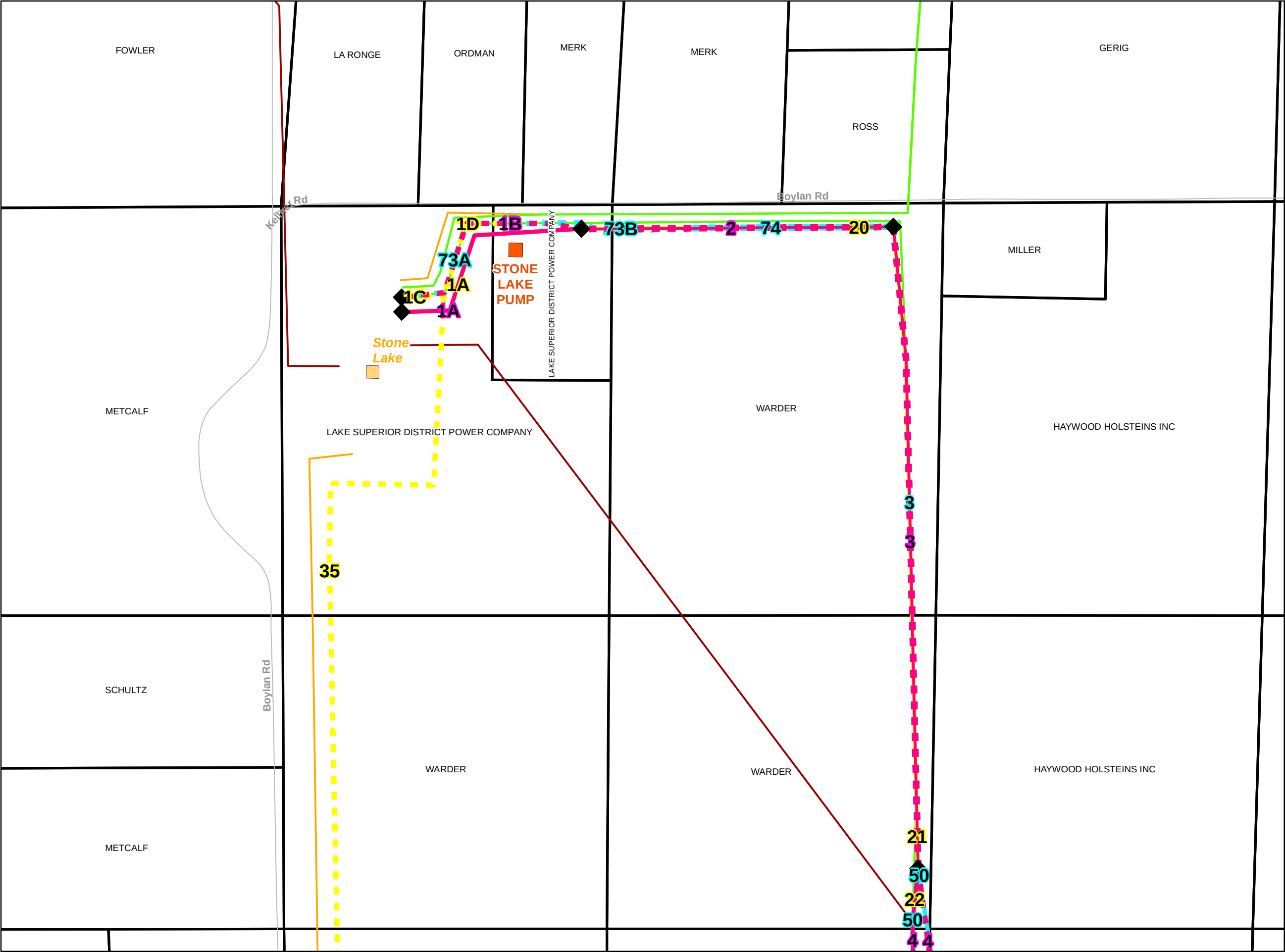
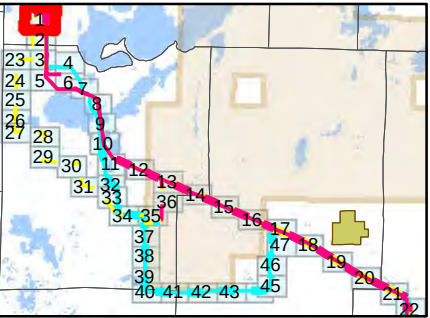
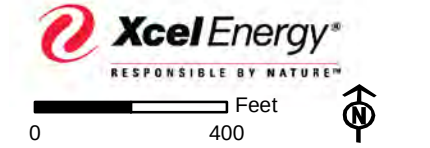


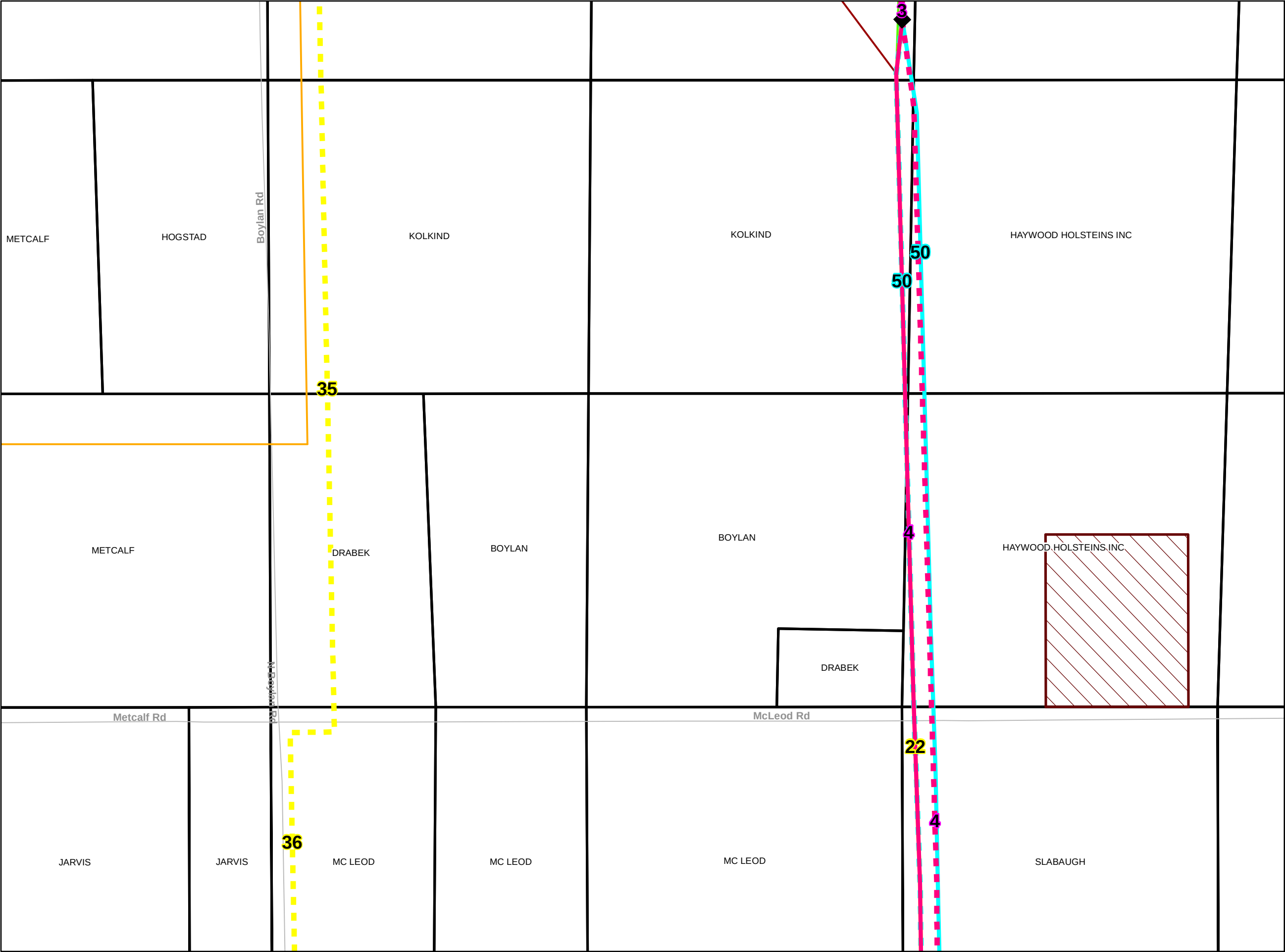


Appendix B-7
Parcel Boundary and Streets
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project

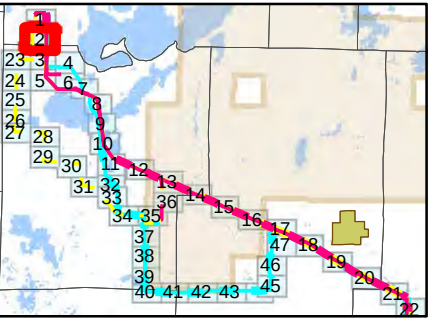


- Route Alternatives**
- Preferred Route 161 kV
 - Preferred Route 69 kV
 - Preferred Route 161/69 kV
 - Alternate Route A 161 kV
 - Alternate Route A 69 kV
 - Alternate Route A 161/69 kV
 - Alternate Route B 161 kV
 - Alternate Route B 69 kV
 - Alternate Route B 161/69 kV
 - Route Segment Endpoint
 - Radisson Substation Site
 - Staging Area
- Existing Transmission**
- 69kV AC
 - 161kV AC
 - 345kV AC
 - Substation (Xcel)
 - Substation (Not Xcel)
 - Road
 - Railroad
 - Tax Parcel

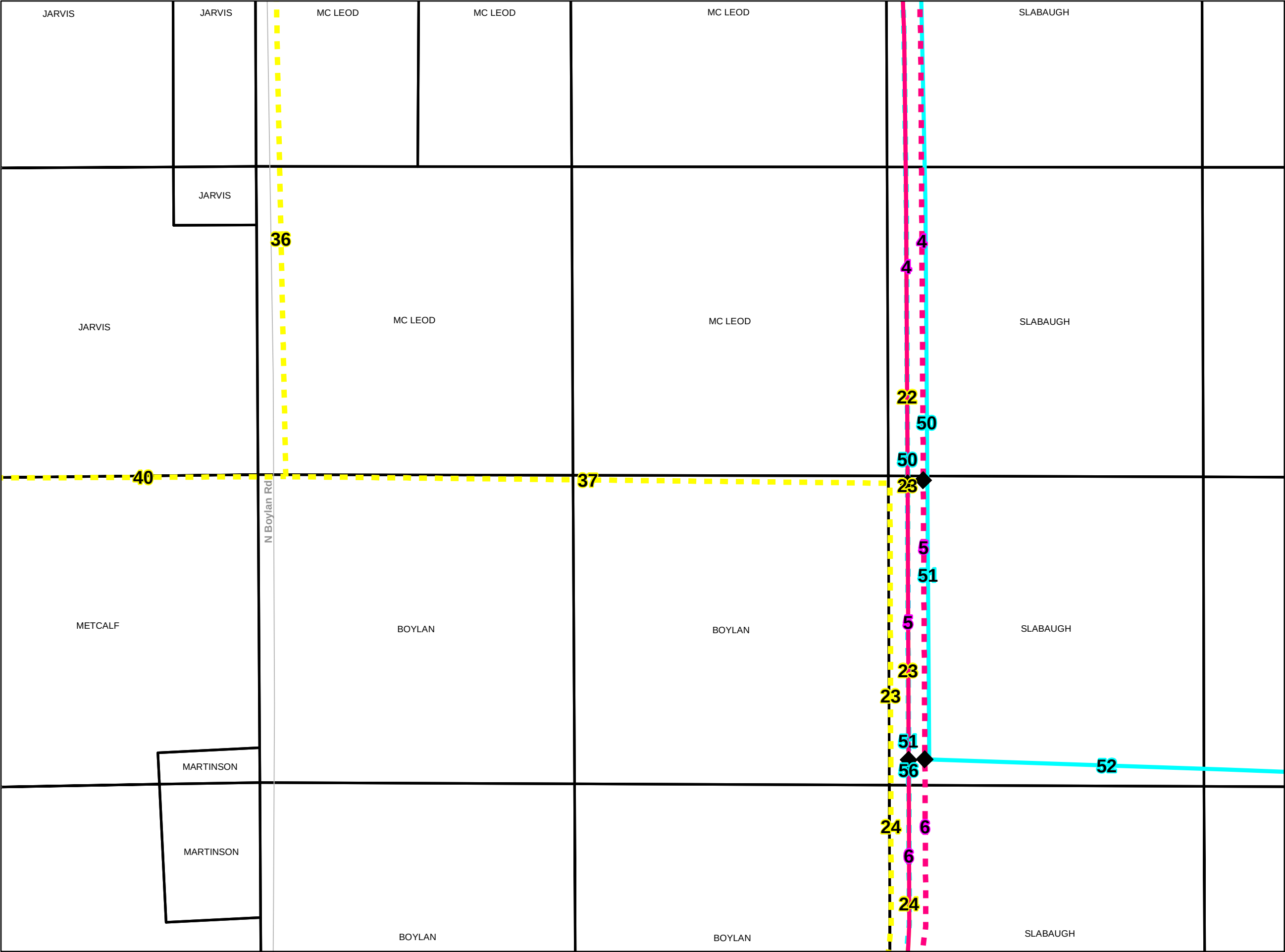




Appendix B-7
Parcel Boundary and Streets
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project



- Route Alternatives**
- Preferred Route 161 kV
 - Preferred Route 69 kV
 - Preferred Route 161/69 kV
 - Alternate Route A 161 kV
 - Alternate Route A 69 kV
 - Alternate Route A 161/69 kV
 - Alternate Route B 161 kV
 - Alternate Route B 69 kV
 - Alternate Route B 161/69 kV
- Legend**
- Route Segment Endpoint
 - Radisson Substation Site
 - Staging Area
 - Existing Transmission**
 - 69kV AC
 - 161kV AC
 - 345kV AC
 - Substation (Xcel)
 - Substation (Not Xcel)
 - Road
 - Railroad
 - Tax Parcel



Appendix B-7

Parcel Boundary and Streets

Stone Lake to Couderay

69 kV Rebuild /
161kV Upgrade Transmission Project

Route Alternatives

- Preferred Route 161 kV
- Preferred Route 69 kV
- Preferred Route 161/69 kV
- Alternate Route A 161 kV
- Alternate Route A 69 kV
- Alternate Route A 161/69 kV
- Alternate Route B 161 kV
- Alternate Route B 69 kV
- Alternate Route B 161/69 kV
- Route Segment Endpoint
- Radisson Substation Site
- Staging Area

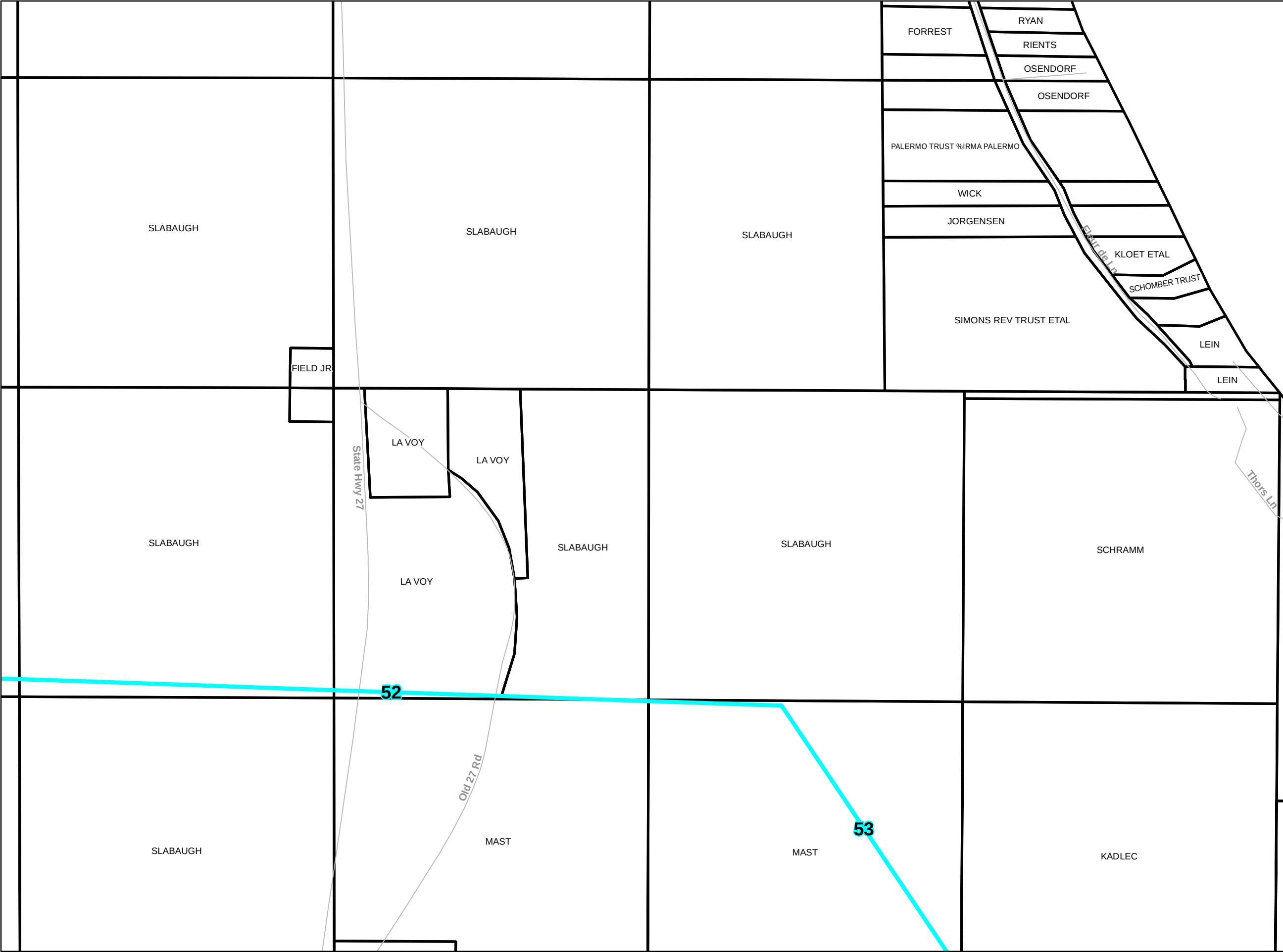
Existing Transmission

- 69kV AC
- 161kV AC
- 345kV AC
- Substation (Xcel)
- Substation (Not Xcel)
- Road
- Railroad
- Tax Parcel

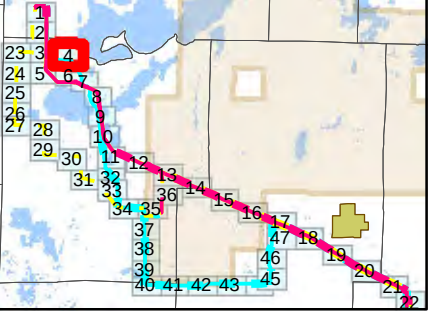
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Source: Sawyer County Plats - July, 2010
Date: 8/29/2011

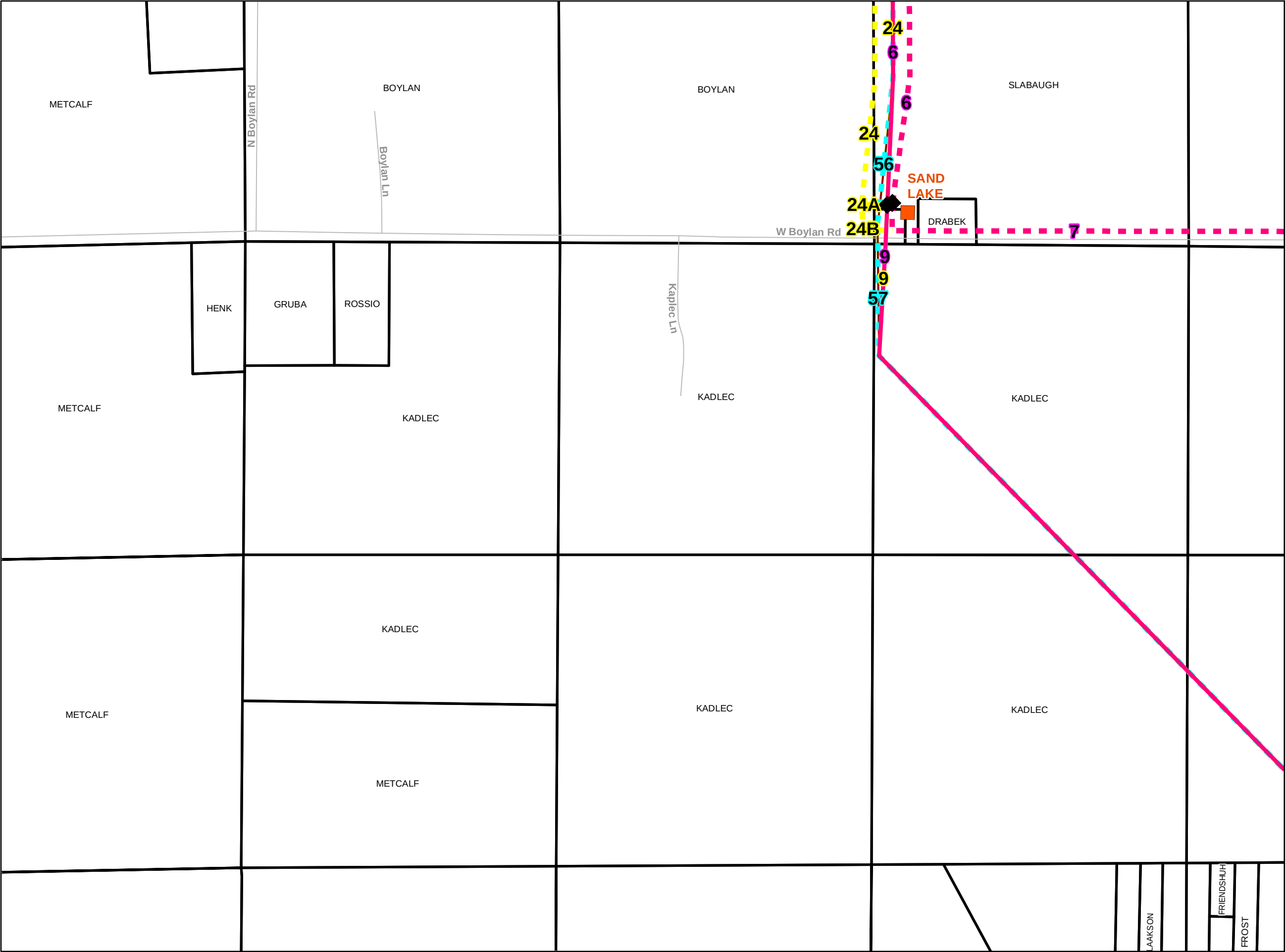
Page 3 of 47



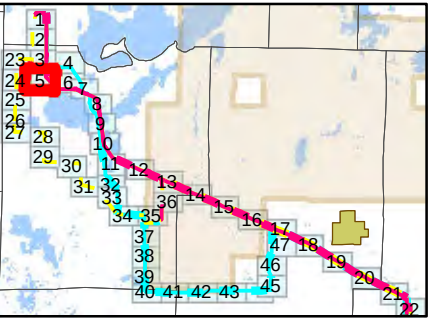
Appendix B-7
Parcel Boundary and Streets
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project



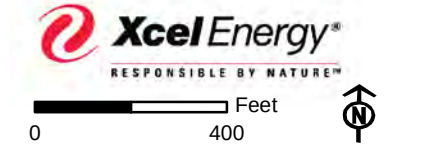
- Route Alternatives**
- Preferred Route 161 kV
 - Preferred Route 69 kV
 - Preferred Route 161/69 kV
 - Alternate Route A 161 kV
 - Alternate Route A 69 kV
 - Alternate Route A 161/69 kV
 - Alternate Route B 161 kV
 - Alternate Route B 69 kV
 - Alternate Route B 161/69 kV
 - Route Segment Endpoint
 - Radisson Substation Site
 - Staging Area
- Existing Transmission**
- 69kV AC
 - 161kV AC
 - 345kV AC
 - Substation (Xcel)
 - Substation (Not Xcel)
 - Road
 - Railroad
 - Tax Parcel



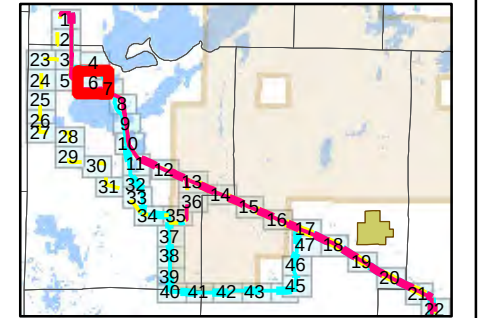
Appendix B-7
Parcel Boundary and Streets
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project



- Route Alternatives**
- Preferred Route 161 kV
 - Preferred Route 69 kV
 - Preferred Route 161/69 kV
 - Alternate Route A 161 kV
 - Alternate Route A 69 kV
 - Alternate Route A 161/69 kV
 - Alternate Route B 161 kV
 - Alternate Route B 69 kV
 - Alternate Route B 161/69 kV
 - Route Segment Endpoint
 - Radisson Substation Site
 - Staging Area
- Existing Transmission**
- 69kV AC
 - 161kV AC
 - 345kV AC
 - Substation (Xcel)
 - Substation (Not Xcel)
 - Road
 - Railroad
 - Tax Parcel



Appendix B-7
Parcel Boundary and Streets
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project

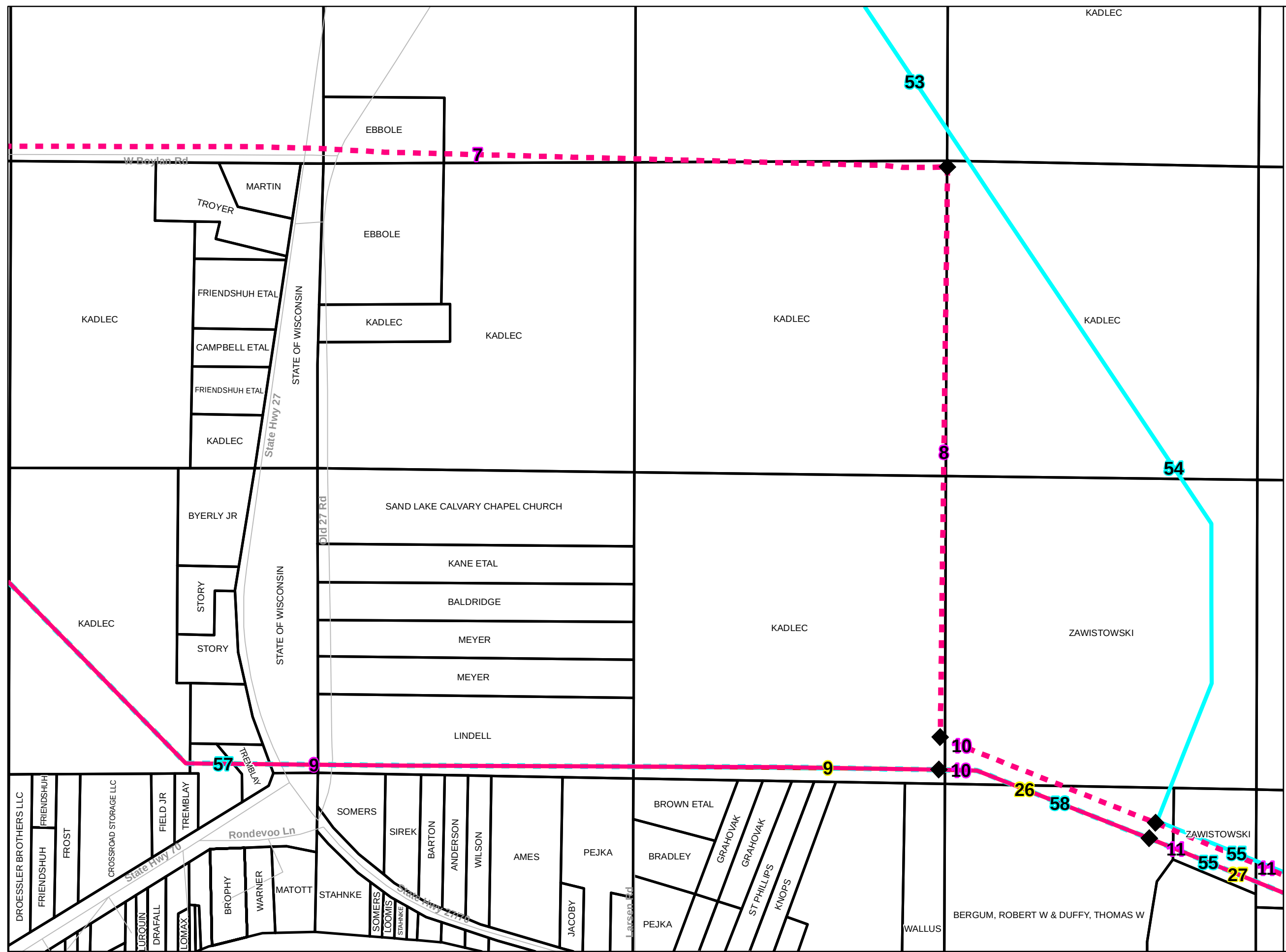


- Route Alternatives**
- Preferred Route 161 kV
 - Preferred Route 69 kV
 - Preferred Route 161/69 kV
 - Alternate Route A 161 kV
 - Alternate Route A 69 kV
 - Alternate Route A 161/69 kV
 - Alternate Route B 161 kV
 - Alternate Route B 69 kV
 - Alternate Route B 161/69 kV
- ◆ Route Segment Endpoint
- ▭ Radisson Substation Site
- ▭ Staging Area
- Existing Transmission**
- 69kV AC
 - 161kV AC
 - 345kV AC
- ▭ Substation (Xcel)
- ▭ Substation (Not Xcel)
- Road
- +— Railroad
- ▭ Tax Parcel

