

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

IN THE MATTER OF THE APPLICATION OF
ITC MIDWEST LLC FOR A ROUTE PERMIT
FOR THE MINNESOTA - IOWA 345 kV
TRANSMISSION LINE PROJECT IN
JACKSON, MARTIN, AND FARIBAULT
COUNTIES, MINNESOTA

PUC DOCKET No. ET6675/TL-12-1337
OAH DOCKET No. 60-2500-30782

**ITC MIDWEST LLC'S POST-HEARING BRIEF
IN SUPPORT OF ITS APPLICATION FOR A ROUTE PERMIT**

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I. INTRODUCTION

ITC Midwest LLC (“ITC Midwest”) respectfully submits this Post-Hearing Brief (“Brief”) and Proposed Findings of Fact, Conclusions of Law, and Recommendation (“Proposed Findings”) to the Administrative Law Judge (“ALJ”) for the Minnesota - Iowa 345 kV Transmission Project and Associated Facilities in Jackson, Martin, and Faribault Counties, Minnesota. The term “Project” as used with respect to the Route Permit refers to the Minnesota portion of the Minnesota - Iowa 345 kV Transmission Project and does not include any portion of the 345 kV transmission line in Iowa. ITC Midwest requests that the ALJ recommend Modified Route A, and the associated facilities proposed in its Route Permit Application, the Project.

After a thorough proceeding, the record has been fully developed on the Route Permit Application to enable the ALJ and the Minnesota Public Utilities Commission (“Commission”) to assess the effects of the Project on human settlement, land-based economies, archaeological and historic sites, rare and unique resources, flora and fauna, watercourses and wetlands, and other environmental impacts to determine the appropriate route for the Project.

ITC Midwest appreciates the input from landowners, agencies, local units of government, and other stakeholders to help inform the Route Permit proceeding. This input was obtained through pre-application open houses held in September 2012, environmental impact statement (“EIS”) scoping meetings and written comments, draft EIS (“DEIS”) public information meetings and written comments, and public hearings and subsequent written comments.

This Brief in Support of ITC Midwest’s Application for a Route Permit and the Proposed Findings¹ details ITC Midwest’s proposal, the applicable law, and record. These submissions show that ITC Midwest has satisfied all requirements for a Route Permit for the Project. ITC Midwest respectfully requests that the ALJ conclude that Modified Route A best meets the criteria in Minnesota Statutes Section 216E.03, subdivision 7 and Minnesota Rule 7850.4100, and recommend a route width of primarily 1,000 feet, with a route width of up to 2,200 feet in certain identified areas, to address site-specific concerns and allow ITC Midwest to work with state agencies and stakeholders to determine the final alignment of the transmission lines. ITC Midwest also requests that the ALJ recommend the Commission include the proposed expansion of the Lakefield Junction Substation, ITC Midwest’s proposed location for the Huntley Substation, and the proposed relocation of 69 kV and 161 kV associated facilities in the Route Permit for the Project.

This Brief is organized to first provide a summary of the Project and the routes proposed by ITC Midwest. Then, the Brief evaluates the routes proposed by ITC Midwest against the factors identified in Minnesota Rule 7850.4100 to establish that Modified Route A best balances these factors and addresses agency issues or concerns. Lastly, this Brief compares Modified Route A against the routes evaluated in the DEIS (“Route Alternatives”) and discusses, at a high level, why these Route Alternatives, although generally similar in potential impacts from a numerical comparison, are inferior to Modified Route A based on additional operational and construction considerations.

¹ ITC Midwest has provided the ALJ a separate brief and findings of fact on its application for a Certificate of Need.

II. PROCEDURAL BACKGROUND

The procedural history for the Project is provided in the Proposed Findings submitted in this Docket.

III. PROJECT PROPOSAL

A. Summary of the Project

The Project is part of ITC Midwest's Minnesota - Iowa 345 kV Transmission Project which is, in turn, part of the Midcontinent Independent System Operator, Inc.'s ("MISO") Multi-Value Project 3 ("MVP 3").² MVP 3 is comprised of a 345 kV transmission line and substations in Minnesota and Iowa.³ MVP 3 will be constructed and owned by ITC Midwest and MidAmerican Energy Company ("MidAm").

MVP 3 starts at the Lakefield Junction Station near Lakefield, Minnesota and heads east to the Huntley Substation near Winnebago and Huntley, Minnesota before turning south to the Ledyard Substation near Ledyard, Iowa and on to the new Kossuth County Substation near Burt, Iowa.⁴ At the Kossuth County Substation, one 345 kV transmission line heads west to Sanborn, Iowa while a second 345 kV transmission line heads south to Fort Dodge, Iowa.⁵

ITC Midwest will own the 345 kV transmission line and associated facilities from the Lakefield Substation east to the Huntley Substation, then south to the Ledyard Substation and on to the Kossuth County Substation (the Minnesota - Iowa 345 kV Transmission Project).⁶ MidAm will own the Kossuth

² Ex. 7 at 1 (Route Permit Application).

³ Ex. 7 at 1 (Route Permit Application).

⁴ Ex. 7 at 1 (Route Permit Application).

⁵ Ex. 7 at 1 (Route Permit Application).

⁶ Ex. 7 at 1 (Route Permit Application).

County Substation and the 345 kV line west from the Kossuth County Substation to Sanborn, Iowa and the 345 kV line south from the Kossuth County Substation to Webster Substation north of Fort Dodge, Iowa.⁷

In total, ITC Midwest's portion of MVP 3 consists of approximately 75 miles of 345 kV transmission line in Minnesota and 25 miles of 345 kV transmission line in Iowa.⁸

ITC Midwest has proposed to construct the Project on 161 kV/345 kV double-circuit capable structures.⁹ There are locations where triple-circuit capable structures are proposed to be installed for certain routes in the record.¹⁰ Depending on the route selected for the Project, the new 345 kV circuit would either be co-located with existing 161 kV or 69 kV transmission lines or only the 345 kV circuit arms would be installed and conductors strung at the time of initial construction, leaving the 161 kV position open if future conditions warrant installation.¹¹

The Project includes several associated facilities.¹² ITC Midwest has proposed to expand the existing Lakefield Junction Substation, construct a new Huntley Substation, and decommission and remove the existing Winnebago Junction Substation.¹³ As a result of decommissioning the Winnebago Junction

⁷ Ex. 7 at 1 (Route Permit Application).

⁸ Ex. 7 at 1 (Route Permit Application).

⁹ Ex. 7 at 10 (Route Permit Application).

¹⁰ Ex. 25 at 28 and 30 (Testimony - Direct Testimony and Schedules of Jack Middleton ("Middleton Direct")); Ex. 32 at 16 (Rebuttal Testimony and Schedules of Jack Middleton ("Middleton Rebuttal")).

¹¹ Ex. 7 at 10 (Route Permit Application); Ex. 24 at 33 (Testimony - Direct Testimony and schedules of William Richard Coeur ("Coeur Direct")); Ex. 25 at 28 and 30 (Middleton Direct); Ex. 32 at 15-16 (Middleton Rebuttal).

¹² Ex. 7 at 11-12 (Route Permit Application).

¹³ Ex. 7 at 11-12 (Route Permit Application).

Substation and constructing the new Huntley Substation, four 161 kV transmission lines and three 69 kV transmission lines (rebuilt to 161 kV standards as part of the Project), would be moved from the Winnebago Junction Substation to the new Huntley Substation.¹⁴ The expansion at the Lakefield Junction Substation will require approximately 2.7 acres of new graded and fenced area.¹⁵ ITC Midwest has entered into a purchase agreement for more land than is necessary for the graded and fenced area to provide a buffer between the Lakefield Junction Substation and the adjacent landowners.¹⁶ The Huntley Substation at the location proposed by ITC Midwest will require approximately 12 acres of fenced area.¹⁷ To accommodate the fenced area, property setbacks, line clearances, grading, and ponding requirements for this substation, ITC Midwest acquired a 40-acre parcel for the Huntley Substation.¹⁸

B. ITC Midwest's Application for a Certificate of Need

Approximately one week before submitting its application for a Route Permit, ITC Midwest submitted an application for a Certificate of Need to the Commission for the Minnesota - Iowa 345 kV Transmission Project.¹⁹ The Commission ordered that the applications be reviewed under a joint proceeding and combined environmental review.²⁰ The Certificate of Need for the Project is

¹⁴ *Id.* Ex. 7 at 11-12 (Route Permit Application).

¹⁵ Ex. 28 at 18 (Rebuttal Testimony and Schedules of Amy Ashbacker (“Ashbacker Rebuttal”).

¹⁶ Ex. 28 at 18 (Ashbacker Rebuttal).

¹⁷ Ex. 21 at 19 (Testimony - Direct Testimony and Schdeule of Amy Ashbacker (“Ashbacker Direct”).

¹⁸ Ex. 21 at 19 (Ashbacker Direct). In this Brief, “Proposed Huntley Substation” refers to the substation site owned by ITC Midwest.

¹⁹ Ex. 6 (Certificate of Need Application).

²⁰ Ex. 516 at 3 (Certificate of Need Completeness Order); Ex. 526 at n.4 (Route Permit Notice and Order for Hearing).

also presently at issue before the ALJ, and ITC Midwest has provided a separate brief regarding its Application for a Certificate of Need for the Minnesota - Iowa 345 kV Transmission Project.

C. ITC Midwest's Proposed Routes and Recommendation

On March 28, 2013, ITC Midwest submitted a Route Permit Application identifying two proposed routes: Route A and Route B.²¹ On February 24, 2014, in Direct Testimony, ITC Midwest proposed Modified Route A, which differs from Route A in four locations.²² These routes are shown on Exhibits 35-B, 35-C, 35-D, 35-E, and 35-F.²³ All three routes proposed by ITC Midwest are approximately 75 miles long.²⁴ Route A, Route B, and Modified Route A all originate at the Lakefield Junction Substation and head east to a 40-acre parcel purchased by ITC Midwest for the Huntley Substation before turning south to terminate at the Iowa Border where the existing Lakefield Junction - Fox Lake - Winnebago - Faribault - Winnco 161 kV Transmission Line ("Lakefield to Border 161 kV Transmission Line") crosses the border between Minnesota and Iowa.²⁵

1. *Route A*

Route A primarily follows the existing Lakefield to Border 161 kV Transmission Line owned by ITC Midwest from the Lakefield Junction Substation east to the Huntley Substation site and south to the Iowa border.²⁶

²¹ Ex. 7 at 10 and Figure 1 (Route Permit Application).

²² Ex. 24 at 23 (Coeur Direct); Ex. 25 at 19 (Middleton Direct).

²³ Ex. 35 (Other - Maps of Routes under Consideration Available in Large Format at Public Hearings ("Large Format Maps")).

²⁴ Ex. 7 at 1 and 10 (Route Permit Application); Ex. 24 at 5 (Coeur Direct).

²⁵ Ex. 24 at Schedules 2, 3, 5, and 12 (Coeur Direct).

²⁶ Ex. 7 at 10 (Route Permit Application); Ex. 24 at 8 (Coeur Direct).

Route A co-locates the new 345 kV transmission line with the existing Lakefield to Border 161 kV Transmission Line for approximately 56 miles of its 73-mile length.²⁷ Route A does not follow the existing Lakefield to Border 161 kV Transmission Line north of the Jackson Municipal Airport, at Fox Lake, at Lake Charlotte, for a short distance west of the Winnebago Junction Substation, and in locations where development close to the existing right-of-way precludes co-location along the same alignment.²⁸

2. *Route B*

Route B is located less than two miles from Route A for almost the entirety of its length.²⁹ Route B does not propose to co-locate the 345 kV transmission line with existing transmission line infrastructure, except for a short portion near the Proposed Huntley Substation.³⁰ Instead, Route B primarily follows field lines, section lines, and roadways.³¹ ITC Midwest proposes using 161 kV/345 kV double-circuit structures for Route B to allow future co-location of a 161 kV transmission line should conditions warrant.³²

3. *Modified Route A*

Modified Route A primarily follows Route A but differs from Route A in four locations.³³ Modified Route A differs from Route A at the Des Moines River, Fox Lake, Lake Charlotte, and the Blue Earth River south of the Proposed

²⁷ Ex. 24 at 9 (Coeur Direct).

