

**BEFORE THE STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS
FOR THE PUBLIC UTILITIES COMMISSION**

In the Matter of the Application of the Route
Permit Application for a High Voltage
Transmission Line Route Permit for the
Hiawatha Transmission Project

**PROPOSED
FINDINGS OF FACT,
CONCLUSIONS OF LAW,
AND RECOMMENDATIONS**

Intervenor Midtown Greenway Coalition (“MGC”) submits proposed Findings of Fact, Conclusions of Law and Recommendations as amendments and substitutions to the Findings of Fact, Conclusions of Law and Recommendations submitted by Applicant on June 15, 2010. Preliminarily, MGC requests that counsel be identified as Paula Goodman Maccabee, Attorney at Law, Just Change Law Offices.

Without taking a position as to whether such Findings are needed to support a decision, MGC has designated where there are no objections to certain of Applicant’s Proposed Findings. Where amendments to Applicant’s Findings are proposed, underlining indicates the differences. For the substantive sections regarding selection of transmission line routes, substation sites and mitigation, conclusions and recommendations entirely new sections are proposed without underlining and new numbering is provided.

STATEMENT OF ISSUE

Should the Commission issue a route permit to Xcel Energy, and if so for which of the routes under consideration, which substations under consideration and under what conditions?

FINDINGS OF FACT

I. PROCEDURAL SUMMARY

MGC does not object to Applicant’s Proposed Findings #1 through #72.

II. DESCRIPTION OF THE HIAWATHA PROJECT

73. The Project is proposed to meet growing demand for electricity in the South Minneapolis Focused Study Area, which extends approximately from Highway 94 to the north to Highway 62 to the south and from Lakes Calhoun and Harriet on the west to the Mississippi River on the east¹ and which includes the Project Area, caused by population growth, increased load density,

¹ Ex. 1A, p. 15 (Application); Ex. 1B, Appendix D2, p. 4, Figure 1 (Application); Mirzayi 1Vol., pp. 76-77.

and economic development in the area resulting from major revitalization efforts in the Midtown District.

74-76. No comments.

77. Applicant proposes that the Hiawatha Substation will initially consist of: (1) a prefabricated concrete wall 107 with non-tag friendly design appropriate to the area; (2) landscaping around the four concrete walled sides of the substation; (3) a gate and driveway along one side of the substation; (4) four 115 kV transmission line dead-end structures and related substation equipment and structures (an additional two dead-end structures would be required to connect one of the lines into the correct electrical position in the substation, and one for the transformer termination); (5) one 13.8 kV transformer termination structure; (6) one 50 MVA, 118-14.4 kV, Load Tap Changer (“LTC”) distribution transformer; (7) one switchgear enclosure containing six 13.8 kV distribution feeders with associated equipment; and (8) one electrical equipment enclosure containing all electrical controls, protective relaying and auxiliary equipment for the operation of the substation.

78. No comments.

79. Applicant proposes that the Midtown Substation located on the Midtown North site will initially consist of: (1) a prefabricated concrete wall, approximately 20 feet high, with non-tag friendly design appropriate to the area along all sides of the substation; (2) landscaping on the south, east and west sides as practical; (3) a driveway on the east and west sides of the substation; (4) two 115 kV transmission line steel box structures and related substation equipment and structures; (5) one 70 MVA, 118-14.4 kV, LTC distribution transformer; and (6) one electrical equipment enclosure initially containing 13.8 kV distribution feeders with associated equipment, all electrical controls, protective relaying and auxiliary equipment for the operation of the substation.

III. TRANSMISSION LINE ROUTES PROPOSED IN THE APPLICATION

80-85 No comments.

IV. TRANSMISSION LINE ROUTES CONSIDERED IN THE DRAFT ENVIRONMENTAL IMPACT STATEMENT

86-88 No comments.

V. TRANSMISSION LINE STRUCTURE TYPES, SPANS AND UNDERGROUND CONSTRUCTION

89. No comments.

After 89, insert 89(A):

89(A) For the proposed overhead transmission route alternatives, the double circuit and single

circuit poles would be between from 75 in height to 115 feet in height.² The poles would be from 36 to 58 inches in diameter at the base, depending on whether they were for single circuit or double circuit, tangent or dead end structures.³

90-92 No comments.

93. Construction of underground transmission line facilities, if selected for the Project, would be performed by installing concrete encased duct bank raceway system in an open cut trench. The open cut trenching method is readily adaptable to various field conditions so long as sufficient space exists to conduct the open cut trenching operation. Using this method, a spare conduit can sometimes be installed to allow future installation of additional circuit cables. The Project would include the construction of one extra conduit for every set of three cables⁴ that could be used to install a new cable if one of the originally-installed cables fails; a spare cable would not be installed at the time of construction.

94. No comments.

VI. TRANSMISSION LINE CONDUCTORS

95. No comments.

96. For the underground designs, Xcel Energy proposes to use a high voltage extruded dielectric (“HVED”) cable. There are two conductor options (1250 kcmil and 3000 kcmil) for underground construction,⁵ which conductor options produce different magnetic fields.⁶ HVED cable consists of stranded copper conductor surrounded by a solid electrostatic conductor shield and insulation. The outermost layers consist of an insulation shield and moisture block and cable shield covered by a layer of polyethylene protective jacket.

VII. TRANSMISSION LINE ROUTE WIDTHS

97. Xcel Energy has requested a 200-foot route width for Route A to provide flexibility to construct the facilities on either side of 29th Street or within the Midtown Greenway. If Route B or C is selected, an 80-foot route width is requested. If Route D is selected, a route width of 80 feet is requested. If Route E2 is selected, a route width of 970 feet is requested. Several intervening parties, including the MGC and the City of Minneapolis, have requested selection of a route alignment near the center of the street for Route D.

VIII. TRANSMISSION LINE RIGHT-OF-WAY

98. The right-of-way required pursuant to the National Electric Safety Code (“NESC”) for the double-circuit overhead design for Route A—Alignment A1 and Route E2 is 50 feet or 25

² Ex. 1A, p. 80 (Application).

³ Final Environmental Impact Statement (“FEIS”), p. 26, Table ES-1.

⁴ Gallay 3 Vol. pp. 137-138.

⁵ Ex. 1A, p. 68 (Application).

⁶ Ex. 1A, p. 69, Table 8 (Application); Ex. 48 & 48A, Table 3 (Xcel Resp. MCG IR 30).

feet on each side of the structure.⁷

99. No comment.

100. Both Routes B and C would ~~will~~ be constructed on single circuit structures with a cantilevered design that would ~~will~~ place the conductors over the street side of these routes. Xcel Energy will seek to acquire a right-of-way up to 50-feet, 25-feet on either side of the transmission structure, for access and maintenance of the structures

After Section VIII, insert a Section as Follows:

VIII(A). PROJECT AREA

Greenway

100(A). The Midtown Greenway is a 5.5-mile-long biking and walking trail through an old railroad corridor that runs east to west across Minneapolis parallel to, and for the most part one block north of, Lake Street. The Greenway connects with other trails around the Minneapolis Chain of Lakes near the City's western border, and with a bikeway on the West River Road along the Mississippi River to the east. The Greenway is lit at night, plowed in the winter, and open all day every day. Before the Midtown Greenway was developed, the area was an abandoned railroad right-of-way, with garbage strewn on the embankments and in the trench.⁸

B. Midtown Greenway trails are in use year round. The Midtown Greenway is Minnesota's busiest bikeway. Data from detector loops under the trail pavement in 2008, which may undercount cyclists, identified about 4,000 trail users per day.⁹ The trail is also used by pedestrians, year round, who are not counted by the detector loops.¹⁰ The Midtown Greenway sees more use than about two-thirds of the total Minneapolis roadway system and rivals a collector street in function.¹¹ Bicycling Magazine named Minneapolis the number one bicycling city in the United States, in part due to the influence of the Midtown Greenway on bicycle use and bicycle culture.¹²

C. Public investment in the Midtown Greenway has included \$10.3 million of HCRRA funds for land acquisition, approximately \$18.5 million in Hennepin County funds, federal grants under the ISTEA program, federal direct appropriations and City and State funds for trail engineering and construction and \$7.2 million for land acquisition and construction the trail entrance at 10th Avenue serving Midtown Exchange. There are also ongoing investments by the City of Minneapolis and Hennepin County for improvements of pavement, lights and vegetation and for maintenance and security.¹³

⁷ Asah 7 Vol. pp. 86-87; Ex. 172 (Diagram); Gallay 13 Vol. p. 22.

⁸ Ex. 36, p. 6 (Springer Direct).

⁹ Springer 7 Vol., pp. 174-176.

¹⁰ Ex. 36, p. 10 (Springer Direct).

¹¹ Ex. 36, p. 11 (Springer Direct).

¹² Springer 7 Vol., p. 179; Ex. 183, p. 2 (Mogush Supplemental Direct).

¹³ Ex. 36, p. 9 (Springer Direct).

D. Public and community plans for the Greenway include overlooks on adjacent land that can serve as viewing platforms, walking paths on the rim of the Greenway, public green space adjacent to the Greenway, public art, connections to nearby business nodes, and infill of residential development with greater density.¹⁴

Neighborhood

E. The Phillips neighborhood, in which Routes A1, A2, A3, D and substantial portions of Routes B and C are located has a population density of more than 8,900 people per square mile, approximately 40 percent of whom are children.¹⁵ Phillips is nearly 70 percent non-European Caucasian and is one of the most diverse communities in the State.¹⁶ According to the 2000 census, there were 19,805 persons in Phillips, reflecting a 15 percent increase over the preceding 10 years.¹⁷ The population of Phillips has grown since the 2000 census,¹⁸ and the trend of increased housing, jobs, and population applies to the project area for Routes A, B, C and D.¹⁹

F. The 11 neighborhoods and communities that could be affected by the project were analyzed in the EIS as the Environmental Justice Study Area. More than 50 percent of the Environmental Justice Study Area were members of a racial minority at the most recent census, while the Caucasian population was the largest group within the State (89.4 percent), the County (80.5 percent) and the City of Minneapolis (65.1 percent). The percentage of the minority population within the Phillips Neighborhoods and within the Environmental Justice Study Area exceeds the state percentage by over 20 percentage points.²⁰

G. The percentage of people living in poverty the Phillips Neighborhoods is persistently higher than in the City of Minneapolis and was 32.8 percent at the most recent census, as compared to 24.3 percent within the Environmental Justice Study Area, 16.9 percent in the City of Minneapolis, 8.3 percent in Hennepin County and 7.9 percent in the State of Minnesota. The percentage of persons living below the poverty level in the Phillips Neighborhoods exceeds the state percentage by more than 20 percentage points.²¹

IX. PROJECT SCHEDULE

101-102. No comment.

103. ~~In light of the~~ Should a Certificate of Need be granted for the Project requirement, Xcel Energy expects to begin construction of the Project in the second quarter of 2012 and complete

¹⁴ Ex. 36, p. 11-12 (Springer Direct); Ex. 40, Executive Summary (Midtown Greenway Land Use and Development Plan).

¹⁵ Rep. Clark Letter, p. 2, eDocket Document No. 20105-50442-01 (May 10, 2010).

¹⁶ Pass 11 Vol., pp. 152-153; FEIS, p. 247.

¹⁷ Ex. 221 (Phillips General Demographics)

¹⁸ Berkholtz 9 Vol., p. 15.

¹⁹ Berkholtz 9 Vol., pp. 19-20.

²⁰ FEIS, p. 236.

²¹ FEIS, pp. 240-241.

the Project by the second quarter of 2013 with a potential that the Project may be delayed beyond system peak in 2013.

104. (Delete, substance included in 103 above)

X. PROJECT COSTS

105. The total cost of the Project, which includes materials, construction, right-of-way acquisition, site preparation and Project management, is ~~dependent, in significant part, on the length of the transmission lines facilities.~~ The total cost for transmission and substation facilities are estimated to be between approximately \$28 million and \$41 million. This estimate is subject to change as it can be affected considerably by several variables such as the timing of construction, availability of construction crews and components, cost of land acquisition and substation mitigation, and the final route and substations selected by the Commission.

XI. SUBSTATIONS

106. No comment.

Replace Finding 107 with the following:

A. Xcel Energy's preferred Hiawatha substation site ("Hiawatha West") is in an area along the existing 115 kV transmission line located between Hiawatha Avenue to the west, Minnehaha Avenue to the east, and the Soo Line Railroad to the South. Xcel's preferred site for either a low-profile or a high-profile substation²² is located in an area owned primarily by the Minnesota Department of Transportation ("Mn/DOT") with portions also owned by the Soo Line/CP Railroad and the Zimmer Davis Company.²³ The portion of the site owned by Mn/DOT is available for sale.²⁴ Xcel Energy has not determined whether Soo Line/CP or Zimmer Davis would be willing sellers.²⁵

B. It is likely that the Hiawatha West site is contaminated with arsenic related to the Heartland Superfund site,²⁶ but no Phase II study, test wells or borings have been done to determine arsenic contamination on Hiawatha West site, so the extent of contamination and potential costs of cleanup are unknown.²⁷

C. Approximately two-thirds²⁸ of the 2.25 acre site requested by Xcel Energy for the Hiawatha West site²⁹ has been planted by neighborhood, business and local government

²² Low-profile design footprint is illustrated in Ex. 1B, Appendix B-7 (Application). High-profile design footprint is illustrated in Ex. 169A, 169B, 169C.

²³ Seykora 11 Vol., pp. 175-176; Asah 13 Vol. pp. 93-94; Ex. 171 (Aerial Photo/MnDOT).

²⁴ Seykora 11 Vol., p. 172.

²⁵ Asah 13 Vol., pp. 94-96.

²⁶ Seykora 12 Vol., pp. 20-21.

²⁷ Seykora 12 Vol., pp. 21-22.

²⁸ Ex. 173 (Aerial Photo/Outline of Green Space)

²⁹ Ex. 1A, p. 24 (Application); Ex. 148 (Route & Substation Alternatives Aerial).

volunteers with approximately 250 trees and shrubs.³⁰ Part of the Hiawatha West site is in a Pedestrian-Oriented Overlay District, which contains building design requirements.³¹

D. For the Hiawatha substation, Xcel Energy's low-profile design substation would have a footprint of 253 by 392 feet and a high-profile design would have a footprint of 233 by 261 feet.³²

108-111 No comments.

Replace Finding 112 with the following

112A. Xcel Energy's preferred Midtown Substation site ("Midtown North") is located on an area that includes 2840 Oakland Avenue (former Xcel Energy Oakland Substation site); 2833 Portland Avenue (condemned triplex); and 2841 Portland Avenue (vacant Brown Campbell land, formerly owned by Xcel Energy). The City of Minneapolis has recently rezoned this area from light industrial use (I1) to high density residential use (R5).³³ The Midtown Substation will be approximately one acre in size. Xcel Energy has stated both that the minimum walled footprint for the Midtown North substation is approximately 145 feet by 228 feet³⁴ and that proposed Midtown North substation would provide usable space of 110 feet x 248 feet, or 0.63 acre.³⁵

112B. The Phillips West Neighborhood Organization, which is the official citizen participation group for the area, opposes the Midtown North substation site.³⁶

113. No comment.

114. Xcel Energy's current design of the Midtown North substation impacts part of the slope near the Midtown Greenway will be needed for the Midtown North site and may require a retaining wall.³⁷ The Company is aware there is community and local government interest and adopted comprehensive plans for a pedestrian promenade³⁸ on the rim of in adding an access point to the Midtown Greenway at where the Midtown North substation is proposed site. Xcel Energy will design the substation wall and layout to allow for a walkway installation along the south side of the substation wall in response to this interest.

115-123 No comments.

Replace Finding 124 with the following:

³⁰ FEIS, p. 231.

³¹ Minneapolis Code of Ordinances, §§551.110 – 551.175.

³² Ex. 1A, p. 24 (Application); Ex. 64, pp. 3, 4 (Xcel Resp. to MGC IR 2); McNelly 5 Vol., pp. 14-15.

³³ Mogush 8 Vol., p. 124; Mogush 12 Vol., p. 59.

³⁴ Ex. 64, p. 5 (Xcel Resp. to MGC IR 2).

³⁵ Ex. 1A, p. 30 (Application)

³⁶ Phillips West Neighborhood Organization Letter, eDocket No. 20104-48737-01 (April 2, 2010).

³⁷ McNelly 5 Vol., pp. 41-42.

³⁸ FEIS, pp. 144-145; Asah 7 Vol., p. 56; Springer 7 Vol., pp. 101-102. See Ex. 175 (Renderings).

124A. Xcel Energy evaluated the feasibility of Hiawatha G-4 site which is located on the site of the former Hiawatha Substation north of 32nd Street. The site is owned by Xcel Energy and also includes adjacent vacant land owned by Mn/DOT, which would be available for purchase.³⁹ ~~and the Soo Line Railroad. The Adjacent property, not included in the site evaluation,~~⁴⁰ is owned by Soo Line Railroad. ~~rail lines adjacent to the Hiawatha G-4 site, including a main line, are currently operated by the railroad as active rail lines.~~ Xcel Energy determined that the site was not feasible because there was inadequate space for transmission and distribution line access and the requisite substation equipment. This assessment was based on accommodating 3 potential 50 MVA transformers and 15 distribution lines proposed for a future “ultimate design” of the Hiawatha substation.⁴¹

124B. The neighborhoods near the proposed Hiawatha substation sites – Longfellow Community Council, the Seward Neighborhood Group, the East Phillips Improvement Coalition, the Midtown Phillips Neighborhood Association and the MGC all prefer the G-4 substation site if it is feasible.⁴²

125-129 No comments.

XII. PUBLIC AND LOCAL GOVERNMENT PARTICIPATION

A. Public Participation

130-133 No comments.

B. Public Comments

134-137 No comments.

138. Sarah Graham, a student at the University of Minnesota, speaking on behalf of Little Earth at the DEIS public meeting, requested that the EIS offer “concrete compensation to members of the community whose surroundings would be environmentally and aesthetically and economically impacted by the project.” Additionally, Ms. Graham requested equipment upgrades to the distribution systems. Finally, Ms. Graham expressed support for underground construction. At the Public Hearing, Ms. Graham presented a group of children from Little Earth of United Tribes ~~to speak about who~~ explained why they preferred an underground transmission line over an above ground transmission line.

139-140 No comments.

After Finding 140, insert the following Findings 140(A) and 140(B):

³⁹ Seykora 11 Vol., pp. 182, 183, 189; Ex. 232 (Email, Letter Mn/DOT and Metro Transit).

⁴⁰ FEIS, pp. 46, 432.

⁴¹ Zima 12 Vol., p. 174.

⁴² Hart 11 Vol., p. 56; Mains 11 Vol., pp. 101-102; Pass 11 Vol., p. 136; Heyer 11 Vol., p. 126; Ex. 36, pp. 5, 30. (Springer Direct); Ex. 111, p. 7 (Hart Direct); Ex. 209, p. 10 (Mains Direct).

140(A). Rachel Maves, who lives in the project area, expressed concern about the safety of overhead high voltage lines and asked that, if the power lines have to go in, they be installed under 28th Street.⁴³ Patrick Cabello Hasel, co-pastor of a church located at 28th Street and 15th Avenue, expressed concern about health and spoke in favor of an underground route beneath 28th Street, even though it would mean disruption for the church during construction.⁴⁴

140 (B) Several members of the public testified as to the unique value of the Midtown Greenway and that it should be protected as any other park. Leslie Everett described the Greenway as a “linear park” and testified that there should not be overhead high-power lines along the Greenway any more than along Minnehaha Parkway or Lake Calhoun.⁴⁵ Gerry Tyrrell, Pam Barnard and Rosemary Frazel also testified that the Greenway should be protected from overhead power lines as in other parks and around Minneapolis lakes.⁴⁶ Avigdor Edminster described the Greenway as “precious” and said that he would not ride on the Greenway if it meant riding under overhead power lines.⁴⁷ Donna Neste testified, “I love the greenway, I think it is the best thing that has happened to Minneapolis.”⁴⁸

C. Local Government and Community Organization Participation

Delete Finding 141 as non-substantive.

142-149 No comments.

Replace Findings 150-153 with the following:

150. On June 2, 2009, the HCRRA Board of Commissioners adopted a resolution stating that the HCRRA “opposes placement of overhead high voltage lines on its Midtown Greenway property as incompatible with the public uses for which the Midtown Greenway and Chicago Milwaukee Grade Separation Historic District have been dedicated.”⁴⁹ In this resolution, the HCRRA supported the placement of the high voltage lines underground and resolved that the additional costs of underground transmission “be spread to the five state service area of Xcel.”⁵⁰

152. On March 10, 2010, in comments submitted on the DEIS, County commissioners stated that, unlike placement in roadway right-of-way where Xcel Energy has certain statutory rights of use, no similar right of use for high voltage transmission lines exists for the Midtown Greenway corridor. Absent consent by the HCRRA or a court judgment of eminent domain, the Midtown

⁴³ Pub. Hearing Tr., p. 33, Testimony of Rachel Maves (April 5, 2010).

⁴⁴ Pub. Hearing Tr., pp. 89, 91, Testimony of Patrick Cabello Hasel (April 5, 2010).

⁴⁵ Pub. Hearing Tr., p. 30, Testimony of Leslie Everett (April 5, 2010).

⁴⁶ Pub. Hearing Tr., p. 69, Testimony of Gerry Tyrrell; p. 37, Testimony of Pam Barnard; p. 67, Testimony of Rosemary Frazel (April 5, 2010).

⁴⁷ Pub. Hearing Tr., p. 33, Testimony of Avigdor Edminster (April 5, 2010).

⁴⁸ Pub. Hearing Tr., p. 40, Testimony of Donna Neste (April 5, 2010).

⁴⁹ Ex. 8 at Schedule 3, pp. 70-71 (Mirzayi Direct).

⁵⁰ Ex. 8 at Schedule 3, pp. 70-71 (Mirzayi Direct)

Greenway corridor would not be available as an alternative route for the Hiawatha Project.⁵¹

154-158 No comments.

Replace Findings 159-160 with the following:

159. On February 6, 2009, the Minneapolis City Council adopted a resolution recommending that Xcel Energy delay its routing permit application and provide a “thorough analysis of aggressive alternative methods to abate and/or supply the energy that is needed.”⁵² The resolution stated:

[I]f such an analysis is undertaken and fails to yield a successful alternative approach to the need for high voltage power lines in Midtown; that the preferred route for the new high voltage transmission lines is underground below 28th Street East, and that the cost of burying the line should be born b the maximum number of rate payers.⁵³

160. Xcel Energy filed its application for a routing permit on April 24, 2010.

161-163 No comments.

