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June 20, 2013

Via Electronic Filing

Ms. Betty McCauly
Administration/Docketing
Public Utilities Commission of Ohio
180 East Broad Street, 11th Floor
Columbus, OH 43215-3793

**Re: Northwest Ohio Wind Energy, LLC
OPSB Case No. 13-197-EL-BGN**

Dear Ms. McCauly:

On May 28, 2013, Northwest Ohio Wind Energy, LLC ("Northwest") filed an Application with the Ohio Power Siting Board for a Certificate of Environmental Compatibility and Public Need under Ohio Administrative Code Chapter 4906-17. The purpose of this letter is to submit for late filing Appendix I, Noise Impact Study. As Staff is aware, Northwest has been waiting for this study, which has just been received.

Also attached is a new application narrative for Section 4906-17-08 Social and Ecological Data, (A) Health and Safety (2) Noise, which has been updated to reflect the noise study of Appendix I. The attached pages replace the application narrative beginning the bottom of page 66 through page 74 of the application.

Please do not hesitate to contact me if you have any questions.

Sincerely,

Sally W. Bloomfield

Attachments

Cc: Chris Cunningham (w/Attachments)

Appendix I

Acoustic Assessment



R | S | G INC.
RESOURCE SYSTEMS GROUP, INC.

Acoustics

Noise Impact Study for Norwest Ohio Wind Project Paulding County, Ohio



June 2013

Prepared by
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for
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TABLE OF CONTENTS

1. INTRODUCTION	1
2. PROJECT DESCRIPTION	1
3. NOISE PRIMER	3
3.1 How is Sound Described?	3
3.2 What is the Difference between Sound Pressure Levels and Sound Power Levels?	4
3.3 How is Sound Modeled?	4
3.4 Description of Terms	6
3.4.1 Equivalent Average Sound Level - L_{eq}	7
3.4.2 Percentile Sound Level - L_n	7
3.4.3 L_{min} and L_{max}	8
4. NOISE STANDARDS	8
5. BACKGROUND SOUND LEVEL MONITORING	9
5.1 Methodology	9
5.2 Monitoring Results Summary	10
5.3 Monitoring Results by Site	11
5.3.1 Monitor A	11
5.3.2 Monitor B	14
5.3.3 Monitor C	16
5.3.4 Monitor D	18
5.3.5 Monitor E	20
6. SOUND LEVELS PRODUCED BY WIND TURBINES	22
6.1 Standards Used to Measure Wind Turbine Sound Emissions	22
6.2 Manufacturer Sound Emissions Estimates	22
7. SOUND FROM WIND TURBINES – SPECIAL ISSUES	23
7.1 Wind Turbine Noise	23
7.2 Meteorology	24
7.3 Masking	25
7.4 Infrasound and Low Frequency Sound	26
8. SOUND PROPAGATION MODELING	28
8.1 Modeling Methodology	28
8.2 Gamesa G114 Model Results	29
8.3 Vestas V110 Model Results	31



8.4 GE 1.7-100 Model Results.....	34
9. CONSTRUCTION IMPACTS	37
10. CONCLUSIONS	38

LIST OF FIGURES

Figure 1: Project Site Map.....	2
Figure 2: Area Map with Proposed Northwest Ohio Turbines & Existing Blue Creek Turbines	3
Figure 3: Common Sounds in A-weighted Decibels	5
Figure 4: Example of Descriptive Terms of Sound Measurement over Time	7
Figure 5: Map of Background Monitoring Locations	10
Figure 6: Monitor A Map.....	12
Figure 7: Photograph of Monitor A.....	13
Figure 8: Monitor A Time History Results	13
Figure 9: Monitor B Map.....	14
Figure 10: Photograph of Monitor B.....	15
Figure 11: Monitor B Time History Results	15
Figure 12: Monitor C Map.....	16
Figure 13: Photograph of Monitor C.....	17
Figure 14: Monitor C Time History Results	17
Figure 15: Monitor D Map	18
Figure 16: Photograph of Monitor D.....	19
Figure 17: Monitor D Time History Results.....	19
Figure 18: Monitor E Map.....	20
Figure 19: Photograph of Monitor E	21
Figure 20: Monitor E Time History Results	21
Figure 21: Airflow around a Rotor Blade	24
Figure 22: Schematic of the Refraction of Sound Due to Vertical Wind Gradient (Wind Shear)	24
Figure 23: Comparison of Normalized Frequency Spectra from Wind and a Gamesa G97 Wind Turbine. 26	
Figure 24: Mitigated Sound Propagation Modeling Results, Daytime, G114	30
Figure 25: Mitigated Sound Propagation Modeling Results, Nighttime, G114.....	31
Figure 26: Mitigated Sound Propagation Modeling Results, Daytime, V110	33
Figure 27: Mitigated Sound Propagation Modeling Results, Nighttime, V110.....	34
Figure 28: Mitigated Sound Propagation Modeling Results, Daytime, GE 1.7-100	36
Figure 29: Mitigated Sound Propagation Modeling Results, Nighttime, GE 1.7-100	37



LIST OF TABLES

Table 1: Decibel Addition 6

Table 2: Monitoring Summary 11

Table 3: Turbine Sound Power Levels (dBA) 22

Table 4: Maximum Sound Levels from Various Construction Equipment 38



1. INTRODUCTION

The Northwest Ohio Wind Project, a proposed National Wind development, is an approximately 100 MW wind power project to be located in Paulding County, Ohio. RSG was hired to perform a noise impact assessment consistent with OPSB precedents set for similar projects. Included in this report are:

- A project description,
- A primer on the science of sound,
- An overview of standards and precedents that apply to the project,
- Background sound level monitoring results,
- A discussion of noise issues particular to wind turbines,
- Sound propagation modeling results,
- Construction impact modeling results, and
- Conclusions

2. PROJECT DESCRIPTION

The proposed Northwest Ohio Wind Project will be located in Paulding County, Ohio. There will be up to 59 turbines located northwest of Grover Hill, north of Ohio 114, south of Ohio 613, and east of Payne. US 127 runs north to south down the center of the project area. The project area is adjacent to Iberdrola Renewables' Blue Creek Wind Farm which is located south of Ohio 114. A map of the proposed site is shown in Figure 1 and a map of the area including turbines from the Blue Creek Wind Farm is shown in Figure 2.



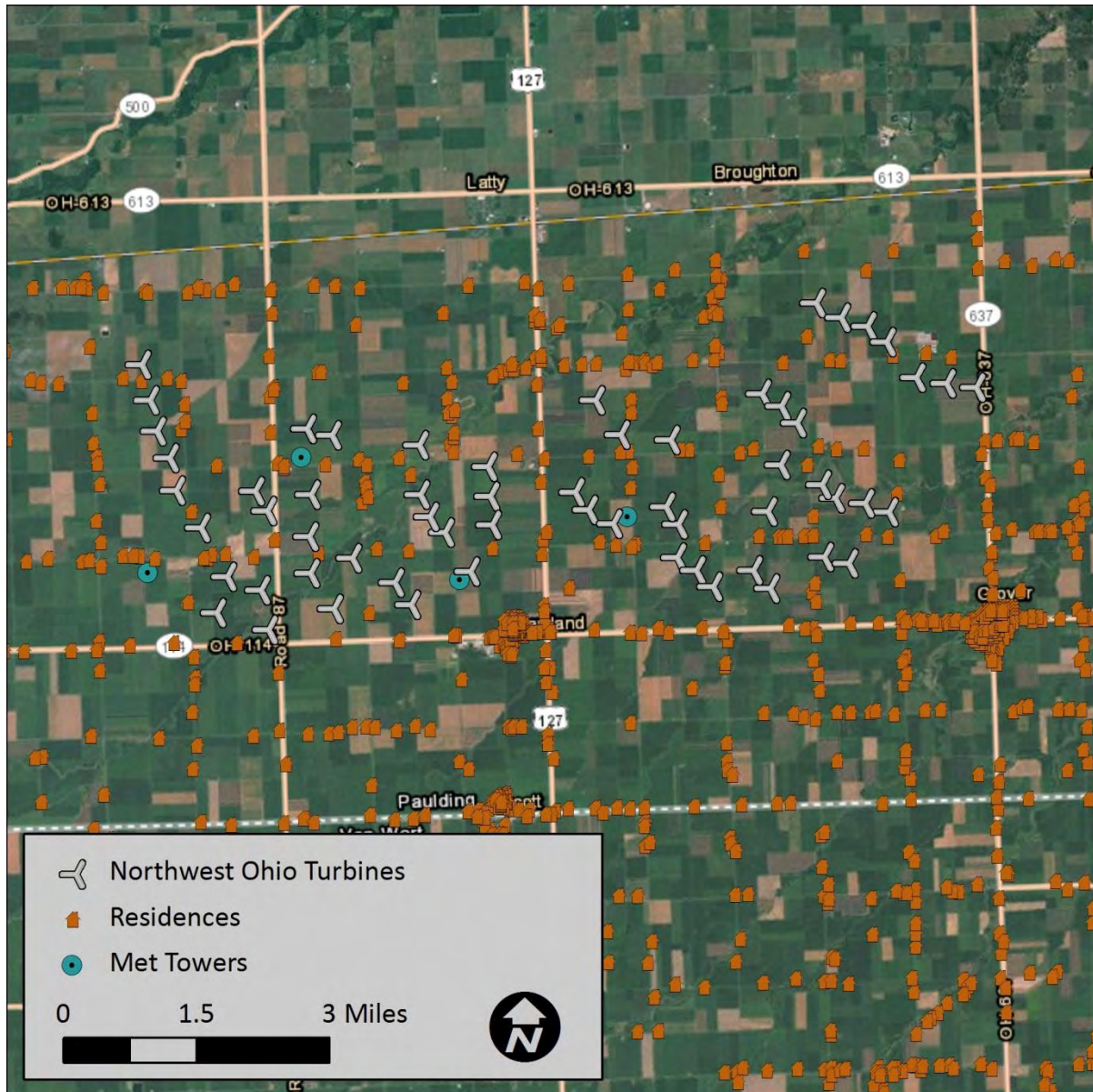


Figure 1: Project Site Map





Figure 2: Area Map with Proposed Northwest Ohio Turbines & Existing Blue Creek Turbines

3. NOISE PRIMER

3.1 How is Sound Described?

Sound is caused by variations in air pressure at a range of frequencies. Sound levels that are detectable by human hearing are defined in the decibel (dB) scale, with 0 dB being the approximate



threshold of human hearing, and 135 dB causing pain and permanent damage to the ear. Figure 3 shows the sound levels of typical activities that generate noise.

The decibel scale can be weighted to mimic the human perception of certain frequencies. The most common of these weighting scales is the “A” weighting. It is used most frequently in environmental noise analyses. Sound levels that are weighted by the “A” scale have units of dBA or dB(A).

3.2 What is the Difference between Sound Pressure Levels and Sound Power Levels?

Both sound power and sound pressure levels are described in terms of decibels, but they are not the same thing. Sound power is a measure of the acoustic power emitted or radiated by a source. The sound power level of a source does not change with its surrounding conditions.

Sound pressure level is observed at a specific location and is related to the difference in air pressure above or below atmospheric pressure. This fluctuation in air pressure is a result of the sound power of a source, the distance at which the sound pressure level is being observed, and the characteristics of the path and environment around the source and receiver. When one refers to sound level, they are generally speaking of the perceived level, or sound pressure level.

For example, a coffee grinder will have the same sound power whether or not it is grinding indoors or outdoors. The amount of sound the coffee grinder generates is always the same. However, if you are standing six meters away from the coffee grinder indoors, you would experience a higher sound pressure level than you would if you were six meters away from the coffee grinder outdoors in an open field. The reason for this is that the sound being emitted from the coffee grinder would bounce off walls and other surfaces indoors which would cause sound to build up and raise the sound pressure level.

Sound power cannot be directly measured. However, since sound pressure and sound power are related, sound power can be calculated by measurements of sound pressure and sound intensity. It can be helpful to note that over soft ground outside, the sound pressure level of a small source observed 50 meters away is roughly 33 dB lower than its sound power level.

3.3 How is Sound Modeled?

The decibel sound level is described on a logarithmic scale. One manifestation of this is that sound power increases by a factor of 10 for every 10 dB increase. However, for every 10 dB increase in sound pressure, we perceive an approximate doubling of loudness. Small changes in sound level, below 3 dB, are generally not perceptible.



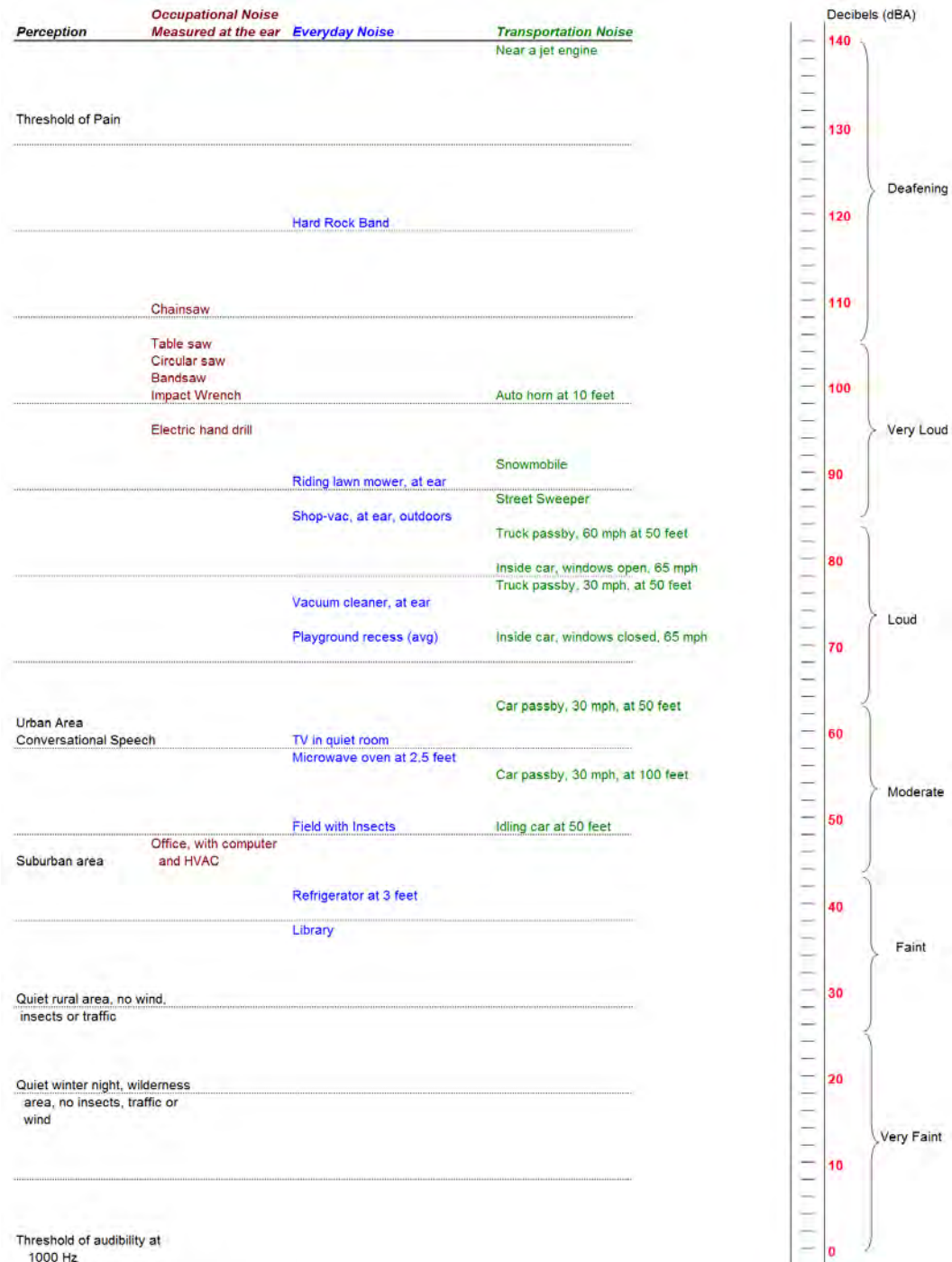


Figure 3: Common Sounds in A-weighted Decibels¹

¹ Background hourly equivalent average sound levels in rural areas with windy conditions such as Paulding County typically range from 35 to 50 dBA which is dependent on wind speed and vegetation.



For a point source, sound level diminishes or attenuates by 6 dB for every doubling of distance due to geometrical divergence. For example, if an idling truck is measured at 50 meters as 66 dBA, at 100 meters the level will decline to 60 dBA, and at 200 meters, 54 dBA, assuming no other influences. From a line source, like a gas pipeline or from closely spaced point sources, like a roadway or string of wind turbines, sound attenuates at approximately 3 dB per of doubling distance. These “line sources” transition to an attenuation of 6 dB per doubling at a distance of roughly a third of the length of the line source. Wind turbines are best approximated as point sources, at distances greater than the length of the blades.

Other factors, such as intervening vegetation, terrain, walls, berms, buildings, and atmospheric absorption will also further reduce the sound level reaching the listener. In each of these, higher frequencies will attenuate faster than lower frequencies. Finally, the ground can also have an impact on sound levels. Harder ground generally increases and softer ground generally decreases the sound level at a receiver. Reflections off of buildings and walls can increase broadband sound levels by as much as 3 dB.

If we add two equal sources together, the resulting sound level will be 3 dB higher. For example, if one machine registers 76 dBA at 50 meters, two co-located machines would register 3 dB more, or 79 dBA at that distance. In a similar manner, at a distance of 50 meters, four machines, all operating at the same place and time, would register 82 dBA and eight machines would register 85 dBA. If the two sources differ in sound level then 0 to 3 dB will be added to the higher level as shown in Table 1.

Table 1: Decibel Addition

If Two Sources Differ By	Add
0-1 dB	3 dB
2-4 dB	2 dB
5-9 dB	1 dB
>9 dB	0 dB

Subtracting sound levels follow the same principles as addition. If there are two co-located machines of equal sound power level and one is turned off, sound levels will decrease by 3 dB. Similarly, if there are two co-located machines that differ in sound power level by between 5 and 9 dB, and the quieter machine is turned off, the overall sound level will decrease by 1 dB.

3.4 Description of Terms

Sound can be measured in many different ways. Perhaps the simplest way is to take an instantaneous measurement, which gives the sound pressure level at an exact moment in time. The level reading could be 62 dB, but a second later it could 57 dB. Sound pressure levels are constantly changing. It is for this reason that it makes sense to describe noise and sound in terms of time.



The most common ways of describing noise over time is in terms of various levels. Take as an example, the sound levels measured over time shown in Figure 4. Instantaneous measurements are shown as a ragged grey line. The sound levels that occur over this time can be described verbally, but it is much easier to describe the recorded levels statistically. This is done using a variety of “levels” which are described below.

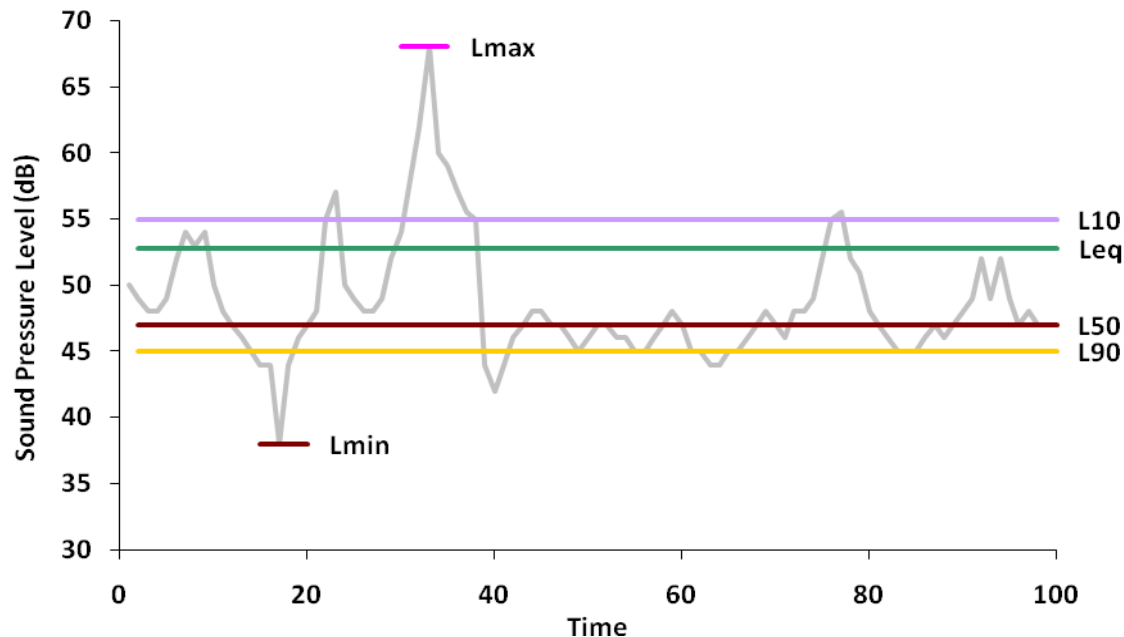


Figure 4: Example of Descriptive Terms of Sound Measurement over Time

3.4.1 Equivalent Average Sound Level - Leq

One of the most common ways of describing noise levels is in terms of the continuous equivalent sound level (Leq). The Leq is the average of the sound pressure over an entire monitoring period and expressed as a decibel. The monitoring period could be for any amount of time. It could be one second (Leq_{1-sec}), one hour (Leq₍₁₎), or 24 hours (Leq₍₂₄₎). Because Leq describes the average pressure, loud and infrequent noises have a greater effect on the resulting level than quieter and more frequent noises. For example, in Figure 4, the median sound level is about 47 dBA, but the equivalent average sound level (Leq) is 53 dBA. Because it tends to weight the higher sound levels and is representative of sound that takes place over time, the Leq is the most commonly used descriptor in noise standards and regulations.

3.4.2 Percentile Sound Level - Ln

Ln is the sound level exceeded n percent of the time. This type of statistical sound level, also shown in Figure 4, gives us information about the distribution of sound levels over time. For example, the



L10 is the sound level that is exceeded 10 percent of the time, while the L90 is the sound level exceeded 90% of the time. The L50 is exceeded half the time.

3.4.3 Lmin and Lmax

Lmin and Lmax are simply the minimum and maximum sound level, respectively, monitored over a period of time.

4. NOISE STANDARDS

There are no state statutes or regulations that establish quantitative noise standards which are applicable to this project.

There are precedents set by the Ohio Power Siting Board (OPSB) for other wind power projects within the state. Recently, in the Buckeye II Wind Farm project, the OPSB placed the following condition:

“The facility shall be operated so that the facility noise contribution does not result in noise levels at the exterior of any currently existing nonparticipating sensitive receptor that exceed the project area ambient nighttime Leq of 39 dBA, plus five dBA. During daytime operations only, 7:00 a.m. to 10:00 p.m., the facility may operate at the greater of: (a) the project area ambient nighttime Leq, 39 dBA, plus five dBA; or (b) the validly measured ambient (Leq), plus five dBA, at the location of the sensitive receptor.”

This condition for the Buckeye II Wind Farm set the applicable nighttime noise limit for the development to 5 dBA above the facility area nighttime ambient noise levels (Leq) and the same limit is used for daytime operations unless a greater ambient noise levels (Leq) at the location of the sensitive receptor is known, in which case the daytime limit would be the greater ambient noise level (Leq) at the sensitive receptor location, plus 5 dBA.

Based on ambient sound monitoring done at five locations around the project area (Section 5), the average nighttime (Leq_{night}) is 43 dBA. The nighttime limit for this project would be 48 dBA under the Buckeye II project precedent. This limit also applies to the daytime except in instances where the daytime ambient noise level (Leq) is higher than 43 dBA at a sensitive receptor. Based on ambient sound monitoring at the five locations around the project area (Section 5), the daytime ambient level ranged from 39 to 59 across the five monitoring locations. The daytime limit for the project would be between 48 dBA (the nighttime limit) and 64 dBA (highest daytime ambient plus 5 dBA) depending on the sensitive receptor.

Although prior board precedent would allow a project limit of 48 dBA, the project will use a design goal of 45 dBA for nighttime operations. This is based on World Health Organization (WHO) guidelines. In their “Guidelines for Community Noise” (1999), the WHO reviewed the most current research on the health impacts of noise to develop guideline sound levels for communities. To quote the foreword of the report, “The scope of WHO’s effort to derive guidelines for community



noise is to consolidate actual scientific knowledge on the health impacts of community noise and to provide guidance to environmental health authorities and professionals trying to protect people from the harmful effect of noise in non-industrial environments.” The WHO concluded that the sound level averaged over the eight nighttime hours should not exceed 45 dBA, (also indicated as 45 dBA Leq₍₈₎), to protect against health impacts, specifically sleep disturbance, due to noise.

In cases where existing sound levels at sensitive receptors exceed these limit, primarily along OH 114, the Northwest Ohio Wind Project will not cause increases in modeled sound levels at those locations that are greater than 1 dB.

5. BACKGROUND SOUND LEVEL MONITORING

5.1 Methodology

Long term sound level monitoring was conducted at five locations (Figure 5) in the project area from May 24, 2013 until May 31, 2013. Temperatures during the monitoring period ranged 41° to 86° F, and average one-minute wind speeds (5 foot height) ranged from 0 to 21 mph with gusts as high as 26 mph. Most of the periods of higher winds occurred on May 28, 29, and 30. There were some light rainy periods on May 27 (6:30 a.m. to 10:00 a.m. & 1 p.m. to 6 p.m.) and May 28 (4:30 a.m. to 6:30 a.m.).

Sound level data was collected using either ANSI/IEC Type 2 Rion NL-22 sound level meters or ANSI/IEC Type 1 Cesva SC310 sound level meters. The Rions were set to log 1 second equivalent A-weighted sound levels every one-second and the Cesvas were set to log 1/3 octave band sound levels every one-second. The Rions were set to record audio clips of sound events that exceeded 55 dBA and the Cesvas were connected to Roland R-05 or R-09 HR sound recorders. The microphones were mounted on a 1.5 meter (5 foot) tall wooden stakes and covered with a 7 inch ACO-Pacific weather resistant windscreens.

Data was summarized into 10-minute periods. All periods that contained precipitation and sustained wind speeds above 11 mph were eliminated during post-processing.





Figure 5: Map of Background Monitoring Locations

5.2 Monitoring Results Summary

A summary of the monitoring results is shown in Table 2. In all cases the nighttime Leq levels are less than daytime Leq levels, which is typical. There is also a generally large spread between the Leq and L90 values, indicating that the soundscapes at most sites are dominated by intermittent sounds (such as car passbys and airplane overflights) instead of constant sound sources (such as streams and distant traffic).



To determine the sound level limit for the project, 5 dB was added to the average nighttime Leq, resulting in a sound level limit of 48 dBA.

Table 2: Monitoring Summary

Location	Sound Pressure Level (dBA)											
	Overall				Day				Night			
	Leq	L90	L50	L10	Leq	L90	L50	L10	Leq	L90	L50	L10
A	56	37	46	54	59	40	47	55	51	34	45	53
B	46	27	37	48	46	29	39	49	45	26	37	48
C	43	26	36	45	44	30	39	47	41	26	33	43
D	38	21	29	39	39	21	31	40	37	21	28	37
E	44	24	33	43	44	23	34	45	43	24	33	42
Noise Standard	Average Nighttime Leq 43 dBA				Average Nighttime Leq + 5 dB 48 dBA							

5.3 Monitoring Results by Site

5.3.1 Monitor A

Monitor A was located in Haviland in a lot on the northwest corner of OH 114 (Main Street) and McKinley Street. The meter was set back approximately 100 feet from the centerline of OH 114 and 60 feet from the centerline of McKinley Street. Figure 6 and Figure 7 show a map and a photograph of the monitoring location, respectively.

Time-history results for Monitor A are shown in Figure 8. The sound levels at Monitor A are the highest of the five monitoring locations, which is to be expected at an in-town location with a state highway that runs through it. The sound levels are diurnal, decreasing at night, with the difference between the Leq and L90 also decreasing at night. Major sound sources at the site included vehicle passbys, birds, and anthropogenic sounds that are typical of a small town.





Figure 6: Monitor A Map





Figure 7: Photograph of Monitor A

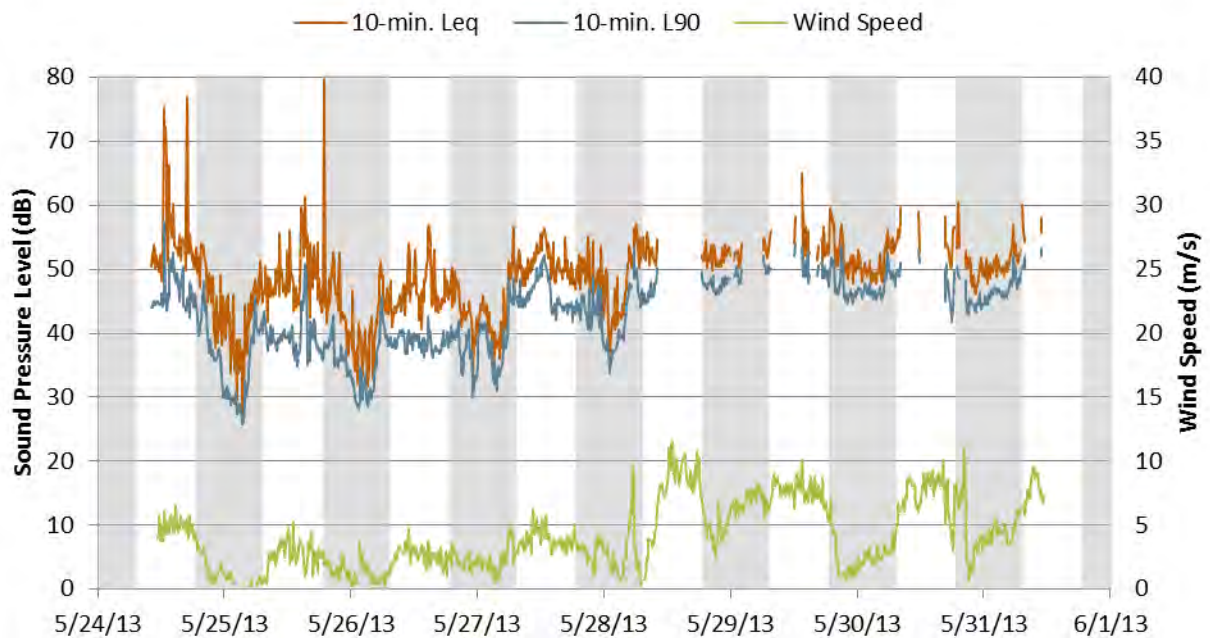


Figure 8: Monitor A Time History Results



5.3.2 Monitor B

Monitor B was located at a residence north of Haviland in the middle of the project area on US 127. The meter was located approximately 160 feet west of the residence, 100 feet north of a farm outbuilding, and approximately 25 feet north of a small shed. It was set back approximately 340 feet west of the US 127 centerline and 475 feet south of Town Highway 48. Figure 9 and Figure 10 show a map and a photograph of the monitoring location, respectively.

Time-history results for are shown in Figure 11. Results show a diurnal pattern with a generally large spread between the Leq and L90, indicated that most major sound sources were short duration sounds (e.g. vehicle passbys). The main sources of sound at the monitor were vehicle passbys, birds, airplane overflights, and mechanical sounds from farm operations.

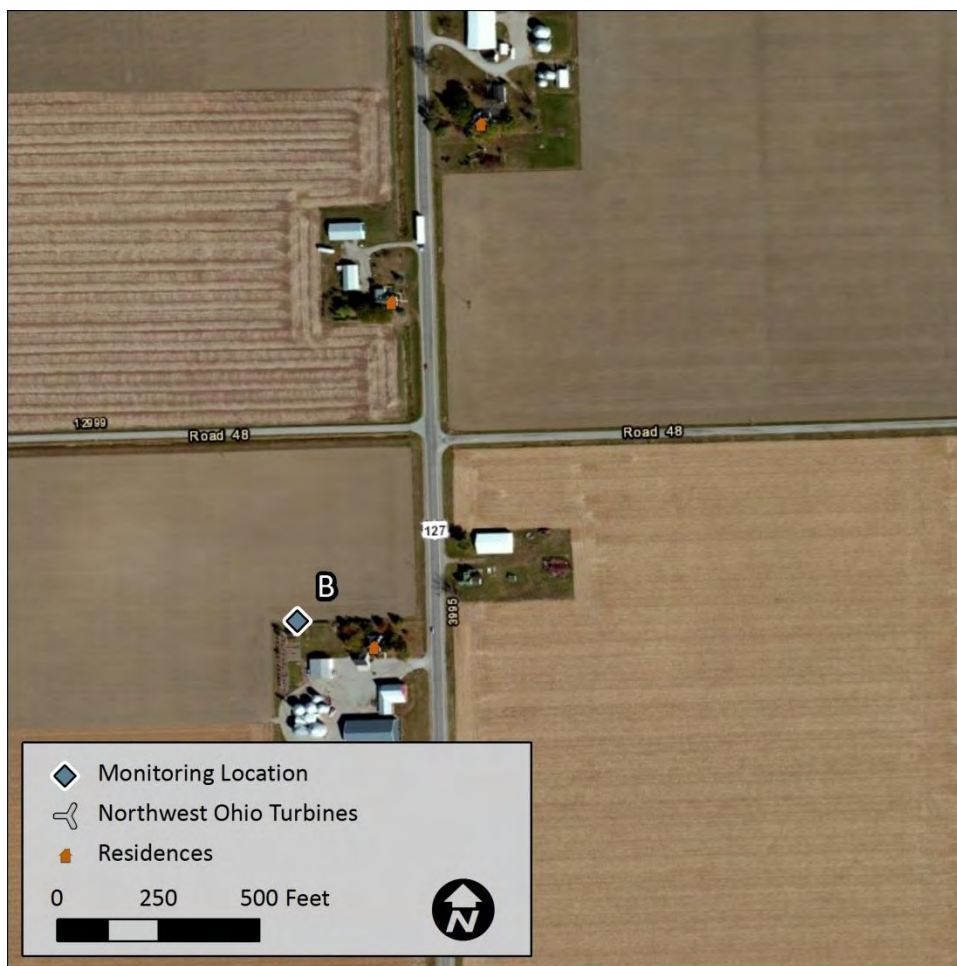


Figure 9: Monitor B Map





Figure 10: Photograph of Monitor B

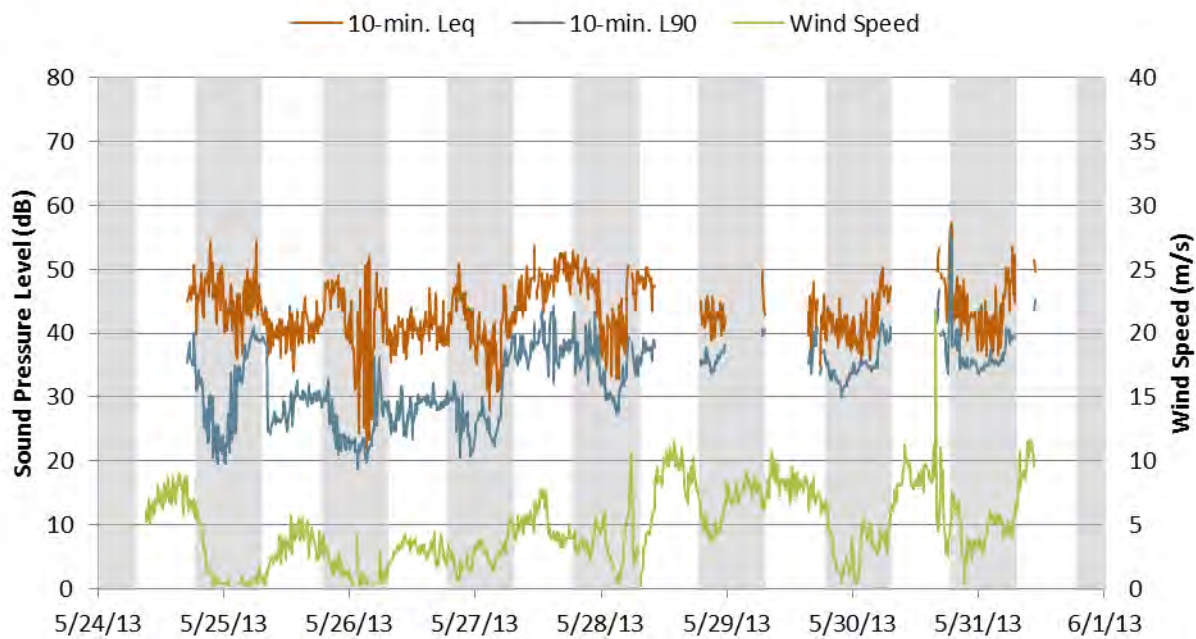


Figure 11: Monitor B Time History Results



5.3.3 Monitor C

Monitor C was located at a residence on the western edge of the project away from major roadways. The meter was located approximately 65 feet southwest of the residence near a pine tree, and was set back approximately 150 feet south of the Town Highway 48 centerline. Figure 12 and Figure 13 show a map and a photograph of the monitoring location, respectively.

Time-history results are shown in Figure 14. The sound levels at Monitor C are diurnal. Major sound sources at the site included birds, airplane overflights, wind induced foliage sound, and occasional mechanical sounds from farm operations.

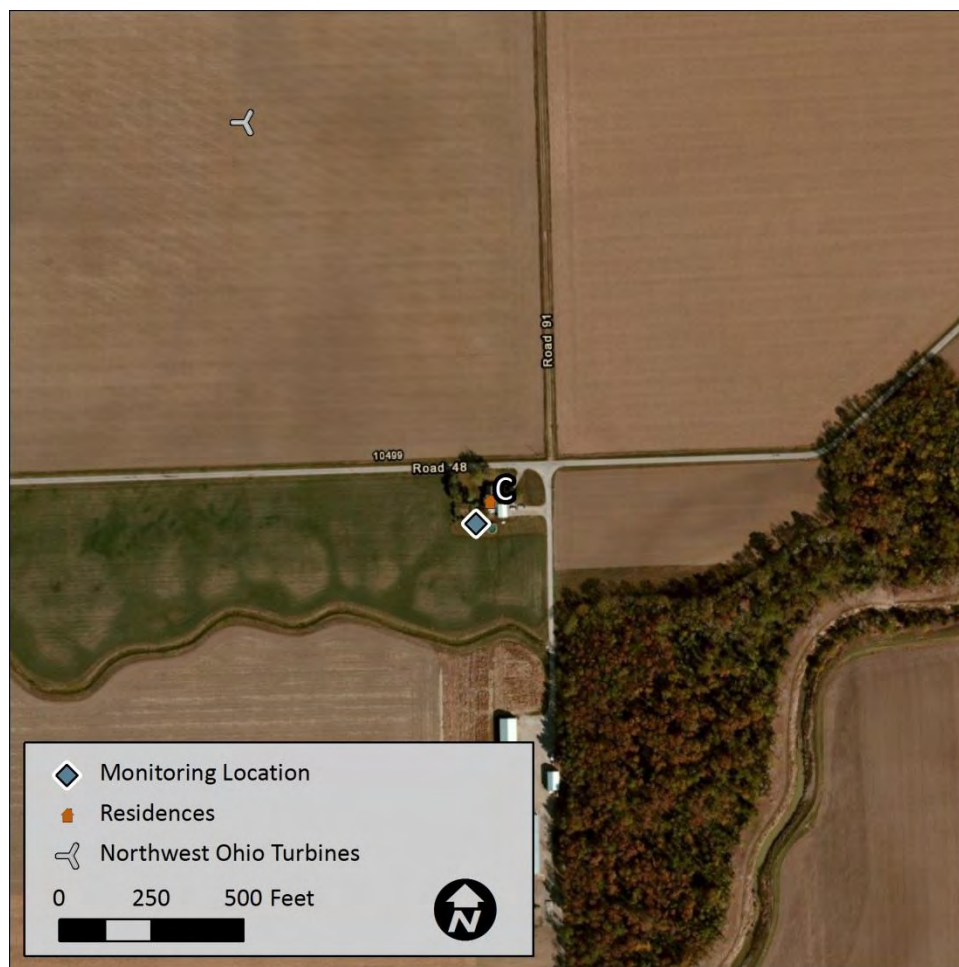


Figure 12: Monitor C Map





Figure 13: Photograph of Monitor C

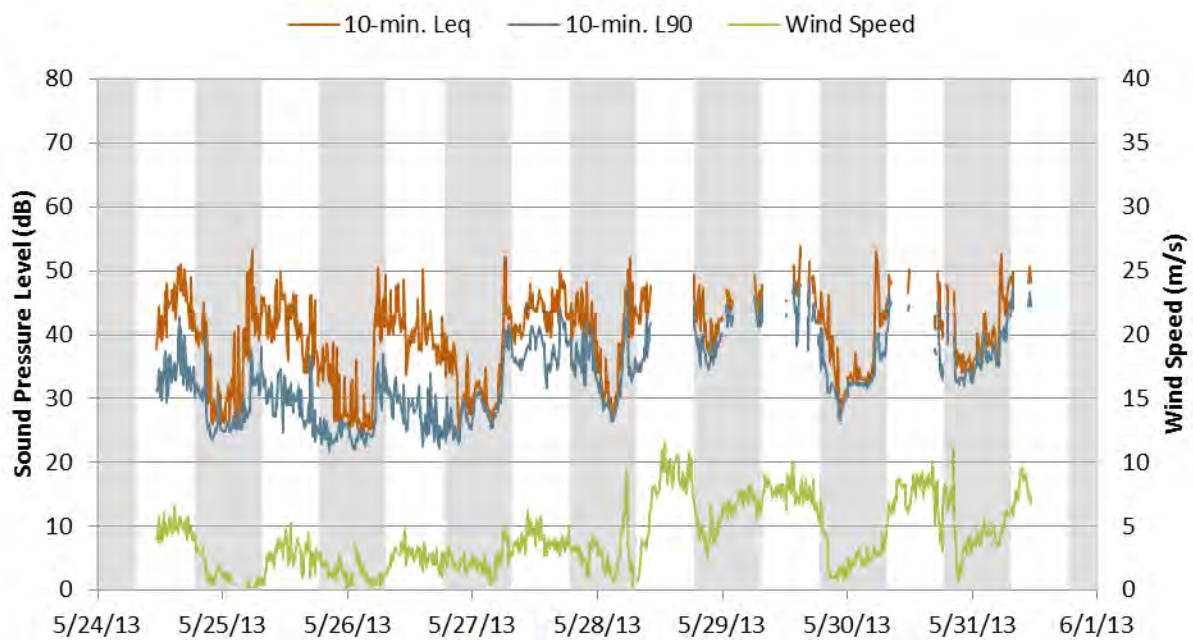


Figure 14: Monitor C Time History Results



5.3.4 Monitor D

Monitor D was located in a field in the northwestern corner of the project area away from major roadways. The meter was located approximately at a residence on the western edge of the project away from major roadways. The meter was located approximately 165 feet west of a project meteorological tower, 1,460 feet east of Town Highway 87, and 340 feet north of Town Highway 60. Figure 15 and Figure 16 show a map and a photograph of the monitoring location, respectively.

