

Northland Reliability Project



Project segments



Segment one

Install approximately 140 miles of new double-circuit 345-kV transmission line, generally located near existing transmission line corridors.

Segment two

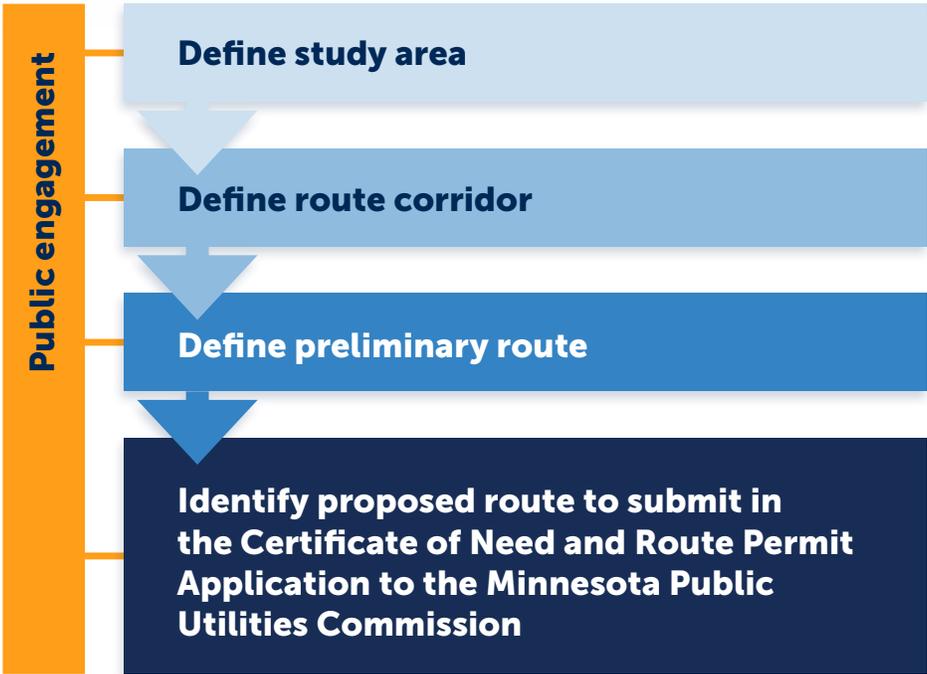
Replace two existing transmission lines.

- Replace an approximately 20-mile 230-kV line with two 345-kV circuits from Benton County Substation to a new substation named Big Oaks Substation in Sherburne County along existing transmission corridors on double-circuit 345-kV structures. The Big Oaks Substation will be built as part of a separate project called Alexandria to Big Oaks.
- Replace an approximately 20-mile 345-kV line from the Benton County Substation to the Sherco Substation in Sherburne County along existing transmission corridors using double-circuit 345-kV structures.

Northland Reliability Project



Our routing process



The criteria for route development is set by Minnesota statute and guide our routing process.

To route a project, we consider:

