

**STATE OF MINNESOTA PUBLIC UTILITIES COMMISSION**  
**ROUTE PERMIT FOR CONSTRUCTION OF A HIGH-VOLTAGE TRANSMISSION  
LINE AND ASSOCIATED FACILITIES**

**IN**  
**HUBBARD, WADENA AND BECKER COUNTIES**

**ISSUED TO**  
**GREAT RIVER ENERGY AND MINNESOTA POWER**

**PUC DOCKET NO. 14-787; 14-797**

In accordance with the requirements of Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850, this route permit is hereby issued to:

**GREAT RIVER ENERGY AND MINNESOTA POWER**

*Great River Energy and Minnesota Power* are authorized by this route permit to construct approximately 22.5 miles of new 115 kV Transmission Line and three new substations known as the “Menahga Area” Project in Hubbard, Wadena and Becker counties, Minnesota.

The transmission line and associated facilities shall be built within the route identified in this permit and as portrayed on the official route maps, and in compliance with the conditions specified in this permit.

Approved and adopted this \_\_\_\_ day of [Month, Year]

BY ORDER OF THE COMMISSION

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Daniel P. Wolf,  
Executive Secretary

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## CONTENTS

1.0	ROUTE PERMIT.....	1
1.1	Pre-emption.....	1
2.0	PROJECT DESCRIPTION.....	1
2.1	Project Location.....	1
2.2	Associated Facilities and Substations.....	2
2.3	Structures.....	4
2.4	Conductors.....	5
2.5	Safety Codes and Design Requirements.....	5
3.0	DESIGNATED ROUTE.....	5
4.0	RIGHT-OF-WAY.....	6
5.0	GENERAL CONDITIONS.....	7
5.1	Notification to Landowners.....	7
5.2	Construction Practices.....	8
5.2.1	Field Representative.....	8
5.2.2	Employee Training and Education of Permit Terms and Conditions.....	8
5.2.3	Public Services, Public Utilities, and Existing Easements.....	8
5.2.4	Temporary Work Space.....	9
5.2.5	Noise.....	9
5.2.6	Site Sediment and Erosion Control.....	9
5.2.7	Aesthetics.....	10
5.2.8	Vegetation Removal and Protection.....	10
5.2.9	Application of Herbicides.....	10
5.2.10	Noxious Weeds.....	11
5.2.11	Restoration.....	11
5.2.12	Wetlands and Water Resources.....	11
5.2.13	Archaeological and Historic Resources.....	12
5.2.14	Avian Mitigation.....	13
5.2.15	Cleanup.....	13
5.2.16	Pollution and Hazardous Wastes.....	13
5.2.17	Damages.....	13
5.3	Electrical Performance Standards.....	13
5.3.1	Grounding.....	13
5.3.2	Electric Field.....	14
5.3.3	Interference with Communication Devices.....	14
5.4	Other Requirements.....	14

5.4.1	Applicable Codes .....	14
5.4.2	Other Permits and Regulations.....	14
6.0	SPECIAL CONDITIONS .....	14
7.0	DELAY IN CONSTRUCTION .....	15
8.0	COMPLAINT PROCEDURES .....	16
9.0	COMPLIANCE REQUIREMENTS.....	16
9.1	Plan and Profile.....	16
9.2	Periodic Status Reports .....	16
9.3	Notification to Commission.....	17
9.4	As-Builts .....	17
9.5	GPS Data.....	17
10.0	PERMIT AMENDMENT .....	17
11.0	TRANSFER OF PERMIT .....	17
12.0	REVOCATION OR SUSPENSION OF THE PERMIT .....	18

**FIGURES**

Official Route Maps

**ATTACHMENTS**

- Attachment A – Complaint Procedures for High-Voltage Transmission Lines
- Attachment B – Compliance Filing Procedures for Permitted Energy Facilities
- Attachment C – Compliance Filing List

## **1.0 ROUTE PERMIT**

The Minnesota Public Utilities Commission (Commission) hereby issues this route permit to Great River Energy and Minnesota Power (Permittee) pursuant to Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850. This permit authorizes the Great River Energy and Minnesota Power to construct approximately 22.5 miles of new 115 kV Transmission Line and three new substations known as the “Menahga Area” Project in Hubbard, Wadena and Becker counties, Minnesota and as identified in the attached route permit maps, hereby incorporated into this document.

