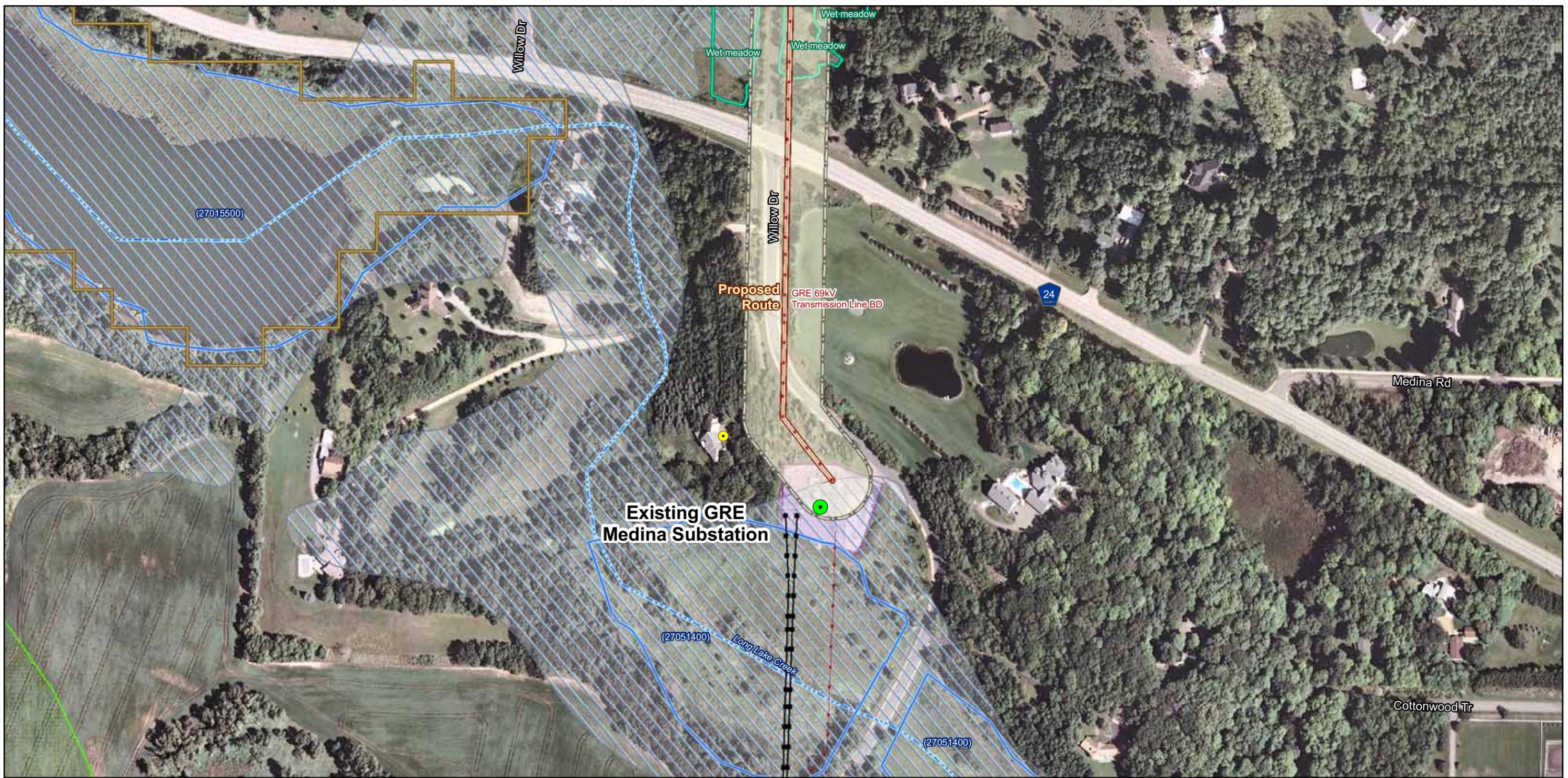


Appendix C

Detailed Route Maps



- | | | | | | |
|---------------------------|---|--|---------------------------|--|---|
| Proposed Route | Existing Xcel Energy Substation | Regional Existing Trail | Church | Public Water Inventory Watercourse | Regionally Significant Ecological Area |
| Alternate Route Segment A | Existing GRE Substation | State Trail | Child Care Center | Public Water Inventory Basin Wetlands (Barr, 2010) (Clipped to 200 Feet of Centerline) | MCBS Native Plant Community |
| Alternate Route Segment B | Existing GRE Transmission Line 69 kV | Snowmobile Trail | School | FEMA Q3 Data | MCBS Sites of Biodiversity Significance |
| Alternate Route Segment C | Existing Xcel Energy Transmission Line 115 kV | Proposed Route Width (200 feet total for rebuild section of existing transmission line and 400 feet total for new transmission line) | Residence* | 100-year Floodplain | Moderate Significance |
| Alternate Route Segment D | Existing Xcel Energy Transmission Line 345 kV | Approximate MnDOT ROW | Non-Residential Building* | 500-year Floodplain | MCBS Railroad Rights-of-Way Prairie |
| Proposed Route Segment A | Railroad | Preferred Substation Site A | Tower | NHIS Rare Natural Features Terrestrial Community | NHIS Rare Natural Features Terrestrial Community - Element Occurance Area |
| Proposed Route Segment B | | Alternate Substation Site B | | | |
| Proposed Route Segment C | | Existing Substation Site | | | |
| Proposed Route Segment D | | | | | |

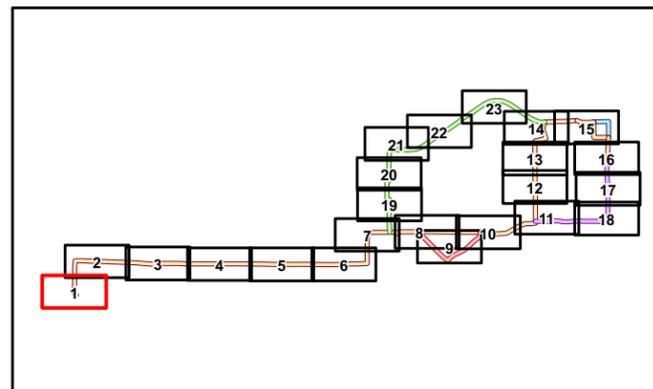


Figure C-1
DETAILED ROUTE MAP
Hollydale Project

Data Source: Barr, Xcel Energy, GRE, MN DNR, MNDOT, USGS.
 *Locations of residences and buildings within approximately 200-feet of the proposed rebuild area are shown. Points were placed on the side of the building closest to the existing transmission line.
 Natural Heritage Information System (NHIS) Data Copyright (2009), State of Minnesota, Department of Natural Resources. Rare features data included here were provided by the Division of Ecological Resources, Minnesota Department of Natural Resources (DNR), and were current as of (2009). These data are not based on an exhaustive inventory of the state. The lack of data for any geographic area shall not be construed to mean that no significant features are present.
 Background: 2009 Aerial Express Imagery for the Twin Cities.





- | | | | | | |
|---------------------------|--|--|---------------------------|------------------------------------|--|
| Proposed Route | Existing Xcel Energy Substation | Regional Existing Trail | Church | Public Water Inventory Watercourse | Regionally Significant Ecological Area |
| Alternate Route Segment A | Existing GRE Substation | State Trail | Child Care Center | Public Water Inventory Basin | MCBS Native Plant Community |
| Alternate Route Segment B | Existing GRE Transmission Line | Snowmobile Trail | School | Wetlands (Barr, 2010) | MCBS Sites of Biodiversity Significance |
| Alternate Route Segment C | 69 kV | Proposed Route Width (200 feet total for rebuild section of existing transmission line and 400 feet total for new transmission line) | Residence* | FEMA Q3 Data | Moderate Significance |
| Alternate Route Segment D | 115 kV | Approximate MnDOT ROW | Non-Residential Building* | 100-year Floodplain | MCBS Railroad Rights-of-Way Prairie |
| Proposed Route Segment A | Existing Xcel Energy Transmission Line | Preferred Substation Site A | Tower | 500-year Floodplain | NHIS Rare Natural Features |
| Proposed Route Segment B | 69 kV | Alternate Substation Site B | | | Terrestrial Community |
| Proposed Route Segment C | 345 kV | Existing Substation Site | | | Terrestrial Community - Element Occurance Area |
| Proposed Route Segment D | Railroad | | | | |

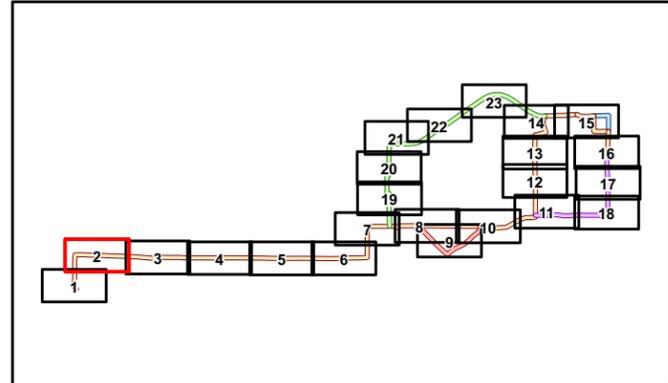
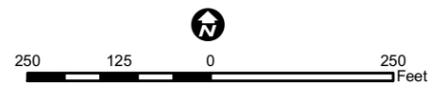


Figure C-2
DETAILED ROUTE MAP
Hollydale Project

Data Source: Barr, Xcel Energy, GRE, MN DNR, MNDOT, USGS.
 *Locations of residences and buildings within approximately 200-feet of the proposed rebuild area are shown. Points were placed on the side of the building closest to the existing transmission line.
 Natural Heritage Information System (NHIS) Data Copyright (2009), State of Minnesota, Department of Natural Resources. Rare features data included here were provided by the Division of Ecological Resources, Minnesota Department of Natural Resources (DNR), and were current as of (2009). These data are not based on an exhaustive inventory of the state. The lack of data for any geographic area shall not be construed to mean that no significant features are present.
 Background: 2009 Aerial Express Imagery for the Twin Cities.





- Proposed Route
- Alternate Route Segment A
- Alternate Route Segment B
- Alternate Route Segment C
- Alternate Route Segment D
- Proposed Route Segment A
- Proposed Route Segment B
- Proposed Route Segment C
- Proposed Route Segment D
- Existing Xcel Energy Substation
- Existing GRE Substation
- Existing GRE Transmission Line
- 69 kV
- 115 kV
- Existing Xcel Energy Transmission Line
- 69 kV
- 345 kV
- Railroad
- Regional Existing Trail
- State Trail
- Snowmobile Trail
- Proposed Route Width (200 feet total for rebuild section of existing transmission line and 400 feet total for new transmission line)
- Approximate MndOT ROW
- Preferred Substation Site A
- Alternate Substation Site B
- Existing Substation Site

- Church
- Child Care Center
- School
- Residence*
- Non-Residential Building*
- Tower
- Public Water Inventory Watercourse
- Public Water Inventory Basin Wetlands (Barr, 2010) (Clipped to 200 Feet of Centerline)
- FEMA Q3 Data
- 100-year Floodplain
- 500-year Floodplain
- Regionally Significant Ecological Area
- MCBS Native Plant Community
- MCBS Sites of Biodiversity Significance
- Moderate Significance
- MCBS Railroad Rights-of-Way Prairie
- NHIS Rare Natural Features
- Terrestrial Community
- Terrestrial Community - Element Occurance Area

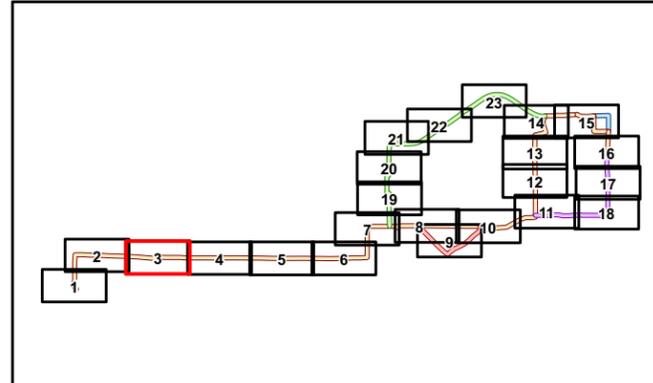
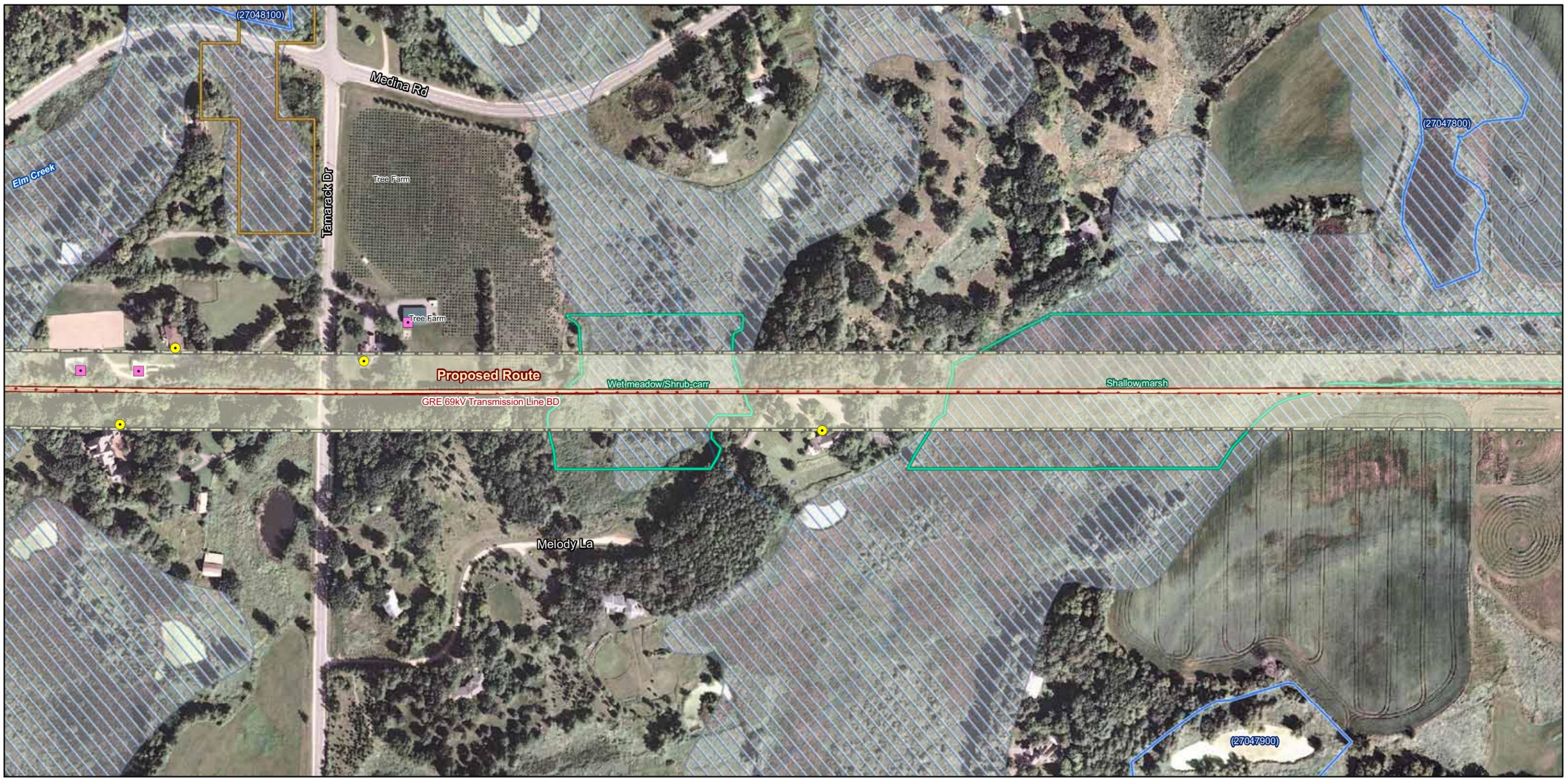


Figure C-3
DETAILED ROUTE MAP
Hollydale Project

Data Source: Barr, Xcel Energy, GRE, MN DNR, MNDOT, USGS.
*Locations of residences and buildings within approximately 200-feet of the proposed rebuild area are shown. Points were placed on the side of the building closest to the existing transmission line.
Natural Heritage Information System (NHIS) Data Copyright (2009), State of Minnesota, Department of Natural Resources. Rare features data included here were provided by the Division of Ecological Resources, Minnesota Department of Natural Resources (DNR), and were current as of (2009). These data are not based on an exhaustive inventory of the state. The lack of data for any geographic area shall not be construed to mean that no significant features are present.
Background: 2009 Aerial Express Imagery for the Twin Cities.





