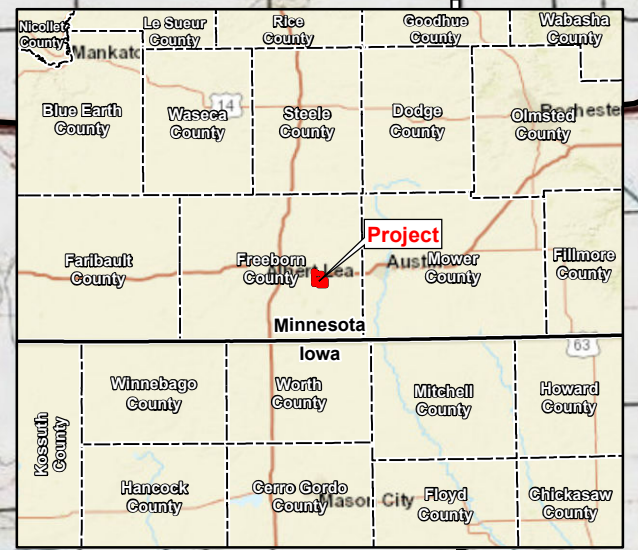
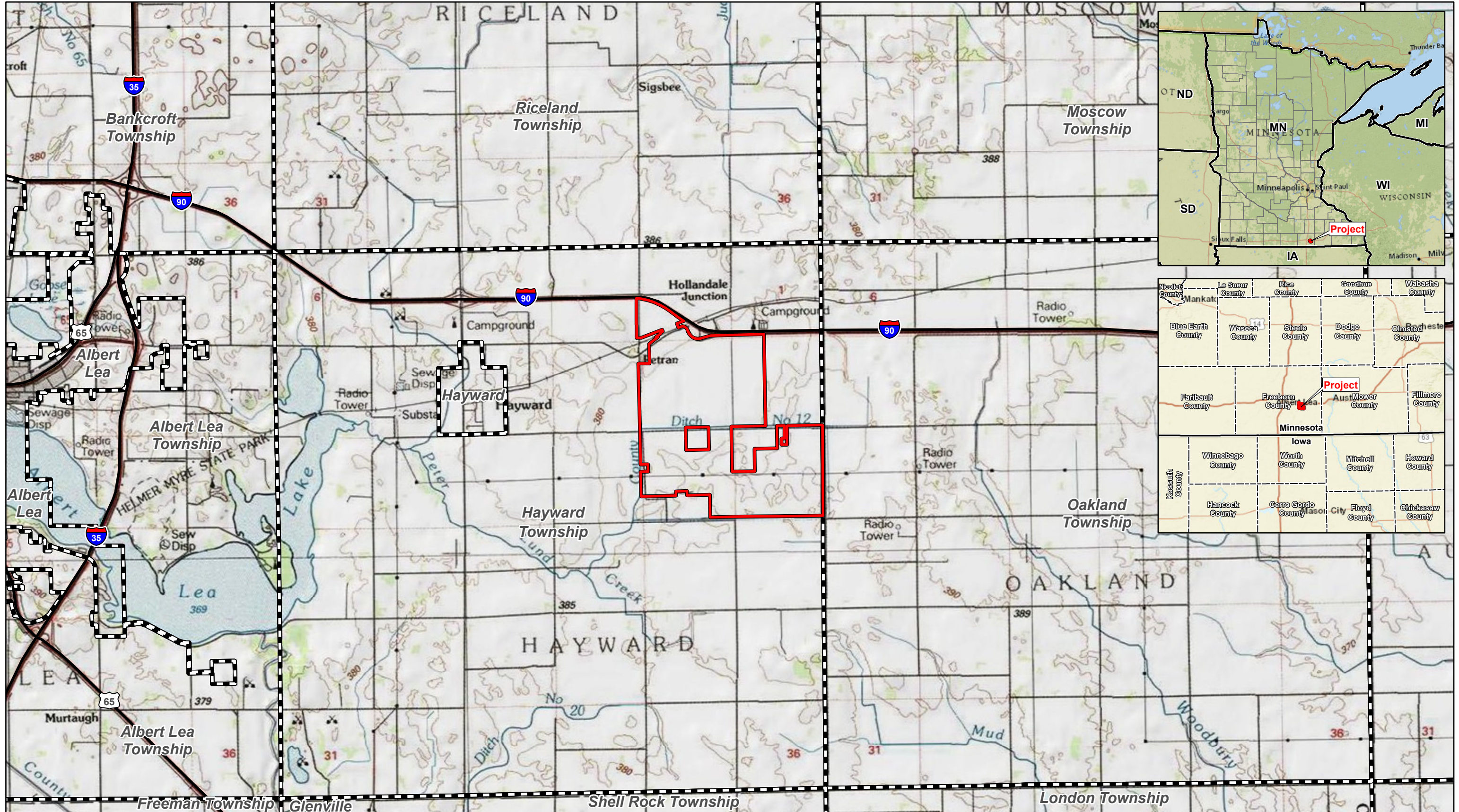


# Figures





Data Source(s): Westwood (2021); ESRI WMS USA Topo, National Geographic, & World Streets Basemaps (Accessed 2021); Census Bureau (2019).

