

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA**

**IN THE MATTER OF THE APPLICATION OF
CROWNED RIDGE WIND, LLC FOR A FACILITIES PERMIT TO
CONSTRUCT A 300 MEGAWATT WIND FACILITY**

Docket No. EL19-003

**SUPPLEMENTAL TESTIMONY
OF TYLER WILHELM AND SAM MASSEY**

May 24, 2019

INTRODUCTION

Q. PLEASE STATE YOUR NAMES AND BUSINESS ADDRESS.

A. Tyler Wilhelm and Sam Massey. Our business address is 700 Universe Blvd., Juno Beach, Florida, 33408.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. We are both employed by NextEra Energy Resources, LLC. Mr. Wilhelm is a Project Manager of Renewable Development, while Mr. Massey is Director of Renewable Development.

Q. WHAT ARE YOUR RESPONSIBILITIES?

A. Together, we are responsible for the development, permitting, community outreach, regulatory compliance, and meeting the commercial operations date for the up to 300 megawatt Crowned Ridge Wind, LLC ("CRW") generation project ("Project").

Q. ARE YOU THE SAME TYLER WILHELM AND SAM MASSEY WHO SUBMITTED DIRECT TESTIMONY IN THIS PROCEEDING ON JANUARY 30, 2019 AND SUPPLEMENTAL TESTIMONY ON APRIL 10, 2019?

A. Yes.

Q. HAS THIS TESTIMONY BEEN PREPARED BY YOU OR UNDER YOUR DIRECT SUPERVISION?

A. Yes.

TESTIMONY

Q. PLEASE DESCRIBE THE PURPOSE OF THE TESTIMONY.

A. The purpose of our testimony is to address the direct testimony of Staff witness Darren Kearney, Staff witness David Hessler, Intervenor John Thompson, and Intervenors' proposed conditions as set forth in Staff witness Darren Kearney's Direct Testimony, Exhibit DK-8.

Shadow/Flicker Waiver

Q. STAFF WITNESS KEARNEY'S TESTIMONY AT PAGE 10, LINES 22-33 STATES THAT IF CRW CANNOT OBTAIN A WAIVER FOR A NON-PARTICIPATING RECEPTOR (CR1-C61-NP), WHO IS EXPECTED TO EXPERIENCE 49 HOURS AND 6 MINUTES OF SHADOW FLICKER PER YEAR, CRW SHOULD ELIMINATE THE USE OF THE WIND TURBINE CAUSING THE SHADOW/FLICKER OR AUTOMATICALLY CONTROL THE TURBINE SO THAT THE RECEPTOR DOES NOT EXPERIENCE OVER 30 HOURS OF SHADOW/FLICKER PER YEAR. WITNESS KEARNEY ALSO REQUESTS THAT CRW PROVIDE IN REBUTTAL TESTIMONY THE FINAL PLAN FOR LIMITING SHADOW/FLICKER AT RECEPTOR (CR1-C61-NP). WHAT IS YOUR FINAL PLAN FOR LIMITING SHADOW/FLICKER AT THE RECEPTOR IN QUESTION?

A. For this receptor, if a waiver is not obtained by the issuance of the Commission's final order in this proceeding, CRW's final plan will be to curtail turbine CR-16 by

1 approximately 20 hours on an annual basis to avoid shadow flicker in excess of 30
2 hours/year on receptor CR1-C61-NP.

3
4 **Q. STAFF WITNESS KEARNEY'S TESTIMONY AT PAGE 11, LINES 9-12**
5 **REQUESTS THAT CRW SUBMIT A MITIGATION STRATEGY FOR**
6 **PARTICIPATING RECEPTOR (CR1-C106-P). WHAT IS THE MITIGATION**
7 **STRATEGY?**

8 A. The landowner has confirmed that this receptor is an unoccupied structure. The structure
9 has been vacant for over 40 years and the landowner plans to remove the structure once
10 allowed by the local fire department. See Exhibit TW-SM-R-1. Given the receptor is an
11 unoccupied structure that will be removed, no mitigation is necessary.

12
13 **Status of County Permits**

14 **Q. STAFF WITNESS KEARNEY'S TESTIMONY AT PAGES 13-15 PROVIDES AN**
15 **OVERVIEW OF THE COUNTY PERMITTING OF CRW AND REQUEST A**
16 **STATUS UPDATE. HAS CRW OBTAINED ALL PERMITS NEEDED FROM**
17 **GRANT COUNTY TO CONSTRUCT THE CROWNED RIDGE WIND**
18 **FACILITY?**

19 A. Yes. The required Grant County Permits have been issued and remain in effect. CRW
20 was issued a Conditional Use Permit ("CUP") on December 17, 2018, for a wind energy
21 system in Grant County, South Dakota. Certain individuals have appealed the issuance
22 of the CUP by filing a Petition for Writ of Certiorari dated January 17, 2019. The Writ

1 has been issued and the Return to the Writ was served April 2, 2019. The matter remains
2 pending in Circuit Court.

3
4 Cattle Ridge Wind Farm, LLC was issued a Conditional Use Permit for the remaining
5 footprint of the Crowned Ridge Wind project within Grant County on April 8, 2019.
6 Findings of Fact were entered April 18, 2019, and to date we have not been informed of
7 an appeal.

8 **Q. HAS CROWNED RIDGE WIND OBTAINED ALL PERMITS NEEDED FROM**
9 **CODINGTON COUNTY TO CONSTRUCT THE CROWNED RIDGE WIND**
10 **FACILITY?**

11 **A.** Yes. The required Codington County Permits have been issued and remain in effect.
12 CRW was issued a CUP for the wind energy project within Codington County on July 16,
13 2018. Certain individuals appealed the issuance of the CUP by Petition for Writ of
14 Certiorari. Hearing on the Writ has been held and a decision denying the appeal was
15 entered and filed by the Circuit Court on March 22, 2019. Findings of Fact and
16 Conclusions of Law were signed by the Court April 30, 2019, and no appeal therefrom
17 has been served to date.

18 **Decommissioning Condition**

19 **Q. STAFF WITNESS KEARNEY'S TESTIMONY AT PAGE 24, LINE 26**
20 **THROUGH PAGE 25, LINE 11 ASSERTS THAT IT IS MORE PRACTICABLE**
21 **FOR THE COUNTIES OF GRANT AND CODINGTON TO ACCEPT THE**
22 **DECOMMISSIONING ESCROW ACCOUNT ESTABLISHED BY THE**

**COMMISSION, BECAUSE OF THE DIFFERENCES IN THE TWO COUNTIES
APPROACHES. DO YOU AGREE?**

A. Yes, CRW agrees with this approach and will engage with Grant and Codington Counties about establishing a uniform escrow agreement that includes requirements consistent with the Commission's goals. However, the project does not have the ability to require either county to accept escrow requirements outside of or beyond their existing requirements, so establishing a uniform escrow agreement will ultimately be contingent on approval from both counties. CRW has recently engaged Grant County to provide the decommissioning financial security required prior to the start of construction. In the event a uniform escrow agreement is accepted, then CRW will request that the uniform escrow agreement be taken into consideration and ultimately as this financial security is likely to be in place prior to uniform escrow agreement, if adopted.

Sound Study

**Q. STAFF WITNESS HESSLER'S TESTIMONY AT PAGE 5 LINES 17 TO PAGE 6
LINE 5 CLAIMS THAT CRW SHOULD MOVE 16 PRIMARY TURBINE
LOCATIONS TO ALTERNATIVE LOCATIONS TO REDUCE THE DBA FOR
NON-PARTICIPANTS FROM A RANGE OF 43-45 DBA TO 41 OR 42 DBA. IN
DOING SO, HE INFERS THAT THESE RELOCATIONS CAN BE COMPLETED
WITHOUT AFFECTING THE TOTAL POWER PRODUCT OR ECONOMICS
OF THE PROJECT. DO YOU AGREE WITH HIS INFERENCE?**

A. No. A significant part of the development process involved discussing primary turbine locations with landowners to engineer access roads and collection in a manner that is

1 compatible with existing farming operations to the extent practicable. To adopt Mr.
2 Hessler's recommendation would essentially eliminate the development work with these
3 landowners for no material benefit.

4
5 Also, as shown in the Rebuttal Testimony of Jay Haley, the CRW wind project, as
6 designed, does not exceed 45 dBA at the residence of a non-participant nor 50 dBA at the
7 residence of a participant. Using this data, the Rebuttal Testimony of CRW witnesses
8 Chris Ollson and Robert McCunney shows that there are no material health, welfare, or
9 reduction of complaints or annoyance for a sound level below 45 dBA, which
10 demonstrates that there is no material benefit to the non-participants if Mr. Hessler's
11 recommendation is adopted.

12
13 Further, there are economic impacts to CRW if Mr. Hessler's recommendation is
14 adopted. For example, the economic impact of using the turbines identified by Mr.
15 Hessler is substantial since these alternate locations would require incremental collection
16 costs in the range of \$2.5 - \$3.5 million to connect these northern most turbines to the
17 centralized project substation. Additionally, the use of 16 alternative turbines for this
18 purpose would effectively exhaust our alternative turbine locations, which could limit the
19 amount of turbines constructed should unexpected conditions be found at the alternative
20 turbine locations or at other primary turbine locations not impacted by Hessler's
21 recommendation.

Non-Participant

Q. INTERVENOR WITNESS THOMPSON TESTIFIED THAT THE CRW MAP 3A SHOWING WHO HAS SIGNED EASEMENTS IS NOT CORRECT, BECAUSE IT SHOWS HIM AS SIGNING AN EASEMENT AGREEMENT AND HE HAS NOT SIGNED AN EASEMENT AGREEMENT. PLEASE EXPLAIN WHY MR. THOMPSON WAS INCLUDED ON THE MAP WHEN HE HAD NOT SIGNED AN EASEMENT AGREEMENT.

A. When the Cattle Ridge Wind Farm, LLC (“Cattle Ridge Wind”) was acquired, Cattle Ridge Wind represented to CRW that the Thompson properties were participating in the project. Although James Thompson stated in an email message that the CRW planning map should not show the Thompson properties as participating and hosting collector lines, Mr. Wilhelm received a voice mail message from Cheryl Thompson, James Thompson’s mother, expressing an interest in participating in the project. Mr. Wilhelm and John Thompson also discussed participation in the project. In response to these inquiries, Russel Lloyd, a land agent for CRW, sent draft easement option documents to the Thompsons. On April 4, 2019, as a follow-up, Mr. Lloyd sent an email to James, John, and Cheryl Thompson seeking to have a call to discuss the easement material. John Thompson emailed back “I don’t think we are interested and are busy. It was at that time that Mr. Wilhelm understood the Thompson’s were not interested in participating. He then started working with the CRW team to re-locate the planned collector lines off of the Thompson’s properties. Mr. Wilhelm also worked with the CRW team to conduct an overall update of the CRW Maps, including Map 3, for land status changes and minor adjustments to project infrastructure to accommodate participating landowners. The task

1 of moving the collector lines off the Thompson's properties was completed on May 14,
2 2019 and the task of updating the CRW Maps was completed on May 23, 2019. On May
3 23, 2019, the CRW Maps were filed in the docket, which showed the Thompson
4 properties as not participating, and, also, showed that there will be no collector lines
5 located on the Thompson's properties. Map 3 is also attached to this testimony as
6 Exhibit TW-SM-R-2.

7
8 **Q. WHERE THERE OTHER UPDATES TO CRW MAPS?**

9 A. Yes, the following updates were made to Exhibit TW-SM-R-2 as well as to other CRW
10 Maps filed on May 23, 2019:

11 1) Revisions to property land statuses. These changes take into account properties
12 where easement option agreements have expired and are subject to renewal
13 (shown as pending on Exhibit TW-SM-R-2), an easement option agreement that
14 will expire prior to the construction of the project that is likely not to be renewed.

15
16 2) Minor refinements to locations of project infrastructure. Notable changes to
17 project infrastructure include (a) the shift of collection from the Thompson
18 property, the removal of collection; (b) removal of a temporary construction
19 easement from the Stricherz property located in Section 22, addition to adjacent
20 property; (c) proposed shifts to access roads for turbines CR-122 through CR-126
21 at the requests of landowners; (d) minor revisions to collection routing were made
22 on properties throughout the Project, which include collection routing identified at

1 met tower SM01, turbine CR-105, between turbines CR-112 and CR-114, CR-
2 115, CR-116, CR-163, CR- ALT7 and between CR-ALT20 and CR-ALT22.

3
4 **Intervenors' Proposed Conditions**

5 **Q. THE INTERVENORS' PROPOSED CONDITION 1 (KEARNEY EXHIBIT DK-8)**
6 **WOULD REQUIRE A "2 MILE SETBACK FROM ALL NON-PARTICIPATING**
7 **LANDOWNERS." DO YOU AGREE WITH THIS PROPOSED CONDITION?**

8 A. No. A 2-mile setback to all non-participating landowners would eliminate all 130
9 turbines in the project. Also, as shown in the rebuttal testimony of CRW witnesses
10 Ollson, McCunney, Haley, and Lampeter, such a setback is not supported from a
11 technical, health, or welfare standpoint. Therefore, CRW does not agree it is appropriate
12 for adoption.

13 **Q. THE INTERVENORS' PROPOSED CONDITION 2 (KEARNEY EXHIBIT DK-8)**
14 **WOULD REQUIRE A "2 MILE SETBACK FROM THE WAVERLY SCHOOL."**
15 **DO YOU AGREE WITH THIS PROPOSED CONDITION?**

16 A. No. As currently designed, the closest CRW project turbine to the Waverly School is
17 turbine CR1-94, which is 6,207 feet away. Implementation of a 2-mile setback to the
18 Waverly School would eliminate 13 turbine locations and would impose an unnecessary
19 commercial burden on the Applicant. In addition, as shown in the rebuttal testimony of
20 CRW witnesses Ollson, McCunney, Haley, and Lampeter, such a setback is not
21 supported from a technical, health, or welfare standpoint. Therefore, CRW does not
22 agree it is appropriate for adoption.

1 **Q. THE INTERVENORS' PROPOSED CONDITION 9 (KEARNEY EXHIBIT DK-8)**
2 **WOULD REQUIRE AIRCRAFT DETECTION LIGHTING SYSTEMS BE USED**
3 **IMMEDIATELY UPON OPERATION." DO YOU AGREE WITH THIS**
4 **PROPOSED CONDITION?**

5 **A.** No. The Federal Aviation Administration ("FAA") has sole jurisdiction and authority
6 over the approval and implementation of Aircraft Detection Lighting Systems ("ADLS").
7 CRW cannot comply with this proposed condition since it cannot compel the FAA to
8 approve of the use of ADLS. As stated in the supplemental responses to intervenors and
9 staff data requests, the Applicant intends to utilize ADLS technology for the Project. The
10 Applicant is currently working with vendors to establish design requirements and will
11 apply with the FAA for use of ADLS, once the FAA first provides its initial
12 determination of no hazard which is expected in July 2019.

13
14 Also, CRW's plan to implement the use of ADLS, if approved by the FAA, is consistent
15 with the requirements in both the Grant and Codington County local ordinances, "Subject
16 to FAA approval, applicants will install an ADLS within one (1) year of approval by
17 FAA for the specified project. In the event FAA does not approve an ADLS system, the
18 turbine owner will comply with all lighting and markings otherwise required by FAA."
19 Therefore, for these reasons, the Commission should not adopt this proposed condition.

1 **Q. THE INTERVENORS' PROPOSED CONDITION 18 (KEARNEY EXHIBIT DK-**
2 **8) WOULD REQUIRE "NO FLICKER SHALL BE ALLOWED TO CROSS NON-**
3 **PARTICIPATING LANDOWNER'S PROPERTY LINE." DO YOU AGREE**
4 **WITH THIS PROPOSED CONDITION?**

5 A. No. This proposed condition is unnecessary because the project will comply with all
6 shadow flicker requirements. As shown in the rebuttal testimony of CRW witnesses
7 Ollson, McCunney, Haley, and Lampeter, such a condition is not supported from a
8 technical, health, or welfare standpoint. Therefore, CRW does not agree it is appropriate
9 for adoption. Additionally, this proposed condition is unduly burdensome because, if
10 implemented, it would eliminate 80 turbines from the project.

11
12 **Q. THE INTERVENORS' PROPOSED CONDITION 21 (KEARNEY EXHIBIT DK-**
13 **8) WOULD REQUIRE "THE PUC SHALL FOR THE LIFE OF THE PROJECT,**
14 **CRADLE TO GRAVE, ENFORCE THE 40 DB(A) L10 BY REQUIRING THE**
15 **REMOVAL OF TURBINES AND FINES IN EXCESS OF \$10,000 PER**
16 **INCIDENT, FOR EQUIPMENT NOISE VIOLATIONS. THE FINE REVENUE**
17 **SHALL BE REMANDED TO THE AFFECTED PROPERTY OWNER WHERE**
18 **THE VIOLATION OCCURRED." DO YOU AGREE WITH THIS PROPOSED**
19 **CONDITION?**

20 A. No. First, we reject the premise that the limit of 40 dba and the use of the L10
21 measurement are appropriate and reasonable for the reasons set forth in the rebuttal
22 testimony of CRW witnesses Ollson, McCunney, Haley, and Lampeter. Second, even for
23 the sake of argument, if a post-construction sound monitoring evaluation indicated that a

Commission-imposed dba limit was exceeded we do not agree that the turbine should be removed and a fine assessed. Any issues raised by community members regarding potential sound impact from operation of CRW should be addressed through the complaint resolution process described in ARSD Chapter 20: 10:01.

Q. THE INTERVENORS' PROPOSED CONDITION 22 (KEARNEY EXHIBIT DK-8) WOULD REQUIRE:

THE APPLICANT SHALL DEVELOP A REPORT CONCERNING HEALTH, SAFETY AND WELFARE OF LIVING, WORKING, RECREATING, AND COMMUTING IN THE TURBINE PROJECT. THIS REPORT SHALL COVER BUT NOT LIMITED TO INFRASOUND, LOW FREQUENCY NOISE, COMMUNITY WITHIN THE PROJECT DURING CONSTRUCTION, DURING ICING CONDITIONS, ICE THROW, FIRE DANGERS INCLUDING PRAIRIE FIRES CAUSED BY TURBINES, SAFETY SETBACKS, A MAP OF TURBINE LOCATIONS AND ID ADDRESS FOR EMERGENCY RESPONDERS, AND THE PUC PHONE NUMBER TO REGISTER COMPLAINTS. THIS REPORT SHALL BE FOR THE LIFE OF THE PROJECT BE PUBLISHED ANNUALLY EACH FALL IN PUBLIC OPINION NEWSPAPER IN WATERTOWN, SD, SOUTH SHORE GAZETTE IN SOUTH SHORE, SD AND THE GRANT COUNTY REVIEW IN MILBANK, SD.

DO YOU AGREE WITH THIS PROPOSED CONDITION?

A. No. The rebuttal testimony of CRW witnesses Thompson, Ollson, McCunney, Haley, Sappington, and Lampeter show that the underlying subject matter regarding health, safety, and welfare in this condition do not warrant the reporting proposed in this Condition. Additionally, this proposed condition is redundant and duplicative of existing reporting channels since the applicant is already required to coordinate with emergency responders in setting up an emergency action plan in the event of fire or other hazardous condition, as previously described in section 18.3.3 of the Application.

1 **Q. THE INTERVENORS' PROPOSED CONDITION 25 (KEARNEY EXHIBIT DK-**
2 **8) WOULD REQUIRE "THE APPLICANT [TO] REMOVE ALL TURBINES**
3 **THAT DO NOT MEET THE CONDITIONS OF THE LOCAL AND STATE**
4 **PERMITS, RULES AND LAWS." DO YOU AGREE WITH THIS PROPOSED**
5 **CONDITION?**

6 **A.** No. This proposed condition is redundant as CRW is required to comply with all
7 applicable local, state, and federal laws. In the event that there is a question whether a
8 turbine is in compliance with these laws, CRW would want to present proof of
9 compliance or possible mitigate measures to bring the turbine into compliance, and, only
10 as a last resort remove the turbine if the agency considering the issue of possible non-
11 compliance ordered the company to remove the turbine after an opportunity to present
12 proof of compliance and/or the mitigation measures.

13
14 **Q. THE INTERVENORS' PROPOSED CONDITION 26 (KEARNEY EXHIBIT DK-**
15 **8) WOULD REQUIRE "IF THE PUC REQUIRES A LIAISON, THE LIAISON**
16 **SHALL LIVE IN THE CROWNED RIDGE LLC BOUNDARY." DO YOU**
17 **AGREE WITH THIS PROPOSED CONDITION?**

18 **A.** No. The roles and responsibilities of the liaison will be articulated by the Commission in
19 its conditions. CRW will propose a candidate liaison to the Commission and the
20 Commission will approve or disapprove of that candidate based on an evaluation of the
21 candidate's suitability for the role.

1 **Q. THE INTERVENORS' PROPOSED CONDITION 27 (KEARNEY EXHIBIT DK-**
2 **8) WOULD REQUIRES "IN THE FIRST WEEK OF MAY, BY LETTER, THE**
3 **PUC SHALL SURVEY THE PARTICIPATING AND NON PARTICIPATING**
4 **LANDOWNERS WITHIN 2 MILES OF THE PROJECT BOUNDARY**
5 **FOOTPRINT WITH 10 QUESTIONS WRITTEN BY THE INTERVENORS." DO**
6 **YOU AGREE WITH THIS PROPOSED CONDITION?**

7 **A.** No. Based on the language of this proposed condition, it is unclear what the purpose of
8 the survey would be and what service it would perform in the public interest.
9

10 **Q. THE INTERVENORS' PROPOSED CONDITION 28 (KEARNEY EXHIBIT DK-**
11 **8) WOULD REQUIRE THAT "THE PUC SHALL REQUIRE THE APPLICANT**
12 **TO REMOVE AND NOTIFY THE PARTICIPATING LANDOWNERS THAT**
13 **THE CONFIDENTIALITY [EASEMENT] AGREEMENT IS NULLIFIED." THIS**
14 **NOTICE SHALL BE SENT BY APRIL 30TH." DO YOU AGREE WITH THIS**
15 **PROPOSED CONDITION?**

16 **A.** No. The participating landowners have entered into a voluntary and private business
17 agreement with the Applicant on terms mutually agreeable to both parties. The terms and
18 conditions and pricing are confidential and sensitive commercial information, which if
19 disclosed would harm the competitive position of the project and other affiliates of CRW
20 who use the same terms and conditions.
21
22

1 **Q. THE INTERVENORS' PROPOSED CONDITION 31 (KEARNEY EXHIBIT DK-**
2 **8) WOULD REQUIRE:**

3 **THE PUC, FOR THE LIFE OF THE PROJECT, SHALL ANNUALLY**
4 **SEND OUT A SURVEY TO ALL PARTICIPATING AND**
5 **NONPARTICIPATING LANDOWNERS WITHIN THE PROJECT**
6 **BOUNDARY FOOTPRINT AND WITHIN 2 MILES OF THE PROJECT**
7 **BOUNDARY FOOTPRINT. THE SURVEY SHALL QUERY BUT NOT**
8 **LIMITED TO, PERCEPTIONS OF PROPERTY VALUE, QUALITY OF**
9 **LIFE, HEALTH CONCERNS RELATED TO TURBINES, CONCERNS**
10 **ABOUT THE TURBINES.**

11
12 **DO YOU AGREE WITH THIS PROPOSED CONDITION?**

13 **A.** No. The rebuttal testimony of CRW witnesses Baker, Ollson, and McCunney shows that
14 the underlying subject matter does not warrant an annual survey. Furthermore, this
15 proposed condition is redundant as there will be a complaint process in place (as required
16 by ARSD Chapter 20: 10:01) that provides members of the community an opportunity, at
17 any time, to raise concerns and seek resolution, and, therefore, the proposed condition is
18 not needed.

19 **Q. THE INTERVENORS' PROPOSED CONDITION 32 (KEARNEY EXHIBIT DK-**
20 **8) WOULD REQUIRE THE PUC NOT TO ALLOW TURBINE SHIFTS. DO**
21 **YOU AGREE WITH THE PROPOSED CONDITION?**

22 **A.** The Commission in past cases (Prevailing Wind, condition no. 23, and Dakota Range I
23 and II, condition no. 22) has allowed turbine shifts of up to 250 feet or less from the
24 turbine locations identified in the application without prior Commission approval, subject
25 to a number of conditions. CRW agrees with the Commission's approach on turbine
26 moves and is agreeable to complying with the same conditions imposed in the Prevailing
27 Wind and Dakota Range cases.

1
2 The Commission-approved condition in those cases also requires that a turbine that is
3 moved within 250 feet must continue to comply with all applicable setbacks, sounds and
4 shadow/flicker requirements; therefore, the moving of the turbine will not result in non-
5 compliance with these setbacks and requirements. Prior to the move, the Commission-
6 approved condition would require that CRW will file in the docket an affidavit
7 demonstrating compliance with the conditions. Any turbine move that does not comply
8 with the limitations would require Commission approval. Thus, we believe the
9 Commission has appropriately conditioned turbine moves, and CRW is willing to comply
10 with such a condition. Therefore, the proposed condition prohibiting turbine moves
11 should not be adopted.

12 **Q. THE INTERVENORS' PROPOSED CONDITION 34 (KEARNEY EXHIBIT DK-**
13 **8) WOULD REQUIRE "THE APPLICANT SHALL PROVIDE A CRADLE TO**
14 **GRAVE CARBON FOOTPRINT REPORT FOR THIS PROJECT." DO YOU**
15 **AGREE WITH THE PROPOSED CONDITION?**

16 A. No. CRW's wind facility is a zero carbon emission energy resource. There is no basis
17 that CRW file a report essentially stating the same.

18 **Q. THE INTERVENORS' PROPOSED CONDITION 36 (KEARNEY EXHIBIT DK-**
19 **8) WOULD REQUIRE CRW TO "COMMIT TO AN END DATE TO THE**
20 **PROJECT." DO YOU AGREE WITH THIS PROPOSED CONDITION?**

21 A. The estimated life of the Project is 25 years, which is the same term as the power
22 purchase agreement ("PPA") with Northern States Power Company. At the end of the
23 PPA, CRW will consider selling the energy from the wind facility to other buyers. CRW

may also extend the life of the project through retrofitting or repowering. To the extent, retrofitting and repowering requires Commission approval at that time, CRW will seek that approval prior to conducting the retrofitting and repowering. Therefore, at this time, there is no specific date to provide when the project will end, but CRW is amendable to notifying the Commission after 25 years if it will not retrofit or repower the project, if the Commission desires.

Q. THE INTERVENORS' PROPOSED CONDITION 38 (KEARNEY EXHIBIT DK-8) WOULD REQUIRE:

AN ANNUAL REPORT PUBLISHED IN THE FOLLOWING PUBLIC PUBLICATIONS, FOR THE LIFE OF THE PROJECT: PUBLIC OPINION NEWSPAPER IN WATERTOWN, SD, SOUTH SHORE GAZETTE IN SOUTH SHORE, SD AND THE GRANT COUNTY REVIEW IN MILBANK, SD WHICH INCLUDES A REPORT OF THE FOLLOWING INFORMATION:

- TAX REVENUE VERSUS PREDICTIONS FOR EACH ENTITY: COUNTY, TOWNSHIP AND SCHOOL DISTRICT.
- ACTUAL POWER PRODUCTION VERSUS PREDICTIONS.
- ELECTRIC PRICES EXPERIENCED BY CITIZENS VERSUS ELECTRIC PRICES AT THE START OF THE PROJECT.
- THE AMOUNT OF NET NEGATIVE ENERGY USED FROM THE GRID AND THE PRICE COST PER KILOWATT AND TOTAL COST PER TURBINE THE APPLICANT PAID FOR IT.
- SCHOOL ENROLLMENT NUMBERS AT WAVERLY SCHOOL VERSUS AT THE START OF THE PROJECT.
- A SURVEY OF ALL LANDOWNERS THAT IS COMPLETED BY A THIRD PARTY SELECTED BY THE PUC, WITH THE RESULTS BEING SENT DIRECTLY FROM THE SURVEY COMPANY TO THE PUC. THE QUESTIONS ON THE SURVEY SHALL INCLUDE:

■ DO YOU FEEL YOUR QUALITY OF LIFE HAS BEEN IMPACTED AS A RESULT OF THE WIND PROJECT, CROWNED RIDGE I? IF YES, HAS IT BEEN IMPACTED FOR THE BETTER OR WORSE?