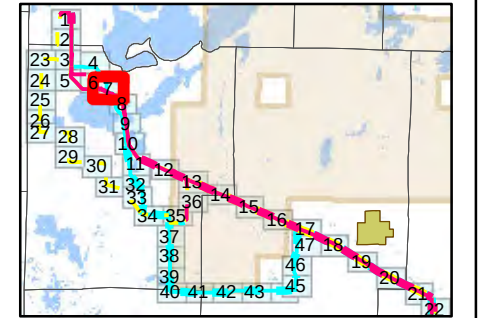

RESPONSIBLE BY NATURE™

0 400 Feet

Source: Sawyer County Plats - July, 2010
Date: 8/29/2011 Page 6 of 47



Appendix B-7 Parcel Boundary and Streets Stone Lake to Couderay 69 kV Rebuild / 161kV Upgrade Transmission Project

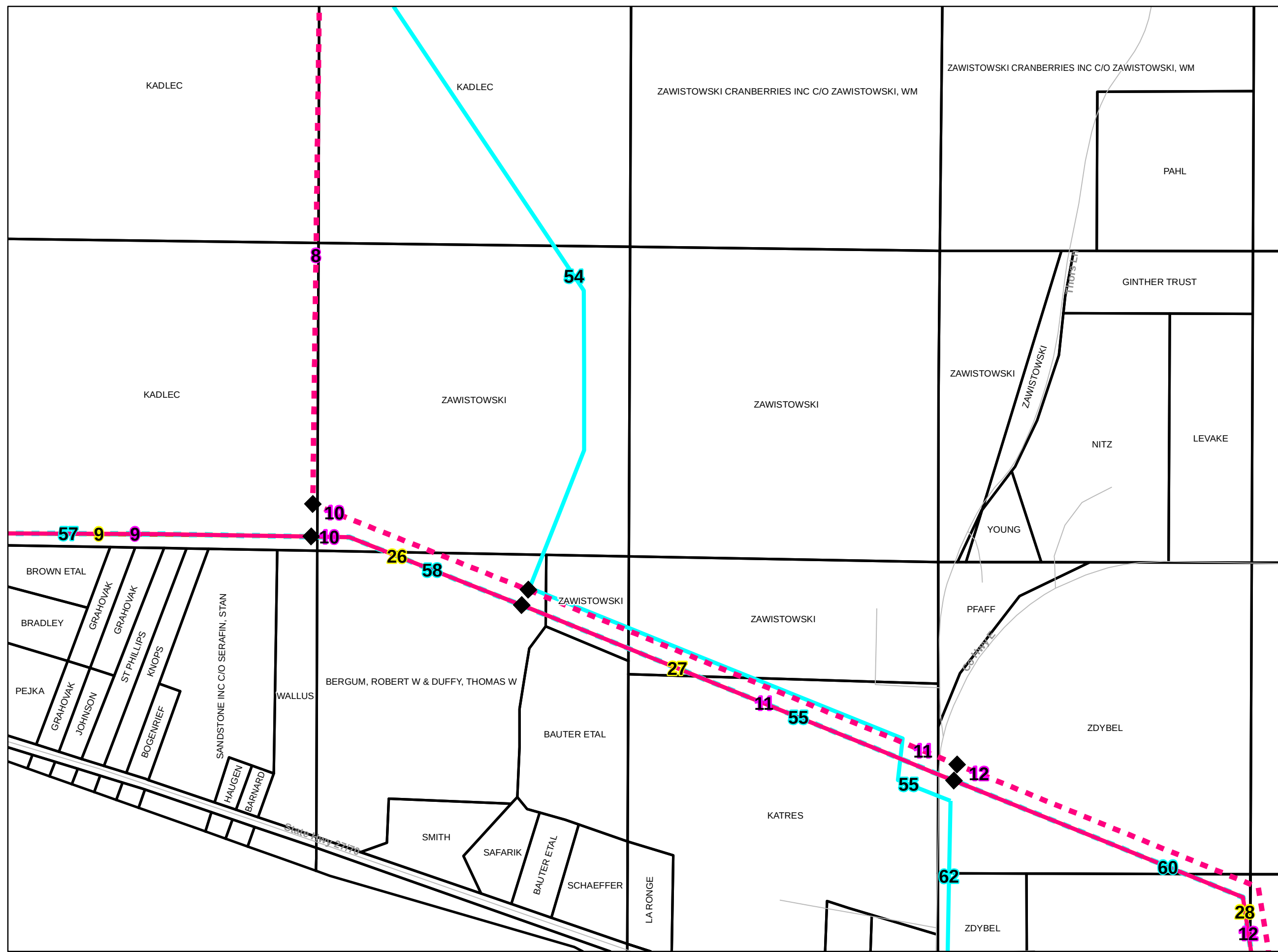


- Route Alternatives**
- Preferred Route 161 kV
 - Preferred Route 69 kV
 - Preferred Route 161/69 kV
 - Alternate Route A 161 kV
 - Alternate Route A 69 kV
 - Alternate Route A 161/69 kV
 - Alternate Route B 161 kV
 - Alternate Route B 69 kV
 - Alternate Route B 161/69 kV
 - Route Segment Endpoint
 - Radisson Substation Site
 - Staging Area
- Existing Transmission**
- 69kV AC
 - 161kV AC
 - 345kV AC
 - Substation (Xcel)
 - Substation (Not Xcel)
 - Road
 - Railroad
 - Tax Parcel

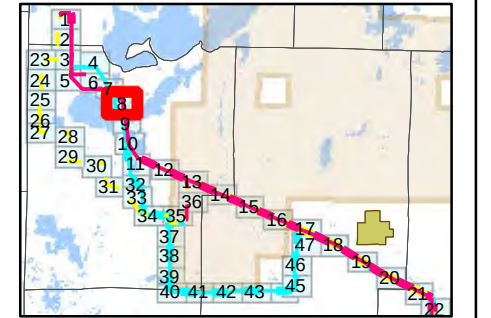
Xcel Energy
RESPONSIBLE BY NATURE™

0 400 Feet

Source: Sawyer County Plats - July, 2010
Date: 8/29/2011 Page 7 of 47



Appendix B-7 Parcel Boundary and Streets Stone Lake to Couderay 69 kV Rebuild / 161kV Upgrade Transmission Project

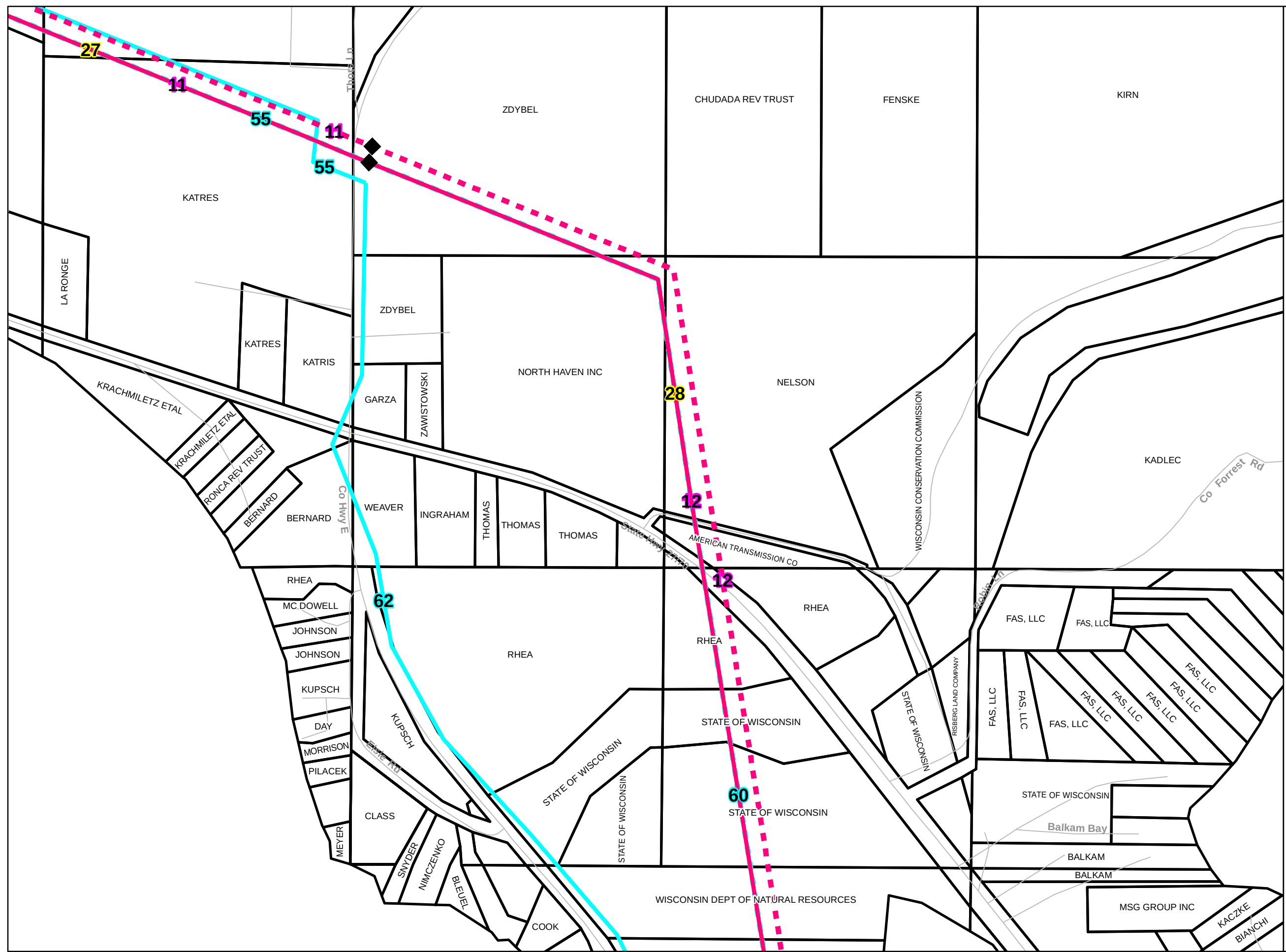


- Route Alternatives**
- Preferred Route 161 kV
 - Preferred Route 69 kV
 - Preferred Route 161/69 kV
 - Alternate Route A 161 kV
 - Alternate Route A 69 kV
 - Alternate Route A 161/69 kV
 - Alternate Route B 161 kV
 - Alternate Route B 69 kV
 - Alternate Route B 161/69 kV
 - Route Segment Endpoint
 - Radisson Substation Site
 - Staging Area
- Existing Transmission**
- 69kV AC
 - 161kV AC
 - 345kV AC
 - Substation (Xcel)
 - Substation (Not Xcel)
 - Road
 - Railroad
 - Tax Parcel

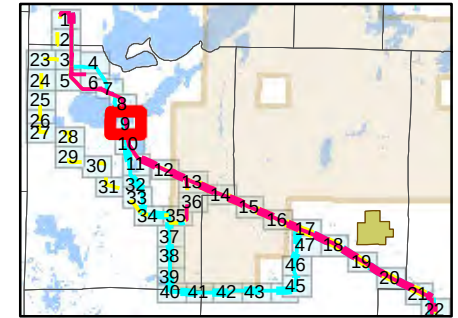
Xcel Energy
RESPONSIBLE BY NATURE™

0 400 Feet

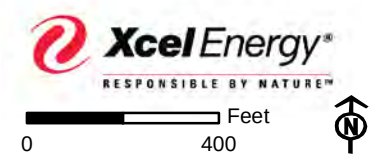
Source: Sawyer County Plats - July, 2010
Date: 8/29/2011 Page 8 of 47



Appendix B-7
Parcel Boundary and Streets
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project

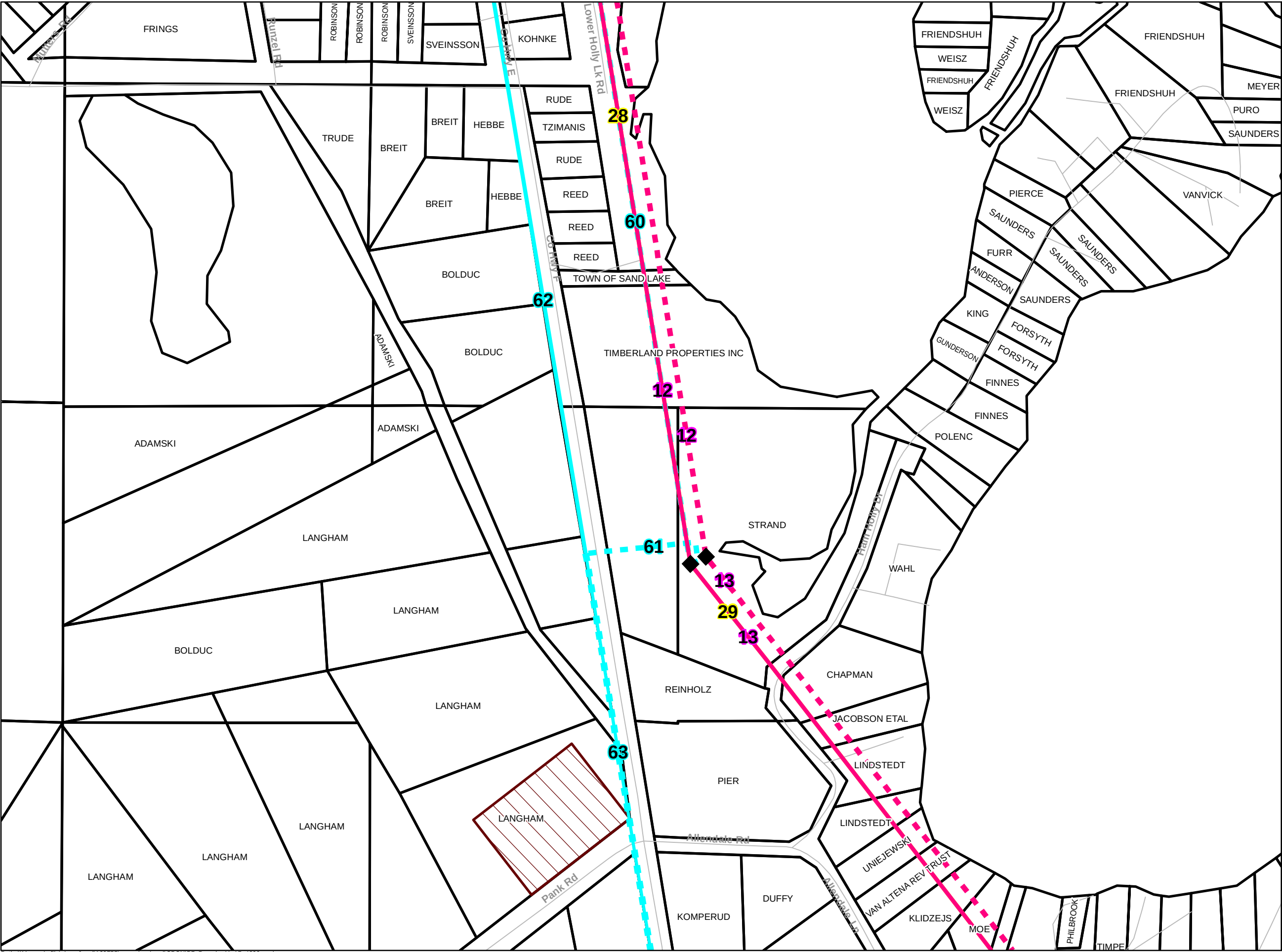


- Route Alternatives**
- Preferred Route 161 kV
 - Preferred Route 69 kV
 - Preferred Route 161/69 kV
 - Alternate Route A 161 kV
 - Alternate Route A 69 kV
 - Alternate Route A 161/69 kV
 - Alternate Route B 161 kV
 - Alternate Route B 69 kV
 - Alternate Route B 161/69 kV
 - Route Segment Endpoint
 - Radisson Substation Site
 - Staging Area
- Existing Transmission**
- 69kV AC
 - 161kV AC
 - 345kV AC
 - Substation (Xcel)
 - Substation (Not Xcel)
 - Road
 - Railroad
 - Tax Parcel

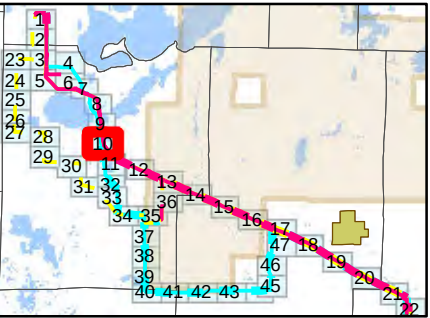


Source: Sawyer County Plats - July, 2010
Date: 8/29/2011 Page 9 of 47

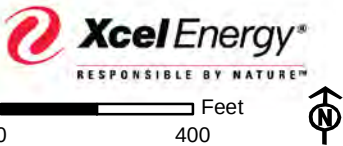




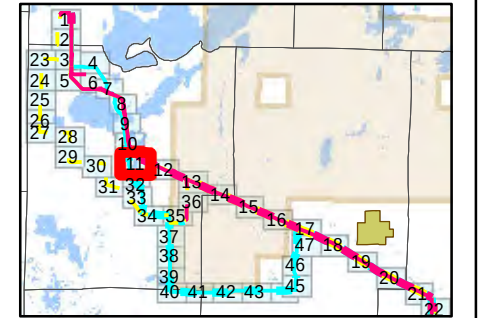
Appendix B-7
Parcel Boundary and Streets
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project



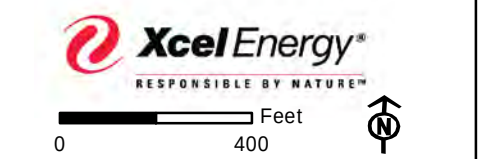
- Route Alternatives**
- Preferred Route 161 kV
 - Preferred Route 69 kV
 - Preferred Route 161/69 kV
 - Alternate Route A 161 kV
 - Alternate Route A 69 kV
 - Alternate Route A 161/69 kV
 - Alternate Route B 161 kV
 - Alternate Route B 69 kV
 - Alternate Route B 161/69 kV
 - Route Segment Endpoint
 - Radisson Substation Site
 - Staging Area
- Existing Transmission**
- 69kV AC
 - 161kV AC
 - 345kV AC
 - Substation (Xcel)
 - Substation (Not Xcel)
 - Road
 - Railroad
 - Tax Parcel



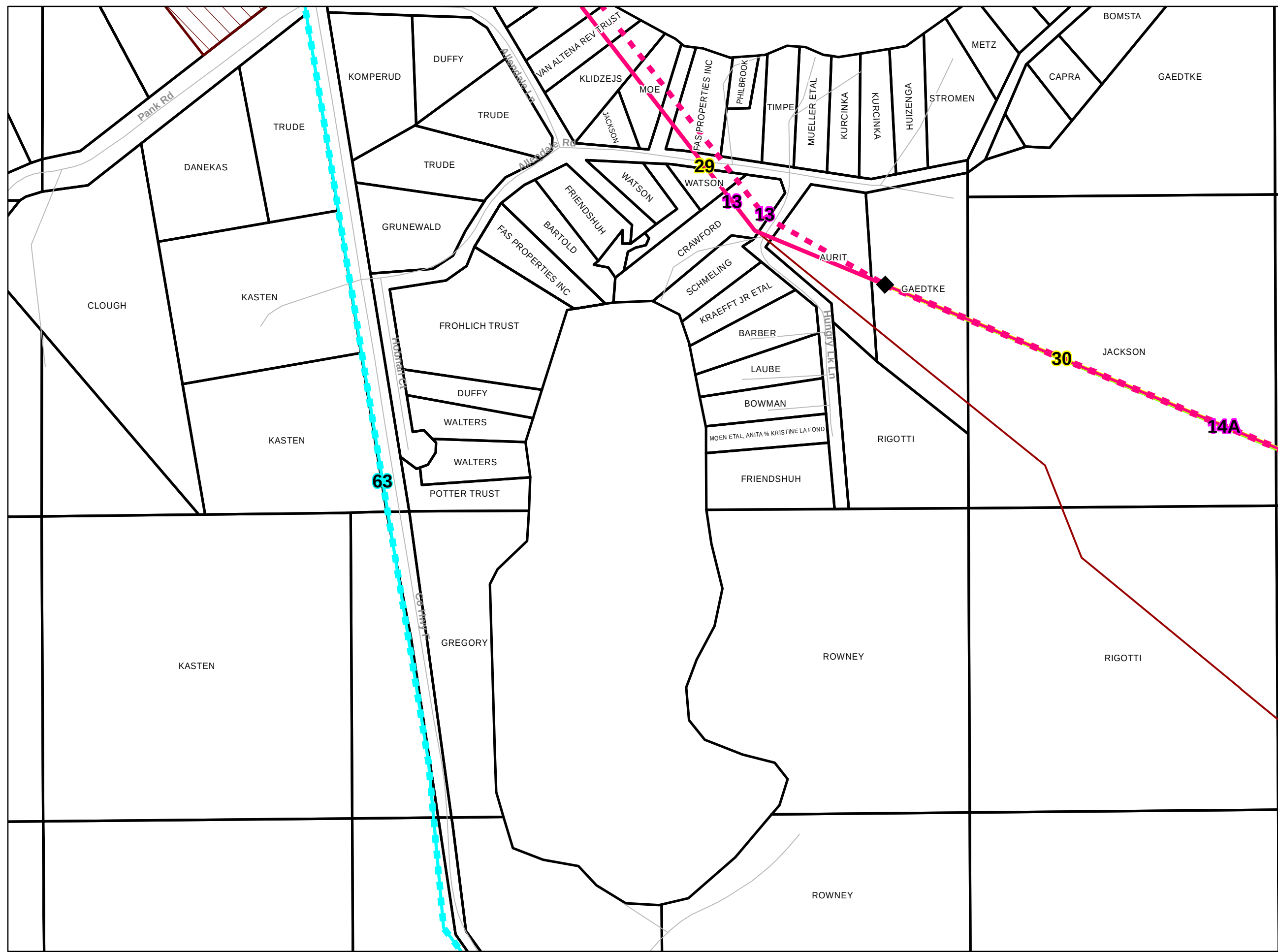
Appendix B-7 Parcel Boundary and Streets Stone Lake to Couderay 69 kV Rebuild / 161kV Upgrade Transmission Project

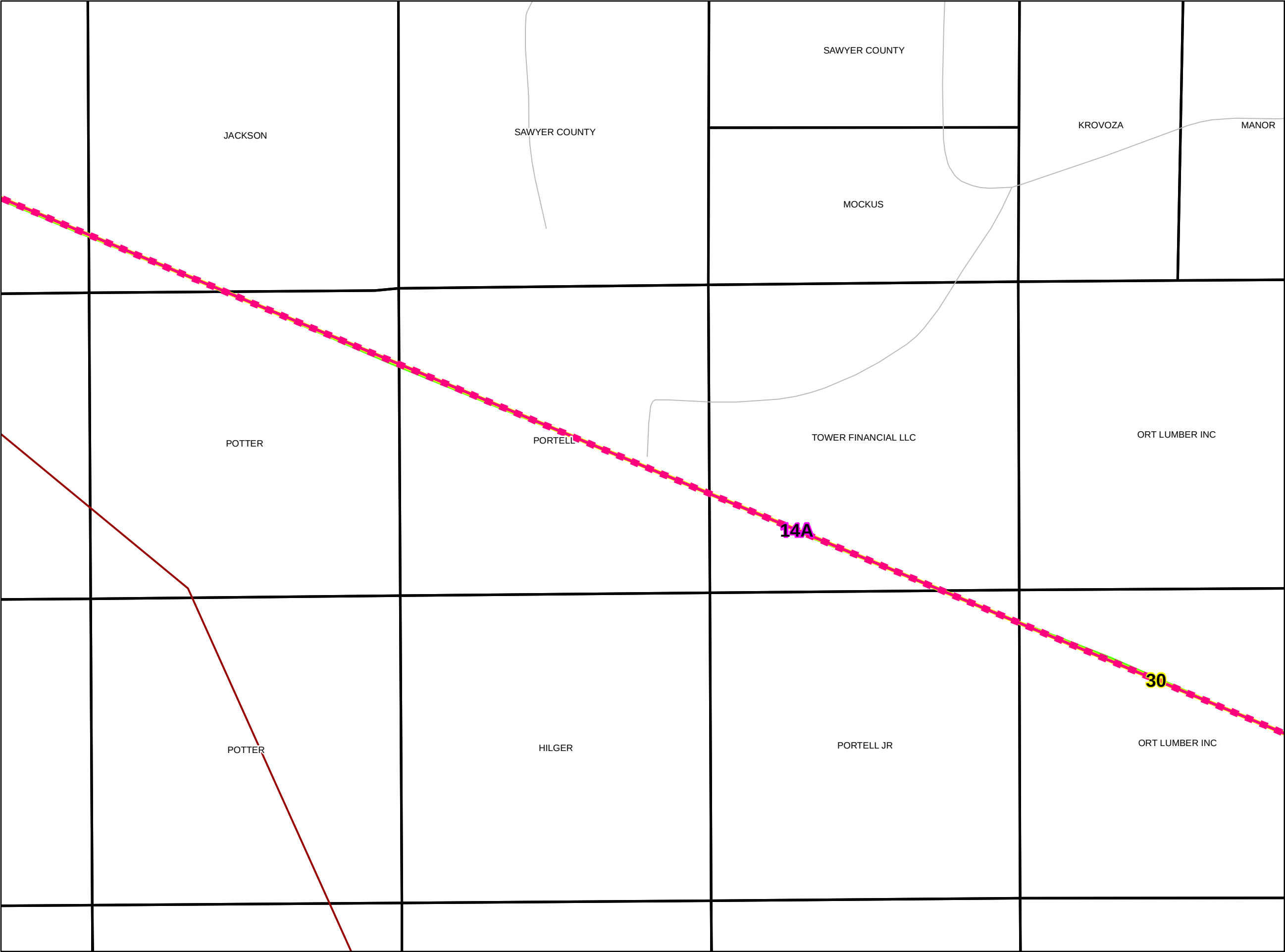


- Route Alternatives**
- Preferred Route 161 kV
 - Preferred Route 69 kV
 - Preferred Route 161/69 kV
 - Alternate Route A 161 kV
 - Alternate Route A 69 kV
 - Alternate Route A 161/69 kV
 - Alternate Route B 161 kV
 - Alternate Route B 69 kV
 - Alternate Route B 161/69 kV
 - Route Segment Endpoint
 - Radisson Substation Site
 - Staging Area
- Existing Transmission**
- 69kV AC
 - 161kV AC
 - 345kV AC
 - Substation (Xcel)
 - Substation (Not Xcel)
 - Road
 - Railroad
 - Tax Parcel

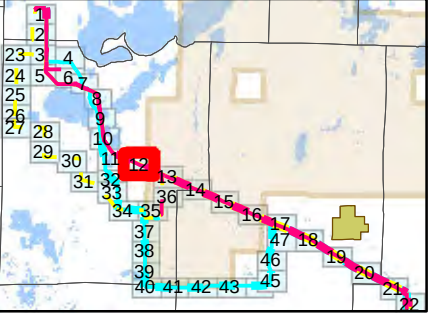


Source: Sawyer County Plats - July, 2010
Date: 8/29/2011 Page 11 of 47





Appendix B-7
Parcel Boundary and Streets
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project