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|---------------------------|--|--|---------------------------|------------------------------------|--|
| Proposed Route | Existing Xcel Energy Substation | Regional Existing Trail | Church | Public Water Inventory Watercourse | Regionally Significant Ecological Area |
| Alternate Route Segment A | Existing GRE Substation | State Trail | Child Care Center | Public Water Inventory Basin | MCBS Native Plant Community |
| Alternate Route Segment B | Existing GRE Transmission Line | Snowmobile Trail | School | Wetlands (Barr, 2010) | MCBS Sites of Biodiversity Significance |
| Alternate Route Segment C | 69 kV | Proposed Route Width (200 feet total for rebuild section of existing transmission line and 400 feet total for new transmission line) | Residence* | FEMA Q3 Data | Moderate Significance |
| Alternate Route Segment D | 115 kV | Approximate MnDOT ROW | Non-Residential Building* | 100-year Floodplain | MCBS Railroad Rights-of-Way Prairie |
| Proposed Route Segment A | Existing Xcel Energy Transmission Line | Preferred Substation Site A | Tower | 500-year Floodplain | NHIS Rare Natural Features |
| Proposed Route Segment B | 69 kV | Alternate Substation Site B | | | Terrestrial Community |
| Proposed Route Segment C | 345 kV | Existing Substation Site | | | Terrestrial Community - Element Occurance Area |
| Proposed Route Segment D | Railroad | | | | |

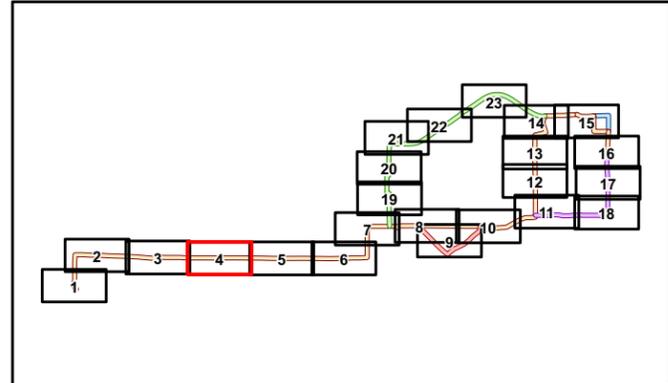
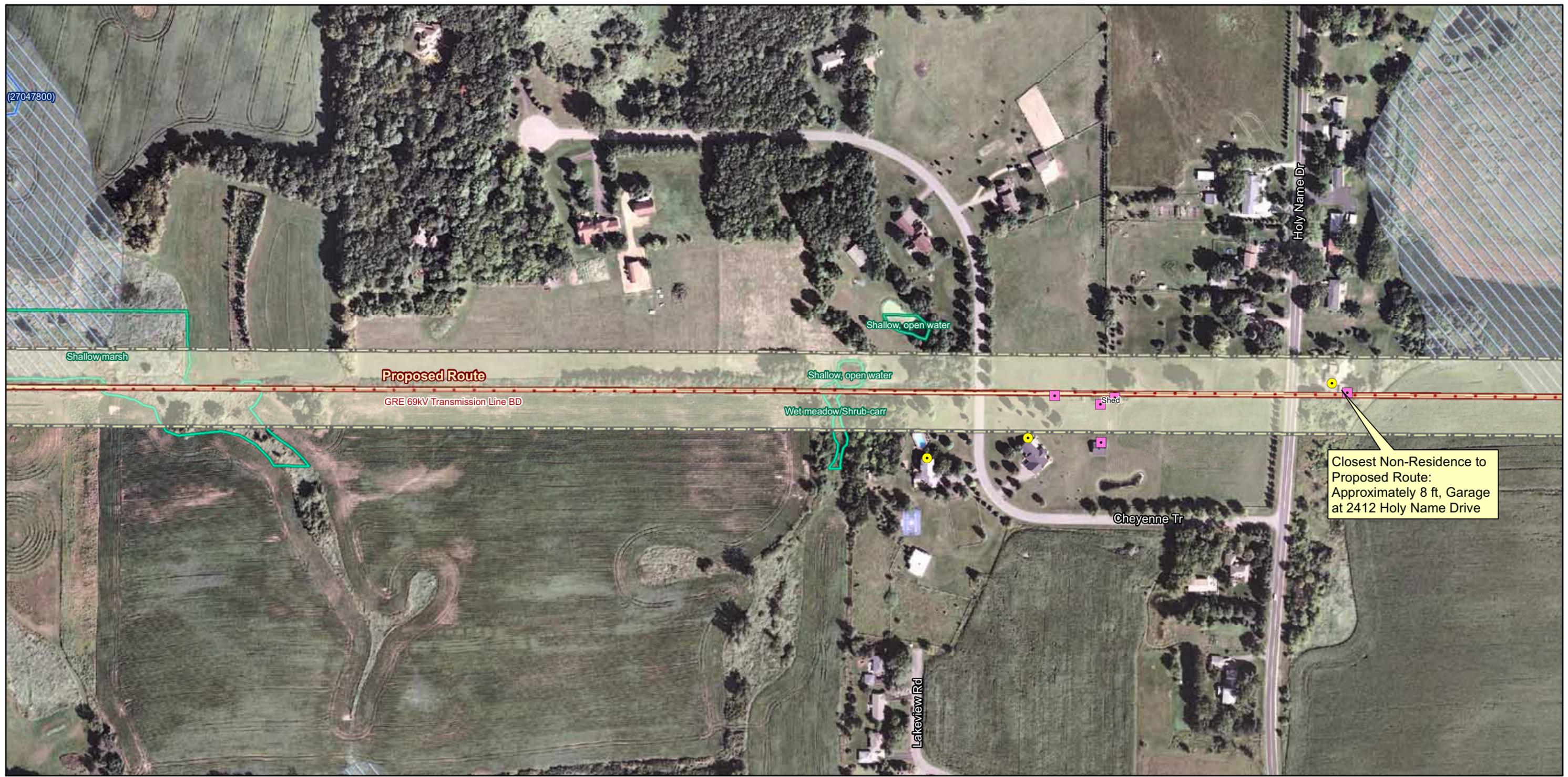


Figure C-4
DETAILED ROUTE MAP
Hollydale Project

Data Source: Barr, Xcel Energy, GRE, MN DNR, MNDOT, USGS.
 *Locations of residences and buildings within approximately 200-feet of the proposed rebuild area are shown. Points were placed on the side of the building closest to the existing transmission line.
 Natural Heritage Information System (NHIS) Data Copyright (2009), State of Minnesota, Department of Natural Resources. Rare features data included here were provided by the Division of Ecological Resources, Minnesota Department of Natural Resources (DNR), and were current as of (2009). These data are not based on an exhaustive inventory of the state. The lack of data for any geographic area shall not be construed to mean that no significant features are present.
 Background: 2009 Aerial Express Imagery for the Twin Cities.





- | | | | | | |
|---------------------------|--|--|---------------------------|------------------------------------|--|
| Proposed Route | Existing Xcel Energy Substation | Regional Existing Trail | Church | Public Water Inventory Watercourse | Regionally Significant Ecological Area |
| Alternate Route Segment A | Existing GRE Substation | State Trail | Child Care Center | Public Water Inventory Basin | MCBS Native Plant Community |
| Alternate Route Segment B | Existing GRE Transmission Line | Snowmobile Trail | School | Wetlands (Barr, 2010) | MCBS Sites of Biodiversity Significance |
| Alternate Route Segment C | 69 kV | Proposed Route Width (200 feet total for rebuild section of existing transmission line and 400 feet total for new transmission line) | Residence* | FEMA Q3 Data | Moderate Significance |
| Alternate Route Segment D | 115 kV | Approximate MndOT ROW | Non-Residential Building* | 100-year Floodplain | MCBS Railroad Rights-of-Way Prairie |
| Proposed Route Segment A | Existing Xcel Energy Transmission Line | Preferred Substation Site A | Tower | 500-year Floodplain | NHIS Rare Natural Features |
| Proposed Route Segment B | 69 kV | Alternate Substation Site B | | | Terrestrial Community |
| Proposed Route Segment C | 345 kV | Existing Substation Site | | | Terrestrial Community - Element Occurance Area |
| Proposed Route Segment D | Railroad | | | | |

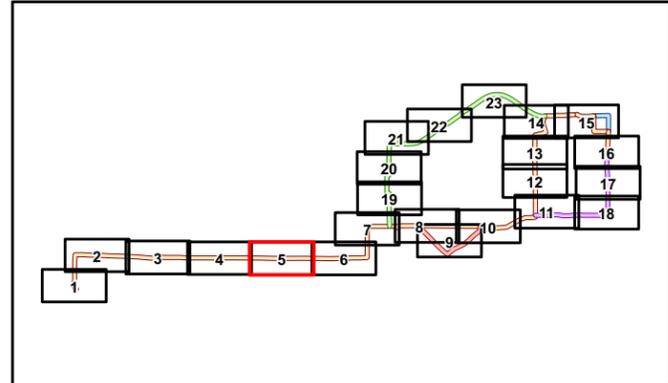


Figure C-5
DETAILED ROUTE MAP
Hollydale Project

Data Source: Barr, Xcel Energy, GRE, MN DNR, MNDOT, USGS.
 *Locations of residences and buildings within approximately 200-feet of the proposed rebuild area are shown. Points were placed on the side of the building closest to the existing transmission line.
 Natural Heritage Information System (NHIS) Data Copyright (2009), State of Minnesota, Department of Natural Resources. Rare features data included here were provided by the Division of Ecological Resources, Minnesota Department of Natural Resources (DNR), and were current as of (2009). These data are not based on an exhaustive inventory of the state. The lack of data for any geographic area shall not be construed to mean that no significant features are present.
 Background: 2009 Aerial Express Imagery for the Twin Cities.





- Proposed Route
- Alternate Route Segment A
- Alternate Route Segment B
- Alternate Route Segment C
- Alternate Route Segment D
- Proposed Route Segment A
- Proposed Route Segment B
- Proposed Route Segment C
- Proposed Route Segment D
- Existing Xcel Energy Substation
- Existing GRE Substation
- Existing GRE Transmission Line
- 69 kV
- 115 kV
- Existing Xcel Energy Transmission Line
- 69 kV
- 345 kV
- Railroad
- Regional Existing Trail
- State Trail
- Snowmobile Trail
- Proposed Route Width (200 feet total for rebuild section of existing transmission line and 400 feet total for new transmission line)
- Approximate MnDOT ROW
- Preferred Substation Site A
- Alternate Substation Site B
- Existing Substation Site
- Church
- Child Care Center
- School
- Residence*
- Non-Residential Building*
- Tower
- Public Water Inventory Watercourse
- Public Water Inventory Basin
- Wetlands (Barr, 2010) (Clipped to 200 Feet of Centerline)
- FEMA Q3 Data
- 100-year Floodplain
- 500-year Floodplain
- Regionally Significant Ecological Area
- MCBS Native Plant Community
- MCBS Sites of Biodiversity Significance
- Moderate Significance
- MCBS Railroad Rights-of-Way Prairie
- NHIS Rare Natural Features
- Terrestrial Community
- Terrestrial Community - Element Occurance Area

Data Source: Barr, Xcel Energy, GRE, MN DNR, MNDOT, USGS.
 *Locations of residences and buildings within approximately 200-feet of the proposed rebuild area are shown. Points were placed on the side of the building closest to the existing transmission line.
 Natural Heritage Information System (NHIS) Data Copyright (2009), State of Minnesota, Department of Natural Resources. Rare features data included here were provided by the Division of Ecological Resources, Minnesota Department of Natural Resources (DNR), and were current as of (2009). These data are not based on an exhaustive inventory of the state. The lack of data for any geographic area shall not be construed to mean that no significant features are present.
 Background: 2009 Aerial Express Imagery for the Twin Cities.

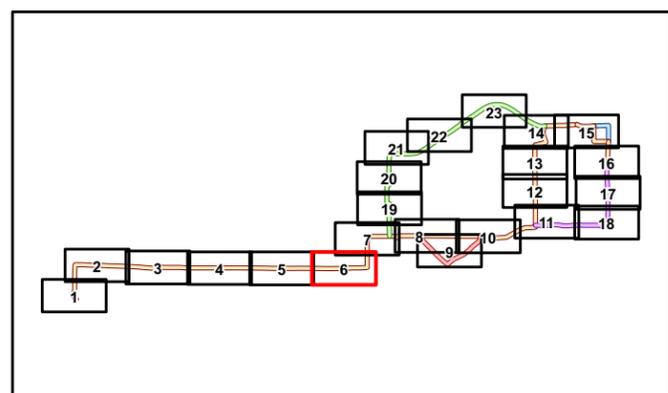
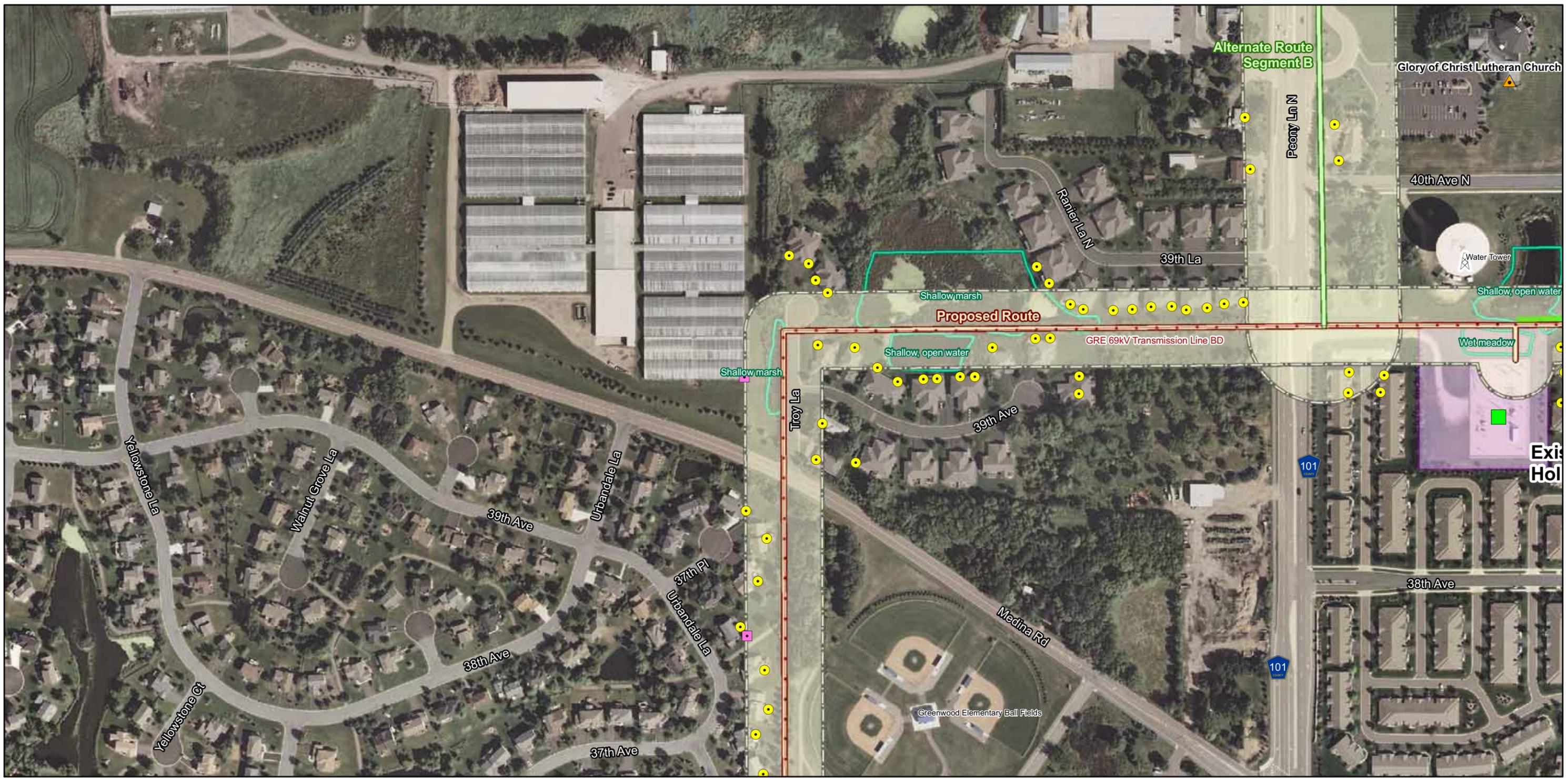


Figure C-6
 DETAILED ROUTE MAP
 Hollydale Project



- | | | | | | |
|---------------------------|--|--|---------------------------|------------------------------------|--|
| Proposed Route | Existing Xcel Energy Substation | Regional Existing Trail | Church | Public Water Inventory Watercourse | Regionally Significant Ecological Area |
| Alternate Route Segment A | Existing GRE Substation | State Trail | Child Care Center | Public Water Inventory Basin | MCBS Native Plant Community |
| Alternate Route Segment B | Existing GRE Transmission Line | Snowmobile Trail | School | Wetlands (Barr, 2010) | MCBS Sites of Biodiversity Significance |
| Alternate Route Segment C | 69 kV | Proposed Route Width (200 feet total for rebuild section of existing transmission line and 400 feet total for new transmission line) | Residence* | FEMA Q3 Data | Moderate Significance |
| Alternate Route Segment D | 115 kV | Approximate MnDOT ROW | Non-Residential Building* | 100-year Floodplain | MCBS Railroad Rights-of-Way Prairie |
| Proposed Route Segment A | Existing Xcel Energy Transmission Line | Preferred Substation Site A | Tower | 500-year Floodplain | NHIS Rare Natural Features |
| Proposed Route Segment B | 69 kV | Alternate Substation Site B | | | Terrestrial Community |
| Proposed Route Segment C | 345 kV | Existing Substation Site | | | Terrestrial Community - Element Occurance Area |
| Proposed Route Segment D | Railroad | | | | |