²⁸ Ex. 7 at VI and 73-74 (Route Permit Application); Ex. 24 at 9 (Coeur Direct).

²⁹ Ex. 24 at 10 (Coeur Direct).

³⁰ Ex. 7 at 81 (Route Permit Application); Ex. 24 at 10 (Coeur Direct).

³¹ Ex. 7 at 81 (Route Permit Application); Ex. 24 at 10 (Coeur Direct).

³² Ex. 7 at 10 (Route Permit Application); Ex. 24 at 10 (Coeur Direct).

³³ Ex. 25 at 19 (Middleton Direct).

Huntley Substation.³⁴ Additionally, Modified Route A has a narrower route width near the Iowa border than Route A.³⁵ Further, Modified Route A has one slight alignment modification from Route A's application alignment east of the Des Moines River and north of the Jackson County Municipal Airport along 820th Street.³⁶ The modifications from Route A to Modified Route A incorporate several route modifications proposed during the EIS scoping process.³⁷

At the Des Moines River, Modified Route A is proposed to cross the river perpendicularly and increase the distance of the north-south portion from the Des Moines River banks.³⁸

At Fox Lake, Route A crosses to the south of Interstate 90, remaining within 100 feet of I-90, before it reaches State Highway 4 from the west.³⁹ Instead of crossing to the south of Interstate 90 before reaching State Highway 4, Modified Route A remains north of I-90 as it crosses State Highway 4 from the west until approximately 100 feet east of the existing double-circuit 69 kV transmission line.⁴⁰ At this location, Modified Route A picks up the 69 kV transmission line currently located along 125th Street, co-locating it on 345 kV/161 kV/69 kV triple-circuit structures leaving the 161 kV position open, and crossing south of I-90 for approximately 1.5 miles before crossing back north

³⁴ Ex. 25 at 19 (Middleton Direct). The route modification to Modified Route A from Route A at the Blue Earth River south of the Proposed Huntley Substation also includes a slight alignment modification from F1-R/HI-1 as identified in the EIS Scoping Decision/DEIS. Ex. 24 at Schedule 11 (Coeur Direct); Ex. 25 at 19 and Schedule 10 (Middleton Direct); Ex. 105 at Map Sheet 5 (EIS Scoping Decision); Ex. 108A at Map 3-16 (DEIS).

³⁵ Ex. 25 at 19 (Middleton Direct).

³⁶ Ex. 25 at 19 (Middleton Direct).

³⁷ Ex. 25 at 19 (Middleton Direct).

³⁸ Ex. 25 at 20 (Middleton Direct).

³⁹ Ex. 25 at 23 (Middleton Direct).

⁴⁰ Ex. 25 at 24 (Middleton Direct).

to rejoin Route A.⁴¹ Modified Route A then continues along the existing 69 kV transmission line and Route A until the point where Route A and Route B intersect at 140th Street.⁴² Modified Route A turns east along Route B/140th Street to 130th Avenue before turning north along 130th Avenue for approximately 2.5 miles to Route A.⁴³

At Lake Charlotte, Modified Route A turns south from Route A approximately one mile west of where Route A turns south and continues in this direction for approximately 0.5 mile.⁴⁴ Modified Route A then turns east and continues approximately 3.2 miles along 160th Street before turning north along a field line to the existing Lakefield to Border 161 kV Transmission line and then east to rejoin Route A.⁴⁵

South of the Proposed Huntley Substation, ITC Midwest has encountered maintenance concerns through the Blue Earth River riparian area with the existing Lakefield to Border 161 kV Transmission Line.⁴⁶ Additionally, the Minnesota Department of Natural Resources (“MnDNR”) indicated a preference for the existing Lakefield to Border 161 kV Transmission Line to be removed from this riparian area.⁴⁷ Modified Route A still includes the existing Lakefield to Border 161 kV Transmission Line right-of-way, but provides an alignment that would place the Project close to the edge of a cultivated field.⁴⁸ Modified Route A

⁴¹ Ex. 25 at 24 (Middleton Direct).

⁴² Ex. 25 at 24 (Middleton Direct).

⁴³ Ex. 25 at 24 (Middleton Direct).

⁴⁴ Ex. 25 at 29 (Middleton Direct).

⁴⁵ Ex. 25 at 29 (Middleton Direct).

⁴⁶ Ex. 25 at 31 (Middleton Direct).

⁴⁷ Ex. 103B at 3 (Written Agency Comments on the Scope of EIS).

⁴⁸ Ex. 103B at 3 (Written Agency Comments on the Scope of EIS).

removes transmission infrastructure from the Blue Earth River riparian area as the 161 kV line would be co-located with the Project.⁴⁹

4. *Recommended Route*

ITC Midwest continues to support Modified Route A for the Project and discusses the anticipated impacts of the route according to each of the factors identified in Minnesota Statutes Section 216E.03, subdivision 7, and Minnesota Rule 7850.4100 in Section IV of this Brief. ITC Midwest believes that Modified Route A is the most prudent and feasible route and suggests specific Route Permit Conditions that should be required for the Project.

D. Proposed Route Width

ITC Midwest requested a route width up to 1,000 feet for the majority of the length of the routes it has proposed in accordance with Minnesota Statutes Section 216E.02, subdivision 1.⁵⁰ In specific areas, ITC Midwest initially requested a route with up to 1.25 miles in width in two areas along Route A, one area along Route B, and five areas along Modified Route A.⁵¹

- For Route A, ITC Midwest requested a route width of 1,800 feet near the interchange of I-90 and State Highway 4 to provide flexibility in coordinating routing near the interchange consistent with the requirements of the Minnesota Department of Transportation (“MnDOT”).⁵²

⁴⁹ Ex. 103B at 3 (Written Agency Comments on the Scope of EIS).

⁵⁰ Ex. 7 at 14 (Route Permit Application); Ex. 24 at 28 (Coeur Direct); Ex. 25 at 33 (Middleton Direct).

⁵¹ Ex. 7 at 14 (Route Permit Application); Ex. 24 at 28 (Coeur Direct); Ex. 25 at 33-34 (Middleton Direct).

⁵² Ex. 7 at 14 (Route Permit Application).

- For both Route A and Route B, ITC Midwest requested a route width of 1.25 miles from 30th Street in Pilot Grove Township south to the Iowa border to provide flexibility in coordinating routing of the Project with the Iowa portion of the Minnesota - Iowa 345 kV Transmission Project.⁵³ The route width of Modified Route A from 30th Street to the Iowa border was narrowed from the 1.25 miles requested for Route A to 1,000 feet by ITC Midwest during the Route Permit proceeding.⁵⁴
- ITC Midwest proposed expanding the route width for Route B west and south of the Center Creek Wildlife Management Area (“WMA”) to 3,500 feet to locate the route outside the recently-acquired WMA boundaries.⁵⁵ Additionally, Route B requires a 1,000-foot wide connector segment between Route B and the existing Lakefield to Border 161 kV Transmission Line that runs on the north side of the Iowa border.⁵⁶

ITC Midwest requests a route width wider than 1,000 feet for Modified Route A in five locations to address specific land use concerns: (1) Des Moines River (1,400 feet); (2) south of Lake Charlotte (1,200 feet); (3) east of Lake Charlotte near State Highway 15 (1,400 feet); (4) south of and adjacent to the Proposed Huntley Substation (2,200 feet); and (5) along the Blue Earth River

⁵³ Ex. 7 at 14 (Route Permit Application).

⁵⁴ Ex. 24 at 29 and Schedule 12 (Coeur Direct).

⁵⁵ Ex. 17 (Comments - ITC Midwest Scoping Period Comment Letter and Attachments); Ex. 25 at 34 (Middleton Direct).

⁵⁶ Ex. 24 at 29 and Schedule 12 (Coeur Direct).

south of the Proposed Huntley Substation (1,700 feet).⁵⁷ These wider route widths are proposed for the following reasons:

- The increased route width at the Des Moines River is to provide additional flexibility to work with both the MnDNR and landowners, as practicable, to design the most appropriate crossing of the Des Moines River.⁵⁸
- Additional route width south of Lake Charlotte along 160th Street is requested to work around a residence in this area.⁵⁹
- An increased route width east of Lake Charlotte and west of State Highway 15 is requested to work around existing agricultural operations and residences in this area.⁶⁰
- ITC Midwest requests additional route width south of the Proposed Huntley Substation to ensure that the Project, including its associated facilities, can all be routed in and out of the substation as necessary.⁶¹
- Finally, a route width greater than 1,000 feet along the Blue Earth River south of the Proposed Huntley Substation is requested to move the existing 161 kV transmission line and co-locate it with the Project out of the Blue Earth River riparian area.⁶²

⁵⁷ Ex. 24 at 28 (Coeur Direct); Ex. 25 at 33-34 (Middleton Direct).

⁵⁸ Ex. 25 at 34 (Middleton Direct).

⁵⁹ Ex. 25 at 34 (Middleton Direct).

⁶⁰ Ex. 25 at 34 (Middleton Direct).

⁶¹ Ex. 25 at 34 (Middleton Direct).

⁶² Ex. 25 at 34 (Middleton Direct).

E. Right-of-Way Requirements

A 200-foot wide right-of-way will be needed for the 345 kV transmission line portions of the Project, except for the limited area crossing the Pilot Grove Lake Waterfowl Production Area (“WPA”).⁶³ Within the 200-foot right-of-way, ITC Midwest will have vegetation management rights, will place its transmission line structures in the centerline of the right-of-way, and will prohibit placement of other structures within the center 150-foot area.⁶⁴ In the outer 25 feet on either side of this center 150-foot area of the 200-foot easement, ITC Midwest will ensure that no structures or other improvements are constructed in this outer 25 feet that pose a safety concern to the Project.⁶⁵ This 200-foot width provides sufficient area to ensure safe and reliable operation of the line in compliance with National Electric Safety Code (“NESC”), North American Electric Reliability Corporation (“NERC”), and ITC Midwest standards.⁶⁶ The easements ITC Midwest plans to acquire will not allow ITC Midwest to manage vegetation beyond the 200-foot easement without additional rights or permission obtained from landowners.⁶⁷

Along Route A and Modified Route A, a narrower right-of-way is proposed in the Pilot Grove Lake WPA. These routes traverse the WPA along the centerline of the existing Lakefield to Border 161 kV Transmission Line.⁶⁸ The existing right-of-way through the WPA is 100 feet.⁶⁹ The right-of-way for the

⁶³ Ex. 7 at 34 (Route Permit Application).

⁶⁴ Ex. 7 at 34 (Route Permit Application).

⁶⁵ Ex. 7 at 34 (Route Permit Application).

⁶⁶ Ex. 21 at 8 (Ashbacker Direct); Evidentiary Hearing Transcript (“Ev. Hrg. Tr.”) at 27-28 (Ashbacker).

⁶⁷ Ev. Hrg. Tr. at 28 (Ashbacker).

⁶⁸ Ex. 7 at 79 (Route Permit Application).

⁶⁹ Ex. 7 at 257 (Route Permit Application).