**Legend**

- Project Area
- Municipal Boundary
- Major Road



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**Hayward Solar Project**

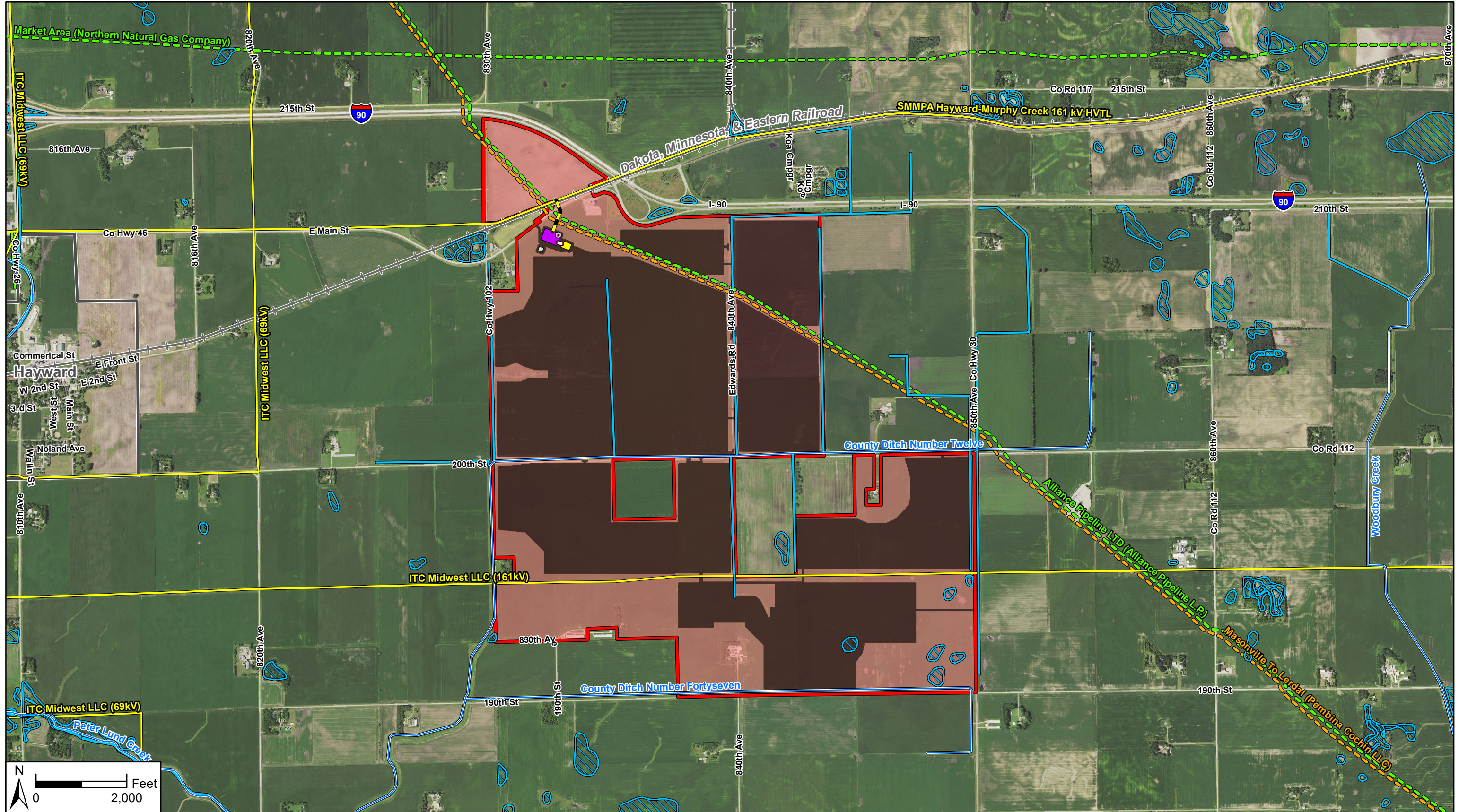
Freeborn County, Minnesota

Project Location & USGS Topography

FIGURE 1

Map Document: N:\0026599\_00\GIS\CON\Figures\Hayward\_Con\_Fig1\_ProjectLocation&USGSTopography\_210427.mxd 4/27/2021 9:55:21 AM radevito





Data Source(s): Westwood (2021); Minnesota NAIIP Imagery (2019); Census Bureau (2019); Ventyx Velocity Suite, Ventyx Energy LLC, (2020); USGS NHD Dataset (2019); U.S. Fish and Wildlife Service (2020); Ducks Unlimited (2020); NPMS (2021). Existing pipeline routes are approximate.