Time-history results are shown in Figure 17. The sound levels at Monitor D are the lowest of the five monitoring locations and less diurnal than the other sites, partly due to the monitor not being located at a residential area. The nearest residence to Monitor D is 960 feet to the west-southwest. The major sound sources at the site are birds, airplane overflights, and occasional mechanical equipment in the distance.

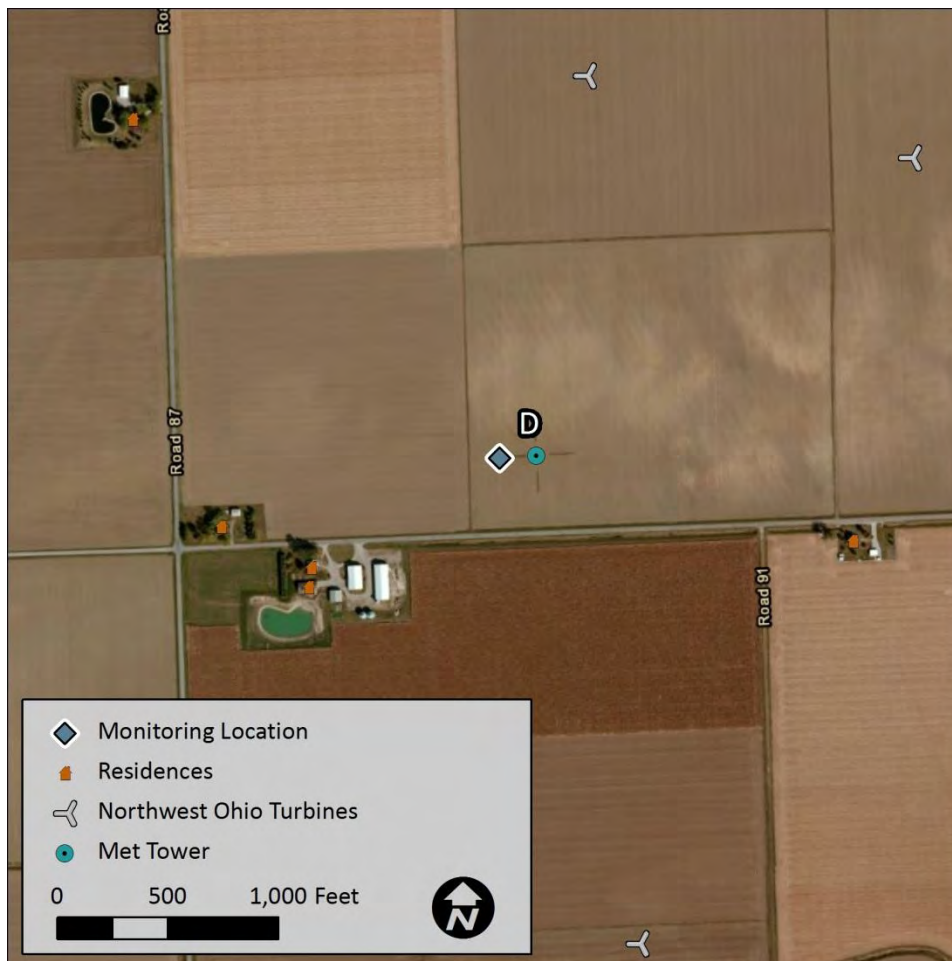


Figure 15: Monitor D Map





Figure 16: Photograph of Monitor D

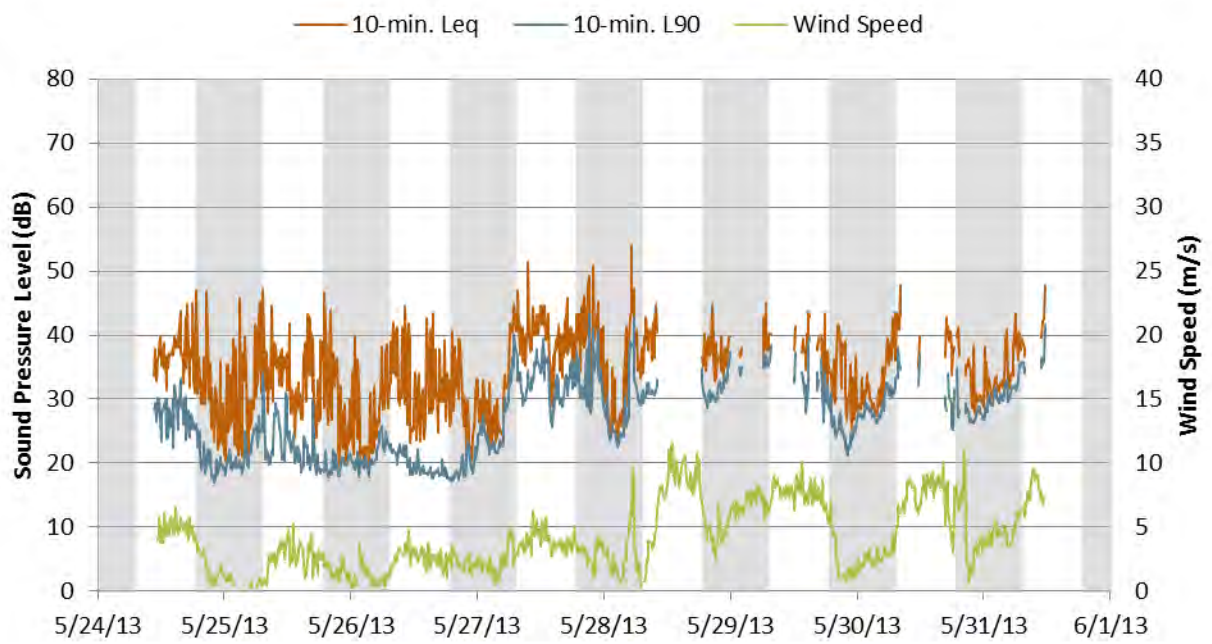


Figure 17: Monitor D Time History Results



5.3.5 Monitor E

Monitor E was located near farm building on the eastern end of the project area away from major roadways. The meter was located approximately 70 feet west of the farm building, 95 feet south of Town Highway 48, and 135 feet east of Town Highway 123. Figure 18 and Figure 19 show a map and a photograph of the monitoring location, respectively.

Time-history results are shown in Figure 20. The sound levels at Monitor E are slightly diurnal, partly due to the monitor not being located at a residential area. The nearest residence to Monitor D is 1,200 feet to the west. The major sound sources at the site include birds, airplane overflights, occasional mechanical equipment, and vehicle passbys.

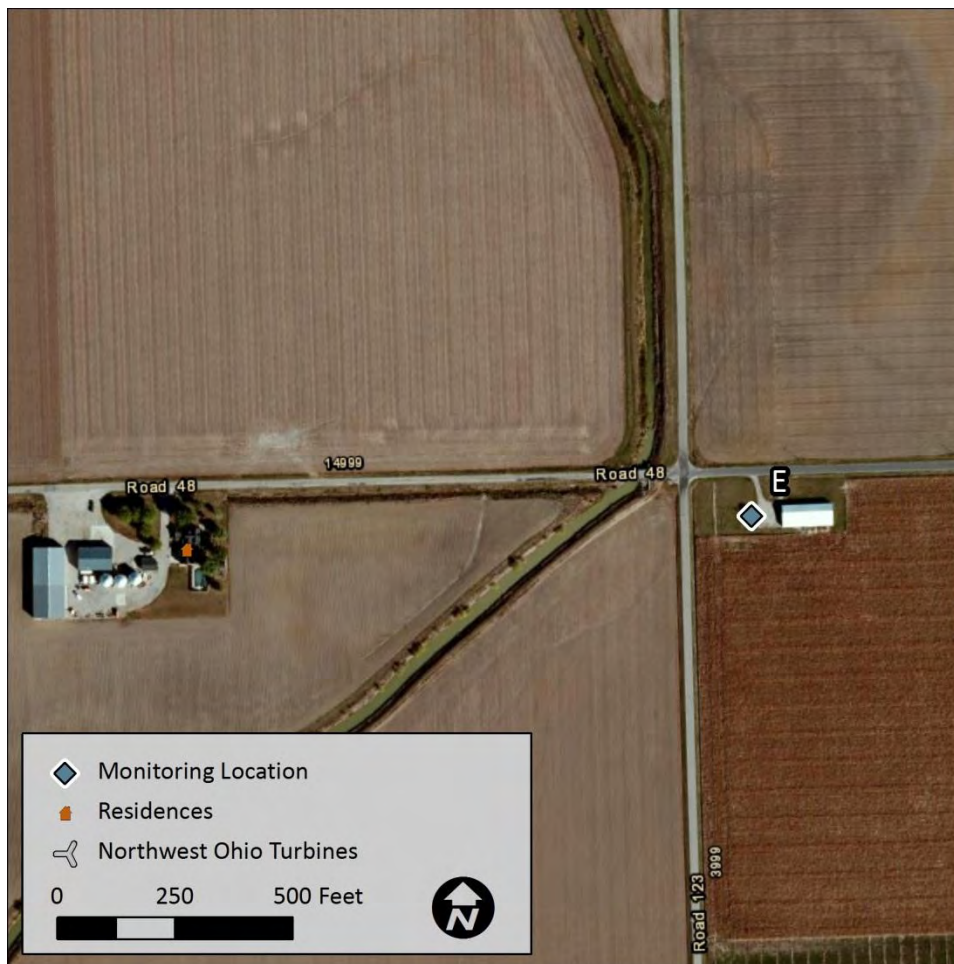


Figure 18: Monitor E Map





Figure 19: Photograph of Monitor E

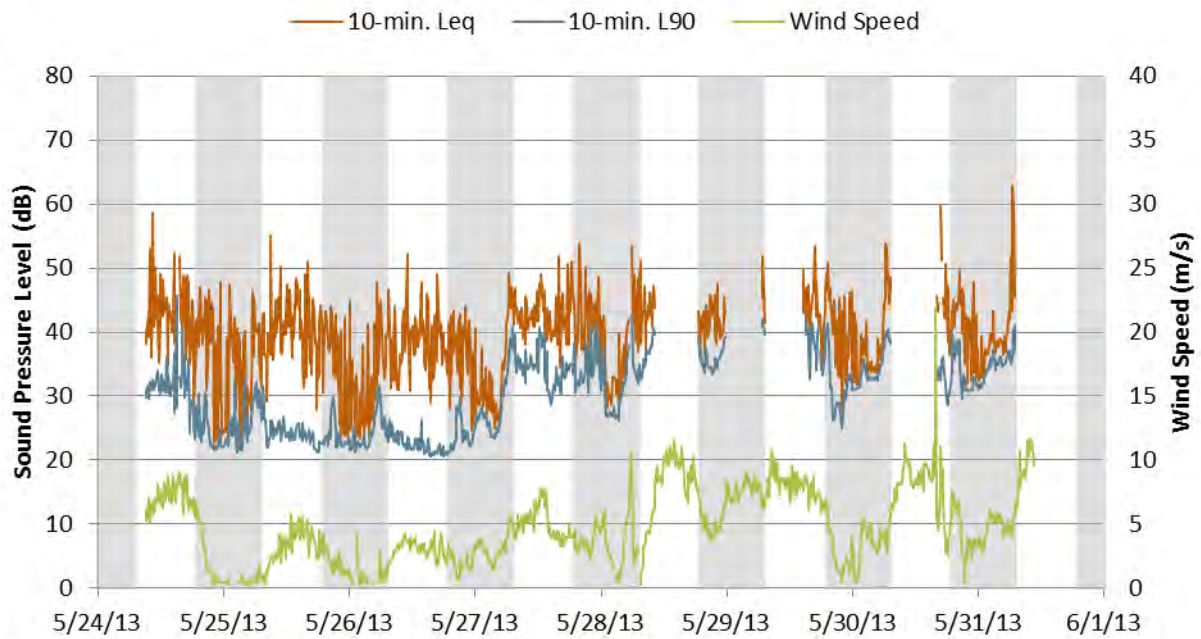


Figure 20: Monitor E Time History Results



6. SOUND LEVELS PRODUCED BY WIND TURBINES

6.1 Standards Used to Measure Wind Turbine Sound Emissions

A manufacturer of a wind turbine must test and report sound emissions from its turbines using two international standards:

1. International Electrotechnical Commission standard IEC 61400-11:2002(E), “Wind Turbine Generator Systems – Part 11: Acoustic Noise Measurement Techniques”
2. International Electrotechnical Commission standard IEC 61400-14:2005(E), “Wind Turbine Generator Systems – Part 14: Declaration of Apparent Sound Power Level and Tonality Values”

These standards provide sound power emission levels from a turbine, by wind speed and frequency. They also provide a confidence interval.

6.2 Manufacturer Sound Emissions Estimates

Since a specific turbine has not yet been chosen for this project, three turbines have been considered: the Gamesa G114 with a 93 meter hub height, the Vestas V110 with a 95 meter hub height, and the General Electric GE 1.7-100 with a hub height of 96 meters.

Sound emissions from a wind turbine are measured as *sound power*. This is different from the *sound pressure* that one measures on a sound level meter. Sound power is the acoustical energy emitted by an object, and sound pressure is the measured change in pressure caused by acoustic waves at an observer location.

The sound power level of the GE 1.7-100 is 107 ± 2 dBA for wind speeds of 7 m/s and greater (10-meter anemometer height). The estimated sound power level of the Gamesa G114 is 106 ± 2 dBA for wind speeds of 6 m/s and greater (10-meter anemometer height), and the estimated sound power level of the Vestas V110 is 107.5 ± 2 dBA. The modeled levels for this study account for the upper end of the sound power uncertainties, so that the GE, Gamesa, and Vestas turbines are modeled at 109, 108, and 109.5 dBA respectively. The octave band sound power levels used in this study’s model are shown in Table 3.

Table 3: Turbine Sound Power Levels (dBA)

Wind Turbine Model	Maximum Sound Power Level including Uncertainty	Octave Band Center Frequency								
		31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
Gamesa G114	108.0	71	81	90	97	101	100	98	95	87
GE 1.7-100	109.0	81	90	95	98	102	102	98	91	72
Vesta V110	109.5	81	88	94	98	101	102	101	97	85
Gamesa G90 (Blue Creek)	108.8		84	93	100	102	100	97	95	91



7. SOUND FROM WIND TURBINES – SPECIAL ISSUES

7.1 Wind Turbine Noise

Wind turbines generate two principle types of noise: aerodynamic noise, produced from the flow of air around the blades, and mechanical noise, produced from mechanical and electrical components within the nacelle.

Aerodynamic noise is the primary source of noise associated with wind turbines. These acoustic emissions can be either tonal or broadband. Tonal noise occurs at discrete frequencies, whereas broadband noise is distributed with little peaking across the frequency spectrum.

While unusual, tonal noise can also originate from unstable air flows over holes, slits, or blunt trailing edges on blades. Most modern wind turbines have upwind rotors designed to prevent blade impulsive noise. Therefore, the majority of audible aerodynamic noise from wind turbines is broadband at the middle frequencies, roughly between 200 Hz and 1,000 Hz.

Wind turbines emit aerodynamic broadband noise as the spinning blades interact with atmospheric turbulence and as air flows along their surfaces. This produces a characteristic “whooshing” sound through several mechanisms (Figure 21):

- *Inflow turbulence noise* occurs when the rotor blades encounter atmospheric turbulence as they pass through the air. Uneven pressure on a rotor blade causes variations in the local angle of attack, which affects the lift and drag forces to cause aerodynamic loading fluctuations. This generates noise that varies across a wide range of frequencies but is most significant at levels below 500 Hz.
- *Trailing edge noise* is produced as boundary-layer turbulence around the airfoil passes into the wake, or trailing edge, of the blade. This noise is distributed across a wide frequency range but is most notable at high frequencies between 700 Hz and 2 kHz.
- *Tip vortex noise* occurs when tip turbulence interacts with the surface of the blade tip. While this is audible near the turbine, it tends to be a small component of the overall noise further away.
- *Stall or separation noise* occurs due to the interaction of turbulence with the blade surface.



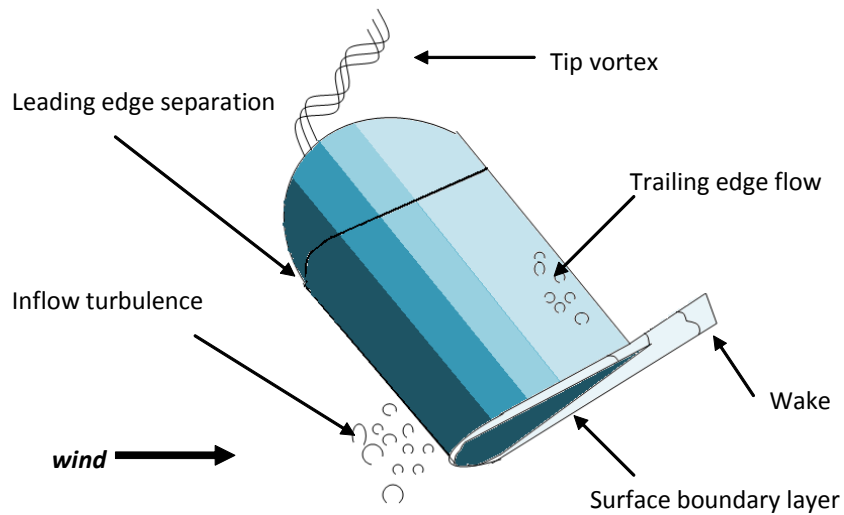


Figure 21: Airflow around a Rotor Blade

Mechanical noise from machinery inside the nacelle tends to be tonal in nature but can also have a broadband component. Potential sources of mechanical noise include the gearbox, generator, yaw drives, cooling fans, and auxiliary equipment. These components are housed within the nacelle, whose surfaces, if untreated, radiate the resulting noise. However modern wind turbines have nacelles that are designed to reduce internal noise, and rarely is the mechanical noise a significant portion of the total noise from a wind turbine.

7.2 Meteorology

Meteorological conditions can significantly affect sound propagation. The two most important conditions to consider are wind shear and temperature lapse. Wind shear is the difference in wind speeds by elevation and temperature lapse rate is the temperature gradient by elevation. In conditions with high wind shear (large wind speed gradient), sound levels upwind from the source tend to decrease and sound levels downwind tend to increase due to the refraction, or bending, of the sound (Figure 22).

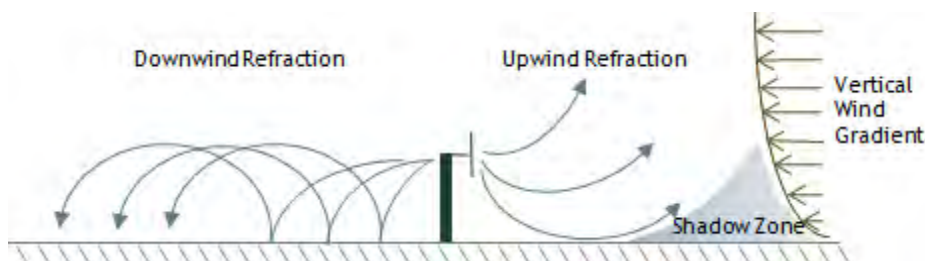


Figure 22: Schematic of the Refraction of Sound Due to Vertical Wind Gradient (Wind Shear)



With temperature lapse, when ground surface temperatures are higher than those aloft, sound will tend to refract upwards, leading to lower sound levels near the ground. The opposite is true when ground temperatures are lower than those aloft (an inversion condition).

The term “Stability Class” is used to describe how stable the atmosphere is. Unstable atmospheres can be caused by high winds and/or high solar radiation. This creates turbulence and tends to break up and dissipate sound energy. Highly stable atmospheres, which generally occur on clear nights with low ground-level wind speeds, tend to minimize atmospheric turbulence and are generally more favorable to down-wind propagation.

In general terms, sound propagates best under stable conditions with a strong temperature inversion. This occurs during the night and is characterized by low ground level winds.² Therefore, this is the default condition for modeling wind turbine sound.

7.3 Masking

As mentioned above, sound levels from wind turbines are a function of wind speed. Background sound is also a function of wind speed, i.e., the stronger the winds, the louder the resulting background sound. This effect is amplified in areas covered by trees and other vegetation. The sound from a wind turbine can often be masked by wind noise at downwind receivers because the frequency spectrum from wind is very similar to the frequency spectrum from a wind turbine. Figure 23 compares the sound spectrum measured during a 17 m/s wind event to a Gamesa wind turbine. As shown, the shapes of the spectra are very similar at the lower frequencies. At higher frequencies, the sounds from the masking wind noise are higher than the wind turbine. As a result, the masking of turbine noise is possible at higher wind speeds.

²The amount of propagation is highly dependent on surface conditions and the frequency of the sound. Under some circumstances highly stable conditions can show lower sound levels.



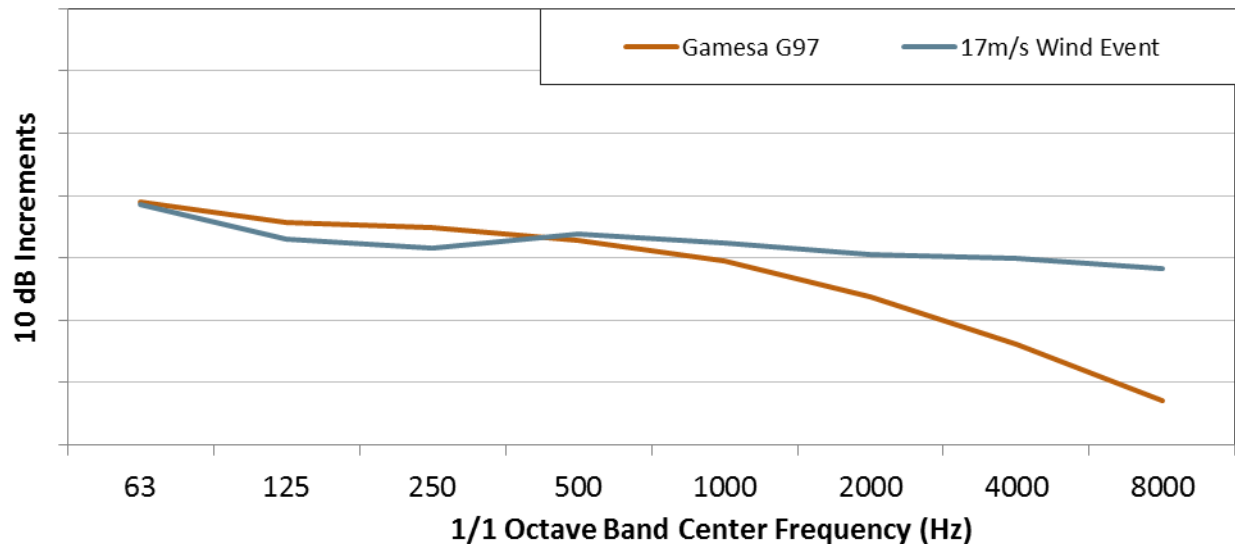


Figure 23: Comparison of Normalized Frequency Spectra from Wind and a Gamesa G97 Wind Turbine

It is important to note that while winds may be blowing at turbine height, there may be little to no wind at ground level. This is especially true during strong wind gradients (high wind shear), which mostly occur at night. This can also occur on the leeward side of ridges where the ridge blocks the wind.

7.4 Infrasound and Low Frequency Sound

Low frequency aerodynamic tonal noise is typically associated with downwind rotors on horizontal axis wind turbines. In this configuration, the rotor plane is behind the tower relative to the oncoming wind. As the turbine blades rotate, each blade crosses behind the tower's aerodynamic wake and experiences brief load fluctuations. This causes short, low-frequency pulses or thumping sounds called *blade impulsive noise*. Large modern wind turbines are “upwind”, where the rotor plane is upwind of the tower. As a result, this type of low frequency noise does not occur in all but the most swirling winds.

Infrasound is sound pressure fluctuations at frequencies below about 20 Hz. Sound below this frequency is generally not audible. Low frequency sound is in the audible range of human hearing, that is, above 20 Hz, but below 100 to 200 Hz depending on the definition.

A recent study comparing infrasound levels at rural homes near (approximately 1.5 km from) wind turbines, rural homes far from wind turbines, and urban homes, found that homes near wind turbines have infrasound levels similar to those located far (30 km) from wind turbines. Infrasound levels at rural residences both near and far from wind turbines were not found to be higher than at urban residences and the study found fluctuations in infrasound to be primarily



caused by wind conditions.³ Another study compared infrasound levels near two wind farms with infrasound levels in the vicinity of a beach, a coastal cliff, a power station, and within the city of Adelaide, Australia. The study found infrasound levels approximately 200 meters from a wind turbine between 63 and 67 dBG. In comparison, infrasound levels were 75 dBG 25 meters from the high water line at a beach, 69 dBG 250 meters from a coastal cliff face, 57 dBG 8 km inland from the coast in a rural area, 74 dBG 350 meters from a gas powered substation, and 76 dBG 70 meters from the nearest road in downtown Adelaide. In short, infrasound levels were not abnormally high compared to everyday sound sources and even some natural sound sources.⁴

At very high sound levels (greater than 110 dB), infrasound can cause health effects such as decreased alertness and sleepiness.⁵ Infrasound can also rattle light-weight building partitions. However, modern wind turbines, with the hub upwind of the tower, do not create this level of infrasound. As a result, impact from infrasound is not expected.

Low frequency sound is a component of the sound generated by wind turbines. It is absorbed less by the atmosphere and ground than higher frequency sound. As with infrasound, high levels of low frequency sound can induce rattling in light-weight partitions in buildings. The American National Standards Institute standard, ANSI S12.2, "Criteria for Evaluating Room Noise", recommends that levels be kept below 65 dB at 16 Hz, 65 dB at 31.5 Hz, and 70 dB at 70 Hz inside the building to prevent moderately perceptible vibration and rattles.

Low frequency sound is primarily generated by the generator and mechanical components. Much of the mechanical noise has been reduced in modern wind turbines through improved sound insulation at the hub. Low frequency sound can also be generated by the blades at higher wind speeds when the inflow air is very turbulent. However, at these wind speeds, low frequency sound from the wind turbine blades is often masked by wind noise at the downwind receivers.

Finally, low frequency sound is absorbed less by the atmosphere and ground than higher frequency sound. Modeling took into account downward diffraction under a moderate nighttime temperature inversion and differing atmospheric absorption between low and high frequency sound.

³ Evans, T., et al. "Infrasound Levels Near Windfarms and in Other Environments." *Australian Environmental Protection Authority*. January 2013.

⁴ Turbull, Chris et al.. "Measurement and Level of Infrasound From Wind Farms and Other Sources." *Acoustics Australia*: April 2012. Vol. 40, No. 1.

⁵ Edge, Phillip and Mayes, William. "Description of Langley Low-Frequency Noise Facility and Study of Human Response to Noise Frequencies Below 50 CPS," National Aeronautics and Space Administration, January 1966.



8. SOUND PROPAGATION MODELING

8.1 Modeling Methodology

Modeling for the project was completed using the International Standards Organization ISO 9613-2 standard, “Acoustics – Attenuation of sound during propagation outdoors, Part 2: General Method of Calculation.” The ISO standard states,

“This part of ISO 9613 specifies an engineering method for calculating the attenuation of sound during propagation outdoors in order to predict the levels of environmental noise at a distance from a variety of sources. The method predicts the equivalent continuous A-weighted sound pressure level ... under meteorological conditions favorable to propagation from sources of known sound emissions. These conditions are for downwind propagation ... or, equivalently, propagation under a well-developed moderate ground-based temperature inversion, such as commonly occurs at night.”

The model takes into account source sound power levels, surface reflection and absorption, atmospheric absorption, geometric divergence, meteorological conditions, walls, barriers, berms, and terrain. Model input data is provided in Appendix A. The ISO standard was implemented in the Cadna A acoustical modeling software. Made by Datakustik GmbH, Cadna A is an internationally accepted acoustical model, used by many other noise control professionals in the United States and abroad.

Standard modeling methodology takes into account moderate nighttime inversions or moderate downwind conditions. For this study, we modeled the sound propagation in accordance with ISO 9613-2 with spectral ground attenuation and mixed ground ($G=0.5$).

A 25-meter by 25-meter grid of receivers was set up in the model covering 183 square miles around the project. In addition, over 800 discrete receivers were modeled at non-participating residences. A receiver is a point above the ground at which the computer model calculates a sound level. The coordinates for each receiver and all turbines are provided in Appendix B and Appendix C respectively.

As previously discussed, there are currently three turbine models under consideration, the Gamesa G114, the Vestas V110, and the GE 1.7-100. Modeling was conducted for each of these turbines using a 60 turbine layout, although the project will actually only construct the following number of turbines for each turbine model:

- Gamesa G114 – 50 turbines
- Vestas V110 – 56 turbines
- GE 1.7-100 – 59 turbines

By using the 60 turbine layout in the noise model, the results presented in this section are conservative and show that the project can meet the OPSB precedent noise standards using NROs



and curtailments as necessary. For non-participating residences, sound levels were mitigated to 48 dBA for daytime operations and 45 dBA for nighttime operations. In some cases, residences along Ohio 114 exceed these levels due to operations of the Blue Creek Wind Farm. When this was the case, sound levels from the proposed Northwest Ohio Wind Project were mitigated such that the increase in modeled sound levels at those residences would be less than 1 dB.

8.2 Gamesa G114 Model Results

Modeling results for the using the Gamesa G114 turbine are shown as sound contour maps in Figure 24 and Figure 25. Figure 24 provides the daytime results with the required NRO modes or curtailments indicated for each proposed turbine to meet the daytime limit, and Figure 25 provides the nighttime results with the required NRO modes or curtailments indicated for each proposed turbine to meet the project nighttime design goal. All residences shown are non-participating residences and the colored lines emanating from the wind turbines are color-coded isolines, where red represents 50 dBA, orange represents 45 dBA, yellow represents 40 dBA, light green represents 35 dBA, and dark green represents 30 dBA. Between the colored isolines are light gray isolines that represent 1 dB increments.

From OH 114 and northward, the highest daytime sound pressure level at a non-participating residence is 48 dBA, and the highest nighttime sound pressure level is 48, both due to the Blue Creek Wind Farm. With the NROs shown in Figure 24 and Figure 25, the sound levels from the Northwest Ohio Wind Project alone are less than 48 dBA during the day and less than 45 dBA at night at all non-participating residences.

The sound level in the 31.5 Hz and 63 Hz 1/1 octave band at the worst case receiver is 48 dB and 56 dB, respectively, which is below the levels specified in ANSI S12.2 that are necessary to cause moderately perceptible building vibrations.⁶

⁶ ANSI S12.2 also has standards for perceptible building vibration at 16 Hz and 31.5 Hz, but no information is available from Gamesa on sound power at these frequencies. Assuming an increase of 3 dB per octave band, however, the ANSI S12.2 standard would be met at these lower octave bands as well.



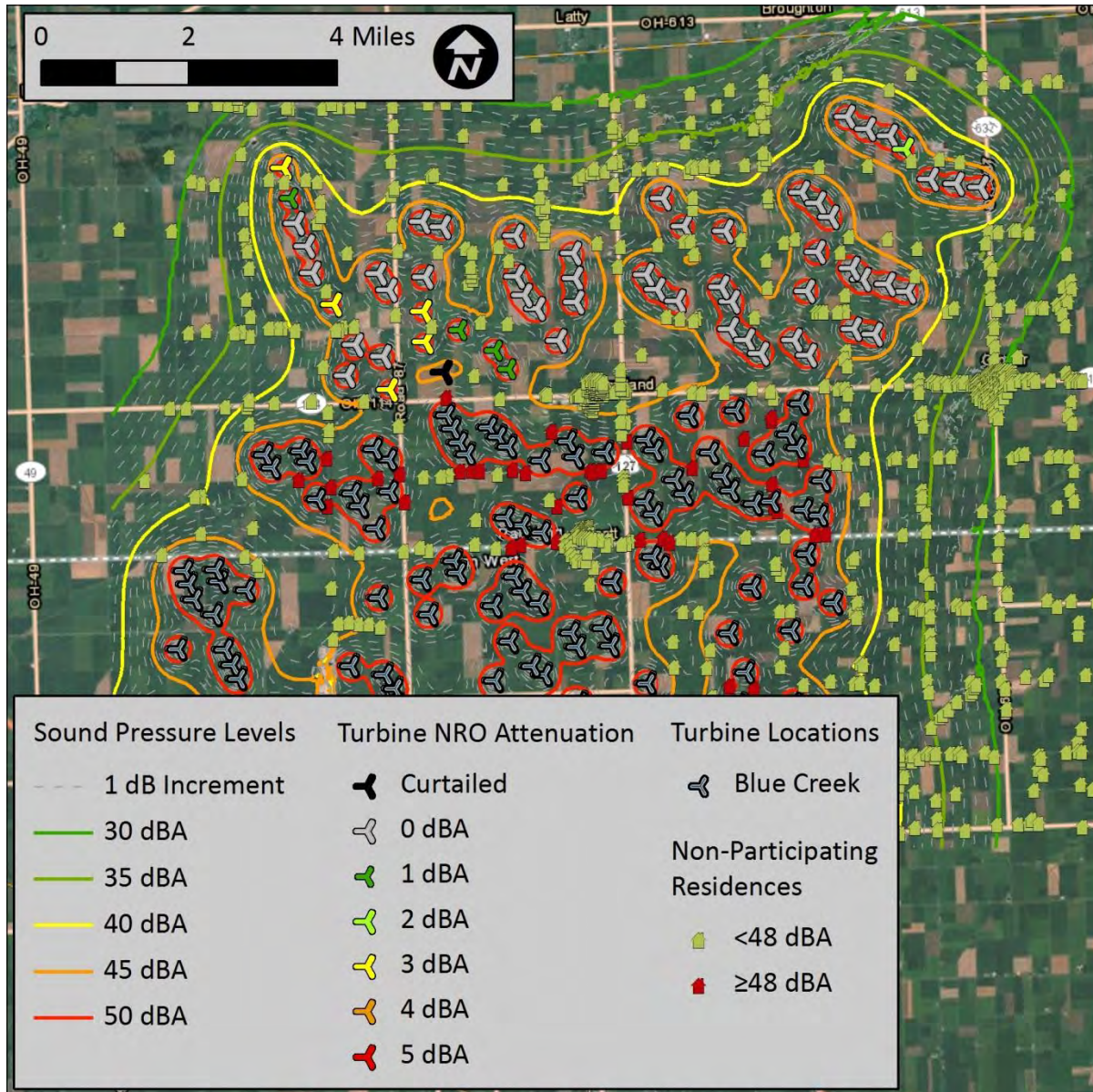


Figure 24: Mitigated Sound Propagation Modeling Results, Daytime, G114



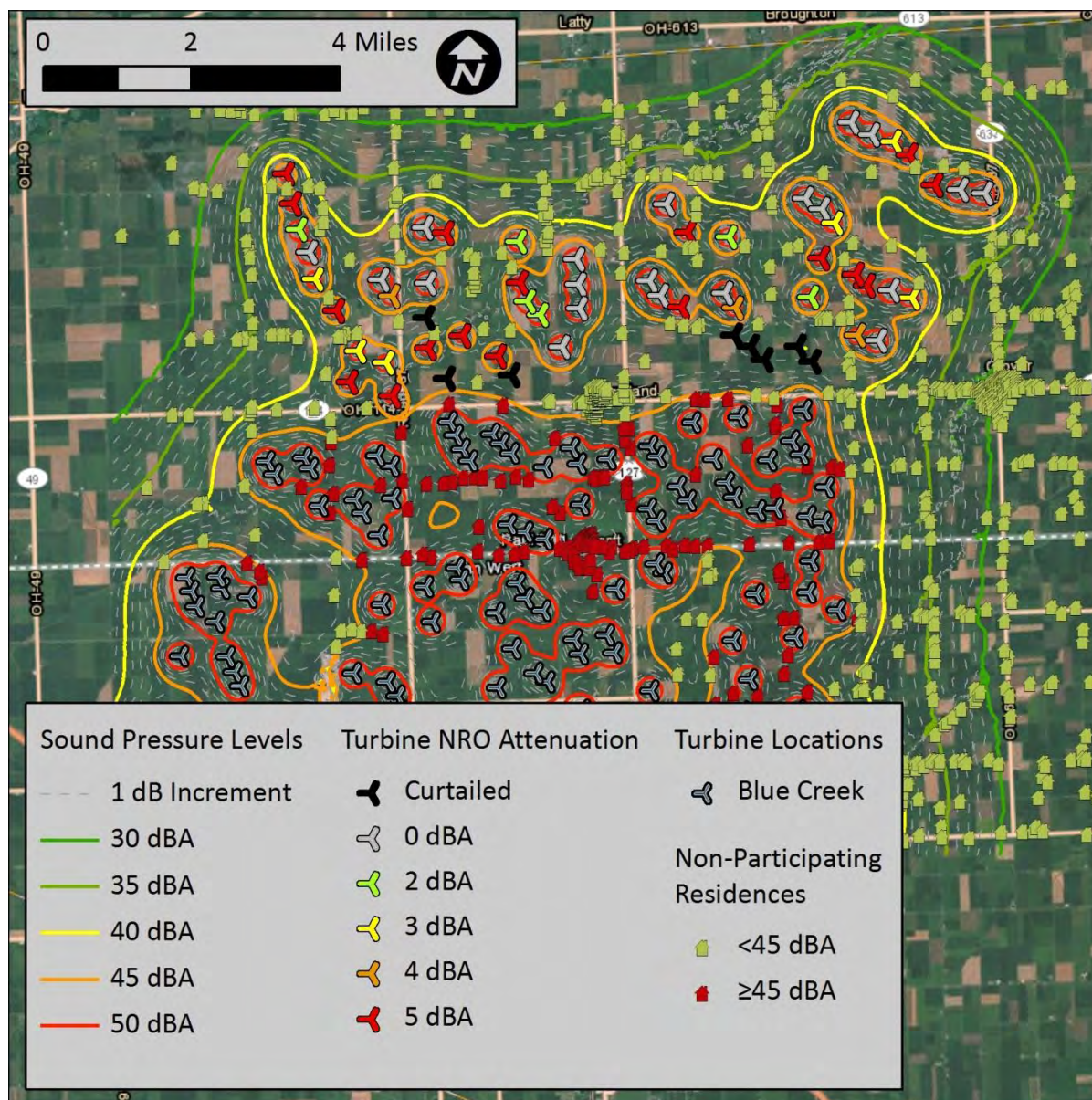


Figure 25: Mitigated Sound Propagation Modeling Results, Nighttime, G114

8.3 Vestas V110 Model Results

Modeling results for the using the Vestas V110 turbine are shown as sound contour maps in Figure 26 and Figure 27. Figure 26 provides the daytime results with the required NRO modes or curtailments indicated for each proposed turbine to meet the daytime limit, and Figure 27 provides the nighttime results with the required NRO modes or curtailments indicated for each proposed turbine to meet the project nighttime design goal. All residences shown are non-participating residences and the colored lines emanating from the wind turbines are color-coded isolines, where red represents 50 dBA, orange represents 45 dBA, yellow represents 40 dBA, light green represents



35 dBA, and dark green represents 30 dBA. Between the colored isolines are light gray isolines that represent 1 dB increments.

From OH 114 and northward, the highest daytime sound pressure level at a non-participating residence is 48 dBA, and the highest nighttime sound pressure level is 48, both due to the Blue Creek Wind Farm. With the NROs shown in Figure 26 and Figure 27, the sound levels from the Northwest Ohio Wind Project alone are less than 48 dBA during the day and less than 45 dBA at night at all non-participating residences.

The sound level in the 31.5 Hz and 63 Hz 1/1 octave band at the worst case receiver is 59 dB and 57 dB, respectively, which is below the levels specified in ANSI S12.2 that are necessary to cause moderately perceptible building vibrations.