■ DO YOU BELIEVE THE COMMUNITY HAS BEEN IMPACTED AS A RESULT OF THE WIND PROJECT, CROWNED

1 **RIDGE I? IF YES, HAS IT BEEN IMPACTED FOR THE BETTER OR**
2 **WORSE?**
3

4 **DO YOU AGREE WITH THESE PROPOSED CONDITIONS?**

5 A. No. As written, it is unclear what the proposed conditions would achieve as this data is
6 either publicly available or commercial and private in nature. Further, the following
7 provides additional reasons why each subject matter should not be part of an annual
8 report.

9 **Tax**

10 County, Township, and School District tax revenues are publicly available, and,
11 therefore, the Intervenors can obtain such information without publishing it the
12 newspaper.

13 **Actual Production Versus Predictions**

14 Many factors can lead to differences between predicted and actual energy production,
15 such as weather resource variability and equipment outages. CRW employs a dedicated
16 team of professionals to forecast project energy production, but there can be differences
17 between predicted and actual production. These differences can be commercially
18 sensitive due to the competitive nature of wind energy development, and, therefore, CRW
19 would oppose publishing them in a newspaper.

20
21 **School Enrollment**

22 As shown in the rebuttal testimony of CRW witnesses Ollson, McCunney, Haley, and
23 Lampeter, there is no supporting evidence from a technical, health, or welfare standpoint

1 that the students of Waverly school will be impacted by this project. Accordingly, the
2 reporting on school enrollment serves no purpose.

3 **Survey by third party**

4 As shown in the rebuttal testimony of CRW witnesses Ollson, McCunney, Haley, and
5 Lampeter, there is no supporting evidence from a technical, health, or welfare standpoint
6 that warrants a third party survey on quality of life and community impact.

7
8 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

9 **A.** Yes, it does.

STATE OF DELAWARE)
) ss
COUNTY OF NEW CASTLE)


I, Sam Massey, being duly sworn on oath, depose and state that I am the witness identified in the foregoing prepared testimony and I am familiar with its contents, and that the facts set forth are true to the best of my knowledge, information and belief.



Sam Massey

Subscribed and sworn to before me this 23 day of
May 2019.

SEAL




Notary Public

My Commission Expires _____ **PAMELA MARIE HEVERIN**
Notary Public - State of Delaware
My Commission Expires August 3, 2021

STATE OF FLORIDA)
) ss
COUNTY OF PALM BEACH)

I, Tyler Wilhelm, being duly sworn on oath, depose and state that I am the witness identified in the foregoing prepared testimony and I am familiar with its contents, and that the facts set forth are true to the best of my knowledge, information and belief.

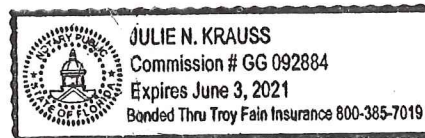

Tyler Wilhelm

Subscribed and sworn to before me this 23rd day of
May 2019.

SEAL


Notary Public

My Commission Expires _____



May 22, 2019

To whom it may concern:

This is Dennis Schmeling, I have the house in NW 1/4 Section 4-T 119-R 51. This house is un-livable, the floors are rotted out, it's full of raccoons, windows are gone. It has no value and has been vacant since 1995.

I intend to remove the structure when local fire department allows removal.

Regards,

Dennis Schmeling

605-467-9876

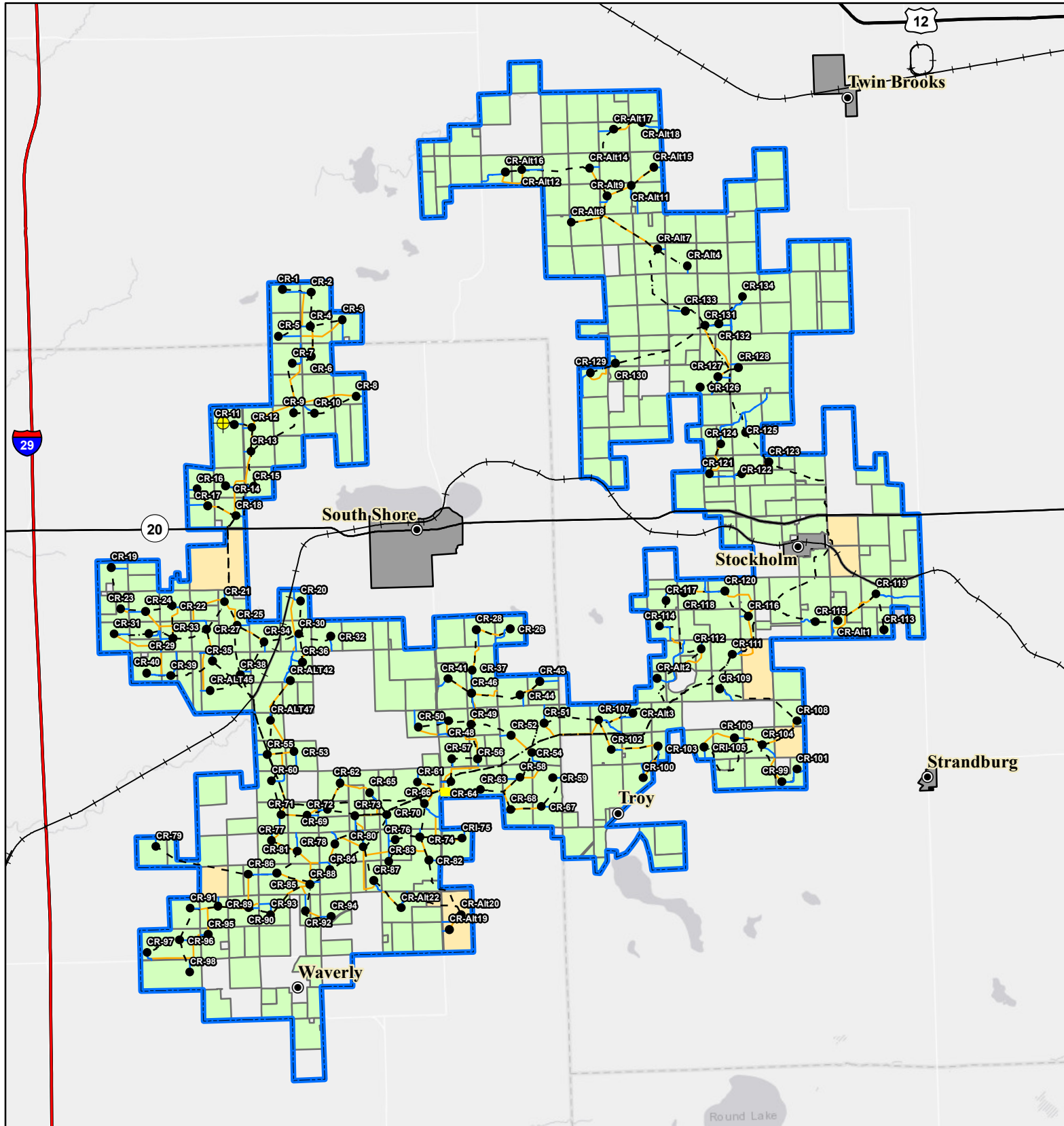
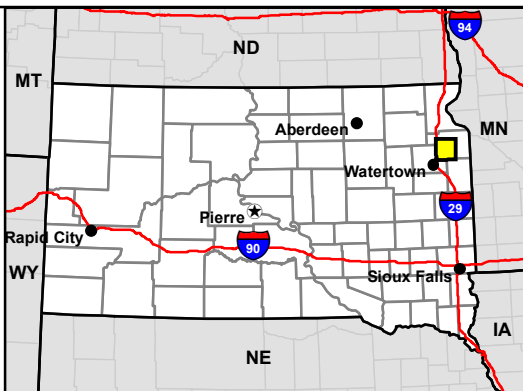


Figure 3. Project Map
Crowned Ridge Wind Farm

- | | | | |
|--|--------------------|---------------------|-----------------------------|
| | MET Tower | | U.S. Highway |
| | Turbine | | State Highway |
| | City | | O&M Facility/
Substation |
| | Access Road | | Town Boundary |
| | Collector Line | | Project Boundary |
| | Crane Path | Lease Status | |
| | Railroad | | Leased, Signed |
| | Interstate Highway | | Pending Approval |



Kilometers
0 2.5 5

Miles
0 2.5 5

Base Map: World Light Gray Canvas Base
Sources: Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community
Codington and Grant Counties, South Dakota

004771 **SWCA**
ENVIRONMENTAL CONSULTANTS

Projection: NAD 1983 UTM Zone 14N

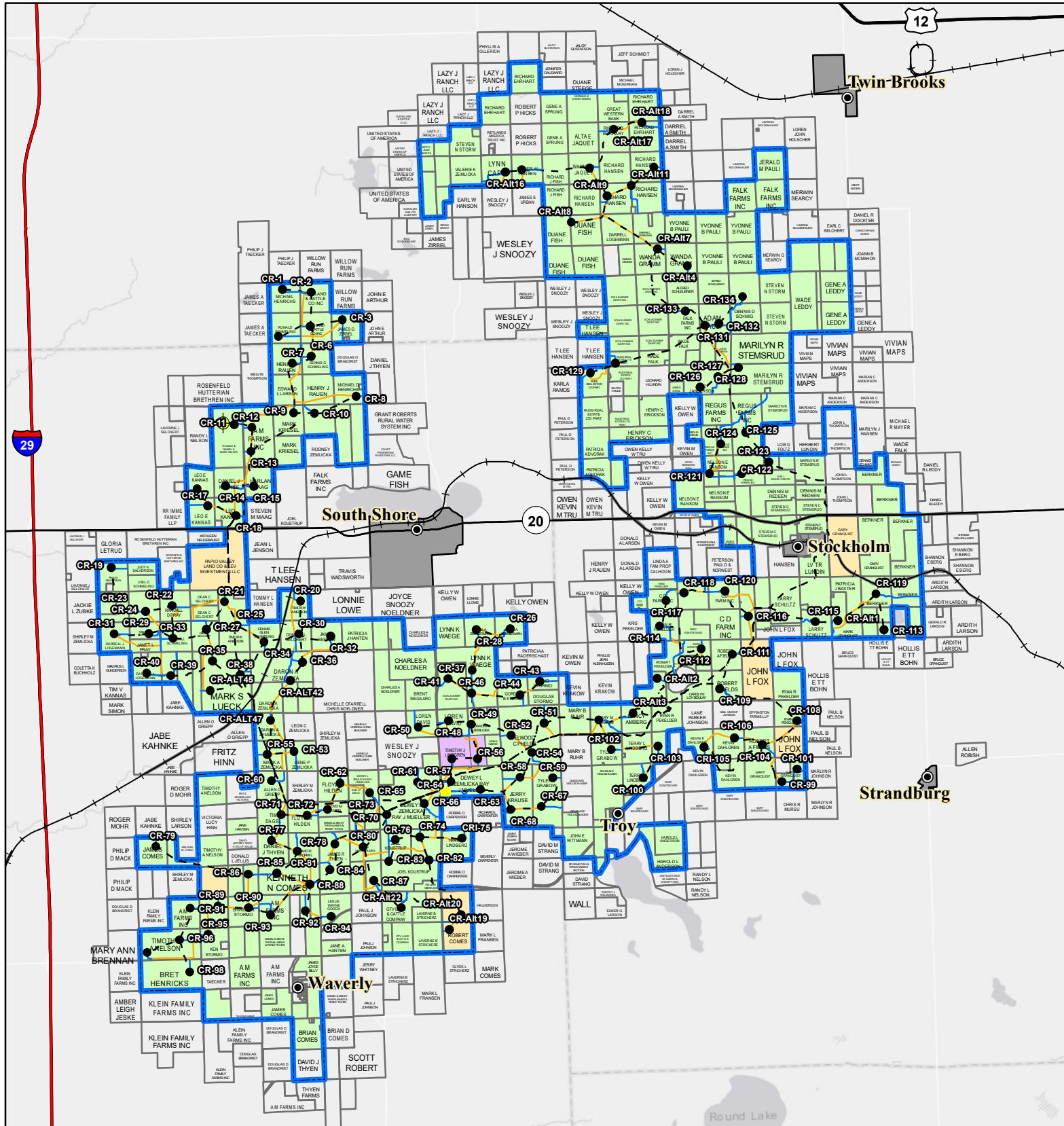
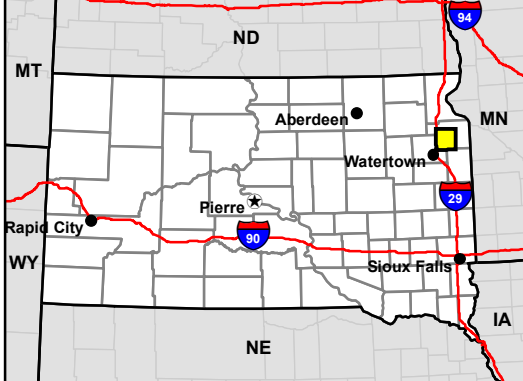


Figure 3a. Project Map

Crowned Ridge Wind Farm

- MET Tower
 - Turbine
 - City
 - Access Road
 - Collector Line
 - Crane Path
 - Railroad
 - Interstate Highway
 - U.S. Highway
 - State Highway
 - O&M Facility/Substation
 - Town Boundary
 - Project Boundary
 - Parcel Boundary
- Lease Status**
- Leased, Signed
 - Pending Approval
 - Under Option but Likely to Expire/Not Resign



Kilometers
0 2.5 5

Miles
0 2.5 5

Base Map: World Light Gray Canvas Base
Sources: Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community
Codington and Grant Counties, South Dakota

004772 **SWCA**
ENVIRONMENTAL CONSULTANTS

Projection: NAD 1983 UTM Zone 14N

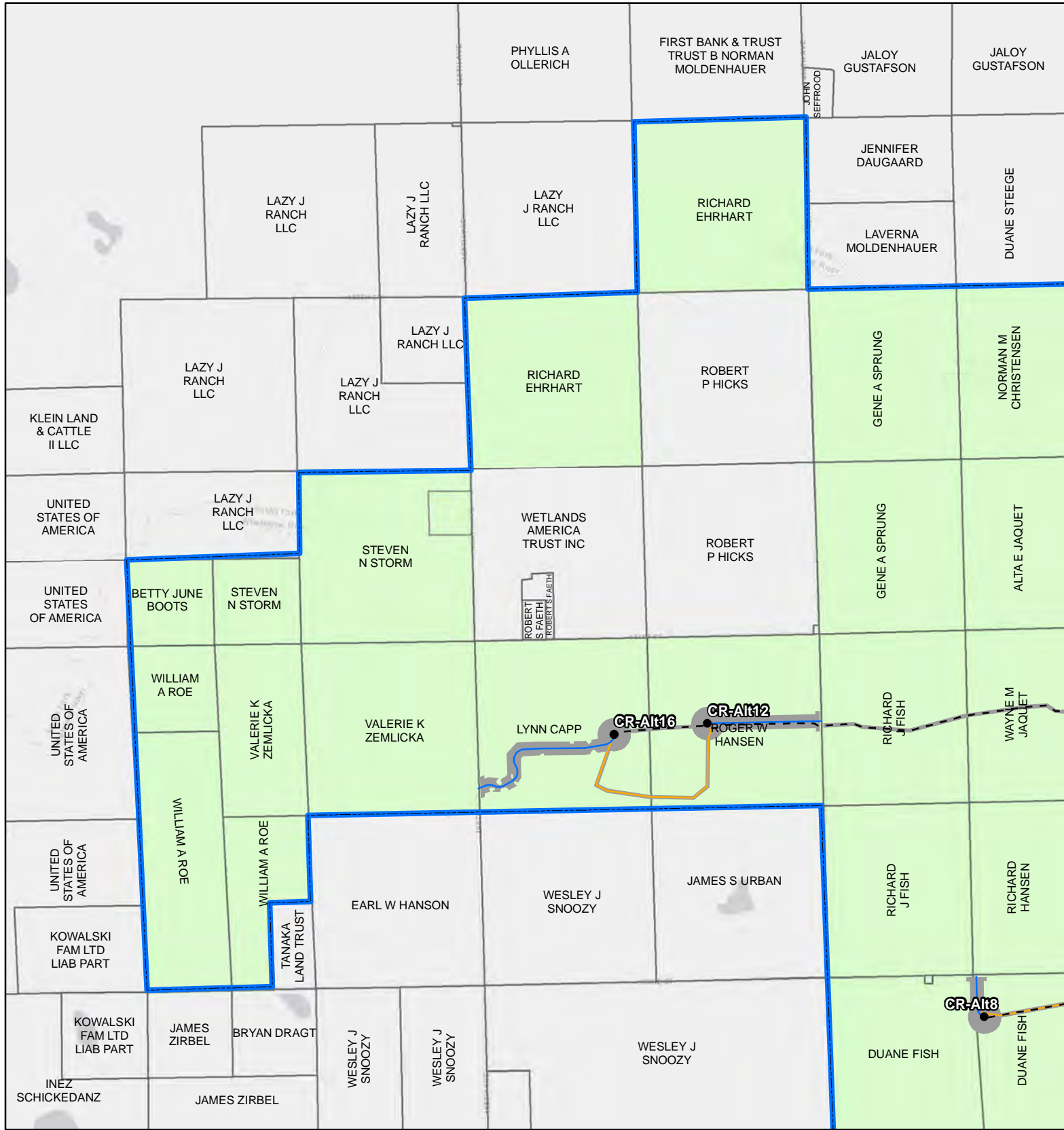
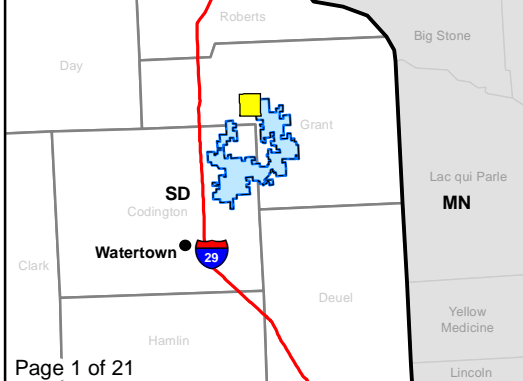


Figure 3a. Project Map
Crowned Ridge Wind Farm

- Turbine
 - ⊙ MET Tower
 - City
 - Access Road
 - - - Collector Line
 - Crane Path
 - Railroad
 - O&M Facility/ Substation
 - Batch Plant
 - Laydown Yard
 - Construction Easement
 - ▬ Parcel Boundary
 - ▬ Project Boundary
 - ▬ County Boundary
- Lease Status**
- Leased, Signed
 - Pending
 - Under Option but Likely to Expire/Not Resign



Kilometers
0 0.5 1

Miles
0 0.25 0.5

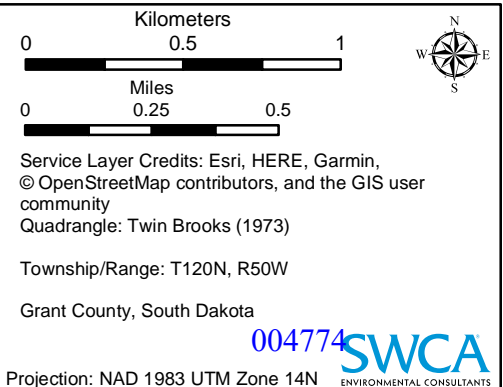
Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community
Quadrangle: Antelope Valley (1973), Twin Brooks (1973)
Township/Range: T120N, R51W, T120N, R50W
Grant County, South Dakota

004773 **SWCA**
ENVIRONMENTAL CONSULTANTS

Projection: NAD 1983 UTM Zone 14N



-
- Day
- Roberts
- Big Stone
- Grant
- SD
- Codington
- Watertown
- 29
- MN
- Deuel
- Yellow Medicine
- Lincoln
- Hamlin
- Clark
- Page 2 of 21



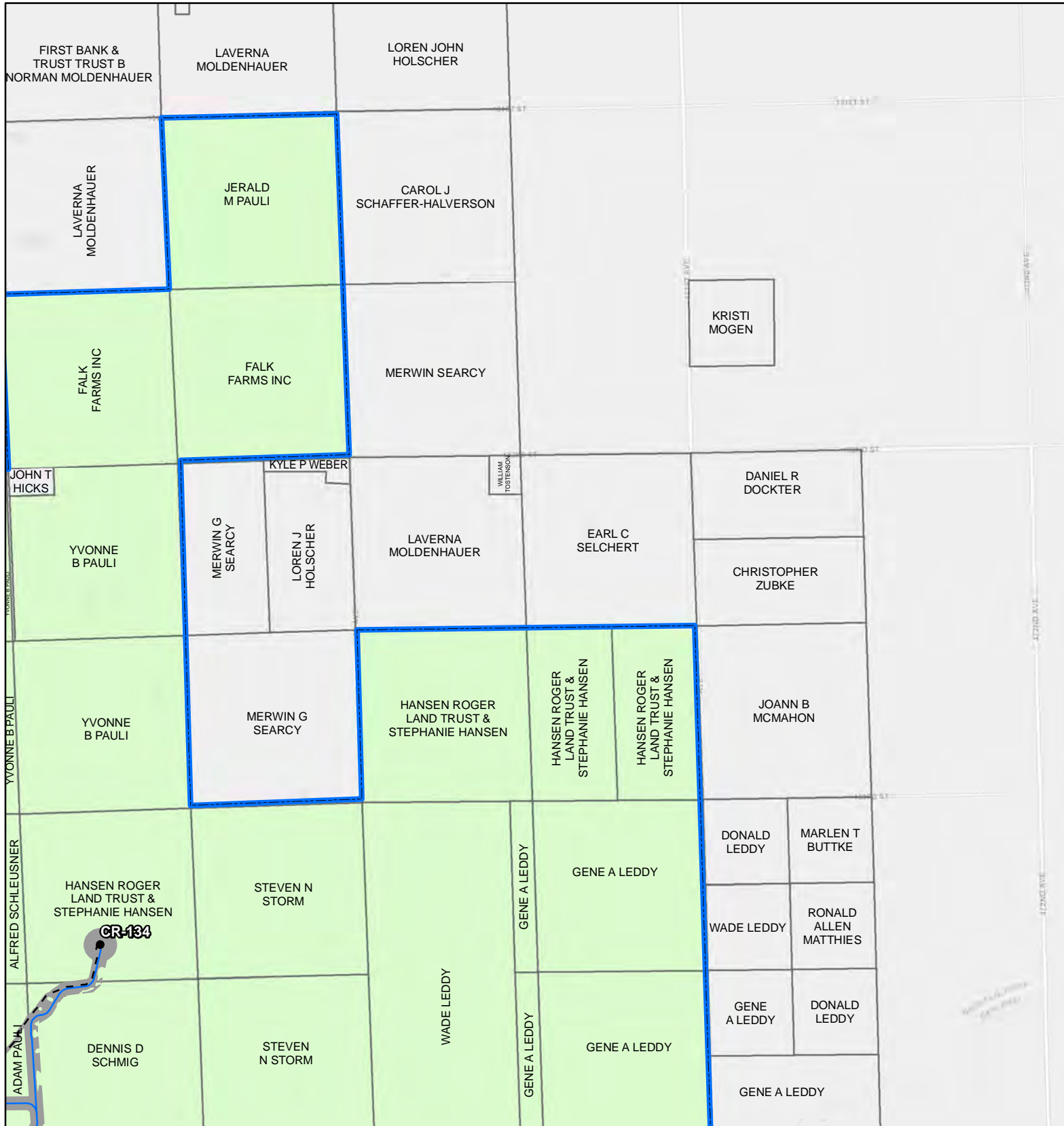


Figure 3a. Project Map
Crowned Ridge Wind Farm

- Turbine
 - ⊕ MET Tower
 - City
 - Access Road
 - - - Collector Line
 - Crane Path
 - Railroad
 - O&M Facility/ Substation
 - Batch Plant
 - Laydown Yard
 - Construction Easement
 - ▭ Parcel Boundary
 - ▭ Project Boundary
 - ▭ County Boundary
- Lease Status**
- Leased, Signed
 - Pending
 - Under Option but Likely to Expire/Not Resign



0 0.5 1
Kilometers

0 0.25 0.5
Miles

Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community

Quadrangle: Twin Brooks (1973)

Township/Range: T120N, R50W

Grant County, South Dakota

004775 **SWCA**
 ENVIRONMENTAL CONSULTANTS

Projection: NAD 1983 UTM Zone 14N

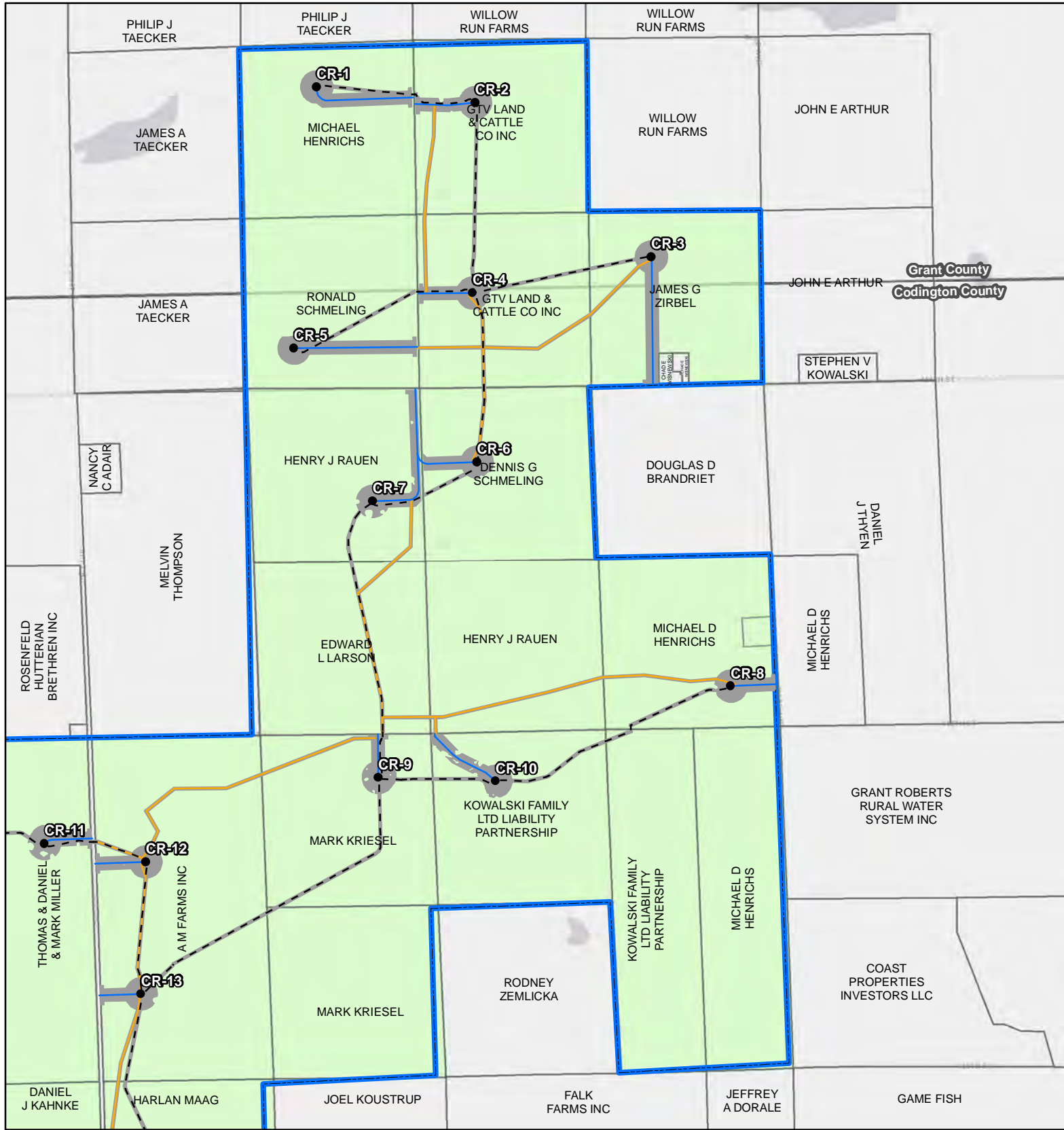
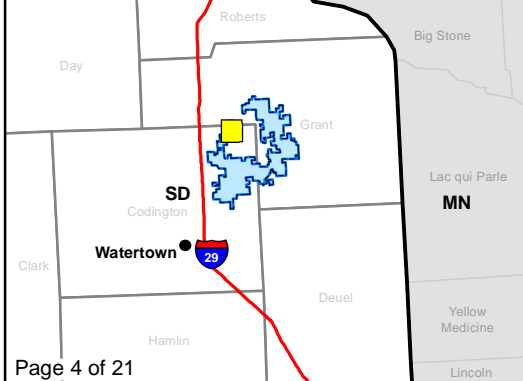