164. Mn/DOT further provided comments regarding the Hiawatha West, G-4 and the G-5 sites for the Hiawatha Substation. Portions of the Hiawatha West site and the G-4 site is are owned by Mn/DOT, are designated as surplus land by Mn/DOT and are available for purchase.⁵⁴ Mn/DOT further commented that a significant portion of the G-5 site was deeded to the Met Council for light rail use.

165. In its March 10, 2010 letter commenting on the DEIS, Mn/DOT discussed Route E2. Mn/DOT stated that Route E2 is likely to occupy a portion of the freeway right-of-way, requiring an exception to federal rules and concurrence of the FHWA and that the location of the E2 transmission line would significantly impact future maintenance and construction on bridges over and under the freeway. Thus, Mn/DOT concluded that it was “highly unlikely” that Mn/DOT would be able to grant the exceptions to rules that would be required for Route E2.⁵⁵ ~~would have significant impacts on future expansion and maintenance activities along the highways the route parallels and crosses.~~²⁹⁷

166. After the conclusion of hearings, Mn/DOT witness David Seykora informed the record that Mn/DOT had received new information from Met Council regarding its continued use of the railroad spur line, which is used for light rail deliveries, that runs across located near the Hiawatha West Substation site.⁵⁶ Xcel Energy proposes to relocate the line to accommodate the

⁵¹ Ex. 143, p. 70, Memo of Cmnr. McLaughlin and Stenglein (Public Written Comments Received on DEIS)

⁵² Ex. 8, Schedule 3, p. 46 (Mirzayi Direct)

⁵³ Ex. 8, Schedule 3, p. 46 (Mirzayi Direct)

⁵⁴ Seykora 11 Vol., pp. 170-172; Ex. 232 (Email/Memo Mn/DOT and Metro Transit).

⁵⁵ Ex. 228, pp. 12-13 (Mn/DOT DEIS Comment Letter – Revised).

⁵⁶ OES June 2, 2010 Letter, eDocket Document No. 20106-51177-01 (June 2, 2010).

proposed substation.

167-183 No comments.

Replace Findings 184-185 with the following:

184. The community organizations in the project area consistently oppose overhead transmission lines, oppose transmission routes on the Greenway, whether overhead or underground and state that if the project is needed, after an analysis of alternatives, the preferred underground route is under 28th Street:

- Phillips West Neighborhood Organization adopted a resolution on April 2, 2009 opposing the Hiawatha Project route on the Midtown Greenway, whether overhead or underground. PWNO further resolved that its preferred route “is along East 28th Street, underground, and down the middle of the roadway, so the high voltage transmission lines are as distant as possible from adjacent residents;⁵⁷
- Midtown Phillips Neighborhood Association, Inc. adopted a motion on January 13, 2009 stating that members “strongly desire” that lines be placed underground, preferably under 28th Street, due to concerns about the beauty of the community and the health to children;⁵⁸
- East Phillips Improvement Coalition adopted a resolution on February 19, 2009 stating that they opposed all above ground routes and if the need for the Hiawatha Project could not be met through alternatives, the lines should be placed under 28th Street or on the south shoulder of the Greenway.⁵⁹ EPIC later modified this position, concluding that the power lines, if constructed at all, must be at the center of 28th Street at a suitable depth.⁶⁰
- Seward Neighborhood Group has passed resolutions regarding the Hiawatha Project,⁶¹ and concluded that Route D, underground on 28th Street East is the only route that the SNG considers to be feasible and prudent.⁶² SNG has concerns regarding either overhead or underground routes on the Midtown Greenway.⁶³
- Longfellow Community Council adopted resolutions on February 24, 2009 and March 19, 2009 stating that if the Hiawatha project is determined to be needed after analysis of alternatives to abate or supply electricity, the LCC’s preferred route is underground below 28th Street East.⁶⁴
- Corcoran Neighborhood Organization adopted a resolution on April 1, 2009 opposing the Hiawatha project on the Midtown Greenway.⁶⁵

⁵⁷ Ex. 8 at Schedule 3, pp. 24-28 (Mirzayi Direct); Mirzayi 1 Vol., pp. 60-61.

⁵⁸ Ex. 8 at Schedule 3, p. 31 (Mirzayi Direct); Mirzayi 1 Vol., pp. 61-62.

⁵⁹ Petition to Intervene, eDocket No. 20101-46215-03 (January 19, 2010).

⁶⁰ Ex. 149, p. 15 (Pass Direct).

⁶¹ Ex. 209, p. 3 (Mains Direct)

⁶² Ex. 209, p. 6 (Mains Direct)

⁶³ Ex. 209, pp. 7-8 (Mains Direct).

⁶⁴ Ex. 8 at Schedule 3, pp. 13-16 (Mirzayi Direct); Mirzayi 1 Vol., pp. 56-57.

⁶⁵ Ex. 8 at Schedule 3, p. 17 (Mirzayi Direct); Mirzayi 1 Vol., pp. 57-58.

- Little Earth of United Tribes has concluded that no overhead route for the Project through any of the surrounding communities is acceptable and that the least objectionable route is Route D, underground on 28th Street.⁶⁶
- The Midtown Greenway Coalition enacted resolutions on December 3, 2008 and January 22, 2009 opposing a Hiawatha route on Greenway, either overhead or underground,⁶⁷ and has concluded that the most acceptable route, if need is established, would be underground in the center of 28th Street East.⁶⁸

185(A).

The Midtown Community Works Partnership, an organization made up of elected and business leaders interested in the Midtown Greenway area,⁶⁹ adopted a resolution on February 12, 2009 opposing power lines aboveground in the Midtown Greenway, concluding that an option for underground placement would be below 28th Street East and stating that costs associated with undergrounding should be borne by NSP.⁷⁰

185(B).

Other neighborhood organizations have also adopted resolutions opposing routes either overhead or underground on the Greenway: Cedar Isles Dean Neighborhood voted in January 2009 to oppose a route on the Greenway due to concerns about impacts to potential rail transit or streetcars on the Greenway⁷¹ and the Lyndale Neighborhood Association voted in February 2009 to oppose any routes along the Greenway, above or below ground.⁷²

CRITERIA FOR A ROUTE PERMIT

186-188 No comments.

After Finding 188, insert the following Findings 188(A), 188(B) and 188(C):

188(A) A route permit may only be issued in keeping with the Minnesota Environmental Policy Act (“MEPA”) and the Minnesota Environmental Rights Act (“MERA”) and consistent with state goals to minimize environmental impacts, impacts on human settlement, land use conflicts:

No site permit or route permit shall be issued in violation of the site selection standards and criteria established in Minnesota Statutes, sections 216E.03 and 216E.04, and in rules adopted by the commission. The commission shall issue a permit for a proposed facility when the commission finds, in keeping with the requirements of the Minnesota Environmental Policy Act, Minnesota Statutes, chapter 116D, and the Minnesota Environmental Rights Act, Minnesota Statutes, chapter 116B, that the facility is consistent with state goals to conserve resources, minimize environmental impacts, and

⁶⁶ Ex. 203, pp. 2-3 (Ellis Direct)

⁶⁷ Ex. 8 at Schedule 3, pp 20-22 (Mirzayi Direct); Mirzayi 1 Vol., pp. 59-60.

⁶⁸ Ex. 36, pp. 28-29 (Springer Direct).

⁶⁹ Ex. 195 (Midtown Community Works Partnership Web Site); McLaughlin 9 Vol., p. 139.

⁷⁰ Ex. 197 (Midtown Community Works Partnership Resolution); McLaughlin 9 Vol., pp. 142-143.

⁷¹ Ex. 8 at Schedule 3, pp. 33-34 (Mirzayi Direct); Mirzayi 1 Vol., pp. 62-63.

⁷² Ex. 36, pp. 27-28 (Springer Direct).

minimize human settlement and other land use conflicts and ensures the state's electric energy security through efficient, cost-effective power supply and electric transmission infrastructure.⁷³

188(B). MEPA and MERA constrain the approval of action impairing natural resources where there are feasible and prudent alternatives. Historical resources listed on the National Register of Historic Places are “natural resources” under applicable law.⁷⁴ MEPA states:

No state action significantly affecting the quality of the environment shall be allowed, nor shall any permit for natural resources management and development be granted, where such action or permit has caused or is likely to cause pollution, impairment, or destruction of the air, water, land or other natural resources located within the state, so long as there is a feasible and prudent alternative consistent with the reasonable requirements of the public health, safety, and welfare and the state's paramount concern for the protection of its air, water, land and other natural resources from pollution, impairment, or destruction. Economic considerations alone shall not justify such conduct.⁷⁵

MERA provides:

In any such administrative, licensing, or other similar proceedings, the agency shall consider the alleged impairment, pollution, or destruction of the air, water, land, or other natural resources located within the state and no conduct shall be authorized or approved which does, or is likely to have such effect so long as there is a feasible and prudent alternative consistent with the reasonable requirements of the public health, safety, and welfare and the state's paramount concern for the protection of its air, water, land, and other natural resources from pollution, impairment, or destruction. Economic considerations alone shall not justify such conduct.⁷⁶

188(C). There is no statutory authority that would allow condemnation of public property owned by the HCRRA, a public entity, and used for a public purpose for a power line route that the HCRRA has determined in incompatible with that public purpose.⁷⁷

189. No comment.

The balance of MGC Findings of Fact, Conclusions of Law and Recommendations are new text and no underlining is provided.

APPLICATION OF STATUTES AND RULES TO ROUTE SELECTION, SUBSTATION SITE SELECTION AND MITIGATION

⁷³ Minn. R. 7850.4000 (2009).

⁷⁴ *State by Archabal v. Cty. of Hennepin*, 495 N.W.2d 416 (Minn. 1993).

⁷⁵ Minn. Stat. § 116D.04, subd. 6 (2009).

⁷⁶ Minn. Stat. § 116B.09, subd. 2 (2009).

⁷⁷ *Matter of City of Shakopee*, 295 N.W. 2d 495, 499 (Minn. 1980).

I. TRANSMISSION LINE ROUTE SELECTION AND MITIGATION

A. Effects on Human Settlement

1. Displacement

190. Route E2 is anticipated to cause the displacement of 63 structures, including apartment buildings and homes.⁷⁸ Route E2 is not a feasible and prudent route according to statutory and rule criteria.

191. It is possible that Routes B and C may require displacement of buildings for right-of-way.⁷⁹ Due to narrow sidewalks and lack of setbacks, along Routes B and C some buildings could be within 12 to 13 feet from the conductor cable,⁸⁰ which would be cantilevered from 8 to 9 feet over the street;⁸¹ buildings could, thus, be less than 5 feet from transmission poles.

2. Proximity to Residences and Sensitive Uses

192. Unlike Maple Grove or Arden Hills, South Minneapolis homes are constructed with few setbacks and residences don't have a large yard or distance between their property and the street right-of-way.⁸²

193. For overhead transmission line routes there are 245 dwelling units within 0 to 25 feet from Route A1, 335 dwelling units within 0 to 25 feet from Route B and 206 dwelling units within 0 to 25 feet from Route C.⁸³

194. Xcel Energy acknowledges that for the Hiawatha Project “the population density in our proposed project area or the Phillips neighborhood is greater than the example we've given here. And, in fact, it's greater than anyplace we've constructed a new transmission line in recent history”⁸⁴ and that “this would be a unique project in terms of the fact that it would be constructed in such a densely populated area.”⁸⁵

195. Throughout Minnesota, Xcel has identified only three segments of 115 kV transmission routed overhead in urban neighborhoods with a population equal to or greater than the project area. All three had been constructed in the 1950's. These three overhead high voltage transmission lines were built in the Cedar-Riverside and the Marcy Holmes neighborhoods of Minneapolis and in the Frogtown neighborhood of St. Paul.⁸⁶

⁷⁸ Ex. 10 at Schedule 3, p. 1 (Asah Direct).

⁷⁹ Gallay 4 Vol. pp. 49-50.

⁸⁰ Asah 7 Vol. pp. 90-91.

⁸¹ Ex. 172 (Illustration of Double and Single Circuit Configurations).

⁸² Asah 1 Vol. p. 226, ll. 2-9.

⁸³ Ex. 49, Table 1 (Xcel Resp. to MGC IR 3); Asah 1 Vol., pp. 161-162.

⁸⁴ Asah 1 Vol., pp. 225-226.

⁸⁵ Asah 2 Vol., p. 85.

⁸⁶ Ex. 52 (Xcel Resp. to MGC IR 6); Asah 1 Vol. pp. 157-159.

196. Overhead routes for the Hiawatha Project place residential, commercial and other buildings, such as day care and hospital facilities, within the “fall zone” of transmission line structures, measured as a radius around each transmission tower. Based on transmission tower locations proposed by Xcel Energy, properties within the fall zone of Hiawatha Project routes are as follows:⁸⁷

Transmission Line Route	Distance Feet	Residential Structures	Residential/ Commercial	Place of Worship	Daycare Centers	Cemeteries	Hospitals	Commercial	Mixed Use	Total Structures
Route A1	75	7	0	0	0	1	0	9	0	17
	115	17	1	1	0	1	0	21	0	41
Route B	75	70	4	3	0	0	0	14	1	92
	115	146	5	4	1	0	0	20	1	117
Route C	75	101	2	6	0	0	1	10	1	121
	115	204	4	7	1	0	1	23	1	241
Route D	75	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	115	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Route E2	75	54	1	0	0	0	0	10	0	67
	115	76	1	0	0	0	0	10	0	90

197. Although not within the fall zone of a proposed transmission line tower, numerous City of Minneapolis public schools, private religious and art schools, and the Swedish Institute are located within the Midtown area in proximity to overhead transmission alternatives. Community facilities in proximity to Routes B and C that cater to children include the YWCA, the Children’s Center at Abbott Northwestern Hospital, the We Love Kids Child Care facility located just south of East 26th Street on Chicago Avenue, the Kaleidoscope Facility and Head Start Parents Community on Park Avenue, and the Lott’s of Love Daycare located on 16th Avenue.⁸⁸

198. Route C would pass between South High School and the High School’s track and football field and a tower would be right behind the stands where spectators watch high school games.⁸⁹ Route C would also run a transmission line next to a church on Chicago and 31st Street⁹⁰ and would pass by the YWCA, which has child care among other programs.⁹¹

199. Xcel Energy acknowledges that routes B, C and E2 have greater impacts on human settlement than route D or route A⁹² and that Route A underground and Route D have zero impacts related to transmission fall zone distances.⁹³

200. Impacts on human settlement from proximity to structures can be addressed by

⁸⁷ FEIS, p. 93, Table 5.1-1, Properties in Proximity to Overhead Transmission Lines. Headings clarified to reflect footnotes.

⁸⁸ FEIS, p. 94.

⁸⁹ Asah 2 Vol., p. 139; FEIS, p. 95.

⁹⁰ Asah 2 Vol., p. 136.

⁹¹ Asah 2 Vol., pp. 139-140.

⁹² Asah 1 Vol., p. 173, ll. 22-23.

⁹³ Asah 1 Vol., p. 222.

constructing the transmission lines underground.⁹⁴

3. Socioeconomics

201. Economic growth and reinvestment have been significant within the Midtown Greenway corridor in recent years. From 2000-2009, a total of 272 nonresidential building permits valued at over \$382 million were issued by the City of Minneapolis, including the Midtown Exchange and related developments (approximately \$147 million) Abbott Northwestern expansion (approximately \$106 million); Wells Fargo Campus (approximately \$29 million).⁹⁵ These permits reflect completed projects.⁹⁶ In addition, during the past 10 years, 66 residential building permits valued at over \$58 million were issued along the Greenway corridor.⁹⁷

202. The Phillips neighborhoods have been positively affected by housing investments. In the past 10 years, MPNAI has helped bring almost \$98 million worth of new housing into the area⁹⁸ and home ownership has increased from roughly 30 percent 10 years ago to about 55 percent.⁹⁹ New investments have turned the neighborhood in a positive direction, but progress remains fragile.¹⁰⁰

203. Overhead transmission Routes A1, B and C would affect housing development within the fall zone of transmission structures since FHA guidelines, as specified in the Housing and Urban Development (HUD) Handbook, prohibit mortgage support for homes in the fall zone of high voltage transmission towers or support structures.¹⁰¹ The HUD handbook states that if a project is within the fall zone of a transmission structure the HUD assessor is to stop the appraisal and the project will not be moving forward with financing.¹⁰²

204. Investors, builders, developers, and others financing new construction or substantial rehabilitation of multifamily housing projects are insured under HUD's Section 207, Section 221(d)(3) and Section 221(d)(4) programs. HUD-backed financing plays a role in the vast majority of higher density residential and mixed-use development projects in the metro region.¹⁰³

205. Steve Cramer, Executive Director of Project for Pride in Living ("PPL"), and former Executive Director of the Minneapolis Community Development Agency (MCDA) and Director of the Hennepin County Department of Housing, Community Works and Transit¹⁰⁴ testified that HUD and FHA financing are fundamentally important to the development of affordable rental or

⁹⁴ FEIS, p. 28, Table ES-2; p. 424, Table 6-3.

⁹⁵ FEIS, p. 206; Ex. 185 (City of Minneapolis – Major Projects Data); Berkholtz 8 Vol., p. 157.

⁹⁶ Berkholtz 8 Vol., p. 163.

⁹⁷ Berkholtz 8 Vol., pp. 200-201.

⁹⁸ Heyer 11 Vol., p 119.

⁹⁹ Heyer 11 Vol., p. 122.

¹⁰⁰ Ex. 117, p. 4 (Cramer Direct).

¹⁰¹ FEIS, p. 224.

¹⁰² Berkholtz 8 Vol., p. 198.

¹⁰³ FEIS, p. 224.

¹⁰⁴ Ex. 117, pp. 1-2 (Cramer Direct).

affordable ownership housing in a neighborhood such as the project area.¹⁰⁵

206. The availability of FHA-insured mortgages is also important for individual buyers in the project area, such as those for PPL's Midtown Exchange condominium project, because down payments are less than for a conventional mortgage and terms are generally more favorable for low- and moderate-income people.¹⁰⁶ Many low- and moderate-income buyers are priced out of the mortgage market without FHA-insured mortgages because down payment requirements are too high or other terms are difficult for them to comply with.¹⁰⁷

207. In the case of the Longfellow Station Apartments, located within the fall zone of the existing overhead transmission line on Hiawatha Avenue and 38th Street, HUD stated in a June 24, 2009 letter to the developer regarding FHA financing: "The overhead high voltage transmission lines are too close to the proposed building to be acceptable under HUD Compliance Standards. The lines are much too close to the proposed building. Unless they are removed, that is not acceptable. We see no reason to believe there is a reasonable probability that this high voltage electric line will either be moved or abandoned."¹⁰⁸

208. Xcel Energy sent an assurance letter stating that transmission line facilities were constructed according to all applicable codes and requirements,¹⁰⁹ but HUD continued to state that a waiver from HUD Headquarters would be required for the location of high voltage power lines, among other issues¹¹⁰ and that it was "doubtful" that HUD would find the site acceptable.¹¹¹ But for the funding from HUD, the Longfellow Station project will not proceed.¹¹²

209. Commission Peter McLaughlin, who has had direct experience with Longfellow Station,¹¹³ explained that even if a waiver may in some cases be obtainable, having to obtain a waiver from the Washington HUD office in order for a development to proceed "is clearly a detriment to investment." Commissioner McLaughlin testified, "uncertainty is the enemy of investment by developers" and that "in the current marketplace, having HUD insurance is almost surely essential."¹¹⁴

210. Commissioner McLaughlin testified that overhead transmission lines would create depressed investment zones or, in some cases "no investment" zones, based on a study that was sponsored by Hennepin County for Hiawatha and Minnehaha Avenues in which efforts were made to reach out to the real estate industry and discuss the redevelopment potential of various parcels. In that study, Commissioner McLaughlin testified, Xcel Energy overhead high tension

¹⁰⁵ Cramer 10 Vol., pp. 71, 72.

¹⁰⁶ Cramer 10 Vol., p. 69.

¹⁰⁷ Cramer 10 Vol., p. 71, ll. 19-25.

¹⁰⁸ Ex. 10, Schedule 8, p. 2 (Asah Direct).

¹⁰⁹ Asah 2 Vol., p. 178.

¹¹⁰ Ex. 187, p. 5 (HUD Letter, March 25, 2010).

¹¹¹ Ex. 187, p. 1 (HUD Letter, January 15, 2010).

¹¹² Berkholtz 8 Vol., p 162.

¹¹³ McLaughlin 9 Vol., p. 149.

¹¹⁴ McLaughlin 9 Vol., p, 150, ll. 14-25.

wires were identified as “an impediment to full-scale, robust development.”¹¹⁵

211. The presence of overhead high voltage transmission lines may adversely impact development due to buyer or tenant reluctance to locate near an overhead power line. Mr. Cramer testified that real estate agents with whom PPL is working to market its 57-unit Midtown Exchange Condos on the Greenway¹¹⁶ have reported in at least two cases that buyers interested in the project who liked its location and design were not willing to move forward with a sale due to uncertainty over the Hiawatha project power line.¹¹⁷ In Mr. Cramer’s opinion, Route A1 would have a detrimental effect on the condominium project.¹¹⁸

212. Executive Director of the Midtown Greenway Coalition, Tim Springer, contacted four developers identified due to their experience with existing or planned projects on the Midtown Greenway, none of whom were active with the MGC.¹¹⁹ All four of these developers¹²⁰ expressed concerns that an overhead transmission line on the Greenway would affect new or existing development, including the following:

“[I]f high voltage power lines were to be located adjacent to these properties (or any other potential development sites) it would likely cause us to rethink trying to create \$60 million in new development on the sites, and have an adverse effect on the marketability of the existing developments.”¹²¹

“As a developer, we would be reluctant to redevelop property along the Midtown Greenway if there were aerial high voltage transmissions lines, as their presence would pose a significant risk of obtaining tenants or buyers of the end product, whether it is office space, apartments, condos, or otherwise. People have a real aversion to the aesthetics of high voltage wires as well as significant concerns about the long term health impacts of being located immediately adjacent the wires.”¹²²

213. Carol Pass, a full-time volunteer with the East Phillips Improvement Coalition, explained that EPIC’s development of a parcel owned in partnership with another non-profit at 2845 Bloomington on the Greenway shoulder was awaiting resolution of the transmission routing.¹²³ The CEO of an architectural firm who has worked with developers in the Phillips neighborhoods wrote that “overhead high voltage power lines will severely damage future prospects for development investments anywhere near by.”¹²⁴

214. Xcel Energy agrees, with respect to overhead lines, that if a developer were trying to

¹¹⁵ McLaughlin 9 Vol., pp. 148-149.

¹¹⁶ Cramer 10 Vol., p. 67.