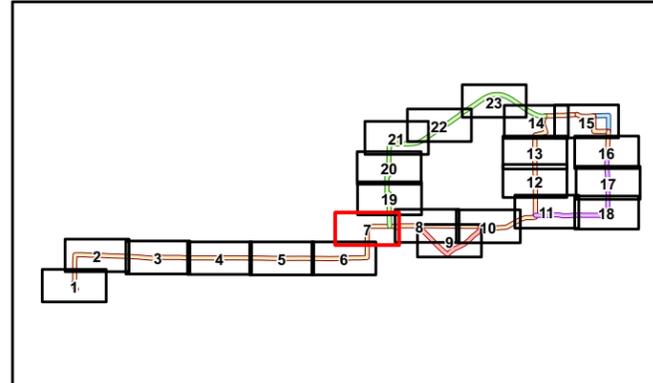
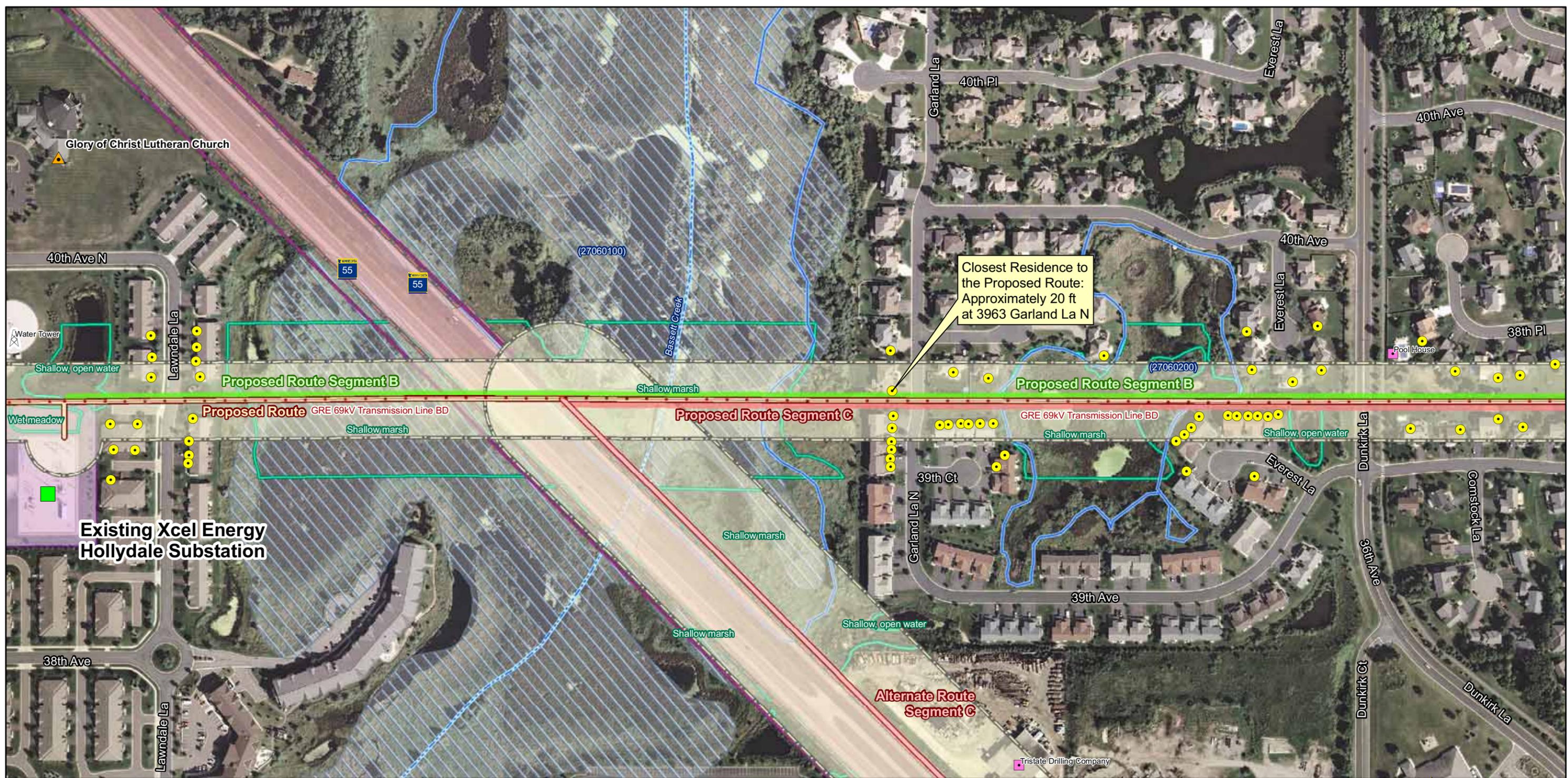


Figure C-7
DETAILED ROUTE MAP
Hollydale Project

Data Source: Barr, Xcel Energy, GRE, MN DNR, MNDOT, USGS.
 *Locations of residences and buildings within approximately 200-feet of the proposed rebuild area are shown. Points were placed on the side of the building closest to the existing transmission line.
 Natural Heritage Information System (NHIS) Data Copyright (2009), State of Minnesota, Department of Natural Resources. Rare features data included here were provided by the Division of Ecological Resources, Minnesota Department of Natural Resources (DNR), and were current as of (2009). These data are not based on an exhaustive inventory of the state. The lack of data for any geographic area shall not be construed to mean that no significant features are present.
 Background: 2009 Aerial Express Imagery for the Twin Cities.



Closest Residence to the Proposed Route:
Approximately 20 ft
at 3963 Garland La N

- Proposed Route
- Alternate Route Segment A
- Alternate Route Segment B
- Alternate Route Segment C
- Alternate Route Segment D
- Proposed Route Segment A
- Proposed Route Segment B
- Proposed Route Segment C
- Proposed Route Segment D
- Existing Xcel Energy Substation
- Existing GRE Substation
- Existing GRE Transmission Line
- 69 kV
- 115 kV
- Existing Xcel Energy Transmission Line
- 69 kV
- 345 kV
- Railroad
- Regional Existing Trail
- State Trail
- Snowmobile Trail
- Proposed Route Width (200 feet total for rebuild section of existing transmission line and 400 feet total for new transmission line)
- Approximate MnDOT ROW
- Preferred Substation Site A
- Alternate Substation Site B
- Existing Substation Site
- Church
- Child Care Center
- School
- Residence*
- Non-Residential Building*
- Tower
- Public Water Inventory Watercourse
- Public Water Inventory Basin Wetlands (Barr, 2010) (Clipped to 200 Feet of Centerline)
- FEMA Q3 Data
- 100-year Floodplain
- 500-year Floodplain
- Regionally Significant Ecological Area
- MCBS Native Plant Community
- MCBS Sites of Biodiversity Significance
- Moderate Significance
- MCBS Railroad Rights-of-Way Prairie
- NHIS Rare Natural Features
- Terrestrial Community
- Terrestrial Community - Element Occurance Area

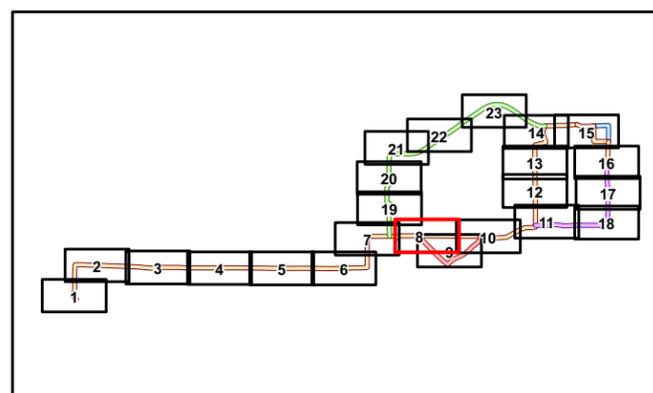
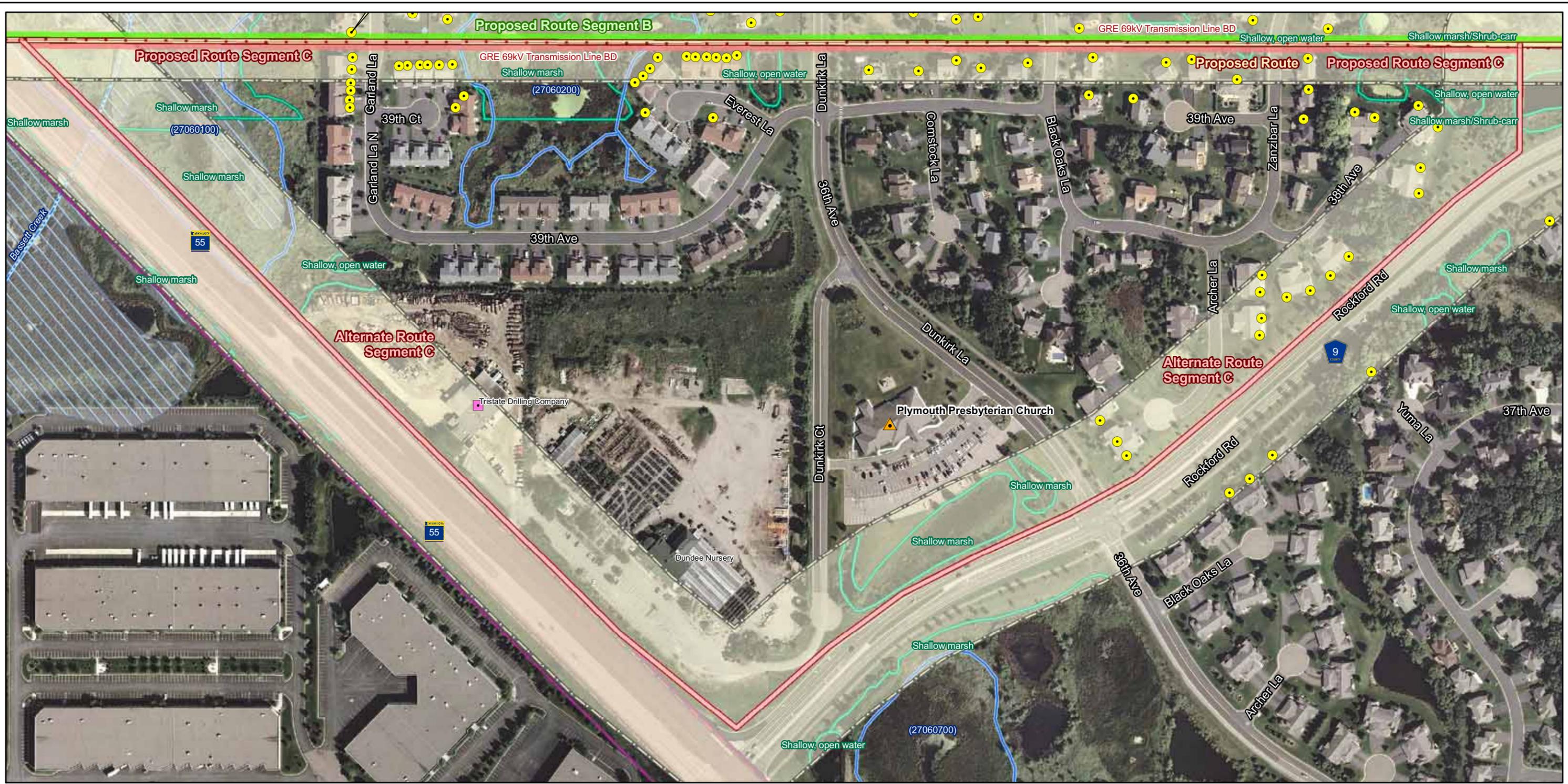


Figure C-8
DETAILED ROUTE MAP
Hollydale Project

Data Source: Barr, Xcel Energy, GRE, MN DNR, MNDOT, USGS.
*Locations of residences and buildings within approximately 200-feet of the proposed rebuild area are shown. Points were placed on the side of the building closest to the existing transmission line.
Natural Heritage Information System (NHIS) Data Copyright (2009), State of Minnesota, Department of Natural Resources. Rare features data included here were provided by the Division of Ecological Resources, Minnesota Department of Natural Resources (DNR), and were current as of (2009). These data are not based on an exhaustive inventory of the state. The lack of data for any geographic area shall not be construed to mean that no significant features are present.
Background: 2009 Aerial Express Imagery for the Twin Cities.





- Proposed Route
- Alternate Route Segment A
- Alternate Route Segment B
- Alternate Route Segment C
- Alternate Route Segment D
- Proposed Route Segment A
- Proposed Route Segment B
- Proposed Route Segment C
- Proposed Route Segment D
- Existing Xcel Energy Substation
- Existing GRE Substation
- Existing GRE Transmission Line
- 69 kV
- 115 kV
- Existing Xcel Energy Transmission Line
- 69 kV
- 345 kV
- Railroad
- Regional Existing Trail
- State Trail
- Snowmobile Trail
- Proposed Route Width (200 feet total for rebuild section of existing transmission line and 400 feet total for new transmission line)
- Approximate MnDOT ROW
- Preferred Substation Site A
- Alternate Substation Site B
- Existing Substation Site
- Church
- Child Care Center
- School
- Residence*
- Non-Residential Building*
- Tower
- Public Water Inventory Watercourse
- Public Water Inventory Basin Wetlands (Barr, 2010) (Clipped to 200 Feet of Centerline)
- FEMA Q3 Data
- 100-year Floodplain
- 500-year Floodplain
- Regionally Significant Ecological Area
- MCBS Native Plant Community
- MCBS Sites of Biodiversity Significance
- Moderate Significance
- MCBS Railroad Rights-of-Way Prairie
- NHIS Rare Natural Features
- Terrestrial Community
- Terrestrial Community - Element Occurance Area

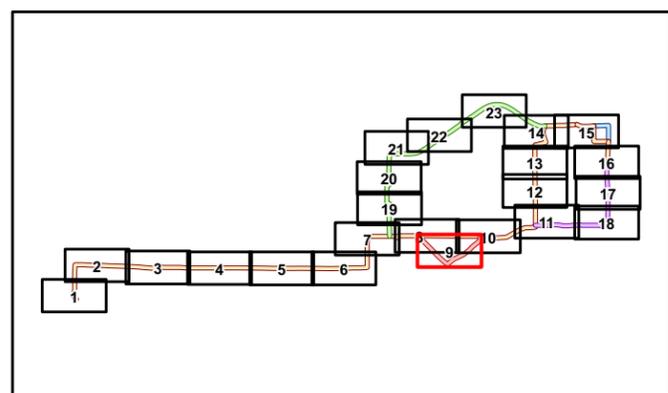
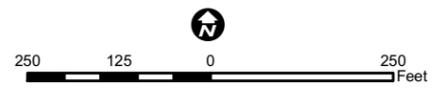
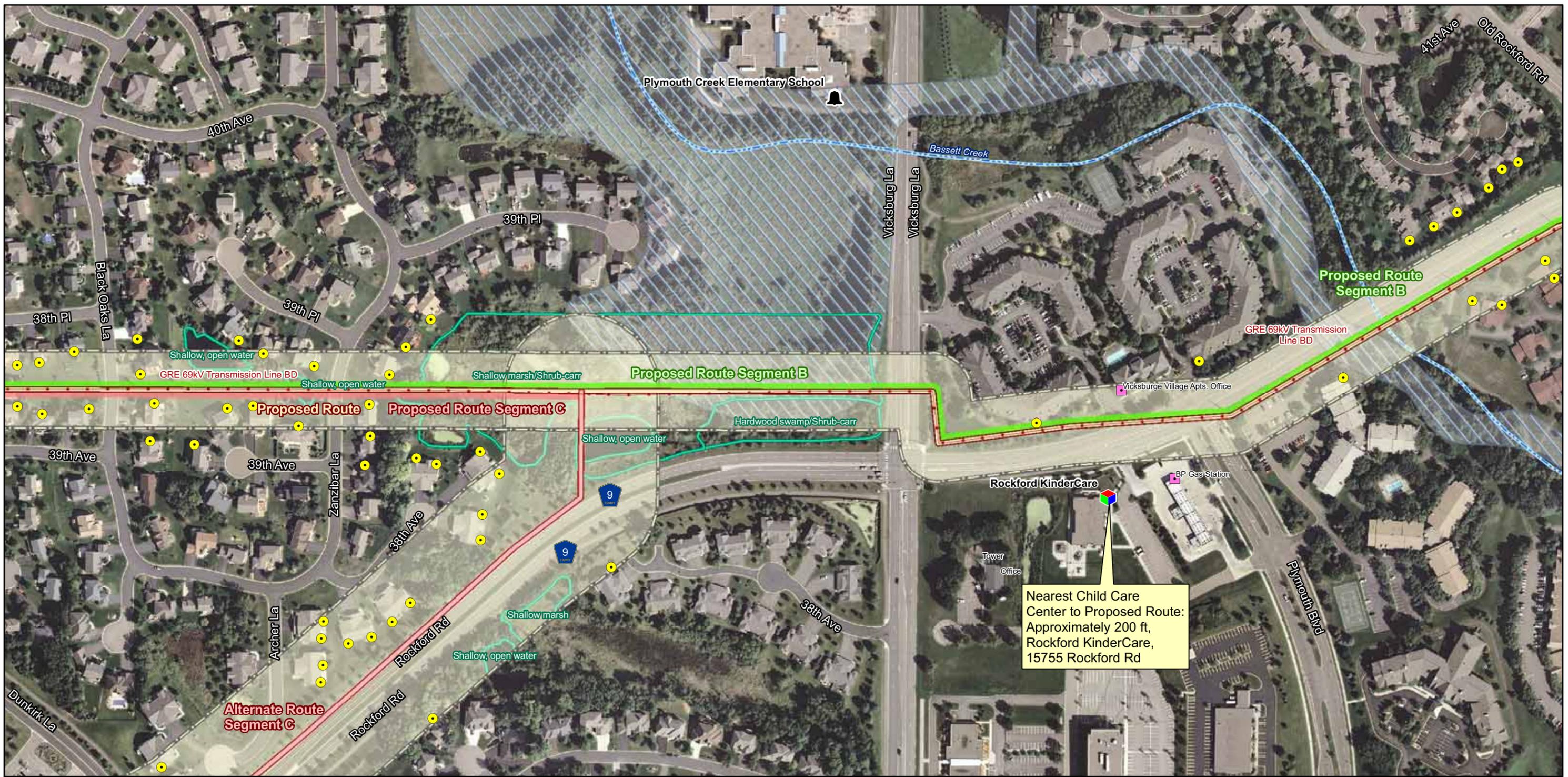