Figure 3a. Project Map
Crowned Ridge Wind Farm

- Turbine
 - ⊕ MET Tower
 - City
 - Access Road
 - - - Collector Line
 - Crane Path
 - Railroad
 - O&M Facility/ Substation
 - Batch Plant
 - Laydown Yard
 - Construction Easement
 - ▭ Parcel Boundary
 - ▭ Project Boundary
 - ▭ County Boundary
- Lease Status**
- Leased, Signed
 - Pending
 - Under Option but Likely to Expire/Not Resign



Kilometers

0 0.5 1

Miles

0 0.25 0.5

Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community

Quadrangle: Antelope Valley (1973), South Shore (1973)

Township/Range: T120N, R51W, T119N, R51W, Codington and Grant Counties, South Dakota

004776 SWCA
 ENVIRONMENTAL CONSULTANTS

Projection: NAD 1983 UTM Zone 14N

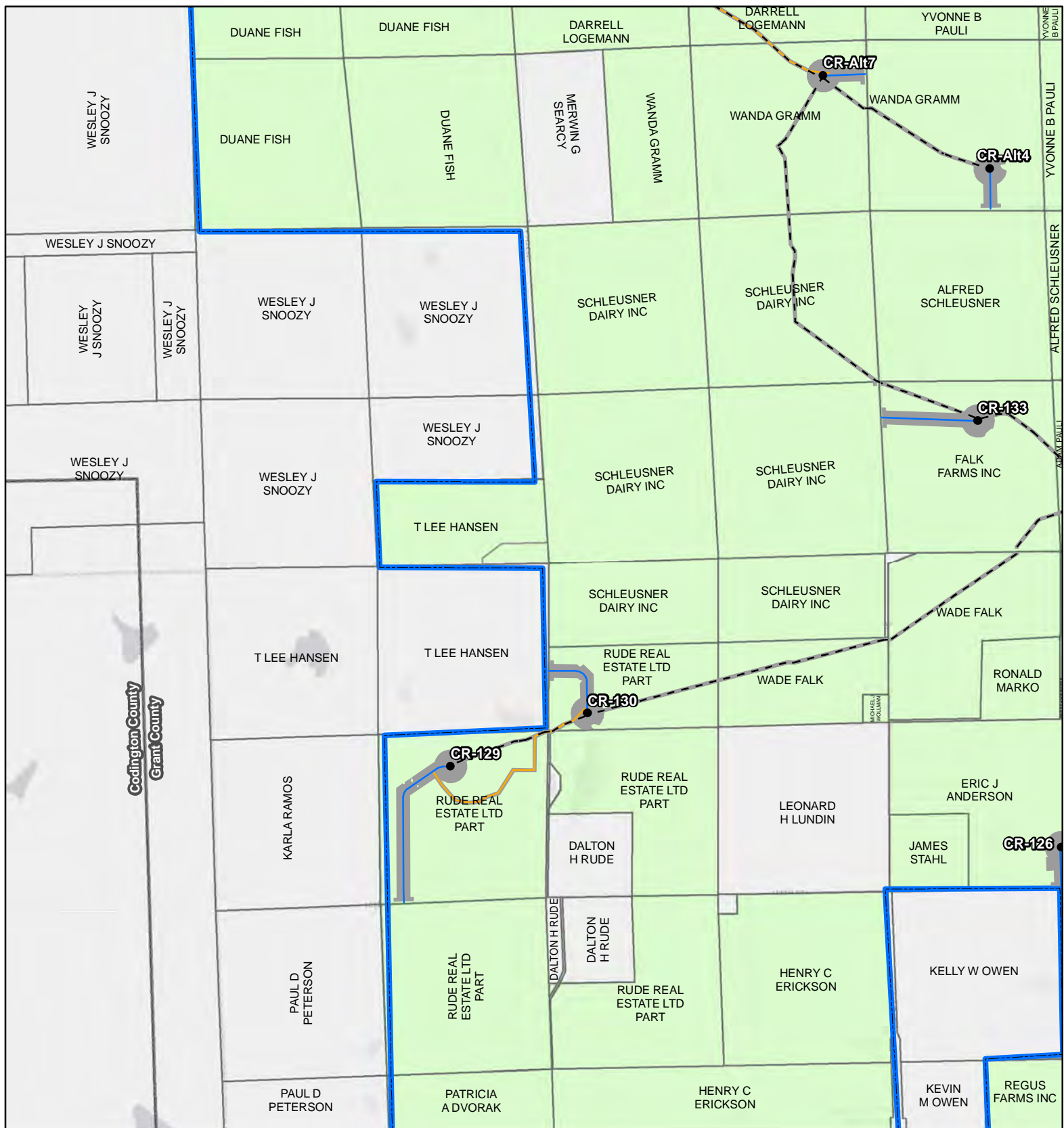
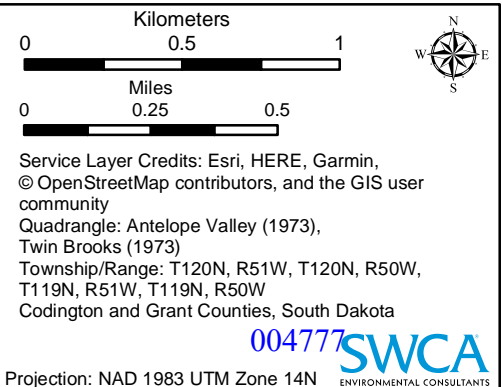
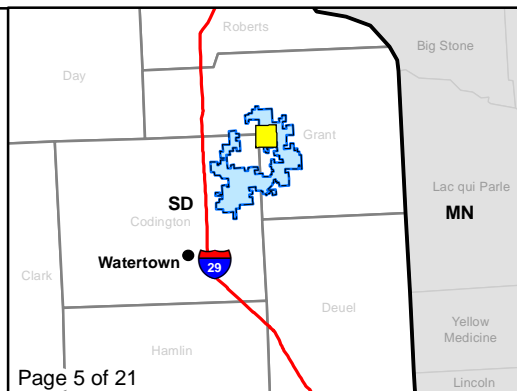
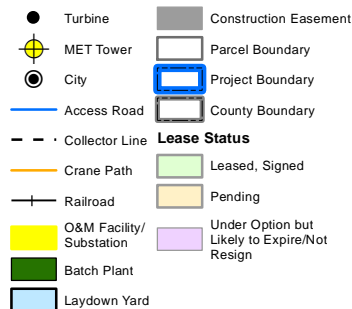


Figure 3a. Project Map
Crowned Ridge Wind Farm



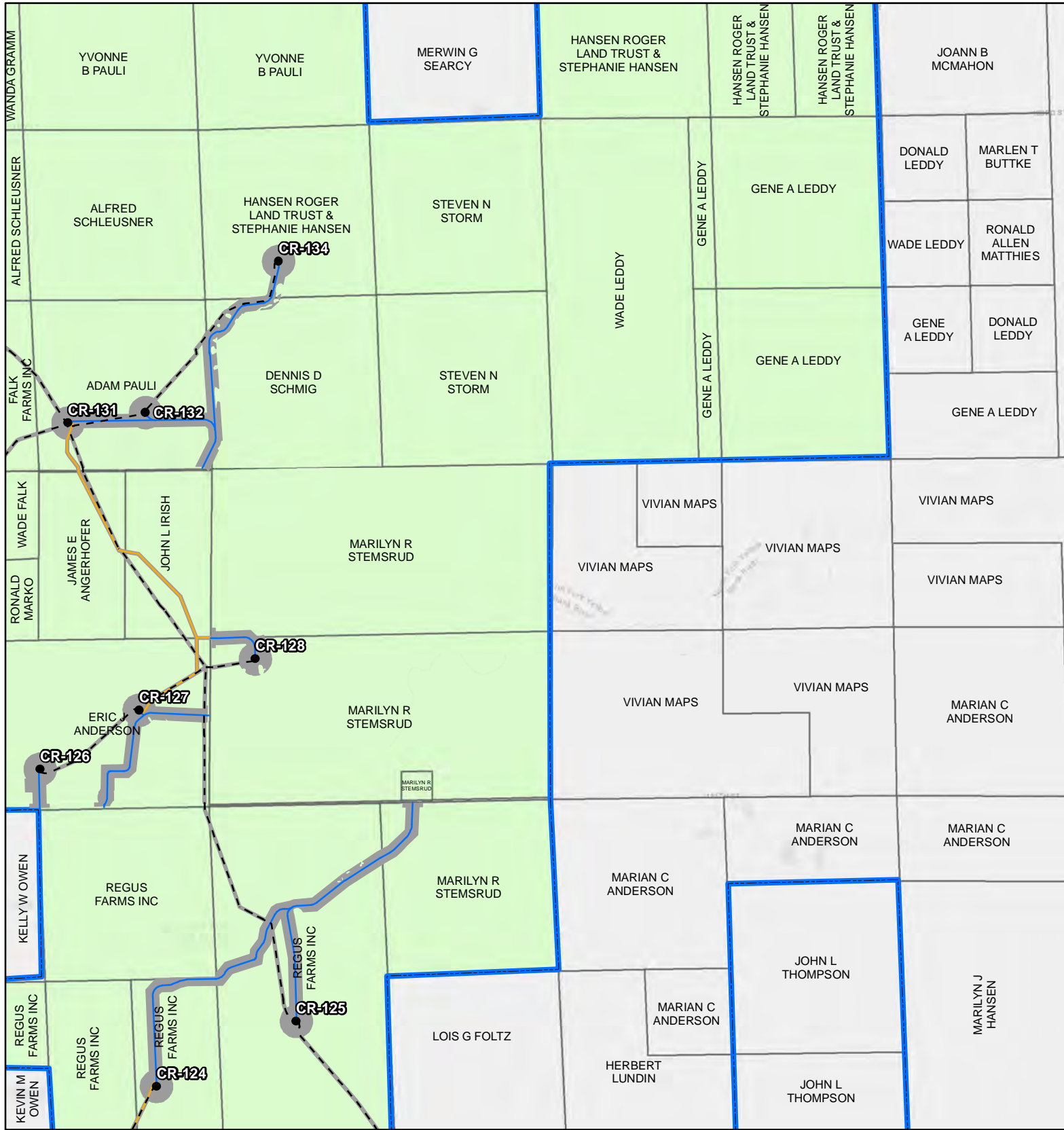
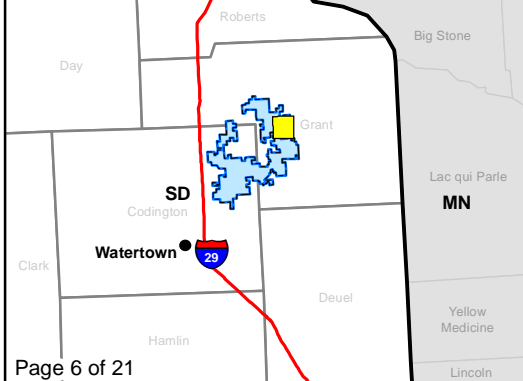


Figure 3a. Project Map
Crowned Ridge Wind Farm

- Turbine
 - ⊕ MET Tower
 - City
 - Access Road
 - - - Collector Line
 - Crane Path
 - Railroad
 - O&M Facility/ Substation
 - Batch Plant
 - Laydown Yard
 - ▨ Construction Easement
 - ▭ Parcel Boundary
 - ▭ Project Boundary
 - ▭ County Boundary
- Lease Status**
- Leased, Signed
 - Pending
 - Under Option but Likely to Expire/Not Resign



0 0.5 1
Kilometers

0 0.25 0.5
Miles

Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community

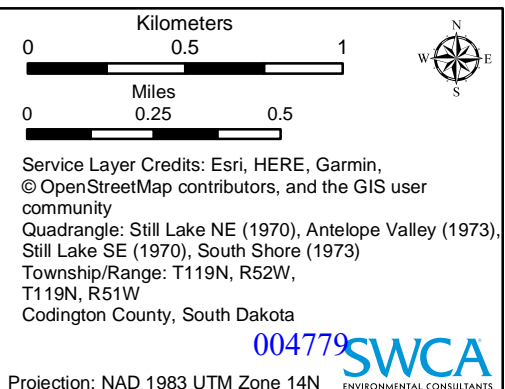
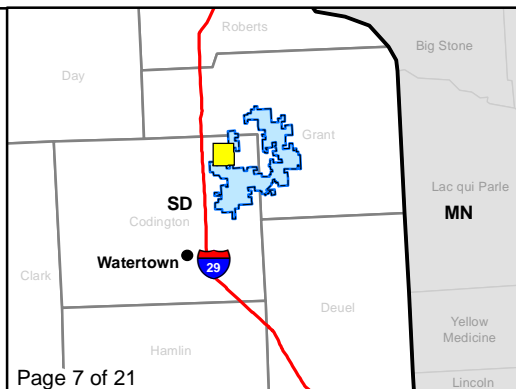
Quadrangle: Twin Brooks (1973), Stockholm (1973)

Township/Range: T120N, R50W, T119N, R50W

Grant County, South Dakota

004778 **SWCA**
 ENVIRONMENTAL CONSULTANTS

Projection: NAD 1983 UTM Zone 14N





-
- A map of Watertown, South Dakota, and its surrounding area. Watertown is marked with a black dot and labeled. To its north is a large blue-shaded area representing a city or county, with a yellow square in its center. A red line, likely a highway, runs north-south through the center of the map, passing through the blue-shaded area and ending at a red and blue shield labeled '29' near Watertown. Other towns labeled include Roberts, Big Stone, Grant, Day, Clark, Deuel, Hamlin, and Yellow Medicine. The state boundary between South Dakota (SD) and Minnesota (MN) is shown on the right side of the map.

0 0.5 1
Kilometers

0 0.25 0.5
Miles

Service Layer Credits: Esri, HERE, Garmin,
© OpenStreetMap contributors, and the GIS user
community

Quadrangle: Stockholm (1973), Antelope Valley (1973),
Twin Brooks (1973), South Shore (1973)
Township/Range: T119N, R50W

Grant County, South Dakota

004780

SWCA
ENVIRONMENTAL CONSULTANTS

Projection: NAD 1983 UTM Zone 14N

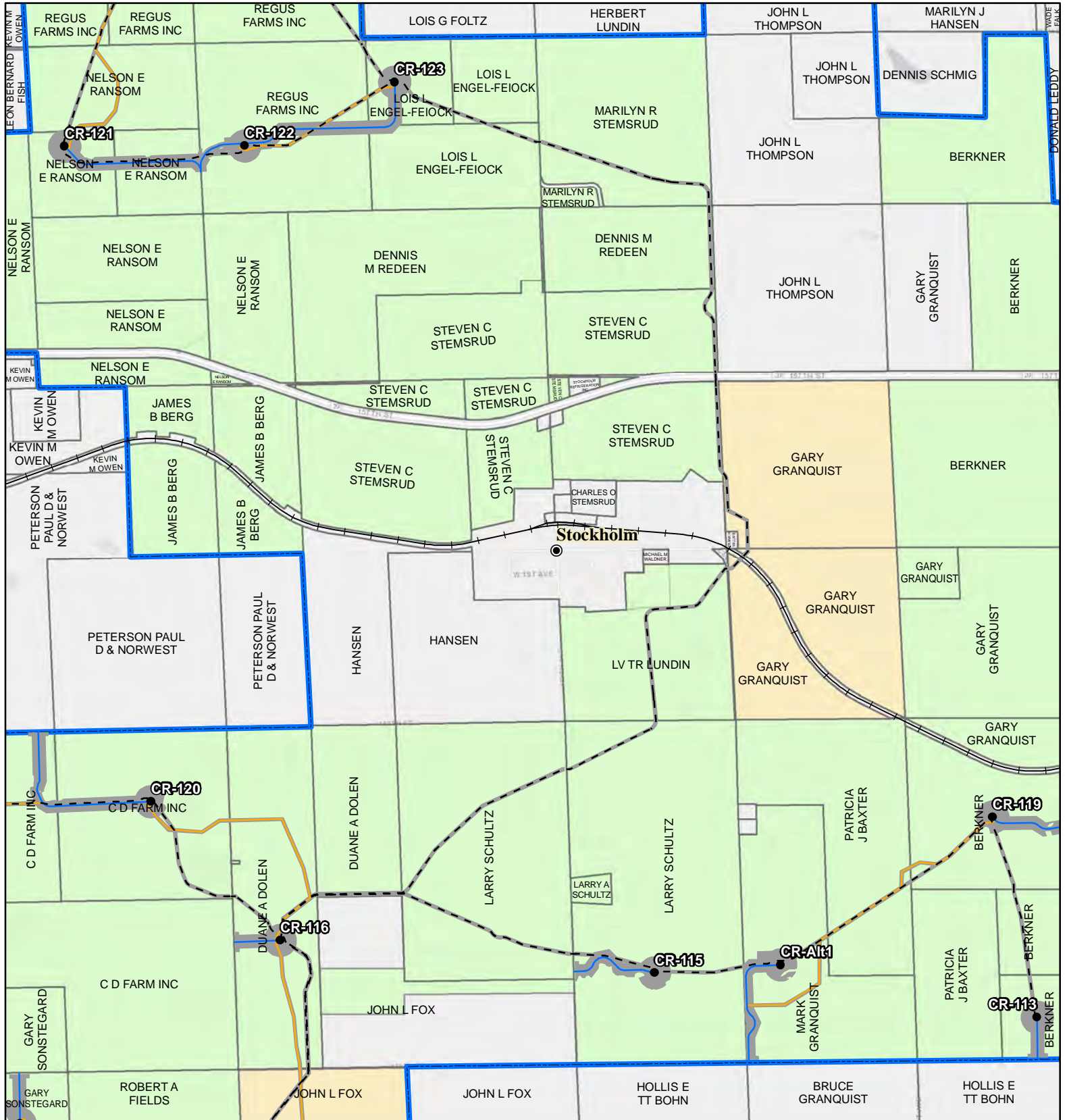
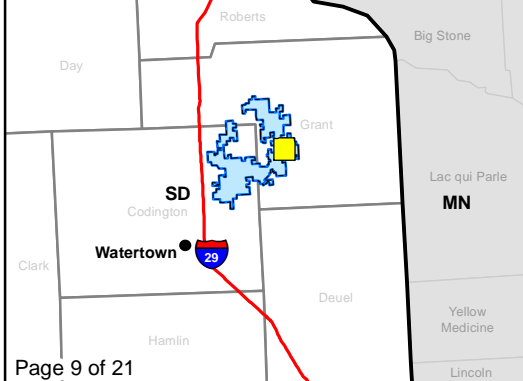


Figure 3a. Project Map
Crowned Ridge Wind Farm

- Turbine
 - ⊕ MET Tower
 - City
 - Access Road
 - - - Collector Line
 - Crane Path
 - Railroad
 - O&M Facility/ Substation
 - Batch Plant
 - Laydown Yard
 - Construction Easement
 - ▭ Parcel Boundary
 - ▭ Project Boundary
 - ▭ County Boundary
- Lease Status**
- Leased, Signed
 - Pending
 - Under Option but Likely to Expire/Not Resign



Kilometers

0 0.5 1

Miles

0 0.25 0.5

Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community

Quadrangle: Stockholm (1973)

Township/Range: T119N, R50W

Grant County, South Dakota

004781 **SWCA**
ENVIRONMENTAL CONSULTANTS

Projection: NAD 1983 UTM Zone 14N

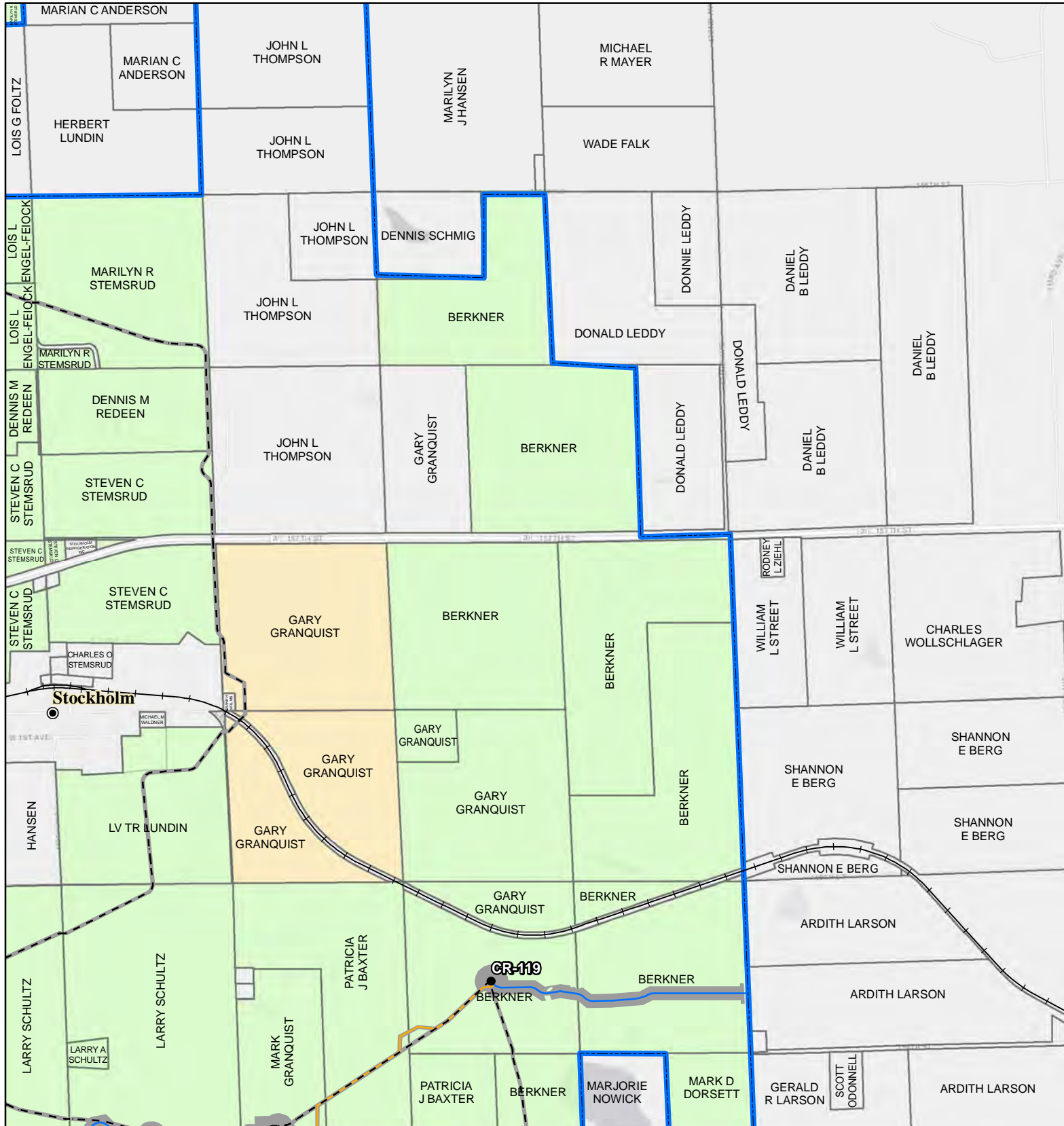
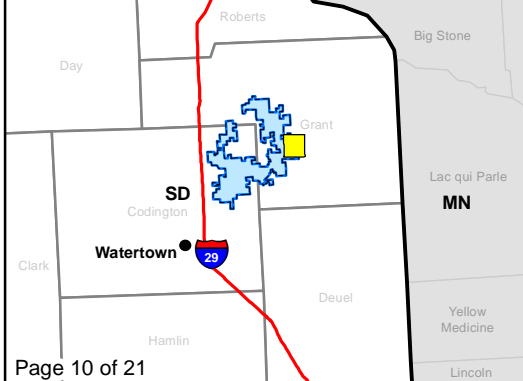


Figure 3a. Project Map
Crowned Ridge Wind Farm

- Turbine
 - ⊕ MET Tower
 - City
 - Access Road
 - - - Collector Line
 - Crane Path
 - Railroad
 - O&M Facility/ Substation
 - Batch Plant
 - Laydown Yard
 - ▬ Construction Easement
 - ▬ Parcel Boundary
 - ▬ Project Boundary
 - ▬ County Boundary
- Lease Status**
- Leased, Signed
 - Pending
 - Under Option but Likely to Expire/Not Resign



Kilometers

0 0.5 1

Miles

0 0.25 0.5

Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community

Quadrangle: Twin Brooks (1973), Stockholm (1973)

Township/Range: T119N, R50W, T119N, R49W

Grant County, South Dakota

004782 **SWCA**
ENVIRONMENTAL CONSULTANTS

Projection: NAD 1983 UTM Zone 14N

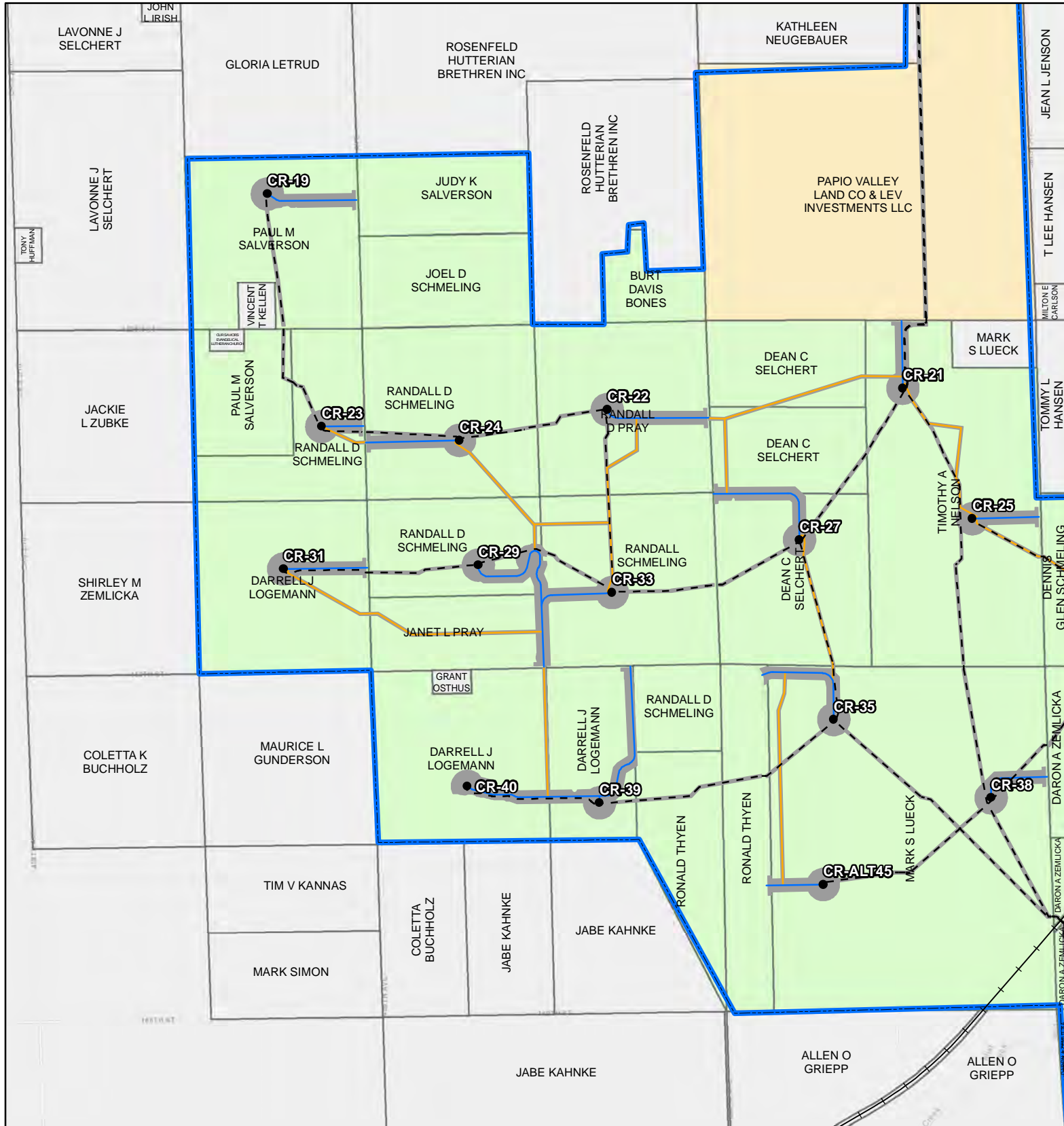
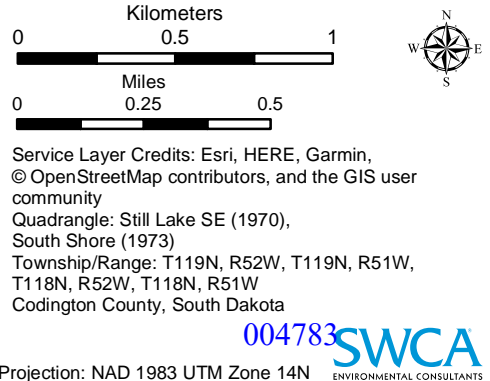
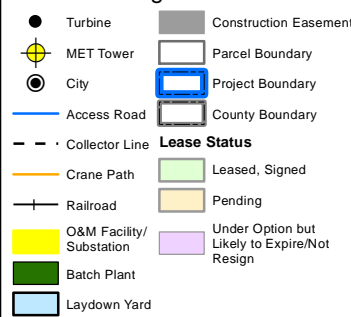


