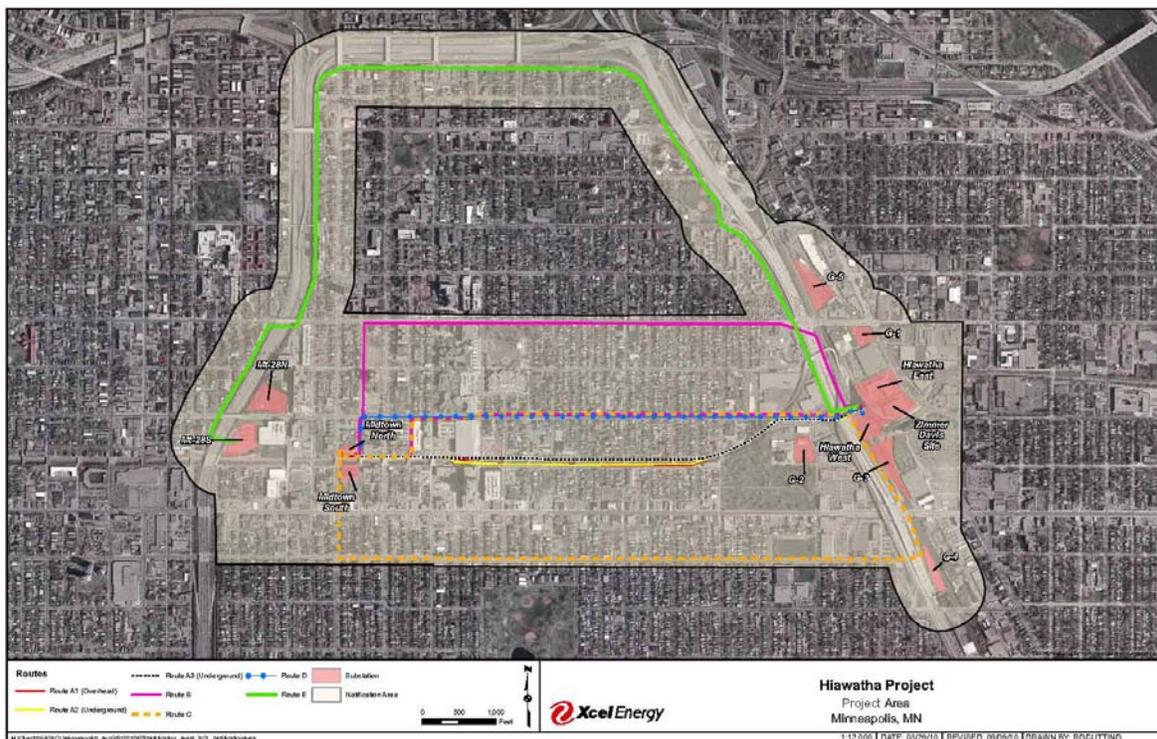


Appendix C.1
Cost Information

COST INFORMATION

This appendix provides cost and ratepayer impact information for the route alternatives proposed in the Route Permit proceeding (Routes A-E2). The cost for these routes were estimated using different substation sites as endpoints, including the proposed Hiawatha and Midtown substation sites, Hiawatha West and Midtown North, and three alternate substation sites, Hiawatha East and Hiawatha Zimmer Davis and Midtown South. A map of the route alternatives and substation sites is shown below.



Substation Cost Assumptions

Construction on the Hiawatha West substation site is estimated to cost \$15,795,000. This amount includes \$14,270,000 for low-profile substation site preparation, equipment and construction costs and \$900,000 in estimated land acquisition costs. This amount also includes \$625,000 in estimated relocation costs associated with relocation of a railroad spur and fiber optic cables that are currently located on the property.

In addition to the Hiawatha West substation site, two alternate substation sites were proposed by Xcel Energy for the Hiawatha Substation: Hiawatha East and Hiawatha Zimmer Davis. Hiawatha East is located on land adjacent to the Hiawatha West site to the northeast at 2650

Minnehaha Avenue. The Hiawatha East site is currently occupied by a light industrial business, Crew2, Inc., a home installation company. Hiawatha Zimmer Davis is located east of the Hiawatha West site at 2700 Minnehaha Avenue. The Hiawatha Zimmer Davis site is currently in use as the central distribution hub for Primary Surgical, Inc. d/b/a Zimmer Davis, an orthopedic implant sales and distribution business. The estimated cost to construct the Hiawatha Substation on either of these two alternate sites is estimated to be \$20,770,000. This amount includes \$14,270,000 for low-profile substation site preparation, equipment and construction costs. The amount also includes \$5,000,000 in estimated land acquisition costs and \$1,500,000 in estimated relocation costs for the existing business (Crew2 or Zimmer Davis).