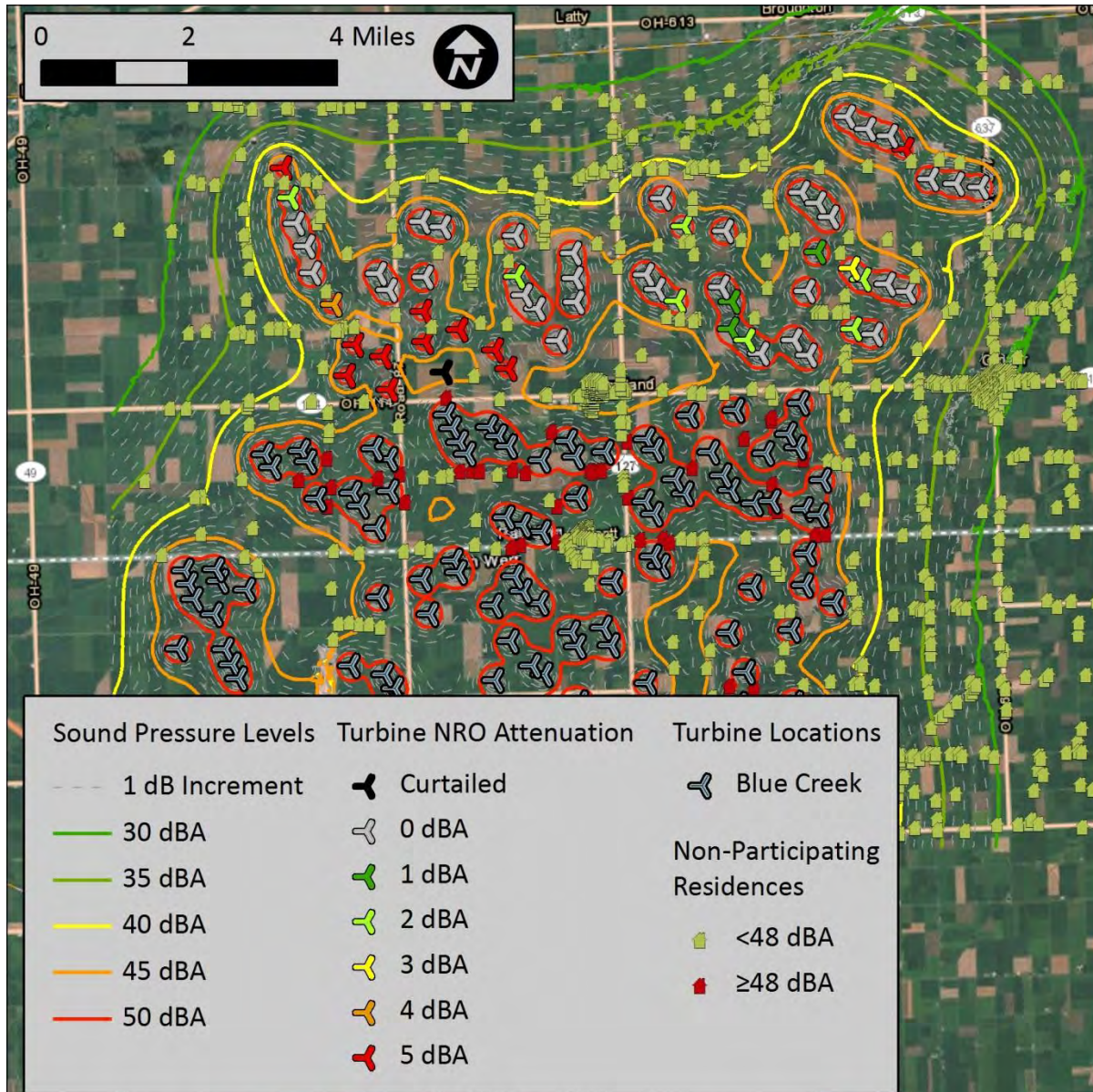


Figure 26: Mitigated Sound Propagation Modeling Results, Daytime, V110



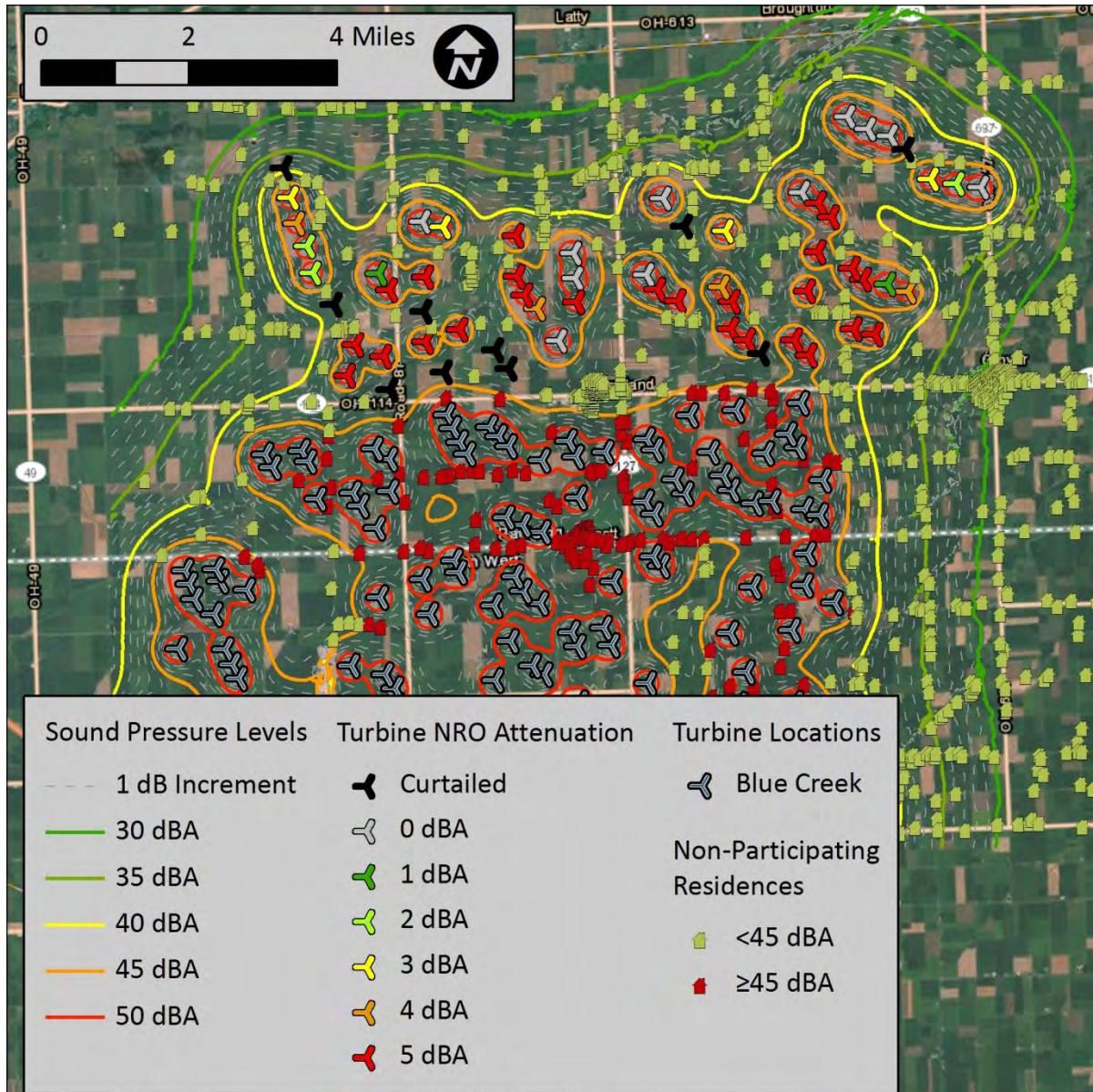


Figure 27: Mitigated Sound Propagation Modeling Results, Nighttime, V110

8.4 GE 1.7-100 Model Results

Modeling results for the using the GE 1.7-100 turbine are shown as sound contour maps in Figure 28 and Figure 29. Figure 28 provides the daytime results with the required NRO modes or curtailments indicated for each proposed turbine to meet the daytime limit, and Figure 29 provides the nighttime results with the required NRO modes or curtailments indicated for each proposed turbine to meet the project nighttime design goal. All residences shown are non-participating residences and the colored lines emanating from the wind turbines are color-coded isolines, where red represents 50 dBA, orange represents 45 dBA, yellow represents 40 dBA, light green represents



35 dBA, and dark green represents 30 dBA. Between the colored isolines are light gray isolines that represent 1 dB increments.

From OH 114 and northward, the highest daytime sound pressure level at a non-participating residence is 48 dBA, and the highest nighttime sound pressure level is 48 dBA, both due to the Blue Creek Wind Farm. With the NROs shown in Figure 28 and Figure 29, the sound levels from the Northwest Ohio Wind Project alone are less than 48 dBA during the day and less than 45 dBA at night at all non-participating residences.

The sound level in the 31.5 Hz and 63 Hz 1/1 octave band at the worst case receiver is 59 dB and 59 dB, respectively, which is below the levels specified in ANSI S12.2 that are necessary to cause moderately perceptible building vibrations.



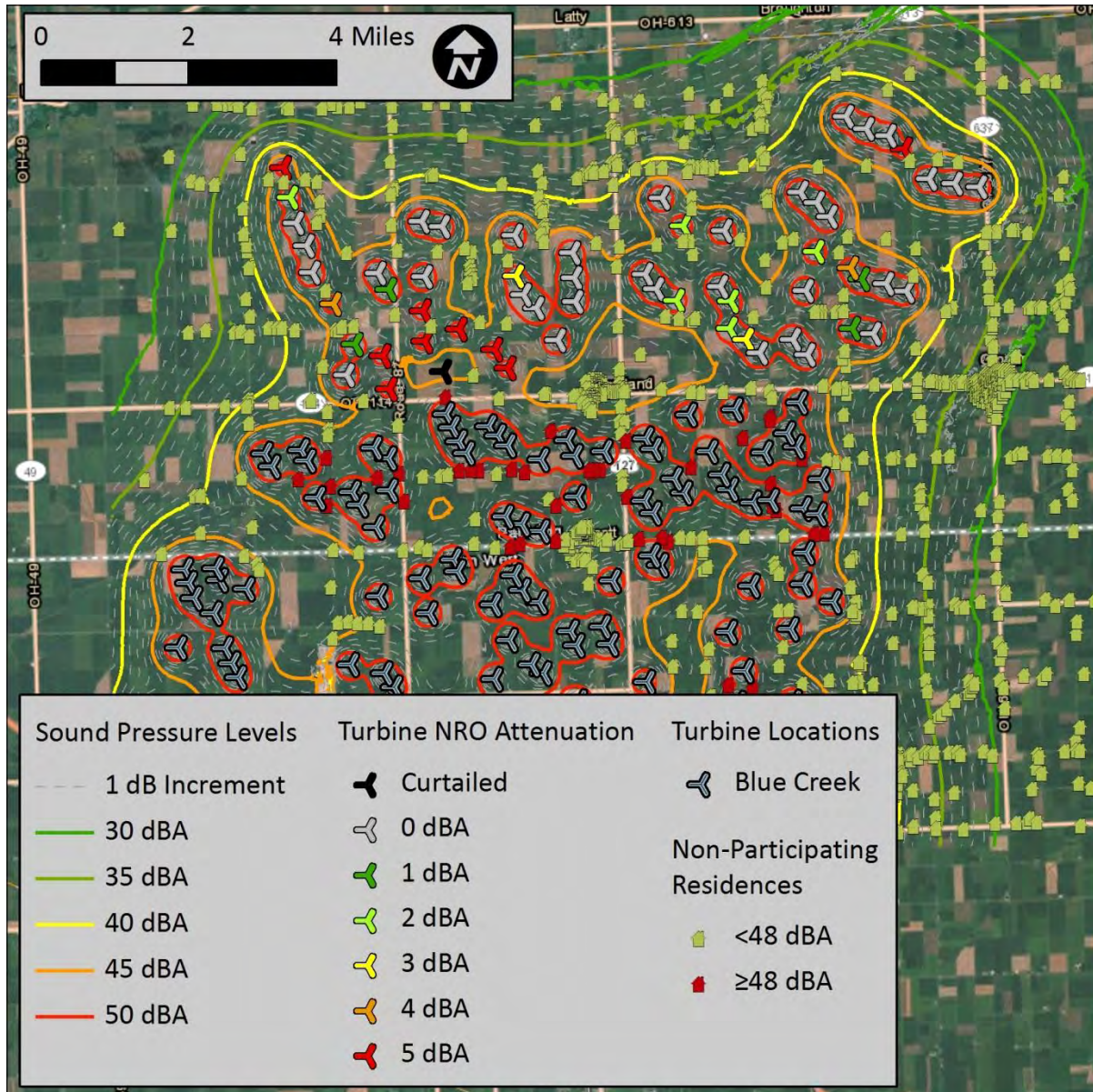


Figure 28: Mitigated Sound Propagation Modeling Results, Daytime, GE 1.7-100



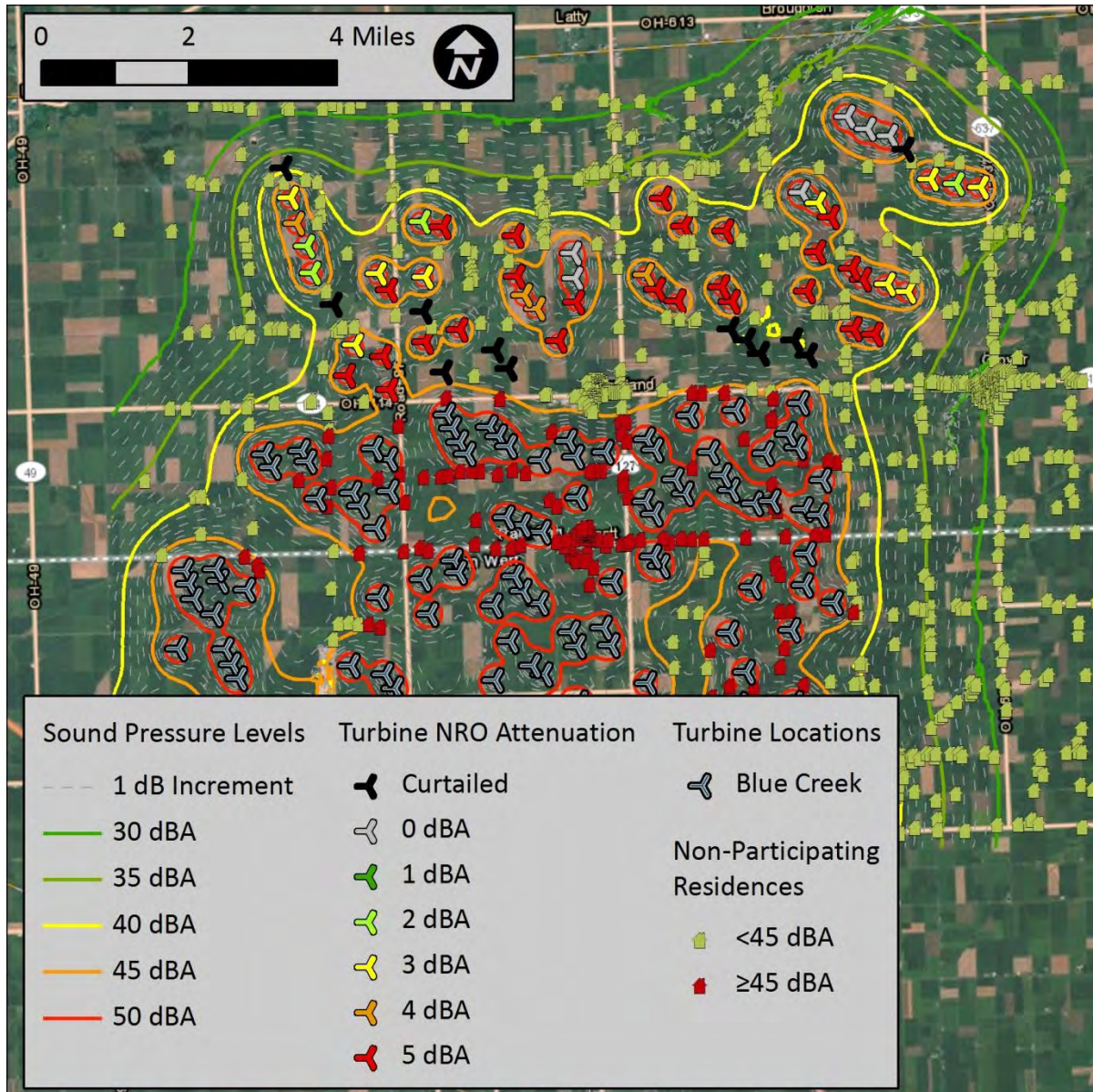


Figure 29: Mitigated Sound Propagation Modeling Results, Nighttime, GE 1.7-100

9. CONSTRUCTION IMPACTS

The construction of the turbines will take place primarily at the turbine sites. While there may be activity closer to residences for road construction and utility work, such work will be of a relatively short duration.

The equipment used for the construction will be varied. Some of the louder pieces of equipment are shown in Table 4 along with the approximate maximum sound pressure levels at 50 feet (15.2 m)



and 985 feet (300 m). 985 feet is the approximate distance of the closest non-participating residence from a turbine site.

Blasting is not anticipated to be needed. Should blasting be required, it will occur intermittently and only for limited periods of time.

Major construction work, such as clearing for the access roads, will occur primarily during the day; however, minor construction work may extend earlier or later.

Due to the setbacks involved and the limited duration of the activities, construction noise should not pose undue quality of life concerns.

Table 4: Maximum Sound Levels from Various Construction Equipment

Equipment	Sound Pressure Level at 50 feet (dBA)	Sound Pressure Level at 985 feet (dBA)*
M-250 Liftcrane	83	51
2250 S3 Liftcrane	78	47
Excavator	83	54
Dumptruck being loaded	86	58
Dumptruck at 25 mph accelerating	76	49
Tractor Trailer at 25 mph accelerating	80	54
Concrete Truck	81	50
Bulldozer	85	54
Rock drill	100	67
Loader	80	46
Backhoe	80	49
Chipper	96	68
*Shortest distance from any one wind turbine to any one non-participating residence.		

10. CONCLUSIONS

Northwest Ohio Wind Project, a proposed National Wind development, is a 60-turbine wind power project to be located in Paulding County, Ohio. In preparation for Ohio Power Siting Board (OPSB) filing, RSG was hired to perform a noise impact assessment consistent with OPSB precedents set for similar projects. Conclusions are as follows:

- 1) There are no quantitative noise standards that apply to this project. The precedent from Buckeye II and other wind projects has set the applicable noise limit modeled at a home to 5 dBA above the facility area nighttime ambient noise levels (Leq). A nighttime design goal for this project has also been set at 45 dBA.



- 2) The average nighttime background sound level, measured from 5 sites around the project was 43 dBA, setting the sound level limit to 48 dBA for the project.
- 3) Sound propagation modeling was performed in accordance with ISO 9613-2 at over 800 discrete receivers that surround the project, with spectral ground attenuation and a ground factor of $G = 0.5$ (mixed ground).
- 4) A turbine model has not been chosen for this project. The Gamesa G114, Vestas V110, and the GE 1.7-100 were all modeled with sound power levels of 106 ± 2 dBA, 107.5 ± 2 dBA, and 107 ± 2 dBA. While only 50 turbines would be constructed if the G114 is used, 56 turbines if the V110 is used, and 59 turbines if the GE 1.7-100 is used, 60 turbines were conservatively modeled in this study for each turbine model.
- 5) With NROs (Noise Reduced Operations) applied to the turbines, the highest modeled daytime sound level at a non-participating receiver was 48, which was due to sound emissions from the adjacent Blue Creek Wind Farm. The highest modeled daytime sound level at a non-participating receiver attributable to the Northwest Ohio Wind Project is 48 dBA.
- 6) With NROs applied to the turbines, the highest modeled nighttime sound level at a non-participating receiver was 48, which was due to sound emissions from the adjacent Blue Creek Wind Farm. The highest modeled daytime sound level at a non-participating receiver attributable to the Northwest Ohio Wind Project is 45 dBA.
- 7) Once the final turbine model and layout is determined, final sound modeling can be conducted to determine the final NRO/curtailment schedule that is necessary to meet the noise limits.
- 8) The modeled levels of low frequency sound will be below recognized standards for low frequency sound intended to protect against perceptible building vibration.
- 9) Other than extended concrete pours and similar events, major construction will take place during normal business hours. Aside from road construction, these activities will take place at approximately 1,000 feet or more from non-participating residences.



APPENDIX A: MODELING INPUTS

Table A 1: Turbine Sound Power Spectrum including IEC 61400-14 Uncertainty (dB)

Wind Turbine Model	Maximum Sound Power Level including Uncertainty	Octave Band Center Frequency								
		31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
Gamesa G114	108.0	71	81	90	97	101	100	98	95	87
GE 1.7-100	109.0	81	90	95	98	102	102	98	91	72
Vesta V110	109.5	81	88	94	98	101	102	101	97	85
Gamesa G90 (Blue Creek)	108.8		84	93	100	102	100	97	95	91

Table A 2: Modeling Parameters

Parameter	Setting
Ground Absorption	Spectral for All Sources, G=0.5
Atmospheric Conditions	Temperature - 10°C and Relative Humidity - 70%
Reflection	No Reflections
Receiver Height (m)	4
Maximum Search Radius (m)	5,000

APPENDIX B: SOURCE INFORMATION

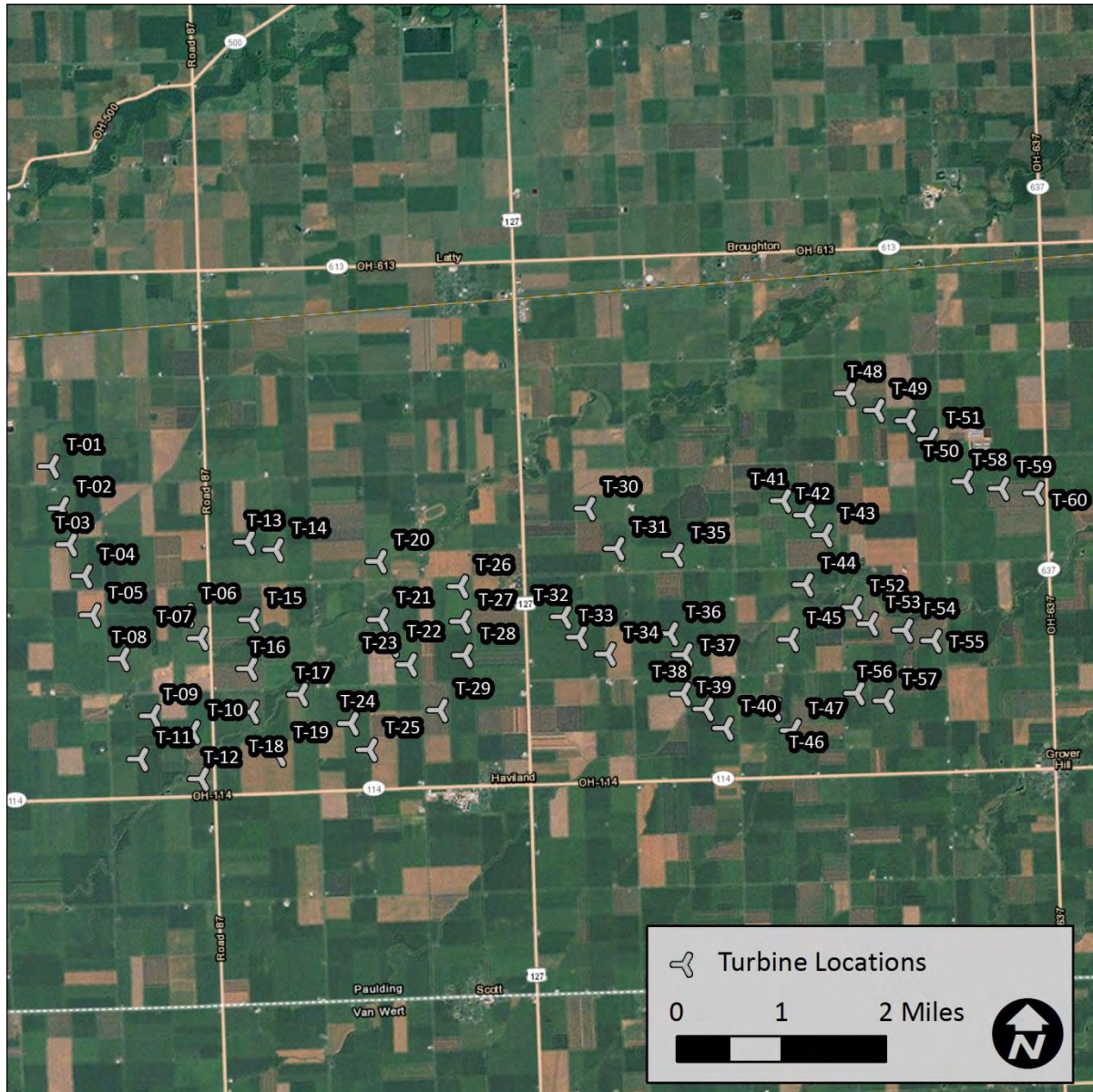


Figure B 1: Source Locations

Table B1: Modeled Gamesa Turbine Source Data

Turbine ID	Unmitigated Sound Power Level (dBA) + 2 dB Uncertainty	Nighttime Mitigated Sound Power Level (dBA)	Nighttime NRO Attenuation (dB)	Daytime Mitigated Sound Power Level (dBA)	Daytime NRO Attenuation (dB)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Hub Height (m)
						X (m)	Y (m)	
T-01	108	103	5	105	3	696668	4548602	318.97
T-02	108	103	5	107	1	696817.4	4547956	318.63
T-03	108	106	2	108	0	696943.8	4547397	318.77
T-04	108	108	0	108	0	697177.6	4546909	319.04
T-05	108	105	3	108	0	697300.6	4546314	319.21
T-06	108	108	0	108	0	698739.6	4546309	318.46
T-07	108	104	4	108	0	698962.6	4545949	318.21
T-08	108	103	5	105	3	697754.2	4545637	318.83
T-09	108	105	3	108	0	698226.9	4544753	318.87
T-10	108	105	3	108	0	698838.9	4544509	318.73
T-11	108	103	5	108	0	698042.2	4544087	319.02
T-12	108	103	5	105	3	698976.5	4543784	318.92
T-13	108	108	0	108	0	699680.4	4547432	317.56
T-14	108	103	5	108	0	700128.7	4547318	317.45
T-15	108	108	0	108	0	699753.2	4546236	317.69
T-16	108	0	Curtailed	105	3	699716.7	4545481	318.75
T-17	108	103	5	107	1	700502	4545090	317.86
T-18	108	103	5	105	3	699744.5	4544815	318.13
T-19	108	103	0	0	Curtailed	700160.5	4544166	318.51
T-20	108	106	2	108	0	701716.2	4547138	316.56
T-21	108	103	5	108	0	701743.9	4546242	316.67
T-22	108	106	2	108	0	701906.8	4545841	317.12
T-23	108	106	2	108	0	702182.3	4545548	316.6
T-24	108	103	5	107	1	701279.6	4544643	317.28
T-25	108	0	Curtailed	107	1	701569.9	4544238	317.46
T-26	108	108	0	108	0	702975.3	4546749	316.05
T-27	108	108	0	108	0	703012.5	4546208	316.18
T-28	108	108	0	108	0	703044.4	4545690	316.21
T-29	108	108	0	108	0	702656.7	4544842	316.89
T-30	108	108	0	108	0	704930.8	4547952	314.65
T-31	108	103	5	108	0	705384.2	4547334	314.67
T-32	108	108	0	108	0	704559.9	4546286	316.22
T-33	108	108	0	108	0	704805.5	4545969	315.49
T-34	108	103	5	108	0	705244.4	4545709	315.24
T-35	108	106	2	108	0	706291.4	4547240	314.53
T-36	108	108		108	0	706204.5	4546022	315.13
T-37	108	104	4	108	0	706434.2	4545698	314.93
T-38	108	0	Curtailed	108	0	706404.8	4545100	315.06
T-39	108	0	Curtailed	108	0	706754.2	4544865	314.17
T-40	108	0	Curtailed	108	0	707063.7	4544570	315.26
T-41	108	108	0	108	0	707954.6	4548071	314
T-42	108	108	0	108	0	708307.1	4547849	314.15
T-43	108	105	3	108	0	708588.7	4547541	314.16
T-44	108	103	5	108	0	708294	4546778	314.39
T-45	108	106	2	108	0	708065.3	4545930	313.83
T-46	108	0	Curtailed	108	0	707794.4	4544862	314.29
T-47	108	0	Curtailed	108	0	708102.1	4544534	314.16
T-48	108	108	0	108	0	708940.4	4549725	313.37
T-49	108	108	0	108	0	709391.9	4549461	313.37
T-50	108	105	3	108	0	709872.3	4549300	313.18
T-51	108	103	5	106	2	710216.7	4549018	313.14
T-52	108	103	5	108	0	709044.3	4546423	314.13
T-53	108	103	5	108	0	709287.1	4546176	313.87
T-54	108	108	0	108	0	709826.1	4546077	313.57
T-55	108	105	3	108	0	710265.8	4545918	313.09
T-56	108	104	4	108	0	709083.6	4545103	314.28
T-57	108	108	0	108	0	709536.6	4544987	314.36
T-58	108	103	5	108	0	710754.6	4548367	313.01
T-59	108	108	0	108	0	711314	4548261	312.88
T-60	108	108	0	108	0	711851.3	4548187	312.69

Table B2: Modeled Vestas Turbine Source Data

Turbine ID	Unmitigated Sound Power Level (dBA) + 2 dB Uncertainty	Nighttime Mitigated Sound Power Level (dBA)	Nighttime NRO Attenuation (dB)	Daytime Mitigated Sound Power Level (dBA)	Daytime NRO Attenuation (dB)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Hub Height (m)
						X (m)	Y (m)	
T-01	109.5	0	Curtailed	104.5	5	696668	4548602	320.97
T-02	109.5	106.5	3	107.5	2	696817.4	4547956	320.63
T-03	109.5	105.5	4	109.5	0	696943.8	4547397	320.77
T-04	109.5	107.5	2	109.5	0	697177.6	4546909	321.04
T-05	109.5	107.5	2	109.5	0	697300.6	4546314	321.21
T-06	109.5	108.5	1	109.5	0	698739.6	4546309	320.46
T-07	109.5	104.5	5	109.5	0	698962.6	4545949	320.21
T-08	109.5	0	Curtailed	105.5	4	697754.2	4545637	320.83
T-09	109.5	104.5	5	104.5	5	698226.9	4544753	320.87
T-10	109.5	104.5	5	104.5	5	698838.9	4544509	320.73
T-11	109.5	104.5	5	104.5	5	698042.2	4544087	321.02
T-12	109.5	0	Curtailed	104.5	5	698976.5	4543784	320.92
T-13	109.5	109.5	0	109.5	0	699680.4	4547432	319.56
T-14	109.5	106.5	3	109.5	0	700128.7	4547318	319.45
T-15	109.5	104.5	5	109.5	0	699753.2	4546236	319.69
T-16	109.5	0	Curtailed	104.5	5	699716.7	4545481	320.75
T-17	109.5	104.5	5	104.5	5	700502	4545090	319.86
T-18	109.5	104.5	5	104.5	5	699744.5	4544815	320.13
T-19	109.5	0	Curtailed	0	Curtailed	700160.5	4544166	320.51
T-20	109.5	104.5	5	109.5	0	701716.2	4547138	318.56
T-21	109.5	104.5	5	107.5	2	701743.9	4546242	318.67
T-22	109.5	104.5	5	109.5	0	701906.8	4545841	319.12
T-23	109.5	105.5	4	109.5	0	702182.3	4545548	318.6
T-24	109.5	0	Curtailed	104.5	5	701279.6	4544643	319.28
T-25	109.5	0	Curtailed	104.5	5	701569.9	4544238	319.46
T-26	109.5	109.5	0	109.5	0	702975.3	4546749	318.05
T-27	109.5	109.5	0	109.5	0	703012.5	4546208	318.18
T-28	109.5	104.5	5	109.5	0	703044.4	4545690	318.21
T-29	109.5	109.5	0	109.5	0	702656.7	4544842	318.89
T-30	109.5	109.5	0	109.5	0	704930.8	4547952	316.65
T-31	109.5	0	Curtailed	107.5	2	705384.2	4547334	316.67
T-32	109.5	109.5	0	109.5	0	704559.9	4546286	318.22
T-33	109.5	104.5	5	109.5	0	704805.5	4545969	317.49
T-34	109.5	104.5	5	107.5	2	705244.4	4545709	317.24
T-35	109.5	106.5	3	109.5	0	706291.4	4547240	316.53
T-36	109.5	105.5	4	109.5	0	706204.5	4546022	317.13
T-37	109.5	104.5	5	108.5	1	706434.2	4545698	316.93
T-38	109.5	104.5	5	108.5	1	706404.8	4545100	317.06
T-39	109.5	104.5	5	107.5	2	706754.2	4544865	316.17
T-40	109.5	0	Curtailed	109.5	0	707063.7	4544570	317.26
T-41	109.5	109.5	0	109.5	0	707954.6	4548071	316
T-42	109.5	104.5	5	109.5	0	708307.1	4547849	316.15
T-43	109.5	104.5	5	109.5	0	708588.7	4547541	316.16
T-44	109.5	104.5	5	108.5	1	708294	4546778	316.39
T-45	109.5	104.5	5	109.5	0	708065.3	4545930	315.83
T-46	109.5	104.5	5	109.5	0	707794.4	4544862	316.29
T-47	109.5	104.5	5	109.5	0	708102.1	4544534	316.16
T-48	109.5	109.5	0	109.5	0	708940.4	4549725	315.37
T-49	109.5	109.5	0	109.5	0	709391.9	4549461	315.37
T-50	109.5	109.5	0	109.5	0	709872.3	4549300	315.18
T-51	109.5	0	Curtailed	104.5	5	710216.7	4549018	315.14
T-52	109.5	104.5	5	106.5	3	709044.3	4546423	316.13
T-53	109.5	104.5	5	107.5	2	709287.1	4546176	315.87
T-54	109.5	108.5	1	109.5	0	709826.1	4546077	315.57
T-55	109.5	105.5	4	109.5	0	710265.8	4545918	315.09
T-56	109.5	104.5	5	107.5	2	709083.6	4545103	316.28
T-57	109.5	104.5	5	109.5	0	709536.6	4544987	316.36
T-58	109.5	106.5	3	109.5	0	710754.6	4548367	315.01
T-59	109.5	107.5	2	109.5	0	711314	4548261	314.88
T-60	109.5	109.5	0	109.5	0	711851.3	4548187	314.69

Table B3: Modeled GE Turbine Source Data

Turbine ID	Unmitigated Sound Power Level (dBA) + 2 dB Uncertainty	Nighttime Mitigated Sound Power Level (dBA)	Nighttime NRO Attenuation (dB)	Daytime Mitigated Sound Power Level (dBA)	Daytime NRO Attenuation (dB)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Hub Height (m)
						X (m)	Y (m)	
T-01	107.7	0	Curtailed	102.7	5	696668	4548602	321.97
T-02	107.7	104.7	3	105.7	2	696817.4	4547956	321.63
T-03	107.7	103.7	4	107.7	0	696943.8	4547397	321.77
T-04	107.7	105.7	2	107.7	0	697177.6	4546909	322.04
T-05	107.7	105.7	2	107.7	0	697300.6	4546314	322.21
T-06	107.7	104.7	3	107.7	0	698739.6	4546309	321.46
T-07	107.7	102.7	5	106.7	1	698962.6	4545949	321.21
T-08	107.7	0	Curtailed	103.7	4	697754.2	4545637	321.83
T-09	107.7	104.7	3	106.7	1	698226.9	4544753	321.87
T-10	107.7	102.7	5	102.7	5	698838.9	4544509	321.73
T-11	107.7	102.7	5	107.7	0	698042.2	4544087	322.02
T-12	107.7	102.7	5	102.7	5	698976.5	4543784	321.92
T-13	107.7	105.7	2	107.7	0	699680.4	4547432	320.56
T-14	107.7	102.7	5	107.7	0	700128.7	4547318	320.45
T-15	107.7	104.7	3	107.7	0	699753.2	4546236	320.69
T-16	107.7	0	Curtailed	102.7	5	699716.7	4545481	321.75
T-17	107.7	102.7	5	102.7	5	700502	4545090	320.86
T-18	107.7	102.7	5	102.7	5	699744.5	4544815	321.13
T-19	107.7	0	Curtailed	0	Curtailed	700160.5	4544166	321.51
T-20	107.7	102.7	5	107.7	0	701716.2	4547138	319.56
T-21	107.7	102.7	5	104.7	3	701743.9	4546242	319.67
T-22	107.7	103.7	4	107.7	0	701906.8	4545841	320.12
T-23	107.7	103.7	4	107.7	0	702182.3	4545548	319.6
T-24	107.7	0	Curtailed	102.7	5	701279.6	4544643	320.28
T-25	107.7	0	Curtailed	102.7	5	701569.9	4544238	320.46
T-26	107.7	107.7	0	107.7	0	702975.3	4546749	319.05
T-27	107.7	107.7	0	107.7	0	703012.5	4546208	319.18
T-28	107.7	102.7	5	107.7	0	703044.4	4545690	319.21
T-29	107.7	102.7	5	107.7	0	702656.7	4544842	319.89
T-30	107.7	102.7	5	107.7	0	704930.8	4547952	317.65
T-31	107.7	102.7	5	105.7	2	705384.2	4547334	317.67
T-32	107.7	103.7	4	107.7	0	704559.9	4546286	319.22
T-33	107.7	102.7	5	107.7	0	704805.5	4545969	318.49
T-34	107.7	102.7	5	105.7	2	705244.4	4545709	318.24
T-35	107.7	102.7	5	107.7	0	706291.4	4547240	317.53
T-36	107.7	102.7	5	107.7	0	706204.5	4546022	318.13
T-37	107.7	102.7	5	105.7	2	706434.2	4545698	317.93
T-38	107.7	0	Curtailed	105.7	2	706404.8	4545100	318.06
T-39	107.7	0	Curtailed	104.7	3	706754.2	4544865	317.17
T-40	107.7	0	Curtailed	107.7	0	707063.7	4544570	318.26
T-41	107.7	107.7	0	107.7	0	707954.6	4548071	317
T-42	107.7	104.7	3	107.7	0	708307.1	4547849	317.15
T-43	107.7	102.7	5	107.7	0	708588.7	4547541	317.16
T-44	107.7	102.7	5	105.7	2	708294	4546778	317.39
T-45	107.7	102.7	5	107.7	0	708065.3	4545930	316.83
T-46	107.7	0	Curtailed	107.7	0	707794.4	4544862	317.29
T-47	107.7	0	Curtailed	107.7	0	708102.1	4544534	317.16
T-48	107.7	107.7	0	107.7	0	708940.4	4549725	316.37
T-49	107.7	107.7	0	107.7	0	709391.9	4549461	316.37
T-50	107.7	107.7	0	107.7	0	709872.3	4549300	316.18
T-51	107.7	0	Curtailed	102.7	5	710216.7	4549018	316.14
T-52	107.7	102.7	5	103.7	4	709044.3	4546423	317.13
T-53	107.7	102.7	5	106.7	1	709287.1	4546176	316.87
T-54	107.7	104.7	3	107.7	0	709826.1	4546077	316.57
T-55	107.7	104.7	3	107.7	0	710265.8	4545918	316.09
T-56	107.7	102.7	5	106.7	1	709083.6	4545103	317.28
T-57	107.7	102.7	5	107.7	0	709536.6	4544987	317.36
T-58	107.7	104.7	3	107.7	0	710754.6	4548367	316.01
T-59	107.7	105.7	2	107.7	0	711314	4548261	315.88
T-60	107.7	104.7	3	107.7	0	711851.3	4548187	315.69