Figure 3a. Project Map
Crowned Ridge Wind Farm



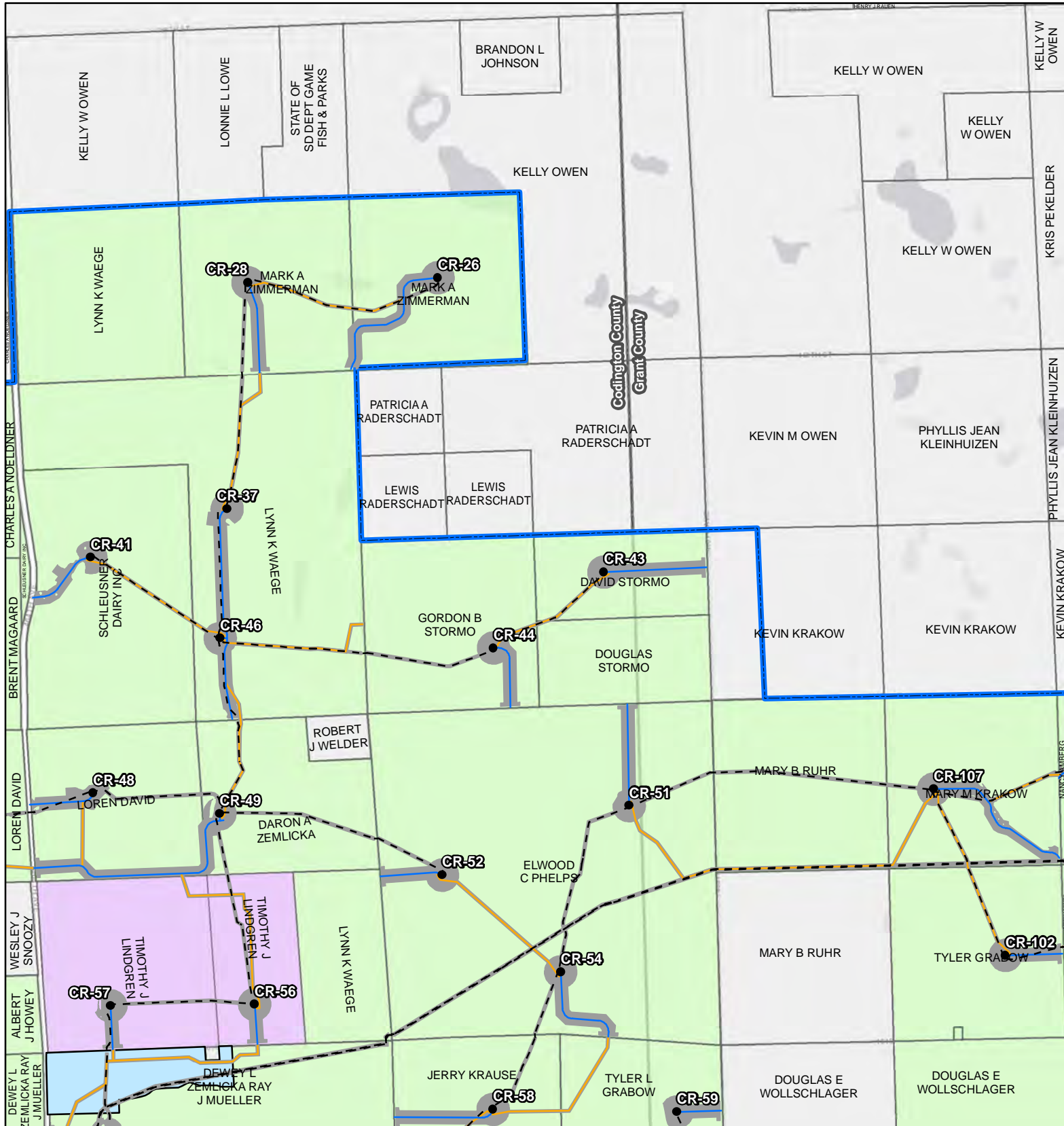
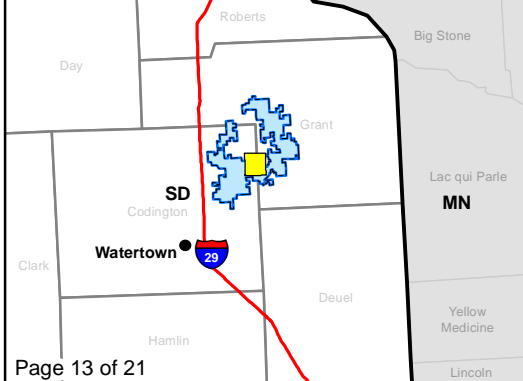


Figure 3a. Project Map
Crowned Ridge Wind Farm

- Turbine
 - ⊕ MET Tower
 - City
 - Access Road
 - - - Collector Line
 - Crane Path
 - Railroad
 - O&M Facility/ Substation
 - Batch Plant
 - Laydown Yard
 - ▬ Construction Easement
 - ▬ Parcel Boundary
 - ▬ Project Boundary
 - ▬ County Boundary
- Lease Status**
- Leased, Signed
 - Pending
 - Under Option but Likely to Expire/Not Resign



Kilometers

0 0.5 1

Miles

0 0.25 0.5

Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community

Quadrangle: South Shore (1973), Stockholm (1973)

Township/Range: T119N, R51W, T119N, R50W, T118N, R51W, T118N, R50W

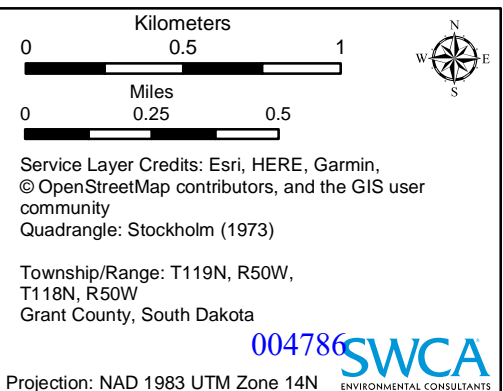
Codington and Grant Counties, South Dakota

004785 SWCA
 ENVIRONMENTAL CONSULTANTS

Projection: NAD 1983 UTM Zone 14N



-
- Map of Watertown, SD, showing its location relative to surrounding counties and states. Watertown is marked with a black dot and labeled. A red line indicates a route passing through the city, with a blue and red shield for Interstate 29. Surrounding counties include Roberts, Grant, Day, Big Stone, Clark, Deuel, Hamlin, and Lincoln. The state boundary between South Dakota (SD) and Minnesota (MN) is shown to the east.



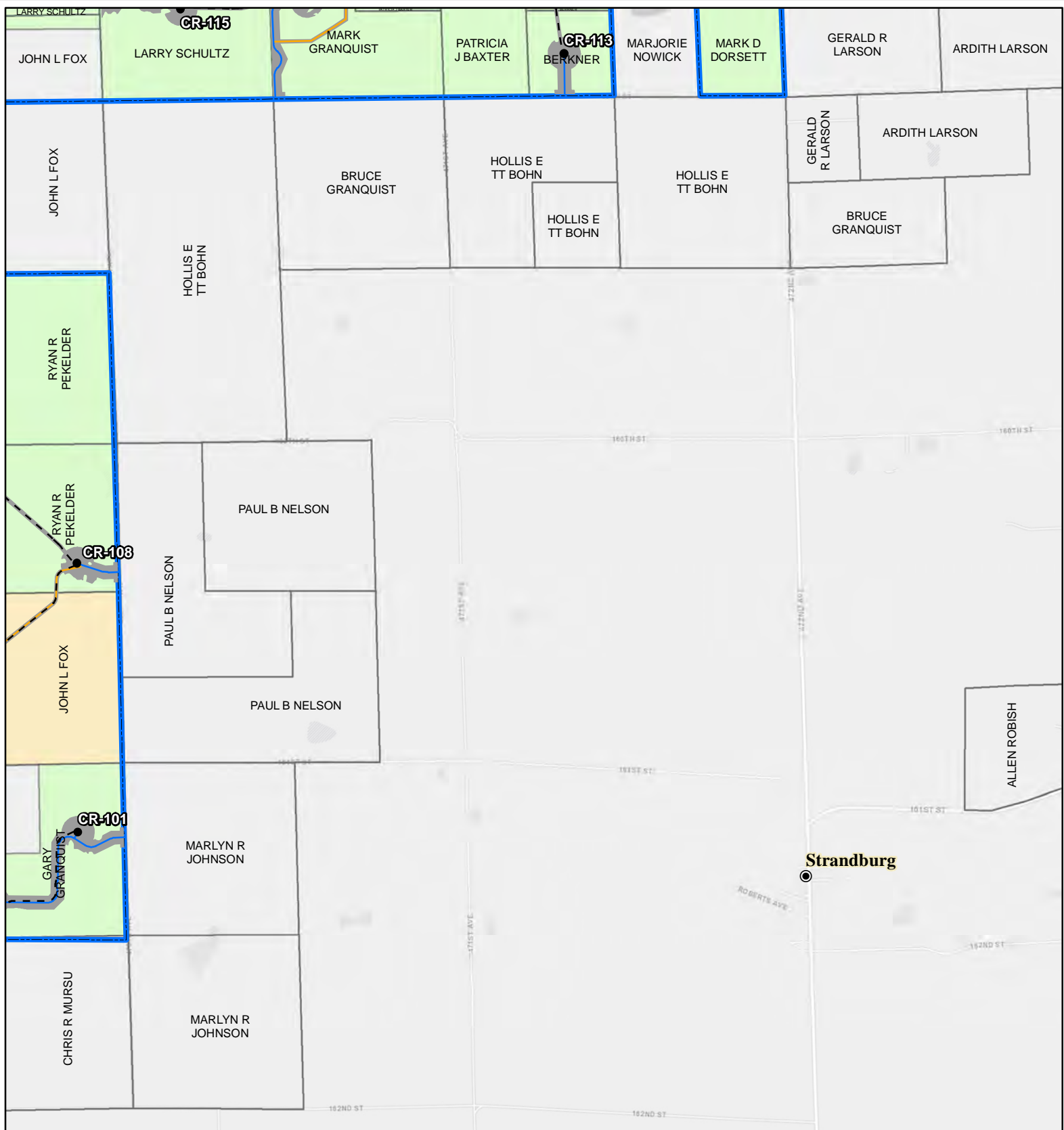
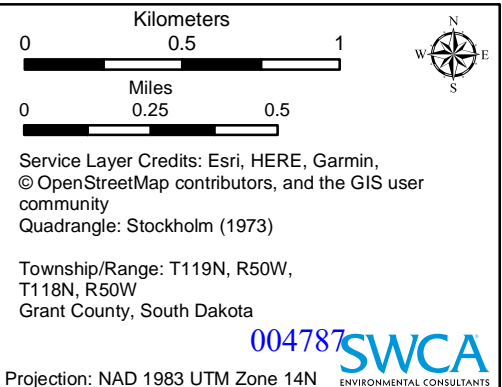
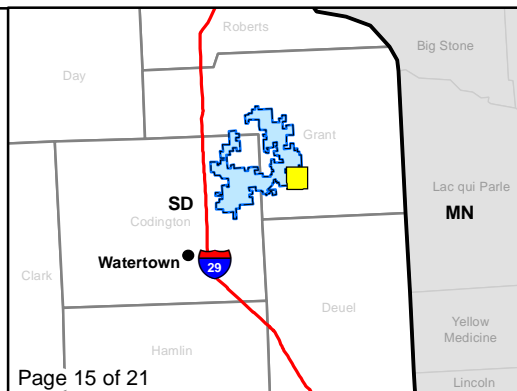
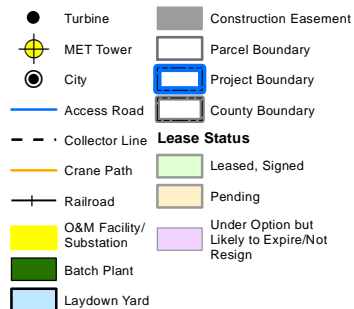


Figure 3a. Project Map
Crowned Ridge Wind Farm



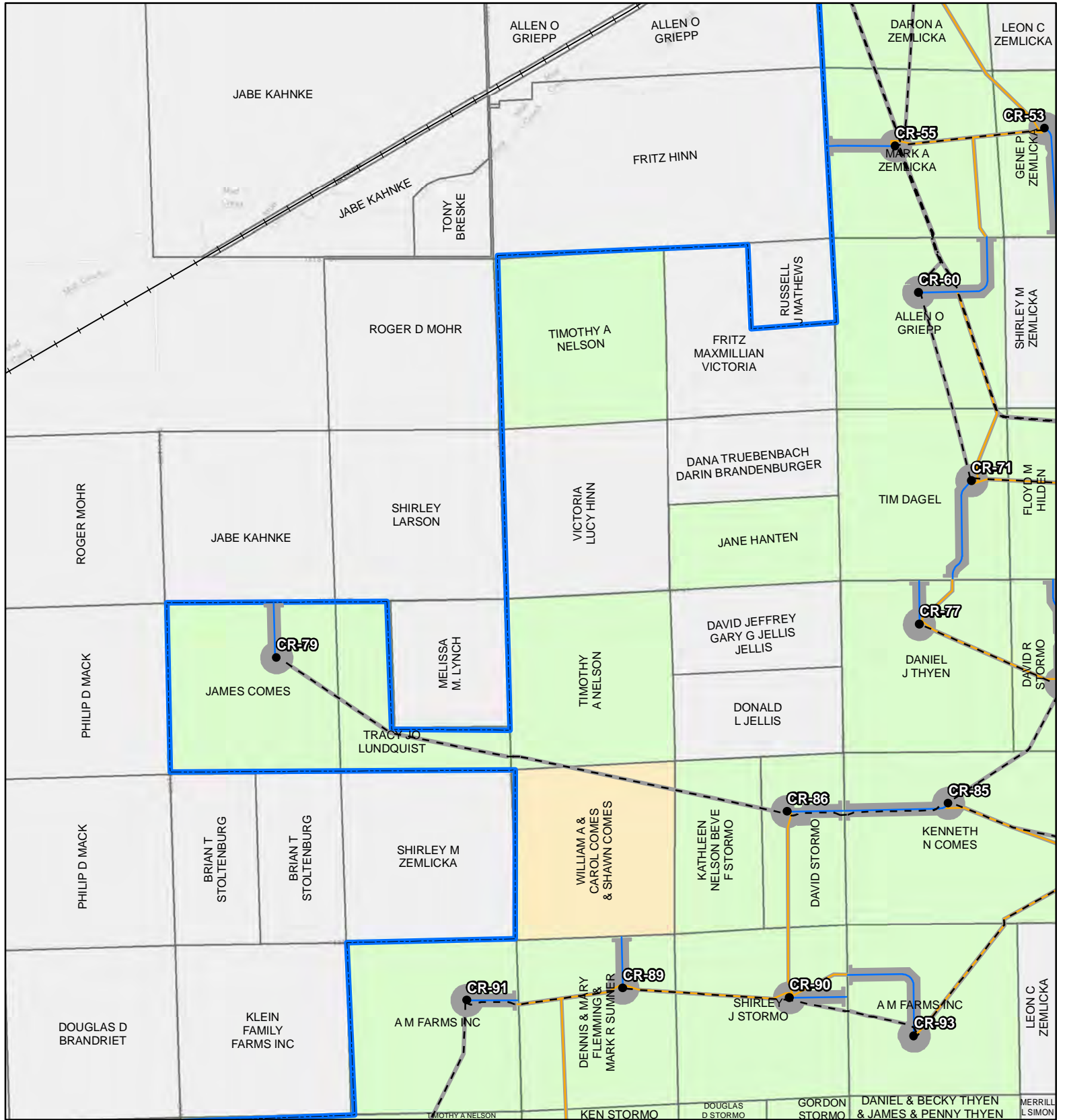
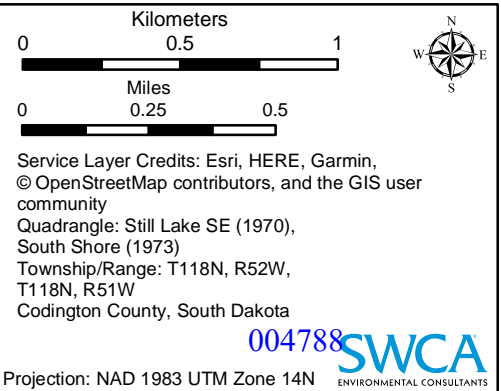
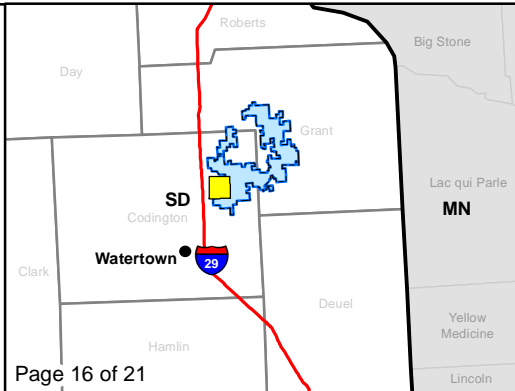


Figure 3a. Project Map
Crowned Ridge Wind Farm

- Turbine
 - ⊕ MET Tower
 - City
 - Access Road
 - - - Collector Line
 - Crane Path
 - Railroad
 - O&M Facility/ Substation
 - Batch Plant
 - Laydown Yard
 - Construction Easement
 - ▭ Parcel Boundary
 - ▭ Project Boundary
 - ▭ County Boundary
- Lease Status**
- Leased, Signed
 - Pending
 - Under Option but Likely to Expire/Not Resign



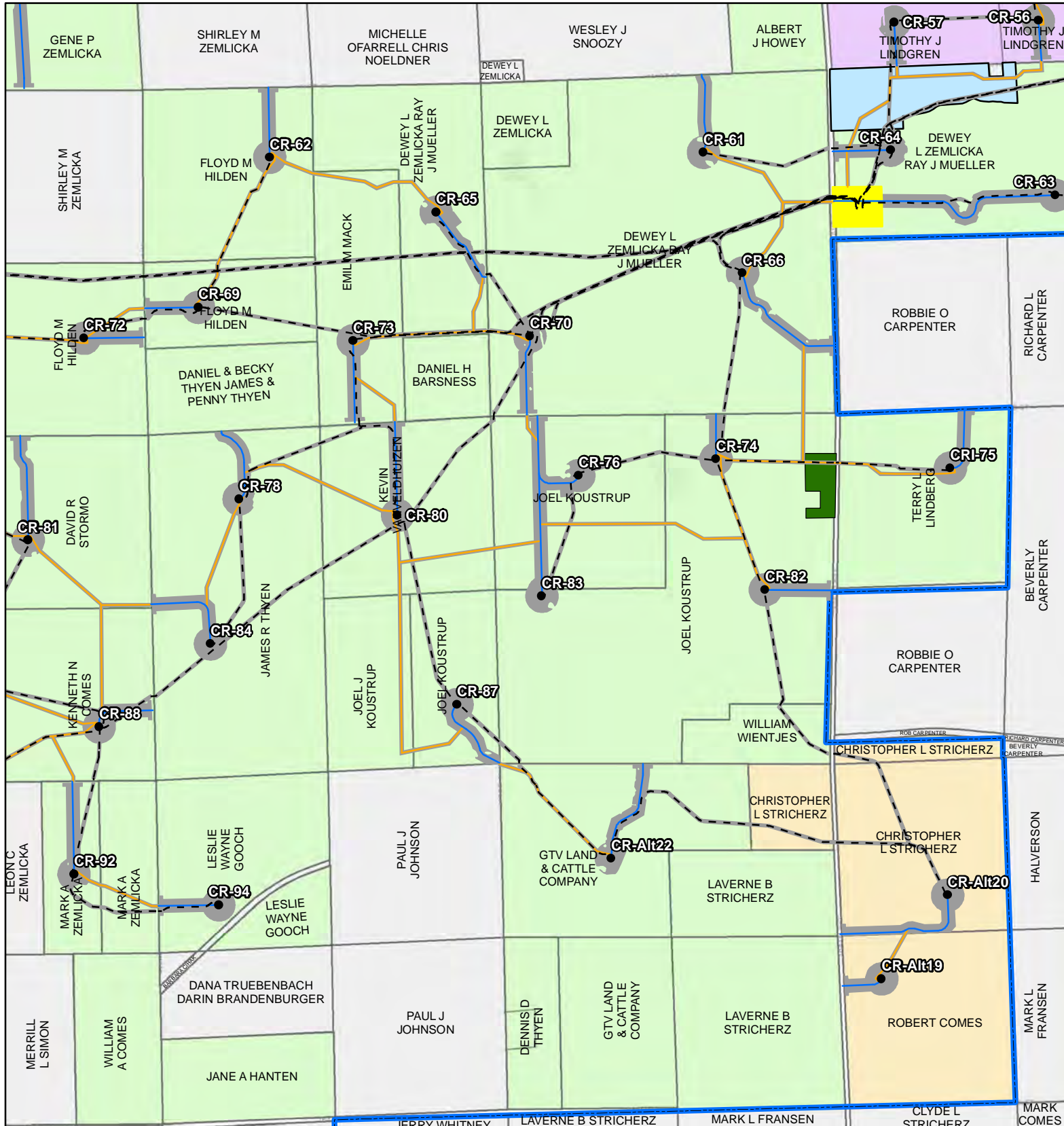
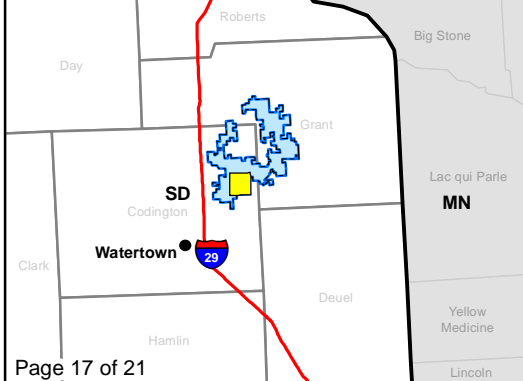


Figure 3a. Project Map
Crowned Ridge Wind Farm

- Turbine
 - ⊕ MET Tower
 - City
 - Access Road
 - - - Collector Line
 - Crane Path
 - Railroad
 - O&M Facility/Substation
 - Batch Plant
 - Laydown Yard
 - ▬ Construction Easement
 - ▬ Parcel Boundary
 - ▬ Project Boundary
 - ▬ County Boundary
- Lease Status**
- Leased, Signed
 - Pending
 - Under Option but Likely to Expire/Not Resign



Kilometers
 0 0.5 1

Miles
 0 0.25 0.5

Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community
 Quadrangle: South Shore (1973)

Township/Range: T118N, R51W

Codington County, South Dakota

004789 **SWCA**
 ENVIRONMENTAL CONSULTANTS

Projection: NAD 1983 UTM Zone 14N

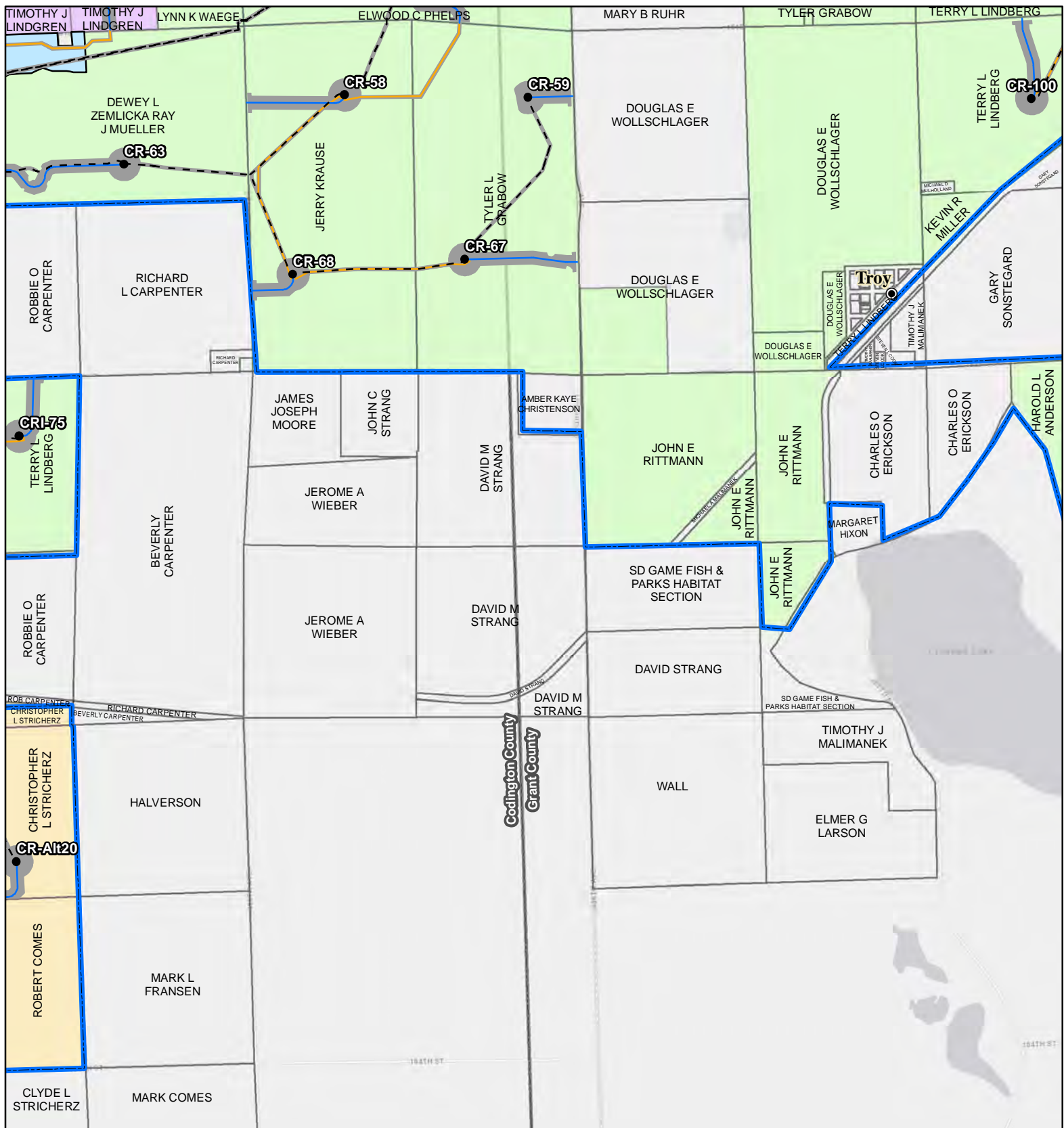
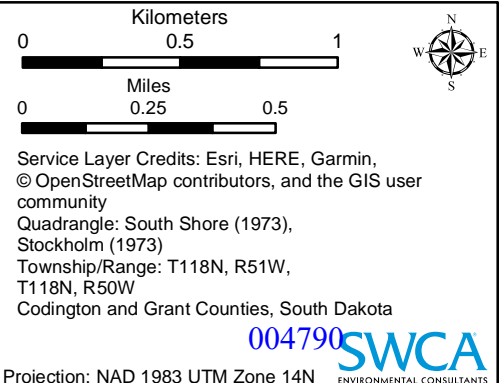
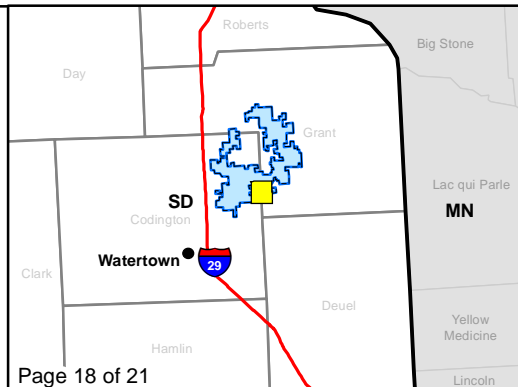
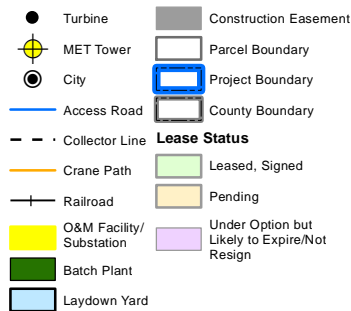