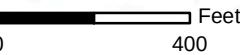
Route Alternatives

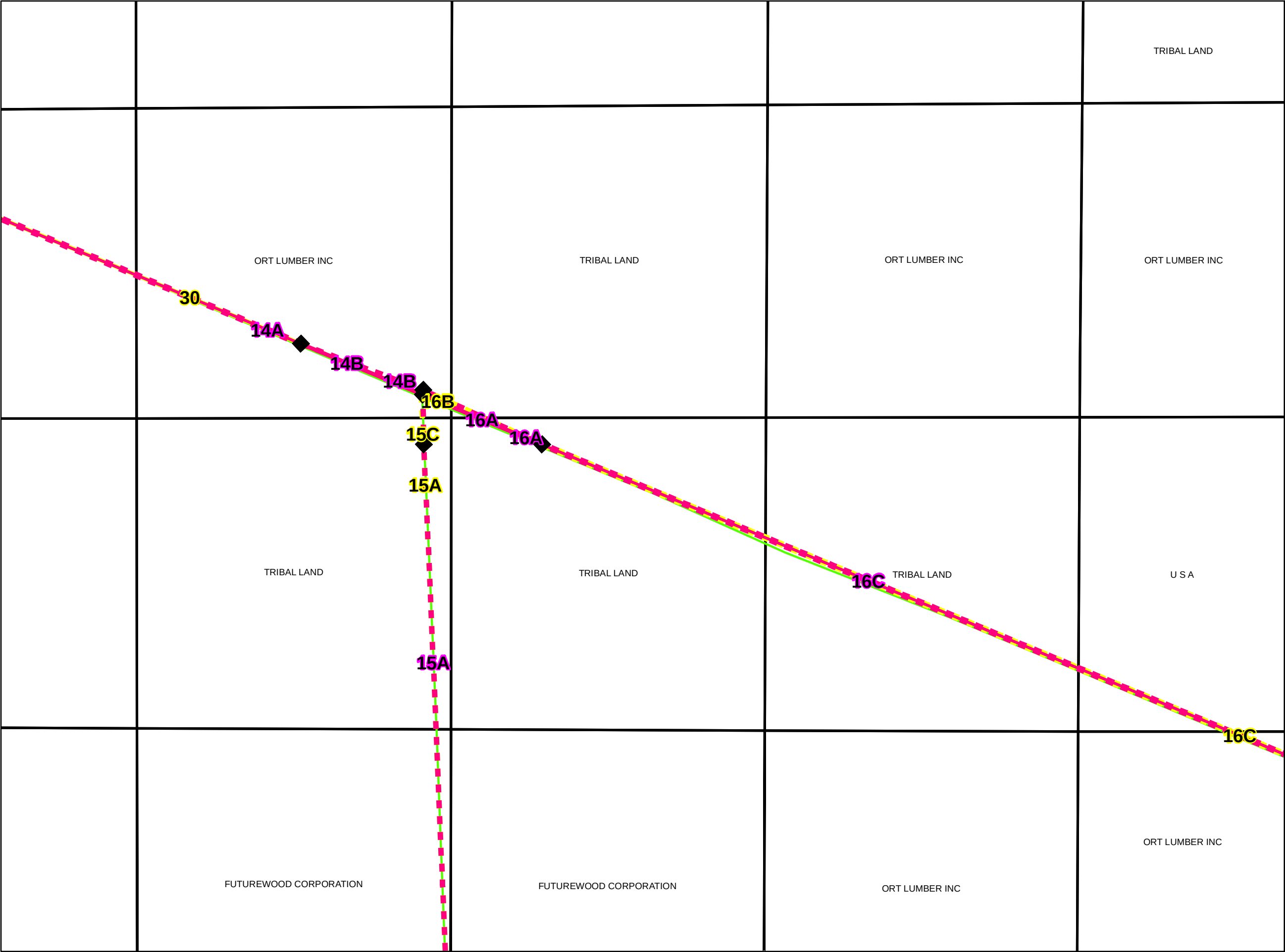
- Preferred Route 161 kV
- Preferred Route 69 kV
- Preferred Route 161/69 kV
- Alternate Route A 161 kV
- Alternate Route A 69 kV
- Alternate Route A 161/69 kV
- Alternate Route B 161 kV
- Alternate Route B 69 kV
- Alternate Route B 161/69 kV

- Route Segment Endpoint
- Radisson Substation Site
- Staging Area

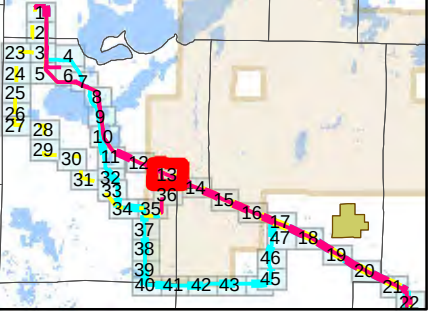
Existing Transmission

- 69kV AC
- 161kV AC
- 345kV AC
- Substation (Xcel)
- Substation (Not Xcel)
- Road
- Railroad
- Tax Parcel





Appendix B-7
Parcel Boundary and Streets
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project



Route Alternatives

- Preferred Route 161 kV
- Preferred Route 69 kV
- Preferred Route 161/69 kV
- Alternate Route A 161 kV
- Alternate Route A 69 kV
- Alternate Route A 161/69 kV
- Alternate Route B 161 kV
- Alternate Route B 69 kV
- Alternate Route B 161/69 kV

- Route Segment Endpoint
- Radisson Substation Site
- Staging Area

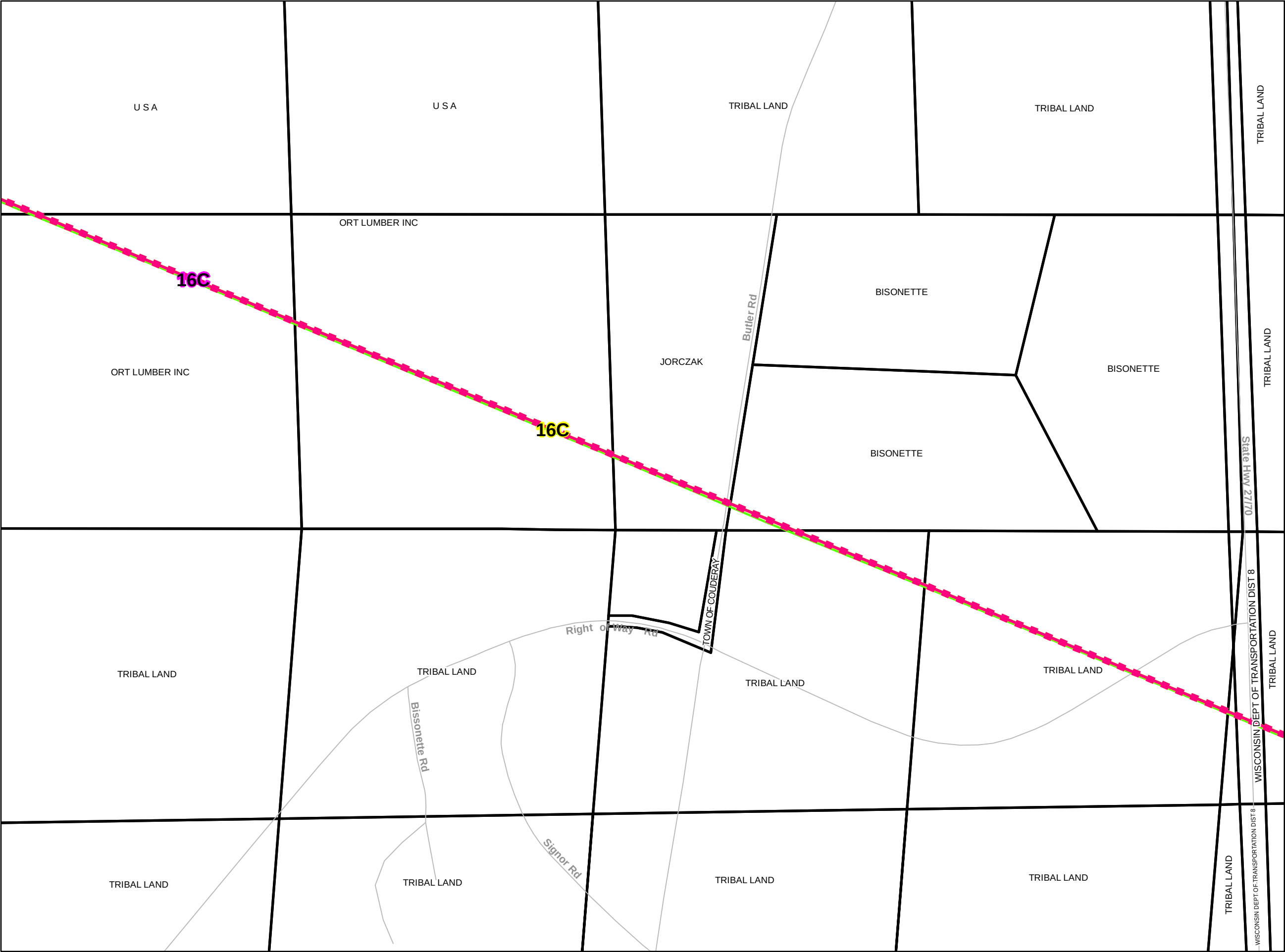
Existing Transmission

- 69kV AC
- 161kV AC
- 345kV AC
- Substation (Xcel)
- Substation (Not Xcel)
- Road
- Railroad
- Tax Parcel

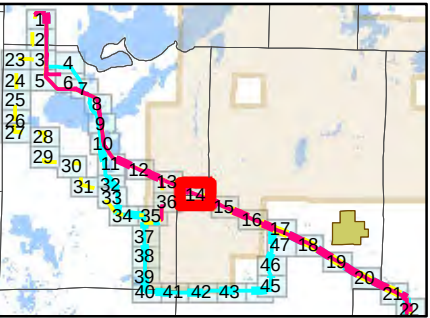


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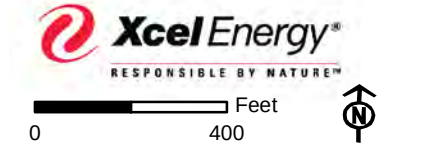


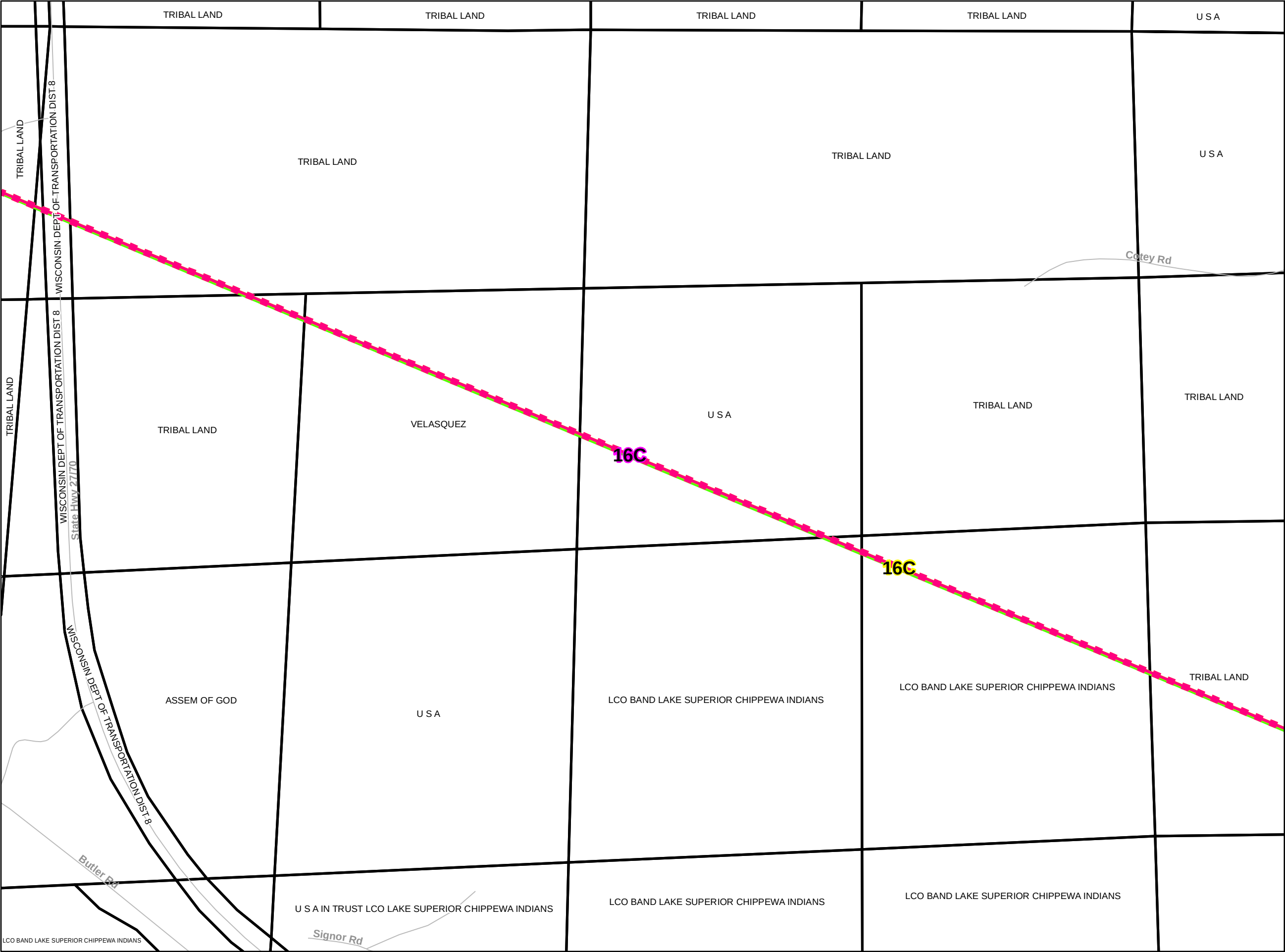


Appendix B-7
Parcel Boundary and Streets
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project

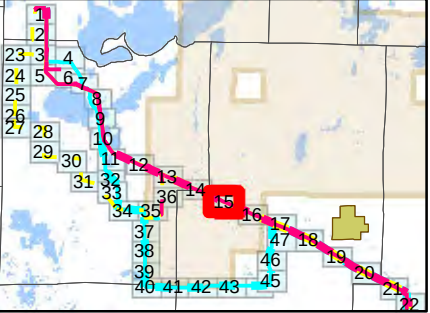


- Route Alternatives**
- Preferred Route 161 kV
 - Preferred Route 69 kV
 - Preferred Route 161/69 kV
 - Alternate Route A 161 kV
 - Alternate Route A 69 kV
 - Alternate Route A 161/69 kV
 - Alternate Route B 161 kV
 - Alternate Route B 69 kV
 - Alternate Route B 161/69 kV
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 - Radisson Substation Site
 - Staging Area
- Existing Transmission**
- 69kV AC
 - 161kV AC
 - 345kV AC
 - Substation (Xcel)
 - Substation (Not Xcel)
 - Road
 - Railroad
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Appendix B-7
Parcel Boundary and Streets
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project



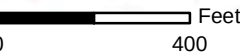
Route Alternatives

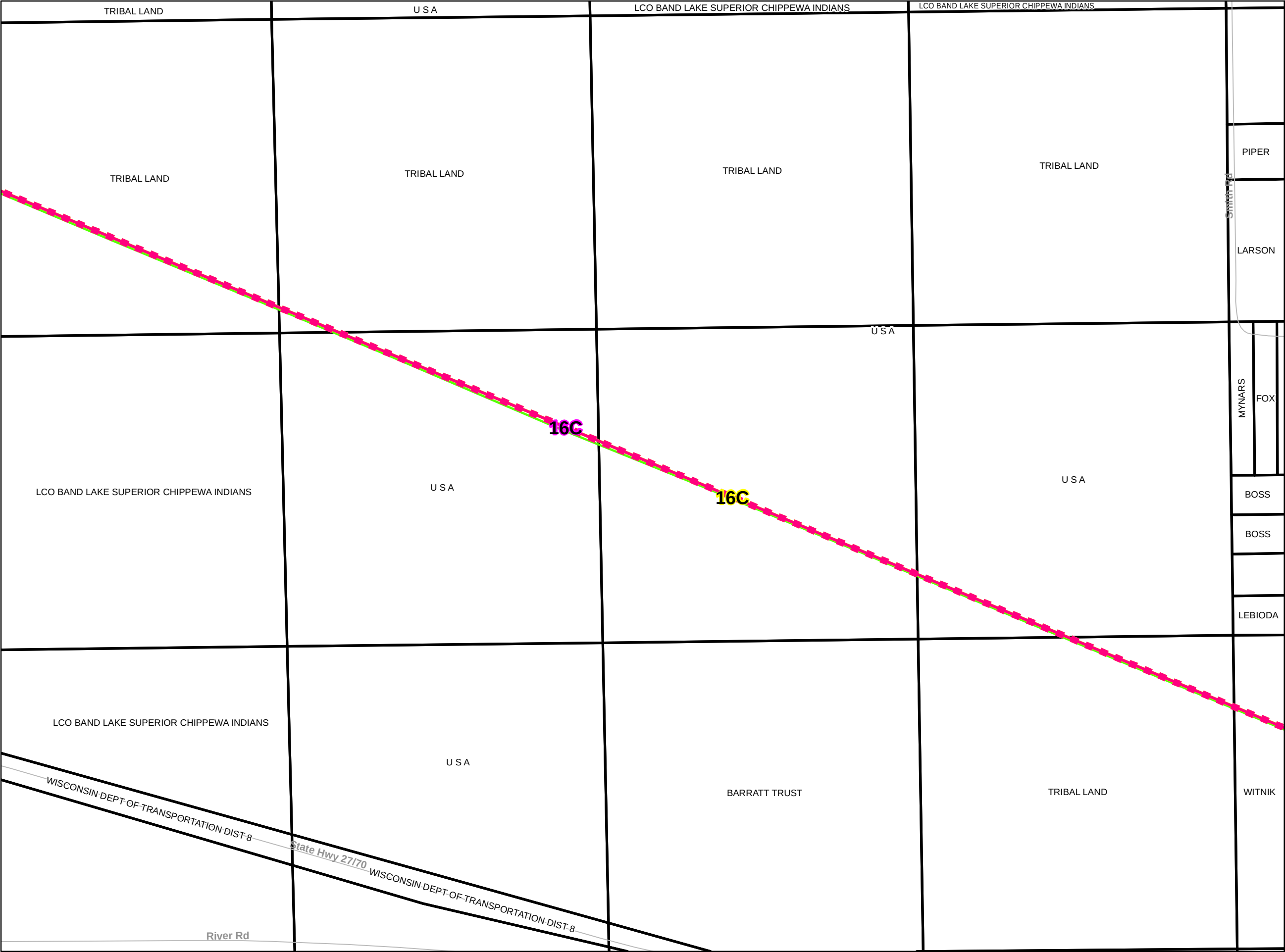
- Preferred Route 161 kV
- Preferred Route 69 kV
- Preferred Route 161/69 kV
- Alternate Route A 161 kV
- Alternate Route A 69 kV
- Alternate Route A 161/69 kV
- Alternate Route B 161 kV
- Alternate Route B 69 kV
- Alternate Route B 161/69 kV

- Route Segment Endpoint
- Radisson Substation Site
- Staging Area

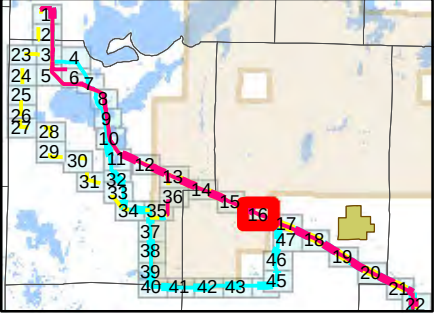
Existing Transmission

- 69kV AC
- 161kV AC
- 345kV AC
- Substation (Xcel)
- Substation (Not Xcel)
- Road
- Railroad
- Tax Parcel





Appendix B-7
Parcel Boundary and Streets
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project



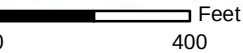
Route Alternatives

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- Preferred Route 69 kV
- Preferred Route 161/69 kV
- Alternate Route A 161 kV
- Alternate Route A 69 kV
- Alternate Route A 161/69 kV
- Alternate Route B 161 kV
- Alternate Route B 69 kV
- Alternate Route B 161/69 kV

- Route Segment Endpoint
- Radisson Substation Site
- Staging Area

Existing Transmission

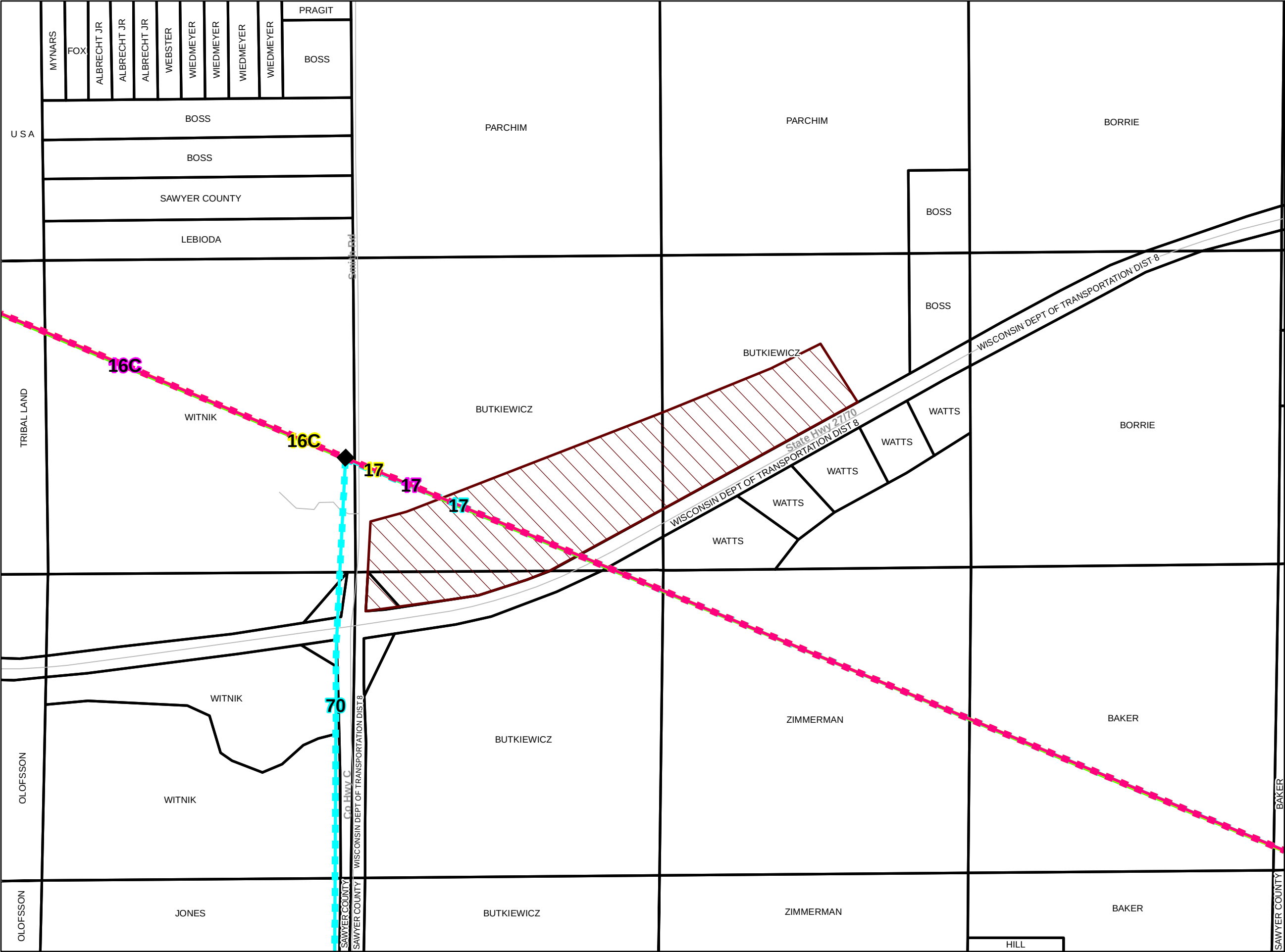
- 69kV AC
- 161kV AC
- 345kV AC
- Substation (Xcel)
- Substation (Not Xcel)
- Road
- Railroad
- Tax Parcel



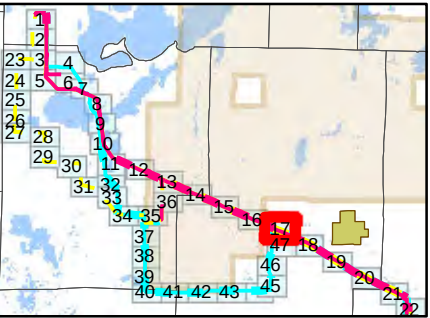
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Date: 8/29/2011

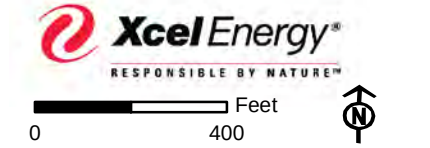
Page 16 of 47

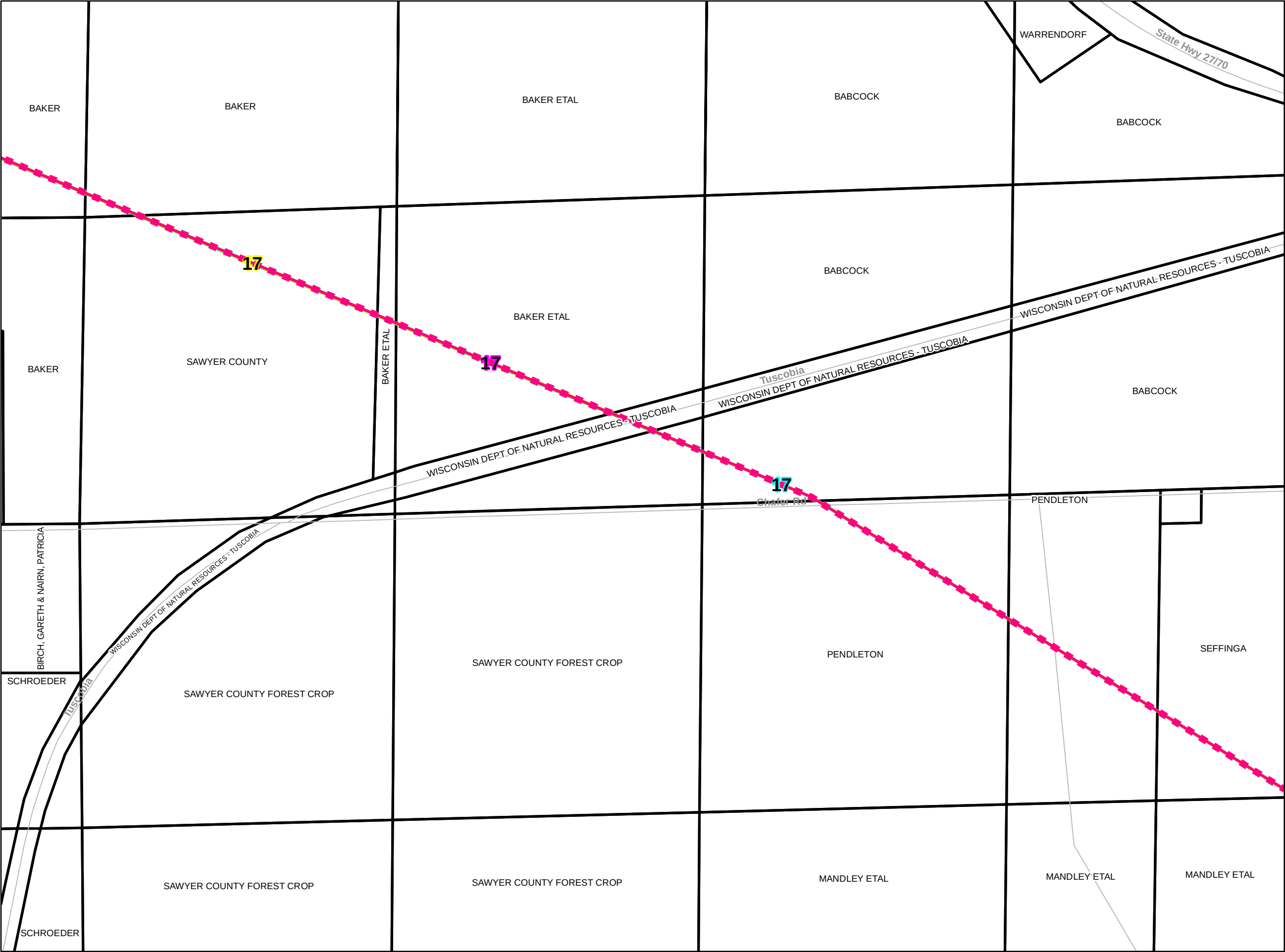


Appendix B-7
Parcel Boundary and Streets
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project

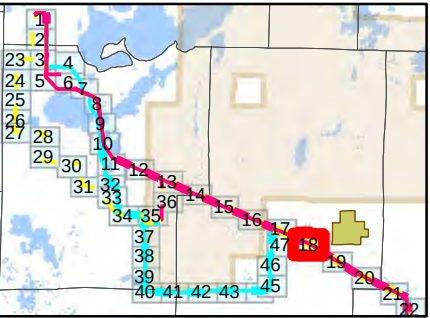


- Route Alternatives**
- Preferred Route 161 kV
 - Preferred Route 69 kV
 - Preferred Route 161/69 kV
 - Alternate Route A 161 kV
 - Alternate Route A 69 kV
 - Alternate Route A 161/69 kV
 - Alternate Route B 161 kV
 - Alternate Route B 69 kV
 - Alternate Route B 161/69 kV
- Route Segment Endpoint**
- Route Segment Endpoint
- Existing Transmission**
- 69kV AC
 - 161kV AC
 - 345kV AC
- Substation (Xcel)**
- Substation (Xcel)
 - Substation (Not Xcel)
- Road**
- Road
- Railroad**
- Railroad
- Tax Parcel**
- Tax Parcel

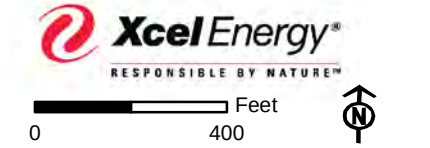




Appendix B-7
Parcel Boundary and Streets
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project

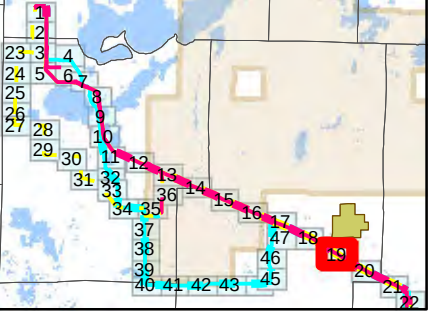


- Route Alternatives**
- Preferred Route 161 kV
 - Preferred Route 69 kV
 - Preferred Route 161/69 kV
 - Alternate Route A 161 kV
 - Alternate Route A 69 kV
 - Alternate Route A 161/69 kV
 - Alternate Route B 161 kV
 - Alternate Route B 69 kV
 - Alternate Route B 161/69 kV
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 - Radisson Substation Site
 - Staging Area
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 - Substation (Xcel)
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 - Railroad
 - Tax Parcel





