



May 16, 2019

#8227576

Steven J. Guetschow
Planning & Zoning Coordinator
Torrance County
P.O. Box 48
Estancia, New Mexico 87016
sguetschow@tcnm.us
505.544.4391

RE: Letter of Intent – Amendment No. 1 to Application for Torrance County Zoning Ordinance Amendment for Special Use District and Height Variance for the Clines Corners Wind Farm Project.

Dear Mr. Guetschow:

On behalf of Orion Wind Resources LLC (Applicant), Souder, Miller & Associates has prepared this Amendment No. 1 to the February 28th, 2019 Application for Torrance County Zoning Ordinance Amendment for Special Use District and Height Variance for the Clines Corners Wind Farm Project. This Amendment was prepared to present an indicative alternate wind farm layout with fewer, higher capacity wind turbines (maximum size 4.2 MW), while keeping the same overall project output and maximum size dimensions, and to present the revised transmission line alignment. The following text describes the modifications to the original Application sections that result from these Project changes.

Use of Higher Capacity Wind Turbines and Alternate Wind Farm Layout:

Introduction (page 4)

The Introduction of the February 28th, 2019 Application stated that the Project will consist of wind turbines having a rated nameplate capacity between 2 and 3.5 MW, with a total Project generation capacity of up to approximately 480 MW split between the two counties.

- *Amendment: The Project will consist of wind turbines having a rated nameplate capacity between 2.0 and 4.2 MW each. The dimensions of individual wind turbines and the total Project output (approximately 480 MW) will remain unchanged. Exhibit A (Project Overview Map) has been amended to illustrate an indicative alternate wind farm layout with fewer, higher capacity turbines. In addition, Exhibit H (Wind Turbine Brochure) includes a brochure for the 4.2 MW wind turbine.*

Section 7.1 Wind Energy Facility Description (page 7)

This section of the February 28th, 2019 Application stated that the Project will consist of wind turbines having a rated nameplate capacity between 2 and 3.5 MW, with a total Project generation capacity of up to approximately 480 MW split between the two counties.

- *Amendment: The Project will consist of wind turbines having a rated nameplate capacity between 2.0 and 4.2 MW each. The dimensions of individual wind turbines and the total Project output (approximately 480 MW) will remain unchanged. Exhibit A (Project Overview Map) has been amended to illustrate an*

indicative alternate wind farm layout with the higher capacity turbines. In addition, Exhibit H (Wind Turbine Brochure) includes a brochure for the 4.2 MW wind turbine.

Section 7.5.1 Electricity Generation (page 18)

This section of the February 28th, 2019 Application stated that the 480 MW Project will consist of wind turbines having a rated nameplate capacity between 2 and 3.5 MW located within Guadalupe and Torrance counties, and is expected to generate approximately 2,000,000 MWh per year of clean, renewable energy.

- *Amendment: The Project will consist of wind turbines having a rated nameplate capacity between 2.0 and 4.2 MW each. The dimensions of individual wind turbines and the total Project output (approximately 480 MW) and annual generation (approximately 2,000,000 MWh per year) will remain unchanged. Exhibit A (Project Overview Map) has been amended to illustrate an indicative alternate wind farm layout with the higher capacity turbines. In addition, Exhibit H (Wind Turbine Brochure) includes a brochure for the 4.2 MW wind turbine.*

Revised Transmission Line Alignment:

Introduction (page 4)

This section of the February 28th, 2019 Application stated that the Project will include construction and operation of a new power transmission line (gen-tie line) which will connect to a point on Public Service Company of New Mexico's (PNM) existing high voltage network (Point of Interconnection). The transmission line will originate at a Project substation located within the wind farm area and head in a westerly direction across private land for approximately 12-15 miles. The transmission line will then enter the U.S. Highway 285 right-of-way and continue in a northwesterly direction approximately 40 miles to the Point of Interconnection on PNM's 345 kV network.

- *Amendment: The Project's revised transmission line alignment is located entirely within Torrance County. The transmission line (gen-tie line) will originate at a Project substation, located within the wind farm area, and head in a westerly direction across private land and potentially State Trust Land, for approximately 18.72 miles. The gen-tie line will terminate at a Project interconnection facility that will interconnect to the proposed Western Spirit 345 kV transmission line (Western Spirit) owned by the New Mexico Renewable Energy Transmission Authority at the Western Spirit switching station (Point of Interconnection), located in the vicinity of the El Cabo Wind Farm project and within the Project Special Use District. The Applicant proposes in this Application that the Point of Interconnection would be included as a foreseeable permissive use within the Project Special Use District. Discussions with the New Mexico Department of Transportation (NMDOT) for highway crossing agreements are ongoing and an application for such use will be submitted shortly. Applicant is also requesting from the NMPRC a ROW width determination for the transmission line pursuant to NMSA 1978, §62-9-3.2, to the extent such approval may be required by law. Exhibit A (Project Overview Map) has been amended to illustrate the revised transmission line alignment. Exhibit B (Land Agreements) has been amended to include signed landowner consent forms for private properties utilized by the transmission line west of U.S. highway 285.*

Section 4.0 Project Site, Legal Description (page 5)

This section of the February 28th, 2019, Application stated that the Project wind turbines and gen-tie line will be located entirely on private land and that the Applicant holds lease or easement agreements with all those

landowners. This section of the Application included Table 2 (page 6), which summarized the private landowners along the transmission line route.

- *Amendment: The revised transmission line alignment west of U.S. highway 285 involves additional landowners, both private and public. Table 2 has been amended, below, to include the additional landowners. Exhibit B (Land Agreements) has been amended to include signed landowner consent forms for private properties utilized by the transmission line west of U.S. highway 285.*

Amended Table 2. Landowner Information - Transmission Line (page 6)

Landowner Name	Township/Range	Property Description	Parcel/UPC Code
L.T. Lewis Ltd. Company	T5 North, Range 14 East; T6 North, Range 14 East; T5 North, Range 15 East T5 North, Range 15 East	T5 Section 1, 2, 3, 4, 5, 29 T6 Section 25, 26, 27, 28, 29, 32, 33, 34, 35, 36 T5 Section 1, 2, 3, 4, 5, 29 Section 6	1087033239223
L.T. Lewis Ltd. Company	T6 North, Range 15 East, T6 North, Range 14 East	T6 Section 31 T6 Section 36, 35, 34, 33, 32	1087033239223
Michele M. Goodson and Wesley Dwayne Goodson	T5 North, Range 14 East, N.M.P.M	Section 6 - T5N R14E Section 7 - T5N R14E Section 17 - T5N R14E Section 20 - T5N R14E	1080029189295
Michele and Wesley Goodson	T5 North, Range 14 East	Section 6	1080029189295
Burson, Thomas W. (Parcel 1 of 2)	T6 North, Range 13 East T5 North, Range 13 East	Section 33 - SE4SE4, SW4SE4 Section 34 - SE4SW4, SW4SW4 Section 4 - NE4NW4, NW4NW4	1073030264263
Burson, Thomas W. (Parcel 2 of 2)	T5 North, Range 13 East	Section 6 - N2N2	1076032525221
Harral, Malcolm C. & Loretta Ray Trust	T5 North, Range 13 East T5 North, Range 13 East T6 North, Range 13 East	Section 6 - NW4NW4 Section 1 - N2N2 Section 2 - N2N2 Section 3 - N2NE4 Section 34 - S2SE4 Section 35 - S2S2	1077030522322
McLaughlin Ranch, LLC	T5 North, Range 13 East	Section 5 - N2N2	1074032309325
Prather, Delma E. Rev Trust	T5 North, Range 12 East	Section 1 - N2N2	1071025526265
Howling Wind Ranch, LLC	T5 North, Range 12 East	Section 3 - SE4NE4, SW4NE4, NE44SE4, NW4SE4	1071033442043

7.2 Site Suitability, g) Cultural Resource and Historic Places (page 11)

This section of the February 28th, 2019 Application stated that the Applicant commissioned a cultural resources literature review to identify previous archaeological field studies and identified cultural resources within and near the Project area. The literature review queried online databases including the New Mexico Historic Preservation Division, Archaeological Management Section's New Mexico Cultural Resources Information System (NMCRIS) to determine the extent of previous cultural resource field surveys and documented sites within 1,640 feet (500 meters) of an indicative layout of the Project's wind turbines, access roads, and high voltage transmission line in Torrance County.

- *Amendment: The revised transmission line alignment includes land west of U.S. highway 285. To evaluate potential environmental impacts to this area, in addition to the wind farm area, the Applicant commissioned the Clines Corners Wind Farm Project Environmental Report, prepared by Burns & McDonnell Engineering Company, dated May 7, 2019. The consultant conducted a literature review of cultural resource studies using the New Mexico Cultural Resource Information System (NMCRIS) over a 1 mile survey corridor. The consultant analyzed possible impacts on cultural, historic, and archeological resources from the Project's revised transmission line alignment, including the area of the transmission line west of U.S. highway 285. The consultant concluded that "the proposed location of the transmission line facilities would not unduly impair cultural, historic, and archeological resources. Impacts to cultural resources are expected to be de minimis, if at all." A copy of the Environmental Report is included with this Amendment.*

Summary of Amended Exhibits

- Exhibit A (Project Overview Map) – Amended to illustrate alternate wind farm layout using higher capacity wind turbines and revised transmission line alignment.
- Exhibit B (Land Agreements and Special Use District Extension Area maps) – Amended to include signed landowner consent letters and maps for properties affected by the transmission line and extension of Project Special Use District west of U.S. highway 285.
- Exhibit C (Assessor's Parcel Map) – Amended to illustrate alternate wind farm layout using higher capacity wind turbines and revised transmission line alignment.
- Exhibit E (Land Cover Map) - Amended to illustrate alternate wind farm layout using higher capacity wind turbines and revised transmission line alignment.
- Exhibit H (Wind Turbine Brochure) – Amended to include manufacturer brochure for an example 4.2 MW wind turbine.
- Exhibit I (Access Roads) - Amended to illustrate alternate wind farm access roads using higher capacity wind turbines and revised transmission line alignment.
- Exhibit P (Historic Places) - Amended to illustrate alternate wind farm layout using higher capacity wind turbines and revised transmission line alignment.
- Exhibit S (Surface Waters and Wetlands) - Amended to illustrate alternate wind farm layout using higher capacity wind turbines and revised transmission line alignment.

Amendment No. 1 to Application for Torrance County Zoning Ordinance Amendment for Special Use District and Height Variance for the Clines Corners Wind Farm Project

May 16, 2019

Page 5

Please contact me at (505) 473-9211 or dale.lyons@soudermiller.com if you require any additional information to process the Amendment No. 1 to Application for Conditional Use Permit and Height Variance.

Sincerely,

MILLER ENGINEERS, INC. D/B/A
SOUDER, MILLER & ASSOCIATES



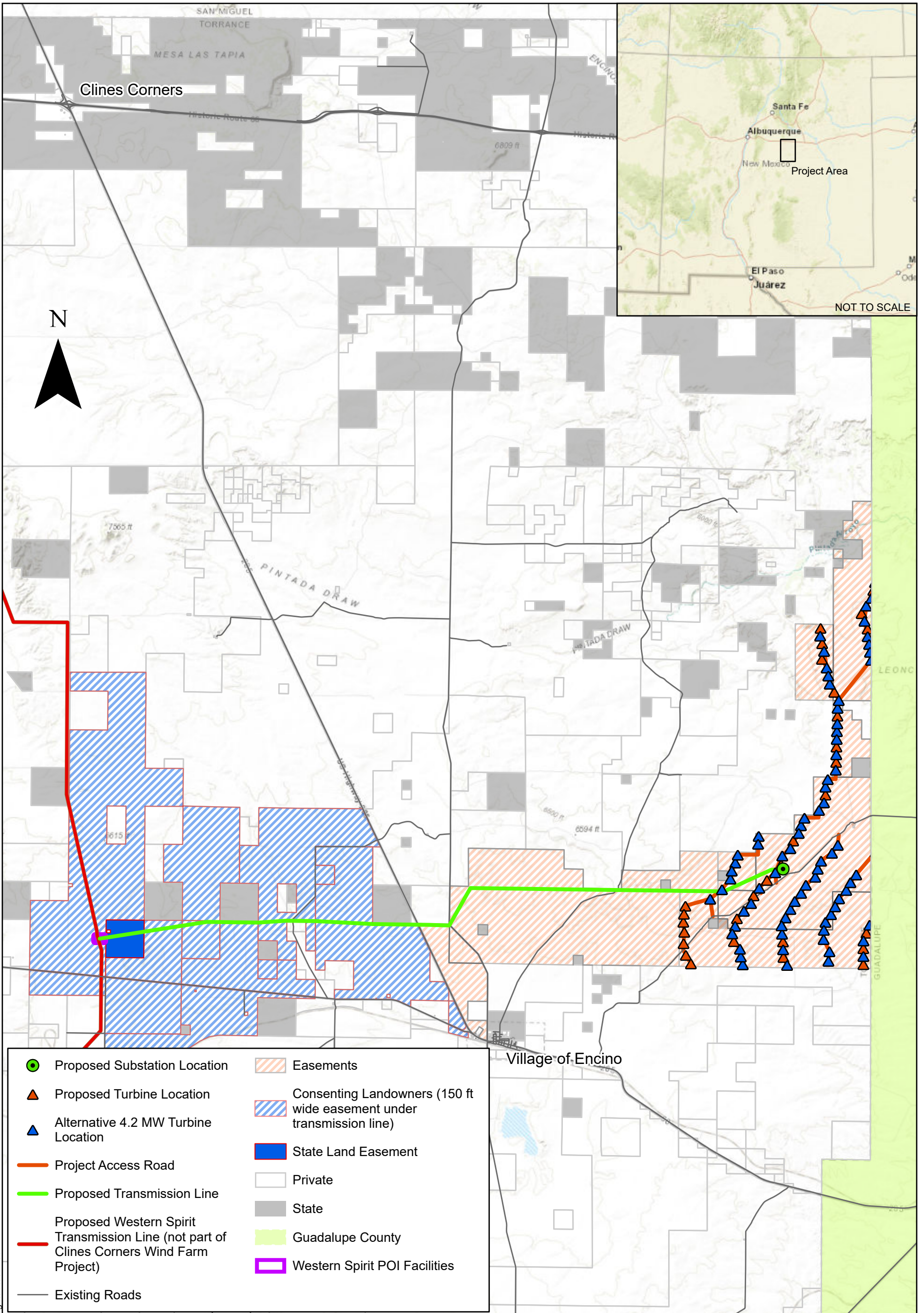
Dale Lyons
Renewable Energy Market Sector Manager

Enc.: 1) Amended Exhibits A, B, C, E, H, I, L, P, S
2) Clines Corners Wind Farm Project Environmental Report, prepared by Burns & McDonnell Engineering Company, May 7, 2019

XC: Michael Kurnik, Orion Wind Resources LLC, mkurnik@orionrenewables.com
Karie Smith, SMA, karie.smith@soudermiller.com

1) Amended Exhibits A, B, C, E, H, I, L, P, S

Exhibits A – Project Overview Map



Designed: ZCT Drawn: ZCT Checked: [] Date: 5/16/2019 Scale: Horiz. - 1" = 2.5 Miles (11x17) Vert. - Project No: 8227576 Sheet: EXHIBIT A	PRELIMINARY NOT FOR CONSTRUCTION <small>THIS DRAWING IS INCOMPLETE AND NOT TO BE USED FOR CONSTRUCTION UNLESS IT IS STAMPED, SIGNED AND DATED</small>	TORRANCE COUNTY TORRANCE COUNTY, NEW MEXICO CLINES CORNERS WIND FARM TORRANCE COUNTY PROJECT OVERVIEW MAP	SMA <small>Souder, Miller & Associates Engineering • Environmental • Surveying www.soudermiller.com</small> 2904 Rodeo Park Dr E #100, Santa Fe, NM 87505 Phone: (505) 473-9211	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">Rev #</th> <th style="width: 5%;">Date</th> <th style="width: 60%;">Description</th> <th style="width: 10%;">By</th> <th style="width: 10%;">Chkd</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	Rev #	Date	Description	By	Chkd																																			
Rev #	Date	Description	By	Chkd																																								

© Souder, Miller & Associates, 2019. All Rights Reserved

Sources: ESRI, Torrance County, Souder, Miller & Associates

Exhibit B – Land Agreements

Torrance County Planning & Zoning
P.O. Box 48
205 9th Street
Estancia, NM 87016

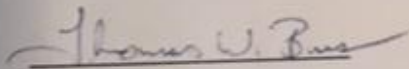
Board members and Commission members,

This letter is given in connection with the application (Application) filed by Orion Wind Resources LLC (Applicant) with Torrance County for a Zoning Ordinance Amendment for a Special Use District (SUD) and Height Variance, in connection with Applicant's proposed Clines Corners Wind Farm Project (Project).