### **1.1 Pre-emption**

Pursuant to Minn. Stat. § 216E.10, this route permit shall be the sole approval required to be obtained by the Permittee for construction of the transmission facilities and this permit shall supersede and preempt all zoning, building, or land use rules, regulations, or ordinances promulgated by regional, county, local and special purpose government.

## **2.0 PROJECT DESCRIPTION**

The Project includes the construction and operation of approximately 22.5 miles of new 115 kV transmission line in Hubbard, Wadena and Becker counties. The 115 kV transmission line would run westward from the existing Hubbard substation to a new Straight River substation in the SW corner of Straight River Twp., and then southward to a new Blueberry substation near the city of Menahga and to a new Red Eye substation approximately 3 miles north of Sebeka, MN.

The Project entails: 1) construction of 4.5 miles of double-circuit 115 kilovolt (kV) transmission line and approximately 2.5 miles of single-circuit 115 kV transmission line, 2) construction of approximately 15.5 miles of primarily single-circuit 115 kV transmission line, and 3) construction of the new Todd-Wadena Electric Cooperative Red Eye Distribution Substation (to serve the proposed Minnesota Pipe Line Company (MPL) Sebeka pump station); construction of the Minnesota Power Straight River Substation, and the construction of the Great River Energy Blueberry Substation; relocation of the existing Todd-Wadena Menahga Distribution Substation to the Blueberry Substation site and convert the voltage from 34.5 kV to 115 kV; and modify the existing Great River Energy Hubbard Substation and Minnesota Power Pipeline Substation.

### **2.1 Project Location**

The Project is located in West-Central Minnesota in Hubbard, Wadena and Becker counties, specifically within the townships of Hubbard, Straight River, Runeberg, Blueberry, and Red Eye in the service territory of Todd-Wadena Electric Cooperative.

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County	Township Name	Township	Range	Section
Hubbard	Hubbard	T139N	R34W	29, 30
Hubbard	Straight River	T139N	R35W	25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35
Wadena	Blueberry	T138N	R35W	6, 7, 18, 19, 20, 29, 30, 31, 32
Becker	Runeberg	T138N	R36W	1, 12, 13, 24
Wadena	Red Eye	T137N	R35W	5, 6, 7, 8, 9, 10, 14, 15, 16, 17, 18, 22, 23

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## 2.2 Associated Facilities and Substations

The associated facilities for the Project include construction of the proposed new Minnesota Power Straight River Substation, Great River Energy Blueberry Substation, and Todd-Wadena Red Eye Substation (that will serve the proposed new MPL pump station); relocation of the existing Todd-Wadena Menahga Substation to the proposed new Blueberry Substation site and conversion of the voltage from 34.5 kV to 115 kV; and modifications to the existing Great River Energy Hubbard Substation and the Minnesota Power Pipeline Substation.

### 2.2.1 Minnesota Power Straight River Substation

The Straight River Substation is located in the SW 1/4 of the SE 1/4 of Section 30 in Straight River Township. Minnesota Power will construct and own the Straight River 115/34.5 kV Substation near the existing MPL Park Rapids Pump Station to re-establish 34.5 kV service to the Minnesota Power Pipeline Substation after removal of the 34.5 kV source from Hubbard. The 34.5 kV 522 feeder line from the Hubbard Substation to the Pipeline Substation will be removed to accommodate the interconnection and routing of the new 115 kV transmission line. It is anticipated that the fenced area of the 115 kV substation will be approximately 115' by 180'.

Facilities at the Straight River Substation will include:

- 115/34.5 kV transformer
- A 115 kV “transrupter” and a 34.5 kV recloser
- A 3-way 115 kV motor operated switch and tap line (approximately 700 feet)
- Structural steel, grounding
- 115 kV and 34.5 kV substation switches
- Communications and metering equipment

### 2.2.2 Great River Energy Blueberry Substation

Great River Energy will construct the Blueberry 115/34.5 kV Substation south of the existing Menahga distribution substation near Menahga, Minnesota. Great River Energy has an option to purchase 10 acres in the NW ¼ of the SW ¼ of Section 29 of Blueberry Township. It is anticipated that the fenced area of the 115 kV substation will be approximately 240' by 415'.