Table B4: Blue Creek Wind Farm Modeled Turbine Source Data

Turbine ID	Unmitigated Sound Power Level (dBA) + 2 dB Uncertainty	Hub Height (m)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Hub Height (m)	Turbine ID	Unmitigated Sound Power Level (dBA) + 2 dB Uncertainty	Hub Height (m)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Hub Height (m)
			X (m)	Y (m)					X (m)	Y (m)	
BlueCreek-1	108.8	100	693815.8	4535782	333.46	BlueCreek-83	108.8	100	701710.11	4539710.09	326.47
BlueCreek-2	108.8	100	693915.7	4536558	332.75	BlueCreek-84	108.8	100	701804.05	4536550.38	328.82
BlueCreek-3	108.8	100	693961.1	4535487	333.47	BlueCreek-85	108.8	100	701804.05	4536550.38	321.82
BlueCreek-4	108.8	100	694324.3	4533871	335.43	BlueCreek-86	108.8	100	701872.62	4540832.84	325.71
BlueCreek-5	108.8	100	694374.1	4538137	332.28	BlueCreek-87	108.8	100	701881.61	4539398.26	326.46
BlueCreek-6	108.8	100	694511.6	4539846	330.26	BlueCreek-88	108.8	100	702076.39	4536276.66	329.08
BlueCreek-7	108.8	100	694609.8	4539551	330.3	BlueCreek-89	108.8	100	702088.97	4537773.3	327.78
BlueCreek-8	108.8	100	694717.9	4539227	330.31	BlueCreek-90	108.8	100	702112.7	4535159.96	329.51
BlueCreek-9	108.8	100	694769.1	4534933	333.85	BlueCreek-91	108.8	100	702230.73	4536040.61	328.95
BlueCreek-10	108.8	100	695150	4538893	330.24	BlueCreek-92	108.8	100	702248.01	4539133.21	326.43
BlueCreek-11	108.8	100	695189.3	4539865	329.55	BlueCreek-93	108.8	100	702257.96	4534932.99	329.49
BlueCreek-12	108.8	100	695277.7	4539620	329.78	BlueCreek-94	108.8	100	702286.08	4542238.79	325.08
BlueCreek-13	108.8	100	695395.6	4538127	330.6	BlueCreek-95	108.8	100	702304.78	4540685.51	325.78
BlueCreek-14	108.8	100	695450	4533081	262.52	BlueCreek-96	108.8	100	702334.52	4537576.86	328.11
BlueCreek-15	108.8	100	695542.9	4537793	330.68	BlueCreek-97	108.8	100	702875.38	4542665.14	324.22
BlueCreek-16	108.8	100	695622.5	4532809	230.78	BlueCreek-98	108.8	100	702941.83	4538501.75	326.93
BlueCreek-17	108.8	100	695658.9	4535941	332.64	BlueCreek-99	108.8	100	703031.29	4542314.33	323.93
BlueCreek-18	108.8	100	695680.4	4537488	331.02	BlueCreek-100	108.8	100	703058.76	4538189.92	327.06
BlueCreek-19	108.8	100	695704.3	4534161	333.59	BlueCreek-101	108.8	100	703085.63	4541427.07	324.73
BlueCreek-20	108.8	100	695749.6	4534960	333.26	BlueCreek-102	108.8	100	703110.5	4536977.15	327.79
BlueCreek-21	108.8	100	695858.6	4533916	333.74	BlueCreek-103	108.8	100	703234.25	4536667.77	328.05
BlueCreek-22	108.8	100	695867	4539423	329.43	BlueCreek-104	108.8	100	703238.49	4534960.22	330.12
BlueCreek-23	108.8	100	696258	4542365	327.78	BlueCreek-105	108.8	100	703635.65	4538603.1	326.76
BlueCreek-24	108.8	100	696417.8	4542089	327.99	BlueCreek-106	108.8	100	703670.54	4542415.68	323.9
BlueCreek-25	108.8	100	696584.1	4536663	331.93	BlueCreek-107	108.8	100	703807.15	4538221.11	326.88
BlueCreek-26	108.8	100	696621.2	4534043	333.24	BlueCreek-108	108.8	100	703846.13	4539600.95	325.57
BlueCreek-27	108.8	100	696712	4536349	332.32	BlueCreek-109	108.8	100	704553.86	4541343.83	324.15
BlueCreek-28	108.8	100	696748.3	4533771	333.2	BlueCreek-110	108.8	100	704574.84	4542696.32	323.48
BlueCreek-29	108.8	100	696811.9	4535124	332.82	BlueCreek-111	108.8	100	704600.32	4537393.37	327.49
BlueCreek-30	108.8	100	696984.4	4531719	108.4	BlueCreek-112	108.8	100	704711.46	4540146.65	325.14
BlueCreek-31	108.8	100	696984.4	4536041	332.17	BlueCreek-113	108.8	100	704746.34	4541074.82	324.24
BlueCreek-32	108.8	100	697053.2	4542443	327.41	BlueCreek-114	108.8	100	704754.14	4542478.04	323.52
BlueCreek-33	108.8	100	697201.3	4542221	326.57	BlueCreek-115	108.8	100	704763.74	4535196.28	328.65
BlueCreek-34	108.8	100	697211.4	4535768	332.43	BlueCreek-116	108.8	100	704890.76	4539943.96	325.26
BlueCreek-35	108.8	100	697338.5	4533117	266.14	BlueCreek-117	108.8	100	704963.48	4534887.59	328.72
BlueCreek-36	108.8	100	697365.7	4534225	332.78	BlueCreek-118	108.8	100	705008.87	4533725.49	330.4
BlueCreek-37	108.8	100	697415.7	4541410	327.9	BlueCreek-119	108.8	100	705172.29	4534587.99	329.06
BlueCreek-38	108.8	100	697429.2	4532818	231.74	BlueCreek-120	108.8	100	705193.85	4541821.1	323.58
BlueCreek-39	108.8	100	697492.8	4532545	201.16	BlueCreek-121	108.8	100	705419.92	4541517.06	323.88
BlueCreek-40	108.8	100	698052.1	4536791	330.7	BlueCreek-122	108.8	100	705480.97	4533416.81	299.01
BlueCreek-41	108.8	100	698090.8	4535832	331.93	BlueCreek-123	108.8	100	705521.27	4543216.53	322.47
BlueCreek-42	108.8	100	698108.9	4534760	332.11	BlueCreek-124	108.8	100	705626.24	4532944.71	246.01
BlueCreek-43	108.8	100	698140.5	4537773	329.3	BlueCreek-125	108.8	100	705973.42	4542421.37	323.02
BlueCreek-44	108.8	100	698179.6	4541531	327.38	BlueCreek-126	108.8	100	706170.97	4532799.45	229.7
BlueCreek-45	108.8	100	698317.7	4533898	332.15	BlueCreek-127	108.8	100	706216.36	4536004.3	327.39
BlueCreek-46	108.8	100	698335.6	4541255	327.48	BlueCreek-128	108.8	100	706238.47	4541914.65	323.34
BlueCreek-47	108.8	100	698463	4533126	266.48	BlueCreek-129	108.8	100	706387.08	4538480.48	325.95
BlueCreek-48	108.8	100	698490.2	4535605	331.96	BlueCreek-130	108.8	100	706417.77	4541595.02	323.7
BlueCreek-49	108.8	100	698590.1	4536604	330.35	BlueCreek-131	108.8	100	706519.12	4543333.46	322.54
BlueCreek-50	108.8	100	698647.4	4542498	326.55	BlueCreek-132	108.8	100	706579.52	4536930.35	326.82
BlueCreek-51	108.8	100	698690	4532781	227.66	BlueCreek-133	108.8	100	706615.83	4534787.73	328.35
BlueCreek-52	108.8	100	698690.3	4540771	327.65	BlueCreek-134	108.8	100	706750.5	4537635.79	326.12
BlueCreek-53	108.8	100	698763.3	4539258	328.02	BlueCreek-135	108.8	100	706888	4539492.15	324.96
BlueCreek-54	108.8	100	698877.2	4537577	329.28	BlueCreek-136	108.8	100	706897.28	4536676.14	326.84
BlueCreek-55	108.8	100	698967	4542264	326.55	BlueCreek-137	108.8	100	706924.49	4541306.58	323.76
BlueCreek-56	108.8	100	698981.7	4534234	332.04	BlueCreek-138	108.8	100	707124.25	4534261.15	328.68
BlueCreek-57	108.8	100	698982.6	4541566	327.34	BlueCreek-139	108.8	100	707133.33	4532835.76	233.77
BlueCreek-58	108.8	100	699083.4	4537272	329.5	BlueCreek-140	108.8	100	707166.16	4542390.18	322.94
BlueCreek-59	108.8	100	699099.8	4533989	332.12	BlueCreek-141	108.8	100	707308.7	4541348.17	323.66
BlueCreek-60	108.8	100	699698.8	4539656	327.27	BlueCreek-142	108.8	100	707414.78	4532654.19	213.39
BlueCreek-61	108.8	100	699846.9	4538892	327.61	BlueCreek-143	108.8	100	707665.08	4542818.95	322.58
BlueCreek-62	108.8	100	699979.2	4536431	329.66	BlueCreek-144	108.8	100	707732.7	4538549.24	324.69
BlueCreek-63	108.8	100	700053	4534842	330.9	BlueCreek-145	108.8	100	707805.17	4536957.58	326.49
BlueCreek-64	108.8	100	700088.1	4536113	329.87	BlueCreek-146	108.8	100	707814.25	4536095.09	326.49
BlueCreek-65	108.8	100	700188	4535850	329.86	BlueCreek-147	108.8	100	707859.98	4542522.71	322.88
BlueCreek-66	108.8	100	700216.4	4543228	326.12	BlueCreek-148	108.8	100	707930.14	4543489.38	322.16
BlueCreek-67	108.8	100	700348.9	4542940	326.45	BlueCreek-149	108.8	100	708015.89	4541181.85	323.36
BlueCreek-68	108.8	100	700384.8	4540061	326.92	BlueCreek-150	108.8	100	708017.53	4539521.62	324.44
BlueCreek-69	108.8	100	700470.6	4539804	326.73	BlueCreek-151	108.8	100	708068.46	4534569.83	327.86
BlueCreek-70	108.8	100	700497	4542636	326.18	BlueCreek-152	108.8	100	708076.47	4540209.16	323.82
BlueCreek-71	108.8	100	700660.7	4542386	325.96	BlueCreek-153	108.8	100	708113.85	4536721.53	326.1
BlueCreek-72	108.8	100	701146.7	4542971	325.51	BlueCreek-154	108.8	100	708240.96	4535332.46	327.31
BlueCreek-73	108.8	100	701242.4	4539086	326.89	BlueCreek-155	108.8	100	708286.35	4534379.18	327.71
BlueCreek-74	108.8	100	701273.7	4537459	328.17	BlueCreek-156	108.8	100	708351.11	4541049.32	323.13
BlueCreek-75	108.8	100	701345.6	4542759	325.43	BlueCreek-157	108.8	100	708413.46	4535114.57	327.49
BlueCreek-76	108.8	100	701477.2	4534815	329.89	BlueCreek-158	108.8	100	708413.47	4541813.3	322.77
BlueCreek-77	108.8	100	701514.1	4540995	325.66	BlueCreek-159	108.8	100	708665.79	4539148.38	324.16
BlueCreek-78	108.8	100	701568.9	4536699	328.62	BlueCreek-160	108.8	100	708694.9	4534869.44	327.15
BlueCreek-79	108.8	100	701568.9	4536699	321.62	BlueCreek-161	108.8	100	708749.38	4533117.21	265.37
BlueCreek-80	108.8	100	701571.5	4542546	325.25	BlueCreek-162	108.8	100	708921.87	4534706.02	327.13
BlueCreek-81	108.8	100	701607.7	4538304	327.29	BlueCreek-163	108.8	100	709103.45	4532953.79	247.03
BlueCreek-82	108.8	100	701658.8	4534488	330.13						

APPENDIX C: RECEIVER INFORMATION

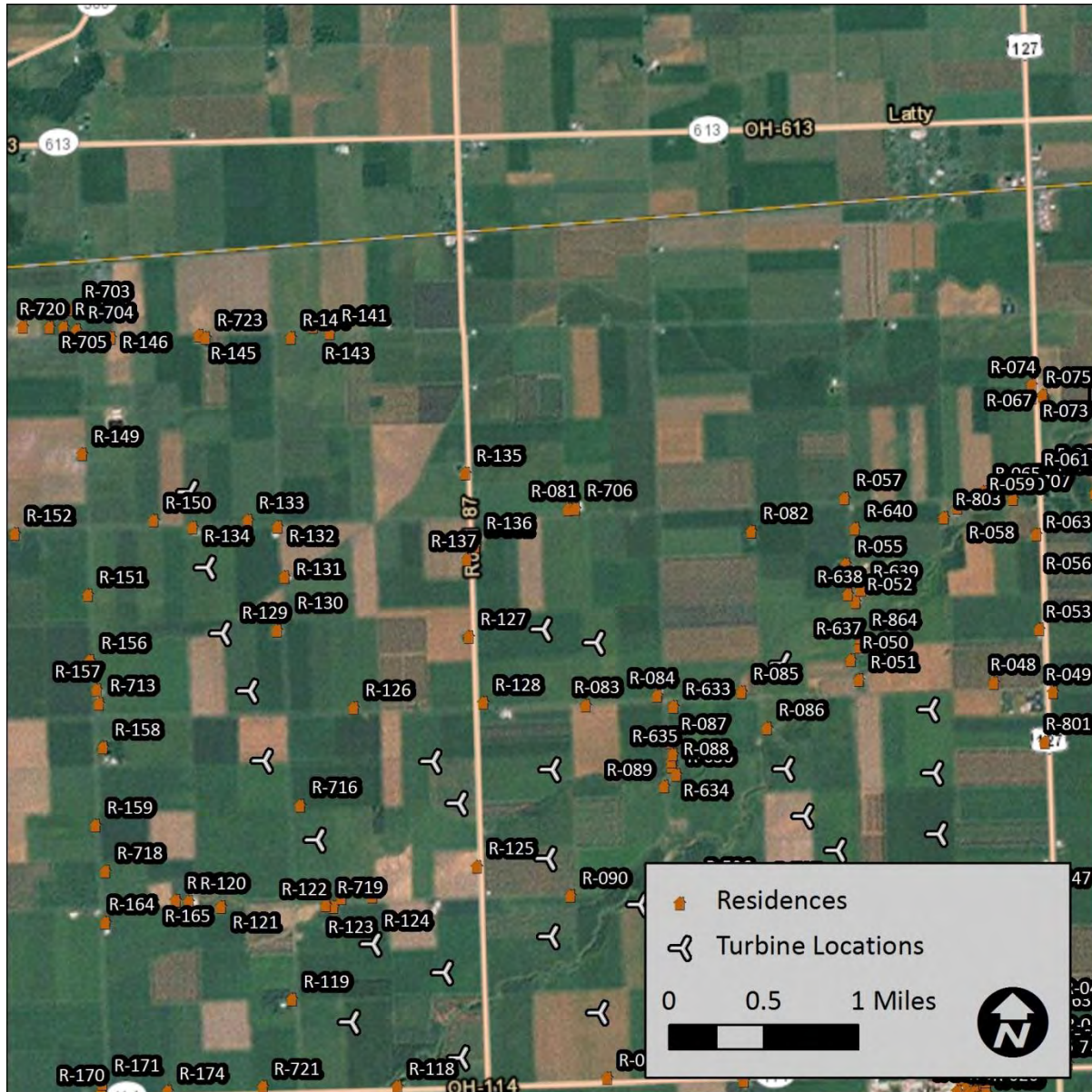


Figure C 1: Receiver Locations - NW Quadrant

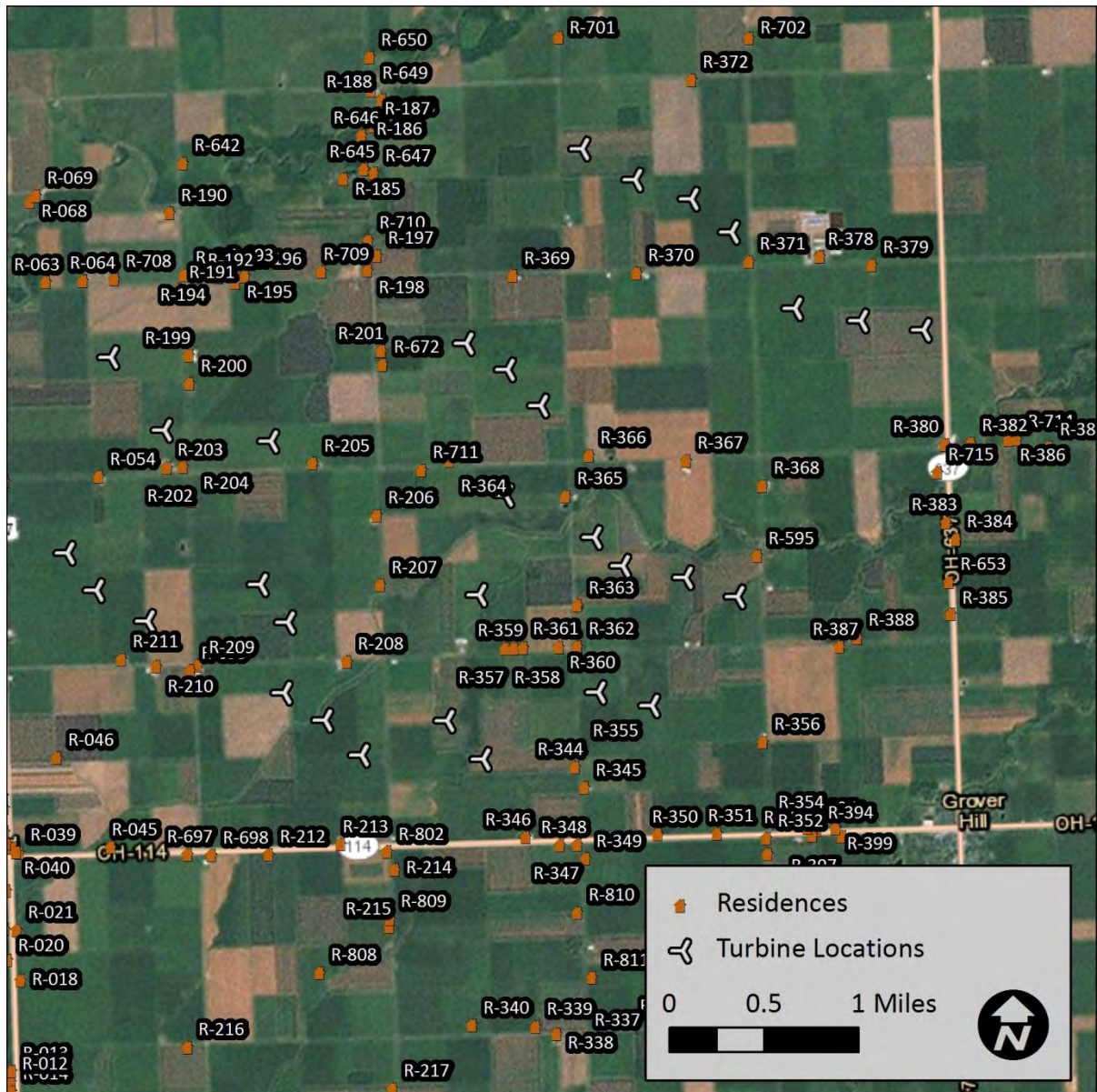


Figure C2: Receiver Locations - NE Quadrant

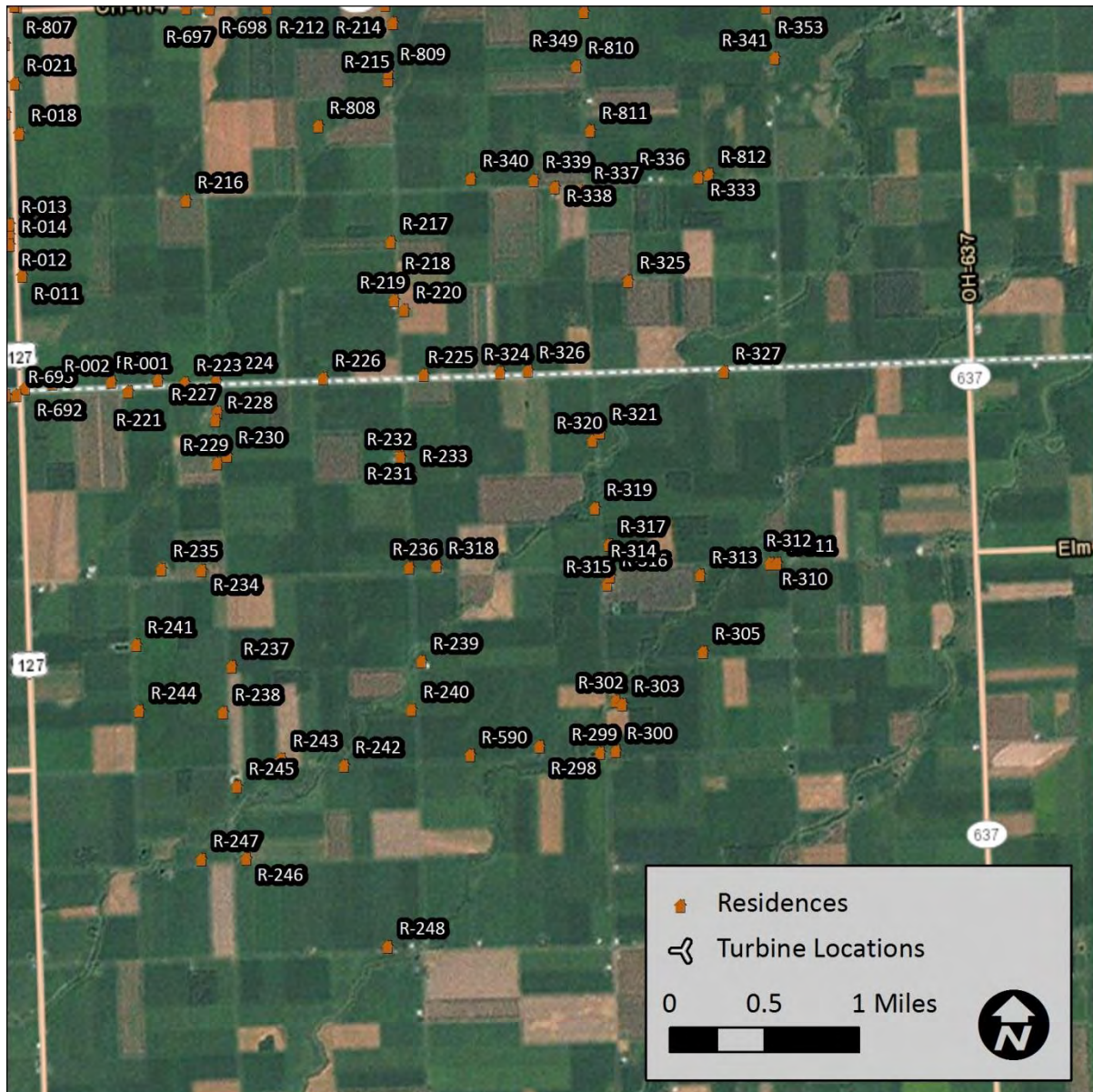


Figure C3: Receiver Locations - SE Quadrant

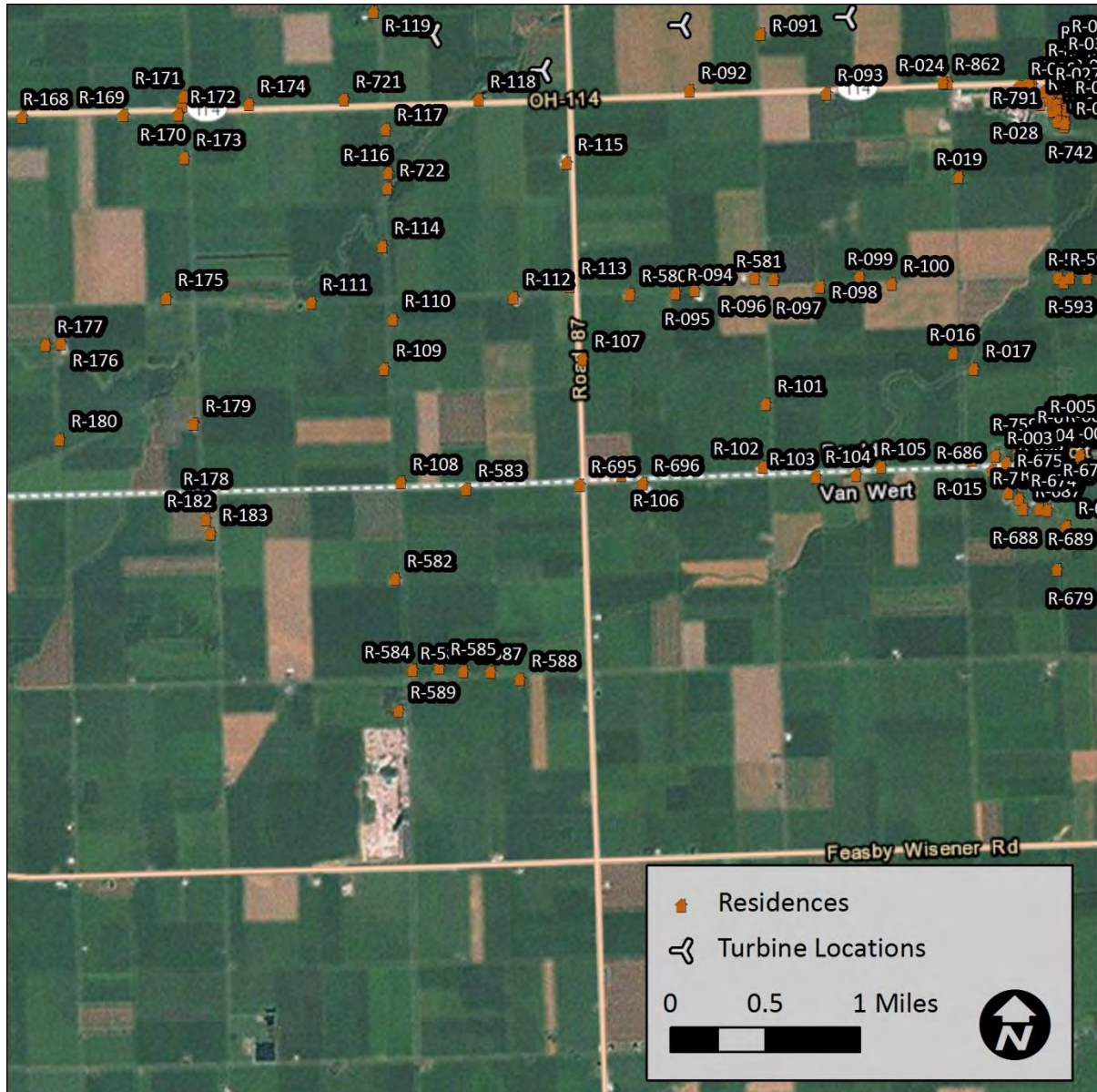


Figure C 4: Receiver Locations - SW Quadrant

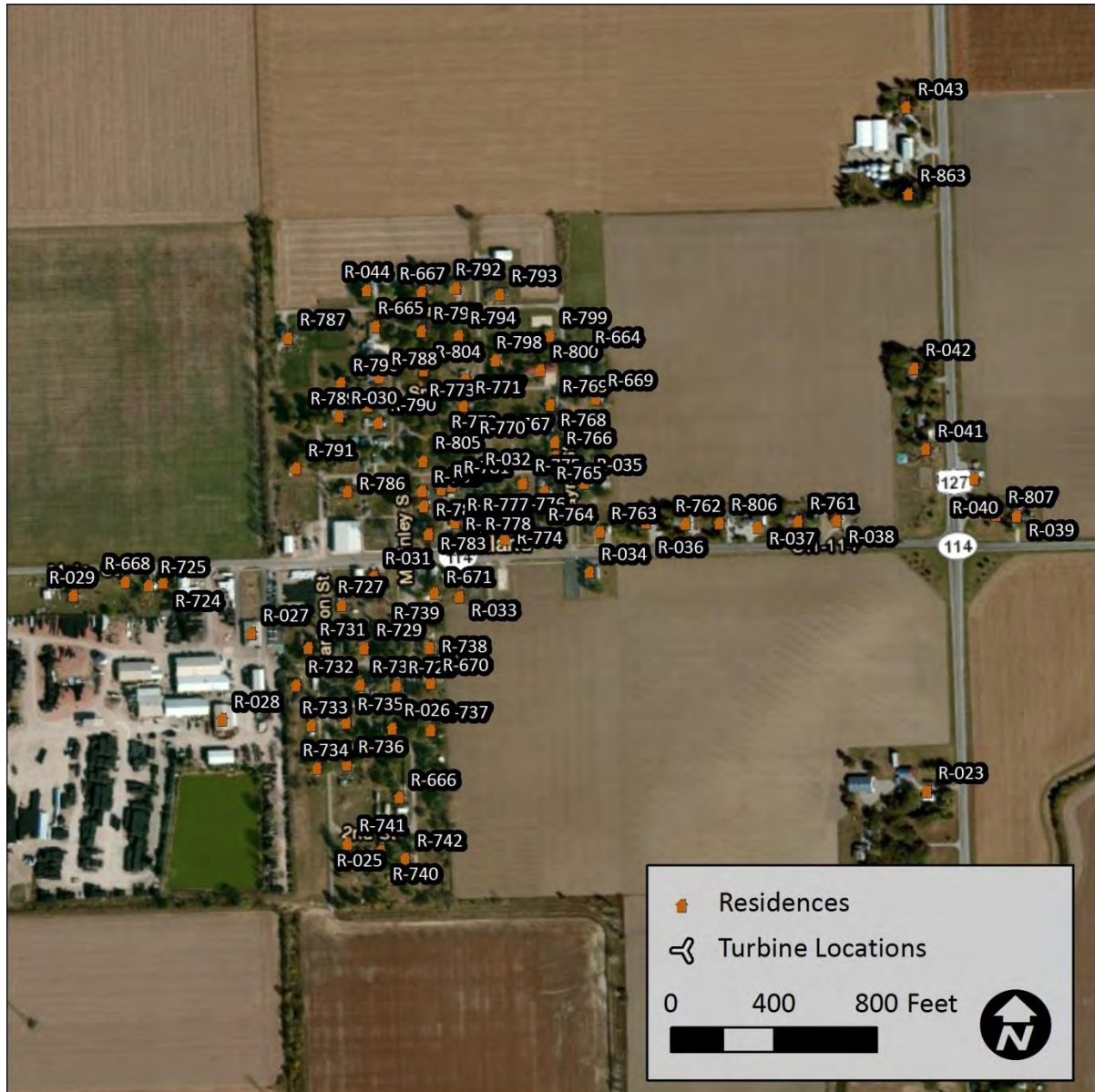


Figure C 5: Receiver Locations – Haviland Center

Table C1: Modeled Receivers - Gamesa Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences001	48.9	48.9	704957.8	4540548	228.81
Residences002	48.7	48.7	704458.3	4540531	228.96
Residences003	46.9	46.9	702836.3	4540515	229.44
Residences004	46	46	703027.1	4540540	229.67
Residences005	46.2	46.2	703203.8	4540783	229.53
Residences006	45.8	45.8	703332	4540701	229.59
Residences007	45.5	45.5	703352.6	4540554	229.19
Residences008	45.4	45.4	703403.2	4540526	229.61
Residences009	45.4	45.5	703557.5	4540515	229.35
Residences010	45.7	45.7	703756.7	4540515	229.12
Residences011	49.2	49.2	704200.1	4541449	228.49
Residences012	47.5	47.6	704090.7	4541797	228.48
Residences013	47.6	47.6	704093.5	4541884	228.12
Residences014	47.6	47.6	704093.5	4541713	228.18
Residences015	48.5	48.5	702637.1	4540484	229.89
Residences016	47.7	47.8	702479.9	4541390	229.18
Residences017	48.3	48.3	702651.1	4541253	229.17
Residences018	49.3	49.3	704174.9	4542657	227.81
Residences019	48.6	48.6	702525.4	4542883	228.74
Residences020	47.9	47.9	704057	4542830	227.85
Residences021	46.5	46.6	704138.4	4543085	227.5
Residences022	46.1	46.2	704031.7	4543094	227.26
Residences023	44.2	44.4	704049.7	4543418	227.55
Residences024	43.6	44.3	702428.2	4543681	228.36
Residences025	44.7	44.9	703419	4543315	227.85
Residences026	43.8	44	703416.7	4543493	227.97
Residences027	43.4	43.7	703249.7	4543605	228.46
Residences028	43.9	44.2	703215.4	4543502	228.53
Residences029	43.4	43.8	703038.9	4543650	228.17
Residences030	42.5	42.9	703354.1	4543862	227.79
Residences031	43	43.4	703394.4	4543672	228.22
Residences032	42.5	42.9	703512.6	4543789	227.94
Residences033	43.1	43.4	703496	4543649	227.89
Residences034	42.9	43.2	703650.1	4543677	228.09
Residences035	42.5	42.9	703644.6	4543783	227.94
Residences036	42.6	43	703717.4	4543736	227.79
Residences037	42.7	43	703849.3	4543731	227.72
Residences038	42.6	43	703943	4543738	227.7
Residences039	42.7	43.1	704156.7	4543744	227.83
Residences040	42.5	42.9	704105.8	4543788	227.83
Residences041	42.4	42.7	704048.6	4543823	227.62

Table C1: Modeled Receivers - Gamesa Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences042	42.1	42.5	704034.5	4543919	227.56
Residences043	41.3	41.9	704025.2	4544228	227.5
Residences044	42.2	42.7	703386.3	4544011	227.93
Residences045	43.7	44.1	704941	4543789	226.72
Residences046	41	41.9	704481	4544551	227.23
Residences048	41.9	42.7	703990.3	4545166	227.39
Residences051	43.4	43.9	703526.5	4546983	226.83
Residences052	42.2	42.9	704033.6	4546901	226.82
Residences053	42.9	44.3	702310.9	4547173	226.73
Residences054	43.7	44.9	702378.7	4547008	226.77
Residences055	39.7	41.1	702349.5	4547669	227.16
Residences056	40	40.9	703911.6	4547435	226.68
Residences057	43.2	44.7	704836.4	4546939	226.12
Residences058	37.6	39.1	702265.9	4547990	226.72
Residences059	37.5	38.4	703886.1	4548244	226.38
Residences060	34.5	36	702254.5	4548553	227.45
Residences061	35.2	36.3	703213.5	4548472	226.25
Residences062	35.1	36.2	703386.7	4548517	226.22
Residences063	35.3	36.3	703470.3	4548519	226.07
Residences064	35.4	36.3	703854.9	4548728	226.29
Residences065	36	36.9	703974.8	4548682	225.97
Residences066	38.5	39.2	704388.1	4548594	226.18
Residences067	40	40.6	704700.6	4548607	225.84
Residences068	34.9	35.9	703440	4548608	226.51
Residences069	35.5	36.4	703966.4	4548772	225.86
Residences070	32.7	33.7	703958.8	4549372	226.12
Residences071	33.6	34.5	704253.4	4549280	224.74
Residences072	33.5	34.5	704303.9	4549330	225.38
Residences073	30.3	31.2	704461.1	4550080	223.87
Residences074	29.3	30.3	703664.1	4550108	225.72
Residences075	30.1	31.1	703911.1	4549987	225.69
Residences076	32.3	33.3	703846.5	4549409	226.38
Residences077	31.9	32.8	703849.3	4549516	226.14
Residences078	32.4	33.4	703944.7	4549429	226.21
Residences079	28.7	29.9	702642.7	4550035	227.14
Residences080	30.6	32	702188.1	4549546	226.63
Residences081	28.7	30.4	700215.3	4550040	227.49
Residences082	28.8	30.5	699842.1	4550035	228.02
Residences083	29	30.6	700672.7	4549998	227.61
Residences084	37.1	38.7	699903.4	4548459	228.03
Residences085	36.1	38	701461.9	4548269	227.68

Table C1: Modeled Receivers - Gamesa Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences087	44.1	45.9	700048.7	4546790	228.77
Residences088	41.2	43.6	700657.3	4546872	228.21
Residences089	44.1	46.3	701377.7	4546904	227.87
Residences090	44.6	47.6	701596	4546597	227.97
Residences091	41.1	43.2	700764.1	4546477	227.48
Residences092	41.2	43.3	700784.1	4546267	228.06
Residences093	41.3	43.4	700720.4	4546100	227.79
Residences094	43.9	47.4	699920.7	4545167	229.2
Residences095	43.9	45.6	700841	4544096	229.18
Residences096	48.2	48.5	700235.5	4543616	230.11
Residences097	45.9	46.9	701397.5	4543594	229.27
Residences098	46.3	46.4	700115.6	4541901	231.1
Residences099	47	47.1	700280.6	4541924	230.95
Residences100	49.2	49.3	700790.7	4542029	230.21
Residences101	48.5	48.5	700951.8	4542017	230.22
Residences102	47.7	47.7	701345.2	4541955	230.02
Residences103	48.4	48.4	701680.6	4542035	229.39
Residences104	48.7	48.8	701954.4	4541976	229.85
Residences105	46.4	46.4	700883.2	4540955	230.56
Residences106	47.4	47.4	700860.7	4540425	230.65
Residences107	47.7	47.7	701309.7	4540338	230.64
Residences108	48.8	48.8	701652.1	4540355	230.23
Residences109	49.7	49.7	701863.3	4540420	229.99
Residences110	46.4	46.4	699656	4540352	231.61
Residences111	48	48.1	699330	4541337	231.66
Residences112	43.9	43.9	697785.7	4540293	232.59
Residences113	50.7	50.7	697639.2	4541255	232.4
Residences114	49.6	49.6	697713.9	4541677	231.91
Residences115	49.1	49.1	697018.4	4541819	232.23
Residences116	50.4	50.4	698740.5	4541861	231.33
Residences117	49.5	49.6	699215.4	4541957	231.16
Residences118	48.5	48.6	697625.7	4542295	230.98
Residences119	45.8	46.2	699188	4543004	230.49
Residences120	44.9	45.2	697676.6	4542917	229.88
Residences121	43.1	44	697652.9	4543291	230.92
Residences122	43.8	45.4	698444.5	4543541	229.79
Residences123	41.7	44.7	697548.6	4544285	230.47
Residences124	37.5	39.2	696667.4	4545121	230.72
Residences125	38.5	40.4	696945.4	4545073	230.34
Residences126	43.5	46.1	697899.2	4545073	229.59
Residences127	43.6	46.1	697972.2	4545147	229.67

Table C1: Modeled Receivers - Gamesa Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences128	44.2	46.8	698231.7	4545166	229.74
Residences130	43.3	46.1	699124.1	4545417	229.52
Residences131	42.2	43.5	698073.7	4546767	230.28
Residences132	42.3	43.2	699055.7	4547371	229.32
Residences133	43.9	44.9	699178	4546811	229.65
Residences134	44.6	46	697421.2	4547425	229.91
Residences135	42.7	44.4	697497.3	4547575	229.43
Residences136	40.9	43.1	697485.3	4547882	229.26
Residences137	39.1	41.6	697424.2	4548308	229.4
Residences138	41	43.6	697170.6	4548362	229.29
Residences139	44.8	47.5	696703.6	4548301	229.87
Residences140	34.4	36	699023	4548763	228.76
Residences141	38.1	39.3	699106.4	4548187	228.84
Residences142	38.9	40	699038	4548032	229.31
Residences143	30.8	32.6	699073.2	4549530	228.16
Residences144	28.8	30.6	699059.2	4549962	228.36
Residences145	28.7	30.5	698382.9	4550068	228.85
Residences146	29.6	31.5	697870.8	4549957	229.5
Residences147	29.3	31.2	698141.5	4549953	229.02
Residences148	29.4	31.3	697729.2	4550013	229.58
Residences149	30	32	697538.5	4549917	229.25
Residences150	30.4	32.5	696755.3	4549938	229.68
Residences151	29.3	31.4	696005.6	4549918	229.98
Residences152	24.4	26.5	694723.6	4549998	229.99
Residences153	25.2	27.4	694204.4	4548859	230.69
Residences154	33.6	35.8	695760.3	4548926	230.91
Residences155	41.9	44.3	696368.6	4548362	230.06
Residences156	36.2	38.5	695808.1	4547727	230.81
Residences157	31.5	33.6	695186.6	4548251	230.78
Residences158	29.7	31.7	694866.7	4548274	231.11
Residences159	28.4	30.5	694678.7	4548330	231.15
Residences160	27.3	29.3	694252.1	4547250	231.51
Residences161	36.5	38.3	695824.9	4547169	230.56
Residences162	36.8	38.5	695885.1	4546924	230.71
Residences163	36.4	38	695938.1	4546431	231.51
Residences164	35	36.6	695874	4545766	231.5
Residences165	30.8	31.9	694614.1	4545019	231.84
Residences166	32	33.2	695001.4	4545078	231.52
Residences167	34.1	35.3	695620.6	4545027	231.22
Residences168	34.5	35.8	695756.4	4545044	231.03
Residences169	35.2	36.5	695958.7	4544942	231.23

Table C1: Modeled Receivers - Gamesa Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences170	36.4	38	696365.2	4545125	231.15
Residences171	37.1	38.8	696556.4	4545127	230.79
Residences172	33.7	33.9	694207.2	4543392	232.85
Residences173	35	35.2	694563.6	4543392	232.57
Residences174	38.2	38.5	695425.1	4543409	232.03
Residences175	39.7	40	695921.8	4543488	231.61
Residences176	39.4	39.7	695935.9	4543569	231.54
Residences177	40.1	40.3	695893.8	4543412	231.8
Residences178	42.7	42.9	695941.5	4543047	231.93
Residences179	41.1	41.5	696488.7	4543502	231.27
Residences180	44.7	44.8	695787.1	4541855	232.53
Residences181	39.9	40	694891.9	4541473	233.21
Residences182	39.7	39.7	694762.9	4541459	233.3
Residences183	45.9	45.9	695832	4540165	233.23
Residences184	42.8	42.8	696020	4540788	232.72
Residences185	44.1	44.1	694880.7	4540656	233.46
Residences186	45	45	694036.1	4540193	234.04
Residences187	45.6	45.6	696123.9	4539979	233.32
Residences188	46.1	46.1	696166	4539858	233.59
Residences189	35.5	35.6	693672.7	4541812	233.51
Residences190	34.8	36	706923.3	4549474	224.92
Residences191	34.5	35.5	707106.6	4549745	224.16
Residences192	34.2	35.1	707176.4	4549921	224.28
Residences193	33.7	34.6	707247.2	4550147	222.83
Residences194	31	32.1	706399	4550325	224.96
Residences195	34.9	36.1	705440.4	4549184	225.01
Residences196	39.2	40.3	705510.9	4548531	225.23
Residences197	37.8	39	705671.3	4548634	224.64
Residences198	37.1	38.6	705840.7	4548675	224.93
Residences199	37.2	38.7	705857.6	4548635	225.12
Residences200	37.1	38.7	706001.4	4548590	225.27
Residences201	36.8	38.4	706081.2	4548643	225.32
Residences202	38.2	39.2	707204	4548819	224.47
Residences203	38.4	39.5	707123.9	4548694	224.06
Residences204	41.9	43.7	705606.1	4547970	225.67
Residences205	43	45.7	705608.4	4547733	226.14
Residences206	41.6	42.6	707246.1	4548010	225.44
Residences207	44.1	47.4	705554.7	4547024	226.05
Residences208	44.5	48	705414.1	4547018	226.24
Residences209	42.9	45	705629.6	4546733	226.26
Residences211	43.9	45.9	706657.8	4547054	225.72