Project through the Pilot Grove Lake WPA will be 100 feet.⁷⁰ ITC Midwest's existing easements provide broad rights to manage vegetation beyond the 100-foot right-of-way that might interfere with the safe operation of the transmission line.⁷¹ ITC Midwest determined that given the objectives of the United States Fish and Wildlife Service ("USFWS") for managing WPA land and the broad vegetation management rights under the existing easements, the narrower right-of-way is acceptable in this limited area.⁷²

For the 161 kV associated facilities requiring reconfiguration from the Winnebago Junction Substation to the Proposed Huntley Substation that will not be co-located with a 345 kV transmission line, ITC Midwest requires a 150-foot right-of-way.⁷³ Several of these reconfigured lines can be co-located to reduce the need for additional right-of-way.⁷⁴ Because the distance between the Winnebago Junction Substation and the Proposed Huntley Substation is short (approximately 1.5 miles with two 161 kV lines proposed to be constructed in parallel for approximately 0.75 mile), a reduced right-of-way is possible to allow construction of up to five circuits on three parallel, overlapping rights-of-way.⁷⁵ For this reason, ITC Midwest proposes a right-of-way of 250 feet instead of 450 feet between 170th Street and the Proposed Huntley Substation.⁷⁶

⁷⁰ Ex. 21 at 9 (Ashbacker Direct).

⁷¹ Ex. 21 at 9 (Ashbacker Direct).

⁷² Ex. 21 at 9 (Ashbacker Direct).

⁷³ Ex. 21 at 10 (Ashbacker Direct); Ev. Hrg. Tr. at 28-29 (Ashbacker).

⁷⁴ Ex. 7 at 214 (Route Permit Application).

⁷⁵ Ex. 24 at 14 (Coeur Direct).

⁷⁶ Ex. 7 at 21 (Route Permit Application); Ex. 25 at Schedule 2 (Middleton Direct).

F. ITC Midwest's Proposed Associated Facilities

In its Route Permit Application, ITC Midwest offered one proposal for the associated facilities, including substations and 161 kV transmission lines.⁷⁷ The associated facilities are as follows:

- Substations: ITC Midwest identified that its existing Lakefield Junction Station would need to be expanded for the Project and that the space limitations at its existing Winnebago Junction Substation required a new substation location, the Proposed Huntley Substation.⁷⁸ ITC Midwest initially investigated expanding the Winnebago Junction Substation, but determined that the property at the site was not sufficient in size to allow the required expansion for the Project's 345 kV equipment.⁷⁹ Further, much of the Winnebago Junction Substation 69 kV and 161 kV equipment, including breakers and the control building, was original to the 1950s construction.⁸⁰ Equipment of this vintage is approaching the end of its operational life and would need to be replaced in the near term.⁸¹ In light of this, ITC Midwest identified and acquired the Proposed Huntley Substation property, located slightly over one mile south of the Winnebago Junction Substation.⁸² ITC Midwest proposes, as part of the Project, to decommission and remove all substation

⁷⁷ Ex. 7 at § 2.4 (Route Permit Application).

⁷⁸ Ex. 7 at 16-18 (Route Permit Application).

⁷⁹ Ex. 7 at 18 (Route Permit Application).

⁸⁰ Ex. 7 at 18 (Route Permit Application).

⁸¹ Ex. 7 at 18 (Route Permit Application).

⁸² Ex. 7 at 19 (Route Permit Application).

infrastructure from the Winnebago Junction Substation parcel after the Huntley Substation is constructed and energized.⁸³

- 161 kV Associated Facilities: Because ITC Midwest proposes to decommission the Winnebago Junction Substation, four 161 kV transmission lines and three 69 kV transmission lines that currently terminate at the site will need to be reconfigured to terminate at the Huntley Substation.⁸⁴ The 69 kV transmission lines to be reconfigured are proposed to be constructed to 161 kV standards.⁸⁵ ITC Midwest's proposed reconfiguration co-locates these transmission lines where possible to minimize additional right-of-way requirements.⁸⁶ This reconfiguration is not anticipated to increase impacts to the natural environment in the area and will remove a 161 kV transmission line from a National Wetland Inventory ("NWI") wetland.⁸⁷ The reconfigured transmission lines will be placed primarily within widened, but existing, 161 kV transmission line rights-of-way and along roadways.⁸⁸ ITC Midwest's proposed 161 kV associated facilities are shown in **Figure 1**.

⁸³ Ex. 7 at 18-19 (Route Permit Application); Ex. 25 at 35 (Middleton Direct).

⁸⁴ Ex. 7 at 19-21 (Route Permit Application); Ex. 25 at 37 (Middleton Direct).

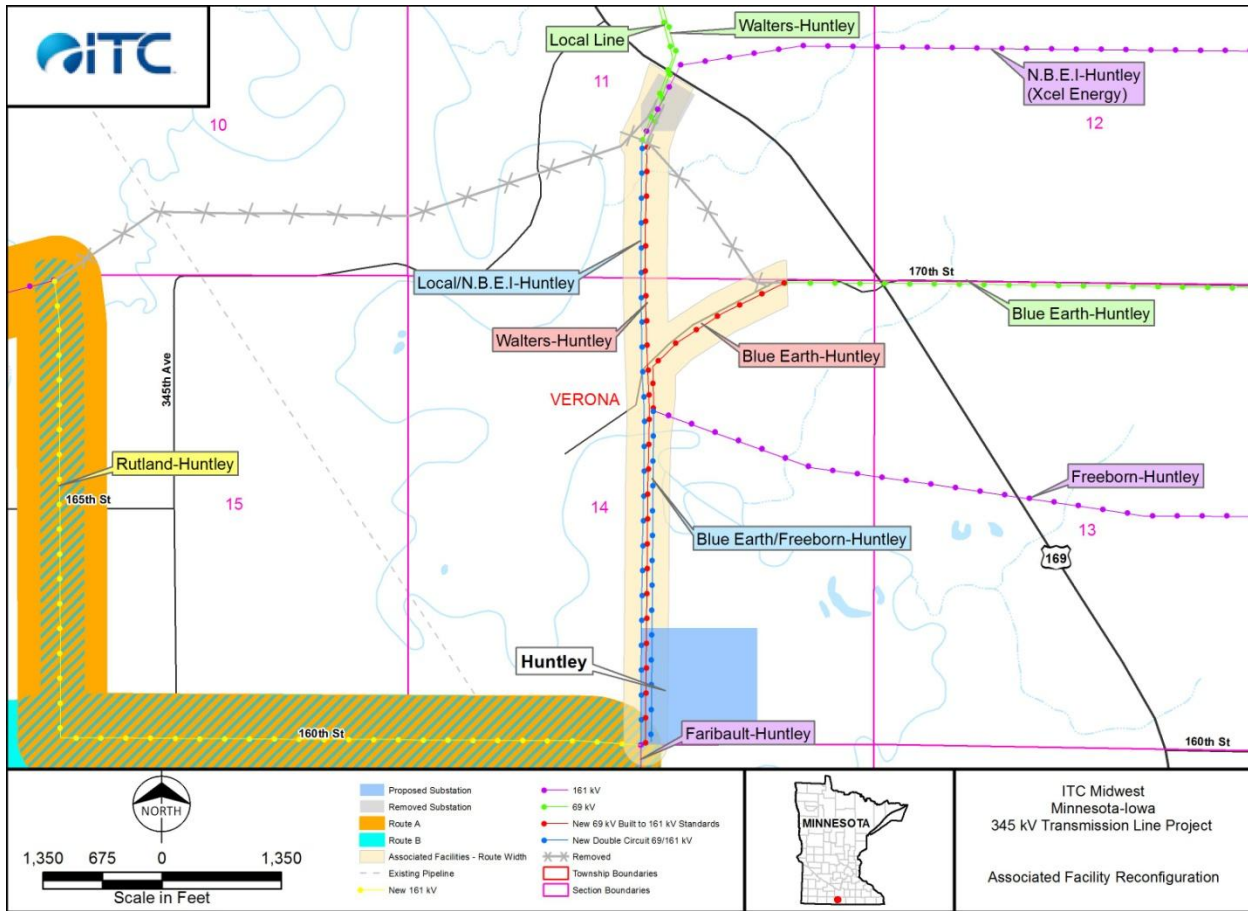
⁸⁵ Ex. 7 at 112-13 (Route Permit Application).

⁸⁶ Ex. 7 at 23 (Route Permit Application).

⁸⁷ Ex. 7 at 217 (Route Permit Application).

⁸⁸ Ex. 7 at 112-13 (Route Permit Application).

Figure 1. ITC Midwest's Proposed 161 kV Associated Facilities⁸⁹



During the scoping process, two additional 161 kV transmission line associated facilities proposals and a southern Huntley Substation site (“Southern Huntley Substation”) were proposed for evaluation in the EIS.⁹⁰ These were evaluated as Route Alternative I90-5 Option 1 and Option 2 in the EIS and are discussed in more detail along with other Route Alternatives proposed during the scoping process, as compared to Modified Route A in **Section IV.B.6** of this Brief.

⁸⁹ Ex. 7 at Figure 6 (Route Permit Application).

⁹⁰ Ex. 105 at Map Sheet 13 and Map Sheet 14 (Scoping Decision).

IV. APPLICATION OF RELEVANT FACTORS

A. Statutes and Rules

Selection of a route for a high voltage transmission line is guided by the factors set forth in the Power Plant Siting Act, Minnesota Statutes Section 216E.03, and the Commission's rules, Minnesota Rules 7850.4000 and 7850.4100.

1. *Power Plant Siting Act*

The Power Plant Siting Act statute establishes the criteria and procedures for evaluating routes for a high voltage transmission line. Minnesota Statutes Section 216E.03, subdivision 7(b), identifies twelve factors to guide the Commission's route designations:

- (1) evaluation of research and investigations relating to the effects on land, water and air resources of large electric power generating plants and high-voltage transmission lines and the effects of water and air discharges and electric and magnetic fields resulting from such facilities on public health and welfare, vegetation, animals, materials and aesthetic values, including baseline studies, predictive modeling, and evaluation of new or improved methods for minimizing adverse impacts of water and air discharges and other matters pertaining to the effects of power plants on the water and air environment;
- (2) environmental evaluation of sites and routes proposed for future development and expansion and their relationship to the land, water, air and human resources of the state;
- (3) evaluation of the effects of new electric power generation and transmission technologies and systems related to power plants designed to minimize adverse environmental effects;
- (4) evaluation of the potential for beneficial uses of waste energy from proposed large electric power generating plants;⁹¹

⁹¹ This factor is not applicable here as it only applies to power plant siting.

- (5) analysis of the direct and indirect economic impact of proposed sites and routes including, but not limited to, productive agricultural land lost or impaired;
- (6) evaluation of adverse direct and indirect environmental effects that cannot be avoided should the proposed site and route be accepted;
- (7) evaluation of alternatives to the applicant's proposed site or route proposed pursuant to subdivision 1 and 2;
- (8) evaluation of potential routes that would use or parallel existing railroad and highway rights-of-way;
- (9) evaluation of governmental survey lines and other natural division lines of agricultural land so as to minimize interference with agricultural operations;
- (10) evaluation of future needs for additional high-voltage transmission lines in the same general area as any proposed route, and the advisability of ordering the construction of structures capable of expansion in transmission capacity through multiple circuiting or design modifications;
- (11) evaluation of irreversible and irretrievable commitments of resources should the proposed site or route be approved; and
- (12) when appropriate, consideration of problems raised by other state and federal agencies and local entities.

The Commission may not designate a route which violates State agency rules. Further, the Commission must make specific finding that it has considered locating the route for a high voltage transmission line on an existing high voltage transmission line route and also the use or paralleling of existing highway rights-of-way. If the Commission does not select a route that uses an existing high voltage transmission line route or highway rights-of-way, the Commission must state the reasons to support that decision.⁹²

⁹² Minn. Stat. § 216E.03, subd. 7(e).

