code <input type="checkbox"/>  *To be more thoroughly analyzed at a later date	Code <input type="checkbox"/>  *To be more thoroughly analyzed at a later date
<b>City Staff Grouping</b>	Tier 2	Tier 2	Tier 2	Tier 1

## DRAFT DOMINION GLEBE SUBSTATION TO POTOMAC RIVER SUBSTATION: PLANNING AND DEVELOPMENT ISSUES

Information Provided By City Staff and Their Consultants - Route Colors In This Chart Align With the Dominion Project Map Routes Colors

Impact Areas	Metro / GW Parkway	GW Parkway	Mt. Jefferson Park Trail	Main Line Blvd
Traffic	Code  Potential traffic impacts along Slaters Lane and George Washington Parkway depending on alignment locations within GW Parkway Right-of-Way	Code  Potential traffic impacts along Slaters Lane and George Washington Parkway depending on alignment locations within GW Parkway Right-of-Way	Code  Potential traffic impacts along Slaters and Massey Lane and significant impacts to East Custis Ave and Commonwealth Ave	Code  Potential traffic impacts along Slaters and Massey Lane and significant impacts to Main Line Blvd, cross streets in Potomac Yard as well as parking and access for multiple businesses in the Potomac Yard Center shopping plaza to the north
Open Space	Code  Potential impacts depending on alignment locations within GW Parkway right-of-way. Impacts on Four Mile Run banks and park. Impact on future planned park at Land Bay E. Impact to passive and wetland area of Potomac Greens Park.	Code  Potential impacts depending on alignment locations within GW Parkway Right-of-Way. Impacts on Four Mile Run banks and park. Impact on future planned park at Land Bay E. Impact to passive and wetland area of Potomac Greens Park.	Code  Significant Impacts to Mt Jefferson Park and Impacts from crossings through parks along Potomac Greens Drive and Potomac Ave. Impacts on Four Mile Run banks and park, Custis Finger Park (Just Completed) and passive area of Potomac Yard Park. Potential impacts to existing and future tree plantings.	Code  Majority of this route has already been developed. Impacts on Four Mile Run banks and park. Will impact a portion of the planned open space for North Potomac Yard.
Development	Code  Potential impacts to future Potomac Yard infill Metrorail Station	Code  Majority of route is in national park land and would have little impact on future development	Code  The required transmission line right-of-way would interfere with any future redevelopment of businesses and residents along Commonwealth Ave and potentially East Custis Ave in Potomac Yard	Code  The required transmission line right-of-way would interfere with any future redevelopment and significantly constrain future access, design, grading and location of planned mixed-use development including Potomac Yard Center shopping plaza and the Potomac Yard development.
Environmental	Code  Impacts to national park land	Code  Considerable Impacts to national park land	Code  Route traverses park land. Potential environmental issues when working in areas with contaminated soils.	Code  Majority of this route has already been developed. Potential environmental issues when working in areas with contaminated soils.
School/Population	Code  Majority of route is on National Park Land or WMATA right-of-way and would have little impact on local population. No residential buildings in the 100-foot buffer area. No adjacent residential use.	Code  Majority of route is in national park land and would have little impact on local population. No residential buildings in the 100-foot buffer area. No adjacent residential use.	Code  Significant impacts to Jefferson Park & Trail and potential impacts to Cora Kelly School, businesses and residents along Commonwealth Ave and residents along Potomac Greens Drive. 203 residential buildings, 769 residences in the 100-foot buffer area.	Code  Potential impacts to residents along Potomac Greens Drive. 145 residential buildings, 1038 residences in the 100-foot buffer area. Relatively short distance adjacent to residential use. Impacts to existing businesses within the Potomac Yard retail center during construction.
Right-of-Way	Code  Majority of route is in WMATA & CSX right-of-way	Code  Would have significant impact existing right-of-way on this route and add the required 50-ft right-of-way for the underground utility.	Code  Would impact existing right-of-way on this route and add the required 50-ft right-of-way for the underground utility.	Code  Would have significant impact existing right-of-way on this route and add the required 50-ft right-of-way for the underground utility.
Aesthetics	Code  Utility is underground. Will Impact existing trees and landscaping.	Code  Utility is underground. Will Impact existing trees and landscaping.	Code  Utility is underground. Will impact the existing trees, and park improvements within the park.	Code  Utility is underground
Cost	Code 	Code 	Code 	Code 
Catalyst	Code  Opportunity to integrate construction with Metro line relocation for new Potomac Yard Metro Station	Code 	Code 	Code 
Beneficial Result	Code  Potential for increased landscaping and management/mitigation of invasive species.  *To be more thoroughly analyzed at a later date	Code  Potential for increased landscaping and management/mitigation of invasive species.  *To be more thoroughly analyzed at a later date	Code  Potential to implement trail and park enhancements as part of the project construction.  *To be more thoroughly analyzed at a later date	Code   *To be more thoroughly analyzed at a later date
City Staff Grouping	<b>Tier 1</b>	<b>Tier 2</b>	<b>Tier 3</b>	<b>Tier 2</b>