Appendix B-7
Parcel Boundary and Streets
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project



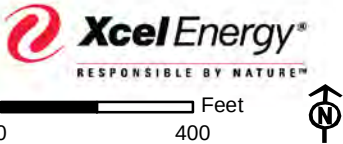
Route Alternatives

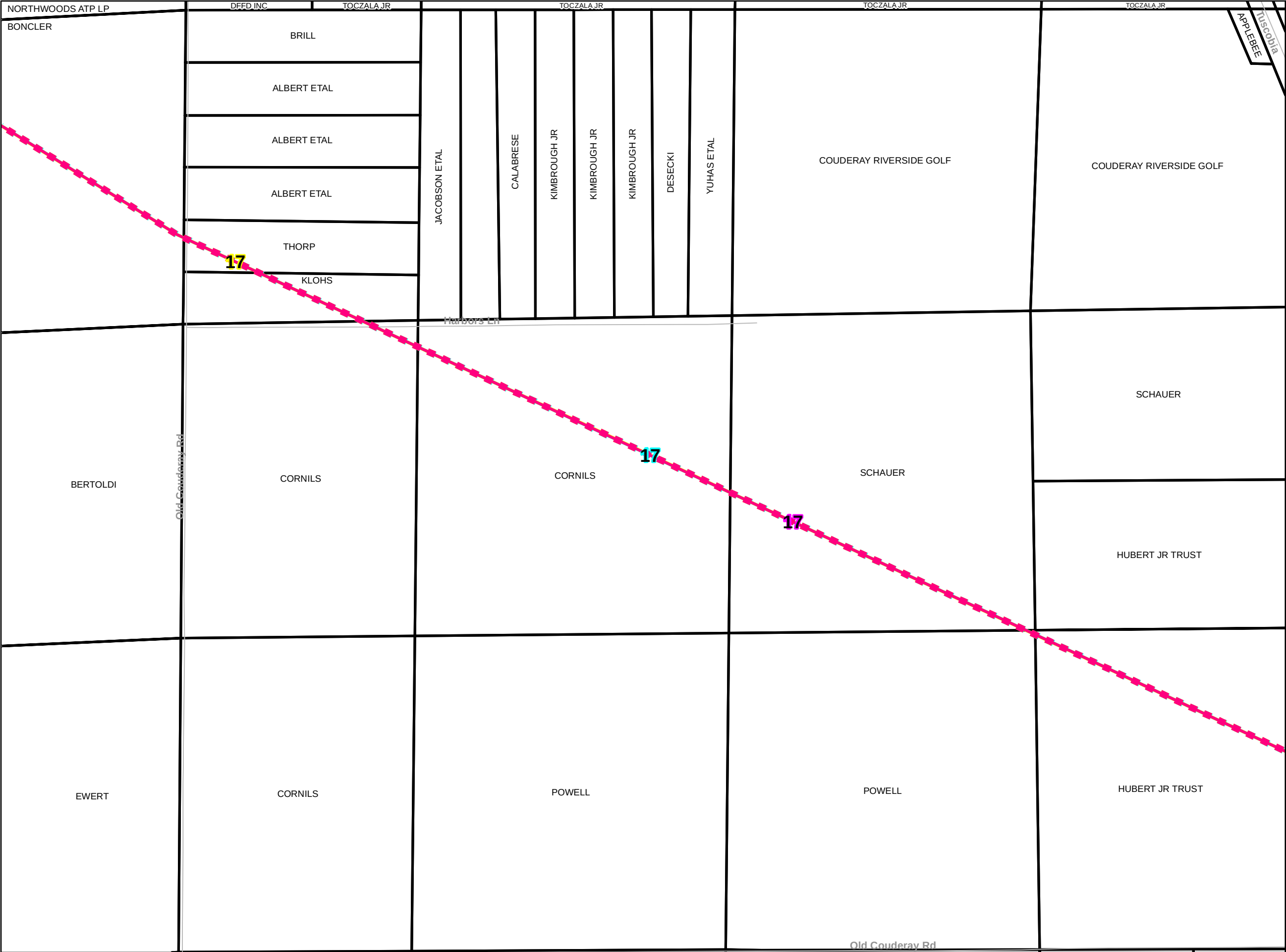
- Preferred Route 161 kV
- Preferred Route 69 kV
- Preferred Route 161/69 kV
- Alternate Route A 161 kV
- Alternate Route A 69 kV
- Alternate Route A 161/69 kV
- Alternate Route B 161 kV
- Alternate Route B 69 kV
- Alternate Route B 161/69 kV

- Route Segment Endpoint
- Radisson Substation Site
- Staging Area

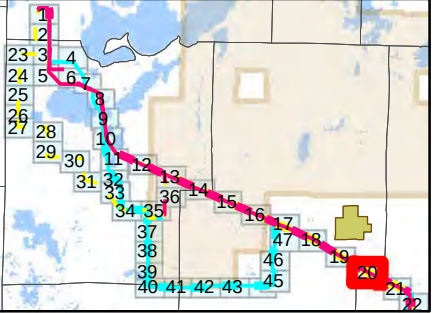
Existing Transmission

- 69kV AC
- 161kV AC
- 345kV AC
- Substation (Xcel)
- Substation (Not Xcel)
- Road
- Railroad
- Tax Parcel





Appendix B-7
Parcel Boundary and Streets
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project



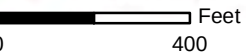
Route Alternatives

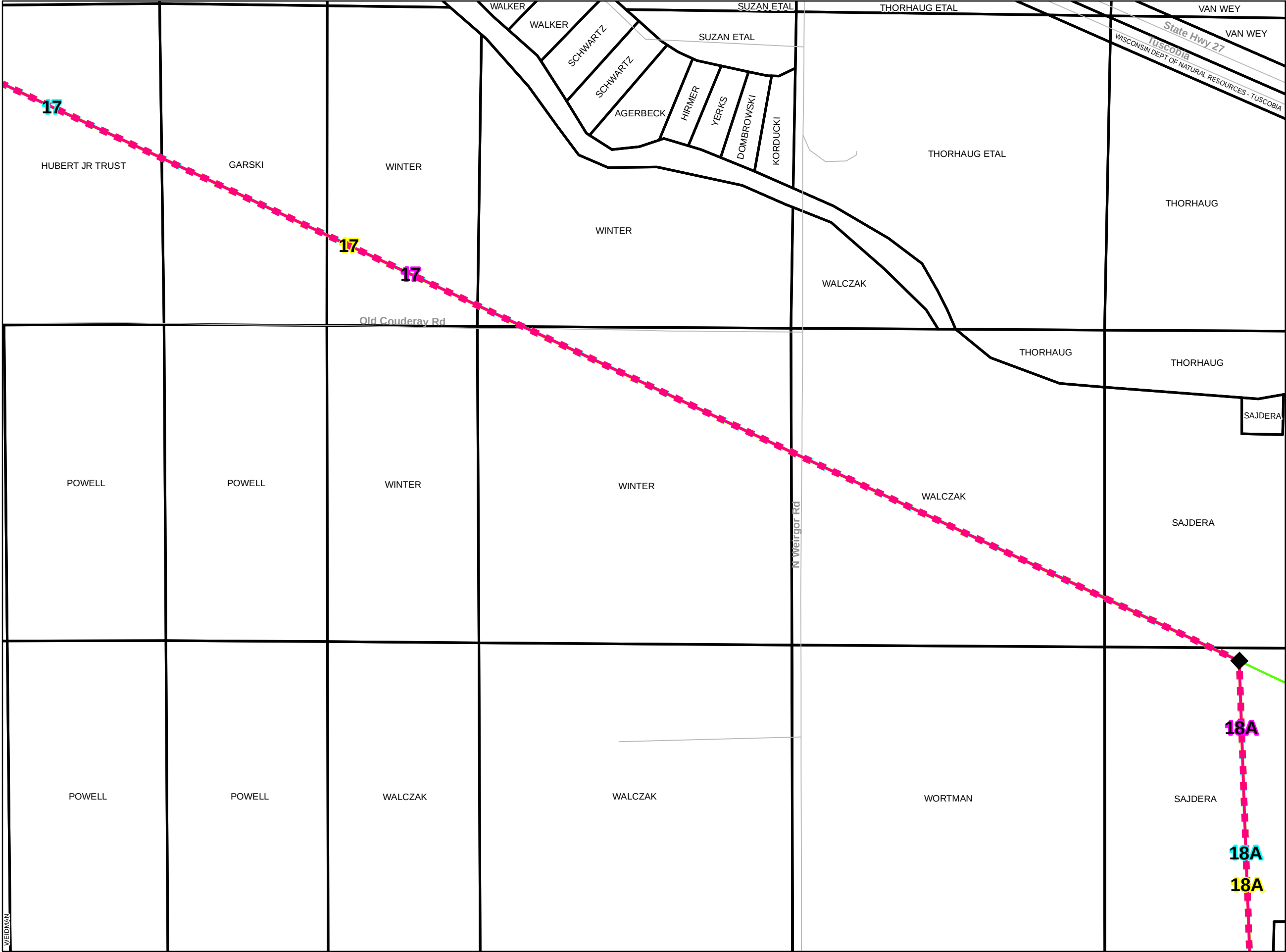
- Preferred Route 161 kV
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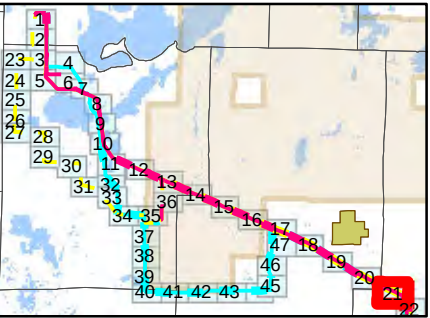
Existing Transmission

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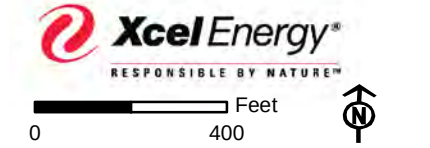


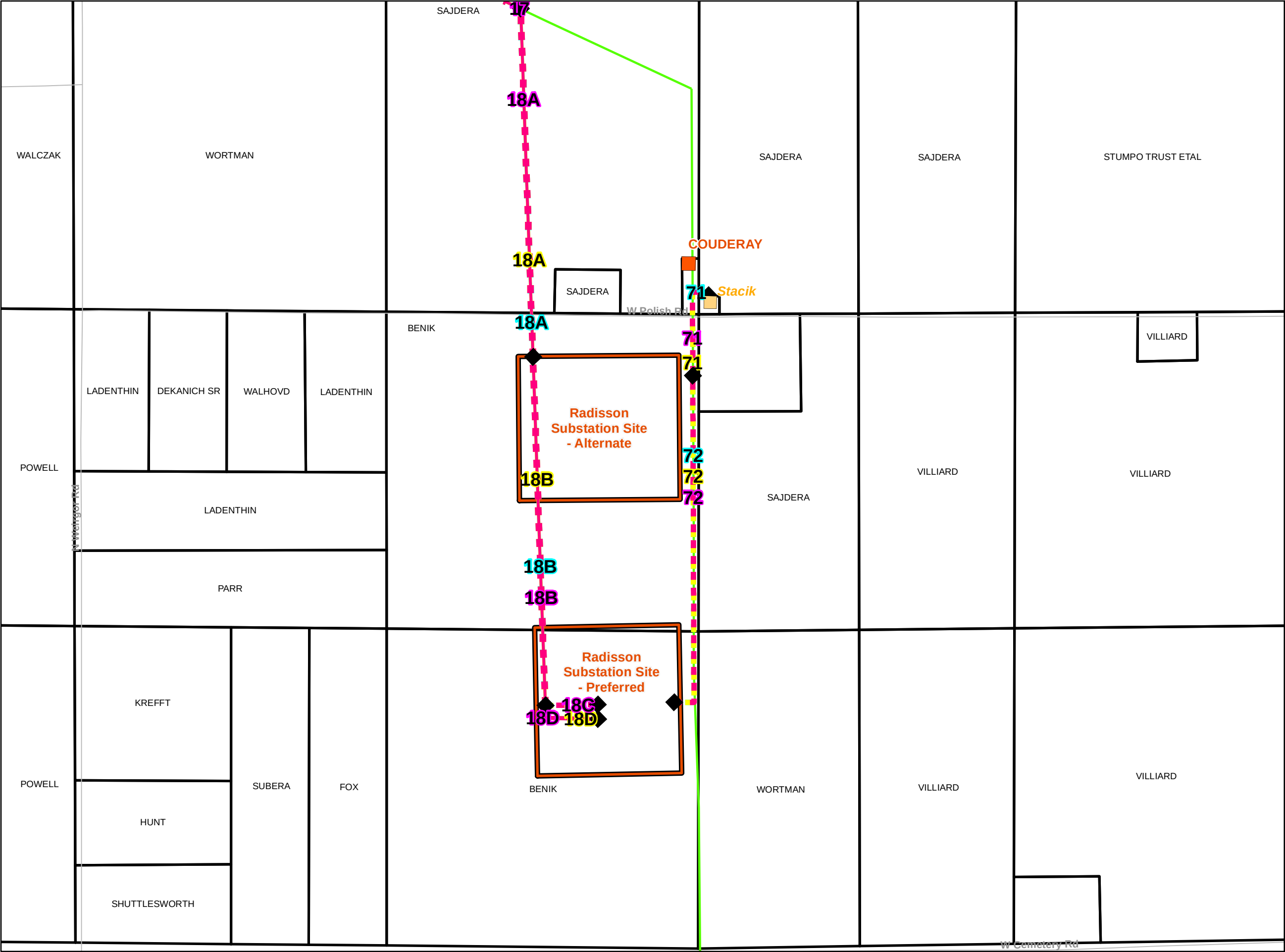


Appendix B-7
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Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project

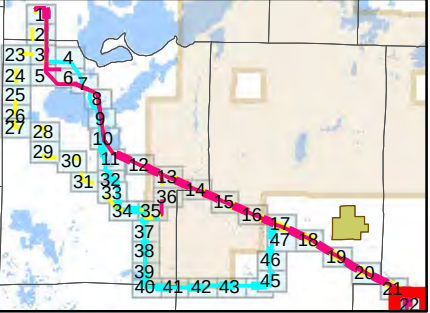


- Route Alternatives**
- Preferred Route 161 kV
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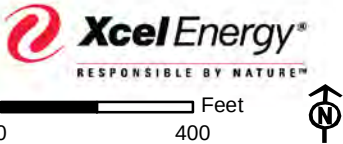




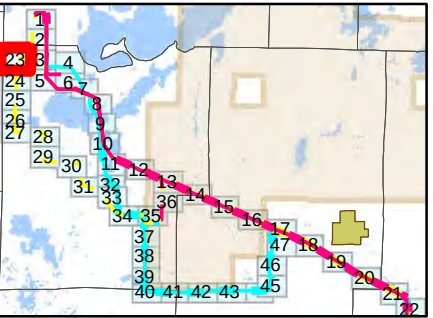
Appendix B-7
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Stone Lake to Couderay
69 kV Rebuild /
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Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project



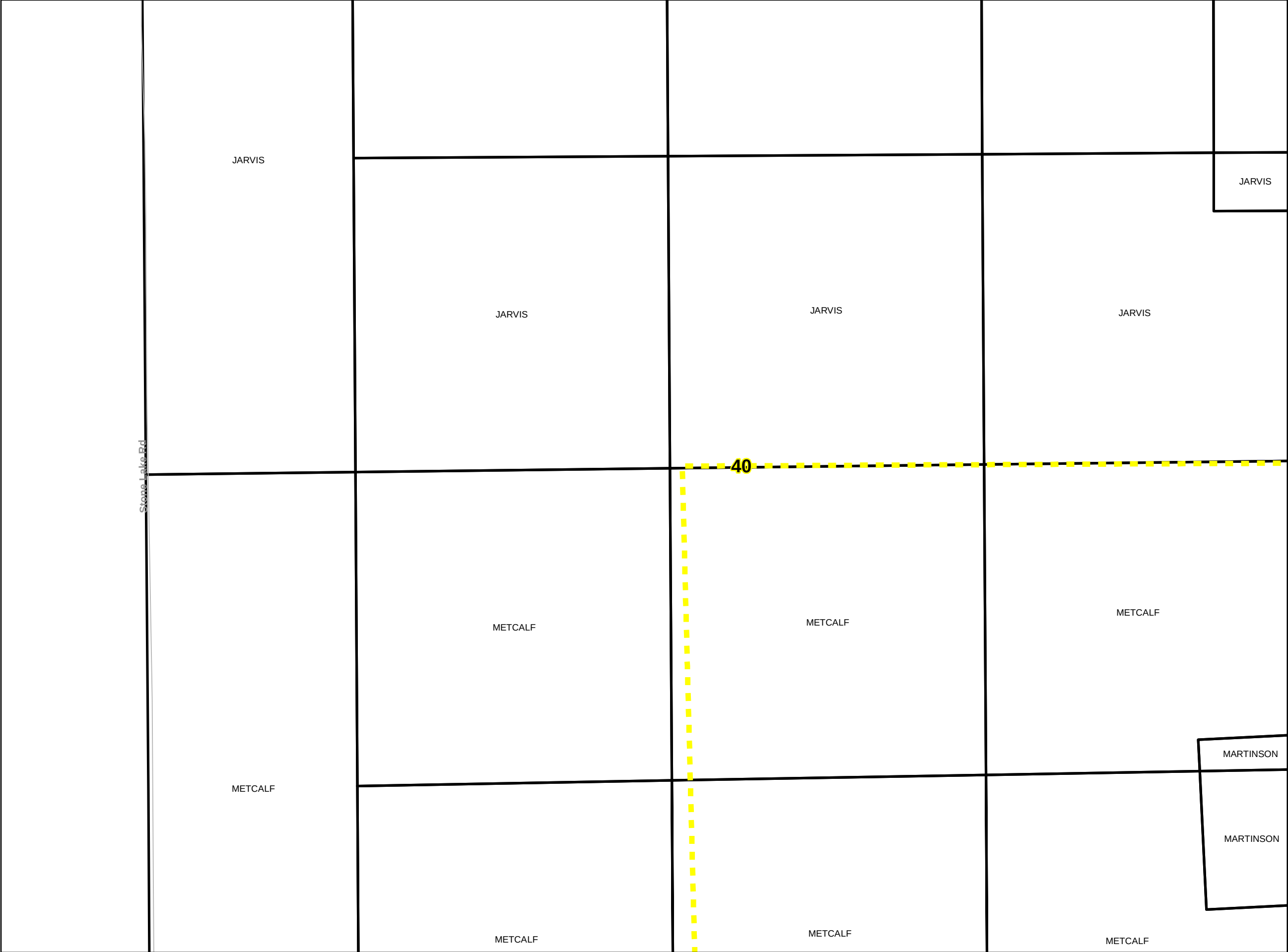
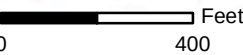
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- Alternate Route B 161/69 kV

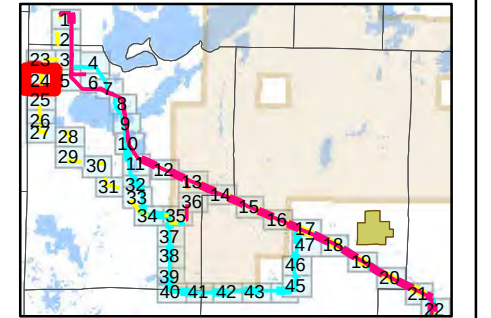
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- Staging Area

Existing Transmission

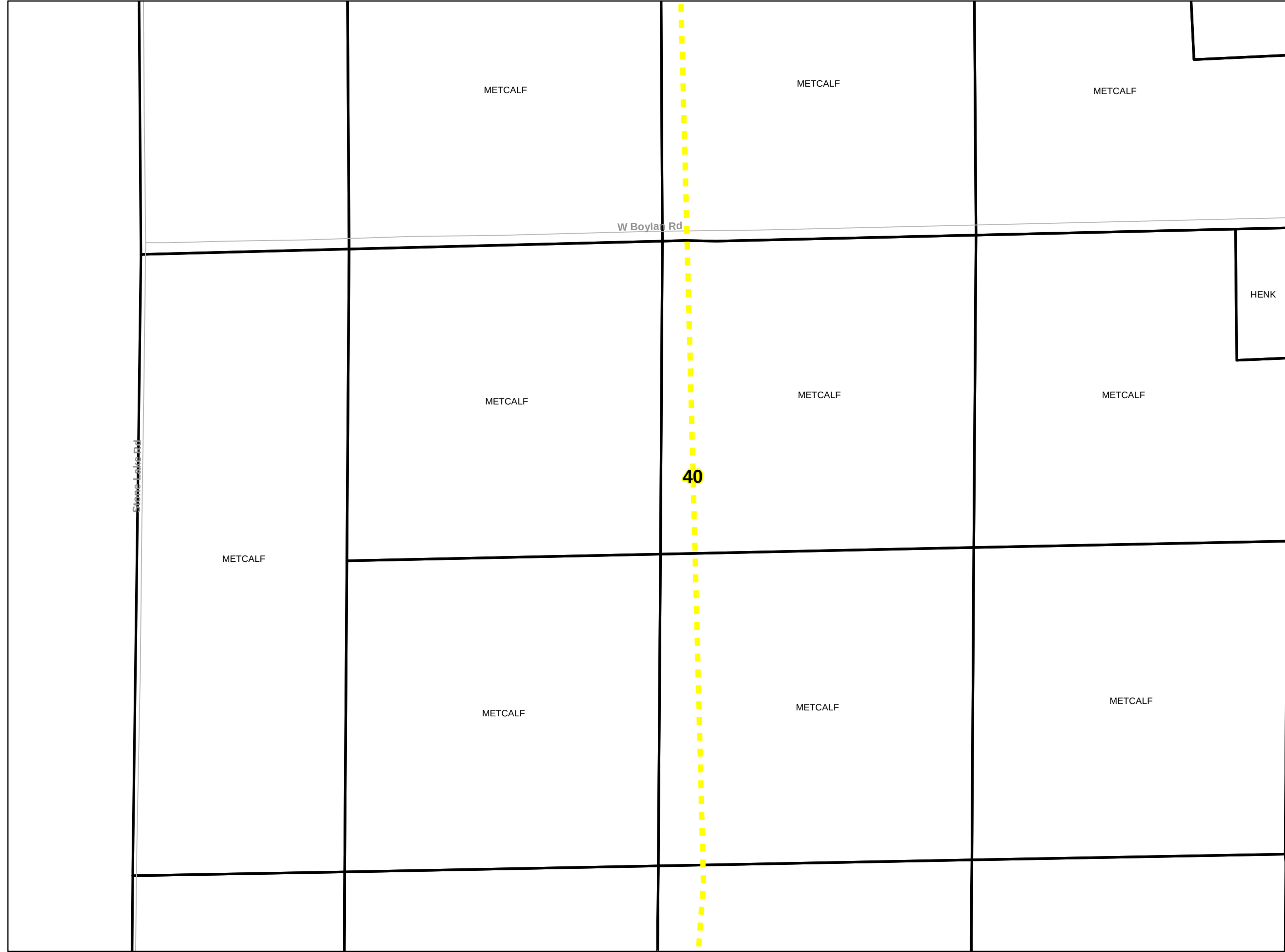
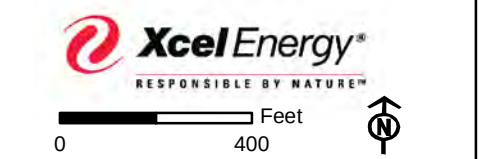
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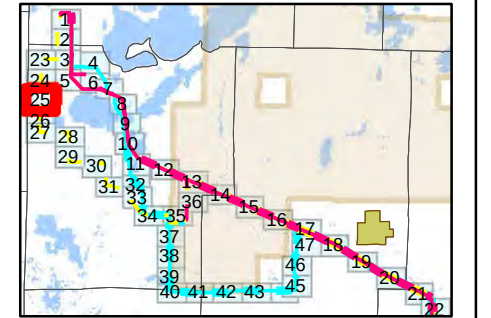
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Parcel Boundary and Streets
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project



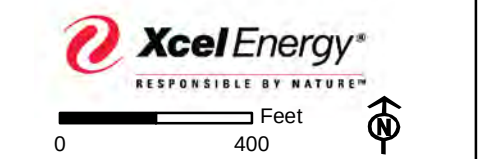
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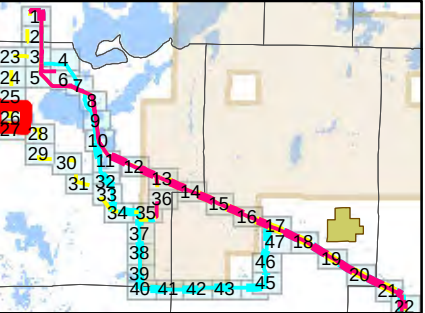
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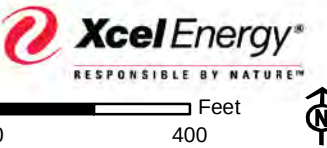
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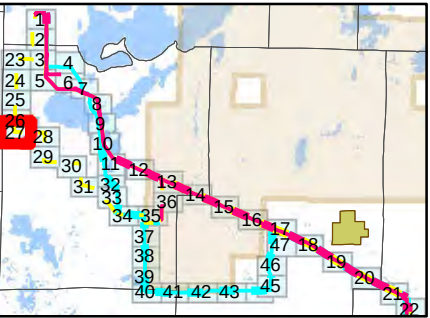
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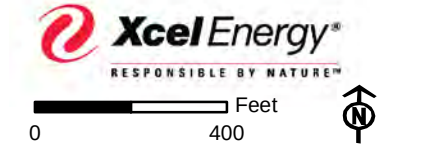




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Stone Lake to Couderay
69 kV Rebuild /
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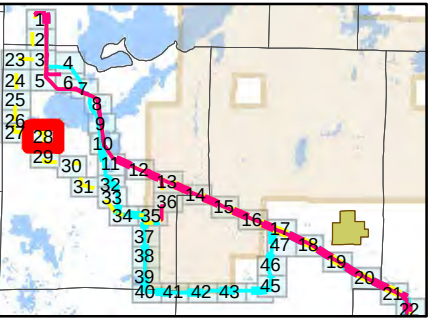


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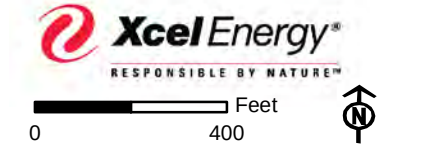




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Stone Lake to Couderay
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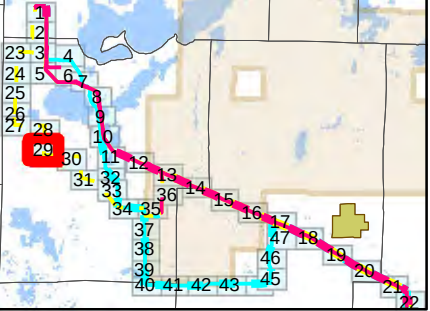


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Stone Lake to Couderay
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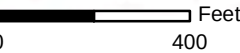
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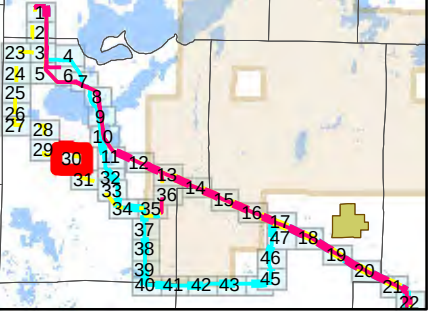
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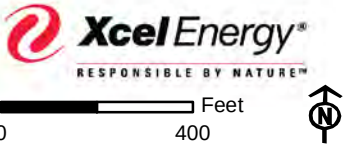
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Existing Transmission