- Opportunities
- Constraints
- Engineering and construction considerations

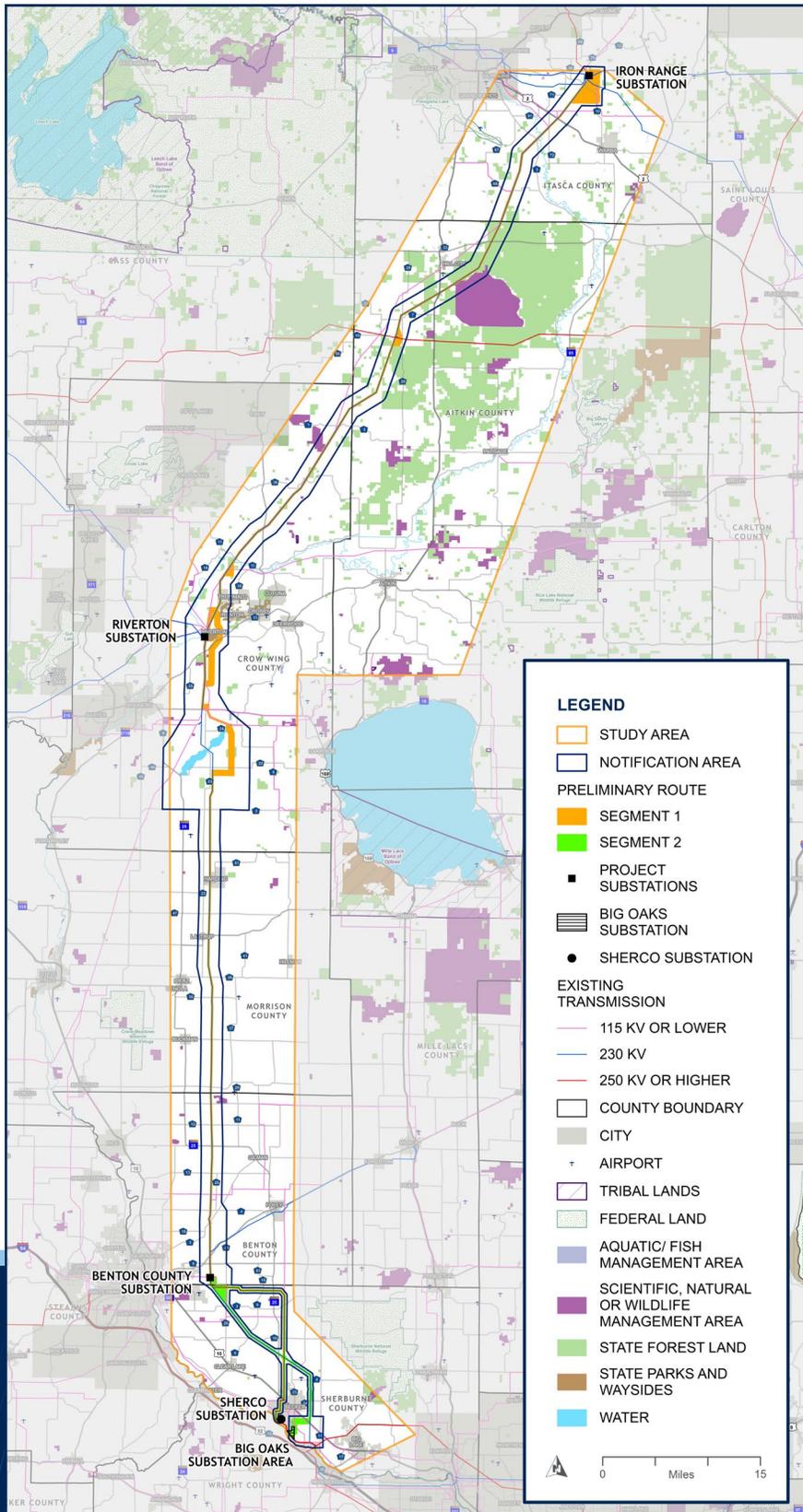
Your input matters

We need your help to identify opportunities and constraints.

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Preliminary route



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Right-of-way acquisition

? What is right-of-way?

A right-of-way, or ROW, is a strip of land used for a specific purpose such as the construction, operation and maintenance of a road or transmission line. Right-of-way is typically secured as an easement on a property.

? What is an easement?

A document allowing Minnesota Power and Great River Energy the right to construct, operate and maintain a transmission line and other associated infrastructure on a landowner's property.

Our right-of-way acquisition process:

Project representatives will hold individual meetings with **affected landowners** to discuss right-of-way needs.



Landowners are contacted to begin right-of-way acquisition process.



An easement is presented to a landowner. An offer based on fair market value is presented.



We work closely with the landowner to resolve concerns and reach an agreement. An easement is recorded.



The utilities construct, operate and maintain the transmission line within the right-of-way.