Facilities at the Blueberry Substation will include:

- Relocated 115/34.5 kV transformer from the Hubbard Substation
- A 115 kV breaker and a 34.5 kV breaker
- 115 kV switches
- Electrical Equipment Enclosure
- Structural steel
- Bus work and fittings
- SCADA/Relay/Control Equipment
- Conduit
- Grounding
- Fiber optic communication
- 115/12.47 kV distribution transformer
- Low side sectionalizing equipment

#### 2.2.3 Todd-Wadena Menahga Substation

Todd-Wadena will relocate the existing Menahga Substation to the new Blueberry Substation site and convert the voltage from 34.5 kV to 115 kV. The existing Menahga Substation will be completely retired, including all equipment, structures and fence. The Menahga Substation will occupy approximately 100' by 100' at the Blueberry site.

Facilities at the relocated Menahga Substation will include:

- 115/12.47 kV transformer
- Structural steel
- Meter building
- Bus work
- Low side sectionalizing equipment

#### 2.2.4 Todd-Wadena Red Eye Substation

Todd-Wadena will construct the Red Eye 115/4.16 kV Substation to support the motor loads for the MPL Sebeka pump station. Todd-Wadena plans to construct the proposed new substation on MPL's property in the SE ¼ of the NE ¼ of Section 22 in Red Eye Township. It is anticipated that the fenced area of the 115 kV substation will be approximately 125' by 125'.

Facilities at the Red Eye Substation will include:

- 115/4.16 kV transformer
- Electrical Equipment Enclosure
- January 2015 Menahga Area 115 kV Project 4-11
- Structural steel
- Bus work and fittings
- Low side sectionalizing equipment
- Meter equipment
- Conduit, Grounding
- Fiber optic communication

#### 2.2.5 Great River Energy Hubbard Substation

Great River Energy will modify the existing Hubbard Substation to accommodate the new 115 kV transmission line. One 115/34.5 kV transformer will be relocated to the proposed Blueberry Substation. The existing 34.5 kV breakers and foundations associated with the transformer will be retired. New equipment to be installed at the Hubbard Substation includes:

- A 115 kV breaker in the ring bus
- 115 kV switches
- Structural steel, bus work and fittings
- SCADA/Relay/Control Equipment
- Conduit, grounding
- Grounding
- Fiber optic communication

#### 2.2.6 Minnesota Power Pipeline Substation

The existing Minnesota Power Pipeline 34.5/4.16 kV Substation, which provides a dedicated source to the MPL Park Rapids pump station, may need to be modified to accommodate the connection of a 34.5 kV feeder from the proposed new Straight River Substation. The extent of these modifications, if they are needed, will not be known until further engineering is completed on the Straight River Substation.

### 2.3 Structures

The majority of the new 115 kV line will consist of single circuit, single pole wood structures spaced approximately 275 to 400 feet apart. Spans for the double circuit portion of the Project will range from 350 to 450 feet. Transmission structures will typically range in height from 60 to 90 feet above ground, depending upon the terrain and environmental constraints (such as highway crossings, river and stream crossings, and required angle structures). The average diameter of the wood structures at ground level is 20 inches. Some sections of the new line will

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have distribution underbuild, which would be attached to new 115 kV transmission line structures spaced 250 to 300 feet apart.

H-Frame design structures may be used in areas with rugged topography and where longer spans are required to avoid or minimize impacts to wetlands or waterways. Span lengths average 600 to 800 feet, with 1,000-foot spans possible with certain topography. Structure heights typically range from 60 to 90 feet above ground with taller structures required for exceptionally long spans and in circumstances requiring additional vertical clearance exceeding the National Electrical Safety Code (NESC) and other agency requirements.

The table below details specifics on the various structure types as presented in the route permit application.

Line Type	Conductor	Structure		Diameter (inches)	Height (feet)	Span (feet)
		Type	Material			
115 kV	477 ACSR	Single Pole	Wood	20	60-90	250-300
115 kV	477 ACSR	Single Pole	Wood	20	60-90	275-400
115 kV	477 ACSR	H-Frame	Wood	20	60-90	600-1,000

#### 2.4 Conductors

The single circuit structures will have three single conductor phase wires and one shield wire. It is anticipated that the phase wires will be 477 thousand circular mil ACSR with seven steel core strands and 26 outer aluminum strands.

The shield wire will be 0.528 optical ground wire.

#### 2.5 Safety Codes and Design Requirements

The transmission line and associated facilities shall be designed to meet or exceed all relevant local and state codes, the National Electric Safety Code (NESC), and North American Electric Reliability Corporation (NERC) requirements. This includes standards relating to clearances to ground, clearance to crossing utilities, clearance to buildings, strength of materials, clearances over roadways, right-of-way widths, and permit requirements. The transmission line shall be equipped with protective devices to safeguard the public if an accident occurs.