Figure C-9
DETAILED ROUTE MAP
Hollydale Project

Data Source: Barr, Xcel Energy, GRE, MN DNR, MNDOT, USGS.
 *Locations of residences and buildings within approximately 200-feet of the proposed rebuild area are shown. Points were placed on the side of the building closest to the existing transmission line.
 Natural Heritage Information System (NHIS) Data Copyright (2009), State of Minnesota, Department of Natural Resources. Rare features data included here were provided by the Division of Ecological Resources, Minnesota Department of Natural Resources (DNR), and were current as of (2009). These data are not based on an exhaustive inventory of the state. The lack of data for any geographic area shall not be construed to mean that no significant features are present.
 Background: 2009 Aerial Express Imagery for the Twin Cities.





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|---------------------------|---|--|---------------------------|--|---|
| Proposed Route | Existing Xcel Energy Substation | Regional Existing Trail | Church | Public Water Inventory Watercourse | Regionally Significant Ecological Area |
| Alternate Route Segment A | Existing GRE Substation | State Trail | Child Care Center | Public Water Inventory Basin Wetlands (Barr, 2010) (Clipped to 200 Feet of Centerline) | MCBS Native Plant Community |
| Alternate Route Segment B | Existing GRE Transmission Line 69 kV | Snowmobile Trail | School | FEMA Q3 Data 100-year Floodplain | MCBS Sites of Biodiversity Significance |
| Alternate Route Segment C | Existing GRE Transmission Line 115 kV | Proposed Route Width (200 feet total for rebuild section of existing transmission line and 400 feet total for new transmission line) | Residence* | FEMA Q3 Data 500-year Floodplain | Moderate Significance |
| Alternate Route Segment D | Existing Xcel Energy Transmission Line 69 kV | Approximate MnDOT ROW | Non-Residential Building* | NHIS Rare Natural Features Terrestrial Community | MCBS Railroad Rights-of-Way Prairie |
| Proposed Route Segment A | Existing Xcel Energy Transmission Line 345 kV | Preferred Substation Site A | Tower | NHIS Rare Natural Features Terrestrial Community - Element Occurance Area | |
| Proposed Route Segment B | Railroad | Alternate Substation Site B | | | |
| Proposed Route Segment C | | Existing Substation Site | | | |
| Proposed Route Segment D | | | | | |

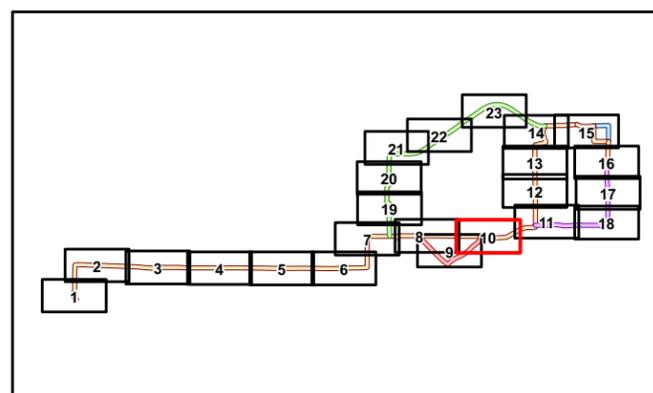
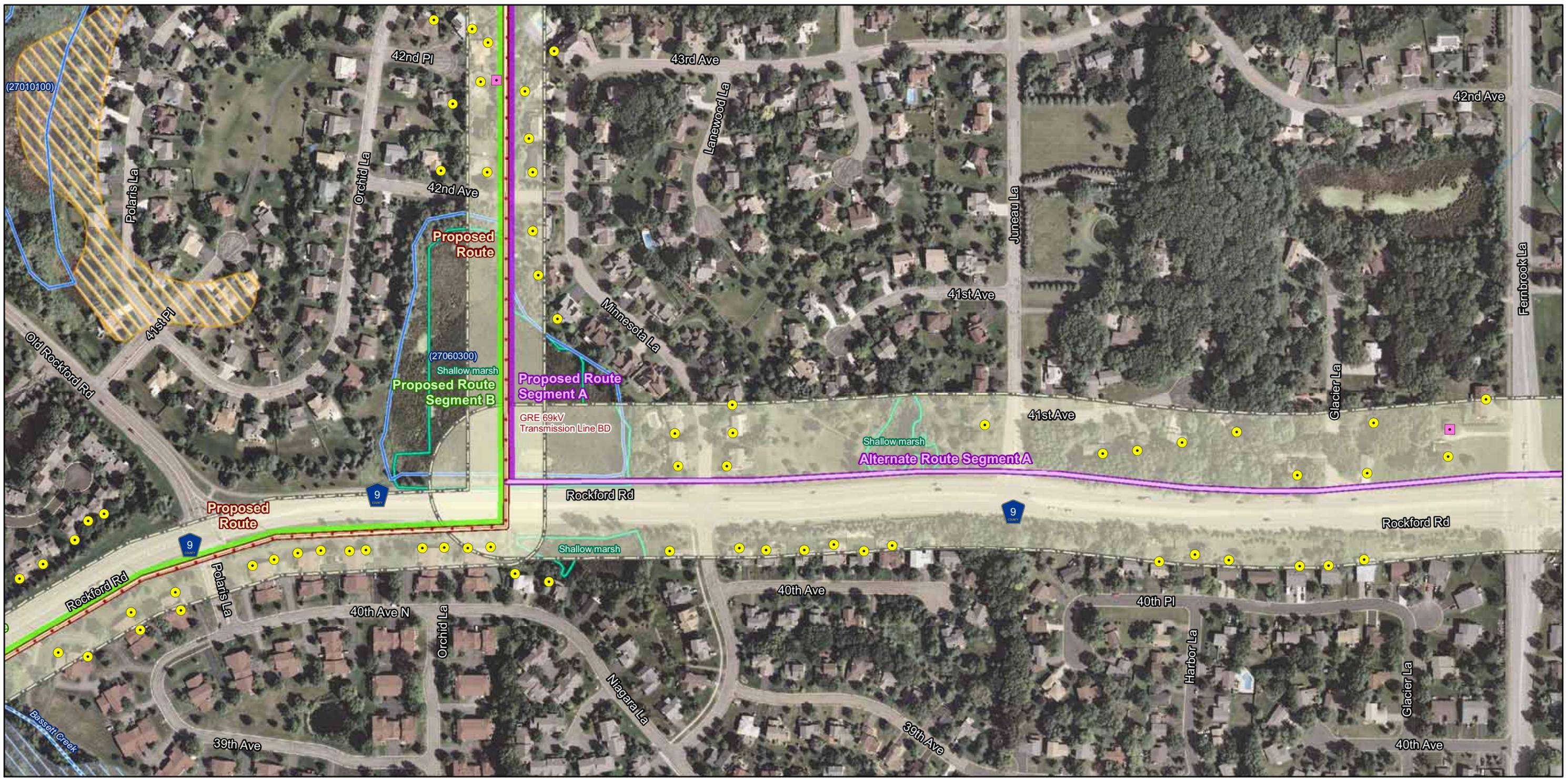


Figure C-10
DETAILED ROUTE MAP
Hollydale Project

Data Source: Barr, Xcel Energy, GRE, MN DNR, MNDOT, USGS.
 *Locations of residences and buildings within approximately 200-feet of the proposed rebuild area are shown. Points were placed on the side of the building closest to the existing transmission line.
 Natural Heritage Information System (NHIS) Data Copyright (2009), State of Minnesota, Department of Natural Resources. Rare features data included here were provided by the Division of Ecological Resources, Minnesota Department of Natural Resources (DNR), and were current as of (2009). These data are not based on an exhaustive inventory of the state. The lack of data for any geographic area shall not be construed to mean that no significant features are present.
 Background: 2009 Aerial Express Imagery for the Twin Cities.





- Proposed Route
- Alternate Route Segment A
- Alternate Route Segment B
- Alternate Route Segment C
- Alternate Route Segment D
- Proposed Route Segment A
- Proposed Route Segment B
- Proposed Route Segment C
- Proposed Route Segment D
- Existing Xcel Energy Substation
- Existing GRE Substation
- Existing GRE Transmission Line
- 69 kV
- 115 kV
- Existing Xcel Energy Transmission Line
- 69 kV
- 345 kV
- Railroad
- Regional Existing Trail
- State Trail
- Snowmobile Trail
- Proposed Route Width (200 feet total for rebuild section of existing transmission line and 400 feet total for new transmission line)
- Approximate MnDOT ROW
- Preferred Substation Site A
- Alternate Substation Site B
- Existing Substation Site
- Church
- Child Care Center
- School
- Residence*
- Non-Residential Building*
- Tower
- Public Water Inventory Watercourse
- Public Water Inventory Basin Wetlands (Barr, 2010) (Clipped to 200 Feet of Centerline)
- FEMA Q3 Data
- 100-year Floodplain
- 500-year Floodplain
- Regionally Significant Ecological Area
- MCBS Native Plant Community
- MCBS Sites of Biodiversity Significance
- Moderate Significance
- MCBS Railroad Rights-of-Way Prairie
- NHIS Rare Natural Features
- Terrestrial Community
- Terrestrial Community - Element Occurance Area

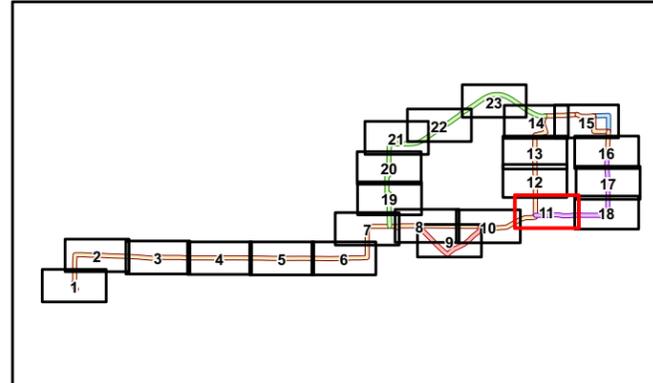
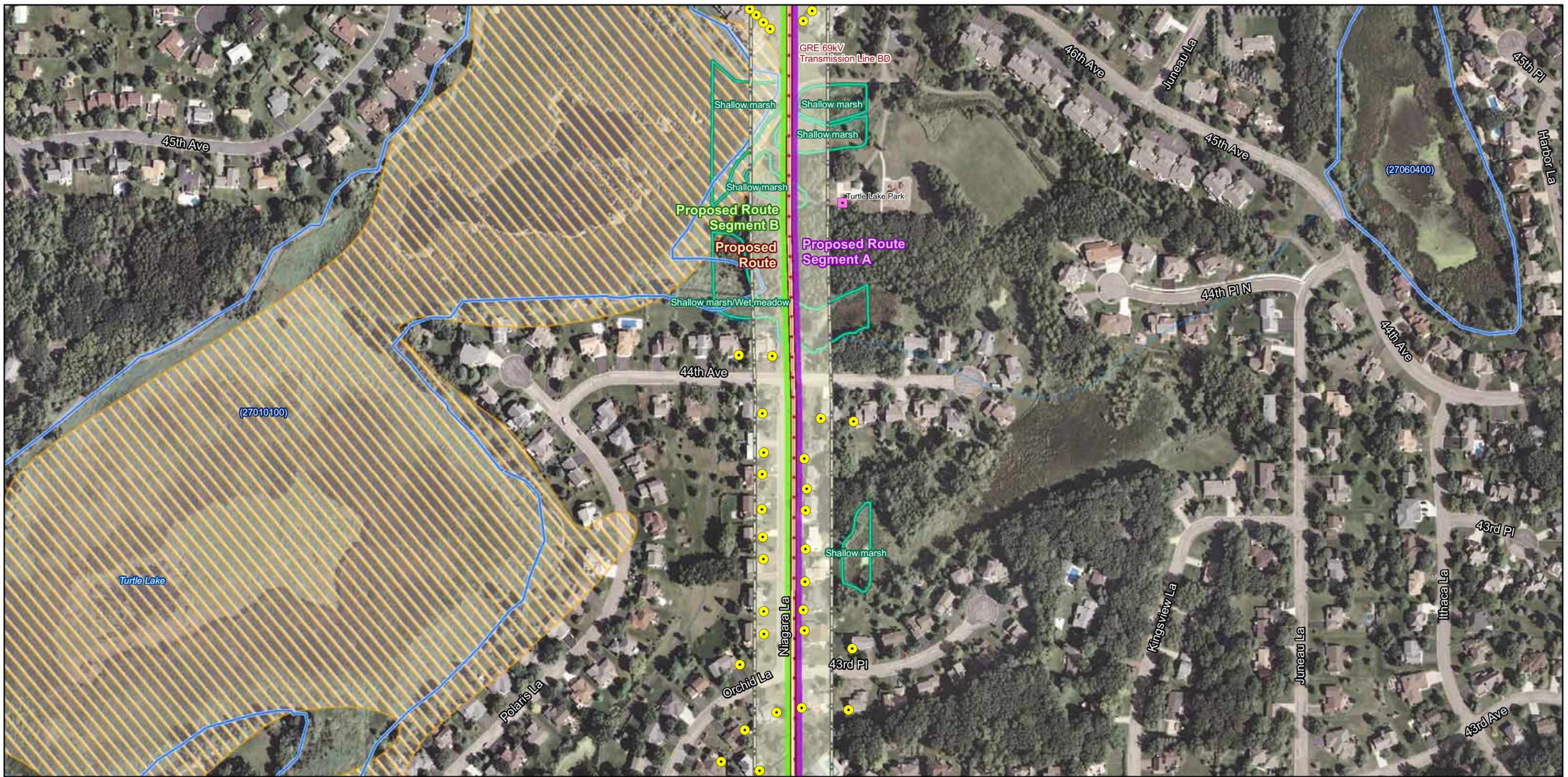


Figure C-11
DETAILED ROUTE MAP
Hollydale Project

Data Source: Barr, Xcel Energy, GRE, MN DNR, MNDOT, USGS.
*Locations of residences and buildings within approximately 200-feet of the proposed rebuild area are shown. Points were placed on the side of the building closest to the existing transmission line.
Natural Heritage Information System (NHIS) Data Copyright (2009), State of Minnesota, Department of Natural Resources. Rare features data included here were provided by the Division of Ecological Resources, Minnesota Department of Natural Resources (DNR), and were current as of (2009). These data are not based on an exhaustive inventory of the state. The lack of data for any geographic area shall not be construed to mean that no significant features are present.
Background: 2009 Aerial Express Imagery for the Twin Cities.



