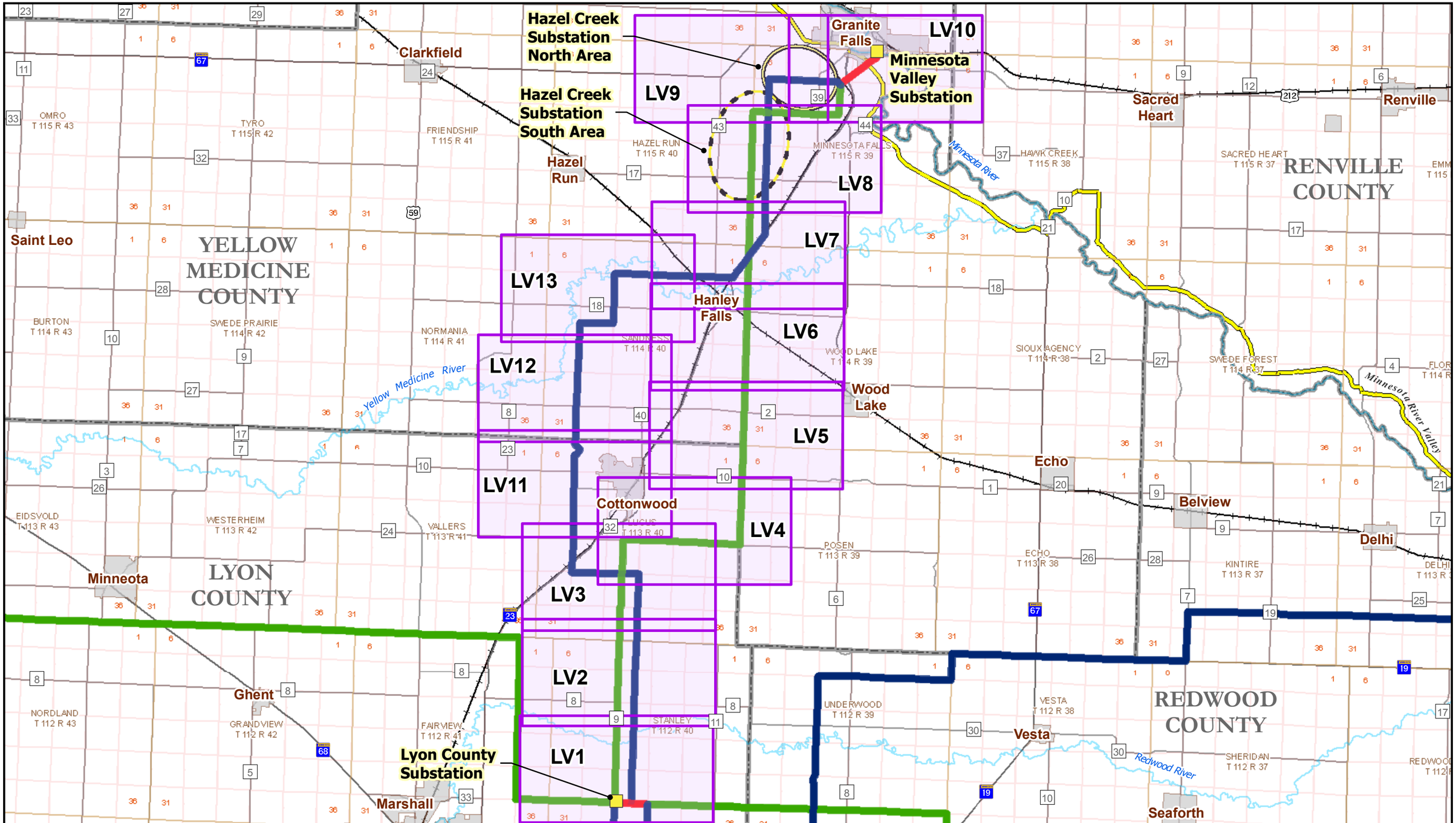

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0 2.5 5 Miles

Preferred Substation Area
Alternate Substation Area
Project Substations
City
Scenic Byway

Routes
Preferred
Alternate
Both Preferred & Alternate

Detailed Map Extent

Appendix B.3 - Detailed Route Maps Index
Lyon County Substation to Minnesota Valley Substation

Route Permit
Brookings County - Hampton
345 kV Transmission Line

Map Document: (\\mspe-gis-file\GISProj\GRE\64620\map_docs\mxd\Route_Permit\appendix\detail\indexes\map_11x17_L_index_area_LV_121508.mxd) 12/19/2008

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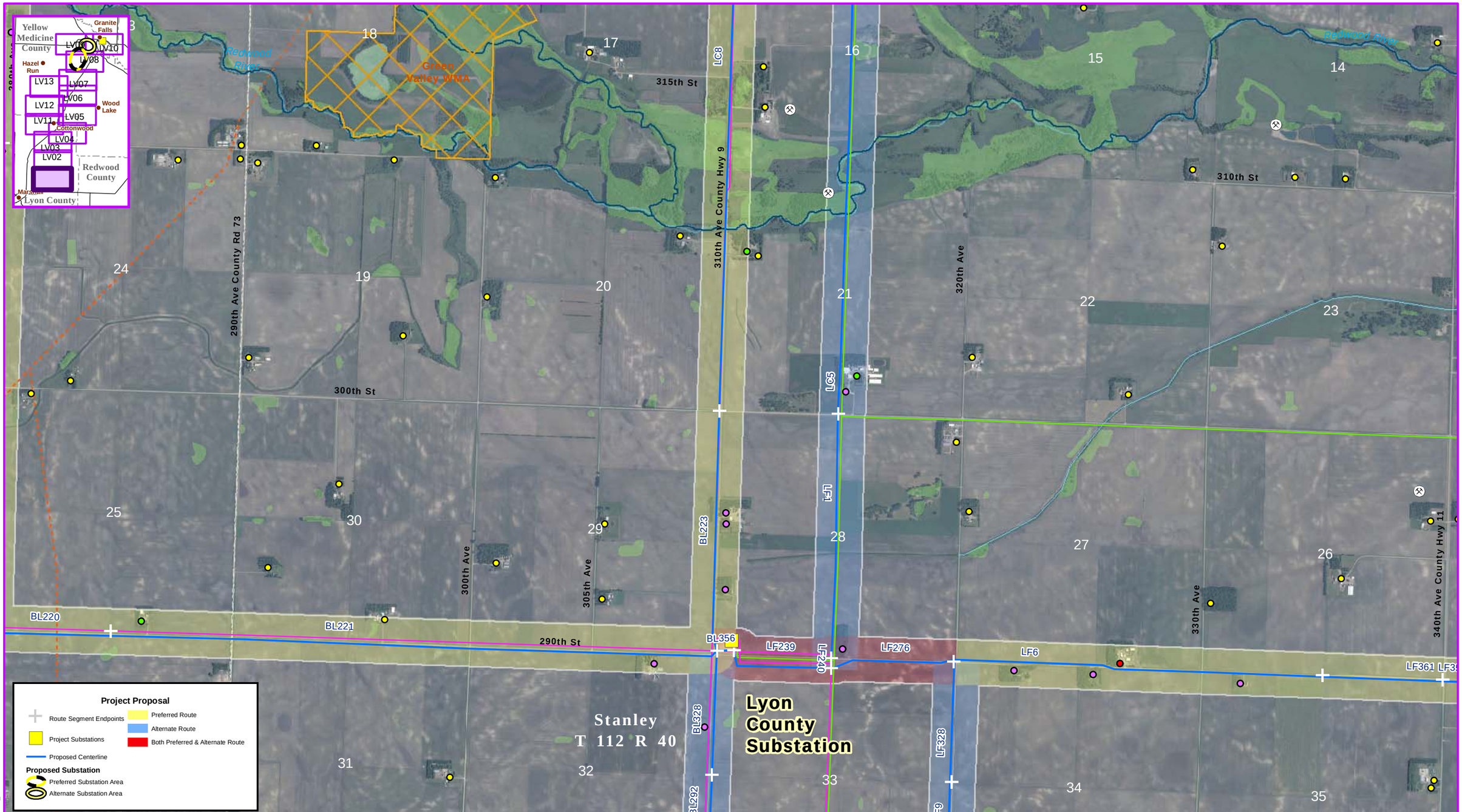

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0 1,000 2,000 Feet
1:24,000

Existing Substations

Transmission Lines
- 69 kV - Existing
- 115 kV - Existing
- 230 kV - Existing
- 345 kV - Existing
- 69 kV - Proposed
- 115 kV - Proposed
- 230 kV - Proposed

- Cemetery
- Churches
- Parks and Recreation
- Aggregate locations
- FCC Telecom Tower
- Certified Organic Farm
- Scenic Byway
- Planned MN DOT Upgrades
- Existing Pipeline

- Railroad Prairie
- Center Pivot Irrigation
- MCES Planned Interceptor

Trails
- Existing State & Regional Trail
- Regional Planned & Proposed Trail
- Snowmobile Trail

MCBS Biodiversity Significance
- Moderate Significance
- High Significance
- Outstanding Significance