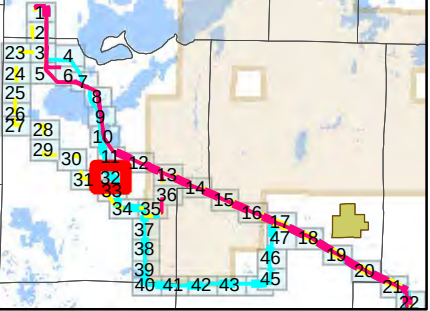
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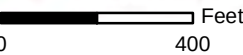
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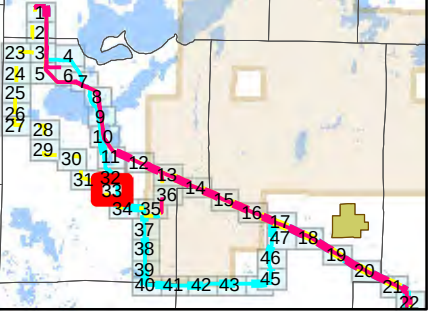
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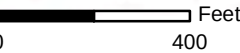
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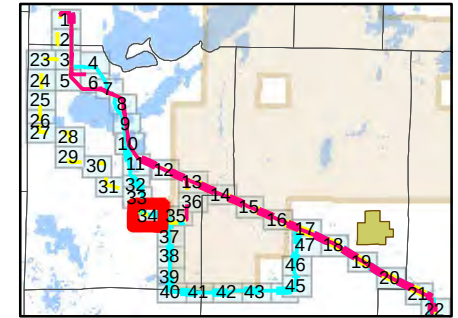
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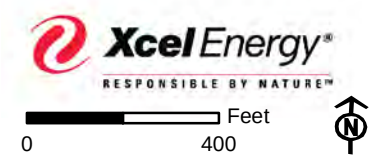
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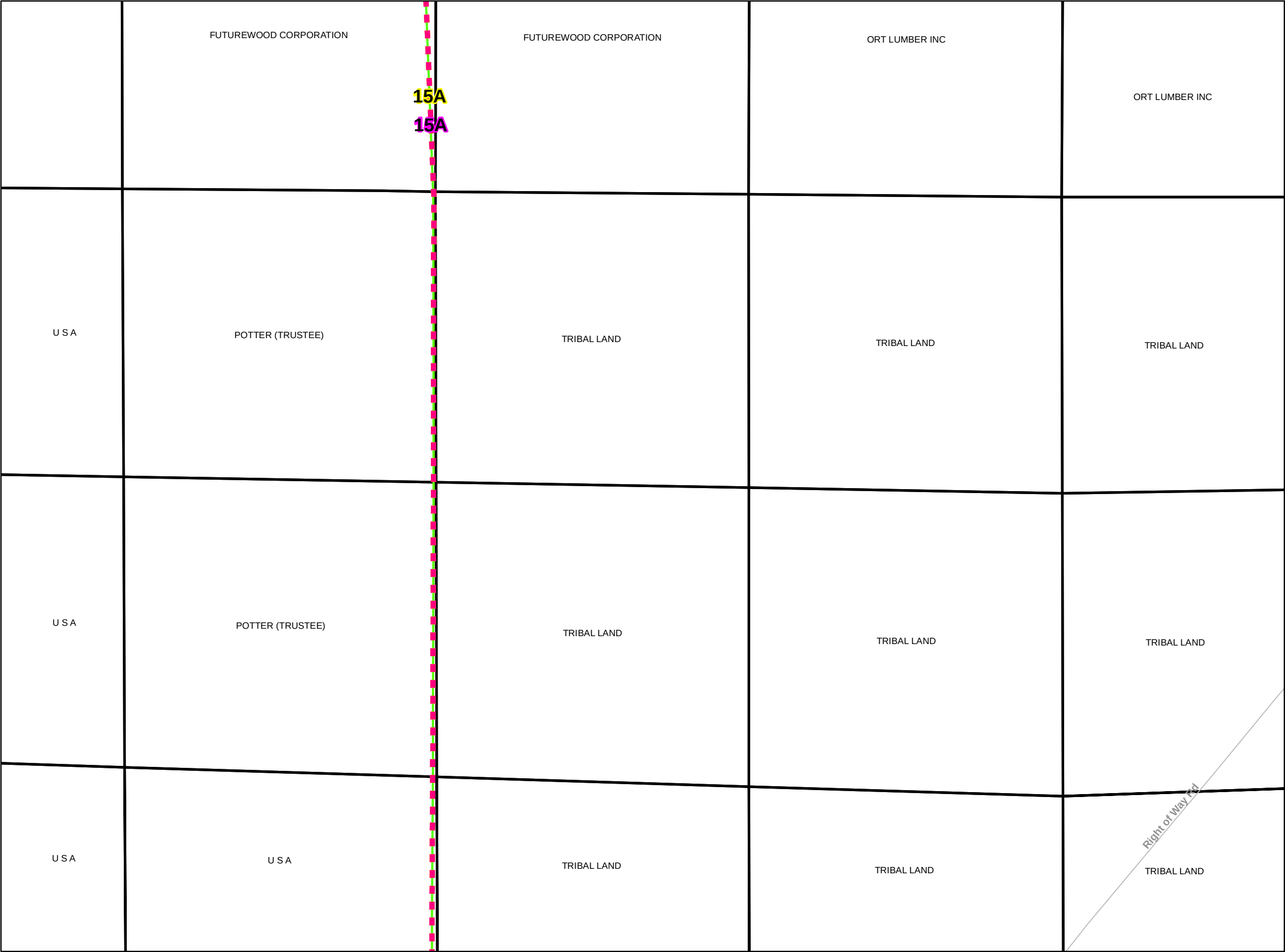


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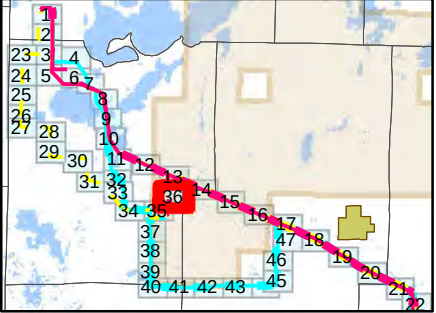


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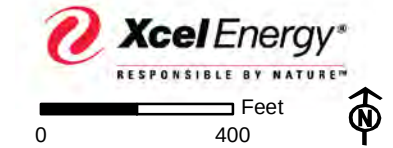


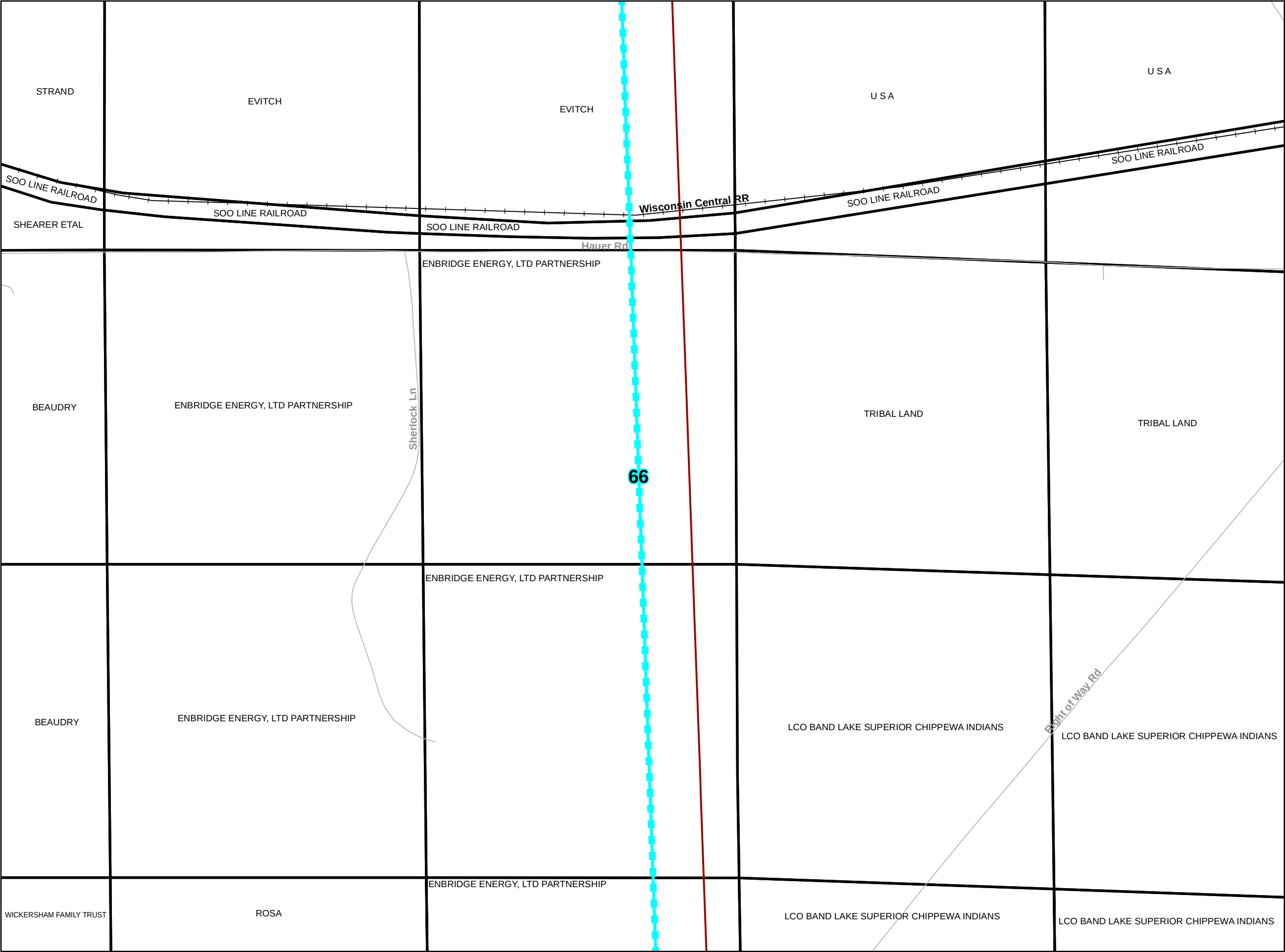


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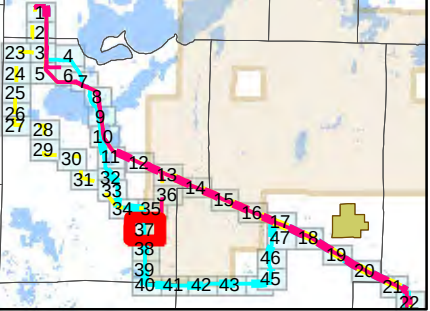


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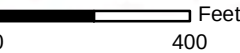
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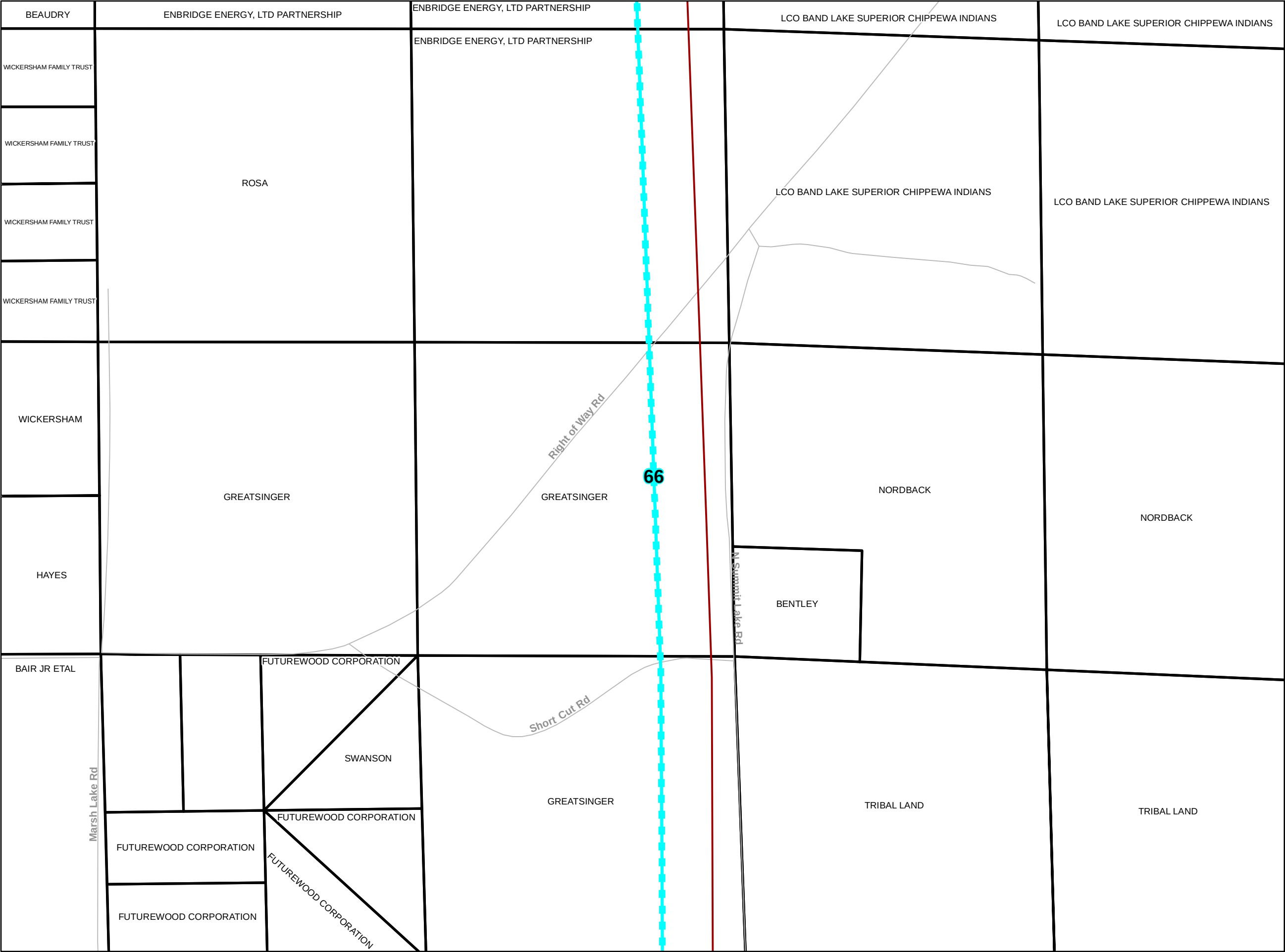
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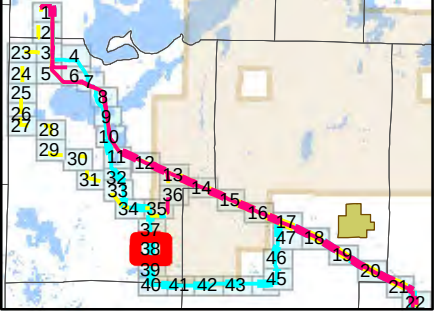
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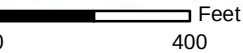
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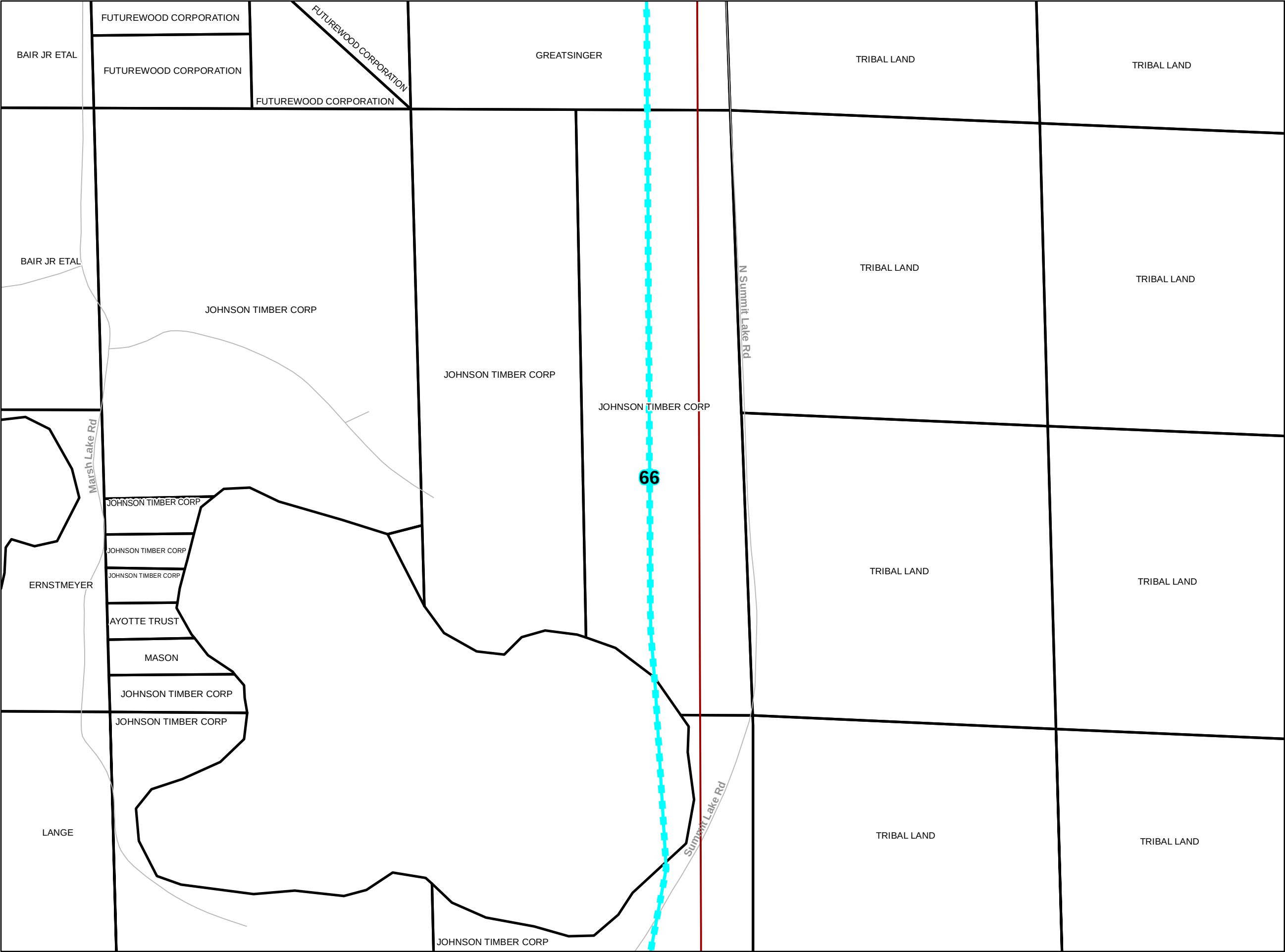
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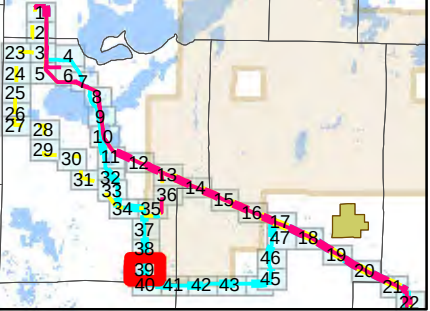
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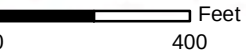
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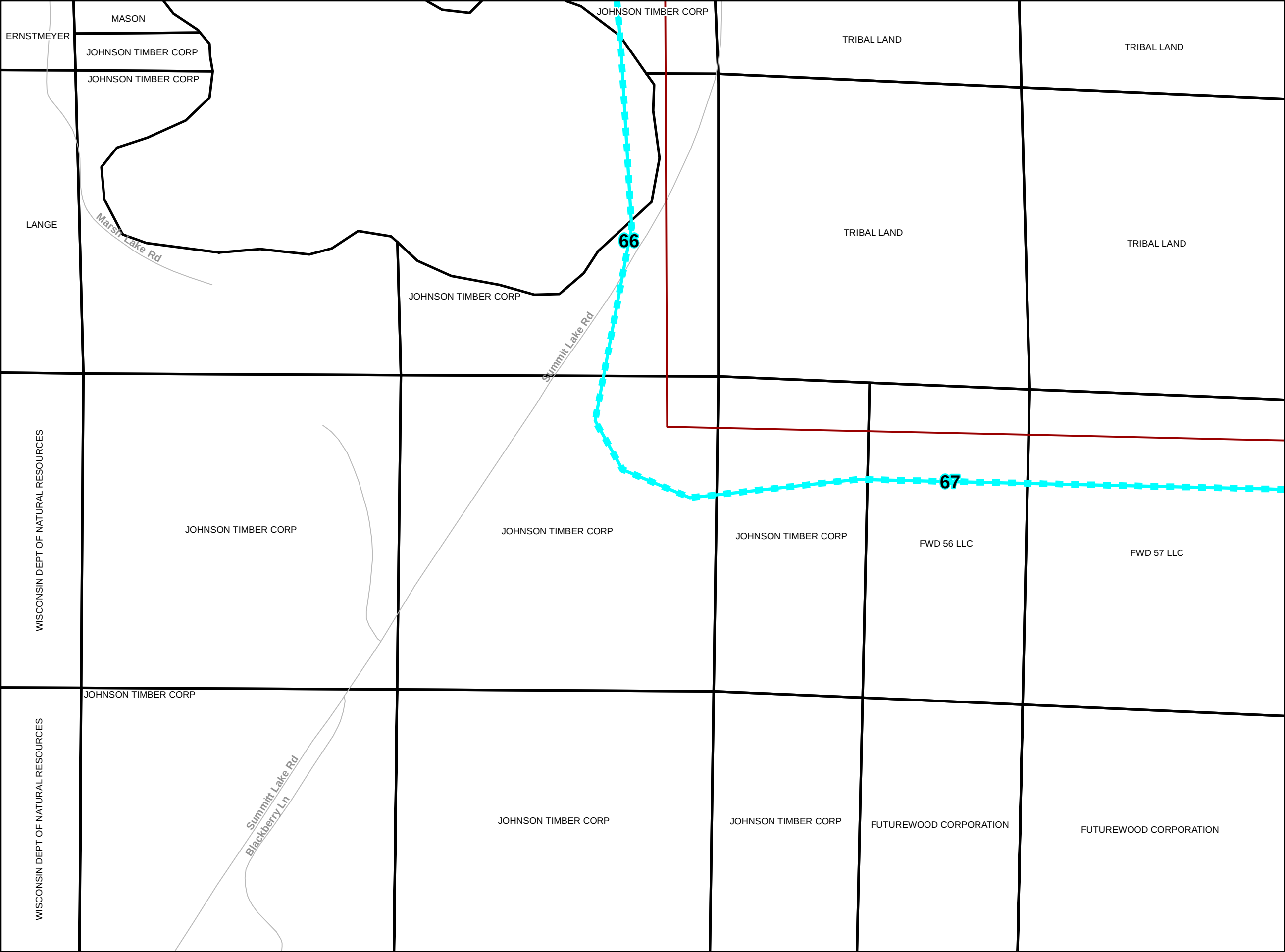
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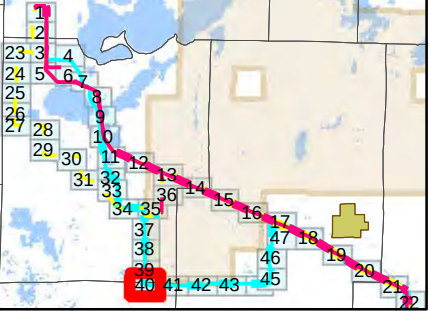
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- Tax Parcel





Appendix B-7
Parcel Boundary and Streets
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project



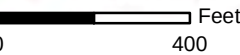
Route Alternatives

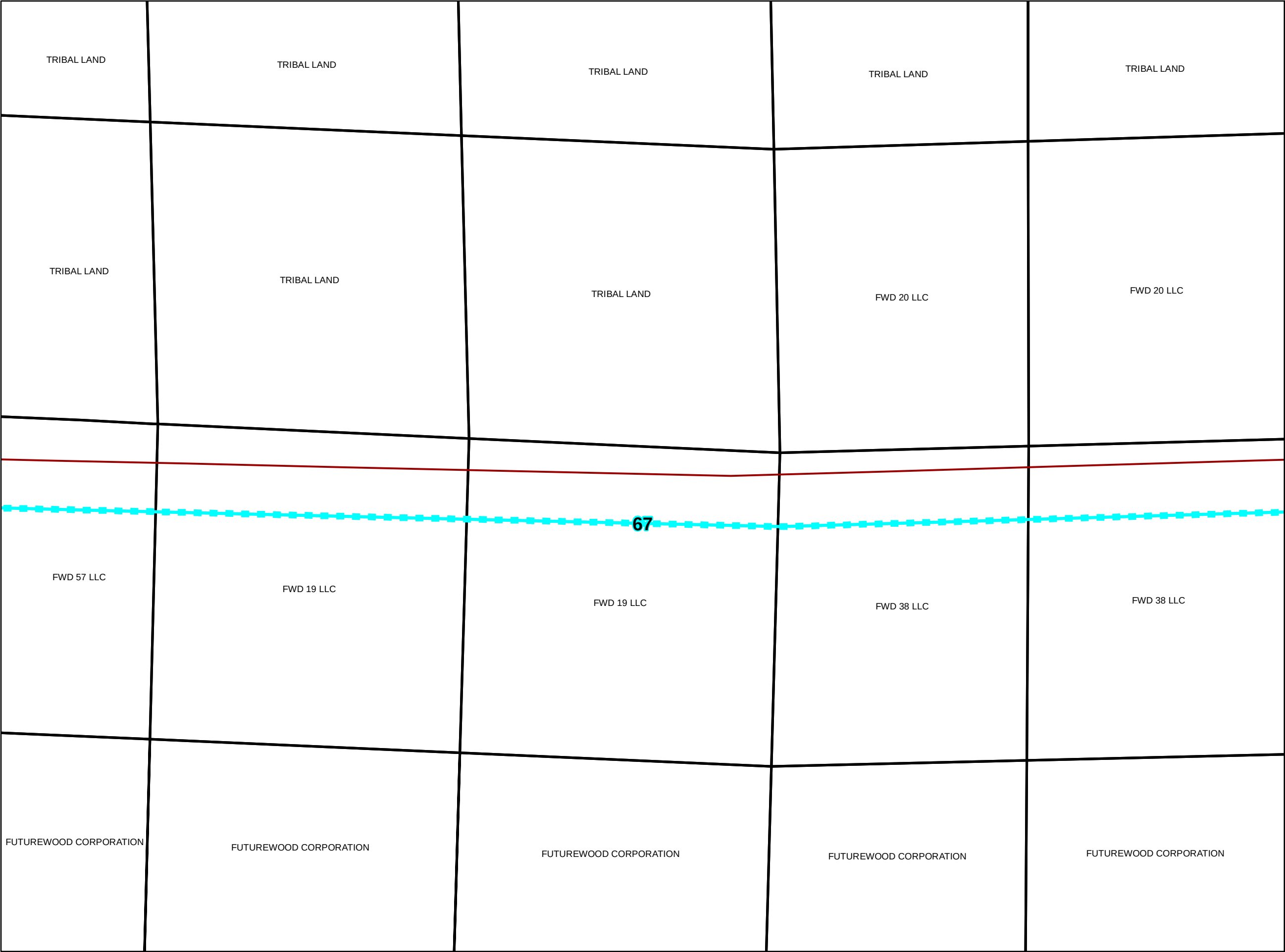
- Preferred Route 161 kV
- Preferred Route 69 kV
- Preferred Route 161/69 kV
- Alternate Route A 161 kV
- Alternate Route A 69 kV
- Alternate Route A 161/69 kV
- Alternate Route B 161 kV
- Alternate Route B 69 kV
- Alternate Route B 161/69 kV

- Route Segment Endpoint
- Radisson Substation Site
- Staging Area

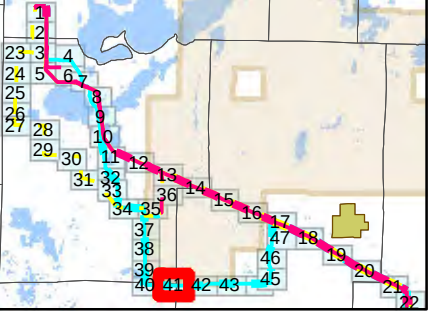
Existing Transmission

- 69kV AC
- 161kV AC
- 345kV AC
- Substation (Xcel)
- Substation (Not Xcel)
- Road
- Railroad
- Tax Parcel





Appendix B-7
Parcel Boundary and Streets
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project



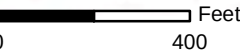
Route Alternatives

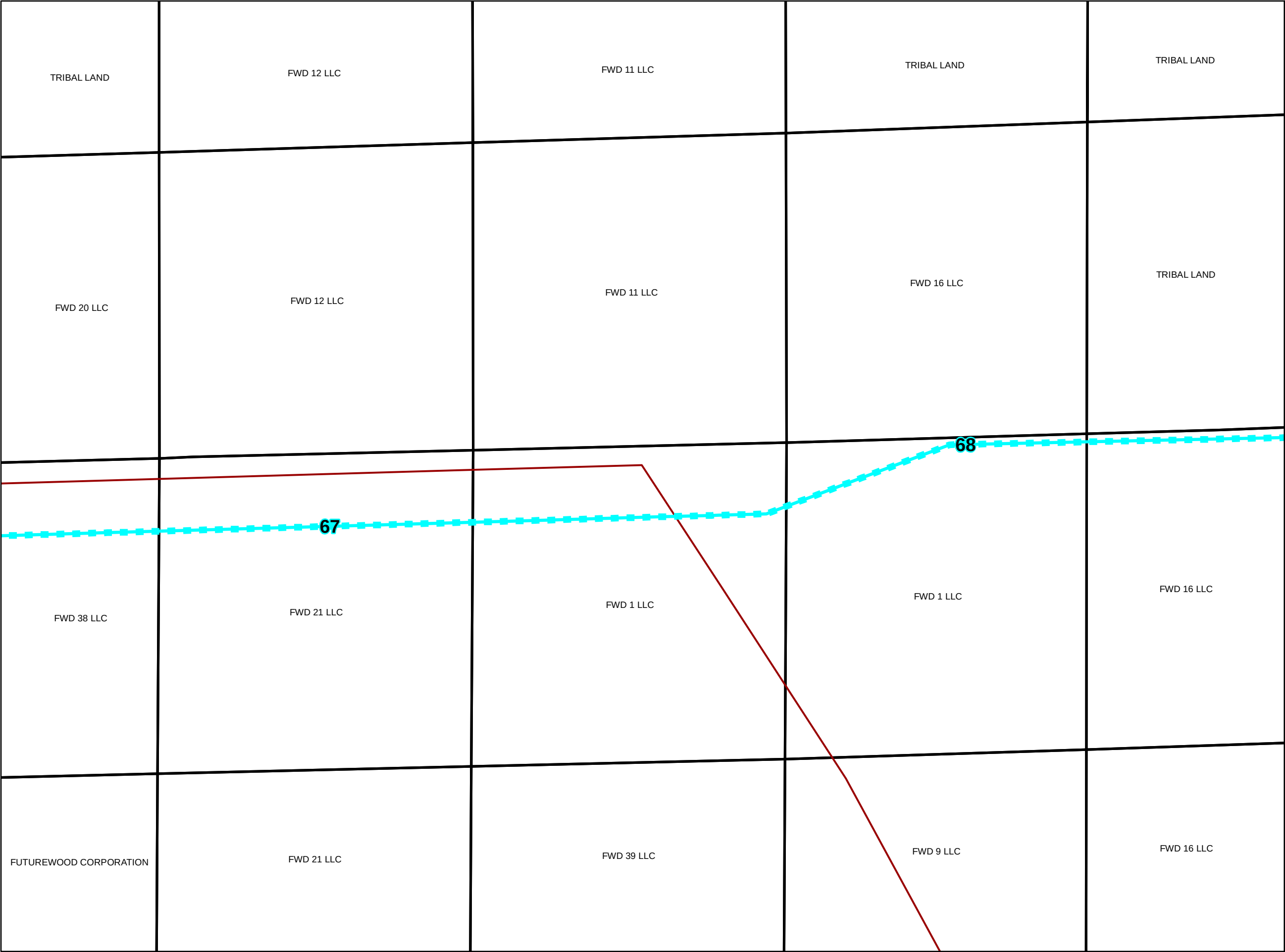
- Preferred Route 161 kV
- Preferred Route 69 kV
- Preferred Route 161/69 kV
- Alternate Route A 161 kV
- Alternate Route A 69 kV
- Alternate Route A 161/69 kV
- Alternate Route B 161 kV
- Alternate Route B 69 kV
- Alternate Route B 161/69 kV