#### 3.0 DESIGNATED ROUTE

The route designated by the Commission in this permit is the route described below and shown on the route maps attached to this permit. The route is generally described as follows:

- Construction of approximately 7 miles of east-west transmission line between the existing Great River Energy Hubbard Substation and proposed new Minnesota Power

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Straight River Substation, which will replace the existing Minnesota Power 34.5 kV “522” feeder line. The first 4.5 miles between the Hubbard Substation and County Road (CR) 115 will be double-circuit 115 kV line to accommodate a future Great River Energy project to the north. The approximate 2.5 miles between CR 115 and the proposed Minnesota Power Straight River Substation will be single-circuit 115 kV line.

- Construction of a generally north to south, single-circuit transmission line (approximately 15.5 miles) between the proposed Minnesota Power Straight River Substation and the proposed new Todd-Wadena Red Eye distribution substation.
- Construction of the proposed new Minnesota Power Straight River Substation, Great River Energy Blueberry Substation, and Todd-Wadena Red Eye Substation (that will serve the proposed new MPL pump station); relocation of the existing Todd-Wadena Menahga Substation to the proposed new Blueberry Substation site and conversion of the voltage from 34.5 kV to 115 kV; and modifications to the existing Great River Energy Hubbard Substation and the Minnesota Power Pipeline Substation.

#### **4.0 RIGHT-OF-WAY**

The approved right-of-way width for the project is as follows:

The route for the Project will be 500-foot wide (250 feet either side of the transmission line in areas where the transmission line will be cross-country, or 250 feet either side of the centerline of road right-of-ways (ROW) in areas where the transmission line follows a road). In a few areas (particularly around proposed substations), Applicants are requesting a route width wider than 500 feet to accommodate facility designs as described below:

- At the existing Hubbard Substation, an additional 150 by 650 feet north of the route width that encompasses the substation.
- In Section 26 of Straight River Township, a wider triangular route width is proposed to allow flexibility for the crossing of Minnesota Power’s 230 kV “909” Line, although only a single alignment with an easement that is 50’ on each side of the transmission line will be required in this area.
- Around the Straight River Substation, an area that accommodates the proposed location, plus an additional 650 feet to the west of the north-south alignment; and 500 feet north and 250 south of the road centerline is necessary to accommodate the transmission line.
- Around the Blueberry Substation, an additional route width of 100 feet to the north, 150 feet to the south, and 450 feet to the west of the substation is necessary to accommodate the transmission lines that will go in and out of the substation.

- Around the Red Eye Substation, an additional area of 400 feet by 750 north of the east-west alignment that extends into the substation (property owned by MPL) to allow flexibility in design and to minimize conflict with MPL and Todd-Wadena's facilities.
- The Minnesota Power DC Line will need to be raised where the proposed 115 kV transmission line would cross under it in Section 7, T148, R35W. However, no additional right-of-way is anticipated to be needed to raise the line.

This permit anticipates that the right-of-way will generally conform to the anticipated alignment as described in the EA and record and as provided for in this permit and noted on the attached route permit maps unless changes are requested by individual landowner or unforeseen conditions are encountered or are otherwise provided for by this permit.

The identified route widths will provide the Permittee with flexibility for minor adjustments of the specific alignment or right-of-way to accommodate landowner requests and unforeseen conditions. The final alignment (i.e., permanent and maintained rights-of-way) will be located within this designated route unless otherwise authorized below.

Any alignment modifications within the designated route shall be located so as to have comparable overall impacts relative to the factors in Minn. R. 7850.4100, as does the alignment identified in this permit, and shall be specifically identified and documented in and approved as part of the plan and profile submitted pursuant to Section 9.1 of this permit.

Where the transmission line route parallels existing highway and other road rights-of-way, the transmission line right-of-way shall occupy and utilize the existing right-of-way to the maximum extent possible, consistent with the criteria in Minn. R. 7850.4100, the other requirements of this permit, and for highways under the jurisdiction of the Minnesota Department of Transportation (Mn/DOT) rules, policies, and procedures for accommodating utilities in trunk highway rights-of-way.

## **5.0 GENERAL CONDITIONS**

The Permittee shall comply with the following conditions during construction of the transmission line and associated facilities over the life of this permit.

