

SOUND LEVEL ASSESSMENT REPORT

Dakota Range III Wind Project Roberts & Grant Counties, South Dakota

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1.0 EXECUTIVE SUMMARY

The Dakota Range III Wind Project (the Project) is a proposed wind power electric generation facility expected to consist of up to 36 wind turbines in Roberts and Grant Counties, South Dakota. The Project is being developed by Apex Clean Energy, Inc. (Apex). Epsilon Associates, Inc. (Epsilon) has been retained by Apex to conduct a sound level modeling study for the Project. This report presents results of the study.

A sound level modeling analysis was conservatively conducted for 45 turbines, including 36 proposed wind turbine locations and 9 alternate locations and a collector substation. All wind turbines for this Project are proposed to be Vestas V136-4.2 units with serrated trailing edge blades. The purpose of this assessment is to predict worst-case sound levels generated by the facilities in Roberts and Grant Counties when the wind turbines are operational and to compare the modeling results to applicable limits. Sound levels from wind energy systems (WES) are limited by ordinance to 50 dBA at the closest principal and accessory structures in Roberts County and at any offsite residences, businesses, and buildings owned and/or maintained by a governmental entity in Grant County.

Using the Project specific data provided by Apex, the L_{eq} sound levels modeled at principal and accessory structures in Roberts County did not exceed 43 dBA and L_{eq} sound levels modeled in Grant County did not exceed 44 dBA. All sound levels are well below the limit of 50 dBA in Roberts and Grant Counties. Therefore, the Project meets the counties' requirements with respect to sound in the regulations.

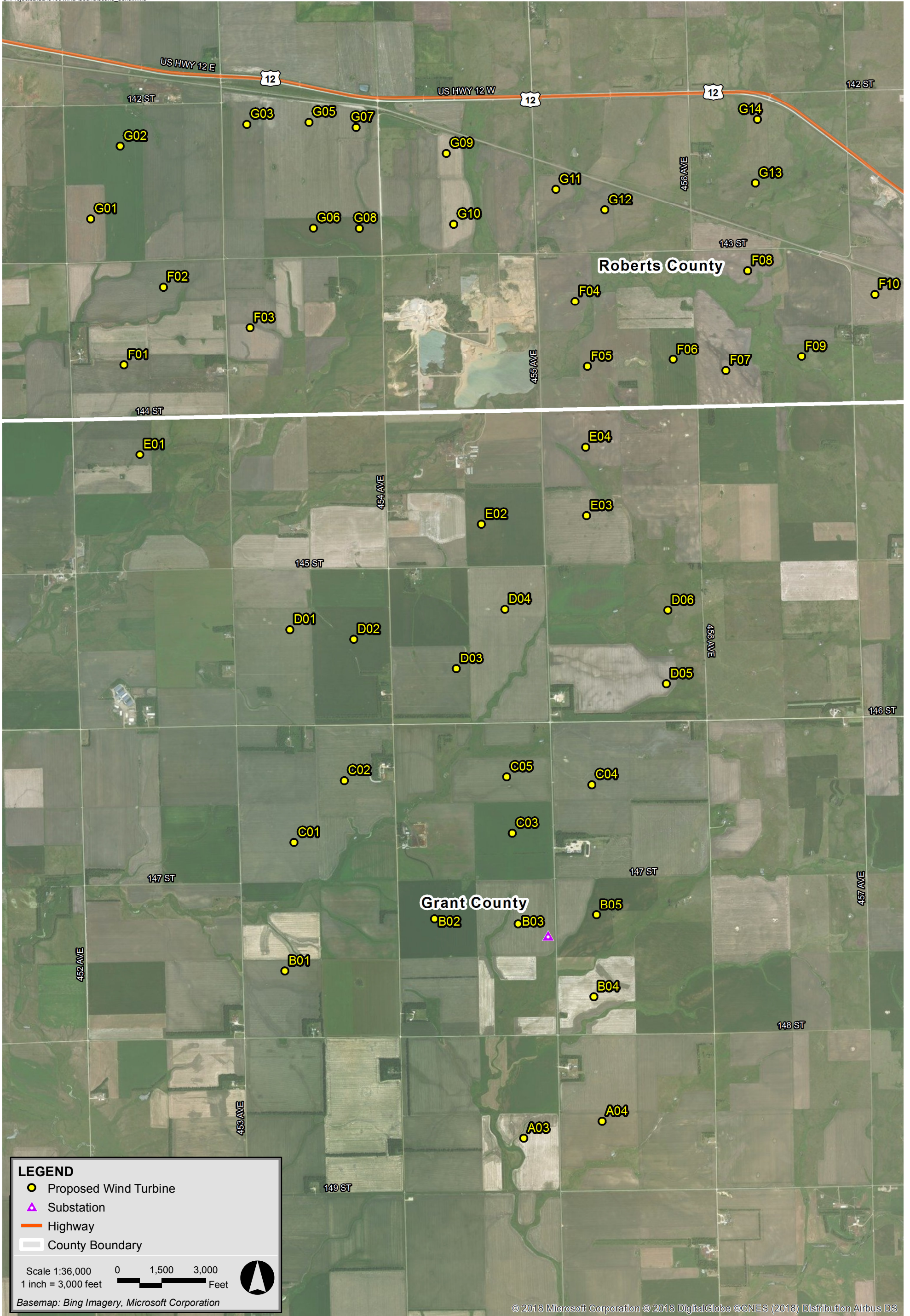
2.0 INTRODUCTION

The Dakota Range III Wind Project to be located in Roberts and Grant Counties, South Dakota will consist of 36 Vestas wind turbines and a collector substation. A total of nine (9) alternate wind turbine locations are also proposed for the Project. The wind turbines will be Vestas V136-4.2 units with serrated trailing edge blades. The V136-4.2 wind turbines have a hub height of 105 meters and a rotor diameter of 136 meters. Figure 2-1 shows the locations of the 36 proposed and 9 alternate wind turbines over aerial imagery in Roberts and Grant Counties and the substation in Grant County.

A detailed discussion of sound from wind turbines is presented in a white paper prepared by the Renewable Energy Research Laboratory.¹ A few points are repeated herein. Wind turbine noise can originate from two different sources; mechanical sound from the interaction of turbine components and aerodynamic sound produced by the flow of air over the rotor blades. Prior to the 1990's, both sources were significant contributors to wind turbine noise. However, recent advances in wind turbine design have greatly reduced the contribution of mechanical noise. Aerodynamic noise has also been reduced in modern wind turbines due to slower rotational speeds and changes in materials of construction. Aerodynamic noise, in general, is broadband (has contributions from a wide range of frequencies). It originates from encounters of the wind turbine blades with localized airflow inhomogeneities and wakes from other turbine blades and from airflow across the surface of the blades, particularly the front and trailing edges. Aerodynamic sound generally increases with increasing wind speed up to a certain point, then typically remains constant, even with higher wind speeds. However, sound levels in general also increase with increasing wind speed with or without the presence of wind turbines.

This report presents the results of a sound level modeling analysis for the Project. The wind turbines were modeled with the Cadna/A software package using sound data from Vestas technical documents.

¹ Renewable Energy Research Laboratory, Department of Mechanical and Industrial Engineering, University of Massachusetts at Amherst, Wind Turbine Acoustic Noise, June 2002, amended January 2006.



Dakota Range III Roberts County/Grant County, South Dakota

3.0 SOUND TERMINOLOGY

There are several ways in which sound (noise) levels are measured and quantified. All of them use the logarithmic decibel (dB) scale. The following information defines the sound level measurement terminology used in this analysis.

The decibel scale is logarithmic to accommodate the wide range of sound intensities found in the environment. A property of the decibel scale is that the sound pressure levels of two or more separate sounds are not directly additive. For example, if a sound of 50 dB is added to another sound of 50 dB, the total is only a 3-decibel increase (53 dB), which is equal to doubling in sound energy but not equal to a doubling in decibel quantity (100 dB). Thus, every 3-dB change in sound level represents a doubling or halving of sound energy. Relative to this characteristic, a change in sound levels of less than 3 dB is imperceptible to the human ear.

Another mathematical property of decibels is that if one source of noise is at least 10 dB louder than another source, then the total sound level is simply the sound level of the higher-level source. For example, a sound source at 60 dB plus another sound source at 47 dB is equal to 60 dB.

A sound level meter (SLM) that is used to measure sound is a standardized instrument.² It contains “weighting networks” (e.g., A-, C-, Z-weightings) to adjust the frequency response of the instrument. Frequencies, reported in Hertz (Hz), are detailed characterizations of sounds, often addressed in musical terms as “pitch” or “tone”. The most commonly used weighting network is the A-weighting because it most closely approximates how the human ear responds to sound at various frequencies. The A-weighting network is the accepted scale used for community sound level measurements; therefore, sounds are frequently reported as detected with a sound level meter using this weighting. A-weighted sound levels emphasize middle frequency sounds (i.e., middle pitched – around 1,000 Hz), and de-emphasize low and high frequency sounds. These sound levels are reported in decibels designated as “dBA”. Sound pressure levels for some common indoor and outdoor environments are shown in Figure 3-1.

Because the sounds in the environment vary with time, many different sound metrics may be used to quantify them. There are two typical methods used for describing variable sounds. These are exceedance levels and equivalent levels, both of which are derived from a large number of moment-to-moment A-weighted sound pressure level measurements. Exceedance levels are values from the cumulative amplitude distribution of all of the sound levels observed during a measurement period. Exceedance levels are designated L_n , where “n” is a value (typically an integer between 1 and 99) in terms of percentage. Equivalent

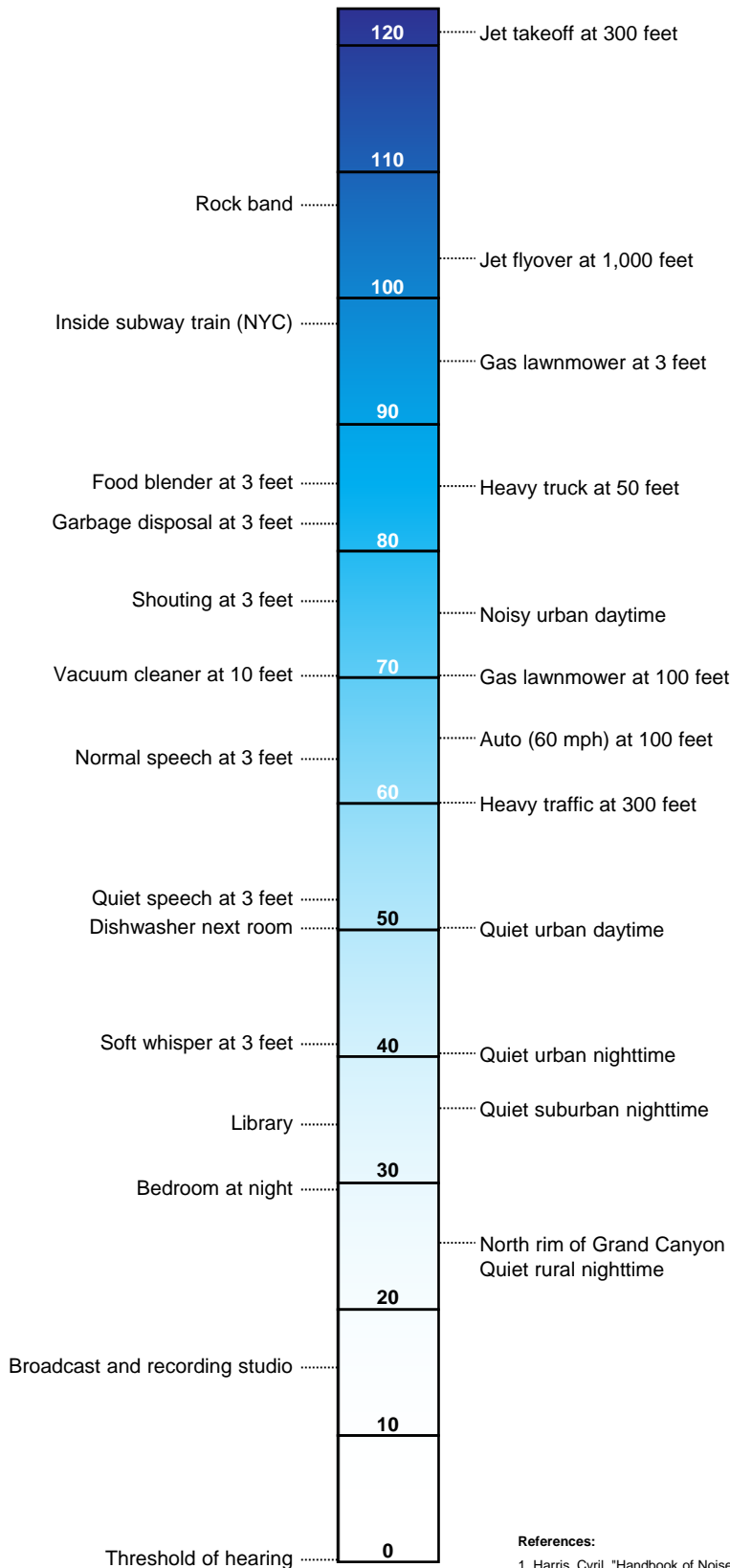
² *American National Standard Specification for Sound Level Meters*, ANSI S1.4-1983 (R2006), published by the Standards Secretariat of the Acoustical Society of America, Melville, NY.

levels are designated L_{eq} and quantify a hypothetical steady sound that would have the same energy as the actual fluctuating sound observed. The two sound level metrics that are commonly reported in community noise monitoring and/or utilized in this report are described below.