¹¹⁷ Cramer 10 Vol., p. 74.

¹¹⁸ Cramer 10 Vol., p. 76.

¹¹⁹ Springer 7 Vol., p. 157.

¹²⁰ Springer 7 Vol., p. 156.

¹²¹ Ex. 46, p. 1 (Developer Email from Brent Rogers, February 3, 2010).

¹²² Ex. 46, p. 2 (Developer Email from Stuart Ackerberg, February 4, 2010).

¹²³ Pass 11 Vol., pp. 147-149; Ex. 220 (Photo of 2845 Bloomington).

¹²⁴ Ex. 149, Schedule 12, Letter of Dean Dovolis dated February 18, 2010 (Pass Direct)

build housing and couldn't obtain financing for it or if private developers were unwilling to invest private money in housing or commercial development in the area of an overhead power line that could be an adverse impact on development within the project area.¹²⁵

215. No witness for any party offered testimony that development in the project area would not be adversely impacted by the proposed Hiawatha Project overhead power lines.

216. The Coloplast North American headquarters, depicted by Xcel Energy as an example of development in the presence of power lines.¹²⁶ is in an industrial and employment district, different than the proposed project area.¹²⁷

217. The FEIS stated that indirect negative impacts may occur to businesses if overhead transmission lines are built and that visual intrusions may impact decisions for locating new businesses within view of the transmission lines.¹²⁸

218. Transmission lines may also decrease the real market value of a residential property as a result of concern or fear of possible health effects from electric or magnetic fields (EMF); potential noise and visual unattractiveness of the transmission line; and potential interference with existing operations or foreclosure of present or future land uses.¹²⁹ In the project area, there is a particular concern about property value loss, because a home may be a family's only asset.¹³⁰

219. The FEIS stated that overhead routes for the Hiawatha Project could have the following adverse socioeconomic affects: "A decrease to the local tax base could also occur over time, resulting from diminished investments in commercial and housing development near overhead transmission lines. . . The construction and operation of overhead transmission lines may impact marketability and investment within the local economy by adding a visual intrusion."¹³¹

220. Overhead routes A1, B and C do not minimize socioeconomic impacts of the Hiawatha Project on human settlement. Adverse socioeconomic impacts of the Project would be mitigated by locating transmission lines underground.¹³²

4. Zoning and Planning

221. Overhead Routes for the Hiawatha Project are inconsistent with land use planning and zoning in the project area. The FEIS stated as follows:

"Overhead transmission lines may create an industrial appearance in residential and commercial areas and [are] inconsistent with urban design directions suggested within

¹²⁵ Asah 1 Vol., p. 213.

¹²⁶ Ex. 188 (Coloplast Photo).

¹²⁷ Berkholtz 9 Vol., p. 11.

¹²⁸ FEIS, p. 219.

¹²⁹ FEIS, p. 223.

¹³⁰ Pass 11 Vol., pp. 144-145.

¹³¹ FEIS, p. 20, Table ES-1.

¹³² FEIS, p. 28, Table ES-2; p. 424 Table 6-3.

many of the local land use plans.”

“Visual intrusions created as a result of overhead transmission lines may discourage additional residential or higher density development.”

“Overhead alternatives are not consistent with pedestrian friendly and pedestrian scale designs (i.e., pedestrian oriented development).”

“Overhead transmission lines have the potential to negatively impact affected residential property values and their ability to acquire Federal Housing Authority (FHA) loans. This may negatively impact future residential development.”

“Could discourage high density residential development.”¹³³

222. Route A1 conflicts with Midtown Greenway Land Use and Development Plan, which envisions re-establishment of 29th Street as a continuous pedestrian realm, with a walkway, a planted boulevard and a pedestrian promenade overlooking the Midtown Greenway, along with additional access points, including ramps and stairs, to increase the connection between businesses, residents and the Midtown Greenway.¹³⁴ Inconsistent with this Plan, Route A1 would prohibit future realignment and reconstruction of 29th Street and associated sidewalks.¹³⁵

223. The Midtown Greenway Land Use and Development Plan and the Phillips West Master Land Use Plan call for increased high-density residential development along the Greenway.¹³⁶ Recent zoning changes adopted by the Minneapolis City Council reflect policy in the Phillips West Master Plan calling for a phase-out of industrial uses along the Greenway in the Phillips West neighborhood.¹³⁷

224. The City’s Comprehensive Plan reflects that the amenity value of the Midtown Greenway attracts new development along the Greenway edge and in nearby areas. The introduction of new facilities that would damage any of the Greenway’s amenity values would reduce interest among the development community and conflict with City plans.¹³⁸ The City’s preferred option to place the transmission lines underground on 28th Street is consistent with the City’s long-term plans and articulated policy¹³⁹ and with City ordinances.¹⁴⁰

225. The FEIS states that the industrial appearance of overhead Routes A1, Route B, Route C, and Route E2 would be incompatible with the urban design direction suggested by many of the local land use plans and would not be consistent with planned pedestrian-oriented development.¹⁴¹ Route alignments A2, A3 and Route D would be consistent with City and small area plans recommending the removal of industrial uses along the Midtown Greenway and

¹³³ FEIS, pp. 18-19, Table ES-1.

¹³⁴ Ex. 36, p. 16 (Springer Direct)

¹³⁵ FEIS, p. 26, Table ES-1.

¹³⁶ Mogush 8 Vol., pp. 110-111; Ex. 40 (Midtown Greenway Land Use Plan); Ex. 86 (Phillips West Master Land Use Plan).

¹³⁷ Mogush 8 Vol., p. 141.

¹³⁸ Mogush 8 Vol., p. 134-135.

¹³⁹ Mogush 8 Vol., p. 142.

¹⁴⁰ Berkholtz 8 Vol., pp. 173-174, referencing Chapter 99, Minneapolis Code of Ordinances.

¹⁴¹ FEIS, pp. 139-140.

the development of this area as a community resource.¹⁴²

226. The FEIS states that construction of the transmission lines underground would minimize conflicts with land use, zoning and planning.¹⁴³

5. Public Services – Transportation and Transit

227. Overhead Routes B and C would adversely impact sidewalk infrastructure, pedestrian transportation, pedestrian safety and pedestrian access to bus transit. The FEIS explains that, due to the width of the transmission structures at the base (36 to 58 inches depending on type), placement at driveway, alley or street intersections could obscure sightlines and cause safety concerns.¹⁴⁴ Routes B and C, which are both located on bus routes, could include transmission pole locations that adversely affect bus stop locations either by obscuring visibility or reducing sidewalk width.¹⁴⁵

228. For overhead power lines B and C, Xcel proposes to place transmission structures on boulevard space. Where there is no boulevard space, poles would be in the sidewalk area.¹⁴⁶ Xcel has not evaluated whether impingement on the sidewalk by poles would conflict with Americans with Disabilities Act (“ADA”) requirements.¹⁴⁷

229. Xcel Energy’s preferred overhead transmission route, Route A1 along the Midtown Greenway would significantly impair the use of the Midtown Greenway corridor for future rail transit. The FEIS states, “Any transmission structures in the Midtown Greenway could either impair available right of way width to the degree that a double-track system may not be viable, impair efficient operation of a transit system, or preclude construction of a rail transit system altogether.”¹⁴⁸

230. Foundations for Route A1 overhead structures are likely to conflict with construction required for future transit. If the transit line were located on the southern portion of the corridor, retaining walls are likely to be needed along the southern edge of the corridor. Foundations for overhead transmission line structures adjacent to where retaining walls are proposed to be constructed could lose stability during and maybe even after construction.¹⁴⁹

231. It would be extremely difficult, not knowing the mode of transit, to design something today for Route A1 that would allow flexibility for future transit.¹⁵⁰

232. The primary purpose for which the HCRRA owns the Midtown Greenway is to preserve

¹⁴² FEIS, pp. 140-141.

¹⁴³ FEIS, p. 28, Table ES-2; p. 424, Table 6-3.

¹⁴⁴ FEIS, p. 26, Table ES-1.

¹⁴⁵ FEIS, p. 26, ES-1.

¹⁴⁶ Gallay 4 Vol., p. 23.

¹⁴⁷ Gallay 13 Vol., pp. 36-37.

¹⁴⁸ FEIS, p. 26, Table ES-1.

¹⁴⁹ Michalko 9 Vol., pp. 87-88.

¹⁵⁰ Michalko 9 Vol., p. 91.

the corridor for future rail transit purposes.¹⁵¹ The HCRRA concluded in a resolution enacted on June 2, 2009 that placement of overhead high voltage lines on its Midtown Greenway property was “incompatible” with the public use for which the Greenway had been dedicated.¹⁵²

233. It is very likely that some form of rail transit, whether light rail or streetcars, will be implemented along the Midtown Greenway.¹⁵³ Light rail has not been ruled out in the Greenway,¹⁵⁴ and the Midtown Community Works Partnership has set a target date of 2016 for implementing streetcar transit in the Greenway.¹⁵⁵

234. Underground routes A2 and A3 pose conflicts with future plans for light rail transit within the Greenway.¹⁵⁶ Underground lines may interfere with transit line construction, depending on the type of transit that's selected, the location within the trench that it's constructed, and the methodology that's used for construction.¹⁵⁷

235. Xcel Energy witnesses have testified that the proposed project could be designed and constructed along route A to avoid physical conflicts with light rail, or trolley plans provided sufficient detail regarding the design of these facilities were available during the design of the proposed project.¹⁵⁸ However, this level of detail is not available at this time,¹⁵⁹ and no one in the city, county or community has indicated to Xcel at any time that this level of detail will be available by the time that the Hiawatha project is propose to be built and constructed.¹⁶⁰

236. Only conceptual work has been done for transit, and no detailed design work.¹⁶¹ Evaluation of conflicts between transit and utilities would be done in the preliminary design phase, which would come after scoping to determine the type of transit.¹⁶²

237. Hennepin County Senior Manager and registered civil engineer Dean Michalko believes that the A3 alignment on the north has less potential to require relocation than the A1 and A2 routes,¹⁶³ but that a project located along A3 could still require relocation of the transmission line in some portion of the route.¹⁶⁴

238. Although current thinking is that future transit would occupy the southern portion of the Greenway, the HCRRA can't state for certain that there won't be portions of the project area

¹⁵¹ McLaughlin 9 Vol., pp. 137-138.

¹⁵² Ex. 8 at Schedule 3, pp. 70-71 (Mirzayi Direct)

¹⁵³ McLaughlin 9 Vol., p. 138; Michalko 9 Vol., p. 122.

¹⁵⁴ McLaughlin 9 Vol., pp. 141-142.

¹⁵⁵ McLaughlin 9 Vol., pp. 140-141; Ex. 196 (Midtown Community Works Partnership Resolution).

¹⁵⁶ FEIS, p. 421.

¹⁵⁷ Michalko 9 Vol., p. 74

¹⁵⁸ Asah 1 Vol., p. 210.

¹⁵⁹ Asah 1 Vol., p. 210.

¹⁶⁰ Asah 1 Vol., p. 211-212.

¹⁶¹ Michalko 9 Vol., p. 68.

¹⁶² Michalko 9 Vol., pp. 76-77.

¹⁶³ Michalko 9 Vol., pp. 94-95.

¹⁶⁴ Michalko 9 Vol., p. 103

where rail transit will need to be located in the center or on the northern side of the trench area of the Midtown Greenway.¹⁶⁵ In narrow stretches of the corridor, the current thinking is that, although the southerly slope would be excavated for transit, the trail would also have to be modified and pushed north.¹⁶⁶

239. It is possible that relocation of bike trails or pedestrian trails in the Greenway might be required to accommodate transit stations at various places along the Greenway in the project area¹⁶⁷ and the HCRRA retains the ability to cancel the city's permit for trails in the Midtown Greenway trench so that if a transit project were to conflict with the existing bike trail, the trail could be either modified or in severe case relocated.¹⁶⁸

240. The right-of-way required for transit is greater at the transit stations than at other locations, due to the need for platforms and vertical circulators. Transit stations could require a change in the alignment of the bicycle or pedestrian trails or that construction take place in the locations where trails are currently located.¹⁶⁹

241. Conceptual drawings of a transit station adopted as part of the City-approved plans show that a transit station could occupy the full Greenway embankment or even additional land.¹⁷⁰

242. Xcel Energy believes that either Route A2 or A3 could be constructed under transit stations provided sufficient details of the station designs were available including the foundation depths, details of underground infrastructure, location of stations, size of stations and depths of stations.¹⁷¹ Xcel would want to know these before the final design of the underground duct system, which would be by the end of 2011 or the beginning of 2012.¹⁷²

243. Neither the design or transit stations nor their location is likely to be known by 2012. Station locations may vary depending on the type of transit used, and on land use, development and traffic patterns. If these change in the future, transit station plans will also change.¹⁷³ Different studies have recommended different transit station locations,¹⁷⁴ and one can't predict what will happen in the future regarding station locations.¹⁷⁵

244. If it were necessary to remove and relocate underground transmission, the costs to do so would be roughly equivalent to the initial installation cost¹⁷⁶ and the time it would take to

¹⁶⁵ Michalko 9 Vol., pp. 102-103.

¹⁶⁶ Michalko 9 Vol., pp. 105-107.

¹⁶⁷ McLaughlin 9 Vol., p. 142.

¹⁶⁸ Michalko 9 Vol., p. 104.

¹⁶⁹ Michalko 9 Vol., pp. 115-117.

¹⁷⁰ Springer 7 Vol., pp. 160-161; Ex. 40, p. 32 (Midtown Greenway Land Use and Development Plan).

¹⁷¹ Gallay 3 Vol., pp. 146-148.

¹⁷² Gallay 3 Vol., p. 148. Dates reflect the certificate of need process.

¹⁷³ Michalko 9 Vol., p. 93.

¹⁷⁴ Springer 7 Vol., pp. 136-137.

¹⁷⁵ Michalko 9 Vol., pp. 101-102.

¹⁷⁶ Gallay 3 Vol., p. 156.

relocate the transmission line would be similar to that needed to build the line new.¹⁷⁷

245. If Route A2 or A3 were selected, the rail or trolley system would have to be designed to be compatible with the underground power line in the Greenway.¹⁷⁸ Typical railway or trolley systems are based on direct current, which impacts the sheath of a dielectric cable unless mitigation measures are used, such as galvanic protection systems or drain circuit board; potentially, these measures could be required along the full length of the rail system.¹⁷⁹

246. Xcel Energy transmission engineer Ben Gallay did not know the cost of a system to protect a rail system from stray voltages or who would bear the costs of such a system.¹⁸⁰

247. Both overhead Route A1 and underground Routes A2 and A3 would also conflict with the replacement or reconstruction of historic bridges across the Midtown Greenway. Engineers have found structural problems with almost every historic bridge along the Greenway.¹⁸¹ Within the Route A project area, the useful life of the Cedar Avenue Bridge is less than 4 years and the useful life of the Columbus Avenue Bridge is less than 8 years.¹⁸²

248. Many of the bridges that currently go over the Midtown Greenway are 100 years old and will need repair and replacement.¹⁸³ Historic bridges in the project area of Route A which may have the need for structural support or replacement, include, 17th Avenue (Ex. 44, p. 9); 16th Avenue (Ex. 44, p. 10) Bloomington Avenue (Ex. 44, p. 11); 15th Avenue (Ex. 44, p. 12); 14th Avenue (Ex. 44, p. 13); 13th Avenue (Ex. 44, p. 14); 12th Avenue (Ex. 44, p. 15); 11th Avenue (Ex. 44, p. 16) 10th Avenue (Ex. 44, p. 17); Columbus Avenue (Ex. 44, p. 21); and Oakland Avenue (Ex. 44, p. 23).¹⁸⁴

249. Replacing a historic bridge over the Greenway requires both aerial space over the bridge for a crane and extensive excavation near bridge abutments.¹⁸⁵

250. The most common deconstruction and construction process uses a crane from above on the embankment to demolish and remove the bridge and do much of the work of construction.¹⁸⁶ With Route A1 overhead lines it would make it much more difficult, if not impossible in some situations, to do both the deconstruction and reconstruction of these bridges.¹⁸⁷

251. De-energizing lines, particularly lines that are critical to service needs, usually has a long

¹⁷⁷ Gallay 3 Vol., p. 157.

¹⁷⁸ Gallay 3 Vol., p. 149; Ex. 18, p. 16 and Schedule 14, Xcel Resp. to Mpls. IR 17 (Gallay Direct).

¹⁷⁹ Gallay 3 Vol., pp. 150-151.

¹⁸⁰ Gallay 3 Vol., pp. 152-153.

¹⁸¹ Ex. 43, p. 3 (Historic Bridge Study).

¹⁸² Ex. 43, p. 2 (Historic Bridge Study).

¹⁸³ Michalko 9 Vol., p. 73.

¹⁸⁴ Michalko 9 Vol., pp. 114-115; Ex. 44 (Midtown Greenway Photographs).

¹⁸⁵ Ex. 51 (Bridge Reconstruction Photo); Michalko 9 Vol., p. 108.

¹⁸⁶ Michalko 9 Vol., pp. 73, 108

¹⁸⁷ Michalko 9 Vol., p. 74.

lead time,¹⁸⁸ and if there is a situation such as bad weather during the time planned for shut-off the process must start all over and work might be delayed for weeks or months for the preparation process.¹⁸⁹ Even if an overhead transmission line were to be de-energized, there could still be physical conflicts with the use of the large equipment used in bridge work construction depending upon the location of the poles and the wires.¹⁹⁰

252. Replacement of historic bridges could create conflicts with proposed underground transmission routes A2 and A3 on the Greenway.¹⁹¹ Excavation to replace a bridge like the Columbus Avenue bridge could be in the vicinity of 10 feet below grade and 10 to 12 feet south of the bridge abutment. Going up the slope, excavation could come further longitudinally along the trail probably 20 feet on either side of the wing walls (retaining walls along the bridge abutments).¹⁹²

253. The Greenway corridor is quite narrow and, at many points, trails are very close to the bridge abutments, with little space in the trench or on the banks of the trench for construction.¹⁹³ The Cedar Avenue bridge area typifies a narrow configuration of the Greenway that lasts for approximately six blocks within the project area.¹⁹⁴ Greenway trails are close to bridge abutments and retaining walls at the 14th Avenue, Chicago Avenue, Columbus Avenue and Oakland Avenue bridges.¹⁹⁵ There would not be a 30-foot right-of-way available for Route A3 within the portal under most Greenway bridges.¹⁹⁶

254. In addition to conflicts with transit, transit stations and bridge replacement, Routes A2 and A3 would adversely impact bicycle and pedestrian transportation. Route A3 could disrupt pedestrian and bicycle facilities during construction.¹⁹⁷ Alignments A2 and A3 may limit future access points to the Midtown Greenway if construction of those access points requires excavation where duct banks would be located.¹⁹⁸

255. Route D underground beneath 28th Street minimizes conflicts with pedestrian transportation and safety posed by Routes B and C and the conflicts with transit lines, transit stations, bridge infrastructure reconstruction and pedestrian and bicycle transportation posed by Routes A1, A2 and A3 along the Midtown Greenway. There are no plans to put rail transit along East 28th Street in the project area¹⁹⁹ and East 28th Street is going to stay in its present

¹⁸⁸ Seykora 12 Vol., p. 44.

¹⁸⁹ Seykora 12 Vol., p. 45.

¹⁹⁰ Seykora 12 Vol., pp. 17-18.

¹⁹¹ Michalko 9 Vol., pp. 113-114.

¹⁹² Michalko 9 Vol., pp. 129-130.

¹⁹³ Ex. 36, p. 14 (Springer Direct).

¹⁹⁴ Springer 7 Vol., pp. 113-114; Ex. 44 (Midtown Greenway Photos).

¹⁹⁵ Springer 7 Vol., pp. 119-120.

¹⁹⁶ Gallay 13 Vol., p. 49.

¹⁹⁷ FEIS, p. 26, ES-1, p. 403.

¹⁹⁸ FEIS, p. 26, ES-1, p. 403.

¹⁹⁹ Michalko 9 Vol., p. 99.

configuration.²⁰⁰ Route D presents the fewest conflicts with public infrastructure and transportation.

256. Transmission lines can be constructed on Route D to be compatible with existing infrastructure.²⁰¹ Typically, water and gas lines are seven to nine feet deep or more -- enough below the surface not to be a concern for underground transmission construction.²⁰² A three-block portion of East 28th Street between 10th Avenue and 13th Avenue has a sanitary sewer in the center of the street about 10 feet deep and there's also a sewer between Hiawatha and 20th Street, further south of the curb line.²⁰³

257. Traffic impacts of Route D could be minimized, since 28th Street has at least three traffic lanes as well as parking lanes that come and go. If a lane were closed temporarily for construction of Route D underground, there would still be lanes available for vehicular traffic.²⁰⁴ Xcel Energy wouldn't be averse to coordinating underground transmission construction with street resurfacing to reduce impacts if that were possible.²⁰⁵

6. Recreation and Tourism

258. Routes B, C and A would impact recreation and tourism along the Midtown Greenway. The entry points for the Route B transmission line into the Midtown North substation are proposed to be only 5 to 10 feet from the Midtown Greenway trail.²⁰⁶ The exits for Route C would also place poles right at the edge of the Greenway.²⁰⁷

259. The FEIS identified adverse short-term impacts on recreation in the Greenway resulting from construction of either Route B or Route C or of any of the Route A alignments, including limitations of access in areas where construction was taking place which would require Greenway users to find alternate routes or access points and construction-related noise and dust impacting the quality of the recreational experience.²⁰⁸

260. The FEIS also identified adverse long-term impacts on recreation resulting from the Route A alignments, including the underground routes:

The overhead lines would pose an aesthetic impact to recreation in the Greenway. . . Alignment A1 would cross over the Greenway twice and the steel pole structures located along the Greenway, whether on top of the trench or along the bike path, would be visible

²⁰⁰ Ogren 8 Vol., p. 13.

²⁰¹ Gallay 3 Vol., p. 159; Ex. 19, p. 7 (Gallay Rebuttal). It should be noted that there are underground utilities in the Greenway as well, running both north/south across the corridor and longitudinally within the corridor. Michalko 9 Vol., p. 75.

²⁰² Gallay 3 Vol., p. 125-126.

²⁰³ Ogren 7 Vol., p. 216.

²⁰⁴ Ogren 8 Vol., p. 18.

²⁰⁵ Gallay 3 Vol., p. 160

²⁰⁶ Gallay 4 Vol., pp. 129-130

²⁰⁷ Gallay 4 Vol., pp. 130-131.