Figure 3a. Project Map
Crowned Ridge Wind Farm



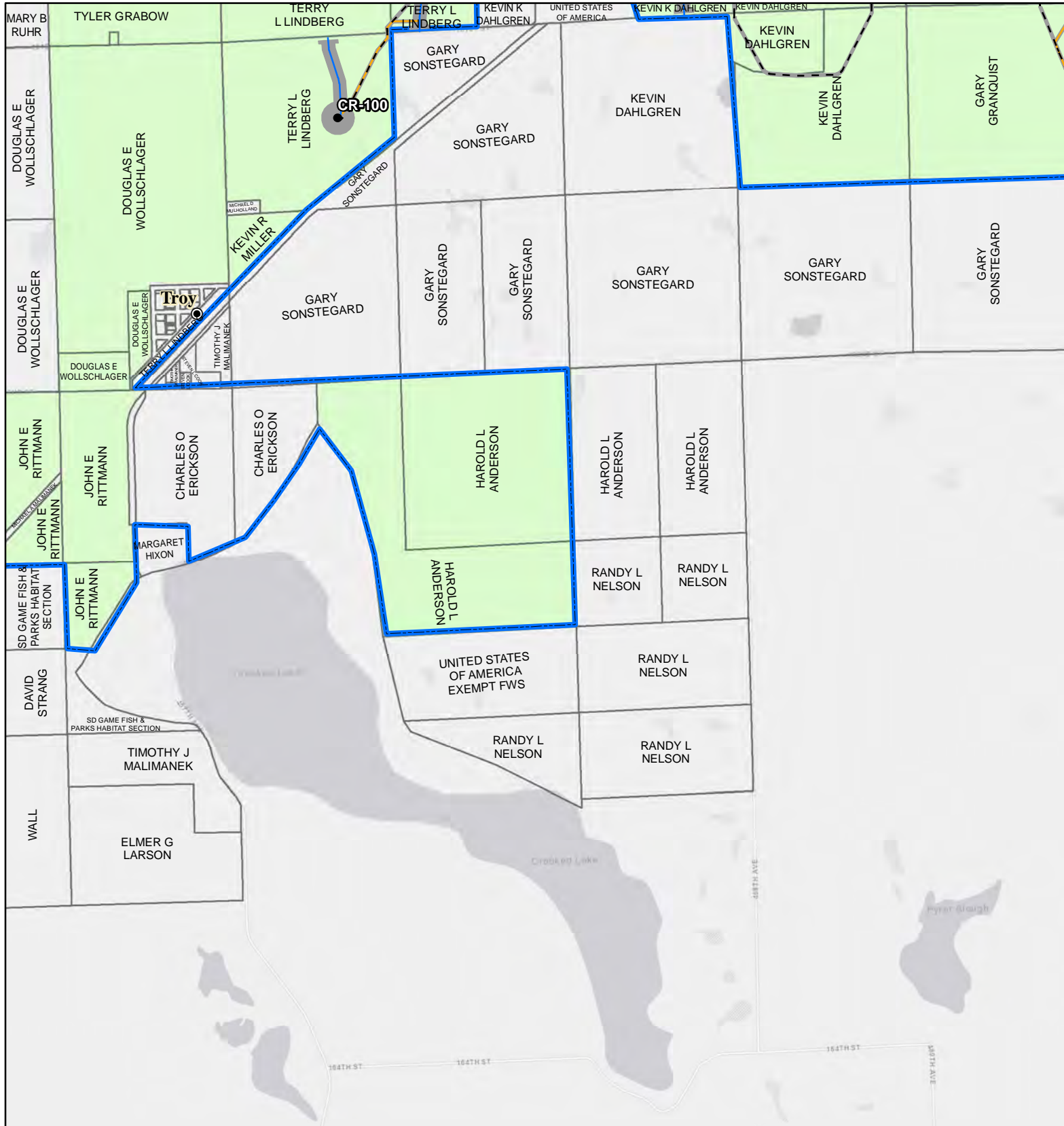
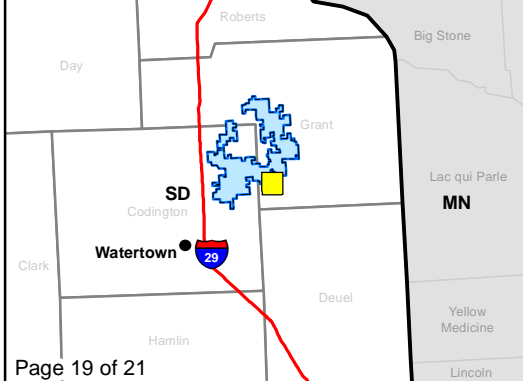


Figure 3a. Project Map
Crowned Ridge Wind Farm

- Turbine
 - ⊕ MET Tower
 - City
 - Access Road
 - - - Collector Line
 - Crane Path
 - Railroad
 - O&M Facility/ Substation
 - Batch Plant
 - Laydown Yard
 - Construction Easement
 - ▭ Parcel Boundary
 - ▭ Project Boundary
 - ▭ County Boundary
- Lease Status**
- Leased, Signed
 - Pending
 - Under Option but Likely to Expire/Not Resign



0 0.5 1

Kilometers

0 0.25 0.5

Miles

Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community

Quadrangle: South Shore (1973), Stockholm (1973)

Township/Range: T118N, R50W

Grant County, South Dakota

004791 **SWCA**

ENVIRONMENTAL CONSULTANTS

Projection: NAD 1983 UTM Zone 14N

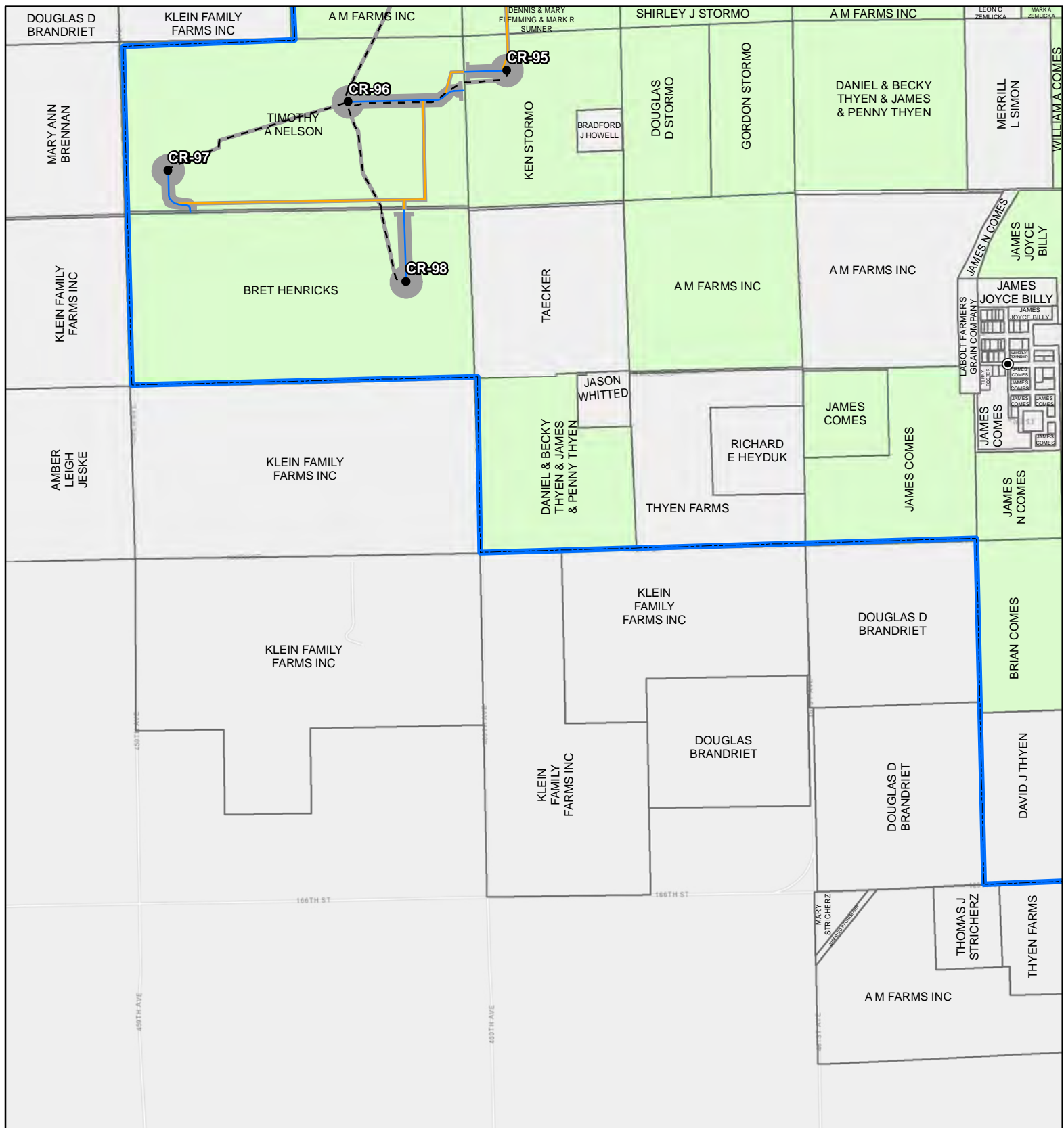
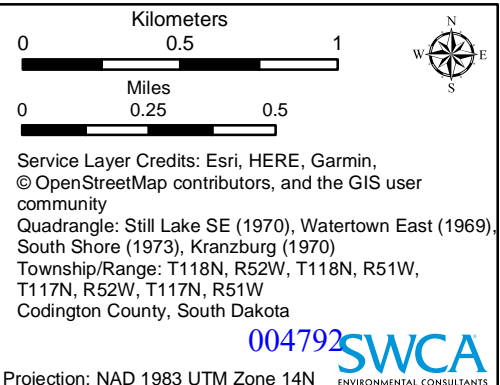
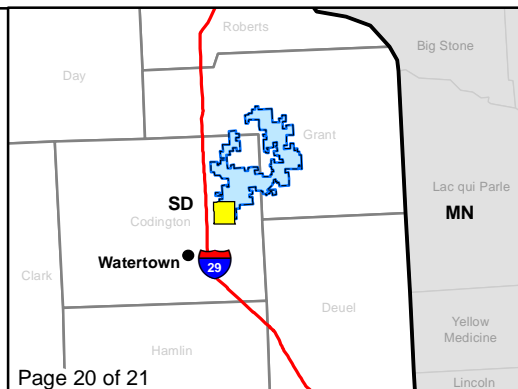
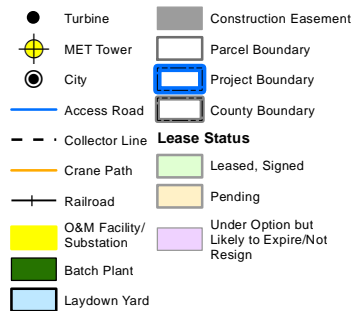


Figure 3a. Project Map
Crowned Ridge Wind Farm



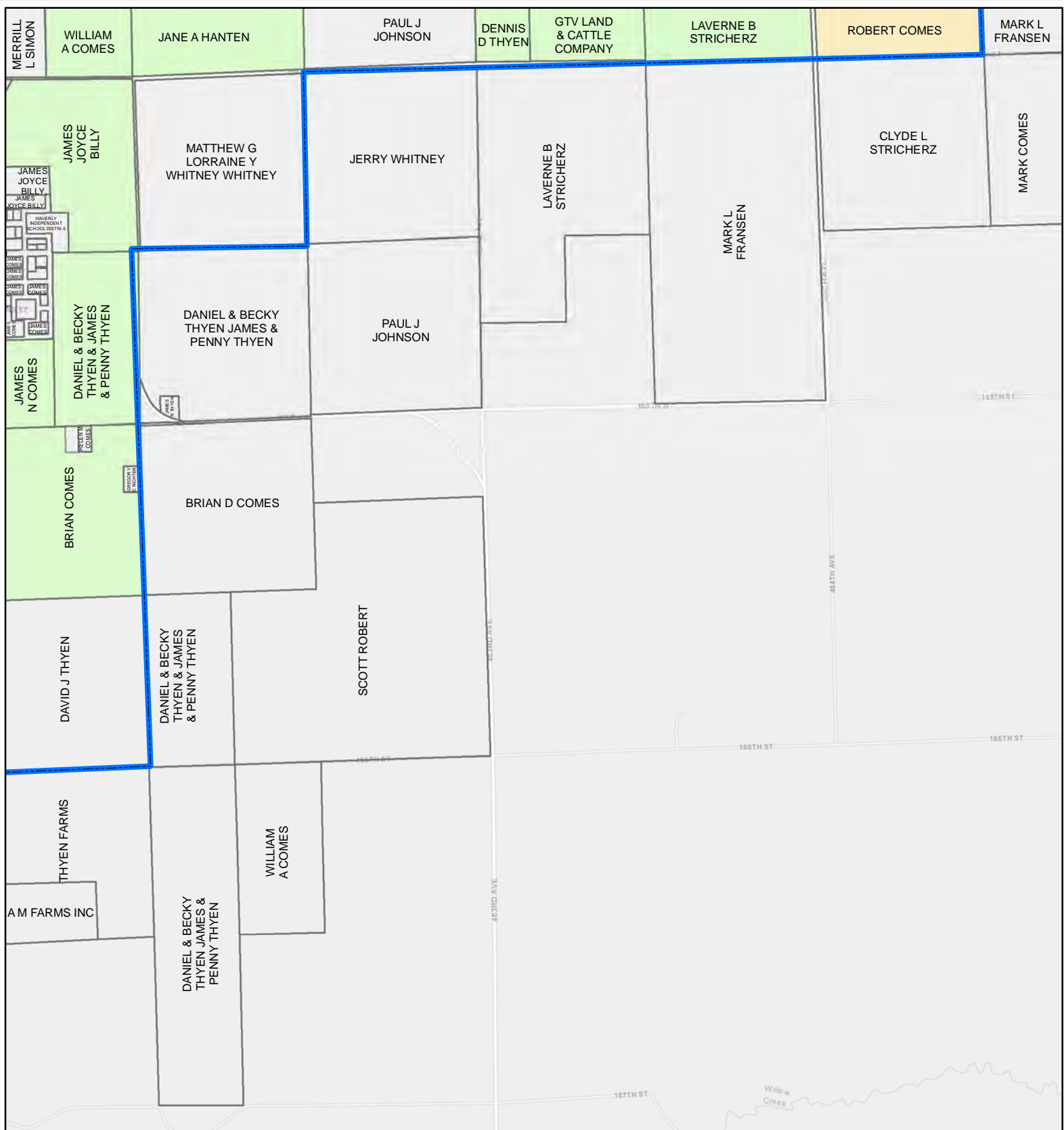
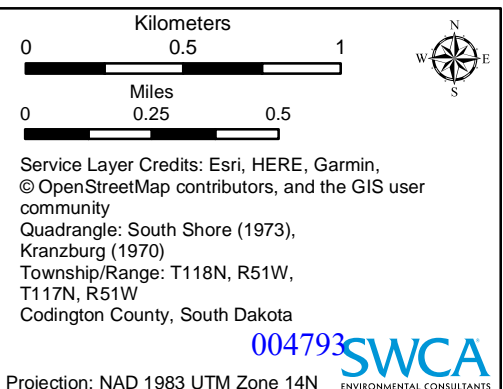
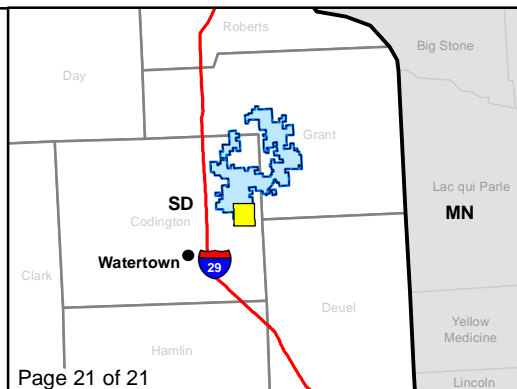
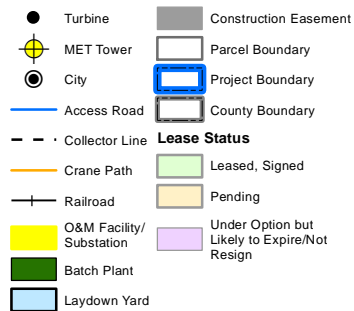


Figure 3a. Project Map
Crowned Ridge Wind Farm



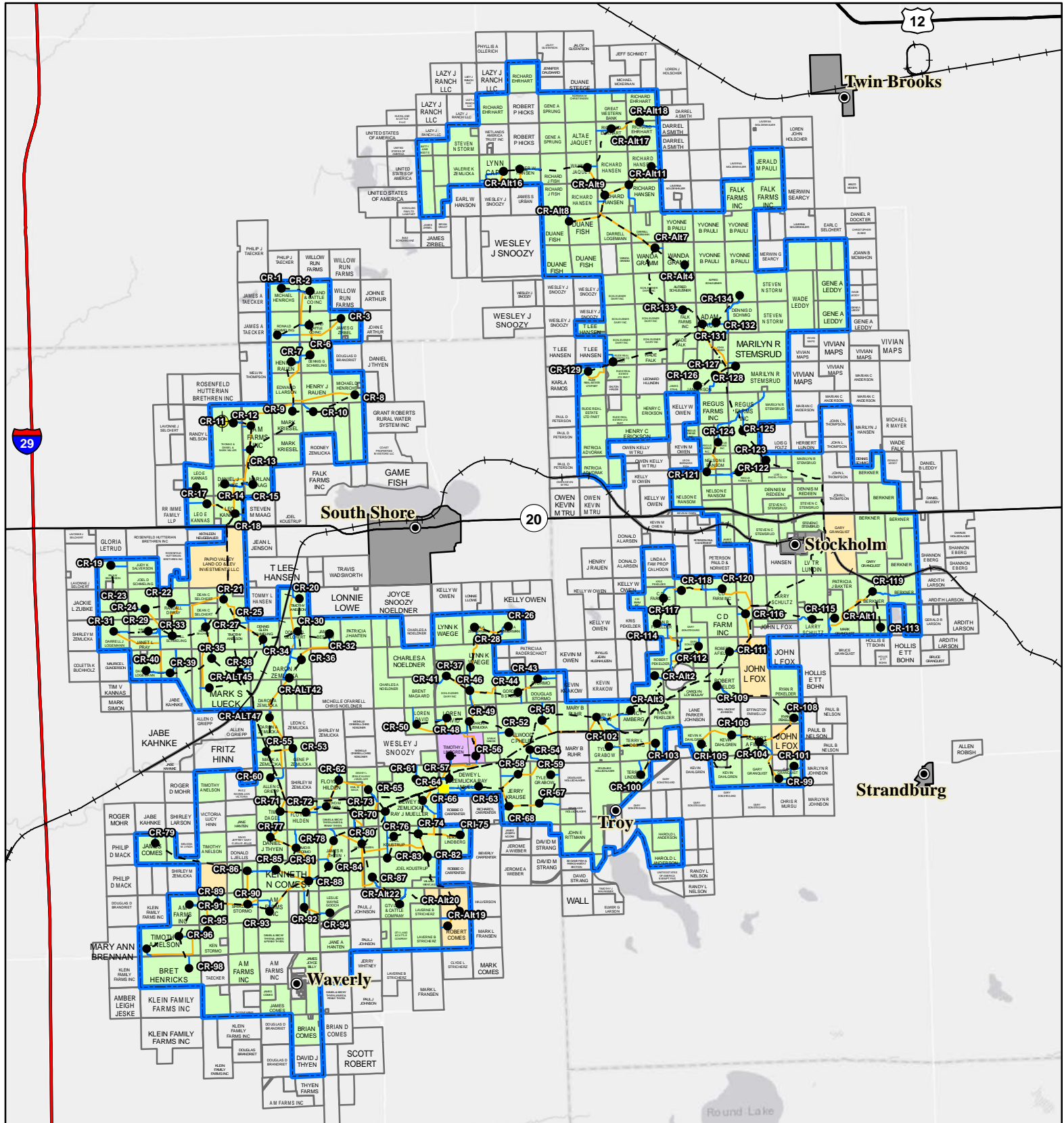
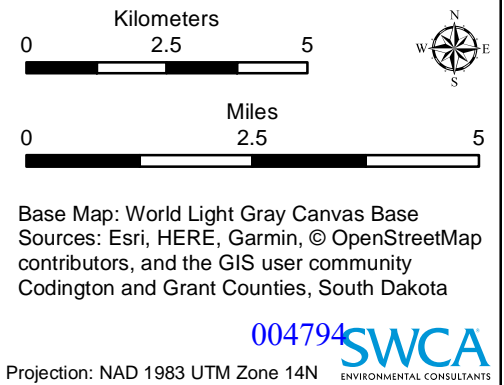
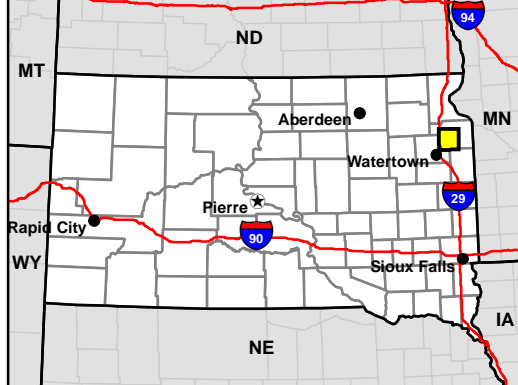
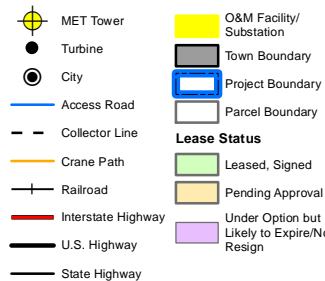


Figure 3a. Project Map

Crowned Ridge Wind Farm



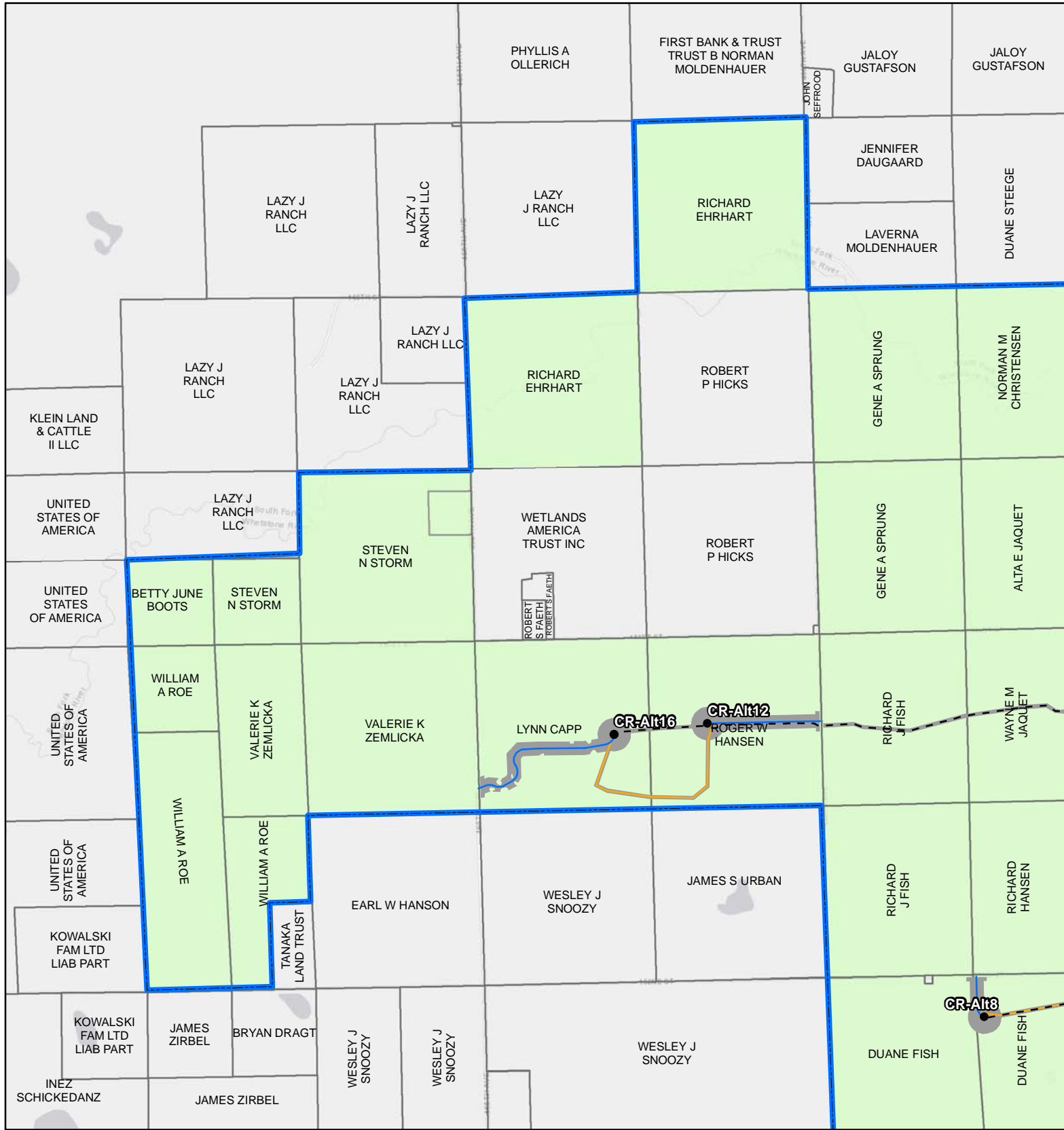
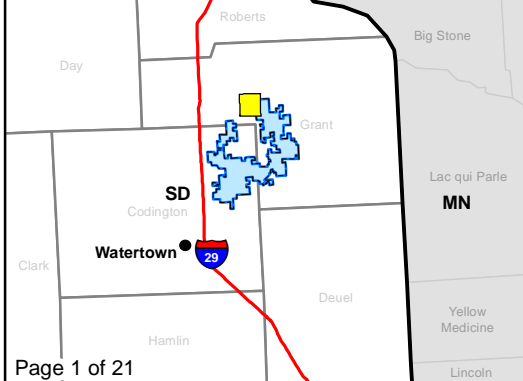


