White Flint Substation New U/G 69kV Lines

Overview
• Transitioning four 69kV Pipe Type feeders from Bells Mill – cutting in and out to supply new White Flint Sub utilizing XLPE
• Relocate three Rockville 69kV supply feeders from Parklawn to White Flint utilizing XLPE in ductbank, app. 1 mile
• Relocate one Kensington 69kV OH supply feeder from Parklawn to White Flint utilizing XLPE in ductbank, app. 1 mile
• Build UG 69kV getaway for two Kensington supply feeders to be relocated overhead.

Design Status
• Test Pitting to locate underground utilities is underway

White Flint Sector Plan Implementation Committee meeting
May 14, 2018
Project Background

• Pepco is planning to construct a new substation at 11650 Nebel Street, near the corner of Nebel Street and Marinelli Road in Rockville.

• We are building this new substation to meet the anticipated load growth in the White Flint area. Without this substation, it is anticipated that the current Parklawn substation will exceed its capacity by 2% in 2022.

• The new substation will increase area capacity, thereby improving reliability and operational flexibility.

• The White Flint substation will be both a 69/13.8 (kilovolt) distribution-class substation with an ultimate total capacity of 120 megavolt ampere of power.

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<thead>
<tr>
<th>Activity</th>
<th>Anticipated Start Date</th>
<th>Anticipated End Date</th>
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<tbody>
<tr>
<td>Substation Building Construction</td>
<td>June 2019</td>
<td>June 2022</td>
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<tr>
<td>Underground and Overhead line</td>
<td>January 2020</td>
<td>January 2023</td>
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<td>work (in Public Space)</td>
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<tr>
<td>Project complete</td>
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<td>January 2023</td>
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Global Perspective

Rockville & North Bethesda are quickly becoming centers for economic development. The area is transitioning from a suburban to an urban environment. Major development is occurring along the I-270 corridor and the White Flint Area. Significant load growth is expected in the region.
White Flint Sub Supply Area

- Parklawn Sub supply area
- White Flint Sub supply area
- Future New load

16 MW MID-PIKE PLAZA
12.5 MW NORTH BETHESDA P.
10 MW WHITE FLINT MALL
5.5 MW NIH
2 MW HR
White Flint New Substation 69/13kV
Site Development
White Flint New Substation 69/13kV
Existing condition – Aerial at Marinelli Road & Nebel Street
White Flint New Substation 69/13kV (Cont.)

Existing condition **Intersection at Nebel & Marinelli**
White Flint New Substation 69/13kV (Cont.)

Existing condition **View from Nebel Street**

Existing condition **View from Marinelli Road**
From discussions with the County, it was desired for the design to have a modern, “jewel-box” character. Rather than attempt to camouflage itself by mimicking an alternate use, the building is viewed as a public art piece, a landmark & a visual asset to the neighborhood. The building highlights & engages an active street corner planned for mixed-used, multi-family residential development.
White Flint New Substation 69/13kV
Proposed Rendering - Intersection at Marinelli Road and Nebel Street

To signify a more urban, residential character, the mass of the substation is broken down into ‘bays’ that emphasize the verticality of the façade rather than the horizontal, rural warehouse proportions. There is strong importance of creating visual ‘life’ to the windowless façade of an industrial use building.
In lieu of fenestration, the use of backlit perforated Trespa laminate panels creates a visually light scrim over the concrete shell. A CNC-routed pattern depicting waves of energy is applied to the panels, which has a subtle daytime quality and becomes an illuminated nighttime feature facing the streets. Vertical channel glass ‘lanterns’ between the bays animate the building with light and introduces glass to the project material pallet without using traditional windows.
White Flint New Substation 69/13kV
Proposed – Digital Patterning & Scale

On the Nebel Street elevation, the primary façade engages the sidewalk directly to maintain the urban-edge. An over-sized, 1’ x 3’ running bond grid diminishes the appearance of the building mass by using a monumental-scale module proportion. The result is a building that is visually light in color and bulk, and dynamically but subtly illuminated at night evoking liveliness in an otherwise unoccupied infrastructure building.
White Flint New Substation 69/13kV
Proposed Renderings – Marinelli Street & Nebel Street Approaches
Questions?