minnesota power
AN ALLETE COMPANY

Duluth Loop
RELIABILITY PROJECT

March 2021

Our Commitment to Reliable Energy

Under our EnergyForward strategy, we are committed to delivering reliable, affordable and cleaner energy to our customers. We have made significant changes to our generation mix, including the retirement of several small coal units, and now half of the energy we deliver comes from renewable sources. In order to maintain a continuous supply of safe and reliable electricity, we are investing in our transmission infrastructure to enhance the stability of our electric system in the communities we serve.

Project Overview

This project will **enhance reliability** in and around Duluth and along the North Shore by building an additional transmission source.

The Duluth Loop Reliability Project includes three components:

- construction of a new 115 kilovolt (kV) transmission line between the Ridgeview and Hilltop substations,
- construction of approximately one-mile extension of an existing 230kV transmission line, connecting to the Arrowhead Substation,
- and upgrades to the Ridgeview, Hilltop, Haines Road, and Arrowhead substations, including expansion of the Ridgeview and Hilltop substations and reconfiguring existing transmission lines at the Hilltop Substation.

Schedule

2021
Routing, public engagement, and permitting

2022
Permitting and environmental surveys

2023-2025
Engineering, environmental and land surveys, real estate, and construction

2025
Complete

Benefits

ENHANCE ENERGY RELIABILITY
for communities in Duluth and the North Shore by adding transmission in the area.

REPLACE GRID STRENGTH AND STABILITY
that was once provided by local coal-fired generation.

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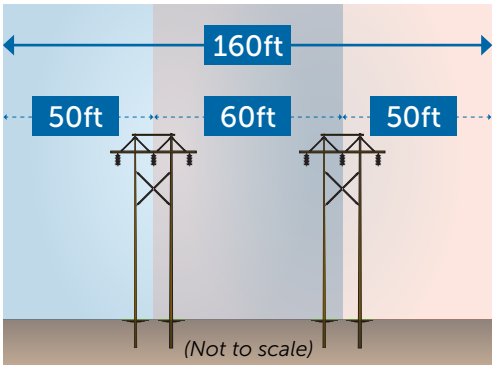
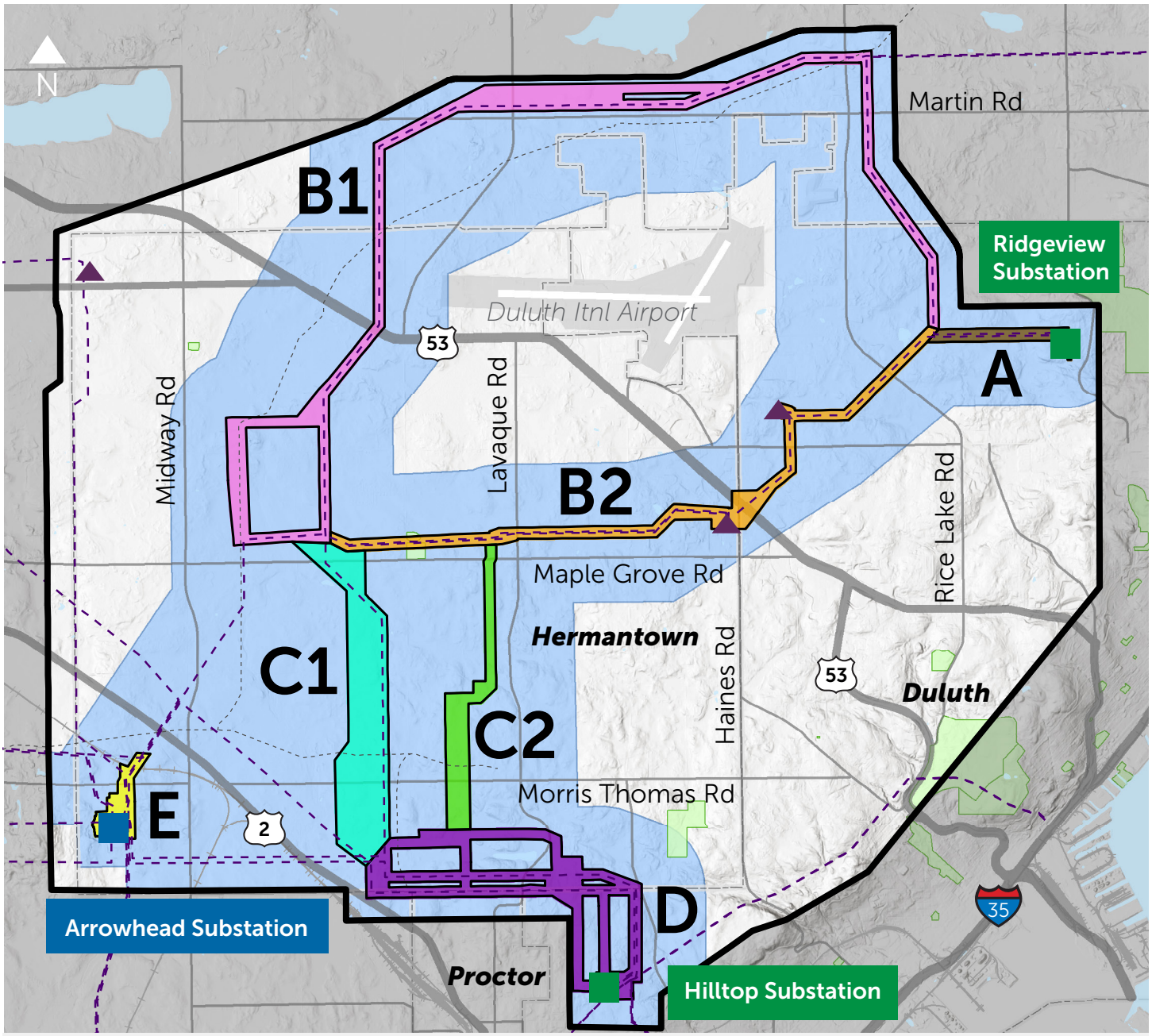
Proposed Route Alternatives

Minnesota Power reviewed and incorporated comments during the development of the Proposed Route Alternatives. The Proposed Route Alternatives shown are wider than the necessary easement needed for the final construction and operation of the new line. Where feasible and in order to minimize impacts, Minnesota Power's preference is to parallel existing transmission lines. In the event that the new 115kV transmission line parallels an existing 115kV transmission line, the alignment of typical right-of-ways may look similar to what's shown in the diagram on the right.





Study Area
Study Corridors
Project Endpoints
Existing Transmission Lines
Pipelines
Substations
Segment A
Segment B1
Segment B2
Segment C1
Segment C2
Segment D
Segment E

This map provides Proposed Route Alternatives for the proposed project by Minnesota Power. These Proposed Route Alternatives were developed to collect information and feedback to identify a Preferred Route. This map does not represent the final route determination. The Minnesota Public Utilities Commission will make the final route determination after considering a variety of factors including human and environmental impacts and stakeholder and public input.