²⁰⁸ FEIS, p. 22, Table ES-1.

to the Greenway users. . . The presence of transmission line structures may have a negative effect on the overall experience, perception and sentiment associated with using the Greenway. The presence of high voltage transmission lines may also affect the use of the Greenway trails due to the perception of health risks associated with the lines. Periodic maintenance and repair of the lines, both overhead and underground, would create additional aesthetic impacts through the presence of equipment and workers in the Greenway area.²⁰⁹

261. Tim Springer, a cyclist involved with the bikeway since its inception, as well as the Executive Director of the Midtown Greenway testified, “An overhead power line on the Midtown Greenway would have a negative impact on the aesthetic quality of trail users’ experiences and is likely to decrease the popularity of the trail. Real and perceived concern about electric and magnetic fields could negatively impact trail use.”²¹⁰ Mr. Springer received comments of many people who said that they would use the trail less if an overhead transmission line were built.²¹¹

262. Given that the Midtown Greenway is Minnesota busiest bikeway, and Minneapolis’ prominence as a biking city, Mr. Springer testified that “protecting the trail users’ experience is a high priority for recreation, transportation and tourism.”²¹²

263. Community Planning Manager Karin Berkholtz testified that recreational amenities, such as the Midtown Greenway are an asset for housing and an economic development and that people’s perceptions of the quality of the amenities in the Greenway are important to its ability to play that function.²¹³

264. Members of the public perceive that an overhead transmission line along the Greenway would create unacceptable impacts on recreation. Leslie Everett, a 61-year-old long-term cyclist testified at the public hearing:

I bike all over the Twin Cities, as many of us do, and we were pleased when the greenway was put in as a linear park. . . I do not feel that they should have overhead high-power lines along that greenway any more than we should have them along Minnehaha Parkway or Lake Calhoun. This is for both aesthetics purposes and for public safety purposes, and let me explain.

There’s safety in numbers in bicyclists. If you reduce the aesthetics, you reduce the numbers of bikers on the greenway, the safety in numbers would go away, and that’s important to me as I bike home at night. So I’d appreciate if you kept the high-voltage power lines off of that greenway.²¹⁴

²⁰⁹ FEIS, p. 314; see also p. 22, Table ES-1.

²¹⁰ Ex. 36, p. 16 (Springer Direct)

²¹¹ Springer 7 Vol., p. 155.

²¹² Ex. 36, p. 16 (Springer Direct).

²¹³ Berkholtz 8 Vol., pp. 202-203.

²¹⁴ Pub. Hearing Tr., Leslie Everett Testimony, pp. 30-31 (April 5, 2010). See also Gerry Tyrrell Testimony, p. 69; Pam Bernard Testimony, p. 37; Rosemary Frazel Testimony, p. 67.

265. Aesthetic impacts to recreation and tourism on the Midtown Greenway resulting from overhead Routes A1, B and C can be minimized by placing transmission lines underground.²¹⁵ Route D further minimizes impacts to the Midtown Greenway from the Hiawatha project.

7. Aesthetics and Noise

266. Routes B and C would create adverse aesthetic impacts to nearby houses of worship, the medical campus setting of Abbott-Northwestern and would not be complementary to the historic nature, architectural style and materials of the American Swedish Institute or the adjacent mansions and early century multi family buildings.²¹⁶

267. Most of the Project Area is residential in character, complemented with supporting uses such as churches, schools and corner retail. Due to the high population density, transmission lines and substations would be visible to many residents living in the area, as well as those traveling through the area.²¹⁷ As explained in the FEIS, the majority of visual impacts related to overhead transmission lines can be eliminated by developing one of the underground construction transmission line alternatives (Route alignments A2 or A3, or Route D).²¹⁸

268. Proximity to structures and population density determines the extent of aesthetic and noise impacts from overhead transmission. Routes A1, B and C each have more than two hundred dwelling units within 25 feet of the transmission line route. Route A1 would have 439 dwelling units within 100 feet of the route.²¹⁹ Given multi-family units and zoning for higher residential density, this would mean that if one looked out a third-story window, one could see a power line conductor about 20-30 feet away.²²⁰

269. The experience of residents living near an overhead route in the Phillips neighborhoods would not be comparable to the photographs used by Xcel Energy to illustrate transmission lines in residential neighborhoods.²²¹ All of the developments were of much lower density than Phillips, none of the properties were closer than 75 feet to the nearest conductor and transmission lines generally went to back of buildings not to their front façade.²²²

270. Audible noise levels from overhead conductors would include a crackling sound, particularly in foggy, damp or rainy weather. As with other aesthetic issues, selecting an underground route would eliminate operational noise impacts from the Hiawatha Project transmission line.²²³ Audible noise, like other perceptual impacts of overhead transmission lines, becomes a more significant impact on human settlement due to population density and the

²¹⁵ FEIS, p. 29, Table ES-2, p. 425.

²¹⁶ FEIS, p. 23, Table ES-1.

²¹⁷ FEIS, pp. 13-14.

²¹⁸ FEIS, p. 10.

²¹⁹ Ex. 49, Table 1 (Xcel Resp. to MGC IR 3); Asah 1 Vol., pp. 161-162.

²²⁰ Mains 11 Vol., p. 83

²²¹ Ex. 198 (Photographs)

²²² Mains 11 Vol., pp. 86-87.

²²³ FEIS, p. 380.

proximity of homes and apartments to the conductor.

271. Shirley Heyer, a long-term advocate for the Midtown Phillips neighborhood, testified that Route D would minimize impacts on human settlement, “What impact this has with putting the high voltage transmission lines aboveground is disastrous. You know, visual impact, aesthetics, the danger of the fall area and so on, the only route our neighborhood has even suggested was underground along East 28th.”²²⁴

B. Effects on Natural Resources

1. Historical Resources

272. Routes B and C and Route A, including alignments A1, A2 and A3 could impact protected historical resources, including properties and places identified on the National Register of Historic Places (“NRHP”). Route D provides a feasible and prudent alternative with no potential impacts on historical resources.

273. Xcel Energy expert witness William Stark²²⁵ and the FEIS²²⁶ provide the following information on historic resources potentially impacted by Hiawatha Project route alternatives:

Name	NRHP Listed	NRHP Eligible	800 List
Route A (Overhead alignment A1 and underground alignments A2 & A3)	8	4	3
Route B	9	5	11
Route C	7	5	10
Route D	0	0	0

274. Route B would parallel the NRHP-listed²²⁷ American Swedish Institute on two sides and create both physical and aesthetic impacts on this NRHP historic resource.²²⁸ Route B would also have visual impacts on the NRHP-eligible Zinsmaster Baking Company building.²²⁹ Route C has a pole location opposite the historic Zinsmaster building.²³⁰ Both Route B and Route C have overhead power line impacts on the Midtown Greenway.²³¹

275. The Midtown Greenway is listed with the NRHP as the Chicago, Milwaukee & St. Paul Railroad Grade Separation Historic District (“Grade Separation Historic District”) and is an historical resource under the Minnesota Environmental Rights Act.²³²

²²⁴ Heyer 11 Vol., p. 125, l. 24 – p. 126, l. 4.

²²⁵ Ex. 13, p. 6 (Stark Direct).

²²⁶ FEIS, p. 160.

²²⁷ Ex. 45, p. 3 (Xcel Resp. to MGC IR 15).

²²⁸ Asah 2 Vol. p. 120; Byers 8 Vol., pp. 95-96;

²²⁹ Asah 2 Vol., p. 125; NRHP eligibility in Ex. 45, p. 2 (Xcel Resp. to MGC IR 15).

²³⁰ Asah 2 Vol., p. 132.

²³¹ Asah 2 Vol., p. 133; Ex. 3D (Aerial Route B); Ex. 4G (Aerial Route C).

²³² Stark 3 Vol., pp. 15-16; Ex. 15, Schedule 10, Cultural Resources Assessment, p.18 (Stark Surrebuttal).

276. Xcel Energy witness William Stark testified that route alignments A2 and A3 have the potential to directly impact historic retaining walls and fences along the Grade Separation Historic District²³³ and would have the potential for adverse effects on the NRHP-listed Sears building and the historic Zinsmaster building as a result of vibrations created during construction.²³⁴

277. Mr. Stark testified that visual effects of Route A1 on historic resources are not a potential, but a certainty.²³⁵ Mr. Stark testified that the height of the poles for the Hiawatha project would be out of character with the Midtown Greenway Grade Separation historic district.²³⁶ Pole placement or changes in pole materials could reduce, but would not eliminate and might not even minimize impacts of overhead lines and 75 to 115 foot tall poles.²³⁷ Mr. Stark testified that the only way to eliminate indirect visual adverse impacts on historic resources from overhead routes would be to run the line underground.²³⁸

278. Hennepin County expert witness Greg Mathis concurred that pole placement could help mitigate visual impacts on specific historic buildings, but could not mitigate impacts on the Grade Separation Historic District, since key views within the district are linear.²³⁹ The overall size and scale of the proposed transmission poles, whatever material is used, would be incompatible with the District.²⁴⁰

279. The FEIS concluded that structures for Route A1 would compromise the integrity of setting, feeling, and association and result in an adverse effect to views from the historic property.²⁴¹

280. Alignment A1 would also be inconsistent with the recommendation of the HCCRA guidelines to remove incompatible features within the Midtown Greenway. As indicated by the documentation in the NRHP nomination form, the visual intrusion would be inconsistent with the intent of the original construction of the Grade Separation historic district.²⁴²

281. Mr. Stark concluded that all alignments of Route A would have an adverse effect or the potential for an adverse effect on historical resources:

Q: And am I correct in understanding that you concluded alignment A1 would have an adverse effect due to the visual effects on views from and of the historic district?

²³³ Stark 3 Vol., p. 18; Ex. 15, Schedule 10, Cultural Resources Assessment, p.96 (Stark Surrebuttal).

²³⁴ Stark 3 Vol., pp. 21, 23; NRHP listing in Ex. 15, Schedule 10, Cultural Resources Assessment, p. 18 (Stark Surrebuttal).

²³⁵ Stark 3 Vol., p. 23.

²³⁶ Stark 3 Vol., p. 29.

²³⁷ Stark 3 Vol., p. 50.

²³⁸ Stark 3 Vol., p. 51.

²³⁹ Mathis 10 Vol., p. 100.

²⁴⁰ Mathis 10 Vol., p.101.

²⁴¹ FEIS, p. 180.

²⁴² FEIS, p. 181

A: That's correct.

Q: And that alignment A2 would have a potential for adverse effects due to vibratory effects on bridges and also potential adverse effects due to possible direct effects on retaining walls or other minor features depending on final design?

A: Yes.

Q: And am I correct that alignment A3, which is another underground route, would have a potential for adverse effect due to vibratory effects on bridges?

A: Yes.

Q: Would you agree that your analysis identify – has identified either an adverse effect or a potential for adverse effects on historical resources from any of the three alignments proposed for Xcel's route A?

A: Yes.²⁴³

282. Route D is the only route for the Hiawatha Project that has no impact or potential impact on historic resources.²⁴⁴ The segment of East 28th Street within the Route D project area isn't included in any federal, state or locally-designated historic district²⁴⁵ and contains no historic properties.²⁴⁶ Placing the lines underground on East 28th Street would take them out of National Register Historic Districts and eliminate negative impacts on historic properties.²⁴⁷

283. There are no previously documented or known archeological resources underneath East 28th Street that would be impacted by digging up the street for Route D.²⁴⁸

284. Xcel Energy routing lead Rae Lynn Asah agreed that Route D would avoid impacts on an historic district while there would be some impact along Route A no matter which alignment was chosen.²⁴⁹

2. Flora

285. The loss of overstory trees within the Greenway for Route A or along Minneapolis residential streets would not be consistent with the vegetated character typical of Minneapolis residential streets.²⁵⁰

286. Route C requires removal of mature American elms on the block of Portland from Lake to 31st Street. If the trees were just trimmed they would be vulnerable to disease.²⁵¹

287. Route alignments A2 and A3 would likely disturb the most non-woody vegetation.²⁵²

²⁴³ Stark 3 Vol., p. 26, l. 24 – p. 27, l. 18.

²⁴⁴ Stark 3 Vol., p. 17; Ex. 13, p. 6 (Stark Direct).

²⁴⁵ Mathis 10 Vol., p. 84.

²⁴⁶ Byers 8 Vol., pp. 79-80.

²⁴⁷ Byers 8 Vol., p. 79.

²⁴⁸ Bielakowski 3 Vol., pp. 79-80.

²⁴⁹ Asah 2 Vol., p. 44.

²⁵⁰ FEIS, p. 23, Table ES-1.

²⁵¹ Asah 2 Vol., p. 134.

²⁵² FEIS, p. 24, Table ES-1.

288. Route D could result in loss of 43 trees if located on the north sidewalk of East 28th Street. There would be no trees lost if Route D were aligned in the center of the street.²⁵³

289. If Route D is constructed, an alternative alignment as close to the center of E 28th Street as feasible would eliminate potential impacts to trees located along sidewalks and boulevards.²⁵⁴

3. Additional Environmental Resources

290. Additional environmental factors, including impacts to air quality, water quality, fauna and rare and unique species neither preclude construction of the Hiawatha Project nor assist in the selection of an appropriate route alternative.

C. Public Health and Safety

291. Exposure to magnetic fields, electric fields and risks of overhead transmission structures and conductors in the event of vandalism may all affect public health and safety.

292. The World Health Organization (“WHO”) has evaluated scientific evidence of the relationship between chronic low-intensity exposures, such as those from power lines and adverse health effects. The WHO Report stated, “Scientific evidence suggesting that everyday, chronic low-intensity (above 0.3 - 0.4 μ T) power-frequency magnetic field exposure poses a health risk is based on epidemiological studies demonstrating a consistent pattern of increased risk for childhood leukemia.” However, based on laboratory evidence and mechanistic evidence that failed to demonstrate causation, WHO concluded “on balance, the evidence is not strong enough to be considered causal, but sufficiently strong to remain a concern.”²⁵⁵

293. Epidemiological studies have consistently shown an association between magnetic fields above 3 to 4 milligauss and childhood leukemia.²⁵⁶ The WHO analyzed the potential that chance or a confounding problem in the analysis resulted in the association, but did not find this criticism valid.²⁵⁷

294. Although expert panels and agencies have not yet identified any viable cause and effect mechanism between exposure to EMFs and adverse health effects, the FEIS noted that hypotheses have existed and continue to be researched.²⁵⁸ The FEIS summarized Dr. David

²⁵³ Asah 1 Vol., pp. 168-169; Ex. 54, pp. 1, 7-10 (Xcel Resp to MGC IR 17).

²⁵⁴ FEIS, p. 29, Table ES-2, p. 359.

²⁵⁵ WHO Report, Environmental Health Criteria 238, Extremely Low Frequency Fields, 2007, pp. 11-12 at pp. 19-20, Rep. Clark Letter & Attachments, eDocket Document No. 20105-50442-01 (May 10, 2010).

²⁵⁶ Ahlbom, A, *et al.*, *A Pooled Analysis of Magnetic Fields and Childhood Leukaemia*, British Journal of Cancer (2000), 83(5), 692-698, pp. 58- 65 and Greenland, S. *et al.*, *A Pooled Analysis of Magnetic Fields, Wire Codes and Childhood Leukemia*, Epidemiology (November 2000), Vol. 11, No. 6, 624-634, pp. 66-76, Rep. Clark Letter & Attachments, eDocket Document No. 20105-50442-01 (May 10, 2010).

²⁵⁷ WHO Report, Environmental Health Criteria 238, Extremely Low Frequency Fields, 2007, p. 355 at p. 3, p. 35, Rep. Clark Letter & Attachments, eDocket Document No. 20105-50442-01 (May 10, 2010).

²⁵⁸ FEIS, p. 276.

Carpenter's testimony:

Dr. David O. Carpenter, during the recent public hearing proceedings for the proposed 345 kV transmission line from Brookings County, South Dakota to Hampton, Minnesota, provided pre-filed direct testimony regarding his findings on health effects associated with EMF. Dr. Carpenter is a public health physician and Director of the Institute for Health and the Environment at the University of Albany, SUNY. He researched and wrote a document titled, *Setting Prudent Public Health Policy for Electromagnetic Field Exposures*. Carpenter concludes "there is strong scientific evidence that exposure to magnetic fields from power lines greater than 4 mG is associated with an elevated risk of childhood leukemia" and that some studies have indicated that there is scientific evidence to suggest that exposures above 2 mG could increase leukemia risks. Carpenter goes on to suggest that "lifetime exposure to magnetic fields in excess of 2 mG is associated with an increased risk of neurodegenerative diseases in adults, including Alzheimer's disease and amyotrophic lateral sclerosis (ALS)." (Carpenter, 2008)

Additionally, during his recent testimony on the proposed 345 kV HVTL in response to whether EMF similar to power line exposure can affect biological tissue, he states the following (Carpenter, 2010):

*Any one of these actions [actions that alter cell tissue] might be responsible for the carcinogenic and/or neurodegenerative actions of EMFs. As with many environmental agents, however, assuming that only one mechanism of action exists would be a mistake, particularly where more than one disease is involved. It is more likely that multiple mechanisms of action would contribute to disease.*²⁵⁹

295. Many countries have adopted regulatory standards, such as the International Commission on Non-Ionizing Radiation Protection ("ICNIRP") standard of 833 milligauss based on acute biological effects of magnetic fields that can have adverse health consequences.²⁶⁰

296. In addition, several countries have more stringent regulations regarding electric and magnetic field strengths in proximity to schools, hospitals, and other sensitive receptors.²⁶¹ The WHO has reported that Israel limits chronic magnetic field exposures to 10 milligauss, the Netherlands limits magnetic fields to 4 milligauss near places where children spend significant amount of time and some local California ordinances limit magnetic fields to 2 to 4 milligauss.²⁶²

297. Xcel Energy reports magnetic fields levels in milligauss: using this unit of measure, 3 milligauss (mG) is equivalent to 0.3 microTesla (mT).²⁶³ Magnetic fields are a function of current; if current in a power line increases over time as load grows, magnetic fields would also

²⁵⁹ FEIS, pp. 276-277; see also Ex. 47 (Dr. David Carpenter Testimony).

²⁶⁰ WHO Report, Environmental Health Criteria 238, Extremely Low Frequency Fields, 2007, p. 11 at p. 19, Rep. Clark Letter & Attachments, eDocket Document No. 20105-50442-01 (May 10, 2010).

²⁶¹ FEIS, p. 279.

²⁶² WHO Report, Environmental Health Criteria 238, Extremely Low Frequency Fields, 2007, p. 355 at p. 4, pp. 44-45, Rep. Clark Letter & Attachments, eDocket Document No. 20105-50442-01 (May 10, 2010).

²⁶³ Gallay 3 Vol., p. 105.

increase.²⁶⁴ Xcel Energy expects that load will grow in the area to be served by the Hiawatha Project, with corresponding increases in current and magnetic fields.²⁶⁵

298. Magnetic fields are also a function of the distance from the transmission line.²⁶⁶ If dwellings are higher than three feet off the ground persons in them would be closer to the transmission line conductor than the standard measurement of one meter off the ground.²⁶⁷ Unlike electric fields, magnetic fields are not easily shielded or weakened by objects or materials.²⁶⁸

299. Xcel Energy calculated magnetic fields for the single circuit and double circuit overhead design options, adding the factor of moving vertically from one meter above ground to various elevations up to 20 meters above ground.²⁶⁹ These elevations better approximate exposures for people living on the second story or higher in a multi-family dwelling.

300. The FEIS calculated peak magnetic field strength for each of the overhead routes at a distance of 25 feet, determining that the maximum magnetic field for Routes B and C would be 123.14 mG at a height 16 meters above the ground, while the maximum magnetic field for Route A1 would be 108.04 mG at 12 meters above the ground.²⁷⁰

301. Average current conditions would more likely reflect chronic, everyday exposures described in the epidemiological literature and the WHO Report. Magnetic fields at average currents estimated by Xcel Energy at 25 feet from the proposed overhead transmission route for the Hiawatha Project are as follows:²⁷¹

Overhead Route	Condition/ Current	Distance Proposed Centerline	Magnetic Fields (mG) at Distance from Ground					
			1 meter	4 meter	6 meter	8 meter	10 meter	12 meter
			(3.28 ft)	(13.12 ft)	(19.68 ft)	(26.24 ft)	(32.8 ft)	(39.36 ft)
Route A1	Average 138 Amps	25'	13.82	26.15	40.37	55.31	63.22	64.63
		25'	13.66	26	40.29	55.39	63.44	64.82
Route B/ Route C	Average/ 138 Amps	25'	7.63	6.41	7.57	8.86	10.18	11.39
		25'	16.54	11.59	16.23	23.93	36.89	55.03

302. It is likely that hundreds of South Minneapolis families will be chronically exposed to magnetic fields at the levels reflected in the above table, since there are 245 dwellings within 25 feet of Route A1, 335 dwelling units within 25 feet of Route B and 206 dwelling units within 25 feet of Route C.²⁷²

²⁶⁴ Gallay 3 Vol., pp. 105-106.

²⁶⁵ Gallay 3 Vol., pp. 107, 108.

²⁶⁶ Gallay 3 Vol., p. 109.

²⁶⁷ Gallay 3 Vol., p. 112.

²⁶⁸ FEIS, p. 274.

²⁶⁹ Gallay 13 Vol., p. 16. See Ex. 246 (Electric and Magnetic Field Calculations - Overhead); Ex. 48A, Table 3, Electric and Magnetic Field Calculations (Xcel Resp. to MGC IR 30).

²⁷⁰ FEIS, p. 289.

²⁷¹ Ex. 246 (Electric and Magnetic Field Calculations – Overhead).

²⁷² Ex. 49, Table 1 (Xcel Resp. to MGC IR 3); Asah 1 Vol., pp. 161-162.

303. The WHO has noted that average magnetic field exposures above 0.3 microTesla/ μ T (equivalent to 3 milligauss) are very rare.²⁷³ However, magnetic field levels for persons living on the second or third floor (from 6 to 10 meters above the ground) of a dwelling within 25 feet of Xcel Energy's preferred Route A1, are ten to fifteen times the level of concern identified by the WHO and in epidemiological literature associating transmission lines with childhood leukemia.