### **5.1 Notification to Landowners**

The Permittee shall provide all affected landowners with a copy of this permit and, as a separate information piece, the complaint procedures at the time of the first contact with the landowners

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after issuance of this permit. The Permittee shall contact landowners prior to entering the property or conducting maintenance along the route. The Permittee shall work with landowners to locate the high-voltage transmission line to minimize the loss of agricultural land, forest, and wetlands, and to avoid homes and farmsteads.

At the time of first contact, the Permittee shall also provide all affected landowners with a copy of the Department of Commerce's Rights-of-Way and Easements for Energy Facility Construction and Operation fact sheet.<sup>1</sup>

## **5.2 Construction Practices**

The Permittee shall follow those specific construction practices and material specifications described in Great River Energy and Minnesota Power Application to the Commission for a route permit for the Menahga Area 115 kV Transmission Line Project, dated January 15, 2015 unless this permit establishes a different requirement in which case this permit shall prevail.

### **5.2.1 Field Representative**

At least 14 days prior to commencing construction, the Permittee shall advise the Commission in writing of the person or persons designated to be the field representative for the Permittee with the responsibility to oversee compliance with the conditions of this permit during construction.

The field representative's address, phone number, emergency phone number, and email shall be provided to the Commission and shall be made available to affected landowners, residents, public officials and other interested persons. The Permittee may change the field representative at any time upon written notice to the Commission.

### **5.2.2 Employee Training and Education of Permit Terms and Conditions**

The Permittee shall inform all employees, contractors, and other persons involved in the transmission line construction of the terms and conditions of this permit.

### **5.2.3 Public Services, Public Utilities, and Existing Easements**

During construction, the Permittee shall minimize any disruption to public services or public utilities. To the extent disruptions to public services or public utilities occur these would be temporary and the Permittee will restore service promptly. Where any impacts

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<sup>1</sup> [http://mn.gov/commerce/energyfacilities/documents/Easements%20Fact%20Sheet\\_08.05.14.pdf](http://mn.gov/commerce/energyfacilities/documents/Easements%20Fact%20Sheet_08.05.14.pdf)

to utilities have the potential to occur the Permittee will work with both landowners and local agencies to determine the most appropriate transmission structure placement.

The Permittee shall work with the landowners, townships, cities, and counties along the route to accommodate concerns regarding tree clearing, distance from existing structures, drain tiles, pole depth and placement in relationship to existing roads and road expansion plans.

The Permittee shall cooperate with county and city road authorities to develop appropriate signage and traffic management during construction.

#### 5.2.4 Temporary Work Space

The Permittee shall limit temporary easements to special construction access needs and additional staging or lay-down areas required outside of the authorized right-of-way. Temporary space shall be selected to limit the removal and impacts to vegetation. Temporary easements outside of the authorized transmission line right-of-way will be obtained from affected landowners through rental agreements and are not provided for in this permit.

Temporary driveways may be constructed between the roadway and the structures to minimize impact using the shortest route possible. Construction mats should also be used to minimize impacts on access paths and construction areas.

#### 5.2.5 Noise

Construction and routine maintenance activities shall be limited to daytime working hours, as defined in Minn. R. 7030.0200, to ensure nighttime noise level standards will not be exceeded.

#### 5.2.6 Site Sediment and Erosion Control

The Permittee shall implement those erosion prevention and sediment control practices recommended by the Minnesota Pollution Control Agency (MPCA) Construction Stormwater Program.

The Permittee shall implement reasonable measures to minimize erosion and sedimentation during construction and shall employ perimeter sediment controls, protect exposed soil by promptly planting, seeding, using erosion control blankets and turf reinforcement mats, stabilizing slopes, protecting storm drain inlets, protecting soil

stockpiles, and controlling vehicle tracking. Contours shall be graded as required so that all surfaces provide for proper drainage, blend with the natural terrain, and are left in a condition that will facilitate re-vegetation and prevent erosion. All areas disturbed during construction of the facilities shall be returned to pre-construction conditions.

Where larger areas of one acre or more are disturbed or other areas designated by the MPCA, the Permittee shall obtain a National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) Construction Stormwater permit from the MPCA.

#### 5.2.7 Aesthetics

The Permittee shall consider input pertaining to visual impacts from landowners or land management agencies prior to final location of structures, rights-of-way, and other areas with the potential for visual disturbance. Care shall be used to preserve the natural landscape, minimize tree removal and prevent any unnecessary destruction of the natural surroundings in the vicinity of the Project during construction and maintenance.

