

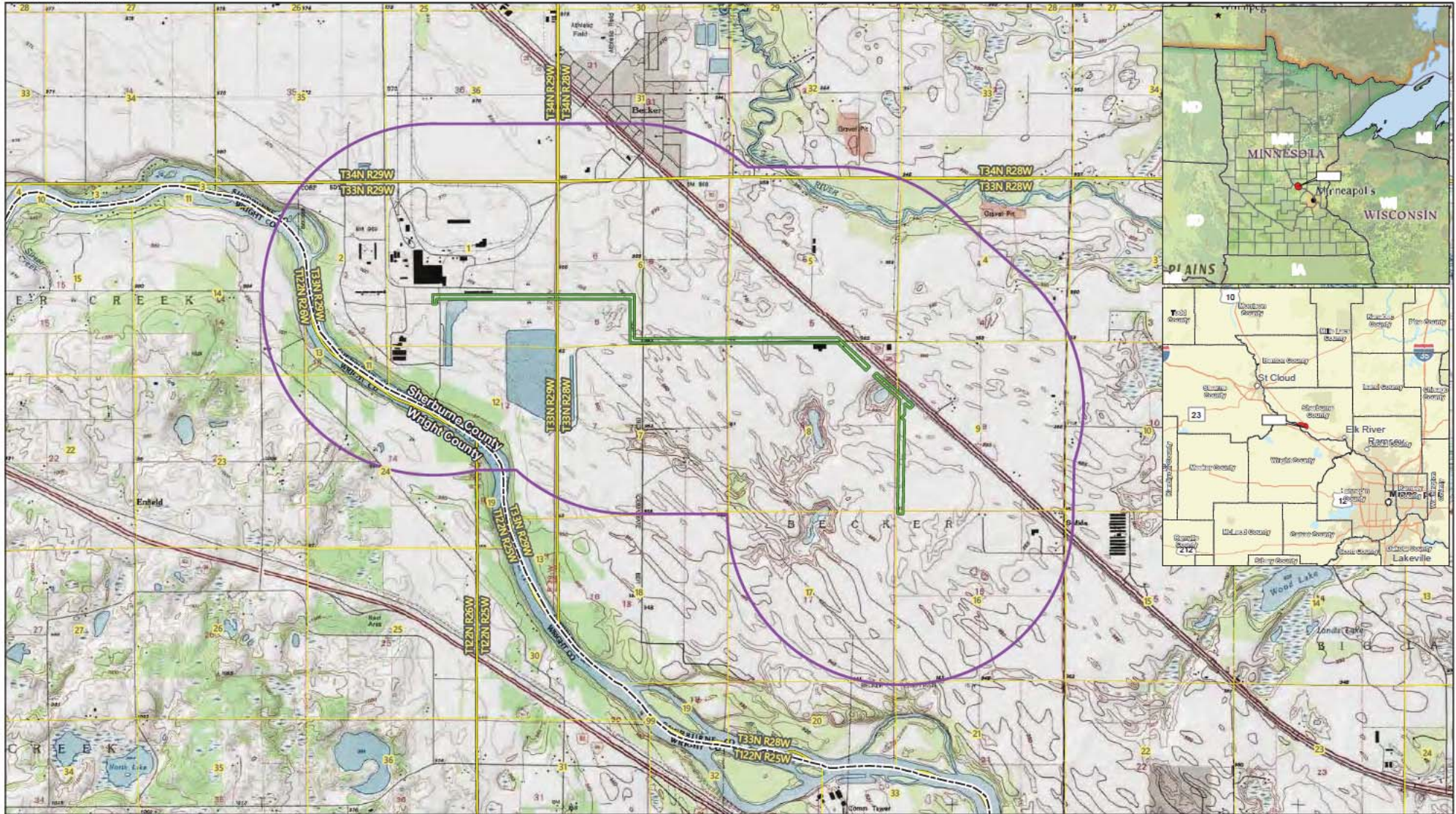
Data Sources: Westwood (2021); Minnesota
NAP Imagery (2019); USGS topographic maps
(2013); ESRI WMS National Geographic & World
Streets Basemap (Accessed 2020); Census
Bureau (2019).