2. *Minnesota Rule 7850.4100 Factors*

The Commission must also consider Minnesota Rules 7850.4000 and 7840.4100. Minnesota Rule 7850.4000 requires that route permits issued by the Commission comply with the standards and criteria established in Minnesota States Section 216E.03 and the rules adopted by the Commission. Minnesota Rule 7850.4100 sets for the factors to be considered by the Commission when determining whether to issue a route permit for a high voltage transmission line. The rule factors are as follows:

- A. effects on human settlement, including, but not limited to, displacement, noise, aesthetics, cultural values, recreation, and public services;
- B. effects on public health and safety;
- C. effects on land-based economies, including, but not limited to, agriculture, forestry, tourism, and mining;
- D. effects on archaeological and historic resources;
- E. effects on the natural environment, including effects on air and water quality resources and flora and fauna;
- F. effects on rare and unique natural resources;
- G. application of design options that maximize energy efficiencies, mitigate adverse environmental effects, and could accommodate expansion of transmission or generating capacity;
- H. use or paralleling of existing rights-of-way, survey lines, natural division lines, and agricultural field boundaries;
- I. use of existing large electric power generating plant sites;⁹³
- J. use of existing transportation, pipeline, and electrical transmission systems or rights-of-way;
- K. electrical system reliability;
- L. costs of constructing, operating, and maintaining the facility which are dependent on design and route;

⁹³ This factor is not applicable here as it applies only to power plant siting.

- M. adverse human and natural environmental effects which cannot be avoided; and
- N. irreversible and irretrievable commitments of resources.

B. Application of Applicable Routing Factors to Applicant's Proposed Routes

Application of applicable routing factors to the evidence on the record in this Docket demonstrates that ITC Midwest's Modified Route A, Lakefield Junction Substation expansion, Proposed Huntley Substation, and 161 kV Associated Facilities are the best proposal for the Project route and best satisfy the public interest in developing reliable and cost-effective transmission facilities while minimizing environmental, human settlement, and land use impacts.

1. *Effects on Human Settlement*

Minnesota Rule 7850.4100(A) requires consideration of the proposed routes' effects on human settlement, including displacement of residences and businesses, noise created during construction and by operation of the Project, and impacts to aesthetics, cultural values, recreation, and public services.

a. *Displacement*

For the Project, displacement of a residence or business was defined to include any such structure within the proposed right-of-way for the Project; within 100 feet of a proposed 345 kV alignment; or within 75 feet of a proposed 161 kV (not co-located with a 345 kV transmission line) alignment.⁹⁴ The record evidence demonstrates that Modified Route A will not result in displacement.⁹⁵

⁹⁴ Ex. 7 at 131-32 and Appendix D, Faribault County, Sheet 2 of 12 (Route Permit Application).

⁹⁵ Ex. 7 at 131 (Route Permit Application); Ex. 24 at Schedule 5 (Coeur Direct); Ex. 25 at Schedule 11 (Middleton Direct).

Route	Homes within 0 to 75 Feet of Alignment ⁹⁶	Homes within 75 to 150 Feet of Alignment ⁹⁷	Homes within 150 to 300 Feet of Alignment ⁹⁸	Homes within 300 to 500 feet of Alignment ⁹⁹
Route A	0	2	13	12
Route B	0	2	16	15
Modified Route A	0	2	8	12
161 kV Associated Facilities	0	0	1	1

Although there are homes within 75 to 150 feet of the Route A, Route B, and Modified Route A alignments, none are within 100 feet.¹⁰⁰ Modified Route A has the same number of residences within 75 to 150 feet of the alignment as Route A and Route B.¹⁰¹ Modified Route A has the fewest number of residences within 150 to 300 feet of the alignment.¹⁰² Modified Route A will have the least impact on human settlement, followed by Route A, then Route B.¹⁰³

b. Noise

The Minnesota Pollution Control Agency (“MPCA”) has established noise limits for residential, commercial, and industrial land use activities.¹⁰⁴ The most restrictive Noise Area Classification (“NAC”) is for residences at 60-65 A-

⁹⁶ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct).

⁹⁷ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct).

⁹⁸ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct).

⁹⁹ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct).

¹⁰⁰ Ex. 7 at 132 (Route Permit Application); Ex. 25 at Schedule 11 (Middleton Direct).

¹⁰¹ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct).

¹⁰² Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct).

¹⁰³ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct).

¹⁰⁴ Ex. 7 at 134 (Route Permit Application).

weighted decibel (“dBA”) during the daytime and 50-55 dBA during the nighttime.¹⁰⁵ The maximum calculated noise level during operation of the Project for the transmission lines is anticipated to not exceed these NAC levels under the transmission line and at the edge of the right-of-way.¹⁰⁶ Noise receptors near the Lakefield Junction Substation are not anticipated to experience any significant changes in noise levels as a result of the Project.¹⁰⁷ The maximum noise calculated for the Proposed Huntley Substation is not anticipated to exceed the MPCA noise levels at the nearest residence.¹⁰⁸ The DEIS confirmed this analysis and concluded that noise impacts from the Project are anticipated to be within the MPCA noise levels.¹⁰⁹

c. Aesthetics

Modified Route A is anticipated to minimize impacts on aesthetics as it makes the greatest use of existing transmission line rights-of-way when compared to ITC Midwest’s proposed routes.¹¹⁰ Modified Route A also incorporates modifications from Route A that are anticipated to further minimize aesthetic impacts.¹¹¹

¹⁰⁵ Ex. 7 at 135 (Route Permit Application).

¹⁰⁶ Ex. 7 at 135 (Route Permit Application).

¹⁰⁷ Ex. 7 at 201 (Route Permit Application).

¹⁰⁸ Ex. 7 at 208 (Route Permit Application).

¹⁰⁹ Ex. 108A at 56 (DEIS).

¹¹⁰ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct).

¹¹¹ Ex. 25 at 31 (Middleton Direct); Ex. 32 at Schedule 29 at 1 (Middleton Rebuttal).

d. Cultural Values

There are no anticipated impacts to cultural values as a result of constructing the Project along any of ITC Midwest's proposed routes.¹¹²

e. Recreation

The record evidence demonstrates that Modified Route A has a lower potential to impact recreational resources than Route A or Route B.¹¹³

f. Public Services

Construction and operation of the Project is not anticipated to impact the operation of any existing public services, including public airports.¹¹⁴ Modified Route A reduces potential conflicts with private airstrips when compared to Route A.¹¹⁵

2. *Effects on Public Health and Safety*

Minnesota Rule 7850.4100(B) requires consideration of the Project's effect on public health and safety. The evidence on the record demonstrates that health

¹¹² Ex. 7 at 76 (Route Permit Application). Impacts to cultural values, when anticipated, are based on impacts to the Project area. Based on no anticipated impacts to cultural values from the construction along Route A or Route B, no anticipated impacts to cultural values are anticipated from the construction along Modified Route A.

¹¹³ Ex. 7 at 79 (Route Permit Application); Ex. 24 at Schedule 2 and Schedule 12 (Middleton Direct). Further, Modified Route A is anticipated to have less of a potential for impacts to recreation than Route A as it would reduce the crossing length at the Des Moines River, collocate an existing 69 kV transmission line with the Project in the Fox Lake Game Refuge, and remove a 161 kV transmission line from the Blue Earth River riparian area south of the Proposed Huntley Substation. Ex. 25 at Schedule 7, Schedule 8, and Schedule 10 (Middleton Direct).

¹¹⁴ Ex. 7 at 76 and 153 (Route Permit Application).

¹¹⁵ Ex. 24 at 27 (Coeur Direct); Ex. 25 at 27 and 30 (Middleton Direct); Ex. 32 at Schedule 29 at 1 (Middleton Rebuttal).

and safety issues are not anticipated during construction and operation of the facilities.

a. Construction and Operation of the Project

The Project will be designed to meet or surpass all applicable local and State building, NESC, and NERC requirements, and additional standards developed by ITC Midwest.¹¹⁶ Safety protocols, procedures, and standards will be followed during design and construction and after installation.¹¹⁷ The Project will be equipped with protective devices (circuit breakers and relays located in substations where transmission lines terminate) to safeguard the public in the event of an accident or if a structure or conductor falls to the ground.¹¹⁸ This equipment will de-energize the transmission line should such an event occur.¹¹⁹ Further, substations will be properly fenced and accessible only by authorized personnel.¹²⁰

b. Electric and Magnetic Fields

Minnesota Statutes Section 216E.03, subdivision 7 requires consideration of the effects of electric and magnetic fields on public health and welfare. The evidence on the record demonstrates that the Project will comply with the Commission's standards for electric fields and no adverse impacts due to electric or magnetic fields are anticipated as a result of the Project.¹²¹

¹¹⁶ Ex. 7 at 29 (Route Permit Application); Ex 107A at 10, 70, and B1-4 (DEIS).

¹¹⁷ Ex. 7 at 29 (Route Permit Application).

¹¹⁸ Ex. 7 at 129 (Route Permit Application); Ex. 108A at 63 (DEIS).

¹¹⁹ Ex. 7 at 129 (Route Permit Application); Ex. 108A at 63 (DEIS).

¹²⁰ Ex. 7 at 129 (Route Permit Application).

¹²¹ Ex. 108A at 63 (DEIS).

Electric field strength is measured in kilovolts per meter (“kV/m”).¹²² The strength of an electric field decreases rapidly as the distance from the source increases.¹²³ The Commission has established that the maximum electric field for one meter above ground under a transmission line must not exceed 8 kV/m.¹²⁴ The maximum electric field for the Project under the transmission line is not anticipated to exceed 5.29 kV/m.¹²⁵

Magnetic field strength is measured in milliGauss (“mG”).¹²⁶ The strength of a magnetic field decreases rapidly as the distance from the source increases.¹²⁷ There are no Minnesota or federal standards for transmission line magnetic fields.¹²⁸ Several states and international organizations have established magnetic field guidelines for general public and occupational exposure.¹²⁹ The lowest of these guidelines for general public exposure is 85 mG at the edge of the right-of-way.¹³⁰ The highest predicted magnetic field during peak operation is less than 30 mG at the edge of the right-of-way.¹³¹ The DEIS confirmed that “[n]o adverse health impacts from electric or magnetic fields are expected for persons living or working near the [P]roject.”¹³²

¹²² Ex. 7 at 48 (Route Permit Application); Ex. 108A at 63 (DEIS).

¹²³ Ex. 108A at 63 (DEIS).

¹²⁴ Ex. 7 at 49 (Route Permit Application); Ex. 108A at 64 (DEIS).

¹²⁵ Ex. 24 at Schedule 7 (Coeur Direct); Ex. 108A at 66 (DEIS).

¹²⁶ Ex. 7 at 48 (Route Permit Application); Ex. 108A at 63 (DEIS).

¹²⁷ Ex. 7 at 48 (Route Permit Application); Ex. 108A at 63 (DEIS).

¹²⁸ Ex. 7 at 51 (Route Permit Application); Ex. 108A at 64 (DEIS).

¹²⁹ Ex. 108A at 65 and Appendix H1 (DEIS).

¹³⁰ Ex. 108A at 65 (DEIS). Massachusetts does not prohibit a magnetic field in excess of 85 mG at the edge of the right-of-way, but a level above 85 mG may trigger a more extensive review of alternatives or mitigation measures.*Id.*

¹³¹ Ex. 24 at Schedule 7 (Coeur Direct); Ex. 108A at 66 (DEIS).