I acknowledge that I am aware of, understand, and approve the addition of my property described on Exhibit A attached to this letter (Real Property) to the proposed SUD, subject to my entering into an option agreement for a wind energy lease or similar agreement and/or a Right-of-Way or transmission easement over the Real Property with the Applicant or its wholly-owned subsidiary, Clines Corners Wind Farm LLC.

I understand that the purpose of the SUD is to authorize the construction, operation, maintenance, and decommissioning of the Project within the SUD as described in the Application.

Sincerely,



Date: May 16, 2019

Torrance County Planning & Zoning
P.O. Box 48
205 9th Street
Estancia, NM 87016

Board members and Commission members,

This letter is given in connection with the application (Application) filed by Orion Wind Resources LLC (Applicant) with Torrance County for a Zoning Ordinance Amendment for a Special Use District (SUD) and Height Variance, in connection with Applicant's proposed Clines Corners Wind Farm Project (Project).

I acknowledge that I am aware of, understand, and approve the addition of my property described on Exhibit A attached to this letter (Real Property) to the proposed SUD, subject to my entering into an option agreement for a wind energy lease or similar agreement and/or a Right-of-Way or transmission easement over the Real Property with the Applicant or its wholly-owned subsidiary, Clines Corners Wind Farm LLC.

I understand that the purpose of the SUD is to authorize the construction, operation, maintenance, and decommissioning of the Project within the SUD as described in the Application.

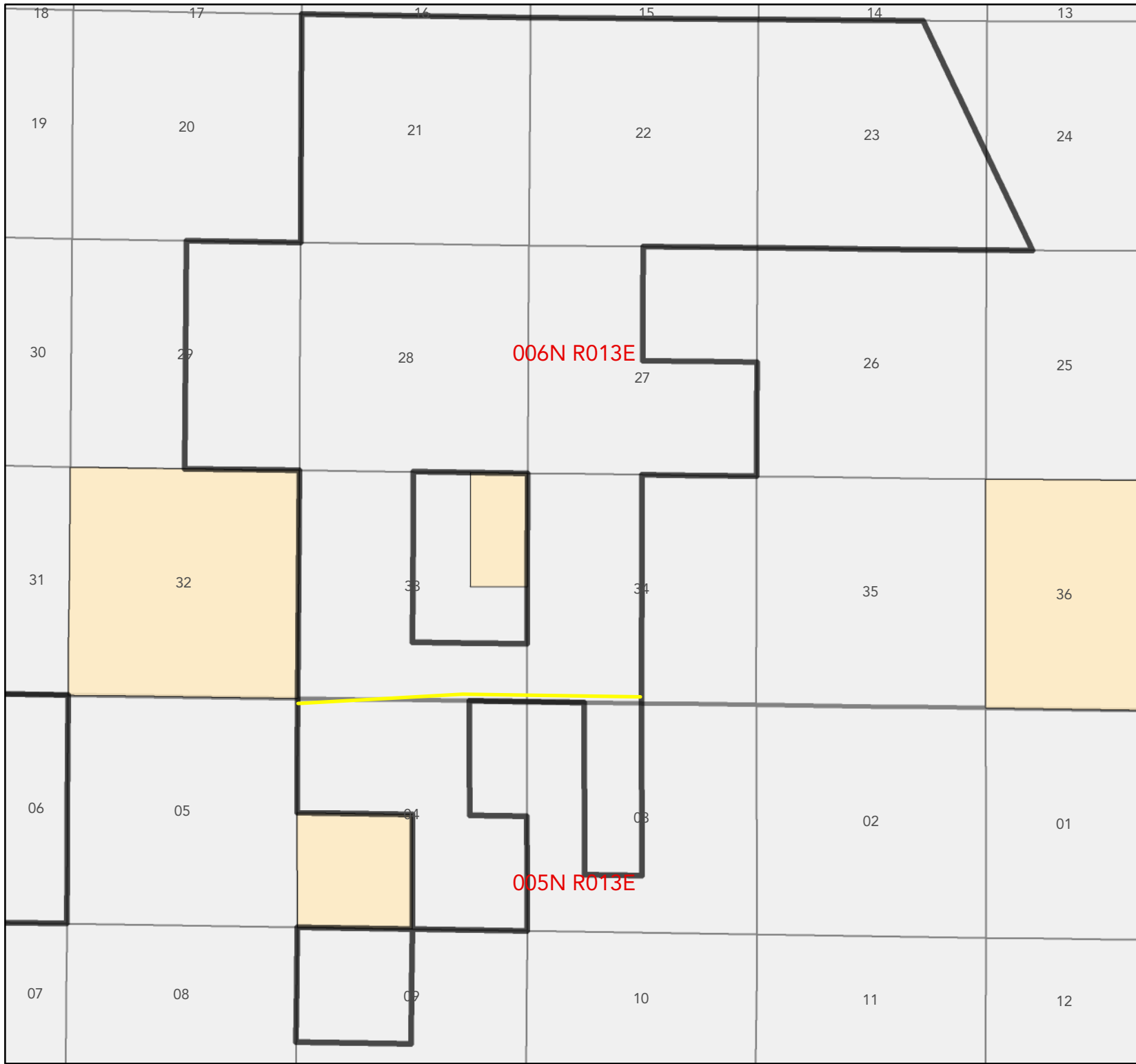
Sincerely,

Date: May ____, 2019

EXHIBIT A
LEGAL DESCRIPTION OF REAL PROPERTY OWNED BY [THOMAS W. BURSON] IN TORRANCE COUNTY
FOR INCLUSION IN THE PROPOSED SUD

Legal Description:

Township	Range	Section	Subdivision
006N	013E	34	SE4SW4, SW4SW4
006N	013E	33	SE4SE4, SW4SE4
005N	013E	4	NE4NW4, NW4NW4
005N	013E	6	N2N2






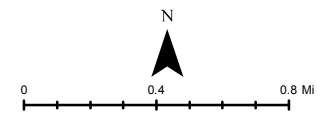
CLINES CORNER
WIND

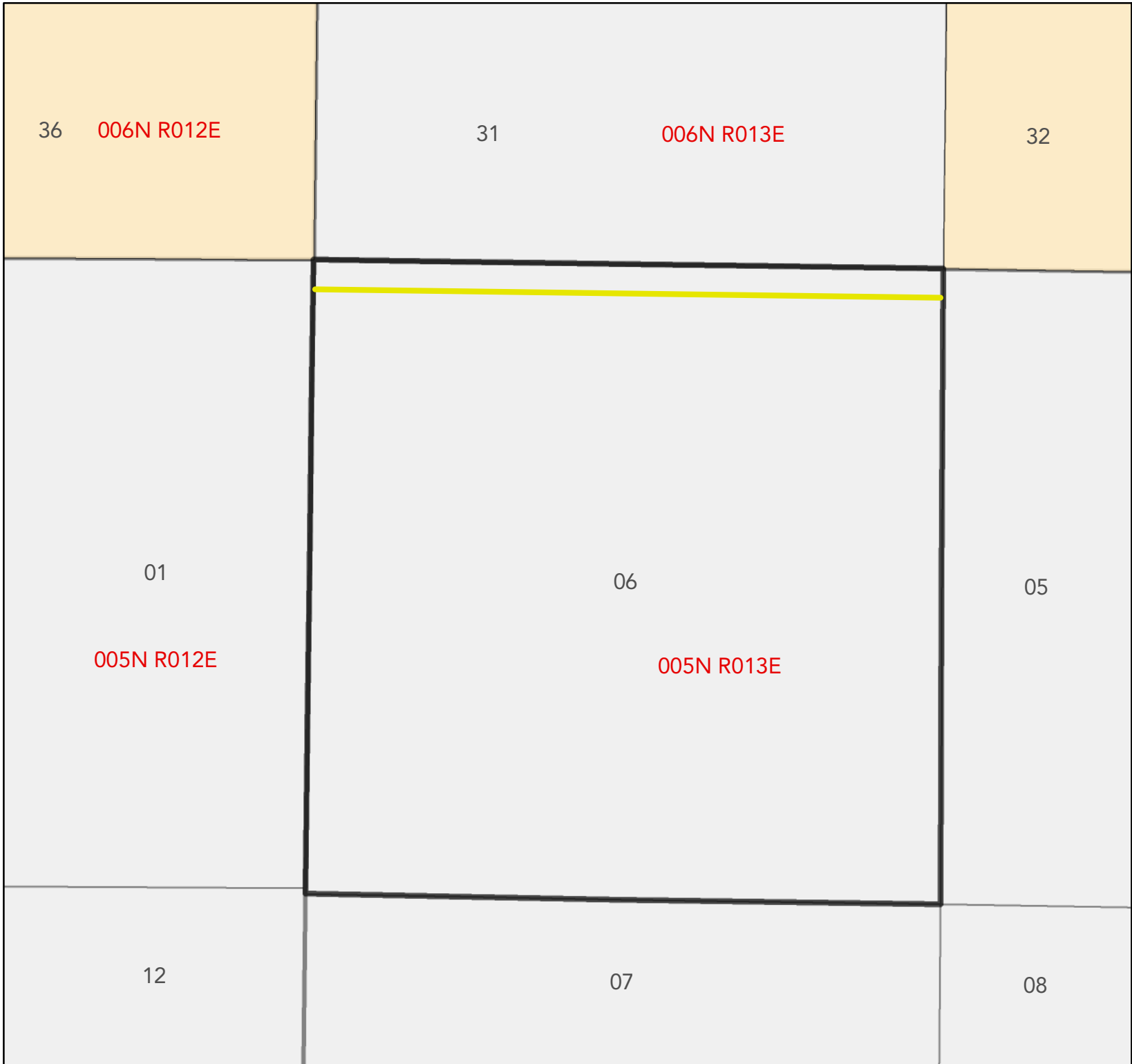
GEN-TIE LINE

TORRANCE COUNTY
NEW MEXICO

BURSON,
THOMAS W.

-  STATE LAND
-  BURSON, THOMAS W.
-  CLINES CORNER WIND GEN-TIE








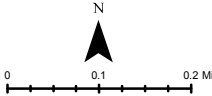
CLINES CORNER
WIND

GEN-TIE LINE

TORRANCE COUNTY
NEW MEXICO

BURSON,
THOMAS W.

-  STATE LAND
-  BURSON, THOMAS W.
-  CLINES CORNER WIND GEN-TIE






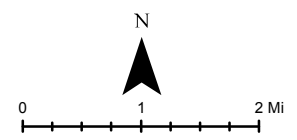


CLINES CORNER WIND

GEN-TIE
LANDOWNERS

TORRANCE COUNTY
NEW MEXICO

-  CLINES CORNER WIND GEN-TIE
-  GEN-TIE PARCELS
-  STATE LAND



Torrance County Planning & Zoning
P.O. Box 48
205 9th Street
Estancia, NM 87016

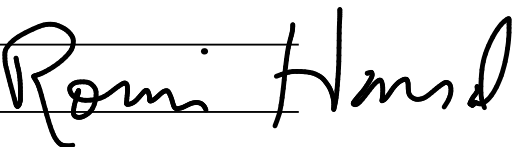
Board members and Commission members,

This letter is given in connection with the application (Application) filed by Orion Wind Resources LLC (Applicant) with Torrance County for a Zoning Ordinance Amendment for a Special Use District (SUD) and Height Variance, in connection with Applicant's proposed Clines Corners Wind Farm Project (Project).

I acknowledge that I am aware of, understand, and approve the addition of my property described on Exhibit A attached to this letter (Real Property) to the proposed SUD, subject to my entering into an option agreement for a wind energy lease or similar agreement and/or a Right-of-Way or transmission easement over the Real Property with the Applicant or its wholly-owned subsidiary, Clines Corners Wind Farm LLC.

I understand that the purpose of the SUD is to authorize the construction, operation, maintenance, and decommissioning of the Project within the SUD as described in the Application.

Sincerely,

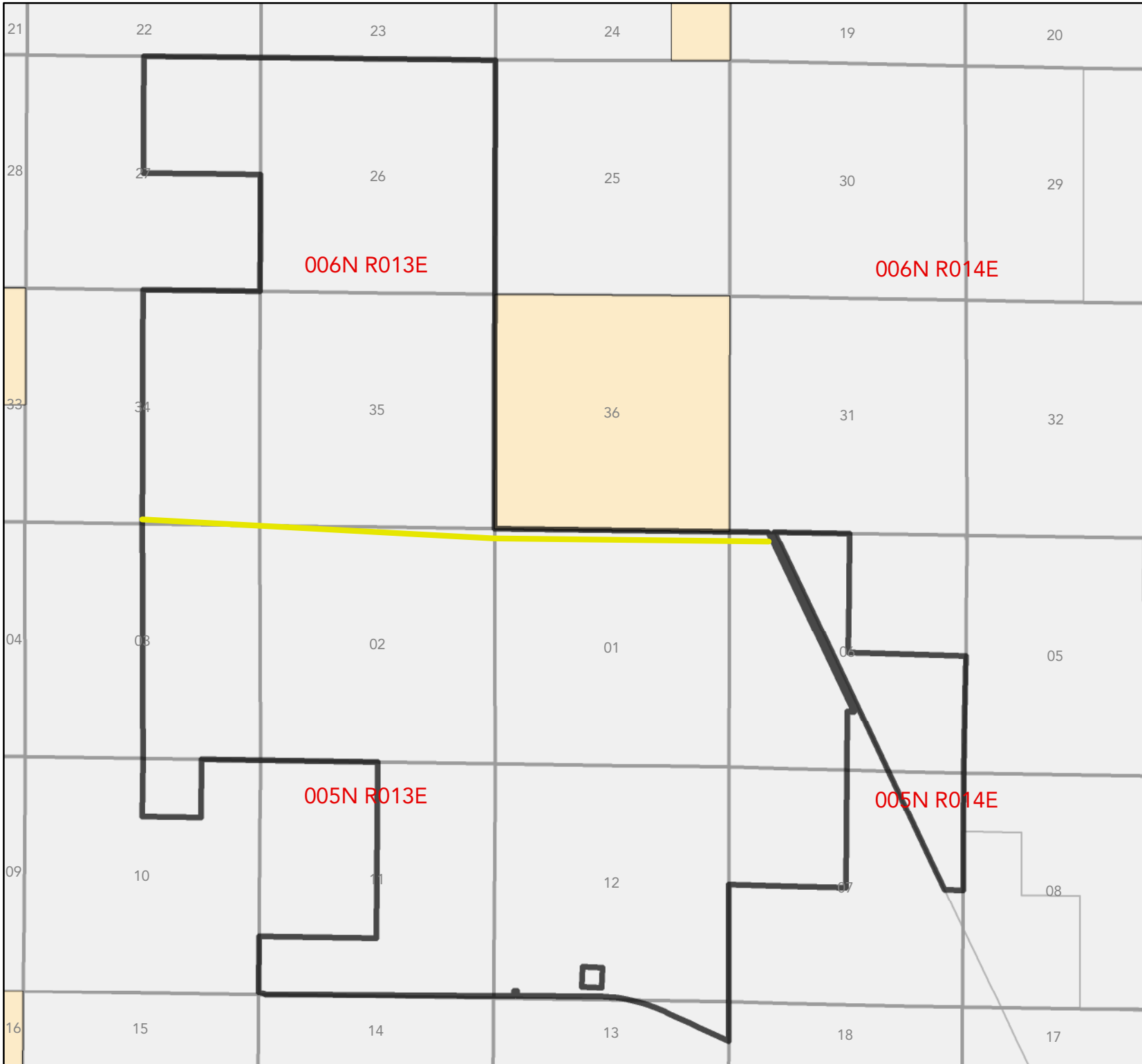
A handwritten signature in black ink, reading "Romi Harsd", is written over two horizontal lines. The signature is cursive and fluid.