- ◆ L_{10} is the sound level exceeded only 10 percent of the time. It is close to the maximum level observed during the measurement period. The L_{10} is sometimes called the intrusive sound level because it is caused by occasional louder sounds like those from passing motor vehicles.
- ◆ L_{90} is the sound level in dBA exceeded 90 percent of the time during a measurement period. The L_{90} is close to the lowest sound level observed. It is essentially the same as the residual sound level, which is the sound level observed when there are no obvious nearby intermittent noise sources.
- ◆ L_{eq} , the equivalent level, is the level of a hypothetical steady sound that would have the same energy (*i.e.*, the same time-averaged mean square sound pressure) as the actual fluctuating sound observed. The equivalent level is designated L_{eq} and is commonly A-weighted. The equivalent level represents the time average of the fluctuating sound pressure, but because sound is represented on a logarithmic scale and the averaging is done with time-averaged mean square sound pressure values, the L_{eq} is mostly determined by occasional loud noises.

Sound Pressure Level, dBA

COMMON INDOOR SOUNDS **COMMON OUTDOOR SOUNDS**



References:

- Harris, Cyril, "Handbook of Noise Acoustical Measurements and Noise Control", p 1-10., 1998
- "Controlling Noise", USAF, AFMC, AFDT, Elgin AFB, Fact Sheet, August 1996
- California Dept. of Trans., "Technical Noise Supplement", Oct, 1998

4.0 NOISE REGULATIONS

4.1 Federal Regulations

There are no federal noise regulations applicable to this Project.

4.2 South Dakota State Regulations

There are no state noise regulations applicable to this Project.

4.3 Local Regulations

4.3.1 *Roberts County*

The section of the proposed Dakota Range III Wind Project within Roberts County, SD is subject to the following sound level requirements in Section 1603.03(5) of Ordinance #20 of Roberts County, Noise subsection of General Provisions for Wind Energy System (WES) Requirements:

Noise level shall not exceed 50 dB (A), average A-weighted Sound pressure³ including constructive interference effects as measured at the exterior wall⁴ of the closest principal and accessory structures.

All receptors were evaluated in this analysis against the 50 dBA limit.

4.3.2 *Grant County*

The section of the proposed Dakota Range III Wind Project within Grant County, SD is subject to the following sound level requirements in Section 1211.04(13) of the Zoning Ordinance for Grant County, Noise subsection of General Provisions for Energy Systems (WES):

³ Epsilon assumes the ordinance intends to read “sound pressure level” reported in dBA, whereas “sound pressure” is reported in units of Pascals.

⁴ If sound levels were measured directly on or in front of an exterior wall, the sound level would be artificially higher due to reflections. It is assumed that this is not the intent of the ordinance; therefore, it is assumed compliance would be determined approximately 50 feet from the wall in the direction of the source.

Noise level shall not exceed 50 dBA, average A-weighted Sound pressure⁵ including constructive interference effects at the perimeter of the principal and accessory structures of existing off-site residences, businesses, and buildings owned and/or maintained by a governmental entity.

All receptors were evaluated in this analysis against the 50 dBA limit.

⁵ Epsilon assumes the ordinance intends to read “sound pressure level” reported in dBA, whereas “sound pressure” is reported in units of Pascals.

5.0 FUTURE CONDITIONS

5.1 Equipment and Operating Conditions

The sound level analysis conservatively includes 45 wind turbines, although only up to 36 turbines will be constructed (nine locations are alternate locations). Global coordinates for the 45 wind turbines are provided in Appendix A. All wind turbines are Vestas V136-4.2 serrated trailing edge blade units. The V136-4.2 wind turbines have a hub height of 105 meters and a rotor diameter of 136 meters. A technical report from Vestas⁶ was provided by Apex which documented the expected sound power levels associated with the Vestas V136-4.2 wind turbine. These third octave-band sound power levels represent an “upper 95% confidence limit for the wind turbine performance” and do not include any additional uncertainty factor. Octave-band sound levels were calculated from the third octave-band levels representing the maximum sound power level for the sound modeling.

In addition to the wind turbines, there will be a collector substation associated with the Project. The substation is proposed to be located southwest of wind turbine #B03 as shown in Figure 5-1. One 167 megavolt-ampere (MVA) transformer is proposed for the substation. Epsilon has estimated octave-band sound power levels using the MVA rating provided by Apex and techniques in the Electric Power Plant Environmental Noise Guide (Edison Electric Institute), Table 4.5 Sound Power Levels of Transformers. Table 5-1 below summarizes the sound power level data used in the modeling.

Table 5-1 Modeled Substation Transformer Sound Power Levels

| Maximum Rating | Broadband dBA | Sound Power Levels per Octave-Band Center Frequency [Hz] | | | | | | | | |
|----------------|---------------|--|-------|--------|--------|--------|-------|-------|-------|-------|
| | | 31.5 dB | 63 dB | 125 dB | 250 dB | 500 dB | 1k dB | 2k dB | 4k dB | 8k dB |
| 167 MVA | 102 | 98 | 104 | 106 | 101 | 101 | 95 | 90 | 85 | 78 |

5.2 Modeling Methodology

The noise impacts associated with the proposed wind turbines were predicted using the Cadna/A noise calculation software developed by DataKustik GmbH. This software uses the ISO 9613-2 international standard for sound propagation (Acoustics - Attenuation of sound during propagation outdoors - Part 2: General method of calculation). The benefits of this software are a more refined set of computations due to the inclusion of topography, ground attenuation, multiple building reflections, drop-off with distance, and atmospheric

⁶ Vestas Wind Systems A/S, V136-4.0 MW Third octave noise emission, 2017. Confidential documentation and information.

absorption. The Cadna/A software allows for octave band calculation of sound from multiple sources as well as computation of diffraction.

Inputs and significant parameters employed in the model are described below:

- ◆ *Project Layout:* A project layout dated October 2, 2018 was provided by Apex. The 36 proposed wind turbines and 9 alternates were input into the model. The substation transformer location was provided by Apex on April 27, 2018. The proposed wind turbines and substation are shown in Figure 5-1.
- ◆ *Modeling Locations:* A modeling receptor dataset was provided by Apex for occupied receptors within 1.5 miles of any proposed wind turbine in Roberts and Grant Counties on October 2, 2018. A second dataset was provided by Apex on October 5, 2018 that contained unoccupied structures. The total 572 receptors from these datasets (209 in Roberts County, 363 in Grant County) were input into the Cadna/A model. These were all conservatively evaluated as receptors and modeled as discrete points at a height of 1.5 meters above ground level to mimic the ears of a typical standing person. These locations are shown in Figure 5-1. Participation status for each of the 572 modeling receptors was assigned based on information provided in each dataset. The receptors are indicated as either participating or non-participating on Figure 5-1.
- ◆ *Terrain Elevation:* Elevation contours for the modeling domain were directly imported into Cadna/A which allowed for consideration of terrain shielding where appropriate. The terrain height contour elevations for the modeling domain were generated from elevation information derived from the National Elevation Dataset (NED) developed by the U.S. Geological Survey.
- ◆ *Source Sound Levels:* Octave-band sound power levels for the Vestas V136-4.2 wind turbines calculated from the provided third octave-band levels in technical report were input to the model. These sound levels represent “worst-case” operational sound level emissions. The substation transformer sound power levels as presented in Table 5-1 were input to the model.
- ◆ *Uncertainty factor:* No uncertainty factor was provided by the wind turbine manufacturer; however, based on experience with other wind turbine manufacturers, an uncertainty factor of 2.0 dBA was assumed and added to the sound power level for each modeled wind turbine.
- ◆ *Ground Attenuation:* Spectral ground absorption was calculated using a G-factor of 0.5 which corresponds to “mixed ground” consisting of both hard and porous ground cover.

The highest wind turbine sound power level for each wind turbine type including uncertainty was input into Cadna/A to model wind turbine generated sound pressure levels during conditions when worst-case sound power levels are expected. Sound pressure levels due to operation of all 45 wind turbines and the substation transformer were conservatively modeled at 572 receptors in Roberts and Grant Counties. In addition to modeling at discrete points, sound levels were also modeled throughout a large grid of receptor points, each spaced 25 meters apart to allow for the generation of sound level isolines.

Several modeling assumptions inherent in the ISO 9613-2 calculation methodology, or selected as conditional inputs by Epsilon, were implemented in the Cadna/A model to ensure conservative results (i.e., higher sound levels), and are described below:

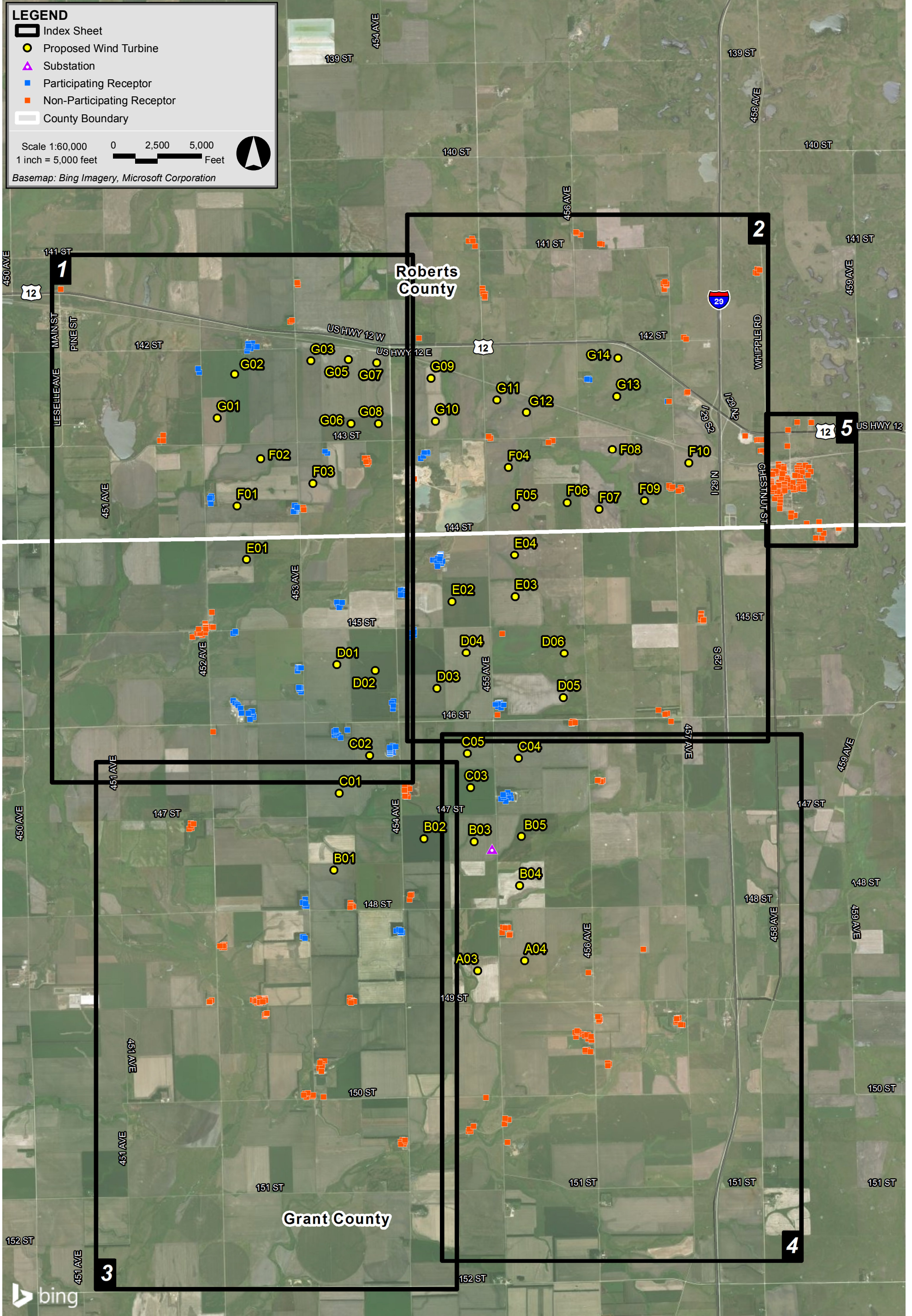
- ◆ All modeled sources were assumed to be operating simultaneously and at the design wind speed corresponding to the greatest sound level impacts.
- ◆ As per ISO 9613-2, the model assumed favorable conditions for sound propagation, corresponding to a moderate, well-developed ground-based temperature inversion, as might occur on a calm, clear night or equivalently downwind propagation.
- ◆ Meteorological conditions assumed in the model (temperature=10°C & relative humidity=70%) were selected to minimize atmospheric attenuation in the 500 Hz and 1 kHz octave bands where the human ear is most sensitive.
- ◆ No additional attenuation due to tree shielding, air turbulence, or wind shadow effects was considered in the model.