Homes (from Proposed Centerline)
- 75 - 150 ft
- 150 - 300 ft
- 300 - 500 ft
- over 500 ft

MN State Wild and Scenic River
- Scenic
- Recreational

Hydrography and Wetlands
- NWI Wetland
- PWI Water
- MN Trout Streams
- Impaired Waters

- USFWS Easement
- MN SNA
- Metro Park
- Metro Significant
- USFWS WPA
- USFWS NWR

MN WMA
- State Funded
- Federally Funded

Data Source: Please refer to Section 12

Appendix B.3 - Sheet LV1
Lyon County Substation to
Minnesota Valley Substation
Detailed Route Maps

Route Permit
Brookings County - Hampton
345 kV Transmission Line

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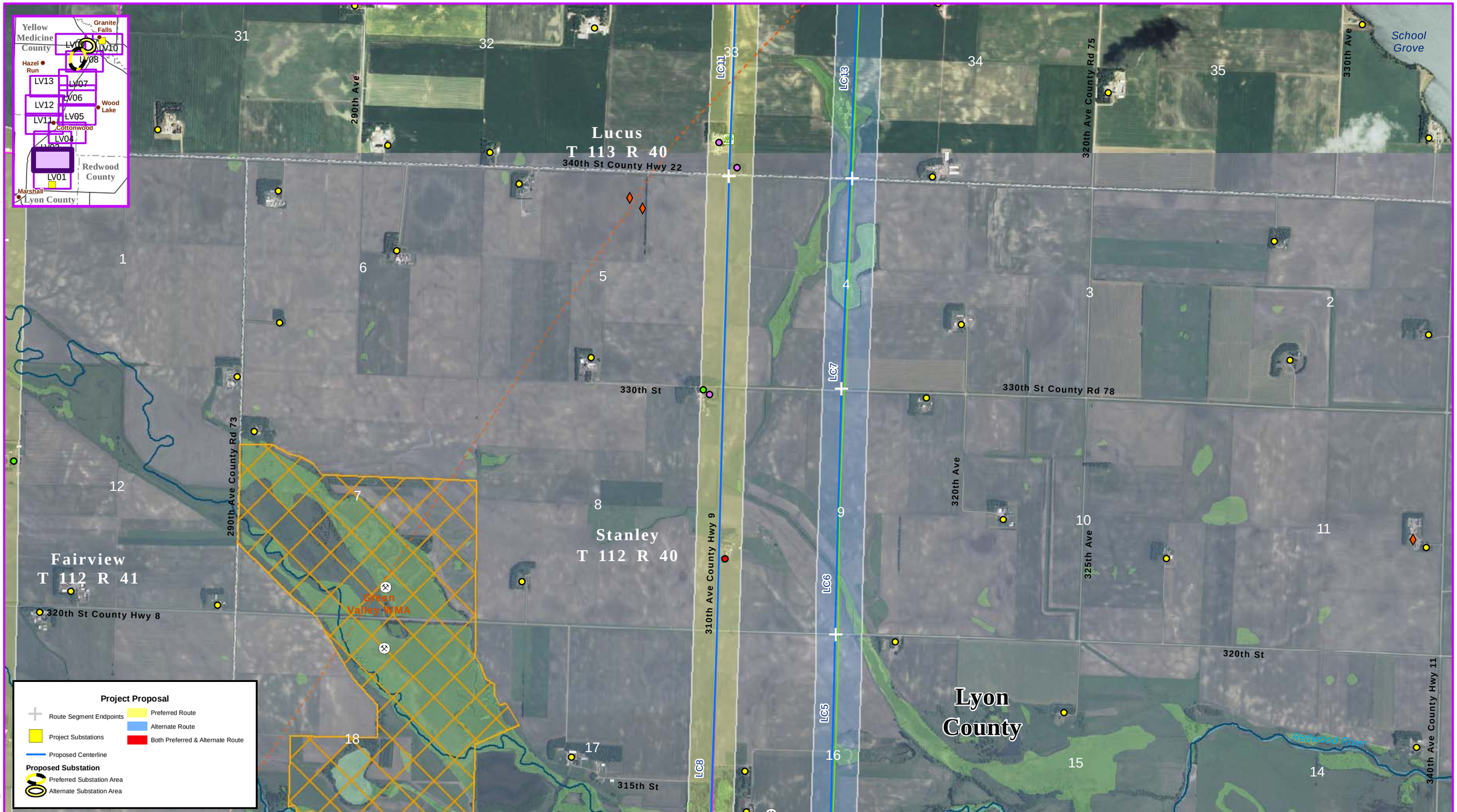

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1:24,000

Existing Substations

Transmission Lines
- 69 kV - Existing
- 115 kV - Existing
- 230 kV - Existing
- 345 kV - Existing
- 69 kV - Proposed
- 115 kV - Proposed
- 230 kV - Proposed

- Cemetery
- Churches
- Parks and Recreation
- Aggregate locations
- FCC Telecom Tower
- Certified Organic Farm
- Scenic Byway
- Planned MN DOT Upgrades
- Existing Pipeline

- Railroad Prairie
- Center Pivot Irrigation
- MCES Planned Interceptor

Trails
- Existing State & Regional Trail
- Regional Planned & Proposed Trail
- Snowmobile Trail

MCBS Biodiversity Significance
- Moderate Significance
- High Significance
- Outstanding Significance

Homes (from Proposed Centerline)
- 75 - 150 ft
- 150 - 300 ft
- 300 - 500 ft
- over 500 ft

MN State Wild and Scenic River
- Scenic
- Recreational

Hydrography and Wetlands
- NWI Wetland
- PWI Water
- MN Trout Streams
- Impaired Waters

- USFWS Easement
- MN SNA
- Metro Park
- Metro Significant
- USFWS WPA
- USFWS NWR

MN WMA
- State Funded
- Federally Funded

Data Source: Please refer to Section 12

Appendix B.3 - Sheet LV2
Lyon County Substation to
Minnesota Valley Substation
Detailed Route Maps

Route Permit
Brookings County - Hampton
345 kV Transmission Line

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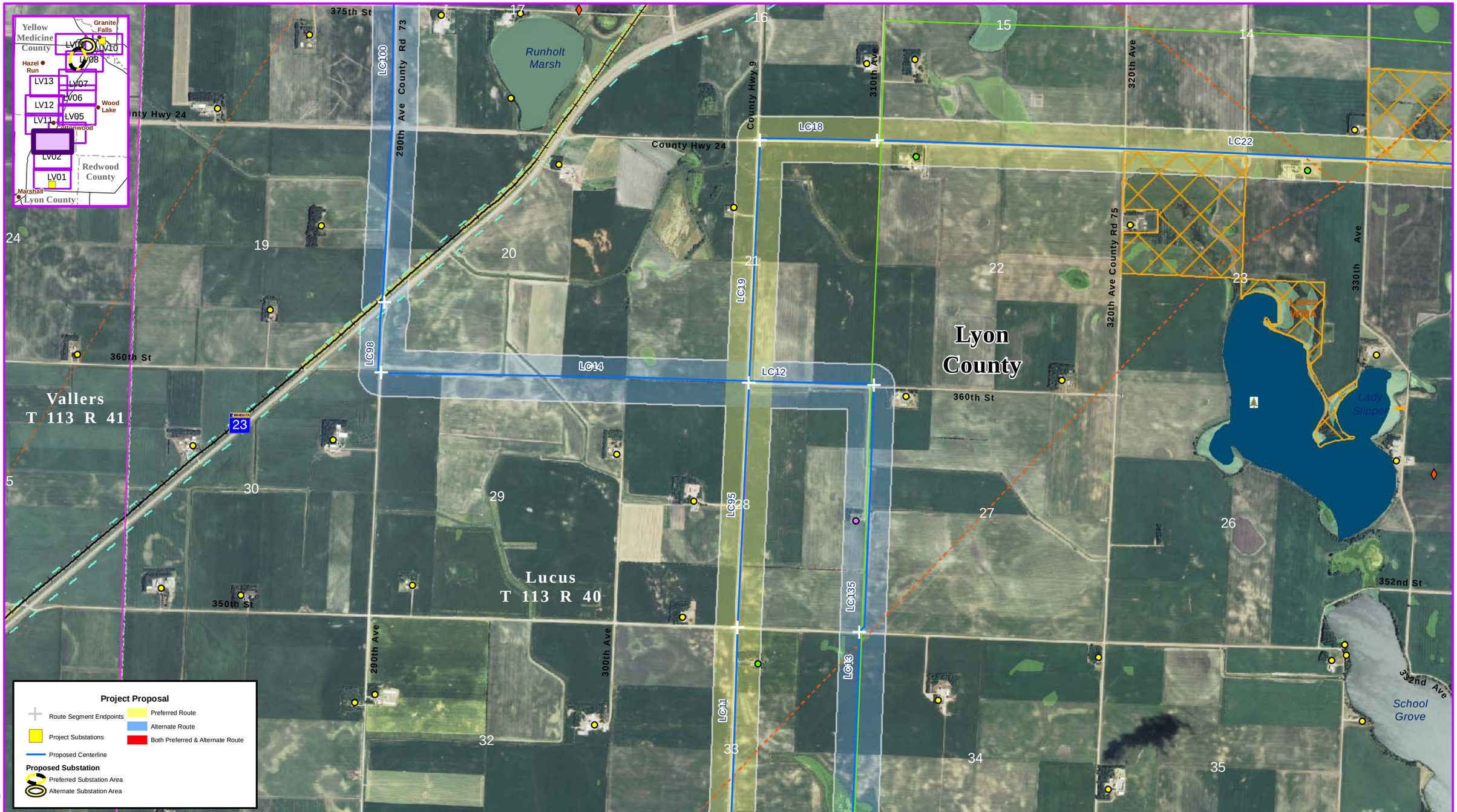