Date: May __, 2019

EXHIBIT
A
LEGAL DESCRIPTION OF REAL PROPERTY OWNED BY [MALCOLM C & LORETTA FAY HARRAL TRUST]
IN TORRANCE COUNTY FOR INCLUSION IN THE PROPOSED
SUD

Legal Description:

Township	Range	Section	Subdivision
005N	R014E	6	NW4NW4
005N	R013E	1	N2N2
005N	R013E	2	N2N2
005N	R013E	3	N2NE4
006N	R013E	35	S2S2
006N	R013E	34	S2SE4






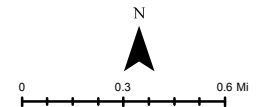
CLINES CORNER
WIND

GEN-TIE LINE

TORRANCE COUNTY
NEW MEXICO

HARRAL, MALCOLM C.
& LORETTA RAY TRUST

-  STATE LAND
-  HARRAL MALCOLM C. & LORETTA RAY TRUST
-  CLINES CORNER WIND GEN-TIE






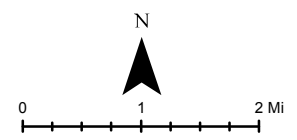


CLINES CORNER WIND

GEN-TIE LANDOWNERS

TORRANCE COUNTY
NEW MEXICO

-  CLINES CORNER WIND GEN-TIE
-  GEN-TIE PARCELS
-  STATE LAND



Torrance County Planning & Zoning
P.O. Box 48
205 9th Street
Estancia, NM 87016

Board members and Commission members,

This letter is given in connection with the application (Application) filed by Orion Wind Resources LLC (Applicant) with Torrance County for a Zoning Ordinance Amendment for a Special Use District (SUD) and Height Variance, in connection with Applicant's proposed Clines Corners Wind Farm Project (Project).

I acknowledge that I am aware of, understand, and approve the addition of my property described on Exhibit A attached to this letter (Real Property) to the proposed SUD, subject to my entering into an option agreement for a wind energy lease or similar agreement and/or a Right-of-Way or transmission easement over the Real Property with the Applicant or its wholly-owned subsidiary, Clines Corners Wind Farm LLC.

I understand that the purpose of the SUD is to authorize the construction, operation, maintenance, and decommissioning of the Project within the SUD as described in the Application.

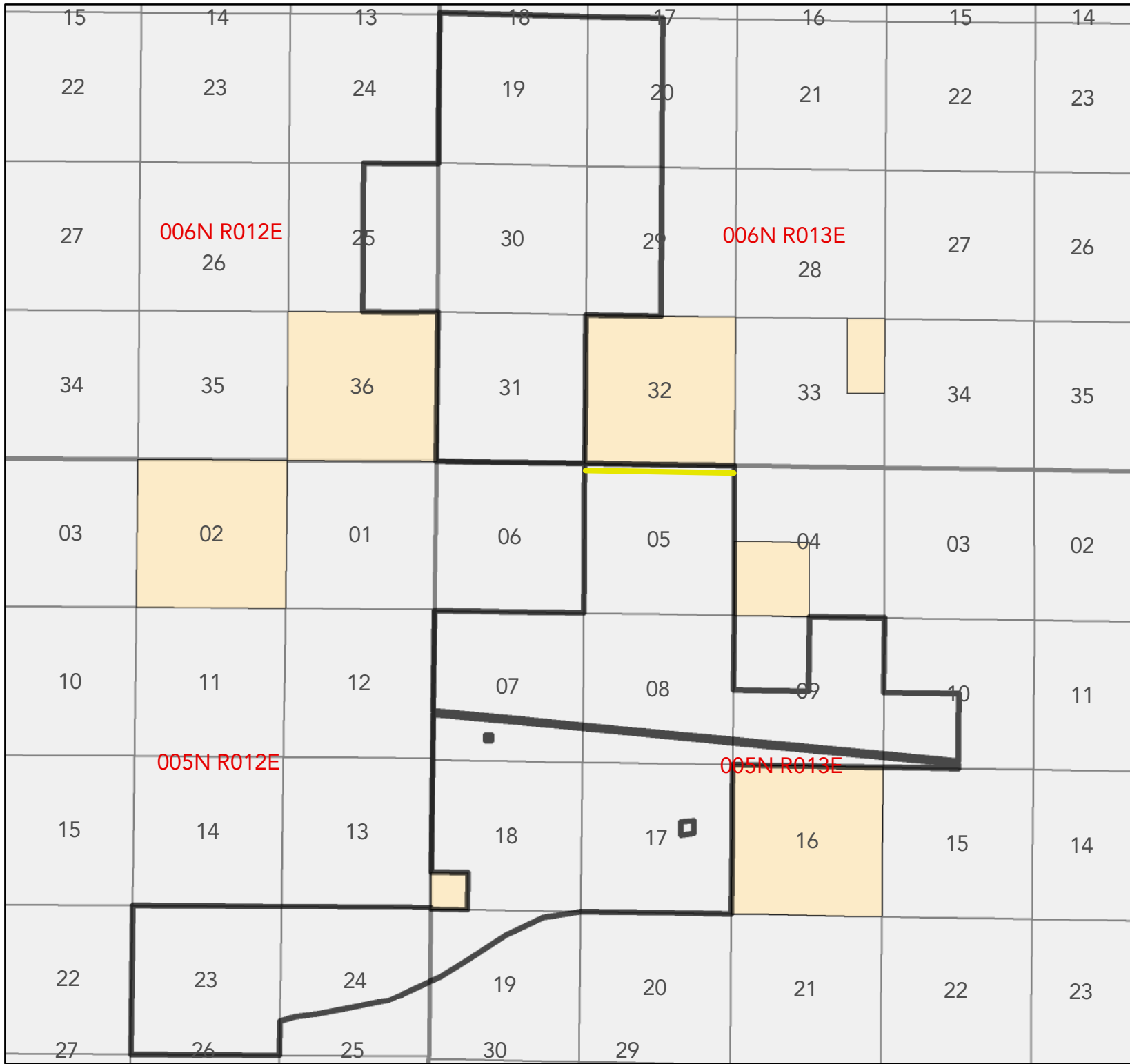
Sincerely,

Date: May ____, 2019

EXHIBIT A
LEGAL DESCRIPTION OF REAL PROPERTY OWNED BY [MCLAUGHLIN RANCH LLC] IN TORRANCE
COUNTY FOR INCLUSION IN THE PROPOSED SUD

Legal Description:

Township	Range	Section	Subdivision
005N	013E	5	N2N2



CLINES CORNER WIND


GEN-TIE LINE

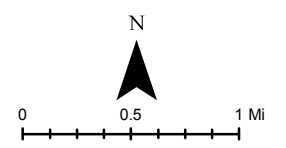
TORRANCE COUNTY
NEW MEXICO

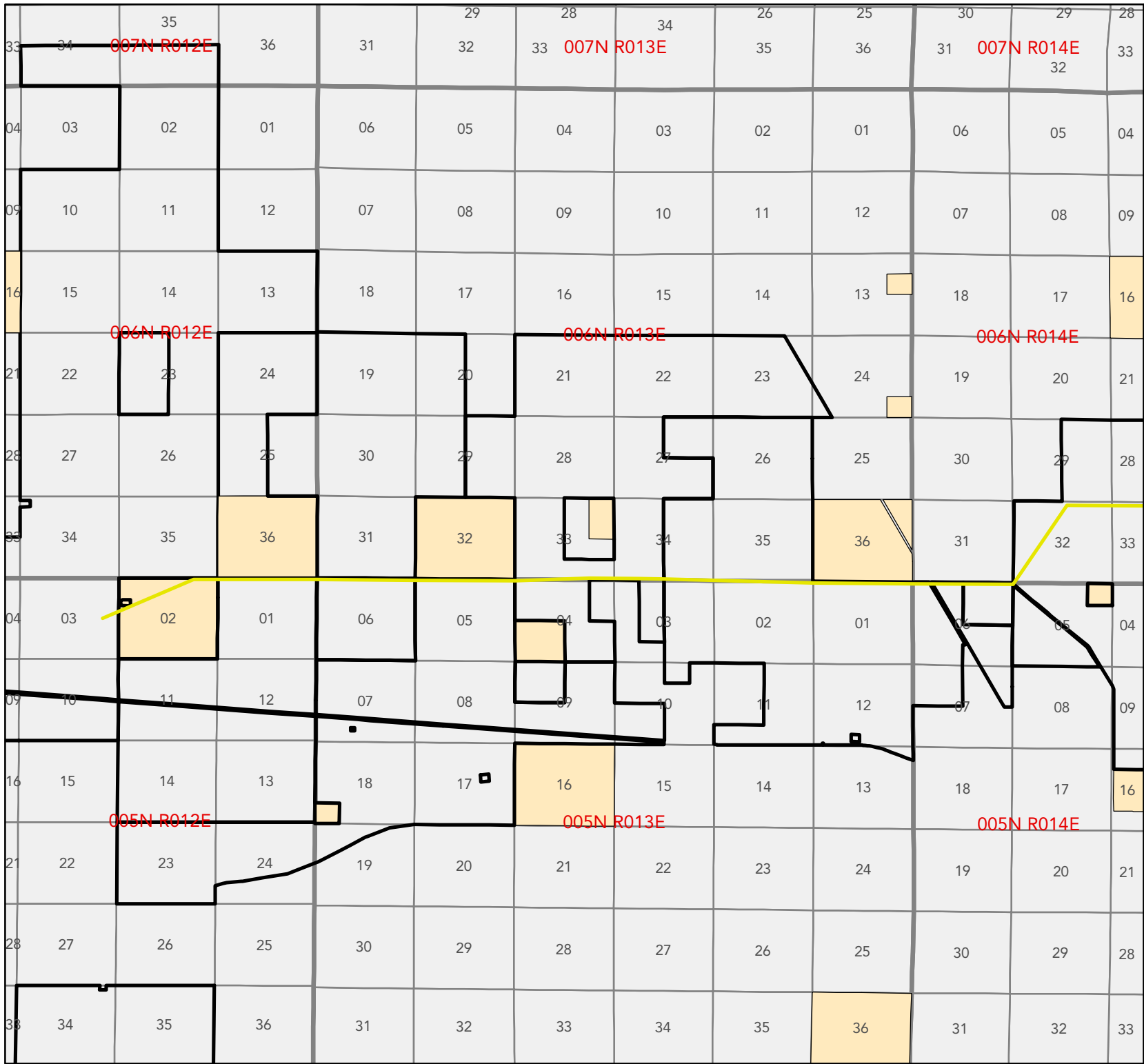
MCLAUGHLIN
RANCH, LLC.

 STATE LAND

 MCLAUGHLIN RANCH, LLC.

 CLINES CORNER WIND GEN-TIE






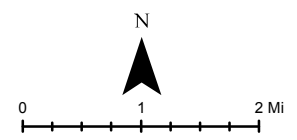


CLINES CORNER WIND

GEN-TIE LANDOWNERS

TORRANCE COUNTY
NEW MEXICO

-  CLINES CORNER WIND GEN-TIE
-  GEN-TIE PARCELS
-  STATE LAND



Torrance County Planning & Zoning
P.O. Box 48
205 9th Street
Estancia, NM 87016

Board members and Commission members,

This letter is given in connection with the application (Application) filed by Orion Wind Resources LLC (Applicant) with Torrance County for a Zoning Ordinance Amendment for a Special Use District (SUD) and Height Variance, in connection with Applicant's proposed Clines Corners Wind Farm Project (Project).

I acknowledge that I am aware of, understand, and approve the addition of my property described on Exhibit A attached to this letter (Real Property) to the proposed SUD, subject to my entering into an option agreement for a wind energy lease or similar agreement and/or a Right-of-Way or transmission easement over the Real Property with the Applicant or its wholly-owned subsidiary, Clines Corners Wind Farm LLC.

I understand that the purpose of the SUD is to authorize the construction, operation, maintenance, and decommissioning of the Project within the SUD as described in the Application.

Sincerely,

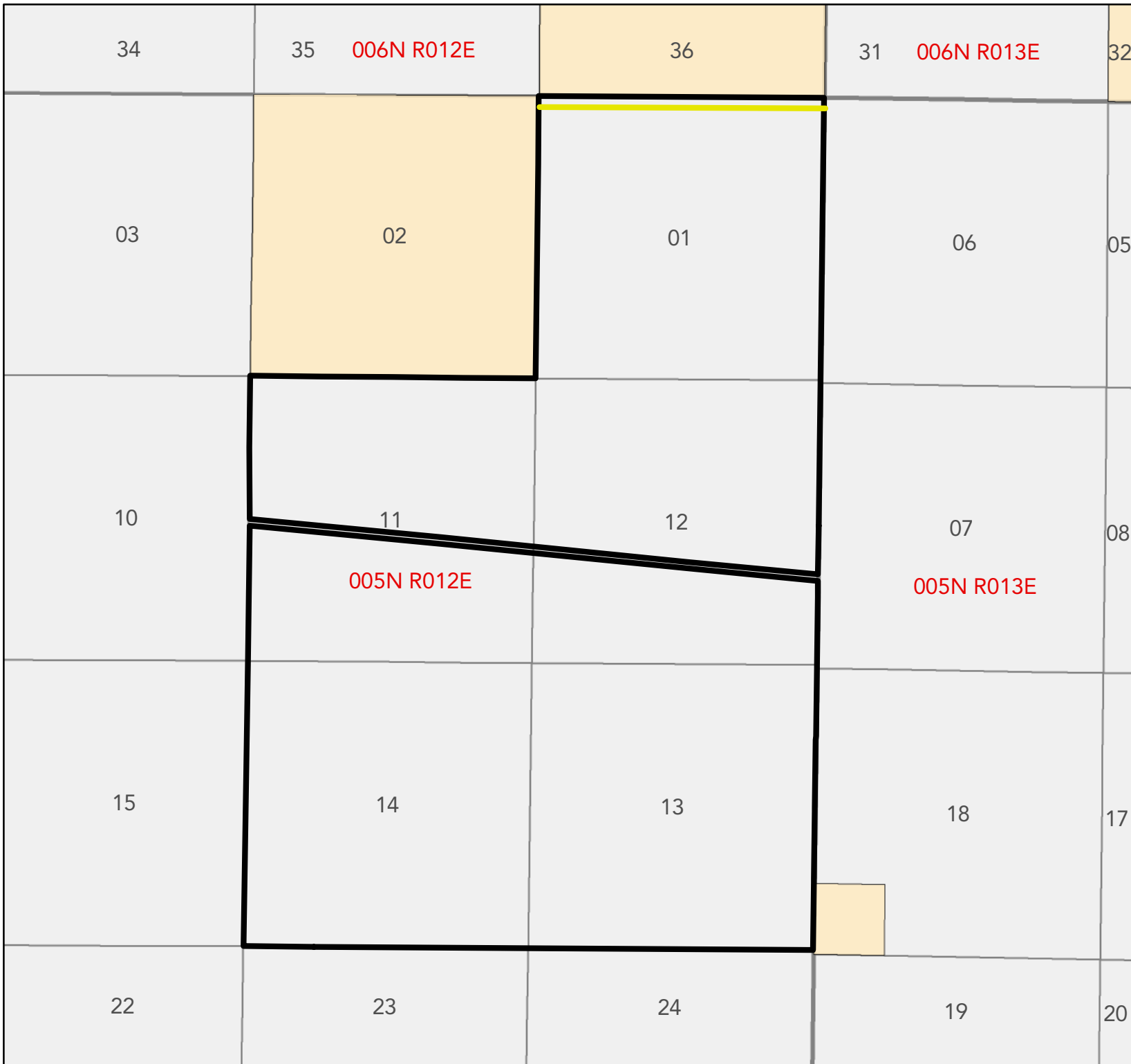
Date: May ____, 2019

EXHIBIT A

LEGAL DESCRIPTION OF REAL PROPERTY OWNED BY [DELMA E PRATHER REV. TRUST] IN TORRANCE
COUNTY FOR INCLUSION IN THE PROPOSED SUD