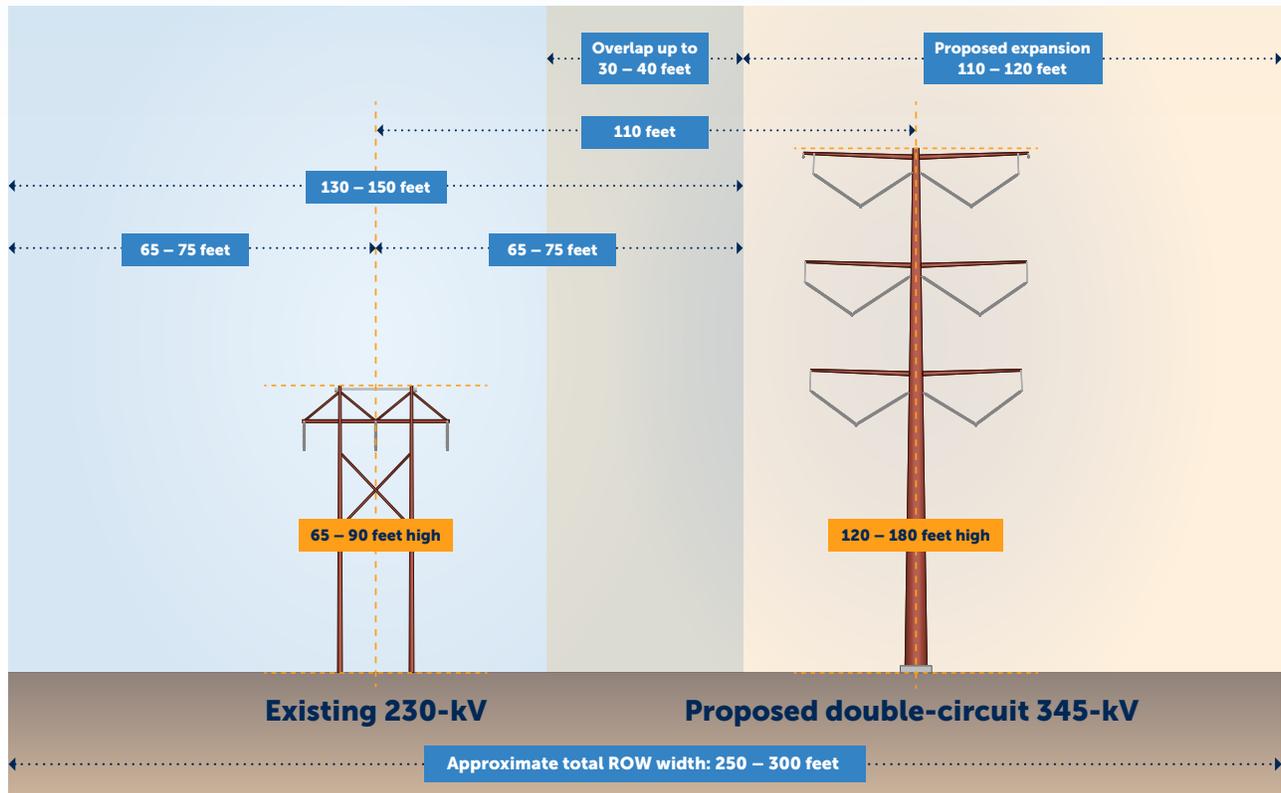
Additional right-of-way needs may include:

- Construction staging areas
- Substation expansions
- Temporary access roads

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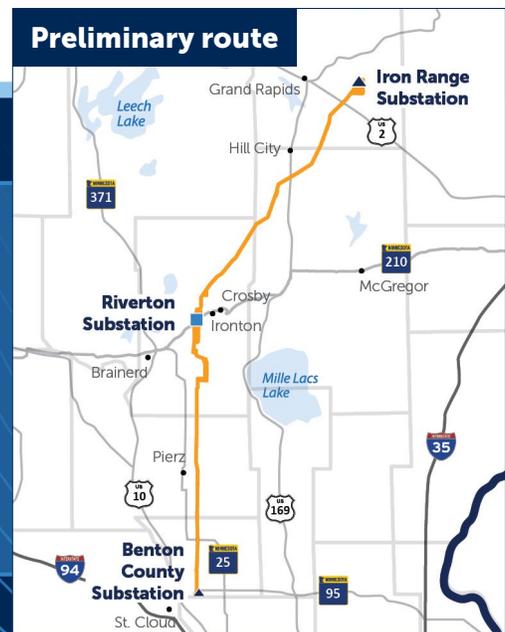