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Sherco Solar One Project
Sherburne County, Minnesota



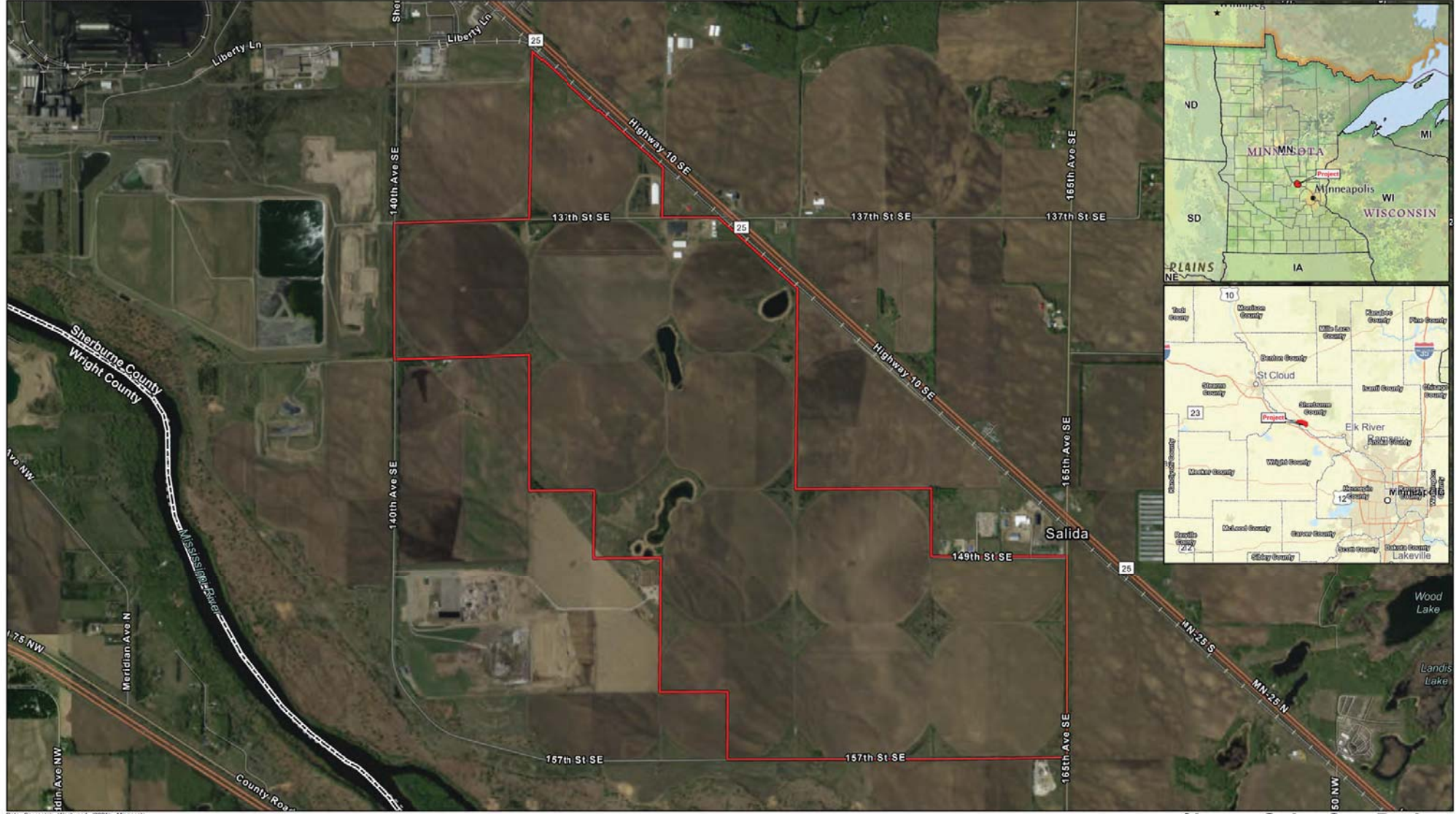
Data Sources: Westwood (2021); Minnesota
NAD 83 Imagery (2019); USGS topographic maps
(2019); 50m WGS National Geographic & World
Streets Baseimage (Accessed 2020); Census
Bureau (2019).



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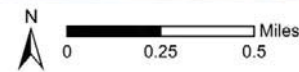
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Sherburne County, Minnesota



Data Sources: Westwood (2021); Minnesota NAD 83 Imagery (2019); USGS Topographic Maps (2013); ESRI WMS National Geographic & World Streets Base Maps (Accessed 2020); Census Bureau (2019).