Table C1: Modeled Receivers - Gamesa Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences212	40.7	43.2	707204.9	4546610	225.69
Residences213	41.4	44.5	707233.5	4546019	225.17
Residences214	41.7	47.6	706949.8	4545366	225.92
Residences215	42.9	46.2	705680.5	4545337	226.52
Residences216	44	47.1	705325.8	4545327	226.59
Residences217	44.7	47.3	705031.8	4545386	226.83
Residences218	46.5	47.1	706284.8	4543727	226.51
Residences219	44.9	46.5	706897.4	4543815	226.68
Residences220	46	46.9	707357.5	4543598	226.69
Residences221	48.3	48.6	707314	4543114	226.53
Residences222	49.9	50	705592.6	4542089	227.49
Residences223	49.9	49.9	707337.8	4541736	227.51
Residences224	57.6	57.6	707354.7	4541399	227.79
Residences225	55.4	55.4	707366	4541239	227.92
Residences226	51.9	51.9	707450.6	4541154	227.76
Residences227	48.4	48.4	705102.1	4540465	228.64
Residences228	46.8	46.8	705355.8	4540561	229.08
Residences229	45.9	45.9	705581.8	4540536	228.1
Residences230	45.3	45.3	705852	4540552	228.2
Residences231	47.5	47.6	707619.7	4540606	227.92
Residences232	45.9	45.9	706759.8	4540575	228.55
Residences233	44.8	44.8	705860.5	4540289	228.39
Residences234	44.7	44.7	705846.4	4540218	228.49
Residences235	44.3	44.3	705860.5	4539854	229.01
Residences236	44.3	44.3	705942.2	4539919	229.06
Residences237	46.5	46.5	707405.4	4540009	228.38
Residences238	46.7	46.7	707419.5	4539905	228.55
Residences239	47.2	47.2	707506.9	4539764	228.73
Residences240	44.1	44.1	705725.1	4538944	229.55
Residences241	43.8	43.8	705384	4538952	229.76
Residences242	47.3	47.3	707495.7	4538969	229.71
Residences243	45.9	45.9	705984.5	4538123	230.61
Residences244	44.8	44.8	705911.5	4537733	230.65
Residences245	47.5	47.5	707600	4538168	229.33
Residences246	45.8	45.8	707515.4	4537757	230.13
Residences247	43.7	43.7	705169.7	4538307	230.43
Residences248	49.4	49.4	706937.4	4537283	230.83
Residences249	48.8	48.8	706404.6	4537340	230.79
Residences250	44.5	44.5	705195.1	4537747	231.03
Residences251	46.2	46.2	706029.6	4537104	230.4
Residences252	47.4	47.4	706105.7	4536490	231.27

Table C1: Modeled Receivers - Gamesa Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences253	45.1	45.1	705725.1	4536487	230.59
Residences254	46.6	46.6	707312.4	4535744	231.49
Residences255	47.9	47.9	707529.5	4535761	231.34
Residences256	49.5	49.5	707642.3	4535826	231.2
Residences257	47.2	47.2	707557.7	4535563	231.25
Residences258	47.4	47.4	707597.2	4535171	231.79
Residences259	48.7	48.7	707518.2	4534486	232.98
Residences260	49.5	49.5	707690.2	4534503	232.93
Residences261	46.4	46.4	706582.2	4534111	232.94
Residences262	45.6	45.6	706376.4	4534111	232.91
Residences263	43.9	43.9	709467.8	4534123	231.41
Residences264	45.4	45.4	709265.6	4534152	231.56
Residences265	45.1	45.1	709439.6	4534365	231.18
Residences266	48.6	48.6	709242.2	4534532	231.23
Residences267	48.1	48.1	709312.7	4534791	230.89
Residences268	47.5	47.5	709295.8	4534983	231.09
Residences269	42.9	42.9	709738.4	4534532	231.16
Residences270	39.9	39.9	710119	4534123	231.59
Residences271	38.1	38.1	710437.6	4534255	231.18
Residences272	40.7	40.7	710026	4534954	230.67
Residences273	40.7	40.7	710014.7	4535000	230.65
Residences274	40.1	40.1	710090.9	4535011	230.3
Residences275	38.2	38.2	710426.4	4535042	230.59
Residences276	40.4	40.4	710011.9	4535132	230.31
Residences277	39.1	39.1	710189.5	4535425	230.49
Residences278	39.1	39.1	710203.6	4535358	230.73
Residences279	39.9	39.9	710104.9	4535180	230.38
Residences280	39.8	39.8	710017.5	4535518	229.28
Residences281	44.9	44.9	709199.9	4535555	231.02
Residences282	49.4	49.4	708080.7	4535776	231.08
Residences283	44.2	44.2	709115.4	4535793	230.82
Residences284	43.4	43.4	709247.9	4535821	230.74
Residences285	43.9	43.9	709253.5	4535700	230.73
Residences286	42.6	42.6	709408.6	4535782	230.79
Residences287	42.1	42.1	709496	4535802	230.97
Residences288	38.8	38.8	710107.8	4535838	230.26
Residences289	39.2	39.2	710065.5	4535745	230.29
Residences290	38.9	38.9	710130.3	4535742	229.86
Residences291	39	39	710130.3	4535689	229.47
Residences292	35.8	35.8	710770.3	4535864	230.31
Residences293	36.1	36.1	710702.6	4535883	230.07

Table C1: Modeled Receivers - Gamesa Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences294	36.9	36.9	710541.9	4535765	230.44
Residences295	37.4	37.4	710406.6	4535830	230.11
Residences296	37.7	37.7	710353	4535821	229.81
Residences297	37.7	37.7	710378.4	4535697	230.33
Residences298	46.9	46.9	708636.1	4535804	231.02
Residences299	41.8	41.8	709245.1	4536429	230.44
Residences300	41.7	41.7	709239.4	4536508	230.52
Residences301	35.3	35.3	710792.9	4536437	229.56
Residences302	34.8	34.8	710753.4	4537207	229.86
Residences303	34.9	34.9	710713.9	4537452	229.4
Residences304	43.4	43.4	708602.3	4537447	229.83
Residences305	40.9	40.9	709121	4537393	229.69
Residences306	40.3	40.3	709250.7	4537404	229.65
Residences307	39	39	709566.5	4537348	230.06
Residences308	39.9	39.9	709253.5	4537834	228.93
Residences309	39.8	39.8	709307.1	4537803	229.04
Residences310	34.4	34.4	710781.6	4538029	228.36
Residences311	37.4	37.4	709997.8	4538250	228.3
Residences312	34.4	34.4	710784.4	4538261	228.32
Residences313	34.4	34.4	710778.8	4538453	228.14
Residences314	34.5	34.5	710775.9	4538842	227.7
Residences315	34.7	34.7	710767.5	4539071	227.36
Residences316	35.5	35.5	710567.3	4539003	227.62
Residences317	35.2	35.2	710626.5	4539000	227.59
Residences318	36	36	710434.8	4539042	227.42
Residences319	38.1	38.1	709972.4	4538901	227.51
Residences320	45.1	45.1	709109.7	4538952	228.16
Residences321	43.6	43.6	709177.4	4538823	228.3
Residences322	43.7	43.7	709202.8	4538893	228.18
Residences323	44.6	44.6	709191.5	4539161	228.2
Residences324	48	48	707728.3	4538980	228.91
Residences325	45	45	709075.9	4539474	227.92
Residences326	43.2	43.2	709053.3	4540046	227.67
Residences327	42.8	42.8	709121	4540117	227.54
Residences328	35.2	35.2	710649.1	4539753	226.73
Residences329	34.8	34.8	710756.2	4539581	226.9
Residences330	49.3	49.3	708266.8	4540628	227.6
Residences331	42.1	42.2	709357	4541404	227.19
Residences332	48.2	48.2	708503.2	4540641	227.93
Residences333	37.3	37.4	710172.3	4540632	227.21
Residences334	35	35.1	710699.8	4540707	226.79

Table C1: Modeled Receivers - Gamesa Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences335	35	35.2	710682.9	4541073	226.18
Residences336	35.5	35.7	710578.8	4541289	226.35
Residences337	35.4	35.6	710598.8	4541455	226.4
Residences338	35.4	35.7	710595.8	4541597	226.52
Residences339	37.9	38.4	709957.3	4542288	226.46
Residences341	36	36.6	710394.2	4542249	226.58
Residences342	36	36.6	710394.2	4542249	226.58
Residences343	41.2	41.4	709351.2	4542290	226.84
Residences344	44.3	44.4	708964.3	4542167	226.85
Residences345	46.1	46.2	708733.7	4542202	226.9
Residences346	47.1	47.2	708556.1	4542262	226.8
Residences347	50.5	50.6	708018.7	4542273	227.52
Residences349	35	36.1	710604.7	4543299	225.55
Residences350	35.1	36.2	710550.3	4543202	225.33
Residences352	34.9	35.9	710617.2	4542990	225.3
Residences353	42	45	708893.2	4544472	225.9
Residences354	41.4	44	708972.4	4544296	225.96
Residences355	43.4	45.2	708471.3	4543874	226.5
Residences356	41.1	42.8	708913.8	4543813	226.28
Residences357	41.8	43.5	708765.8	4543808	226.55
Residences358	41	42.4	708980.2	4543690	226.45
Residences359	39.2	40.7	709597.5	4543900	226.18
Residences360	37.7	39.1	710102.3	4543907	225.56
Residences361	36	37.4	710522.9	4543864	225.34
Residences362	35.8	37.2	710531	4543732	225.5
Residences363	36.4	37.8	710526	4544021	225.35
Residences365	43.4	46.2	708950.2	4544631	225.91
Residences366	38.6	40.2	710493.9	4544685	225.26
Residences368	43.1	46.5	708297.8	4545479	225.59
Residences369	42.9	46.3	708371	4545481	225.61
Residences370	42.8	46.2	708452.9	4545483	226.08
Residences371	43.4	46.6	708752.7	4545488	225.63
Residences372	44.2	47.4	708913.5	4545496	225.63
Residences373	44.2	47.4	708913.5	4545496	225.63
Residences376	44	47.4	708915.2	4545845	225.39
Residences377	42.7	45.3	707825.5	4547075	225.65
Residences378	44.2	48	708814.6	4546775	225.57
Residences379	42.9	45.8	709014.4	4547121	225.33
Residences381	40.4	42.7	709840.5	4547075	224.9
Residences382	39.6	41.6	710488.2	4546863	224.48
Residences383	42.8	43.5	708362.4	4548648	224.99

Table C1: Modeled Receivers - Gamesa Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences385	42.3	43.8	709416.6	4548672	224.75
Residences386	45	47.8	710372	4548770	224.23
Residences388	39.3	40.4	709883.7	4550316	223.75
Residences389	32	33.3	711915	4550355	223.76
Residences390	30	31.1	712397.1	4550486	223.59
Residences391	28.6	29.7	712896.1	4550401	223.36
Residences392	27.1	28.1	713319	4550517	223.42
Residences393	26.4	27.4	713559.3	4550496	223.35
Residences394	43.3	45.5	710976.1	4548813	224.61
Residences395	44.5	45.3	711421.5	4548741	223.94
Residences396	37.9	38.6	712043.2	4547216	223.68
Residences397	33.5	34.3	712927.1	4547192	223.4
Residences398	37.1	37.8	712259.7	4547224	223.22
Residences399	34.4	35.8	712053.1	4546550	223.58
Residences400	33.7	35.2	712134.9	4546406	224.03
Residences401	32.5	34.3	712093.7	4545774	224.65
Residences402	35.6	36.4	712583.1	4547255	223.39
Residences403	37.1	39.1	711149.1	4545493	224.67
Residences404	36.3	38.3	711293.7	4545570	224.73
Residences405	28.7	30.5	712952.5	4545575	224.26
Residences406	28.5	30.2	713025.8	4545575	224.25
Residences407	27.8	29.3	713203.4	4545589	223.61
Residences408	30.9	32.9	712167.9	4545145	224.87
Residences409	31.2	33	712118.4	4544910	224.77
Residences410	34.4	35.9	710950.8	4543934	225.42
Residences411	35.1	36.6	710807.1	4543974	225.4
Residences412	34.5	36	710914.1	4543891	225.42
Residences413	33.6	35.1	711167.3	4543881	225.45
Residences414	33	34.5	711351.8	4543957	225.25
Residences415	33.9	35.4	711111.4	4543951	225.28
Residences416	32.8	34.3	711379.3	4543906	225.19
Residences417	27.7	29.6	712682.5	4544508	224.28
Residences418	24.1	25.6	713403.6	4543990	224.82
Residences419	25	26.7	713073.7	4543965	225.02
Residences420	25.3	27.2	713006	4544019	225.3
Residences421	26.5	28.1	712896.1	4543945	225.24
Residences422	26.7	28.3	712867.9	4544024	225
Residences423	27	28.6	712724.1	4543999	224.97
Residences424	31.3	32.9	711727.1	4543899	224.58
Residences425	30.5	32.2	712041.8	4544143	224.86
Residences426	30.1	31.7	712137.7	4544179	224.72

Table C1: Modeled Receivers - Gamesa Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences427	29.8	31.4	712232.6	4544190	224.7
Residences428	29.4	31.1	712289.6	4544195	225.07
Residences429	29.2	30.9	712334.1	4544193	225.16
Residences430	28.8	30.5	712456.3	4544202	224.93
Residences431	28.4	30.1	712532.4	4544213	225.03
Residences432	28.2	29.9	712563.4	4544162	225.04
Residences433	28.1	29.8	712569	4544103	225.29
Residences434	28	29.7	712569	4544038	225.07
Residences435	27.9	29.6	712569	4543982	225
Residences436	27.8	29.5	712563.4	4543925	224.91
Residences437	28.3	29.9	712490.1	4543911	224.93
Residences438	28.9	30.4	712399.9	4543920	225.04
Residences439	29.1	30.6	712310.3	4543831	225.12
Residences440	28.7	30.2	712391.4	4543787	225.04
Residences441	28.5	30	712464.7	4543751	225.08
Residences442	28.6	30.1	712397.1	4543706	225.12
Residences443	28.5	29.9	712385.8	4543632	225.17
Residences444	29.2	30.6	712253.3	4543629	225.3
Residences445	29.1	30.4	712250.5	4543567	225.3
Residences446	29.1	30.3	712261.7	4543531	225.25
Residences447	29	30.2	712284.3	4543488	225.34
Residences448	29.1	30.3	712230.7	4543446	225.25
Residences449	28.9	30.2	712278.6	4543443	225.25
Residences450	29.2	30.5	712182.8	4543438	225.57
Residences451	29.1	30.4	712188.4	4543390	225.67
Residences452	29.1	30.4	712180	4543339	225.66
Residences453	29.3	30.5	712140.5	4543398	225.4
Residences454	29.4	30.6	712134.9	4543483	225.37
Residences455	29.7	31	712047.5	4543517	225.49
Residences456	30.1	31.5	711988.3	4543545	225.52
Residences457	30.2	31.7	711943.1	4543545	225.27
Residences458	30.6	32	711847.3	4543590	225.13
Residences459	30.8	32.3	711790.9	4543666	224.6
Residences460	31	32.5	711783.7	4543753	224.99
Residences461	29.9	31.3	712016.4	4543635	225.47
Residences462	29.7	31.1	712098.2	4543638	225.35
Residences463	29.4	30.9	712199.7	4543669	225.36
Residences464	29.3	30.7	712258.9	4543720	225.27
Residences465	29.1	30.6	712289.9	4543782	225.18
Residences466	29.1	30.7	712304	4543892	225.25
Residences467	29.1	30.7	712354.8	4543979	224.99

Table C1: Modeled Receivers - Gamesa Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences468	28.8	30.4	712402.7	4544030	224.87
Residences469	29	30.6	712388.6	4544134	225.03
Residences470	29.7	31.3	712236.4	4544134	224.53
Residences471	29.9	31.6	712140.5	4544086	224.99
Residences472	30.2	31.7	711996.7	4543810	225.29
Residences473	30	31.5	712008	4543720	225.37
Residences474	29.7	31.2	712106.7	4543703	225.54
Residences475	29.6	31.1	712180	4543765	225.36
Residences476	29.6	31	712216.6	4543832	225.29
Residences477	29.3	30.9	712258.9	4543942	225.39
Residences478	29.3	30.9	712295.8	4544026	224.89
Residences479	30.1	31.6	712044.5	4543870	225.35
Residences480	29.5	31.1	712191.2	4543942	225.41
Residences481	28.4	29.6	712256.1	4543176	225.51
Residences482	28.9	30.2	712165.9	4543223	225.64
Residences483	34	34.6	710945.4	4542322	226.19
Residences484	32.7	33.4	711233.6	4542334	225.94
Residences485	27.3	27.9	712559.7	4542301	226.04
Residences486	26.1	26.6	712721.3	4542379	225.53
Residences487	25.3	25.8	712828.4	4542399	225.48
Residences488	19.9	20.6	713372.5	4542331	225.14
Residences489	16.7	17.9	713575.5	4542351	224.62
Residences490	28.3	28.4	712317.4	4541338	226.36
Residences491	28.3	28.3	712289.8	4541028	225.86
Residences492	25.3	25.3	712834.1	4540720	225.91
Residences493	27.8	27.8	712283.7	4540538	226.37
Residences494	No Contribution	No Contribution	713547.3	4541239	224.98
Residences495	27.9	27.9	712242	4540190	226.61
Residences496	27.1	27.1	712258.9	4539681	226.64
Residences497	26.7	26.7	712459.1	4539340	227.1
Residences498	26.7	26.7	712436.5	4539371	227.37
Residences499	29	29	711903.7	4539159	227.64
Residences500	30.8	30.8	711562.5	4539024	227.67
Residences501	31.6	31.6	711444.1	4539030	227.63
Residences502	32.2	32.2	711339.8	4539111	227.58
Residences503	27.7	27.7	712298.4	4538903	227.47
Residences504	17.6	17.6	713330.3	4539210	227.03
Residences505	17	17	713544.5	4539066	226.95
Residences506	27.9	27.9	712301.2	4538269	227.88
Residences507	28.2	28.2	712337.9	4537910	228.28
Residences508	28.3	28.3	712383	4538119	227.97

Table C1: Modeled Receivers - Gamesa Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences509	31.3	31.3	711649.9	4537426	227.09
Residences510	32.6	32.6	711353.9	4536997	228.76
Residences511	31.2	31.2	711695	4537217	228.61
Residences512	30.9	30.9	711734.5	4537310	228.47
Residences513	30.6	30.6	711782.4	4537361	228.63
Residences514	28.1	28.1	712326.6	4537459	228.74
Residences515	27.9	27.9	712416.8	4537279	228.86
Residences516	23.3	23.3	712853.8	4537550	228.11
Residences517	16.8	16.8	713352.8	4537578	227.91
Residences518	16.9	16.9	713268.2	4537482	228.64
Residences519	28.1	28.1	712436.5	4536836	228.84
Residences520	33.3	33.3	711184.7	4536817	229.14
Residences521	34	34	711057.9	4536724	228.78
Residences522	34.4	34.4	710987.4	4536670	228.94
Residences523	31.5	31.5	711647.1	4537158	228.77
Residences524	30.2	30.2	712165.9	4535806	229.89
Residences525	30.7	30.7	711968.5	4535893	229.59
Residences526	33.4	33.4	711393.4	4535879	229.67
Residences527	32.9	32.9	711466.7	4535817	229.66
Residences528	34.1	34.1	711212.9	4535868	229.68
Residences529	35.5	35.5	710877.4	4535789	230.04
Residences530	35.3	35.3	710905.6	4535862	229.97
Residences531	24.5	24.5	713231.6	4535405	230.25
Residences532	36	36	710900	4534846	230.76
Residences533	33.9	33.9	711334.2	4534998	230.36
Residences534	26.8	26.8	713039.9	4535066	230.31
Residences535	35.6	35.6	710932.9	4534207	231.44
Residences536	33	33	711531.5	4534195	231.31
Residences537	30	30	712236.4	4534321	231.2
Residences538	28.1	28.1	712693.1	4534336	231.02
Residences539	27.2	27.2	712980.7	4534429	230.65
Residences540	27.4	27.4	712929.9	4534341	230.76
Residences541	26.2	26.2	713130.1	4534347	230.86
Residences542	35.7	35.7	710925.4	4534446	231.15
Residences543	No Contribution	No Contribution	714085.8	4534271	230.59
Residences544	No Contribution	No Contribution	714054.9	4535196	229.91
Residences545	No Contribution	No Contribution	714311.4	4535097	229.8
Residences546	16.7	16.7	713744.7	4535892	229.51
Residences547	No Contribution	No Contribution	713995.6	4535914	229.48
Residences548	No Contribution	No Contribution	713992.8	4536129	229.63
Residences549	No Contribution	No Contribution	714077.4	4536416	229.47

Table C1: Modeled Receivers - Gamesa Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences550	No Contribution	No Contribution	714071.7	4535906	229.51
Residences551	No Contribution	No Contribution	714170.4	4537579	228.14
Residences552	No Contribution	No Contribution	714001.2	4538463	227.19
Residences553	No Contribution	No Contribution	714012.5	4538728	226.9
Residences554	No Contribution	No Contribution	714401.6	4539182	226.93
Residences555	No Contribution	No Contribution	713849	4539190	226.39
Residences556	No Contribution	No Contribution	713936.4	4540700	226.19
Residences557	No Contribution	No Contribution	713911	4541367	225.19
Residences558	No Contribution	No Contribution	713905.4	4542022	225.11
Residences559	19.5	20.5	713767.2	4543246	224.92
Residences560	19.8	20.7	713840.5	4543525	224.78
Residences561	17.1	18.4	713874.4	4543051	225.02
Residences562	22.7	23.6	713885.7	4544040	224.89
Residences563	21.1	21.9	714021	4543975	224.96
Residences564	21	21.7	714091.5	4543989	225.04
Residences565	23.4	24.7	713727.2	4544165	225
Residences566	26.4	27.8	713744.5	4545769	222
Residences567	26.8	28.1	713834.9	4546174	223.57
Residences568	27.2	28.6	713662.9	4546047	223.56
Residences569	28.3	29.4	713750.3	4546748	223.84
Residences570	30.2	31	713722.1	4548434	223.3
Residences571	No Contribution	No Contribution	716777.6	4539289	226.47
Residences572	No Contribution	No Contribution	716471.4	4538848	226.84
Residences573	No Contribution	No Contribution	717045.4	4539139	226.84
Residences574	No Contribution	No Contribution	717182.4	4538553	227.18
Residences575	No Contribution	No Contribution	717242.7	4536786	227.75
Residences576	No Contribution	No Contribution	716763.4	4535982	228.47
Residences577	No Contribution	No Contribution	716945.9	4536019	228.27
Residences578	No Contribution	No Contribution	717295	4535555	229.29
Residences579	No Contribution	No Contribution	717302.2	4535850	228.65
Residences580	No Contribution	No Contribution	717284.6	4536176	228.42
Residences581	No Contribution	No Contribution	717283.9	4536471	227.98
Residences582	No Contribution	No Contribution	715285.7	4536001	228.3
Residences583	No Contribution	No Contribution	715236.3	4536053	229.05
Residences584	No Contribution	No Contribution	714625.4	4535098	229.26
Residences585	No Contribution	No Contribution	714736.7	4536754	229.03
Residences586	No Contribution	No Contribution	714897.9	4535885	229.78
Residences587	No Contribution	No Contribution	715523.4	4539873	226.3
Residences588	No Contribution	No Contribution	715539.1	4539610	226.08
Residences589	No Contribution	No Contribution	715543.2	4539200	226.45
Residences590	No Contribution	No Contribution	715741.5	4534888	229.73

Table C1: Modeled Receivers - Gamesa Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences591	26.5	27.9	713603.8	4545568	221.32
Residences592	26.1	27.6	713653.3	4545430	223.58
Residences593	25.4	26.9	713720.5	4545182	223.99
Residences594	26.4	27.7	713857.4	4545976	223.67
Residences595	26.2	27.6	713767.3	4545697	222.31
Residences596	46.1	46.2	699732	4541890	231.26
Residences597	49	49	700535.3	4542015	230.51
Residences598	42.7	42.7	697735	4539471	232.69
Residences599	45.5	45.5	698338.4	4540236	232.5
Residences600	43.6	43.6	697882.1	4538698	232.57
Residences601	44.2	44.2	698108.5	4538721	232.7
Residences602	44.9	44.9	698312.5	4538687	231.58
Residences603	45.6	45.6	698545.1	4538684	232.03
Residences604	45.8	45.8	698795.7	4538621	232.24
Residences605	44.5	44.5	697763.2	4538354	233.24
Residences606	47.3	47.3	708012.1	4537372	230.04
Residences607	49.4	49.4	703371.7	4542028	228.24
Residences608	49.1	49.1	703422.1	4541993	228.17
Residences609	49.2	49.2	703470.6	4542028	228.38
Residences610	49.1	49.1	703615.8	4542029	228.57
Residences611	44.4	46.6	710443.4	4546266	224.01
Residences612	42.9	45.7	700975.3	4545259	228.93
Residences613	No Contribution	No Contribution	715582.4	4538421	227.52
Residences614	No Contribution	No Contribution	715612.5	4538208	227.79
Residences615	No Contribution	No Contribution	715627.1	4537887	227.64
Residences616	No Contribution	No Contribution	715725.7	4537955	227.36
Residences617	No Contribution	No Contribution	715719	4538472	227.41
Residences618	No Contribution	No Contribution	715764.7	4539238	226.49
Residences619	No Contribution	No Contribution	715686.2	4539240	226.35
Residences620	No Contribution	No Contribution	715565.6	4538938	226.74
Residences621	No Contribution	No Contribution	716179.5	4539165	226.77
Residences622	No Contribution	No Contribution	716622.7	4539281	226.46
Residences623	No Contribution	No Contribution	716476	4538589	227.12
Residences624	No Contribution	No Contribution	716397.4	4538481	227.11
Residences625	No Contribution	No Contribution	716495.8	4538265	227.23
Residences626	No Contribution	No Contribution	716412.1	4538214	227.34
Residences627	No Contribution	No Contribution	714870.3	4536399	229.12
Residences628	No Contribution	No Contribution	714643	4535968	229.44
Residences629	No Contribution	No Contribution	714885.2	4535975	229.81
Residences630	No Contribution	No Contribution	715784.2	4536269	228.21
Residences631	No Contribution	No Contribution	715688.4	4536247	228.28

Table C1: Modeled Receivers - Gamesa Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences632	No Contribution	No Contribution	715698.6	4536152	228.5
Residences633	No Contribution	No Contribution	715695.3	4536094	228.7
Residences634	No Contribution	No Contribution	715620.2	4536042	228.21
Residences635	No Contribution	No Contribution	715719	4535960	228.85
Residences636	No Contribution	No Contribution	715653.6	4535913	228.73
Residences637	No Contribution	No Contribution	715528.9	4535952	228.7
Residences638	No Contribution	No Contribution	715825.4	4535960	228.68
Residences639	No Contribution	No Contribution	715775.2	4535900	228.65
Residences640	No Contribution	No Contribution	715716.7	4536039	228.69
Residences641	No Contribution	No Contribution	716480.4	4535970	228.67
Residences642	No Contribution	No Contribution	716553.1	4536778	227.83
Residences643	No Contribution	No Contribution	715654.2	4536823	228.22
Residences644	No Contribution	No Contribution	715830.4	4534946	229.75
Residences645	No Contribution	No Contribution	715041.8	4537534	228.12
Residences646	24.5	24.5	713142.2	4535831	229.6
Residences647	24	24	713183.4	4535764	230
Residences648	25.9	25.9	713121.6	4535523	229.87
Residences649	41	43.2	700798.1	4546778	228.06
Residences650	41.1	43.3	700784.6	4546311	228.52
Residences651	41.1	43.2	700793.6	4546373	228.33
Residences652	41.2	43.4	700820.8	4546199	227.93
Residences653	42.2	43.5	702382.4	4547288	226.88
Residences654	39.3	40.8	702286.1	4547733	226.43
Residences655	38.9	40.2	702396.3	4547776	227.17
Residences656	35.8	37.3	702344.5	4548294	227.14
Residences657	38.1	39.3	705563.8	4548653	224.81
Residences658	32.8	34.1	705553.7	4549608	225.42
Residences659	31.8	33	706119.1	4549971	224.43
Residences660	30.3	31.4	705539.8	4550248	225.37
Residences661	35	36.2	707093.9	4549556	223.98
Residences662	32.8	33.9	707073.7	4549843	224.1
Residences663	34.3	35.4	707178.4	4549520	222.58
Residences664	34.2	35.2	707215.2	4549946	224.33
Residences665	33.2	34.1	707154.4	4550225	223.69
Residences666	32.1	33	707143.3	4550505	224.35
Residences667	29.9	31.1	711905.5	4550882	223.75
Residences669	30.9	31.7	713612.4	4548029	223.1
Residences670	33.1	34.8	712079.5	4546045	224.45
Residences671	26.8	28.2	713536.9	4545651	223.48
Residences672	31	33	712171.1	4545200	225.08
Residences673	30.4	32.3	712527.2	4545611	224.47

Table C1: Modeled Receivers - Gamesa Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences674	30.6	32.4	712189.1	4544725	224.69
Residences675	21.3	22	713960.3	4543989	225.2
Residences676	22.2	23.2	713841.1	4543975	225.27
Residences677	22.8	23.8	713811	4544036	225.15
Residences678	No Contribution	No Contribution	713801.5	4542330	225.03
Residences679	No Contribution	No Contribution	713826.6	4541603	225.03
Residences680	34.7	36.2	710876	4543954	225.43
Residences681	42.1	42.5	703642.5	4543934	227.72
Residences682	42.3	42.7	703396.7	4543968	227.75
Residences683	44.2	44.4	703424.9	4543411	227.95
Residences684	42.1	42.6	703451.1	4544009	227.71
Residences685	43.3	43.6	703100.9	4543666	227.91
Residences686	42.2	42.6	703657.7	4543883	227.72
Residences687	43.5	43.8	703462.3	4543546	228.07
Residences688	43.1	43.4	703466.3	4543652	228.03
Residences689	41.7	42.7	707252.4	4547893	225.62
Residences690	45.5	45.5	703312.1	4540244	229.3
Residences691	45.6	45.7	703038.7	4540152	229.44
Residences692	46.1	46.1	702919.1	4540320	229.57
Residences693	46.2	46.2	703092.2	4540692	229.37
Residences694	45.6	45.6	703350.5	4540641	229.46
Residences695	46.1	46.1	703289.6	4540783	229.5
Residences696	47.3	47.3	703358.9	4539550	229.73
Residences697	46.8	46.8	703442.2	4539918	229.7
Residences698	46	46	703100.8	4540651	229.38
Residences699	45.9	45.9	703099.8	4540602	229.48
Residences700	46.2	46.3	702930.7	4540456	229.99
Residences701	45.8	45.8	702951.5	4540204	229.66
Residences702	46	46	702945.6	4540361	229.7
Residences703	46.7	46.7	702811.4	4540392	230.12
Residences704	45.7	45.7	703071.8	4540064	229.6
Residences705	45.7	45.7	703211.2	4540067	229.66
Residences706	45.7	45.7	703275.9	4540055	229.6
Residences707	46	46	703334.5	4540797	229.45
Residences708	45.7	45.7	703715.4	4540401	229.1
Residences709	47.3	47.3	704226.2	4540494	229.16
Residences710	47	47	704151.2	4540435	229.27
Residences711	46.6	46.6	704061	4540429	229.31
Residences712	46.1	46.1	699301.9	4540271	232.19
Residences713	47.3	47.3	699837.3	4540282	231.44
Residences714	45.8	46.2	705596.4	4543727	226.68

Table C1: Modeled Receivers - Gamesa Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences715	45.6	46.1	705797.5	4543720	226.35
Residences716	42.8	45.9	705616.1	4545291	226.55
Residences717	27.5	29	713255.6	4545570	223.68
Residences718	37.7	38.2	708752.5	4550678	223.66
Residences719	35.1	36.4	710373.3	4550673	223.6
Residences720	27.2	29.2	695681.1	4550160	229.78
Residences721	28.1	30.1	695712.7	4549982	229.63
Residences722	27.3	29.3	695484	4550009	229.91
Residences723	37	38.7	699959.8	4548464	228.09
Residences724	35.7	36.6	703692.9	4548546	226.09
Residences725	40.3	41	704969.7	4548621	225.48
Residences726	37	38.4	706731.3	4548683	225.19
Residences727	37.2	38.2	707130	4548947	224.21
Residences728	41.4	43.8	707586.8	4546997	225.35
Residences729	22.3	24.3	693107.1	4547281	231.72
Residences730	36.7	38.4	695902.3	4546805	231.01
Residences732	35.3	36	712651.1	4547259	223.15
Residences733	36.4	37.4	711976.4	4546977	222.71
Residences735	44.9	47	697619.6	4545938	230.06
Residences736	43.8	46.1	701561.7	4545222	228.11
Residences737	35.1	36.6	695960.7	4545377	231.75
Residences738	43.1	45.5	697835.8	4545088	229.08
Residences739	26	28.2	695253.9	4550010	230.15
Residences740	41.9	42.9	697298.7	4543542	231.47
Residences741	45.7	45.9	697668.1	4542788	230.3
Residences742	30.6	32.6	696811.1	4549917	229.56
Residences743	43.2	43.6	703145.4	4543665	227.98
Residences744	43.3	43.6	703128.3	4543662	227.93
Residences745	31.7	33.4	700594.3	4549332	227.92
Residences746	43.2	43.5	703357.1	4543638	228.14
Residences747	43.5	43.8	703421.9	4543543	227.97
Residences748	43.4	43.7	703383.6	4543587	227.95
Residences749	43.6	43.8	703378.9	4543544	228.04
Residences750	43.4	43.7	703317.1	4543588	228.03
Residences751	43.6	43.9	703302.9	4543544	228.01
Residences752	43.8	44.1	703320.7	4543496	227.98
Residences753	44.1	44.3	703328	4543445	227.93
Residences754	43.8	44	703362.1	4543499	227.96
Residences755	44	44.3	703362.7	4543450	228.01
Residences756	43.7	44	703462.3	4543490	227.98
Residences757	43.3	43.6	703460.9	4543587	227.94

Table C1: Modeled Receivers - Gamesa Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences758	43.3	43.6	703404.4	4543608	228.05
Residences759	44.5	44.7	703403.1	4543348	227.93
Residences760	44.5	44.7	703363.7	4543356	228.12
Residences761	44.6	44.7	703432.2	4543338	227.89
Residences762	45.9	45.9	703336.9	4540753	229.53
Residences763	45.9	45.9	703290.9	4540727	229.39
Residences764	45.9	45.9	703226.5	4540679	229.48
Residences765	45.9	45.9	703223.8	4540706	229.49
Residences766	45.9	45.9	703188.8	4540673	229.34
Residences767	46	46	703186.1	4540702	229.34
Residences768	46.1	46.1	703188.1	4540738	229.47
Residences769	46.1	46.2	703175.2	4540744	229.52
Residences770	46.1	46.1	703135.2	4540694	229.44
Residences771	45.7	45.7	703335.6	4540665	229.63
Residences772	45.6	45.7	703294.3	4540631	229.31
Residences773	45.6	45.6	703294.6	4540585	229.49
Residences774	45.5	45.5	703297.6	4540560	229.46
Residences775	45.6	45.6	703244.6	4540555	229.5
Residences776	45.7	45.7	703197	4540573	229.45
Residences777	45.7	45.7	703232.7	4540600	229.51
Residences778	45.7	45.7	703238	4540626	229.46
Residences779	45.8	45.8	703244	4540651	229.39
Residences780	42.6	43	703897.3	4543738	227.68
Residences781	42.6	43	703763.9	4543735	227.78
Residences782	42.7	43	703662.3	4543725	228.02
Residences783	42.7	43.1	703587.7	4543724	227.85
Residences784	42.6	42.9	703597.2	4543773	227.92
Residences785	42.4	42.8	703609.2	4543815	227.91
Residences786	42.4	42.8	703609.6	4543831	227.89
Residences787	42.3	42.7	703602	4543857	227.88
Residences788	42.3	42.7	703604	4543876	227.86
Residences789	42.4	42.8	703506	4543827	227.88
Residences790	42.3	42.7	703501.2	4543874	227.85
Residences791	42.5	42.8	703472.6	4543834	227.8
Residences792	42.4	42.8	703446.4	4543871	227.79
Residences793	42.8	43.1	703550.4	4543717	227.77
Residences794	42.5	42.9	703571.8	4543782	227.87
Residences795	42.7	43	703554	4543736	227.79
Residences796	42.7	43.1	703510.3	4543736	227.94
Residences797	42.8	43.1	703512.7	4543713	228.01
Residences798	42.8	43.2	703489.7	4543713	228.02

Table C1: Modeled Receivers - Gamesa Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences799	42.7	43.1	703491.7	4543736	227.86
Residences800	42.6	43	703487.3	4543780	227.88
Residences801	42.6	43	703475	4543775	227.94
Residences802	42.8	43.2	703459.9	4543722	227.98
Residences803	42.7	43.1	703454.4	4543756	227.97
Residences804	42.7	43	703452	4543774	227.95
Residences805	42.7	43.1	703363.9	4543772	227.87
Residences806	42.4	42.8	703293.2	4543955	228.04
Residences807	42.4	42.8	703402	4543908	227.85
Residences808	42.4	42.9	703388.5	4543874	227.84
Residences809	42.5	42.9	703400.4	4543854	227.83
Residences810	42.7	43.1	703302.8	4543800	227.86
Residences811	42.1	42.5	703492.1	4544014	227.93
Residences812	42	42.5	703543.7	4544006	227.83
Residences813	42.2	42.6	703495.3	4543957	227.83
Residences814	42.2	42.6	703451.6	4543963	227.74
Residences815	42.4	42.9	703356.3	4543901	227.9
Residences816	42.3	42.7	703503.2	4543905	227.79
Residences817	42.2	42.6	703539.3	4543928	227.73
Residences818	42.1	42.5	703603.6	4543957	227.66
Residences819	42.2	42.6	703592.1	4543917	227.78
Residences820	44	44.5	703961.1	4546478	227.08
Residences822	45	46.4	707293	4543750	226.37
Residences823	35.5	36.6	703100.4	4548390	226.8
Residences824	42.3	42.7	703453.9	4543917	227.71
Residences825	42.6	42.9	703453.3	4543809	227.79
Residences826	42.6	43	703804.2	4543736	227.7
Residences827	42.7	43	704132.2	4543745	227.81
Residences828	48.1	48.3	706719.8	4542723	227.66
Residences829	47.9	48.2	707315.8	4543178	226.51
Residences830	41.9	42.7	708915.2	4543231	226.72
Residences831	42.2	42.6	709035.8	4542681	226.93
Residences832	37.5	38	710046.5	4542309	226.4
Residences833	30.3	30.4	711919.3	4541156	226.53
Residences835	32.4	33.9	711477.1	4543910	224.98
Residences836	31.9	33.4	711510.4	4543962	224.27
Residences837	31.2	32.8	711762.8	4543911	224.91
Residences838	31.1	32.7	711785.5	4543917	225
Residences839	31.1	32.6	711818.4	4543927	225.15
Residences840	31.3	32.9	711762.4	4543962	224.83
Residences841	31.2	32.7	711804.5	4543978	225.01

Table C1: Modeled Receivers - Gamesa Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences842	31	32.6	711847.8	4543978	225.07
Residences843	31	32.6	711792.2	4543830	225.24
Residences844	31.1	32.6	711787	4543862	225.15
Residences845	31	32.5	711829.5	4543870	225.27
Residences846	30.8	32.4	711841.8	4543796	225.29
Residences847	30.7	32.3	711885.5	4543819	225.29
Residences848	30.6	32.2	711941	4543868	225.26
Residences849	30.8	32.4	711882.3	4543884	225.17
Residences850	30.5	32	711893.4	4543669	225.27
Residences851	30.7	32.2	711823.2	4543654	225
Residences852	30.8	32.3	711850.5	4543753	225.12
Residences853	30.4	31.8	711947	4543689	225.4
Residences854	30.2	31.6	711999.5	4543651	225.46
Residences855	30.4	32	712018.8	4543992	225.45
Residences856	29.9	31.5	712138.7	4544041	225.11
Residences857	30.2	31.8	712083.1	4544024	225.17
Residences858	30	31.5	712108.5	4543976	225.24
Residences859	30	31.6	712110.5	4543991	225.15
Residences860	29.3	30.8	712300.6	4543981	224.98
Residences861	30	31.5	712095.8	4543912	225.52
Residences862	29.9	31.4	712091.4	4543825	225.23
Residences863	30	31.5	712051	4543804	225.41
Residences864	30.1	31.5	712023.6	4543784	225.29
Residences865	29.9	31.3	712092.2	4543783	225.39
Residences866	29.5	31	712214.5	4543813	225.31
Residences867	29.1	30.7	712307.3	4543874	225.17
Residences868	29.1	30.7	712324.4	4543906	225.28
Residences869	28.9	30.4	712370.4	4543881	225.03
Residences870	29	30.7	712404.2	4544210	225.14
Residences871	29	30.6	712395.4	4544152	225.02
Residences872	29.7	31.3	712247	4544153	224.97
Residences873	29.9	31.5	712184.7	4544152	224.32
Residences874	29.7	31.4	712188.7	4544107	224.84
Residences875	29.8	31.4	712192.6	4544086	224.98
Residences876	29.5	31.1	712256.9	4544082	224.55
Residences877	29.5	31.1	712259.3	4544111	224.62
Residences878	29.4	31	712297.8	4544090	224.71
Residences879	29.4	31	712295.4	4544116	224.92
Residences880	29	30.7	712355.4	4544090	224.9
Residences881	29	30.7	712355.8	4544135	225.1
Residences882	38.4	39.6	699107	4548146	228.85

Table C1: Modeled Receivers - Gamesa Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences883	43.6	44.3	702391.2	4543689	228.28
Residences884	41.5	42.1	704028.2	4544125	227.6
Residences885	41.7	43	702387.7	4547366	227.33
Residences886	30.5	32.1	712039.3	4544120	225.06
Residences887	30.5	32.2	712000.9	4544075	225.21
Residences888	30.6	32.3	711977.9	4544078	225.1
Residences889	30.4	32	712041.7	4544077	225.23
Residences890	30.1	31.8	712091.9	4544134	225.02
Residences891	30.3	31.9	712046.8	4544039	225.27
Residences892	30.3	31.9	712041.7	4544016	225.23
Residences893	30	31.7	712106.9	4544080	225.06
Residences894	30	31.6	712147.7	4544131	224.9
Residences895	30.1	31.9	712176.4	4544434	224.26
Residences896	31.5	33.4	712238.5	4545538	224.75
Residences897	31.5	33	711675.9	4543905	224.65
Residences898	27.6	29.6	695600.1	4550010	229.65