Structures shall be placed at a distance, consistent with sound engineering principles and system reliability criteria, from intersecting roads, highway, or trail crossings and could cross roads to minimize or avoid impacts.

#### 5.2.8 Vegetation Removal and Protection

The Permittee shall minimize the number of trees to be removed in selecting the right-of-way specifically preserving to the maximum extent practicable windbreaks, shelterbelts, living snow fences, and vegetation in areas such as trail and stream crossings where vegetative screening may minimize aesthetic impacts, to the extent that such actions do not violate sound engineering principles or system reliability criteria.

Tall growing species located within the transmission line right-of-way that endanger the safe and reliable operation of the transmission facility will be removed by the Permittee. The Permittee shall leave undisturbed, to the extent possible, existing low growing species in the right-of-way or replant such species in the right-of-way to blend the difference between the right-of-way and adjacent areas, to the extent that the low growing vegetation that will not pose a threat to the transmission facility or impede construction.

#### 5.2.9 Application of Herbicides

The Permittee shall restrict herbicide use to those herbicides and methods of application approved by the Minnesota Department of Agriculture and the U.S. Environmental

Protection Agency. Selective foliage or basal application shall be used when practicable. The Permittee shall contact the landowner or his designee to obtain approval for the use of herbicide prior to any application on their property. The landowner may request that there be no application of herbicides on any part of the right-of-way within the landowner's property. All herbicides shall be applied in a safe and cautious manner so as not to damage crops, orchards, tree farms, or gardens.

#### 5.2.10 Noxious Weeds

The Permittee shall take all reasonable precautions against the spread of noxious weeds during all phases of construction. When utilizing seed to establish temporary and permanent vegetative cover on exposed soil, the Permittee shall select site appropriate seed certified to be free of noxious weeds. To the extent possible, the Permittee shall use native seed mixes. The Permittee shall consult with landowners on the selection and use of seed for replanting.

#### 5.2.11 Restoration

The Permittee shall restore the right-of-way, temporary work spaces, access roads, abandoned right-of-way, and other public or private lands affected by construction of the transmission line.

Restoration within the right-of-way must be compatible with the safe operation, maintenance, and inspection of the transmission line. Within 60 days after completion of all restoration activities, the Permittee shall advise the Commission in writing of the completion of such activities.

#### 5.2.12 Wetlands and Water Resources

Wetland impact avoidance measures that shall be implemented during design and construction of the transmission line will include spacing and placing the power poles at variable distances to span and avoid wetlands, watercourses, and floodplains.

Unavoidable wetland impacts as a result of the placement of poles shall be limited to the immediate area around the poles. To minimize impacts, construction in wetland areas shall occur during frozen ground conditions. When construction during winter is not possible, wooden or composite mats shall be used to protect wetland vegetation. Soil excavated from the wetlands and riparian areas shall be contained and not placed back into the wetland or riparian area.

Wetlands and riparian areas shall be accessed using the shortest route possible in order to minimize travel through wetland areas and prevent unnecessary impacts. No staging or

stringing set up areas shall be placed within or adjacent to wetlands or water resources, as practicable. Power pole structures shall be assembled on upland areas before they are brought to the site for installation.

Areas disturbed by construction activities shall be restored to pre-construction conditions. Restoration of the wetlands will be performed by Permittee in accordance with the requirements of applicable state and federal permits or laws and landowner agreements.

All requirements of the U.S. Army Corps of Engineers (wetlands under federal jurisdiction), Minnesota Department of Natural Resources (Public Waters/Wetlands), and County (wetlands under the jurisdiction of the Minnesota Wetland Conservation Act) shall be met.

As part of the preconstruction reports, the permittee will include a section evaluating the potential for the occurrence of Aquatic Invasive Species (AIS) in the project area and describing if any best management practices apply to the project. The permittee should identify any infested waters or otherwise state that aquatic invasive species are not anticipated. The MN DNR must be notified if any AIS are identified in an area not previously identified as infested water.

#### 5.2.13 Archaeological and Historic Resources

The Permittee shall consult with the State Historic Preservation Office (SHPO) concerning the extent of a Phase I archaeological survey and appropriate mitigation measures for the Project. Permittee shall document and submit to the Commission the results of the consultation, including those portions of the Project that will be surveyed and the extent of the survey. ~~with the Construction Environmental Control Plan for the Project.~~

For those portions of the Project that are surveyed, Permittee shall submit, with the plan and profile for these portions, the results of the survey and all applicable avoidance and mitigation measures employed or to be employed.