Right-of-way needs: Segment one



Segment one: New line

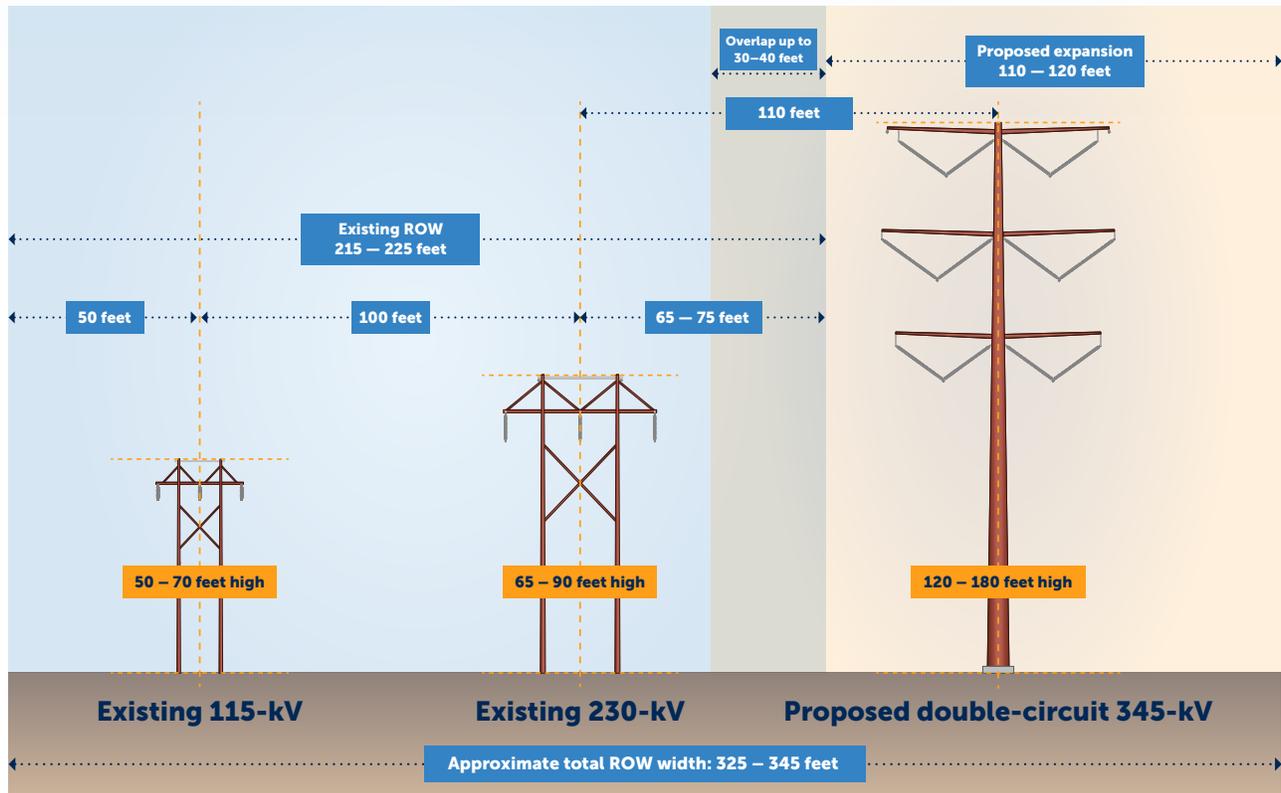
The graphic shows the typical right-of-way needed for a new 345-kV transmission line next to an existing 230-kV transmission line.



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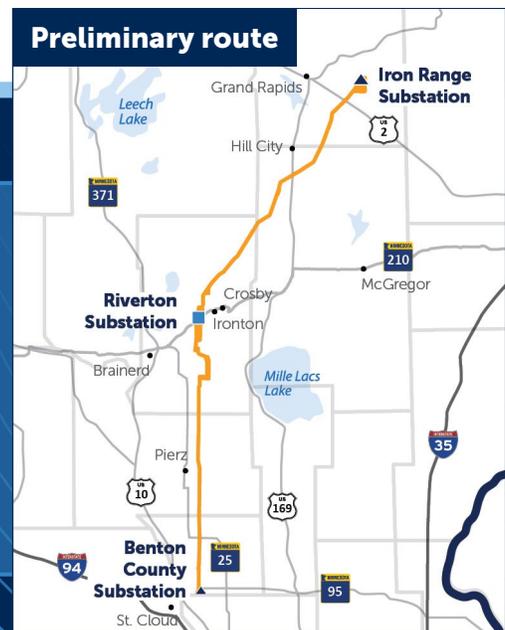