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| Legend |                               |
|--------|-------------------------------|
|        | Project Area                  |
|        | Proposed Substation           |
|        | Current Site Control Area     |
|        | Preliminary Development Area  |
|        | Municipal Boundary            |
|        | SMMPA Switchyard              |
|        | Proposed O&M Building         |
|        | POI                           |
|        | SMMPA Line Tap                |
|        | Project Gen-Tie Line          |
|        | Existing Transmission Line    |
|        | Existing Natural Gas Pipeline |
|        | Existing Crude Oil Pipeline   |
|        | Major Waterway                |
|        | NW1 Wetland                   |
|        | Railroad                      |

# Hayward Solar Project

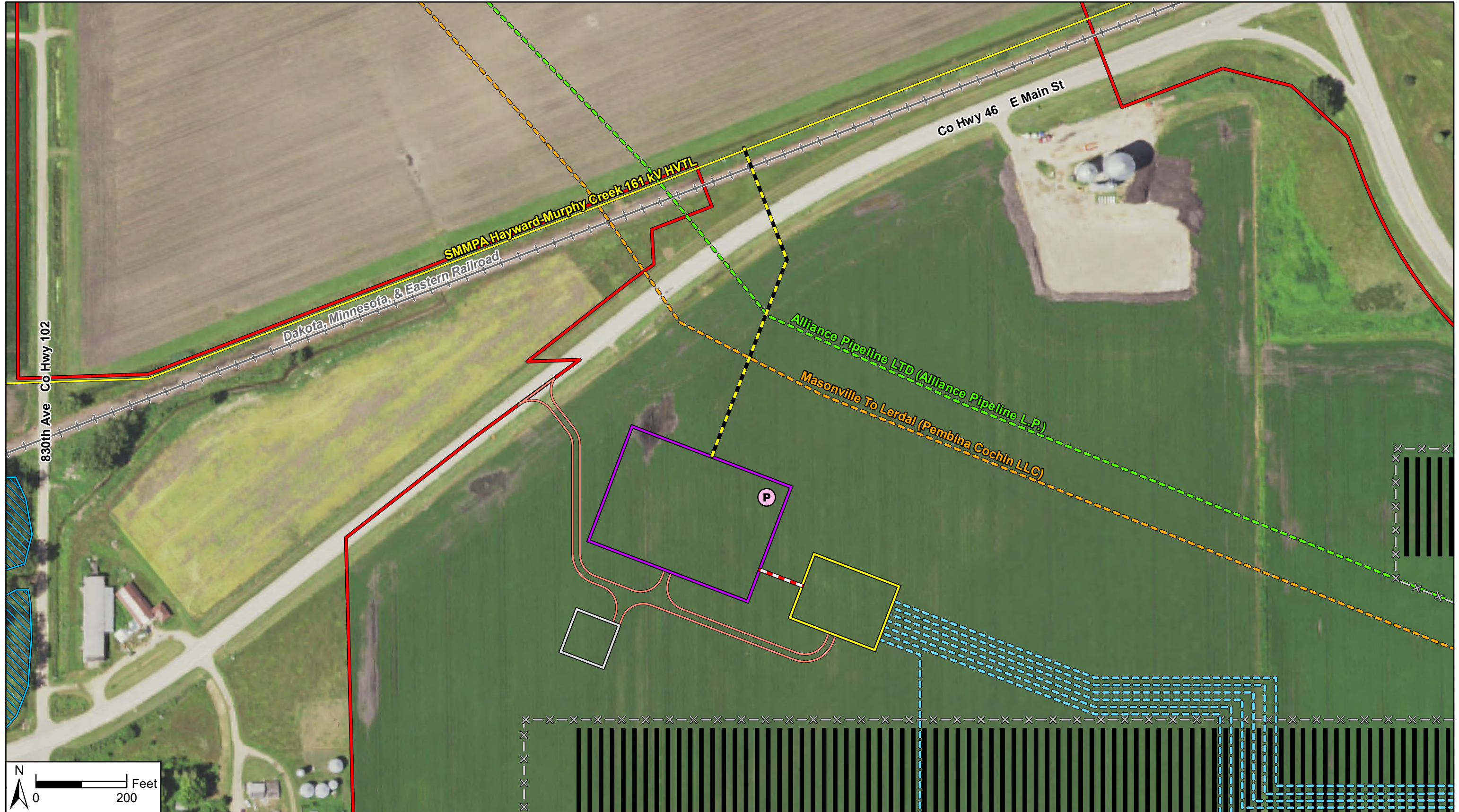
Freeborn County, Minnesota

## Land Rights & Preliminary Development Area

FIGURE 2