Table C2: Modeled Receivers - Vestas Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences001	48.9	48.9	704957.8	4540548	228.81
Residences002	48.7	48.7	704458.3	4540531	228.96
Residences003	46.9	46.9	702836.3	4540515	229.44
Residences004	46	46	703027.1	4540540	229.67
Residences005	46.2	46.2	703203.8	4540783	229.53
Residences006	45.7	45.8	703332	4540701	229.59
Residences007	45.5	45.5	703352.6	4540554	229.19
Residences008	45.4	45.4	703403.2	4540526	229.61
Residences009	45.4	45.5	703557.5	4540515	229.35
Residences010	45.7	45.7	703756.7	4540515	229.12
Residences011	49.2	49.2	704200.1	4541449	228.49
Residences012	47.6	47.6	704090.7	4541797	228.48
Residences013	47.6	47.7	704093.5	4541884	228.12
Residences014	47.6	47.6	704093.5	4541713	228.18
Residences015	48.5	48.5	702637.1	4540484	229.89
Residences016	47.7	47.8	702479.9	4541390	229.18
Residences017	48.3	48.3	702651.1	4541253	229.17
Residences018	49.3	49.3	704174.9	4542657	227.81
Residences019	48.6	48.6	702525.4	4542883	228.74
Residences020	47.9	48	704057	4542830	227.85
Residences021	46.5	46.6	704138.4	4543085	227.5
Residences022	46.1	46.2	704031.7	4543094	227.26
Residences023	44.2	44.5	704049.7	4543418	227.55
Residences024	43.6	44.2	702428.2	4543681	228.36
Residences025	44.7	45	703419	4543315	227.85
Residences026	43.8	44.1	703416.7	4543493	227.97
Residences027	43.4	43.8	703249.7	4543605	228.46
Residences028	43.9	44.3	703215.4	4543502	228.53
Residences029	43.4	43.9	703038.9	4543650	228.17
Residences030	42.6	43.1	703354.1	4543862	227.79
Residences031	43.1	43.5	703394.4	4543672	228.22
Residences032	42.6	43.1	703512.6	4543789	227.94
Residences033	43.1	43.5	703496	4543649	227.89
Residences034	42.9	43.3	703650.1	4543677	228.09
Residences035	42.5	43	703644.6	4543783	227.94
Residences036	42.7	43.1	703717.4	4543736	227.79
Residences037	42.7	43.1	703849.3	4543731	227.72
Residences038	42.7	43.1	703943	4543738	227.7
Residences039	42.8	43.2	704156.7	4543744	227.83
Residences040	42.5	43	704105.8	4543788	227.83

Table C2: Modeled Receivers - Vestas Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences041	42.4	42.9	704048.6	4543823	227.62
Residences042	42.1	42.7	704034.5	4543919	227.56
Residences043	41.3	42.2	704025.2	4544228	227.5
Residences044	42.3	43	703386.3	4544011	227.93
Residences045	43.7	44.2	704941	4543789	226.72
Residences046	41	42.2	704481	4544551	227.23
Residences048	41.6	43.3	703990.3	4545166	227.39
Residences051	44.2	44.9	703526.5	4546983	226.83
Residences052	42.6	43.8	704033.6	4546901	226.82
Residences053	42.9	45.3	702310.9	4547173	226.73
Residences054	44	45.8	702378.7	4547008	226.77
Residences055	39.6	42.1	702349.5	4547669	227.16
Residences056	40.5	41.8	703911.6	4547435	226.68
Residences057	43	45.3	704836.4	4546939	226.12
Residences058	37.5	40.1	702265.9	4547990	226.72
Residences059	38	39.3	703886.1	4548244	226.38
Residences060	34.7	37	702254.5	4548553	227.45
Residences061	35.6	37.2	703213.5	4548472	226.25
Residences062	35.6	37.2	703386.7	4548517	226.22
Residences063	35.7	37.3	703470.3	4548519	226.07
Residences064	35.9	37.3	703854.9	4548728	226.29
Residences065	36.5	37.9	703974.8	4548682	225.97
Residences066	39.2	40.2	704388.1	4548594	226.18
Residences067	40.8	41.6	704700.6	4548607	225.84
Residences068	35.3	36.9	703440	4548608	226.51
Residences069	36.1	37.4	703966.4	4548772	225.86
Residences070	33.3	34.8	703958.8	4549372	226.12
Residences071	34.1	35.5	704253.4	4549280	224.74
Residences072	34.1	35.5	704303.9	4549330	225.38
Residences073	30.8	32.4	704461.1	4550080	223.87
Residences074	29.8	31.5	703664.1	4550108	225.72
Residences075	30.5	32.3	703911.1	4549987	225.69
Residences076	32.8	34.3	703846.5	4549409	226.38
Residences077	32.4	33.9	703849.3	4549516	226.14
Residences078	32.9	34.4	703944.7	4549429	226.21
Residences079	29.2	31.2	702642.7	4550035	227.14
Residences080	31	33.1	702188.1	4549546	226.63
Residences081	29.5	31.7	700215.3	4550040	227.49
Residences082	29.5	31.7	699842.1	4550035	228.02
Residences083	29.7	31.9	700672.7	4549998	227.61

Table C2: Modeled Receivers - Vestas Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences084	38.1	39.7	699903.4	4548459	228.03
Residences085	36.2	39	701461.9	4548269	227.68
Residences087	44.3	47	700048.7	4546790	228.77
Residences088	41.7	44.4	700657.3	4546872	228.21
Residences089	43.2	47.2	701377.7	4546904	227.87
Residences090	44.6	47.9	701596	4546597	227.97
Residences091	40.8	43.7	700764.1	4546477	227.48
Residences092	40.7	43.6	700784.1	4546267	228.06
Residences093	40.8	43.6	700720.4	4546100	227.79
Residences094	44.3	46.7	699920.7	4545167	229.2
Residences095	43.4	44.8	700841	4544096	229.18
Residences096	48.2	48.4	700235.5	4543616	230.11
Residences097	45.9	46.5	701397.5	4543594	229.27
Residences098	46.3	46.4	700115.6	4541901	231.1
Residences099	47	47	700280.6	4541924	230.95
Residences100	49.2	49.2	700790.7	4542029	230.21
Residences101	48.5	48.5	700951.8	4542017	230.22
Residences102	47.7	47.7	701345.2	4541955	230.02
Residences103	48.4	48.4	701680.6	4542035	229.39
Residences104	48.7	48.8	701954.4	4541976	229.85
Residences105	46.4	46.4	700883.2	4540955	230.56
Residences106	47.4	47.4	700860.7	4540425	230.65
Residences107	47.7	47.7	701309.7	4540338	230.64
Residences108	48.8	48.8	701652.1	4540355	230.23
Residences109	49.7	49.7	701863.3	4540420	229.99
Residences110	46.3	46.4	699656	4540352	231.61
Residences111	48	48.1	699330	4541337	231.66
Residences112	43.9	43.9	697785.7	4540293	232.59
Residences113	50.7	50.7	697639.2	4541255	232.4
Residences114	49.6	49.6	697713.9	4541677	231.91
Residences115	49.1	49.1	697018.4	4541819	232.23
Residences116	50.4	50.4	698740.5	4541861	231.33
Residences117	49.5	49.5	699215.4	4541957	231.16
Residences118	48.5	48.5	697625.7	4542295	230.98
Residences119	45.7	46	699188	4543004	230.49
Residences120	44.9	45	697676.6	4542917	229.88
Residences121	43.1	43.3	697652.9	4543291	230.92
Residences122	43.2	44.3	698444.5	4543541	229.79
Residences123	41.8	42.5	697548.6	4544285	230.47
Residences124	37.3	39.1	696667.4	4545121	230.72

Table C2: Modeled Receivers - Vestas Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences125	38.1	40.1	696945.4	4545073	230.34
Residences126	42.5	44.4	697899.2	4545073	229.59
Residences127	42.4	44.6	697972.2	4545147	229.67
Residences128	43.4	45	698231.7	4545166	229.74
Residences130	43	46.2	699124.1	4545417	229.52
Residences131	42.3	44.4	698073.7	4546767	230.28
Residences132	43.1	44.3	699055.7	4547371	229.32
Residences133	43.9	45.9	699178	4546811	229.65
Residences134	44.3	47.1	697421.2	4547425	229.91
Residences135	42.7	45.4	697497.3	4547575	229.43
Residences136	41.3	43.8	697485.3	4547882	229.26
Residences137	39.4	42	697424.2	4548308	229.4
Residences138	41.1	43.9	697170.6	4548362	229.29
Residences139	44.2	47.6	696703.6	4548301	229.87
Residences140	35.1	36.9	699023	4548763	228.76
Residences141	38.9	40.3	699106.4	4548187	228.84
Residences142	39.7	41	699038	4548032	229.31
Residences143	31.4	33.5	699073.2	4549530	228.16
Residences144	29.3	31.7	699059.2	4549962	228.36
Residences145	28.8	31.5	698382.9	4550068	228.85
Residences146	29.3	32.2	697870.8	4549957	229.5
Residences147	29.3	32	698141.5	4549953	229.02
Residences148	29.1	32.1	697729.2	4550013	229.58
Residences149	29.5	32.6	697538.5	4549917	229.25
Residences150	29.2	32.9	696755.3	4549938	229.68
Residences151	28.2	31.8	696005.6	4549918	229.98
Residences152	23.8	27.1	694723.6	4549998	229.99
Residences153	24.9	28	694204.4	4548859	230.69
Residences154	32	35.9	695760.3	4548926	230.91
Residences155	39.8	44.2	696368.6	4548362	230.06
Residences156	36.4	39.1	695808.1	4547727	230.81
Residences157	31.2	34.1	695186.6	4548251	230.78
Residences158	29.5	32.3	694866.7	4548274	231.11
Residences159	28.2	31.2	694678.7	4548330	231.15
Residences160	27.4	30.1	694252.1	4547250	231.51
Residences161	36.5	39.1	695824.9	4547169	230.56
Residences162	36.8	39.3	695885.1	4546924	230.71
Residences163	36.4	38.8	695938.1	4546431	231.51
Residences164	35	37.1	695874	4545766	231.5
Residences165	30.8	32	694614.1	4545019	231.84

Table C2: Modeled Receivers - Vestas Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences166	32	33.3	695001.4	4545078	231.52
Residences167	34.1	35.4	695620.6	4545027	231.22
Residences168	34.4	35.9	695756.4	4545044	231.03
Residences169	35.2	36.5	695958.7	4544942	231.23
Residences170	36.3	38	696365.2	4545125	231.15
Residences171	36.9	38.7	696556.4	4545127	230.79
Residences172	33.7	33.9	694207.2	4543392	232.85
Residences173	34.9	35.1	694563.6	4543392	232.57
Residences174	38.2	38.4	695425.1	4543409	232.03
Residences175	39.7	39.9	695921.8	4543488	231.61
Residences176	39.3	39.6	695935.9	4543569	231.54
Residences177	40	40.2	695893.8	4543412	231.8
Residences178	42.7	42.8	695941.5	4543047	231.93
Residences179	41.1	41.3	696488.7	4543502	231.27
Residences180	44.7	44.8	695787.1	4541855	232.53
Residences181	39.9	39.9	694891.9	4541473	233.21
Residences182	39.7	39.7	694762.9	4541459	233.3
Residences183	45.9	45.9	695832	4540165	233.23
Residences184	42.8	42.8	696020	4540788	232.72
Residences185	44.1	44.1	694880.7	4540656	233.46
Residences186	45	45	694036.1	4540193	234.04
Residences187	45.6	45.6	696123.9	4539979	233.32
Residences188	46.1	46.1	696166	4539858	233.59
Residences189	35.5	35.5	693672.7	4541812	233.51
Residences190	35.3	37	706923.3	4549474	224.92
Residences191	35.1	36.6	707106.6	4549745	224.16
Residences192	34.9	36.2	707176.4	4549921	224.28
Residences193	34.5	35.7	707247.2	4550147	222.83
Residences194	31.7	33.2	706399	4550325	224.96
Residences195	35.4	37	705440.4	4549184	225.01
Residences196	39.7	41.2	705510.9	4548531	225.23
Residences197	38.2	39.9	705671.3	4548634	224.64
Residences198	37.4	39.4	705840.7	4548675	224.93
Residences199	37.6	39.5	705857.6	4548635	225.12
Residences200	37.4	39.5	706001.4	4548590	225.27
Residences201	37	39.2	706081.2	4548643	225.32
Residences202	38.6	40.3	707204	4548819	224.47
Residences203	38.8	40.5	707123.9	4548694	224.06
Residences204	42	44.3	705606.1	4547970	225.67
Residences205	42.1	45.9	705608.4	4547733	226.14

Table C2: Modeled Receivers - Vestas Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences206	41.9	43.6	707246.1	4548010	225.44
Residences207	41.6	47.4	705554.7	4547024	226.05
Residences208	41.6	47.8	705414.1	4547018	226.24
Residences209	41.9	45.5	705629.6	4546733	226.26
Residences211	43.9	47	706657.8	4547054	225.72
Residences212	40.5	43.9	707204.9	4546610	225.69
Residences213	41.4	45.1	707233.5	4546019	225.17
Residences214	44	47.9	706949.8	4545366	225.92
Residences215	43.3	46.3	705680.5	4545337	226.52
Residences216	44.2	47	705325.8	4545327	226.59
Residences217	44.5	47.4	705031.8	4545386	226.83
Residences218	46.6	47.2	706284.8	4543727	226.51
Residences219	45.2	46.7	706897.4	4543815	226.68
Residences220	46.2	47.1	707357.5	4543598	226.69
Residences221	48.4	48.6	707314	4543114	226.53
Residences222	50	50	705592.6	4542089	227.49
Residences223	49.9	49.9	707337.8	4541736	227.51
Residences224	57.6	57.6	707354.7	4541399	227.79
Residences225	55.4	55.4	707366	4541239	227.92
Residences226	51.9	51.9	707450.6	4541154	227.76
Residences227	48.4	48.4	705102.1	4540465	228.64
Residences228	46.8	46.8	705355.8	4540561	229.08
Residences229	45.9	45.9	705581.8	4540536	228.1
Residences230	45.3	45.3	705852	4540552	228.2
Residences231	47.5	47.6	707619.7	4540606	227.92
Residences232	45.9	45.9	706759.8	4540575	228.55
Residences233	44.8	44.8	705860.5	4540289	228.39
Residences234	44.7	44.7	705846.4	4540218	228.49
Residences235	44.3	44.4	705860.5	4539854	229.01
Residences236	44.3	44.3	705942.2	4539919	229.06
Residences237	46.5	46.5	707405.4	4540009	228.38
Residences238	46.7	46.7	707419.5	4539905	228.55
Residences239	47.2	47.2	707506.9	4539764	228.73
Residences240	44.1	44.1	705725.1	4538944	229.55
Residences241	43.8	43.8	705384	4538952	229.76
Residences242	47.3	47.3	707495.7	4538969	229.71
Residences243	45.9	45.9	705984.5	4538123	230.61
Residences244	44.8	44.8	705911.5	4537733	230.65
Residences245	47.5	47.5	707600	4538168	229.33
Residences246	45.8	45.8	707515.4	4537757	230.13

Table C2: Modeled Receivers - Vestas Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences247	43.7	43.7	705169.7	4538307	230.43
Residences248	49.4	49.4	706937.4	4537283	230.83
Residences249	48.8	48.8	706404.6	4537340	230.79
Residences250	44.5	44.5	705195.1	4537747	231.03
Residences251	46.2	46.2	706029.6	4537104	230.4
Residences252	47.4	47.4	706105.7	4536490	231.27
Residences253	45.1	45.1	705725.1	4536487	230.59
Residences254	46.6	46.6	707312.4	4535744	231.49
Residences255	47.9	47.9	707529.5	4535761	231.34
Residences256	49.5	49.5	707642.3	4535826	231.2
Residences257	47.2	47.2	707557.7	4535563	231.25
Residences258	47.4	47.4	707597.2	4535171	231.79
Residences259	48.7	48.7	707518.2	4534486	232.98
Residences260	49.5	49.5	707690.2	4534503	232.93
Residences261	46.4	46.4	706582.2	4534111	232.94
Residences262	45.6	45.6	706376.4	4534111	232.91
Residences263	43.9	43.9	709467.8	4534123	231.41
Residences264	45.4	45.4	709265.6	4534152	231.56
Residences265	45.1	45.1	709439.6	4534365	231.18
Residences266	48.6	48.6	709242.2	4534532	231.23
Residences267	48.1	48.1	709312.7	4534791	230.89
Residences268	47.5	47.5	709295.8	4534983	231.09
Residences269	42.9	42.9	709738.4	4534532	231.16
Residences270	39.9	39.9	710119	4534123	231.59
Residences271	38.1	38.1	710437.6	4534255	231.18
Residences272	40.7	40.7	710026	4534954	230.67
Residences273	40.7	40.7	710014.7	4535000	230.65
Residences274	40.1	40.1	710090.9	4535011	230.3
Residences275	38.2	38.2	710426.4	4535042	230.59
Residences276	40.4	40.4	710011.9	4535132	230.31
Residences277	39.1	39.1	710189.5	4535425	230.49
Residences278	39.1	39.1	710203.6	4535358	230.73
Residences279	39.9	39.9	710104.9	4535180	230.38
Residences280	39.8	39.8	710017.5	4535518	229.28
Residences281	44.9	44.9	709199.9	4535555	231.02
Residences282	49.4	49.4	708080.7	4535776	231.08
Residences283	44.2	44.2	709115.4	4535793	230.82
Residences284	43.4	43.4	709247.9	4535821	230.74
Residences285	43.9	43.9	709253.5	4535700	230.73
Residences286	42.6	42.6	709408.6	4535782	230.79

Table C2: Modeled Receivers - Vestas Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences287	42.1	42.1	709496	4535802	230.97
Residences288	38.8	38.8	710107.8	4535838	230.26
Residences289	39.2	39.2	710065.5	4535745	230.29
Residences290	38.9	38.9	710130.3	4535742	229.86
Residences291	39	39	710130.3	4535689	229.47
Residences292	35.8	35.8	710770.3	4535864	230.31
Residences293	36.1	36.1	710702.6	4535883	230.07
Residences294	36.9	36.9	710541.9	4535765	230.44
Residences295	37.4	37.4	710406.6	4535830	230.11
Residences296	37.7	37.7	710353	4535821	229.81
Residences297	37.7	37.7	710378.4	4535697	230.33
Residences298	46.9	46.9	708636.1	4535804	231.02
Residences299	41.8	41.8	709245.1	4536429	230.44
Residences300	41.7	41.7	709239.4	4536508	230.52
Residences301	35.3	35.3	710792.9	4536437	229.56
Residences302	34.8	34.8	710753.4	4537207	229.86
Residences303	34.9	34.9	710713.9	4537452	229.4
Residences304	43.4	43.4	708602.3	4537447	229.83
Residences305	40.9	40.9	709121	4537393	229.69
Residences306	40.3	40.3	709250.7	4537404	229.65
Residences307	39	39	709566.5	4537348	230.06
Residences308	39.9	39.9	709253.5	4537834	228.93
Residences309	39.8	39.8	709307.1	4537803	229.04
Residences310	34.4	34.4	710781.6	4538029	228.36
Residences311	37.4	37.4	709997.8	4538250	228.3
Residences312	34.4	34.4	710784.4	4538261	228.32
Residences313	34.4	34.4	710778.8	4538453	228.14
Residences314	34.5	34.5	710775.9	4538842	227.7
Residences315	34.7	34.7	710767.5	4539071	227.36
Residences316	35.5	35.5	710567.3	4539003	227.62
Residences317	35.2	35.2	710626.5	4539000	227.59
Residences318	36	36	710434.8	4539042	227.42
Residences319	38.1	38.1	709972.4	4538901	227.51
Residences320	45.1	45.1	709109.7	4538952	228.16
Residences321	43.6	43.6	709177.4	4538823	228.3
Residences322	43.7	43.7	709202.8	4538893	228.18
Residences323	44.6	44.6	709191.5	4539161	228.2
Residences324	48	48	707728.3	4538980	228.91
Residences325	45	45	709075.9	4539474	227.92
Residences326	43.2	43.3	709053.3	4540046	227.67

Table C2: Modeled Receivers - Vestas Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences327	42.8	42.8	709121	4540117	227.54
Residences328	35.2	35.2	710649.1	4539753	226.73
Residences329	34.8	34.8	710756.2	4539581	226.9
Residences330	49.3	49.3	708266.8	4540628	227.6
Residences331	42.1	42.2	709357	4541404	227.19
Residences332	48.2	48.2	708503.2	4540641	227.93
Residences333	37.3	37.4	710172.3	4540632	227.21
Residences334	35	35.2	710699.8	4540707	226.79
Residences335	35	35.3	710682.9	4541073	226.18
Residences336	35.5	35.8	710578.8	4541289	226.35
Residences337	35.4	35.8	710598.8	4541455	226.4
Residences338	35.4	35.8	710595.8	4541597	226.52
Residences339	38	38.5	709957.3	4542288	226.46
Residences341	36.1	36.8	710394.2	4542249	226.58
Residences342	36.1	36.8	710394.2	4542249	226.58
Residences343	41.2	41.5	709351.2	4542290	226.84
Residences344	44.3	44.4	708964.3	4542167	226.85
Residences345	46.2	46.3	708733.7	4542202	226.9
Residences346	47.1	47.2	708556.1	4542262	226.8
Residences347	50.5	50.6	708018.7	4542273	227.52
Residences349	34.9	36.5	710604.7	4543299	225.55
Residences350	35.1	36.6	710550.3	4543202	225.33
Residences352	34.9	36.2	710617.2	4542990	225.3
Residences353	42.2	45.4	708893.2	4544472	225.9
Residences354	41.5	44.4	708972.4	4544296	225.96
Residences355	43.9	45.6	708471.3	4543874	226.5
Residences356	41.4	43.2	708913.8	4543813	226.28
Residences357	42.2	43.9	708765.8	4543808	226.55
Residences358	41.1	42.7	708980.2	4543690	226.45
Residences359	38.8	41.2	709597.5	4543900	226.18
Residences360	37.2	39.6	710102.3	4543907	225.56
Residences361	35.7	38	710522.9	4543864	225.34
Residences362	35.5	37.7	710531	4543732	225.5
Residences363	35.9	38.4	710526	4544021	225.35
Residences365	43.1	46.5	708950.2	4544631	225.91
Residences366	37.8	40.9	710493.9	4544685	225.26
Residences368	43.2	47.2	708297.8	4545479	225.59
Residences369	43	47	708371	4545481	225.61
Residences370	42.9	46.7	708452.9	4545483	226.08
Residences371	43.4	46.7	708752.7	4545488	225.63

Table C2: Modeled Receivers - Vestas Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences372	44.2	47.4	708913.5	4545496	225.63
Residences373	44.2	47.4	708913.5	4545496	225.63
Residences376	44.3	47.3	708915.2	4545845	225.39
Residences377	42.7	46	707825.5	4547075	225.65
Residences378	44.7	47.8	708814.6	4546775	225.57
Residences379	42.9	46.3	709014.4	4547121	225.33
Residences381	40.7	43.2	709840.5	4547075	224.9
Residences382	39.9	42.3	710488.2	4546863	224.48
Residences383	43	44.6	708362.4	4548648	224.99
Residences385	43.5	44.6	709416.6	4548672	224.75
Residences386	44.1	47.7	710372	4548770	224.23
Residences388	40.9	41.3	709883.7	4550316	223.75
Residences389	33.1	34.3	711915	4550355	223.76
Residences390	31	32.2	712397.1	4550486	223.59
Residences391	29.8	30.8	712896.1	4550401	223.36
Residences392	28.2	29.3	713319	4550517	223.42
Residences393	27.6	28.6	713559.3	4550496	223.35
Residences394	44.2	46.5	710976.1	4548813	224.61
Residences395	44.8	46.4	711421.5	4548741	223.94
Residences396	38.6	39.7	712043.2	4547216	223.68
Residences397	34.2	35.4	712927.1	4547192	223.4
Residences398	37.8	38.9	712259.7	4547224	223.22
Residences399	34.9	36.8	712053.1	4546550	223.58
Residences400	34.2	36.2	712134.9	4546406	224.03
Residences401	32.8	35.2	712093.7	4545774	224.65
Residences402	36.4	37.5	712583.1	4547255	223.39
Residences403	37.1	40	711149.1	4545493	224.67
Residences404	36.3	39.2	711293.7	4545570	224.73
Residences405	29.2	31.6	712952.5	4545575	224.26
Residences406	29	31.2	713025.8	4545575	224.25
Residences407	28.3	30.3	713203.4	4545589	223.61
Residences408	31.1	33.8	712167.9	4545145	224.87
Residences409	31.3	33.9	712118.4	4544910	224.77
Residences410	34.1	36.5	710950.8	4543934	225.42
Residences411	34.8	37.2	710807.1	4543974	225.4
Residences412	34.2	36.5	710914.1	4543891	225.42
Residences413	33.4	35.7	711167.3	4543881	225.45
Residences414	32.8	35.1	711351.8	4543957	225.25
Residences415	33.7	36	711111.4	4543951	225.28
Residences416	32.7	35	711379.3	4543906	225.19

Table C2: Modeled Receivers - Vestas Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences417	28	30.6	712682.5	4544508	224.28
Residences418	24.3	26.7	713403.6	4543990	224.82
Residences419	25.2	27.7	713073.7	4543965	225.02
Residences420	25.7	28.3	713006	4544019	225.3
Residences421	26.7	29	712896.1	4543945	225.24
Residences422	26.9	29.2	712867.9	4544024	225
Residences423	27.2	29.5	712724.1	4543999	224.97
Residences424	31.3	33.6	711727.1	4543899	224.58
Residences425	30.5	32.9	712041.8	4544143	224.86
Residences426	30.1	32.5	712137.7	4544179	224.72
Residences427	29.9	32.2	712232.6	4544190	224.7
Residences428	29.5	31.9	712289.6	4544195	225.07
Residences429	29.3	31.7	712334.1	4544193	225.16
Residences430	29	31.4	712456.3	4544202	224.93
Residences431	28.6	31	712532.4	4544213	225.03
Residences432	28.3	30.7	712563.4	4544162	225.04
Residences433	28.3	30.6	712569	4544103	225.29
Residences434	28.2	30.5	712569	4544038	225.07
Residences435	28.1	30.5	712569	4543982	225
Residences436	28	30.4	712563.4	4543925	224.91
Residences437	28.5	30.7	712490.1	4543911	224.93
Residences438	29	31.1	712399.9	4543920	225.04
Residences439	29.2	31.4	712310.3	4543831	225.12
Residences440	28.9	31	712391.4	4543787	225.04
Residences441	28.7	30.8	712464.7	4543751	225.08
Residences442	28.8	30.9	712397.1	4543706	225.12
Residences443	28.6	30.6	712385.8	4543632	225.17
Residences444	29.3	31.3	712253.3	4543629	225.3
Residences445	29.2	31.1	712250.5	4543567	225.3
Residences446	29.1	31	712261.7	4543531	225.25
Residences447	29	30.9	712284.3	4543488	225.34
Residences448	29.1	31	712230.7	4543446	225.25
Residences449	29	30.9	712278.6	4543443	225.25
Residences450	29.2	31.1	712182.8	4543438	225.57
Residences451	29.2	31	712188.4	4543390	225.67
Residences452	29.2	31	712180	4543339	225.66
Residences453	29.3	31.2	712140.5	4543398	225.4
Residences454	29.4	31.3	712134.9	4543483	225.37
Residences455	29.7	31.7	712047.5	4543517	225.49
Residences456	30.2	32.1	711988.3	4543545	225.52

Table C2: Modeled Receivers - Vestas Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences457	30.3	32.3	711943.1	4543545	225.27
Residences458	30.6	32.7	711847.3	4543590	225.13
Residences459	30.8	32.9	711790.9	4543666	224.6
Residences460	30.9	33.2	711783.7	4543753	224.99
Residences461	30	32	712016.4	4543635	225.47
Residences462	29.8	31.8	712098.2	4543638	225.35
Residences463	29.5	31.6	712199.7	4543669	225.36
Residences464	29.4	31.4	712258.9	4543720	225.27
Residences465	29.2	31.4	712289.9	4543782	225.18
Residences466	29.3	31.5	712304	4543892	225.25
Residences467	29.2	31.5	712354.8	4543979	224.99
Residences468	28.9	31.3	712402.7	4544030	224.87
Residences469	29.1	31.4	712388.6	4544134	225.03
Residences470	29.8	32.1	712236.4	4544134	224.53
Residences471	30	32.3	712140.5	4544086	224.99
Residences472	30.2	32.4	711996.7	4543810	225.29
Residences473	30.1	32.2	712008	4543720	225.37
Residences474	29.8	31.9	712106.7	4543703	225.54
Residences475	29.7	31.8	712180	4543765	225.36
Residences476	29.7	31.8	712216.6	4543832	225.29
Residences477	29.4	31.7	712258.9	4543942	225.39
Residences478	29.4	31.7	712295.8	4544026	224.89
Residences479	30.1	32.3	712044.5	4543870	225.35
Residences480	29.6	31.9	712191.2	4543942	225.41
Residences481	28.4	30.1	712256.1	4543176	225.51
Residences482	29	30.8	712165.9	4543223	225.64
Residences483	34	34.8	710945.4	4542322	226.19
Residences484	32.7	33.7	711233.6	4542334	225.94
Residences485	27.3	28.4	712559.7	4542301	226.04
Residences486	25.9	27.1	712721.3	4542379	225.53
Residences487	25.1	26.4	712828.4	4542399	225.48
Residences488	19.2	21.7	713372.5	4542331	225.14
Residences489	15.2	19.7	713575.5	4542351	224.62
Residences490	28.2	28.5	712317.4	4541338	226.36
Residences491	28.1	28.4	712289.8	4541028	225.86
Residences492	25.3	25.3	712834.1	4540720	225.91
Residences493	27.8	27.8	712283.7	4540538	226.37
Residences494	No Contribution	No Contribution	713547.3	4541239	224.98
Residences495	27.9	27.9	712242	4540190	226.61
Residences496	27.1	27.1	712258.9	4539681	226.64

Table C2: Modeled Receivers - Vestas Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences497	26.7	26.7	712459.1	4539340	227.1
Residences498	26.7	26.7	712436.5	4539371	227.37
Residences499	29	29	711903.7	4539159	227.64
Residences500	30.8	30.8	711562.5	4539024	227.67
Residences501	31.6	31.6	711444.1	4539030	227.63
Residences502	32.2	32.2	711339.8	4539111	227.58
Residences503	27.7	27.7	712298.4	4538903	227.47
Residences504	17.6	17.6	713330.3	4539210	227.03
Residences505	17	17	713544.5	4539066	226.95
Residences506	27.9	27.9	712301.2	4538269	227.88
Residences507	28.2	28.2	712337.9	4537910	228.28
Residences508	28.3	28.3	712383	4538119	227.97
Residences509	31.3	31.3	711649.9	4537426	227.09
Residences510	32.6	32.6	711353.9	4536997	228.76
Residences511	31.2	31.2	711695	4537217	228.61
Residences512	30.9	30.9	711734.5	4537310	228.47
Residences513	30.6	30.6	711782.4	4537361	228.63
Residences514	28.1	28.1	712326.6	4537459	228.74
Residences515	27.9	27.9	712416.8	4537279	228.86
Residences516	23.3	23.3	712853.8	4537550	228.11
Residences517	16.8	16.8	713352.8	4537578	227.91
Residences518	16.9	16.9	713268.2	4537482	228.64
Residences519	28.1	28.1	712436.5	4536836	228.84
Residences520	33.3	33.3	711184.7	4536817	229.14
Residences521	34	34	711057.9	4536724	228.78
Residences522	34.4	34.4	710987.4	4536670	228.94
Residences523	31.5	31.5	711647.1	4537158	228.77
Residences524	30.2	30.2	712165.9	4535806	229.89
Residences525	30.7	30.7	711968.5	4535893	229.59
Residences526	33.4	33.4	711393.4	4535879	229.67
Residences527	32.9	32.9	711466.7	4535817	229.66
Residences528	34.1	34.1	711212.9	4535868	229.68
Residences529	35.5	35.5	710877.4	4535789	230.04
Residences530	35.3	35.3	710905.6	4535862	229.97
Residences531	24.5	24.5	713231.6	4535405	230.25
Residences532	36	36	710900	4534846	230.76
Residences533	33.9	33.9	711334.2	4534998	230.36
Residences534	26.8	26.8	713039.9	4535066	230.31
Residences535	35.6	35.6	710932.9	4534207	231.44
Residences536	33	33	711531.5	4534195	231.31

Table C2: Modeled Receivers - Vestas Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences537	30	30	712236.4	4534321	231.2
Residences538	28.1	28.1	712693.1	4534336	231.02
Residences539	27.2	27.2	712980.7	4534429	230.65
Residences540	27.4	27.4	712929.9	4534341	230.76
Residences541	26.2	26.2	713130.1	4534347	230.86
Residences542	35.7	35.7	710925.4	4534446	231.15
Residences543	No Contribution	No Contribution	714085.8	4534271	230.59
Residences544	No Contribution	No Contribution	714054.9	4535196	229.91
Residences545	No Contribution	No Contribution	714311.4	4535097	229.8
Residences546	16.7	16.7	713744.7	4535892	229.51
Residences547	No Contribution	No Contribution	713995.6	4535914	229.48
Residences548	No Contribution	No Contribution	713992.8	4536129	229.63
Residences549	No Contribution	No Contribution	714077.4	4536416	229.47
Residences550	No Contribution	No Contribution	714071.7	4535906	229.51
Residences551	No Contribution	No Contribution	714170.4	4537579	228.14
Residences552	No Contribution	No Contribution	714001.2	4538463	227.19
Residences553	No Contribution	No Contribution	714012.5	4538728	226.9
Residences554	No Contribution	No Contribution	714401.6	4539182	226.93
Residences555	No Contribution	No Contribution	713849	4539190	226.39
Residences556	No Contribution	No Contribution	713936.4	4540700	226.19
Residences557	No Contribution	No Contribution	713911	4541367	225.19
Residences558	No Contribution	No Contribution	713905.4	4542022	225.11
Residences559	19	22.2	713767.2	4543246	224.92
Residences560	19.2	22.4	713840.5	4543525	224.78
Residences561	15.7	20.2	713874.4	4543051	225.02
Residences562	22.8	25.1	713885.7	4544040	224.89
Residences563	21.3	23.6	714021	4543975	224.96
Residences564	21.2	23.4	714091.5	4543989	225.04
Residences565	23.6	26	713727.2	4544165	225
Residences566	26.8	28.9	713744.5	4545769	222
Residences567	27.3	29.2	713834.9	4546174	223.57
Residences568	27.9	29.7	713662.9	4546047	223.56
Residences569	29	30.5	713750.3	4546748	223.84
Residences570	31.2	32.2	713722.1	4548434	223.3
Residences571	No Contribution	No Contribution	716777.6	4539289	226.47
Residences572	No Contribution	No Contribution	716471.4	4538848	226.84
Residences573	No Contribution	No Contribution	717045.4	4539139	226.84
Residences574	No Contribution	No Contribution	717182.4	4538553	227.18
Residences575	No Contribution	No Contribution	717242.7	4536786	227.75
Residences576	No Contribution	No Contribution	716763.4	4535982	228.47

Table C2: Modeled Receivers - Vestas Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences577	No Contribution	No Contribution	716945.9	4536019	228.27
Residences578	No Contribution	No Contribution	717295	4535555	229.29
Residences579	No Contribution	No Contribution	717302.2	4535850	228.65
Residences580	No Contribution	No Contribution	717284.6	4536176	228.42
Residences581	No Contribution	No Contribution	717283.9	4536471	227.98
Residences582	No Contribution	No Contribution	715285.7	4536001	228.3
Residences583	No Contribution	No Contribution	715236.3	4536053	229.05
Residences584	No Contribution	No Contribution	714625.4	4535098	229.26
Residences585	No Contribution	No Contribution	714736.7	4536754	229.03
Residences586	No Contribution	No Contribution	714897.9	4535885	229.78
Residences587	No Contribution	No Contribution	715523.4	4539873	226.3
Residences588	No Contribution	No Contribution	715539.1	4539610	226.08
Residences589	No Contribution	No Contribution	715543.2	4539200	226.45
Residences590	No Contribution	No Contribution	715741.5	4534888	229.73
Residences591	26.9	29	713603.8	4545568	221.32
Residences592	26.5	28.6	713653.3	4545430	223.58
Residences593	25.9	28	713720.5	4545182	223.99
Residences594	26.9	28.8	713857.4	4545976	223.67
Residences595	26.7	28.7	713767.3	4545697	222.31
Residences596	46.1	46.1	699732	4541890	231.26
Residences597	49	49	700535.3	4542015	230.51
Residences598	42.7	42.7	697735	4539471	232.69
Residences599	45.5	45.5	698338.4	4540236	232.5
Residences600	43.6	43.6	697882.1	4538698	232.57
Residences601	44.2	44.2	698108.5	4538721	232.7
Residences602	44.9	44.9	698312.5	4538687	231.58
Residences603	45.6	45.6	698545.1	4538684	232.03
Residences604	45.8	45.8	698795.7	4538621	232.24
Residences605	44.5	44.5	697763.2	4538354	233.24
Residences606	47.3	47.3	708012.1	4537372	230.04
Residences607	49.4	49.5	703371.7	4542028	228.24
Residences608	49.1	49.1	703422.1	4541993	228.17
Residences609	49.2	49.2	703470.6	4542028	228.38
Residences610	49.1	49.1	703615.8	4542029	228.57
Residences611	44.7	47.7	710443.4	4546266	224.01
Residences612	42.6	44.7	700975.3	4545259	228.93
Residences613	No Contribution	No Contribution	715582.4	4538421	227.52
Residences614	No Contribution	No Contribution	715612.5	4538208	227.79
Residences615	No Contribution	No Contribution	715627.1	4537887	227.64
Residences616	No Contribution	No Contribution	715725.7	4537955	227.36

Table C2: Modeled Receivers - Vestas Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences617	No Contribution	No Contribution	715719	4538472	227.41
Residences618	No Contribution	No Contribution	715764.7	4539238	226.49
Residences619	No Contribution	No Contribution	715686.2	4539240	226.35
Residences620	No Contribution	No Contribution	715565.6	4538938	226.74
Residences621	No Contribution	No Contribution	716179.5	4539165	226.77
Residences622	No Contribution	No Contribution	716622.7	4539281	226.46
Residences623	No Contribution	No Contribution	716476	4538589	227.12
Residences624	No Contribution	No Contribution	716397.4	4538481	227.11
Residences625	No Contribution	No Contribution	716495.8	4538265	227.23
Residences626	No Contribution	No Contribution	716412.1	4538214	227.34
Residences627	No Contribution	No Contribution	714870.3	4536399	229.12
Residences628	No Contribution	No Contribution	714643	4535968	229.44
Residences629	No Contribution	No Contribution	714885.2	4535975	229.81
Residences630	No Contribution	No Contribution	715784.2	4536269	228.21
Residences631	No Contribution	No Contribution	715688.4	4536247	228.28
Residences632	No Contribution	No Contribution	715698.6	4536152	228.5
Residences633	No Contribution	No Contribution	715695.3	4536094	228.7
Residences634	No Contribution	No Contribution	715620.2	4536042	228.21
Residences635	No Contribution	No Contribution	715719	4535960	228.85
Residences636	No Contribution	No Contribution	715653.6	4535913	228.73
Residences637	No Contribution	No Contribution	715528.9	4535952	228.7
Residences638	No Contribution	No Contribution	715825.4	4535960	228.68
Residences639	No Contribution	No Contribution	715775.2	4535900	228.65
Residences640	No Contribution	No Contribution	715716.7	4536039	228.69
Residences641	No Contribution	No Contribution	716480.4	4535970	228.67
Residences642	No Contribution	No Contribution	716553.1	4536778	227.83
Residences643	No Contribution	No Contribution	715654.2	4536823	228.22
Residences644	No Contribution	No Contribution	715830.4	4534946	229.75
Residences645	No Contribution	No Contribution	715041.8	4537534	228.12
Residences646	24.5	24.5	713142.2	4535831	229.6
Residences647	24	24	713183.4	4535764	230
Residences648	25.9	25.9	713121.6	4535523	229.87
Residences649	41	43.9	700798.1	4546778	228.06
Residences650	40.8	43.7	700784.6	4546311	228.52
Residences651	40.8	43.7	700793.6	4546373	228.33
Residences652	40.8	43.7	700820.8	4546199	227.93
Residences653	42.2	44.4	702382.4	4547288	226.88
Residences654	39.2	41.8	702286.1	4547733	226.43
Residences655	38.9	41.2	702396.3	4547776	227.17
Residences656	35.9	38.2	702344.5	4548294	227.14