- Project Boundary
- County Boundary



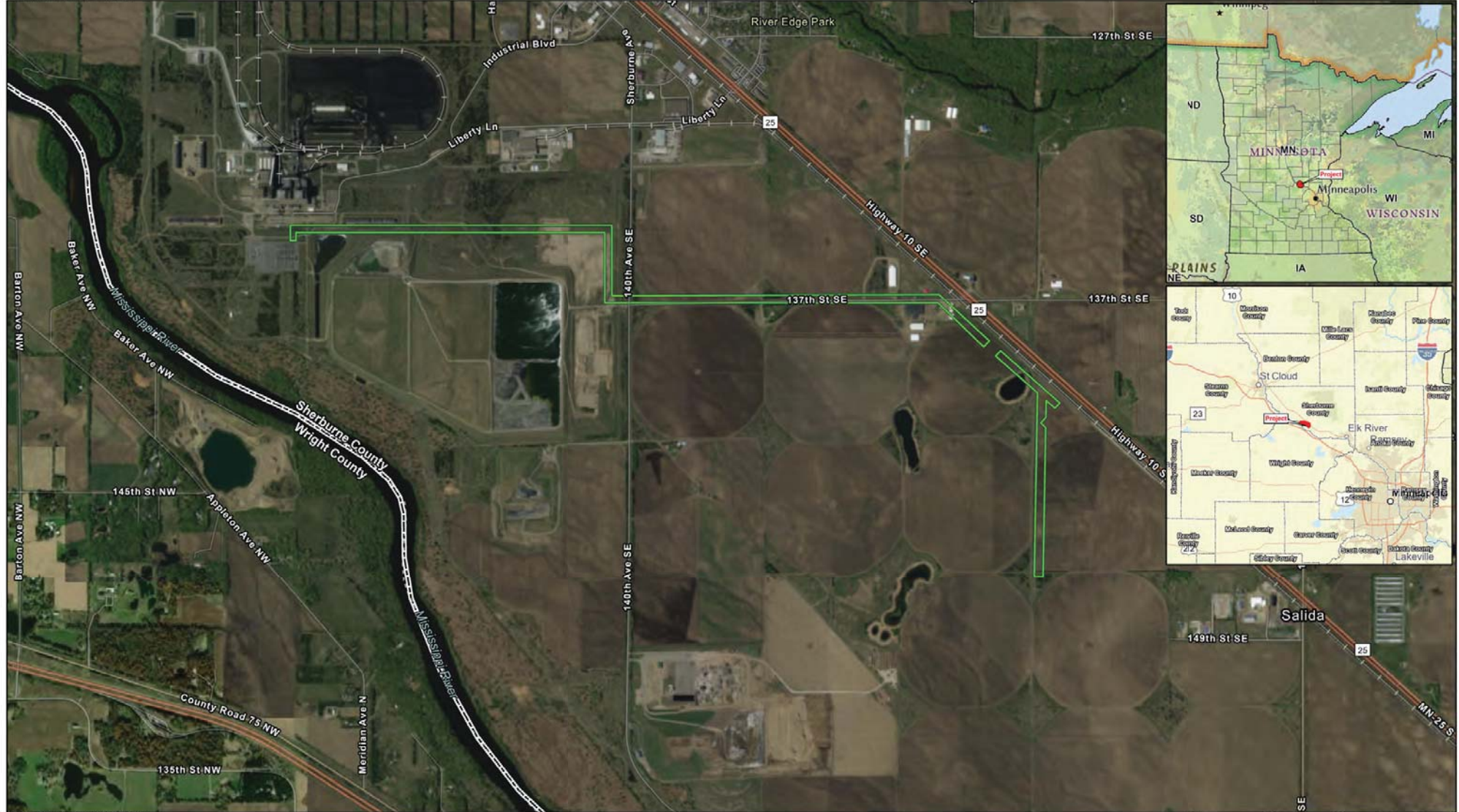
Sherco Solar One Project
Sherburne County, Minnesota

Archaeological Investigation Project Location Map – Solar Facility

EXHIBIT 2a

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Data Sources: Westwood (2021); Minnesota NAD83 Imagery (2019); USGS topographic maps (2013); Esri VMS National Geographic & World Streets Base Maps (Accessed 2020); Census Bureau (2019).

T-Line Corridor
 County Boundary



Sherco Solar One Project
Sherburne County, Minnesota

Archaeological Investigation Project Location Map – Transmission Line

EXHIBIT 2b

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[NONPUBLIC DATA HAS BEEN EXCISED...


...NONPUBLIC DATA HAS BEEN EXCISED]

Data Sources: Westwood (2021); Minnesota
HA P Imagery (2019); USGS topographic maps
(2019); ESRI WMS National Geographic & World
Streets Basemap (Accessed 2020); Census
Bureau (2019).