Legal Description:

Township	Range	Section	Subdivision
005N	012E	1	N2N2




CLINES CORNER
WIND


GEN-TIE LINE

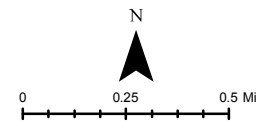
TORRANCE COUNTY
NEW MEXICO

PRATHER, DELMA E.
REV. TRUST

 STATE LAND

 PRATHER, DELMA E.
REV. TRUST

 CLINES CORNER
WIND GEN-TIE






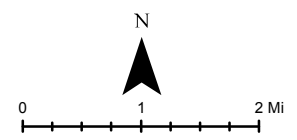


CLINES CORNER WIND

GEN-TIE
LANDOWNERS

TORRANCE COUNTY
NEW MEXICO

-  CLINES CORNER WIND GEN-TIE
-  GEN-TIE PARCELS
-  STATE LAND



Torrance County Planning & Zoning
P.O. Box 48
205 9th Street
Estancia, NM 87016


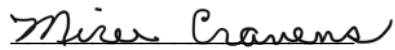
Board members and Commission members,

This letter is given in connection with the application (Application) filed by Orion Wind Resources LLC (Applicant) with Torrance County for a Zoning Ordinance Amendment for a Special Use District (SUD) and Height Variance, in connection with Applicant's proposed Clines Corners Wind Farm Project (Project).

I acknowledge that I am aware of, understand, and approve the addition of my property described on Exhibit A attached to this letter (Real Property) to the proposed SUD, subject to my entering into an option agreement for a wind energy lease or similar agreement and/or a Right-of-Way or transmission easement over the Real Property with the Applicant or its wholly-owned subsidiary, Clines Corners Wind Farm LLC.

I understand that the purpose of the SUD is to authorize the construction, operation, maintenance, and decommissioning of the Project within the SUD as described in the Application.

Sincerely,

Date: May 15, 2019

EXHIBIT A
LEGAL DESCRIPTION OF REAL PROPERTY OWNED BY [HOWLING WIND RANCH LLC] IN TORRANCE
COUNTY FOR INCLUSION IN THE PROPOSED SUD

Land Description:

GenTie line:

Township	Range	Section	Subdivision	Ac.
005N	R012E	3	SE4NE4	.96

SUD Extension Facility (Project Interconnection Facility & Western Spirit Switching Station):

Township	Range	Section	Subdivision	Ac.
005N	R012E	3	SE4NE4	4.7
005N	R012E	3	SW4NE4	1.3
005N	R012E	3	NE4SE4	9.5
005N	R012E	3	NW4SE4	1.6









CLINES CORNER WIND

GEN-TIE LINE

TORRANCE COUNTY
NEW MEXICO

HOWLING WIND
RANCH

-  STATE LAND
-  HOWLING WIND RANCH
-  PROJECT INTERCONNECTION FACILITY
-  WESTERN SPIRIT SWITCHING STATION (NON-PROJECT PERMISSIVE USE)
-  SUD EXTENSION FACILITY
-  CLINES CORNER WIND GEN-TIE

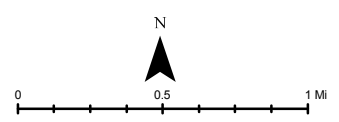











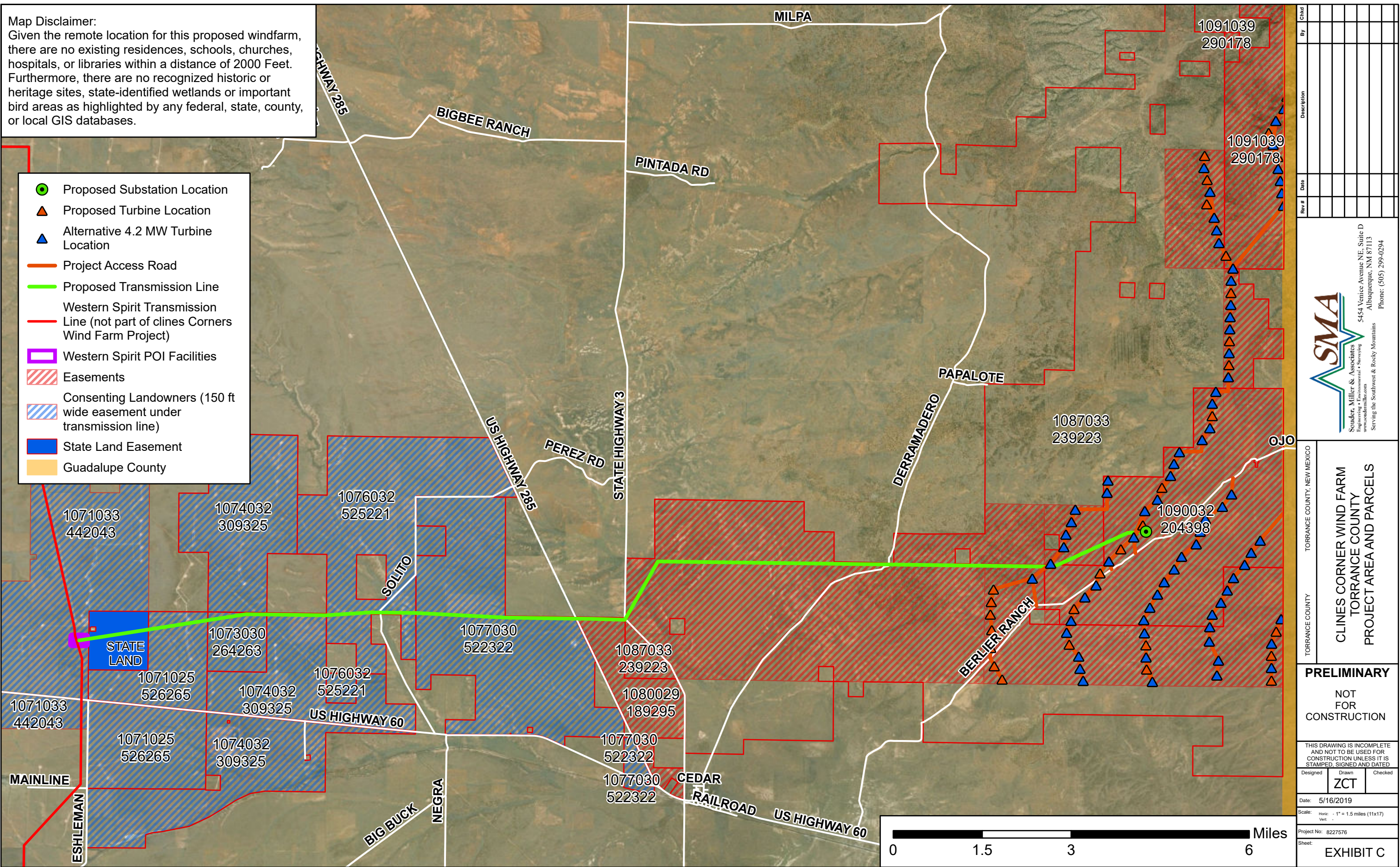


Exhibit C – Assessor’s Parcel Maps

Map Disclaimer:
 Given the remote location for this proposed windfarm, there are no existing residences, schools, churches, hospitals, or libraries within a distance of 2000 Feet. Furthermore, there are no recognized historic or heritage sites, state-identified wetlands or important bird areas as highlighted by any federal, state, county, or local GIS databases.

-  Proposed Substation Location
-  Proposed Turbine Location
-  Alternative 4.2 MW Turbine Location
-  Project Access Road
-  Proposed Transmission Line
-  Western Spirit Transmission Line (not part of clines Corners Wind Farm Project)
-  Western Spirit POI Facilities
-  Easements
-  Consenting Landowners (150 ft wide easement under transmission line)
-  State Land Easement
-  Guadalupe County



Rev #	Date	Description	By	Chkd

SMA
 Souder, Miller & Associates
 Environmental Planning
 www.soudermiller.com
 Serving the Southwest & Rocky Mountains
 5454 Venice Avenue NE, Suite D
 Albuquerque, NM 87113
 Phone: (505) 299-0294

TORRANCE COUNTY, NEW MEXICO
CLINES CORNER WIND FARM
 TORRANCE COUNTY
 PROJECT AREA AND PARCELS

PRELIMINARY
 NOT FOR CONSTRUCTION

THIS DRAWING IS INCOMPLETE AND NOT TO BE USED FOR CONSTRUCTION UNLESS IT IS STAMPED, SIGNED AND DATED

Designed	Drawn	Checked
	ZCT	

Date: 5/16/2019
 Scale: Horiz: 1" = 1.5 miles (11x17)
 Vert: -
 Project No: 8227576
 Sheet: **EXHIBIT C**

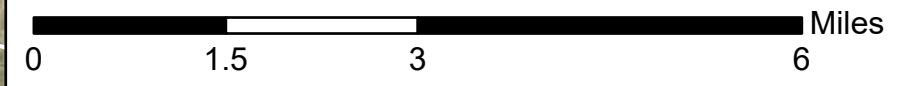
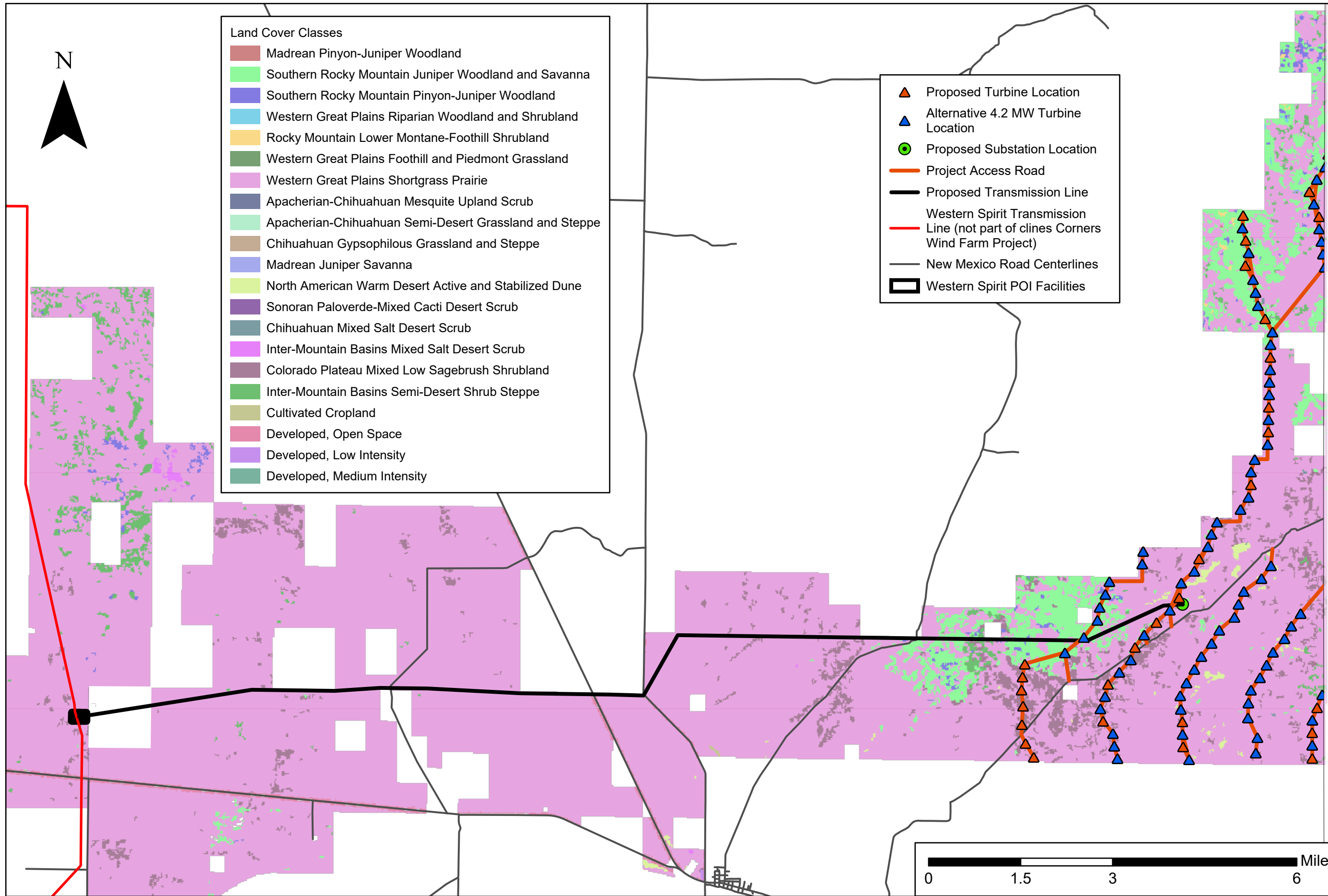


Exhibit E – Land Cover Map



Land Cover Classes

Madrean Pinyon-Juniper Woodland
Southern Rocky Mountain Juniper Woodland and Savanna
Southern Rocky Mountain Pinyon-Juniper Woodland
Western Great Plains Riparian Woodland and Shrubland
Rocky Mountain Lower Montane-Foothill Shrubland
Western Great Plains Foothill and Piedmont Grassland
Western Great Plains Shortgrass Prairie
Apacherian-Chihuahuan Mesquite Upland Scrub
Apacherian-Chihuahuan Semi-Desert Grassland and Steppe
Chihuahuan Gypsophilous Grassland and Steppe
Madrean Juniper Savanna
North American Warm Desert Active and Stabilized Dune
Sonoran Paloverde-Mixed Cacti Desert Scrub
Chihuahuan Mixed Salt Desert Scrub
Inter-Mountain Basins Mixed Salt Desert Scrub
Colorado Plateau Mixed Low Sagebrush Shrubland
Inter-Mountain Basins Semi-Desert Shrub Steppe
Cultivated Cropland
Developed, Open Space
Developed, Low Intensity
Developed, Medium Intensity

▲ Proposed Turbine Location
▲ Alternative 4.2 MW Turbine Location
● Proposed Substation Location
— Project Access Road
— Proposed Transmission Line
— Western Spirit Transmission Line (not part of Clines Corners Wind Farm Project)
— New Mexico Road Centerlines
◻ Western Spirit POI Facilities

Rev #	Date	Description	By	Chkd

SMA
 Souder, Miller & Associates
 Environmental Planning
 www.soudermiller.com
 Serving the Southwest & Rocky Mountains
 5454 Venice Avenue NE, Suite D
 Albuquerque, NM 87113
 Phone: (505) 299-0294

TORRANCE COUNTY
 TORRANCE COUNTY, NEW MEXICO
**CLINES CORNERS WIND FARM
 TORRANCE COUNTY
 LAND COVER MAP**

PRELIMINARY
 NOT FOR CONSTRUCTION

THIS DRAWING IS INCOMPLETE AND NOT TO BE USED FOR CONSTRUCTION UNLESS IT IS STAMPED, SIGNED AND DATED

Designed	Drawn	Checked
	ZCT	

Date: 5/16/2019
 Scale: Horiz: 1" = 1.5 Miles (11x17)
 Vert: . . .
 Project No: 8227576
 Sheet: **EXHIBIT E**

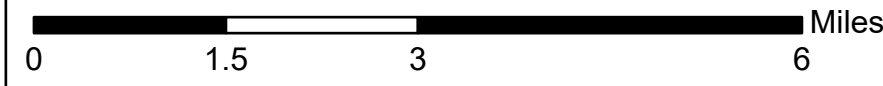



Exhibit H – Wind Turbine Brochures



SIEMENS



Siemens Wind Turbine SWT-2.3-108

The new productivity benchmark



Exhibit H - 4.2 MW Wind Turbine Brochure

The industry standard, redefined

The Siemens 2.3-MW family has firmly established itself as the tried and tested workhorse for reliability, with a range of rotor diameters for different wind conditions. Our new SWT-2.3-108 adds a new, larger rotor to the family, setting a new standard for productivity

Greater output from lower wind speeds

Since wind turbine technology was in its infancy, Siemens has been a major driver of innovation. And with its enhanced reliability and productivity in low to moderate wind speeds, the new SWT-2.3-108 is yet another example of the commitment to customers' success.