¹³² Ex. 108A at 66 (DEIS).

3. *Effects on Land-Based Economies*

Minnesota Rule 7850.4100(C) requires consideration of the Project's effects on land-based economies, specifically agriculture, forestry, tourism, and mining. The record evidence demonstrates that construction along Modified Route A will have the least potential to impact land-based economies.

a. Agriculture

Construction of the Project will result in permanent and temporary impacts to farmland.¹³³ Construction of the Project along Route A or Modified Route A will replace H-frame structures with single pole structures where the Project follows the existing Lakefield to Border 161 kV Transmission Line, while Route B introduces a new transmission line to the area, leaving the existing Lakefield to Border 161 kV Transmission Line in its current location through other agricultural fields.¹³⁴ ITC Midwest has estimated the permanent and temporary impacts to agricultural fields.¹³⁵

Route	Permanent Impacts to Agricultural Land (ft ²) ¹³⁶
Route A	22,216
Route B	19,843
Modified Route A	22,705

¹³³ Ex. 7 at 160 (Route Permit Application); Ex. 32 at Schedule 29 at 1 (Middleton Rebuttal).

¹³⁴ Ex. 7 at 162 (Route Permit Application).

¹³⁵ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct).

¹³⁶ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct).

Route	Temporary Impacts to Agricultural Land (acres) ¹³⁷
Route A	358
Route B	321
Modified Route A	359

b. Forestry

There is no evidence on the record that impacts to forestry are anticipated due to construction of the Project.¹³⁸

c. Mining

There are no known mining sites anticipated to be affected by construction of the Project.¹³⁹

d. Tourism

Any potential effect on tourism due to construction of the Project is anticipated to be minor and temporary in nature, lasting only for the duration of construction.¹⁴⁰

4. *Effects on Archaeological and Historic Resources*

Minnesota Rule 7850.4100(D) requires consideration of the Project’s effects on archaeological and historic resources. There are known archaeological and

¹³⁷ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct). Total temporary impact is equal to the total number of structures (angle and tangent) estimated in agricultural land multiplied by 40,000 ft² per pole per the detailed explanations provided at the end of each Schedule. These estimates for temporary impacts do not include spooling or staging areas.

¹³⁸ Ex. 108A at 73 (Draft Environmental Impact Statement (“DEIS”)).

¹³⁹ Ex. 108A at 74 (DEIS).

¹⁴⁰ Ex. 108A at 74 (DEIS).

historical sites in the vicinity of the routes proposed by ITC Midwest.¹⁴¹ ITC Midwest will avoid known resources to the extent practicable during construction of the Project.¹⁴² The evidence on the record demonstrates that Modified Route A will have the lowest potential for impacting archaeological and historic resources.¹⁴³

Route	Number of Archaeological Sites within One Mile ¹⁴⁴	Number of Historical Sites within One Mile ¹⁴⁵
Route A	56	31
Route B	53	25
Modified Route A	55	17

5. *Effects on Natural Environment*

Minnesota Rule 7850.4100(E) requires consideration of the Project’s effects on the natural environment including effects on air and water quality and flora and fauna. The evidence on the record demonstrates that the Project is not anticipated to have a material effect on the natural environment.

a. Air Quality

Construction of the Project is anticipated to only result in temporary air quality impacts similar to those of agricultural activities common in the area.¹⁴⁶

¹⁴¹ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct).

¹⁴² Ex. 36 at 16 (Comments - ITC Midwest LLC Comments on the Draft Environmental Impact Statement (“Comment Letter on DEIS”)).

¹⁴³ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct); Ex. 108A at Appendix J (DEIS).

¹⁴⁴ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct).

¹⁴⁵ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct).

¹⁴⁶ Ex. 108A at 70 (DEIS).

Emissions from operating the Project would have negligible impacts on air quality.¹⁴⁷

b. Water Quality

The routes that ITC Midwest proposed for the Project will require crossing lakes, watercourses, floodplains, and wetlands.¹⁴⁸ Lakes and watercourses that are crossed by the Project will be spanned.¹⁴⁹ NWI and Public Water Inventory (“PWI”) wetlands will also be spanned to the extent practicable.¹⁵⁰ ITC Midwest will obtain a general construction stormwater permit and develop a Project-specific stormwater pollution prevention plan that identifies best management practices to be implemented during Project construction to prevent erosion and sedimentation in surface waters.¹⁵¹ Some transmission line structures may need to be placed in wetlands greater than 1,000 feet wide.¹⁵² The evidence on the record demonstrates the following impacts to wetlands:

¹⁴⁷ Ex. 108A at 70 (DEIS).

¹⁴⁸ Ex. 108A at 76 (DEIS).

¹⁴⁹ Ex. 108A at 76 (DEIS).

¹⁵⁰ Ex. 108A at 78 (DEIS).

¹⁵¹ Ex. 7 at 177 (Route Permit Application); Ex. 108A at 77 (DEIS).

¹⁵² Ex. 108A at 78 (DEIS).

Route	Acres of NWI Wetland within Right-of-Way ¹⁵³	Acres of Forested NWI Wetland within Right-of-Way ¹⁵⁴	NWI Wetlands Crossed over 1,000 Feet ¹⁵⁵	Length of NWI Wetlands over 1,000 Feet ¹⁵⁶
Route A	19.2	4.3	1	1,213.8
Route B	7.7	1.6	0	0
Modified Route A	12.3	1.3	1	1,213.8
161 kV Associated Facilities	1.39	0	0	0

Route	Number of NWI Wetlands within Route ¹⁵⁷	Number of PWI Wetlands within Route ¹⁵⁸	Number of PWI Wetland Crossings over 1,000 Feet ¹⁵⁹
Route A	55	0	0
Route B	72	0	0
Modified Route A	58	1	0
161 kV Associated Facilities	2	0	0

¹⁵³ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct).

¹⁵⁴ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct).

¹⁵⁵ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct).

¹⁵⁶ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct).

¹⁵⁷ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct).

¹⁵⁸ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct).

¹⁵⁹ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct).

The evidence on the record demonstrates the following potential impacts to surface waters:

Route	Number of Stream and River Crossings by Alignment ¹⁶⁰	Number of PWI Stream Crossings by Alignment ¹⁶¹
Route A	54	32
Route B	38	19
Modified Route A	52	31
161 kV Associated Facilities	2	1

Modified Route A is proposed to reduce impacts to the Des Moines River and Blue Earth River. At the Des Moines River, Route A crosses the Des Moines River at a long running angle along the existing Lakefield to Border 161 kV Transmission Line centerline.¹⁶² Modified Route A at the Des Moines River crosses more perpendicularly to the river, crosses at the narrowest point of the Minnesota Biological Survey (“MBS”) site, and is proposed to relocate the existing Lakefield to Border 161 kV Transmission Line in this new location and allow the current 161 kV right-of-way to re-vegetate.¹⁶³ ITC Midwest proposed Modified Route A to include both the Route A alignment and the Modified Route A alignment to provide flexibility and provide the opportunity to work with the MnDNR and the landowners along the river, as practicable, to identify

¹⁶⁰ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct).

¹⁶¹ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct).

¹⁶² Ex. 25 at Schedule 7 (Middleton Direct).

¹⁶³ Ex. 25 at Schedule 7 (Middleton Direct).

the most appropriate alignment.¹⁶⁴ At the Blue Earth River, Modified Route A is proposed to construct the Project on the west bank of the Blue Earth River and remove the existing Lakefield to Border 161 kV Transmission Line from the Blue Earth River riparian area.¹⁶⁵

c. Flora and Fauna

The record evidence demonstrates that impacts to flora and fauna will be limited. The record evidence demonstrates that either Route A or Modified Route A will encounter the fewest number of flora and fauna habitats, including WMAs, WPAs, and MBS sites.

Route	MBS within Route ¹⁶⁶	WMAs within Route ¹⁶⁷	WMAs within One Mile ¹⁶⁸	WPAs within One Mile ¹⁶⁹	SNAs within One Mile ¹⁷⁰
Route A	6	0	6	2	0
Route B	15	3	9	2	0
Modified Route A	6	0	6	2	0
161 kV Associated Facilities	1	0	0	0	0

Impacts to existing vegetation communities caused by construction and operation of the Project are anticipated to be both temporary and permanent.¹⁷¹

¹⁶⁴ Ex. 25 at 34 (Middleton Direct).

¹⁶⁵ Ex. 25 at Schedule 10 (Middleton Direct).

¹⁶⁶ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct).

¹⁶⁷ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct).

¹⁶⁸ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct).

¹⁶⁹ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct).

¹⁷⁰ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct).

¹⁷¹ Ex. 108A at 80 (DEIS).

Except for the transmission line structure foundations, impacts to flora are anticipated to be temporary as the majority of the disturbed area will be reseeded or allowed to return to agricultural activities.¹⁷² ITC Midwest has committed to developing a Vegetation Management Plan for the construction of the Project so long as vegetation management requirements do not violate sound engineering, design principles or system reliability criteria.¹⁷³

Impacts to wildlife, either temporary or permanent, are anticipated as a result of Project construction.¹⁷⁴ The potential impacts to avian species could be mitigated by marking the shield wire of the Project transmission lines in areas where waterfowl or other birds would be traveling between habitats or over open water.¹⁷⁵ ITC Midwest has committed to developing an Avian Mitigation Plan that will identify measures to minimize the potential impacts to avian species and will work with the MnDNR and the USFWS to develop the plan.¹⁷⁶ Modified Route A makes the greatest use of consolidating transmission lines and may reduce potential impacts to avian species.¹⁷⁷

6. *Effects on Rare and Unique Resources*

Minnesota Rule 7850.4100(F) requires consideration of the Project's effects on rare and unique resources. Rare and unique resources, including threatened and endangered species have been found in the vicinity of the routes proposed by ITC Midwest. Route A has the lowest number of threatened or endangered

¹⁷² Ex. 108A at 80 (DEIS).

¹⁷³ Ex. 36 at 21 (Comment Letter on DEIS).

¹⁷⁴ Ex. 32 at Schedule 29 at 2 (Middleton Rebuttal); Ex. 108A at 82 (DEIS).

¹⁷⁵ Ex. 108A at 83 (DEIS).

¹⁷⁶ Ex. 36 at 21 (Comment Letter on DEIS).

¹⁷⁷ Ex. 32 at Schedule 29 at 2 (Middleton Rebuttal).

species within the route (zero) followed by Modified Route A (one).¹⁷⁸ Route B has the greatest number of threatened or endangered species within the route (seven).¹⁷⁹ Potential impacts can likely be mitigated by designing the Project to span critical habitat or to install bird flight diverters where the potential for avian impacts are of concern.¹⁸⁰

Route	Threatened or Endangered Species within Route ¹⁸¹	Threatened or Endangered Species within One Mile ¹⁸²
Route A	0	18
Route B	7	16
Modified Route A	1	21
161 kV Associated Facilities	0	5

7. *Application of Design Considerations*

Minnesota Rule 7850.4100(G) requires consideration of whether the applied design considerations maximize energy efficiencies, mitigate adverse environmental effects, and could accommodate expansion of transmission or generating capacity. The evidence on the record demonstrates that Modified Route A best satisfies this factor. Modified Route A makes the greatest use of the existing Lakefield to Border 161 kV Transmission Line right-of-way and the co-location of other transmission lines with the Project.¹⁸³ While Route B

¹⁷⁸ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct). Ex. 108A at Appendix L at LH14 (DEIS). Note that Modified Route A follows Route Variations LC-3 and LC-5 near Lake Charlotte. Exhs. 35-J and 35-K (Large Format Maps).

¹⁷⁹ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct).

¹⁸⁰ Ex. 108A at 85-86 and 148 (DEIS).