## DRAFT DOMINION GLEBE SUBSTATION TO POTOMAC RIVER SUBSTATION: PLANNING AND DEVELOPMENT ISSUES

Information Provided By City Staff and Their Consultants - Route Colors In This Chart Align With the Dominion Project Map Routes Colors Where Applicable

Impact Areas	4 Mile Run / Potomac River	Overhead Transmission Line	Pepco Potomac River Substation Expansion	
Traffic	Code <input type="checkbox"/> Route would have no impact to open traffic	Code <input checked="" type="checkbox"/> Overhead should have limited impact to traffic	Code <input type="checkbox"/> Potential traffic impacts along Slaters Lane.	
Open Space	Code <input type="checkbox"/> Impacts on Four Mile Run banks and park. Impact on future planned park at Land Bay E. Impact to passive and wetland area of Potomac Greens Park.	Code <input checked="" type="checkbox"/> Overhead will take up available open space	Code <input type="checkbox"/> Area to be redeveloped is currently a parking lot	
Development	Code <input type="checkbox"/> Route would have little impact to future development	Code <input checked="" type="checkbox"/> Overhead will inhibit future development and will be in view of local businesses	Code <input checked="" type="checkbox"/> Impacts potential redevelopment of 2.5-3 acre site.	
Environmental	Code <input checked="" type="checkbox"/> Waterway impacts to Potomac River and Four Mile Run	Code <input checked="" type="checkbox"/> Overhead will impact natural spaces and may raise some health concerns with the public in proximity	Code <input type="checkbox"/> Area to be redeveloped is currently a parking lot	
School/Population	Code <input type="checkbox"/> Route would have minimum impact to local population. Impacts to Marina Towers, 283 units, at edge of the 100-foot buffer area.	Code <input checked="" type="checkbox"/> Overhead will inhibit future development and will be in the view of local population	Code <input checked="" type="checkbox"/> Impacts to adjoin office buildings during construction.	
Right-of-Way	Code <input type="checkbox"/> Route should have no impact to existing or proposed right-of-way	Code <input checked="" type="checkbox"/> Would have significant impact existing right-of-way on this route and add the required 50-ft right-of-way for the underground utility.	Code <input type="checkbox"/> Site to be developed is within Pepco property	
Aesthetics	Code <input type="checkbox"/> Utility is underground	Code <input checked="" type="checkbox"/> Overhead transmission lines would be perceived as a significant eye sore to the local community	Code <input checked="" type="checkbox"/> Proposed substation will be visible from the George Washington Memorial Parkway and within the Historic District	
Cost	Code <input checked="" type="checkbox"/> This would be the most expensive routing option	Code <input type="checkbox"/> This would be the least expensive routing option	Code <input checked="" type="checkbox"/>	
Catalyst	Code <input type="checkbox"/>	Code <input type="checkbox"/>	Code <input type="checkbox"/> Potential opportunity to reduce existing substation footprint as part of expansion though use of technology.	
Beneficial Result	Code <input type="checkbox"/>	Code <input type="checkbox"/>	Code <input type="checkbox"/>	
	*To be more thoroughly analyzed at a later date	*To be more thoroughly analyzed at a later date	*To be more thoroughly analyzed at a later date	
City Staff Grouping	Tier 1	Tier 3	N/A	

## DRAFT DOMINION GLEBE SUBSTATION TO POTOMAC RIVER SUBSTATION: PLANNING AND DEVELOPMENT ISSUES

Information Provided By City Staff and Their Consultants - Route Colors In This Chart Represent Dominion Work Group Alternative Routes