304. Magnetic fields are reduced in underground applications due to phase cancellation.²⁷⁴ Magnetic fields decrease far more quickly for the underground alternatives than for overhead lines.²⁷⁵ By fifteen feet away from the proposed centerline of either Route A underground or Route D, magnetic fields drop to approximately one milligauss,²⁷⁶ which is generally understood to be a background level.²⁷⁷

305. For Hiawatha Project underground transmission routes, either a 3000 kcmil conductor or a 1250 kcmil conductor would be feasible and prudent.²⁷⁸ The 1250 kcmil conductor has two conductors for each of the three phases, which can be arranged to cancel out propagation of magnetic fields, resulting in a lower magnetic field reading than the 3000 kcmil conductor, which has one conductor for each phase.²⁷⁹

306. Xcel Energy stated in discovery that "conductor size, spacing, and orientation would be selected to produce the lowest possible values of magnetic fields."²⁸⁰ The diameter of the 1250 kcmil conductor is more compact than the 3000 kcmil conductor, so space for installation would not appear to be a constraint.²⁸¹

307. Average magnetic fields for the 3000 kcmil conductor are higher above and near the underground duct than for the 1250 kcmil conductor.²⁸²

308. Xcel Energy's proposed route alignment for Route D is as close to the curb and to homes as is possible.²⁸³ Xcel's proposed distance from the center of the ducts to the curb is from 5 to 10 feet;²⁸⁴ since the duct is 10 feet wide,²⁸⁵ its edge would be from 0 to 5 feet from the curb. With this proposed alignment, there would be 69 estimated dwelling units within 25 feet of the

²⁷³ Rep. Clark Letter, p. 3 eDocket Document No. 20105-50442-01 (May 10, 2010).

²⁷⁴ Gallay 3 Vol., p. 128.

²⁷⁵ Gallay 3 Vol., p. 125.

²⁷⁶ Gallay 3 Vol., pp. 125-126.

²⁷⁷ See e.g. Ex. 47, p. 8 (Carpenter Direct) reporting research using 1mG as a control group.

²⁷⁸ Gallay 3 Vol., p. 114-115.

²⁷⁹ Gallay 3 Vol., p. 116.

²⁸⁰ Ex. 48, p. 2 (Xcel Resp. to MGC IR 30)

²⁸¹ Ex. 48, p. 5 (Xcel Resp. to MGC IR 30)

²⁸² Ex. 48A, Table 3 Electric and Magnetic Field Calculations (Xcel Resp. to MGC IR 30); Gallay 3 Vol., p. 115.

²⁸³ Asah 13 Vol., pp. 100, 102.

²⁸⁴ Asah 13 Vol., p. 77.

²⁸⁵ Ex.1A, p. 56 (Application).

underground transmission line.²⁸⁶

309. The average width of East 28th Street is a little over 80 feet.²⁸⁷ Sidewalks on East 28th Street are between 3 to 6 feet and boulevards from 2 to 4 feet.²⁸⁸ If Route D were aligned under the center of East 28th Street, there would be no dwellings within 25 feet of the underground line.²⁸⁹

310. All overhead routes have equal potential to electrically charge objects, resulting in potential shocks.²⁹⁰ For either Route alignment A2 or A3 or Route D underground, electrical fields would be contained within the duct banks and there would be zero values for measured electric fields at all distances from the transmission line.²⁹¹

311. Overhead routes create a risk of serious injury or death to persons entering power line right-of-way for the purpose of vandalism or theft.²⁹² Impacts to structures from severe weather also pose risks to public health and safety.²⁹³

312. All construction within the project area may pose a health risk due to arsenic contamination of soils. In terms of arsenic contamination of soil, there are no significant differences between Route D and a Route A2 underground alignment.²⁹⁴

313. Underground transmission line alternatives would reduce safety and health impacts by eliminating power line electric fields, reducing magnetic fields and preventing impacts to structures from severe weather.²⁹⁵ If Route D is constructed, an alternative alignment closer to the center of East 28th Street would result in the transmission line being farther from residential homes and children.²⁹⁶

314. Representative Karen Clark, a nurse with extensive environmental health policy experience who represents the Phillips neighborhood, commented in a letter to the ALJ:

Even if it is not practical to change all existing power lines to reduce risks of magnetic field exposures, precaution and environmental justice must prevent new power lines such as the Hiawatha Project from begin routed overhead in close proximity to homes in a community already experiencing the cumulative impacts of environmental injustice. The Phillips community is a racially diverse and low-income community with a very high proportion of children, infants and pregnant women. This community is particularly

²⁸⁶ Ex. 247, Revised Table 1 (Xcel Resp. to MGC IR 3).

²⁸⁷ Asah 13 Vol., p. 103.

²⁸⁸ Asah 13 Vol., p. 78.

²⁸⁹ Ex. 247, Table 1, p. 3 (Xcel Resp. to MGC IR 3).

²⁹⁰ FEIS, p. 294.

²⁹¹ Ex. 18, p. 3 (Gallay Direct); Gallay 3 Vol. p. 90.

²⁹² Gallay 3 Vol., p. 98.

²⁹³ FEIS, p. 281.

²⁹⁴ Asah 2 Vol., pp. 214-215.

²⁹⁵ FEIS, p. 29, Table ES-2, p. 425 Table 6-3.

²⁹⁶ FEIS, p. 424, Table 6-3.

vulnerable to health problems due to the impacts of lead, arsenic, air emissions and multiple triggers for asthma. Our Phillips community cannot afford to become another experiment in environmental health risk.²⁹⁷

D. Environmental Justice

315. Executive Order 12,898 requires federal actions to address potential environmental justice impacts by directing federal agencies to “identify and address disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority or low-income populations.”²⁹⁸

316. The Minnesota Pollution Control Agency (“MPCA”) and the Minnesota Department of Transportation (“Mn/DOT”) have adopted environmental justice policies.²⁹⁹

317. Mn/DOT’s Environmental Justice Guidance is broadly applicable to *all* projects and activities that “affect human health or the environment and which are undertaken or approved by DOT.”³⁰⁰ This Guidance defines disproportionately high and adverse effect on minority and/or low income populations to include an adverse effect that “(1) is predominately borne by a minority population and/or a low-income population, or (2) will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population.”³⁰¹

318. Adverse effects under this Environmental Justice Guidance include health, environmental, social and economic effects, destruction or disruption of man-made or natural resources, destruction or diminution of aesthetic values and disruption of a community’s economic vitality.³⁰²

319. It is undisputed that adverse effects of the Hiawatha Project will be experienced by an environmental justice community. Transmission route alternatives are located in areas where the minority population exceeds 50 percent and the percentage of low income persons generally

²⁹⁷ Rep. Clark Letter & Attachments, p. 4, eDocket Document No. 20105-50442-01 (May 10, 2010).

²⁹⁸ Exec. Order No. 12,898, 59 Fed. Reg. 7,629 (Feb. 11, 1994).

²⁹⁹ Minnesota Pollution Control Agency, *Environmental Justice Principles and Practices*, Apr. 30, 2008, available to download at <http://www.pca.state.mn.us/index.php/about-mpca/assistance/mpca-and-environmental-justice.html>; Minnesota Department of Transportation, *HPDP /Scoping /Subject Guidance Minnesota Department of Transportation Environmental Justice*, available at <http://dotapp7.dot.state.mn.us/edms/download?docId=614585>

³⁰⁰ Mn/DOT Environmental Justice Guidance, p. 5.

³⁰¹ Minnesota Department of Transportation, *HPDP /Scoping /Subject Guidance Minnesota Department of Transportation Environmental Justice*, p. 5 available at <http://dotapp7.dot.state.mn.us/edms/download?docId=614585>

³⁰² Minnesota Department of Transportation, *HPDP /Scoping /Subject Guidance Minnesota Department of Transportation Environmental Justice*, pp. 4-5 available at <http://dotapp7.dot.state.mn.us/edms/download?docId=614585>

exceeds the state level by 20 percentage points. These groups would be affected more often than other non-minority and non-low income property owners.³⁰³

320. Xcel Energy agrees that the Phillips neighborhood is a minority and low income population affected historically by cumulative impacts of environmental contaminants.³⁰⁴ Ms. Asah testified that there is state legislation designating the project area as a cumulative impact area for environmental and health impacts.³⁰⁵

321. Effects of the Hiawatha Project would be disproportionately born by minority and low-income persons, while benefits go to larger community. Ms. Asah agreed that the burdens imposed by the project will be on the Phillips neighborhoods, not on the other neighborhoods that might also benefit from the project.³⁰⁶

322. The Hiawatha Project would expand capacity to the entire South Minneapolis Focused Study Area³⁰⁷ and is intended to address not just the area immediately surrounding the proposed transmission project, but the entire South Minneapolis Focused Study Area.³⁰⁸ The reliability risk under N-1 single contingency to which the Project responds affects 33 of the 39 distribution circuits throughout South Minneapolis.³⁰⁹

323. The broader benefit area for the Hiawatha Project includes many neighborhoods where people have higher incomes than the people who will live with impacts of a proposed overhead line in the project area,³¹⁰ including neighborhoods such as Lowry Hill, Lowry East, East Harriet, Kingfield, Tangletown, Lynnhurst, Kenny, Windom, Diamond Lake, and possibly areas of Kenwood and Bryn-Mawr.³¹¹

324. Environmental justice effects under federal and state agency policies are not limited to health effects, but also include displacement of homes and businesses, loss of scenic resources and loss of economic resources.³¹²

325. The FEIS noted that the following could be adverse environmental justice impacts of the Hiawatha Project: aesthetic changes within the areas that are predominately home to minority and low income populations; interference of an overhead route with the visual nature of the Midtown Greenway multi-modal path which local residents would interact with more frequently than those living outside of the Phillips community; and impacts on potential businesses which may perceive the transmission lines and substations as a disadvantage and may not locate in the

³⁰³ FEIS, p. 21, Table ES-1, p. 264.

³⁰⁴ Asah 2 Vol., p. 85.

³⁰⁵ Asah 2 Vol., pp. 176-177.

³⁰⁶ Asah 2 Vol., p. 41-42.

³⁰⁷ FEIS, p. 36.

³⁰⁸ Mirzayi 1 Vol., pp. 76-77; Asah 2 Vol., p. 41; Zima 5 Vol., p. 164.

³⁰⁹ Zima 5 Vol., pp. 159-169; Ex. 1B, Appendix D. 3, p. 32 (Application).

³¹⁰ Berkholtz 8 Vol., p. 185.

³¹¹ Berkholtz 9 Vol., pp. 39-40.

³¹² FEIS, p. 245.

Phillips community.³¹³

326. Mr. William Storm testified on behalf of the Office of Energy Security (“OES”) that any of the following could be an environmental justice adverse effect: if location of an overhead transmission route on the Midtown Greenway would reduce investment in housing for the Phillips Neighborhood;³¹⁴ if fall zones for transmission structures reduced the opportunity for FHA-insured mortgages for homes in the Phillips Neighborhoods;³¹⁵ or if an overhead transmission line impaired scenic resources along the Greenway.³¹⁶

327. Mitigating the potential environmental injustice of the Hiawatha Project requires mitigating adverse effects on human settlement and the environment. Route D, which eliminates adverse socioeconomic impacts from fall zones on federally financed or insured homes, eliminates adverse impacts on developer financing due to proximity to overhead lines, minimizes impacts on transit, transportation and the Midtown Greenway, minimizes aesthetic and noise impacts of transmission lines and towers, eliminates adverse impacts on made-made historical resource and reduces the public health and safety risks of magnetic fields, electric fields and overhead towers also reduces the potential that the Hiawatha Project would impose disproportionate burdens on low-income and minority communities in the Phillips neighborhoods.

E. Reliability

328. In general, underground transmission proposed for the Hiawatha Project is more reliable than overhead lines, with a mean time between failures of underground lines approximately three times longer than for overhead cables.³¹⁷ Underground lines are also more reliable in the case of a tornado or severe weather.³¹⁸

329. Xcel Energy has had no outages or failures related to underground dielectric cable, such as that proposed for the project.³¹⁹

330. Industry-wide average repair times of three weeks are based on older, oil-filled underground cables and are not applicable to the solid dielectric cable that would be used in the Hiawatha Project and is easier to repair.³²⁰ For the underground cable that would be used in the Hiawatha Project, the task of removing the damaged cable would take one to two days and the pulling in of the new cable, a day.³²¹

331. Larry Schedin, a Hennepin County witness who worked for NSP for 18 years, testified

³¹³ FEIS, p. 21, Table ES-1.

³¹⁴ Storm 12 Vol., p 142.

³¹⁵ Storm 12 Vol., p. 142-143

³¹⁶ Storm 12 Vol., p. 143

³¹⁷ Gallay 3 Vol., p. 180; Ex. 160, p. 1 (Xcel Resp. to MGC IR 8)

³¹⁸ Gallay 3 Vol., pp. 195-196; Schedin 10 Vol., pp. 44-45.

³¹⁹ Gallay 3 Vol., p. 143-144, 146; Gallay 4 Vol., pp. 38-39, 41; Ex. 160, p. 3 (Xcel Resp. to MGC IR 8).

³²⁰ Gallay 3 Vol., pp. 180-182, 187.

³²¹ Gallay 3 Vol., p. 139.

that utilities share equipment in a pool to be used during emergencies, so that if one utility has an outage of a key element, they can quickly get a piece of spare equipment in and replace it. Mr. Schedin suggested that Xcel could have a reserve supply of cable available, either in their own warehouse or in their utility pool.³²² With a reserve supply available, Xcel Energy would only have to pull out the faulted section between two manholes, insert and splice in a new cable, a process that would take 3 to 5 days.³²³

332. In addition to the general increase in reliability from underground transmission lines, Mr. Schedin testified that overhead route A1, which provides a double circuit on a single structure and no other electric source for the Midtown Substation would not meet recommended reliability criteria, since proper procedure for power flow outage studies requires consideration of a double circuit overhead line as a single element for purposes of contingencies.³²⁴ Both circuits could be taken out with severe weather, particularly in a residential and commercial neighborhood where large amounts of debris could be raised by high winds.³²⁵

333. Although North American Electric Reliability Corporation (“NERC”) standards would not apply to a radial line to the Midtown Substation, Mr. Schedin testified that this is not a reason for accepting inappropriate construction. To do so would be saying that customers served by the Midtown Substation are less important than other customers in the grid.³²⁶ Mr. Schedin proposed an underground alternative along either Route A or Route D to provide superior reliability.³²⁷

334. An additional reliability issue was raised by intervenor Little Earth of United Tribes in testimony suggesting that parts of the distribution in the Phillips neighborhoods were deficient and unreliable.³²⁸ There is no evidence that Xcel Energy has gone out to Little Earth to identify the exact nature of their complaints and inspect distribution equipment in response to their concerns.³²⁹

335. Xcel Energy has an infrared camera which can detect places with excessive heat, on a transformer, an overhead wire, a distribution feeder circuit or a tap circuit -- anyplace there might be a problem, to find where the problems are and fix them before they cause an outage.³³⁰ Xcel could use this device driving in a vehicle through the project area.³³¹

F. Capacity and Use of Right-of-Way

336. All routes proposed for the Hiawatha Project (A through E2) are designed to provide 120 MW of load serving support in the South Minneapolis Focused Study Area, which would meet

³²² Schedin 10 Vol., p. 53

³²³ Schedin 10 Vol., p. 26.

³²⁴ Ex. 109, p. 8 (Schedin Direct).

³²⁵ Schedin 9 Vol., p. 192.

³²⁶ Schedin 10 Vol., pp. 43-44.

³²⁷ Ex. 109, p. 5 (Schedin Direct).

³²⁸ Ex. 203, p. 3 (Ellis Direct);

³²⁹ Zima 12 Vol., pp. 200-201.

³³⁰ Zima 12 Vol., p. 204

³³¹ Zima 12 Vol., p. 204.

current distribution needs and further demand growth in the area³³² and would serve customer load, including a future electric streetcar or light rail in the Midtown Greenway trench.³³³

337. The level of capacity that is needed for the project will be reviewed in a certificate of need proceeding pursuant to recent legislation.³³⁴

338. All routes proposed for the Hiawatha Project (A through E2) have been proposed generally within existing transportation rights of way. Routes B, C and E2 may require additional right-of-way from private properties adjacent to the proposed routes.³³⁵

339. The difference in length between Route A and Route D is one-tenth of a mile.³³⁶

G. Costs

340. Projecting that the cost of constructing the substations for each route will be the same (\$25.4 million), Xcel Energy has estimated costs for the transmission route alternatives as follows: Route A 1, \$2.8 million; Route A2, \$13.6 million; Route A3, \$12.7 million; Route B, \$4.6 million; Route C, \$5.7 million; Route D, \$15.5 million; Route E2, \$4.7 million.³³⁷

341. These construction costs do not reflect potential costs to ratepayers due to disruption or relocation of transmission lines to accommodate transit, transit stations or bridge infrastructure or costs resulting from adverse impacts on human settlement, economic investment, recreational scenic or historic resources or health and safety.

H. Cost Allocation

342. Any route ordered by the Commission becomes a standard facility.³³⁸ For example, when the Commission orders a lengthened route to avoid a sensitive environmental feature, the cost for that additional line length is part of the approved project and is considered a standard facility.³³⁹

343. The preference of local governments or neighborhood groups for an underground transmission route does not affect cost recovery of a standard facility. The opinion of a community group does not affect how standard facilities would be dealt with from a cost recovery standpoint.³⁴⁰

³³² Ex. 23, p. 8 (Zima Direct).

³³³ Zima 5 Vol., p. 199.

³³⁴ See Ch. 361, Sec. 19, Minnesota Session Laws 2010.

³³⁵ Gallay 4 Vol. pp. 49-50; Asah 7 Vol. pp. 90-91 describing 12-13 foot distance from buildings to conductors. *See also* Ex. 10 at Schedule 3, p. 1 (Asah Direct) regarding E2.

³³⁶ Asah 1 Vol., p. 207.

³³⁷ Ex. 18, p. 11 (Gallay Direct).

³³⁸ Lehman, pp. 204-205.

³³⁹ Lehman 6 Vol., p. 182.

³⁴⁰ Lehman 6 Vol., p. 179.

344. The city-requested facility surcharge rider applies only to distribution facilities.³⁴¹ If a facility is standard, there is no other cost recovery system other than the generalized rate basing of costs.³⁴²

345. The Minnesota Electric Rate Book, defines standard facilities:

Standard facilities are those facilities whose design or location constitute the reasonable and prudent least cost alternative that is consistent with the existing electric system configuration will meet the needs of the Company's customers and will maintain system reliability and performance under the circumstances. In determining the design or location of a "Standard Facility", the Company shall use good utility practices and evaluate all of the circumstances surrounding the proposal, including (i) public and employee safety in the installation, operation and maintenance of the facility, (ii) compliance with the National Electrical Safety Code, other applicable engineering standards and electric utility norms and standards, (iii) electrical system reliability requirements, (iv) the presence, age, condition and configuration of existing facilities in the affected area, (v) the presence and size of existing right of way in the affected area, (vi) existing topology, soil spacing, and any environmental limitations in the specific area, (vii) existing and reasonably projected development in the affected area, (viii) installation, maintenance, useful life and replacement cost factors and (ix) other relevant factors under the particular circumstances.³⁴³

346. If underground installation would be a good utility practice due to local conditions, underground construction would be standard construction and the project would not be subject to a surcharge.³⁴⁴ Factors to be considered in determining if an underground installation is a standard facility could include fall zones in proximity to buildings,³⁴⁵ company norms and standards pertaining to building facilities in other areas of equivalent population density,³⁴⁶ historical designations,³⁴⁷ recent and planned housing and economic investments in the project corridor,³⁴⁸ and projections for transit and transit stations along the Greenway.³⁴⁹

347. When there is no viable overhead route, what would otherwise be considered non-standard is considered a standard facility for rate-making purposes.³⁵⁰

348. Xcel Energy does not consider the undergrounding of transmission for the Hiawatha Project to be a "special" facility.³⁵¹

³⁴¹ Lehman 6 Vol., pp. 195-196.

³⁴² Lehman 6 Vol., p. 176.

³⁴³ Ex. 27, Schedule 2 Minnesota Electric Rate Book, p. 2, section 5.3(A)(5)(Lehman Direct).

³⁴⁴ Lehman 6 Vol., pp. 200-201.

³⁴⁵ Lehman 6 Vol., p. 184.

³⁴⁶ Lehman 6 Vol., p. 186.

³⁴⁷ Lehman 6 Vol., pp. 188-189.

³⁴⁸ Lehman 6 Vol., p. 189.

³⁴⁹ Lehman 6 Vol., p. 189.

³⁵⁰ Lehman 7 Vol., p. 42 ll.18-23.

³⁵¹ Lehman 7 Vol., p. 50, ll. 5-14.

349. It is industry standard to construct transmission lines underground in a downtown urban environment.³⁵² Planning Manager Karin Berkholtz testified that the Hiawatha Project area is like a downtown area in terms of the intensity of use and height and scale of buildings and that both the downtown area and Chicago Avenue in the project area are called growth centers within the City's comprehensive plan and land use designations.³⁵³

350. Xcel Energy has not sought cost recovery from any local community for the incremental cost difference between overhead and underground transmission lines for the 12 miles of underground transmission that Xcel already has in Minnesota.³⁵⁴

351. The underground 115 kV transmission lines built by Xcel Energy in downtown Minneapolis and from Fifth Street to the Aldrich substation, Fifth Street to the Riverside substation, Fifth Street to the Main Street substation, and in Elliot Park are standard facilities included in Xcel Energy's standard rates.³⁵⁵ They have been implicitly approved by the Commission in standard rates and are being recovered.³⁵⁶

352. There are no examples of any underground transmission facilities in the Minneapolis-St. Paul Metropolitan Area that have been treated as special facilities.³⁵⁷

353. The Midwest ISO would categorize the Hiawatha Project as network service and would charge the upgrade to all Midwest ISO customers within the NSP pricing zone.³⁵⁸ The NSP pricing zone is similar to NSP's (Xcel Energy's Midwest) service territory, which includes Minnesota, Wisconsin, South Dakota, North Dakota and Michigan customers.³⁵⁹

354. Hennepin County witness Larry Schedin testified that underground facilities for the Hiawatha Project should be treated as standard facilities based on NSP's general rules and regulations,³⁶⁰ that underground construction through high-density residential neighborhoods should be considered standard based on the practice of undergrounding in the Cedar Riverside area³⁶¹ and the technological advance of cross-linked polyethylene cable,³⁶² that underground facilities for this project are the reasonable and prudent least cost alternative³⁶³ and that any excess costs for underground lines should not be assessed on a special basis.³⁶⁴

355. The FEIS discussed cost allocation as an environmental justice concern, suggesting that if

³⁵² Asah 2 Vol., p. 34.

³⁵³ Berkholtz 8 Vol., p. 190.

³⁵⁴ Lehman 6 Vol., pp. 192-193; Asah 2 Vol., pp. 33-34, 171-172; Ex. 55, p. 5 (Xcel Resp. to MGC IR 26)

³⁵⁵ Lehman 7 Vol., pp. 14-15; Lehman 6 Vol., p. 180.

³⁵⁶ Lehman 7 Vol., p. 44.

³⁵⁷ Lehman 7 Vol. p. 18, l. 25 to p. 19, l. 6.