5.3 Sound Level Results

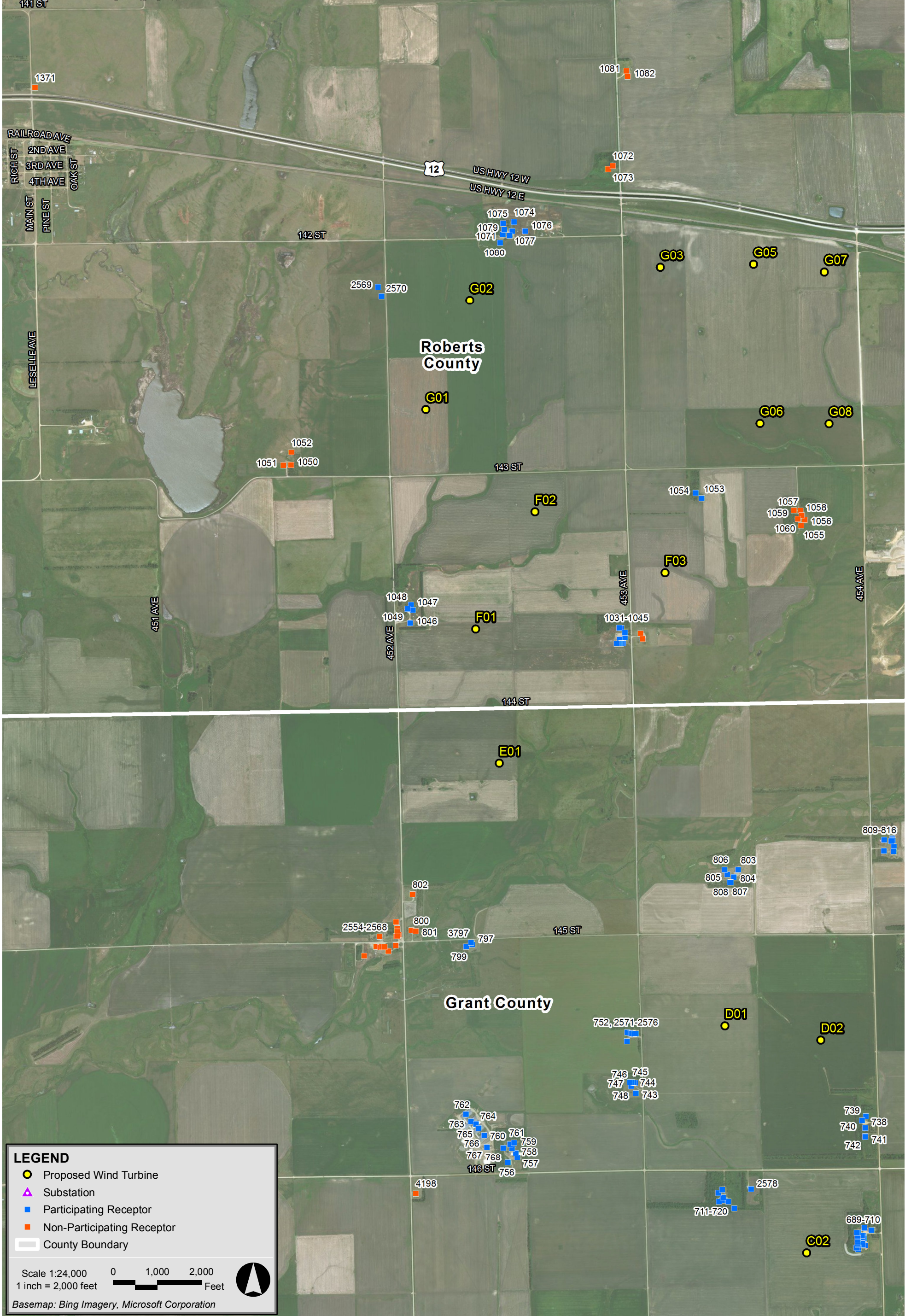
Table B-1 in Appendix B shows the predicted “Project-Only” broadband (dBA) L_{eq} sound levels under conditions specified in the previous section for the 209 receptors in Roberts County. These sound levels range from 27 to 43 dBA.

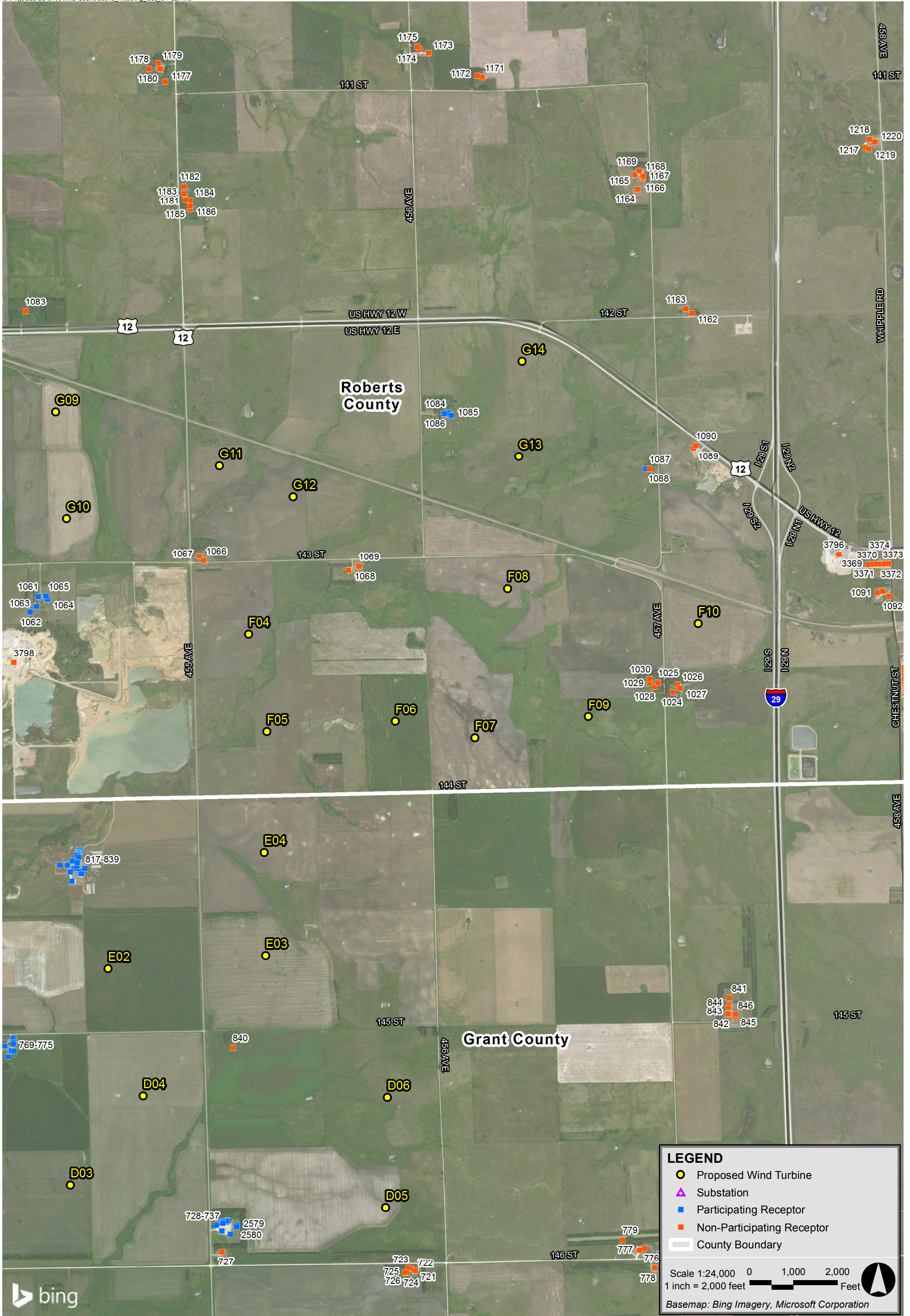
Table B-2 in Appendix B shows the predicted “Project-Only” broadband (dBA) L_{eq} sound levels for the 363 receptors in Grant County. These sound levels range from 25 to 44 dBA.

In addition to the 572 receptor points, L_{eq} sound level isolines generated from the modeling grid are presented in Figure 5-2.