Impact Areas	4 Mile Run / Potomac River / GW Parkway - Alternate	Mt. Jefferson Park Trail - DRCA Alternate	CSX - DRCA Alternate	
Traffic	Code <input checked="" type="radio"/> Potential traffic impacts along Slaters Lane and George Washington Parkway depending on alignment locations within GW Parkway Right-of-Way	Code <input checked="" type="radio"/> Potential traffic impacts along Slaters and Massey Lane and significant impacts to East Custis Ave and Commonwealth Ave. Major impacts to section along Route 1.	Code <input type="radio"/> Potential traffic impacts along Slaters and Massey Lane and rail service along CSX main line	
Open Space	Code <input checked="" type="radio"/> Potential impacts depending on alignment locations within GW Parkway Right-of-Way. Impacts on Four Mile Run banks and park. Impact on future planned park at Land Bay E. Impact to passive and wetland area of Potomac Greens Park.	Code <input checked="" type="radio"/> Significant Impacts to Mt Jefferson Park and Impacts from crossings through parks along Potomac Greens Drive and Potomac Ave. Impacts on Four Mile Run banks and park. Potential impacts to existing trees and the possibility of future tree plantings.	Code <input type="radio"/> Majority of route is CSX right-of- way or immediately adjacent to CSX right of way. Route crosses 4 Mile Run via rail bridge and connects with Glebe Substation in Arlington County. Impact on future planned park at Land Bay E.	
Development	Code <input type="radio"/> Route would have little impact to future development	Code <input checked="" type="radio"/> The required transmission line right-of-way would interfere with any future redevelopment of businesses and residents along Commonwealth Ave. Could interfere with future plans to develop along route 1.	Code <input type="checkbox"/> Majority of route is CSX right-of- way or immediately adjacent to CSX right of way	
Environmental	Code <input checked="" type="radio"/> Waterway impacts to Potomac River and Four Mile Run with additional impacts to national park land	Code <input checked="" type="radio"/> Route traverses park land but this route alternative avoids sensitive impact areas. Potential environmental issues when working in areas with contaminated soils.	Code <input checked="" type="radio"/> Majority of route is CSX right-of- way or immediately adjacent to CSX right of way. Likely environmental issues when working in areas with contaminated soils.	
School/Population	Code <input type="radio"/> portions of route is in national park land and would have little impact on local population	Code <input checked="" type="radio"/> Significant impacts to Jefferson Park & Trail and potential impacts to Cora Kelly School, businesses and residents along Commonwealth Ave and residents along Potomac Greens Drive.	Code <input type="checkbox"/> Majority of route is CSX right-of- way or immediately adjacent to CSX right of way	
Right-of-Way	Code <input checked="" type="radio"/> Would impact existing right-of-way on this route and add the required 50-ft right-of-way for the underground utility.	Code <input checked="" type="radio"/> Would impact existing right-of-way on this route and add the required 50-ft right-of-way for the underground utility.	Code <input type="radio"/> Majority of route is CSX right-of- way or immediately adjacent to CSX right of way. 24 residential buildings, 50 residences in buffer area. within CSX right-of-way. There would be temporary impacts during construction	
Aesthetics	Code <input type="checkbox"/> Utility is underground	Code <input checked="" type="radio"/> Utility is underground. Will impact the existing trees, and park improvements within the park.	Code <input type="checkbox"/> Utility is underground	
Cost	Code <input checked="" type="radio"/> This would also be a high cost routing option	Code <input checked="" type="radio"/>	Code <input checked="" type="radio"/>	
Catalyst	Code <input type="checkbox"/>	Code <input type="checkbox"/>	Code <input type="checkbox"/>	
Beneficial Result	Code <input type="checkbox"/>	Code <input checked="" type="radio"/> Opportunity for potential betterments to Jefferson Park and Trail	Code <input type="checkbox"/>	
	*To be more thoroughly analyzed at a later date	*To be more thoroughly analyzed at a later date	*To be more thoroughly analyzed at a later date	
City Staff Grouping	Tier 2	Tier 3	Tier 1	

# DRAFT DOMINION GLEBE SUBSTATION TO POTOMAC RIVER SUBSTATION: PLANNING AND DEVELOPMENT ISSUES

Symbols, Legends and Notes

Coding Key	
<p>Code  High Level of Impacts</p> <p>Code  Medium Level of Impacts</p> <p>Code  Low Level of Impacts</p>	<p>Code  No Impacts</p> <p>Code  Further Study / See Report</p>