Longer blades. More energy

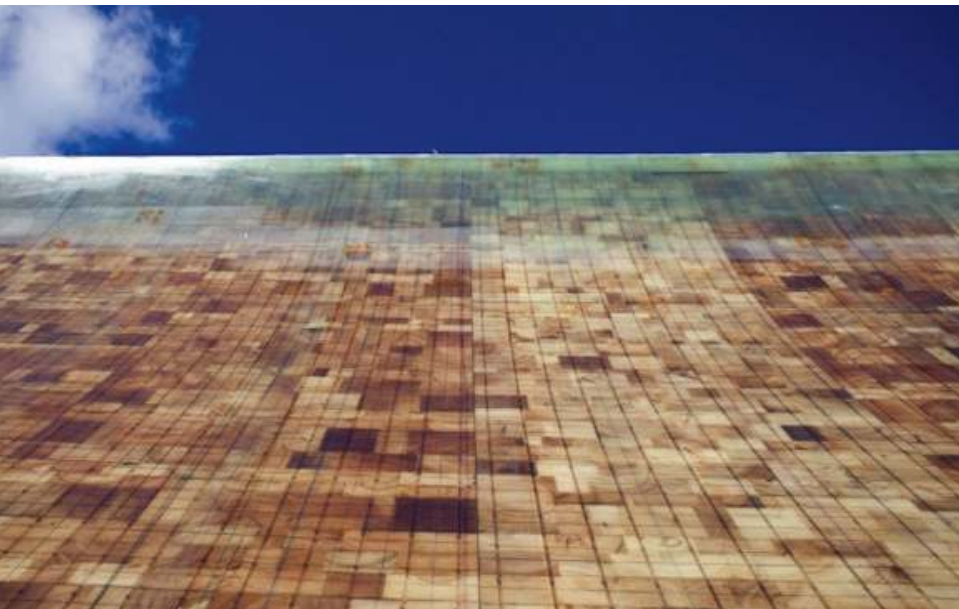
In recent years, Siemens created a product line specifically to extract more energy from moderate wind conditions. The SWT-2.3-108's innovative rotor blade design now extends productivity even further. The new 108-meter rotor with its unique blade properties is perfectly optimized for sites with low wind speeds.

Your trusted partner

With its combination of robust and reliable wind turbines, highly efficient solutions for power transmission and distribution and a deep understanding of the entire energy market, Siemens continues to be a leading supplier. Long-lasting customer relationships based on an excellent delivery record provide for a sound, sustainable and profitable investment.

With over 140 years of experience in the energy sector, a strong focus on renewables and a global network of highly skilled and trained employees, Siemens has proven itself to be a trustworthy and reliable business partner. And it will continue to be in the future.

For superior availability, reliability and a lower levelized cost of energy, look no further than the new Siemens SWT-2.3-108 turbine.



Advanced blade technology allows for longer lifecycles and contributes to lower levelized cost of energy

Superior performance provides higher yields

Optimum energy output at moderate wind conditions

The SWT-2.3-108 wind turbine is designed to increase the energy returns from sites with moderate wind conditions. The advanced blade design, with a rotor diameter of 108 meters and pitch regulation, optimize power output and increase control over energy output.

High availability

Currently, the Siemens fleet of 2.3-MW wind turbines sets the industry standard for availability. The SWT-2.3-108 will build on the reputation for reliability that the market has come to expect from a Siemens wind turbine.

High yield with minimal maintenance

Siemens optimizes the return on investment in its wind turbines through intelligent maintenance that allows high yield with low operational costs.

The rugged structural design, combined with an automatic lubrication system, internal climate control and a generator system without slip rings contributes to exceptional reliability. The innovative design of the SWT-2.3-108 allows for longer service intervals.

Superior grid compliance

The Siemens NetConverter® system is designed for maximum flexibility in the wind turbine's response to voltage and frequency variations, fault ride-through capability and output adjustment. The advanced wind farm control system provides state-of-the-art fleet management.

Proven track record

Siemens has a proven track record of providing reliable wind turbines that last. The company's first commercial turbine was installed in 1980 and still operates today. The world's first offshore wind farm in Vindeby, Denmark, was installed in 1991 and is also still fully operational. In California, Siemens installed over 1,100 units between 1983 and 1990, with 97% still in operation today.

Siemens takes its commitment to reliability seriously and prides itself on the long lifespan that its wind turbines have demonstrated.

Siemens' Turbine Condition Monitoring® system instantly detects deviations from normal operating conditions



No compromise on reliability

SWT-2.3-108: The newest member of an extremely reliable product family

Siemens wind turbines are designed to last. The robust design of the SWT-2.3-108 allows for trouble-free output throughout the complete lifecycle of the machine.

Instead of glueing the blades together from a number of spars and shells, they are cast in a single process. This not only enables both low weight and enormous strength, there are no glue joins which could potentially expose the blades to cracking and lightning damage.

Climate control within the nacelle protects vital equipment from the outside environment. The wind turbine also offers controlled-wear strategies for critical components, which results in a further reduction of maintenance costs.

Safety first

Safety is at the heart of all Siemens' operations. From production to installation, operation and service, Siemens strives to set the standard in safety.

The fail safe capabilities within a wind turbine, combined with Siemens' superior lightning protection system, are designed to enhance security for the turbine.

Advanced operations support

Given the logistical challenges associated with servicing wind farms, Siemens has equipped its turbines with a Turbine Condition Monitoring® system that reduces the need for on-site servicing.

Siemens' Turbine Condition Monitoring® system compares the vibration levels of the main nacelle components with a set of established reference spectra and instantly detects deviations from normal operating conditions. This allows Siemens to proactively plan the service and maintenance of the wind turbines, as any unusual event can be categorized and prioritized based on severity.

Using the knowledge gained from monitoring thousands of wind turbines over the years, Siemens' experts are exceptionally skilled at analyzing and predicting operational anomalies. This allows Siemens to proactively plan service and maintenance activity as each event can be categorized and prioritized based on severity. Siemens can then determine the most appropriate course of action to keep the wind turbine running at its best.

Technical Specifications

SWT-2.3-108

Rotor

Type	3-bladed, horizontal axis
Position	Upwind
Diameter	108 m
Swept area	9144 m ²
Speed range	6-16 rpm
Power regulation	Pitch regulation with variable speed
Rotor tilt	6 degrees

Blade

Type	Self-supporting
Blade length	53 m
Root chord	3.4 m
Aerodynamic profile	NACA63.xxx, FFAxxx, SWPxxx
Material	GRE
Surface gloss	Semi-gloss, <30 / ISO2813
Surface colour	Light grey, RAL 7035

Aerodynamic brake

Type	Full-span pitching
Activation	Active, hydraulic

Load-Supporting Parts

Hub	Nodular cast iron
Main bearing	Spherical roller bearing
Main shaft	Alloy steel
Nacelle bed plate	Steel

Transmission system

Coupling hub - shaft	Flange
Coupling shaft - gearbox	Shrink disc
Gearbox type	3-stage planetary/helical
Gearbox ratio	1:91
Gearbox lubrication	Splash/forced lubrication
Oil volume	Approx. 400 l
Gearbox oil filtering	Inline and offline
Gearbox cooling	Separate oil cooler
Gearbox designation	PEAB 4456 (Winergy) or EH851 (Hansen)
Coupling gear - generator	Double flexible coupling

Mechanical brake

Type	Hydraulic disc brake
Position	High speed shaft
Number of callipers	2

Canopy

Type	Totally enclosed
Material	Steel
Surface gloss	Semi-gloss, 25-45, ISO2813
Colour	Light grey, RAL 7035

Generator

Type	Asynchronous
Nominal power	2,300 kW
Protection	IP 54
Cooling	Integrated heat exchanger
Insulation class	F

Grid Terminals (LV)

Nominal power	2,300 kW
Voltage	690 V
Frequency	50 Hz or 60 Hz

Yaw system

Type	Active
Yaw bearing	Externally geared slew ring
Yaw brake	Passive friction brake
Yaw drive	Eight electric gear motors with frequency converter

Controller

Type	Microprocessor
SCADA system	WPS via modem
Controller designation	KK WTC 3.0
Controller manufacturer	KK Electronic A/S

Tower

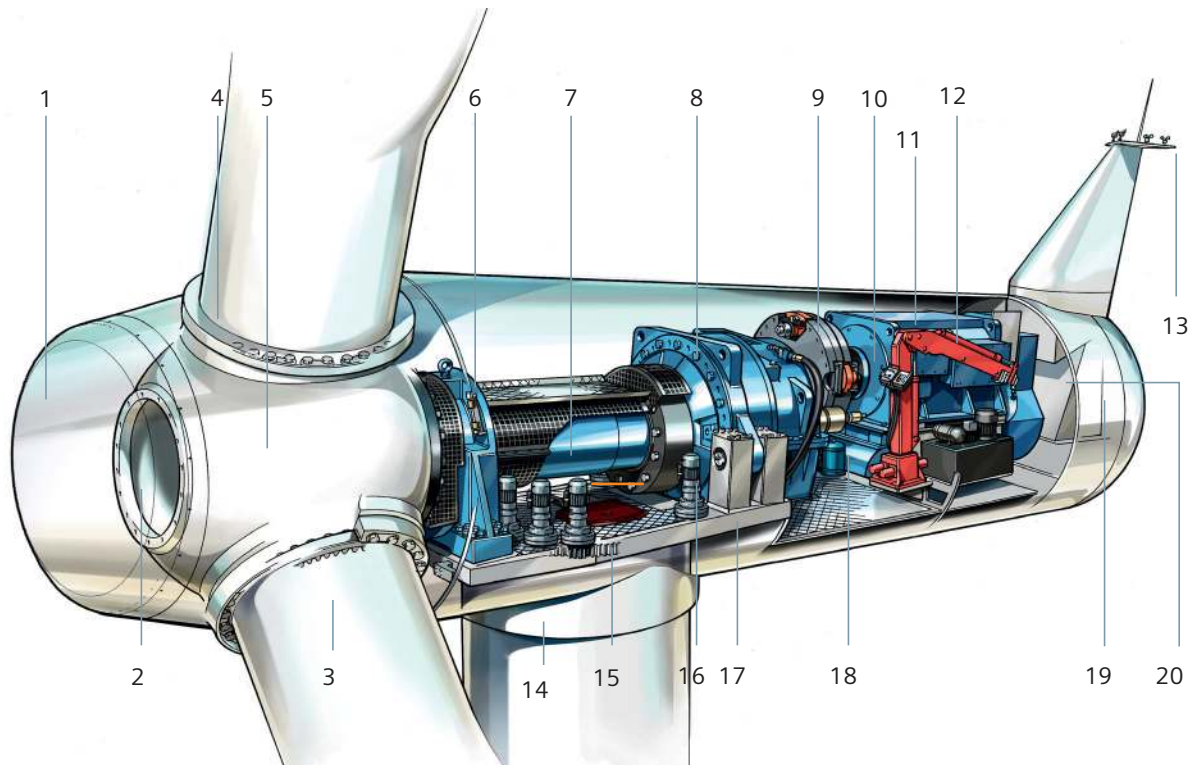
Type	Cylindrical and/or tapered tubular
Hub height	80 m or site-specific
Corrosion protection	Painted
Surface gloss	Semi-gloss, 25-45, ISO2813
Colour	Light grey, RAL 7035

Operational data

Cut-in wind speed	3-4 m/s
Rated power at	11-12 m/s
Cut-out wind speed	25 m/s
Maximum 3 s gust	59.5 m/s (IEC version)

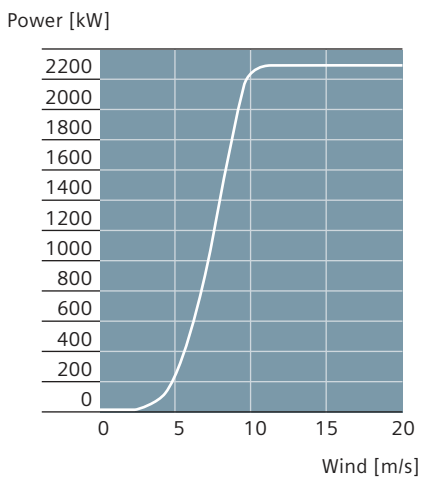
Weights (approximately)

Rotor	60,000 kg
Nacelle	82,000 kg



Sales power curve

The calculated power curve data are valid for standard conditions of 15 degrees Celsius air temperature, 1013 hPa air pressure and 1.225 kg/m³ air density, clean rotor blades and horizontal, undisturbed air flow. The calculated curve data are preliminary.