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-  Project Boundary
-  1-Mile Buffer
-  County Boundary
-  Archaeological Site

 Historic Resources
(Unevaluated)

 Great Nor. RR (Big Lake Twp
segment) (CEF)

 Nor. Pac. RR (Big Lake Twp
segment) (CEF)

 MN Hwy 10 (Elk River to St.
Cloud) (CEF)



Sherco Solar One Project
Sherburne County, Minnesota

Cultural Resources in the
Vicinity of Solar Facility

EXHIBIT 3a




[NONPUBLIC DATA HAS BEEN EXCISED...]

...NONPUBLIC DATA HAS BEEN EXCISED]




Data Sources: Westwood (2021); Minnesota
H&P Imagery (2019); USGS topographic maps
(2019); ESRI WMS National Geographic & World
Streets Base Maps (Accessed 2020); Census
Bureau (2019).

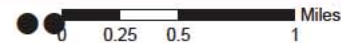
Westwood

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-  T-Line Corridor
-  1-Mile Buffer
-  County Boundary

-  Great Nor. RR (Big Lake Twp
segment) (CEF)
-  Nor. Pac. RR (Big Lake Twp
segment) (CEF)

-  MN Hwy 10 (Elk River to St.
Cloud) (CEF)
-  Historic Resources
(Unevaluated)
-  Archaeological Site



Sherco Solar One Project
Sherburne County, Minnesota
Cultural Resources in the
Vicinity of Transmission Line

EXHIBIT 3b

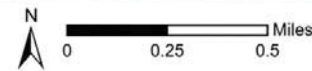


Data Sources: Westwood (2021); Minnesota
NAD 83 Imagery (2019); USGS topographic maps
(2013); ESRI VMS National Geographic & World
Streets Base Maps (Accessed 2020); Census
Bureau (2019).

- ▬ Project Boundary
- ▬ T-Line Corridor
- ▬ 1-Mile Buffer
- County Boundary
- ▶ Photo Point

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Sherco Solar One Project

Sherburne County, Minnesota

Photo Key

EXHIBIT 4



Via Email

January 27, 2021

Ms. Lisa Joyal
Endangered Species Review Coordinator
NHIS Data Distribution Coordinator
Division of Ecological and Water Resources
Minnesota Department of Natural Resources
500 Lafayette Road, Box 25
St. Paul, MN 55155

Email: lisa.joyal@state.mn.us

**Re: Natural Heritage Data Review of the Proposed Sherco Solar Project
Sherburne County, Minnesota**

Dear Ms. Joyal:

On behalf of Sherco Solar, LLC (Sherco Solar), a wholly owned subsidiary of National Grid Renewables Development (NG Renewables), Merjent, Inc. (Merjent) queried the Minnesota Natural Heritage Information System (NHIS) to conduct a natural heritage data review for the proposed Sherco Solar Project (Project).

Merjent holds a license agreement with the Minnesota Department of Natural Resources (MnDNR) to access electronic NHIS data. On April 22, 2020, Merjent requested from the MnDNR its annual NHIS data update per its license agreement which was provided on May 8, 2020. This updated MnDNR data was used for this Natural Heritage Data Review by a trained and experienced Merjent biologist. The following provides a brief description of the Project, results of the NHIS query, and an assessment of potential impacts to rare natural features and state-listed species. Based upon this information and review, Merjent respectfully requests that the MnDNR review and concur with this Natural Heritage Data Review for the Project.

Project Description

Sherco Solar, in collaboration with Xcel Energy, will submit an application to the Minnesota Public Utilities Commission (PUC) for up to 600 MW of nameplate solar-energy capacity. Following permitting and development of the Project by NG Renewables, the Project is anticipated to be transferred, constructed, owned, and operated by Xcel Energy.

The Project's permanent facilities may include:

- Solar modules, inverters, and racking;

- Fencing;
- Access roads (as required);
- Two collection substation facilities;
- Two 345 kilovolt (kV) gen-tie lines;
- On-site below-ground and above-ground electrical collection lines, and
- Weather stations (up to 20 feet tall).

The Solar Project is proposed in three distinct solar blocks, which collectively create the Project Area. The Project Area covers 4,429.6 acres and is comprised of the West Block (950.2 acres) and Central Block (1,653.7 acres), both of which are located on the west side of the Sherburne County (Sherco) Generating Plant and the East Block (1,825.7 acres), which is located on the east side of the Sherco Generating Plant. Due to the unique layout of the site, Sherco Solar will interconnect to the electric grid via two separate 345 kV gen-tie lines to the existing substation within the existing Sherco Coal Generation Station footprint. Neither gen-tie line is anticipated to exceed 5 miles in length.