Dominion Route Legend	Working Group Alternate Route Legend
<ul style="list-style-type: none"> <li> Commonwealth Ave / E Glebe Rd</li> <li> Route 1 / Slaters Lane</li> <li> Potomac Ave</li> <li> CSX</li> <li> Metro / GW Parkway</li> <li> GW Parkway</li> <li> Mt Jefferson Park Trail</li> <li> Main Line Blvd</li> <li> 4 Mile Run / Potomac River</li> </ul>	<ul style="list-style-type: none"> <li> 4 Mile Run / Potomac River / GW Parkway</li> <li> Mt. Jefferson Park Trail - DRCA Alternate</li> <li> CSX - DRCA Alternate</li> </ul>

Impact Area Descriptions / Subcategories	
<p><b>Traffic</b></p> <ul style="list-style-type: none"> <li>➤ Road Classification</li> <li>➤ Traffic Volume</li> <li>➤ Transit / Multi-Modal</li> </ul> <p><b>Open Space</b></p> <ul style="list-style-type: none"> <li>➤ Developed / Parkland</li> <li>➤ Undeveloped</li> </ul> <p><b>Development</b></p> <ul style="list-style-type: none"> <li>➤ Existing Development</li> <li>➤ Future Commercial / Retail / Residential</li> <li>➤ Undeveloped</li> </ul> <p><b>Environmental</b></p> <ul style="list-style-type: none"> <li>➤ Water Quality</li> <li>➤ Air Quality / Traffic</li> <li>➤ Electro Magnetic Field (EMF)</li> </ul>	<p><b>School / Population</b></p> <ul style="list-style-type: none"> <li>➤ Proximity to Current Locations</li> <li>➤ Proximity to Future Locations</li> </ul> <p><b>Right-of-Way</b></p> <ul style="list-style-type: none"> <li>➤ Existing</li> <li>➤ Proposed</li> </ul> <p><b>Catalyst</b></p> <ul style="list-style-type: none"> <li>➤ Dovetails Current City Efforts?</li> </ul> <p><b>Beneficial Result</b></p> <ul style="list-style-type: none"> <li>➤ Mitigation Opportunities</li> <li>➤ Positive Impacts</li> </ul> <p><b>Cost</b></p> <ul style="list-style-type: none"> <li>➤ Projected Cost of Construction</li> </ul> <p><b>Aesthetics</b></p>

# Commonwealth Ave / E Glebe Rd

*Information Provided By City Staff and Their Consultants*

## Route Summary

The Commonwealth Avenue / East Glebe Road Route begins by leaving Arlington County to the north and crossing Four Mile Run into the City of Alexandria. From there it continues southbound along Commonwealth Avenue before turning south east at East Glebe Road. Next the route crosses Route-1 and continuing east on East Glebe Road before turning south and following Potomac Ave to the intersection of Main Line Blvd where the alignment transitions southeast crossing under CSX mainline track and passing over Metrorail tunnel before reaching Massey Lane.

## Connection to Glebe Substation

This route connects to the Glebe Substation through various optional crossings from Arlington County to Alexandria in and around Four Mile Run.

## Connection to Potomac River Substation

This route connects to the Potomac Substation through various optional routes that start along Massey Lane and continue to the substation after branching off from either Slaters Lane to the north or via the railroad siding track alignment to the southwest of the facility.

## Route Pros

- Potential streetscape improvements for Glebe Road and Commonwealth Avenue.
- Impacts to Freight and Commuter rail service along CSX Mainline tracks could be avoided by bore and jack operations.

## Route Cons

- Significant impacts to traffic on Commonwealth Ave, E. Glebe Rd., Route-1 and Potomac Ave. Potential for traffic impacts along Massey Lane and Slaters Lane.
- The route will require coordination and approval by CSX and WMATA.
- A lease will be required for track crossing from CSX for use of railroad right-of-way.
- Potential impacts to Cora Kelly School, businesses and residents along Potomac Ave, East Glebe Rd and Commonwealth Ave. 142 residential buildings, 1144 residences in the 100-foot buffer area.
- Potential impacts to open space along Potomac Ave.
- Environmental issues when working in areas with contaminated soils.
- Impacts on Four Mile Run banks and park.