CapX2020
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0 1,000 2,000 Feet
1:24,000

Existing Substations

Transmission Lines
- 69 kV - Existing
- 115 kV - Existing
- 230 kV - Existing
- 345 kV - Existing
- 69 kV - Proposed
- 115 kV - Proposed
- 230 kV - Proposed

- Cemetery
- Churches
- Parks and Recreation
- Aggregate locations
- FCC Telecom Tower
- Certified Organic Farm
- Scenic Byway
- Planned MN DOT Upgrades
- Existing Pipeline

- Railroad Prairie
- Center Pivot Irrigation
- MCES Planned Interceptor

Trails
- Existing State & Regional Trail
- Regional Planned & Proposed Trail
- Snowmobile Trail

MCBS Biodiversity Significance
- Moderate Significance
- High Significance
- Outstanding Significance

Homes (from Proposed Centerline)
- 75 - 150 ft
- 150 - 300 ft
- 300 - 500 ft
- over 500 ft

MN State Wild and Scenic River
- Scenic
- Recreational

Hydrography and Wetlands
- NWI Wetland
- PWI Water
- MN Trout Streams
- Impaired Waters

- USFWS Easement
- MN SNA
- Metro Park
- Metro Significant
- USFWS WPA
- USFWS NWR

MN WMA
- State Funded
- Federally Funded

Data Source: Please refer to Section 12

Appendix B.3 - Sheet LV3
Lyon County Substation to
Minnesota Valley Substation
Detailed Route Maps

Route Permit
Brookings County - Hampton
345 kV Transmission Line

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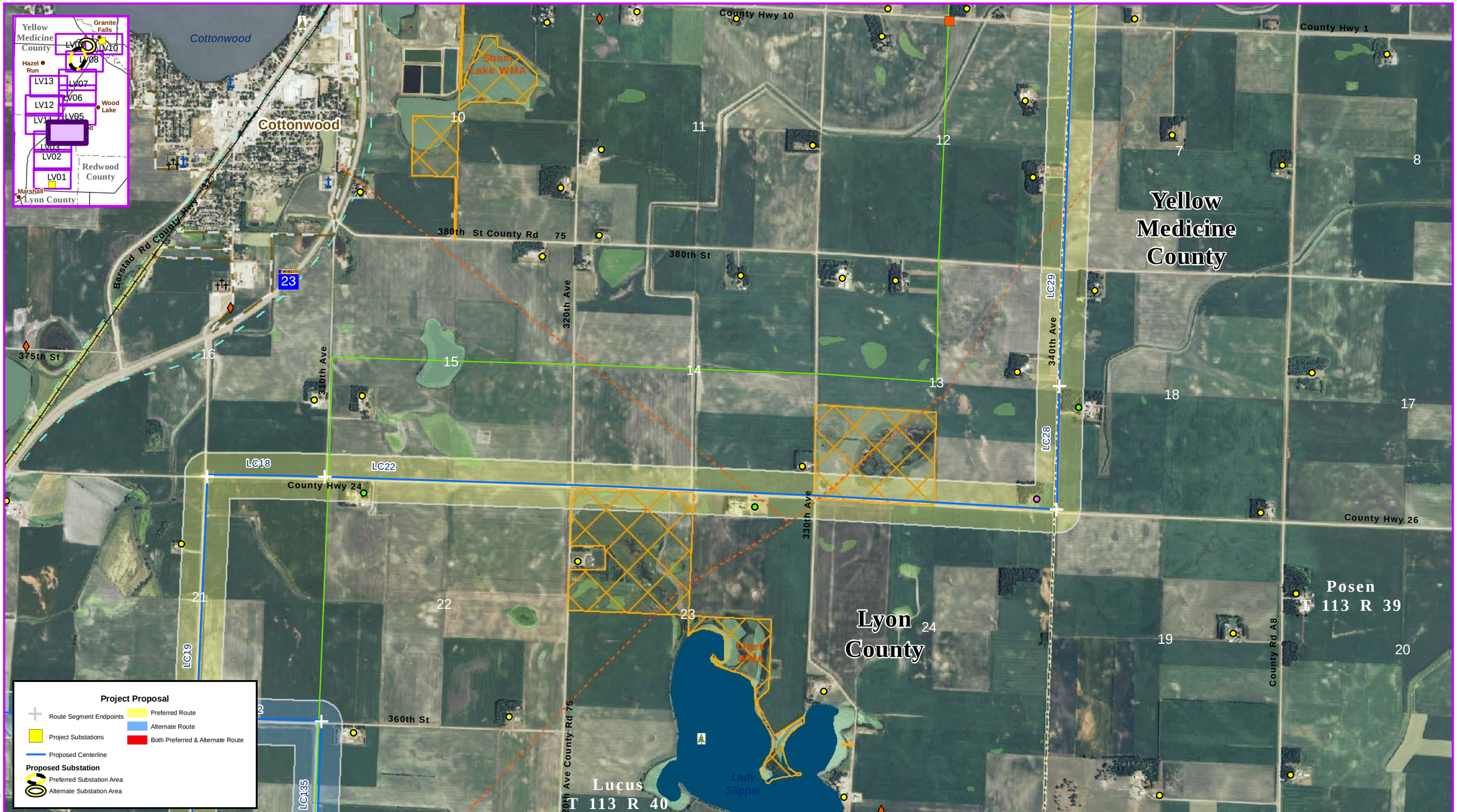

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0 1,000 2,000 Feet
1:24,000

Existing Substations

Transmission Lines
- 69 kV - Existing
- 115 kV - Existing
- 230 kV - Existing
- 345 kV - Existing
- 69 kV - Proposed
- 115 kV - Proposed
- 230 kV - Proposed

- Cemetery
- Churches
- Parks and Recreation
- Aggregate locations
- FCC Telecom Tower
- Certified Organic Farm
- Scenic Byway
- Planned MN DOT Upgrades
- Existing Pipeline

- Railroad Prairie
- Center Pivot Irrigation
- MCES Planned Interceptor

Trails
- Existing State & Regional Trail
- Regional Planned & Proposed Trail
- Snowmobile Trail

MCBS Biodiversity Significance
- Moderate Significance
- High Significance
- Outstanding Significance

Homes (from Proposed Centerline)
- 75 - 150 ft
- 150 - 300 ft
- 300 - 500 ft
- over 500 ft

MN State Wild and Scenic River
- Scenic
- Recreational

Hydrography and Wetlands
- NWI Wetland
- PWI Water
- MN Trout Streams
- Impaired Waters

- USFWS Easement
- MN SNA
- Metro Park
- Metro Significant
- USFWS WPA
- USFWS NWR

MN WMA
- State Funded
- Federally Funded

Data Source: Please refer to Section 12

Appendix B.3 - Sheet LV4
Lyon County Substation to
Minnesota Valley Substation
Detailed Route Maps