- Route Segment Endpoint
- Radisson Substation Site
- Staging Area

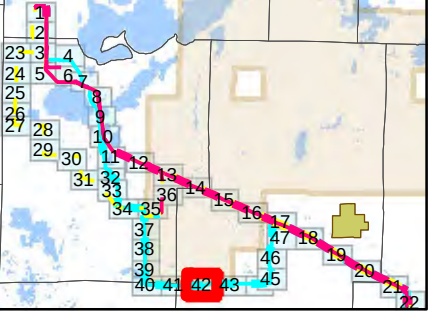
Existing Transmission

- 69kV AC
- 161kV AC
- 345kV AC
- Substation (Xcel)
- Substation (Not Xcel)
- Road
- Railroad
- Tax Parcel





Appendix B-7
Parcel Boundary and Streets
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project



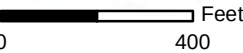
Route Alternatives

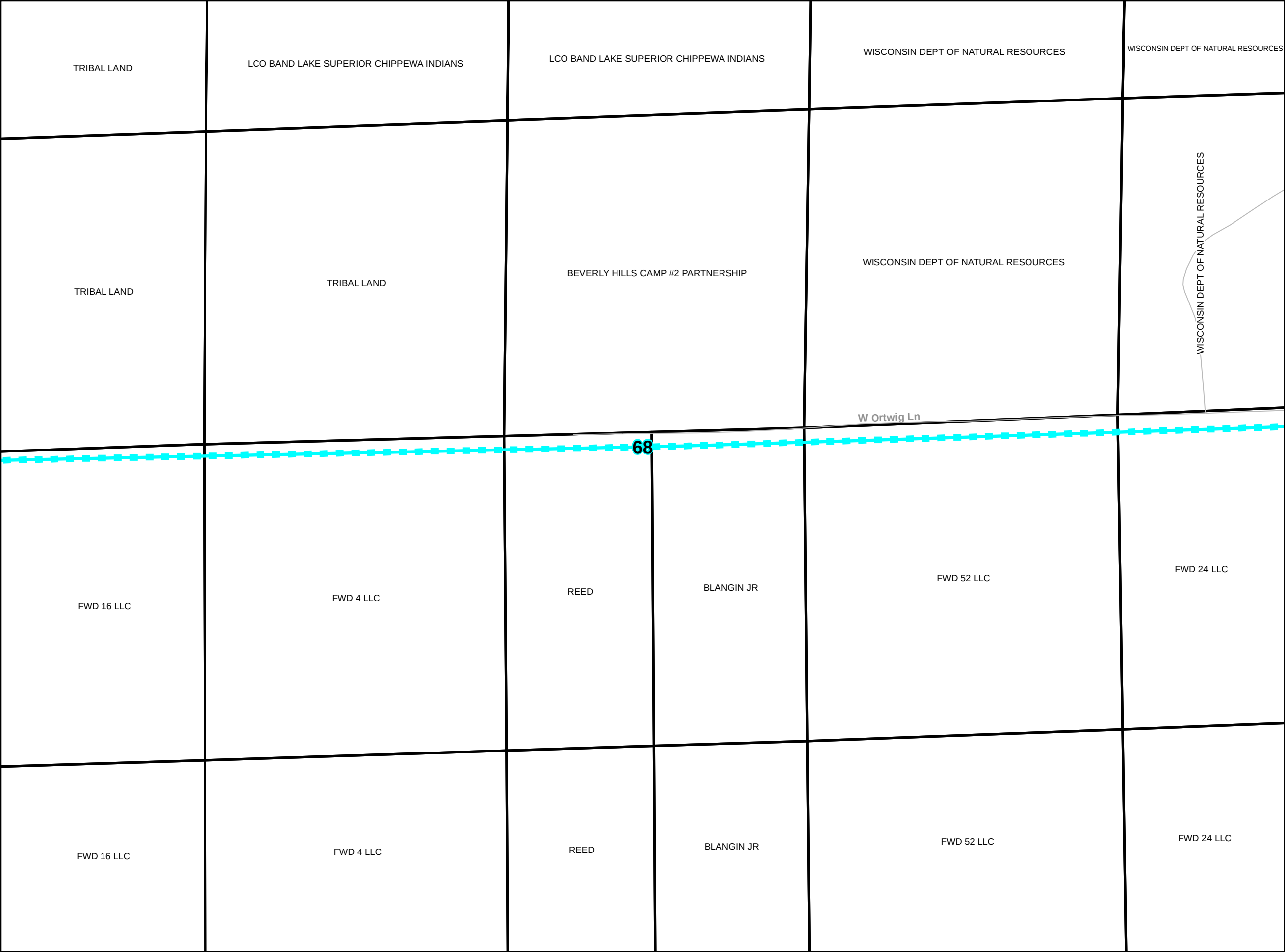
- Preferred Route 161 kV
- Preferred Route 69 kV
- Preferred Route 161/69 kV
- Alternate Route A 161 kV
- Alternate Route A 69 kV
- Alternate Route A 161/69 kV
- Alternate Route B 161 kV
- Alternate Route B 69 kV
- Alternate Route B 161/69 kV

- Route Segment Endpoint
- Radisson Substation Site
- Staging Area

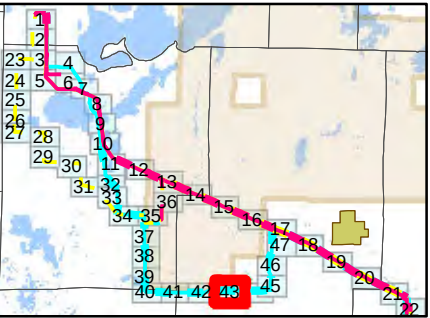
Existing Transmission

- 69kV AC
- 161kV AC
- 345kV AC
- Substation (Xcel)
- Substation (Not Xcel)
- Road
- Railroad
- Tax Parcel

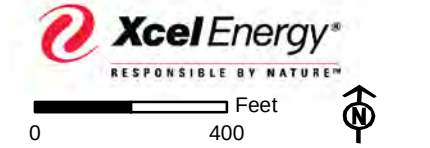


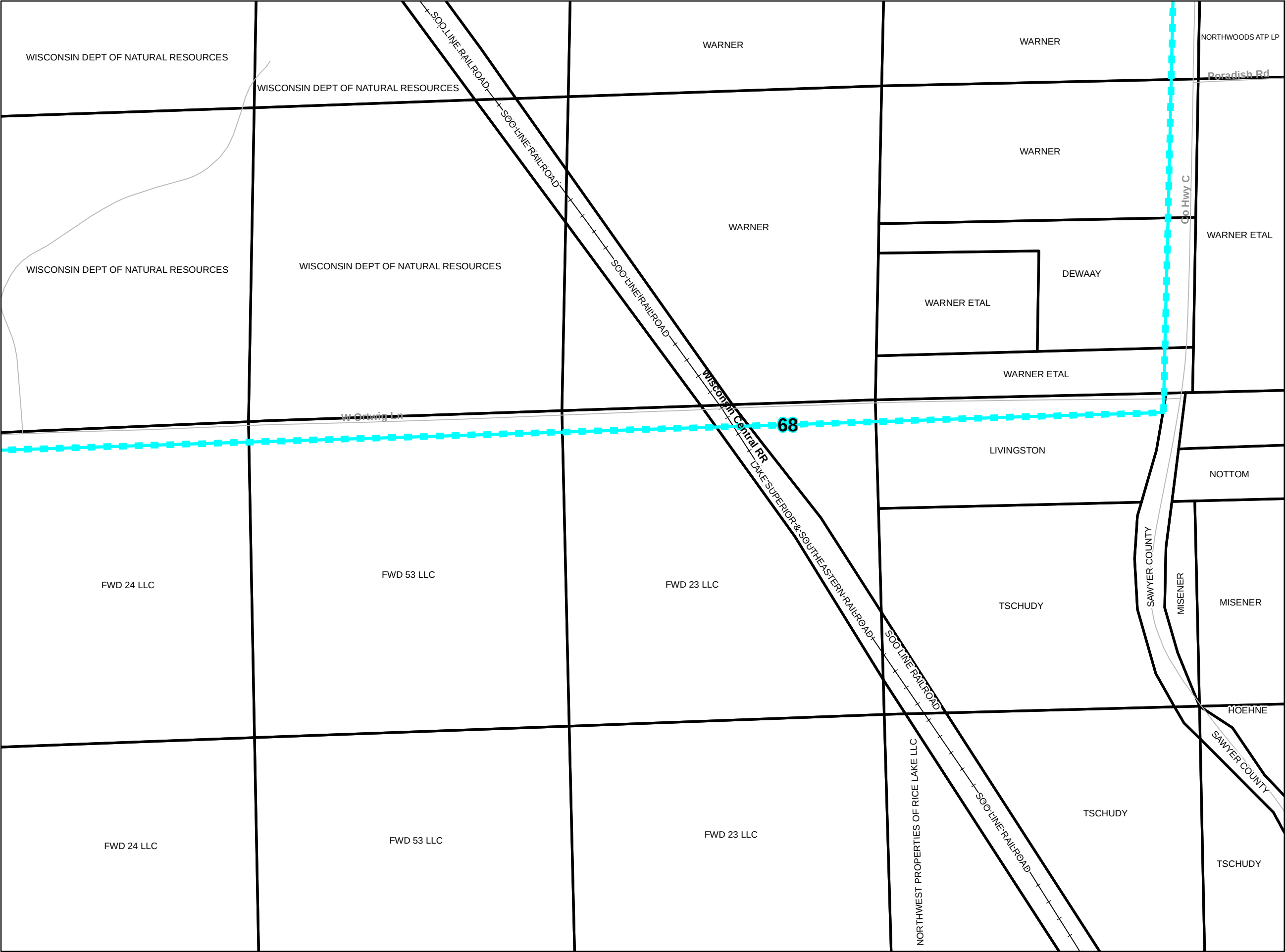


Appendix B-7
Parcel Boundary and Streets
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project

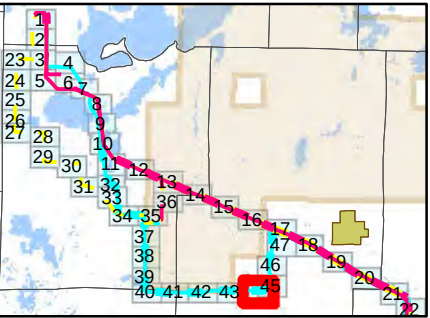


- Route Alternatives**
- Preferred Route 161 kV
 - Preferred Route 69 kV
 - Preferred Route 161/69 kV
 - Alternate Route A 161 kV
 - Alternate Route A 69 kV
 - Alternate Route A 161/69 kV
 - Alternate Route B 161 kV
 - Alternate Route B 69 kV
 - Alternate Route B 161/69 kV
- ◆ Route Segment Endpoint
- ▭ Radisson Substation Site
- ▭ Staging Area
- Existing Transmission**
- 69kV AC
 - 161kV AC
 - 345kV AC
 - Substation (Xcel)
 - Substation (Not Xcel)
 - Road
 - Railroad
 - Tax Parcel

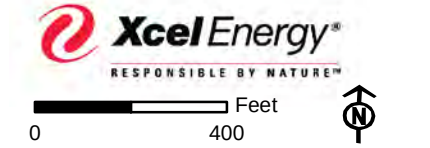




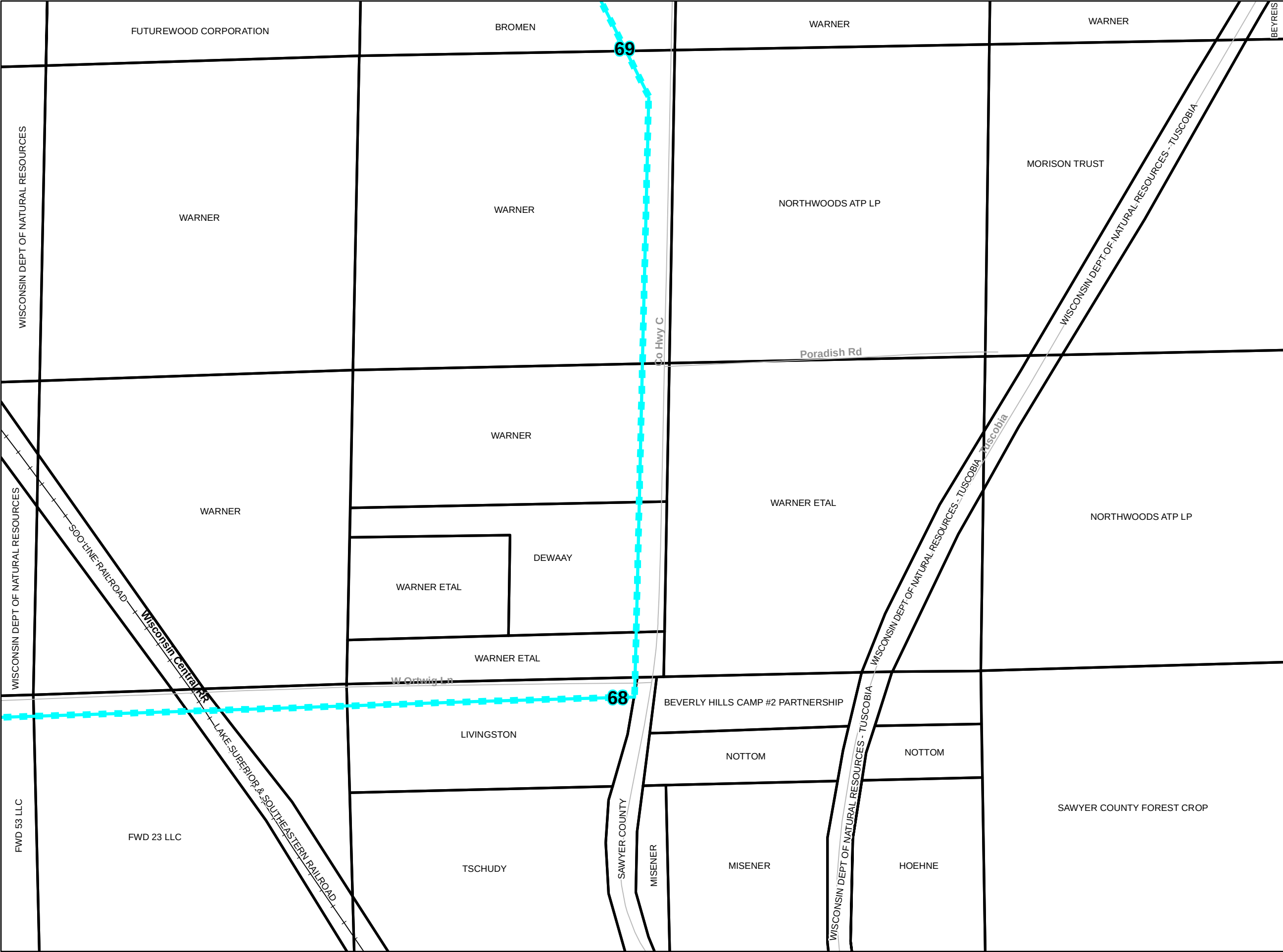
Appendix B-7
Parcel Boundary and Streets
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project



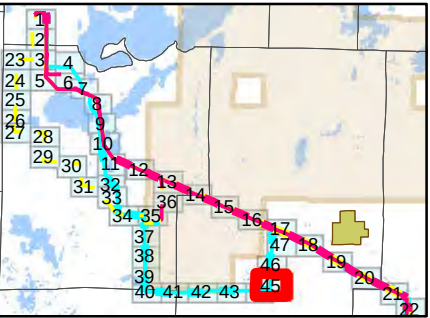
- Route Alternatives**
- Preferred Route 161 kV
 - Preferred Route 69 kV
 - Preferred Route 161/69 kV
 - Alternate Route A 161 kV
 - Alternate Route A 69 kV
 - Alternate Route A 161/69 kV
 - Alternate Route B 161 kV
 - Alternate Route B 69 kV
 - Alternate Route B 161/69 kV
 - Route Segment Endpoint
 - Radisson Substation Site
 - Staging Area
- Existing Transmission**
- 69kV AC
 - 161kV AC
 - 345kV AC
 - Substation (Xcel)
 - Substation (Not Xcel)
 - Road
 - Railroad
 - Tax Parcel



Source: Sawyer County Plats - July, 2010
Date: 8/29/2011 Page 44 of 47



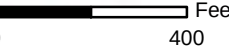
Appendix B-7
Parcel Boundary and Streets
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project



- Route Alternatives**
- Preferred Route 161 kV
 - Preferred Route 69 kV
 - Preferred Route 161/69 kV
 - Alternate Route A 161 kV
 - Alternate Route A 69 kV
 - Alternate Route A 161/69 kV
 - Alternate Route B 161 kV
 - Alternate Route B 69 kV
 - Alternate Route B 161/69 kV
 - Route Segment Endpoint
 - Radisson Substation Site
 - Staging Area
- Existing Transmission**
- 69kV AC
 - 161kV AC
 - 345kV AC
 - Substation (Xcel)
 - Substation (Not Xcel)
 - Road
 - Railroad
 - Tax Parcel



RESPONSIBLE BY NATURE™



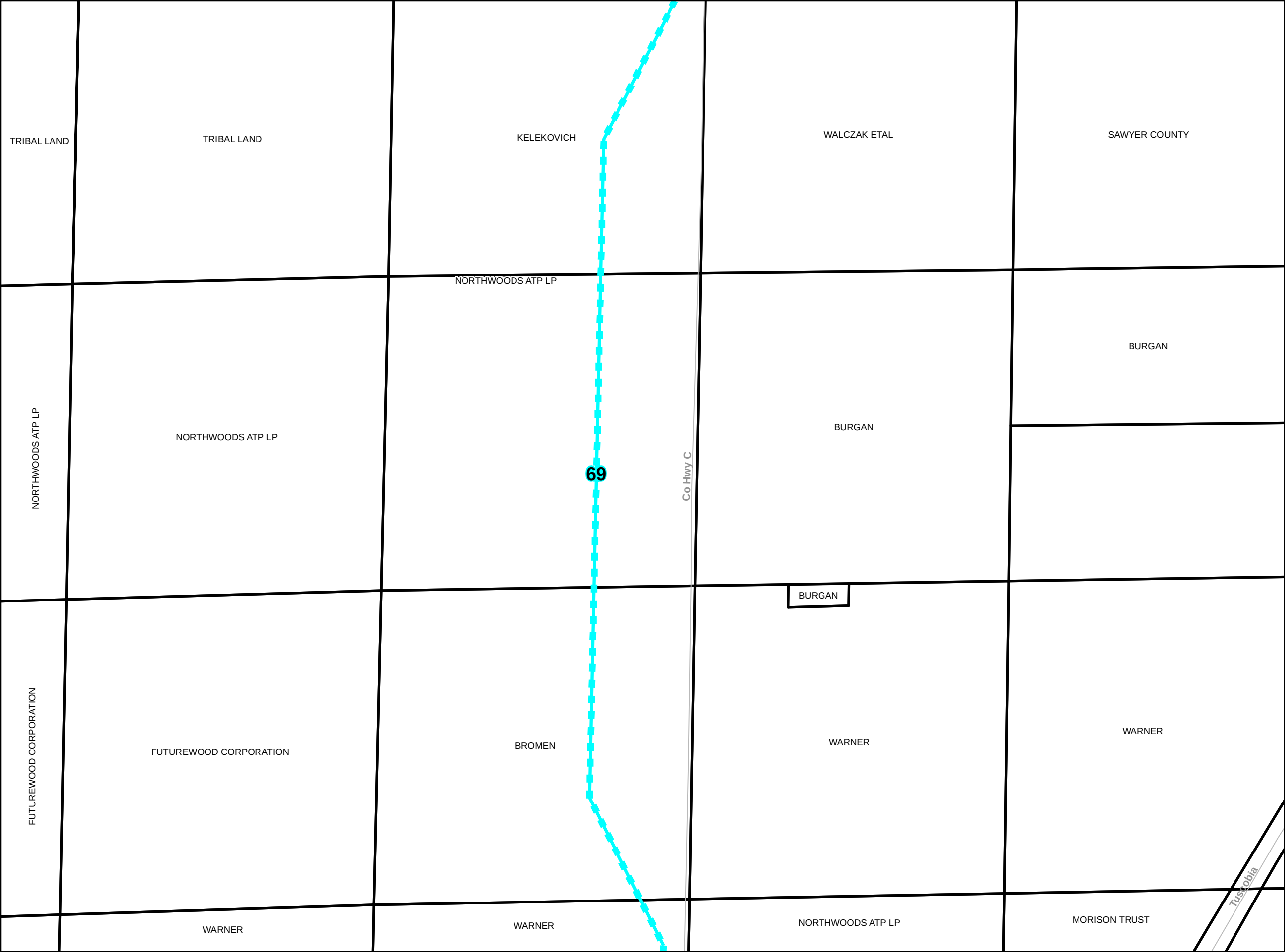
0 400 Feet



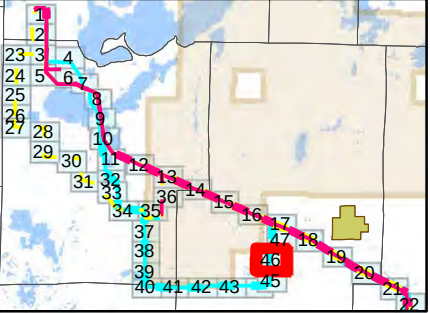
↑

Source: Sawyer County Plats - July, 2010
Date: 8/29/2011

Page 45 of 47



Appendix B-7
Parcel Boundary and Streets
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project



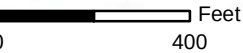
Route Alternatives

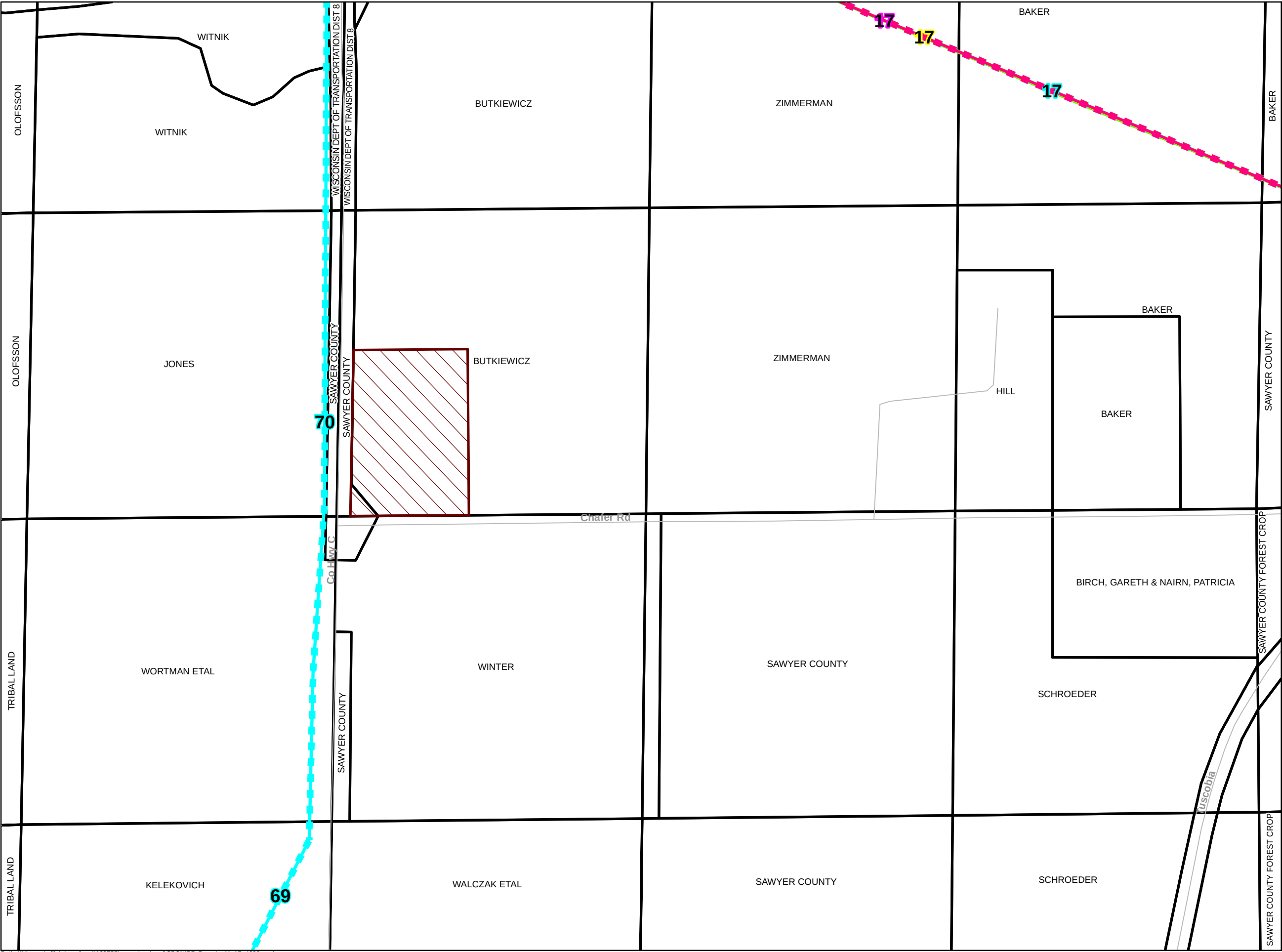
- Preferred Route 161 kV
- Preferred Route 69 kV
- Preferred Route 161/69 kV
- Alternate Route A 161 kV
- Alternate Route A 69 kV
- Alternate Route A 161/69 kV
- Alternate Route B 161 kV
- Alternate Route B 69 kV
- Alternate Route B 161/69 kV

- Route Segment Endpoint
- Radisson Substation Site
- Staging Area

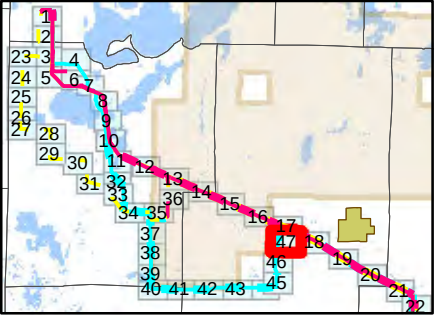
Existing Transmission

- 69kV AC
- 161kV AC
- 345kV AC
- Substation (Xcel)
- Substation (Not Xcel)
- Road
- Railroad
- Tax Parcel





Appendix B-7
Parcel Boundary and Streets
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project



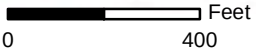
Route Alternatives

- Preferred Route 161 kV
- Preferred Route 69 kV
- Preferred Route 161/69 kV
- Alternate Route A 161 kV
- Alternate Route A 69 kV
- Alternate Route A 161/69 kV
- Alternate Route B 161 kV
- Alternate Route B 69 kV
- Alternate Route B 161/69 kV