# Route 1 / Slaters Lane

*Information Provided By City Staff and Their Consultants*

## Route Summary

The Route -1 (Jefferson Davis Highway) / Slaters Lane Route begins by leaving Arlington County to the north and crossing Four Mile Run into the City of Alexandria. From there it turns to the south and follows Route-1 to Potomac Ave. From there the route turns east before transitions southeast crossing under CSX mainline track and passing over Metrorail tunnel before reaching Massey Lane.

## Connection to Glebe Substation

This route connects to the Glebe Substation through various optional crossings from Arlington County to Alexandria in and around Four Mile Run.

## Connection to Potomac River Substation

This route connects to the Potomac Substation through various optional routes that start along Massey Lane and continue to the substation after branching off from either Slaters Lane to the north or via the railroad siding track alignment to the southwest of the facility.

## Route Pros

- Potential to underground utilities and make long-term roadway improvements if along west side of Route-1 right-of-way.
- Impacts to Freight and Commuter rail service along CSX Mainline tracks could be avoided by bore and jack operations.

## Route Cons

- Significant impacts to traffic on Route-1 and potential for traffic impacts along Massey Lane and Slaters Lane.
- Could interfere with future plans to develop along route 1.
- The route will require coordination and approval by CSX and WMATA.
- A lease will be required for track crossing from CSX for use of railroad right-of-way.
- Impacts to businesses and residents along Route-1. 84 residential buildings, 630 residences in the 100-foot buffer area.
- Possible environmental issues when working in areas with contaminated soils.
- Impacts on Four Mile Run banks and park.

# Potomac Avenue

*Information Provided By City Staff and Their Consultants*

## Route Summary

The Potomac Avenue Route begins by leaving Arlington County to the north and crossing Four Mile Run into the City of Alexandria. From there it turns to the south and follows Potomac Ave to intersection of Main Line Blvd where the alignment transitions southeast crossing under CSX mainline track and passing over Metrorail tunnel before reaching Massey Lane.

## Connection to Glebe Substation

This route connects to the Glebe Substation through various optional crossings from Arlington County to Alexandria in and around Four Mile Run.

## Connection to Potomac River Substation

This route connects to the Potomac Substation through various optional routes that start along Massey Lane and continue to the substation after branching off from either Slaters Lane to the north or via the railroad siding track alignment to the southwest of the facility.

## Route Pros

- A majority of this route has already been developed.
- Impacts to Freight and Commuter rail service along CSX Mainline tracks could be avoided by bore and jack operations.

## Route Cons

- Significant impacts to traffic on Potomac Ave and potential for traffic impacts along Massey Lane and Slaters Lane.
- The route will require coordination and approval by CSX and WMATA.
- A lease will be required for track crossing from CSX for use of railroad right-of-way.
- Impacts to businesses and residents along Potomac Ave. 83 residential buildings, 519 residences in the 100-foot buffer area.
- Potential impacts to open space along Potomac Ave.
- Impacts on Four Mile Run banks and park.
- Impact on future planned park at Land Bay E.
- Impacts to new street trees.

# CSX

*Information Provided By City Staff and Their Consultants*

## Route Summary

The CSX Route begins by leaving Arlington County to the north and crossing 4 Mile run into the City of Alexandria. The route continues south along CSX Mainline tracks to Slaters Lane. From there the route continues east crossing over the Metrorail tunnel going further east on Slaters Lane.

## Connection to Glebe Substation

This route connects to the Glebe Substation through various optional crossings from Arlington County to Alexandria in and around 4 Mile Run.

## Connection to Potomac River Substation

This route connects to the Potomac Substation through various optional routes that start along Massey Lane and continue to the substation after branching off from either Slaters Lane to the north or via the railroad siding track alignment to the southwest of the facility.

## Route Pros

- Implementing a route that stays away from population centers and will provide reduced impacts to schools, businesses and residents.

## Route Cons

- Potential for traffic impacts along Massey Lane and Slaters Lane.
- Freight and Commuter rail service will be impacted along CSX Mainline tracks.
- The route will require coordination and approval by CSX and WMATA.
- A lease will be required from CSX for use of railroad right-of-way.
- Environmental issues when working in areas with contaminated soils.
- Impacts on Four Mile Run banks and park.
- Impact on future planned park at Land Bay E.