Route Permit
Brookings County - Hampton
345 kV Transmission Line

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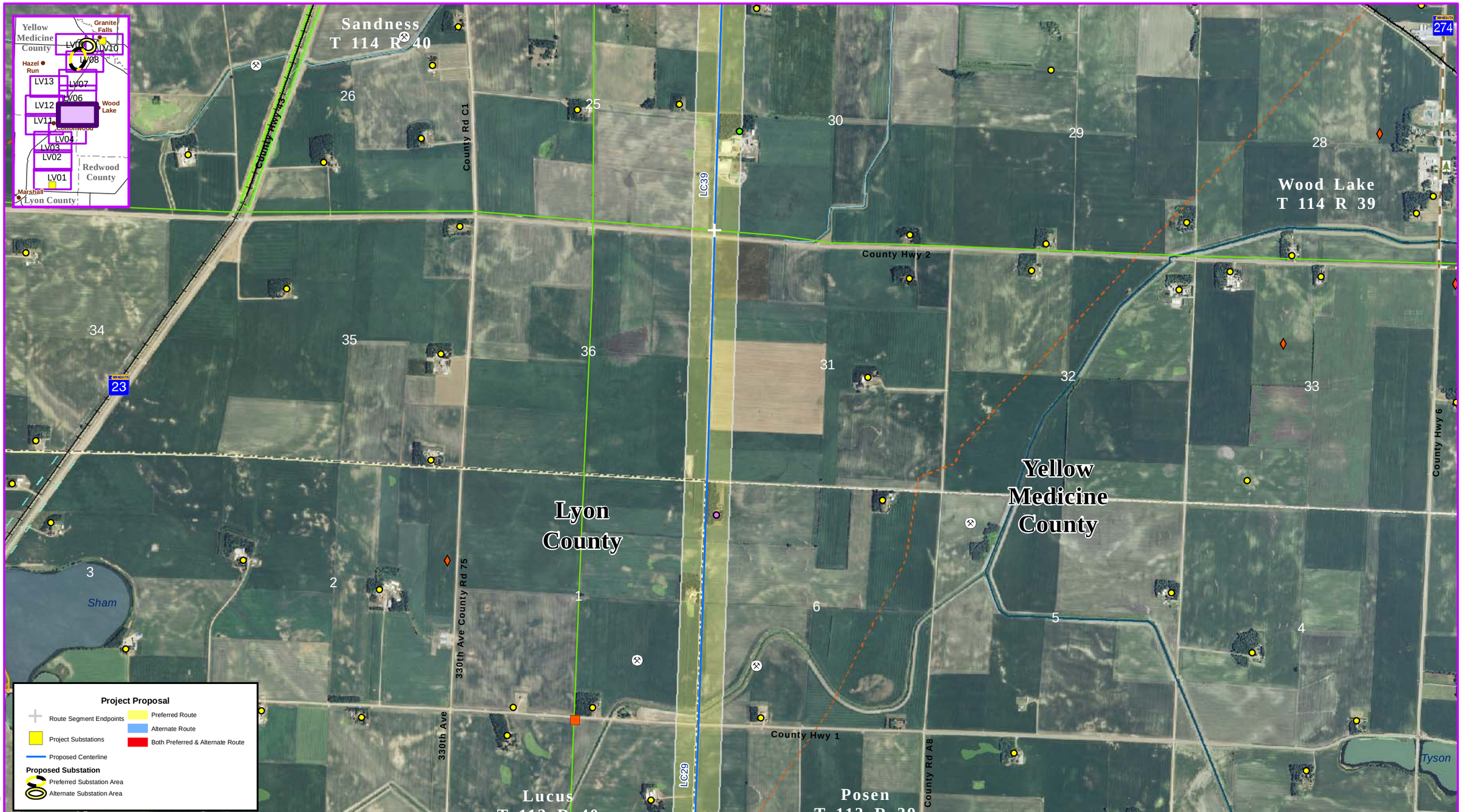

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0 1,000 2,000 Feet
1:24,000

Existing Substations
Transmission Lines
69 kV - Existing
115 kV - Existing
230 kV - Existing
345 kV - Existing
69 kV - Proposed
115 kV - Proposed
230 kV - Proposed

Cemetery
Churches
Parks and Recreation
Aggregate locations
FCC Telecom Tower
Certified Organic Farm
Scenic Byway
Planned MN DOT Upgrades
Existing Pipeline

Railroad Prairie
Center Pivot Irrigation
MCES Planned Interceptor
Trails
Existing State & Regional Trail
Regional Planned & Proposed Trail
Snowmobile Trail
MCBS Biodiversity Significance
Moderate Significance
High Significance
Outstanding Significance

Homes (from Proposed Centerline)
75 - 150 ft
150 - 300 ft
300 - 500 ft
over 500 ft

MN State Wild and Scenic River
Scenic
Recreational
Hydrography and Wetlands
NWI Wetland
PWI Water
MN Trout Streams
Impaired Waters

USFWS Easement
MN SNA
Metro Park
Metro Significant
USFWS WPA
USFWS NWR
MN WMA
State Funded
Federally Funded

Appendix B.3 - Sheet LV5
Lyon County Substation to
Minnesota Valley Substation
Detailed Route Maps

Route Permit
Brookings County - Hampton
345 kV Transmission Line

Data Source: Please refer to Section 12

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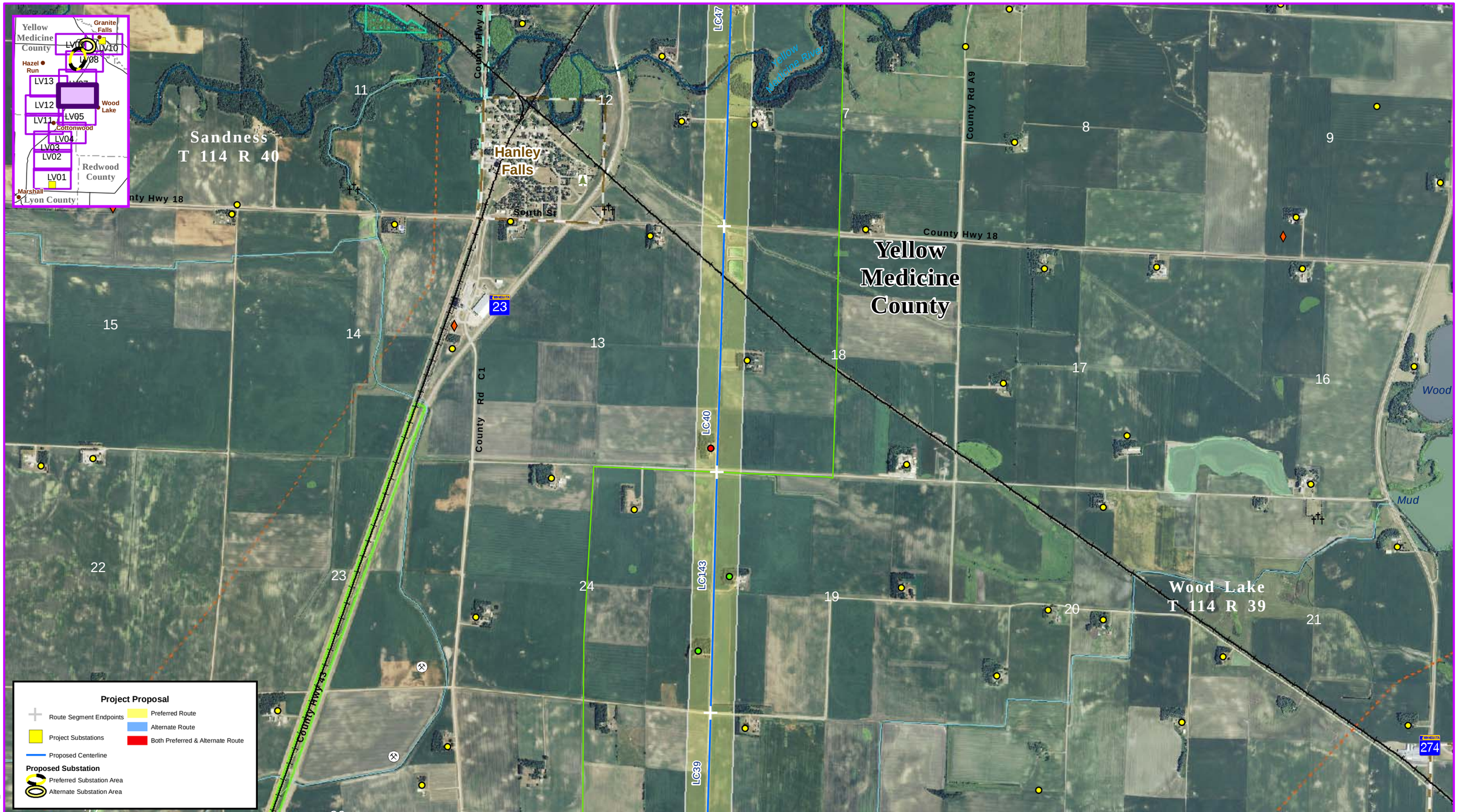

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Existing Substations

Transmission Lines
- 69 kV - Existing
- 115 kV - Existing
- 230 kV - Existing
- 345 kV - Existing
- 69 kV - Proposed
- 115 kV - Proposed
- 230 kV - Proposed

- Cemetery
- Churches
- Parks and Recreation
- Aggregate locations
- FCC Telecom Tower
- Certified Organic Farm
- Scenic Byway
- Planned MN DOT Upgrades
- Existing Pipeline

- Railroad Prairie
- Center Pivot Irrigation
- MCES Planned Interceptor

Trails
- Existing State & Regional Trail
- Regional Planned & Proposed Trail
- Snowmobile Trail

MCBS Biodiversity Significance
- Moderate Significance
- High Significance
- Outstanding Significance

Homes (from Proposed Centerline)
- 75 - 150 ft
- 150 - 300 ft
- 300 - 500 ft
- over 500 ft

MN State Wild and Scenic River
- Scenic
- Recreational

Hydrography and Wetlands
- NWI Wetland
- PWI Water
- MN Trout Streams
- Impaired Waters

- USFWS Easement
- MN SNA
- Metro Park
- Metro Significant
- USFWS WPA
- USFWS NWR

MN WMA
- State Funded
- Federally Funded

Appendix B.3 - Sheet LV6
Lyon County Substation to
Minnesota Valley Substation
Detailed Route Maps