To facilitate your review, we have enclosed a map of Sherco Solar's location, associated project boundary, and the potential routing areas for each gen-tie line. The exact alignment of the gen-tie lines have not yet been finalized, but are anticipated to be wholly contained within the potential routing areas. Sherco Solar continues to collect information to inform Project design. The racking layout, access roads, and electrical connections have not been finalized. Land cover within the Project area is predominantly agricultural with a mix of hay/pasture, row crops, and center-pivot-irrigated farmland, and the Project area does not contain any soils classified as prime farmland. The table below lists the townships, ranges, and sections crossed by the Solar Project and two 345 kV gen-tie lines.

Project Component	Township	Range	Sections
Solar Project	33N	28W	5, 7, 8, 16, 17
	34N	29W	18, 19, 20, 21, 22, 26, 27, 28, 34
	34N	30W	13, 24
West Gen-Tie Line Route Width	33N	29W	1, 2
	34N	29W	22, 25, 26, 27, 35, 36
East Gen-Tie Line Route Width	33W	28W	6, 7
	33W	29W	1

Upon receipt of applicable permits and permissions, Sherco Solar anticipates construction commencing as early as possible in 2022 and commencement of commercial operation by the end of 2023.

Natural Heritage Review

Sherco Solar previously received a Natural Heritage Review Response from the MnDNR for the West and Central solar blocks on December 11, 2020 (Correspondence # ERDB 20210125) (see attached). However, this initial NHIS request was for a smaller project area that has since expanded, in collaboration with Xcel Energy, to include land on the east side of the Sherco Generating Plant (i.e., East Solar Block). This updated NHIS request also includes the West and East Gen-tie lines to interconnect to the existing Sherburne County Substation on the south side of the Sherco Generating Plant.

Merjent reviewed the MnDNR NHIS data for state-listed threatened and endangered species that are known to occur within 1 mile of the Solar Project and West and East Gen-Tie Line Routes. Table 1 (enclosed) summarizes the records found during the review of the NHIS data for each Project component

and provides an assessment of impacts. In addition to the species shown in Table 1, the NHIS review identified a colonial waterbird nesting site within 1 mile; this nesting site is not located within the Solar Project blocks or West or East Gen-Tie Line Routes, and suitable waterbird nesting habitat is not present within the Project Area.

Merjent also reviewed the Solar Project and West and East Gen-Tie Line Routes for sites that have been specially designated as having notable natural resources. Natural resource sites designated by the State of Minnesota include Minnesota Biological Survey (MBS) Sites of Biodiversity Significance (SOBS), and Native Plant Communities (NPC), including native prairie. No sites designated as MBS SOBS, NPCs or native prairie were identified within the Solar Project blocks or West or East Gen-Tie Line Routes.

Based on the mitigation measures outlined in the enclosed table, we believe the Sherco Solar Project will not impact MnDNR high value areas and state-listed species. On behalf of Sherco Solar, Merjent respectfully requests that the MnDNR review and concur with this Natural Heritage Data Review for the Project within 30 days of receipt of this submittal.

Should you have any questions or comments regarding this matter, please contact me at 612-746-3666, or at angela.durand@merjent.com.

Sincerely,



Angela Durand
Senior Environmental Analyst
Merjent, Inc.