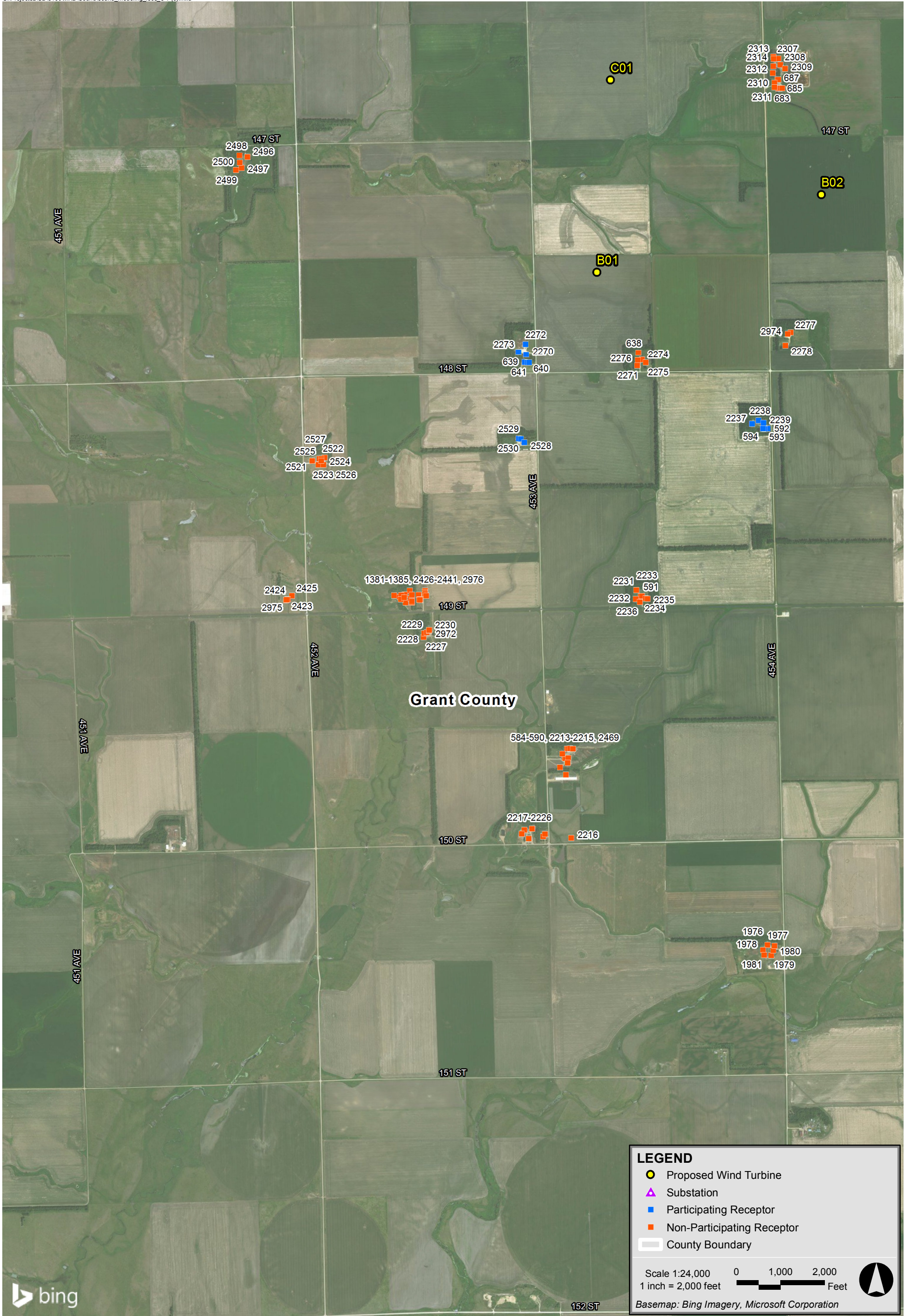


Dakota Range III Roberts County/Grant County, South Dakota





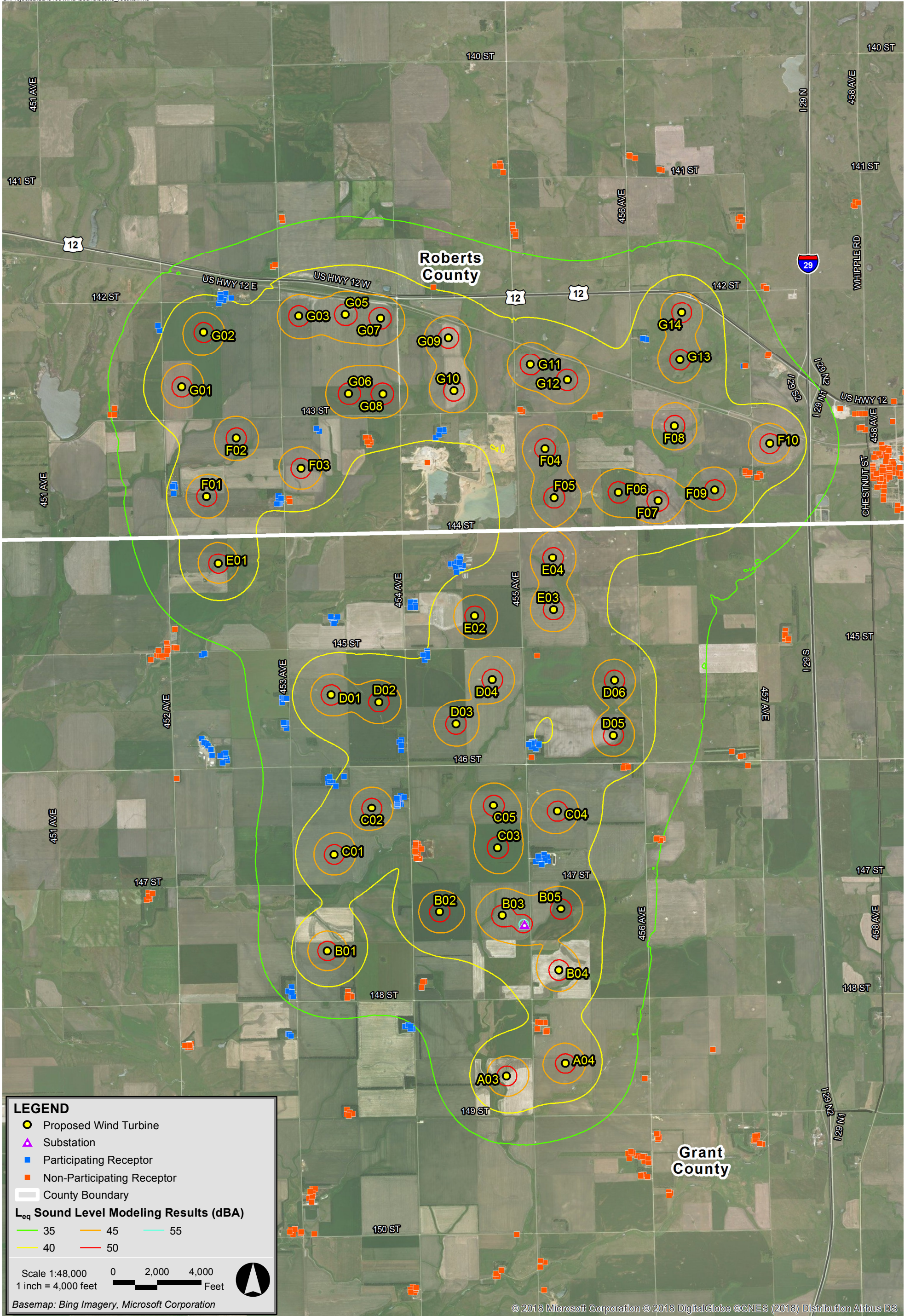
Dakota Range III Roberts County/Grant County, South Dakota







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Dakota Range III Roberts County/Grant County, South Dakota

6.0 CONSTRUCTION NOISE

The majority of the construction activity related to the Dakota Range III Wind Project will occur around each of the wind turbine sites. By its very nature, construction activity moves around the site. Full construction activity will generally occur at one wind turbine site at a time, although there will be some overlap at adjacent sites for maximum efficiency. There are generally three phases of construction at a wind energy project – excavation, foundations, and turbine erection. Table 6-1 presents the equipment sound levels for the louder pieces of construction equipment expected to be used at this site along with their phase of construction. Reference sound source information in Table 6-1 was obtained from either Epsilon field measurements or the FHWA's Roadway Construction Noise Model database.

Construction of the Project is expected to take multiple months. Construction of a single wind turbine from excavation to foundation pouring to turbine erection is roughly a three week process. However, work will not proceed in that order for each wind turbine to be erected. For example, all foundations will typically be poured before any turbine erection work begins. Excavation work is expected to occur from early morning to the evening. Concrete foundation work and turbine erection work could extend into the overnight hours depending on the weather and timing of a concrete pour which must be continuous. Excavation work will typically be daytime only.

Table 6-1 Sound Levels for Construction Noise Sources

| Phase | Equipment | Sound Level at 50 feet (dBA) |
|------------------|--------------------------|------------------------------|
| Excavation | Grader | 85 |
| Excavation | Bulldozer | 82 |
| Excavation | Front-end loader | 79 |
| Excavation | Backhoe | 78 |
| Excavation | Dump truck | 76 |
| Excavation | Roller | 80 |
| Excavation | Excavator | 81 |
| Excavation | Rock drill | 89 |
| Foundation | Concrete mixer truck | 79 |
| Foundation | Concrete pump truck | 81 |
| Foundation | Concrete batch plant | 83 |
| Turbine erection | Large crane #1 | 81 |
| Turbine erection | Large crane #2 | 81 |
| Turbine erection | Component delivery truck | 84 |
| Turbine erection | Air compressor | 78 |

7.0 EVALUATION OF SOUND LEVELS

7.1 Modeled Sound Levels

All modeled sound levels, as output from Cadna/A and presented in Appendix B, are A-weighted equivalent sound levels (L_{eq} , dBA).

7.2 Roberts County Evaluation

The Project is subject to the requirements contained in the zoning ordinance of Roberts County, South Dakota for WES. The sound level limit in this regulation for a WES is 50 dBA at the closest principal and accessory structures. The predicted worst-case L_{eq} sound levels from the Dakota Range III Wind Project are below the 50 dBA limit at all modeled structures in Roberts County. A review of Table B-1 in Appendix B shows the highest L_{eq} sound level for an occupied structure to be 43 dBA. Therefore, the Project meets the requirements with respect to sound in the county regulation.

7.3 Grant County Evaluation

The Project is subject to the requirements contained in the zoning ordinance for Grant County, South Dakota for WES. The sound level limit in this regulation for a WES is 50 dBA at the perimeter of the principal and accessory structures of existing offsite residences, businesses, and buildings owned and/or maintained by a governmental entity. The predicted worst-case L_{eq} sound levels from the Dakota Range III Wind Project are below the 50 dBA limit at all modeled structures in Grant County. A review of Table B-2 in Appendix B shows the highest L_{eq} sound level for an occupied structure to be 43 dBA. Therefore, the Project meets the requirements with respect to sound in the county regulation.

8.0 CONCLUSIONS

A comprehensive sound level analysis was conducted for the proposed Dakota Range III Project within Roberts and Grant Counties. A total of 36 wind turbines are proposed for this Project. Sound levels resulting from the operation of 36 wind turbines and 9 alternates were calculated at 203 receptor points (i.e., existing off-site residences, businesses, churches, and buildings owned and/or maintained by a governmental entity), and isolines were generated from a grid encompassing the area surrounding the wind turbines using the proposed layout. The L_{eq} sound levels modeled at occupied receptors in Roberts County⁷ were at or below 43 dBA and sound levels modeled at occupied receptors in Grant County⁸ were at or below 43 dBA. All L_{eq} sound levels are below the respective county limit of 50 dBA. Therefore, the Project meets the requirements with respect to sound in the regulations.

⁷ Excludes accessory structures for which sound levels ranged from 27 to 43 dBA in Roberts County.

⁸ Excludes accessory structures for which sound levels ranged from 24 to 44 dBA in Grant County.

Appendix A

Wind Turbine Coordinates

Table A-1: Wind Turbine Coordinates (LAY-051)

| Wind Turbine ID | Coordinates NAD83 UTM Zone 14N (meters) | |
|-----------------|--|--------------|
| | X (Easting) | Y (Northing) |
| G01 | 644069.37 | 5019682.13 |
| G02 | 644372.97 | 5020436.04 |
| F01 | 644413.60 | 5018170.33 |
| F02 | 644820.83 | 5018977.35 |
| G03 | 645684.00 | 5020660.46 |
| F03 | 645716.57 | 5018555.79 |
| D01 | 646129.26 | 5015433.54 |
| C01 | 646172.00 | 5013227.00 |
| G05 | 646326.44 | 5020682.18 |
| C02 | 646692.12 | 5013869.38 |
| D02 | 646789.72 | 5015334.55 |
| G07 | 646814.64 | 5020629.19 |
| G08 | 646847.63 | 5019583.70 |
| G09 | 647748.85 | 5020361.86 |
| G10 | 647824.65 | 5019627.47 |
| D03 | 647852.00 | 5015027.00 |
| E02 | 648111.37 | 5016522.39 |
| D04 | 648354.10 | 5015642.49 |
| C03 | 648428.99 | 5013322.19 |
| G11 | 648880.05 | 5019991.34 |
| F04 | 649080.58 | 5018830.64 |
| E04 | 649188.49 | 5017323.04 |
| E03 | 649199.33 | 5016610.85 |
| F05 | 649206.60 | 5018155.00 |
| C04 | 649252.00 | 5013827.00 |
| B04 | 649274.15 | 5011633.29 |
| B05 | 649302.08 | 5012478.13 |
| D06 | 650038.45 | 5015632.43 |
| D05 | 650025.44 | 5014871.27 |
| F06 | 650093.66 | 5018226.66 |
| F08 | 650866.95 | 5019143.94 |
| F07 | 650640.88 | 5018111.76 |
| G13 | 650943.57 | 5020055.05 |
| G14 | 650965.75 | 5020710.65 |
| F09 | 651423.03 | 5018259.05 |
| F10 | 652182.12 | 5018903.20 |
| E01 | 644576.16 | 5017243.74 |
| B01 | 646078.29 | 5011898.34 |
| C05 | 648372.00 | 5013907.00 |
| G06 | 646372.00 | 5019587.00 |
| B02 | 647627.16 | 5012437.01 |
| B03 | 648491.74 | 5012385.54 |
| A03 | 648550.55 | 5010167.89 |
| A04 | 649361.55 | 5010341.75 |
| G12 | 649388.59 | 5019776.99 |