Nacelle arrangement

- | | |
|--------------------|----------------------------|
| 1. Spinner | 11. Generator |
| 2. Spinner bracket | 12. Service crane |
| 3. Blade | 13. Meteorological sensors |
| 4. Pitch bearing | 14. Tower |
| 5. Rotor hub | 15. Yaw ring |
| 6. Main bearing | 16. Yaw gear |
| 7. Main shaft | 17. Nacelle bedplate |
| 8. Gearbox | 18. Oil filter |
| 9. Brake disc | 19. Canopy |
| 10. Coupling | 20. Generator fan |

Published by and copyright © 2011:
Siemens AG
Energy Sector
Freyeslebenstrasse 1
91058 Erlangen, Germany

Siemens Wind Power A/S
Lindenplatz 2
20099 Hamburg, Germany
www.siemens.com/wind

For more information, please contact
our Customer Support Center.
Phone: +49 180 524 70 00
Fax: +49 180 524 24 71
(Charges depending on provider)
E-mail: support.energy@siemens.com

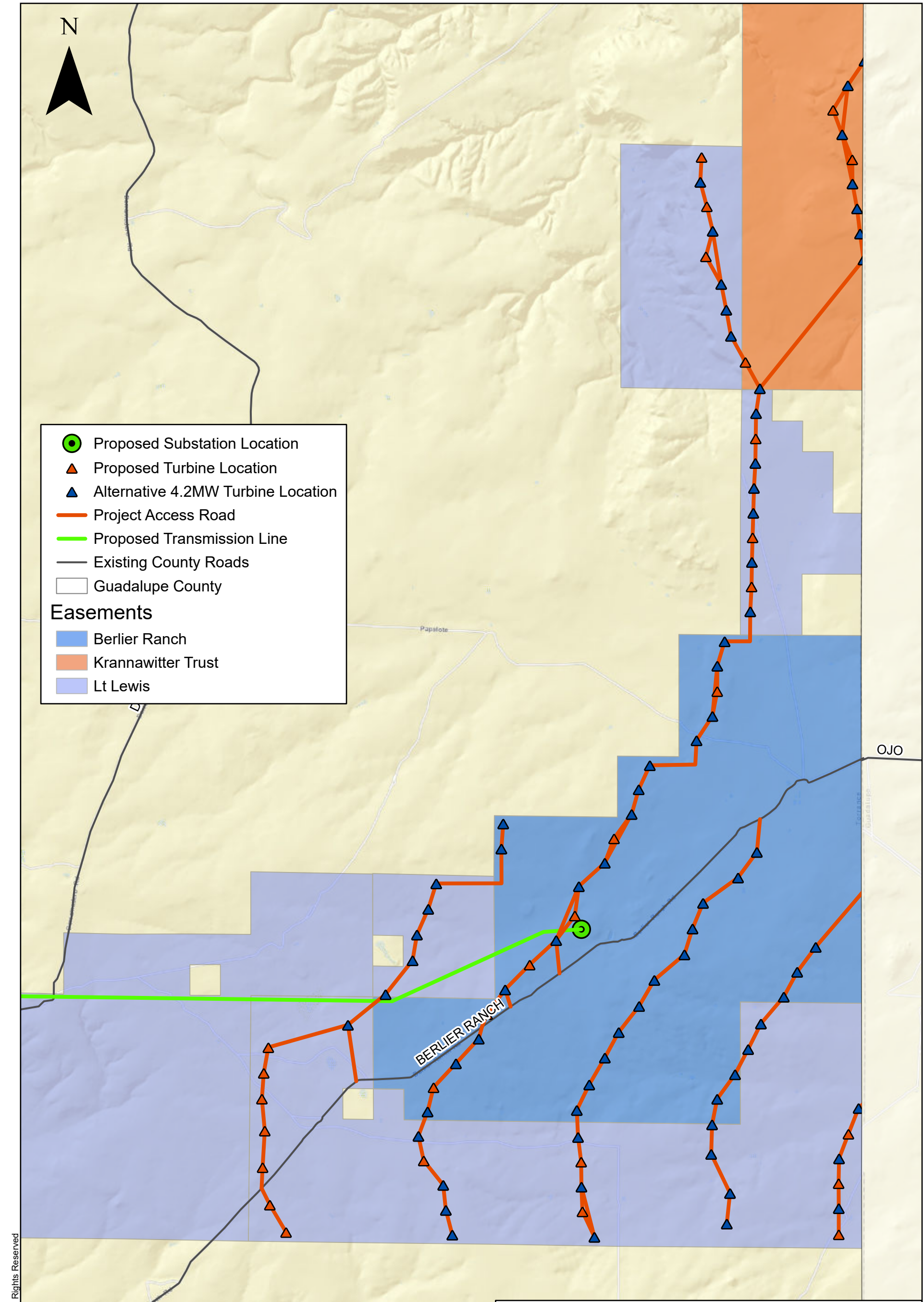
Wind Power Division
E50001-W310-A184-X-4A00

Printed in Germany
Dispo 34804 c4bs No. 7491
MCS 12.11.1
Printed on elementary chlorine-free
bleached paper.

All rights reserved.
Trademarks mentioned in this document
are the property of Siemens AG, its affiliates,
or their respective owners.

Subject to change without prior notice.
The information in this document contains
general descriptions of the technical options
available, which may not apply in all cases.
The required technical options should therefore
be specified in the contract.

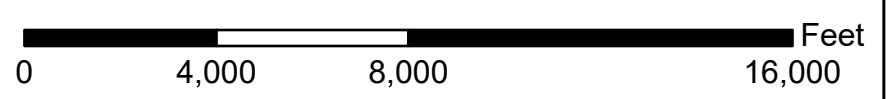
Exhibit I – Access Roads



● Proposed Substation Location
▲ Proposed Turbine Location
▲ Alternative 4.2MW Turbine Location
— Project Access Road
— Proposed Transmission Line
— Existing County Roads
 Guadalupe County

Easements

Berlier Ranch
 Krannawitter Trust
 Lt Lewis



© Souder, Miller & Associates, 2019. All Rights Reserved

Designed	Drawn	Checked
	ZCT	
Date: 5/16/2019		
Scale: Horiz. - 1" = 4,000' (11x17)		
Project No: 8227576		
Sheet: EXHIBIT I		

PRELIMINARY

NOT FOR CONSTRUCTION

THIS DRAWING IS INCOMPLETE AND NOT TO BE USED FOR CONSTRUCTION UNLESS IT IS STAMPED, SIGNED AND DATED

TORRANCE COUNTY TORRANCE COUNTY, NEW MEXICO

**CLINES CORNERS WIND FARM
TORRANCE COUNTY
PROJECT ACCESS ROADS**

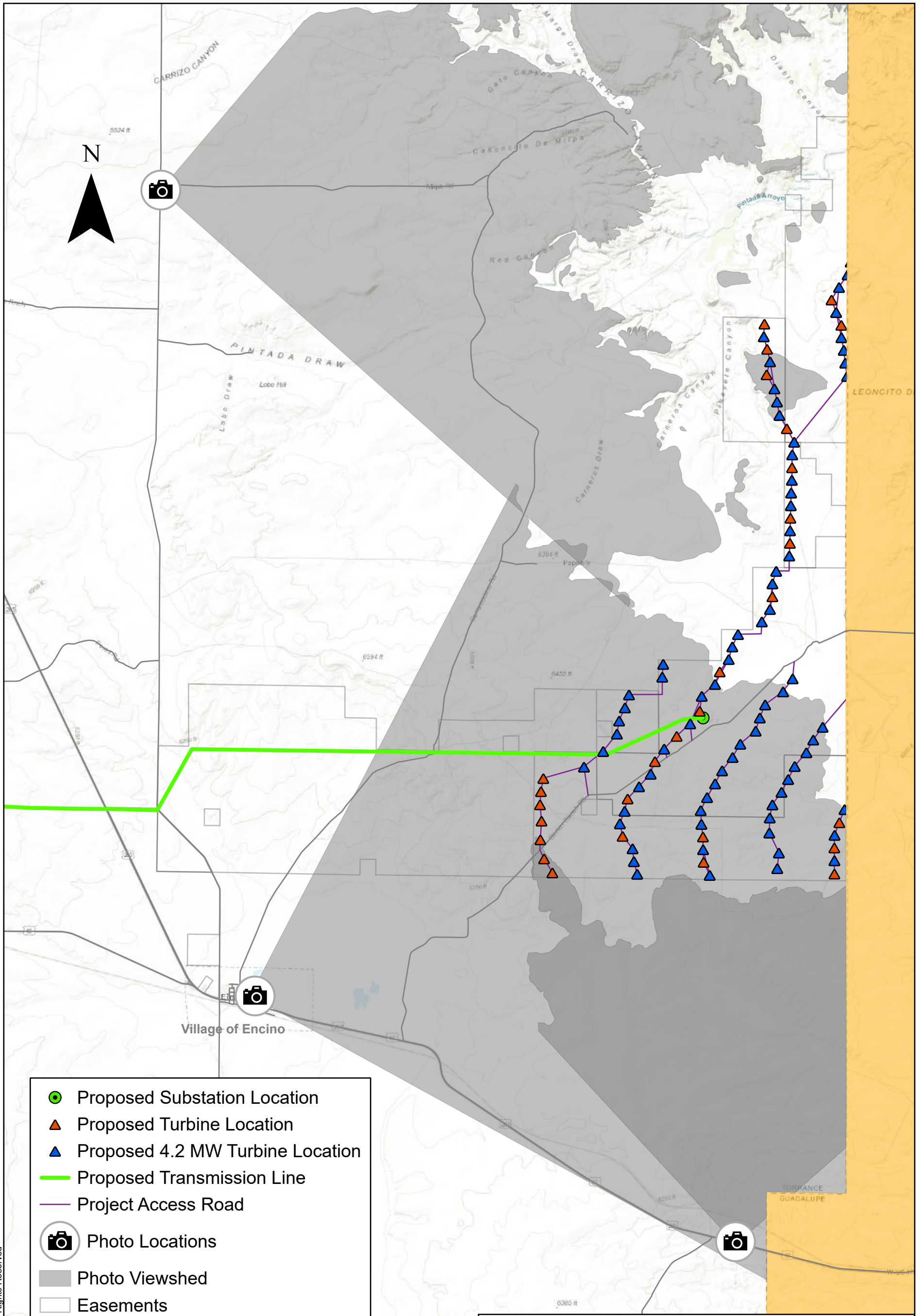


SMA
 Souder, Miller & Associates
 Engineering • Environmental • Surveying
 www.soudermiller.com
 2904 Rodeo Park Dr E #100,
 Santa Fe, NM 87505
 Phone: (505) 473-9211

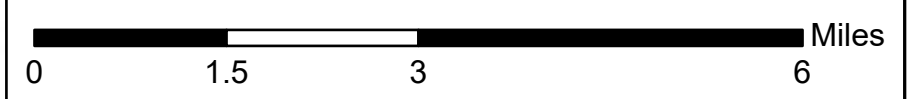
Rev #	Date	Description	By	Chkd

Sources: ESRI, Souder, Miller & Associates

Exhibit L – Project Visibility Map



- Proposed Substation Location
- Proposed Turbine Location
- Proposed 4.2 MW Turbine Location
- Proposed Transmission Line
- Project Access Road
- Photo Locations
- Photo Viewshed
- Easements
- Guadalupe County



© Souder, Miller & Associates, 2019. All Rights Reserved

Designed	Drawn	Checked
	ZCT	
Date: 5/16/2019		
Scale: Horiz. - 1" = 1.5 Miles (11x17)		
Project No: 8227576		
Sheet: EXHIBIT L		

PRELIMINARY

NOT FOR CONSTRUCTION

THIS DRAWING IS INCOMPLETE AND NOT TO BE USED FOR CONSTRUCTION UNLESS IT IS STAMPED, SIGNED AND DATED

TORRANCE COUNTY TORRANCE COUNTY, NEW MEXICO

**CLINES CORNERS WIND FARM
TORRANCE COUNTY
PROJECT VISIBILITY**



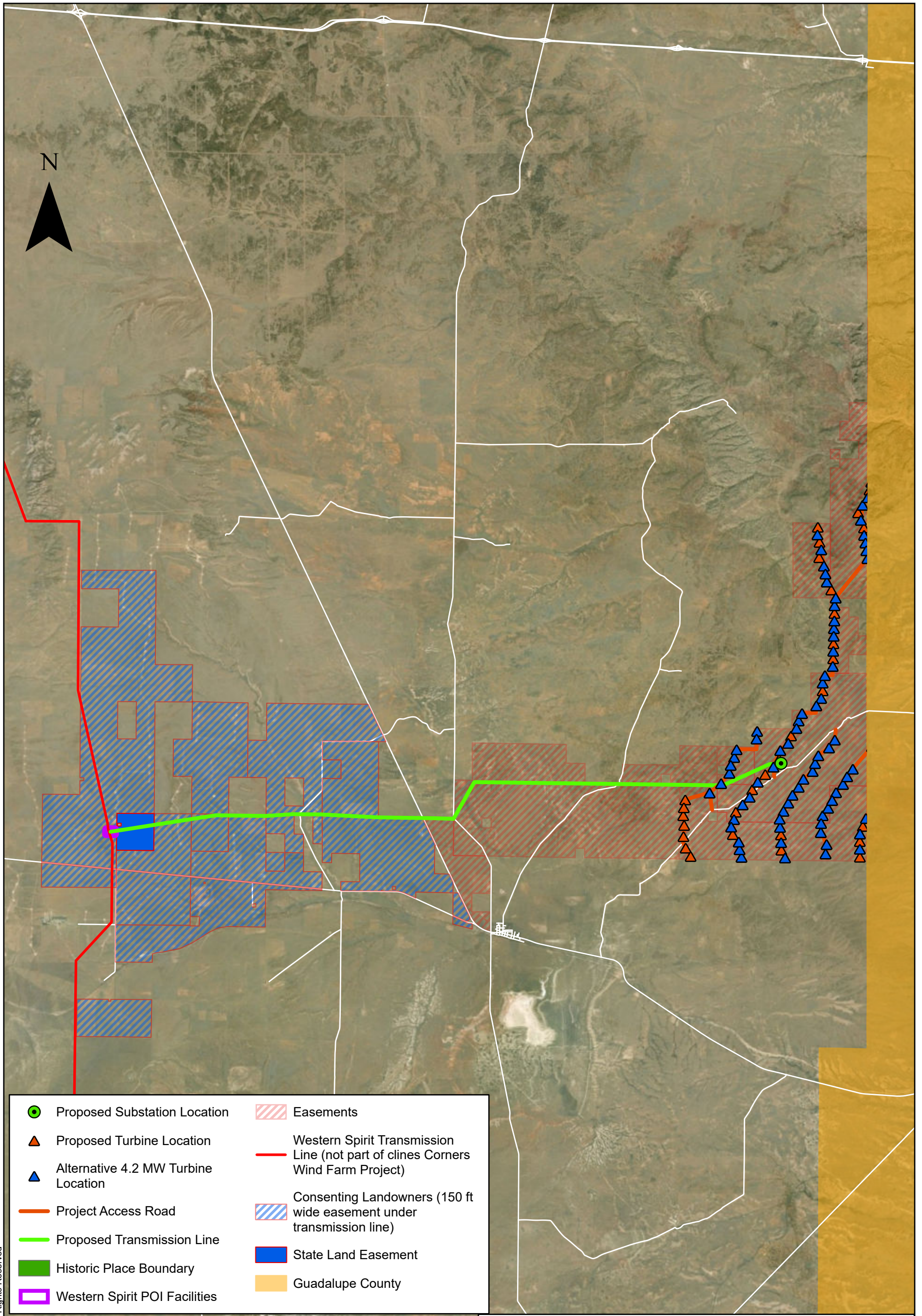
Souder, Miller & Associates
Engineering • Environmental • Surveying
www.soudermiller.com

2904 Rodeo Park Dr E #100,
Santa Fe, NM 87505
Phone: (505) 473-9211

Rev #	Date	Description	By	Chkd

Sources: ESRI, Torrance County, Souder, Miller & Associates

Exhibit P – Map of Historic Places



Proposed Substation Location	Easements
Proposed Turbine Location	Western Spirit Transmission Line (not part of Clines Corners Wind Farm Project)
Alternative 4.2 MW Turbine Location	Consenting Landowners (150 ft wide easement under transmission line)
Project Access Road	State Land Easement
Proposed Transmission Line	Guadalupe County
Historic Place Boundary	
Western Spirit POI Facilities	



© Souder, Miller & Associates, 2019. All Rights Reserved

Designed	Drawn	Checked
	ZCT	
Date: 5/16/2019		
Scale: Horiz. - 1" = 2.5 Miles (11x17)		
Project No: 8227576		
Sheet: EXHIBIT P		