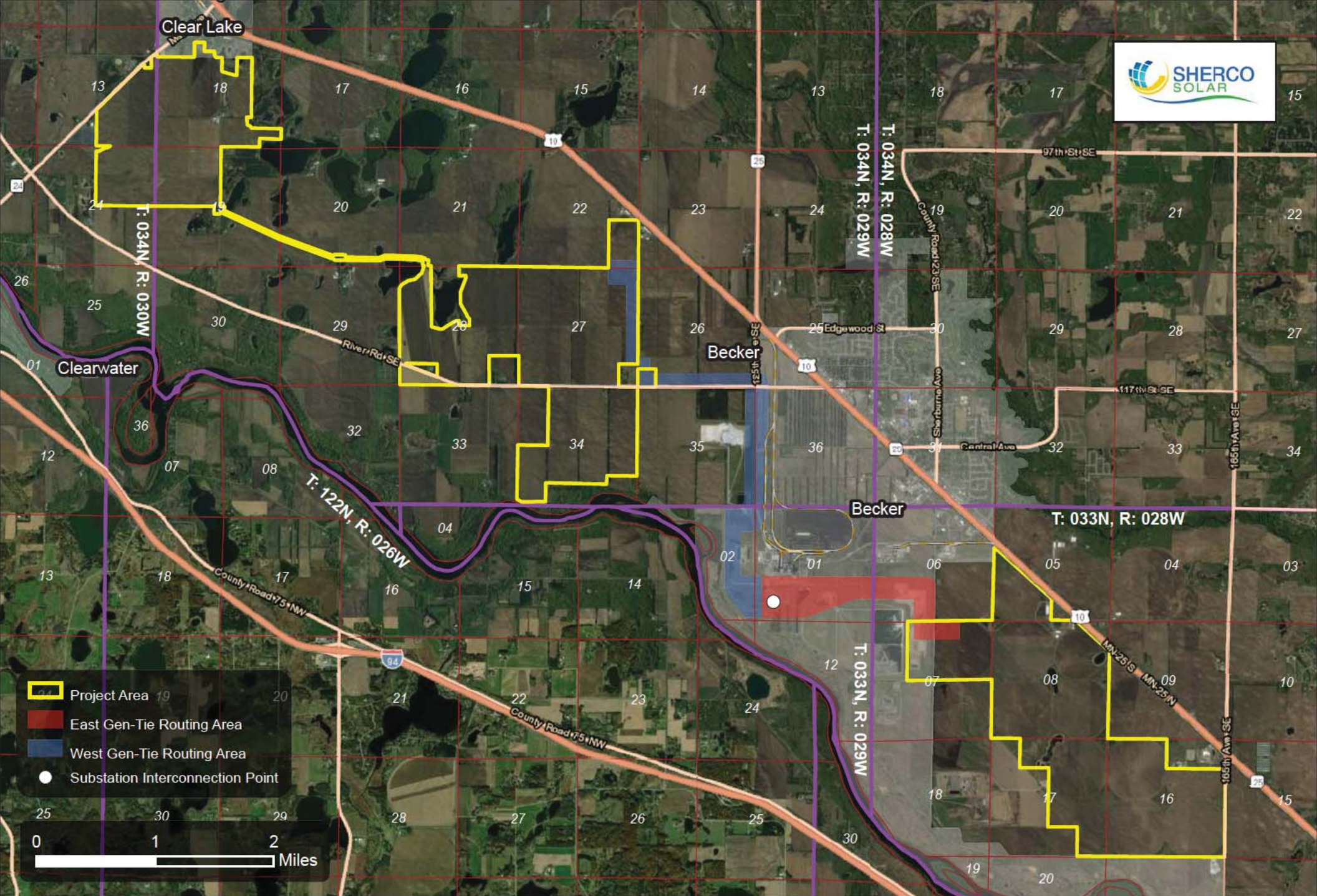
Enclosure: Table 1: State-listed Species Assessment
 Project Location Map
 MnDNR Natural Heritage Review - West and Central Solar Blocks (Correspondence #
 ERDB 20210125)