Right-of-way needs: Segment one



Segment one: New line

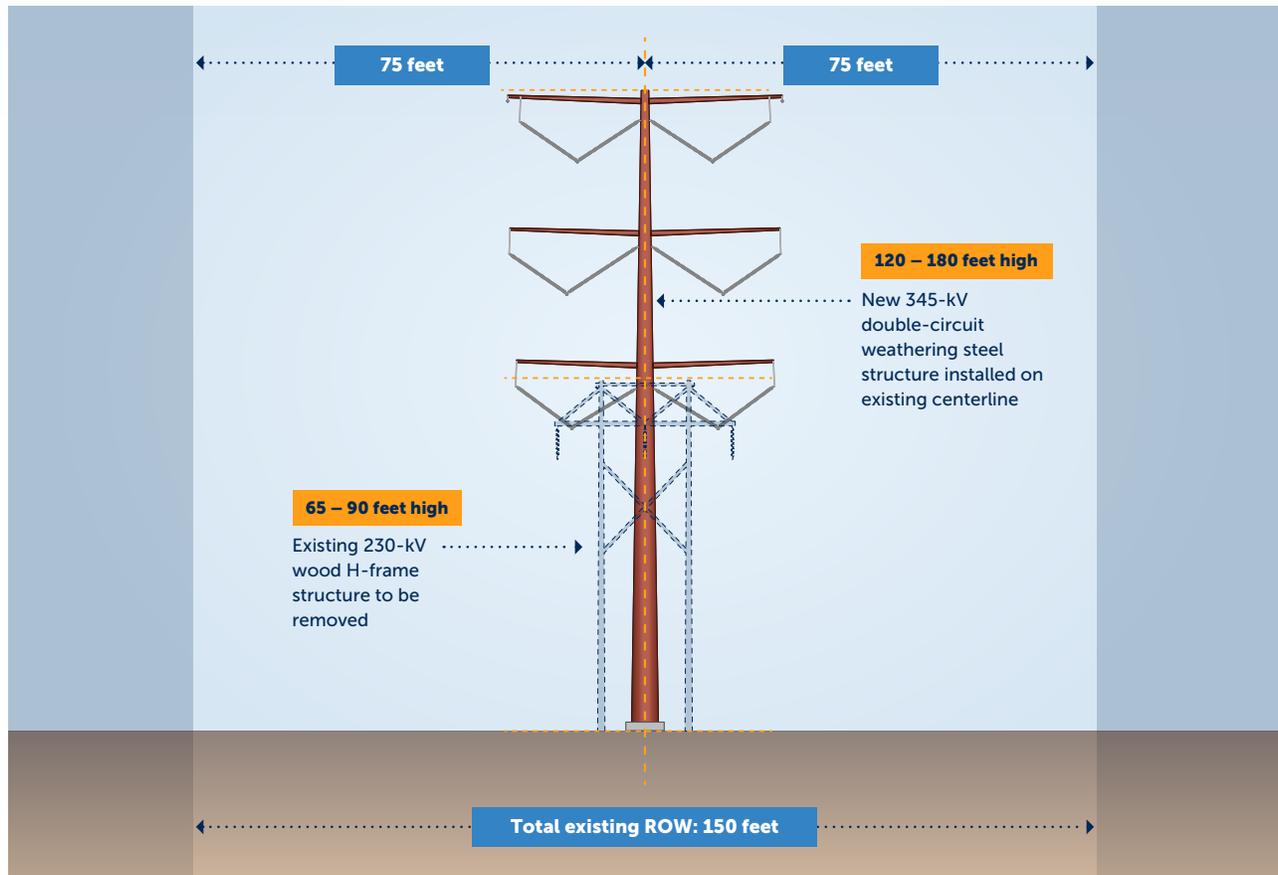
The graphic shows the typical right-of-way needed for a new 345-kV transmission line next to an existing 115-kV and 230-kV transmission line.



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Right-of-way needs: **Segment two** **A**