# Metro / GW Parkway

*Information Provided By City Staff and Their Consultants*

## Route Summary

The Metro / GW Parkway Route begins by leaving Arlington County to the north and crossing Four Mile Run into the City of Alexandria. From there it turns to the south and follows Metrorail tracks before turning to the east near E. Glebe Road. From there the route turns south again and follows the alignment of George Washington Parkway.

## Connection to Glebe Substation

This route connects to the Glebe Substation through various optional crossings from Arlington County to Alexandria in and around Four Mile Run.

## Connection to Potomac River Substation

This route connects to the Potomac Substation from either Slaters Lane to the north or via the railroad siding track alignment to the southwest of the facility.

## Route Pros

- Implementing a route that stays away from population centers and will provide reduced impacts to schools, businesses and residents.

## Route Cons

- Traffic on George Washington Parkway and Slaters Lane will be impacted.
- Commuter rail service will be impacted along the Metrorail section of the route.
- The route will require coordination and approval by the National Park Service and WMATA.
- Route has potential to impact existing trees and open spaces along George Washington Parkway.
- Route has potential to impact location of future Potomac Yard infill Metro Station.
- Impacts on Four Mile Run banks and park.
- Impact on future planned park at Land Bay E.
- Impact to passive and wetland area of Potomac Greens Park.

# GW Parkway

*Information Provided By City Staff and Their Consultants*

## Route Summary

The GW Parkway Route begins by leaving Arlington County to the north and crossing Four Mile Run into the City of Alexandria. From there it turns to the south and follows the alignment of George Washington Parkway.

## Connection to Glebe Substation

This route connects to the Glebe Substation through various optional crossings from Arlington County to Alexandria in and around Four Mile Run.

## Connection to Potomac River Substation

This route connects to the Potomac Substation from either Slaters Lane to the north or via the railroad siding track alignment to the southwest of the facility.

## Route Pros

- Implementing a route that stays away from population centers and will provide reduced impacts to schools, businesses and residents.

## Route Cons

- Traffic on George Washington Parkway and Slaters Lane will be impacted.
- The route will require coordination and approval by the National Park Service.
- Route has potential to impact existing trees and open spaces along George Washington Parkway.
- Impacts on Four Mile Run banks and park.
- Impact on future planned park at Land Bay E.
- Impact to passive and wetland area of Potomac Greens Park.

# Mt. Jefferson Park Trail

*Information Provided By City Staff and Their Consultants*

## Route Summary

The Mount Jefferson Park Trail Route begins by leaving Arlington County to the north and crossing Four Mile Run into the City of Alexandria. From there the route travels southbound along Commonwealth Avenue before turning southeast at the Mount Jefferson Park Trail. The route then continues through the park before crossing Route-1 and turning east on Custis Ave. From there the alignment continues east crossing under CSX mainline track and Metrorail tracks before reaching Potomac Greens Drive. The route then transitions south on Potomac Greens Drive to the intersection of Massey Lane.

## Connection to Glebe Substation

This route connects to the Glebe Substation through various optional crossings from Arlington County to Alexandria in and around Four Mile Run.

## Connection to Potomac River Substation

This route connects to the Potomac Substation through various optional routes that start along Massey Lane and continue to the substation after branching off from either Slaters Lane to the north or via the railroad siding track alignment to the southwest of the facility.

## Route Pros

- Potential to implement trail and park enhancements as part of the project construction.
- Impacts to Freight and Commuter rail service along CSX Mainline tracks and Metrorail tracks could be avoided by bore and jack operations.

## Route Cons

- Significant impacts to traffic on Commonwealth Ave, E. Glebe Rd., Route-1 and Potomac Ave. Potential for traffic impacts along Massey Lane and Slaters Lane.
- The route will require coordination and approval by CSX and WMATA.
- A lease will be required for track crossing from CSX for use of railroad right-of-way.
- Significant impacts to Jefferson Park & Trail and potential impacts to Cora Kelly School, businesses and residents along Commonwealth Ave and residents along Potomac Greens Drive. 203 residential buildings, 769 residences in the 100-foot buffer area.
- Environmental issues when working in areas with contaminated soils.
- Impacts on Four Mile Run banks and park.
- Impact to Custis Finger Park (Just Completed) and passive area of Potomac Yard Park.
- Potential impacts to existing trees and the possibility of future tree plantings.