Map Document: N:\0026599.00\GIS\CON\Figures\Hayward\_Con\_Fig2\_LandRights&PreliminaryDevelopmentArea\_210427.mxd 4/27/2021 11:36:54 AM radevib





Data Source(s): Westwood (2021); Minnesota NAIIP Imagery (2019); Census Bureau (2019); Ventyx Velocity Suite, Ventyx Energy LLC (2020); USGS NHD Dataset (2019); U.S. Fish and Wildlife Service (2020); Ducks Unlimited (2020); NPMS (2021). Existing pipeline routes are approximate.



**Legend**

- Project Area
- Proposed Project Access Road
- SMMPA Line Tap
- Project Gen-Tie Line
- Proposed Project Underground Collection Line
- Proposed Project O&M Building
- Proposed Project Substation
- SMMPA Switchyard
- Proposed Project Inverter
- P POI
- Proposed Project Water Basin
- Major Waterway
- NWI Wetland
- Existing Transmission Line
- Existing Natural Gas Pipeline
- Existing Crude Oil Pipeline
- Railroad

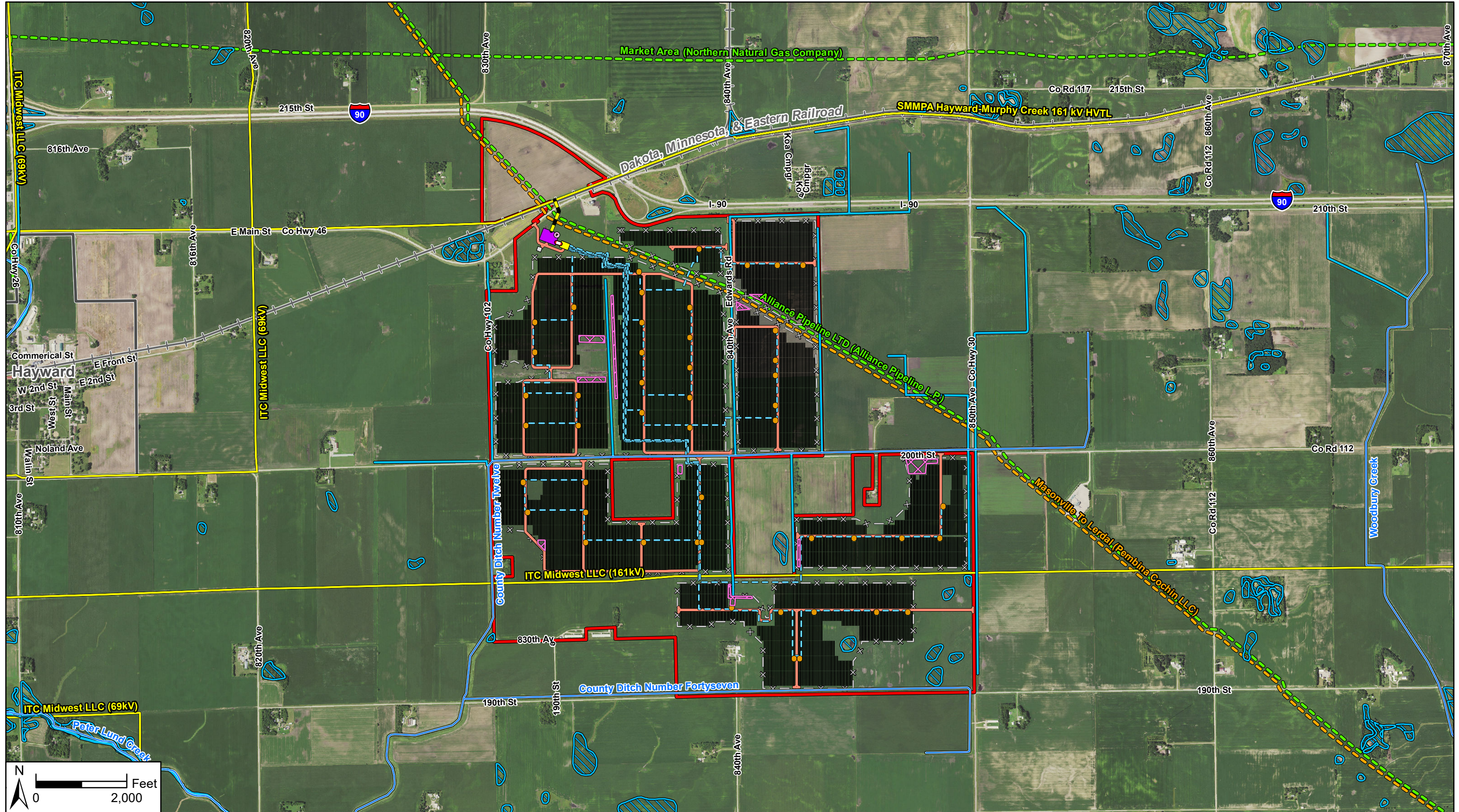
**Hayward Solar Project**  
Freeborn County, Minnesota