Route Permit
Brookings County - Hampton
345 kV Transmission Line

Data Source: Please refer to Section 12

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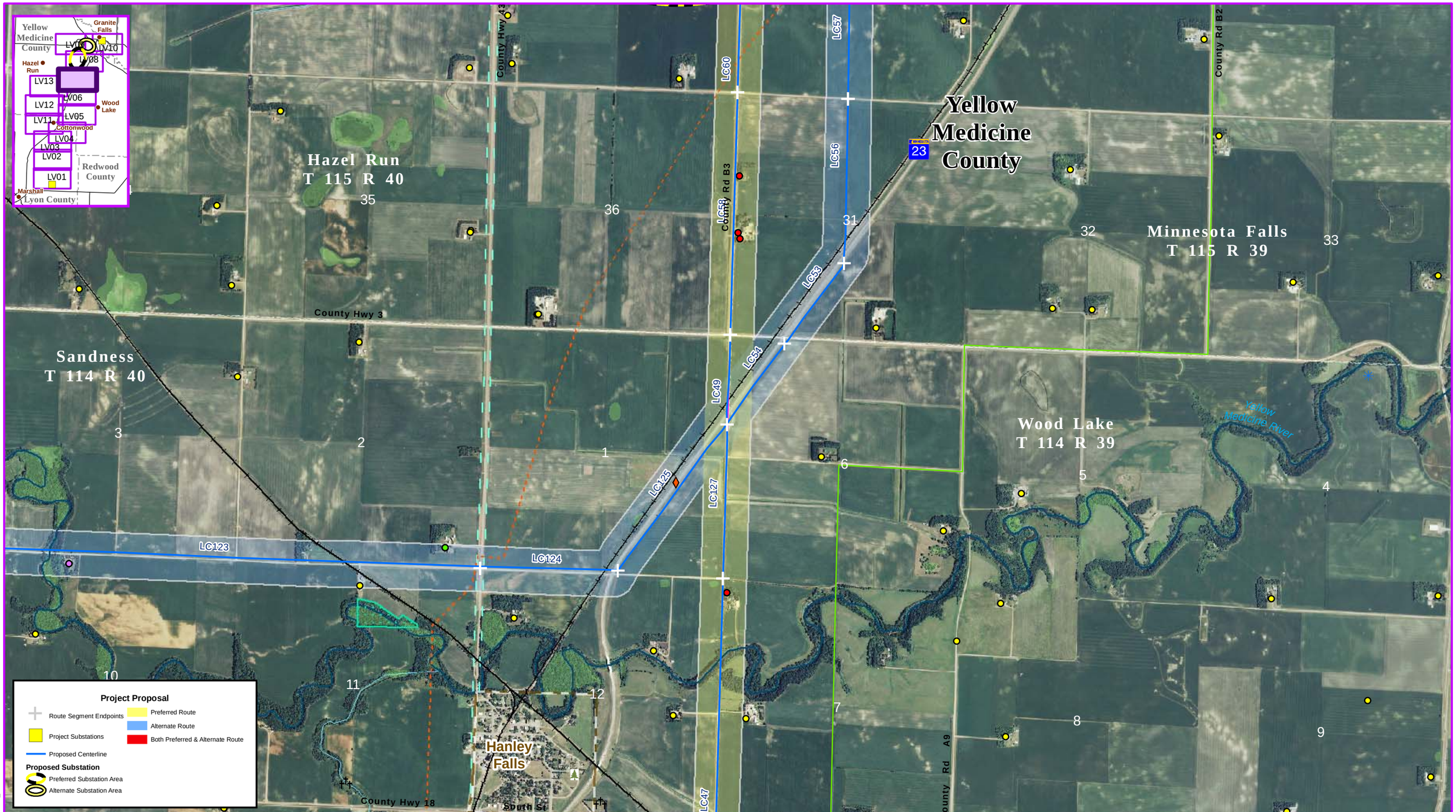

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Existing Substations

Transmission Lines
- 69 kV - Existing
- 115 kV - Existing
- 230 kV - Existing
- 345 kV - Existing
- 69 kV - Proposed
- 115 kV - Proposed
- 230 kV - Proposed

- Cemetery
- Churches
- Parks and Recreation
- Aggregate locations
- FCC Telecom Tower
- Certified Organic Farm
- Scenic Byway
- Planned MN DOT Upgrades
- Existing Pipeline

- Railroad Prairie
- Center Pivot Irrigation
- MCES Planned Interceptor

Trails
- Existing State & Regional Trail
- Regional Planned & Proposed Trail
- Snowmobile Trail

MCBS Biodiversity Significance
- Moderate Significance
- High Significance
- Outstanding Significance

Homes (from Proposed Centerline)
- 75 - 150 ft
- 150 - 300 ft
- 300 - 500 ft
- over 500 ft

MN State Wild and Scenic River
- Scenic
- Recreational

Hydrography and Wetlands
- NWI Wetland
- PWI Water
- MN Trout Streams
- Impaired Waters

- USFWS Easement
- MN SNA
- Metro Park
- Metro Significant
- USFWS WPA
- USFWS NWR

MN WMA
- State Funded
- Federally Funded

Data Source: Please refer to Section 12

Appendix B.3 - Sheet LV7
Lyon County Substation to
Minnesota Valley Substation
Detailed Route Maps

Route Permit
Brookings County - Hampton
345 kV Transmission Line

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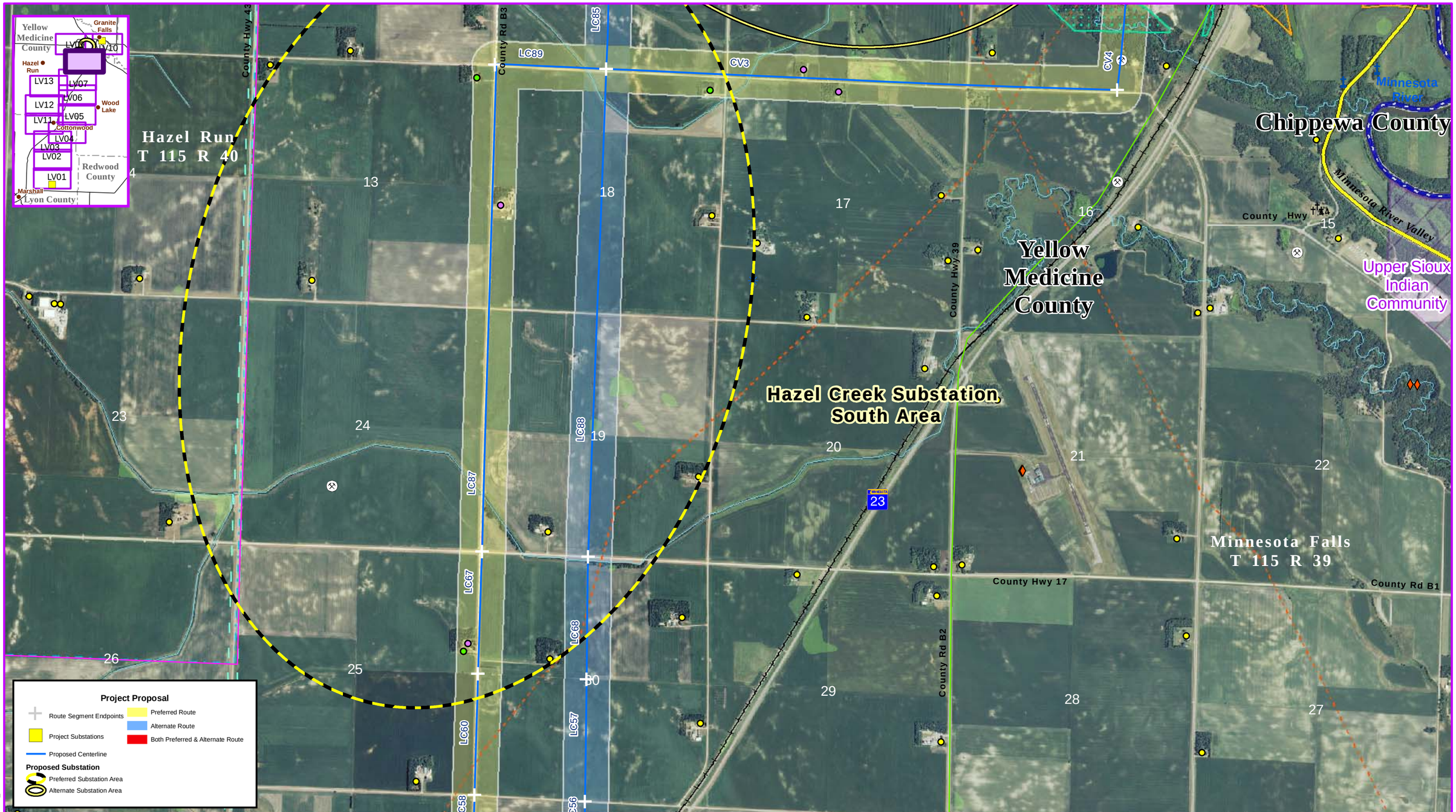

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Existing Substations
Transmission Lines
69 kV - Existing
115 kV - Existing
230 kV - Existing
345 kV - Existing
69 kV - Proposed
115 kV - Proposed
230 kV - Proposed

Cemetery
Churches
Parks and Recreation
Aggregate locations
FCC Telecom Tower
Certified Organic Farm
Scenic Byway
Planned MN DOT Upgrades
Existing Pipeline