# Main Line Blvd

*Information Provided By City Staff and Their Consultants*

## Route Summary

The Main Line Boulevard Trail Route begins by leaving Arlington County to the north and crossing Four Mile Run into the City of Alexandria. From there it turns southbound through the Potomac Yard Center shopping plaza parking lot continuing south through Potomac Yard development on Main Line Boulevard to the intersection of Custis Ave before turning east. From there the alignment continues east crossing under CSX mainline track and Metrorail tracks before reaching Potomac Greens Drive. The route then transitions south on Potomac Greens Drive to the intersection of Massey Lane.

## Connection to Glebe Substation

This route connects to the Glebe Substation through various optional crossings from Arlington County to Alexandria in and around Four Mile Run.

## Connection to Potomac River Substation

This route connects to the Potomac Substation through various optional routes that start along Massey Lane and continue to the substation after branching off from either Slaters Lane to the north or via the railroad siding track alignment to the southwest of the facility.

## Route Pros

- Impacts to Freight and Commuter rail service along CSX Mainline tracks and Metrorail tracks could be avoided by bore and jack operations.

## Route Cons

- Significant impacts to traffic in Potomac Yard Center shopping plaza, Main Line Boulevard, Custis Avenue and Potomac Greens Drive. Potential for traffic impacts along Massey Lane and Slaters Lane.
- The route will require coordination and approval by CSX and WMATA.
- A lease will be required for track crossing from CSX for use of railroad right-of-way.
- Will interfere with mixed-use development including Potomac Yard Center shopping plaza and the Potomac Yard development.
- Potential impacts to residents along Potomac Greens Drive. 145 residential buildings, 1038 residences in the 100-foot buffer area. Relatively short distance adjacent to residential use.
- Environmental issues when working in areas with contaminated soils.
- Impacts on Four Mile Run banks and park.
- Will impact a portion of the planned open space for North Potomac Yard.

# 4 Mile Run / Potomac River

*Information Provided By City Staff and Their Consultants*

## Route Summary

The For Mile Run / Potomac River Route begins by leaving Arlington County to the north and crossing Four Mile Run into the City of Alexandria. From there it snakes its way out into the Potomac River and the District of Columbia before taking a turn to the south and following the coast line tracking south before reaching land and re-entering Virginia near Slaters Lane.

## Connection to Glebe Substation

This route connects to the Glebe Substation through various optional crossings from Arlington County to Alexandria in and around Four Mile Run.

## Connection to Potomac River Substation

This route connects to the Potomac Substation from the Potomac River to the east of the facility. It is unique to other proposed routes in that respect.

## Route Pros

- Implementing a route that stays away from population centers and roadways will provide the least possible impact to open spaces, schools, businesses, residencies and the traveling public.
- The fifty foot right-of-way required for the transmission line would typically impact existing and future development but with this route it will be primarily located out in the water avoiding such conflicts.

## Route Cons

- The primarily underwater route will present considerable challenges and costs to the construction of the transmission line duct bank.
- Having to locate the line in the riverbed of the Potomac and 4 mile run will cause significant environmental impacts.
- This route also spans state lines between the District of Columbia and Virginia adding to jurisdictional oversight.
- Impacts to Marina Towers, 283 units, at edge of the 100-foot buffer area.
- This should be the highest cost option.
- Impact on future planned park at Land Bay E.
- Impact to passive and wetland area of Potomac Greens Park.

# Overhead Transmission Line

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*Information Provided By City Staff and Their Consultants*

## Route Summary

The Overhead Transmission Line option route has yet to be determined.

## Connection to Glebe Substation

This route connection to the Glebe Substation has yet to be determined.

## Connection to Potomac River Substation

This route connection to the Potomac River Substation has yet to be determined.

## Route Pros

- Low Cost Option

## Route Cons

- Significant Aesthetic impacts to local residents and businesses.
- Overhead will impact natural spaces, Potomac Yard Park and may raise some health concerns with the public in proximity

# 4 Mile Run / Potomac River / GW Parkway - Alternate

*Information Provided By City Staff and Their Consultants*

## Route Summary

The 4 Mile Run / Potomac River / GW Parkway Route begins by leaving Arlington County to the north and crossing Four Mile Run into the City of Alexandria. From there it snakes its way out into the Potomac River and the District of Columbia before taking a turn to the south and following the coast line tracking south before reaching land and re-entering Virginia just north of the marina. From there it crosses land to follow the George Washington Parkway alignment south to Slaters Lane.