~~Permittee shall inform construction personnel of known archaeological resources along the permitted route for the Project and of archaeological survey results. Permittee shall employ a monitor that reports to and communicates with the Environmental Monitor to identify and report archaeological resources encountered during construction of the Project and to coordinate with SHPO on appropriate mitigation measures.~~

Prior to construction, workers shall be trained about the need to avoid cultural properties, how to identify cultural properties, and procedures to follow if undocumented cultural properties, including gravesites, are found during construction.

#### 5.2.14 Avian Mitigation

The Permittee's standard transmission design shall incorporate adequate spacing of conductors and grounding devices in accordance with Avian Power Line Interaction Committee standards to eliminate the risk of electrocution to raptors with larger wingspans that may simultaneously come in contact with a conductor and grounding devices.

The Permittee will consult with the Minnesota Department of Natural Resources and USFWS regarding type and placement of bird diverters.

#### 5.2.15 Cleanup

All waste and scrap that is the product of construction shall be removed from the right-of-way and all premises on which construction activities were conducted and properly disposed of upon completion of each task. Personal litter, including bottles, cans, and paper from construction activities shall be removed on a daily basis.

#### 5.2.16 Pollution and Hazardous Wastes

All appropriate precautions to protect against pollution of the environment must be taken by the Permittee. The Permittee shall be responsible for compliance with all laws applicable to the generation, storage, transportation, clean up and disposal of all wastes generated during construction and restoration of the right-of-way.

#### 5.2.17 Damages

The Permittee shall fairly restore or compensate landowners for damage to crops, fences, private roads and lanes, landscaping, drain tile, or other damages sustained during construction.

### 5.3 Electrical Performance Standards

#### 5.3.1 Grounding

The Permittee shall design, construct, and operate the transmission line in a manner so that the maximum induced steady-state short-circuit current shall be limited to five

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milliamperes root mean square (rms) alternating current between the ground and any non-stationary object within the right-of-way, including but not limited to large motor vehicles and agricultural equipment. All fixed metallic objects on or off the right-of-way, except electric fences that parallel or cross the right-of-way, shall be grounded to the extent necessary to limit the induced short-circuit current between ground and the object so as not to exceed one milliamperes rms under steady state conditions of the transmission line and to comply with the ground fault conditions specified in the NESC. The Permittee shall address and rectify any induced current problems that arise during transmission line operation.

#### 5.3.2 Electric Field

The transmission line shall be designed, constructed, and operated in such a manner that the electric field measured one meter above ground level immediately below the transmission line shall not exceed 8.0 kV/m rms.

#### 5.3.3 Interference with Communication Devices

If interference with radio or television, satellite, wireless internet, GPS-based agriculture navigation systems or other communication devices is caused by the presence or operation of the transmission line, the Permittee shall take whatever action is feasible to restore or provide reception equivalent to reception levels in the immediate area just prior to the construction of the line.

### 5.4 Other Requirements

#### 5.4.1 Applicable Codes

The Permittee shall comply with applicable NERC planning standards and requirements of the NESC including clearances to ground, clearance to crossing utilities, clearance to buildings, right-of way widths, erecting power poles, and stringing of transmission line conductors.

#### 5.4.2 Other Permits and Regulations

The Permittee shall comply with all applicable state rules and statutes. The Permittee shall obtain all required permits for the Project and comply with the conditions of these permits. A list of the permits known to be required is included in the permit application. The Permittee shall submit a copy of such permits to the Commission upon request.

## 6.0 SPECIAL CONDITIONS

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The Permittee shall provide a report to the Commission as part of the plan and profile submission that describes the actions taken and mitigative measures developed regarding the Project and the following special conditions. Special conditions shall take precedence over other conditions of this permit should there be a conflict.

### **6.1 Bird Diverters**

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The USFWS has indicated a need for bird flight diverters near the Red Eye WMA. There may be other areas of the project where the Minnesota Department of Natural Resources (DNR) and USFWS would recommend the use of bird flight diverters, such as at public water crossings.

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### **6.2 Erosion Control**

The Permittee shall use biodegradable erosion control measures where practicable instead of plastic or non-biodegradable erosion control measures.