Railroad Prairie
Center Pivot Irrigation
MCES Planned Interceptor
Trails
Existing State & Regional Trail
Regional Planned & Proposed Trail
Snowmobile Trail
MCBS Biodiversity Significance
Moderate Significance
High Significance
Outstanding Significance

Homes (from Proposed Centerline)
75 - 150 ft
150 - 300 ft
300 - 500 ft
over 500 ft

MN State Wild and Scenic River
Scenic
Recreational
Hydrography and Wetlands
NWI Wetland
PWI Water
MN Trout Streams
Impaired Waters

USFWS Easement
MN SNA
Metro Park
Metro Significant
USFWS WPA
USFWS NWR
MN WMA
State Funded
Federally Funded

Data Source: Please refer to Section 12

Appendix B.3 - Sheet LV8
Lyon County Substation to
Minnesota Valley Substation
Detailed Route Maps

Route Permit
Brookings County - Hampton
345 kV Transmission Line

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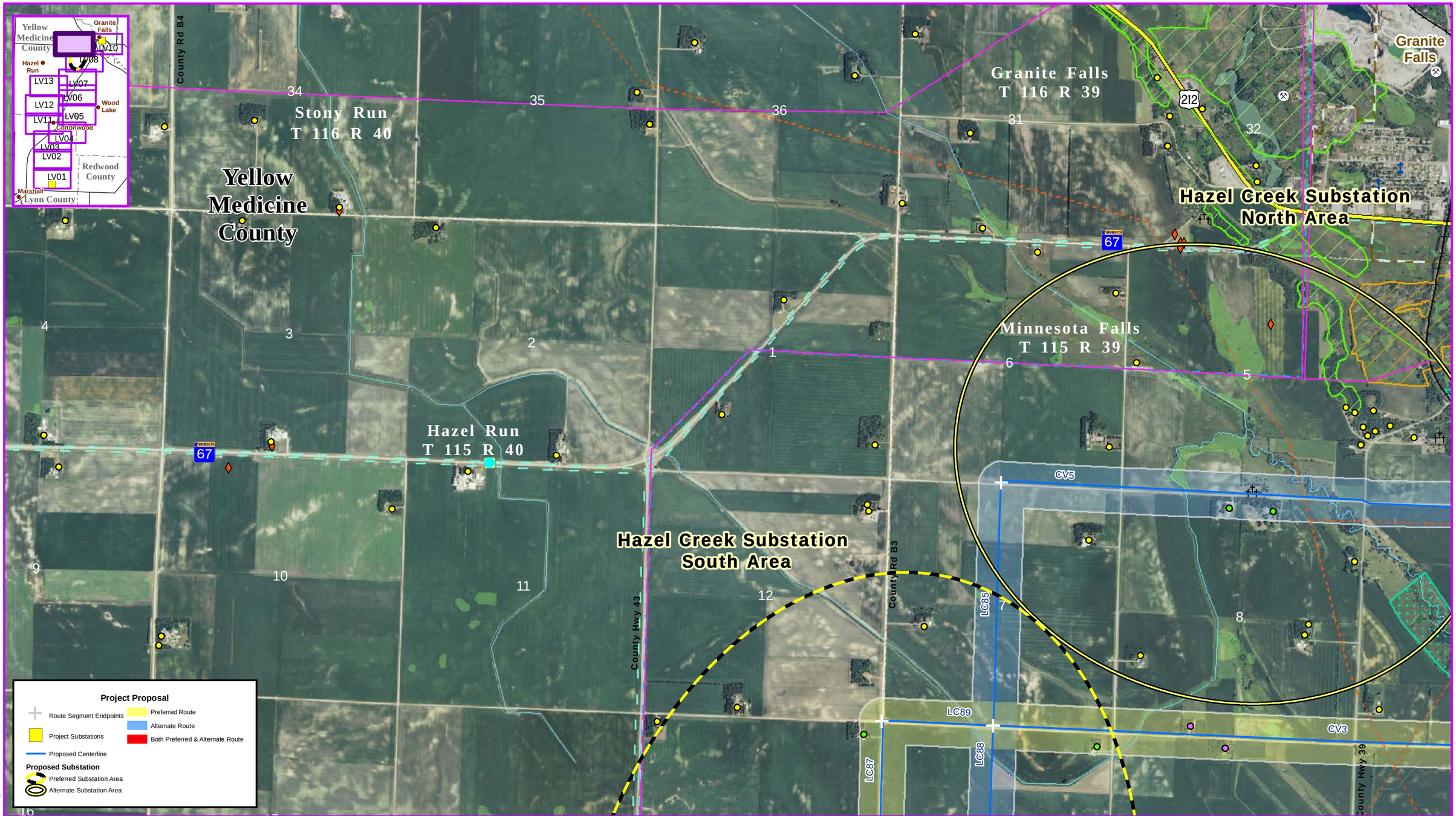

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Existing Substations

Transmission Lines
- 69 kV - Existing
- 115 kV - Existing
- 230 kV - Existing
- 345 kV - Existing
- 69 kV - Proposed
- 115 kV - Proposed
- 230 kV - Proposed

- Cemetery
- Churches
- Parks and Recreation
- Aggregate locations
- FCC Telecom Tower
- Certified Organic Farm
- Scenic Byway
- Planned MN DOT Upgrades
- Existing Pipeline

- Railroad Prairie
- Center Pivot Irrigation
- MCES Planned Interceptor

Trails
- Existing State & Regional Trail
- Regional Planned & Proposed Trail
- Snowmobile Trail

MCBS Biodiversity Significance
- Moderate Significance
- High Significance
- Outstanding Significance

Homes (from Proposed Centerline)
- 75 - 150 ft
- 150 - 300 ft
- 300 - 500 ft
- over 500 ft

MN State Wild and Scenic River
- Scenic
- Recreational

Hydrography and Wetlands
- NWI Wetland
- PWI Water
- MN Trout Streams
- Impaired Waters

- USFWS Easement
- MN SNA
- Metro Park
- Metro Significant
- USFWS WPA
- USFWS NWR

MN WMA
- State Funded
- Federally Funded

Data Source: Please refer to Section 12

Appendix B.3 - Sheet LV9
Lyon County Substation to
Minnesota Valley Substation
Detailed Route Maps

Route Permit
Brookings County - Hampton
345 kV Transmission Line

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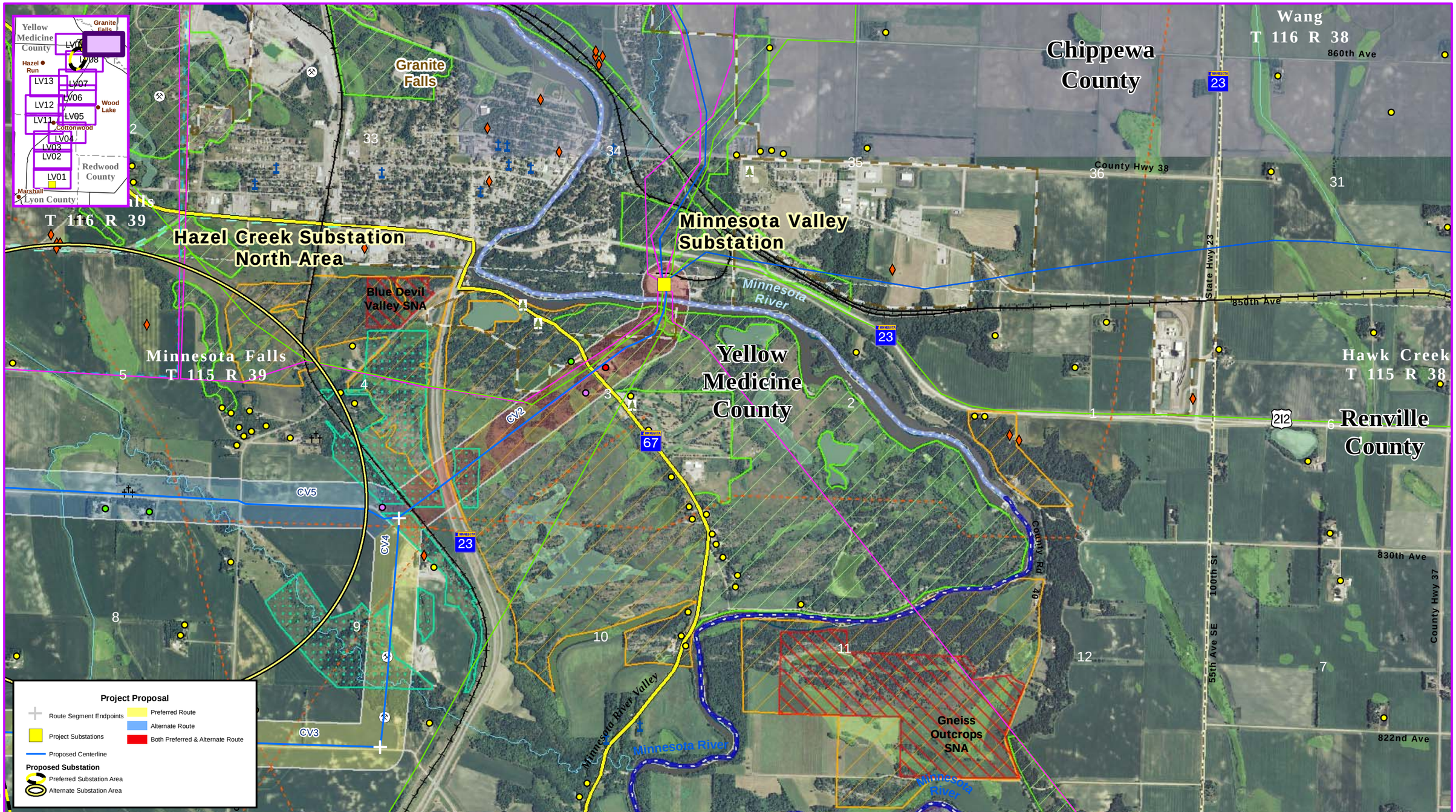