- Proposed Route
- Alternate Route Segment A
- Alternate Route Segment B
- Alternate Route Segment C
- Alternate Route Segment D
- Proposed Route Segment A
- Proposed Route Segment B
- Proposed Route Segment C
- Proposed Route Segment D
- Existing Xcel Energy Substation
- Existing GRE Substation
- Existing GRE Transmission Line
 - 69 kV
 - 115 kV
- Existing Xcel Energy Transmission Line
- Proposed Route Width (200 feet total for rebuild section of existing transmission line and 400 feet total for new transmission line)
- Approximate MnDOT ROW
- Preferred Substation Site A
- Alternate Substation Site B
- Existing Substation Site
- Regional Existing Trail
- State Trail
- Snowmobile Trail
- Church
- Child Care Center
- School
- Residence*
- Non-Residential Building*
- Tower
- Public Water Inventory Watercourse
- Public Water Inventory Basin Wetlands (Barr, 2010) (Clipped to 200 Feet of Centerline)
- FEMA Q3 Data
- 100-year Floodplain
- 500-year Floodplain
- Regionally Significant Ecological Area
- MCBS Native Plant Community
- MCBS Sites of Biodiversity Significance
- Moderate Significance
- MCBS Railroad Rights-of-Way Prairie
- NHIS Rare Natural Features
 - Terrestrial Community
 - Terrestrial Community - Element Occurance Area

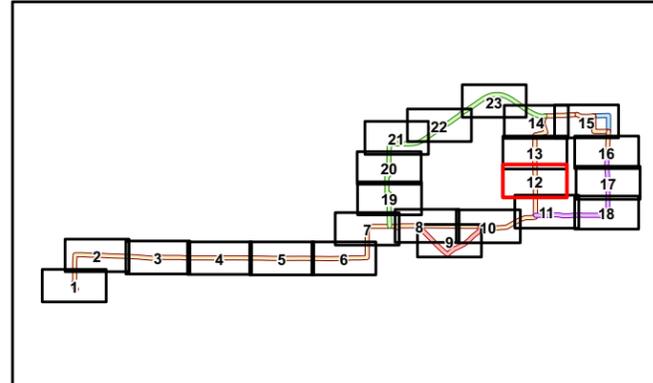
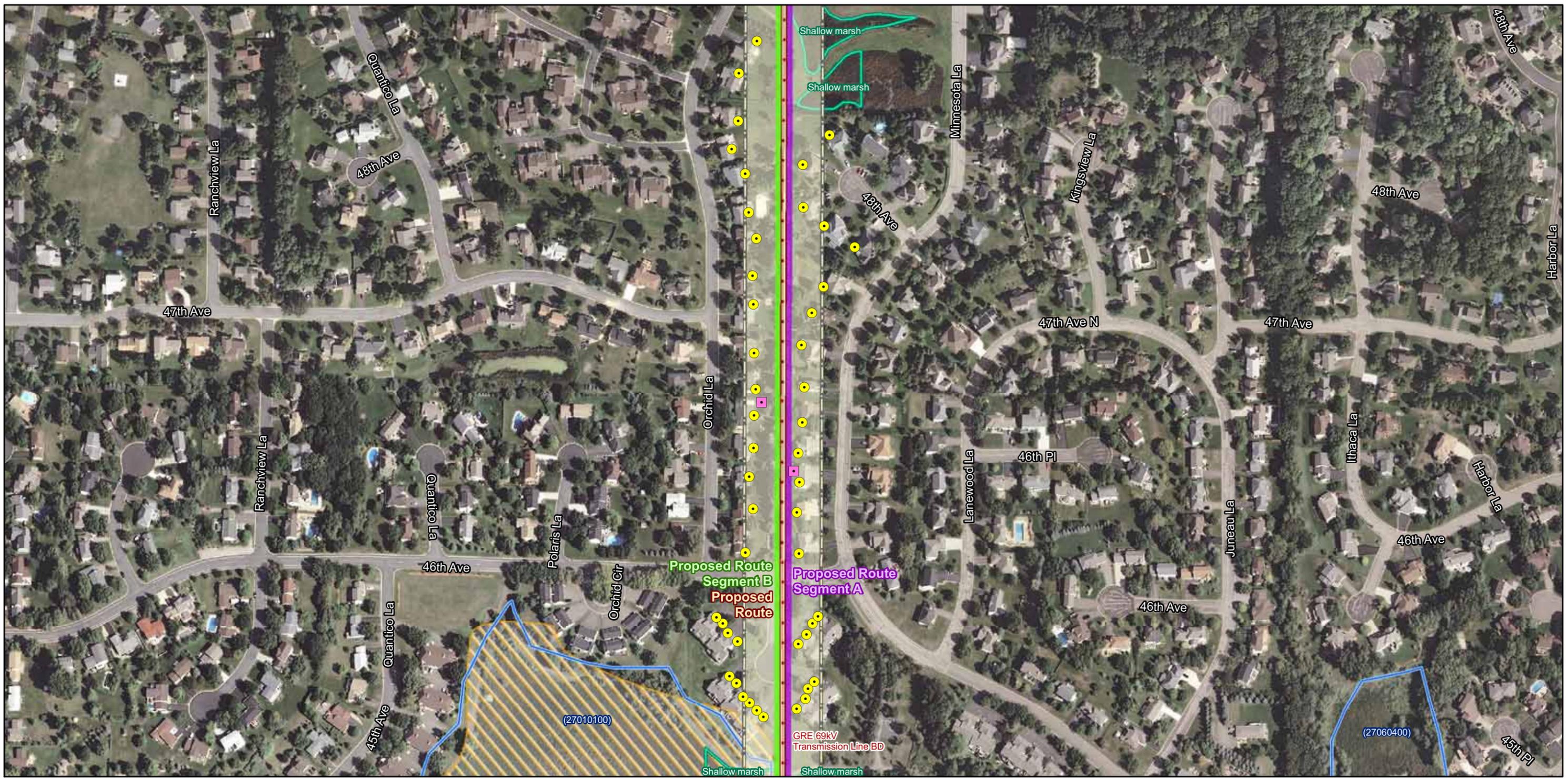


Figure C-12
 DETAILED ROUTE MAP
 Hollydale Project

Data Source: Barr, Xcel Energy, GRE, MN DNR, MNDOT, USGS.
 *Locations of residences and buildings within approximately 200-feet of the proposed rebuild area are shown. Points were placed on the side of the building closest to the existing transmission line.
 Natural Heritage Information System (NHIS) Data Copyright (2009), State of Minnesota, Department of Natural Resources. Rare features data included here were provided by the Division of Ecological Resources, Minnesota Department of Natural Resources (DNR), and were current as of (2009). These data are not based on an exhaustive inventory of the state. The lack of data for any geographic area shall not be construed to mean that no significant features are present.
 Background: 2009 Aerial Express Imagery for the Twin Cities.



- Proposed Route
- Alternate Route Segment A
- Alternate Route Segment B
- Alternate Route Segment C
- Alternate Route Segment D
- Proposed Route Segment A
- Proposed Route Segment B
- Proposed Route Segment C
- Proposed Route Segment D
- Existing Xcel Energy Substation
- Existing GRE Substation
- Existing GRE Transmission Line
- 69 kV
- 115 kV
- Existing Xcel Energy Transmission Line
- 69 kV
- 345 kV
- Railroad
- Regional Existing Trail
- State Trail
- Snowmobile Trail
- Proposed Route Width (200 feet total for rebuild section of existing transmission line and 400 feet total for new transmission line)
- Approximate MnDOT ROW
- Preferred Substation Site A
- Alternate Substation Site B
- Existing Substation Site
- Church
- Child Care Center
- School
- Residence*
- Non-Residential Building*
- Tower
- Public Water Inventory Watercourse
- Public Water Inventory Basin
- Wetlands (Barr, 2010)
- FEMA Q3 Data
- 100-year Floodplain
- 500-year Floodplain
- Regionally Significant Ecological Area
- MCBS Native Plant Community
- MCBS Sites of Biodiversity Significance
- Moderate Significance
- MCBS Railroad Rights-of-Way Prairie
- NHIS Rare Natural Features
- Terrestrial Community
- Terrestrial Community - Element Occurance Area

Data Source: Barr, Xcel Energy, GRE, MN DNR, MNDOT, USGS.
 *Locations of residences and buildings within approximately 200-feet of the proposed rebuild area are shown. Points were placed on the side of the building closest to the existing transmission line.
 Natural Heritage Information System (NHIS) Data Copyright (2009), State of Minnesota, Department of Natural Resources. Rare features data included here were provided by the Division of Ecological Resources, Minnesota Department of Natural Resources (DNR), and were current as of (2009). These data are not based on an exhaustive inventory of the state. The lack of data for any geographic area shall not be construed to mean that no significant features are present.
 Background: 2009 Aerial Express Imagery for the Twin Cities.

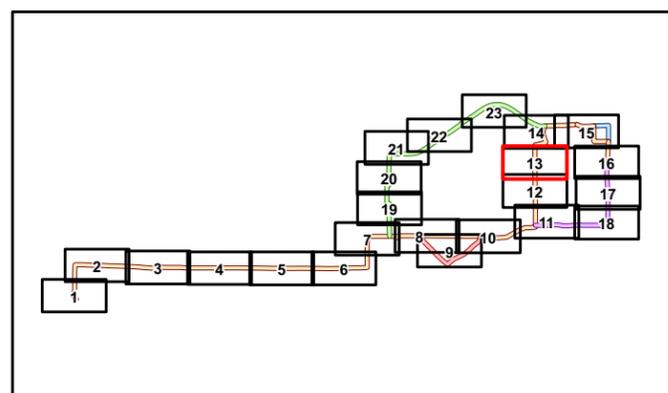
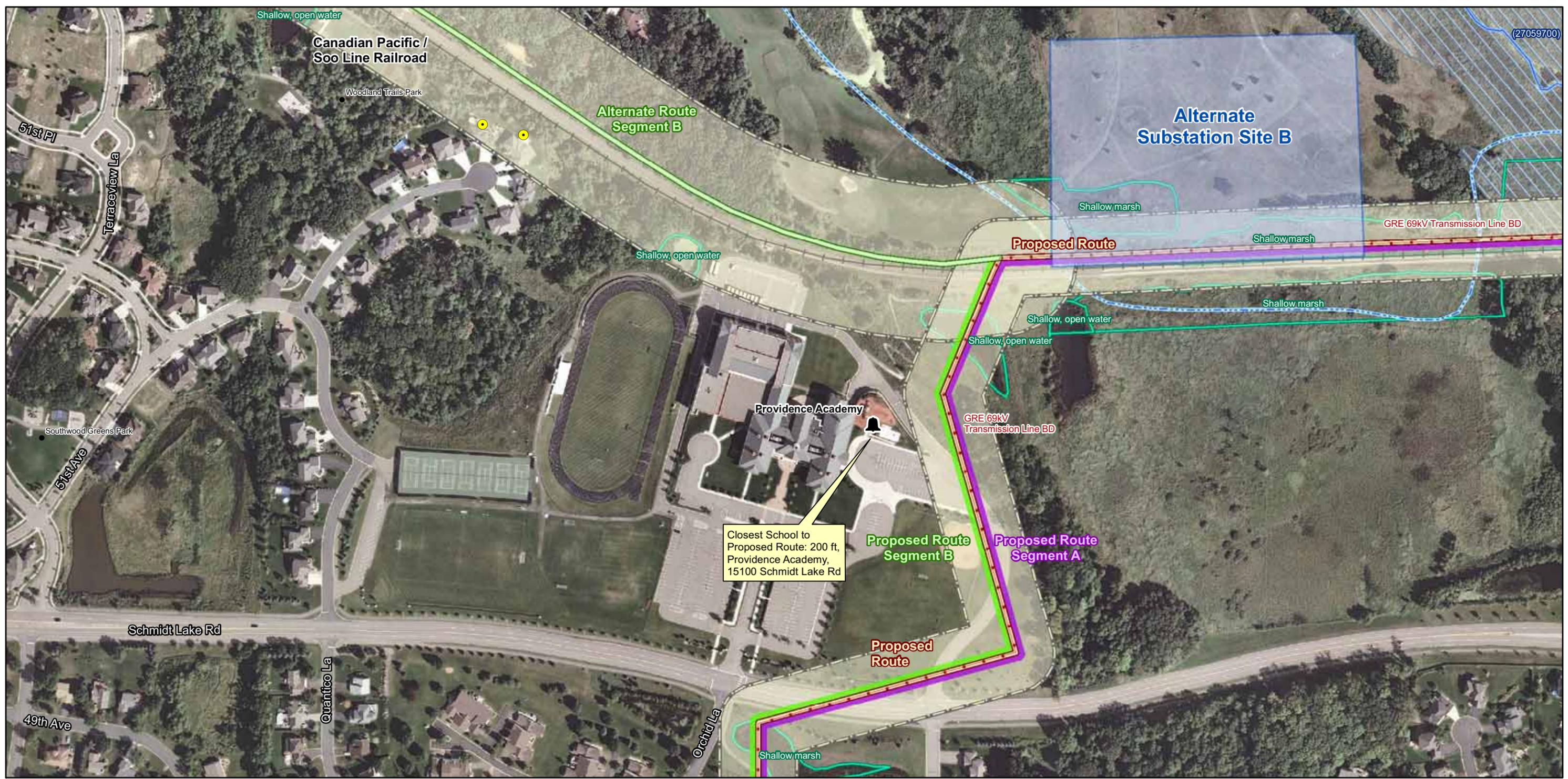


Figure C-13
 DETAILED ROUTE MAP
 Hollydale Project



- Proposed Route
- Alternate Route Segment A
- Alternate Route Segment B
- Alternate Route Segment C
- Alternate Route Segment D
- Proposed Route Segment A
- Proposed Route Segment B
- Proposed Route Segment C
- Proposed Route Segment D
- Existing Xcel Energy Substation
- Existing GRE Substation
- Existing GRE Transmission Line
 - 69 kV
 - 115 kV
 - Existing Xcel Energy Transmission Line
 - 69 kV
 - 345 kV
- Railroad
- Regional Existing Trail
- State Trail
- Snowmobile Trail
- Proposed Route Width (200 feet total for rebuild section of existing transmission line and 400 feet total for new transmission line)
- Approximate MnDOT ROW
- Preferred Substation Site A
- Alternate Substation Site B
- Existing Substation Site
- Church
- Child Care Center
- School
- Residence*
- Non-Residential Building*
- Tower
- Public Water Inventory Watercourse
- Public Water Inventory Basin Wetlands (Barr, 2010) (Clipped to 200 Feet of Centerline)
- FEMA Q3 Data
- 100-year Floodplain
- 500-year Floodplain
- Regionally Significant Ecological Area
- MCBS Native Plant Community
- MCBS Sites of Biodiversity Significance
- Moderate Significance
- MCBS Railroad Rights-of-Way Prairie
- NHIS Rare Natural Features
 - Terrestrial Community
 - Terrestrial Community - Element Occurance Area

Data Source: Barr, Xcel Energy, GRE, MN DNR, MNDOT, USGS.
 *Locations of residences and buildings within approximately 200-feet of the proposed rebuild area are shown. Points were placed on the side of the building closest to the existing transmission line.
 Natural Heritage Information System (NHIS) Data Copyright (2009), State of Minnesota, Department of Natural Resources. Rare features data included here were provided by the Division of Ecological Resources, Minnesota Department of Natural Resources (DNR), and were current as of (2009). These data are not based on an exhaustive inventory of the state. The lack of data for any geographic area shall not be construed to mean that no significant features are present.
 Background: 2009 Aerial Express Imagery for the Twin Cities.