Appendix B

Predicted Wind Energy System Sound Levels at Receptors

Table B-1: Sensitive Receptor Results by Receptor - Roberts County

| Receptor ID | Coordinates UTM NAD83 Zone 14N | | Participation Status | Project-Only Leq Broadband Sound Level (dBA) |
|-------------|-----------------------------------|------------|----------------------|---|
| | X (m) | Y (m) | | |
| 669 | 654426.49 | 5017892.36 | Non-Participating | 29 |
| 670 | 654209.18 | 5017869.34 | Non-Participating | 29 |
| 956 | 654009.01 | 5018003.84 | Non-Participating | 30 |
| 957 | 653947.62 | 5018047.23 | Non-Participating | 30 |
| 958 | 653727.49 | 5018884.37 | Non-Participating | 32 |
| 959 | 653644.94 | 5018764.78 | Non-Participating | 32 |
| 960 | 653647.06 | 5018716.10 | Non-Participating | 32 |
| 961 | 653686.22 | 5018751.02 | Non-Participating | 32 |
| 962 | 653727.49 | 5018733.03 | Non-Participating | 32 |
| 963 | 653732.78 | 5018803.94 | Non-Participating | 32 |
| 964 | 653775.12 | 5018820.87 | Non-Participating | 31 |
| 965 | 653779.35 | 5018775.37 | Non-Participating | 31 |
| 966 | 653796.28 | 5018756.32 | Non-Participating | 31 |
| 967 | 653812.16 | 5018729.86 | Non-Participating | 31 |
| 968 | 653789.93 | 5018684.35 | Non-Participating | 31 |
| 969 | 653801.57 | 5018650.48 | Non-Participating | 31 |
| 970 | 653830.15 | 5018654.72 | Non-Participating | 31 |
| 971 | 653872.48 | 5018648.37 | Non-Participating | 31 |
| 972 | 653824.86 | 5018766.90 | Non-Participating | 31 |
| 973 | 653821.68 | 5018837.81 | Non-Participating | 31 |
| 974 | 653773.00 | 5018844.16 | Non-Participating | 31 |
| 975 | 653729.61 | 5018837.81 | Non-Participating | 32 |
| 976 | 654082.03 | 5018861.09 | Non-Participating | 30 |
| 977 | 654097.91 | 5018818.76 | Non-Participating | 30 |
| 978 | 654051.34 | 5018819.82 | Non-Participating | 30 |
| 979 | 654060.87 | 5018781.72 | Non-Participating | 30 |
| 980 | 654100.02 | 5018783.83 | Non-Participating | 30 |
| 981 | 654098.97 | 5018738.32 | Non-Participating | 30 |
| 982 | 654058.75 | 5018740.44 | Non-Participating | 30 |
| 983 | 654134.95 | 5018784.89 | Non-Participating | 30 |
| 984 | 654136.01 | 5018744.67 | Non-Participating | 30 |
| 985 | 654104.26 | 5018656.83 | Non-Participating | 30 |
| 986 | 654054.52 | 5018682.23 | Non-Participating | 30 |
| 987 | 654011.12 | 5018692.82 | Non-Participating | 30 |
| 988 | 654193.16 | 5018864.27 | Non-Participating | 30 |
| 989 | 654247.13 | 5018830.40 | Non-Participating | 30 |
| 990 | 654284.17 | 5018758.43 | Non-Participating | 30 |
| 991 | 654237.61 | 5018695.99 | Non-Participating | 30 |
| 992 | 654160.35 | 5018557.35 | Non-Participating | 30 |
| 993 | 654118.02 | 5018592.27 | Non-Participating | 30 |
| 994 | 654088.38 | 5018585.92 | Non-Participating | 30 |
| 995 | 654096.85 | 5018546.77 | Non-Participating | 30 |
| 996 | 654075.68 | 5018498.08 | Non-Participating | 30 |
| 997 | 654075.68 | 5018466.33 | Non-Participating | 30 |
| 998 | 654167.76 | 5018458.92 | Non-Participating | 30 |
| 999 | 654156.12 | 5018498.08 | Non-Participating | 30 |
| 1000 | 654013.24 | 5018454.69 | Non-Participating | 30 |

Table B-1: Sensitive Receptor Results by Receptor - Roberts County

| Receptor ID | Coordinates UTM NAD83 Zone 14N | | Participation Status | Project-Only Leq Broadband Sound Level (dBA) |
|-------------|-----------------------------------|------------|----------------------|---|
| | X (m) | Y (m) | | |
| 1001 | 653986.78 | 5018446.22 | Non-Participating | 30 |
| 1002 | 653980.43 | 5018480.09 | Non-Participating | 31 |
| 1003 | 653975.14 | 5018568.99 | Non-Participating | 31 |
| 1004 | 653933.87 | 5018491.73 | Non-Participating | 31 |
| 1005 | 653876.72 | 5018492.79 | Non-Participating | 31 |
| 1006 | 653880.95 | 5018543.59 | Non-Participating | 31 |
| 1007 | 653833.32 | 5018607.09 | Non-Participating | 31 |
| 1008 | 653789.93 | 5018604.97 | Non-Participating | 31 |
| 1009 | 653789.93 | 5018572.17 | Non-Participating | 31 |
| 1010 | 653785.70 | 5018529.83 | Non-Participating | 31 |
| 1011 | 653792.05 | 5018446.22 | Non-Participating | 31 |
| 1012 | 653793.11 | 5018411.30 | Non-Participating | 31 |
| 1013 | 653755.01 | 5018415.53 | Non-Participating | 31 |
| 1014 | 653746.54 | 5018463.16 | Non-Participating | 31 |
| 1015 | 653702.09 | 5018464.22 | Non-Participating | 32 |
| 1016 | 653707.38 | 5018314.99 | Non-Participating | 31 |
| 1017 | 653758.18 | 5018316.05 | Non-Participating | 31 |
| 1018 | 653751.83 | 5018374.26 | Non-Participating | 31 |
| 1019 | 653660.82 | 5018297.00 | Non-Participating | 32 |
| 1020 | 653758.18 | 5018239.85 | Non-Participating | 31 |
| 1021 | 653751.83 | 5018171.06 | Non-Participating | 31 |
| 1022 | 653750.77 | 5018124.49 | Non-Participating | 31 |
| 1023 | 653942.33 | 5017978.44 | Non-Participating | 30 |
| 1024 | 652007.10 | 5018428.62 | Non-Participating | 42 |
| 1025 | 651904.31 | 5018493.71 | Non-Participating | 43 |
| 1026 | 652040.04 | 5018481.80 | Non-Participating | 42 |
| 1027 | 652055.92 | 5018455.21 | Non-Participating | 42 |
| 1028 | 651881.29 | 5018466.72 | Non-Participating | 43 |
| 1029 | 651848.75 | 5018492.91 | Non-Participating | 43 |
| 1030 | 651846.37 | 5018518.31 | Non-Participating | 43 |
| 1031 | 645549.34 | 5018139.28 | Non-Participating | 42 |
| 1032 | 645441.78 | 5018112.69 | Participating | 41 |
| 1033 | 645405.27 | 5018099.60 | Participating | 41 |
| 1034 | 645417.57 | 5018175.80 | Participating | 42 |
| 1035 | 645401.70 | 5018177.38 | Participating | 42 |
| 1036 | 645562.04 | 5018101.98 | Non-Participating | 42 |
| 1037 | 645441.78 | 5018144.84 | Participating | 42 |
| 1038 | 645429.08 | 5018071.42 | Participating | 41 |
| 1039 | 645424.32 | 5018071.42 | Participating | 41 |
| 1040 | 645417.57 | 5018071.42 | Participating | 41 |
| 1041 | 645412.41 | 5018071.02 | Participating | 41 |
| 1042 | 645405.27 | 5018070.62 | Participating | 41 |
| 1043 | 645398.13 | 5018069.83 | Participating | 41 |
| 1044 | 645391.78 | 5018069.83 | Participating | 41 |
| 1045 | 645384.63 | 5018069.43 | Participating | 41 |
| 1046 | 643962.03 | 5018210.66 | Participating | 42 |
| 1047 | 643979.49 | 5018300.61 | Participating | 42 |

Table B-1: Sensitive Receptor Results by Receptor - Roberts County

| Receptor ID | Coordinates UTM NAD83 Zone 14N | | Participation Status | Project-Only Leq Broadband Sound Level (dBA) |
|-------------|-----------------------------------|------------|----------------------|---|
| | X (m) | Y (m) | | |
| 1048 | 643968.38 | 5018335.54 | Participating | 41 |
| 1049 | 643942.45 | 5018308.02 | Participating | 41 |
| 1050 | 643141.20 | 5019297.31 | Non-Participating | 35 |
| 1051 | 643087.63 | 5019295.33 | Non-Participating | 35 |
| 1052 | 643142.39 | 5019386.61 | Non-Participating | 36 |
| 1053 | 645969.02 | 5019070.40 | Participating | 42 |
| 1054 | 645928.01 | 5019106.78 | Participating | 42 |
| 1055 | 646654.96 | 5018883.21 | Non-Participating | 41 |
| 1056 | 646678.77 | 5018921.57 | Non-Participating | 41 |
| 1057 | 646650.99 | 5018984.41 | Non-Participating | 42 |
| 1058 | 646657.60 | 5018952.66 | Non-Participating | 41 |
| 1059 | 646606.01 | 5018985.74 | Non-Participating | 42 |
| 1060 | 646631.14 | 5018927.53 | Non-Participating | 41 |
| 1061 | 647630.61 | 5019088.92 | Participating | 41 |
| 1062 | 647573.72 | 5018982.43 | Participating | 40 |
| 1063 | 647616.72 | 5019021.46 | Participating | 41 |
| 1064 | 647692.13 | 5019070.40 | Participating | 41 |
| 1065 | 647682.86 | 5019092.23 | Participating | 41 |
| 1066 | 648770.30 | 5019338.96 | Non-Participating | 43 |
| 1067 | 648739.88 | 5019368.72 | Non-Participating | 43 |
| 1068 | 649770.43 | 5019268.18 | Non-Participating | 42 |
| 1069 | 649840.55 | 5019297.28 | Non-Participating | 42 |
| 1071 | 644598.95 | 5020889.63 | Participating | 41 |
| 1072 | 645356.99 | 5021362.71 | Non-Participating | 38 |
| 1073 | 645326.03 | 5021338.90 | Non-Participating | 38 |
| 1074 | 644677.53 | 5020973.77 | Participating | 39 |
| 1075 | 644602.13 | 5020963.45 | Participating | 40 |
| 1076 | 644754.53 | 5020911.06 | Participating | 40 |
| 1077 | 644664.04 | 5020911.86 | Participating | 40 |
| 1078 | 644646.58 | 5020880.90 | Participating | 41 |
| 1079 | 644610.06 | 5020920.59 | Participating | 40 |
| 1080 | 644582.28 | 5020830.89 | Participating | 42 |
| 1081 | 645450.73 | 5022016.36 | Non-Participating | 34 |
| 1082 | 645459.86 | 5021977.07 | Non-Participating | 35 |
| 1083 | 647540.28 | 5021057.51 | Non-Participating | 40 |
| 1084 | 650455.16 | 5020356.05 | Participating | 42 |
| 1085 | 650478.98 | 5020337.00 | Participating | 42 |
| 1086 | 650430.29 | 5020350.23 | Participating | 41 |
| 1087 | 651845.75 | 5019968.54 | Non-Participating | 38 |
| 1088 | 651820.09 | 5019967.22 | Participating | 38 |
| 1089 | 652148.21 | 5020111.75 | Non-Participating | 36 |
| 1090 | 652165.41 | 5020130.93 | Non-Participating | 36 |
| 1091 | 653419.21 | 5019117.51 | Non-Participating | 33 |
| 1092 | 653498.58 | 5019091.05 | Non-Participating | 33 |
| 1093 | 653454.27 | 5019124.78 | Non-Participating | 33 |
| 1095 | 653878.92 | 5019204.82 | Non-Participating | 31 |
| 1096 | 653892.81 | 5019481.31 | Non-Participating | 31 |