**Project Interconnection Facilities**

FIGURE 3

Map Document: N:\0026599\_00\GIS\CoN\_Figures\Hayward\_CoN\_Fig3\_ProjectInterconnectionFacilities\_210427.mxd 4/27/2021 9:54:43 AM radevito





Data Source(s): Westwood (2021); Minnesota NAIP Imagery (2019); Census Bureau (2019); Ventyx Velocity Suite, Ventyx Energy LLC, (2020); USGS NHD Dataset (2019); U.S. Fish and Wildlife Service (2020); Ducks Unlimited (2020).

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| Legend |                                     |
|--------|-------------------------------------|
|        | Project Area                        |
|        | Proposed Project Solar Array Layout |
|        | Proposed Project Collection Line    |
|        | Proposed Project Fence Boundary     |
|        | Municipal Boundary                  |
|        | Proposed Project Access Road        |
|        | Proposed Project Collection Line    |
|        | Proposed Project Inverter           |
|        | Proposed Project Substation         |
|        | SMMPA Switchyard                    |
|        | Proposed Project O&M Building       |
|        | POI                                 |
|        | SMMPA Line Tap                      |
|        | Project Gen-Tie Line                |
|        | Proposed Project Water Basin        |
|        | Major Waterway                      |
|        | NWI Wetland                         |
|        | Existing Transmission Line          |
|        | Existing Natural Gas Pipeline       |
|        | Existing Crude Oil Pipeline         |
|        | Railroad                            |