³⁵⁸ Ex. 109, pp. 11-12 (Schedin Direct); Lehman 7 Vol., pp. 19-20.

³⁵⁹ Lehman 7 Vol., p. 20-21.

³⁶⁰ Schedin 10 Vol., p. 17.

³⁶¹ Schedin 10 Vol., pp. 18-19.

³⁶² Schedin 10 Vol., p. 19, ll. 20-23.

³⁶³ Schedin 10 Vol., p. 18.

³⁶⁴ Schedin 10 Vol., p. 27.

an underground transmission route alternative is chosen incremental costs of undergrounding the transmission line among a larger base of ratepayers would reduce the potential economic hardship on ratepayers in the Project Area.³⁶⁵

II. SUBSTATION SITE SELECTION AND MITIGATION.

A. Potential for Adverse Effects on Human Settlement, Land Use, Natural Resources, Public Health and Safety and Environmental Justice

356. The Midtown North and Hiawatha West substations proposed by Xcel Energy have the potential for adverse effects on human settlement, land use, natural resources and environmental justice.

357. Project substations may result in visual effects and may discourage some new development.³⁶⁶ The presence of substations in any of the locations may reduce opportunities for new businesses, which view the substations as a visual intrusion, to locate in the Phillips community.³⁶⁷

358. Location of a substation at the Hiawatha West location would adversely effect existing green space along the Midtown Greenway, which is inconsistent with land use and planning, and would add industrial uses rather than remove industrial uses as directed in local planning and zoning for the Midtown site.³⁶⁸

359. Loss of green space, trees and shrubs along the Midtown Greenway at the Hiawatha West location could impact aesthetics and amenities at an important location, adversely effecting transportation users.³⁶⁹

360. Transformers at all substations could produce audible noise slightly above background levels depending upon weather conditions and their design.³⁷⁰

361. Although some noise is generated by cooling fans, the power transformer is the primary element of the electrical substation that produces noise, which is due to steel core vibration.³⁷¹ Transformers proposed by Xcel Energy for the Hiawatha Project would have a sound level of 69 decibels.³⁷² Transformers for both substations are about 18 feet tall.³⁷³

362. Above ground substations may have a negative impact to known historic resources by introducing modern features within or near the historic district and indirectly impacting the

³⁶⁵ FEIS, p. 28, Table ES-2, p. 269, p. 424, Table 6-3.

³⁶⁶ FEIS, pp. 226, 227.

³⁶⁷ FEIS, p. 21, Table ES-1.

³⁶⁸ FEIS, p. 18, Table ES-1.

³⁶⁹ FEIS, p. 266.

³⁷⁰ FEIS, p. 25, ES-1, p. 145.

³⁷¹ McNelly 5 Vol., pp. 44-45.

³⁷² Asah 2 Vol., p.19.

³⁷³ McNelly 5 Vol., p. 51.

visual aspect of historic resources, and, if the Midtown North substation is selected, impacts to the sloped berm of the Midtown Greenway would represent a direct impact to the CM&StP Railroad Grade Separation district, which is listed on the National Register of Historic Places.³⁷⁴

363. Depending on the footprint and layout of the Hiawatha West substation location, up to approximately 250 new trees and shrubs planted by community groups could be adversely affected if that substation were selected.³⁷⁵

364. Vandalism to substations and theft for copper wire and scrap metal could create the risk of serious injury or death to persons engaged in the activity as well as compromising the high voltage equipment.³⁷⁶

365. The addition of walls surrounding the proposed substations would increase the area available for unauthorized graffiti in the Project Area, indirectly effecting perceptions of safety and increases in graffiti-related crimes.³⁷⁷ Xcel Energy's existing substation site in the Phillips neighborhood has cement rubble and graffiti.³⁷⁸

366. Magnetic fields from substations were predicted to range from 1.11 to 11.75 milligauss at 10 feet from the wall or fence of the Hiawatha Substation and from 0.02 to 2.02 milligauss at 25 feet. For the Midtown Substation, magnetic fields are predicted to range from 0.02 to 8.87 milligauss at 10 feet and from 0.01 to 1.21 milligauss at 25 feet.³⁷⁹

367. Actual magnetic fields measured 25 feet from the wall or fence at the West River Road substation (up to 4.5 milligauss) and Elliot Park substation (up to 5.3 milligauss), which are a similar design to the proposed Hiawatha and Midtown substations, are higher than predicted for these Hiawatha Project substations.³⁸⁰

368. Hiawatha Project substations are located in areas where the minority population exceeds 50 percent and the percentage of low-income populations generally exceeds the state level by 20 percentage points.³⁸¹ Both the construction and operation of substations result in a disproportionate adverse impact because the proposed locations are within areas that are predominately home to minority and low-income populations.³⁸²

B. Underground Substation Design

369. Locating the substations underground would reduce adverse effects, including the

³⁷⁴ FEIS, p. 19, Table ES-1.

³⁷⁵ FEIS, p. 24, Table ES-1; p. 231.

³⁷⁶ FEIS, p. 295; Gallay 3 Vol., p. 98.

³⁷⁷ FEIS, p. 295.

³⁷⁸ Ex. 164A and 164B (Xcel Energy Photos of Midtown North Substation Site).

³⁷⁹ Ex. 155, p. 2 (Xcel Resp. to MGC IR 32).

³⁸⁰ Gallay 3 Vol., pp. 134-135; Ex. p. 3 (Xcel Resp. to MGC IR 32).

³⁸¹ FEIS, p. 12.

³⁸² FEIS, p. 21, Table ES-1.

perceived and/or real impact to socioeconomic factors and property values,³⁸³ aesthetics,³⁸⁴ recreation and tourism,³⁸⁵ and, therefore to environmental justice.³⁸⁶

370. No estimate was provided of the costs of constructing the Midtown North substation underground. Xcel Energy estimated the costs of constructing the Hiawatha Substation underground at \$86 million, as compared to an aboveground cost of \$14.27 million.³⁸⁷

371. Xcel Energy provided information regarding the underground construction of a substation in Anaheim, California³⁸⁸ which cost \$19.5 million to build,³⁸⁹ testifying that this substation was smaller and of lower voltage than the Hiawatha Project substations.³⁹⁰

C. Certificate of Need Relationship to Substation Size and Configuration

372. The level of capacity that is needed for the Hiawatha Project will be reviewed in a certificate of need (“CON”) proceeding pursuant to recent legislation.³⁹¹ Questions of size, type, alternative system configurations and voltage will be included in those upcoming CON proceedings.³⁹² The CON proceeding will review reasonable alternatives and suitable modifications to the facilities proposed for the Hiawatha Project,³⁹³ including the substations.³⁹⁴

373. The Hiawatha Project is based on a determination by distribution planning at Xcel Energy that the South Minneapolis Focused Study Area has a deficit of 55 MW based on 2006 peak conditions at an N-1 contingency.³⁹⁵

374. The Hiawatha substation site will be built with one 50 MVA transformer.³⁹⁶ The Midtown substation site will be built with one 70 MVA transformer.³⁹⁷

375. The two initial transformers with which the substations will be constructed -- 50 MW at Hiawatha and 70 MW at Midtown -- would provide an additional 120 megawatts of load-serving support in the South Minneapolis area.³⁹⁸

³⁸³ FEIS, p. 28, Table ES-2; p. 424, Table 6-3.

³⁸⁴ FEIS, p. 29, Table ES-2.

³⁸⁵ FEIS, p. 425, Table 6-3.

³⁸⁶ FEIS, p. 265.

³⁸⁷ Ex. 20, p. 13 and Schedule 7, Sargent & Lundy Report (McNelly Direct); Ex. 18, p. 11 (Gallay Direct); FEIS, p. 54.

³⁸⁸ Ex. 67, p. 4 (Xcel Resp. to MGC IR 27); Asah 5 Vol., pp. 26-27.

³⁸⁹ Ex. 66 (T&DW, Anaheim Substation Design).

³⁹⁰ Asah 5 Vol., pp. 28-29; pp. 109-111.

³⁹¹ See Ch. 361, Sec. 19, Minnesota Session Laws 2010.

³⁹² Minn. Stat. §216E.02, Subd. 2 (2009).

³⁹³ Minn. R. 7849.0120, Subparts B, C. (2009).

³⁹⁴ Minn. R. 7849.0260, Subpart B(4) (2009).

³⁹⁵ Zima 5 Vol., p. 170; Ex. 1B, Appendix D-2, p. 10, Appendix D3, p. 27 (Application).

³⁹⁶ Ex. 1A, p. 26 (Application); McNelly 5 Vol. p. 26

³⁹⁷ Ex. 1A, p. 13 (Application).

³⁹⁸ Zima 5 Vol., p. 182.

376. Xcel Energy’s proposed Hiawatha substation size and layout have been designed to accommodate a potential future additional transmission line tie-in, as well as two additional 50 MVA transformers and additional feeder lines.³⁹⁹

377. Xcel Energy’s proposed Midtown substation size and layout have been designed to accommodate an additional 115 kV transmission line tie-in, as well as an additional 70 MVA transformer and feeder lines.⁴⁰⁰

378. Xcel Energy has no current plans to install the second or third 50 MVA transformers in the Hiawatha substation,⁴⁰¹ and cannot project either the date by which additional transformers would be installed or the level of customer load in the area that would necessitate installation of an additional transformer at the Hiawatha substation.⁴⁰²

379. Xcel Energy’s conclusion that the G-4 alternative substation site is not feasible or prudent due to poor accessibility of distribution feeders is based on an “ultimate” system design of 15 circuits.⁴⁰³ Initially, there would be 5 feeders, not 15 at the Hiawatha site.⁴⁰⁴ There is no date by which Xcel Energy predicts that that ultimate expansion to 15 feeders and three transformers is going to take place. This expansion depends on predictions of load growth.⁴⁰⁵

380. There are no current plans to add a second transformer to the Midtown substation.⁴⁰⁶ Xcel Energy’s projections in its Application and discovery responses of magnetic fields at an average of 138 amps are based on the installation of one transformer of 70 MVA.⁴⁰⁷

381. The Midtown North Substation layout that encroaches upon the Midtown Greenway Grade Separation Historic District is based on a design that accommodates a second transmission line tie-in and transformer.

382. The certificate of need proceeding required by the Legislature could determine that the G-4 alternative site for the Hiawatha substation is feasible or that modification of the footprint of the Hiawatha and Midtown substations is suitable upon review of whether design of these substations to accommodate an “ultimate” design with additional transformers is needed.

D. Application of Statutes and Rules to Site Selection and Mitigation for the Midtown Substation

1. Substation Site Selection

³⁹⁹ Ex. 1A, p. 41; McNelly 5 Vol. pp. 26, 114.

⁴⁰⁰ Ex. 1A, p. 41 (Application); McNelly 5 Vol., p. 114.

⁴⁰¹ McNelly 5 Vol., p. 114.

⁴⁰² Zima 5 Vol., p. 178, ll. 16-25.

⁴⁰³ Zima 12 Vol., pp. 174.

⁴⁰⁴ Zima 12 Vol., p. 198.

⁴⁰⁵ Zima 12 Vol., pp. 198-199.

⁴⁰⁶ McNelly 5 Vol., p. 114.

⁴⁰⁷ Gallay 3 Vol., p. 122. See Ex. 1A, p. 69, Table 8 (Application); Ex. 48 & 48A, Table 3 (Xcel Resp. MGC IR 30); Ex. 246 (Electric and Magnetic Field Calculations - Overhead).

383. Xcel Energy prefers the Midtown North site for its substation location.⁴⁰⁸

384. The Midtown South site would require removal of buildings owned and occupied by Brown Campbell Enterprises.⁴⁰⁹ Intervenor Wells Fargo opposes the selection of either the Mt-28N or MT-S site.⁴¹⁰

385. The Phillips West Neighborhood Organization opposes selection of the Midtown North substation site,⁴¹¹ and East Phillips Improvement Coalition supports this position.⁴¹² Midtown Phillips Neighborhood Association, Inc. believes a below grade substation should be explored for the Midtown North substation, that the substation should not extend into the Greenway and that the wall surrounding the substation should be 30 feet or higher to mitigate noise.⁴¹³

386. Neither the County of Hennepin, the City of Minneapolis, Crew2, Zimmer Davis or neighborhood intervenors Longfellow Community Council, Seward Neighborhood Group, Corcoran Neighborhood Organization or Little Earth of United Tribes have taken positions regarding the selection of the Midtown substation site. The Midtown Greenway Coalition (MGC) has not proposed an alternative site for the Midtown substation.⁴¹⁴

387. MGC's position is that Xcel Energy's proposal for the North Midtown Substation is inconsistent with the residential character of the immediate neighborhood and the aesthetics and appeal of the adjacent Greenway trails.⁴¹⁵ If the Midtown North substation site is selected, altering the grade of the berm for the Midtown substation should be avoided,⁴¹⁶ the footprint of the substation should be minimized, the architecture and landscaping should be in keeping with a residential neighborhood and integrated with public art, and plans for a pedestrian promenade along the Greenway should be implemented as part of the mitigation for the Hiawatha Project.⁴¹⁷

2. Proximity to Residences.

388. There are 6 residential dwellings from 0 to 25 feet of the proposed Midtown North substation and 67 dwelling units within 200 feet of the proposed Midtown North substation.⁴¹⁸ The Midtown South site would place half as many dwellings within 25 feet of the substation.⁴¹⁹

389. Xcel Energy is unaware of any other Xcel substations within 0 to 25 feet of dwelling

⁴⁰⁸ Ex. 1A, p. 29 (Application).

⁴⁰⁹ Ex. 1A, p. 31 (Application).

⁴¹⁰ Ex. 127, pp. 2-3(Olson Direct).

⁴¹¹ Phillips West Neighborhood Organization Letter, eDocket No. 20104-48737-01 (April 2, 2010).

⁴¹² Pass 11 Vol., p. 136.

⁴¹³ Heyer 11 Vol. p. 126.

⁴¹⁴ Springer 7 Vol., p. 140.

⁴¹⁵ Ex. 36, p. 31 (Springer Direct).

⁴¹⁶ Springer 7 Vol., p. 127

⁴¹⁷ Ex. 36, p. 31 (Springer Direct).

⁴¹⁸ Ex. 155, Attachment 1 (Xcel Resp. to MGC IR 32); Asah 1 Vol., pp. 165-166, 202.

⁴¹⁹ Ex. 155, Attachment 1 (Xcel Resp. to MGC IR 32).

units.⁴²⁰ The closest resident to the Merriam Park substation discussed in a recent article where a resident complained of noise, is between 50 to 100 feet away.⁴²¹

390. Xcel Energy is proposing to purchase and demolish a vacant triplex in order to construct the Midtown North substation,⁴²² but is not considering purchasing or displacing any additional homes for the Midtown North substation.⁴²³

3. Residential Zoning and Planning

391. On April 2, 2010, the Minneapolis City Council approved changes to the Minneapolis Zoning Code in the Hiawatha Project area,⁴²⁴ including rezoning the Midtown North substation site, which was partially residential and partially light industrial, so that the entire site is now multiple-family high-density residential zoning (R5).⁴²⁵

392. These recent zoning changes adopted by the City of Minneapolis are a reflection of policy in the Phillips West Master Land Use Plan,⁴²⁶ adopted by the City Council in July of 2009 as part of the City's comprehensive plan,⁴²⁷ that supports the phase-out of industrial uses along the greenway in the Phillips West neighborhood.⁴²⁸

393. R5 is a multifamily residential district that would not permit construction of a new industrial use.⁴²⁹ Use of the Midtown North substation location may be inconsistent with future residential development and land uses.⁴³⁰

4. Pedestrian and Bicycle Transportation and Recreation

394. One objective of the Midtown Greenway Land Use and Development Plan is the development of a premier public edge along both sides of the Greenway, including a more pedestrian and bicycle-friendly 29th Street and public promenades.⁴³¹ A promenade and level pedestrian walkway to access the Midtown Greenway are planned at the Midtown North substation location.⁴³²

395. The Phillips West Master Land Use Plan that was adopted by the Minneapolis City Council includes a plan for a pedestrian walkway on the Greenway between Portland Avenue

⁴²⁰ Asah 1 Vol., p. 166.

⁴²¹ Asah 2 Vol., p. 22.

⁴²² Asah 1 Vol., p. 167.

⁴²³ Asah 7 Vol., p. 76.

⁴²⁴ Mogush 8 Vol., p. 118.

⁴²⁵ Mogush 8 Vol., p. 124; Ex. 235, p. 6 (Existing Zoning Study Maps); Ex. 236, pp. 6-7 (Adopted Zoning Changes Maps); Ex. 239 (Midtown Greenway Rezoning Study).

⁴²⁶ Ex. 86, p. 35 (Phillips West Master Land Use Plan).

⁴²⁷ Ex. 72 (Minneapolis Comprehensive Plan).

⁴²⁸ Mogush 8 Vol., p. 141.

⁴²⁹ Mogush 8 Vol., p. 130.

⁴³⁰ FEIS, p. 146.

⁴³¹ Ex. 40, p. 5 (Midtown Greenway Land Use and Development Plan).

⁴³² FEIS, p. 144.

and Chicago.⁴³³ Plans for this pedestrian promenade were adopted by the Phillips West Neighborhood Organization in 2008, and the concept was also approved by the Midtown Community Works Partnership in November 2009.⁴³⁴

396. The pedestrian promenade would allow public access to the rim of the Midtown Greenway, where otherwise there would only be private space.⁴³⁵ Plans for pedestrian access points like the Phillips West promenade plan provide pedestrian amenities and eyes on the Midtown Greenway to enhance safety for Greenway users.⁴³⁶

397. Construction of the Midtown North substation could create physical constraints in the planned Midtown Greenway pedestrian promenade.⁴³⁷

5. Effects on Historical Resources.

398. Xcel Energy's property at the Midtown North substation extends into the Midtown Greenway all the way down to the northernmost paved surface of the Greenway bicycle trail.⁴³⁸

399. Xcel Energy's proposed design for the Midtown North substation would alter the berming and the grade separation between the trails in the Greenway trench by extending the site and building a retaining wall.⁴³⁹ Xcel Energy hasn't determined the height or the length of the proposed retaining wall for the Midtown North Substation property.⁴⁴⁰

400. The Midtown Greenway trench is a historic district, designated as the Chicago, Milwaukee & St. Paul Railroad Grade Separation Historic District ("Grade Separation Historic District") and is an historical resource under MERA.⁴⁴¹

401. Neither the boundaries, the characteristics or the restrictions placed on the Grade Separation Historic District were taken into account when Xcel energy was determining which substation property to select or where and how on the property the substation equipment would be situated.⁴⁴²

402. The grade separation, lineal trench, depth and width of the trench, volunteer vegetation, and slopes of the trench are character-defining features of the Grade Separation Historic District.⁴⁴³ The retaining walls and earthen berms are part of the character of the trench and are

⁴³³ Asah 7 Vol., p. 56.

⁴³⁴ Springer 7 Vol., pp. 101-102; Ex. 175 (Renderings of Pedestrian Promenade).

⁴³⁵ Mogush 8 Vol., p. 136.

⁴³⁶ McLaughlin 9 Vol., pp. 144-145.

⁴³⁷ FEIS, p. 26, Table ES-1.

⁴³⁸ Asah 2 Vol., pp. 156, 167-168.

⁴³⁹ McNelly 5 Vol., p. 41, l. 23 - p. 42, l. 5. See existing trench berm in Ex. 15, Schedule 10, Cultural Assessment Report, p. 72, Figure 52 (Stark Surrebuttal) and simulated view of Midtown North substation in FEIS, Figure 5.8-18.

⁴⁴⁰ McNelly Vol. 5, p. 82.

⁴⁴¹ Stark 3 Vol., pp. 15-16; Ex. 15, Schedule 10, Cultural Resources Assessment, p.18 (Stark Surrebuttal).

⁴⁴² McNelly 5 Vol., pp. 122, l. 25 - 123, l. 8.

⁴⁴³ Ex. 15, Schedule 10, Cultural Assessment Report, pp. 77, 80 (Stark Surrebuttal).

historically significant.⁴⁴⁴ Greg Mathis testified on behalf of Hennepin County:

Q: In your opinion how important is the depth, width, and slope of the lineal trench itself to the historic nature of the Chicago, Milwaukee & St. Paul District?

A: It's very important. It helps define the overall historic character in terms of design and feeling. And it affects -- if you lose that, you end up losing -- the district loses its ability to convey its significance.

Q: What is the consequence if a district loses its ability to convey significance?

A: It could lose its historic designation.⁴⁴⁵

403. The Minneapolis Comprehensive Plan provides for the preservation, maintenance, and designation of historic resources within the city. Resources are to be protected from modifications that are not sensitive to their historic significance; new construction should be compatible with existing historic fabric; and new developments should seek to retain historic elements rather than removing them.⁴⁴⁶

404. In 2006, the HCRRA completed the *Cultural Landscape Management and Treatment Guidelines for the Chicago Milwaukee and St. Paul Grade Separation Historic District of the Midtown Corridor, Minneapolis, Minnesota* (“*HCRRA Guidelines*”) in an “effort to prevent irrevocable damage to the character-defining features of the district.”⁴⁴⁷ Largely based on the Secretary of the Interior’s Standards and Guidelines for Historic Preservation, these *HCRRA Guidelines* provide specific application to the historic district’s character-defining features by specifying recommended and not recommended treatments.⁴⁴⁸

405. The *HCRRA Guidelines* recommend retaining the graded slopes of the trench.⁴⁴⁹ If Xcel Energy were to adjust the slope of the trench at the Midtown substation site and install a retaining wall, that would not be consistent with retaining the graded slopes.⁴⁵⁰

406. *HCRRA Guidelines* applicable to new structures such as the Midtown North substation recommend against adding new structures or buildings so that the definition and linear nature of the grade separation is lost.⁴⁵¹

407. Xcel Energy’s proposal to add retaining walls at the Midtown North substation is inconsistent with statements in Xcel’s Cultural Assessment Report that the Project “would not

⁴⁴⁴ Stark 3 Vol., p. 44; Byers 8 Vol., pp. 81-82; Mathis 10 Vol., pp. 80-81; *see also* Ex. 15, Schedule 10, Cultural Assessment Report, p. 86 (Stark Surrebuttal).

⁴⁴⁵ Mathis 10 Vol., p. 88 ll. 1-12.

⁴⁴⁶ FEIS, p. 161, citing Ex. 72, Policy 8.1 (Minneapolis Plan for Sustainable Growth).

⁴⁴⁷ Ex. 15, Schedule 10, Cultural Assessment Report, p. 76 (Stark Surrebuttal). The *HCRRA Guidelines* are contained in Ex. 13, Schedule 6 (Stark Direct).