Table B-1: Sensitive Receptor Results by Receptor - Roberts County

| Receptor ID | Coordinates UTM NAD83 Zone 14N | | Participation Status | Project-Only Leq Broadband Sound Level (dBA) |
|-------------|-----------------------------------|------------|----------------------|---|
| | X (m) | Y (m) | | |
| 1097 | 654050.90 | 5019609.63 | Non-Participating | 30 |
| 1098 | 654293.66 | 5019607.65 | Non-Participating | 29 |
| 1162 | 652138.05 | 5021042.12 | Non-Participating | 34 |
| 1163 | 652096.38 | 5021072.55 | Non-Participating | 34 |
| 1164 | 651763.66 | 5021900.70 | Non-Participating | 32 |
| 1165 | 651747.13 | 5021999.92 | Non-Participating | 32 |
| 1166 | 651799.38 | 5021975.44 | Non-Participating | 32 |
| 1167 | 651800.70 | 5021983.38 | Non-Participating | 32 |
| 1168 | 651802.69 | 5021991.98 | Non-Participating | 32 |
| 1169 | 651774.25 | 5022027.04 | Non-Participating | 32 |
| 1171 | 650692.76 | 5022671.96 | Non-Participating | 31 |
| 1172 | 650657.04 | 5022683.21 | Non-Participating | 31 |
| 1173 | 650323.00 | 5022839.31 | Non-Participating | 29 |
| 1174 | 650256.86 | 5022865.77 | Non-Participating | 29 |
| 1175 | 650244.29 | 5022880.98 | Non-Participating | 30 |
| 1177 | 648505.80 | 5022642.72 | Non-Participating | 31 |
| 1178 | 648394.67 | 5022729.51 | Non-Participating | 31 |
| 1179 | 648456.06 | 5022768.67 | Non-Participating | 31 |
| 1180 | 648470.34 | 5022730.04 | Non-Participating | 31 |
| 1181 | 648648.67 | 5021826.75 | Non-Participating | 34 |
| 1182 | 648635.97 | 5021919.35 | Non-Participating | 34 |
| 1183 | 648632.80 | 5021869.08 | Non-Participating | 34 |
| 1184 | 648676.72 | 5021823.04 | Non-Participating | 34 |
| 1185 | 648673.54 | 5021782.83 | Non-Participating | 34 |
| 1186 | 648675.66 | 5021761.13 | Non-Participating | 34 |
| 1217 | 653334.91 | 5022188.01 | Non-Participating | 28 |
| 1218 | 653362.03 | 5022242.91 | Non-Participating | 28 |
| 1219 | 653358.73 | 5022176.11 | Non-Participating | 28 |
| 1220 | 653401.72 | 5022226.38 | Non-Participating | 28 |
| 1371 | 641377.12 | 5021901.76 | Non-Participating | 27 |
| 2464 | 653885.69 | 5018617.60 | Non-Participating | 31 |
| 2569 | 643740.41 | 5020526.47 | Participating | 39 |
| 2570 | 643763.90 | 5020463.66 | Participating | 40 |
| 3369 | 653357.06 | 5019308.47 | Non-Participating | 33 |
| 3370 | 653386.66 | 5019309.46 | Non-Participating | 33 |
| 3371 | 653412.09 | 5019310.84 | Non-Participating | 33 |
| 3372 | 653442.11 | 5019311.42 | Non-Participating | 33 |
| 3373 | 653467.54 | 5019311.97 | Non-Participating | 33 |
| 3374 | 653494.22 | 5019312.94 | Non-Participating | 32 |
| 3769 | 653603.40 | 5018596.29 | Non-Participating | 32 |
| 3770 | 653604.82 | 5018578.43 | Non-Participating | 32 |
| 3771 | 653605.25 | 5018559.25 | Non-Participating | 32 |
| 3772 | 653606.32 | 5018544.38 | Non-Participating | 32 |
| 3773 | 653606.78 | 5018519.91 | Non-Participating | 32 |
| 3774 | 653738.12 | 5018572.85 | Non-Participating | 31 |
| 3775 | 653833.37 | 5018573.34 | Non-Participating | 31 |
| 3776 | 653746.30 | 5018527.91 | Non-Participating | 31 |

Table B-1: Sensitive Receptor Results by Receptor - Roberts County

| Receptor ID | Coordinates UTM NAD83 Zone 14N | | Participation Status | Project-Only Leq Broadband Sound Level (dBA) |
|-------------|-----------------------------------|------------|----------------------|---|
| | X (m) | Y (m) | | |
| 3777 | 653783.39 | 5018643.52 | Non-Participating | 31 |
| 3778 | 653830.24 | 5018539.59 | Non-Participating | 31 |
| 3779 | 653824.23 | 5018486.98 | Non-Participating | 31 |
| 3780 | 653711.74 | 5018495.32 | Non-Participating | 32 |
| 3781 | 653836.59 | 5018462.57 | Non-Participating | 31 |
| 3782 | 653835.10 | 5018431.80 | Non-Participating | 31 |
| 3783 | 653698.14 | 5018375.86 | Non-Participating | 32 |
| 3784 | 653712.83 | 5018413.97 | Non-Participating | 32 |
| 3785 | 653654.57 | 5018423.59 | Non-Participating | 32 |
| 3786 | 653610.61 | 5018419.39 | Non-Participating | 32 |
| 3787 | 653608.95 | 5018483.21 | Non-Participating | 32 |
| 3788 | 653609.72 | 5018462.71 | Non-Participating | 32 |
| 3789 | 653612.12 | 5018445.52 | Non-Participating | 32 |
| 3790 | 653731.26 | 5018526.38 | Non-Participating | 32 |
| 3791 | 653653.83 | 5018482.45 | Non-Participating | 32 |
| 3792 | 653684.55 | 5018762.40 | Non-Participating | 32 |
| 3793 | 653822.23 | 5018807.10 | Non-Participating | 31 |
| 3794 | 653619.64 | 5018711.28 | Non-Participating | 32 |
| 3795 | 653796.87 | 5018723.96 | Non-Participating | 31 |
| 3796 | 653153.96 | 5019379.44 | Non-Participating | 34 |
| 3798 | 647460.57 | 5018633.20 | Non-Participating | 38 |

Table B-2: Sensitive Receptor Results by Receptor - Grant County

| Receptor ID | Coordinates UTM NAD83 Zone 14N | | Participation Status | Project-Only Leq Broadband Sound Level (dBA) |
|-------------|-----------------------------------|------------|----------------------|---|
| | X (m) | Y (m) | | |
| 569 | 650655.61 | 5009314.95 | Non-Participating | 31 |
| 570 | 650655.44 | 5009322.09 | Non-Participating | 31 |
| 571 | 650655.88 | 5009328.95 | Non-Participating | 31 |
| 572 | 650812.37 | 5008555.08 | Non-Participating | 28 |
| 573 | 650357.33 | 5009074.91 | Non-Participating | 31 |
| 574 | 650361.64 | 5009076.05 | Non-Participating | 31 |
| 575 | 650367.78 | 5009075.16 | Non-Participating | 31 |
| 576 | 650373.62 | 5009074.85 | Non-Participating | 31 |
| 577 | 650353.13 | 5009075.55 | Non-Participating | 31 |
| 578 | 650418.63 | 5008803.51 | Non-Participating | 30 |
| 579 | 650424.60 | 5008803.66 | Non-Participating | 30 |
| 580 | 650430.12 | 5008803.94 | Non-Participating | 30 |
| 581 | 650435.65 | 5008803.92 | Non-Participating | 30 |
| 582 | 650440.88 | 5008804.04 | Non-Participating | 30 |
| 584 | 645856.45 | 5008543.80 | Non-Participating | 27 |
| 585 | 645863.36 | 5008543.59 | Non-Participating | 27 |
| 586 | 645872.28 | 5008610.60 | Non-Participating | 27 |
| 587 | 645881.05 | 5008610.62 | Non-Participating | 27 |
| 588 | 645893.33 | 5008612.76 | Non-Participating | 27 |
| 589 | 645913.20 | 5008609.50 | Non-Participating | 27 |
| 590 | 645825.23 | 5008480.74 | Non-Participating | 27 |
| 591 | 646381.49 | 5009661.58 | Non-Participating | 30 |
| 592 | 647256.80 | 5010821.58 | Participating | 35 |
| 593 | 647235.37 | 5010818.40 | Participating | 35 |
| 594 | 647223.68 | 5010820.21 | Participating | 35 |
| 595 | 649109.27 | 5010799.30 | Non-Participating | 41 |
| 596 | 649089.51 | 5010782.32 | Non-Participating | 41 |
| 597 | 649095.33 | 5010782.45 | Non-Participating | 41 |
| 598 | 649102.06 | 5010781.94 | Non-Participating | 42 |
| 638 | 646364.45 | 5011342.22 | Non-Participating | 38 |
| 639 | 645581.19 | 5011275.19 | Participating | 36 |
| 640 | 645600.32 | 5011274.27 | Participating | 36 |
| 641 | 645611.23 | 5011274.52 | Participating | 36 |
| 667 | 654477.01 | 5017621.71 | Non-Participating | 27 |
| 668 | 654369.31 | 5017619.71 | Non-Participating | 28 |
| 671 | 654440.66 | 5017764.63 | Non-Participating | 27 |
| 672 | 654505.30 | 5017699.22 | Non-Participating | 25 |
| 673 | 654765.63 | 5017786.32 | Non-Participating | 28 |
| 674 | 650706.84 | 5013445.00 | Non-Participating | 35 |
| 675 | 649055.08 | 5013130.33 | Participating | 43 |
| 676 | 649111.77 | 5013137.89 | Participating | 42 |
| 677 | 649127.84 | 5013136.95 | Participating | 42 |
| 678 | 649096.66 | 5013193.64 | Participating | 42 |
| 679 | 649108.94 | 5013193.64 | Participating | 42 |
| 680 | 649108.94 | 5013193.64 | Participating | 42 |
| 681 | 649000.27 | 5013158.68 | Participating | 43 |
| 682 | 648992.71 | 5013143.56 | Participating | 43 |

Table B-2: Sensitive Receptor Results by Receptor - Grant County

| Receptor ID | Coordinates UTM NAD83 Zone 14N | | Participation Status | Project-Only Leq Broadband Sound Level (dBA) |
|-------------|-----------------------------------|------------|----------------------|---|
| | X (m) | Y (m) | | |
| 683 | 647329.54 | 5013167.93 | Non-Participating | 40 |
| 684 | 647338.47 | 5013168.60 | Non-Participating | 40 |
| 685 | 647346.08 | 5013169.92 | Non-Participating | 40 |
| 686 | 647355.67 | 5013170.25 | Non-Participating | 40 |
| 687 | 647323.59 | 5013228.79 | Non-Participating | 40 |
| 688 | 647329.54 | 5013228.79 | Non-Participating | 40 |
| 689 | 647139.01 | 5014024.33 | Participating | 42 |
| 690 | 647091.06 | 5014040.04 | Participating | 42 |
| 691 | 647096.85 | 5013921.81 | Participating | 43 |
| 692 | 647085.68 | 5013986.57 | Participating | 43 |
| 693 | 647086.24 | 5013976.65 | Participating | 43 |
| 694 | 647086.79 | 5013967.83 | Participating | 43 |
| 695 | 647076.86 | 5013967.83 | Participating | 43 |
| 696 | 647075.21 | 5013976.65 | Participating | 43 |
| 697 | 647075.21 | 5013987.12 | Participating | 43 |
| 698 | 647076.86 | 5013934.76 | Participating | 43 |
| 699 | 647078.52 | 5013924.84 | Participating | 43 |
| 700 | 647048.75 | 5013895.07 | Participating | 44 |
| 701 | 647049.30 | 5013905.54 | Participating | 44 |
| 702 | 647036.63 | 5013905.54 | Participating | 44 |
| 703 | 647046.55 | 5013925.94 | Participating | 44 |
| 704 | 647043.79 | 5013934.76 | Participating | 44 |
| 705 | 647045.45 | 5013943.03 | Participating | 44 |
| 706 | 647044.89 | 5013963.97 | Participating | 44 |
| 707 | 647044.34 | 5013978.86 | Participating | 43 |
| 708 | 647043.79 | 5013986.57 | Participating | 43 |
| 709 | 647045.45 | 5014008.62 | Participating | 43 |
| 710 | 647038.28 | 5014008.62 | Participating | 43 |
| 711 | 646127.95 | 5014229.11 | Participating | 40 |
| 712 | 646121.88 | 5014229.11 | Participating | 40 |
| 713 | 646115.27 | 5014229.11 | Participating | 40 |
| 714 | 646108.65 | 5014229.66 | Participating | 40 |
| 715 | 646089.91 | 5014221.39 | Participating | 39 |
| 716 | 646153.85 | 5014222.49 | Participating | 40 |
| 717 | 646195.19 | 5014175.09 | Participating | 40 |
| 718 | 646118.02 | 5014249.50 | Participating | 40 |
| 719 | 646084.40 | 5014279.82 | Participating | 39 |
| 720 | 646111.96 | 5014301.87 | Participating | 39 |
| 721 | 650227.89 | 5014434.71 | Non-Participating | 41 |
| 722 | 650207.50 | 5014449.60 | Non-Participating | 42 |
| 723 | 650200.88 | 5014449.60 | Non-Participating | 42 |
| 724 | 650171.67 | 5014421.48 | Non-Participating | 41 |
| 725 | 650180.49 | 5014452.90 | Non-Participating | 42 |
| 726 | 650160.64 | 5014422.59 | Non-Participating | 41 |
| 727 | 648895.05 | 5014567.56 | Non-Participating | 41 |
| 728 | 648857.57 | 5014749.46 | Participating | 40 |
| 729 | 648896.15 | 5014710.32 | Participating | 40 |