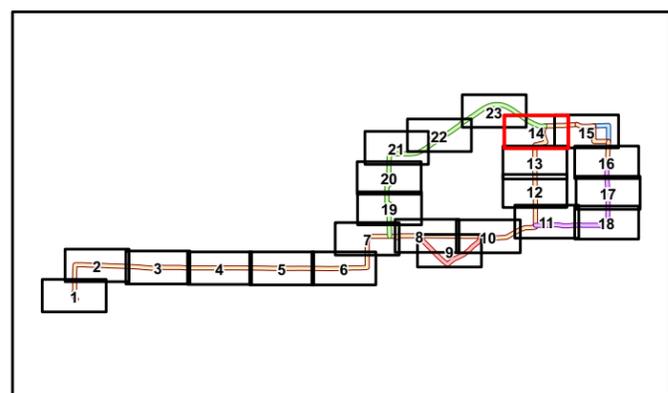
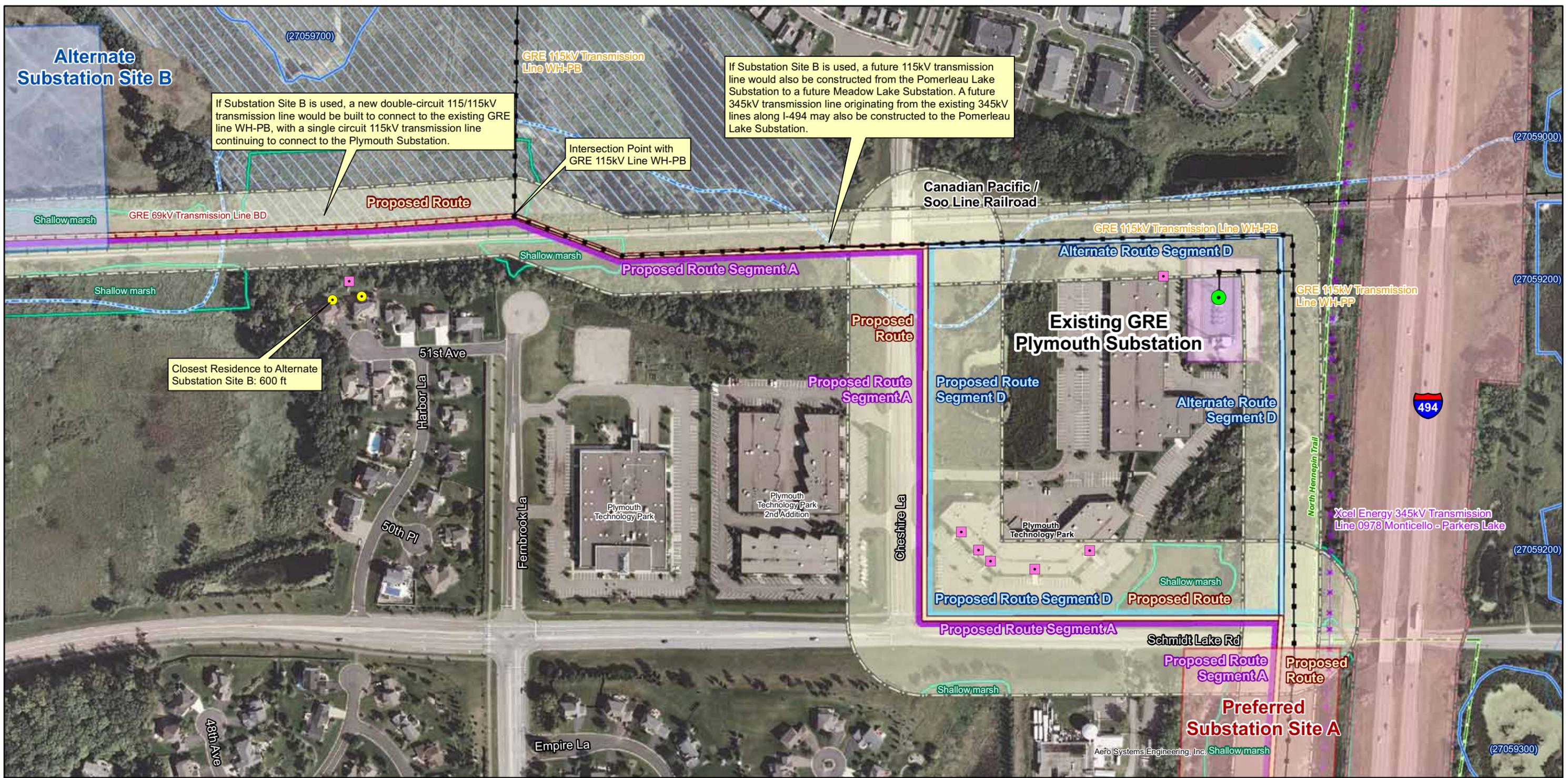


Figure C-14
 DETAILED ROUTE MAP
 Hollydale Project



- Proposed Route
- Alternate Route Segment A
- Alternate Route Segment B
- Alternate Route Segment C
- Alternate Route Segment D
- Proposed Route Segment A
- Proposed Route Segment B
- Proposed Route Segment C
- Proposed Route Segment D
- Existing Xcel Energy Substation
- Existing GRE Substation
- Existing GRE Transmission Line
 - 69 kV
 - 115 kV
 - Existing Xcel Energy Transmission Line
 - 69 kV
 - 345 kV
- Railroad
- Regional Existing Trail
- State Trail
- Snowmobile Trail
- Proposed Route Width (200 feet total for rebuild section of existing transmission line and 400 feet total for new transmission line)
- Approximate MnDOT ROW
- Preferred Substation Site A
- Alternate Substation Site B
- Existing Substation Site
- Church
- Child Care Center
- School
- Residence*
- Non-Residential Building*
- Tower
- Public Water Inventory Watercourse
- Public Water Inventory Basin Wetlands (Barr, 2010) (Clipped to 200 Feet of Centerline)
- FEMA Q3 Data
- 100-year Floodplain
- 500-year Floodplain
- Regionally Significant Ecological Area
- MCBS Native Plant Community
- MCBS Sites of Biodiversity Significance
- Moderate Significance
- MCBS Railroad Rights-of-Way Prairie
- NHIS Rare Natural Features
 - Terrestrial Community
 - Terrestrial Community - Element Occurance Area

Data Source: Barr, Xcel Energy, GRE, MN DNR, MNDOT, USGS.
 *Locations of residences and buildings within approximately 200-feet of the proposed rebuild area are shown. Points were placed on the side of the building closest to the existing transmission line. Natural Heritage Information System (NHIS) Data Copyright (2009), State of Minnesota, Department of Natural Resources. Rare features data included here were provided by the Division of Ecological Resources, Minnesota Department of Natural Resources (DNR), and were current as of (2009). These data are not based on an exhaustive inventory of the state. The lack of data for any geographic area shall not be construed to mean that no significant features are present.
 Background: 2009 Aerial Express Imagery for the Twin Cities.

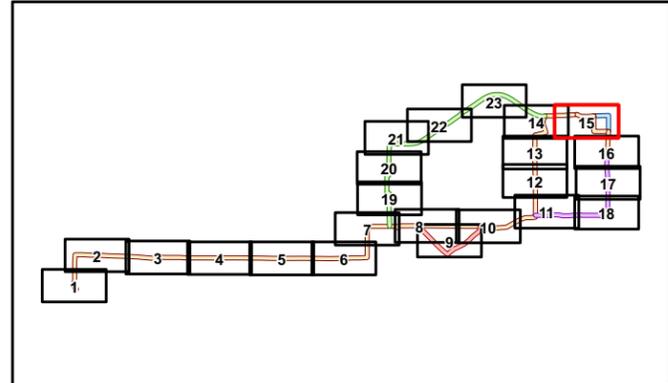
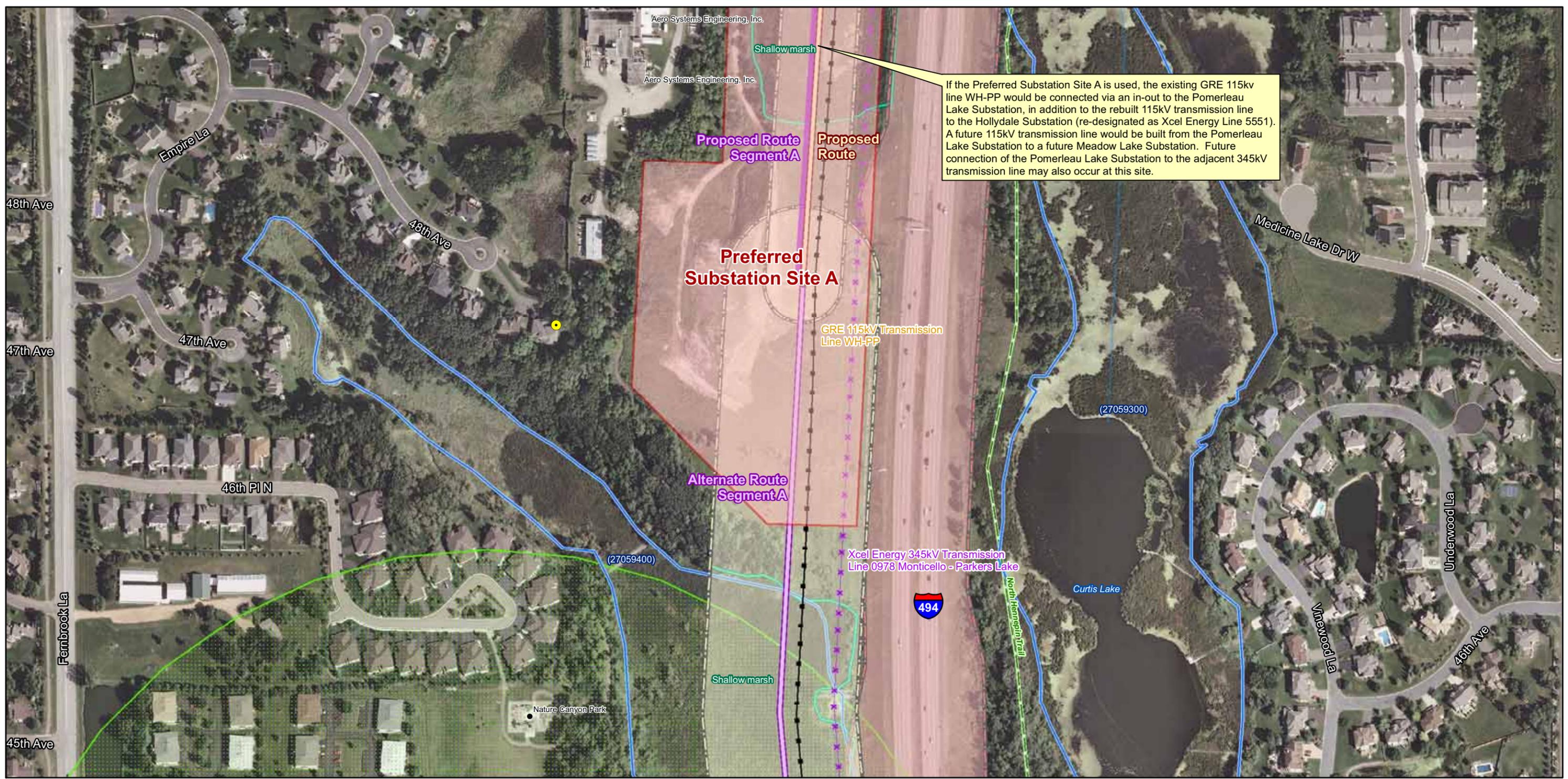


Figure C-15
 DETAILED ROUTE MAP
 Hollydale Project



If the Preferred Substation Site A is used, the existing GRE 115kV line WH-PP would be connected via an in-out to the Pomerleau Lake Substation, in addition to the rebuilt 115kV transmission line to the Hollydale Substation (re-designated as Xcel Energy Line 5551). A future 115kV transmission line would be built from the Pomerleau Lake Substation to a future Meadow Lake Substation. Future connection of the Pomerleau Lake Substation to the adjacent 345kV transmission line may also occur at this site.

- Proposed Route
- Alternate Route Segment A
- Alternate Route Segment B
- Alternate Route Segment C
- Alternate Route Segment D
- Proposed Route Segment A
- Proposed Route Segment B
- Proposed Route Segment C
- Proposed Route Segment D
- Existing Xcel Energy Substation
- Existing GRE Substation
- Existing GRE Transmission Line
- 69 kV
- 115 kV
- Existing Xcel Energy Transmission Line
- 69 kV
- 345 kV
- Railroad
- Regional Existing Trail
- State Trail
- Snowmobile Trail
- Proposed Route Width (200 feet total for rebuild section of existing transmission line and 400 feet total for new transmission line)
- Approximate MnDOT ROW
- Preferred Substation Site A
- Alternate Substation Site B
- Existing Substation Site
- Church
- Child Care Center
- School
- Residence*
- Non-Residential Building*
- Tower
- Public Water Inventory Watercourse
- Public Water Inventory Basin Wetlands (Barr, 2010) (Clipped to 200 Feet of Centerline)
- FEMA Q3 Data
- 100-year Floodplain
- 500-year Floodplain
- Regionally Significant Ecological Area
- MCBS Native Plant Community
- MCBS Sites of Biodiversity Significance
- Moderate Significance
- MCBS Railroad Rights-of-Way Prairie
- NHIS Rare Natural Features
- Terrestrial Community
- Terrestrial Community - Element Occurance Area

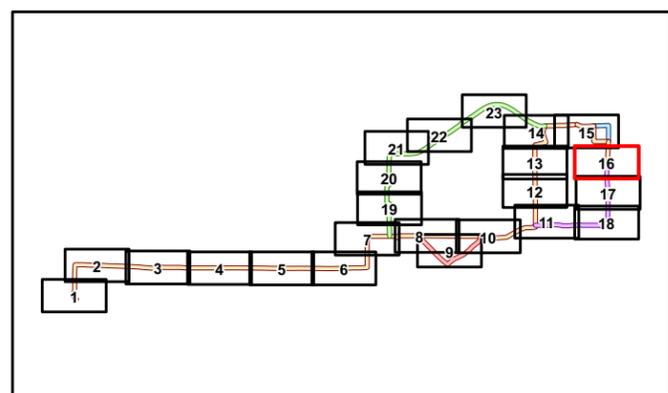
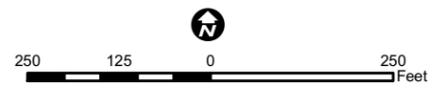
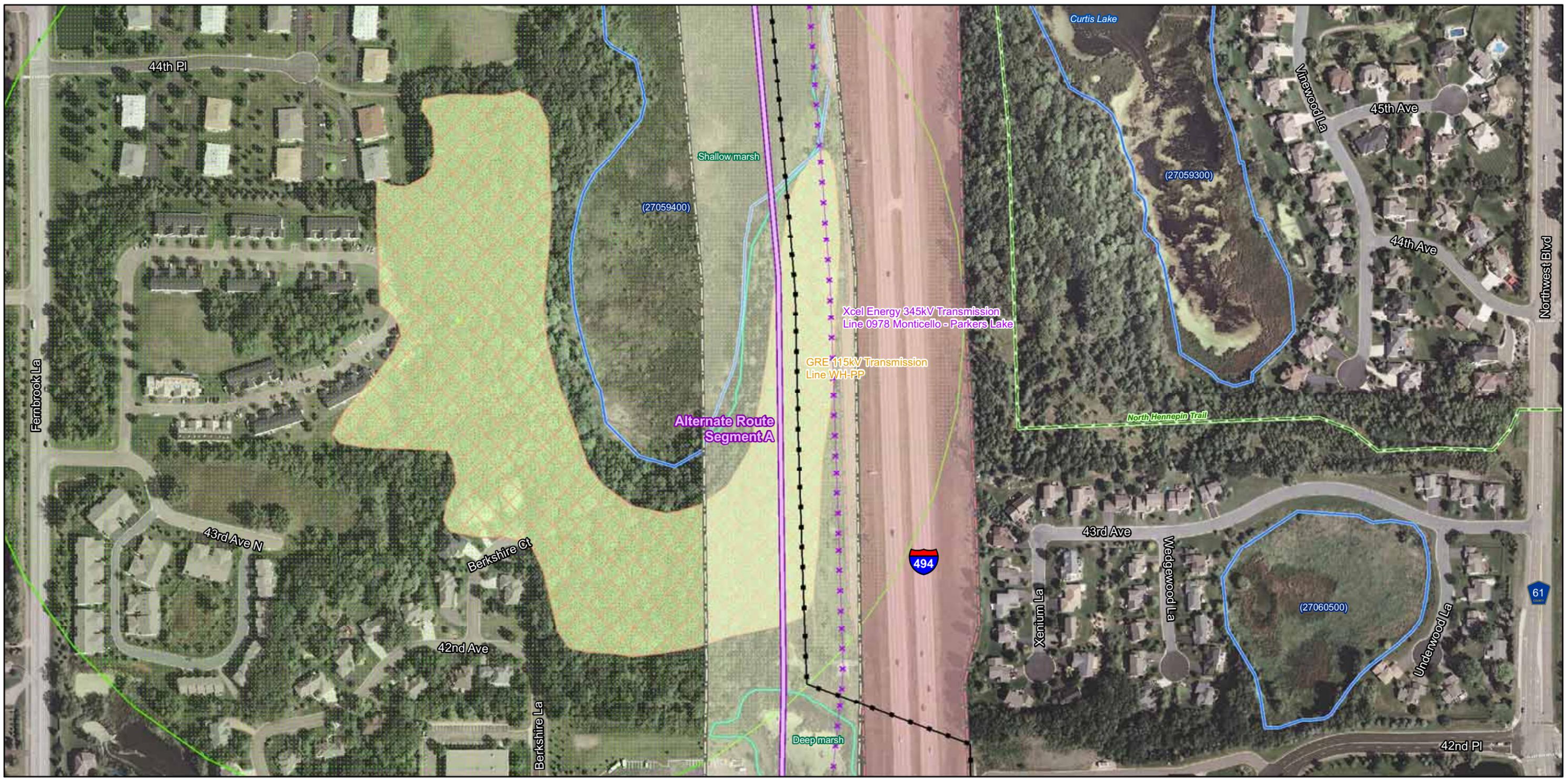


Figure C-16
DETAILED ROUTE MAP
Hollydale Project

Data Source: Barr, Xcel Energy, GRE, MN DNR, MNDOT, USGS.
 *Locations of residences and buildings within approximately 200-feet of the proposed rebuild area are shown. Points were placed on the side of the building closest to the existing transmission line.
 Natural Heritage Information System (NHIS) Data Copyright (2009), State of Minnesota, Department of Natural Resources. Rare features data included here were provided by the Division of Ecological Resources, Minnesota Department of Natural Resources (DNR), and were current as of (2009). These data are not based on an exhaustive inventory of the state. The lack of data for any geographic area shall not be construed to mean that no significant features are present.
 Background: 2009 Aerial Express Imagery for the Twin Cities.