Segment two: Line replacement

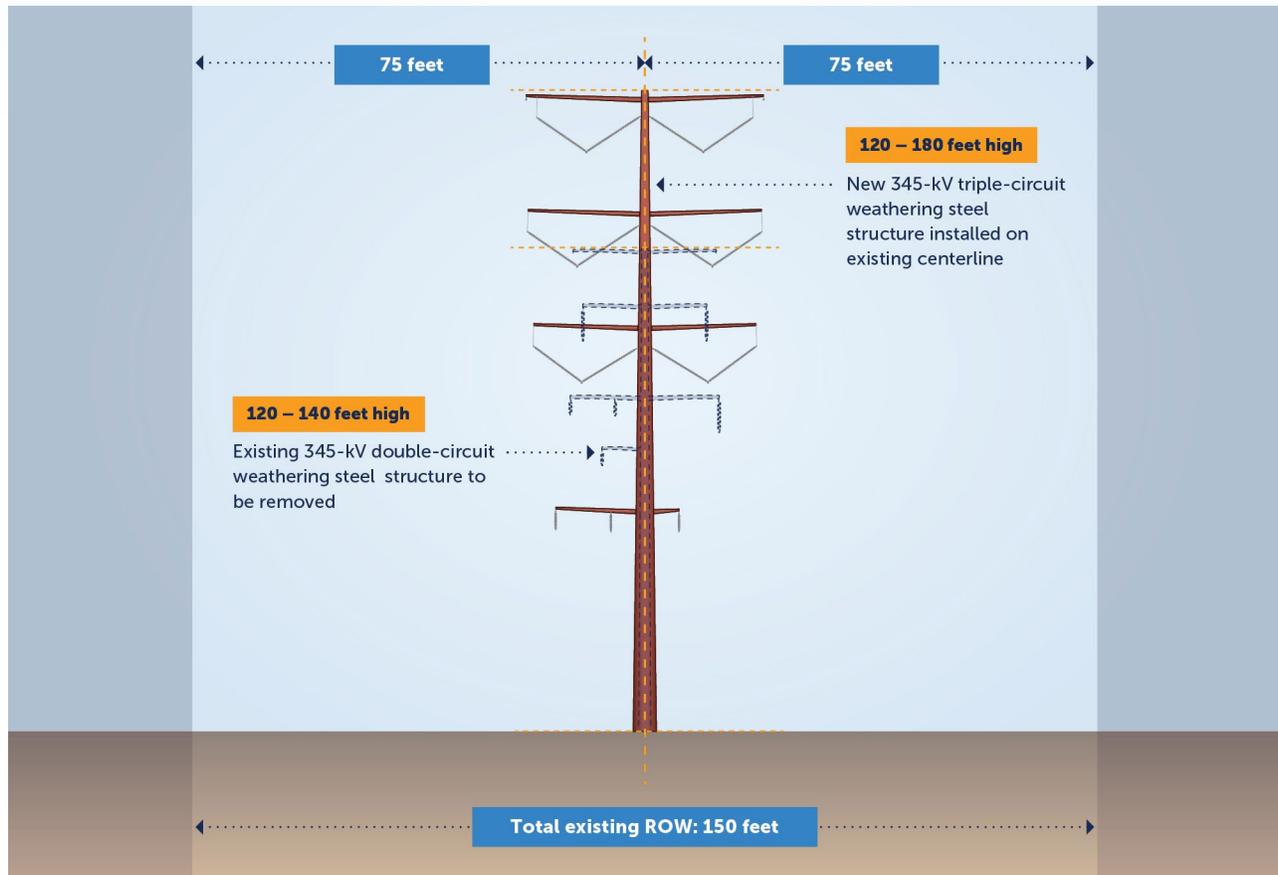
Replace an approximately 20-mile 230-kV line with two 345-kV circuits from Benton County Substation to a new substation named Big Oaks Substation in Sherburne County along existing transmission corridors on double circuit 345-kV structures. The Big Oaks Substation will be built as part of a separate project called Alexandria to Big Oaks. Approximately three miles of new 345-kV double-circuit transmission is required to route into the new Big Oaks Substation.



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Right-of-way needs: Segment two **B**



Segment two: Line replacement

Replace an approximately 20-mile 345-kV line from the Benton County Substation to the Sherco Substation in Sherburne County along existing transmission corridors using double-circuit 345-kV structures. Approximately 10 miles of this transmission line will be built to carry a 69-kV circuit on the same structures.