### **6.3 Invasive Species Management Plan**

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The Permittee shall develop an invasive species management plan and provide an opportunity for the MN DNR to comment on the draft plan before submitting it to the Commission with its plan and profile.

*[Describe any special conditions]*

*Examples of special conditions included in permits:*

- *Avian Mitigation Plan*
- *Environmental Control Plan*
- *Agriculture Mitigation Plan*
- *Vegetation Management Plan*
- *Property Restrictions*
- *Minnesota Department of Natural Resources Requirements*
- *Minnesota Pollution Control Requirements*
- *Minnesota State Historical Preservation Office Requirements*
- *Minnesota Department of Transportation Requirements*

## **7.0 DELAY IN CONSTRUCTION**

If the Permittee has not commenced construction or improvement of the route within four years after the date of issuance of this permit the Permittee shall file a report on the failure to construct

and the Commission shall consider suspension of the permit in accordance with Minn. R. 7850.4700.

## 8.0 COMPLAINT PROCEDURES

Prior to the start of construction, the Permittee shall submit to the Commission the procedures that will be used to receive and respond to complaints. The procedures shall be in accordance with the requirements of Minn. R. 7829.1500 or Minn. R. 7829.1700, and as set forth in the complaint procedures attached to this permit.

Upon request, the Permittee shall assist the Commission with the disposition of unresolved or longstanding complaints. This assistance shall include, but is not limited to, the submittal of complaint correspondence and complaint resolution efforts.

## 9.0 COMPLIANCE REQUIREMENTS

Failure to timely and properly make compliance filings required by this permit is a failure to comply with the conditions of this permit. Compliance filings must be electronically filed with the Commission.

### 9.1 Plan and Profile

At least 30 days before right-of-way preparation for construction begins on any segment or portion of the Project, the Permittee shall provide the Commission with a plan and profile of the right-of-way and the specifications and drawings for right-of-way preparation, construction, and structure specifications and locations. ~~cleanup, and restoration for the transmission line.~~ The documentation shall include maps depicting the plan and profile including the right-of-way, alignment, and structures in relation to the route and alignment approved per this permit.

The Permittee may not commence construction until the 30 days has expired or until the Commission has advised the Permittee in writing that it has completed its review of the documents and determined that the planned construction is consistent with this permit. If the Permittee intends to make any significant changes in its plan and profile or the specifications and drawings after submission to the Commission, the Permittee shall notify the Commission at least five days before implementing the changes. No changes shall be made that would be in violation of any of the terms of this permit.

### 9.2 Periodic Status Reports

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The Permittee shall report to the Commission on progress regarding finalization of the route, design of structures, and construction of the transmission line. The Permittee need not report more frequently than monthly.

### **9.3 Notification to Commission**

At least three days before the line is to be placed into service, the Permittee shall notify the Commission of the date on which the line will be placed into service and the date on which construction was complete.

### **9.4 As-Builts**

Within ~~60-90~~ days after completion of construction, the Permittee shall submit copies of all final as-built plans and specifications developed during the Project.

### **9.5 GPS Data**

Within ~~60-90~~ days after completion of construction, the Permittee shall submit to the Commission, in the format requested by the Commission, geo-spatial information (e.g., ArcGIS compatible map files, GPS coordinates, associated database of characteristics) for all structures associated with the transmission line and each substation connected.

## **10.0 PERMIT AMENDMENT**

This permit may be amended at any time by the Commission. Any person may request an amendment of the conditions of this permit by submitting a request to the Commission in writing describing the amendment sought and the reasons for the amendment. The Commission will mail notice of receipt of the request to the Permittee. The Commission may amend the conditions after affording the Permittee and interested persons such process as is required.

## **11.0 TRANSFER OF PERMIT**

The Permittee may request at any time that the Commission transfer this permit to another person or entity. The Permittee shall provide the name and description of the person or entity to whom the permit is requested to be transferred, the reasons for the transfer, a description of the facilities affected, and the proposed effective date of the transfer.

The person to whom the permit is to be transferred shall provide the Commission with such information as the Commission shall require to determine whether the new Permittee can comply with the conditions of the permit. The Commission may authorize transfer of the permit after affording the Permittee, the new Permittee, and interested persons such process as is required.

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## **12.0 REVOCATION OR SUSPENSION OF THE PERMIT**

The Commission may initiate action to revoke or suspend this permit at any time. The Commission shall act in accordance with the requirements of Minn. R. 7850.5100, to revoke or suspend the permit.

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