PRELIMINARY

NOT FOR CONSTRUCTION

THIS DRAWING IS INCOMPLETE AND NOT TO BE USED FOR CONSTRUCTION UNLESS IT IS STAMPED, SIGNED AND DATED

TORRANCE COUNTY TORRANCE COUNTY, NEW MEXICO

**CLINES CORNERS WIND FARM
TORRANCE COUNTY
HISTORIC PLACES**



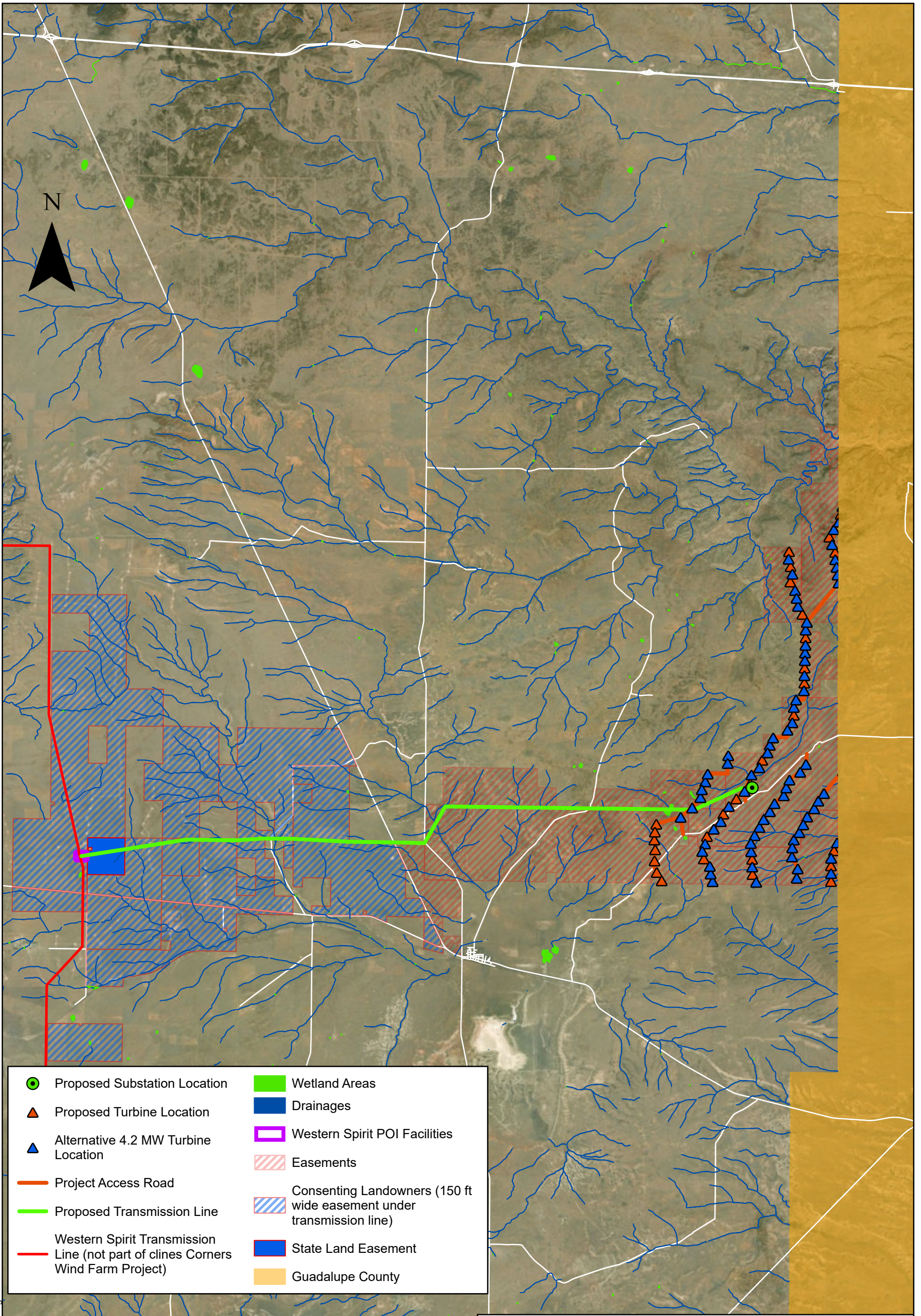
SMA
Souder, Miller & Associates
Engineering • Environmental • Surveying
www.soudermiller.com

2904 Rodeo Park Dr E #100,
Santa Fe, NM 87505
Phone: (505) 473-9211

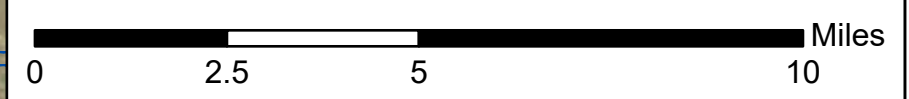
Rev #	Date	Description	By	Chkd

Sources: ESRI, Torrance County, USNRIS, Souder, Miller & Associates

Exhibit S – Map of Surface Waters, Wetlands



Proposed Substation Location	Wetland Areas
Proposed Turbine Location	Drainages
Alternative 4.2 MW Turbine Location	Western Spirit POI Facilities
Project Access Road	Easements
Proposed Transmission Line	Consenting Landowners (150 ft wide easement under transmission line)
Western Spirit Transmission Line (not part of Clines Corners Wind Farm Project)	State Land Easement
	Guadalupe County



© Souder, Miller & Associates, 2019. All Rights Reserved

Designed	Drawn	Checked
	ZCT	
Date: 5/16/2019		
Scale: Horiz. - 1" = 2.5 Miles (11x17)		
Project No: 8227576		
Sheet: EXHIBIT S		

PRELIMINARY

NOT FOR CONSTRUCTION

THIS DRAWING IS INCOMPLETE AND NOT TO BE USED FOR CONSTRUCTION UNLESS IT IS STAMPED, SIGNED AND DATED

TORRANCE COUNTY TORRANCE COUNTY, NEW MEXICO

CLINES CORNERS WIND FARM TORRANCE COUNTY SURFACE WATERS

SMA
Souder, Miller & Associates
Engineering • Environmental • Surveying
www.soudermiller.com

2904 Rodeo Park Dr E #100,
Santa Fe, NM 87505
Phone: (505) 473-9211

Rev #	Date	Description	By	Chkd

Sources: ESRI, Torrance County, USFWS, Souder, Miller & Associates

2) Clines Corners Wind Farm Project Environmental Report, prepared by Burns & McDonnell Engineering Company, May 7, 2019 (Introduction Section; one full copy also provided)

Clines Corners Wind Farm Project Environmental Report



Clines Corners Wind Farm, LLC

**Clines Corners Wind Farm Project
Project No. 115159**

**Final
5/7/2019**

Clines Corners Wind Farm Project Environmental Report

prepared for

**Clines Corners Wind Farm, LLC
Clines Corners Wind Farm Project
New Mexico**

Project No. 115159

**Final
5/7/2019**

prepared by

**Burns & McDonnell Engineering Company, Inc.
La Jolla, California**

COPYRIGHT © 2019 BURNS & McDONNELL ENGINEERING COMPANY, INC.

TABLE OF CONTENTS

	<u>Page No.</u>
1.0 SUMMARY	1-1
2.0 INTRODUCTION AND PURPOSE AND NEED	2-1
2.1 Purpose and Need	2-1
2.2 Decisions to be Made.....	2-2
3.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION	3-1
3.1 Alternatives Considered.....	3-1
3.2 Proposed Project (Proponent Preferred)	3-1
3.2.1 Transmission Line.....	3-1
3.2.2 Step-Up Substation and Adjacent Switchyard.....	3-3
3.2.3 Right-of-Way Acquisition	3-3
3.2.4 Access Roads	3-4
3.2.5 Laydown / Material Staging Areas	3-4
3.2.6 Construction Activities	3-5
3.2.7 Operation and Maintenance	3-10
3.2.8 Decommissioning	3-12
4.0 AFFECTED ENVIRONMENT	4-1
4.1 Introduction.....	4-1
4.2 Air Resources.....	4-2
4.2.1 Data Sources	4-2
4.2.2 Current Conditions and Trends, Regional Overview – Clines Corners Gen-Tie System Corridor	4-2
4.2.3 Current Conditions and Trends, Regional Overview – Clines Corners Wind Farm	4-2
4.3 Noise	4-2
4.3.1 Data Sources	4-2
4.3.2 Current Conditions and Trends, Regional Overview – Clines Corners Gen-Tie System Corridor.....	4-3
4.3.3 Current Conditions and Trends, Regional Overview – Clines Corners Wind Farm	4-3
4.4 Geology and Mineral Resources	4-3
4.4.1 Data Sources	4-3
4.4.2 Current Conditions and Trends, Regional Overview – Clines Corners Gen-Tie System Corridor.....	4-3
4.4.3 Current Conditions and Trends, Regional Overview – Clines Corners Wind Farm	4-4
4.5 Soil Resources.....	4-6
4.5.1 Data Sources	4-6
4.5.2 Current Conditions and Trends, Regional Overview – Clines Corners Gen-Tie System Corridor.....	4-6

4.5.3	Current Conditions and Trends, Regional Overview – Clines Corners Wind Farm	4-7
4.6	Paleontological Resources	4-8
4.6.1	Data Sources	4-8
4.6.2	Current Conditions and Trends, Regional Overview – Clines Corners Gen-Tie System Corridor	4-8
4.6.3	Current Conditions and Trends, Regional Overview – Clines Corners Wind Farm	4-9
4.7	Water Resources	4-9
4.7.1	Data Sources	4-9
4.7.2	Current Conditions and Trends, Regional Overview – Clines Corners Gen-Tie System Corridor	4-11
4.7.3	Current Conditions and Trends, Regional Overview – Clines Corners Wind Farm	4-13
4.8	Flora and Fauna.....	4-14
4.8.1	Data Sources	4-14
4.8.2	Current Conditions and Trends, Regional Overview – Clines Corners Gen-Tie System Corridor	4-15
4.8.3	Current Conditions and Trends, Regional Overview – Clines Corners Wind Farm	4-19
4.9	Cultural Historic and Archaeological Resources	4-25
4.9.1	Prehistoric Cultural	4-25
4.9.2	Historic Cultural Resources	4-26
4.10	Religious and Cemetery Sites	4-27
4.10.1	Data Sources	4-27
4.10.2	Current Conditions and Trends, Regional Overview – Clines Corners Gen-Tie System Corridor	4-27
4.10.3	Current Conditions and Trends, Regional Overview – Clines Corners Wind Farm	4-27
4.11	Visual and Scenic Resources	4-28
4.11.1	Data Sources	4-28
4.11.2	Overview.....	4-28
4.11.3	Current Conditions and Trends, Regional Overview – Clines Corners Gen-Tie System Corridor	4-29
4.11.4	Current Conditions and Trends, Regional Overview – Clines Corners Wind Farm	4-30
4.12	Land Use, Including Farm, Range, and Recreational Resources.....	4-31
4.12.1	Data Sources	4-31
4.12.2	Current Conditions and Trends, Regional Overview – Clines Corners Gen-Tie System Corridor	4-31
4.12.3	Current Conditions and Trends, Regional Overview – Clines Corners Wind Farm	4-33
4.13	Socioeconomics	4-33
4.13.1	Data Sources	4-33
4.13.2	Current Conditions and Trends, Regional Overview – Clines Corners Gen-Tie System Corridor and Wind Farm.....	4-34

4.14	Communication Signals	4-37
4.14.1	Data Sources	4-37
4.14.2	Current Conditions and Trends, Regional Overview – Clines Corners Gen-Tie System Corridor	4-37
4.14.3	Current Conditions and Trends, Regional Overview – Clines Corners Wind Farm	4-38
4.15	Radioactive Waste and Radiation Hazards	4-42
4.16	Hazardous Materials	4-42
4.17	Safety	4-42
4.18	Geographic Resources	4-42
4.18.1	Data Sources	4-42
4.18.2	Current Conditions and Trends, Regional Overview – Clines Corners Gen-Tie System Corridor	4-43
4.18.3	Current Conditions and Trends, Regional Overview – Clines Corners Wind Farm	4-43
4.19	Military Activities and Aviation	4-44
4.19.1	Data Sources	4-44
4.19.2	Current Conditions and Trends, Regional Overview – Clines Corners Gen-Tie System Corridor	4-44
4.19.3	Current Conditions and Trends, Regional Overview – Clines Corners Wind Farm	4-44
4.20	Roads	4-44
4.20.1	Data Sources	4-44
4.20.2	Current Conditions and Trends, Regional Overview – Clines Corners Gen-Tie System Corridor	4-45
4.20.3	Current Conditions and Trends, Regional Overview – Clines Corners Wind Farm	4-45
5.0	ENVIRONMENTAL EFFECTS	5-1
5.1	Introduction	5-1
5.2	Air Resources	5-2
5.2.1	Impact Assessment Methods	5-2
5.2.2	Impacts Specific to the Clines Corners Gen-Tie System Corridor	5-2
5.2.3	Protection Measures	5-3
5.2.4	Conclusion	5-3
5.3	Noise	5-3
5.3.1	Impact Assessment Methods	5-3
5.3.2	Impacts Specific to the Clines Corners Gen-Tie System Corridor	5-4
5.3.3	Protection Measures	5-4
5.3.4	Conclusion	5-4
5.4	Geology and Mineral Resources	5-4
5.4.1	Impact Assessment Methods	5-4
5.4.2	Impacts Specific to the Clines Corners Gen-Tie System Corridor	5-4
5.4.3	Protection Measures	5-5
5.4.4	Conclusion	5-5
5.5	Soil Resources	5-5
5.5.1	Impact Assessment Methods	5-5

5.5.2	Impacts Specific to the Clines Corners Gen-Tie System Corridor	5-5
5.5.3	Protection Measures	5-6
5.5.4	Conclusion	5-7
5.6	Paleontological Resources	5-7
5.6.1	Impact Assessment Methods.....	5-7
5.6.2	Impacts Specific to the Clines Corners Gen-Tie System Corridor	5-7
5.6.3	Protection Measures.....	5-7
5.6.4	Conclusion	5-8
5.7	Water Resources	5-8
5.7.1	Methods and Impact Types.....	5-8
5.7.2	Impacts Specific to the Clines Corners Gen-Tie System Corridor	5-8
5.7.3	Protection Measures.....	5-10
5.7.4	Conclusion	5-11
5.8	Flora and Fauna.....	5-11
5.8.1	Methods and Impact Types	5-11
5.8.2	Impacts Specific to the Clines Corners Gen-Tie System Corridor	5-11
5.8.3	Protection Measures.....	5-13
5.8.4	Conclusion	5-14
5.9	Cultural, Historic, and Archaeological Resources	5-14
5.9.1	Methods and Impact Types.....	5-15
5.9.2	Impacts Specific to the Clines Corners Gen-Tie System Corridor	5-15
5.9.3	Protection Measures.....	5-15
5.9.4	Conclusion	5-16
5.10	Religious and Cemetery Sites	5-16
5.10.1	Methods and Impact Types	5-16
5.10.2	Impacts Specific to the Clines Corners Gen-Tie System Corridor	5-16
5.10.3	Protection Measures.....	5-16
5.10.4	Conclusion	5-16
5.11	Visual and Scenic Resources	5-17
5.11.1	Methods and Impact Types.....	5-17
5.11.2	Impacts Specific to the Clines Corners Gen-Tie System Corridor	5-18
5.11.3	Protection Measures.....	5-19
5.11.4	Conclusion	5-19
5.12	Land Use, Including Farm, Range, and Recreational Resources.....	5-19
5.12.1	Impact Assessment Methods.....	5-19
5.12.2	Impacts Specific to the Clines Corners Gen-Tie System Corridor	5-20
5.12.3	Protection Measures.....	5-22
5.12.4	Conclusion	5-23
5.13	Socioeconomics	5-23
5.13.1	Impact Assessment Methods.....	5-23
5.13.2	Impacts Specific to the Clines Corners Gen-Tie System Corridor	5-24
5.13.3	Protection Measures.....	5-25
5.13.4	Conclusion	5-26
5.14	Communication Signals.....	5-26
5.14.1	Impact Assessment Methods.....	5-26
5.14.2	Impacts Specific to the Clines Corners Gen-Tie System Corridor	5-26