Table 1: STATE-LISTED SPECIES ASSESSMENT ^a

Species	State Status	Habitat	Potential Impacts/Mitigation
Black Sandshell <i>Ligumia recta</i>	SC	Riffle and run areas of medium to large rivers in areas dominated by sand or gravel	No suitable waterbody habitat present within the Project Area; therefore, no impacts anticipated.
Creek Heelsplitter <i>Lasmigona compressa</i>	SC	Creeks, small rivers, and the upstream portions of large rivers. Its preferred substrates are sand, fine gravel, and mud	No suitable waterbody habitat present within the Project Area; therefore, no impacts anticipated.
Loggerhead Shrike <i>Lanius ludovicianus</i>	END	Upland grasslands and sometimes in agricultural areas where short grass vegetation and perching sites such as hedgerows, shrubs, and small trees are found	Potential nesting habitat present; any tree/shrub removal will be conducted outside of the species nesting season (4/1 – 7/31). Any loggerhead shrike sightings will be reported to the MnDNR Regional Nongame Specialist, Erica Hoaglund.
Peregrine Falcon <i>Falco peregrinus</i>	SC	Nest primarily on buildings and bridges in urban settings and also use historic eyries, including along the Mississippi River in the rugged bluff country of the southeastern part of the state	The Project Area does not contain suitable nesting habitat; therefore, no impacts are anticipated. This species has been known to nest on the smokestack within the Sherco Generating Plant, which demonstrates its tolerance to human disturbance.
Red-shouldered Hawk <i>Buteo lineatus</i>	SC	Large tracts of mature deciduous forest with scattered wetland openings; nesting sites include high, thick canopies and trees with large diameters	Large tracts of mature deciduous forest are not present within the Project Area; therefore, impacts to nesting habitat are not anticipated. Suitable nesting habitat is present along the Mississippi River south of the Project area.
Rock Sandwort <i>Minuartia dawsonensis</i>	THR	Dry, sedimentary bedrock outcrops; grows in crevices and in very shallow accumulations of organic matter over exposed bedrock	No suitable habitat present within the Project Area; therefore, no impacts anticipated.
Seaside Three-awn <i>Aristida tuberculosa</i>	THR	Exclusively in dry and loose sand in sand savannas, sand prairies, and dunes, where vegetation is sparse	No suitable habitat present within the Project Area; therefore, no impacts anticipated.
Gopher Snake <i>Pituophis catenifer</i>	SC	Well-drained, loose sandy and gravel soils; dry sand prairies and bluff prairies are prime habitat	No suitable prairie habitat present within the Project Area; therefore, no impacts anticipated.
Blanding's Turtle ^a <i>Emydoidea blandingii</i>	THR	Wetland complexes and adjacent sandy uplands	Suitable habitat present; Sherco will adhere to the avoidance measures outlined in the MN DNR's December 11, 2020 letter (see attached).

^a Includes state-listed threatened and endangered species within 1 mile of the Project.

^b Blanding's turtle was not documented within one mile of any of the Sherco Solar Project components; but was identified in a Natural Heritage Review Response from the MnDNR for the West and Central solar blocks on December 11, 2020 (see attached).



Sherco Solar

Sherburne County, Minnesota



Minnesota Department of Natural Resources
Division of Ecological & Water Resources
500 Lafayette Road, Box 25
St. Paul, MN 55155-4025

December 11, 2020

Correspondence # ERDB 20210125

Connor Maloney
Tetra Tech, Inc.
2001 Killebrew Drive, Suite 141
Bloomington, MN 55425

RE: Natural Heritage Review of the proposed Sherco Solar,

County	Township (N)	Range (W)	Section(s)
Sherburne	34	29	15-22, 27, 28, and 34
Sherburne	34	30	13 and 24

Dear Connor Maloney,

As requested, the Minnesota Natural Heritage Information System has been queried to determine if any rare species or other significant natural features are known to occur within an approximate one-mile radius of the proposed project. Based on this query, rare features have been documented within the search area (for details, please visit the [Rare Species Guide Website](#) for more information on the biology, habitat use, and conservation measures of these rare species). Please note that the following rare features may be adversely affected by the proposed project:

- Blanding's turtles (*Emydoidea blandingii*), a state-listed threatened species, have been documented in the vicinity of the proposed project. Blanding's turtles use upland areas up to and over a mile distant from wetlands, waterbodies, and watercourses. Uplands are used for nesting, basking, periods of dormancy, and traveling between wetlands. Factors believed to contribute to the decline of this species include collisions with vehicles, wetland drainage and degradation, and the development of upland habitat. Any added mortality can be detrimental to populations of Blanding's turtles, as these turtles have a low reproduction rate that depends upon a high survival rate to maintain population levels.

This project has the potential to impact this rare turtle through direct fatalities and habitat disturbance/destruction due to excavation, fill, and other construction activities associated with

the project. Minnesota's Endangered Species Statute (*Minnesota Statutes*, section 84.0895) and associated Rules (*Minnesota Rules*, part 6212.1800 to 6212.2300 and 6134) prohibit the take of threatened or endangered species without a permit. As such, **the following avoidance measures are required:**

- Avoid wetland impacts during hibernation season, between October 15th and April 15th, unless the area is unsuitable for hibernation:
 - less than 14 inches deep,
 - anoxic conditions, or
 - not a suitable substrate.
- The [Blanding's turtle flyer](#) must be given to all contractors working in the area.
- The use of [erosion control](#) blanket shall be limited to 'bio-netting' or 'naturalnetting' types, and specifically not products containing plastic mesh netting or other plastic components.
 - Also, be aware that hydro-mulch products may contain small synthetic (plastic) fibers to aid in its matrix strength. These loose fibers could potentially re-suspend and make their way into Public Waters. As such, please review mulch products and not allow any materials with synthetic (plastic) fiber additives in areas that drain to Public Waters.
- Monitor for turtles during construction and report any sightings to the DNR Nongame Specialist, Erica Hoaglund at 651-259-5772 or Erica.Hoaglund@state.mn.us.
- If turtles are in imminent danger they must be moved by hand out of harm's way, otherwise they are to be left undisturbed.