- Route Segment Endpoint
- Radisson Substation Site
- Staging Area

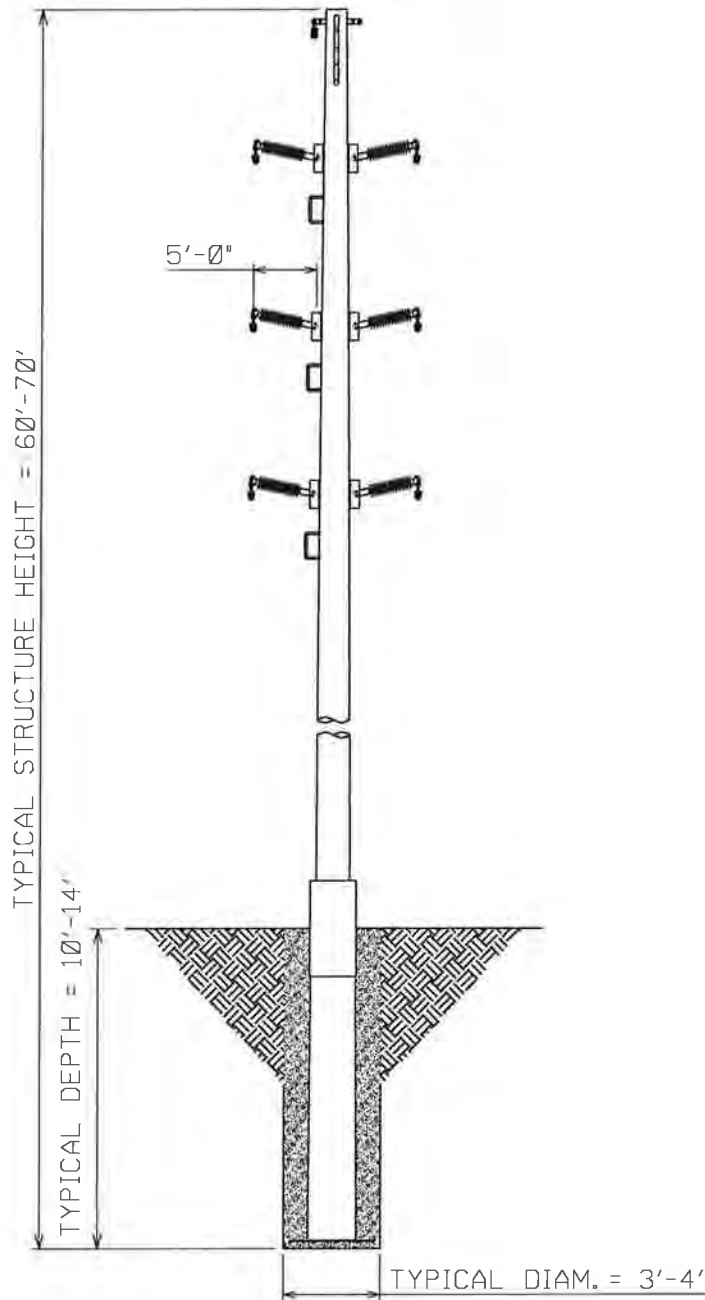
Existing Transmission

- 69kV AC
- 161kV AC
- 345kV AC
- Substation (Xcel)
- Substation (Not Xcel)
- Road
- Railroad
- Tax Parcel



APPENDIX B-8
Proposed Structure Design Drawings

69kV/69kV CIRCUIT



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LINE W3472/W3472

69kV/69kV

TYPICAL STRUCTURE CONFIGURATION

DOUBLE CIRCUIT, HORIZONTAL POST, STEEL STRUCTURE



SCALE

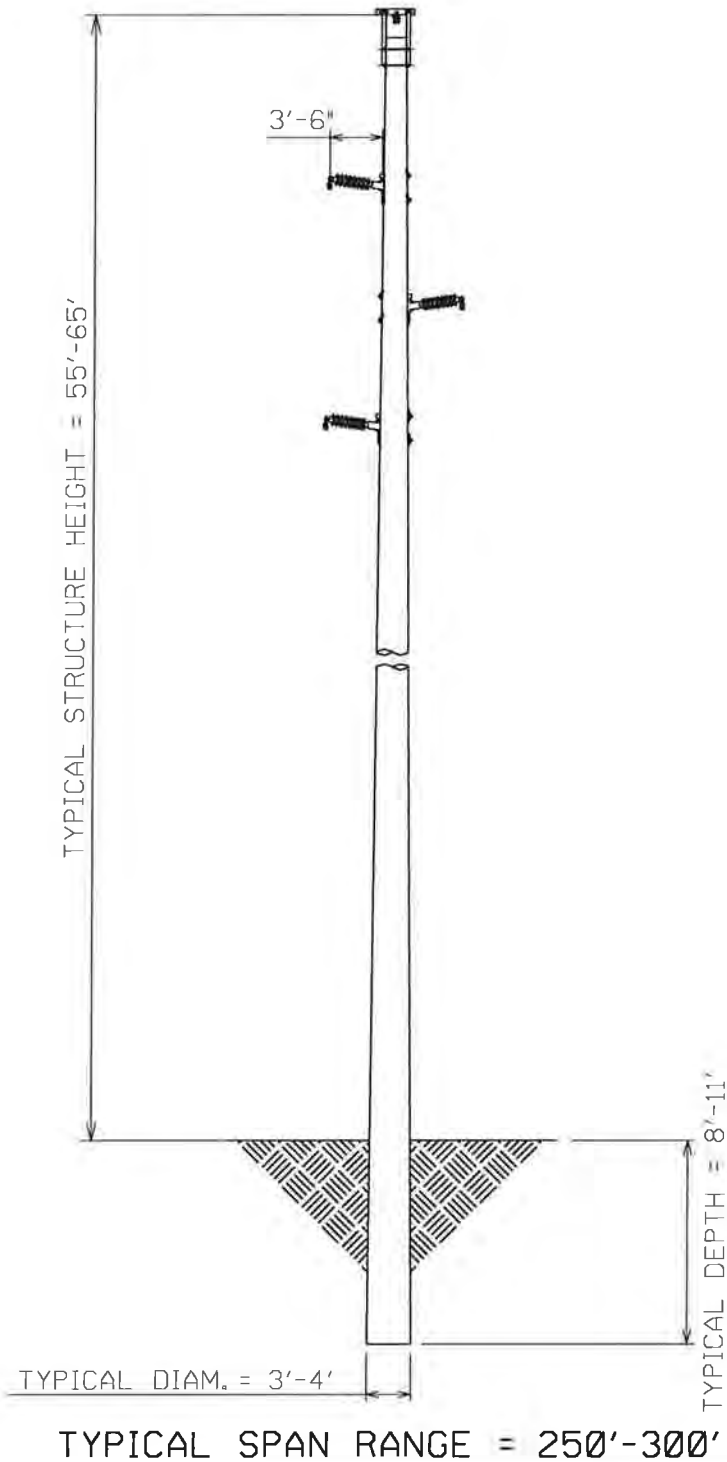
1/8"=1'-0"

SKETCH 1

REV

GRP	SIGNIFICANT NUMBER
1	
2	
3	
4	
5A	
5B	
6	
CL	

69kV CIRCUIT



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MINNEAPOLIS, MN

LINE W3472

69kV

TYPICAL STRUCTURE CONFIGURATION

SINGLE CIRCUIT, HORIZONTAL POST, WOOD STRUCTURE



SCALE

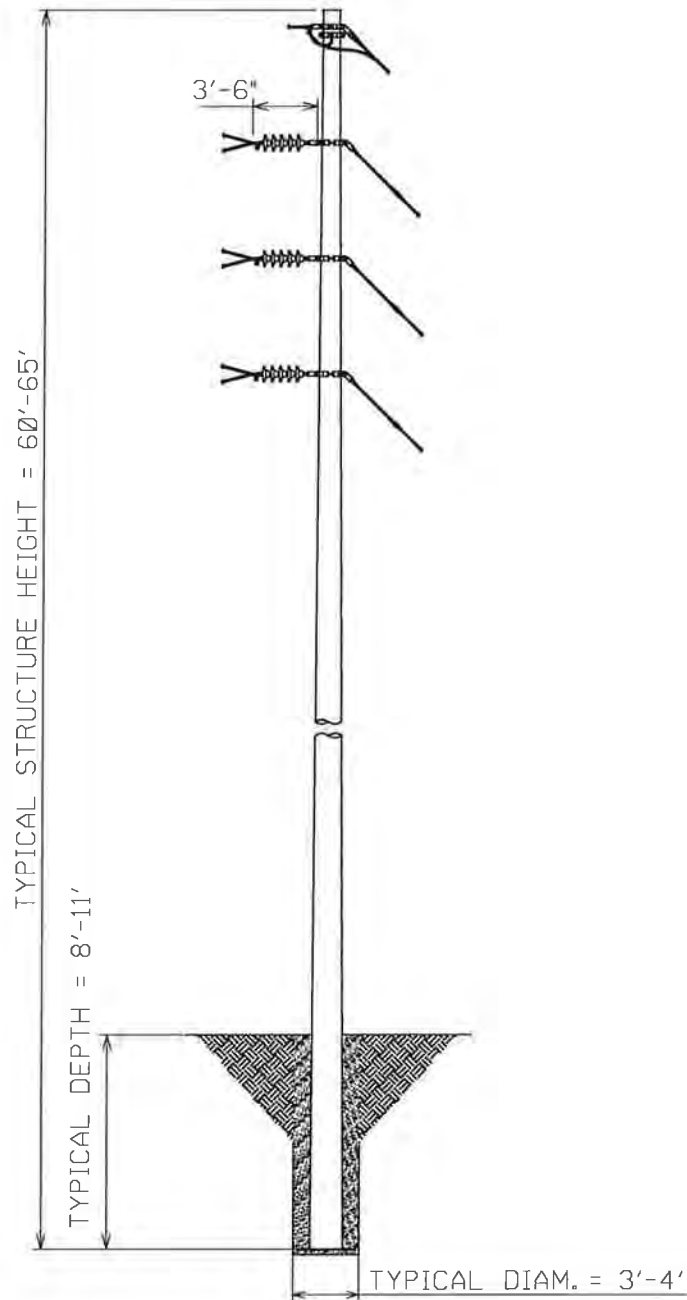
1/8"=1'-0"

SKETCH 2

REV

GRP	SIGNIFICANT NUMBER
1	
2	
3	
4	
5A	
5B	
6	
CL	

69kV CIRCUIT



TYPICAL SPAN RANGE = 250'-300'

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LINE W3472
TYPICAL STRUCTURE CONFIGURATION
SINGLE CIRCUIT, WOOD RUNNING ANGLE STRUCTURE

69kV

GRP	SIGNIFICANT NUMBER
1	
2	
3	
4	
5A	
5B	
6	
CL	

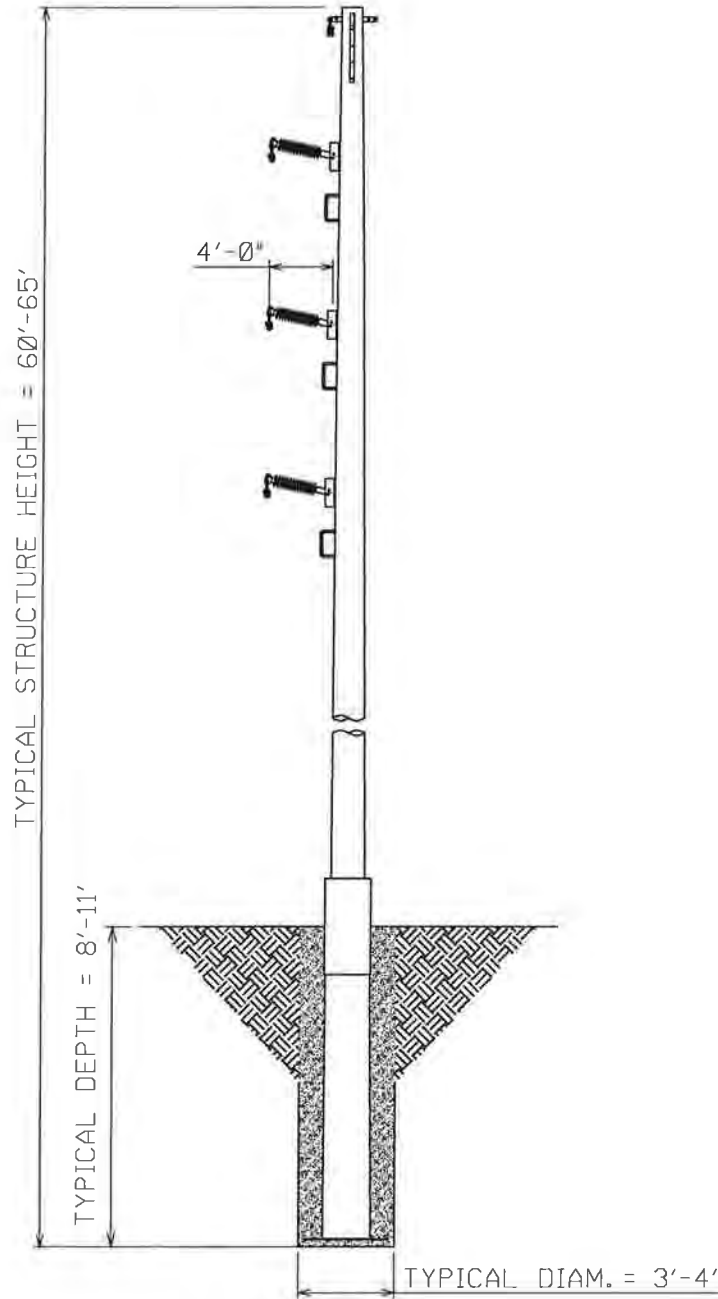


SCALE
1/8"=1'-0"

SKETCH 3

REV

69kV CIRCUIT



TYPICAL SPAN RANGE = 250'-300'

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LINE W3472

69kV

TYPICAL STRUCTURE CONFIGURATION

SINGLE CIRCUIT, STEEL RUNNING ANGLE STRUCTURE



SCALE

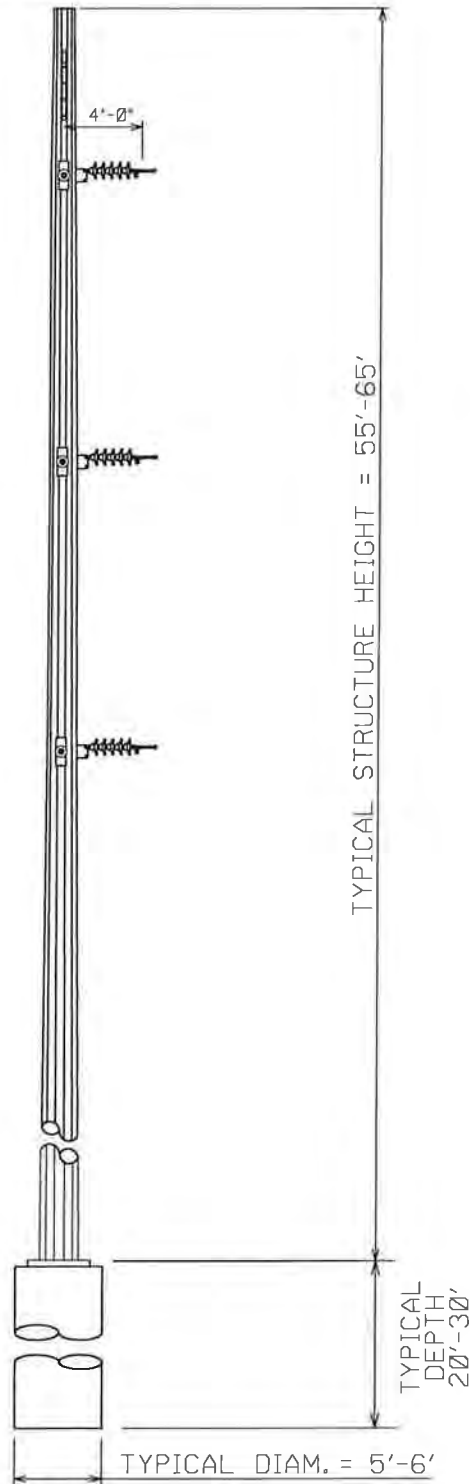
1/16"=1'-0"

SKETCH 4

REV

GRP	SIGNIFICANT NUMBER
1	
2	
3	
4	
5A	
5B	
6	
CL	

69kV CIRCUIT



TYPICAL SPAN RANGE = 250'-300'

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MINNEAPOLIS, MN

LINE W3472

69kV

TYPICAL STRUCTURE CONFIGURATION

SINGLE CIRCUIT, STEEL DEADEND STRUCTURE

GRP	SIGNIFICANT NUMBER
1	
2	
3	
4	
5A	
5B	
6	
CL	



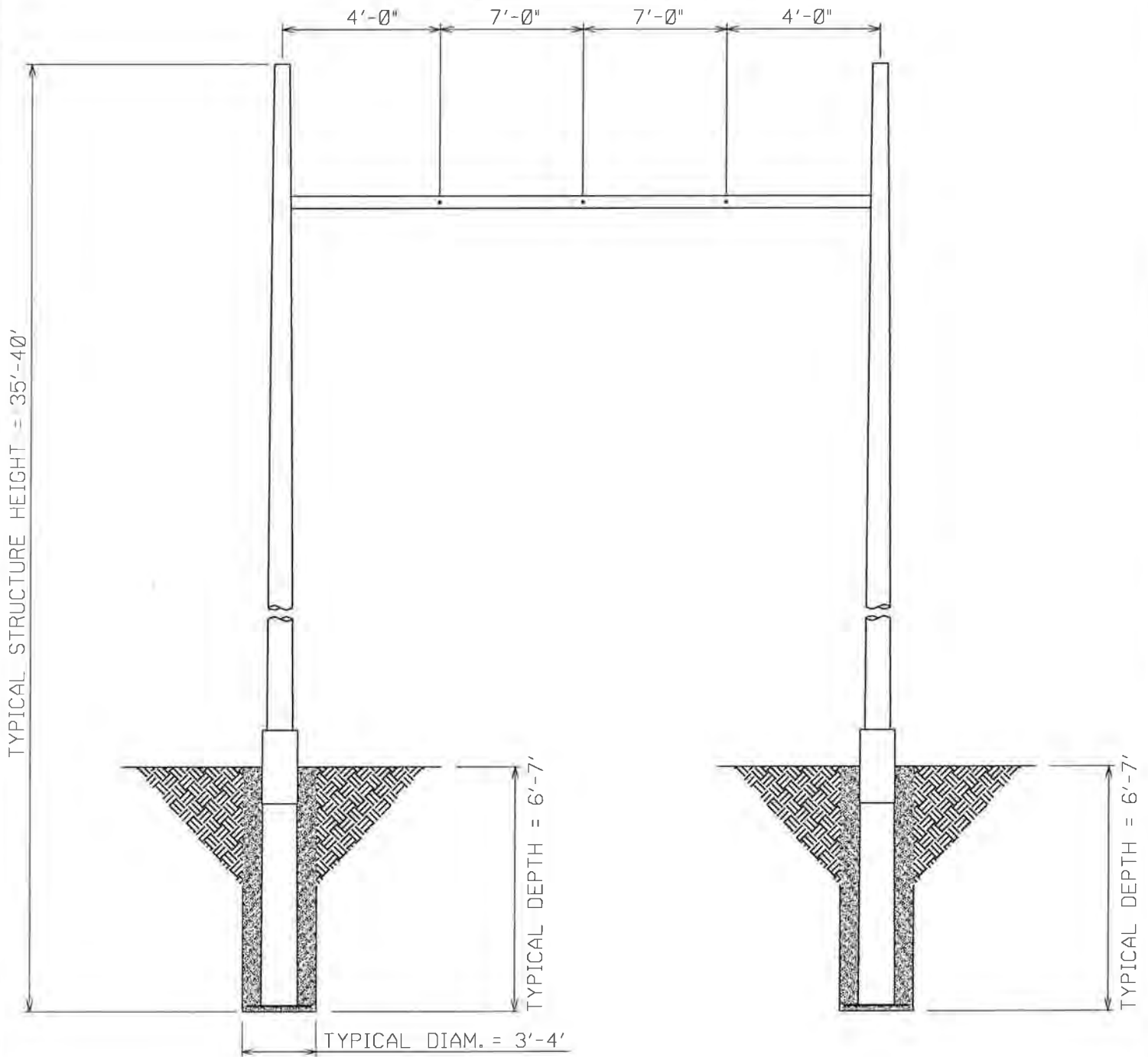
SCALE

1/16"=1'-0"

SKETCH 5

REV

69kV CIRCUIT



TYPICAL SPAN RANGE = 100'-150'

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MINNEAPOLIS, MN

LINE W3472

69kV

TYPICAL STRUCTURE CONFIGURATION

SINGLE CIRCUIT, STEEL DEADEND STRUCTURE



SCALE

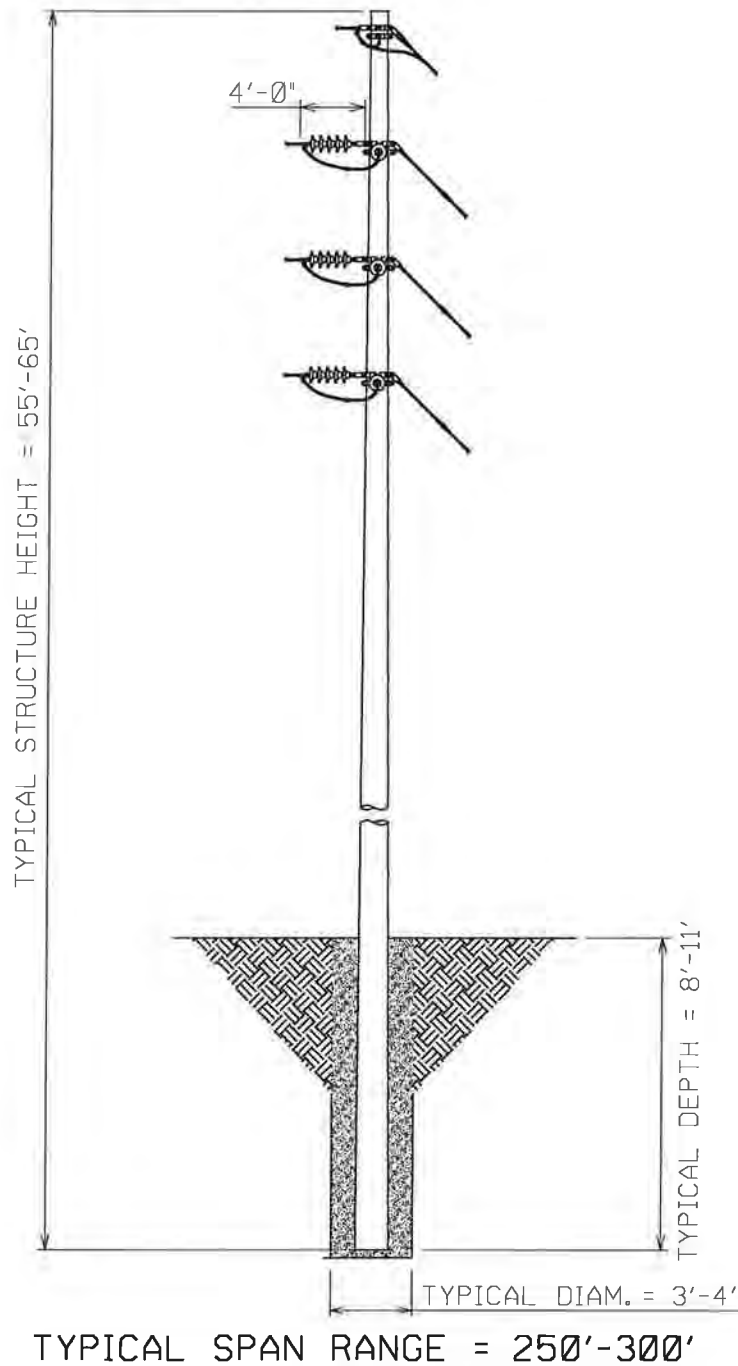
1/8"=1'-0"

SKETCH 6

REV

GRP	SIGNIFICANT NUMBER
1	
2	
3	
4	
5A	
5B	
6	
CL	

69kV CIRCUIT



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DEPARTMENT
MINNEAPOLIS, MN

LINE W3472

69kV

TYPICAL STRUCTURE CONFIGURATION

SINGLE CIRCUIT, WOOD DEADEND STRUCTURE



SCALE

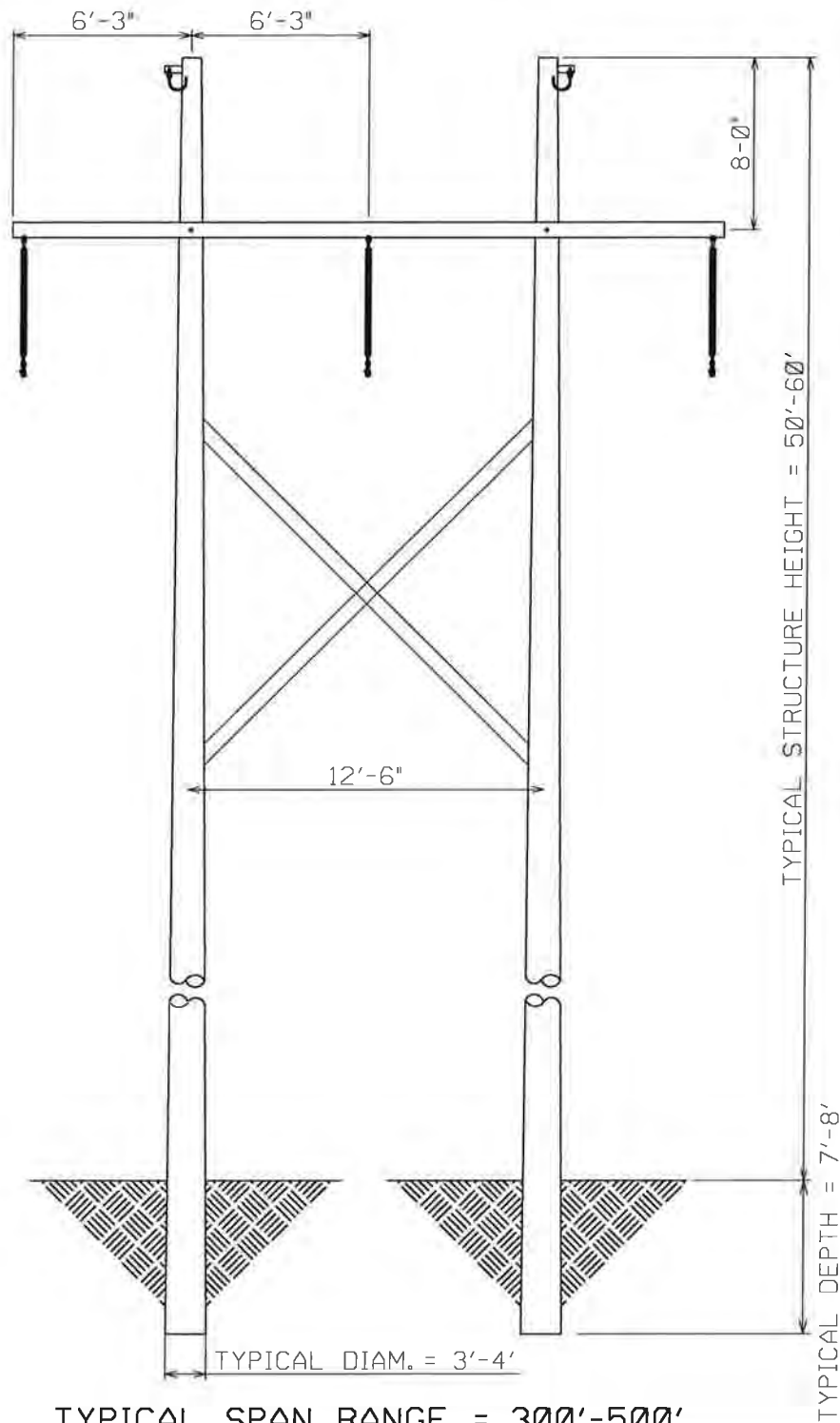
1/8"=1'-0"

SKETCH 7

REV

GRP	SIGNIFICANT NUMBER
1	
2	
3	
4	
5A	
5B	
6	
CL	

69kV CIRCUIT



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DEPARTMENT
MINNEAPOLIS, MN

LINE W3472

69kV

TYPICAL STRUCTURE CONFIGURATION

SINGLE CIRCUIT, WOOD H-FRAME STRUCTURE



SCALE

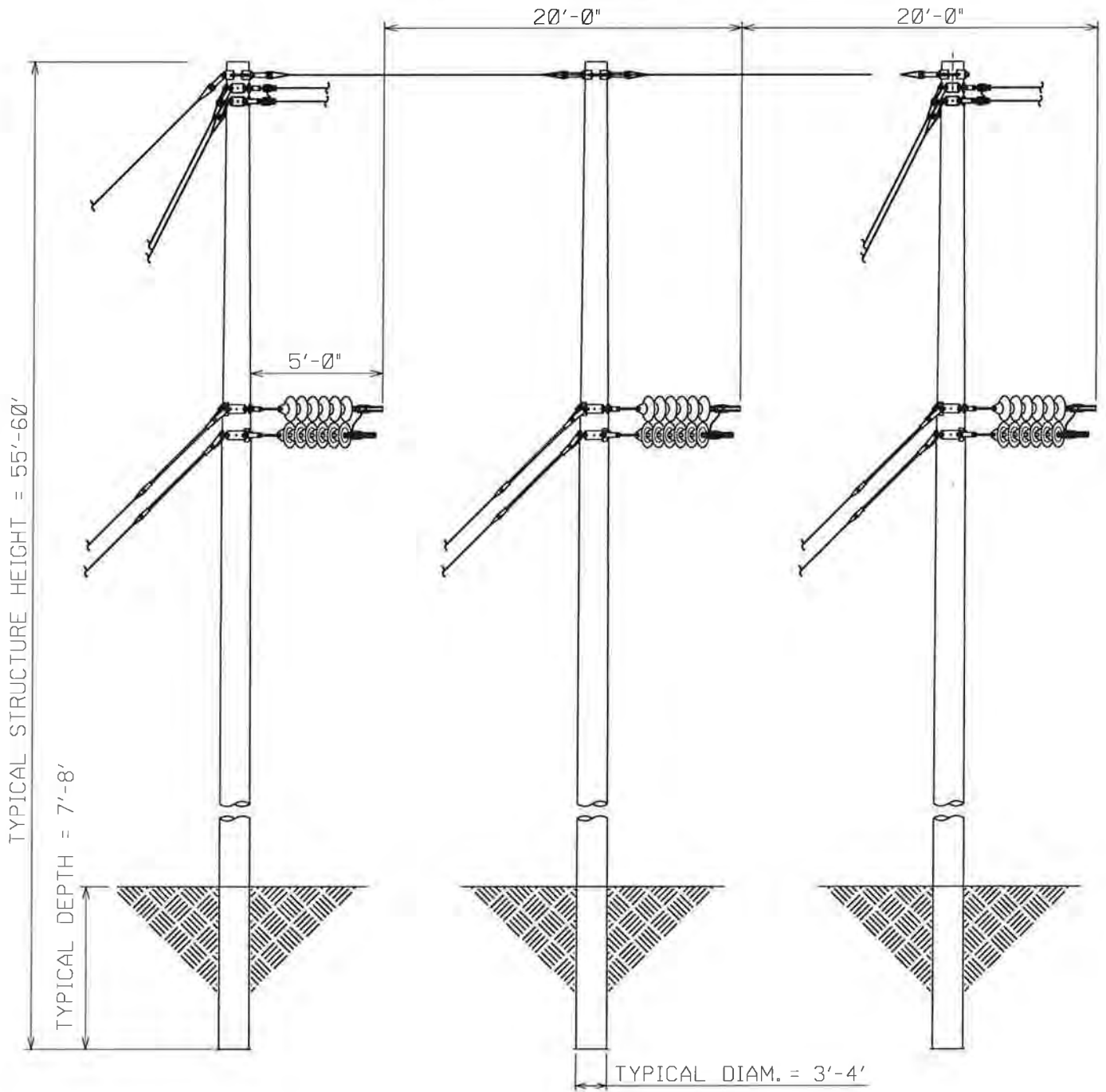
1/8"=1'-0"