## Connection to Glebe Substation

This route connects to the Glebe Substation through various optional crossings from Arlington County to Alexandria in and around Four Mile Run.

## Connection to Potomac River Substation

This route connects to the Potomac Substation from Slaters Lane to the north of the facility.

## Route Pros

- Implementing a route that stays away from population centers and will provide reduced impacts to schools, businesses and residents.
- The fifty foot right-of-way required for the transmission line would typically impact existing and future development but with this route a good portion will be located out in the water avoiding such conflicts.

## Route Cons

- The underwater section of the route will present considerable challenges and costs to the construction of the transmission line duct bank.
- Having to locate portions the line in the riverbed of the Potomac and 4 mile run will cause significant environmental impacts.
- This route also spans state lines between the District of Columbia and Virginia adding to jurisdictional oversight.
- Traffic on George Washington Parkway and Slaters Lane will be impacted.
- The route will require coordination and approval by the National Park Service.
- Route has potential to impact existing trees and open spaces along George Washington Parkway.
- Impacts on Four Mile Run banks and park.
- Impact on future planned park at Land Bay E.
- Impact to passive and wetland area of Potomac Greens Park.

# Mt. Jefferson Park Trail - DRCA Alternate

*Information Provided By City Staff and Their Consultants*

## Route Summary

The Mount Jefferson Park Trail – DCRA Alternate Route begins by leaving Arlington County to the north and crossing Four Mile Run into the City of Alexandria. From there the route travels southbound along Commonwealth Avenue before turning southeast at the Mount Jefferson Park Trail. The route then continues through the park before turning east onto Swann Ave. The route turns south onto Route-1 to the area near the bridge crossing over CSX Tracks. From there the route continues east crossing under CSX mainline track and over Metrorail tunnel before transitioning eastbound on Slaters Lane.

## Connection to Glebe Substation

This route connects to the Glebe Substation through various optional crossings from Arlington County to Alexandria in and around Four Mile Run.

## Connection to Potomac River Substation

This route connects to the Potomac Substation from Slaters Lane to the north of the facility.

## Route Pros

- Potential to implement trail and park enhancements as part of the project construction.
- This alternative avoids sensitive park area but cutting down Swann Ave.
- Impacts to Freight and Commuter rail service along CSX Mainline tracks could be avoided by bore and jack operations.

## Route Cons

- Significant impacts to traffic on Commonwealth Ave, E. Glebe Rd. and Route-1. Potential for traffic impacts along Slaters Lane.
- The route will require coordination and approval by CSX and WMATA.
- A lease will be required for track crossing from CSX for use of railroad right-of-way.
- Significant impacts to Jefferson Park & Trail and potential impacts to Cora Kelly School, businesses and residents along Commonwealth Ave, Swann Ave and Route-1.
- Environmental issues when working in areas with contaminated soils.
- Impacts on Four Mile Run banks and park.
- Potential impacts to existing trees and the possibility of future tree plantings.

# CSX - DRCA Alternate

*Information Provided By City Staff and Their Consultants*

## Route Summary

The CSX – DRCA Alternate Route begins on South Glebe Road before leaving Arlington County to the north and crossing Four Mile Run over the CSX Rail Bridge into the City of Alexandria. It continues south along CSX Mainline tracks to Slaters Lane. From there the route continues east crossing over the Metrorail tunnel going further east on Slaters Lane.

## Connection to Glebe Substation

This route connects to the Glebe Substation from South Glebe Road to the north. This route is unique in that regard.

## Connection to Potomac River Substation

This route connects to the Potomac Substation from Slaters Lane to the north of the facility.

## Route Pros

- A majority of this route stays away from population centers and will provide reduced impacts to schools, businesses and residents.

## Route Cons

- Potential for traffic impacts along Slaters Lane.
- Freight and Commuter rail service will be impacted along CSX Mainline tracks.
- The route will require coordination and approval by CSX and WMATA.
- A lease will be required from CSX for use of railroad right-of-way.
- Environmental issues when working in areas with contaminated soils.
- Impact on future planned park at Land Bay E.