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1:24,000

Existing Substations
Transmission Lines
69 kV - Existing
115 kV - Existing
230 kV - Existing
345 kV - Existing
69 kV - Proposed
115 kV - Proposed
230 kV - Proposed

Cemetery
Churches
Parks and Recreation
Aggregate locations
FCC Telecom Tower
Certified Organic Farm
Scenic Byway
Planned MN DOT Upgrades
Existing Pipeline

Railroad Prairie
Center Pivot Irrigation
MCES Planned Interceptor
Trails
Existing State & Regional Trail
Regional Planned & Proposed Trail
Snowmobile Trail
MCBS Biodiversity Significance
Moderate Significance
High Significance
Outstanding Significance

Homes (from Proposed Centerline)
75 - 150 ft
150 - 300 ft
300 - 500 ft
over 500 ft

MN State Wild and Scenic River
Scenic
Recreational
Hydrography and Wetlands
NWI Wetland
PWI Water
MN Trout Streams
Impaired Waters

USFWS Easement
MN SNA
Metro Park
Metro Significant
USFWS WPA
USFWS NWR
MN WMA
State Funded
Federally Funded

Appendix B.3 - Sheet LV10
Lyon County Substation to
Minnesota Valley Substation
Detailed Route Maps

Route Permit
Brookings County - Hampton
345 kV Transmission Line

Data Source: Please refer to Section 12

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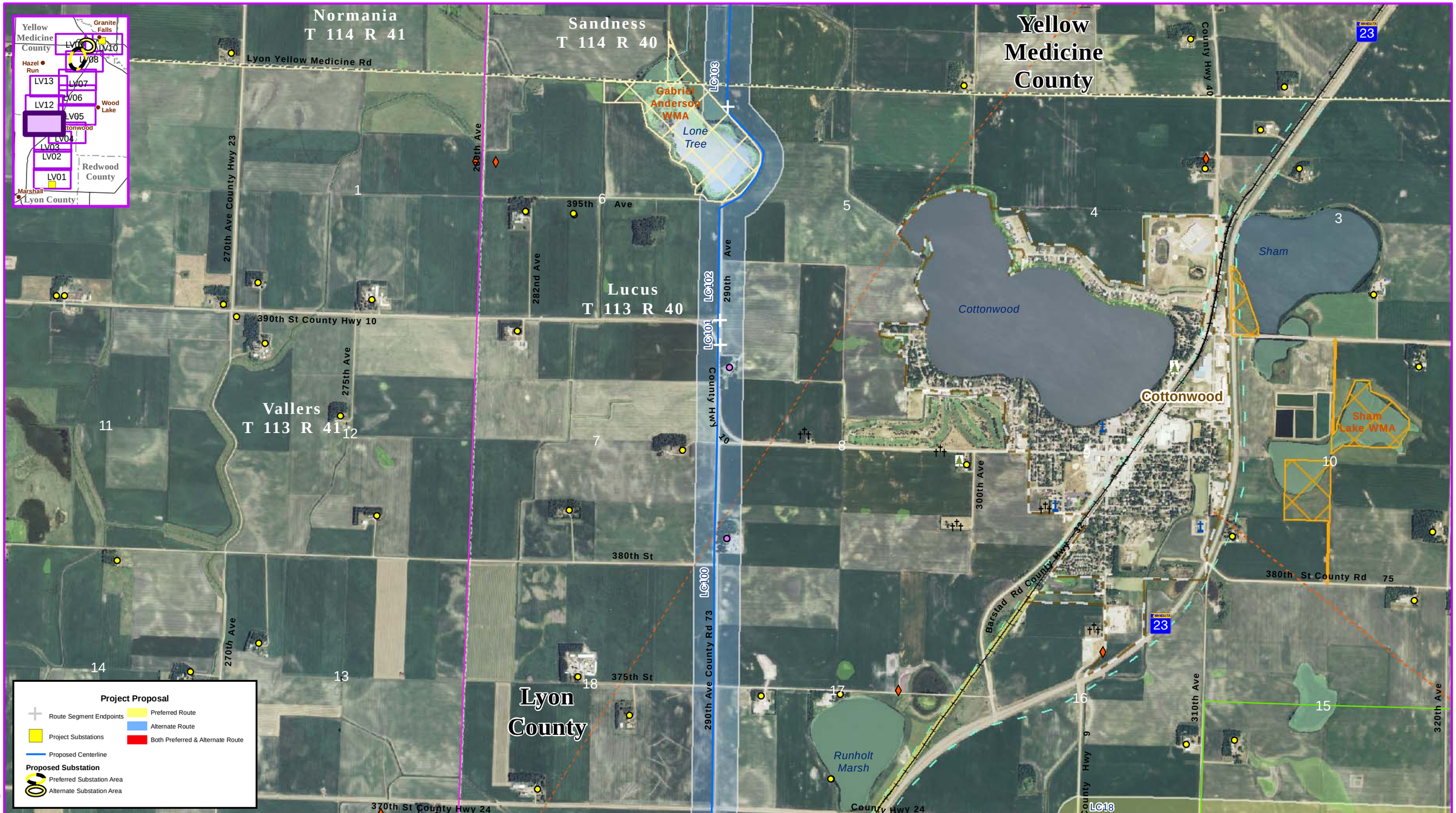

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0 1,000 2,000 Feet
1:24,000

Existing Substations

Transmission Lines
- 69 kV - Existing
- 115 kV - Existing
- 230 kV - Existing
- 345 kV - Existing
- 69 kV - Proposed
- 115 kV - Proposed
- 230 kV - Proposed

- Cemetery
- Churches
- Parks and Recreation
- Aggregate locations
- FCC Telecom Tower
- Certified Organic Farm
- Scenic Byway
- Planned MN DOT Upgrades
- Existing Pipeline

- Railroad Prairie
- Center Pivot Irrigation
- MCES Planned Interceptor

Trails
- Existing State & Regional Trail
- Regional Planned & Proposed Trail
- Snowmobile Trail

MCBS Biodiversity Significance
- Moderate Significance
- High Significance
- Outstanding Significance

Homes (from Proposed Centerline)
- 75 - 150 ft
- 150 - 300 ft
- 300 - 500 ft
- over 500 ft

MN State Wild and Scenic River
- Scenic
- Recreational

Hydrography and Wetlands
- NWI Wetland
- PWI Water
- MN Trout Streams
- Impaired Waters

- USFWS Easement
- MN SNA
- Metro Park
- Metro Significant
- USFWS WPA
- USFWS NWR

MN WMA
- State Funded
- Federally Funded

Data Source: Please refer to Section 12

Appendix B.3 - Sheet LV11
Lyon County Substation to
Minnesota Valley Substation
Detailed Route Maps