# Hayward Solar Project

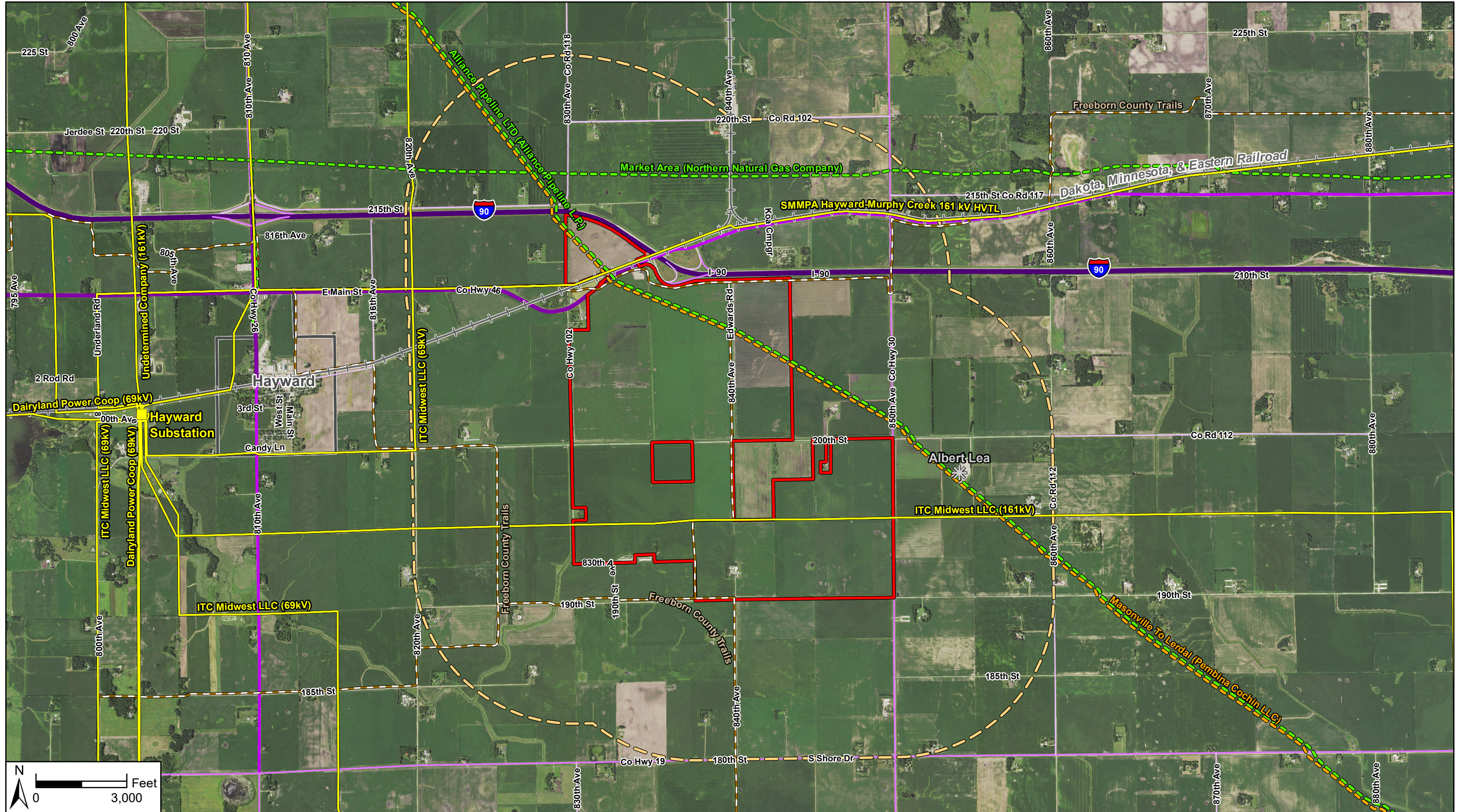
Freeborn County, Minnesota

## Preliminary Facility Design

FIGURE 4

Map Document: N:\0026599\_00\GIS\CoN\Figures\FacilityDesign\_CoN\_Fig4\_PreliminaryFacilityDesign\_210427.mxd 4/27/2021 11:32:00 AM radrevito





Data Source(s): Westwood (2021); Minnesota NAIP Imagery (2019); Census Bureau (2019); Ventyx Velocity Suite, Ventyx Energy LLC. (2021); MNDOT (2021); NPMS (2021). Existing pipeline routes are approximate.



**Legend**

- |                            |                                |                               |                  |             |                |
|----------------------------|--------------------------------|-------------------------------|------------------|-------------|----------------|
| Project Area               | Existing Substation            | Existing Transmission Line    | Railroad         | 15 - 205    | 1,501 - 2,800  |
| 1-Mile Project Area Buffer | Airport                        | Existing Natural Gas Pipeline | Snowmobile Trail | 206 - 810   | 2,801 - 12,700 |
| Municipal Boundary         | Natural Gas Compressor Station | Existing Crude Oil Pipeline   |                  | 811 - 1,500 |                |