¹⁸¹ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct).

¹⁸² Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct).

¹⁸³ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct).

provides the greatest ability to accommodate expansion of transmission capacity, Modified Route A best utilizes existing transmission rights-of-way and co-location opportunities to minimize impacts to human settlement and the natural environment.¹⁸⁴ Further, even in areas where Modified Route A is not proposed to be co-located with another transmission line or where Modified Route A is proposed to be co-located with a 69 kV transmission line, the structures will have an open position for a 161 kV transmission line in the future when conditions warrant.¹⁸⁵

ITC Midwest has acquired sufficient property at both the Lakefield Junction Substation and the Proposed Huntley Substation to accommodate expansion beyond that necessary for the Project.¹⁸⁶

8. *Use or Paralleling of Existing Rights-of-Way, Survey Lines, Natural Division Lines, and Agricultural Field Boundaries*

Minnesota Rule 7850.4100(H) requires consideration of the use or paralleling of existing rights-of-way, survey lines, natural division lines, and agricultural field boundaries. Modified Route A makes the greatest use of field lines.

¹⁸⁴ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct).

¹⁸⁵ Ex. 7 at 10 (Route Permit Application); Ex. 24 at 33 (Coeur Direct); Ex. 25 at 28 and 30 (Middleton Direct); Ex. 32 at 16 (Middleton Rebuttal).

¹⁸⁶ Ex. 21 at 19 (Ashbacker Direct); Ex. 28 at 18 (Ashbacker Rebuttal).

Route	Miles Sharing Field/Division/Survey Lines ¹⁸⁷	Percent Sharing Field/Division/Survey Lines
Route A	52/4.5/67.5	71.2/6.2/92.5
Route B	52.9/2.9/69	72.1/4.0/94.0
Modified Route A	54.7/1.1/61.6	75.7/1.5/85.2

9. Use of Existing Transportation, Pipeline, and Electrical Transmission Systems or Rights-of-Way

Minnesota Rule 7850.4100(J) requires consideration of use or paralleling of existing transportation, pipeline, and electrical transmission system rights-of-way. None of the routes proposed by ITC Midwest share pipeline rights-of-way, although all three cross pipeline rights-of-way.¹⁸⁸ The evidence on the record demonstrates that Modified Route A makes the greatest use of existing transmission system rights-of-way.

Route	Miles Sharing Existing Transmission Line Rights-of-Way ¹⁸⁹	Percent Sharing Existing Transmission Line Rights-of-Way
Route A	55.2	75.6
Route B	0.2	0.3
Modified Route A	55.9	77.3

¹⁸⁷ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct). Note that a route may follow both a field line and a natural division line in the same area, so the number of miles cannot just be summed to find the total miles.

¹⁸⁸ Ex. 25 at Schedules 2 and 12 (Middleton Direct).

¹⁸⁹ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct).

Route	Miles Sharing Existing Transportation Rights-of-Way ¹⁹⁰	Percent Sharing Existing Transportation Rights-of-Way
Route A	12.1	16.6
Route B	34.8	47.4
Modified Route A	16.5	22.8

10. *Electrical System Reliability*

Minnesota Rule 7850.4100(K) requires consideration of electrical system reliability when selecting a route for a high voltage transmission line. ITC Midwest has proposed to construct the Project on 161 kV/345 kV double-circuit capable structures.¹⁹¹ There are locations where triple-circuit capable structures are proposed to be installed.¹⁹² The Project would either be co-located with existing 161 kV or 69 kV transmission lines or only the 345 kV circuit arms would be installed and conductors strung at the time of construction, leaving the 161 kV position open if future conditions warrant installation.¹⁹³ The evidence on the record demonstrates that Modified Route A will ensure system reliability.

11. *Costs of Constructing, Operating, and Maintaining the Project*

Minnesota Rule 7850.4100(L) requires consideration of the cost to construct proposed routes and the cost of operation and maintenance. The estimated cost of construction for each of the three routes proposed by ITC Midwest is provided below.

¹⁹⁰ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct).

¹⁹¹ Ex. 7 at 10 (Route Permit Application).

¹⁹² Ex. 25 at 28 and 30 (Direct Testimony of Jack Middleton (“Middleton Direct”)); Ex. 32 at 16 (Rebuttal Testimony of Jack Middleton (“Middleton Rebuttal”)).

¹⁹³ Ex. 7 at 10 (Route Permit Application); Ex. 24 at 33 (Coeur Direct); Ex. 25 at 28 and 30 (Middleton Direct); Ex. 32 at 16 (Middleton Rebuttal).

Route	Cost of Construction ^{194*}
Route A	\$208
Route B	\$196/\$222 ¹⁹⁵
Modified Route A	\$207

*Cost of construction includes associated facilities from Winnebago Junction Substation to the Proposed Huntley Substation

While all three routes are approximately the same length, the materials and labor costs for Route B are estimated to be lower than for Route A and Modified Route A because only the 345 kV circuit would be installed as part of the Project. ITC Midwest estimates the cost to install the 161 kV circuit along Route B, considering only materials and labor, would be approximately \$28 million. Therefore, if Route B were also constructed with both the 345 kV and 161 kV circuits installed it would cost an estimated \$222 million.¹⁹⁶ The evidence on the record demonstrates that it will cost less to construct the Project, including associated facilities, along Modified Route A than Route A or Route B.

Annual operation and maintenance costs are anticipated to be approximately the same for any of the routes proposed by ITC Midwest. Operation and maintenance costs are estimated at approximately \$2,000 per mile.¹⁹⁷

12. *Unavoidable Impacts*

Minnesota Rule 7850.4100(M) requires consideration of unavoidable human and environmental impacts. Even with mitigation strategies, there are adverse impacts of the Project which cannot be avoided including aesthetic

¹⁹⁴ Ex. 24 at 21 (Coeur Direct).

¹⁹⁵ Ex. 7 at 25 (Route Permit Application).

¹⁹⁶ Ex. 7 at 25 (Route Permit Application).

¹⁹⁷ Ex. 7 at 48 (Route Permit Application).

impacts, temporary construction-related impacts, impacts to soils and agriculture, and certain impacts to the natural environment.¹⁹⁸ These impacts are addressed above in this Brief and the evidence on the record demonstrates that Modified Route A will have fewer unavoidable adverse human and natural environment impacts than the other route options.

13. Irreversible and Irretrievable Commitments of Resources

Minnesota Rule 7850.4100(N) requires consideration of the irreversible and irretrievable commitments of resources that are necessary for the Project. The types of commitments are anticipated to be similar for all routes proposed.¹⁹⁹ The Project will require few irreversible and irretrievable commitments of resources.²⁰⁰ Construction resources such as steel, concrete, and hydrocarbon resources will be irreversibly and irretrievably committed for the Project.²⁰¹

Route	Number of Poles ²⁰²
Route A	436
Route B	434
Modified Route A	437

C. Consideration of Issues Presented by State Agencies and Local Units of Government

1. MnDNR

In scoping comments, the MnDNR requested that additional analysis related to specific features be included in the EIS for Route A and Route B.²⁰³ The

¹⁹⁸ Ex. 108A at 240 (DEIS).

¹⁹⁹ Ex. 108A at 240 (DEIS).

²⁰⁰ Ex. 108A at 240 (DEIS).

²⁰¹ Ex. 108A at 240 (DEIS).

²⁰² Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct).

²⁰³ Ex. 103B at 2-3 (Written Agency Comments Received on Scope of EIS).

MnDNR requested that an alignment “the farthest possible to the east in Section 3, Township 102N, Range 35W” away from the east bank of the Des Moines River be developed.²⁰⁴ In the scoping comments, the MnDNR also requested that the EIS include an evaluation of a more perpendicular route to the river compared to a parallel route.²⁰⁵ ITC Midwest developed Modified Route A across and east of the Des Moines River in response to these MnDNR requests.²⁰⁶

The MnDNR provided additional comments regarding the Des Moines River crossing during the written public hearing comment period on Modified Route A.²⁰⁷ In its May 30, 2014 comments, the MnDNR discussed the crossings of the Des Moines River and requested further evaluation by ITC Midwest of the existing 161 kV transmission line crossing and Modified Route A.²⁰⁸ The MnDNR indicated that it preferred use of the existing 161 kV transmission line crossing (referred to as Route Variation JA-2 in the DEIS) over Modified Route A, unless Modified Route A could be constructed in a way that allowed vegetation to remain on the banks of the Des Moines River in the lowest area of the valley.²⁰⁹ The MnDNR identified that there is the possibility of historic vegetation in this area and indicated a desire to retain this vegetation to the greatest extent practicable.²¹⁰ ITC Midwest supports working with the MnDNR and the landowners, to the extent practicable, to identify the most appropriate crossing of

²⁰⁴ Ex. 103B at 2 (Written Agency Comments Received on Scope of EIS).

²⁰⁵ Ex. 103B at 2 (Written Agency Comments Received on Scope of EIS).

²⁰⁶ Ex. 25 at 21-22 (Middleton Direct).

²⁰⁷ Document ID No. 20145-100021-01 (May 30, 2014).

²⁰⁸ Document ID No. 20145-100021-01 (May 30, 2014).

²⁰⁹ Document ID No. 20145-100021-01 (May 30, 2014).

²¹⁰ Document ID No. 20145-100021-01 (May 30, 2014).

the Des Moines River.²¹¹ Modified Route A provides sufficient width in this area to provide flexibility to work with these stakeholders on the most appropriate Des Moines River crossing.²¹²

2. *MnDOT*

On May 15, 2014, MnDOT provided comments on the routes proposed by ITC Midwest and the additional routes evaluated in the DEIS.²¹³ In its comments, MnDOT identified various issues that must be considered or addressed by ITC Midwest before MnDOT would issue a utility permit.²¹⁴ Many of these items have been addressed by ITC Midwest in its development of Modified Route A.²¹⁵ In its comments, MnDOT did not identify any routes that would not be permittable.²¹⁶

3. *Jackson Municipal Airport*

The Jackson Municipal Airport has developed an airport layout plan (“ALP”) for potential airport expansion.²¹⁷ ITC Midwest developed Route A and Modified Route A north of the Jackson Municipal Airport to avoid conflicts with air navigation at the existing or expanded airport.²¹⁸ ITC Midwest intends to submit specific structure information to the Federal Aviation Administration

²¹¹ Ex. 25 at 34 (Middleton Direct).

²¹² Ex. 25 at 34 (Middleton Direct); Ex. 35 at 35-H at DEIS Route Variation JA-2 (Large Format Maps).

²¹³ Document ID No. 20145-99538-01 (May 15, 2014).

²¹⁴ Document ID No. 20145-99538-01 at 2 (May 15, 2014).

²¹⁵ See Ex. 24 (Coeur Direct); Ex 25 (Middleton Direct).

²¹⁶ See Document ID No. 20145-99538-01 (May 15, 2014).

²¹⁷ Ex. 7 at 114 and Appendix K (Route Permit Application).

²¹⁸ Ex. 7 at 114 (Route Permit Application). Modified Route A north of the Jackson County Municipal Airport is the same as Route A. See Ex. 25 at Schedule 7 (Middleton Direct).

after design is complete to ensure that the Project will not conflict with Jackson Municipal Airport operations or future expansion.²¹⁹

V. EVALUATION OF ALTERNATIVES TO MODIFIED ROUTE A

As previously stated, ITC Midwest believes that Modified Route A, including the Lakefield Junction Substation expansion, Proposed Huntley Substation, and Proposed Transmission Associated Facilities, is the most appropriate route for the Project. The DEIS evaluated “Route Alternatives” between the Lakefield Junction Substation and the Huntley Substation. Additionally, 15 “Route Variations” were evaluated in several areas between the Lakefield Junction Substation and the Huntley Substation.²²⁰ Route Variations are shorter sections of routes designed to mitigate a specific local impact.²²¹ No Route Alternatives were developed between the Huntley Substation and the Iowa border.²²² Five Route Variations were evaluated in the DEIS between the Huntley Substation and the Iowa border.²²³ The record evidence demonstrates that no Route Alternative is a better alternative than Modified Route A. Further, the record evidence demonstrates that no Route Variation²²⁴ is appropriate to

²¹⁹ Ex. 7 at 153 (Route Permit Application).