Table B-2: Sensitive Receptor Results by Receptor - Grant County

| Receptor ID | Coordinates UTM NAD83 Zone 14N | | Participation Status | Project-Only Leq Broadband Sound Level (dBA) |
|-------------|-----------------------------------|------------|----------------------|---|
| | X (m) | Y (m) | | |
| 730 | 648954.58 | 5014688.27 | Participating | 40 |
| 731 | 648938.60 | 5014782.53 | Participating | 40 |
| 732 | 648893.40 | 5014764.34 | Participating | 40 |
| 733 | 648927.57 | 5014772.06 | Participating | 40 |
| 734 | 648928.12 | 5014779.77 | Participating | 40 |
| 735 | 648901.67 | 5014779.22 | Participating | 40 |
| 736 | 648903.32 | 5014772.61 | Participating | 40 |
| 737 | 648903.32 | 5014764.34 | Participating | 40 |
| 738 | 647097.54 | 5014730.16 | Participating | 41 |
| 739 | 647101.94 | 5014808.44 | Participating | 41 |
| 740 | 647073.83 | 5014779.77 | Participating | 41 |
| 741 | 647096.43 | 5014673.39 | Participating | 41 |
| 742 | 647096.43 | 5014667.88 | Participating | 41 |
| 743 | 645515.54 | 5014966.64 | Participating | 38 |
| 744 | 645511.35 | 5015039.18 | Participating | 38 |
| 745 | 645500.11 | 5015039.51 | Participating | 38 |
| 746 | 645488.20 | 5015041.82 | Participating | 38 |
| 747 | 645475.97 | 5015042.48 | Participating | 38 |
| 748 | 645483.57 | 5015016.03 | Participating | 38 |
| 752 | 645456.19 | 5015387.96 | Participating | 38 |
| 756 | 644633.40 | 5014490.63 | Participating | 33 |
| 757 | 644699.02 | 5014523.97 | Participating | 33 |
| 758 | 644688.97 | 5014556.78 | Participating | 33 |
| 759 | 644662.51 | 5014589.06 | Participating | 33 |
| 760 | 644650.87 | 5014618.69 | Participating | 33 |
| 761 | 644676.80 | 5014628.74 | Participating | 33 |
| 762 | 644346.60 | 5014822.95 | Participating | 32 |
| 763 | 644380.46 | 5014773.74 | Participating | 32 |
| 764 | 644415.39 | 5014756.80 | Participating | 33 |
| 765 | 644433.91 | 5014726.64 | Participating | 33 |
| 766 | 644471.48 | 5014679.01 | Participating | 33 |
| 767 | 644488.94 | 5014596.46 | Participating | 33 |
| 768 | 644603.24 | 5014591.17 | Participating | 33 |
| 769 | 647399.27 | 5015986.51 | Participating | 40 |
| 770 | 647454.83 | 5016038.43 | Participating | 40 |
| 771 | 647445.90 | 5015956.74 | Participating | 40 |
| 772 | 647422.42 | 5015911.76 | Participating | 40 |
| 773 | 647459.13 | 5016012.97 | Participating | 40 |
| 774 | 647461.45 | 5015953.10 | Participating | 40 |
| 775 | 647457.48 | 5016001.72 | Participating | 40 |
| 776 | 651813.15 | 5014591.35 | Non-Participating | 32 |
| 777 | 651778.23 | 5014579.18 | Non-Participating | 33 |
| 778 | 651881.15 | 5014455.09 | Non-Participating | 32 |
| 779 | 651659.69 | 5014649.03 | Non-Participating | 33 |
| 797 | 644388.43 | 5015993.78 | Participating | 34 |
| 799 | 644347.42 | 5015979.23 | Participating | 34 |
| 800 | 643969.72 | 5016091.68 | Non-Participating | 34 |

Table B-2: Sensitive Receptor Results by Receptor - Grant County

| Receptor ID | Coordinates UTM NAD83 Zone 14N | | Participation Status | Project-Only Leq Broadband Sound Level (dBA) |
|-------------|-----------------------------------|------------|----------------------|---|
| | X (m) | Y (m) | | |
| 801 | 643999.49 | 5016084.40 | Non-Participating | 34 |
| 802 | 643977.66 | 5016340.39 | Non-Participating | 35 |
| 803 | 646221.99 | 5016509.06 | Participating | 37 |
| 804 | 646190.90 | 5016458.79 | Participating | 37 |
| 805 | 646145.92 | 5016476.65 | Participating | 37 |
| 806 | 646127.40 | 5016510.38 | Participating | 37 |
| 807 | 646163.78 | 5016423.73 | Participating | 37 |
| 808 | 646171.06 | 5016423.07 | Participating | 37 |
| 809 | 647283.77 | 5016724.17 | Participating | 38 |
| 810 | 647284.96 | 5016717.42 | Participating | 38 |
| 811 | 647286.15 | 5016710.28 | Participating | 38 |
| 812 | 647276.62 | 5016705.91 | Participating | 38 |
| 813 | 647227.01 | 5016714.64 | Participating | 38 |
| 814 | 647294.09 | 5016667.81 | Participating | 38 |
| 815 | 647292.90 | 5016636.46 | Participating | 39 |
| 816 | 647225.43 | 5016639.23 | Participating | 38 |
| 817 | 647920.06 | 5017342.93 | Participating | 39 |
| 818 | 647914.50 | 5017334.59 | Participating | 39 |
| 819 | 647910.93 | 5017326.66 | Participating | 39 |
| 820 | 647907.36 | 5017321.10 | Participating | 39 |
| 821 | 647904.58 | 5017314.75 | Participating | 39 |
| 822 | 647901.41 | 5017308.80 | Participating | 39 |
| 823 | 647897.83 | 5017302.45 | Participating | 39 |
| 824 | 647929.58 | 5017194.50 | Participating | 40 |
| 825 | 647921.25 | 5017194.50 | Participating | 40 |
| 826 | 647922.84 | 5017174.65 | Participating | 40 |
| 827 | 647929.58 | 5017175.84 | Participating | 40 |
| 828 | 647874.81 | 5017215.13 | Participating | 39 |
| 829 | 647876.80 | 5017207.59 | Participating | 39 |
| 830 | 647779.17 | 5017234.58 | Participating | 39 |
| 831 | 647831.16 | 5017234.18 | Participating | 39 |
| 832 | 647866.48 | 5017264.35 | Participating | 39 |
| 833 | 647950.22 | 5017211.56 | Participating | 39 |
| 834 | 647910.93 | 5017290.14 | Participating | 39 |
| 835 | 647897.44 | 5017210.37 | Participating | 39 |
| 836 | 647897.04 | 5017225.85 | Participating | 39 |
| 837 | 647851.40 | 5017188.15 | Participating | 39 |
| 838 | 647860.92 | 5017125.44 | Participating | 40 |
| 839 | 647898.23 | 5017253.63 | Participating | 39 |
| 840 | 648971.54 | 5015975.43 | Non-Participating | 42 |
| 841 | 652396.31 | 5016321.44 | Non-Participating | 32 |
| 842 | 652387.85 | 5016207.14 | Non-Participating | 32 |
| 843 | 652390.49 | 5016269.05 | Non-Participating | 32 |
| 844 | 652391.55 | 5016251.06 | Non-Participating | 32 |
| 845 | 652435.47 | 5016190.20 | Non-Participating | 31 |
| 846 | 652438.65 | 5016205.55 | Non-Participating | 31 |
| 1381 | 644892.87 | 5009700.02 | Non-Participating | 28 |

Table B-2: Sensitive Receptor Results by Receptor - Grant County

| Receptor ID | Coordinates UTM NAD83 Zone 14N | | Participation Status | Project-Only Leq Broadband Sound Level (dBA) |
|-------------|-----------------------------------|------------|----------------------|---|
| | X (m) | Y (m) | | |
| 1382 | 644892.46 | 5009690.93 | Non-Participating | 28 |
| 1383 | 644892.94 | 5009681.23 | Non-Participating | 28 |
| 1384 | 644801.52 | 5009641.13 | Non-Participating | 28 |
| 1385 | 644802.36 | 5009635.06 | Non-Participating | 28 |
| 1976 | 647303.97 | 5007251.04 | Non-Participating | 26 |
| 1977 | 647254.71 | 5007256.45 | Non-Participating | 26 |
| 1978 | 647224.09 | 5007221.18 | Non-Participating | 26 |
| 1979 | 647282.08 | 5007185.04 | Non-Participating | 26 |
| 1980 | 647295.49 | 5007219.92 | Non-Participating | 26 |
| 1981 | 647232.96 | 5007186.75 | Non-Participating | 26 |
| 1982 | 648397.12 | 5007404.49 | Non-Participating | 26 |
| 1983 | 648429.08 | 5007405.89 | Non-Participating | 26 |
| 1984 | 648407.50 | 5007439.13 | Non-Participating | 26 |
| 1985 | 648480.56 | 5007489.68 | Non-Participating | 26 |
| 1986 | 649016.69 | 5007529.25 | Non-Participating | 27 |
| 1987 | 649083.23 | 5007600.36 | Non-Participating | 27 |
| 1988 | 649022.20 | 5007623.82 | Non-Participating | 27 |
| 1989 | 649067.37 | 5007215.51 | Non-Participating | 26 |
| 2186 | 652004.55 | 5009315.55 | Non-Participating | 26 |
| 2187 | 652011.48 | 5009353.67 | Non-Participating | 26 |
| 2188 | 651968.05 | 5009280.43 | Non-Participating | 26 |
| 2189 | 651984.41 | 5009299.06 | Non-Participating | 26 |
| 2190 | 652079.70 | 5009234.35 | Non-Participating | 25 |
| 2191 | 651974.01 | 5009343.47 | Non-Participating | 26 |
| 2192 | 651978.16 | 5009341.71 | Non-Participating | 26 |
| 2193 | 652045.23 | 5009239.11 | Non-Participating | 26 |
| 2194 | 650636.03 | 5009296.62 | Non-Participating | 31 |
| 2195 | 650621.29 | 5009376.36 | Non-Participating | 31 |
| 2196 | 650637.75 | 5009375.27 | Non-Participating | 31 |
| 2197 | 650640.57 | 5009319.36 | Non-Participating | 31 |
| 2198 | 650789.37 | 5008570.83 | Non-Participating | 28 |
| 2199 | 650792.95 | 5008524.02 | Non-Participating | 28 |
| 2200 | 650451.20 | 5008993.05 | Non-Participating | 30 |
| 2201 | 650511.28 | 5008972.89 | Non-Participating | 30 |
| 2202 | 650454.57 | 5009065.19 | Non-Participating | 31 |
| 2203 | 650397.34 | 5009047.01 | Non-Participating | 31 |
| 2204 | 650431.62 | 5009062.71 | Non-Participating | 31 |
| 2205 | 650503.26 | 5009033.74 | Non-Participating | 30 |
| 2206 | 650245.22 | 5009028.03 | Non-Participating | 31 |
| 2207 | 650227.43 | 5009105.24 | Non-Participating | 31 |
| 2208 | 650291.19 | 5009109.20 | Non-Participating | 31 |
| 2209 | 650266.51 | 5009129.39 | Non-Participating | 31 |
| 2210 | 650404.49 | 5008782.78 | Non-Participating | 30 |
| 2211 | 650402.75 | 5008799.12 | Non-Participating | 30 |
| 2212 | 650493.66 | 5008776.86 | Non-Participating | 29 |
| 2213 | 645881.03 | 5008546.97 | Non-Participating | 27 |
| 2214 | 645840.98 | 5008574.90 | Non-Participating | 27 |