If the above avoidance measures are not possible, please contact me as further action may be needed.

For additional information, see the [Blanding's turtle fact sheet](#), which describes the habitat use and life history of this species. The fact sheet also provides two lists of recommendations for avoiding and minimizing impacts to this rare turtle. **Please refer to both lists of recommendations for your project.** For further assistance regarding the Blanding's turtle, please contact the DNR Regional Nongame Specialist, Erica Hoaglund.

- The Loggerhead Shrike (*Lanius ludovicianus*), a state-listed endangered bird, has been documented in the vicinity of the project site. Loggerhead Shrikes use grasslands that contain short grass and scattered perching sites such as hedgerows, shrubs, or small trees. They can be found in native prairie, pastures, shelterbelts, old fields or orchards, cemeteries, grassy roadsides, and farmyards. Shrikes frequently shift territories between years so it is not unusual for a particular nesting area to be vacant for several years before it is used again. Given the potential for this species to be found in the vicinity of the project, avoid tree and shrub removal during the breeding season, typically April through July. Contact me if any tree or shrub removal

will occur during the breeding season, as the DNR may request that a survey for active nests be conducted prior to construction. Please report any loggerhead shrike sightings to the Regional Nongame Specialist, Erica Hoaglund.

- Please include a copy of this letter in any state or local license or permit application. Please note that measures to avoid or minimize disturbance to the above rare features may be included as restrictions or conditions in any required permits or licenses.

The Natural Heritage Information System (NHIS), a collection of databases that contains information about Minnesota's rare natural features, is maintained by the Division of Ecological and Water Resources, Department of Natural Resources. The NHIS is continually updated as new information becomes available, and is the most complete source of data on Minnesota's rare or otherwise significant species, native plant communities, and other natural features. However, the NHIS is not an exhaustive inventory and thus does not represent all of the occurrences of rare features within the state. Therefore, ecologically significant features for which we have no records may exist within the project area. If additional information becomes available regarding rare features in the vicinity of the project, further review may be necessary.

For environmental review purposes, the results of this Natural Heritage Review are valid for one year; the results are only valid for the project location (noted above) and the project description provided on the NHIS Data Request Form. Please contact me if project details change or for an updated review if construction has not occurred within one year.

The Natural Heritage Review does not constitute review or approval by the Department of Natural Resources as a whole. Instead, it identifies issues regarding known occurrences of rare features and potential effects to these rare features. This letter does not address potential impacts to state-listed species of special concern. This is a temporary modification as we transition to a new process. To ensure compliance with federal law, the DNR recommends you conduct a federal regulatory review using the U.S. Fish and Wildlife Service's (USFWS) online [Information for Planning and Consultation \(IPaC\) tool](#). If needed, contact your [DNR Regional Environmental Assessment Ecologist](#) to determine whether there are other natural resource concerns associated with the proposed project. Please be aware that additional site assessments or review may be required.

Thank you for consulting us on this matter, and for your interest in preserving Minnesota's rare natural resources. An invoice will be mailed to you under separate cover.

Sincerely,

A handwritten signature in black ink that reads "Samantha Bump". The signature is written in a cursive, flowing style.

Samantha Bump
Natural Heritage Review Specialist
Samantha.Bump@state.mn.us

Links: Rare Species Guide
<http://www.dnr.state.mn.us/rsg/index.html>
DNR Regional Environmental Assessment Ecologist Contact Info
http://www.dnr.state.mn.us/eco/ereview/erp_regioncontacts.html
USFWS IPaC Tool
<https://ecos.fws.gov/ipac/>
Blanding's Turtle Fact Sheet
http://files.dnr.state.mn.us/natural_resources/animals/reptiles_amphibians/turtles/blandings_turtle/factsheet.pdf
Blanding's Turtle Flyer
http://files.dnr.state.mn.us/natural_resources/animals/reptiles_amphibians/turtles/blandings_turtle/flyer.pdf
Wildlife Friendly Erosion Control
<http://files.dnr.state.mn.us/eco/nongame/wildlife-friendly-erosion-control.pdf>

Cc: Melissa Collins, Leslie Parris, and Erica Hoaglund