Figure 3a. Project Map
Crowned Ridge Wind Farm

- Turbine
 - ⊙ MET Tower
 - City
 - Access Road
 - - - Collector Line
 - Crane Path
 - Railroad
 - O&M Facility/ Substation
 - Batch Plant
 - Laydown Yard
 - Construction Easement
 - ▬ Parcel Boundary
 - ▬ Project Boundary
 - ▬ County Boundary
- Lease Status**
- Leased, Signed
 - Pending
 - Under Option but Likely to Expire/Not Resign



0 0.5 1
Kilometers

0 0.25 0.5
Miles

Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community
Quadrangle: Antelope Valley (1973), Twin Brooks (1973)
Township/Range: T120N, R51W, T120N, R50W
Grant County, South Dakota

004795 **SWCA**
ENVIRONMENTAL CONSULTANTS

Projection: NAD 1983 UTM Zone 14N

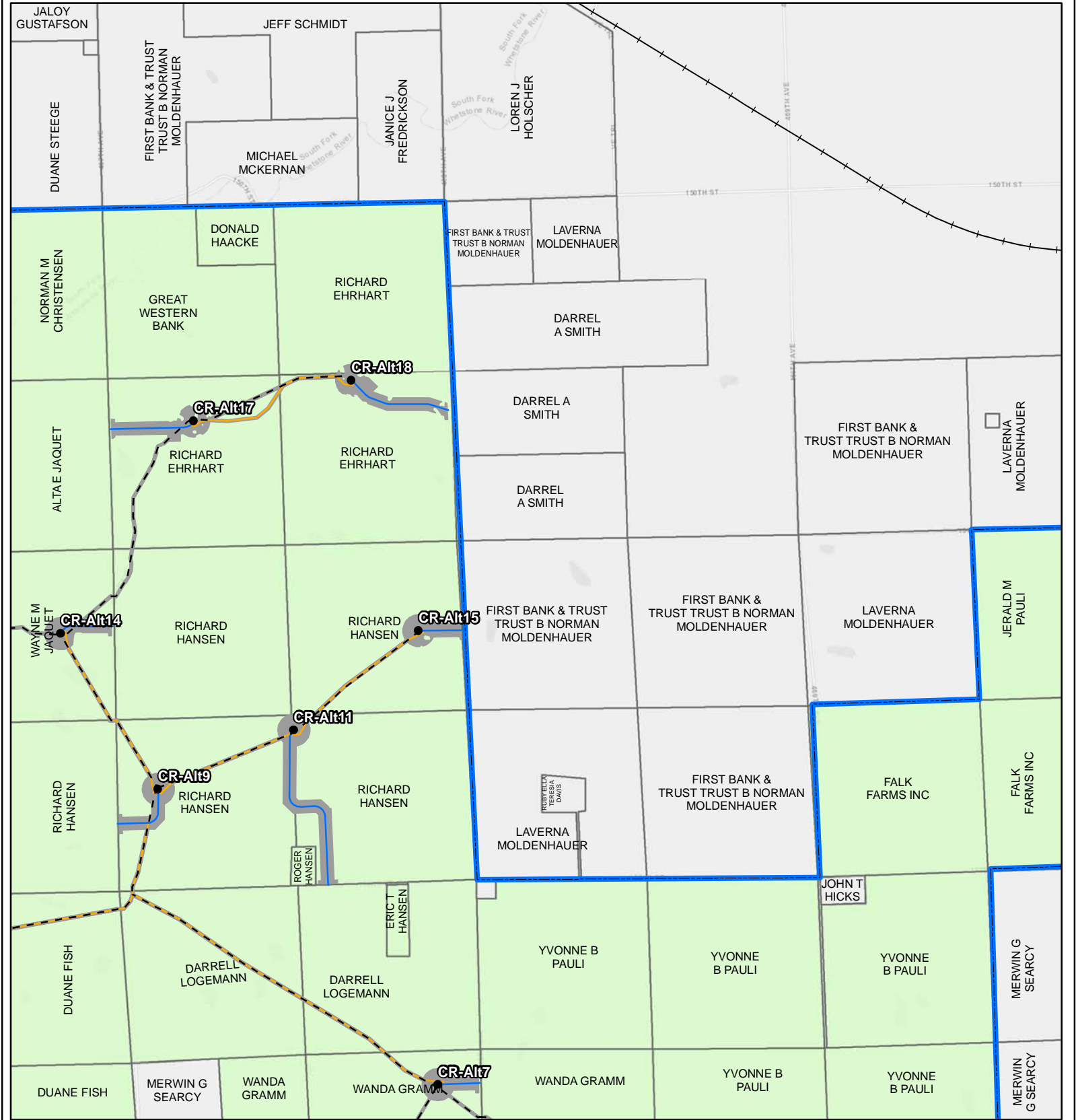
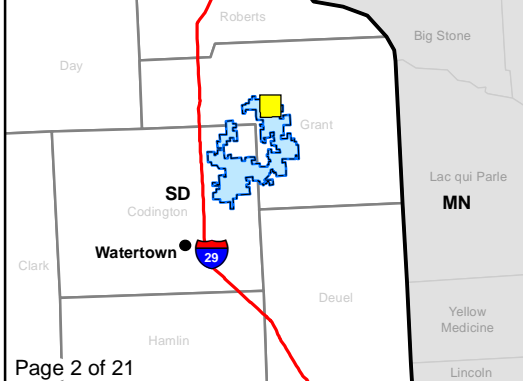


Figure 3a. Project Map
Crowned Ridge Wind Farm

- Turbine
 - ⊕ MET Tower
 - City
 - Access Road
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 - Under Option but Likely to Expire/Not Resign



Kilometers

0 0.5 1

Miles

0 0.25 0.5

Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community

Quadrangle: Twin Brooks (1973)

Township/Range: T120N, R50W

Grant County, South Dakota

004796 **SWCA**

ENVIRONMENTAL CONSULTANTS

Projection: NAD 1983 UTM Zone 14N

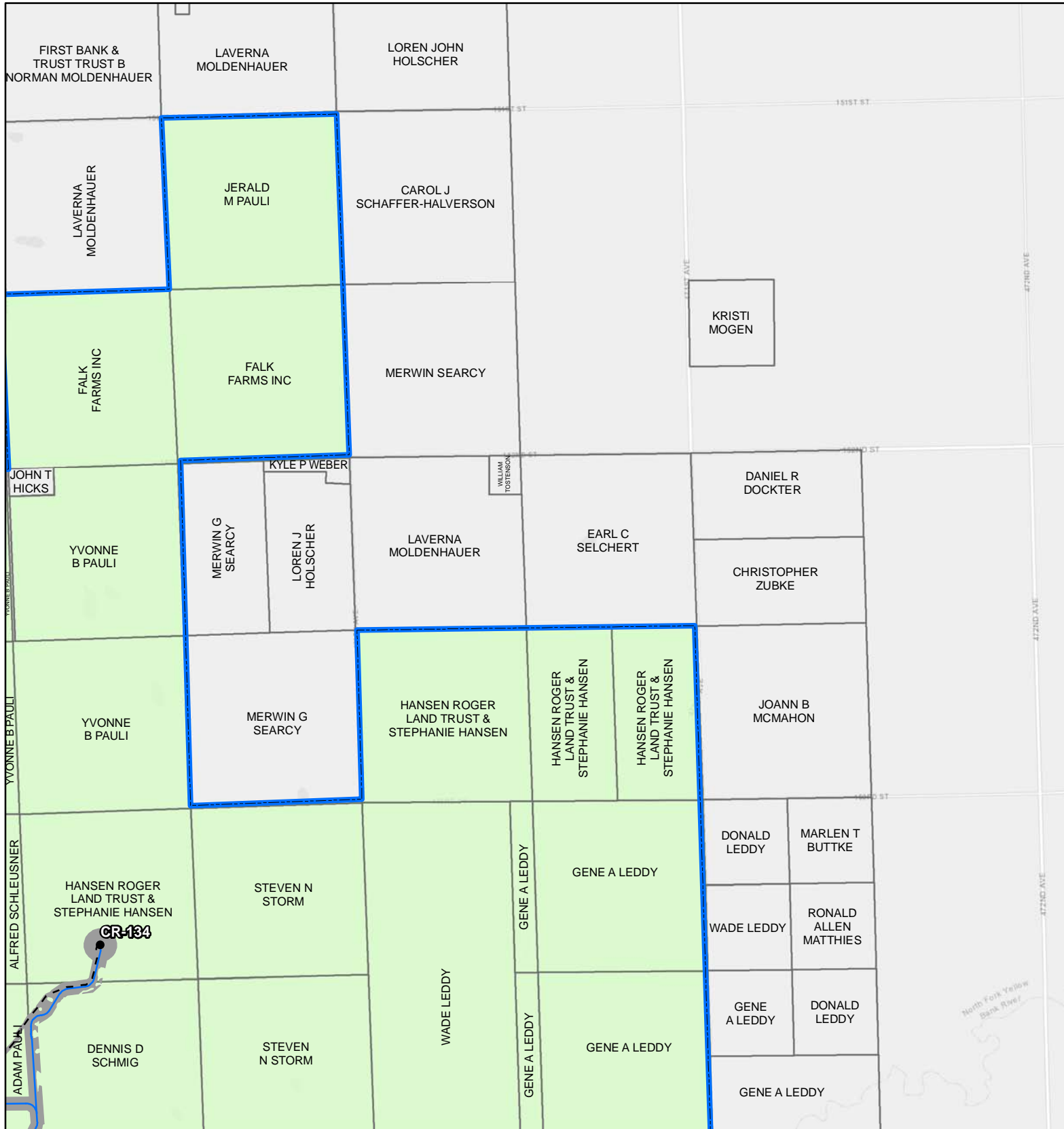
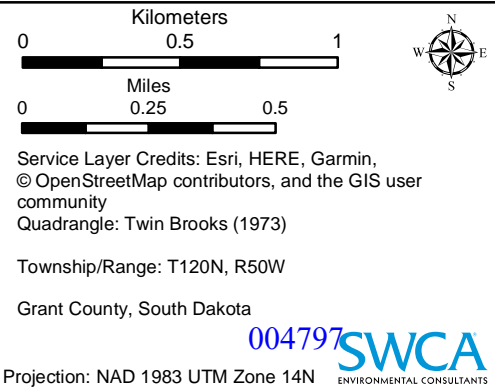
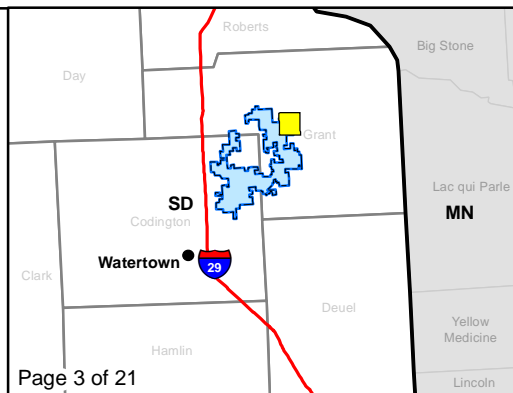
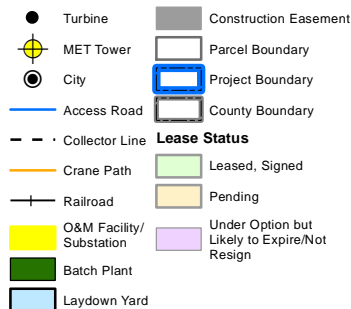


Figure 3a. Project Map
Crowned Ridge Wind Farm



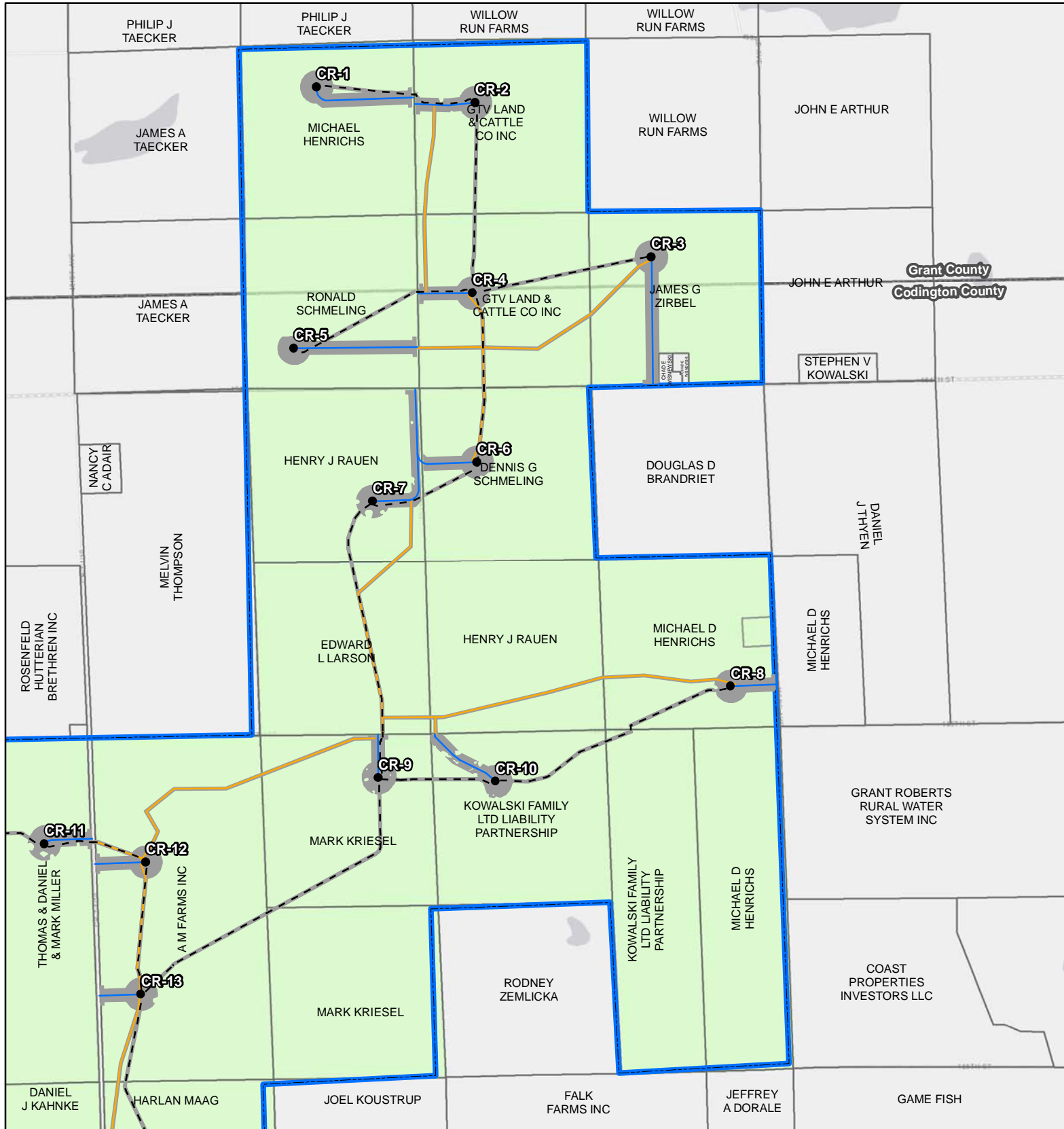
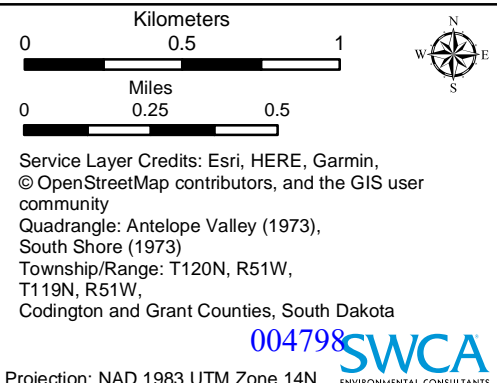
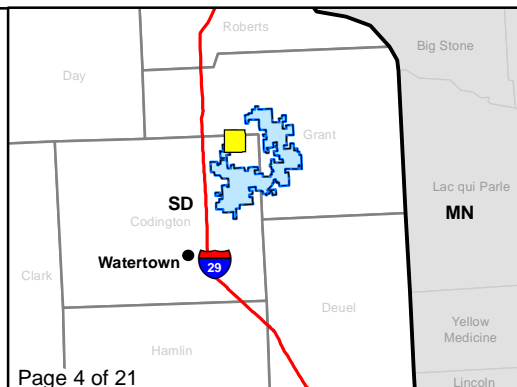
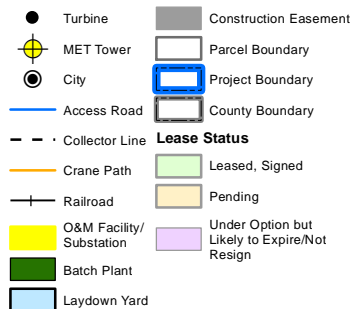


Figure 3a. Project Map
Crowned Ridge Wind Farm



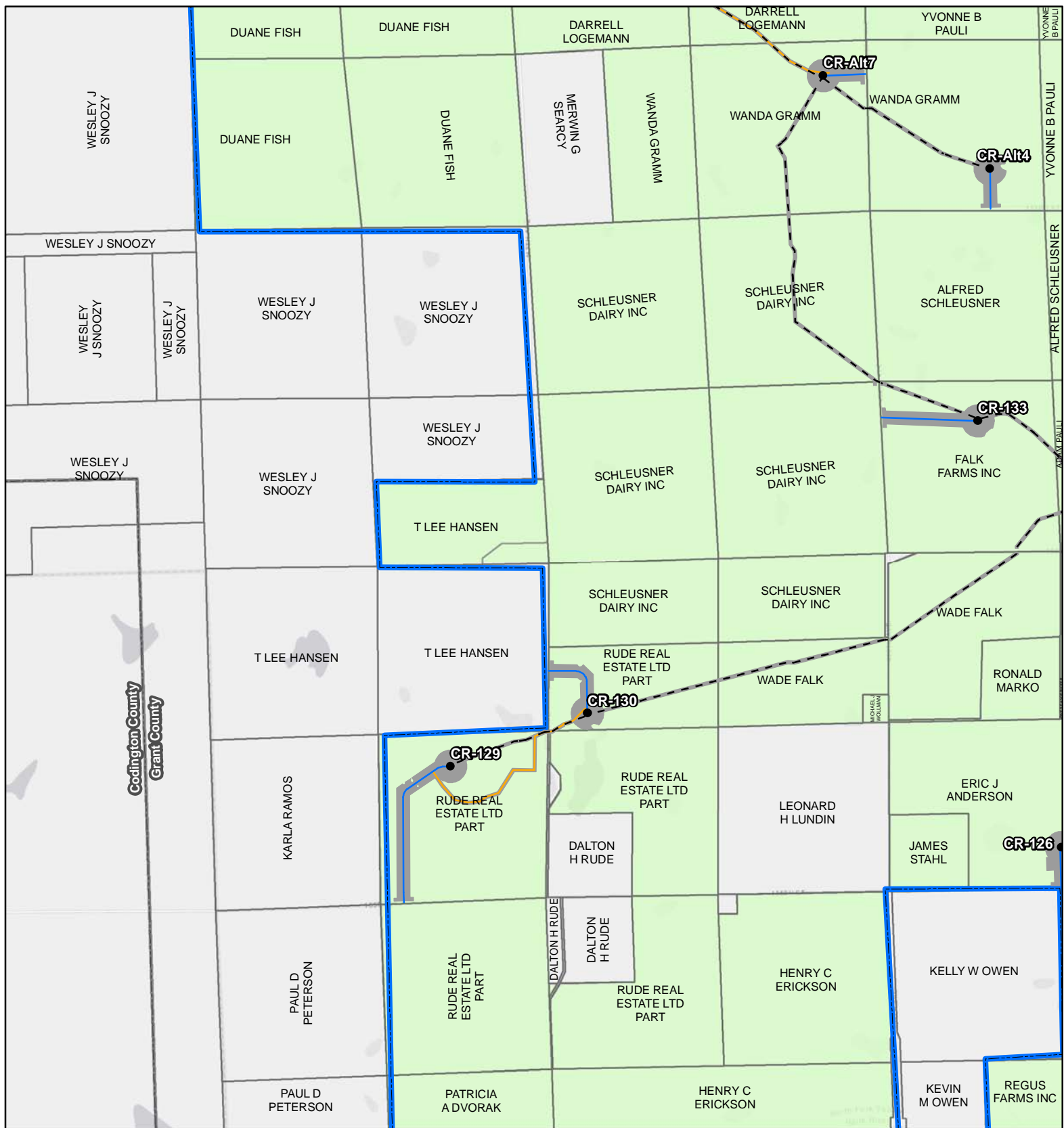
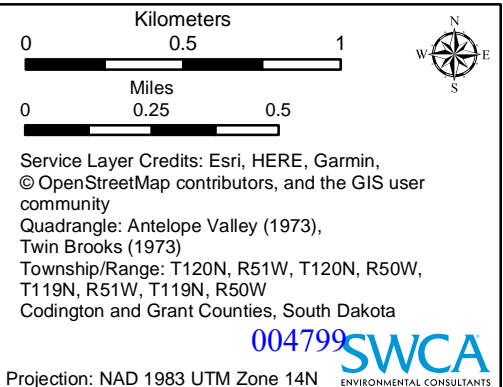
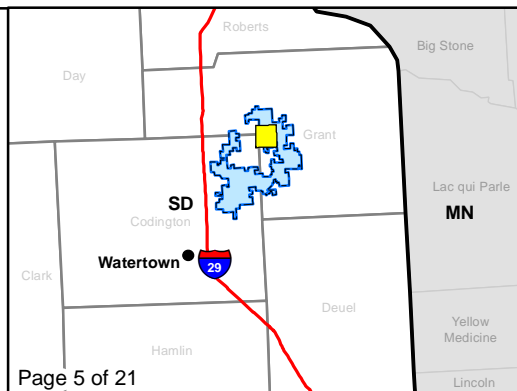
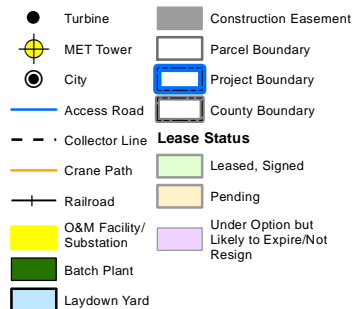


Figure 3a. Project Map
Crowned Ridge Wind Farm



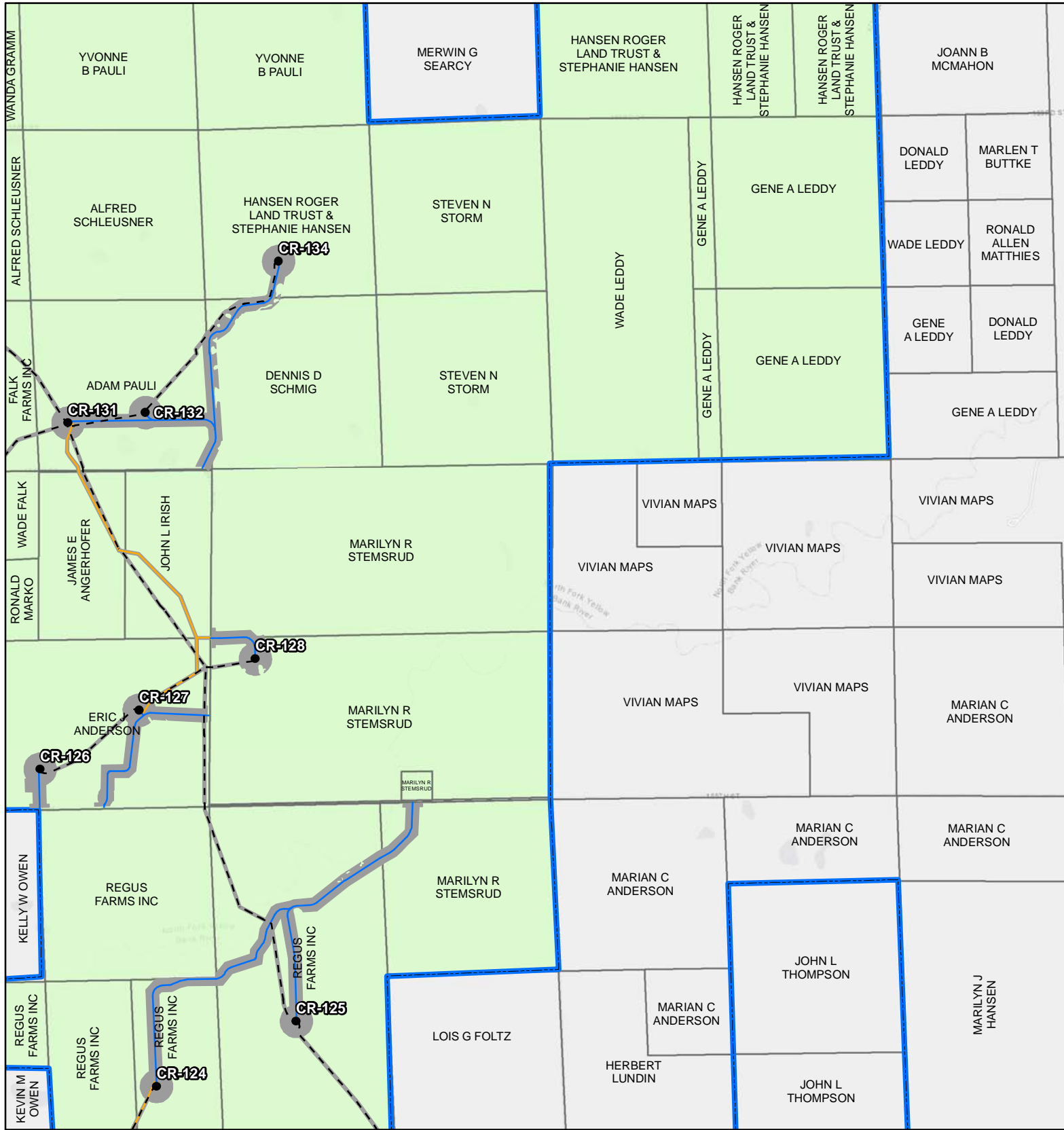
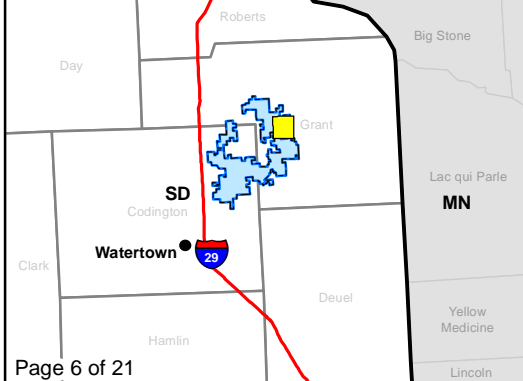


Figure 3a. Project Map
Crowned Ridge Wind Farm

- Turbine
 - ⦿ MET Tower
 - City
 - Access Road
 - - - Collector Line
 - Crane Path
 - Railroad
 - O&M Facility/ Substation
 - Batch Plant
 - Laydown Yard
 - ▨ Construction Easement
 - ▭ Parcel Boundary
 - ▭ Project Boundary
 - ▭ County Boundary
- Lease Status**
- Leased, Signed
 - Pending
 - Under Option but Likely to Expire/Not Resign



Kilometers

0 0.5 1

Miles

0 0.25 0.5

Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community

Quadrangle: Twin Brooks (1973), Stockholm (1973)