⁴⁴⁸ Ex. 15, Schedule 10, Cultural Assessment Report, p. 76 (Stark Surrebuttal); Mathis 10 Vol., pp. 85-86.

⁴⁴⁹ Ex. 15, Schedule 10, Cultural Assessment Report, p. 80 (Stark Surrebuttal).

⁴⁵⁰ McNelly 5 Vol., pp. 118, l. 25-119, l. 9.

⁴⁵¹ Mathis 10 Vol., p. 89, *citing* Ex. 13, Schedule 6, p. 18, *HCRRA Guidelines* (Stark Direct).

add retaining walls or furnishings to the historic district.”⁴⁵²

408. If impacts to the sloped berm are not avoided through substation design, this would represent a direct impact on the Grade Separation Historic District as a result of the construction of the Midtown North substation.⁴⁵³

409. In addition to direct effects, it is important to minimize indirect visual effects that are adverse effects on historical properties.⁴⁵⁴

410. The Midtown Greenway trench was built during the period of significance for both safety and aesthetics.⁴⁵⁵ A high profile substation on the Midtown North site would have indirect visual impacts on the Zinsmaster Baking Company and the Grade Separation Historic District.⁴⁵⁶

411. Building out into the Midtown Greenway trench for the Midtown Substation would have both direct and indirect effects on the Grade Separation Historic District. Hennepin County witness Greg Mathis testified:

It would compromise the entirety of the district in terms of its physical integrity of materials by removing historic fabric, which is the grade itself . . . And as far as indirect, there would also be significant visual effects because it would change the overall feeling of the historic district by, again, changing those spaces.⁴⁵⁷

6. Mitigation in Design of Midtown North Substation.

412. Xcel Energy has an obligation to mitigate aesthetic impacts and noise resulting from the Midtown North substation.⁴⁵⁸

413. Xcel Energy’s current proposal for the Midtown North substation has 20-foot prefabricated walls on four sides,⁴⁵⁹ a solid wooden gate,⁴⁶⁰ sound absorbing panels to ensure compliance with city and state noise regulations,⁴⁶¹ and a 34-foot electrical equipment enclosure to provide shielding from the humming sound of the transformer.⁴⁶²

414. Equipment from the Midtown North substation would visibly protrude above a 20-foot wall.⁴⁶³ The Xcel Energy noise study did not evaluate making walls higher than 20 feet to further

⁴⁵² McNelly 5 Vol., pp. 119, l. 14 – 120, l.1; Ex. 15, Schedule 10, Cultural Assessment Report, p. 86 (Stark Surrebuttal).

⁴⁵³ FEIS, p. 187; Stark 3 Vol., p. 73.

⁴⁵⁴ Stark 3 Vol., pp. 47-48.

⁴⁵⁵ Stark 3 Vol., pp. 44-45.

⁴⁵⁶ Stark 3 Vol., p. 18.

⁴⁵⁷ Mathis 10 Vol., p. 81, ll.8-21.

⁴⁵⁸ Asah 1 Vol., pp. 202-203.

⁴⁵⁹ McNelly 5 Vol., p. 39; FEIS, p. 321.

⁴⁶⁰ McNelly 5 Vol., p. 39.

⁴⁶¹ FEIS, p. 321.

⁴⁶² Asah 2 Vol., p. 16.

⁴⁶³ McNelly 5 Vol., p. 39, ll. 21-24.

reduce noise.⁴⁶⁴

415. Xcel Energy has committed to designing the Midtown North substation to support the planned promenade and pedestrian walkway adjacent to the substation on the north side of the Midtown Greenway.⁴⁶⁵ The promenade would be at grade level on the north rim of the Midtown Greenway.⁴⁶⁶

416. The design of screening walls for the Midtown North substation should be compatible with the district's character to mitigate and minimize adverse effects and should take the HCRRRA Guidelines into consideration.⁴⁶⁷

417. Xcel Energy has stated that the minimum walled footprint for the Midtown North substation with a high profile design is approximately 145 feet by 228 feet.⁴⁶⁸

418. Xcel Energy has provided no plan or concept for construction of the Midtown North substation that would not affect the slope of the Greenway and require construction of retaining walls.⁴⁶⁹

E. Application of Statutes and Rules to Site Selection and Mitigation for the Hiawatha Substation

1. G-4 Substation Alternative to Hiawatha West Site

419. None of the 17 neighborhood groups that comprise the Midtown Greenway Coalition advocate the location of the Hiawatha substation on either the Crew2 site or the Zimmer Davis site.⁴⁷⁰

420. The Midtown Greenway Coalition prefers the G-4 site to the Hiawatha West substation site based on the preferences of the communities most affected by the Hiawatha substation.⁴⁷¹ Communities expressing a preference for the G-4 substation site include the Longfellow Community Council,⁴⁷² Seward Neighborhood Group,⁴⁷³ East Phillips Improvement Coalition,⁴⁷⁴ and Midtown Phillips Neighborhood Association, Inc.⁴⁷⁵

421. Seward Neighborhood Group has testified that G-4 would be an ideal substation site from

⁴⁶⁴ Asah 2 Vol., p. 26.

⁴⁶⁵ Ex. 20, p. 9, ll. 23-24 (McNelly Direct); McNelly 5 Vol., p. 62; Asah 2 Vol., p. 156; Asah 7 Vol., p. 59, ll.5-8; FEIS, p. 145.

⁴⁶⁶ Asah 2 Vol., p. 169.

⁴⁶⁷ Stark 3 Vol., pp. 24-25.

⁴⁶⁸ Ex. 64, p. 5 (Xcel Resp. to MGC IR 2).

⁴⁶⁹ Asah 7 Vol., pp. 53-54.

⁴⁷⁰ Springer 7 Vol., p. 183.

⁴⁷¹ Ex. 36, p. 5 (Springer Direct).

⁴⁷² Hart 11 Vol., p. 56.

⁴⁷³ Ex. 209, p. 10 (Mains Direct).

⁴⁷⁴ Pass 11 Vol., p. 136.

⁴⁷⁵ Heyer 11 Vol., p. 126.

a land use perspective: G-4 has limited access, which means it would not be suitable for any retail development, office development or residential use, so a substation is its highest and best use in planning terms.⁴⁷⁶

422. The G-4 site does not abut the Midtown Greenway and there is no community green space planted on the G-4 site.

423. The G-4 site includes an abandoned Xcel Energy substation site, a portion of land that is vacant and unused,⁴⁷⁷ and land owned by Mn/DOT and leased to the Metropolitan Council for parking.⁴⁷⁸ Use of the parking lot has been limited, and neither Mn/DOT nor the Met Council opposes the use of G-4 as a substation site.⁴⁷⁹ The Met Council has no plans for use of the G-4 site, and Mn/DOT considers it to be available for purchase.⁴⁸⁰

423. The G-4 site evaluated by Xcel Energy and in the FEIS did not include adjacent property owned by the Soo Line Railroad.⁴⁸¹ According to Xcel Energy, the minimum width required for the G-4 substation is 180 feet and the G-4 site is 153 feet wide, without considering adjacent railroad property.⁴⁸² The G-4 site is, thus, approximately 30 feet too narrow to meet Xcel's minimum requirements for the Hiawatha substation.⁴⁸³

424. Xcel Energy believes that the Soo Line Railroad rail lines adjacent to the G-4 site are operated by the railroad as active rail lines,⁴⁸⁴ while neighborhood observers believe they are infrequently used.⁴⁸⁵ It is unclear on this record whether the Soo Line Railroad would be willing to sell a portion of its property adjacent to the G-4 site,⁴⁸⁶ making the G-4 site feasible for the proposed Hiawatha substation.

425. If certificate of need proceedings were to determine that the Hiawatha substation configuration should be modified to accommodate a single 50 MVA transformer, rather than a potential "ultimate" design of three transformers and 15 feeder lines, the G-4 site could be feasible with or without purchase of adjacent railroad property.

2. Displacement of Green Space – Impacts on Socioeconomic Values, Land Use and Planning, Transportation, Recreation, Tourism and Urban Forestation.

⁴⁷⁶ Mains 11 Vol., pp. 101-102.

⁴⁷⁷ Mains 11 Vol., p. 109.

⁴⁷⁸ Ex. 228, p. 11 (Mn/DOT DEIS Comment Letter – Revised); Seykora 11 Vol., pp. 182.

⁴⁷⁹ Seykora 11 Vol., p. 182; Ex. 232 (Seykora Cover Email, B. Lamb Letter April 26, 2010).

⁴⁸⁰ Seykora 11 Vol., pp. 183,189.

⁴⁸¹ FEIS, pp. 46, 432.

⁴⁸² McNelly 5 Vol., p. 86; Ex. 209, p. 10 (Mains Direct).

⁴⁸³ Mains 11 Vol., p. 114.

⁴⁸⁴ Asah 13 Vol., p. 98.

⁴⁸⁵ Mains 11 Vol., pp. 93, 96. Ex. 209, p. 10 (Mains Direct).

⁴⁸⁶ See Ex. 209, p. 11 (Mains Direct) stating that the Soo Line Railroad had not considered the sale of property for the G-4 site and McNelly 5 Vol., p. 13 stating a belief that the Soo Line Railroad indicated to someone at Xcel that they were not interested in moving the rail. Neither testimony directly addresses the question of willingness to sell a strip of land for a substation to be located on the G-4 site.

426. Locating the Hiawatha substation on Xcel Energy’s preferred Hiawatha West site would displace green space that represents a long-term planned strategy for public investment in economic redevelopment, transit and transportation amenities, recreation and urban reforestation.

427. The concept of plantings along the Greenway began over ten years ago, with the idea of creating an urban amenity that would live up to hundred-year-old plans in the City of Minneapolis to connect the Minneapolis chain of lakes to the Mississippi River through south central Minneapolis.⁴⁸⁷

428. Business leaders, community groups and elected officials have put together private resources from corporations, public funds from Hennepin County and Mn/DOT and volunteers organized from neighborhoods, corporations and governmental units to plant 2,000 trees and hundreds of shrubs along the length of the Greenway.⁴⁸⁸

429. The chronology of the green space and plantings on the Hiawatha West site began in 2001 with publication of the East End Revival Plan, which identified the area as a future community green space.⁴⁸⁹ In 2004, the Seward Longfellow Greenway Area Land Use and Predevelopment Study identified the need for additional trees and green space, “industrial park reforestation” on the site.⁴⁹⁰

430. In 2006, the Conceptual Landscape for the Midtown Greenway Phase III identified the Hiawatha West site as a “gateway greenspace” and the Longfellow Community Council authorized money under its Revitalization Plan – Phase II to promote the area around the Hiawatha West site as a “brownfields to greenfields” area.⁴⁹¹ The Seward and Longfellow Greenway Area Land Use and Pre-Development Study, approved by City on Feb. 9, 2007 called for “Industrial Park Reforestation” including the location for the Hiawatha West substations.⁴⁹²

431. In 2007, the Sabo Bridge was opened, connecting the Hiawatha West area up to the Midtown Greenway. Right after the bridge opened, community planning for the Hiawatha green space began.⁴⁹³ On Arbor Day in April 2008, 234 trees and shrubs were planted immediately north of the Greenway.⁴⁹⁴ And on Arbor Day 2009, the area where the Hiawatha West site is proposed was planted with 258 trees and shrubs.⁴⁹⁵

432. Mn/DOT’s Community Roadside Landscaping Partnership Program uses trunk highway funds for the purpose of improving landscape, aesthetics and safety of highways by having the roadsides maintained in an attractive manner.⁴⁹⁶ Plantings north of the Greenway and south of

⁴⁸⁷ McLaughlin 9 Vol., p. 152.

⁴⁸⁸ McLaughlin 9 Vol., p. 153.

⁴⁸⁹ Ex. 204 (Green Space Chronology); Hart 11 Vol., p. 52; FEIS, p. 136.

⁴⁹⁰ Ex. 204 (Green Space Chronology); Hart 11 Vol., pp. 52-53; FEIS, p. 132.

⁴⁹¹ Ex. 204 (Green Space Chronology); Hart 11 Vol., p. 53.

⁴⁹² FEIS, p. 132.

⁴⁹³ Ex. 204 (Green Space Chronology); Hart 11 Vol., p. 53.

⁴⁹⁴ Ex. 204 (Green Space Chronology); Hart 11 Vol., p. 53; Ex. 42, p. 1 (Hiawatha Green Space Plans).

⁴⁹⁵ Ex. 204 (Green Space Chronology); Hart 11 Vol., p. 53; Ex. 42, p. 2 (Hiawatha Green Space Plans).

⁴⁹⁶ Seykora 11 Vol., p. 195; Ex. 233 (Mn/DOT Web Site, Landscape Partnership Program).

the Greenway on the Hiawatha West site were done under Mn/DOT's Landscape Partnership Program,⁴⁹⁷ available to communities working with volunteers to fund landscape improvements on trunk highway land owned by Mn/DOT.⁴⁹⁸

433. The Hiawatha area planting project was large enough to involve two years of work. Hennepin County applied for and was granted funds from Mn/DOT in two pieces – one application in 2007 for planting in the spring of 2008 and a second application in 2008, for planting in 2009.⁴⁹⁹

434. Mn/DOT encumbered \$30,000 for the 2009 plantings, and actual payment by Mn/DOT for plant materials was about \$28,000.⁵⁰⁰ The cost for plantings was \$57,766 for the 2008 planting and \$64,639 for the 2009 planting on the Hiawatha West site, including an estimate for volunteer time.⁵⁰¹ Approximately \$60,000 of the 2009 cost was for plant material and design,⁵⁰² and funds were raised from business donations and local governments as well as from Mn/DOT.⁵⁰³

435. Plantings on the Hiawatha West site are maintained through HCRRA contracts with Sentenced to Serve and Twin Cities Tree Trust.⁵⁰⁴

436. Both the 2008 and the 2009 agreements with Mn/DOT for funding through the Community Roadside Landscape Partnership Program contain provisions allowing the state to terminate the agreement upon notice.⁵⁰⁵

437. Mn/DOT's standard practice is to maintain full ownership and grant a permit rather than a property right such as an easement.⁵⁰⁶ The Midtown Greenway trails on the east side of Hiawatha Avenue in the Project Area⁵⁰⁷ are on Mn/DOT property for which the City of Minneapolis has a permit subject to cancellation, rather than a property ownership interest.⁵⁰⁸ The fact that the City has only a permit subject to cancellation doesn't mean that the Midtown Greenway doesn't serve an important public transportation purpose.⁵⁰⁹

438. The Hiawatha West plantings funded by Mn/DOT serve as an amenity for the Midtown Greenway to encourage bicycle and pedestrian use and also as an amenity for the Hiawatha

⁴⁹⁷ Seykora 11 Vol., p. 178-180; FEIS, pp. 113-114.

⁴⁹⁸ Seykora 11 Vol., p. 198; Ex. 233 (Mn/DOT Web Site, Landscape Partnership Program).

⁴⁹⁹ Seykora 11 Vol., pp. 179-180, 194-195.

⁵⁰⁰ Seykora 11 Vol., p. 199; Ex. 230 (Mn/DOT Agreement 2009 Planting)

⁵⁰¹ Hart 11 Vol., pp. 53-54; Ex. 205 (2008 and 2009 Planting Budget).

⁵⁰² Hart 11 Vol., p. 64.

⁵⁰³ Hart 11 Vol., pp. 64-65.

⁵⁰⁴ Springer 7 Vol., p. 135.

⁵⁰⁵ Ex. 230, p. 8 (Mn/DOT Agreement 2009 Planting); Ex. 231, pp. 7-8 (Mn/DOT Agreement 2008 Planting).

⁵⁰⁶ Seykora 11 Vol., p. 193.

⁵⁰⁷ Visible as blue lines on Ex. 171 (Aerial of Mn/DOT Property Ownership); Seykora 11 Vol., p. 192.

⁵⁰⁸ Seykora 11 Vol., pp. 192-193.

⁵⁰⁹ Seykora 11 Vol., pp. 193-194.

Avenue trunk highway.⁵¹⁰

439. Based on his experience and the location of Zimmer Davis business on the Greenway, President Tom Davis agreed that the presence of attractive plantings and green space adjacent to the Greenway enhances the recreational value of the trail.⁵¹¹

440. The plantings are significant to the Phillips, Seward and Longfellow communities and as a gateway coming across the Sabo Bridge.⁵¹² Tim Springer, Executive Director of the Midtown Greenway Coalition explained the site's importance for transit, transportation, recreation, tourism and economic vitality:

That site is at the nexus of Minnesota's two most important alternate transportation features, the Hiawatha LRT line and the Midtown Greenway as a bikeway, its only rail transit line and its busiest bikeway. And it's viewed by transit users when they for the very first time get their view of the downtown skyline when riding from the airport. It is at the base of the beautiful iconic \$5.2 million Sabo Bridge up at the Greenway. There are a lot of things coming together there, and so we see them all as working together synergistically. And so I truly believe that there is an indirect positive impact of open space at the Hiawatha West site on the tax base in Minneapolis.⁵¹³

441. If the Hiawatha West site were selected, up to 250 newly planted trees and shrubs may need to be removed, which would be inconsistent with incorporating additional green space into the city or with the creation of a pedestrian oriented district in the area.⁵¹⁴

442. Although not designated as a park, the Hiawatha West substation site is green space valued by the community and viewed as an extension of the Midtown Greenway. Construction activities and removal of vegetation from this green space would create aesthetic impacts for Greenway users.⁵¹⁵

443. The low-profile Hiawatha West substation design proposed in Xcel Energy's Routing Application⁵¹⁶ would engulf most of the site where plantings were done by the community in 2009.⁵¹⁷

444. Xcel Energy has not made any calculation for relocation or restoration of the plantings currently on the Hiawatha West site or included costs for such relocation or restoration in its cost

⁵¹⁰ Seykora 11 Vol., p. 200. See Ex. 174 (Photos of Hiawatha West Plantings April 2010), showing views looking east from Hiawatha at the top and from near the Zimmer Davis site on the bottom, as explained by Springer 7 Vol., pp. 100-101.

⁵¹¹ Davis 11 Vol., p. 30.

⁵¹² McLaughlin 9 Vol., pp. 154-155; Asah 1 Vol., p. 192.

⁵¹³ Springer 7 Vol., pp. 191, l. 23 -192, l. 11.

⁵¹⁴ FEIS, pp. 143-144, p. 18, Table ES-1.

⁵¹⁵ FEIS, p. 319.

⁵¹⁶ Ex. 1B, Figure B.7 (Application)

⁵¹⁷ Ex. 173 (Aerial Indicating Location of Plantings on Hiawatha West site); Springer 7 Vol., p. 99; Ex. 173 (Aerial Indicating Location of Plantings on Hiawatha West site).

estimates.⁵¹⁸

3. Planning for Transportation and Recreation – Midtown Greenway Connection to Lake Street.

445. In addition to planning for urban reforestation, the Seward and Longfellow Greenway Area Land Use and Pre-Development Study proposed as a high priority an extension of the Greenway to create a pedestrian and bicycle path along the east side of Hiawatha as a link to the Lake Street light-rail station.⁵¹⁹

446. The City of Minneapolis and community groups would like to see the extension of the Midtown Greenway bike path to Lake Street on the east side of Hiawatha.⁵²⁰

447. Location of a Hiawatha West low-profile substation as proposed by Xcel Energy in the Application would interfere with plans to build a leg of the Greenway trail to connect to Lake Street.⁵²¹

448. The minimum width for a bike path extension would be about 10 feet for a combined pedestrian and bicycle path and at least 5 feet clearance on either side of the path.⁵²² It would be preferable to have 12 feet for the combined path and about 10 feet for clearance, particularly on the Hiawatha Avenue side; the geometry would also have to take into account the highway entrance ramp.⁵²³

4. Mitigation of Impacts: High-Profile Design, Distance from Greenway, Replacement Green Space & Trees, Trail Extension.

449. If the Hiawatha West site is selected, the Midtown Greenway Coalition and affected community groups in Longfellow, Seward and Phillips support a high-profile design as depicted in Xcel Energy's Ex. 169B, preservation and restoration of green space between the substation and the Greenway, replacement of any lost green space in another site along the Greenway, and construction of a trail extension to Lake Street on the east side of Hiawatha Avenue.

450. The fenced or walled footprint for a high-profile design for the Hiawatha substation is approximately 233 feet by 261 feet,⁵²⁴ two-thirds the size of the low-profile design that Xcel Energy proposed for the Hiawatha West site.⁵²⁵

451. Either a high-profile or low-profile substation on the Hiawatha site would support the 50

⁵¹⁸ McNelly 5 Vol., pp. 69-70; Ex. 165 (Xcel Energy Estimates of Relocation Costs).

⁵¹⁹ FEIS, pp. 132-133.

⁵²⁰ Seykora 11 Vol., p. 205.

⁵²¹ Ex. 36, p. 30 (Springer Direct); *see* Ex. 1B, Appendix B, Figure B.7 (Application).

⁵²² Seykora 11 Vol., p. 206.

⁵²³ Seykora 11 Vol., p. 207.

⁵²⁴ Ex. 64, p. 4 (Xcel Resp. to MGC IR 2); McNelly 5 Vol., pp. 14-15.

⁵²⁵ McNelly 6 Vol., pp. 100-101; *see also* Ex. 64, p. 3 (Xcel Resp. to MGC IR 2).

MVA transformer and an additional potential two future 50 MVA transformers.⁵²⁶ There are no performance differences between the high profile design depicted in Exhibits 169A, 169B and 169C and a low-profile substation.⁵²⁷

452. Other than the size of the footprint, the primary difference between a high-profile and a low-profile design is that although both structures have a similar total height, with a high-profile design there are more structures that are taller.⁵²⁸ Labor costs to construct the high-profile station are slightly higher, but they are usually offset by the footprint savings of the grading and, in this case, the smaller diameter of the wall.⁵²⁹

453. Xcel Energy provided three depictions of alternative layouts for a high-profile design on the Hiawatha West site in Exhibits 169A, 169B and 169C.⁵³⁰

454. The layout in Ex. 169B has the substation set back to the farthest south location; at its closest point the substation wall would be approximately 175 feet from the Greenway and at the “Y” of the trail, the distance from the Greenway is approximately 220 feet.⁵³¹ The layout in Ex. 169C is approximately half that distance from the Greenway trails.⁵³²

455. Xcel Energy agrees that the layout in 169B is feasible, but may need to shift a bit further to the north if setbacks from the railway need to be adjusted.⁵³³

456. An Xcel Energy witness testified that Xcel would prefer the layout in Ex. 169C, since the site is only on Mn/DOT land and does not include railroad property.⁵³⁴ However, Mn/DOT’s witness testified that all of the high-profile layouts (Ex. 169A, 169B and 169C) include some property not owned by Mn/DOT.⁵³⁵

457. Even with the high-profile design, Xcel Energy is requesting a site for the Hiawatha West substation that extends from the Greenway on the north and nearly to Hiawatha on the west.⁵³⁶ Xcel’s requested site includes Mn/DOT property, Soo Line or CP Railroad property and Zimmer-Davis property.⁵³⁷

458. Longfellow Community Council testified that the Ex. 169A layout is unacceptable due to proximity of substation walls to the Midtown Greenway trail; it is not an improvement from the

⁵²⁶ McNelly 5 Vol., p. 26.