5.14.3	Protection Measures	5-26
5.14.4	Conclusion	5-27
5.15	Radioactive Waste and Radiation Hazards	5-27
5.16	Hazardous Materials	5-27
5.16.1	Impact Assessment Methods.....	5-27
5.16.2	Impacts Specific to the Clines Corners Gen-Tie System Corridor	5-27
5.16.3	Protection Measures.....	5-28
5.16.4	Conclusion	5-28
5.17	Safety	5-28
5.17.1	Impact Assessment Methods.....	5-28
5.17.2	Impacts Specific to the Clines Corners Gen-Tie System Corridor	5-28
5.17.3	Protection Measures.....	5-29
5.17.4	Conclusion	5-30
5.18	Geographic Resources	5-30
5.18.1	Impact Assessment Methods.....	5-30
5.18.2	Impacts Specific to the Clines Corners Gen-Tie System Corridor	5-31
5.18.3	Protection Measures.....	5-31
5.18.4	Conclusion	5-31
5.19	Military Activities and Aviation	5-32
5.19.1	Impact Assessment Methods.....	5-32
5.19.2	Impacts Specific to the Clines Corners Gen-Tie System Corridor	5-32
5.19.3	Protection Measures.....	5-32
5.19.4	Conclusion	5-32
5.20	Roads.....	5-32
5.20.1	Impact Assessment Methods.....	5-32
5.20.2	Impacts Specific to the Clines Corners Gen-Tie System Corridor	5-33
5.20.3	Protection Measures.....	5-33
5.20.4	Conclusion	5-33
5.21	Additional Protection Measures.....	5-33
6.0	CONSULTATION AND COORDINATION	6-1
6.1	List of Preparers and Reviewers	6-1
6.1.1	Clines Corners Wind Farm, LLC.....	6-1
6.1.2	Burns & McDonnell.....	6-1
6.2	Technical Reports Contributing to the Environmental Report	6-1
6.3	Recipients of the Environmental Report.....	6-2
7.0	LITERATURE CITED	7-1
8.0	INDEX	8-1
 APPENDIX 1 - EXHIBITS		

LIST OF TABLES

	<u>Page No.</u>
Table 4-1: Clines Corners Gen-Tie System Corridor Parent Material	4-4
Table 4-2: Clines Corners Wind Farm Parent Material	4-5
Table 4-3: Clines Corners Gen-Tie System Corridor Soil Coverage Types.....	4-6
Table 4-4: Clines Corners Wind Farm Soil Coverage Types	4-7
Table 4-5: National Land Cover Database Type Clines Corners Gen-Tie System Corridor Acreage.....	4-12
Table 4-6: Clines Corners Gen-Tie System Corridor Wetland Table Based on the U.S. Fish and Wildlife Service National Wetland Inventory Data	4-13
Table 4-7: Clines Corners Wind Farm Wetland Table Based on the U.S. Fish and Wildlife Service National Wetland Inventory Data	4-13
Table 4-8: National Land Cover Data Summary for the Clines Corners Wind Farm	4-14
Table 4-9: Federally Listed Species with potential to occur in Clines Corners Gen- Tie System Corridor	4-17
Table 4-10: State Listed Species with potential to occur in Clines Corners Gen-Tie System Corridor	4-17
Table 4-11: Federally Listed Species in Clines Corners Wind Farm	4-20
Table 4-12: State Listed Wildlife Species in Clines Corners Wind Farm	4-21
Table 4-13: Project Area Counties (2017 Population Figures).....	4-34
Table 4-14: 2012 and 2007 New Mexico Project Area Farm Demographics.....	4-35
Table 4-15: Communication Structures within Clines corners Gen-Tie System Corridor	4-37
Table 4-16: Summary of Tower Structures	4-39
Table 4-17: Summary Communication Antenna	4-39
Table 4-18: Land Mobile and Emergency Services Sites Wind Farm.....	4-40
Table 4-19: Regional Licenses	4-41
Table 4-20: Mobile Phone Carriers in Area of Interest with E911 Service.....	4-42

LIST OF EXHIBITS

<u>Exhibit Number</u>	<u>Exhibit Name</u>
Exhibit 1	Project Area
Exhibit 2	Assessment Area
Exhibit 3	Soils Summary
Exhibit 4	Oil & Gas Well Summary
Exhibit 5	Mineral Resources Map
Exhibit 6	Parent Material
Exhibit 7	Surface Waters
Exhibit 8	National Wetlands Inventory Map
Exhibit 9	Floodplain Summary
Exhibit 10	Breeding Bird Survey Routes
Exhibit 11	Cemeteries
Exhibit 12	Easement Map
Exhibit 13	Elevation Map
Exhibit 14	Boundary Summary
Exhibit 15	Byways & Trails
Exhibit 16	Project Vicinity
Exhibit 17	General Vicinity Map
Exhibit 18	State Parks
Exhibit 19	GAP Analysis Program
Exhibit 20	Communications Map
Exhibit 21	Visual Flight Rules Map

LIST OF ABBREVIATIONS

<u>Abbreviation</u>	<u>Term/Phrase/Name</u>
AC	alternating current
ACSR	aluminum conductor Steel reinforced
ACSS	aluminum conductor steel supported
APLIC	Avian Power Line Interaction Committee
BCI	Bat Conservation International
BCR	Bird Conservation Region
BGEPA	Bald and Golden Eagle Protection Act
BISON-M	Biota Information System
BMPs	Best Management Practices
Burns & McDonnell	Burns & McDonnell Engineering Company, Inc.
CDBG	Community Development Block Grant
CFR	Code of Federal Regulations
CO	Carbon dioxide
DNH	Determination of No Hazard
EPA	U.S. Environmental Protection Agency
ER	Environmental Report
ESA	Endangered Species Act
ETZ	extraterritorial zone
ETZA	Extraterritorial Zoning Authority
ETZC	Extraterritorial Zoning Commission
FAA	Federal Aviation Administration

<u>Abbreviation</u>	<u>Term/Phrase/Name</u>
FHWA	Federal Highway Administration
GAP	USGS Gap Analysis Program
GLO	General Land Office
GRT	Gross Receipts Tax
IBA	Important Bird Areas
IPaC	Information, Planning, and Consultation System
IRB's	Industrial Revenue Bonds
kcMil	Thousand Circular Mil
kV	kilovolt
MBTA	Migratory Bird Treaty Act
MW	megawatt
NESC	National Electrical Safety Code
NHD	National Hydrography Dataset
NLCD	National Land Cover Database
NM CHAT	New Mexico Crucial Habitat Assessment Tool
NMCRIS	New Mexico Cultural Resource Information System
NMDGF	New Mexico Department of Game and Fish
NMDOT	New Mexico Department of Transportation
NMED-SWQB	New Mexico Environment Department Surface Water Quality Bureau
NO _x	Carbon monoxide
NWI	National Wetlands Inventory
NWP	Nationwide Permit

<u>Abbreviation</u>	<u>Term/Phrase/Name</u>
O&M	operations and maintenance
OHWM	ordinary high-water mark
OPGW	optic ground wire
PILOTs	provide payments in-lieu of taxes
PLJV	Playa Lakes Joint Venture
PM	particulate matter
PM	Particulate matter
PPA	Power Purchase Agreements
ROW	right-of-way
SGP CHAT	Southern Great Plains Crucial Habitat Assessment Tool
SLO	State Land Office
SPCC	Spill Prevention, Containment, and Countermeasures Plan
SPS	Special Protection System
SSURGO	USDA Soil Survey Geographic
SWCD	Soil and Water Conservation District
SWPPP	Stormwater Pollution Prevention Plan
UDP	Unanticipated Discovery Protocol
UDP	Unanticipated Discovery Protocol
USGS	U.S. Geological Survey
VOCs	Volatile organic compounds
WMP	Water Management Plan
WOTUS	Waters of the U.S.

1.0 SUMMARY

This report responds to the requirement of the New Mexico Public Regulation Commission (the Commission) for a report, in the form provided in 40 C.F.R. Section 1502.10, for location of transmission lines of 230 kilovolt (kV) or greater associated with a large-capacity power plants capable of 300 megawatts (MW) or more of generation that do not require an Environmental Assessment or Environmental Impact Statement pursuant to the National Environmental Policy Act. The New Mexico location control statute, NMSA 1978, Section 62-9-3.E states that the Commission is required to approve an application for the location of generating plants capable of 300 MW or more unless it finds such facilities will not comply with applicable air and water pollution control standards and regulations. Moreover, NMSA 1978, Section 62-9-3F provides that the Commission shall approve the location of the transmission line unless the Commission finds that the location will unduly impair important environmental values.

Clines Corners Wind Farm, LLC (Applicant), which is owned by a joint venture between Orion Renewable Energy Group, LLC and MAP Renewable Energy, is proposing to locate a transmission line and related substation facilities in Torrance and Guadalupe counties, New Mexico. These electrical facilities are anticipated to be 345-kV alternating current (AC) lines (Clines Corners Gen-Tie System, or Gen-Tie System) and the associated right-of-way (ROW), which interconnect up to approximately 480 MW of wind-generated electricity from the proposed Clines Corners Wind Farm Project (Clines Corners Wind Farm Project or Project) to a proposed new 345-kV merchant transmission line [Western Spirit] and switchyard, located in the vicinity of the existing El Cabo Wind Farm project (Point of Interconnection). The proposed gen-tie line will be 345-kV and would have enough capacity to accommodate all proposed phases of the Project. It will originate at a Project substation and head in a westerly direction across private land for approximately 18.72 miles, depending on final location. The gen-tie line crosses the U.S. Highway 285 ROW and continues in a westerly direction to the Point of Interconnection on state lands. Discussions with the New Mexico Department of Transportation (NMDOT) for the use of the highway ROW are ongoing and an application for such use will be submitted [to NMDOT]. The Clines Corners Gen-Tie System will require a ROW width of approximately 150 feet across private land for which Applicant has obtained. Applicant is requesting a ROW width determination pursuant to NMSA 1978, §62-9-3.2 to the extent such approval may be required by law.

The Clines Corners Wind Farm will be located on approximately 39,580 acres of private land in Torrance and Guadalupe counties. As planned, the Clines Corners Wind Farm will likely consist of wind turbines having a rated nameplate capacity between 2 and 4.2 MW split between the two counties. The Applicant

will determine the final number of wind turbines planned for each county following engineering analysis and micro siting to avoid or mitigate any unforeseen or unanticipated issues. The Clines Corners Wind Farm is expected to generate approximately 2,000,000 MWh per year of clean, renewable energy. The Applicant will determine the final number and location of wind turbines later in the development process following engineering analysis and micro siting, with the Applicant providing final numbers and locations to the Counties in which the development will occur.

In addition to wind turbines, there will be one or more Operations and Maintenance (O&M) buildings, underground (and if required by localized terrain, overhead) power collection lines, one Project substation with electrical transforming capabilities (dependent on final electrical design), service access roads, up to 4 permanent meteorological monitoring (MET) towers, and related facilities and equipment.

Collection lines of 34.5-kV will connect each of the turbines in the Clines Corners Wind Farm to a newly proposed substation, which will be located within the area where the Clines Corners Wind Farm will be constructed (Clines Corners Wind Farm). The collection lines are expected to be buried underground unless local conditions make burial impracticable. Although information about the Clines Corners Wind Farm, as a whole, is discussed herein, the subject of this Environmental Report (ER) is the Clines Corners Gen-Tie System Corridor. The Clines Corners Gen-Tie System Corridor consists of a 1-mile-wide corridor inclusive of the 150-foot gen-tie line ROW.

Project construction and start of commercial operations is planned for as early as 2020. Additional phases of the Project may be constructed, and would have a 2021 or later commercial operations timeline. The Clines Corners Wind Farm is designed to generate electricity for approximately 30 years, with the possibility to extend energy generation beyond this period.

This ER addresses the affected environment (existing condition) for the environmental values provided in New Mexico Statutes Annotated (NMSA) 1978 Section 62-9-3.M, Commission Rule 17.9.592 NMAC, and additional resource areas identified to be of interest by Commission Staff (Staff). The resources addressed in this ER include: air resources; water resources; biological resources; land use (including recreation and schools); visual and scenic; cultural, historic, and archeological resources; religious resources; geology and paleontology; soils; minerals and mining; socioeconomic; roads; noise; communication signals; military activities and aviation; geographic resources; radioactive waste and radiation hazard; hazardous materials; and safety.

The discussion for each resource includes data sources used, current regional conditions, and conditions within the Clines Corners Wind Study Area (Exhibit 1), which consists of the Clines Corners Gen-Tie

System Corridor (inclusive of the step-up substation and switchyard) and Clines Corners Wind Farm. The analysis is based off of field surveys of the proposed Project site and vicinity as well as desktop reviews of publicly available information gathered from a variety of data sources. The environmental consequences (potential impacts) for the resources identified above were addressed to determine whether the proposed transmission line, step-up substation and switchyard (collectively, Gen-Tie System) would “unduly impair important environmental values,” as provided in NMSA 1978, Section 62-9-3.F. Impact evaluations for each resource are discussed in the context of the Clines Corners Gen-Tie System Corridor alongside Best Management Practices (BMPs) that can help manage impacts.

2.0 INTRODUCTION AND PURPOSE AND NEED

The Applicant is proposing to locate in Torrance County, New Mexico, approximately 18.72 miles of 345-kV transmission line, related facilities and ROW (Exhibit 1). Although information about the Clines Corners Wind Farm as a whole is discussed herein to provide overall project context, the New Mexico statutes only require evaluation of the Clines Corners Gen-Tie System. The following terms used in this report are defined as follows:

2.1 Purpose and Need

The purpose and need of the Clines Corners Gen-Tie System is to connect the Clines Corners Wind Farm to the Point of Interconnection. The proposed gen-tie line will be 345-kV and would have enough capacity to accommodate all proposed phases of the Project.

The Applicant's objective is to increase transmission capacity for renewable energy. The wind resource in New Mexico is one of the strongest and most abundant in the country. New Mexico, however, lacks adequate transmission infrastructure to bring the resource to western markets. The proposed Clines Corners Gen-Tie System is necessary to address the lack of transmission segments with available transfer capacity in New Mexico to deliver a high-demand renewable resource to western markets. The Clines Corners Gen-Tie System would transmit electricity to market generated by renewable energy facilities that are or would be located in east-central New Mexico. The Applicant's objectives for the proposed Clines Corners Gen-Tie System include the following:

- improve access to renewable energy at a competitive cost by facilitating the transfer of up to 480 MW of renewable power from east-central New Mexico to markets with increasing demands;
- provide a cost-efficient, practicable, and reliable interconnection that facilitates the transfer of wind- and/or solar-generated electricity;
- assist in satisfying the growing consumer demand for renewable energy; and,
- provide safe and efficient transmission infrastructure consistent with electric service reliability pursuant to prudent utility practice.

The Clines Corners Gen-Tie System is being constructed in connection with the generation of renewable energy within Torrance and Guadalupe counties in the State of New Mexico. This is consistent with the 2015 "New Mexico Energy Policy & Implementation Plan" published by the Governor's office.

2.2 Decisions to be Made

The New Mexico location statute, NMSA 1978, Section 62-9-3.F provides the New Mexico Public Regulatory Commission shall approve the location of the transmission line unless the Commission finds that the location will unduly impair important environmental values. This report addresses the important environmental values the Commission has identified in its location rule 17.9.592 NMAC, as well as other issues identified by Staff.