**Hayward Solar Project**

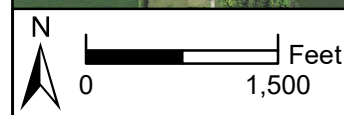
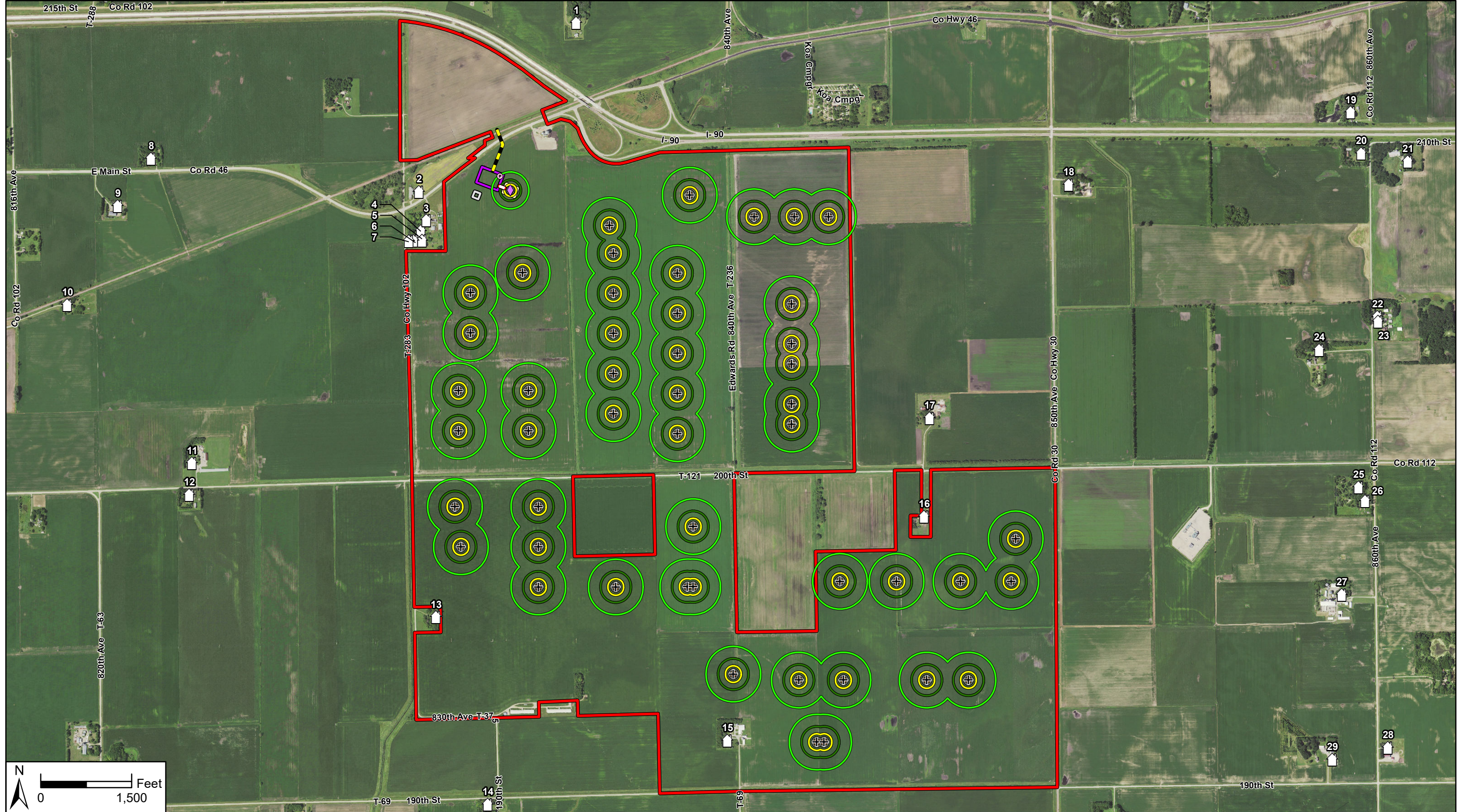
Freeborn County, Minnesota

**Existing Infrastructure & Traffic Summary**

FIGURE 5

Map Document: N:\0026599\_00\GIS\CoN\Figures\Hayward\_CoN\_Fig5\_ExistingInfrastructure&TrafficSummary\_210427.mxd 4/27/2021 11:36:20 AM rdevitlo





Data Source(s): Westwood (2021); Minnesota NAIP Imagery (2019); Census Bureau (2019).

**Legend**

- Project Area
- Proposed Project Substation
- SMMPA Switchyard
- Proposed Project O&M Building
- + POI
- SMMPA Line Tap
- Project Gen-Tie Line
- + Proposed Project Inverter Skid
- ♦ Proposed Project Substation Transformer
- + Residence

- Decibel Levels**
- 90dBA
  - 55dBA
  - 40dBA
  - 75dBA
  - 50dBA
  - 35dBA
  - 60dBA
  - 45dBA