Table B-2: Sensitive Receptor Results by Receptor - Grant County

| Receptor ID | Coordinates UTM NAD83 Zone 14N | | Participation Status | Project-Only Leq Broadband Sound Level (dBA) |
|-------------|-----------------------------------|------------|----------------------|---|
| | X (m) | Y (m) | | |
| 2215 | 645876.21 | 5008512.81 | Non-Participating | 27 |
| 2216 | 645901.09 | 5007993.08 | Non-Participating | 26 |
| 2217 | 645708.61 | 5008004.25 | Non-Participating | 26 |
| 2218 | 645720.53 | 5008021.46 | Non-Participating | 26 |
| 2219 | 645631.03 | 5008056.63 | Non-Participating | 26 |
| 2220 | 645560.46 | 5008023.00 | Non-Participating | 26 |
| 2221 | 645560.46 | 5008023.00 | Non-Participating | 26 |
| 2222 | 645561.02 | 5008023.38 | Non-Participating | 26 |
| 2223 | 645631.03 | 5008056.63 | Non-Participating | 26 |
| 2224 | 645631.03 | 5008056.63 | Non-Participating | 26 |
| 2225 | 645608.28 | 5007990.03 | Non-Participating | 26 |
| 2226 | 645578.93 | 5008048.55 | Non-Participating | 26 |
| 2227 | 644883.47 | 5009382.64 | Non-Participating | 28 |
| 2228 | 644887.00 | 5009408.03 | Non-Participating | 28 |
| 2229 | 644906.27 | 5009414.05 | Non-Participating | 28 |
| 2230 | 644920.93 | 5009426.30 | Non-Participating | 28 |
| 2231 | 646350.92 | 5009704.64 | Non-Participating | 30 |
| 2232 | 646346.49 | 5009644.25 | Non-Participating | 30 |
| 2233 | 646389.71 | 5009664.22 | Non-Participating | 30 |
| 2234 | 646415.62 | 5009648.30 | Non-Participating | 30 |
| 2235 | 646427.10 | 5009646.11 | Non-Participating | 30 |
| 2236 | 646374.72 | 5009624.58 | Non-Participating | 30 |
| 2237 | 647150.23 | 5010852.56 | Participating | 35 |
| 2238 | 647194.50 | 5010875.61 | Participating | 35 |
| 2239 | 647229.03 | 5010859.63 | Participating | 35 |
| 2240 | 648982.24 | 5010914.63 | Non-Participating | 40 |
| 2241 | 649080.25 | 5010909.13 | Non-Participating | 41 |
| 2242 | 648974.09 | 5010822.91 | Non-Participating | 41 |
| 2243 | 650458.09 | 5010135.55 | Non-Participating | 34 |
| 2244 | 651399.84 | 5010537.19 | Non-Participating | 30 |
| 2270 | 645591.52 | 5011330.52 | Participating | 36 |
| 2271 | 646356.26 | 5011253.61 | Non-Participating | 37 |
| 2272 | 645585.78 | 5011401.80 | Participating | 37 |
| 2273 | 645538.58 | 5011347.66 | Participating | 36 |
| 2274 | 646389.47 | 5011293.14 | Non-Participating | 38 |
| 2275 | 646415.18 | 5011273.33 | Non-Participating | 37 |
| 2276 | 646361.55 | 5011290.46 | Non-Participating | 38 |
| 2277 | 647415.35 | 5011482.18 | Non-Participating | 37 |
| 2278 | 647379.17 | 5011394.43 | Non-Participating | 37 |
| 2293 | 650616.12 | 5013442.16 | Non-Participating | 35 |
| 2294 | 650696.44 | 5013445.94 | Non-Participating | 35 |
| 2295 | 650676.60 | 5013430.83 | Non-Participating | 35 |
| 2296 | 650673.76 | 5013421.38 | Non-Participating | 35 |
| 2297 | 650627.46 | 5013453.50 | Non-Participating | 35 |
| 2298 | 649069.25 | 5013233.33 | Participating | 43 |
| 2299 | 649041.85 | 5013179.47 | Participating | 43 |
| 2300 | 649080.59 | 5013142.62 | Participating | 43 |

Table B-2: Sensitive Receptor Results by Receptor - Grant County

| Receptor ID | Coordinates UTM NAD83 Zone 14N | | Participation Status | Project-Only Leq Broadband Sound Level (dBA) |
|-------------|-----------------------------------|------------|----------------------|---|
| | X (m) | Y (m) | | |
| 2301 | 649008.78 | 5013133.17 | Participating | 43 |
| 2302 | 649037.12 | 5013089.70 | Participating | 43 |
| 2303 | 648954.91 | 5013131.28 | Participating | 43 |
| 2304 | 648997.44 | 5013169.08 | Participating | 43 |
| 2305 | 648987.99 | 5013202.15 | Participating | 43 |
| 2306 | 647290.87 | 5013273.96 | Non-Participating | 40 |
| 2307 | 647329.61 | 5013373.18 | Non-Participating | 40 |
| 2308 | 647343.79 | 5013329.72 | Non-Participating | 40 |
| 2309 | 647376.86 | 5013304.20 | Non-Participating | 40 |
| 2310 | 647304.10 | 5013205.93 | Non-Participating | 40 |
| 2311 | 647304.10 | 5013176.64 | Non-Participating | 40 |
| 2312 | 647295.15 | 5013319.08 | Non-Participating | 40 |
| 2313 | 647295.81 | 5013385.89 | Non-Participating | 40 |
| 2314 | 647298.12 | 5013371.00 | Non-Participating | 40 |
| 2423 | 643933.96 | 5009635.42 | Non-Participating | 27 |
| 2424 | 643946.39 | 5009641.33 | Non-Participating | 27 |
| 2425 | 643975.79 | 5009665.94 | Non-Participating | 27 |
| 2426 | 644853.33 | 5009638.98 | Non-Participating | 28 |
| 2427 | 644862.14 | 5009641.30 | Non-Participating | 28 |
| 2428 | 644848.89 | 5009672.37 | Non-Participating | 28 |
| 2429 | 644901.25 | 5009666.58 | Non-Participating | 28 |
| 2430 | 644788.31 | 5009700.09 | Non-Participating | 28 |
| 2431 | 644753.13 | 5009673.55 | Non-Participating | 28 |
| 2432 | 644681.23 | 5009668.07 | Non-Participating | 28 |
| 2433 | 644718.39 | 5009658.52 | Non-Participating | 28 |
| 2434 | 644728.55 | 5009671.12 | Non-Participating | 28 |
| 2435 | 644759.74 | 5009620.13 | Non-Participating | 28 |
| 2436 | 644726.99 | 5009642.96 | Non-Participating | 28 |
| 2437 | 644749.25 | 5009654.50 | Non-Participating | 28 |
| 2438 | 644793.42 | 5009647.29 | Non-Participating | 28 |
| 2439 | 644803.12 | 5009672.33 | Non-Participating | 28 |
| 2440 | 644801.56 | 5009619.01 | Non-Participating | 28 |
| 2441 | 644801.96 | 5009626.88 | Non-Participating | 28 |
| 2469 | 645864.11 | 5008430.88 | Non-Participating | 27 |
| 2495 | 648692.68 | 5007983.40 | Non-Participating | 28 |
| 2496 | 643667.62 | 5012693.36 | Non-Participating | 30 |
| 2497 | 643627.55 | 5012618.92 | Non-Participating | 29 |
| 2498 | 643612.69 | 5012703.95 | Non-Participating | 29 |
| 2499 | 643588.71 | 5012604.37 | Non-Participating | 29 |
| 2500 | 643616.37 | 5012655.62 | Non-Participating | 29 |
| 2521 | 644116.25 | 5010595.94 | Non-Participating | 28 |
| 2522 | 644199.80 | 5010616.97 | Non-Participating | 27 |
| 2523 | 644157.37 | 5010568.03 | Non-Participating | 27 |
| 2524 | 644193.15 | 5010568.01 | Non-Participating | 27 |
| 2525 | 644166.97 | 5010609.29 | Non-Participating | 27 |
| 2526 | 644177.53 | 5010608.42 | Non-Participating | 27 |
| 2527 | 644178.38 | 5010595.40 | Non-Participating | 27 |

Table B-2: Sensitive Receptor Results by Receptor - Grant County

| Receptor ID | Coordinates UTM NAD83 Zone 14N | | Participation Status | Project-Only Leq Broadband Sound Level (dBA) |
|-------------|-----------------------------------|------------|----------------------|---|
| | X (m) | Y (m) | | |
| 2528 | 645577.99 | 5010725.78 | Participating | 33 |
| 2529 | 645540.65 | 5010751.32 | Participating | 33 |
| 2530 | 645554.61 | 5010749.35 | Participating | 33 |
| 2554 | 643750.44 | 5016047.80 | Non-Participating | 33 |
| 2555 | 643882.17 | 5016060.13 | Non-Participating | 33 |
| 2556 | 643811.08 | 5015949.57 | Non-Participating | 33 |
| 2557 | 643861.64 | 5015986.64 | Non-Participating | 33 |
| 2558 | 643864.12 | 5016147.92 | Non-Participating | 33 |
| 2559 | 643643.91 | 5015915.41 | Non-Participating | 32 |
| 2560 | 643872.16 | 5016102.25 | Non-Participating | 33 |
| 2561 | 643872.81 | 5016086.78 | Non-Participating | 33 |
| 2562 | 643871.79 | 5016080.04 | Non-Participating | 33 |
| 2563 | 643866.02 | 5016051.00 | Non-Participating | 33 |
| 2564 | 643873.30 | 5016052.04 | Non-Participating | 33 |
| 2565 | 643727.73 | 5015980.11 | Non-Participating | 33 |
| 2566 | 643755.87 | 5015975.78 | Non-Participating | 33 |
| 2567 | 643766.66 | 5015976.32 | Non-Participating | 33 |
| 2568 | 643783.89 | 5015976.41 | Non-Participating | 33 |
| 2571 | 645455.16 | 5015327.96 | Participating | 38 |
| 2572 | 645476.01 | 5015383.27 | Participating | 39 |
| 2573 | 645485.86 | 5015380.02 | Participating | 39 |
| 2574 | 645493.52 | 5015381.73 | Participating | 39 |
| 2575 | 645504.71 | 5015378.12 | Participating | 39 |
| 2576 | 645515.66 | 5015380.47 | Participating | 39 |
| 2578 | 646310.24 | 5014306.02 | Participating | 41 |
| 2579 | 649001.28 | 5014751.92 | Participating | 40 |
| 2580 | 648997.19 | 5014739.07 | Participating | 40 |
| 2972 | 644922.56 | 5009429.71 | Non-Participating | 28 |
| 2973 | 649025.05 | 5010906.20 | Non-Participating | 41 |
| 2974 | 647394.85 | 5011472.38 | Non-Participating | 37 |
| 2975 | 643939.34 | 5009639.68 | Non-Participating | 27 |
| 2976 | 644856.17 | 5009637.68 | Non-Participating | 28 |
| 3797 | 644380.38 | 5016007.67 | Participating | 34 |
| 4198 | 644000.03 | 5014277.21 | Non-Participating | 31 |