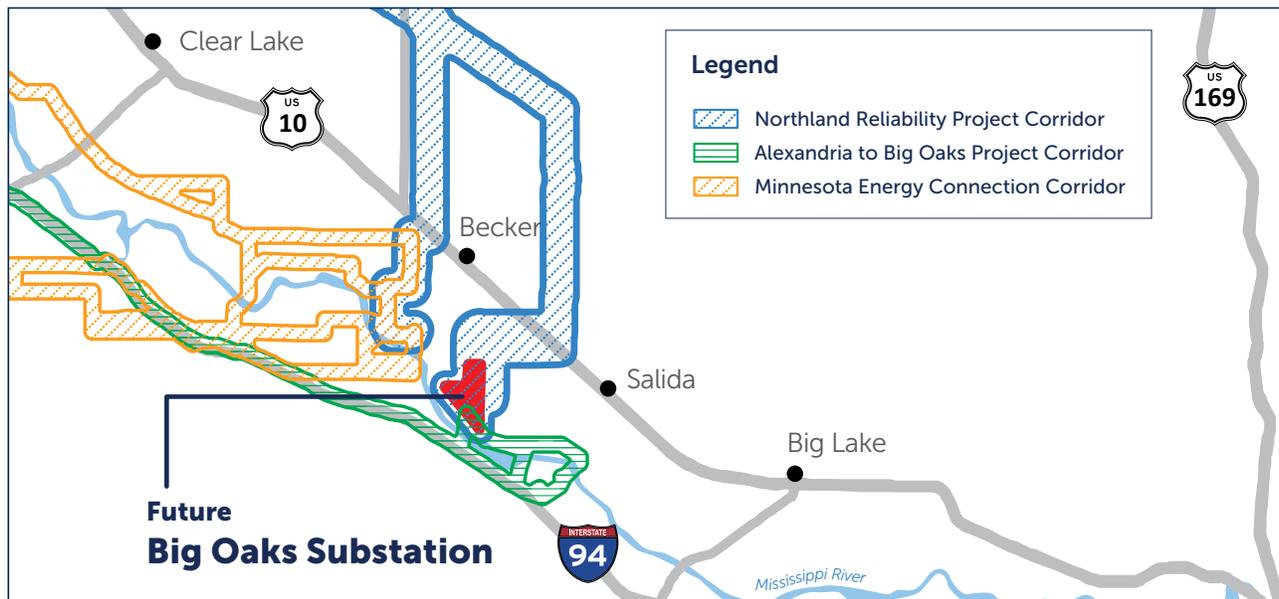
Preliminary route



Northland Reliability Project



Three separate long-range transmission projects to connect near Big Oaks Substation, near Becker.



Northland Reliability Project

Segment two of the Northland Reliability Project proposes to replace two existing transmission lines with two double-circuit 345-kV transmission lines — one 345-kV line will connect to Big Oaks Substation and the second will connect to the Sherco Substation. Minnesota Power and Great River Energy are investing in transmission infrastructure to enhance the stability of the regional electric system and support a reliable, resilient and flexible electric grid as energy resources continue to evolve away from fossil fuels toward more renewable energy like wind and solar.

Learn more at:
northlandreliabilityproject.com
connect@northlandreliabilityproject.com
218-864-6059

Minnesota Public Utilities Commission Docket Numbers

Certificate of Need: 22-416
Route Permit: 22-415



Alexandria to Big Oaks Project

Xcel Energy is planning to complete Phase 3 of the CapX2020 project, which is to add a second 345-kV circuit to the existing transmission line structures from Alexandria, Minnesota, to the Big Oaks Substation near Becker.

Learn more at:
AlexandriatoBigOaks.com
AlexandriatoBigOaks@xcelenergy.com
888-231-7068

Minnesota Public Utilities Commission Docket Numbers

Certificate of Need: 22-538
Route Permit: 23-159



Minnesota Energy Connection

Xcel Energy is proposing to build a new double-circuit 345-kV transmission line between the retiring Sherco coal plant near Becker and Lyon County in southwest Minnesota. The new transmission infrastructure is designed to enable more than 2,000 megawatts of renewable energy to replace the electricity produced by the coal plants.

Learn more at:
MNEnergyConnection.com
MNEnergyConnection@xcelenergy.com
888-292-4714

