

115 kV Bridge Attachment Option (Barnhardt Option 1) (Total Line Miles 2.3)

- Replace 2.2 Miles of Aging Single Circuit Transmission Line with 2.3 Miles of Primarily Aboveground Facilities
- Transmission Cable will be Installed Within Fiberglass Conduits Attached to the Underside of the Robert O. Norris Bridge.
- Construct 2 Transition Stations, 1 on Each Side of the River Crossing, to Connect the Underground Cable to the Aboveground 115 kV Transmission Line Under the Robert O. Norris Bridge
- New Right of Way Needed on Land

Underground Route Option (Total Line Miles 2.3)

- Replace 2.2 Miles of Aging Single Circuit Transmission Line with 2.3 Miles of Underground Facilities
- Transmission Line Will be Installed Under River Via Horizontal Directional Drill
- Construct 2 Transition Stations, 1 on Each Side of the River Crossing, to Connect the Underground Cable to the Existing Overhead 115 kV Transmission Line
- New Right of Way Needed on Land and in the River

Trenched Route Option (Barnhardt Option 2) (Total Line Miles 2.4)

- Replace 2.2 Miles of Aging Single Circuit Transmission Line with 2.4 Miles of Underground Facilities
- Transmission Line Will be Installed Under River Via Jet Plow With Each Conductor in its Own Shallow Trench Spaced 100' Apart
- Construct 2 Transition Stations, 1 on Each Side of the River Crossing, to Connect the Underground Cable to the Existing Overhead 115 kV Transmission Line
- New Right of Way Needed on Land and in the River

115 kV Overhead Rebuild Route Alternative (Total Line Miles 2.2)

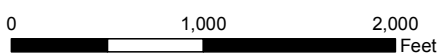
- Replace 2.2 Miles of Aging Single Circuit Transmission Line with 2.2 Miles of Structures that Maintain 115 kV Clearances
- Lancaster County: Remove and Replace 1 Existing Land Based Wooden 3-Pole Structure with a Galvanized Steel 3-Pole Structure
- Middlesex County: Remove and Replace 4 Existing, Land Based Wooden Monopole Structures with 1 Galvanized Steel Monopole and 2 Weathering Steel Monopoles
- River Crossing: Remove 7 Wooden H-Frame Structures and 14 Structures Attached to the Robert O. Norris Bridge and Replace with 10 Galvanized Steel H-frame Structures
- New Right-of-Way Needed in the River

230 kV Overhead Rebuild Route Alternative (Total Line Miles 2.2)

- Replace 2.2 Miles of Aging Single Circuit Transmission Line with 2.2 Miles of Structures that Maintain 230 kV Clearances
- Lancaster County: Remove and Replace 1 Existing Land Based Wooden 3-Pole Structure with 1 Galvanized Steel 3-Pole Structure
- Middlesex County: Remove and Replace 4 Existing, Land Based Wooden Monopole Structures with 1 Galvanized Steel Monopole and 2 Weathering Steel Monopoles
- River Crossing: Remove 7 Wooden H-Frame Structures and 14 Structures Attached to the Robert O. Norris Bridge and Replace with 10 Galvanized Steel H-frame Structures
- New Right-of-Way Needed in the River and on Land in Middlesex County



- 115 kV Overhead Route and 230 kV Overhead Alternative Routes
- Underground Option
- Barnhardt Option 1
- Barnhardt Option 2
- Transition Stations



**Line #65 115 kV Rebuild at Norris Bridge
Dominion Virginia Power
Project Overview Map**



an ERM Group company

DRAWN BY: JPB