

Appendix I
Cost Assumptions

APPENDIX I COST ASSUMPTIONS

I. Introduction

This preliminary design estimates provided in this Application are subject to many yet unknown constraints based on the final approved route and actual working conditions. The estimates include, but are not limited to, the assumptions list below:

II. Cost Assumptions

A. Route A – Overhead Construction

- 50-foot transmission line easement or right-of-way width.
- Steel monopole structures the length of the route. (Approximately 18)
- Double-circuit davit arm construction.
- Moderate soil conditions allowing drilled pier foundation construction for 50% of the structures the remainder being on driven pile foundations.
- Nominal span distances of 400-500 feet.
- Nominal structure heights of 70-80 feet. (Crossing structures may be as high as 100-110 feet.)
- Clear working conditions and reasonable access to construction locations.
- Workable foundation locations free of underground obstruction and affording sufficient structural support.
- Single 795 kcmil 26/7 ACSR conductors per phase for each line.
- Two 3/8 Extra High Strength (“EHS”) 7 strand steel shield wires the length of the line.
- Price of steel poles is dependent upon the market cost of steel.
- Price of conductor is dependent upon the market cost of aluminum.
- Contract labor is assumed for the line construction.
- Cost of contract labor is dependant upon labor availability, which will be impacted by other transmission line work underway in the area.
- Cost of construction is dependant upon the market cost of fuel.
- No distribution under build on structures.

B. Route B and Route C

- 50-foot transmission easement or right-of-way width. (Measured from the center line of the conductor.)
- Proposed route is along road right of way, and impacts the sidewalk.
- Steel monopole structures the length of the route. (Approximately 43)
- Single circuit davit arm construction.

- Moderate soil conditions allowing direct imbedded or drilled pier construction. (100% drilled pier estimated.)
- Nominal span distances of 400-500 feet.
- Nominal structure heights of 70-80 feet.
- Clear working conditions and reasonable access to construction locations.
- Workable foundation locations free of underground obstruction and affording sufficient structural support.
- Single 795 kcmil 26/7 ACSR conductors per phase for each circuit.
- Single 3/8 EHS 7 strand shield wire the length of the line.
- Price of steel poles is dependant upon the market cost of steel.
- Price of conductor is dependant upon the market cost of aluminum.
- Contract labor is assumed for the line construction.
- Cost of contract labor is dependant upon labor availability, which will be impacted by other transmission line work underway in the area.
- Cost of construction is dependant upon the market cost of fuel.
- Distribution under build on structures.

C. Route A and Route D - Underground Construction

- 2 feet x 2 feet concrete duct bank the majority of the route.
- 1500-foot runs between cable vaults.
- Better than average soil conditions allowing for sufficient thermal heat dissipation needed to meet required electrical capacity of the cable.
- Clear working conditions and reasonable access to construction locations.
- Workable duct bank locations free of underground utilities and other obstructions so that the underground duct banks can be installed with large smooth bends to reduce pulling tensions needed during installation.
- Single 3000 kcmil Cu XLPE conductor per phase for each line.
- Price of conductor is dependant upon the market cost of copper.
- Contract labor is assumed for the underground cable installation.
- Cost of contract labor is dependant upon labor availability, which will be impacted by other underground transmission line work underway in the United States.
- Cost of construction is dependant upon the market cost of fuel and concrete.
- Ground continuity conductor in each duct bank.
- Streets other than Hiawatha Avenue can be closed during installation of duct banks and cables.
- Underground cable ordered from a domestic supplier allowing for 6-7 month delivery from receipt of order.