SKETCH 8

REV

GRP	SIGNIFICANT NUMBER
1	
2	
3	
4	
5A	
5B	
6	
CL	

69kV CIRCUIT



TYPICAL SPAN RANGE = 250'-300'

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LINE W3472

69kV

TYPICAL STRUCTURE CONFIGURATION

SINGLE CIRCUIT, 3 POLE WOOD DEADEND STRUCTURE



SCALE

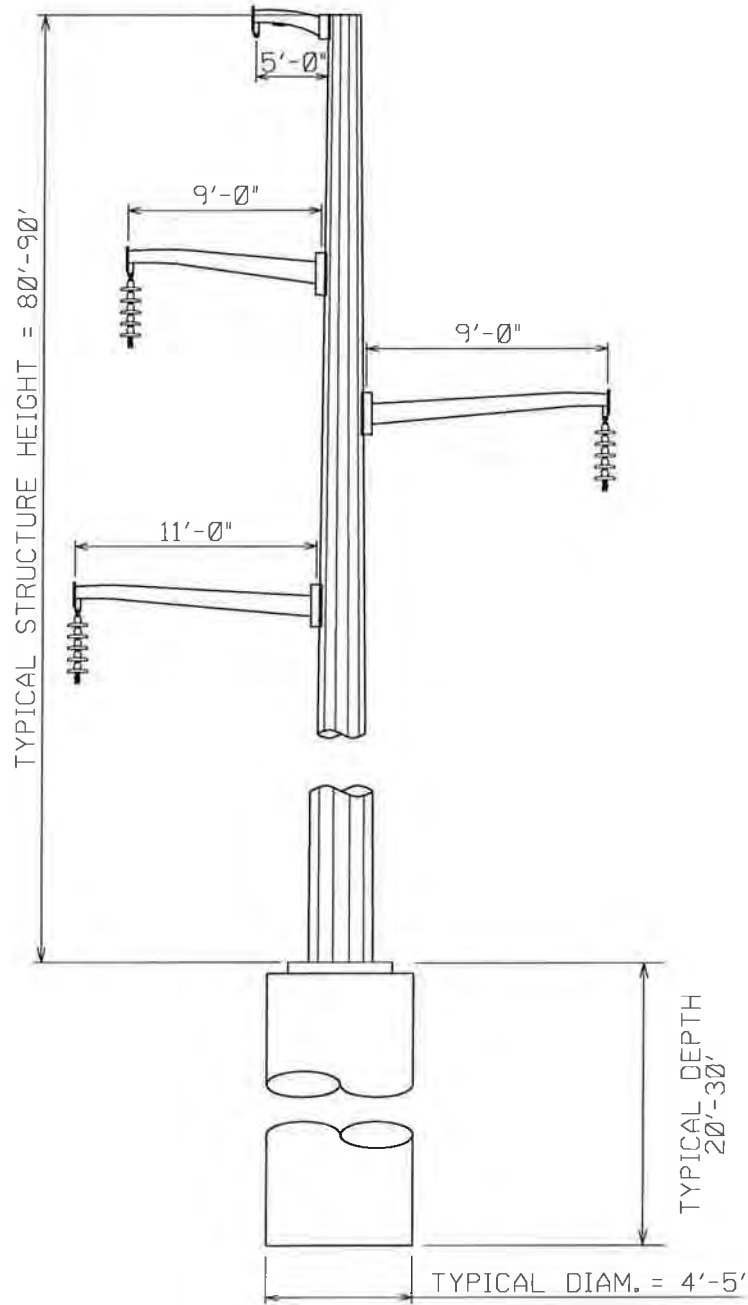
1/8"=1'-0"

SKETCH 9

REV

GRP	SIGNIFICANT NUMBER
1	
2	
3	
4	
5A	
5B	
6	
CL	

161kV CIRCUIT



TYPICAL SPAN RANGE = 550'-700'

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LINE W32XX

161kV

TYPICAL STRUCTURE CONFIGURATION

SINGLE CIRCUIT, STEEL DAVIT ARM STRUCTURE

GRP	SIGNIFICANT NUMBER
1	
2	
3	
4	
5A	
5B	
6	
CL	

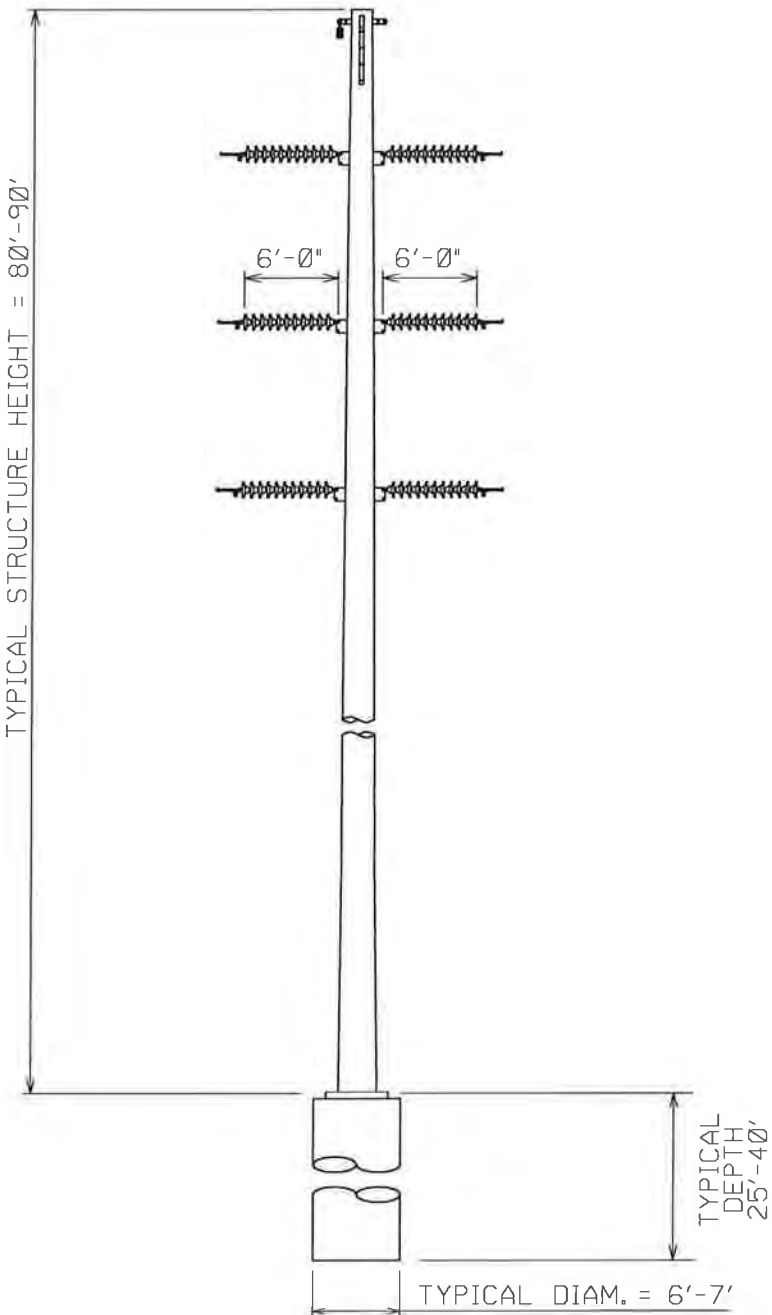


SCALE
1/8"=1'-0"

SKETCH 10

REV

161kV CIRCUIT



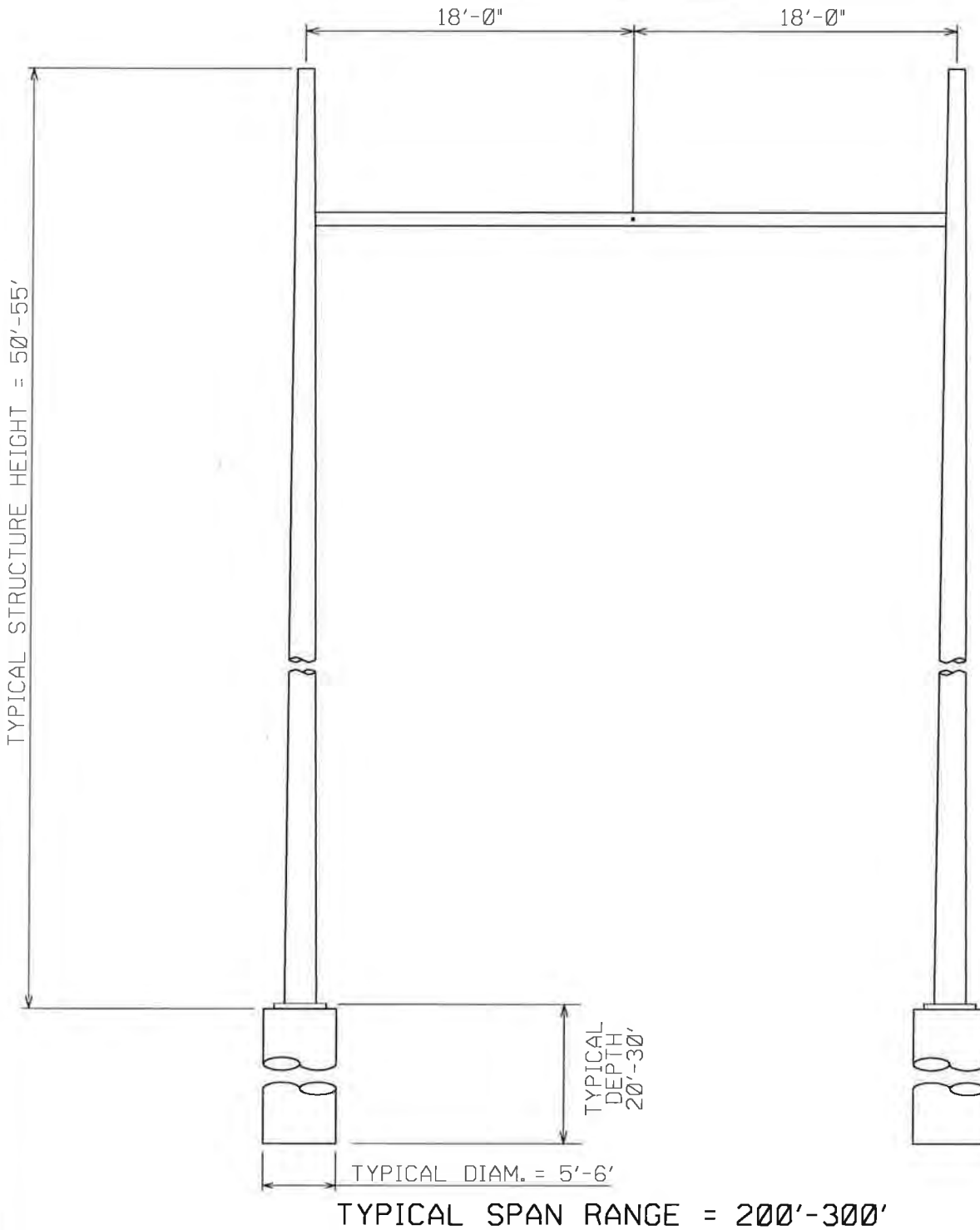
TYPICAL SPAN RANGE = 550'-700'

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ENGINEERING DEPARTMENT MINNEAPOLIS, MN	LINE W32XX TYPICAL STRUCTURE CONFIGURATION SINGLE CIRCUIT, STEEL DEADEND STRUCTURE	161kV	SCALE 1/8"=1'-0"	SKETCH 11	REV	GRP	SIGNIFICANT NUMBER
						1	
						2	
						3	
						4	
						5A	
						5B	
						6	
						CL	

161kV CIRCUIT



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MINNEAPOLIS, MN

LINE 32XX

161kV

TYPICAL STRUCTURE CONFIGURATION

SINGLE CIRCUIT, STEEL DEADEND STRUCTURE

GRP	SIGNIFICANT NUMBER
1	
2	
3	
4	
5A	
5B	
6	
CL	

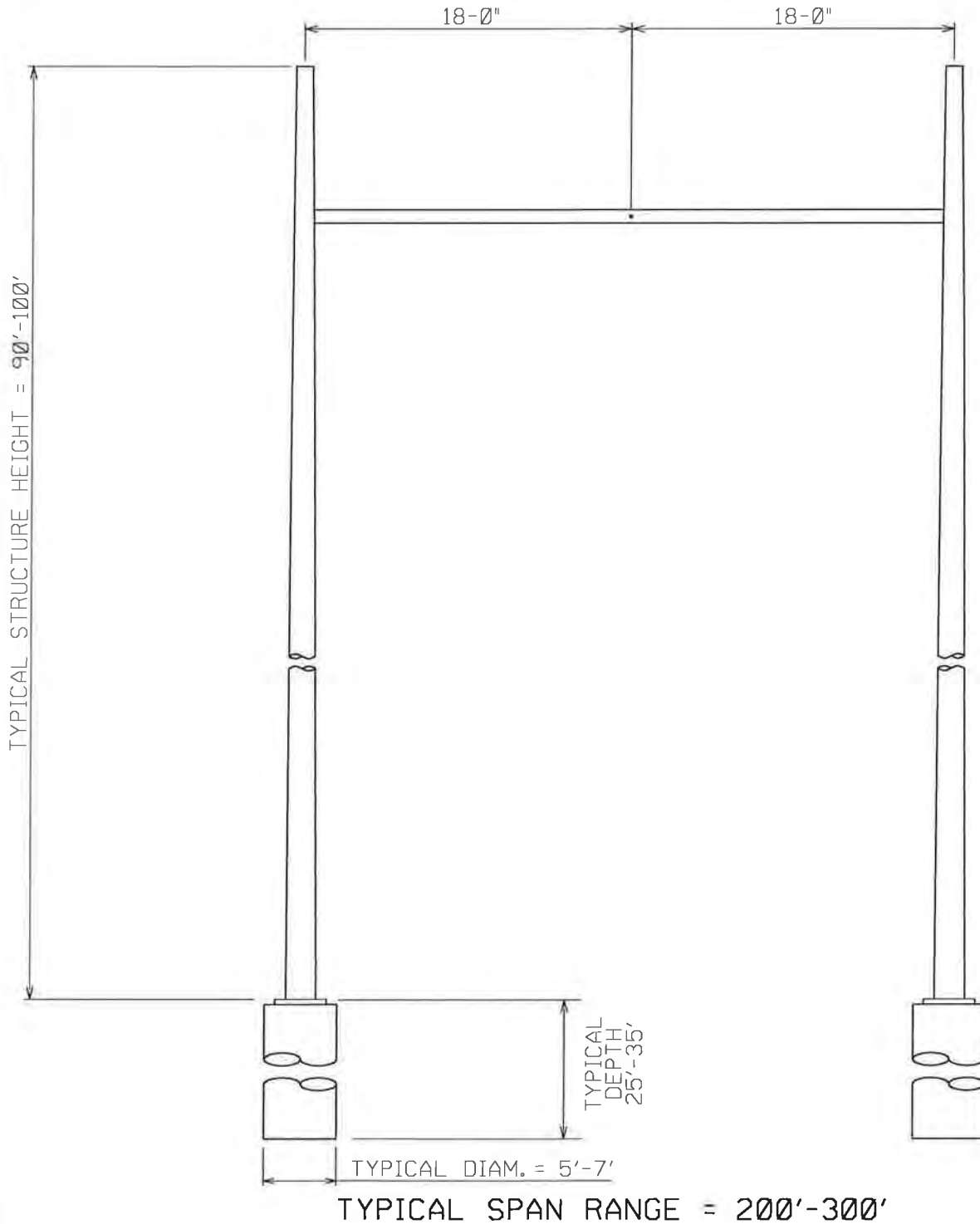


SCALE
1/8"=1'-0"

SKETCH 12

REV

161kV CIRCUIT



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LINE 32XX

161kV

TYPICAL STRUCTURE CONFIGURATION

SINGLE CIRCUIT, STEEL DEADEND STRUCTURE



SCALE

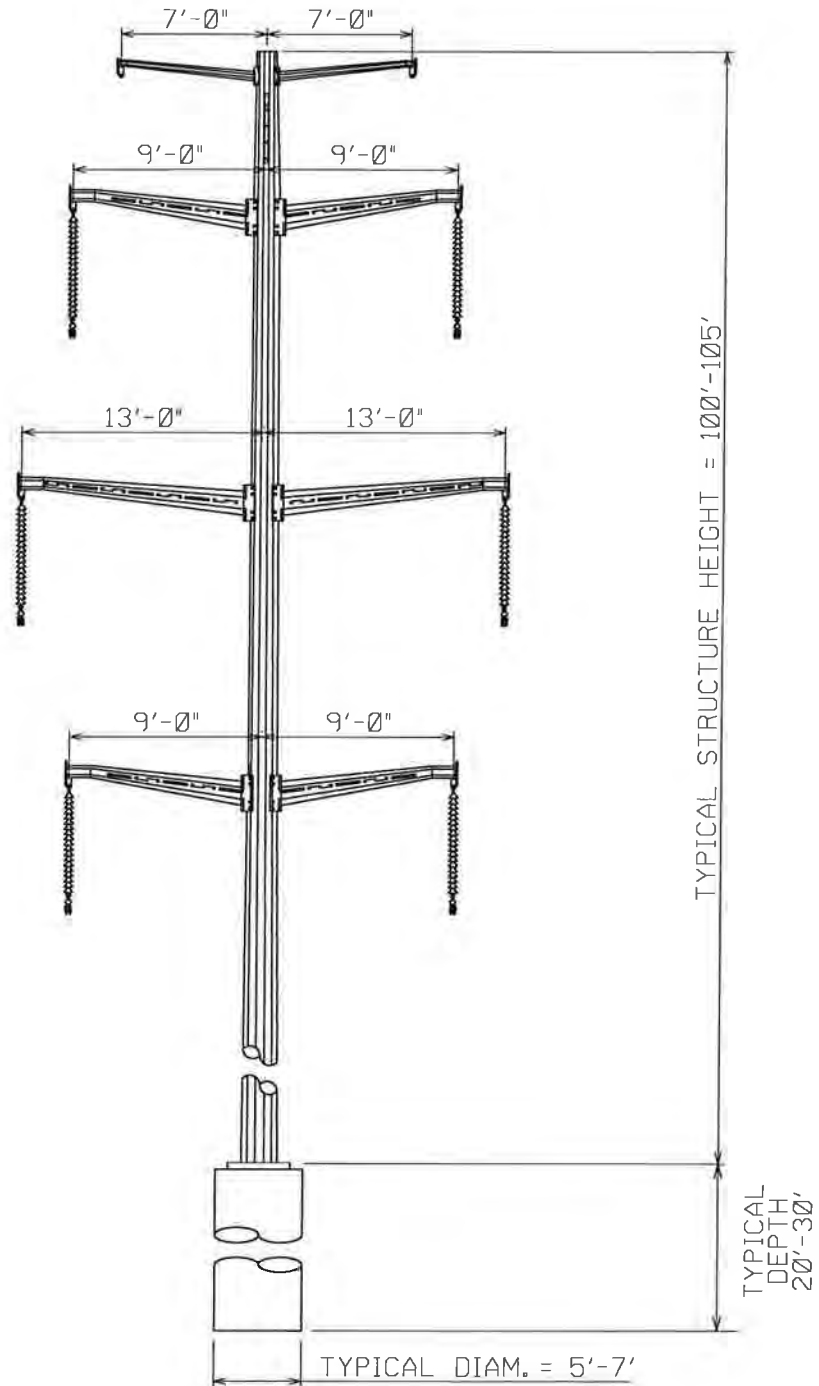
1/8"=1'-0"

SKETCH 13

REV

GRP	SIGNIFICANT NUMBER
1	
2	
3	
4	
5A	
5B	
6	
CL	

161kV/69kV DOUBLE CIRCUIT



TYPICAL SPAN RANGE = 550'-800'

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ENGINEERING
DEPARTMENT
MINNEAPOLIS, MN

LINE W32XX/W3472

161kV/69kV

TYPICAL STRUCTURE CONFIGURATION

DOUBLE CIRCUIT, STEEL DAVIT ARM TANGENT STRUCTURE



SCALE

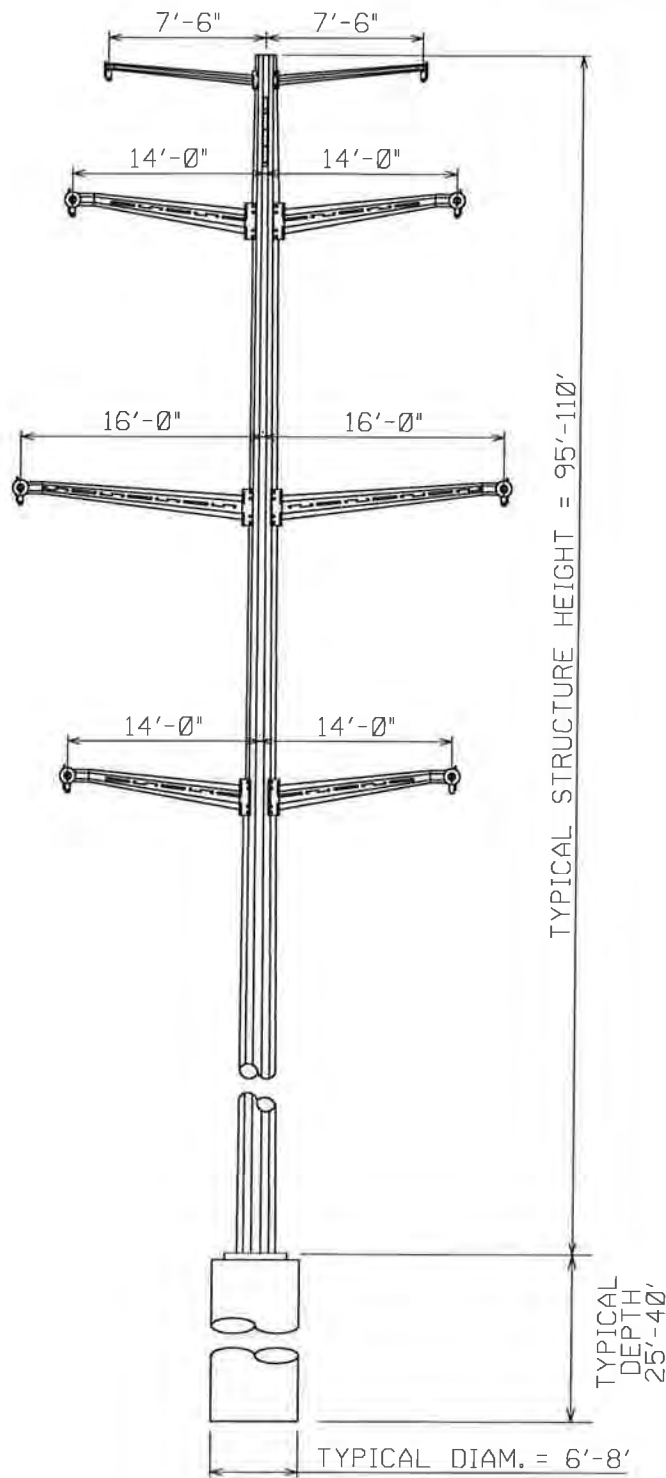
1/16"=1'-0"

SKETCH 14

REV

GRP	SIGNIFICANT NUMBER
1	
2	
3	
4	
5A	
5B	
6	
CL	

69kV/161kV DOUBLE CIRCUIT



TYPICAL SPAN RANGE = 550'-800'

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LINE W32XX/W3472

161kV/69kV

TYPICAL STRUCTURE CONFIGURATION

DOUBLE CIRCUIT, STEEL DAVIT ARM DEADEND STRUCTURE



SCALE

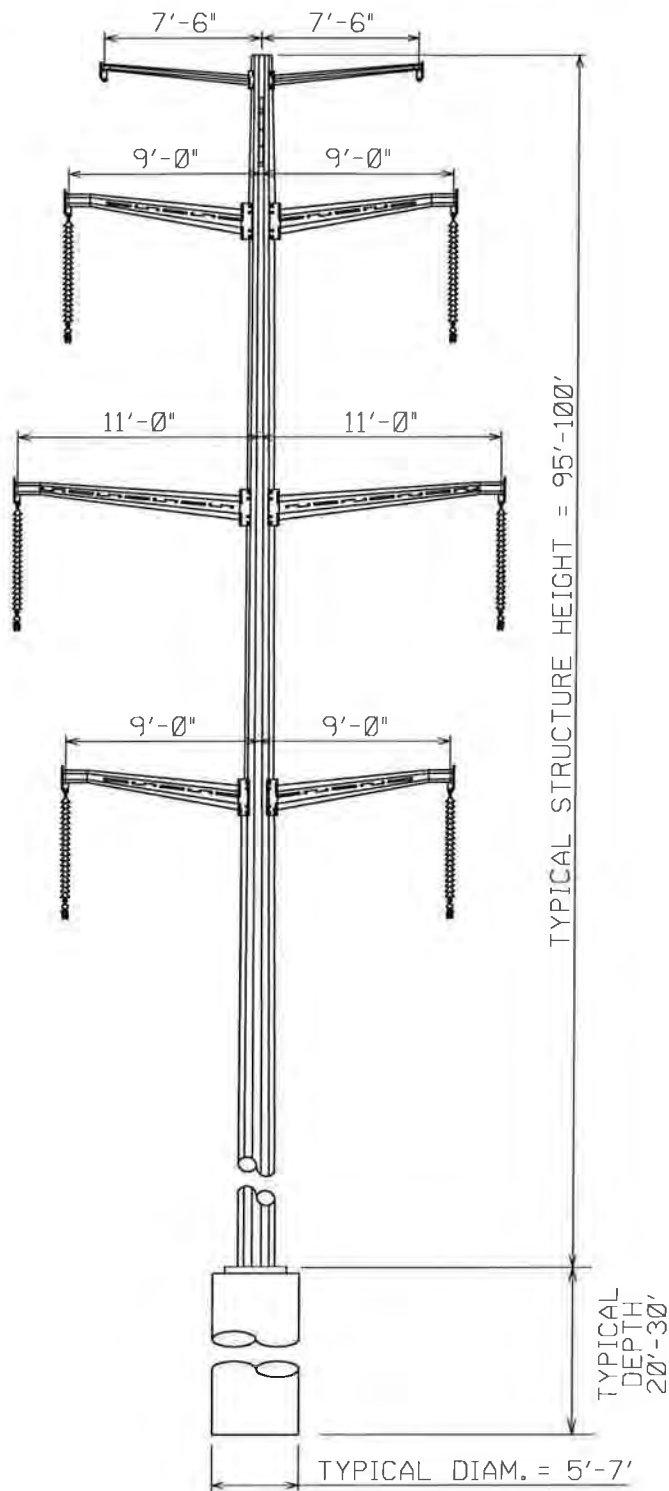
1/16"=1'-0"

SKETCH 15

REV

GRP	SIGNIFICANT NUMBER
1	
2	
3	
4	
5A	
5B	
6	
CL	

69kV/161kV DOUBLE CIRCUIT



TYPICAL SPAN RANGE = 500'-700'

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ENGINEERING
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MINNEAPOLIS, MN

LINE W32XX/W3472

161kV/69kV

TYPICAL STRUCTURE CONFIGURATION

DOUBLE CIRCUIT, STEEL DAVIT ARM STRUCTURE

CRP	SIGNIFICANT NUMBER
1	
2	
3	
4	
5A	
5B	
6	
CL	



SCALE

1/16"=1'-0"

SKETCH 16

REV

APPENDIX B-9 Visual Simulations

Visual Simulations

Example of location where existing ATC/Xcel 345/69 kV structures would be upgraded to 345/161 kV, and a parallel 69 kV line would be installed.



Existing



Proposed

Visual Simulations

Example of Location within the LCO Reservation boundary where 69 kV H-frame structures would be upgraded to 161/69 kV steel monopole structures within existing ROW



Existing



Proposed

APPENDIX B-10
Special Status Species Report
[CONFIDENTIAL INFORMATION]