⁵²⁷ McNelly 6 Vol., p. 107.

⁵²⁸ Mc Nelly 5 Vol., p. 15; McNelly Vol. 6, p. 107.

⁵²⁹ McNelly 6 Vol., pp. 105-106.

⁵³⁰ McNelly 6 Vol., pp. 100-101; Ex. 169A, 169B, 169C (Hiawatha High-Profile Design Layouts).

⁵³¹ McNelly 6 Vol., p. 101; Ex. 169B (Hiawatha High-Profile Design Layouts).

⁵³² Ex. 169B, 169C (Hiawatha High-Profile Design Layouts).

⁵³³ McNelly 6 Vol., p. 103.

⁵³⁴ Asah 7 Vol., p. 63.

⁵³⁵ Seykora 11 Vol., pp. 175-176.

⁵³⁶ Asah 13 Vol., pp. 98-99. Xcel is requesting the entire Hiawatha West site depicted on Ex. 2A (Route A Map), Asah 13 Vol., pp. 71-72.

⁵³⁷ Asah 13 Vol. pp. 93-94.

initial low-profile plan.⁵³⁸ The Ex. 169C layout is inferior to Ex. 169B, since it displaces more green space; it would require more replacement green space off site; and Ex. 169B is the best of the three layouts.⁵³⁹

459. Seward Neighborhood Group testified that, if a Hiawatha West location were selected, the layout should be as far south and east as possible, as in Ex. 169B and that the substation should be located to allow an extension of the Greenway trail to Lake Street.⁵⁴⁰

460. Mn/DOT would want to keep some land immediately east of Hiawatha Avenue for maintenance and safety issues associated with highway operations, reflected in the dashed line on Ex. 171.⁵⁴¹ Otherwise, Mn/DOT has no fixed expectation regarding selling the entire tract or a portion of it; they would want to find out as a result of this proceeding how much property is needed for a substation.⁵⁴²

461. Eric Hart testified on behalf of Longfellow Community Council that if placement of the Hiawatha West substation requires the loss of green space, it should be replaced with an equal amount of green space nearby along the Midtown Greenway⁵⁴³ and Xcel Energy should be responsible for this mitigation.⁵⁴⁴

462. An example of suitable replacement green space would be some portion of the Metro Produce site, on the south side of the Midtown Greenway about 5 blocks east of Hiawatha Avenue, part of which is used for an industrial parking lot.⁵⁴⁵ The Metro Produce site was identified as the “NoLo” site in previous plans to provide green space along the Greenway.⁵⁴⁶

5. Zoning and Planning – Pedestrian and Transit Oriented District.

463. All proposed Hiawatha substation sites are industrial zoning,⁵⁴⁷ but the Hiawatha West site is partially contained in a pedestrian-oriented overlay district.⁵⁴⁸

464. The pedestrian-oriented zoning overlay reflects that this area is intended to become pedestrian-friendly⁵⁴⁹ and may place additional restrictions on uses otherwise permitted under the base zoning.⁵⁵⁰

465. Minneapolis Pedestrian Oriented Overlay Districts are “established to preserve and

⁵³⁸ Hart 11 Vol., p. 57.

⁵³⁹ Hart 11 Vol., pp. 57-58.

⁵⁴⁰ Ex. 209, pp. 11-12 (Mains Direct).

⁵⁴¹ Seykora 11 Vol., p. 174, Ex. 171 (Aerial Photo/Mn/DOT Property Ownership).

⁵⁴² Seykora 11 Vol., p. 173.

⁵⁴³ Hart 11 Vol., pp. 58-59.

⁵⁴⁴ Hart 11 Vol., p. 62.

⁵⁴⁵ Hart 11 Vol., p. 59; Ex. 207 (Aerial Photo of Metro Produce site).

⁵⁴⁶ Hart 11 Vol., p. 59; Ex. 118, Schedule 3 (Hart Direct).

⁵⁴⁷ Mogush 12 Vol. 60.

⁵⁴⁸ FEIS, p. 103; Mogush 12 Vol., p. 64; Ex. 237 (Adopted Overlay Zoning Change Map).

⁵⁴⁹ FEIS, pp. 128, 141.

⁵⁵⁰ Mogush 12 Vol., p. 76; *see also* Minneapolis City Code, Ch. 551.30.

encourage the pedestrian character of commercial areas and to promote street life and activity by regulating building orientation and design” as well as prohibiting certain automobile-oriented uses.⁵⁵¹

466. Design requirements for Minneapolis Pedestrian Oriented Overlay Districts include building placement to reinforce the street wall, maximize natural surveillance and pedestrian circulation⁵⁵² and building facades containing at least 40 percent windows on the first floor of any non-residential use facing a public street or sidewalk;⁵⁵³

467. The Hiawatha West substation site is also partially covered by the Lake Street/Midtown LRT Station Overlay District, which places additional regulations within the Pedestrian Oriented Overlay District.⁵⁵⁴

468. Transit-oriented development is intended to take advantage of the amenity provided by transit, such as fixed rail. It has characteristics such as higher housing densities, mixed land use and improvements to the public realm, such as green spaces to make the area around the station more attractive as a place to live.⁵⁵⁵

469. Minneapolis regulations for the Lake Street/Midtown LRT Station area set a 1.0 Floor Area Ratio and prohibit uses that function primarily as unoccupied buildings, such as self-storage and warehousing over 30,000 square feet in size.⁵⁵⁶

470. The removal of green space, the design of a building without natural surveillance or windows and the construction of a substation that will be unoccupied most of the time are inconsistent with the pedestrian-oriented and transit-oriented zoning applicable to a portion of the Hiawatha West site.

6. Aesthetic and Noise Impacts on Midtown Greenway Users and Adjacent Residents.

471. Hiawatha Commons is a fully-occupied multi-family residential project for low-income wage earners located to the immediate southeast of the Hiawatha West site.⁵⁵⁷ Design should mitigate and minimize impacts on this adjacent residential use.⁵⁵⁸

472. As compared to the low-profile design in the Application or the high-profile layout in Ex. 169A, Ex. 169B increases the distance from the Hiawatha substation wall to Hiawatha

⁵⁵¹ Minneapolis City Code, Ch. 551.60.

⁵⁵² Minneapolis City Code, Ch. 551.110.

⁵⁵³ Minneapolis City Code, Ch. 551.120(a).

⁵⁵⁴ Ex. 237 (Adopted Overlay Zoning Change Map); Minneapolis City Code, Ch. 551.175.

⁵⁵⁵ Mogush 8 Vol., pp. 132-133.

⁵⁵⁶ Minneapolis City Code, Ch. 551.175.

⁵⁵⁷ Berkholtz 9 Vol., p. 23. *See also* Ex. 174 top photo showing green space and Hiawatha Commons (Photos of Hiawatha West Plantings April 2010)

⁵⁵⁸ Berkholtz 8 Vol., p. 213.

Commons.⁵⁵⁹

473. Xcel is proposing a prefabricated wall on four sides of the Hiawatha station and a chain link gate.⁵⁶⁰

474. Xcel Energy's noise study report only evaluated the noise impacts of the Midtown North substation and not the proposed Hiawatha substation.⁵⁶¹ Sound limiting features proposed for the Midtown site, including sound-absorbing materials for the substation walls, an added wall adjacent to the transformers with sound-absorption material and rubber matting under the substation transformers,⁵⁶² have not been considered for the Hiawatha substation.⁵⁶³

475. Whether or not transmission lines were routed underground, the substations would include equipment that is 57 feet tall.⁵⁶⁴

476. With a high-profile substation, Xcel Energy would propose a 20-foot wall.⁵⁶⁵ Xcel has not considered either a higher wall or partial excavation of the Hiawatha West site in order to reduce the visual impact of the taller elements of the substation.⁵⁶⁶

477. The existing 115 kV transmission line along Hiawatha Avenue could be brought underground where it breaks off from Hiawatha Avenue so that it would enter the substation from underground.⁵⁶⁷

478. Longfellow Community Council adopted a resolution on March 23, 2010 summarizing design to mitigate impacts of the Hiawatha substation: 1) substation footprint must be "as small as possible"; 2) high voltage transmission lines and feeder lines must be undergrounded at least a block away from the substation; 3) the visual appearance must be aesthetically pleasing, preferably including recess of the substation below grade with berming and necessarily involving an artist and community involvement process from the start of the design process; 4) walls must border all sides and must be made graffiti resistant through vegetation on the walls or other aesthetically pleasing means; 5) native plantings and landscaping must be provided on all sides of the substation consistent with the Midtown Greenway Phase III Conceptual Landscape Plan; 6) noise must be mitigated so as not to disturb nearby residents of Hiawatha Commons.⁵⁶⁸

⁵⁵⁹ Ex. 1B, Appendix B.7 (Application) and Ex. 169A, 169B and 169C (Hiawatha High-Profile Design Layouts). Layouts in Ex. 169B and 169C place the substation about the same distance from Hiawatha Commons. McNelly 6 Vol. pp. 110-111.

⁵⁶⁰ McNelly 5 Vol. pp. 32-33.

⁵⁶¹ Asah 2 Vol., p. 16.

⁵⁶² McNelly 5 Vol., pp. 124-125.

⁵⁶³ McNelly 5 Vol., pp. 128-129.

⁵⁶⁴ McNelly 5 Vol., p. 36.

⁵⁶⁵ McNelly 6 Vol., p. 101.

⁵⁶⁶ McNelly 5 Vol., pp. 36-37.

⁵⁶⁷ Asah 7 Vol., p. 68.

⁵⁶⁸ Ex. 206 (Longfellow Mitigation Resolution); Hart 11 Vol., pp. 54-56.

F. Design and Process to Minimize Impacts for both the Midtown and Hiawatha Substations

479. The FEIS and the hearing record included recommendations to mitigation adverse impacts of substations applicable to both the Midtown and Hiawatha substations.

480. Substations could be constructed with architecturally designed perimeter walls, the surrounding area could be landscaped and any exterior lighting for security could use down shielding lights to minimize the potential for light pollution and the industrial appearance of the substation after dark.⁵⁶⁹

481. Architectural designed substation walls could be appropriate to the Project Area, considering various alternative designs⁵⁷⁰ and architecturally designed to complement the existing character of historical resources, such as the Grade Separation Historic District and the Zinsmaster Building.⁵⁷¹

482. To further mitigate the impact of the Hiawatha Substation, landscaping treatment would break up the massing of the walls and blend the site with the area immediately north that has just received landscape enhancements.⁵⁷² To further mitigate the impact of the Midtown Substation, some landscaping could be provided on all sides of the walls, especially walls facing residential properties.⁵⁷³

483. A further mitigation measure would be to change the material of fences and gates to wooden doors that have more of an architectural character while still achieving needed access and security.⁵⁷⁴

484. Sound absorbing panels as well as putting four walls around the substation could be used where necessary to help mitigate noise from the substation transformers.⁵⁷⁵ Wooden gates and an additional interior substation wall would further reduce noise levels associated with substation operations.⁵⁷⁶

485. Community intervenors have proposed that raising substation walls above 20 feet would reduce aesthetic and noise impacts. It is possible for Xcel Energy to make walls taller than 20 feet.⁵⁷⁷

486. To address concerns about graffiti and vandalism, removal of graffiti from substations

⁵⁶⁹ FEIS, p. 29, Table ES-2; p. 425, Table 6-3.

⁵⁷⁰ FEIS, p. 345. Alternative designs in the record include the Con Edison substation in Bronx, New York, Ex. 65 (Con Ed Substation Design Article) and Ex. 21, Schedule 8 (McNelly Rebuttal).

⁵⁷¹ FEIS, p. 189.

⁵⁷² FEIS, p. 346

⁵⁷³ FEIS, p. 346.

⁵⁷⁴ FEIS, p. 346.

⁵⁷⁵ FEIS, p. 30, Table ES-2; see also McNelly 5 Vol., p. 46.

⁵⁷⁶ FEIS, pp. 387-388

⁵⁷⁷ Asah 7 Vol., p. 76.

and equipment could be required as part of scheduled maintenance, to reduce indirect adverse effects on the community.⁵⁷⁸

487. The record suggests several processes, in collaboration with the HCRRA, the City of Minneapolis and community organizations to ensure development of designs that mitigate aesthetic and other impacts of the substations.

488. The FEIS suggests that Xcel Energy could work with the HCRRA to ensure that designs conform to *HCRRA Guidelines* for the Grade Separation Historic District. Development of a memorandum of agreement (MOA) with the HCRRA is suggested to address issues such as the documentation of the existing conditions, corridor restoration, vegetation restoration plans, and effects to elements within the historic district.⁵⁷⁹

489. To further reduce the potential aesthetic impact of substation walls, community artists or community organizations could be allowed to assist in the design of the substation walls or select/create exterior public art.⁵⁸⁰

490. The City of Minneapolis recommends that Xcel Energy work closely with City development and review staff on how the substations could be designed so that they don't detract from the surrounding community and that this process include community engagement.⁵⁸¹ The City would expect reimbursement from Xcel Energy for costs in design review and facilitating community engagement.⁵⁸²

491. Xcel Energy is willing to meet with the City and with neighborhood organizations or the Midtown Greenway Coalition invited by the City to review options for design prior to submitting a plan and design to the OES.⁵⁸³

Based on the foregoing Findings of Fact and the record in this proceeding, the ALJ makes the following:

CONCLUSIONS

1. The Public Utilities Commission and Administrative Law Judge have jurisdiction to consider Xcel Energy's Application for a Route Permit.
2. The Commission determined that the Application was substantially complete and accepted the Application on May 26, 2009.
3. OES has conducted an appropriate environmental analysis of the Project for purposes of this route permit proceeding and the FEIS satisfies Minn. R. 7850.2500. Specifically, the FEIS

⁵⁷⁸ FEIS, p. 300.

⁵⁷⁹ FEIS, p. 189.

⁵⁸⁰ FEIS, p. 346; *see also* Ex. 36, p. 31 (Springer Direct); Ex. 206 (Longfellow Mitigation Resolution).

⁵⁸¹ Berkholtz 8 Vol., pp 206-209.

⁵⁸² Berkholtz 8 Vol., p. 209.

⁵⁸³ Asah 7 Vol., pp. 60-61.

addresses the issues and alternatives raised through the scoping process in light of the availability of information and the time limitations for considering the permit application, provides responses to the timely substantive comments received during the DEIS review process, and was prepared in compliance with the procedures in Minn. R. 7850.1000-7850.5600.

4. Xcel Energy gave notice as required by Minn. Stat. § 216E.03, subd. 3a; Minn. Stat. § 216E.03, subd. 4; Minn. R. 7850.2100, Subp. 2; Minn. R. 7850.2100, Subp. 4.

5. OES gave notice as required by Minn. Stat. § 216E.03, subd. 6; Minn. R. 7850.2300, Subp. 2; Minn. R. 7850.2500, Subp. 2; Minn. R. 7850.2500, Subp. 7; Minn. R. 7850.2500, Subp. 8; and Minn. R. 7850.2500, Subp. 9.

6. Public hearings were conducted in the community near the proposed high voltage transmission line routes. Xcel Energy and OES gave proper notice of the public hearings, and the public was given the opportunity to speak at the hearings and to submit written comments. All procedural requirements for the Route Permit were met.

7. The evidence on the record demonstrates that Route D satisfies the route permit criteria set forth in Minnesota Statute § 216E.03, subd. 7 and Minnesota Rule 7850.4100.

8. Overhead Route E2 is not a feasible or prudent route due to displacement of homes and buildings and conflicts with federal highway rules.

9. Overhead Routes A1, B and C present a potential for significant adverse environmental effects pursuant to the Minnesota Environmental Rights Act (“MERA”) and the Minnesota Environmental Policy Act (“MEPA”), due to impacts on historic resources.

10. Overhead Routes A1, B and C present impacts inconsistent with routing criteria due to proximity to homes, socioeconomic impacts on housing and economic development, and impacts on transportation, recreation and aesthetics.

11. Overhead Routes A1, B and C would create disproportionate impacts to minority and low-income residents in the project area, while creating benefits in a wider geographic area with proportionately fewer low-income and minority residents.

12. None of the proposed overhead routes for the Hiawatha Project are consistent with statutory and rule criteria under MEPA, MERA, Minnesota Statute § 216E.03, subd. 7 and Minnesota Rule 7850.4100.

13. Under the particular circumstances of this record, the underground route selected in these proceedings is a standard facility, for which costs should be borne by the entire Xcel Energy Midwest general rate base.

14. Underground Routes A2 and A3 present a potential for significant environmental effects pursuant to the MERA and MEPA, which underground Route D would avoid.

15. Underground Routes A2 and A3 present a potential for significant conflict with transportation, transit, transit stations, replacement and renovation of bridge infrastructure and recreation along the Midtown Greenway, which underground route D would avoid.
16. The evidence on the record demonstrates that underground Route D is the best alternative for the 115 kV transmission lines between the proposed Midtown substation and Hiawatha substation pursuant to Minnesota Statute § 216E.03, subd. 7 and Minnesota Rule 7850.4100.
17. Potential adverse impacts of Route D can be minimized by aligning the transmission lines as close to the center of the East 28th Street as feasible.
18. The Midtown North site is the best alternative on the record for the Midtown substation if it is constructed to avoid impacts on historic resources.
19. Construction of the Midtown North substation has the potential to impair protected historic resources, through impacts to the NRHP-listed Grade Separation Historic District, which impacts should be avoided.
20. If it is determined that there is no need to accommodate three 50 MVA transformers and 15 feeder circuits at the Hiawatha substation, the G-4 is a feasible and prudent alternative for the Hiawatha substation that minimizes adverse impacts.
21. If there will be a future need to accommodate three 50 MVA transformers and 15 feeder circuits at the Hiawatha substation, under appropriate conditions to minimize impacts, the Hiawatha West site is the best alternative on the record for the Hiawatha substation.
22. Construction of the Hiawatha substation on the Hiawatha West site will displace community green space, which has been planned, publicly funded, planted and serves a public purpose.
23. Construction of both the Midtown and the Hiawatha substations has the potential to conflict with the character of local land uses and zoning and to constrain development of pedestrian and bicycle transportation as well as to create adverse aesthetic, noise and public safety impacts.
24. The Route Permit should include conditions to mitigate and minimize potential adverse impacts of the Midtown and Hiawatha substations.
25. The Route Permit should require Xcel Energy to obtain all required local, state, and federal permits and licenses, to comply with the terms of those permits or licenses, and to comply with all applicable rules and regulations.

Any Findings more properly designated Conclusions are hereby adopted as such.

Based upon these Conclusions, the Administrative Law Judge makes the following:

RECOMMENDATIONS

I. That, should the Commission determine that the high voltage transmission lines and substations proposed by Xcel Energy are needed, the Commission issue to Xcel Energy the following permit for the Hiawatha Project:

- A. A route permit for a double circuit 115 kV high voltage transmission line with a 1250 kcmil conductor along Route D, underground on East 28th Street, as depicted in Exhibits 5A-5D, with an alignment as close to the center of the street as is feasible, which alignment shall be finalized in consultation with the Minneapolis Department of Public Works.
- B. Said route permit will be subject to the following conditions:
 1. The Midtown substation will be designed in conformance with the HCRRA Guidelines for the Grade Separation Historic District and the Applicant will enter into a memorandum of agreement with the HCRRA regarding protection of historic resources of the Historic District and adjacent historic properties.
 2. Xcel Energy shall construct a pedestrian promenade on the northern rim of the Greenway adjacent to the Midtown substation along with appropriate landscaping and lighting consistent with the Midtown Greenway Land Use and Development Plan and provide the HCRRA or the City of Minneapolis with an appropriate easement to secure continuing public use of the property for a pedestrian promenade.
 3. The Hiawatha Substation will be a high-profile design oriented and located on the Hiawatha West site as illustrated in Exhibit 169B, providing at least 170 feet of distance from the substation walls to the Midtown Greenway trails on the north and sufficient distance from Hiawatha Avenue on the east to construct a bicycle/pedestrian path with appropriate setbacks.
 4. Xcel Energy shall replace and restore community green space and plantings north of the Hiawatha substation to the Midtown Greenway trails, designed in accordance with the Midtown Greenway Coalition and affected community organizations, and shall provide the HCRRA or the City of Minneapolis with an appropriate easement to secure continuing use of the property for community green space.
 5. Xcel Energy shall secure replacement green space along the Midtown Greenway for any green space unavoidably lost as a result of the Hiawatha West substation footprint, in consultation with the Midtown Greenway Coalition and affected community organizations.
 6. Xcel Energy shall construct a bicycle/pedestrian trail extension from the Midtown Greenway to Lake Street on the Hiawatha West site immediately east of Hiawatha Avenue and shall provide the HCRRA or the City of Minneapolis with an appropriate easement to secure continuing use of the property for trail purposes.

7. Xcel Energy will design the Midtown and the Hiawatha substations, including height of walls, design and articulation of walls, landscaping, lighting and noise attenuation using a process that includes City of Minneapolis staff review, review and input by the Midtown Greenway Coalition and affected community organizations, and employment of an artist to mitigate impacts of the substation on users of the Midtown Greenway and the surrounding residents, businesses, historic resources and users of trails and/or transit.
8. Xcel Energy will investigate concerns raised by intervening parties regarding distribution equipment reliability deficits in the Phillips neighborhoods and repair or replace any equipment found by Xcel to be deficient.

II. That, should the Commission determine that the high voltage transmission lines proposed by Xcel Energy are needed, but the need to accommodate future additional transformers is not established, the Commission shall issue to Xcel Energy the permit for the Hiawatha Project described in I(A) and I(B)(1), I(B)(2), I(B)(7) and I(B)(8), except that the Hiawatha Substation shall be sited at the location identified in the record as site G-4.

THIS REPORT IS NOT AN ORDER AND NO AUTHORITY IS GRANTED HEREIN. THE MINNESOTA PUBLIC UTILITIES COMMISSION WILL ISSUE THE ORDER WHICH MAY ADOPT OR DIFFER FROM THE PRECEDING RECOMMENDATION.

Dated on _____

Beverly Jones Heydinger
Administrative Law Judge