- Proposed Route
- Alternate Route Segment A
- Alternate Route Segment B
- Alternate Route Segment C
- Alternate Route Segment D
- Proposed Route Segment A
- Proposed Route Segment B
- Proposed Route Segment C
- Proposed Route Segment D
- Existing Xcel Energy Substation
- Existing GRE Substation
- Existing GRE Transmission Line
- 69 kV
- 115 kV
- Existing Xcel Energy Transmission Line
- 69 kV
- 345 kV
- Railroad
- Regional Existing Trail
- State Trail
- Snowmobile Trail
- Proposed Route Width (200 feet total for rebuild section of existing transmission line and 400 feet total for new transmission line)
- Approximate MnDOT ROW
- Preferred Substation Site A
- Alternate Substation Site B
- Existing Substation Site
- Church
- Child Care Center
- School
- Residence*
- Non-Residential Building*
- Tower
- Public Water Inventory Watercourse
- Public Water Inventory Basin Wetlands (Barr, 2010) (Clipped to 200 Feet of Centerline)
- FEMA Q3 Data
- 100-year Floodplain
- 500-year Floodplain
- Regionally Significant Ecological Area
- MCBS Native Plant Community
- MCBS Sites of Biodiversity Significance
- Moderate Significance
- MCBS Railroad Rights-of-Way Prairie
- NHIS Rare Natural Features
- Terrestrial Community
- Terrestrial Community - Element Occurance Area

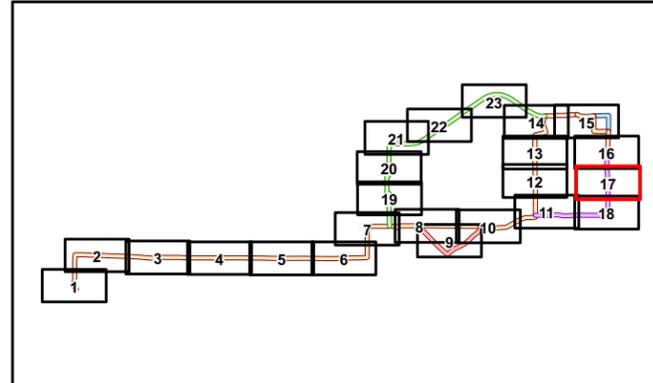
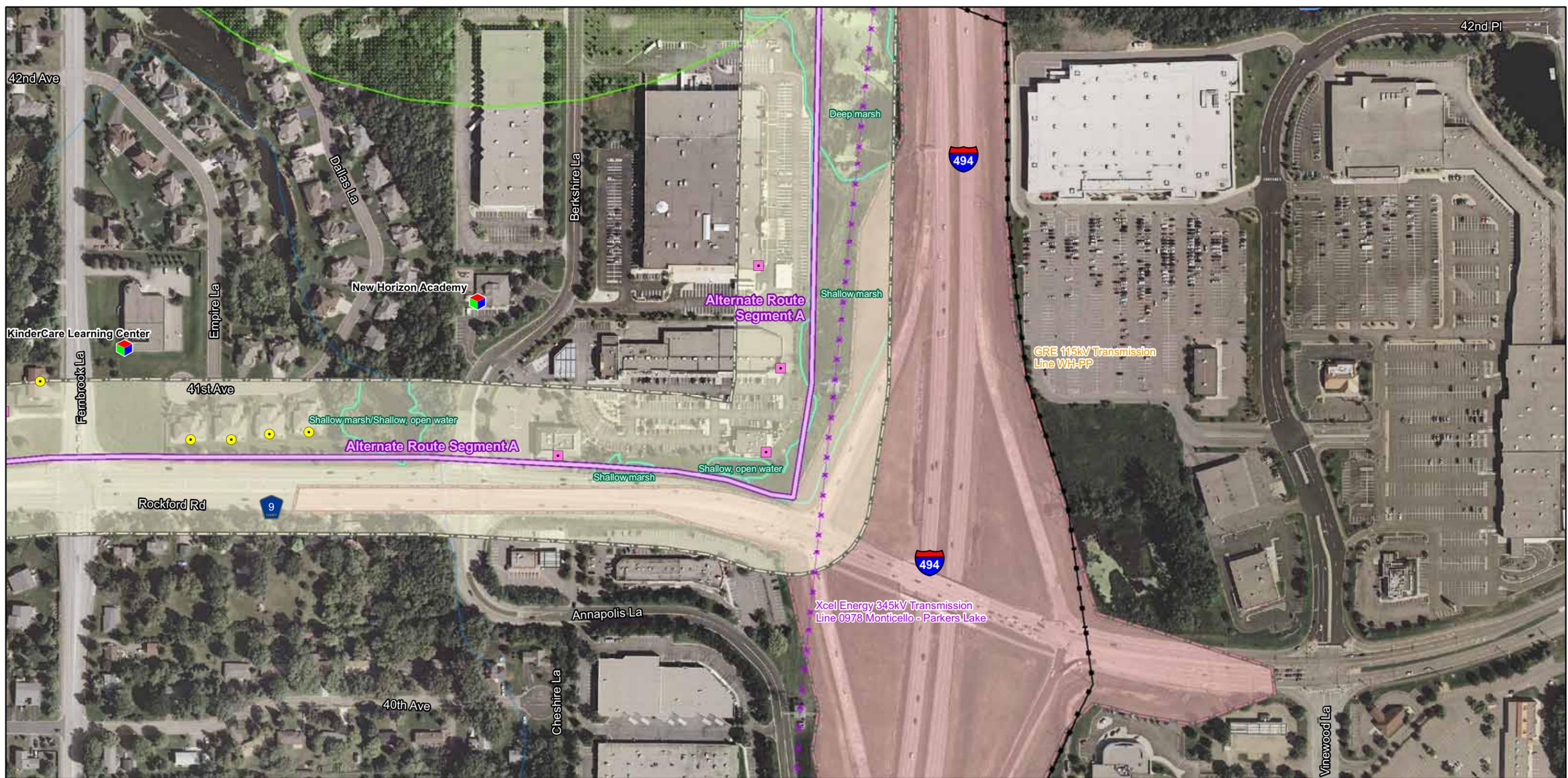


Figure C-17
DETAILED ROUTE MAP
Hollydale Project

Data Source: Barr, Xcel Energy, GRE, MN DNR, MNDOT, USGS.
 *Locations of residences and buildings within approximately 200-feet of the proposed rebuild area are shown. Points were placed on the side of the building closest to the existing transmission line.
 Natural Heritage Information System (NHIS) Data Copyright (2009), State of Minnesota, Department of Natural Resources. Rare features data included here were provided by the Division of Ecological Resources, Minnesota Department of Natural Resources (DNR), and were current as of (2009). These data are not based on an exhaustive inventory of the state. The lack of data for any geographic area shall not be construed to mean that no significant features are present.
 Background: 2009 Aerial Express Imagery for the Twin Cities.





- Proposed Route
- Alternate Route Segment A
- Alternate Route Segment B
- Alternate Route Segment C
- Alternate Route Segment D
- Proposed Route Segment A
- Proposed Route Segment B
- Proposed Route Segment C
- Proposed Route Segment D
- Existing Xcel Energy Substation
- Existing GRE Substation
- Existing GRE Transmission Line
- 69 kV
- 115 kV
- Existing Xcel Energy Transmission Line
- 69 kV
- 345 kV
- Railroad
- Regional Existing Trail
- State Trail
- Snowmobile Trail
- Proposed Route Width (200 feet total for rebuild section of existing transmission line and 400 feet total for new transmission line)
- Approximate MnDOT ROW
- Preferred Substation Site A
- Alternate Substation Site B
- Existing Substation Site

- Church
- Child Care Center
- School
- Residence*
- Non-Residential Building*
- Tower
- Public Water Inventory Watercourse
- Public Water Inventory Basin Wetlands (Barr, 2010) (Clipped to 200 Feet of Centerline)
- FEMA Q3 Data
- 100-year Floodplain
- 500-year Floodplain
- Regionally Significant Ecological Area
- MCBS Native Plant Community
- MCBS Sites of Biodiversity Significance
- Moderate Significance
- MCBS Railroad Rights-of-Way Prairie
- NHIS Rare Natural Features
- Terrestrial Community
- Terrestrial Community - Element Occurance Area

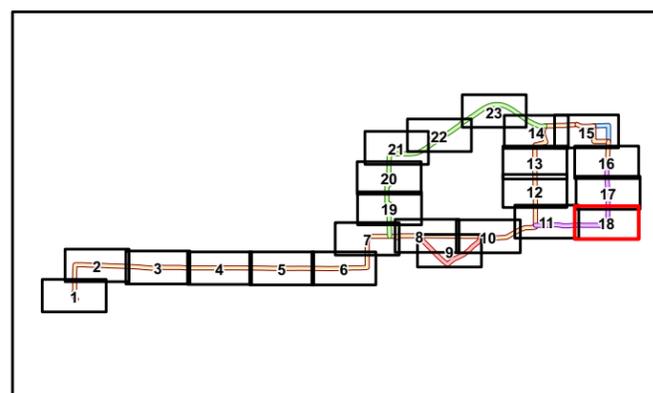
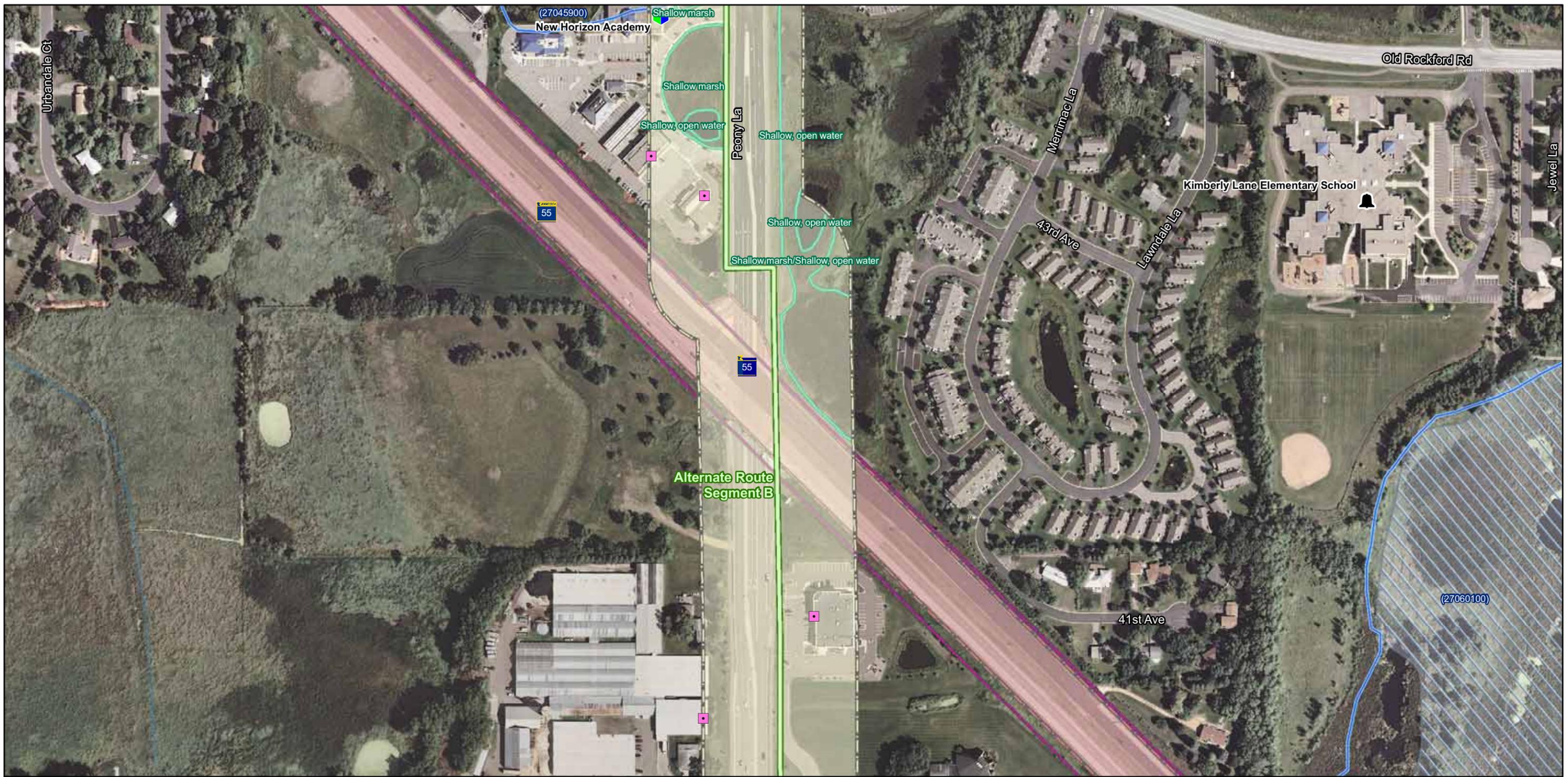


Figure C-18
DETAILED ROUTE MAP
Hollydale Project

Data Source: Barr, Xcel Energy, GRE, MN DNR, MNDOT, USGS.
*Locations of residences and buildings within approximately 200-feet of the proposed rebuild area are shown. Points were placed on the side of the building closest to the existing transmission line.
Natural Heritage Information System (NHIS) Data Copyright (2009), State of Minnesota, Department of Natural Resources. Rare features data included here were provided by the Division of Ecological Resources, Minnesota Department of Natural Resources (DNR), and were current as of (2009). These data are not based on an exhaustive inventory of the state. The lack of data for any geographic area shall not be construed to mean that no significant features are present.
Background: 2009 Aerial Express Imagery for the Twin Cities.



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Data Source: Barr, Xcel Energy, GRE, MN DNR, MNDOT, USGS.
 *Locations of residences and buildings within approximately 200-feet of the proposed rebuild area are shown. Points were placed on the side of the building closest to the existing transmission line.
 Natural Heritage Information System (NHIS) Data Copyright (2009), State of Minnesota, Department of Natural Resources. Rare features data included here were provided by the Division of Ecological Resources, Minnesota Department of Natural Resources (DNR), and were current as of (2009). These data are not based on an exhaustive inventory of the state. The lack of data for any geographic area shall not be construed to mean that no significant features are present.
 Background: 2009 Aerial Express Imagery for the Twin Cities.

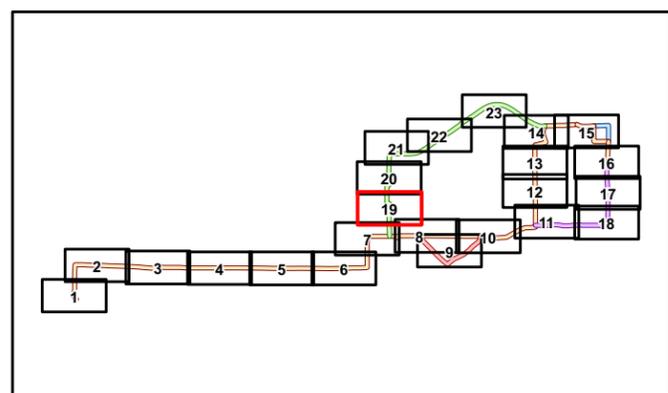


Figure C-19
 DETAILED ROUTE MAP
 Hollydale Project



- Proposed Route
- Alternate Route Segment A
- Alternate Route Segment B
- Alternate Route Segment C
- Alternate Route Segment D
- Proposed Route Segment A
- Proposed Route Segment B
- Proposed Route Segment C
- Proposed Route Segment D
- Existing Xcel Energy Substation
- Existing GRE Substation
- Existing GRE Transmission Line
- 69 kV
- 115 kV
- Existing Xcel Energy Transmission Line
- 69 kV
- 345 kV
- Railroad
- Regional Existing Trail
- State Trail
- Snowmobile Trail
- Proposed Route Width (200 feet total for rebuild section of existing transmission line and 400 feet total for new transmission line)
- Approximate MnDOT ROW
- Preferred Substation Site A
- Alternate Substation Site B
- Existing Substation Site
- Church
- Child Care Center
- School
- Residence*
- Non-Residential Building*
- Tower
- Public Water Inventory Watercourse
- Public Water Inventory Basin Wetlands (Barr, 2010) (Clipped to 200 Feet of Centerline)
- FEMA Q3 Data
- 100-year Floodplain
- 500-year Floodplain
- Regionally Significant Ecological Area
- MCBS Native Plant Community
- MCBS Sites of Biodiversity Significance
- Moderate Significance
- MCBS Railroad Rights-of-Way Prairie
- NHIS Rare Natural Features
- Terrestrial Community
- Terrestrial Community - Element Occurance Area

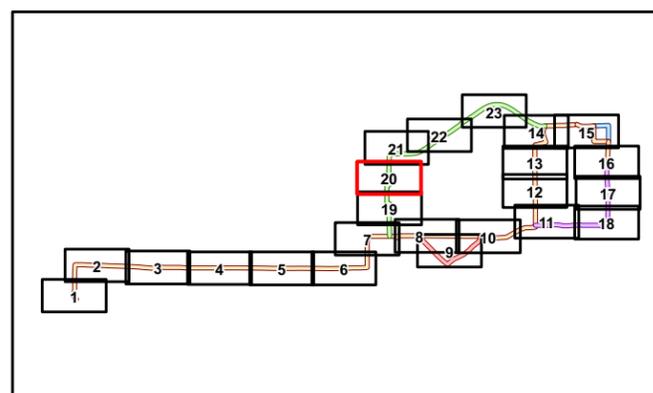


Figure C-20
DETAILED ROUTE MAP
Hollydale Project

Data Source: Barr, Xcel Energy, GRE, MN DNR, MNDOT, USGS.
 *Locations of residences and buildings within approximately 200-feet of the proposed rebuild area are shown. Points were placed on the side of the building closest to the existing transmission line.
 Natural Heritage Information System (NHIS) Data Copyright (2009), State of Minnesota, Department of Natural Resources. Rare features data included here were provided by the Division of Ecological Resources, Minnesota Department of Natural Resources (DNR), and were current as of (2009). These data are not based on an exhaustive inventory of the state. The lack of data for any geographic area shall not be construed to mean that no significant features are present.
 Background: 2009 Aerial Express Imagery for the Twin Cities.