Table C2: Modeled Receivers - Vestas Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences657	38.6	40.1	705563.8	4548653	224.81
Residences658	33.3	35	705553.7	4549608	225.42
Residences659	32.4	34	706119.1	4549971	224.43
Residences660	31	32.5	705539.8	4550248	225.37
Residences661	35.7	37.2	707093.9	4549556	223.98
Residences662	33.5	34.9	707073.7	4549843	224.1
Residences663	34.8	36.3	707178.4	4549520	222.58
Residences664	34.9	36.2	707215.2	4549946	224.33
Residences665	33.9	35.2	707154.4	4550225	223.69
Residences666	33	34.2	707143.3	4550505	224.35
Residences667	31	32.2	711905.5	4550882	223.75
Residences669	31.9	32.8	713612.4	4548029	223.1
Residences670	33.5	35.7	712079.5	4546045	224.45
Residences671	27.2	29.3	713536.9	4545651	223.48
Residences672	31.2	33.9	712171.1	4545200	225.08
Residences673	30.8	33.3	712527.2	4545611	224.47
Residences674	30.6	33.2	712189.1	4544725	224.69
Residences675	21.5	23.7	713960.3	4543989	225.2
Residences676	22.2	24.7	713841.1	4543975	225.27
Residences677	23	25.2	713811	4544036	225.15
Residences678	No Contribution	No Contribution	713801.5	4542330	225.03
Residences679	No Contribution	No Contribution	713826.6	4541603	225.03
Residences680	34.4	36.8	710876	4543954	225.43
Residences681	42.1	42.7	703642.5	4543934	227.72
Residences682	42.3	43	703396.7	4543968	227.75
Residences683	44.2	44.5	703424.9	4543411	227.95
Residences684	42.2	42.9	703451.1	4544009	227.71
Residences685	43.3	43.8	703100.9	4543666	227.91
Residences686	42.2	42.8	703657.7	4543883	227.72
Residences687	43.5	43.9	703462.3	4543546	228.07
Residences688	43.1	43.5	703466.3	4543652	228.03
Residences689	41.9	43.7	707252.4	4547893	225.62
Residences690	45.5	45.5	703312.1	4540244	229.3
Residences691	45.6	45.7	703038.7	4540152	229.44
Residences692	46.1	46.1	702919.1	4540320	229.57
Residences693	46.2	46.2	703092.2	4540692	229.37
Residences694	45.6	45.6	703350.5	4540641	229.46
Residences695	46.1	46.1	703289.6	4540783	229.5
Residences696	47.3	47.3	703358.9	4539550	229.73
Residences697	46.8	46.8	703442.2	4539918	229.7

Table C2: Modeled Receivers - Vestas Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences698	46	46	703100.8	4540651	229.38
Residences699	45.9	45.9	703099.8	4540602	229.48
Residences700	46.2	46.3	702930.7	4540456	229.99
Residences701	45.8	45.8	702951.5	4540204	229.66
Residences702	46	46	702945.6	4540361	229.7
Residences703	46.7	46.7	702811.4	4540392	230.12
Residences704	45.7	45.7	703071.8	4540064	229.6
Residences705	45.7	45.7	703211.2	4540067	229.66
Residences706	45.7	45.7	703275.9	4540055	229.6
Residences707	46	46	703334.5	4540797	229.45
Residences708	45.7	45.7	703715.4	4540401	229.1
Residences709	47.3	47.3	704226.2	4540494	229.16
Residences710	47	47	704151.2	4540435	229.27
Residences711	46.6	46.6	704061	4540429	229.31
Residences712	46.1	46.1	699301.9	4540271	232.19
Residences713	47.3	47.3	699837.3	4540282	231.44
Residences714	45.9	46.3	705596.4	4543727	226.68
Residences715	45.7	46.2	705797.5	4543720	226.35
Residences716	43.1	46.1	705616.1	4545291	226.55
Residences717	27.8	29.9	713255.6	4545570	223.68
Residences718	38.9	39.3	708752.5	4550678	223.66
Residences719	36.6	37.3	710373.3	4550673	223.6
Residences720	26.4	29.7	695681.1	4550160	229.78
Residences721	27.1	30.5	695712.7	4549982	229.63
Residences722	26.5	29.8	695484	4550009	229.91
Residences723	38	39.7	699959.8	4548464	228.09
Residences724	36.2	37.6	703692.9	4548546	226.09
Residences725	41.2	42	704969.7	4548621	225.48
Residences726	37.3	39.3	706731.3	4548683	225.19
Residences727	37.6	39.2	707130	4548947	224.21
Residences728	41.3	44.5	707586.8	4546997	225.35
Residences729	22.5	25.4	693107.1	4547281	231.72
Residences730	36.7	39.2	695902.3	4546805	231.01
Residences732	36	37.1	712651.1	4547259	223.15
Residences733	37	38.4	711976.4	4546977	222.71
Residences735	43.6	47.6	697619.6	4545938	230.06
Residences736	42.9	46.1	701561.7	4545222	228.11
Residences737	35.1	36.9	695960.7	4545377	231.75
Residences738	41.9	44.1	697835.8	4545088	229.08
Residences739	25.1	28.6	695253.9	4550010	230.15

Table C2: Modeled Receivers - Vestas Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences740	41.9	42.2	697298.7	4543542	231.47
Residences741	45.7	45.8	697668.1	4542788	230.3
Residences742	29.3	33	696811.1	4549917	229.56
Residences743	43.3	43.7	703145.4	4543665	227.98
Residences744	43.3	43.7	703128.3	4543662	227.93
Residences745	32.3	34.5	700594.3	4549332	227.92
Residences746	43.2	43.6	703357.1	4543638	228.14
Residences747	43.6	43.9	703421.9	4543543	227.97
Residences748	43.4	43.8	703383.6	4543587	227.95
Residences749	43.6	43.9	703378.9	4543544	228.04
Residences750	43.5	43.8	703317.1	4543588	228.03
Residences751	43.7	44	703302.9	4543544	228.01
Residences752	43.9	44.2	703320.7	4543496	227.98
Residences753	44.1	44.4	703328	4543445	227.93
Residences754	43.8	44.1	703362.1	4543499	227.96
Residences755	44.1	44.3	703362.7	4543450	228.01
Residences756	43.8	44.1	703462.3	4543490	227.98
Residences757	43.3	43.7	703460.9	4543587	227.94
Residences758	43.3	43.7	703404.4	4543608	228.05
Residences759	44.6	44.8	703403.1	4543348	227.93
Residences760	44.6	44.8	703363.7	4543356	228.12
Residences761	44.6	44.8	703432.2	4543338	227.89
Residences762	45.9	45.9	703336.9	4540753	229.53
Residences763	45.9	45.9	703290.9	4540727	229.39
Residences764	45.9	45.9	703226.5	4540679	229.48
Residences765	45.9	46	703223.8	4540706	229.49
Residences766	45.9	45.9	703188.8	4540673	229.34
Residences767	46	46	703186.1	4540702	229.34
Residences768	46.1	46.1	703188.1	4540738	229.47
Residences769	46.1	46.2	703175.2	4540744	229.52
Residences770	46.1	46.1	703135.2	4540694	229.44
Residences771	45.7	45.7	703335.6	4540665	229.63
Residences772	45.6	45.7	703294.3	4540631	229.31
Residences773	45.6	45.6	703294.6	4540585	229.49
Residences774	45.5	45.5	703297.6	4540560	229.46
Residences775	45.6	45.6	703244.6	4540555	229.5
Residences776	45.7	45.7	703197	4540573	229.45
Residences777	45.7	45.7	703232.7	4540600	229.51
Residences778	45.7	45.7	703238	4540626	229.46
Residences779	45.8	45.8	703244	4540651	229.39

Table C2: Modeled Receivers - Vestas Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences780	42.7	43.1	703897.3	4543738	227.68
Residences781	42.7	43.1	703763.9	4543735	227.78
Residences782	42.7	43.2	703662.3	4543725	228.02
Residences783	42.7	43.2	703587.7	4543724	227.85
Residences784	42.6	43.1	703597.2	4543773	227.92
Residences785	42.5	43	703609.2	4543815	227.91
Residences786	42.4	43	703609.6	4543831	227.89
Residences787	42.4	42.9	703602	4543857	227.88
Residences788	42.3	42.9	703604	4543876	227.86
Residences789	42.5	43	703506	4543827	227.88
Residences790	42.4	43	703501.2	4543874	227.85
Residences791	42.5	43.1	703472.6	4543834	227.8
Residences792	42.4	43	703446.4	4543871	227.79
Residences793	42.8	43.3	703550.4	4543717	227.77
Residences794	42.6	43.1	703571.8	4543782	227.87
Residences795	42.7	43.2	703554	4543736	227.79
Residences796	42.8	43.2	703510.3	4543736	227.94
Residences797	42.8	43.3	703512.7	4543713	228.01
Residences798	42.9	43.3	703489.7	4543713	228.02
Residences799	42.8	43.2	703491.7	4543736	227.86
Residences800	42.6	43.1	703487.3	4543780	227.88
Residences801	42.7	43.2	703475	4543775	227.94
Residences802	42.8	43.3	703459.9	4543722	227.98
Residences803	42.8	43.2	703454.4	4543756	227.97
Residences804	42.7	43.2	703452	4543774	227.95
Residences805	42.8	43.3	703363.9	4543772	227.87
Residences806	42.5	43.1	703293.2	4543955	228.04
Residences807	42.4	43	703402	4543908	227.85
Residences808	42.5	43.1	703388.5	4543874	227.84
Residences809	42.5	43.1	703400.4	4543854	227.83
Residences810	42.8	43.3	703302.8	4543800	227.86
Residences811	42.1	42.8	703492.1	4544014	227.93
Residences812	42.1	42.8	703543.7	4544006	227.83
Residences813	42.2	42.9	703495.3	4543957	227.83
Residences814	42.3	42.9	703451.6	4543963	227.74
Residences815	42.5	43.1	703356.3	4543901	227.9
Residences816	42.3	42.9	703503.2	4543905	227.79
Residences817	42.2	42.9	703539.3	4543928	227.73
Residences818	42.1	42.7	703603.6	4543957	227.66
Residences819	42.2	42.8	703592.1	4543917	227.78

Table C2: Modeled Receivers - Vestas Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences820	44.4	45.5	703961.1	4546478	227.08
Residences822	45.3	46.7	707293	4543750	226.37
Residences823	35.8	37.5	703100.4	4548390	226.8
Residences824	42.3	42.9	703453.9	4543917	227.71
Residences825	42.6	43.1	703453.3	4543809	227.79
Residences826	42.7	43.1	703804.2	4543736	227.7
Residences827	42.7	43.2	704132.2	4543745	227.81
Residences828	48.2	48.3	706719.8	4542723	227.66
Residences829	48	48.3	707315.8	4543178	226.51
Residences830	42	42.9	708915.2	4543231	226.72
Residences831	42.2	42.7	709035.8	4542681	226.93
Residences832	37.6	38.2	710046.5	4542309	226.4
Residences833	30.2	30.5	711919.3	4541156	226.53
Residences835	32.3	34.5	711477.1	4543910	224.98
Residences836	31.7	34	711510.4	4543962	224.27
Residences837	31.2	33.5	711762.8	4543911	224.91
Residences838	31.1	33.4	711785.5	4543917	225
Residences839	31	33.3	711818.4	4543927	225.15
Residences840	31.2	33.6	711762.4	4543962	224.83
Residences841	31.1	33.5	711804.5	4543978	225.01
Residences842	31	33.3	711847.8	4543978	225.07
Residences843	31	33.3	711792.2	4543830	225.24
Residences844	31	33.3	711787	4543862	225.15
Residences845	30.9	33.2	711829.5	4543870	225.27
Residences846	30.8	33.1	711841.8	4543796	225.29
Residences847	30.7	33	711885.5	4543819	225.29
Residences848	30.6	32.9	711941	4543868	225.26
Residences849	30.8	33.1	711882.3	4543884	225.17
Residences850	30.5	32.6	711893.4	4543669	225.27
Residences851	30.7	32.8	711823.2	4543654	225
Residences852	30.8	33	711850.5	4543753	225.12
Residences853	30.4	32.5	711947	4543689	225.4
Residences854	30.2	32.2	711999.5	4543651	225.46
Residences855	30.4	32.8	712018.8	4543992	225.45
Residences856	29.9	32.3	712138.7	4544041	225.11
Residences857	30.3	32.5	712083.1	4544024	225.17
Residences858	30.1	32.3	712108.5	4543976	225.24
Residences859	30.1	32.3	712110.5	4543991	225.15
Residences860	29.4	31.6	712300.6	4543981	224.98
Residences861	30.1	32.2	712095.8	4543912	225.52

Table C2: Modeled Receivers - Vestas Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences862	30	32.1	712091.4	4543825	225.23
Residences863	30.1	32.2	712051	4543804	225.41
Residences864	30.1	32.2	712023.6	4543784	225.29
Residences865	29.9	32	712092.2	4543783	225.39
Residences866	29.6	31.7	712214.5	4543813	225.31
Residences867	29.2	31.4	712307.3	4543874	225.17
Residences868	29.2	31.4	712324.4	4543906	225.28
Residences869	29	31.2	712370.4	4543881	225.03
Residences870	29.2	31.5	712404.2	4544210	225.14
Residences871	29.1	31.5	712395.4	4544152	225.02
Residences872	29.8	32.1	712247	4544153	224.97
Residences873	30	32.3	712184.7	4544152	224.32
Residences874	29.8	32.2	712188.7	4544107	224.84
Residences875	29.9	32.2	712192.6	4544086	224.98
Residences876	29.6	31.9	712256.9	4544082	224.55
Residences877	29.6	31.9	712259.3	4544111	224.62
Residences878	29.5	31.8	712297.8	4544090	224.71
Residences879	29.6	31.8	712295.4	4544116	224.92
Residences880	29.1	31.5	712355.4	4544090	224.9
Residences881	29.2	31.5	712355.8	4544135	225.1
Residences882	39.2	40.6	699107	4548146	228.85
Residences883	43.6	44.2	702391.2	4543689	228.28
Residences884	41.6	42.3	704028.2	4544125	227.6
Residences885	41.7	43.9	702387.7	4547366	227.33
Residences886	30.5	32.9	712039.3	4544120	225.06
Residences887	30.5	32.9	712000.9	4544075	225.21
Residences888	30.6	33	711977.9	4544078	225.1
Residences889	30.4	32.7	712041.7	4544077	225.23
Residences890	30.2	32.6	712091.9	4544134	225.02
Residences891	30.4	32.6	712046.8	4544039	225.27
Residences892	30.4	32.6	712041.7	4544016	225.23
Residences893	30.1	32.4	712106.9	4544080	225.06
Residences894	30	32.4	712147.7	4544131	224.9
Residences895	30.2	32.7	712176.4	4544434	224.26
Residences896	31.9	34.3	712238.5	4545538	224.75
Residences897	31.4	33.7	711675.9	4543905	224.65
Residences898	26.7	30.1	695600.1	4550010	229.65

Table C3: Modeled Receivers - GE Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences001	48.9	48.9	704957.8	4540548	228.81
Residences002	48.7	48.7	704458.3	4540531	228.96
Residences003	46.9	46.9	702836.3	4540515	229.44
Residences004	46	46	703027.1	4540540	229.67
Residences005	46.2	46.2	703203.8	4540783	229.53
Residences006	45.7	45.8	703332	4540701	229.59
Residences007	45.5	45.5	703352.6	4540554	229.19
Residences008	45.4	45.4	703403.2	4540526	229.61
Residences009	45.4	45.5	703557.5	4540515	229.35
Residences010	45.7	45.7	703756.7	4540515	229.16
Residences011	49.2	49.2	704200.1	4541449	228.49
Residences012	47.5	47.6	704090.7	4541797	228.48
Residences013	47.6	47.7	704093.5	4541884	228.13
Residences014	47.6	47.6	704093.5	4541713	228.18
Residences015	48.5	48.5	702637.1	4540484	229.89
Residences016	47.7	47.8	702479.9	4541390	229.18
Residences017	48.3	48.3	702651.1	4541253	229.19
Residences018	49.3	49.3	704174.9	4542657	227.87
Residences019	48.5	48.7	702525.4	4542883	228.74
Residences020	47.9	48	704057	4542830	227.85
Residences021	46.5	46.6	704138.4	4543085	227.5
Residences022	46	46.3	704031.7	4543094	227.29
Residences023	44.1	44.5	704049.7	4543418	227.55
Residences024	43.3	44.3	702428.2	4543681	228.36
Residences025	44.6	45	703419	4543315	227.88
Residences026	43.6	44.2	703416.7	4543493	227.97
Residences027	43.2	43.9	703249.7	4543605	228.46
Residences028	43.7	44.3	703215.4	4543502	228.56
Residences029	43.1	43.9	703038.9	4543650	228.17
Residences030	42.1	43.2	703354.1	4543862	227.78
Residences031	42.8	43.6	703394.4	4543672	228.22
Residences032	42.3	43.2	703512.6	4543789	227.95
Residences033	42.8	43.6	703496	4543649	227.89
Residences034	42.7	43.4	703650.1	4543677	228.13
Residences035	42.3	43.1	703644.6	4543783	227.94
Residences036	42.4	43.2	703717.4	4543736	227.79
Residences037	42.5	43.2	703849.3	4543731	227.72
Residences038	42.5	43.2	703943	4543738	227.7
Residences039	42.6	43.3	704156.7	4543744	227.83
Residences040	42.3	43.1	704105.8	4543788	227.83
Residences041	42.2	43	704048.6	4543823	227.62

Table C3: Modeled Receivers - GE Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences042	41.8	42.8	704034.5	4543919	227.59
Residences043	40.9	42.3	704025.2	4544228	227.5
Residences044	41.7	43.1	703386.3	4544011	227.93
Residences045	43.6	44.2	704941	4543789	226.73
Residences046	40.5	42.4	704481	4544551	227.23
Residences047	40.8	43.5	703990.3	4545166	227.39
Residences048	43.9	45.1	703526.5	4546983	226.83
Residences049	41.3	44	704033.6	4546901	226.82
Residences050	42.9	45.4	702310.9	4547173	226.73
Residences051	44	45.9	702378.7	4547008	226.77
Residences052	39.5	42.2	702349.5	4547669	227.16
Residences053	39.4	42	703911.6	4547435	226.68
Residences054	41.7	45.4	704836.4	4546939	226.12
Residences055	37.4	40.3	702265.9	4547990	226.72
Residences056	36.2	39.6	703886.1	4548244	226.37
Residences057	34.3	37.3	702254.5	4548553	227.45
Residences058	34.8	37.5	703213.5	4548472	226.25
Residences059	34.6	37.5	703386.7	4548517	226.21
Residences060	34.6	37.6	703470.3	4548519	226.07
Residences061	34.2	37.6	703854.9	4548728	226.29
Residences062	34.6	38.2	703974.8	4548682	225.99
Residences063	36.3	40.4	704388.1	4548594	226.18
Residences064	37.5	41.8	704700.6	4548607	225.8
Residences065	34.3	37.2	703440	4548608	226.51
Residences066	34.2	37.7	703966.4	4548772	225.86
Residences067	31.9	35.2	703958.8	4549372	226.12
Residences068	32.3	35.8	704253.4	4549280	224.61
Residences069	32.4	35.9	704303.9	4549330	225.37
Residences070	29.9	32.9	704461.1	4550080	223.87
Residences071	29	32.1	703664.1	4550108	225.72
Residences072	29.6	32.8	703911.1	4549987	225.69
Residences073	31.5	34.7	703846.5	4549409	226.38
Residences074	31.1	34.4	703849.3	4549516	226.14
Residences075	31.5	34.8	703944.7	4549429	226.18
Residences076	28.7	31.7	702642.7	4550035	227.15
Residences077	30.5	33.6	702188.1	4549546	226.63
Residences078	29.2	32.1	700215.3	4550040	227.49
Residences079	29.2	32.2	699842.1	4550035	227.97
Residences080	29.4	32.4	700672.7	4549998	227.61
Residences081	36.9	40	699903.4	4548459	228.03
Residences082	35.8	39.2	701461.9	4548269	227.68

Table C3: Modeled Receivers - GE Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences083	43.6	47.1	700048.7	4546790	228.79
Residences084	41	44.6	700657.3	4546872	228.21
Residences085	43.2	47.2	701377.7	4546904	227.87
Residences086	44.6	47.6	701596	4546597	227.94
Residences087	40.7	43.8	700764.1	4546477	227.48
Residences088	40.8	43.8	700784.1	4546267	228.06
Residences089	40.9	43.8	700720.4	4546100	227.79
Residences090	44.4	46.8	699920.7	4545167	229.24
Residences091	43.5	44.9	700841	4544096	229.19
Residences092	48.3	48.4	700235.5	4543616	230.11
Residences093	45.8	46.6	701397.5	4543594	229.27
Residences094	46.3	46.4	700115.6	4541901	231.1
Residences095	47	47.1	700280.6	4541924	230.96
Residences096	49.2	49.3	700790.7	4542029	230.21
Residences097	48.5	48.5	700951.8	4542017	230.22
Residences098	47.7	47.7	701345.2	4541955	230.02
Residences099	48.4	48.4	701680.6	4542035	229.39
Residences100	48.7	48.8	701954.4	4541976	229.85
Residences101	46.4	46.4	700883.2	4540955	230.56
Residences102	47.4	47.4	700860.7	4540425	230.65
Residences103	47.7	47.7	701309.7	4540338	230.64
Residences104	48.8	48.8	701652.1	4540355	230.23
Residences105	49.7	49.7	701863.3	4540420	229.99
Residences106	46.4	46.4	699656	4540352	231.61
Residences107	48.1	48.1	699330	4541337	231.66
Residences108	43.9	43.9	697785.7	4540293	232.59
Residences109	50.7	50.7	697639.2	4541255	232.39
Residences110	49.6	49.7	697713.9	4541677	231.91
Residences111	49.1	49.1	697018.4	4541819	232.25
Residences112	50.4	50.4	698740.5	4541861	231.33
Residences113	49.5	49.6	699215.4	4541957	231.16
Residences114	48.5	48.6	697625.7	4542295	230.98
Residences115	45.9	46.2	699188	4543004	230.49
Residences116	45	45.3	697676.6	4542917	229.95
Residences117	43.3	44.2	697652.9	4543291	230.92
Residences118	44.2	45.5	698444.5	4543541	229.81
Residences119	42.4	45.4	697548.6	4544285	230.46
Residences120	37.6	39.9	696667.4	4545121	230.72
Residences121	38.4	41	696945.4	4545073	230.34
Residences122	43.6	46.4	697899.2	4545073	229.59
Residences123	43.5	46.5	697972.2	4545147	229.67

Table C3: Modeled Receivers - GE Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences124	44.5	47	698231.7	4545166	229.74
Residences125	43.1	46.2	699124.1	4545417	229.51
Residences126	41.9	44.6	698073.7	4546767	230.28
Residences127	41.8	44.4	699055.7	4547371	229.32
Residences128	43	46	699178	4546811	229.65
Residences129	44.4	47.2	697421.2	4547425	229.91
Residences130	42.7	45.5	697497.3	4547575	229.43
Residences131	41.4	44	697485.3	4547882	229.26
Residences132	39.5	42.2	697424.2	4548308	229.4
Residences133	41.2	44	697170.6	4548362	229.34
Residences134	44.2	47.6	696703.6	4548301	229.87
Residences135	34.4	37.3	699023	4548763	228.74
Residences136	37.8	40.6	699106.4	4548187	228.83
Residences137	38.5	41.2	699038	4548032	229.31
Residences138	30.9	33.9	699073.2	4549530	228.15
Residences139	28.8	32.1	699059.2	4549962	228.36
Residences140	28.6	31.9	698382.9	4550068	228.9
Residences141	29.2	32.6	697870.8	4549957	229.5
Residences142	29.1	32.4	698141.5	4549953	229.02
Residences143	29.1	32.5	697729.2	4550013	229.58
Residences144	29.4	33	697538.5	4549917	229.26
Residences145	29.3	33.2	696755.3	4549938	229.68
Residences146	28.3	32.2	696005.6	4549918	229.98
Residences147	24.3	27.6	694723.6	4549998	229.99
Residences148	25.4	28.5	694204.4	4548859	230.69
Residences149	32.2	36.2	695760.3	4548926	230.91
Residences150	39.9	44.3	696368.6	4548362	230.06
Residences151	36.6	39.3	695808.1	4547727	230.81
Residences152	31.4	34.5	695186.6	4548251	230.78
Residences153	29.7	32.8	694866.7	4548274	231.11
Residences154	28.5	31.6	694678.7	4548330	231.15
Residences155	27.8	30.7	694252.1	4547250	231.51
Residences156	36.7	39.4	695824.9	4547169	230.56
Residences157	37	39.6	695885.1	4546924	230.73
Residences158	36.6	39.1	695938.1	4546431	231.51
Residences159	35.3	37.6	695874	4545766	231.5
Residences160	31.1	32.6	694614.1	4545019	231.84
Residences161	32.3	33.9	695001.4	4545078	231.52
Residences162	34.3	36	695620.6	4545027	231.22
Residences163	34.7	36.5	695756.4	4545044	231.03
Residences164	35.4	37.2	695958.7	4544942	231.18

Table C3: Modeled Receivers - GE Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences165	36.6	38.7	696365.2	4545125	231.15
Residences166	37.2	39.5	696556.4	4545127	230.91
Residences167	33.8	34.2	694207.2	4543392	232.57
Residences168	35	35.4	694563.6	4543392	232.57
Residences169	38.3	38.6	695425.1	4543409	232.03
Residences170	39.8	40.2	695921.8	4543488	231.61
Residences171	39.4	39.8	695935.9	4543569	231.54
Residences172	40.1	40.4	695893.8	4543412	231.8
Residences173	42.8	42.9	695941.5	4543047	231.94
Residences174	41.2	41.6	696488.7	4543502	231.27
Residences175	44.8	44.8	695787.1	4541855	232.49
Residences176	40	40	694891.9	4541473	233.21
Residences177	39.7	39.7	694762.9	4541459	233.3
Residences178	45.9	45.9	695832	4540165	233.23
Residences179	42.8	42.8	696020	4540788	232.72
Residences180	44.1	44.1	694880.7	4540656	233.46
Residences181	45	45	694036.1	4540193	234.04
Residences182	45.6	45.6	696123.9	4539979	233.32
Residences183	46.1	46.1	696166	4539858	233.59
Residences184	35.5	35.6	693672.7	4541812	233.51
Residences185	35.4	37.3	706923.3	4549474	224.87
Residences186	35.2	36.9	707106.6	4549745	224.16
Residences187	35	36.5	707176.4	4549921	224.28
Residences188	34.7	36	707247.2	4550147	222.83
Residences189	31.7	33.6	706399	4550325	224.96
Residences190	33.8	37.3	705440.4	4549184	225.09
Residences191	37.3	41.4	705510.9	4548531	225.23
Residences192	36.3	40.1	705671.3	4548634	224.64
Residences193	36	39.7	705840.7	4548675	224.93
Residences194	36.2	39.8	705857.6	4548635	225.12
Residences195	36.2	39.8	706001.4	4548590	225.27
Residences196	36.1	39.5	706081.2	4548643	225.32
Residences197	38.8	40.5	707204	4548819	224.47
Residences198	38.9	40.7	707123.9	4548694	224.06
Residences199	40.4	44.4	705606.1	4547970	225.68
Residences200	42.2	46	705608.4	4547733	226.32
Residences201	42	43.7	707246.1	4548010	225.44
Residences202	43.9	47.4	705554.7	4547024	226.05
Residences203	44.5	47.9	705414.1	4547018	226.3
Residences204	41.7	45.6	705629.6	4546733	226.26
Residences205	42.6	47	706657.8	4547054	225.72

Table C3: Modeled Receivers - GE Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences206	40	43.9	707204.9	4546610	225.68
Residences207	40.6	45.1	707233.5	4546019	225.17
Residences208	41.1	47.5	706949.8	4545366	225.92
Residences209	42.2	46.2	705680.5	4545337	226.52
Residences210	43.6	47	705325.8	4545327	226.59
Residences211	44	47.4	705031.8	4545386	226.83
Residences212	46.5	47.2	706284.8	4543727	226.49
Residences213	44.9	46.7	706897.4	4543815	226.68
Residences214	46	47.1	707357.5	4543598	226.69
Residences215	48.3	48.7	707314	4543114	226.53
Residences216	49.9	50	705592.6	4542089	227.49
Residences217	49.9	49.9	707337.8	4541736	227.51
Residences218	57.6	57.6	707354.7	4541399	227.79
Residences219	55.4	55.4	707366	4541239	227.62
Residences220	51.9	51.9	707450.6	4541154	227.73
Residences221	48.4	48.4	705102.1	4540465	228.66
Residences222	46.8	46.8	705355.8	4540561	229.08
Residences223	45.9	45.9	705581.8	4540536	228.09
Residences224	45.3	45.3	705852	4540552	228.19
Residences225	47.5	47.6	707619.7	4540606	227.92
Residences226	45.9	45.9	706759.8	4540575	228.55
Residences227	44.8	44.8	705860.5	4540289	228.39
Residences228	44.7	44.7	705846.4	4540218	228.49
Residences229	44.3	44.4	705860.5	4539854	229.01
Residences230	44.3	44.3	705942.2	4539919	229.06
Residences231	46.5	46.5	707405.4	4540009	228.38
Residences232	46.7	46.7	707419.5	4539905	228.55
Residences233	47.2	47.2	707506.9	4539764	228.73
Residences234	44.1	44.1	705725.1	4538944	229.54
Residences235	43.8	43.8	705384	4538952	229.76
Residences236	47.3	47.3	707495.7	4538969	229.71
Residences237	45.9	45.9	705984.5	4538123	230.61
Residences238	44.8	44.8	705911.5	4537733	230.65
Residences239	47.5	47.5	707600	4538168	229.33
Residences240	45.8	45.8	707515.4	4537757	230.13
Residences241	43.7	43.7	705169.7	4538307	230.43
Residences242	49.4	49.4	706937.4	4537283	230.83
Residences243	48.8	48.8	706404.6	4537340	230.79
Residences244	44.5	44.5	705195.1	4537747	231.03
Residences245	46.2	46.2	706029.6	4537104	230.4
Residences246	47.4	47.4	706105.7	4536490	231.27

Table C3: Modeled Receivers - GE Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences247	45.1	45.1	705725.1	4536487	230.59
Residences248	46.6	46.6	707312.4	4535744	231.49
Residences249	47.9	47.9	707529.5	4535761	231.34
Residences250	49.5	49.5	707642.3	4535826	231.2
Residences251	47.2	47.2	707557.7	4535563	231.25
Residences252	47.4	47.4	707597.2	4535171	231.79
Residences253	48.7	48.7	707518.2	4534486	232.98
Residences254	49.5	49.5	707690.2	4534503	232.93
Residences255	46.4	46.4	706582.2	4534111	232.9
Residences256	45.6	45.6	706376.4	4534111	232.91
Residences257	43.9	43.9	709467.8	4534123	231.41
Residences258	45.4	45.4	709265.6	4534152	231.56
Residences259	45.1	45.1	709439.6	4534365	231.18
Residences260	48.6	48.6	709242.2	4534532	231.14
Residences261	48.1	48.1	709312.7	4534791	230.89
Residences262	47.5	47.5	709295.8	4534983	231.09
Residences263	42.9	42.9	709738.4	4534532	231.16
Residences264	39.9	39.9	710119	4534123	231.59
Residences265	38.1	38.1	710437.6	4534255	231.18
Residences266	40.7	40.7	710026	4534954	230.63
Residences267	40.7	40.7	710014.7	4535000	230.65
Residences268	40.1	40.1	710090.9	4535011	230.3
Residences269	38.2	38.2	710426.4	4535042	230.59
Residences270	40.4	40.4	710011.9	4535132	230.31
Residences271	39.1	39.1	710189.5	4535425	230.49
Residences272	39.1	39.1	710203.6	4535358	230.73
Residences273	39.9	39.9	710104.9	4535180	230.38
Residences274	39.8	39.8	710017.5	4535518	229.28
Residences275	44.9	44.9	709199.9	4535555	231.02
Residences276	49.4	49.4	708080.7	4535776	231.08
Residences277	44.2	44.2	709115.4	4535793	230.82
Residences278	43.4	43.4	709247.9	4535821	230.74
Residences279	43.9	43.9	709253.5	4535700	230.74
Residences280	42.6	42.6	709408.6	4535782	230.79
Residences281	42.1	42.1	709496	4535802	230.97
Residences282	38.8	38.8	710107.8	4535838	230.26
Residences283	39.2	39.2	710065.5	4535745	230.29
Residences284	38.9	38.9	710130.3	4535742	229.86
Residences285	39	39	710130.3	4535689	229.47
Residences286	35.8	35.8	710770.3	4535864	230.31
Residences287	36.1	36.1	710702.6	4535883	230.06

Table C3: Modeled Receivers - GE Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences288	36.9	36.9	710541.9	4535765	230.44
Residences289	37.4	37.4	710406.6	4535830	230.11
Residences290	37.7	37.7	710353	4535821	229.92
Residences291	37.7	37.7	710378.4	4535697	230.33
Residences292	46.9	46.9	708636.1	4535804	231.02
Residences293	41.8	41.8	709245.1	4536429	230.45
Residences294	41.7	41.7	709239.4	4536508	230.54
Residences295	35.3	35.3	710792.9	4536437	229.56
Residences296	34.8	34.8	710753.4	4537207	229.87
Residences297	34.9	34.9	710713.9	4537452	229.4
Residences298	43.4	43.4	708602.3	4537447	229.82
Residences299	40.9	40.9	709121	4537393	229.69
Residences300	40.3	40.3	709250.7	4537404	229.64
Residences301	39	39	709566.5	4537348	230.06
Residences302	39.9	39.9	709253.5	4537834	228.87
Residences303	39.8	39.8	709307.1	4537803	229.04
Residences304	34.4	34.4	710781.6	4538029	228.36
Residences305	37.4	37.4	709997.8	4538250	228.3
Residences306	34.4	34.4	710784.4	4538261	228.32
Residences307	34.4	34.4	710778.8	4538453	228.14
Residences308	34.5	34.5	710775.9	4538842	227.7
Residences309	34.7	34.7	710767.5	4539071	227.36
Residences310	35.5	35.5	710567.3	4539003	227.62
Residences311	35.2	35.2	710626.5	4539000	227.64
Residences312	36	36	710434.8	4539042	227.42
Residences313	38.1	38.1	709972.4	4538901	227.51
Residences314	45.1	45.1	709109.7	4538952	228.16
Residences315	43.6	43.6	709177.4	4538823	228.3
Residences316	43.7	43.7	709202.8	4538893	228.19
Residences317	44.6	44.6	709191.5	4539161	228.2
Residences318	48	48	707728.3	4538980	228.93
Residences319	45	45	709075.9	4539474	227.92
Residences320	43.2	43.3	709053.3	4540046	227.67
Residences321	42.8	42.8	709121	4540117	227.53
Residences322	35.2	35.2	710649.1	4539753	226.7
Residences323	34.8	34.8	710756.2	4539581	226.93
Residences324	49.3	49.3	708266.8	4540628	227.61
Residences325	42.1	42.3	709357	4541404	227.19
Residences326	48.2	48.2	708503.2	4540641	227.93
Residences327	37.3	37.5	710172.3	4540632	227.2
Residences328	35	35.2	710699.8	4540707	226.8

Table C3: Modeled Receivers - GE Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences329	35	35.3	710682.9	4541073	226.07
Residences330	35.4	35.9	710578.8	4541289	226.35
Residences331	35.4	35.9	710598.8	4541455	226.4
Residences332	35.4	35.9	710595.8	4541597	226.52
Residences333	37.9	38.6	709957.3	4542288	226.45
Residences334	36	36.9	710394.2	4542249	226.58
Residences335	36	36.9	710394.2	4542249	226.58
Residences336	41.1	41.6	709351.2	4542290	226.81
Residences337	44.2	44.5	708964.3	4542167	226.85
Residences338	46.1	46.3	708733.7	4542202	226.9
Residences339	47.1	47.2	708556.1	4542262	226.8
Residences340	50.5	50.6	708018.7	4542273	227.52
Residences341	34.7	36.8	710604.7	4543299	225.56
Residences342	34.9	36.8	710550.3	4543202	225.33
Residences343	34.7	36.4	710617.2	4542990	225.33
Residences344	41.3	45.8	708893.2	4544472	225.9
Residences345	40.7	44.7	708972.4	4544296	225.96
Residences346	43.3	45.7	708471.3	4543874	226.5
Residences347	40.9	43.4	708913.8	4543813	226.36
Residences348	41.6	44	708765.8	4543808	226.55
Residences349	40.7	42.9	708980.2	4543690	226.45
Residences350	38.5	41.5	709597.5	4543900	226.18
Residences351	37	39.9	710102.3	4543907	225.56
Residences352	35.5	38.3	710522.9	4543864	225.34
Residences353	35.3	38	710531	4543732	225.5
Residences354	35.7	38.7	710526	4544021	225.35
Residences355	42.5	47	708950.2	4544631	225.91
Residences356	37.6	41.2	710493.9	4544685	225.26
Residences357	42.3	47.4	708297.8	4545479	225.59
Residences358	42.2	47.2	708371	4545481	225.62
Residences359	42.2	46.9	708452.9	4545483	226.08
Residences360	43	47.2	708752.7	4545488	225.62
Residences361	43.8	47.9	708913.5	4545496	225.63
Residences362	43.8	47.9	708913.5	4545496	225.63
Residences363	44	47.6	708915.2	4545845	225.39
Residences364	42.8	45.8	707825.5	4547075	225.65
Residences365	44.7	47.5	708814.6	4546775	225.57
Residences366	43	46.3	709014.4	4547121	225.33
Residences367	40.5	43.4	709840.5	4547075	224.91
Residences368	39.6	42.6	710488.2	4546863	224.48
Residences369	43.4	44.8	708362.4	4548648	224.99

Table C3: Modeled Receivers - GE Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences370	43.7	44.8	709416.6	4548672	224.75
Residences371	44.1	47.8	710372	4548770	224.23
Residences372	41	41.6	709883.7	4550316	223.72
Residences373	32.9	34.7	711915	4550355	223.76
Residences374	30.7	32.6	712397.1	4550486	223.61
Residences375	29.3	31.2	712896.1	4550401	223.36
Residences376	27.9	29.7	713319	4550517	223.42
Residences377	27.3	29.1	713559.3	4550496	223.35
Residences378	44.1	46.7	710976.1	4548813	224.61
Residences379	44.2	46.6	711421.5	4548741	223.93
Residences380	37.3	40	712043.2	4547216	223.68
Residences381	33.1	35.7	712927.1	4547192	223.4
Residences382	36.5	39.2	712259.7	4547224	223.22
Residences383	34.3	37.1	712053.1	4546550	223.62
Residences384	33.7	36.6	712134.9	4546406	224.03
Residences385	32.6	35.6	712093.7	4545774	224.65
Residences386	35.1	37.8	712583.1	4547255	223.39
Residences387	37.1	40.3	711149.1	4545493	224.67
Residences388	36.4	39.5	711293.7	4545570	224.64
Residences389	28.9	32.1	712952.5	4545575	224.26
Residences390	28.7	31.8	713025.8	4545575	224.25
Residences391	27.9	30.9	713203.4	4545589	223.61
Residences392	30.9	34.3	712167.9	4545145	224.87
Residences393	31.2	34.3	712118.4	4544910	224.77
Residences394	34	36.9	710950.8	4543934	225.42
Residences395	34.6	37.5	710807.1	4543974	225.4
Residences396	34	36.9	710914.1	4543891	225.42
Residences397	33.2	36	711167.3	4543881	225.45
Residences398	32.7	35.5	711351.8	4543957	225.25
Residences399	33.5	36.4	711111.4	4543951	225.28
Residences400	32.5	35.3	711379.3	4543906	225.22
Residences401	27.7	31.1	712682.5	4544508	224.28
Residences402	24.2	27.4	713403.6	4543990	224.82
Residences403	25.2	28.5	713073.7	4543965	225.02
Residences404	25.5	29	713006	4544019	225.26
Residences405	26.6	29.6	712896.1	4543945	225.24
Residences406	26.7	29.8	712867.9	4544024	225.04
Residences407	27	30.1	712724.1	4543999	224.97
Residences408	31.1	34	711727.1	4543899	224.58
Residences409	30.4	33.4	712041.8	4544143	224.8
Residences410	29.9	33	712137.7	4544179	224.72

Table C3: Modeled Receivers - GE Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences411	29.7	32.7	712232.6	4544190	224.7
Residences412	29.3	32.5	712289.6	4544195	225.1
Residences413	29.1	32.2	712334.1	4544193	225.16
Residences414	28.8	31.9	712456.3	4544202	224.93
Residences415	28.4	31.6	712532.4	4544213	225.03
Residences416	28.1	31.3	712563.4	4544162	225.04
Residences417	28	31.2	712569	4544103	225.29
Residences418	27.9	31.1	712569	4544038	225.05
Residences419	27.9	31	712569	4543982	225
Residences420	27.8	31	712563.4	4543925	224.91
Residences421	28.3	31.3	712490.1	4543911	224.93
Residences422	28.8	31.7	712399.9	4543920	225
Residences423	29	31.9	712310.3	4543831	225.14
Residences424	28.7	31.5	712391.4	4543787	225.04
Residences425	28.5	31.3	712464.7	4543751	225.08
Residences426	28.6	31.4	712397.1	4543706	225.12
Residences427	28.4	31.2	712385.8	4543632	225.17
Residences428	29.1	31.8	712253.3	4543629	225.3
Residences429	29	31.6	712250.5	4543567	225.32
Residences430	28.9	31.5	712261.7	4543531	225.25
Residences431	28.8	31.4	712284.3	4543488	225.34
Residences432	28.9	31.5	712230.7	4543446	225.27
Residences433	28.8	31.4	712278.6	4543443	225.27
Residences434	29	31.6	712182.8	4543438	225.57
Residences435	29	31.5	712188.4	4543390	225.67
Residences436	29	31.5	712180	4543339	225.66
Residences437	29.1	31.6	712140.5	4543398	225.4
Residences438	29.2	31.8	712134.9	4543483	225.36
Residences439	29.5	32.1	712047.5	4543517	225.49
Residences440	30	32.5	711988.3	4543545	225.52
Residences441	30.1	32.8	711943.1	4543545	225.27
Residences442	30.4	33.1	711847.3	4543590	225.13
Residences443	30.6	33.4	711790.9	4543666	224.6
Residences444	30.8	33.6	711783.7	4543753	225.02
Residences445	29.8	32.5	712016.4	4543635	225.47
Residences446	29.6	32.3	712098.2	4543638	225.35
Residences447	29.4	32.1	712199.7	4543669	225.36
Residences448	29.2	31.9	712258.9	4543720	225.27
Residences449	29	31.8	712289.9	4543782	225.19
Residences450	29.1	32	712304	4543892	225.23
Residences451	29.1	32	712354.8	4543979	224.99