Township/Range: T120N, R50W, T119N, R50W

Grant County, South Dakota

004800 SWCA
ENVIRONMENTAL CONSULTANTS

Projection: NAD 1983 UTM Zone 14N

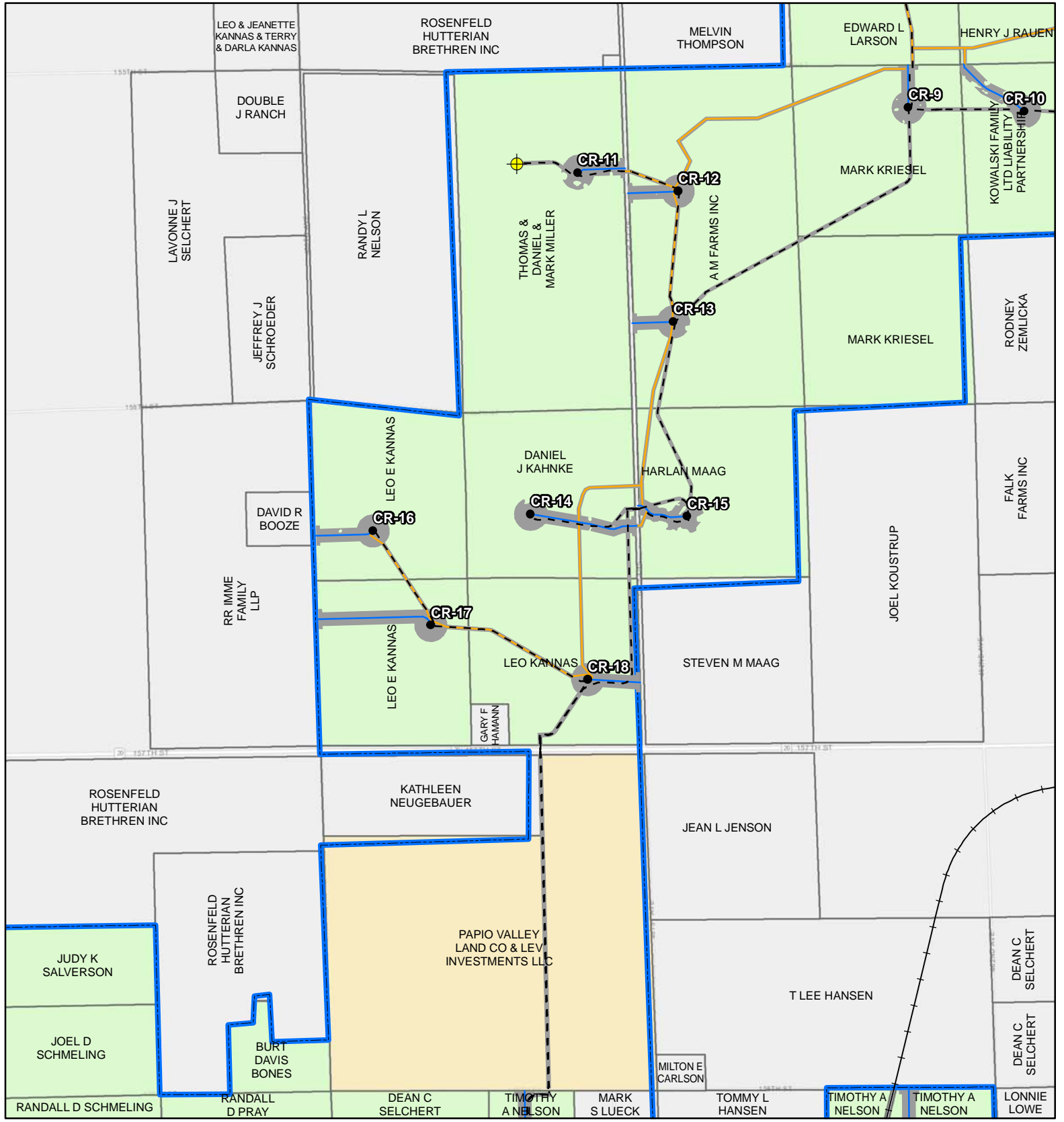


Figure 3a. Project Map
Crowned Ridge Wind Farm

- Turbine
 - ⊕ MET Tower
 - City
 - Access Road
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 - Laydown Yard
 - Construction Easement
 - ▭ Parcel Boundary
 - ▭ Project Boundary
 - ▭ County Boundary
- Lease Status**
- Leased, Signed
 - Pending
 - Under Option but Likely to Expire/Not Resign



Scale

Kilometers: 0, 0.5, 1

Miles: 0, 0.25, 0.5

Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community

Quadrangle: Still Lake NE (1970), Antelope Valley (1973), Still Lake SE (1970), South Shore (1973)

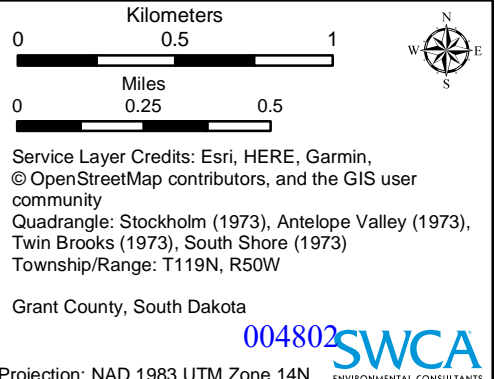
Township/Range: T119N, R52W, T119N, R51W

Codington County, South Dakota

004801 **SWCA**

ENVIRONMENTAL CONSULTANTS

Projection: NAD 1983 UTM Zone 14N



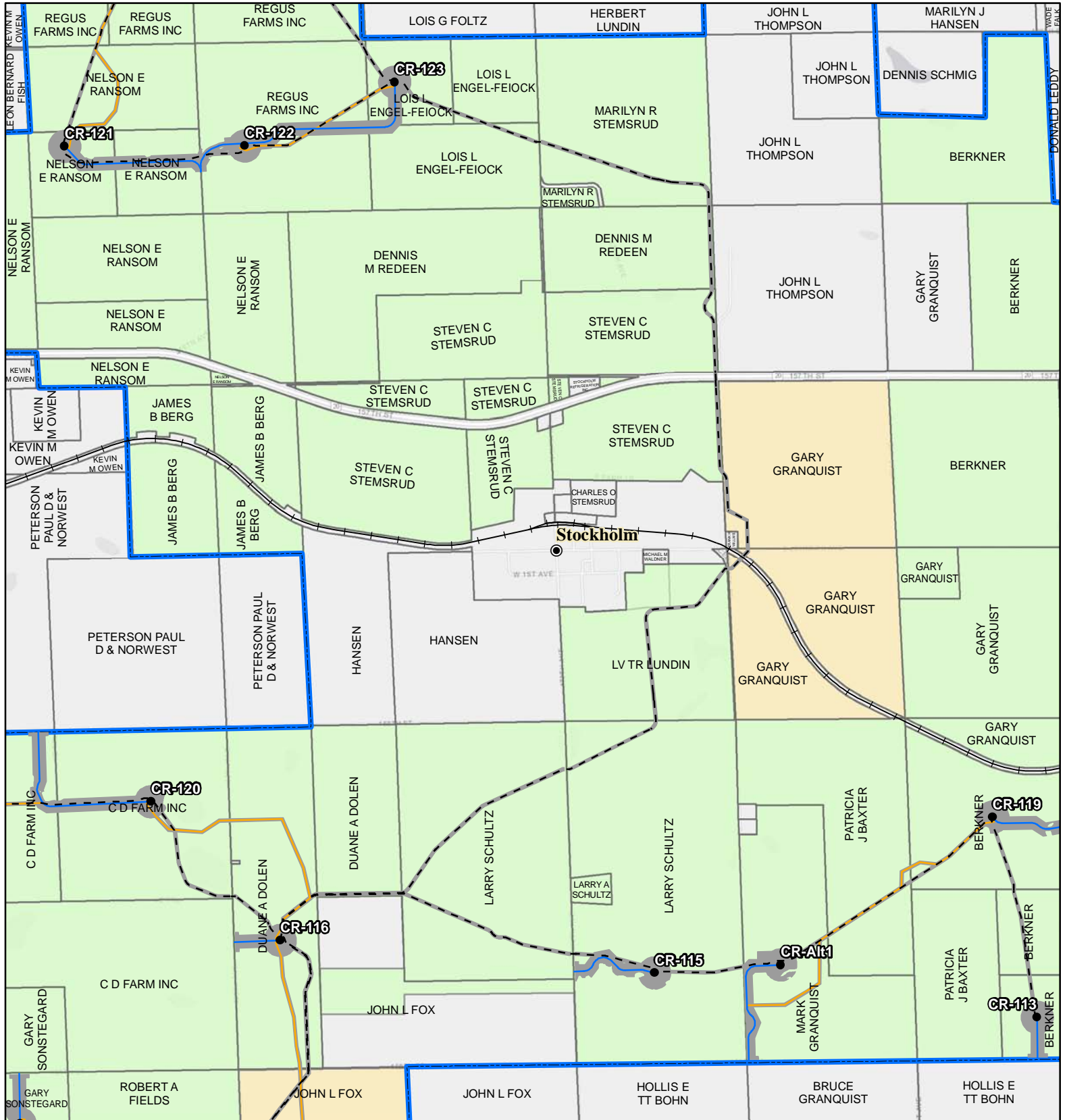
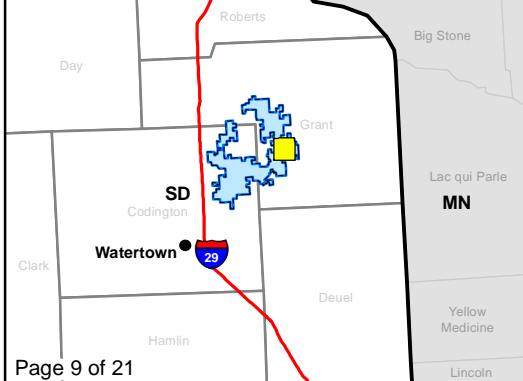


Figure 3a. Project Map
Crowned Ridge Wind Farm

- Turbine
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- Lease Status**
- Leased, Signed
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 - Under Option but Likely to Expire/Not Resign



0 0.5 1
Kilometers

0 0.25 0.5
Miles

Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community
Quadrangle: Stockholm (1973)

Township/Range: T119N, R50W

Grant County, South Dakota

004803 **SWCA**
ENVIRONMENTAL CONSULTANTS

Projection: NAD 1983 UTM Zone 14N

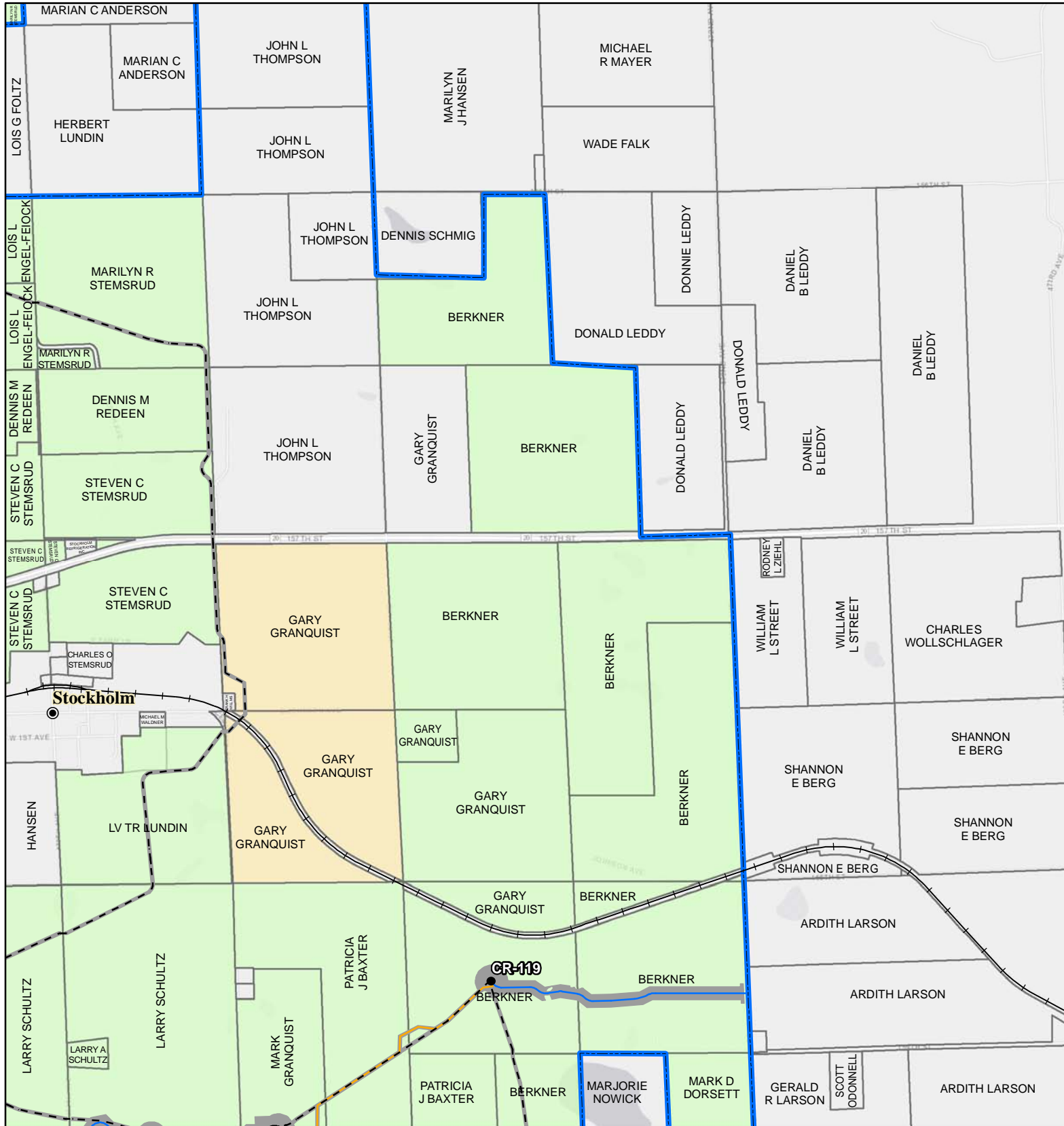
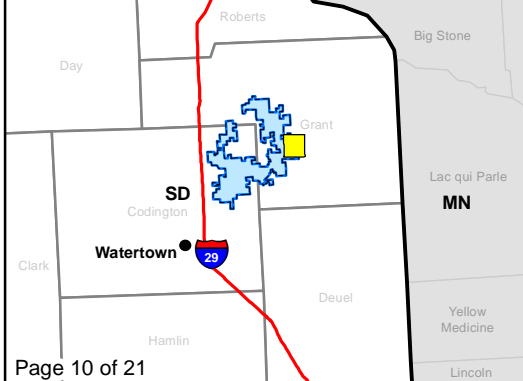


Figure 3a. Project Map
Crowned Ridge Wind Farm

- Turbine
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 - ▬ County Boundary
- Lease Status**
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 - Under Option but Likely to Expire/Not Resign



0 0.5 1
Kilometers

0 0.25 0.5
Miles

Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community

Quadrangle: Twin Brooks (1973), Stockholm (1973)

Township/Range: T119N, R50W, T119N, R49W

Grant County, South Dakota

004804 **SWCA**
ENVIRONMENTAL CONSULTANTS

Projection: NAD 1983 UTM Zone 14N

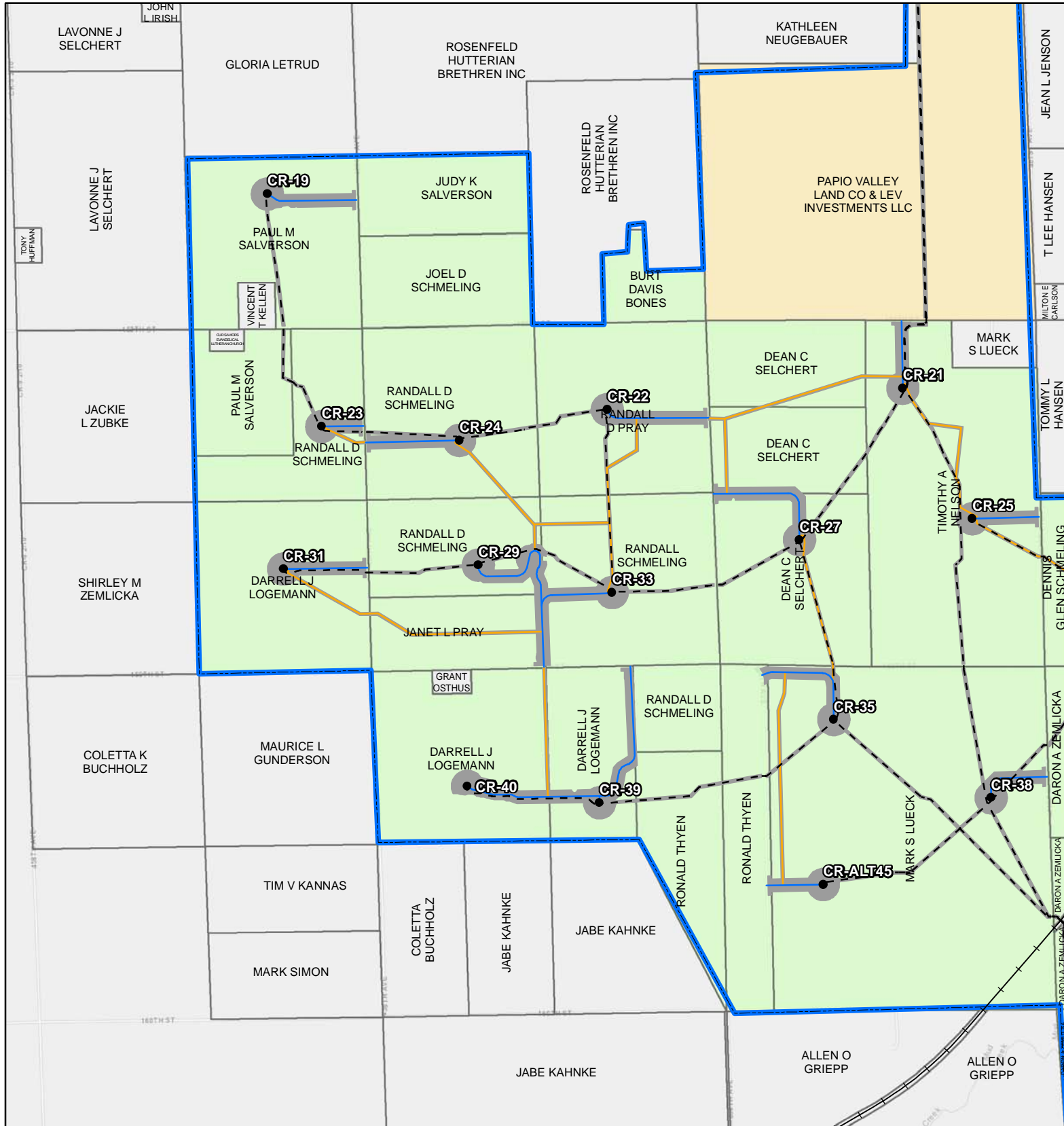


Figure 3a. Project Map
Crowned Ridge Wind Farm

- Turbine
 - ⊕ MET Tower
 - City
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 - Pending
 - Under Option but Likely to Expire/Not Resign



Kilometers

0 0.5 1

Miles

0 0.25 0.5

Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community

Quadrangle: Still Lake SE (1970), South Shore (1973)

Township/Range: T119N, R52W, T119N, R51W, T118N, R52W, T118N, R51W

Codington County, South Dakota

004805 **SWCA**

ENVIRONMENTAL CONSULTANTS

Projection: NAD 1983 UTM Zone 14N

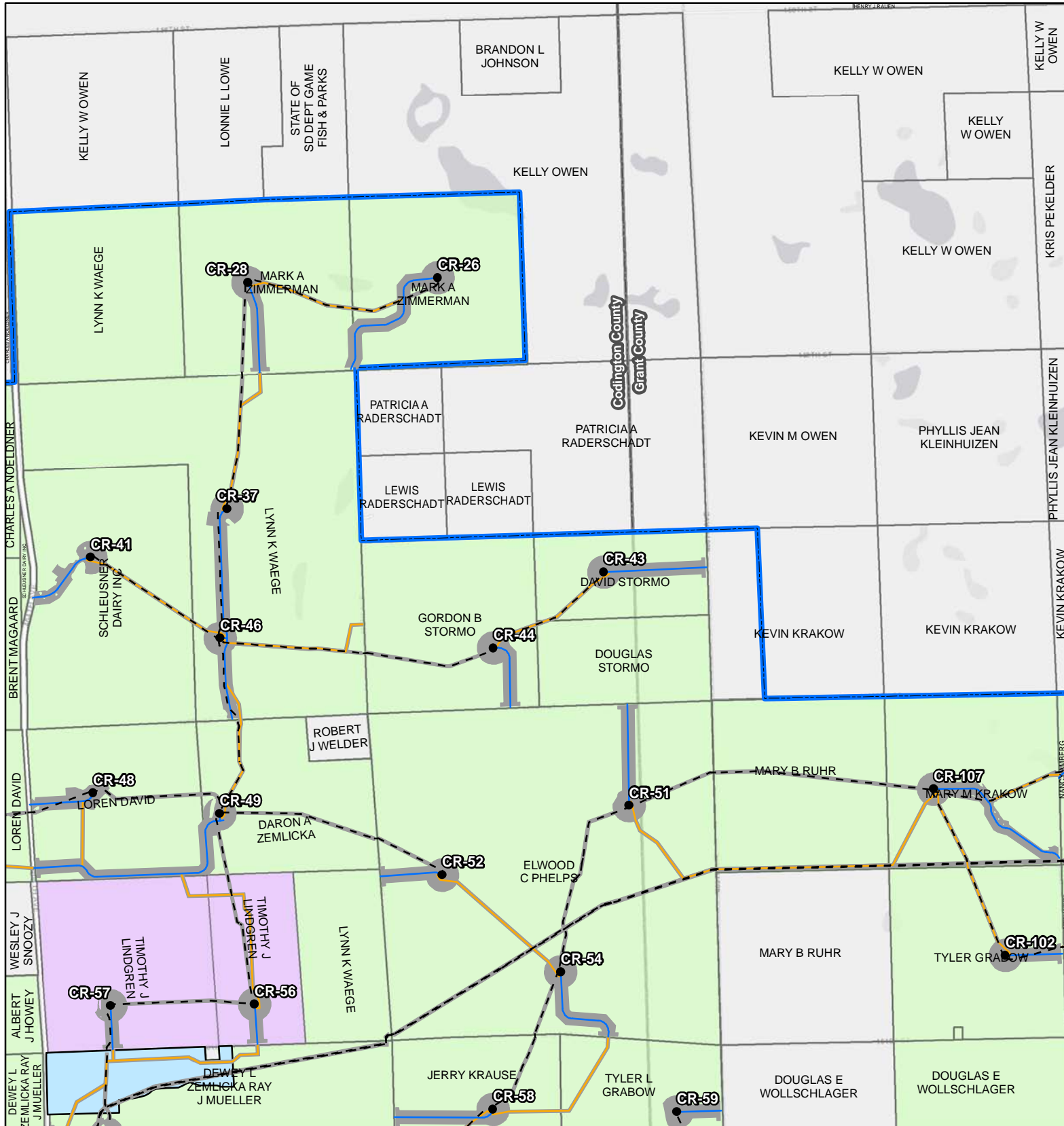
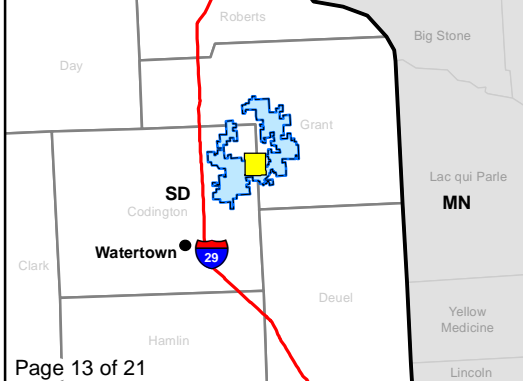


Figure 3a. Project Map
Crowned Ridge Wind Farm

- Turbine
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 - ▭ Project Boundary
 - ▭ County Boundary
- Lease Status**
- Leased, Signed
 - Pending
 - Under Option but Likely to Expire/Not Resign



Kilometers

0 0.5 1

Miles

0 0.25 0.5

Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community

Quadrangle: South Shore (1973), Stockholm (1973)

Township/Range: T119N, R51W, T119N, R50W, T118N, R51W, T118N, R50W

Codington and Grant Counties, South Dakota

004807 **SWCA**
ENVIRONMENTAL CONSULTANTS

Projection: NAD 1983 UTM Zone 14N

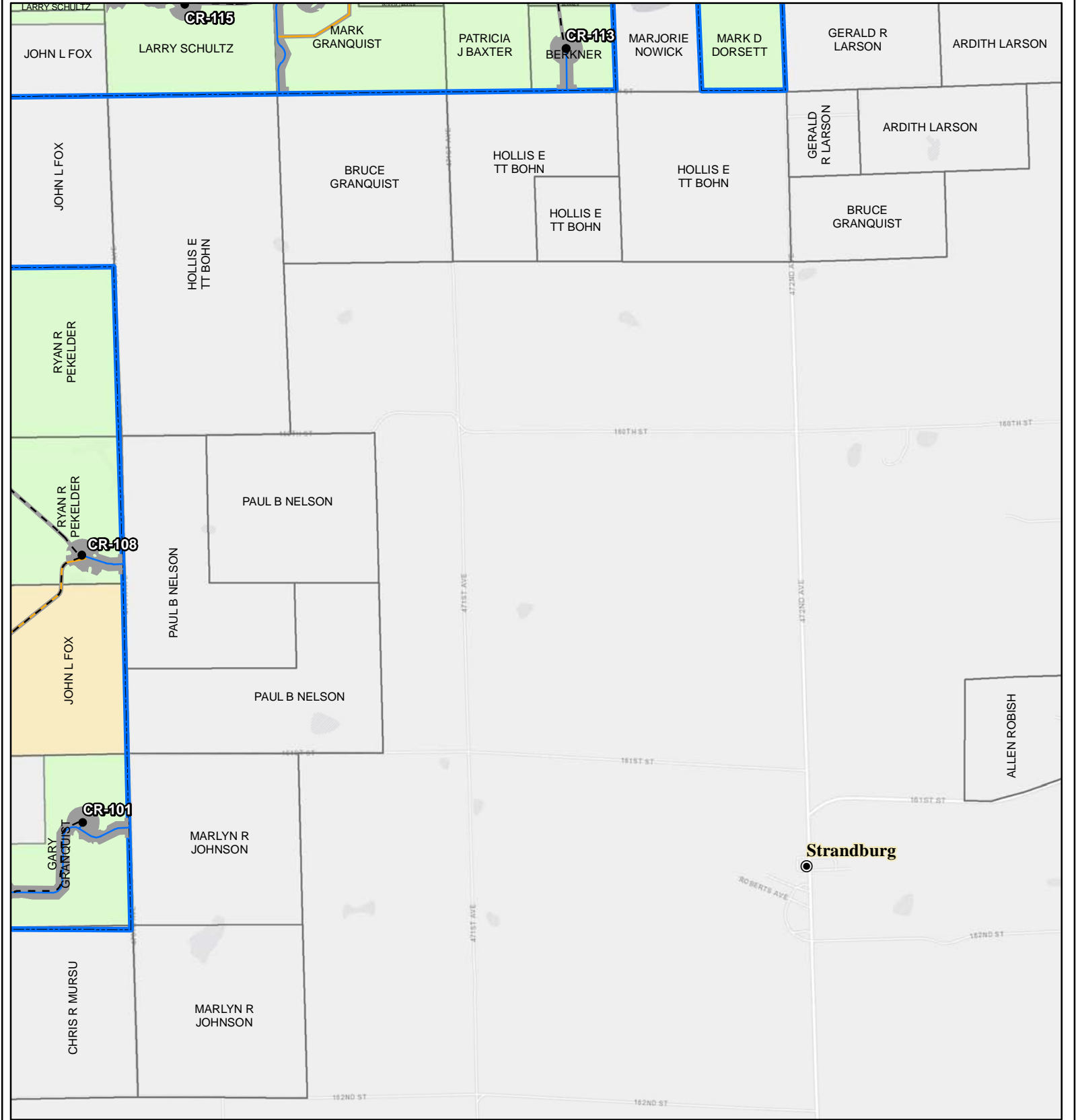
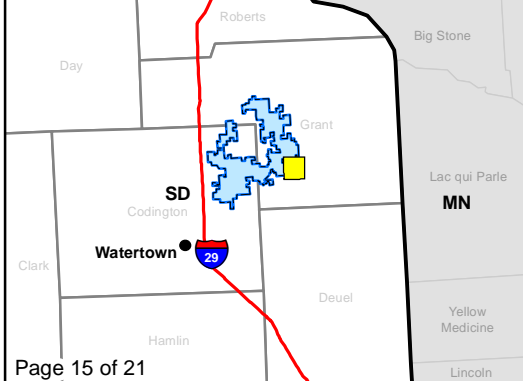