The Midtown North substation is estimated to cost \$11,820,000. This estimate includes \$11,120,000 for high-profile substation site preparation, equipment and construction costs, \$700,000 in estimated land acquisition costs and \$0 in estimated relocation costs. Xcel Energy identified the Midtown South site, located across the Midtown Greenway from the Midtown North site, as an alternate site for the Midtown Substation. The Midtown South site is located on an area that includes 2907 Portland Avenue and 2915 Portland Avenue. Both of these properties are currently owned and occupied by Brown Campbell Enterprises. Xcel Energy estimates that it will cost \$14,370,000 to construct the Midtown Substation on the Midtown South site. This amount includes \$11,120,000 for a high-profile substation site preparation, equipment and construction costs and \$2,500,000 in estimated land acquisition costs and \$750,000 in estimated relocation costs.

The following charts provide cost information for the various routes and substation alternatives. These cost estimates do not include costs associated with distribution ducts and feeder circuits.

Hiawatha West to Midtown North

Route Alternative	Hiawatha Substation Costs (Hiawatha West) (\$millions)	Midtown Substation Costs (Midtown North) (\$millions)	115 kV Transmission Line Costs (\$millions)	Total Cost (\$millions)
Route A, Alignment 1	\$15.8	\$11.8	\$2.8	\$30.4
Route A, Alignment 2	\$15.8	\$11.8	\$13.6	\$41.2
Route A, Alignment 3	\$15.8	\$11.8	\$12.7	\$40.3
Route B	\$15.8	\$11.8	\$4.6	\$32.2
Route C	\$15.8	\$11.8	\$5.7	\$33.3
Route D	\$15.8	\$11.8	\$15.5	\$43.1
Route E2	\$15.8	\$11.8	\$4.7	\$32.3

Hiawatha West to Midtown South

Route Alternative	Hiawatha Substation Costs (Hiawatha West) (\$millions)	Midtown Substation Costs (Midtown South) (\$millions)	115 kV Transmission Line Costs (\$millions)	Total Cost (\$millions)
Route A, Alignment 1	\$15.8	\$14.4	\$2.8	\$33.0
Route A, Alignment 2	\$15.8	\$14.4	\$13.6	\$44.0
Route A, Alignment 3	\$15.8	\$14.4	\$12.7	\$43.0
Route B	\$15.8	\$14.4	\$4.6	\$35.0
Route C	\$15.8	\$14.4	\$5.7	\$36.0
Route D	\$15.8	\$14.4	\$15.5	\$46.0
Route E2	\$15.8	\$14.4	\$4.7	\$35.0

Hiawatha East/Hiawatha Zimmer Davis to Midtown North

Route Alternative	Hiawatha Substation Costs (Hiawatha East or Zimmer Davis) (\$millions)	Midtown Substation Costs (Midtown North) (\$millions)	115 kV Transmission Line Costs (\$millions)	Total Cost (\$millions)
Route A, Alignment 1	\$20.8	\$11.8	\$2.8	\$35.4
Route A, Alignment 2	\$20.8	\$11.8	\$13.6	\$46.2
Route A, Alignment 3	\$20.8	\$11.8	\$12.7	\$45.3
Route B	\$20.8	\$11.8	\$4.6	\$37.2
Route C	\$20.8	\$11.8	\$5.7	\$38.3
Route D	\$20.8	\$11.8	\$15.5	\$48.1
Route E2	\$20.8	\$11.8	\$4.7	\$37.3

Hiawatha East/Hiawatha Zimmer Davis to Midtown South

Route Alternative	Hiawatha Substation Costs (Hiawatha East or Zimmer Davis) (\$millions)	Midtown Substation Costs (Midtown South) (\$millions)	115 kV Transmission Line Costs (\$millions)	Total Cost (\$millions)
Route A, Alignment 1	\$20.8	\$14.4	\$2.8	\$37.9
Route A, Alignment 2	\$20.8	\$14.4	\$13.6	\$48.7
Route A, Alignment 3	\$20.8	\$14.4	\$12.7	\$47.8
Route B	\$20.8	\$14.4	\$4.6	\$39.7
Route C	\$20.8	\$14.4	\$5.7	\$40.8
Route D	\$20.8	\$14.4	\$15.5	\$50.6
Route E2	\$20.8	\$14.4	\$4.7	\$39.8