Route Permit
Brookings County - Hampton
345 kV Transmission Line

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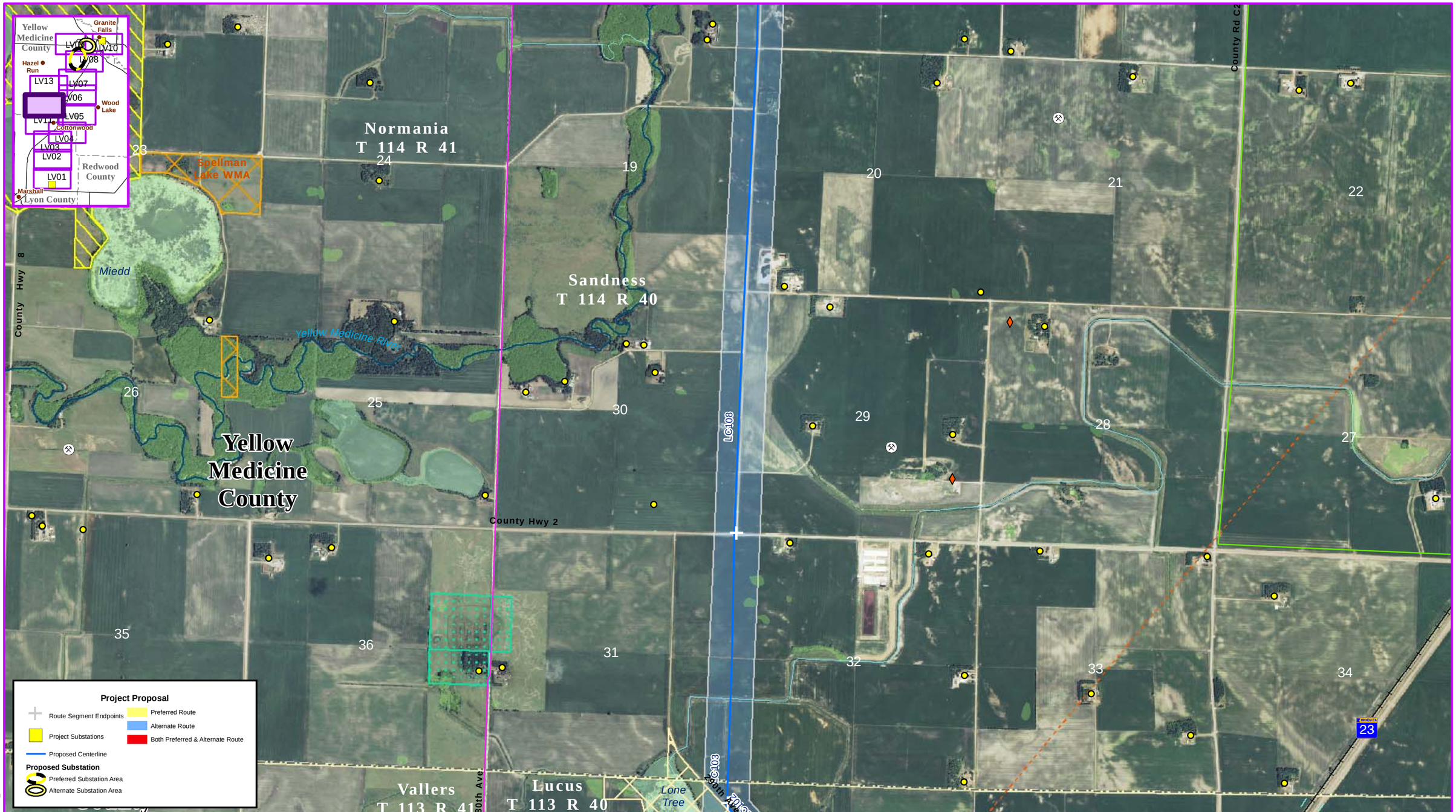

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0 1,000 2,000 Feet
1:24,000

Existing Substations

Transmission Lines
- 69 kV - Existing
- 115 kV - Existing
- 230 kV - Existing
- 345 kV - Existing
- 69 kV - Proposed
- 115 kV - Proposed
- 230 kV - Proposed

- Cemetery
- Churches
- Parks and Recreation
- Aggregate locations
- FCC Telecom Tower
- Certified Organic Farm
- Scenic Byway
- Planned MN DOT Upgrades
- Existing Pipeline

- Railroad Prairie
- Center Pivot Irrigation
- MCES Planned Interceptor

Trails
- Existing State & Regional Trail
- Regional Planned & Proposed Trail
- Snowmobile Trail

MCBS Biodiversity Significance
- Moderate Significance
- High Significance
- Outstanding Significance

Homes (from Proposed Centerline)
- 75 - 150 ft
- 150 - 300 ft
- 300 - 500 ft
- over 500 ft

MN State Wild and Scenic River
- Scenic
- Recreational

Hydrography and Wetlands
- NWI Wetland
- PWI Water
- MN Trout Streams
- Impaired Waters

- USFWS Easement
- MN SNA
- Metro Park
- Metro Significant
- USFWS WPA
- USFWS NWR

MN WMA
- State Funded
- Federally Funded

Data Source: Please refer to Section 12

Appendix B.3 - Sheet LV12
Lyon County Substation to
Minnesota Valley Substation
Detailed Route Maps

Route Permit
Brookings County - Hampton
345 kV Transmission Line

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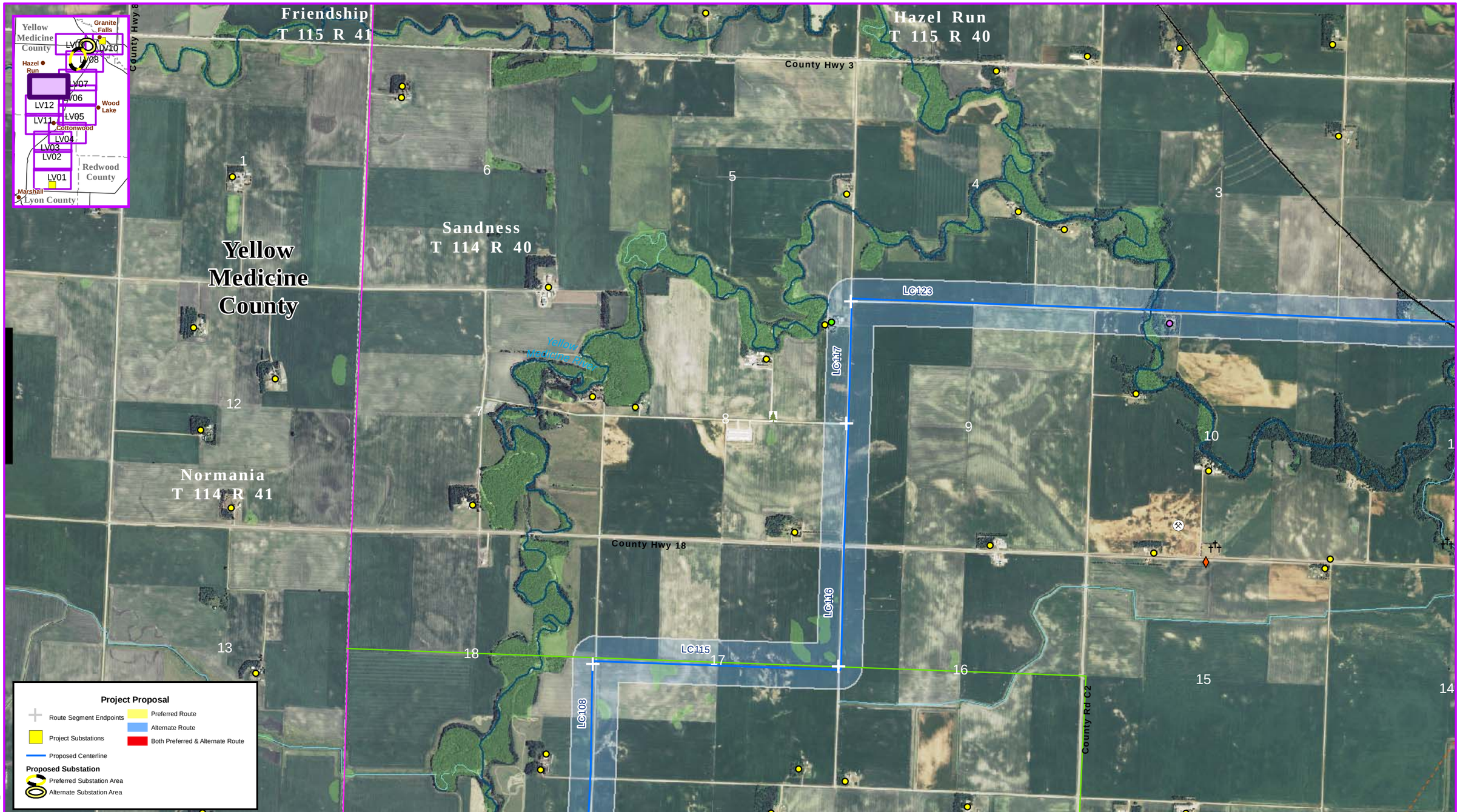

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Delivering electricity you can rely on

0 1,000 2,000 Feet
1:24,000

Existing Substations
Transmission Lines
69 kV - Existing
115 kV - Existing
230 kV - Existing
345 kV - Existing
69 kV - Proposed
115 kV - Proposed
230 kV - Proposed

Cemetery
Churches
Parks and Recreation
Aggregate locations
FCC Telecom Tower
Certified Organic Farm
Scenic Byway
Planned MN DOT Upgrades
Existing Pipeline

Railroad Prairie
Center Pivot Irrigation
MCES Planned Interceptor
Trails
Existing State & Regional Trail
Regional Planned & Proposed Trail
Snowmobile Trail
MCBS Biodiversity Significance
Moderate Significance
High Significance
Outstanding Significance

Homes (from Proposed Centerline)
75 - 150 ft
150 - 300 ft
300 - 500 ft
over 500 ft

MN State Wild and Scenic River
Scenic
Recreational
Hydrography and Wetlands
NWI Wetland
PWI Water
MN Trout Streams
Impaired Waters

USFWS Easement
MN SNA
Metro Park
Metro Significant
USFWS WPA
USFWS NWR
MN WMA
State Funded
Federally Funded

Appendix B.3 - Sheet LV13
Lyon County Substation to
Minnesota Valley Substation
Detailed Route Maps

Route Permit
Brookings County - Hampton
345 kV Transmission Line

Data Source: Please refer to Section 12

mxd\Route_Permit\appendix\detailmap_11x17_L_detailed_routes.mxd 11/23/2008

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