Figure 3a. Project Map
Crowned Ridge Wind Farm

- Turbine
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 - City
 - Access Road
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 - O&M Facility/ Substation
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 - ▭ Parcel Boundary
 - ▭ Project Boundary
 - ▭ County Boundary
- Lease Status**
- Leased, Signed
 - Pending
 - Under Option but Likely to Expire/Not Resign



0 0.5 1
 Kilometers

0 0.25 0.5
 Miles

Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community
 Quadrangle: Stockholm (1973)

Township/Range: T119N, R50W,
 T118N, R50W
 Grant County, South Dakota

004809 **SWCA**
 ENVIRONMENTAL CONSULTANTS

Projection: NAD 1983 UTM Zone 14N

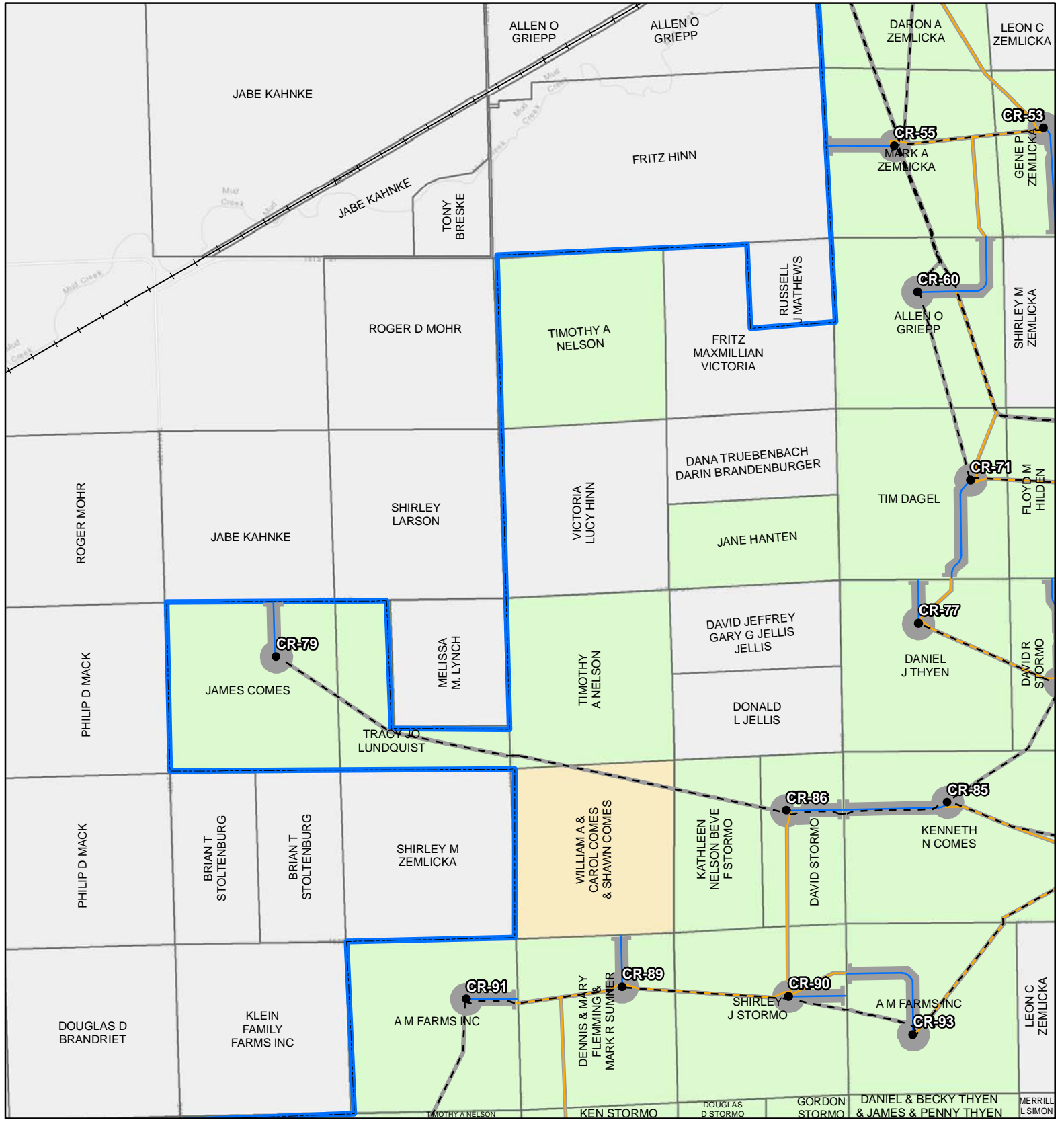
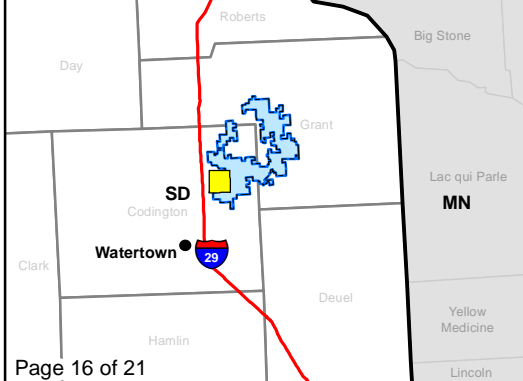


Figure 3a. Project Map
Crowned Ridge Wind Farm

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- Lease Status**
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0 0.5 1
Kilometers

0 0.25 0.5
Miles

Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community

Quadrangle: Still Lake SE (1970), South Shore (1973)

Township/Range: T118N, R52W, T118N, R51W

Codington County, South Dakota

004810 **SWCA**
ENVIRONMENTAL CONSULTANTS

Projection: NAD 1983 UTM Zone 14N

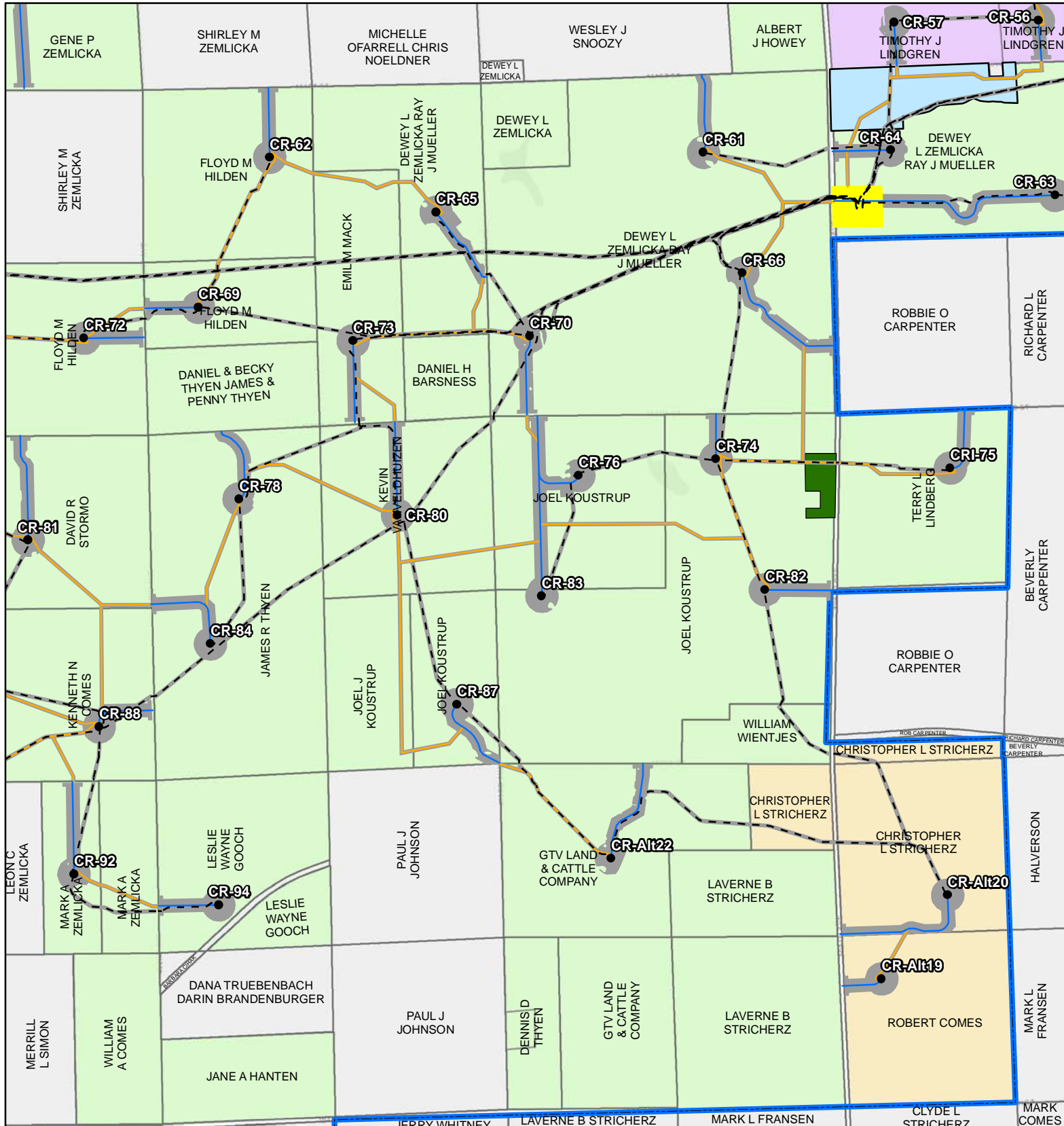
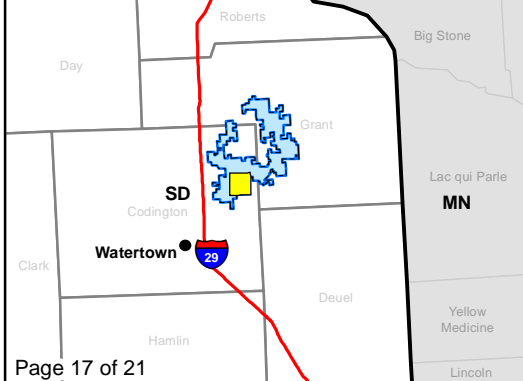


Figure 3a. Project Map
Crowned Ridge Wind Farm

- Turbine
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 - City
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 - Crane Path
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 - ▬ County Boundary
- Lease Status**
- Leased, Signed
 - Pending
 - Under Option but Likely to Expire/Not Resign



Kilometers
0 0.5 1

Miles
0 0.25 0.5

Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community
Quadrangle: South Shore (1973)

Township/Range: T118N, R51W

Codington County, South Dakota

004811 SWCA
ENVIRONMENTAL CONSULTANTS

Projection: NAD 1983 UTM Zone 14N

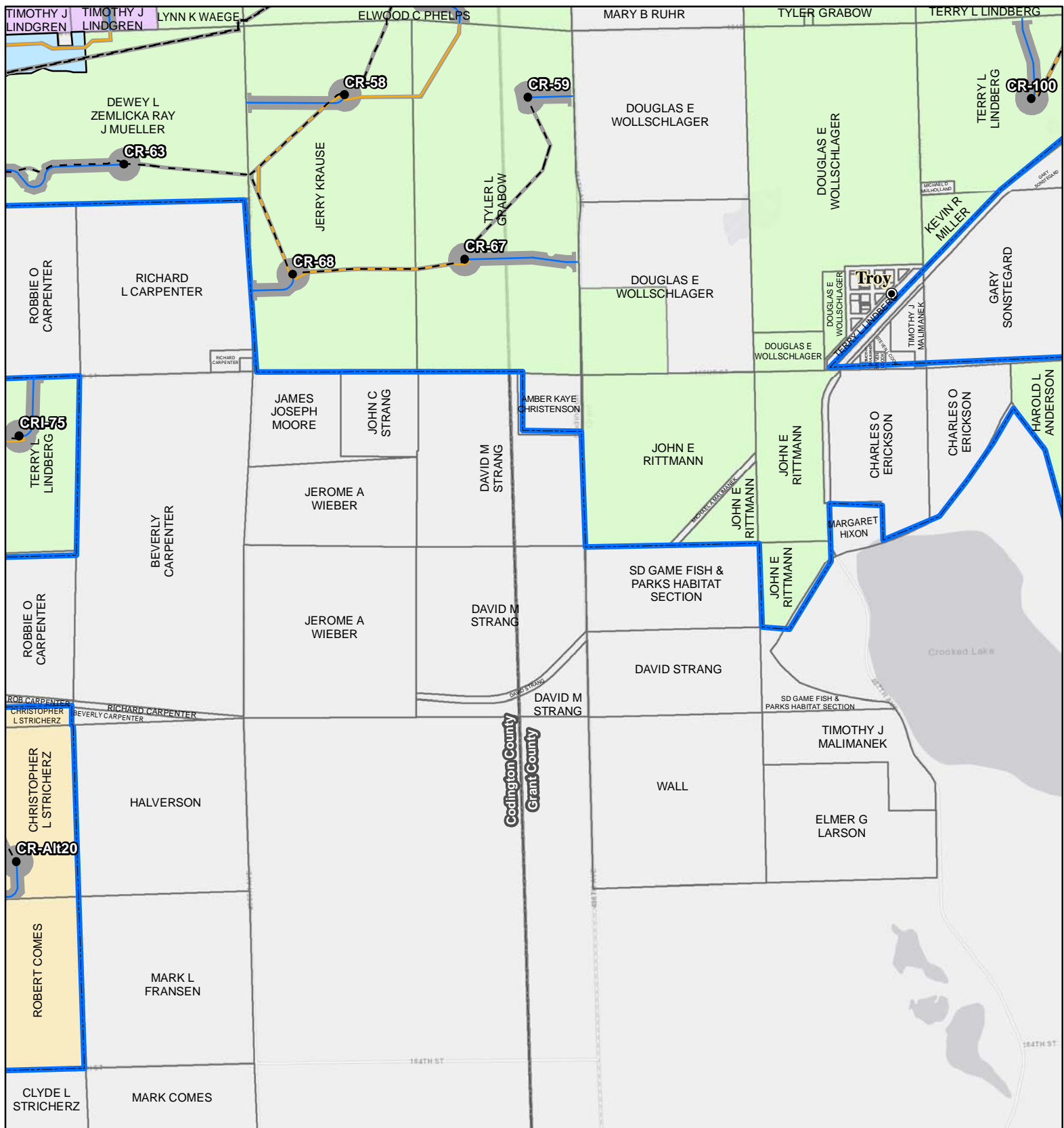
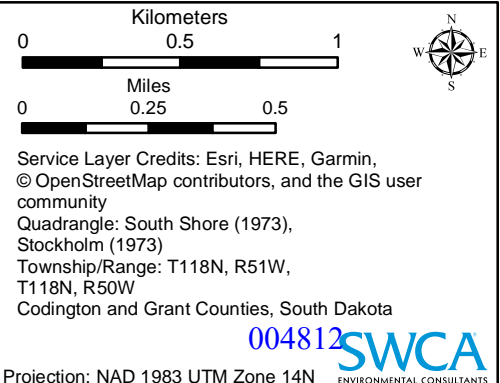
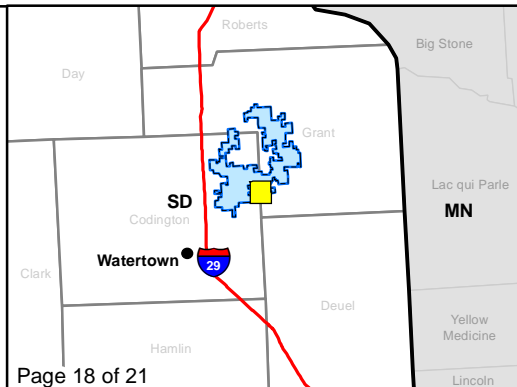
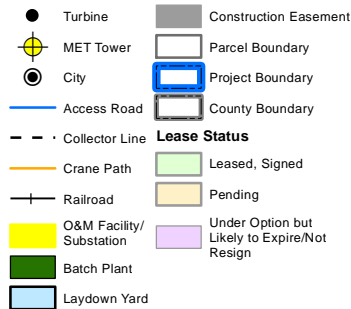


Figure 3a. Project Map
Crowned Ridge Wind Farm



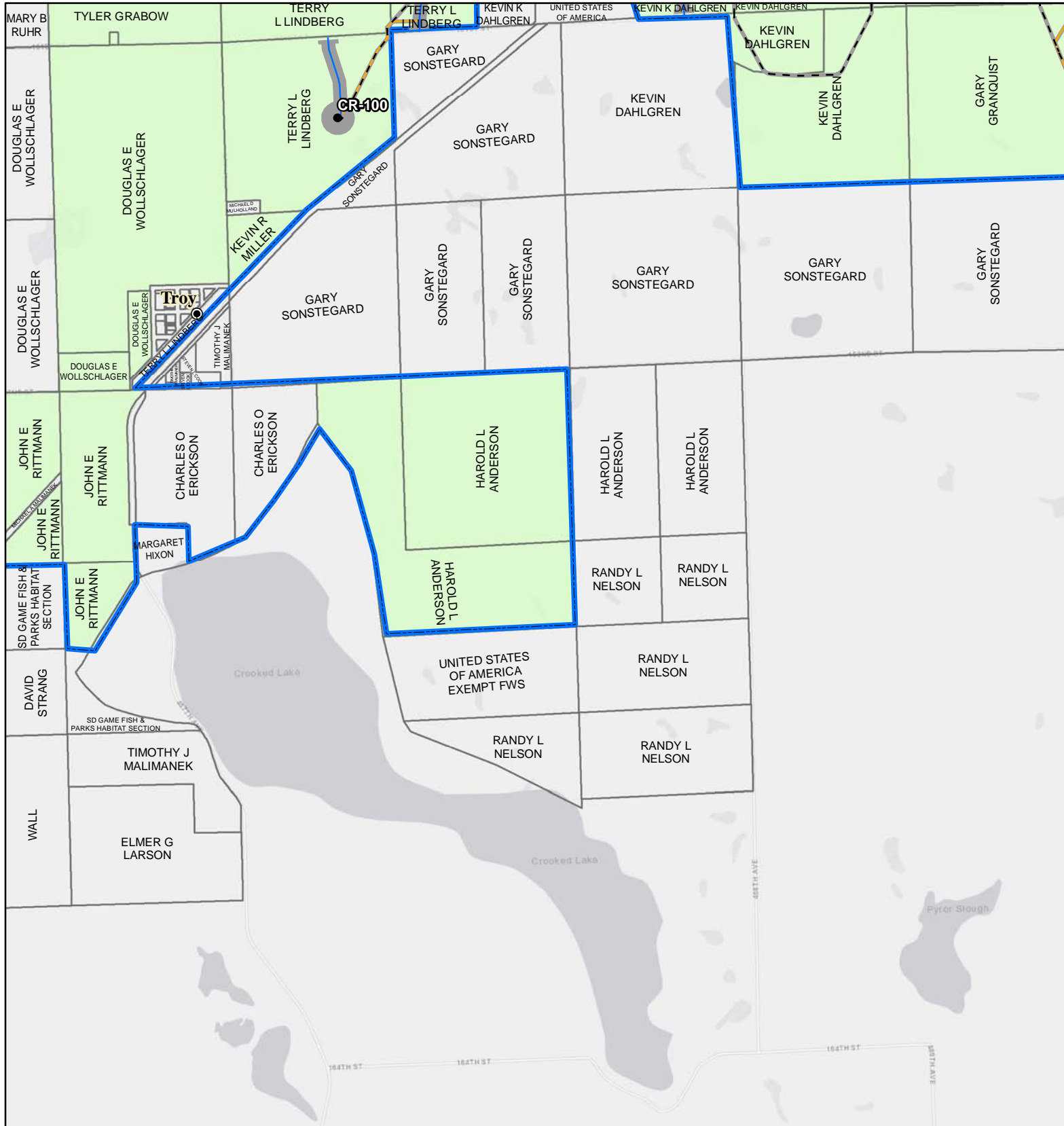


Figure 3a. Project Map
Crowned Ridge Wind Farm

- Turbine
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 - ▭ County Boundary
- Lease Status**
- Leased, Signed
 - Pending
 - Under Option but Likely to Expire/Not Resign



0 0.5 1

Kilometers

0 0.25 0.5

Miles

Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community

Quadrangle: South Shore (1973), Stockholm (1973)

Township/Range: T118N, R50W

Grant County, South Dakota

004813 **SWCA**
 ENVIRONMENTAL CONSULTANTS

Projection: NAD 1983 UTM Zone 14N

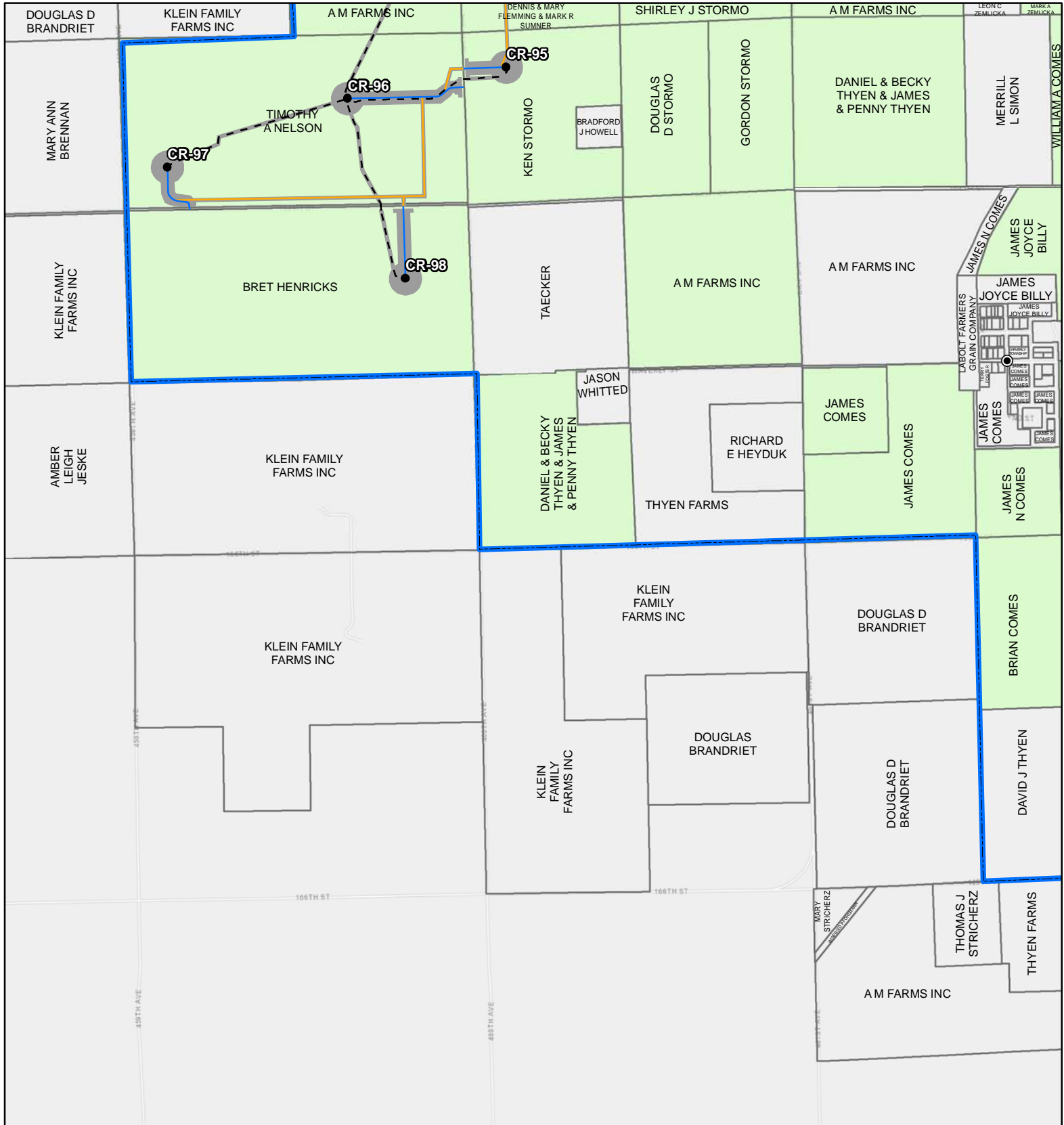
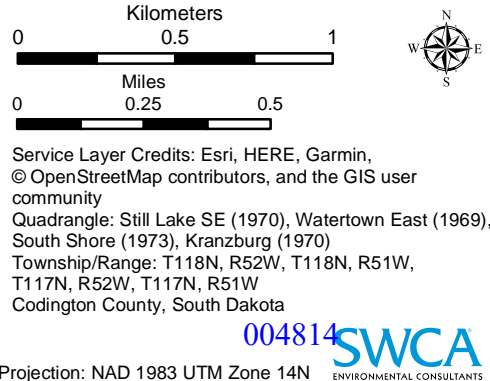
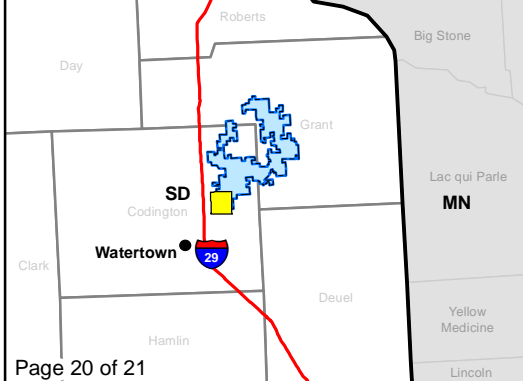
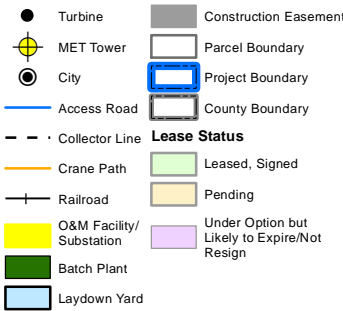


Figure 3a. Project Map
Crowned Ridge Wind Farm



**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA**

IN THE MATTER OF THE APPLICATION)	
BY CROWNED RIDGE WIND, LLC FOR A)	EL19-003
PERMIT OF A WIND ENERGY FACILITY)	
IN GRANT AND CODINGTON COUNTIES)	CERTIFICATE OF SERVICE
)	

I hereby certify that true and correct copies of Tyler Wilhelm and Sam Massey's
Rebuttal testimony and attachments in this matter were served electronically to the parties
listed below on the 24th day of May, 2019, addressed to:

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Staff Analyst
Eric.paulson@state.sd.us

Mr. Brian J. Murphy
Senior Attorney
NextEra Energy Resources, LLC
Brian.j.murphy@nee.com

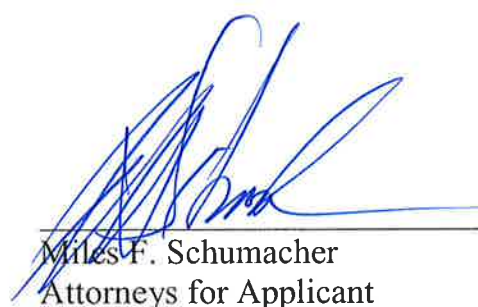
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Mr. David Ganje
Representing Intervenors Mr. Allen Robish,
Ms. Amber Christenson, Ms. Kristi Mogen,
Ms. Melissa Lynch and Mr. Patrick Lynch
Ganje Law Offices
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Sioux Falls, SD 57104