**Hayward Solar Project**  
Freeborn County, Minnesota

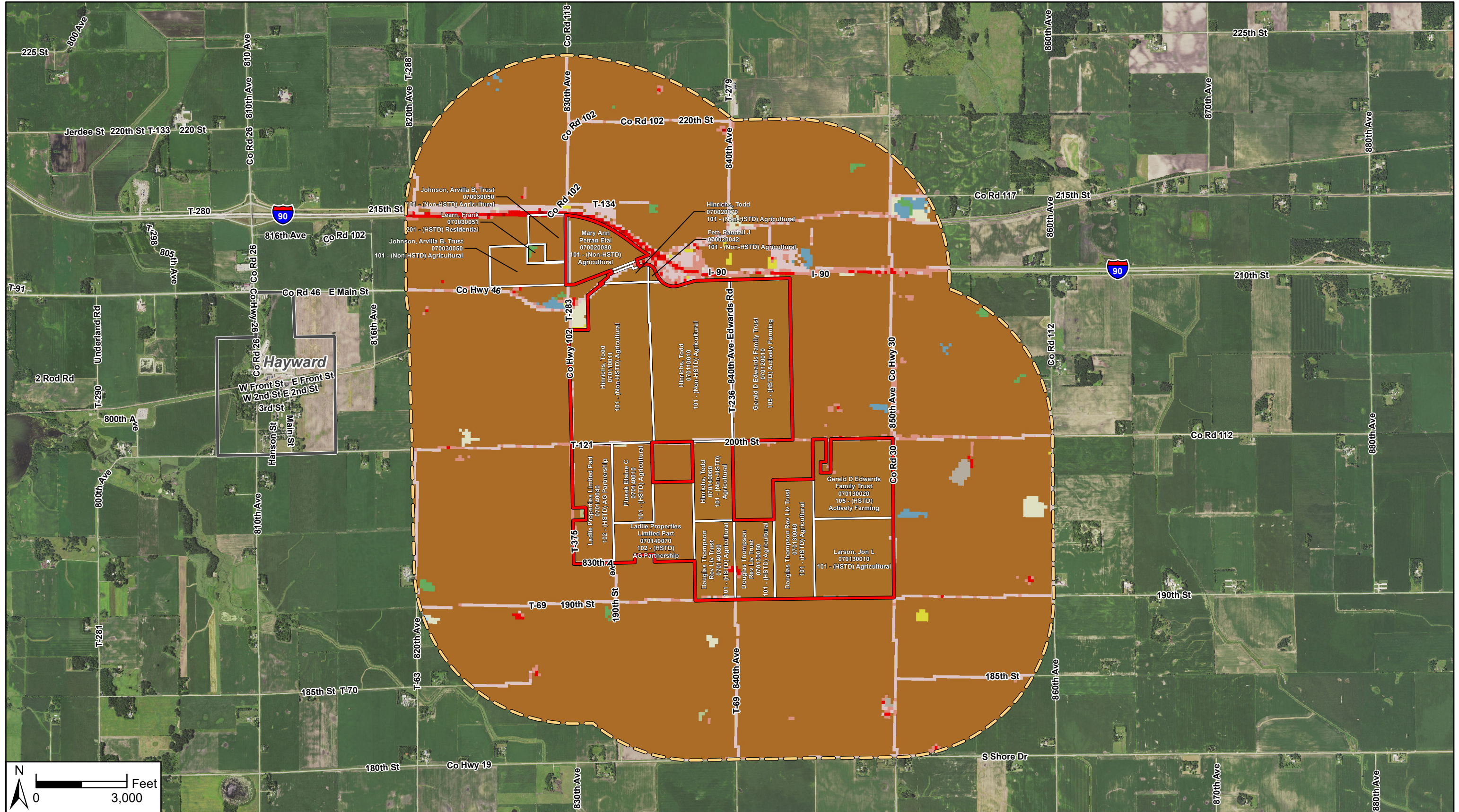
**Noise Modeling Results**



FIGURE 6

Map Document: N:\0026599\_00\GIS\CoN\Figures\Hayward\_CoN\_Fig6\_NoiseModelingResults\_210427.mxd 4/27/2021 5:47:13 PM radevito





Data Source(s): Westwood (2021); Minnesota NAIP Imagery (2019); Census Bureau (2019); U.S. Geological Survey (2016); Freeborn County, MN (2021).

**Legend**

- Project Area
- Project Area Parcel
- 1-Mile Project Area Buffer

**NLCD Land Cover Type (Percentage of Project Area)**

- |   |   |  |
|---|---|--|
| <span style="display: inline-block; width: 15px; height: 10px; background-color: #8B4513; margin-right: 5px;"></span> Cultivated Crops (96.64%)           | <span style="display: inline-block; width: 15px; height: 10px; background-color: #D2B48C; margin-right: 5px;"></span> Developed, Open Space (2.23%) | <span style="display: inline-block; width: 15px; height: 10px; background-color: #3CB371; margin-right: 5px;"></span> Deciduous Forest (0%)            |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: #C0504D; margin-right: 5px;"></span> Developed, Low Intensity (0.86%)    | <span style="display: inline-block; width: 15px; height: 10px; background-color: #FFFF00; margin-right: 5px;"></span> Hay/Pasture (0.02%)           | <span style="display: inline-block; width: 15px; height: 10px; background-color: #4682B4; margin-right: 5px;"></span> Emergent Herbaceous Wetland (0%) |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: #FF0000; margin-right: 5px;"></span> Developed, Medium Intensity (0.12%) | <span style="display: inline-block; width: 15px; height: 10px; background-color: #C0C0C0; margin-right: 5px;"></span> Herbaceous (0.12%)            | <span style="display: inline-block; width: 15px; height: 10px; background-color: #90EE90; margin-right: 5px;"></span> Mixed Forest (0.01%)             |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: #800000; margin-right: 5px;"></span> Developed, High Intensity (0.0001%) | <span style="display: inline-block; width: 15px; height: 10px; background-color: #A9A9A9; margin-right: 5px;"></span> Barren Land (0%)              |  |

**Hayward Solar Project**  
Freeborn County, Minnesota

NLCD Land Cover & Zoning

FIGURE 7