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|---------------------------|--|--|---------------------------|------------------------------------|--|
| Proposed Route | Existing Xcel Energy Substation | Regional Existing Trail | Church | Public Water Inventory Watercourse | Regionally Significant Ecological Area |
| Alternate Route Segment A | Existing GRE Substation | State Trail | Child Care Center | Public Water Inventory Basin | MCBS Native Plant Community |
| Alternate Route Segment B | Existing GRE Transmission Line | Snowmobile Trail | School | Wetlands (Barr, 2010) | MCBS Sites of Biodiversity Significance |
| Alternate Route Segment C | 69 kV | Proposed Route Width (200 feet total for rebuild section of existing transmission line and 400 feet total for new transmission line) | Residence* | FEMA Q3 Data | Moderate Significance |
| Alternate Route Segment D | 115 kV | Approximate MnDOT ROW | Non-Residential Building* | 100-year Floodplain | MCBS Railroad Rights-of-Way Prairie |
| Proposed Route Segment A | Existing Xcel Energy Transmission Line | Preferred Substation Site A | Tower | 500-year Floodplain | NHIS Rare Natural Features |
| Proposed Route Segment B | 69 kV | Alternate Substation Site B | | | Terrestrial Community |
| Proposed Route Segment C | 345 kV | Existing Substation Site | | | Terrestrial Community - Element Occurance Area |
| Proposed Route Segment D | Railroad | | | | |

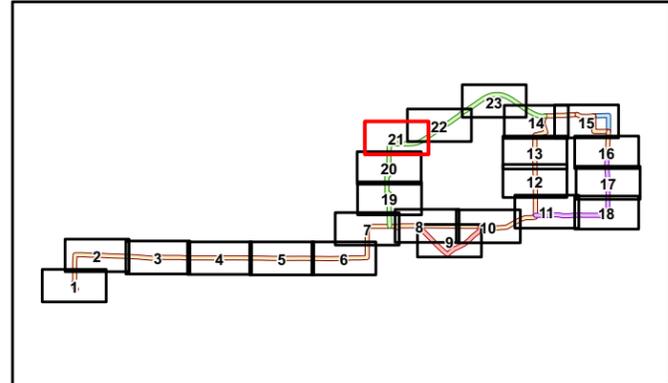
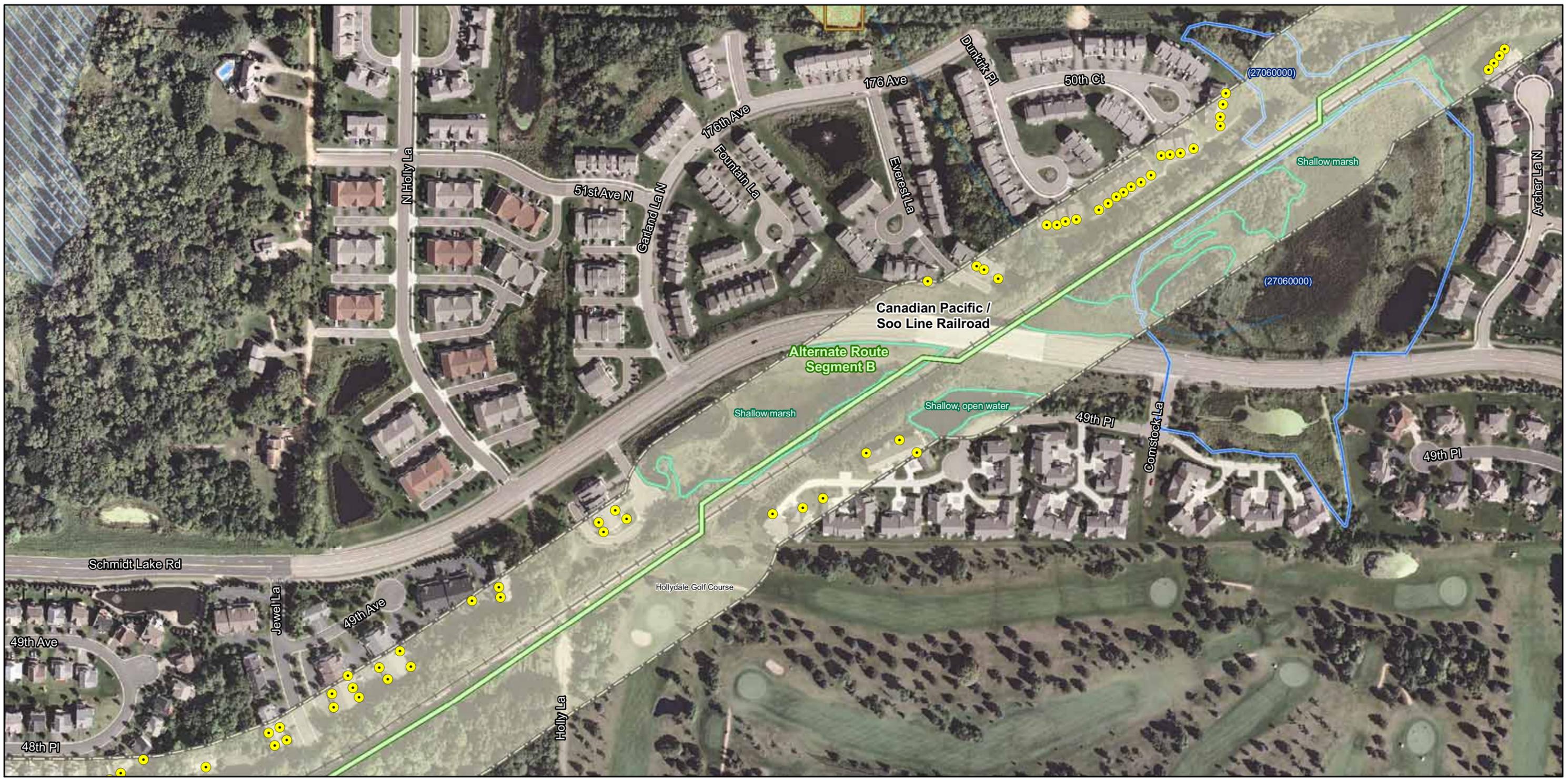


Figure C-21
DETAILED ROUTE MAP
Hollydale Project

Data Source: Barr, Xcel Energy, GRE, MN DNR, MNDOT, USGS.
*Locations of residences and buildings within approximately 200-feet of the proposed rebuild area are shown. Points were placed on the side of the building closest to the existing transmission line.
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Background: 2009 Aerial Express Imagery for the Twin Cities.





- Proposed Route
- Alternate Route Segment A
- Alternate Route Segment B
- Alternate Route Segment C
- Alternate Route Segment D
- Proposed Route Segment A
- Proposed Route Segment B
- Proposed Route Segment C
- Proposed Route Segment D
- Existing Xcel Energy Substation
- Existing GRE Substation
- Existing GRE Transmission Line
- 69 kV
- 115 kV
- Existing Xcel Energy Transmission Line
- 69 kV
- 345 kV
- Railroad
- Regional Existing Trail
- State Trail
- Snowmobile Trail
- Proposed Route Width (200 feet total for rebuild section of existing transmission line and 400 feet total for new transmission line)
- Approximate MnDOT ROW
- Preferred Substation Site A
- Alternate Substation Site B
- Existing Substation Site
- Church
- Child Care Center
- School
- Residence*
- Non-Residential Building*
- Tower
- Public Water Inventory Watercourse
- Public Water Inventory Basin Wetlands (Barr, 2010) (Clipped to 200 Feet of Centerline)
- FEMA Q3 Data
- 100-year Floodplain
- 500-year Floodplain
- Regionally Significant Ecological Area
- MCBS Native Plant Community
- MCBS Sites of Biodiversity Significance
- Moderate Significance
- MCBS Railroad Rights-of-Way Prairie
- NHIS Rare Natural Features
- Terrestrial Community
- Terrestrial Community - Element Occurance Area

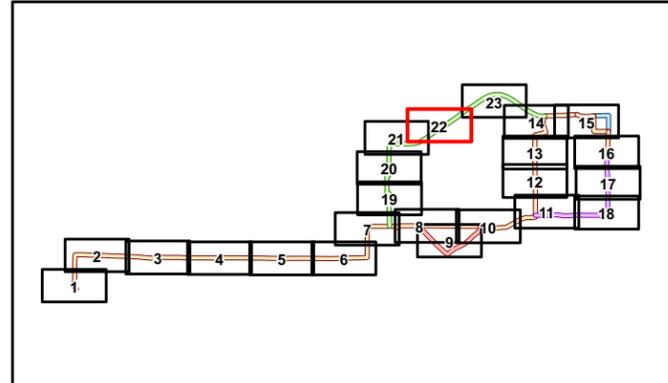
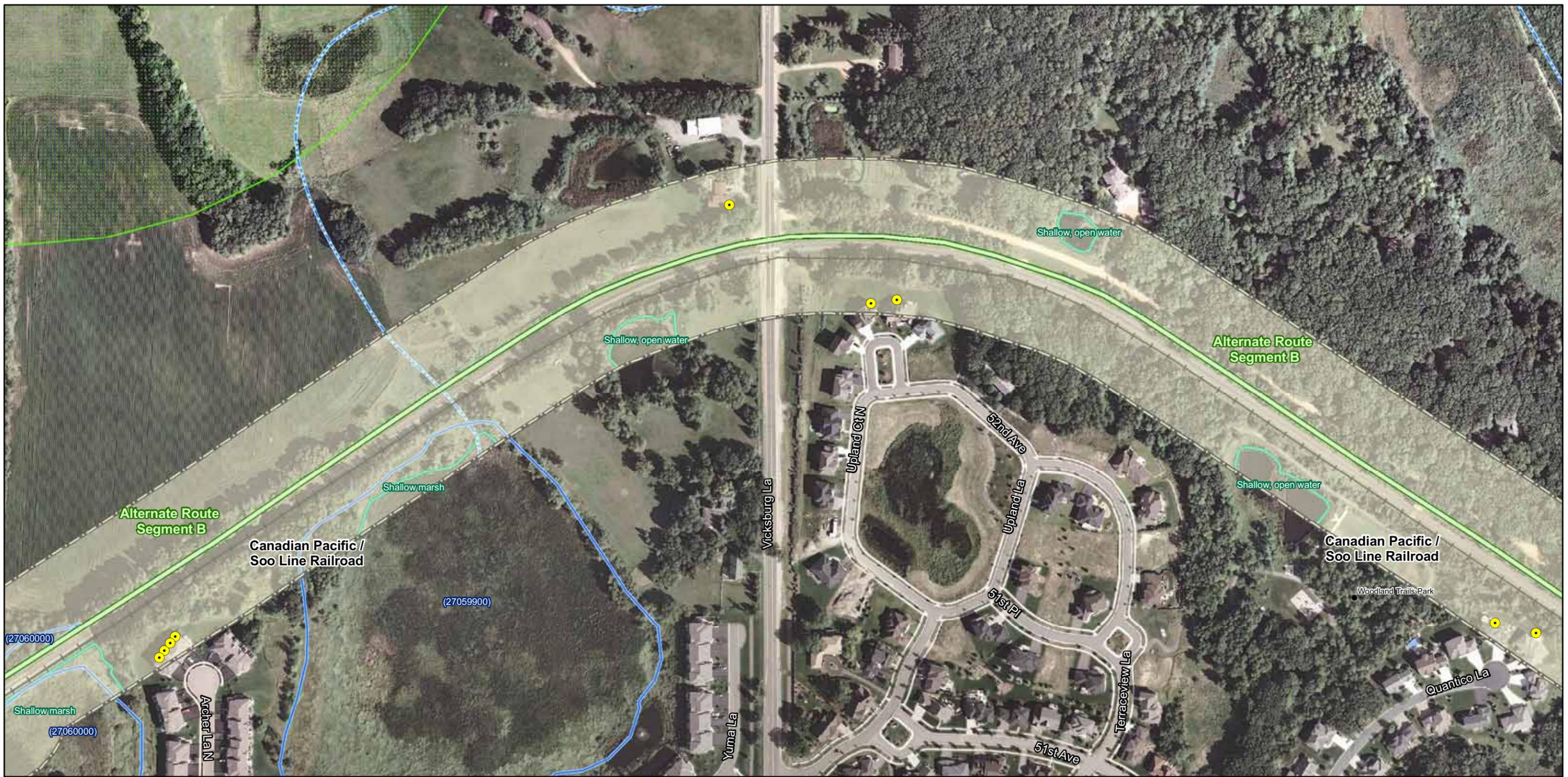


Figure C-22
DETAILED ROUTE MAP
Hollydale Project

Data Source: Barr, Xcel Energy, GRE, MN DNR, MNDOT, USGS.
 *Locations of residences and buildings within approximately 200-feet of the proposed rebuild area are shown. Points were placed on the side of the building closest to the existing transmission line.
 Natural Heritage Information System (NHIS) Data Copyright (2009), State of Minnesota, Department of Natural Resources. Rare features data included here were provided by the Division of Ecological Resources, Minnesota Department of Natural Resources (DNR), and were current as of (2009). These data are not based on an exhaustive inventory of the state. The lack of data for any geographic area shall not be construed to mean that no significant features are present.
 Background: 2009 Aerial Express Imagery for the Twin Cities.





- | | | | | | |
|---------------------------|--|--|---------------------------|---|--|
| Proposed Route | Existing Xcel Energy Substation | Regional Existing Trail | Church | Public Water Inventory Watercourse | Regionally Significant Ecological Area |
| Alternate Route Segment A | Existing GRE Substation | State Trail | Child Care Center | Public Water Inventory Basin Wetlands (Barr, 2010) (Clipped to 200 Feet of Centerline) FEMA Q3 Data | MCBS Native Plant Community |
| Alternate Route Segment B | Existing GRE Transmission Line | Snowmobile Trail | School | 100-year Floodplain | MCBS Sites of Biodiversity Significance |
| Alternate Route Segment C | 69 kV | Proposed Route Width (200 feet total for rebuild section of existing transmission line and 400 feet total for new transmission line) | Residence* | 500-year Floodplain | Moderate Significance |
| Alternate Route Segment D | 115 kV | Approximate MnDOT ROW | Non-Residential Building* | NHIS Rare Natural Features | MCBS Railroad Rights-of-Way Prairie |
| Proposed Route Segment A | Existing Xcel Energy Transmission Line | Preferred Substation Site A | Tower | Terrestrial Community | Terrestrial Community - Element Occurance Area |
| Proposed Route Segment B | 69 kV | Alternate Substation Site B | | | |
| Proposed Route Segment C | 345 kV | Existing Substation Site | | | |
| Proposed Route Segment D | Railroad | | | | |

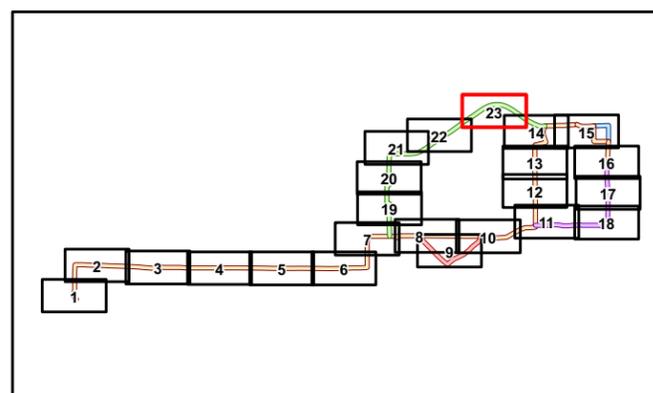


Figure C-23
DETAILED ROUTE MAP
Hollydale Project

Data Source: Barr, Xcel Energy, GRE, MN DNR, MNDOT, USGS.
*Locations of residences and buildings within approximately 200-feet of the proposed rebuild area are shown. Points were placed on the side of the building closest to the existing transmission line.
Natural Heritage Information System (NHIS) Data Copyright (2009), State of Minnesota, Department of Natural Resources. Rare features data included here were provided by the Division of Ecological Resources, Minnesota Department of Natural Resources (DNR), and were current as of (2009). These data are not based on an exhaustive inventory of the state. The lack of data for any geographic area shall not be construed to mean that no significant features are present.
Background: 2009 Aerial Express Imagery for the Twin Cities.