²²⁰ Route Variations located in the following areas are evaluated in the EIS: Des Moines River/Jackson County Municipal Airport, Fox Lake, and Lake Charlotte. Ex. 108A at S-2, 17-18, and Map 3-9 (DEIS).

²²¹ Ex. 108A at S-2 (DEIS).

²²² Ex. 108A at 17 (DEIS).

²²³ Ex. 108A at 17 (DEIS).

²²⁴ Modified Route A already incorporates the following Route Variations: the north-south portion of JA-2 east of the Des Moines River, a portion of FL-2 east of the Fox Lake Substation, a portion of FL-4 east of 110th Avenue, a portion of LC-3 north of 160th Street, a portion of LC-5 east of LC-3, and a portion of HI-1 south of the Proposed Huntley Substation. Ex. 25 at 19 (Middleton Direct). The testimony of Mr. Middleton refers to the incorporated Route Variations by the nomenclature presented in the EIS Scoping Decision as the DEIS and its nomenclature were not available at the time Direct Testimony was filed.

incorporate into Modified Route A other than JA-2, which is the original Route A alignment at the Des Moines River and is discussed in Section IV.C.1 of this Brief.

A. Lake Crossings

The DEIS discusses the possibility of removing the existing Lakefield to Border 161 kV Transmission Line crossings from Fox Lake and Lake Charlotte and also the possibility of removal from certain areas between the lakes.²²⁵ ITC Midwest has not proposed to remove the crossings of Fox Lake and Lake Charlotte that were rebuilt within the last five years at a cost of \$7 million to meet MnDNR license clearance requirements.²²⁶ ITC Midwest has, however, proposed to construct Modified Route A on structures capable of carrying the 161 kV circuit in the future when conditions warrant its removal from the lake.²²⁷ ITC Midwest does not believe ordering removal of the existing Lakefield to Border 161 kV Transmission Line from Fox Lake and Lake Charlotte is necessary as part of the Project, but it has planned for the relocation of this line when conditions warrant that it be rebuilt due to age or other considerations.²²⁸

B. Route Alternative I90-1

I90-1 connects the Lakefield Junction Substation with the Proposed Huntley Substation.²²⁹ I90-1 is anticipated to result in more impacts to agricultural lands than Modified Route A.²³⁰ Further, I90-1 would require rebuilding the existing decade-old Jackson to Fox Lake 161 kV transmission line

²²⁵ Ex. 108A at Map 3-8 (DEIS).

²²⁶ Ex. 24 at 31-32 (Coeur Direct).

²²⁷ Ex. 24 at 33 (Coeur Direct); Ex. 32 at 16 (Middleton Rebuttal).

²²⁸ Ex. 24 at 33 (Coeur Direct); Ex. 32 at 16 (Middleton Rebuttal).

²²⁹ Ex. 108A at Map 3-4 (DEIS).

²³⁰ Ex. 108A at Figure 7-2 (DEIS); Ex 32 at Schedule 29 at 1 (Middleton Rebuttal).

along I-90.²³¹ Rebuilding this line presents some unique considerations that do not arise with rebuilding the Lakefield to Border 161 kV Transmission Line.

Construction of I90-1 is not possible along the existing Jackson to Fox Lake 161 kV transmission line centerline as the existing structure locations would not be permitted by MnDOT today.²³² I90-1 would need to be constructed at least 30 feet from the Jackson to Fox Lake 161 kV line centerline to avoid conflicts with MnDOT permit requirements.²³³ Reconstructing this line at this minimum distance requirement of 30 feet from the existing line raises operational concerns.²³⁴ Construction at this location would require that the Jackson to Fox Lake 161 kV transmission line be taken out of service during construction.²³⁵ Taking the Jackson to Fox Lake 161 kV line out of service has a significant negative impact on reliability and transfer capability.²³⁶ When the line is out of service, the City of Jackson load is served radially from the Lakefield Junction Substation via the Lakefield Junction to Jackson 161 kV transmission line.²³⁷ Taking the Jackson to Fox Lake 161 kV line out of service for reconstruction is possible, but it would be subject to a potential 72-hour “recall” notice by MISO if certain system contingencies occur.²³⁸ This means that ITC Midwest would be required to restore the Jackson to Fox Lake 161 kV line to service within 72 hours

²³¹ Ex. 108A at Map 3-4 (DEIS).

²³² Ex. 25 at 26 (Middleton Direct).

²³³ Ex. 25 at 26 (Middleton Direct).

²³⁴ Ex. 21 at 13 (Ashbacker Direct).

²³⁵ Ex. 21 at 13 (Ashbacker Direct).

²³⁶ Ex. 21 at 5 (Ashbacker Direct).

²³⁷ Ex. 21 at 5 (Ashbacker Direct).

²³⁸ Ex. 21 at 5 and 13-14 (Ashbacker Direct); Ex. 22 at 19-20 (Testimony - Direct Testimony and Schedules of Joe Berry (“Berry Direct”).

of a recall.²³⁹ Due to this recall requirement and accessibility issues along the interstate, more costly and time-intensive construction techniques must be implemented.²⁴⁰ Additionally, a significant delay in the construction of the Project could occur if the Jackson to Fox Lake 161 kV line were recalled into service due to a catastrophic event.²⁴¹

To avoid additional construction costs and issues related to a recall of this line, I90-1 would need to be constructed at least 100 feet from the existing Jackson to Fox Lake 161 kV transmission line, increasing impacts on agricultural operations, human settlement, and natural environments.²⁴²

East of Fox Lake, I90-1 could not be constructed along the same centerline as the existing 69 kV transmission line because of the proximity of the existing line to the MnDOT right-of-way.²⁴³ This is likely to increase impacts on agricultural operations in this area along I-90. Further, I90-1 would introduce a new transmission line along State Highway 15 where none exists currently.²⁴⁴

One option for I90-1 in the DEIS contemplates removing the existing Lakefield to Border 161 kV Transmission Line from its current location between the Fox Lake Substation and the Rutland Substation, co-locating it on triple-circuit structures for a length much longer than any triple-circuit portion of Modified Route A.²⁴⁵ This option would require approximately 13 miles of triple-

²³⁹ Ex. 22 at 20-21 (Berry Direct).

²⁴⁰ Ex. 21 at 5 (Ashbacker Direct).

²⁴¹ Ex. 21 at 5 (Ashbacker Direct).

²⁴² Ex. 21 at 15 (Ashbacker Direct); Ex. 25 at 53-54 (Middleton Direct).

²⁴³ Ex. 32 at Schedule 29 (Middleton Rebuttal).

²⁴⁴ Ex. 32 at Schedule 29 at 1 (Middleton Rebuttal).

²⁴⁵ Ex. 32 at Schedule 29 at 1 (Middleton Rebuttal).

circuit structures²⁴⁶ which presents a much greater risk than Modified Route A of a common tower outage of multiple circuits.²⁴⁷ For these reasons, I90-1 is not a more prudent route than Modified Route A.

C. Route Alternative I90-2

I90-2 is most similar to Modified Route A when looking at the Route Alternatives in the DEIS.²⁴⁸ I90-2 differs from Modified Route A in three areas: 1) I90-2 does not incorporate a more perpendicular crossing of the Des Moines River, provide additional separation from the Des Moines River MBS site on the east side of the river, nor does it incorporate the alignment modification proposed at 820th Street to avoid a well on the north side of the street; 2) at Fox Lake, the I90-2 anticipated right-of-way is located north of I-90, boxing in a residence on 125th Street; and 3) I90-2 continues east along I-90 from Fox Lake to State Highway 15 where it turns north, crossing the highway two times where no transmission line currently exists.²⁴⁹ As noted, east of Fox Lake, I90-2 could not be constructed along the same centerline as the existing 69 kV transmission line because of the proximity of the existing line to the MnDOT right-of-way.²⁵⁰ This is likely to increase impacts on agricultural operations in this area along I-90.

Modified Route A follows more of the existing Lakefield to Border 161 kV Transmission Line around Fox Lake and Lake Charlotte than I90-2.²⁵¹ Modified Route A also avoids WMAs, whereas I90-2 crosses through the Krahmer WMA

²⁴⁶ Ex. 108A at Appendix L (DEIS).

²⁴⁷ Ev. Hrg. Tr. at 26-27 (Ashbacker).

²⁴⁸ Ex. 32 at 13 (Middleton Rebuttal).

²⁴⁹ Ex. 32 at 13-14 (Middleton Rebuttal).

²⁵⁰ Ex. 32 at Schedule 29 (Middleton Rebuttal).

²⁵¹ Ex. 32 at 15 (Middleton Rebuttal).

near I-90.²⁵² Further, as with I90-1, one option for I90-2 contemplates removing the existing Lakefield to Border 161 kV Transmission Line from its current location between the Fox Lake Substation and the Rutland Substation, co-locating it on triple-circuit structures for a length much longer than any triple-circuit portion of Modified Route A.²⁵³ This is not favorable in light of the potential risk of a common outage on multiple circuits.²⁵⁴ For these reasons, I90-2 is not a more prudent route than Modified Route A.

D. Route Alternative I90-3

I90-3 presents the same concerns as I90-1 related to the Jackson to Fox Lake 161 kV transmission line.²⁵⁵ East of Fox Lake, I90-3 could not be constructed along the same centerline as the existing 69 kV transmission line because of the proximity of the existing line to the MnDOT right-of-way.²⁵⁶ This is likely to increase impacts on agricultural operations in this area along I-90. While I90-3 primarily follows I-90, it uses existing transmission infrastructure for only six percent of its length.²⁵⁷ Additionally, I90-3 would require constructing a 345 kV transmission line north from I-90 to the Proposed Huntley Substation through agricultural fields where no transmission infrastructure currently exists.²⁵⁸ I90-3 is not a more prudent route than Modified Route A.

²⁵² Ex. 32 at 15 (Middleton Rebuttal).

²⁵³ Ex. 32 at 15 (Middleton Rebuttal).

²⁵⁴ Ev. Hrg. Tr. at 26-27 (Ashbacker).

²⁵⁵ See Ex. 108A at Map 3-4 (DEIS); Ex. 21 at 15 (Ashbacker Direct).

²⁵⁶ Ex. 32 at Schedule 29 (Middleton Rebuttal).

²⁵⁷ Ex. 108A at J-10 (DEIS).

²⁵⁸ See Ex. 108A at Map 3-3 and 3-4 (DEIS).

E. Route Alternative I90-4

I90-4 presents the same issues as I90-3 except that instead of introducing a new transmission line corridor from I-90 to the Proposed Huntley Substation, it places the Lakefield Junction Substation to Huntley Substation 345 kV transmission line immediately adjacent to the Huntley Substation to Iowa 345 kV transmission line for approximately 3.5 miles, immediately south of the Proposed Huntley Substation, in Faribault County.²⁵⁹ This configuration is not desirable from an operations perspective, due to increased likelihood that a single event could impact both circuits.²⁶⁰ Further, Option 4 would require a 400-foot right-of-way through an area that would only require a 200-foot right-of-way for Modified Route A.²⁶¹ For these reasons, I90-4 is not a more prudent route than Modified Route A.