Table C3: Modeled Receivers - GE Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences452	28.7	31.8	712402.7	4544030	224.85
Residences453	28.9	32	712388.6	4544134	225.03
Residences454	29.6	32.6	712236.4	4544134	224.53
Residences455	29.8	32.8	712140.5	4544086	224.99
Residences456	30	32.9	711996.7	4543810	225.29
Residences457	29.9	32.6	712008	4543720	225.42
Residences458	29.7	32.3	712106.7	4543703	225.54
Residences459	29.5	32.2	712180	4543765	225.36
Residences460	29.5	32.2	712216.6	4543832	225.29
Residences461	29.3	32.2	712258.9	4543942	225.44
Residences462	29.3	32.2	712295.8	4544026	224.9
Residences463	30	32.7	712044.5	4543870	225.34
Residences464	29.4	32.3	712191.2	4543942	225.41
Residences465	28.3	30.6	712256.1	4543176	225.49
Residences466	28.8	31.2	712165.9	4543223	225.64
Residences467	33.9	35	710945.4	4542322	226.19
Residences468	32.7	33.9	711233.6	4542334	225.91
Residences469	27.3	28.8	712559.7	4542301	226.04
Residences470	26	27.5	712721.3	4542379	225.53
Residences471	25.2	26.9	712828.4	4542399	225.47
Residences472	19.8	22.3	713372.5	4542331	225.14
Residences473	16.6	20.5	713575.5	4542351	224.54
Residences474	28.2	28.6	712317.4	4541338	226.37
Residences475	28.2	28.4	712289.8	4541028	225.86
Residences476	25.3	25.3	712834.1	4540720	225.91
Residences477	27.8	27.8	712283.7	4540538	226.37
Residences478	No Contribution	No Contribution	713547.3	4541239	224.87
Residences479	27.9	27.9	712242	4540190	226.61
Residences480	27.1	27.1	712258.9	4539681	226.64
Residences481	26.7	26.7	712459.1	4539340	227.11
Residences482	26.7	26.7	712436.5	4539371	227.37
Residences483	29	29	711903.7	4539159	227.64
Residences484	30.8	30.8	711562.5	4539024	227.67
Residences485	31.6	31.6	711444.1	4539030	227.63
Residences486	32.2	32.2	711339.8	4539111	227.58
Residences487	27.7	27.7	712298.4	4538903	227.47
Residences488	17.6	17.6	713330.3	4539210	227.03
Residences489	17	17	713544.5	4539066	226.88
Residences490	27.9	27.9	712301.2	4538269	227.88
Residences491	28.2	28.2	712337.9	4537910	228.27
Residences492	28.3	28.3	712383	4538119	227.97

Table C3: Modeled Receivers - GE Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences493	31.3	31.3	711649.9	4537426	227.09
Residences494	32.6	32.6	711353.9	4536997	228.71
Residences495	31.2	31.2	711695	4537217	228.61
Residences496	30.9	30.9	711734.5	4537310	228.47
Residences497	30.6	30.6	711782.4	4537361	228.63
Residences498	28.1	28.1	712326.6	4537459	228.74
Residences499	27.9	27.9	712416.8	4537279	228.86
Residences500	23.3	23.3	712853.8	4537550	228.11
Residences501	16.8	16.8	713352.8	4537578	227.91
Residences502	16.9	16.9	713268.2	4537482	228.64
Residences503	28.1	28.1	712436.5	4536836	228.84
Residences504	33.3	33.3	711184.7	4536817	229.14
Residences505	34	34	711057.9	4536724	228.78
Residences506	34.4	34.4	710987.4	4536670	228.94
Residences507	31.5	31.5	711647.1	4537158	228.77
Residences508	30.2	30.2	712165.9	4535806	229.89
Residences509	30.7	30.7	711968.5	4535893	229.59
Residences510	33.4	33.4	711393.4	4535879	229.67
Residences511	32.9	32.9	711466.7	4535817	229.65
Residences512	34.1	34.1	711212.9	4535868	229.68
Residences513	35.5	35.5	710877.4	4535789	230.04
Residences514	35.3	35.3	710905.6	4535862	229.96
Residences515	24.5	24.5	713231.6	4535405	230.25
Residences516	36	36	710900	4534846	230.76
Residences517	33.9	33.9	711334.2	4534998	230.36
Residences518	26.8	26.8	713039.9	4535066	230.31
Residences519	35.6	35.6	710932.9	4534207	231.44
Residences520	33	33	711531.5	4534195	231.31
Residences521	30	30	712236.4	4534321	231.2
Residences522	28.1	28.1	712693.1	4534336	231.03
Residences523	27.2	27.2	712980.7	4534429	230.65
Residences524	27.4	27.4	712929.9	4534341	230.75
Residences525	26.2	26.2	713130.1	4534347	230.84
Residences526	35.7	35.7	710925.4	4534446	231.08
Residences527	No Contribution	No Contribution	714085.8	4534271	230.61
Residences528	No Contribution	No Contribution	714054.9	4535196	229.91
Residences529	No Contribution	No Contribution	714311.4	4535097	229.8
Residences530	16.7	16.7	713744.7	4535892	229.51
Residences531	No Contribution	No Contribution	713995.6	4535914	229.48
Residences532	No Contribution	No Contribution	713992.8	4536129	229.63
Residences533	No Contribution	No Contribution	714077.4	4536416	229.45

Table C3: Modeled Receivers - GE Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences534	No Contribution	No Contribution	714071.7	4535906	229.51
Residences535	No Contribution	No Contribution	714170.4	4537579	228.14
Residences536	No Contribution	No Contribution	714001.2	4538463	227.19
Residences537	No Contribution	No Contribution	714012.5	4538728	226.9
Residences538	No Contribution	No Contribution	714401.6	4539182	226.93
Residences539	No Contribution	No Contribution	713849	4539190	226.39
Residences540	No Contribution	No Contribution	713936.4	4540700	226.19
Residences541	No Contribution	No Contribution	713911	4541367	225.19
Residences542	No Contribution	No Contribution	713905.4	4542022	225.1
Residences543	19.3	22.9	713767.2	4543246	224.92
Residences544	19.5	23.1	713840.5	4543525	224.79
Residences545	17.1	20.9	713874.4	4543051	225.02
Residences546	22.6	25.9	713885.7	4544040	224.9
Residences547	20.9	24.3	714021	4543975	224.92
Residences548	20.7	24.1	714091.5	4543989	225.04
Residences549	23.5	26.8	713727.2	4544165	225
Residences550	26.4	29.5	713744.5	4545769	222
Residences551	26.7	29.8	713834.9	4546174	223.57
Residences552	27.4	30.3	713662.9	4546047	223.52
Residences553	28.3	31.1	713750.3	4546748	223.84
Residences554	30.2	32.6	713722.1	4548434	223.3
Residences555	No Contribution	No Contribution	716777.6	4539289	226.47
Residences556	No Contribution	No Contribution	716471.4	4538848	226.84
Residences557	No Contribution	No Contribution	717045.4	4539139	226.84
Residences558	No Contribution	No Contribution	717182.4	4538553	227.18
Residences559	No Contribution	No Contribution	717242.7	4536786	227.75
Residences560	No Contribution	No Contribution	716763.4	4535982	228.47
Residences561	No Contribution	No Contribution	716945.9	4536019	228.27
Residences562	No Contribution	No Contribution	717295	4535555	229.29
Residences563	No Contribution	No Contribution	717302.2	4535850	228.64
Residences564	No Contribution	No Contribution	717284.6	4536176	228.43
Residences565	No Contribution	No Contribution	717283.9	4536471	227.98
Residences566	No Contribution	No Contribution	715285.7	4536001	228.3
Residences567	No Contribution	No Contribution	715236.3	4536053	229.01
Residences568	No Contribution	No Contribution	714625.4	4535098	229.26
Residences569	No Contribution	No Contribution	714736.7	4536754	229.03
Residences570	No Contribution	No Contribution	714897.9	4535885	229.78
Residences571	No Contribution	No Contribution	715523.4	4539873	226.3
Residences572	No Contribution	No Contribution	715539.1	4539610	226.08
Residences573	No Contribution	No Contribution	715543.2	4539200	226.45
Residences574	No Contribution	No Contribution	715741.5	4534888	229.73

Table C3: Modeled Receivers - GE Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences575	26.5	29.6	713603.8	4545568	221.32
Residences576	26.1	29.3	713653.3	4545430	223.58
Residences577	25.6	28.7	713720.5	4545182	223.9
Residences578	26.4	29.4	713857.4	4545976	223.65
Residences579	26.2	29.3	713767.3	4545697	222.31
Residences580	46.1	46.2	699732	4541890	231.26
Residences581	49	49	700535.3	4542015	230.54
Residences582	42.7	42.7	697735	4539471	232.69
Residences583	45.5	45.6	698338.4	4540236	232.5
Residences584	43.6	43.6	697882.1	4538698	232.57
Residences585	44.2	44.2	698108.5	4538721	232.7
Residences586	44.9	44.9	698312.5	4538687	231.58
Residences587	45.6	45.6	698545.1	4538684	232.03
Residences588	45.8	45.8	698795.7	4538621	232.2
Residences589	44.5	44.5	697763.2	4538354	233.24
Residences590	47.3	47.3	708012.1	4537372	230.04
Residences591	49.4	49.5	703371.7	4542028	228.24
Residences592	49.1	49.1	703422.1	4541993	228.17
Residences593	49.2	49.2	703470.6	4542028	228.38
Residences594	49.1	49.2	703615.8	4542029	228.57
Residences595	44.8	47.8	710443.4	4546266	224.01
Residences596	42.6	44.9	700975.3	4545259	228.93
Residences597	No Contribution	No Contribution	715582.4	4538421	227.52
Residences598	No Contribution	No Contribution	715612.5	4538208	227.79
Residences599	No Contribution	No Contribution	715627.1	4537887	227.65
Residences600	No Contribution	No Contribution	715725.7	4537955	227.36
Residences601	No Contribution	No Contribution	715719	4538472	227.41
Residences602	No Contribution	No Contribution	715764.7	4539238	226.49
Residences603	No Contribution	No Contribution	715686.2	4539240	226.35
Residences604	No Contribution	No Contribution	715565.6	4538938	226.74
Residences605	No Contribution	No Contribution	716179.5	4539165	226.73
Residences606	No Contribution	No Contribution	716622.7	4539281	226.46
Residences607	No Contribution	No Contribution	716476	4538589	227.11
Residences608	No Contribution	No Contribution	716397.4	4538481	227.11
Residences609	No Contribution	No Contribution	716495.8	4538265	227.23
Residences610	No Contribution	No Contribution	716412.1	4538214	227.36
Residences611	No Contribution	No Contribution	714870.3	4536399	229.12
Residences612	No Contribution	No Contribution	714643	4535968	229.44
Residences613	No Contribution	No Contribution	714885.2	4535975	229.85
Residences614	No Contribution	No Contribution	715784.2	4536269	228.21
Residences615	No Contribution	No Contribution	715688.4	4536247	228.28

Table C3: Modeled Receivers - GE Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences616	No Contribution	No Contribution	715698.6	4536152	228.51
Residences617	No Contribution	No Contribution	715695.3	4536094	228.7
Residences618	No Contribution	No Contribution	715620.2	4536042	228.21
Residences619	No Contribution	No Contribution	715719	4535960	228.85
Residences620	No Contribution	No Contribution	715653.6	4535913	228.73
Residences621	No Contribution	No Contribution	715528.9	4535952	228.7
Residences622	No Contribution	No Contribution	715825.4	4535960	228.68
Residences623	No Contribution	No Contribution	715775.2	4535900	228.65
Residences624	No Contribution	No Contribution	715716.7	4536039	228.69
Residences625	No Contribution	No Contribution	716480.4	4535970	228.67
Residences626	No Contribution	No Contribution	716553.1	4536778	227.83
Residences627	No Contribution	No Contribution	715654.2	4536823	228.22
Residences628	No Contribution	No Contribution	715830.4	4534946	229.75
Residences629	No Contribution	No Contribution	715041.8	4537534	228.12
Residences630	24.5	24.5	713142.2	4535831	229.68
Residences631	24	24	713183.4	4535764	230
Residences632	25.9	25.9	713121.6	4535523	229.87
Residences633	40.7	44	700798.1	4546778	228.06
Residences634	40.8	43.8	700784.6	4546311	228.52
Residences635	40.8	43.8	700793.6	4546373	228.33
Residences636	40.9	43.8	700820.8	4546199	227.93
Residences637	42.2	44.6	702382.4	4547288	226.89
Residences638	39.1	42	702286.1	4547733	226.43
Residences639	38.7	41.4	702396.3	4547776	227.17
Residences640	35.6	38.5	702344.5	4548294	227.13
Residences641	36.5	40.4	705563.8	4548653	224.81
Residences642	32.4	35.4	705553.7	4549608	225.68
Residences643	32.1	34.5	706119.1	4549971	224.43
Residences644	30.5	33	705539.8	4550248	225.37
Residences645	35.8	37.5	707093.9	4549556	223.98
Residences646	33.5	35.1	707073.7	4549843	223.61
Residences647	34.8	36.5	707178.4	4549520	222.21
Residences648	35.1	36.6	707215.2	4549946	224.32
Residences649	34.1	35.6	707154.4	4550225	223.69
Residences650	33.2	34.6	707143.3	4550505	224.07
Residences651	31	32.6	711905.5	4550882	223.75
Residences652	30.8	33.2	713612.4	4548029	223.17
Residences653	33.2	36.2	712079.5	4546045	224.45
Residences654	26.7	29.9	713536.9	4545651	223.45
Residences655	31	34.4	712171.1	4545200	225.11
Residences656	30.5	33.8	712527.2	4545611	224.47

Table C3: Modeled Receivers - GE Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences657	30.5	33.7	712189.1	4544725	224.69
Residences658	21	24.4	713960.3	4543989	225.2
Residences659	22.1	25.4	713841.1	4543975	225.27
Residences660	22.8	26	713811	4544036	225.18
Residences661	No Contribution	No Contribution	713801.5	4542330	225.03
Residences662	No Contribution	No Contribution	713826.6	4541603	225.03
Residences663	34.2	37.1	710876	4543954	225.43
Residences664	41.7	42.8	703642.5	4543934	227.72
Residences665	41.8	43.1	703396.7	4543968	227.75
Residences666	44.1	44.5	703424.9	4543411	227.94
Residences667	41.6	43	703451.1	4544009	227.71
Residences668	43	43.8	703100.9	4543666	227.91
Residences669	41.9	42.9	703657.7	4543883	227.72
Residences670	43.3	43.9	703462.3	4543546	228.07
Residences671	42.8	43.6	703466.3	4543652	228.02
Residences672	42	43.9	707252.4	4547893	225.63
Residences673	45.5	45.5	703312.1	4540244	229.36
Residences674	45.6	45.7	703038.7	4540152	229.44
Residences675	46.1	46.1	702919.1	4540320	229.57
Residences676	46.2	46.2	703092.2	4540692	229.41
Residences677	45.6	45.6	703350.5	4540641	229.46
Residences678	46.1	46.1	703289.6	4540783	229.5
Residences679	47.3	47.3	703358.9	4539550	229.71
Residences680	46.8	46.8	703442.2	4539918	229.7
Residences681	46	46	703100.8	4540651	229.38
Residences682	45.9	45.9	703099.8	4540602	229.41
Residences683	46.2	46.3	702930.7	4540456	229.98
Residences684	45.8	45.8	702951.5	4540204	229.66
Residences685	46	46	702945.6	4540361	229.7
Residences686	46.7	46.7	702811.4	4540392	230.12
Residences687	45.7	45.7	703071.8	4540064	229.58
Residences688	45.7	45.7	703211.2	4540067	229.66
Residences689	45.7	45.7	703275.9	4540055	229.6
Residences690	46	46	703334.5	4540797	229.45
Residences691	45.7	45.7	703715.4	4540401	229.1
Residences692	47.3	47.3	704226.2	4540494	229.12
Residences693	47	47	704151.2	4540435	229.27
Residences694	46.6	46.6	704061	4540429	229.31
Residences695	46.1	46.1	699301.9	4540271	232.19
Residences696	47.3	47.3	699837.3	4540282	231.42
Residences697	45.7	46.3	705596.4	4543727	226.68

Table C3: Modeled Receivers - GE Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences698	45.6	46.2	705797.5	4543720	226.35
Residences699	42.1	46	705616.1	4545291	226.55
Residences700	27.4	30.5	713255.6	4545570	223.68
Residences701	39.1	39.5	708752.5	4550678	223.7
Residences702	36.8	37.6	710373.3	4550673	223.6
Residences703	26.5	30.1	695681.1	4550160	229.78
Residences704	27.2	30.9	695712.7	4549982	229.63
Residences705	26.7	30.2	695484	4550009	229.91
Residences706	36.8	39.9	699959.8	4548464	228.09
Residences707	34.7	37.9	703692.9	4548546	226.09
Residences708	37.8	42.2	704969.7	4548621	225.48
Residences709	37.1	39.6	706731.3	4548683	225.23
Residences710	37.7	39.4	707130	4548947	224.21
Residences711	41.3	44.5	707586.8	4546997	225.35
Residences712	23.1	26	693107.1	4547281	231.72
Residences713	36.9	39.6	695902.3	4546805	230.99
Residences714	34.8	37.4	712651.1	4547259	223.15
Residences715	35.9	38.7	711976.4	4546977	222.74
Residences716	43.6	47.8	697619.6	4545938	230.06
Residences717	42.7	46.2	701561.7	4545222	228.11
Residences718	35.3	37.4	695960.7	4545377	231.75
Residences719	42.9	45.9	697835.8	4545088	229.06
Residences720	25.6	29	695253.9	4550010	230.15
Residences721	42.1	43.2	697298.7	4543542	231.55
Residences722	45.7	46	697668.1	4542788	230.3
Residences723	29.4	33.3	696811.1	4549917	229.56
Residences724	43	43.8	703145.4	4543665	227.98
Residences725	43	43.8	703128.3	4543662	227.93
Residences726	31.7	34.9	700594.3	4549332	227.92
Residences727	43	43.7	703357.1	4543638	228.14
Residences728	43.4	44	703421.9	4543543	227.97
Residences729	43.2	43.9	703383.6	4543587	227.95
Residences730	43.4	44	703378.9	4543544	228.03
Residences731	43.2	43.9	703317.1	4543588	228.03
Residences732	43.5	44.1	703302.9	4543544	228.01
Residences733	43.7	44.2	703320.7	4543496	227.98
Residences734	44	44.5	703328	4543445	227.93
Residences735	43.6	44.2	703362.1	4543499	227.96
Residences736	43.9	44.4	703362.7	4543450	228
Residences737	43.6	44.1	703462.3	4543490	227.98
Residences738	43.1	43.8	703460.9	4543587	227.94

Table C3: Modeled Receivers - GE Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences739	43.1	43.8	703404.4	4543608	228.05
Residences740	44.4	44.8	703403.1	4543348	227.93
Residences741	44.4	44.8	703363.7	4543356	228.12
Residences742	44.5	44.9	703432.2	4543338	227.89
Residences743	45.9	45.9	703336.9	4540753	229.53
Residences744	45.9	45.9	703290.9	4540727	229.39
Residences745	45.9	45.9	703226.5	4540679	229.48
Residences746	45.9	46	703223.8	4540706	229.49
Residences747	45.9	45.9	703188.8	4540673	229.34
Residences748	46	46	703186.1	4540702	229.34
Residences749	46.1	46.1	703188.1	4540738	229.43
Residences750	46.1	46.2	703175.2	4540744	229.38
Residences751	46.1	46.1	703135.2	4540694	229.44
Residences752	45.7	45.7	703335.6	4540665	229.63
Residences753	45.6	45.7	703294.3	4540631	229.34
Residences754	45.6	45.6	703294.6	4540585	229.47
Residences755	45.5	45.5	703297.6	4540560	229.46
Residences756	45.6	45.6	703244.6	4540555	229.5
Residences757	45.7	45.7	703197	4540573	229.48
Residences758	45.7	45.7	703232.7	4540600	229.51
Residences759	45.7	45.7	703238	4540626	229.51
Residences760	45.8	45.8	703244	4540651	229.39
Residences761	42.4	43.2	703897.3	4543738	227.68
Residences762	42.4	43.2	703763.9	4543735	227.78
Residences763	42.5	43.3	703662.3	4543725	228.02
Residences764	42.5	43.3	703587.7	4543724	227.85
Residences765	42.3	43.2	703597.2	4543773	227.92
Residences766	42.1	43.1	703609.2	4543815	227.91
Residences767	42.1	43.1	703609.6	4543831	227.89
Residences768	42	43	703602	4543857	227.88
Residences769	41.9	43	703604	4543876	227.86
Residences770	42.1	43.1	703506	4543827	227.88
Residences771	42	43.1	703501.2	4543874	227.85
Residences772	42.1	43.1	703472.6	4543834	227.76
Residences773	42	43.1	703446.4	4543871	227.77
Residences774	42.5	43.3	703550.4	4543717	227.77
Residences775	42.3	43.2	703571.8	4543782	227.89
Residences776	42.5	43.3	703554	4543736	227.79
Residences777	42.5	43.3	703510.3	4543736	227.96
Residences778	42.6	43.4	703512.7	4543713	228.02
Residences779	42.6	43.4	703489.7	4543713	228.02

Table C3: Modeled Receivers - GE Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences780	42.5	43.3	703491.7	4543736	227.86
Residences781	42.3	43.2	703487.3	4543780	227.88
Residences782	42.3	43.3	703475	4543775	227.94
Residences783	42.6	43.4	703459.9	4543722	227.97
Residences784	42.4	43.3	703454.4	4543756	227.97
Residences785	42.4	43.3	703452	4543774	227.95
Residences786	42.4	43.4	703363.9	4543772	227.87
Residences787	41.9	43.2	703293.2	4543955	228.15
Residences788	41.9	43.1	703402	4543908	227.85
Residences789	42.1	43.2	703388.5	4543874	227.84
Residences790	42.1	43.2	703400.4	4543854	227.83
Residences791	42.4	43.4	703302.8	4543800	227.86
Residences792	41.6	42.9	703492.1	4544014	227.93
Residences793	41.6	42.9	703543.7	4544006	227.83
Residences794	41.8	43	703495.3	4543957	227.83
Residences795	41.8	43	703451.6	4543963	227.73
Residences796	42	43.2	703356.3	4543901	227.9
Residences797	41.9	43	703503.2	4543905	227.79
Residences798	41.8	43	703539.3	4543928	227.73
Residences799	41.7	42.8	703603.6	4543957	227.66
Residences800	41.8	42.9	703592.1	4543917	227.78
Residences801	42.9	45.6	703961.1	4546478	227.09
Residences802	44.9	46.7	707293	4543750	226.38
Residences803	35.2	37.8	703100.4	4548390	226.8
Residences804	41.9	43	703453.9	4543917	227.71
Residences805	42.2	43.2	703453.3	4543809	227.83
Residences806	42.4	43.2	703804.2	4543736	227.7
Residences807	42.5	43.3	704132.2	4543745	227.81
Residences808	48.1	48.3	706719.8	4542723	227.66
Residences809	47.9	48.3	707315.8	4543178	226.51
Residences810	41.9	43	708915.2	4543231	226.69
Residences811	42.1	42.7	709035.8	4542681	226.93
Residences812	37.5	38.3	710046.5	4542309	226.4
Residences813	30.3	30.6	711919.3	4541156	226.53
Residences814	32.1	34.9	711477.1	4543910	224.98
Residences815	31.6	34.3	711510.4	4543962	224.29
Residences816	31	33.9	711762.8	4543911	224.91
Residences817	31	33.9	711785.5	4543917	224.99
Residences818	30.9	33.8	711818.4	4543927	225.15
Residences819	31.1	34	711762.4	4543962	224.83
Residences820	31	33.9	711804.5	4543978	225.01

Table C3: Modeled Receivers - GE Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences821	30.9	33.8	711847.8	4543978	225.11
Residences822	30.9	33.7	711792.2	4543830	225.24
Residences823	30.9	33.8	711787	4543862	225.15
Residences824	30.8	33.7	711829.5	4543870	225.27
Residences825	30.7	33.5	711841.8	4543796	225.29
Residences826	30.6	33.4	711885.5	4543819	225.29
Residences827	30.5	33.3	711941	4543868	225.27
Residences828	30.7	33.5	711882.3	4543884	225.17
Residences829	30.4	33.1	711893.4	4543669	225.29
Residences830	30.5	33.2	711823.2	4543654	225
Residences831	30.6	33.4	711850.5	4543753	225.12
Residences832	30.3	33	711947	4543689	225.4
Residences833	30.1	32.7	711999.5	4543651	225.45
Residences834	30.2	33.2	712018.8	4543992	225.45
Residences835	29.8	32.7	712138.7	4544041	225.11
Residences836	30.1	33	712083.1	4544024	225.2
Residences837	29.9	32.7	712108.5	4543976	225.24
Residences838	29.9	32.7	712110.5	4543991	225.17
Residences839	29.2	32.1	712300.6	4543981	224.98
Residences840	29.9	32.7	712095.8	4543912	225.52
Residences841	29.8	32.6	712091.4	4543825	225.25
Residences842	29.9	32.6	712051	4543804	225.41
Residences843	29.9	32.7	712023.6	4543784	225.29
Residences844	29.8	32.5	712092.2	4543783	225.39
Residences845	29.5	32.2	712214.5	4543813	225.31
Residences846	29.1	31.9	712307.3	4543874	225.17
Residences847	29.1	31.9	712324.4	4543906	225.28
Residences848	28.8	31.7	712370.4	4543881	225.03
Residences849	29	32	712404.2	4544210	225.14
Residences850	28.9	32	712395.4	4544152	225.02
Residences851	29.6	32.6	712247	4544153	224.97
Residences852	29.8	32.8	712184.7	4544152	224.32
Residences853	29.7	32.7	712188.7	4544107	224.84
Residences854	29.7	32.7	712192.6	4544086	224.98
Residences855	29.4	32.4	712256.9	4544082	224.55
Residences856	29.5	32.4	712259.3	4544111	224.62
Residences857	29.3	32.3	712297.8	4544090	224.71
Residences858	29.4	32.3	712295.4	4544116	224.92
Residences859	28.9	32	712355.4	4544090	224.9
Residences860	29	32	712355.8	4544135	225.1
Residences861	38	40.8	699107	4548146	228.85

Table C3: Modeled Receivers - GE Model Run

Residence ID	Nighttime Mitigated Sound Pressure Level (dBA)	Daytime Mitigated Sound Pressure Level (dBA)	NAD 1983 UTM Zone 16N Coordinates		Elevation Plus Receiver Height (m)
			X (m)	Y (m)	
Residences862	43.3	44.3	702391.2	4543689	228.28
Residences863	41.2	42.4	704028.2	4544125	227.6
Residences864	41.7	44.1	702387.7	4547366	227.33
Residences865	30.3	33.4	712039.3	4544120	225.08
Residences866	30.4	33.4	712000.9	4544075	225.21
Residences867	30.5	33.5	711977.9	4544078	225.1
Residences868	30.3	33.2	712041.7	4544077	225.22
Residences869	30	33	712091.9	4544134	225.08
Residences870	30.2	33.1	712046.8	4544039	225.27
Residences871	30.2	33.1	712041.7	4544016	225.23
Residences872	29.9	32.9	712106.9	4544080	225.06
Residences873	29.9	32.9	712147.7	4544131	224.9
Residences874	30	33.2	712176.4	4544434	224.26
Residences875	31.7	34.8	712238.5	4545538	224.75
Residences876	31.3	34.2	711675.9	4543905	224.65
Residences877	26.9	30.5	695600.1	4550010	229.64

Section 4906-17-08 Social and Ecological Data, (A) Health and Safety (2) noise is supplemented with the following submittal to accommodate acoustic sound studies completed for the site.

(2) Noise

Noise is commonly used to describe unwanted sound. Sound is an audible variation of air pressure, and can vary in both intensity and frequency. The intensity of a sound wave is measured on a logarithmic scale in units called decibels [dB]. Each 10 dB increase is a doubling of the intensity. Because people are more sensitive to sounds of certain frequencies, the A-weighted [dB(A)] scale is used to discuss sound impacts on humans. The dB(A) scale gives more weight to sounds within the normal human hearing range and less weight to sounds that are at the upper and lower range of audible frequency. Table 8-3 shows sound levels associated with some common sources and/or locations:

Table 8-3: Common Sound Sources and Sound Levels	
Sound in dB(A)	Source
140	Jet Engine (at 80 feet)
130	Jet Aircraft (at 330 feet)
120	Rock and Roll Concert
110	Pneumatic Chipper
100	Jointer/Planer
90	Chainsaw
80	Heavy Truck Traffic
70	Business Office
60	Conversational Speech
50	Library
40	Bedroom
30	Secluded Woods
20	Whisper

Typical ambient night time sound levels for windy rural areas are in the low-to-mid 30 dB(A) range. Ambient levels up to 60 dB(A) may exist near roads, farmsteads and other areas of human activity during normal daytime work hours (USEPA/EPA 1974). The windy conditions in the Project area will tend to increase the natural ambient sound levels and mask other sound sources.

Paulding County is a rural agricultural area. Although sound levels may be sporadically elevated in localized areas due to roadway noise, periods of human activity, or farming operations, overall existing ambient sound levels are expected to be relatively low. Background sound levels vary both spatially and temporally, depending on proximity to area sound sources, roadways, and natural sounds. Principal contributors to the existing acoustic environment likely include motor vehicle traffic, mobile farming equipment, farming activities such as plowing and irrigation, all-terrain vehicles, local roadways, periodic aircraft fly-overs and rail movements, and natural sounds such as birds, insects, and leaf or vegetation rustle during elevated wind conditions in areas with established trees or established crops. Diurnal effects result in sound levels that are typically quieter during the night than during the daytime, except during periods when evening and nighttime insect noise dominates in warmer seasons.

In areas with elevated background sound levels, sound may be obscured through a mechanism referred to as acoustic masking. For example, crickets chirping, farming activities, and wind-generated ambient noise as airflow interacts with foliage can contribute to this masking effect. The variation of background noise with wind speed is dependent on several site-specific factors including topographic shielding, and locations of established woodlots and open areas. There are also seasonal differences in background sound levels. The loss of leaf cover during fall decreases background sound masking effects. Also, during wintertime windows are typically closed decreasing the transmission of sound.

Westwood reviewed regulations at the federal, state, and county level. There are no regulations with numerically defined decibel limits directly applicable to the Facility. There are, however, precedents set by the Ohio Power Siting Board (OPSB) for other

wind power projects within the state. Recently, in the Buckeye II Wind Farm project, the OPSB placed the following condition:

“The facility shall be operated so that the facility noise contribution does not result in noise levels at the exterior of any currently existing nonparticipating sensitive receptor that exceed the project area ambient nighttime Leq of 39 dBA, plus five dBA. During daytime operations only, 7:00 a.m. to 10:00 p.m., the facility may operate at the greater of: (a) the project area ambient nighttime Leq, 39 dBA, plus five dBA; or (b) the validly measured ambient (Leq), plus five dBA, at the location of the sensitive receptor.”

This condition for the Buckeye II Wind Farm set the applicable nighttime noise limit for the development to 5 dBA above the facility area nighttime ambient noise levels (Leq) and the same limit is used for daytime operations unless a greater ambient noise levels (Leq) at the location of the sensitive receptor is known, in which case the daytime limit would be the greater ambient noise level (Leq) at the sensitive receptor location, plus 5 dBA.

Based on ambient sound monitoring at five locations around the project area (Section 5), the average nighttime (Leq_{night}) is 43 dBA. The nighttime limit for this project would be 48 dBA under the Buckeye II project precedent. This limit also applies to the daytime except in instances where the daytime ambient noise level (Leq) is higher than 43 dBA at a sensitive receptor. Based on ambient sound monitoring at the five locations around the project area (Section 5), the daytime ambient level ranged from 39 to 59 across the five monitoring locations. The daytime limit for the project would be between 48 dBA (the nighttime limit) and 64 dBA (highest daytime ambient plus 5 dBA) depending on the sensitive receptor.

Although prior board precedent would allow a project limit of 48 dBA, the project will use as a design goal of 45 dBA for nighttime operations. This is based on World Health Organization (WHO) guidelines. In their “Guidelines for Community Noise” (1999), the WHO reviewed the most current research on the health impacts of noise to develop guideline sound levels for communities. To quote the foreword of the report, “The scope of WHO’s effort to derive guidelines for community noise is to consolidate actual

scientific knowledge on the health impacts of community noise and to provide guidance to environmental health authorities and professionals trying to protect people from the harmful effect of noise in non-industrial environments.” The WHO concluded that the sound level averaged over the eight nighttime hours should not exceed 45 dBA, (also indicated as 45 dBA Leq(8)), to protect against health impacts, specifically sleep disturbance, due to noise.

Construction Noise Levels

Noise from construction activities will likely cause a temporary impact to some of the homes in proximity to the Project area. These construction sounds can vary significantly depending on the age and condition of equipment and the particular stage of construction and equipment necessary to that particular stage. The expected noise levels at the nearest property boundary will be variable and are expected to be within the ranges found in Table 8-4.

(i) Dynamiting activities

Applicant will not use blasting during Facility construction.

(ii) Operation of earthmoving equipment

Site clearing: This first phase typically includes establishing temporary site offices, storage areas, and construction staging areas as well as the installation of erosion and sedimentation control measures.

Excavation: This phase typically includes the construction and preparation of access roads, laydown yards, and excavation for turbine foundations.

Foundation work: This phase consists of the construction of the concrete turbine foundations and the network of collection lines.

(iii) Driving of piles

Applicant will not use driving of piles during Facility construction.

(iv)Erection of structures

Turbine installation: The final phase includes the delivery and erection of the turbines. The primary equipment utilized during this phase includes flat-bed semis transporting the materials to the turbine site via access roads and the track-mounted erection crane.

(v) Truck traffic

Over-the-road transport trucks will deliver the majority of equipment and components to the site. The majority of such materials will be delivered directly to the turbine site for off-loading and installation. Some materials will be delivered to the lay-down yard for staging until required for a particular state of construction.

(vi)Equipment installation

The typical pieces of equipment used during construction and their average near (50 feet) noise levels are summarized in Table 8-4.

Table 8-4. Noise Emission Levels Typical of Construction Equipment		
Equipment	Estimated Sound Level at 50 feet (dBA)	Estimated Sound Level at 2000 feet (dBA)
Backhoe	80	48
Grader	85	53
Crane	85	53
Loader	85	53
Roller	75	50
Bulldozer	85	51-56
Truck	88	52
Compressor	80	48
Concrete Pump	77	45
Source: Federal Transit Administration, 1995, USDOT, 2006		

Operational Noise Levels

Applicant performed Long term sound level monitoring at five locations in the project area from May 24, 2013 until May 31, 2013. Temperatures during the

monitoring period ranged 41° to 86° F, and average one-minute wind speeds (5 foot height) ranged from 0 to 21 mph with gusts as high as 26 mph. Most of the periods of higher winds occurred on May 28, 29, and 30. There were some light rainy periods on May 27 (6:30 a.m. to 10:00 a.m. & 1 p.m. to 6 p.m.) and May 28 (4:30 a.m. to 6:30 a.m.).

Sound level data was collected using either ANSI/IEC Type 2 Rion NL-22 sound level meters or ANSI/IEC Type 1 Cesva SC310 sound level meters. The Rions were set to log 1 second equivalent A-weighted sound levels every one-second and the Cesvas were set to log 1/3 octave band sound levels every one-second. The Rions were set to record audio clips of sound events that exceeded 55 dBA and the Cesvas were connected to Roland R-05 or R-09 HR sound recorders. The microphones were mounted on a 1.5 meter (5 foot) tall wooden stakes and covered with a 7 inch ACO-Pacific weather resistant windscreens.

Data was summarized into 10-minute periods. All periods that contained precipitation and sustained wind speeds above 11 mph were eliminated during post-processing. The modeled maximum L50 sound level at 1,000 feet for a single turbine using the above assumptions is shown in Table 8-5:

Table 8-5: Modeled Maximum Sound Levels: Turbine Sound [dB(A)]		
Turbine Model	dB(A) daytime	dB(A) nighttime
GE 1.7-100 1.MW turbine	48	45
Gamesa G114-2.0MW turbine	48	45
Vestas V100-1.8MW turbine	48	45

Cumulative sound impact analysis results showing the highest modeled sound power level at any home in the Project area for the turbine layout are in Table 8-6:

Table 8-6: Cumulative Modeled Maximum Sound Levels: Turbine Sound [dB(A)]	
Turbine Model	dB(A)
GE 1.7-100 1.MW turbine	48
Gamesa G114-2.0MW turbine	48
Vestas V100-1.8MW turbine	48

Modeling results for all three turbines are shown as sound contour maps in Appendix I. Separate figures for each turbine provide the daytime results with the required NRO modes or curtailments indicated for each proposed turbine to meet the daytime limit, and the nighttime results with the required NRO modes or curtailments indicated for each proposed turbine to meet the project nighttime design goal. All residences shown are non-participating residences and the colored lines emanating from the wind turbines are color-coded isolines, where yellow represents 50 dBA, light green represents 45 dBA, and dark green represents 40 dBA. Between the colored isolines are light gray isolines that represent 1 dB increments.

From OH 114 and northward, the highest daytime sound pressure level at a non-participating residence is 48 dBA, and the highest nighttime sound pressure level is 48, both due to the Blue Creek Wind Farm. With the NROs shown in Appendix I, the sound levels from the Northwest Ohio Wind Project alone are less than 48 dBA during the day and less than 45 dBA at night at all non-participating residences.

The sound level in the 31.5 Hz and 63 Hz 1/1 octave band at the worst case receiver is 59 dB and 59 dB, respectively, which is below the levels specified in ANSI S12.2 that are necessary to cause moderately perceptible building vibrations.

During operation of the Facility, the primary source of sound from the step-up facility will be the transformer, which can emit a low frequency humming sound. An Option Agreement for purchase of up to 25 acres for the step-up facility has

been executed between Applicant and the parcel landowner. The final location of the step-up facility within that parcel has not been finalized and is contingent upon further civil design work, collector line routing, and coordination with the transmission owner in locating the interconnection facilities.

The nearest occupied home to locations being considered for the step-up facility within the parcel is located more than 500 feet away and sound associated with normal operation of the step-up facility is not expected to be audible at this farmstead/home.

(b) Location of Noise Sensitive Areas

The predicted sound contour plots in Appendix I depict residential structures within one mile of the Facility. There are no libraries, hospitals, nursing homes or assisted living and health care facilities within one mile of the turbines. However, there are XX churches located within one mile of the Facility: Edgerton Wesleyan Church (Woodburn), Jehovah's Witnesses Kingdom (Antwerp), and St. James Lutheran Church (Payne). The Wayne Trace high school is located within the project footprint as shown on Figure 3-1. Places of worship are shown on Figure 8-1.

(c) Mitigation of Noise Emissions

Over the last decade, the wind industry has invested heavily in reducing turbine noise through improvements in turbine technology, engineering, and insulation. According to a 2006 report prepared by the Renewable Energy Research Laboratory, sound levels emitted by turbines have decreased as technology has advanced. Improvements in blade airfoil efficiency have resulted in more wind energy being converted into rotational energy, and less into acoustic energy. Vibration dampening and improved mechanical design have also significantly reduced noise from mechanical sources. Furthermore, aerodynamic sound generation is very sensitive to speed at the blade tips. Modern variable speed turbines, like those proposed for the Facility, rotate at slower speeds in low winds,

increasing in higher winds. This results in quieter operation in low winds when compared to older, constant speed turbines (Rogers et al., 2006). These findings are consistent with a recent Department of Energy Report (2008), which concluded, "advances in engineering and insulation ensure that modern turbines are relatively quiet; concerns about sound are primarily associated with older technology, such as the turbines of the 1980s, which were considerably louder."

Although residential sound impacts are anticipated to be minor, additional mitigation measures will include the following:

- The turbines will operate under NROs or full curtailment to meet the noise requirements imposed by the OPSB. The current modeling assumes that all 60 locations will be operational as the most conservative assumption. Final selection of a turbine and the corresponding locations will result in total project noise lower than the current analysis based on eliminating up to 10 locations. Following final turbine selection modifications to turbine layout will be adopted to attenuate sound levels.
- General construction activities will be typically limited to the hours of 7:00 a.m. to 7:00 p.m., or until dusk when sunset occurs after 7:00 p.m. Construction activities that do not involve noise increases above ambient levels at sensitive receptors may be performed outside of daylight hours when necessary. Applicant will notify property owners or affected tenants within the meaning of OAC Section 4906-5-08(C)(3), of upcoming construction activities including potential for nighttime construction activities.
- Notifying landowners of certain construction sound impacts in advance, e.g., if blasting becomes necessary. .

In addition, if adverse sound impacts are identified during turbine operations that exceed the acoustic guidelines, a reasonable complaint resolution procedure will be implemented to ensure any complaints regarding construction or operational

sound are adequately investigated and resolved. Facility staff will formally document all noise complaints, which will then be investigated by on-site Facility staff. This will involve a review of equipment performance to determine if sound levels fall outside normal tolerances; any faulty equipment identified will be repaired.

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Summary: Correspondence of Northwest Ohio Wind Energy, LLC Submitting for Late Filing
Appendix I electronically filed by Teresa Orahod on behalf of Sally Bloomfield