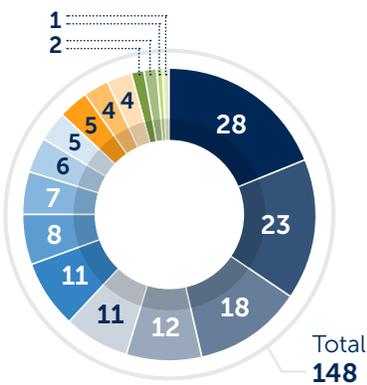
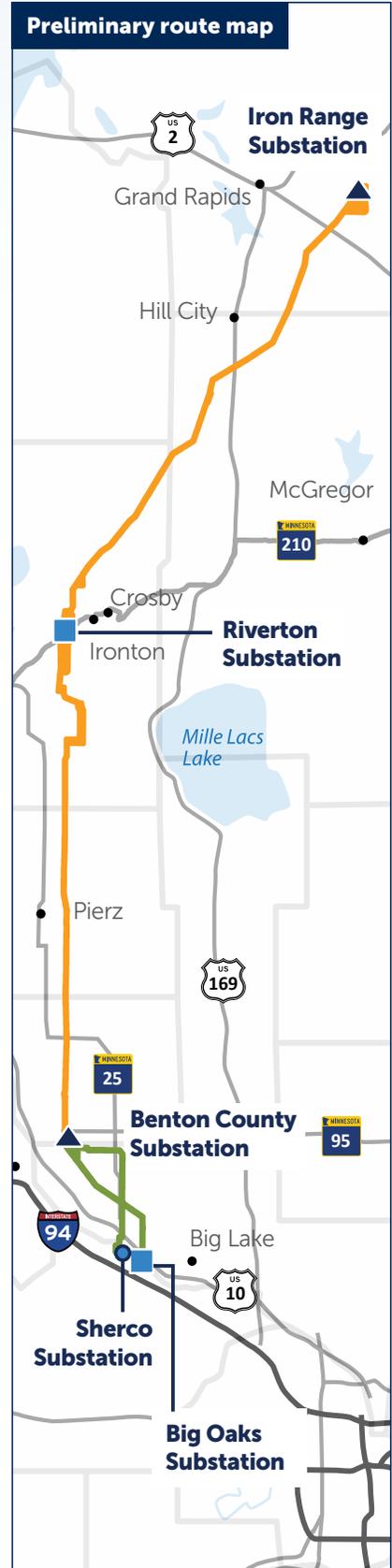
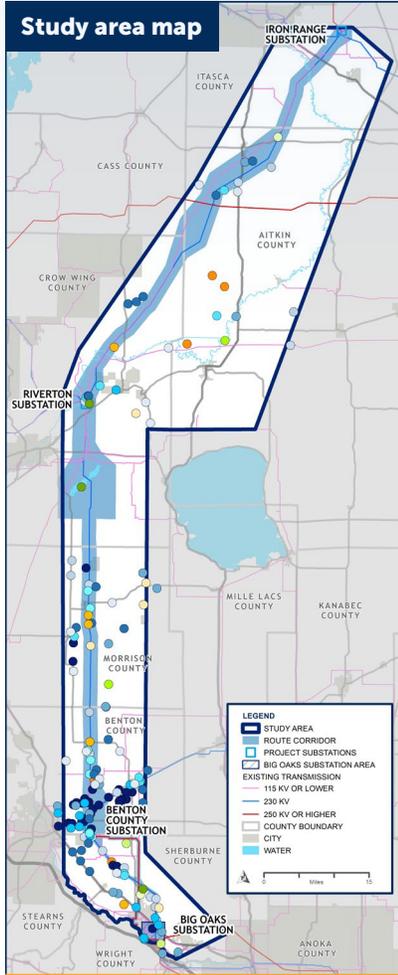
**Minnesota Public Utilities
Commission Docket Number:** 22-131



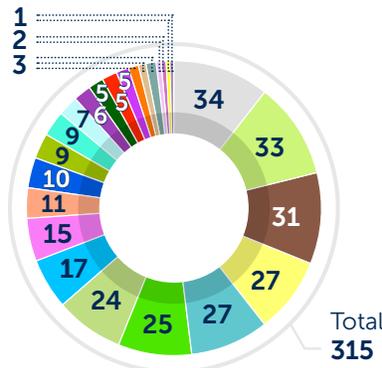
Northland Reliability Project



What we heard



- Utilities
- Geology/Mining
- Transportation
- Routing
- Cultural resources
- Planned development
- Recreation
- Homes
- Managed/Fee lands
- General
- Wetlands and water resources
- Agriculture
- Land use
- Communication
- Topography
- Easement
- Environmental



- Communication
- Environmental
- Agriculture
- Residence
- Routing
- Recreation
- Out buildings
- Water Resources
- Land Use
- Mining
- Utilities
- Business
- Topography
- Transportation
- Easement
- Aesthetics
- Cultural
- Health and Safety
- Construction
- Property Values
- Veg Management
- Engineering
- Planned Development
- Civil
- Managed / Fee Lands