F. Route Alternative I90-5 Options 1 and Option 2

Route Alternative I90-5 presents many of the same concerns as I90-3 and I90-4, except that the 345 kV transmission line would terminate at the Southern Huntley Substation.²⁶² Selection of I90-5 would require reconfiguration of the 161 kV and 69 kV transmission lines from the Winnebago Junction Substation over four miles to the Southern Huntley Substation.²⁶³ I90-5 Option 2 would require a right-of-way between 170th Street south of the Winnebago Junction Substation to

²⁵⁹ See Ex. 108A and Map 3-4 and Map 3-5 (DEIS). I90-4 could use Route B from the Proposed Huntley Substation, but this would then create a new transmission right-of-way within one mile of the existing Lakefield to Border 161 kV Transmission Line increasing the incremental impact of the Project.

²⁶⁰ Ex. 22 at 14-15 (Berry Direct).

²⁶¹ Ex. 22 at 16 (Berry Direct).

²⁶² Ex. 108A at Map 3-4, Map 3-6, and Map 3-7 (DEIS).

²⁶³ Ex. 108A at Map 3-6 and Map 3-7 (DEIS).

the Southern Huntley Substation of 450 feet wide for 4.5 miles.²⁶⁴ This is in contrast to the 250-foot wide right-of-way required for Modified Route A for less than a mile between 170th Street and the Proposed Huntley Substation.²⁶⁵ Further, I90-5 Option 2 raises similar common corridor concerns for the 161 kV transmission lines that need to be reconfigured as those common corridor concerns raised for the I90-4 345 kV lines.²⁶⁶ I90-5 Option 1 would eliminate the common corridor concerns but would introduce over 11 miles of new transmission line rights-of-way between the Winnebago Junction Substation and the Southern Huntley Substation.²⁶⁷ This proposal was of concern to many stakeholders near Blue Earth because of the proximity to a residential subdivision.²⁶⁸ Finally, a 32-acre site for the Southern Huntley Substation has not yet been identified, and it is unknown where in Section 2 the substation may be located.²⁶⁹ Neither I90-5 Option 1 nor I90-5 Option 2 is a more prudent route than Modified Route A.

VI. SUMMARY OF APPROPRIATENESS OF MODIFIED ROUTE A

Modified Route A best balances the statutory and rule route factors. Modified Route A makes the best use of existing transmission line rights-of-way. It also provides the greatest proposed co-location of existing transmission facilities with the Project. Even in instances where an existing 161 kV centerline is not followed, ITC Midwest proposes use of 161 kV/345 kV or

²⁶⁴ Ex. 108A at Map 3-7 (DEIS).

²⁶⁵ Ex. 108A at Map 3-2 (DEIS).

²⁶⁶ Ex. 22 at 15-16 (Berry Direct).

²⁶⁷ Ex. 108A at Map 3-6 (DEIS).

²⁶⁸ Document ID Nos. 20146-100148-07 (Moore); 20146-100148-09 (Ankeny).

²⁶⁹ Ex. 32 at 11 (Middleton Rebuttal).

69 kV/161 kV/345 kV structures to provide an open position that can be used in the future for 161 kV co-location should conditions warrant.²⁷⁰ Modified Route A minimizes impacts to human settlement and the natural environment.²⁷¹ The evidence on the record also demonstrates that the Proposed Huntley Substation, expansion of the Lakefield Junction Substation, and the 161 kV Associated Facilities reconfiguration proposed by ITC Midwest best balance these routing factors. Modified Route A rebuilds a substantial portion of the Lakefield to Border 161 kV Transmission Line, which would likely need to be rebuilt in the next 10 to 20 years.²⁷² Conversely, I90-1, I90-3, I90-4, and I90-5 would require the removal and rebuilding of the Jackson to Fox Lake 161 kV transmission line, which was constructed within the last decade.²⁷³

Ultimately, Modified Route A most appropriately balances the various routing factors when compared to all other Route Alternatives on the record.

VII. SPECIAL PERMIT CONDITIONS

A Route Permit issued by the Commission contains standard Route Permit Conditions and may also include Special Route Permit Conditions.²⁷⁴ ITC Midwest has not objected to any specific standard Route Permit Conditions.²⁷⁵ ITC Midwest has, however, requested minor modifications to the standard Route

²⁷⁰ Ex. 32 at 16 (Middleton Rebuttal).

²⁷¹ Ex. 25 at Schedule 2 and Schedule 12 (Middleton Direct); Ex. 32 at Schedule 27 and Schedule 29 (Middleton Rebuttal).

²⁷² Ex. 7 at 10 (Route Permit Application).

²⁷³ See *In the Matter of the Route Permit for Construction of a High Voltage Transmission Line in Jackson and Martin Counties Issued to Northern States Power Co. d/b/a Xcel Energy*, EQB Docket No. 03-64-TR-XCEL, PUC Docket No. E002/TL-05-1355.

²⁷⁴ Ex. 108A at Appendix B1 at §§ 4.0 and 4.10 (DEIS); Ex. 528 at §§ 4.0 and 4.10 (Generic Route Permit Template).

²⁷⁵ See Ex. 21 (Ashbacker Direct); Ex. 28 (Ashbacker Rebuttal); Ex. 36 (Comment Letter on DEIS).

Permit Conditions regarding noise and interference with communication devices.²⁷⁶

Specifically, ITC Midwest requests that standard Route Permit Condition 4.2.4 regarding noise from Project construction be modified to acknowledge that occasionally there may be construction activities outside the defined daytime hours of 7 a.m. to 10 p.m. or on a weekend if ITC Midwest is required to work around customer schedules, line outages, or has been significantly impacted due to other factors.²⁷⁷ ITC Midwest also requests that standard Route Permit Condition 4.7.3 regarding interference with communication devices be modified to read:

Should electronic interference with radio or television, satellite, wireless internet, GPS-based agriculture navigation systems or other communication devices occur as a result of the presence or operation of the transmission line, ITC Midwest will work with affected landowners on a case-by-case basis to assess the cause of the interference and, to the extent practicable, restore electronic reception to pre-Project quality.²⁷⁸

ITC Midwest requests this modification to clarify that it will restore electronic reception where the degradation in reception is determined to be caused by the Project.

ITC Midwest has also agreed to or requested certain Special Route Permit Conditions related to the development of construction plans and the Des Moines River Crossing.²⁷⁹ Regarding plans, ITC Midwest has completed an Agriculture

²⁷⁶ Ex. 36 at 9, 10, and Attachment B at 62 (Comment Letter on DEIS).

²⁷⁷ Ex. 36 at 9 (Comment Letter on DEIS).

²⁷⁸ Ex. 36 at 10 (Comment Letter on DEIS).

²⁷⁹ Ex. 25 at 34 (Middleton Direct); Ex. 36 at 17 and 21-22 (Comment Letter on DEIS).

Impact Mitigation Plan (“AIMP”),²⁸⁰ and agreed to prepare an Avian Mitigation Plan in cooperation with the MnDNR and the USFWS,²⁸¹ a Vegetation Management Plan, a Stormwater Pollution Prevention Plan, and an overall Construction Environmental Control Plan to identify mitigation measures to be implemented during the design and construction of the Project in Minnesota.²⁸² ITC Midwest has requested that the Special Route Permit Condition regarding the Construction Environmental Control Plan include the following language:

The Construction Environmental Control Plan shall include all environmental control plans and special conditions imposed by permits or licenses issued by state or federal agencies related to agency-managed resources. Plans within the Construction Environmental Control Plan shall include the Agricultural Impact Mitigation Plan (AIMP), an Avian Mitigation Plan (AMP), a Vegetation Management Plan (VMP), and a Stormwater Pollution Prevention Plan (SWPPP). The Construction Environmental Control Plan shall be filed with the Commission ten (10) days prior to submitting the Plan and Profile. The Construction Environmental Control Plan shall include the following:

1. Identification of and contact information for an Environmental Monitor to oversee the construction process and monitor compliance with the Construction Environmental Control Plan and all plans therein.
2. A process for reporting construction status to the Commission.
3. A process for internal tracking of construction management, including required plan or permit inspection forms.

²⁸⁰ The Minnesota Department of Agriculture approved ITC Midwest’s proposed AIMP on May 1, 2014. Ex. 36 at Attachment G (Comment Letter on DEIS).

²⁸¹ Ex. 36 at 21 (Comment Letter on DEIS).

²⁸² Ex. 36 at 21-22 (Comment Letter on DEIS).

ITC Midwest also supports a Special Route Permit Condition for the Des Moines River Crossing.²⁸³ Specifically, ITC Midwest requests the following Special Route Permit Condition:

This Route Permit shall allow ITC Midwest to construct the Project across the Des Moines River within Modified Route A along either the existing 161 kV transmission line centerline (referred to as JA-2 in the EIS) or the Modified Route A alignment without providing additional information on the potential for environmental impacts. ITC Midwest intends to work with the MnDNR and the landowners on the east and west banks of the Des Moines River, to the extent practicable. To accommodate various considerations regarding impacts to environmental features and to avoid interference with air navigation at the Jackson Municipal Airport, ITC Midwest may use specialty structures if necessary.

This Special Route Permit Condition should address the concerns raised by the MnDNR in its May 30, 2014 letter, previously discussed in this Brief, regarding potential impacts using either the JA-2 or Modified Route A alignments, both of which fall within Modified Route A's route width.

ITC Midwest has objected to a Special Route Permit Condition proposed in the DEIS regarding archaeological resources.²⁸⁴ The DEIS suggests that ITC Midwest be required to train construction workers in the handling of archaeological resources.²⁸⁵ The DEIS identifies one archaeological resource within 100 feet of Modified Route A, which is capable of being spanned.²⁸⁶ ITC Midwest does not believe it is reasonable to require training of construction workers on the identification of historic and archaeological resources as

²⁸³ Ex. 25 at 34 (Middleton Direct).

²⁸⁴ Ex. 36 at 16 (Comment Letter on DEIS).

²⁸⁵ Ex. 36 at 16 (Comment Letter on DEIS).

²⁸⁶ Ex. 7 at 166 and Appendix P, Archaeological and Historic Resources, Faribault County, Sheet 2 of 12; Ex. 108A at 102 and Appendix I at I-1 (DEIS).

suggested in the DEIS.²⁸⁷ ITC Midwest proposes, however, to inform construction workers of known archaeological and historic resource areas and ITC Midwest's environmental monitor will be responsible for the identification and reporting of any suspected resources encountered during construction.²⁸⁸ Given the limited risk for impact to archaeological and historic resources as a result of the Project, ITC Midwest does not support a Route Permit Condition requiring training of construction personnel on how to identify cultural properties or resources²⁸⁹ but would propose instead to inform construction personnel of known properties or resources and ensure the environmental monitor is capable of identifying unknown properties or resources.

VIII. CONCLUSION

The record evidence demonstrates that of the routes on the record, Modified Route A best balances the routing factors in Minnesota Statutes Section 216E.03, subdivision 7 and Minnesota Rules 7850.4000 and 7850.4100. ITC Midwest respectfully requests that the ALJ recommend Modified Route A for the Project. Further, ITC Midwest requests that the ALJ recommend that the Commission incorporate the Route Permit Conditions discussed in this Brief into the Route Permit for the Project. Finally, ITC Midwest requests that the ALJ adopt the Proposed Findings submitted along with this Brief.

²⁸⁷ Ex. 36 at 16 (Comment Letter on DEIS).

²⁸⁸ Ex. 36 at 16 (Comment Letter on DEIS).

²⁸⁹ Ex. 108A at Appendix B at B2-13 (DEIS).

Dated: July 11, 2014

Respectfully submitted:

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